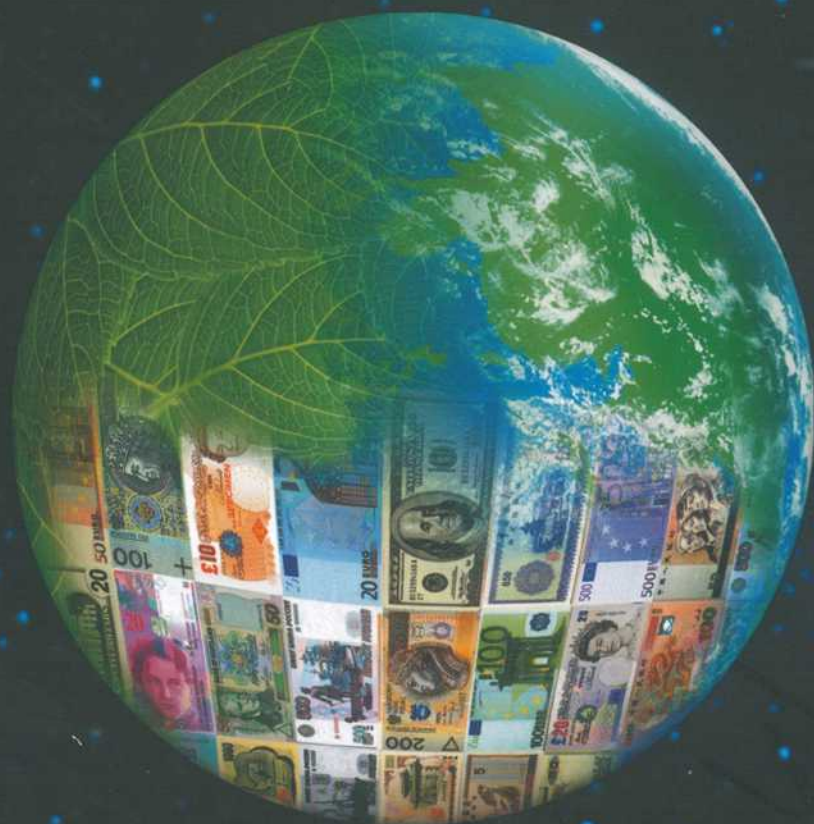


FINANCE & NATURAL ENVIRONMENT

Experience of Poland against the background
of developed market economies



Edited by

Leszek Dziawgo & Danuta Dziawgo

Toruń 2003

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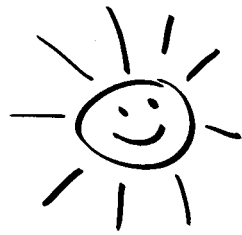
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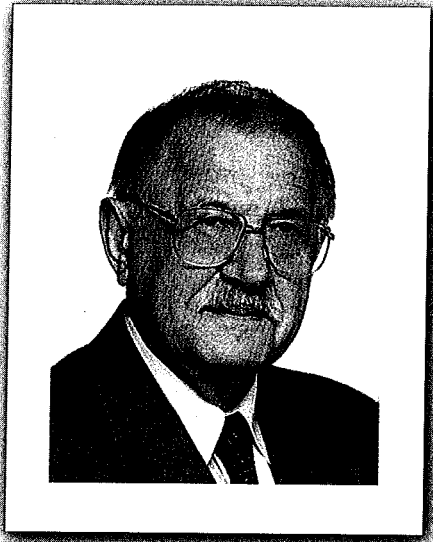
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N O T E

The chapters have been written in the personal capacity of the authors and should not be associated with the views of their employers, or of any other body of which they are members.



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PREFACE

As in the case of many other fields, if one speaks about the natural environment it is necessary to distinguish words from action. Much has been said about environmental protection and its designing, also at great world congresses. It has undoubtedly caused increased environmental awareness, however, compared with societies of higher civilisational level it is lower in Poland, but with a visible positive tendency.

There is usually a long way between words and action and we must remember that organized collective action has to be preceded by an identification of the problem considered and by its preparation (projection). In the field of environmental protection and design the gap between words and action is alarming. The authors of the publication intend to contribute to an intensification of action for natural environment. They propose how to restrain the forces which result from people's rapacity and which devastate the environment by means of the system of state finance and activities of individual businesses.

The Authors of particular parts of the publication are almost all well-known specialists in the fields of the problems presented.

I am very glad that Nicholas Copernicus University staff, which I feel closely linked with, has made significant contribution to the publication reviewed. The field explored by the Authors is almost trackless, so much the greater their glory. One can hope, for all of us and each of us, that our analyses and proposals will be implemented most widely and as quickly as possible.

Professor Stanisław Sudol

Doctor Honoris Causa

Toruń, January 2003



Maciej S. Wiatr, Professor, Ph.D., for many years associated with Warsaw School of Economics. Specialises in the problems of finance and banking.

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He has worked out a method of credit rating for enterprises, for small businesses communes, credit monitoring for PBK S.A., a system of lending limits for bank customers, sectoral limits, giving opinions on major credit applications.

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Granted, among other things, the Silver Cross of Merit and the Golden Mark: Meritorious for Warmia and Masuria.

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REVIEW

For many years the question of the protection of man's natural environment has been perceived as the most important factor to determine the level of civilisational existence of world's community. Facing the natural limitations of natural resources and the trends to exploit them hastily or wastefully, this will be, according to specialists, a basic challenge for mankind in the 21st century.

A counteraction to this real threat of an ecocatastrophe requires that the seriousness of the situation should be realised, in particular, decision makers should give up their primitive approach, based on a purely mercantile perception of effects and outlays in the management process, to the maximisation of value added at any cost for capital owners. As is well known, endeavour to multiply the value of the company, so natural in the market economy, is achieved through three basic resources: capital, labour and, of course, resources. However, the issue of their adequate selection is not only purely theoretical; it is differently understood and applied in countries, integration systems of countries or on the continents. The international market and its various institutions and instruments occupy an important place in this respect. Obviously, it influences the ecological sphere, but on the other hand, the requirements related to man's natural environment also influence the behaviour and the desirable adaptation of market mechanisms and its subjects, including financial institutions. The point is, among other things, that an image of a financial institution should be created that would be acceptable by the customer and environmentally friendly, to strengthen the company's competitive value on the increasingly global market.

In this context, the subject taken up, which pertains to a broadly perceived conception of support for commercial financial institutions in their financing of natural environment protection and at the same time the creation of suitable instruments to promote sustainable economic and

social development, is, undoubtedly, a topical, ambitious, novel and deeply applicable undertaking. These statements can be confirmed by both the content-based value of this work, the international composition of authors, their unquestioned scientific authority and, in many cases, a wealth of professional experience related to this subject. (...)

Professor Maciej S. Wiatr

Warsaw, February 2003

INTRODUCTION

The devastation of man's natural environment acquires very alarming dimensions. In the whole world attempts are made not to allow an ecological disaster and attention is paid to the essential role of capital in the process of environmental protection. The use of the financial market, its institutions, instruments and mechanisms for cooperation in the protection of natural environment remains constantly an important challenge. The possibility to use the financial market and engage financial institutions in the protection of natural environment is a widely discussed issue and finding possible solutions would be very promising.

Undoubtedly, the international financial market is subject to "ecological" pressure in the positive meaning of the word. It seems that at present a process of adaptation of financial institutions to the functioning in the society which respects the requirements of natural environment protection takes place. Numerous symptoms of a positive influence of environmental protection on the functioning of financial institutions have already been observed. A serious of cases can be indicated when renowned financial institutions maintain or gain customers by using aspects of environmental protection in offering their services of products. Like other production and service enterprises before, the numerous commercial financial institutions have noticed a chance for themselves in order to distinguish themselves positively on the market for the purpose of maintaining and gaining customers. Supporting the protection of natural environment by a financial institution may draw society's attention to this particular institution and help to receive a greater social approval to this activity. As a result, this may lead to a stronger market position and raise the value of the company.

Not only more or less spectacular gestures of financial institutions concerning the protection of natural environment are known on the international financial market. Definite cases of shaping a new offer of products and financial services addressed to the customers who take aspects of natural environment into account are known, too. So far, the offers of banks, investment fund companies and other financial institutions in the area of financing environmental

protection have not made up an essential part of the international financial market. But it is already a perceivable part of the market created by serious international financial institutions, determining, as it seems, new quality standards of investment in today's world. Giving the number of banks engaged in the protection of natural environment or the number of ecological investment funds and the values of assets collected in them will not suffice for the correct assessment of the influence of environmental protection on the international financial market. It is also important that attention should be paid to which renowned financial institutions offer their customers products in which ecological aspects have been taken into account.

Globalisation and international cooperation create an additional opportunity to work out a conception of using commercial financial institutions in the financing of the protection of natural environment. A process of exchange of ideas, reflection and experience advances in the field of a broader participation of financial institution in the realisation of the conception of sustainable development. Attention is paid to the growing importance of the question of banking and financial world engagement in environmental protection on our globe.

Poland remains under the influence of the international financial market. In this country, too, an influence of environmental protection on the financial market can be observed. We can boast essential successes. The first significant bank to finance environmental protection was established in Poland. For some time it was simultaneously the world's only ecological bank with shares quoted on the stock exchange. The Polish integrated system of financing environmental protection also deserves distinction. Its part is the mentioned Bank Ochrony Środowiska (Bank of Environmental Protection) and it includes the Narodowy Fundusz Ochrony Środowiska i Gospodarki Wodnej (National Fund for Environmental Protection and Water Management). These are not the only financial institutions engaged in the financing of environmental protection in Poland. An investment fund has appeared in whose investment policy securities of issuers connected with environmental protection technologies are taken into account. Municipal issues of bonds in order to gain funds for pro-ecological investments can also be shown. There are many more similar examples.

THE SUBJECT AND AIM OF THE WORK

In consideration of the idea of introduction of the problem, the selection of topics, the subject content of chapters and the authors' team, one can speak about an innovative and unique publication. The quality of the publication relates to the importance of the problem. The publication is a unique publishing undertaking.

A presentation of pro-ecological transformations which take place on the international financial market are the subject of this collective publication. A number of issues concerning the financing of environmental protection with the help of public and private financial means have been described. Examples of engagement of financial institutions and application of financial instruments in the process of the financing of environmental protection have been presented.

The aim of the publication is to focus society's attention and that of scientific political and economic (including financial) circles on the necessity of a broader use of financial institutions and instruments in the formation of a modern, complex and coherent system of financing environmental protection. It can be hoped that this publication will help to popularise the presented solution and inspire to seek new ones.

This publication is also aimed at a presentation of the Polish experience and achievements in the financing of environmental protection by using commercial financial institutions. Not only some Western solutions are adapted in this country but a series of Polish, original, and tested solutions can be indicated. Poland is one of the more and more important emerging markets. Poland's joining the European Union in the near future makes the Polish market more attractive and worthwhile.

THE COMPOSITION OF THE WORK

The present work consists of 25 articles presented in three parts.

Part one contains the chapters which are devoted to general considerations to the nature of market economy and financial market, and the possibility and necessity to use modern solutions for the purpose of financing the natural environment. Attention has been paid to the use of market mechanisms to this end. In this part of the publication philosophical threads can be found, which are conducive to reflection.

In part two solutions consisting in the use of commercial institutions for the purpose of financing environmental protection are presented. Usually, commercial financial institutions are not contained in the problems of financing the natural environment. It is not so in this publication. It can be reckoned that a modern, complex and coherent system of financing environmental protection must take into account the necessity to engage commercial financial institutions as well and, naturally, also the use of market mechanisms.

Part three, which is devoted to Poland, consists of chapters in which the use of public funds in the financing of environmental protection is described also paying attention to the existence of market mechanisms. The content of

this part underlines the essential importance of public finances in the noble effort to preserve man's natural environment. Moreover, in this part one can become acquainted with the activity of a Polish ecological bank: Bank Ochrony Środowiska (Bank for Environmental Protection). This is a very inspiring example.

THE TEAM OF AUTHORS

The team of authors is composed of excellent specialists. It is noteworthy that both academics and practitioners of the financial market are engaged in this undertaking. It is an international team, too. Otherwise it would be impossible. Cooperation between the circles of theoreticians and practitioners should become closer in order to meet the challenges of today. Fortunately, outstanding authors have responded to the invitation for cooperation with the editorial board of the Faculty of Economic Sciences and Management, Nicholas Copernicus University in Toruń. It is in Toruń that research into new solutions of the financing of environmental protection has been conducted for some time now. During this research contacts with competent people were established. The people were then invited to cooperate. The research was conducted in Poland, Germany, Austria, Switzerland, the United States, Great Britain and Japan. As a result we have gained broad knowledge on the possibilities to use market solutions in the financing of environmental protection. Many inspiring solution used in the world have been selected for, and presented in, this publication. Below is a list of authors who undertook cooperation in this difficult subject.

Dariusz Błaszczuk and **Konrad Prandacki** – University of Insurance and Banking in Warsaw – Poland

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Jerzy Bogdanienko – Nicholas Copernicus University in Toruń – Poland

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Waldemar Tarczyński – University of Szczecin – Poland
Mizue Tsukushi – Good Bankers – Japan
Dariusz Zarzecki and **Tomasz Wiśniewski** – University of Szczecin
 – Poland
Zofia Zawadzka – Warsaw School of Economics – Poland
Tomasz Żylicz – Warsaw Ecological Economics Center; Warsaw University
 – Poland

We can claim it a success that we have won **two Doctors Honoris Causa of Nicholas Copernicus University to this publication: Prof. Stanisław Sudol and Prof. Peter Friedrich**. They both are linked with the Faculty of Economic Sciences and Management.

This publication has been possible thanks the support from the **Committee of Scientific Research** (Komitet Badań Naukowych) and the carrying out of a research project entitled '*Bankęs and investment funds towards natural environmental protection problem. Ecological criteria in financial transactions*' No. 1 H02C 023 18.

We hope that this publication by an international team of authors will contribute to a dissemination of the idea of using the financial market for the purpose of environmental protection.

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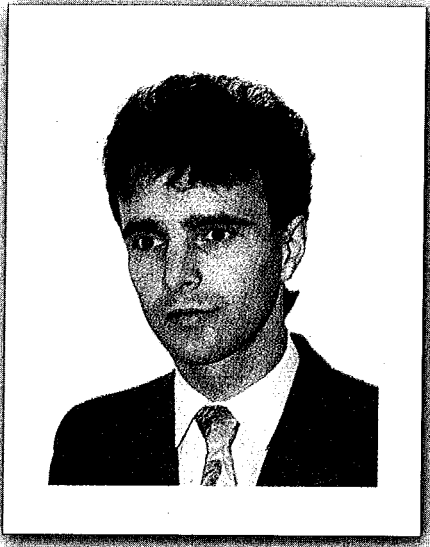
P A R T I

**ENVIRONMENTAL PROTECTION
IN ECONOMY**

Mirosław Bochenek

CHAPTER 1

**ECOLOGICAL MANAGEMENT
AND RATIONALITY**



Mirosław Bochenek, Ph.D., research activity covers theory of rationality, non-market economics and history of economic thought.

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In 1994 he was trained for six months at the University of Vienna and in the academic year 1995/96 at the University of Zurich. Author of book: *"The Question of Rationality in Polish Economic Thought"* and about 30 articles.

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ECOLOGICAL MANAGEMENT AND RATIONALITY

Up to the present, ways of management have turned out to be extremely burdensome for the environment. Its pollution has exceeded the acceptable limits, unrenovable resources are wasted. The frightening vision of resource depletion forced mankind to revise the existing opinions and to change behaviour. The ecological criterion became one of many, which decide about acknowledging business activities as rational.

1. GLOBAL PRESENTATION OF ECONOMIC PROBLEMS

However, problems with environmental protection go beyond the areas of individual countries, and their consequences have a world-wide impact. Natural resources of the whole globe are treated as a world heritage, of which supranational authorities should decide. Unfortunately, this way of tackling the problem creates doubts, since those who take advantage of mankind heritage to the highest degree are the rich.¹

As the world is characterised by its closeness, and the increasing population as well as industrial development 'have diminished' the world, interdependence of some societies from others is more and more noticeable. In such conditions an activity appropriate for a traditional directive of rationality, making a decision-maker maximise usefulness, and not take into consideration its consequences turns out to be fatal for the whole society. From the point of view an individual, an activity can be rational, however from the

¹ Kulig, J. (1978). Koncepcja <potrzeb podstawowych> a nowy międzynarodowy ład ekonomiczny. *Sprawy Międzynarodowe*, 2, pp. 127, 130.

global point of view it may turn out to be irrational. Therefore, it seems indispensable to consider the concept of rationality in a wider context, making choices between activities on the basis of sufficiently justified and reasonable data. The principle of rational activity should be reformulated in such a way that it would take into consideration the subject of the activity along with its place and results of application for a given entity. The environment taken into consideration needs to be obviously bigger than it has been up till now. Also the notion of activity rationality in the global sense taking into account a wider special scope of modern management hides new ideas. Biological and civilised survival of mankind is treated as the proper criterion for assessing management rationality in global terms since this criterion refers to the whole and it narrows down the analysis of world economy. It cannot be, for example, economic development since there is no universal model which makes a comparison of all countries possible. Economy, aiming at meeting human needs, creates a certain chain, whose elements are environment – economy – human needs. It is important to have knowledge about the elements as well as about interdependence and the correlation between them, in order to learn more about this activity. Assuming mankind's survival² *'Rationality in the global perspective refers then to the relation between economy and the natural environment, which is taken into consideration from the point of view present and future living conditions of man. In favour of such an approach speak limitations and complexity of the natural environment'*.³

Absolute limitations of natural environment taken into account in an analysis not including the time factor, i.e., the area of cultivable land as well as land suitable for settlement, minerals, the air and the water, mark borderlines for human activity, and they have an objective and historical character. Therefore, the fact that the natural environment 'supplies' man with mineral resources and 'absorbs' pollution and waste of human activities, cannot be ignored. Modern economy through wasteful resource exploitation as well as water and air pollution has resulted in a situation, in which correlation between environment and economy have reached a level bringing the future of human existence into question. The ecological situation on the Earth shows that the existing economic concepts do not meet the rationality criterion of the global economy.

² Kamiński, B. and Okólski, M. (1980). Racjonalność systemów społeczno-ekonomicznych w świetle prawa entropii. In B. Kamiński and A. Łukaszewicz (Ed.), *Racjonalność gospodarowania w socjalizmie* (pp. 303-306). Warsaw: PWE.

³ See Kamiński and Okólski 306.

The world economy's system of functioning, ignoring interactions of economy and natural environment, was based on state rationality, limited to solutions maximising its usefulness, overlooking, at the same time, external effects. Economic development brings current advantages only to some nations whereas negative ecological effects to all of mankind. Hence, the mechanism of global economy functioning has now led up to self-destruction.⁴

From the point of view of economic rationality it is necessary to compare expenditures (means) and results (aims). The common denominator cannot be money since treating the economic system as independent of other economic systems and subsystems, political, social and ecological, does not suit the interpretation of economic rationality and mankind's survival proposed by the authors. Praxeological directions, that is in other words rationality, proposed by O. Lange, from the practical point of view, is of low value because it does not take into account the time factor. It may turn out that from one time perspective the activity is rational, and from another one it is irrational. In entropy law time dimension has a different meaning. Formerly undertaken activities state the living conditions of future generations. Managing contemporarily in agreement with the operating economic calculation – accessible resources, condemns future generations to bear higher expenditures of obtaining resources or lack thereof. The praxiological notion of rationality expressed in *homo oeconomicus* owes its grounds to the comparability of means and aims. For maintaining its attractiveness and immediate interest B. Kamiński and M. Okólski pointed at the law of Entropy as the common denominator for integrating time, economy, and natural environment.⁵

As a result of the modern world 'getting shrunk', the up-to-the-present considerations about the rationality of management limited to macro scale, which are national economies, seem too narrow. The aims of individual economies must meet requirements set up for the rationality of management on the world-wide scale. Meeting the world-wide requirements in management becomes a necessity. The approach causes, however, a difficult problem of grasping diversified preferences of consumers all over the world. Therefore, different aims need to be limited down to the most basic ones and their reasonable hierarchy should be established. Additional problems result from mutual dependency existing among the aims and sub-aims.⁶

⁴ See Kamiński and Okólski 306-308.

⁵ See Kamiński and Okólski 325-326, 328-329.

⁶ Melich, A. (1985). *Podstawy teorii gospodarowania*, (pp. 99, 110, 124-125). Warsaw: PWE.

Because the real management is taking place globally recently, therefore an analysis of the global dimension of the rationality of management is justified. A global strategy has failed, therefore, the only chance of globalisation stays in global thinking about rational management, which may lead to the realisation of the concept in global terms. This idea breaks with traditional models of thinking, looks for new concepts, and gains a holistic character.

Such phenomena as an energy crisis, global debt, and tension between the North and the South are evidence of an inability to carry global rationality into effect. The 'cowboy' economy has led to local rationality. However, in reference to the whole, it is an irrational economy since an unlimited increase is impossible on a limited globe. This statement leads to global rationality connected with correlation between economy of the whole world and the environment. In other words, this idea transmits from physics to economics the concept of entropy. This idea has found favourable conditions in economic sciences due to a developing disorganisation which is caused by an economic process. Therefore, entropy can be the measure of economic rationality. Including the concept of entropy in the concept of global rationalisation should lead to the reformulation of the methods of managing an economy, the methodology of economics, and, last but not least, the criteria for, and methods of, measuring rationality. Using the law of entropy as a tool for measuring rationality, questions the usefulness of economic calculations, comparing incomplete resources with incomplete effects, thus only those which can be expressed only with money.⁷

Due to clear symptoms of global irrationality in the 1970's attempts to create alternative solutions of global problems were made. Their reflection was found in prognostic studies initiated by the Roman Club. Although the concepts (e.g. zero development, regionally differentiated sustainable development, new economic order) warned the world against the consequences of the tendency of development hitherto existing, they have influenced to a limited degree a change in the attitude and systems of principles, which were mainly expressed by newly-created movements and ecological parties. However, in the long run, they resulted in effects of small significance. Nonetheless, the new thinking led to important changes in models of rationality. It turned out, then, that economic effectiveness is not identical with rationality.⁸

⁷ Stacewicz, J. (1988). Racjonalność gospodarowania a współczesne wyzwania rozwojowe (pp. 8-9, 13-19, 95, 109-111). Warsaw: PWE. A great deal of opinions presented in a little different and wider version can be found in the below quoted books and the article: Stacewicz, J. (1987). Wzorce myślenia o racjonalności a planowanie centralne. Wektory Gospodarki, 12, pp. 21-23.

⁸ Stacewicz, J. (1991). Ekonomia na rozdrożu (pp. 50-3). Wrocław-Warszawa-Kraków: Ossoliński.

The globalisation of socio-economic life is accompanied by the process of unification of not only lifestyles and models of behaviour, but also criteria of values. This process is already a historical and unavoidable process. Irrespective of the level, whether individual, local, regional, national, or global the quality of life can be identically understood. Therefore, the only choice left is between possession, i.e. 'to have', and existence, i.e. 'to be'.

2. NECESSITY OF MODIFYING THE CONCEPT OF RATIONALITY

The new understanding of rationality satisfying modern conditions requires taking into account the non-economic dimensions of economy i.e. ecological, philosophical, and psychological. Taking into consideration the social aspect of economy, only the economic decisions giving a guarantee for maintaining or increasing the already achieved quality of life are treated as rational. Accepting the quality of life as a global criterion of rationality in place of specialised criteria of a competitive character in the form of profit or productivity of production factors or the dynamics of growth leads to humanisation of rational economy. Humanistic rationality, that is the economic rationality aimed at the quality of life, is realised by a multi-dimensional man. This activity is based on different motives. This is one of the concepts of understanding man as a subject. This concept takes into account elements of human nature. An egoistic man, in turn, who follows strictly economic motives in management, leads to achieving a traditional economic rationality expressed by microeconomic rationality (financial success).⁹

Rationality understood stereotypically, due to its inadequacy, evolves in the direction of 'human' rationality. It implies that rationality should be implemented:

- ecologically (a wider understanding of economic objects),
- ethically (taking into account ethical criteria of choice in theory and in practice in the field of economy),
- globally (the world dimension in economy),

⁹ Stacewicz, J. (1991). Stereotypy rozwoju a ekonomia (pp. 28-30, 34-35, 48, 58, 82, 90-91). Warsaw: PWE.

- holistically (global, multilevel interpretation of economy), and
- humanistically (man is the economic subject).

Along with new trends in thinking, it is necessary to revalue human attitudes, aims and values in order to be able to treat them as rational.¹⁰

3. FULFILLING BASIC NEEDS VERSUS RATIONAL ECONOMY

Fryderyk Skarbek, 150 years ago, believed that there is no real wealth if a small group of people lived in luxury, whereas the rest are in need. Owning huge resources is not a sign of the country's wealth if it is inhabited by beggars. Even when it constitutes a world power, a country of beggars is not interested in its powerful authority, fame, and monuments because means of living are more important. Wealth of a country is determined by welfare of all its citizens.¹¹

The rationality thesis seems doubtful when millions of people die of famine, suffer from chronic malnutrition, are deprived of chances to make use of the benefits of the education and health service systems, and do not have permanent sources of income. These problems make it impossible to consider economic management rational. Every human being has the right (it is the moral duty of society as a community to create conditions) to meet at least elementary needs.

All economic actions should, in the light of the elementary needs concept, aim at providing all the people in the world with a possibility of meeting elementary needs, i.e. indispensable food consumption, clothes, indispensable living space and its fittings, drinking water, communal service, communication, transport, health service, education and its participation in decision taking processes concerning society. Their realisation is possible owing to an active employment policy. Through employment people have a possibility of gaining incomes which become a means of meeting one's needs. Work is also treated as a basic human need, thanks to which a human being feels useful and can

¹⁰ Stacewicz, J. (1991). Ekonomia na rozdrożu (pp. 105-106, 112, 117, 124, 128).

¹¹ Skarbek, F. (1926). Ogólne zasady nauki gospodarstwa narodowego czyli czysta teoria ekonomii politycznej (pp. 156-158). (Vol.2). Warsaw: Gebethner and Wolff. See also Skarbek, F. (1955). Przedmowa do trzeciego tomu <Teorie des richesses sociales>. In F. Skarbek (Ed.), Ogólne zasady nauki gospodarstwa narodowego czyli czysta teoria ekonomii politycznej (pp. 292-293). (Vol.2). Warsaw: PWN.

realise oneself. In the process of development particular countries will go through successive 'models' of standard countries with typical characteristics varied in respect of the level of development, approximating to real countries. However, in the face of limited natural resources many countries will have to lower their expectations, otherwise it will be possible to overstep the development limits. Moreover, realisation of the concept requires vital structural changes among others in investments, employment, training, international division of labour, and in the agricultural sector. It is also essential that food and simple industrial consumption goods production should be increased in order to meet the basic needs.¹²

The factual consumption level should be measured and compared with the normative level, accepted as sufficient, on the basis of science recommendation (nutrition physiology, hygiene and medicine).

The recommended consumption model has to define the minimum and maximum values. The social minimum constitutes the low limit, the high limit is indicated by productive capacities in the analysed period of time and the state of knowledge and experience from highly developed countries. The minimum and maximum values correspond to certain standards recognised by humanity and defined in the political process of choice.¹³

However, meeting such numerous needs by all the inhabitants in the world, which conditions rationality in economic management, seems possible. In order to achieve this it is necessary to undertake decisive and simultaneous actions on several planes. They refer to creating places of work or appropriate working conditions for everybody, such as public education, a change of the consumption model, helping the poorest, and the environment protection. Nevertheless, employment is the basic condition.

Aiming at realising one's own plans, improving not only oneself, but also the environment is possible only through work, which becomes a duty and a way to survive. In addition, work ennobles a human being.

Working gives a person not only a possibility of meeting basic needs, but it also contributes to the progress of science, technology, culture, and morality. Work is one of the crucial aspects of human life which requires permanent reflection and which is always up to date. Appointing a human being to work does not mean that they are for work, but work is for people. However, work cannot degrade a person. Work is not only a moral duty of a person who has

¹² Kulig 124-125, 130-131.

¹³ Pohorille, M. (1980). Kategoria potrzeb ekonomicznych. *Ekonomista*, 5-6, pp. 1123-1132.

many privileges at the same time. One of them is the right to have a job, which means every person capable of this has the right to suitable employment.¹⁴

Responsibility for exercising every adult citizen's right to work lies firmly with the state, for whom a policy of full employment has to belong to their basic actions.¹⁵

Counteracting unemployment is a task for international organisations, public authorities of particular countries, social organisations and employers of all kind for every case of unemployment is evil, which can transform, after having exceeded certain numbers, into a social calamity. However, in the long run counteracting unemployment and providing work for all clever people who want to work, lies with the state. Realisation of the task involves global planning, correct and deliberate work organisation, and first of all, evoking social initiative, and not centralisation of the problem. Unfortunately, there are millions of unemployed and starving people all over the world, showing incorrectness in the sphere of work and employment organisation.¹⁶

Full and rational employment belongs to the most important economic tasks of the state. Nevertheless, problems of labour resources do not confine only to full employment but also to ways of making use of work and its results.¹⁷

The fundamental condition of rational economic management is full employment, which guarantees meeting other needs.

Unfortunately unemployment is closely related to the structure of a market economy and it exists in every country. If it happens on a massive scale, it entails a chain of negative results. Economic and socio-psychological consequences of unemployment should be treated as the most important problems of modern global economy. It is, apparently, the severest disaster after the war, not only social, but also individual. A need to work is one of the most important needs in almost all cultures. A possibility of meeting the majority of material needs, the structure of the time budget (working time and discretionary time), lifestyle, kind of relations with society, opinion and value systems, aspirations, or even ways of thinking, depend on work.¹⁸

¹⁴ Jan Paweł II, (1981). Laborem exercens (pp. 3, 8, 13, 15, 21, 37, 40). Poznań: Pallottinum.

¹⁵ Majka, J. (1980). Etyka życia gospodarczego (pp. 139,141). Warsaw: Ośrodek Dokumentacji i Studiów Społecznych.

¹⁶ Jan Paweł II 40-43.

¹⁷ Secomski, K. (1991). Człowiek w rozwoju społeczno-gospodarczym. In E. Domańska (Ed.), Pamięci Edwarda Lipieńskiego. Szkice ekonomiczne (pp. 91, 93). Warsaw: PWE.

¹⁸ Dach, Z. (1993). Bezrobocie w okresie przemian systemowych gospodarki polskiej (pp. 14-15, 21, 26, 58-66). Wrocław: Ossoliński – PAN.

4. THE ECOLOGICAL ASPECT OF RATIONALITY

While considering rationality an ecological balance also becomes a central issue. The mutual relationship between man and nature was limited to the source of indispensable resources for economy. Nature was not looked at as a place for man to live, thus a consumption commodity that would meet physiological and aesthetic needs (the air, the water, the landscape). Economic theory and practice excluded them from the range of interest, treating them as free goods, infinite in exploitation and as free of charge location for waste disposal. It was not until the second half of the 20th century that one realised the environment was endangered as a result of thoughtless exploitation of nature.¹⁹

In the interwar period the perspective of exhausting natural resources on a world-wide scale still seemed very distant.²⁰

Both the economics and economic practice must take into consideration ecological parameters of economic management, which means harmonising problems of economic growth with a necessity of preserving a clear environment, and what is more, they must create methods of the economic mechanism assessment and pricing natural resources, which will force us to use them in an efficient and pro-ecological way.²¹

Economic theory neglected one of the factors that determine economic management too long. Since natural resources were treated as relatively rich, capital and human factors took the central position, as if they were the basis of economic management. Only when pollution of the environment and threats of exhausting some resources appeared did the economics start to pay attention to the environment. It also turned out that the current economic aims were contradictory to environmental protection.²²

The use of gross national product in economic statistics to measure the economic increase also means neglecting other characteristics that determine the quality of life and leads to degradation of nature. Social costs of environmental pollution must be included in the national accountancy system, the lack of which deforms the picture of economic reality.²³ Economic

¹⁹ Semkow, J. (1989). *Ekonomia a ekologia* (2nd ed.). (p. 13). Warsaw: PWN.

²⁰ Pszczółkowski, S. (1936). *Zarys ekonomji* (p. 207). Warsaw: Dom Książki Polskiej.

²¹ Semkow, *Ekonomia a ekologia* 48, 50.

²² Górńska, K. and Poskrobko, B. (1991). *Ekonomika ochrony środowiska* (2nd ed.). (p. 8). Warsaw: PWE.

²³ Semkow, J. (1984). *Wprowadzenie do ekonomii* (p. 281). Warsaw: PWN.

calculations run by individual companies do not take into consideration social costs, either, when, in fact, they should be introduced into an economic analysis. It is related to establishing cause links as well as the size of damage and its price. This is also difficult because it is not an object of market transactions, thus its price is unknown.²⁴

Social costs, i.e. the external ones, are linked to environmental pollution, which have been covered by the whole population so far, not by companies, must be treated as environmental protection and restoration self-costs, included in a company economic calculation. Many economists are in favour of internalisation (inclusion) of external costs in accordance with the principle of the doer. This may lead to the increase of prices, but it is a justifiable charging of environmental protection.²⁵

The history of several civilisations confirms the fact that civilised people in their economic management have plundered, and destroyed forests, pastures, land and water animals, and minerals, contributing to the fall of a given culture in order to start a new life in a new place. So far, every form of economic management has violated the natural environment. It was not until the second half of the 20th century that ecological disasters showed the falsity of ideas and practices of infinite use of natural resources and of burdening the environment with waste. The environment has limited possibilities of biological self-regulation; thus some waste cumulates having a bad influence on man and economic management. Famine, similarly to other natural disasters, which affects mainly the population of Africa and other countries of 'the South', is the result of the violation of the delicate ecosystem balance (breaking the harmony between man-nature).²⁶

Almost all economists-ecologists agree that human economic management has changed and polluted the natural environment considerably.

Threats for man and the natural environment (cultural monuments are destroyed in a similar way) result mainly from negative consequences of using technology in the economic field. The threats that occur are, therefore, due to irrational actions.²⁷

The increase of population, economic growth, the growth of industrialisation, urbanisation and motorisation, and chemicalisation of agriculture

²⁴ Semkow, *Ekonomia a ekologia* 72-74, 231.

²⁵ Górka and Poskrobko, *Ekonomika ochrony środowiska* 72-74, 231.

²⁶ Semkow, *Ekonomia a ekologia* 20-22, 42, 46-47, 251, 257-259, 268-274.

²⁷ Delorme, A. (1975). O racjonalności działań. *Prakseologia*, 2, pp. 60-62.

directly or indirectly pollute the environment, which violates the biological balance in nature. The pollution of the environment has been caused not only by faulty allocation of resources and the economic structure, uncontrolled growth of engineering and technology or improper consumption standards, production of noxious goods, thus techno-economic factors, demographic factors (the number of population), but also by socio-cultural factors such as new needs, the level of consumption, customs, cultural norms, habits, ecological awareness etc., and geographical factors, i.e. industry concentration in space.²⁸

The superior aim of economic and social growth must be growth and survival of the population. Their realisation guarantees long-lasting rationality of economic management and the latter must be in accordance with the requirements of natural environment. Keeping the environment in balance forces the state to use combinations of many means (e.g. emission norms, charging the use of the environment, penalties, subsidy and ecological funds, tax shelters and deductions), the task of which is to prevent destruction of the environment.²⁹

Counteracting environmental damage is more profitable and ethic than liquidation of damage, thus the economic management of the first type can be regarded as rational. Damage removal is time-consuming and is not always possible because there is sometimes a threat of violating the natural balance or irreversible pathogenic changes of living organisms.³⁰

Further economic growth is not possible without extending cases of closed circulation of resources and materials.³¹ Thus, it is indispensable to popularise recycling, that is closing cycles in production and consumption processes, which make use of waste and droppings. In consequence, it is possible to reduce or get rid of the natural environment's burden. Stimulating the recycling process by means of different methods (by fiscal, credit policies and subsidy) contributes to speeding productive capacity growth of existing companies or newly established ones, to creating new workplaces, structural changes in the economy, and consequently to economic growth. Recycling yields huge economic and environmental benefits. The process can be applied to different

²⁸ Górka and Poskrobko, Ekonomika ochrony środowiska 7, 15, 61-66, 81-82, 103-104. Philosophers also pointed out the necessity of reasonable use of the environment. See Cackowski, Z. (1979). Człowiek jako podmiot działania praktycznego i poznawczego (p. 124). Warsaw: KiW.

²⁹ Semkow, Ekonomia a ekologia 152-161.

³⁰ Prandecka, B.K. (1991). Nauki ekonomiczne a środowisko przyrodnicze (2nd ed.). (pp. 15-16, 97-98, 110-126). Warsaw: PWE.

kinds of deposits from water purification plants, wood, food-agricultural, extractive, iron and steel industry waste, municipal waste, metal scrap, glass and ceramics, rubber, plastics and synthetic plastics, paper, textile waste, rags, leather, and animal production manure.³²

Nowadays almost everything, except for radioactive waste, can be used to create a new product. However, a new way of thinking, new organisation, and new technologies are necessary. Facing the threat of exhausting non-renewable sources of energy coming from gas, petroleum and coal people more and more often use inexhaustible sources such as solar energy, biomass, wind, and seawater movements. A considerable part of waste and rubbish is used in the world to produce energy. Non-waste water technologies, that is production with a complete elimination of wastewater or technologies using closed circulations constitute a good solution for water management. In the latter ones wastewater is purified and it is used once again in a production process.³³

The natural environment belongs to the whole present population and future generations that is why each form of its degradation and exploitation of resources violates the natural and social order and the interior human order, degrades morality and dignity, so it contradicts the human brain. Rational and economical management of all resources, which takes into consideration the needs of the present and future generations, becomes not only a privilege of some individuals or nations, but also a duty of people all over the world. Rationality and humanism must characterise the human being to nature relationship, too. It refers to exploitation of resources, means and methods of using them, re-establishing the ecological balance, and respect for the natural environment. It is not only the duty of the state, but also of every citizen to be concerned about the environment. Furthermore, producers and households are responsible for the pollution of the environment to a great extent. The former much too often accord priority to maximisation of profit, not to whole society's interest. The situation is similar as far as production of harmful goods is concerned, mainly massive consumption.³⁴

³¹ Łukaszewicz, A. (1980). Przyczynek do kwestii postępu społeczno-gospodarczego. Ekonomista, 5-6, p. 1086.

³² Łukaszewicz, A. (1990). Bariera ekologiczna, recykliżacja, wzrost gospodarczy. Ekonomista, 6, p. 846, 853-862, 865-866. See also about need of recycling: Fiedor, B. and Wilczyński, p. (1987). Ekonomiczne metody ochrony środowiska. Ekonomista, 6, p. 1304. Górka and Poskrobko, Ekonomika ochrony środowiska 123, 126-127.

³³ Semkow, Ekonomia a ekologia 6, 76, 104-106, 207-212, 218-219.

³⁴ Majka 287, 293-297.

In spite of postulates at numerous conferences, reports, or actions in support of protection of the environment, its devastation still takes place on the whole planet's scale. The level of environmental pollution grows faster than social production. Poorly developed countries of Asia, Africa and Latin America are in greater danger. They are the destinations of poisonous technologies brought there by companies that escape ecological consequences, which are introduced in industrialised countries more widely. It turns out that problems of ecology and economic growth cannot be treated as an alternative. Their synchronisation conditions preservation of the natural environment, therefore, human life as well.³⁵

Environmental protection should determine economic management and human life. Taking into consideration only the economic plane, it is nothing else, but only a rational use of natural resources. If the use of the natural environment corresponds to ecological aims of social growth, and, moreover, if economic growth accompanies protection and restoration of natural resources, one of the rational economic management requirements is met then. That requirement needs a global, complete, and interdisciplinary approach. That is why not only economic results, but also possibly the highest quality of life, being an ideal aim of economic growth measure rationality of economic management. The environmental protection wants companies, in their economic activity, to follow the principle of means saving, not the principle of the highest productivity. Taking into consideration the pollution of the environment, it turns out that mass production and consumption of goods is not rational. Amendment of the current principles of social rationality is necessary. Although ecological awareness of the whole nation is growing, there is still a lack of individual awareness.³⁶

New thinking in the economics must concentrate on human beings, not objects. Rational economic management is revealed not only in two techno-economic principles, namely maximisation of results and minimisation of the use of resources, but also the principle concerning all fields of the economics, which says about action in accordance with social needs. If the first two principles do not satisfy the condition of the third one, they are not rational then. Gaining agreement between economic and ecological aims, which are interdependent, is possible owing to rationality of action. There are no rational actions that neglect environmental protection. Rational action

³⁵ Semkow, *Ekonomia a ekologia* 5, 8, 10, 77, 274.

³⁶ Górká and Poskrobko, *Ekonomika ochrony środowiska* 8-9, 20-22, 106.

includes protection of the natural environment; in other words, protection of this environment and economical use of natural resources should be treated as conditions (components) of rationality.³⁷

5. THE INFLUENCE OF CONSUMPTION MODEL ON ECONOMY

Not only the current methods of managing the environment, but also models of consumption realised in different parts of the world are faulty. Next, consumption is responsible for the level and structure of production.

The aim of economic management, which is consumption, stimulating all economic activity cannot be analysed only from the economic point of view. It must satisfy both economic and ethic requirements. In consumer society these are not needs that determine the level of production, but purchasing abilities of potential consumers who create demand. Thus producers direct their activity to extending the need scale of consumers who represent appropriate purchasing power. The fruits of producers' efforts are goods that perfectly meet people's needs; that is to say they make everyday life easier, so they rationalise this life. However, among all the goods offered there are many that do not satisfy any material or cultural needs, but they only take free time, they make it impossible to reach proper aims, are harmful to one's health, and satisfy pseudo-needs created by society. Over consumption and production of useless goods is a waste of limited resources, which should be used in branches bringing profits to all mankind. The importance of the problem becomes visible in comparison to difficulties faced by developing countries and citizens of metropolitan suburbs. Over-consumption and the increase of pseudo-needs, which are accompanied by constant industrial production growth, cause increasing environmental pollution. Their uncontrollable growth causes new pseudo-needs, and it does not solve the existing problems. Growth of individual communication is an example of this. Rich countries are able to fight famine as a world phenomenon. They are even obliged to do so, since they manage appropriate financial, organisational and technical resources.³⁸

Over consumption in modern societies worries not only philosophers but also sociologists and economists. Humanistic values have been replaced with

³⁷ Prandacka, *Nauki ekonomiczne a środowisko przyrodnicze* 15, 29, 37, 110, 249, 252, 256.

³⁸ Majka 34, 59, 64, 226-230, 233-244, 277, 280-283, 295-296.

rushes (in a selfish and merciless way) towards large quantities of material goods, often-irrelevant ones³⁹.

Monopolies, transnational companies, state interventionism and the state sector are enemies of free individual consumption, as well as effective production, which guarantee the market mechanism and economic freedom.⁴⁰

Famine should never accompany mankind. In spite of the demographic bulge in the 20th century, in which demand for food increased, there was also an increase of food resources supply, which even overtook demand. It was not only the result of agricultural production growth and its effectiveness in the US, Western Europe, or China and India, but also limitation of crop losses (done earlier by insects and rodents). Strangely enough, the Third World countries, where a great amount of people starve or do not eat enough, export food to countries having food surplus. Financial resources obtained in this way are spent not only on importing food and investment goods, but also on armament. It is said that all countries, including those with undernourished and starving people used to have abilities of self-provision with food; however, many of them have lost this ability. At present alimentation of these nations is not possible without thorough agricultural reforms (allotment system for farmers) and growth of multidirectional agricultural production. Unfortunately the most absurd direction of using rare resources is armament production and expenditure. The sums of money are large on the world scale so this is why even small limitation of them could decrease poverty and famine of millions of people. Social behaviour observations show that the people are either indifferent to the problem, or they are unaware of it, and on the other hand, politicians and businessmen from industrial countries seem to be interested in the growth of armament production and its profitable export. Thus this is a form of the most sublime waste of limited resources. Although more and more money is spent on research, scientific publications and research results, degradation and human poverty in the world is still in progress. The number of starving and illiterate people is growing, so are expenses of exorbitant armament. There are more and more local conflicts and economic coercion of poorer nations by richer ones.⁴¹

Consumer society constitutes the growth model that has been realised in most countries so far. However, on account of its negative consequences, there

³⁹ Prandecka, *Nauki ekonomiczne a środowisko przyrodnicze* 146.

⁴⁰ Prandecka, B. (1985). Cele gospodarowania a rozwój społeczny. *Ekonomista*, 4-5, pp. 649, 651, 654-656, 662, 665.

⁴¹ Semkow, *Ekonomia a ekologia* 33, 260-263, 267, 274-277, 292-293, 298-303.

is a suggestion that the so-called American model (bigger production, bigger consumption) should be replaced with another one. The Roman model, similarly to the American one, is wasteful (bigger production and consumption, stimulating growth). The so-called Greek model (the same production, lesser consumption) offers moderation, while the Scottish model (bigger production, smaller consumption) is the closest to modern value systems, which combine the ideas of saving and expansion. The Buddhist model (smaller and other production, smaller consumption) assumes a change of values and renouncement. Since the Scottish model requires the least changes in the value system, it has been assessed as rational for a great amount of people. The growth, which it realises, is resource-economical, thus provides a more effective use of labour resources, assumes tight links between countries in the whole world, egalitarianism, and co-existence of the market and the state. Taking into consideration the increased limits of traditional growth stereotypes, it may turn out that growth models will have to follow the Buddhist way, revealing minus growth of artificially created needs and minus growth of industry and urbanisation.⁴²

The hierarchy of values and human aims, which has been cherished for a long time and claims it is more important 'to have' than 'to be', is to blame for the modern world economic dilemmas, among others: famine, resource wasting, debts and demographic bulge. This hierarchy has to be changed.⁴³

Aims of individuals and society depend on their philosophy of life and given reality. Different aims and resources of poor and rich societies, contradictory production and distribution interests, interests of the present and future generations, and interests of an individual and society are an obstacle.⁴⁴

However, common good requires individuals, families and countries to resign from their whims. Humanity's good should constitute the basic ethical law of global rationality. Thinking about aims of economic management and its consequences for the whole world has also been neglected. Prices of resources reflect only current costs of excavation and not their rarity and restoration. This field has been dominated by particular economic action. The future growth of civilisation should not be exposed to spontaneous

⁴² Stacewicz, Stereotypy rozwoju a ekonomia 101-113, 117.

⁴³ Michalewski, A. (1983). Czy kryzys teorii ekonomii? Życie Gospodarcze, 39. Also Alojzy Melich pointed out, that it is not the demographic explosion in poor countries, but irrational consumption in highly-developed countries that causes poor food management. See Melich, Podstawy teorii gospodarowania 104.

⁴⁴ Taylor, E. (1936). Wstęp do ekonomiki (pp. 36-37, 81). (Vol.1). Poznań: Dom Książki Polskiej.

and self-serving activity, as it has been so far, but it should be directed by means of global interventionism.⁴⁵

Common good has to be shared by all human beings. It comes from an assumption that mankind constitutes one entity and common good, is understood and realised for everybody, while its realisation influences growth of particular individuals and enables to achieve their aims.⁴⁶

The concept of common good was transferred from philosophy to economics. J.S. Mill and H. Spencer in their considerations about utilitarianism state that the basic good is happiness of the whole population, not self-happiness of individuals, even someone else's good at the expense of one's own sacrifice. What is more, Mill and Spencer view concern about an individual as a means of realising the whole community's good.⁴⁷

Unfortunately in the market economy which is in favour of economic liberalism, the idea of common good is defeated by tough requirements of economic effectiveness. Liberal concepts in the economic sphere guarantee economic freedom, which contributes to the welfare of the consumer. Since economic effectiveness is the most important value of liberalism, this is why greater effectiveness of economic management leads to greater welfare. However, the postulate to replace economic effectiveness with humanisation of the economic sphere to a greater extent meets certain difficulties resulting from links between particular countries and the world economy, in which merciless requirements of tough competition rule. The economic aspect is the most important in this competition. The position of economic management is determined by its competitiveness, which constitutes a function of effectiveness. Economic effectiveness is thus the highest value in the hierarchy of the liberal system values.⁴⁸

The idea of common good and a duty of social justice on the world scale oblige us to help backward countries. This is the first command, more important than other international tasks and programmes.

The state of the economy of poorly developed countries is worsening dramatically. Unjust international relations should be replaced with a new

⁴⁵ Płowiec, U. (1989). Józef Pajestka, Prolegomena globalnej racjonalności człowieka (p. 278). Warsaw: PAN.

⁴⁶ Majka 254-257.

⁴⁷ Kotarbiński, T. (1957). Utylitaryzm w etyce Milla i Spencera. In T. Kotarbiński (Ed.), Wybór pism (pp. 228, 232, 234, 240, 243-246, 252, 295-300). (Vol.1). Warsaw: PWN.

⁴⁸ Lipowski, A. (1991). Gospodarka socjalistyczna, czyli kryzys tożsamości. In E. Domańska (Ed.) 207-209.

order, thanks to which the whole mankind could live with dignity and in wealth.⁴⁹

It is important, since an increase in meeting one's needs motivates people to undertake rational, efficient, and creative activity, which together with other factors, among others: properly formed incomes and consumption, serves progress.⁵⁰

Supporting the Third World countries should enable them to work out an appropriate production specialisation, which also determines rationality. Behavioural pattern changes of the world community must go together with very deep restructuring of the global economy, whose structure would match new rationality challenges. Within these transformations each community should take the most convenient place in the international division of labour.⁵¹

6. NEW INTERPRETATION OF ECONOMIC RATIONALITY

Meeting the basic needs as an aim of economic management serves making the ultimate aim real, which is human existence and growth. There was an accepted system of aims and values in each society. In the present situation it is necessary to draw and specify a system, which would be socially preferable and in accordance with the idea of rational economic management and would reflect a different character of the world community. Through social approval of aims of economic management, the objectivisation of this category takes place and then stops being subjective. The economy, which is socially preferred (in accordance with social interest), becomes rational economic management. If people do not identify themselves with those aims, and through this with rationality, if the aims are worthless for people, if they are out-of-reach, people will not undertake any actions to make them real, and in consequence they will not act rationally.

Rational economic management is conscious and meaningful activity, preceded with rational thinking, realising aims that are in accordance with a widely approved value system (the minimum of which is meeting basic

⁴⁹ Semkow, *Ekonomia a ekologia* 7, 26-27.

⁵⁰ Pajestka, J. (1975). *Determinanty postępu. Czynniki i współzależności rozwoju społeczno-gospodarczego* (p. 99). Warsaw: PWE.

⁵¹ Łukawer, E. (1987). *Oblicza efektywności* (pp. 19-23). Warsaw: SGPiS.

needs). Realisation of the aims is performed by means of methods, which are in accordance with accessible scientific knowledge and the principle of economic management.

Humanism characterises rational economic management understood in such a way, although there are economic elements in it too. In other words, it is a combination of moral commands and mercenary motives.

Functioning of the market economy has proved that the market mechanism is not capable of solving all problems in the best possible way. It is necessary to make the state a part of economic life. It does not mean widely expanded state interventionism. Total elimination of the state may be equally harmful. The state should, first of all, create a framework of efficient economy functioning, make sure that "the rules of the economic game" are obeyed, protect competition, and create a fair system of social product division.

If all institutions behave in a rational way, then one can say it is global rationality. The way the economy, both national and world, functions depends on economic behaviour of every human individual. While undertaking some action or resigning from it we influence production of certain goods, their value, service, work, resources, and also actions and symbols vital for its functioning.⁵²

Rationalisation of the social process means searching for opportunities to control forces that oppose our brain and solving contradictory interests of individuals and social groups in order to save humanity from destruction. Thus rationality will comprise different steps from elementary aims of survival to rationality of co-existence of contradictory interests, thus guaranteeing self-realisation of members' and social groups' interests. However, it does not mean non-existence of different or contradictory interests, but it means co-ordination of particular and general interests.⁵³

In the history of mankind, in most cases, actions have had a non-rational character.⁵⁴ Man acts rationally only to a small extent. Their needs and profits make human beings act irrationally.⁵⁵

⁵² Szczepański, J. (1980). Socjologiczna analiza zachowań gospodarczych. *Ekonomista*, 5-6, pp. 1103, 1106-1108.

⁵³ Mizińska, J. (1983). Racjonalizm i racjonalność w życiu społecznym. *Studia Filozoficzne*, 5-6, pp. 332-334.

⁵⁴ Pszczołkowski, S. (1937). *Przedmiot i metoda ekonomii* (p. 20). Warsaw: Fundusz Naukowy Zrzeszenia Pracowników Banku Polskiego.

⁵⁵ Melich 136.

The nature of a human being cannot be reduced to rational or utilitarian strategies taking into consideration only the resources one owns and the expected results. It is richer and more complex.⁵⁶ A human being is too complicated to be defined or classified unequivocally. Although man is selfish and altruistic, full of hope and desperate, frustrated and delighted, he lives in the real world and a world of dreams, one is capable of thinking and acting in a rational way.⁵⁷

According to Alfred Adler's humanistic psychology a human being is capable of devoting oneself to human community. Altruism may not constitute a natural feature of the world, but in the educational process human beings are able to develop features which are in accordance with their species interest. Appearance of a social instinct may be a distant future; therefore every individual is responsible for developing a feeling of community spirit. Everybody is held accountable for the human species doom, irrespective of the functions one has, their job etc. Good of all people should be reflected not only in socio-political activity, but also in economic action.⁵⁸

Erich Fromm shared the opinion. His theory is considered to be psycho-social. According to it social character is developed in a person on the basis of adjustment to social requirements. An individual is able to reach a compromise between his/her individual needs and social conditions. Requirements towards people cannot, however, be in disagreement with nature. This is society, its structure and strength that form social character of its members, which corresponds to needs and universal values recognised by society.

Economists view a human being similarly. The most important problems and secrets are in a person, in a complex, or even complicated structure of motives of one's activity. In the economic sphere a human being does not become an isolated economic person, but is still a member of a family, a citizen, a member of a political party or cultural tradition, a supporter of a given ethic system or ideology, a politician, etc. Many economic activity aims of a human being are not stated clearly enough, and the results of this activity are hardly anticipated.⁵⁹

⁵⁶ Suchodolski, B. (1976). Kim jest człowiek? (pp. 10, 25, 41, 98, 151, 219, 224, 240, 242). Warsaw: Wiedza Powszechna.

⁵⁷ Hall, C.S. and Lindsey, G. (1990), Teorie osobowości (p. 73). Warsaw: PWN.

⁵⁸ Adler, A. (1986). Sens życia (pp. 9-10, 24, 67, 243-250, 255). Warsaw: PWN.

⁵⁹ Woźniak, M.G. (1989). Mechanizmy uzgadniania preferencji w świetle interesów indywidualnych, grupowych i społecznych. Kraków: Zeszyty Naukowe Akademii Ekonomicznej. (Vol.306), p. 68.

7. THE INFLUENCE OF ECO-ECONOMIC EDUCATION ON IMPLEMENTING ECONOMY RATIONALITY

People's needs get them to undertake economic action, and meeting these needs makes economic management meaningful, or constitutes its natural aim, although in practice the relationship between needs and economic management is often deformed by different factors such as profit, war, or political power. However, economic decisions, especially having to do with production, should be preceded with the appropriate formation of needs, which are influenced by education linked to economic management. Rationality and realisation of aims of the whole economic management process are dependent on this education to a great degree.⁶⁰

Although individuals and social communities most often act in a non-rational way, but economic subjects and society can be inculcated with rational thinking and acting axioms through suitable education and direction.⁶¹ The internal drive to rational acting by every individual, from both individual and social points of view can be worked out by economic education of society. It should result in gaining economy and productivity habits as well as an ability to compare existing solutions, and finally an ability to make choices with regard to accepted criteria. In economic education a great emphasis should be put on issues dealing with limitations of resources, making rational choices out of alternative solutions and analysis of losses and benefits from individual and social points of view. However, rarity of resources is a primary problem. Each inventory, material or financial, can be used only once.⁶²

Taking into consideration objectivity of economic laws, namely their functioning in all economic processes and every human activity, it is important that the economics should not be a privilege or a domain of a small group of specialists, that is economists, but of every single person as well. All people should be economists to some extent.⁶³

⁶⁰ Majka 63-64, 83, 292.

⁶¹ Biegeleisen, L.W. (1937). Wstęp do nauki ekonomii społecznej (pp. 31, 403). (Vol.1). Warsaw: Nasza Księgarnia.

⁶² Wilczyński, W. (1981). Kilka uwag wprowadzających. In Z. Blok, B. Stęplowski (Ed.), Podstawy racjonalnego gospodarowania (pp. 9-15, 18-24). Warsaw: KiW.

By using one's brain a human being is able to make outstanding discoveries, but too often it is used in a fragmentary way, and while solving the most vital problems, people often forget about it completely.⁶⁴

Nowadays we need to believe in a human being in the way Edmund Husserl did. A human being for E. Husserl is a rational being, and their task and vocation is discovering rationality of the world. If one believes in man, they believe in the meaningfulness of the world and existence of people, and at the same time in the rational character of a human being. However, their self-realisation as a rational being may occur only when the observed human reality turns out completely rational. Realising rationality of a human being's existing reality is thus an order for people.⁶⁵

So far the rationality concept has been too narrow and evoked justified objections of many economists. The suggested modification of the concept mainly concerns substantiating the aims, which must include at least satisfying basic needs of the whole mankind, a necessity of protecting the natural environment and giving up the consumption model of life. 'New' rationality will not tolerate over consumption, production of anti-goods, degradation of nature etc. Unfortunately modern societies, in their rush to increase consumption, have lost moderation and the instinct for self-preservation as well as ecological sensitivity. Thus it turned out that human species, enjoying the name of *homo sapiens*, does not guarantee rationality in the economic sphere.

Modification of the rationality concept comprises the need to analyse not only economic criteria, but also ecological, moral, and social ones on the world scale. International community must revise its systems of values and attitude, educational systems and economic management solutions, in order that existing, and what is more important, future economic systems can become rational.

⁶³ Urban, M. (1983). Gospodarność powszechnym prawem życia. *Gospodarka Planowa*, 10, p. 438.

⁶⁴ Pajestka, J. (1990). Prolegomena globalnej racjonalności człowieka. O racjonalności ewolucji cywilizacyjnej (pp. 10, 50, 72, 89, 190, 210, 214, 216). Warsaw: PWN.

⁶⁵ Święcicka, K. (1983). Racjonalizm zbłąkany: Husserlowska krytyka obiektywizmu. *Studia Filozoficzne*, 5-6, pp. 292-292.

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Stanisław Flejterski
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CHAPTER 2

**FINANCES AND PRO-ECOLOGICAL
CHALLENGES OF TODAY'S MARKET:
BETWEEN SENSITIVENESS
AND INTERESTEDNESS**



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FINANCES AND PRO-ECOLOGICAL CHALLENGES OF TODAY'S MARKET: BETWEEN SENSITIVENESS AND INTERESTEDNESS

If only one man dreams, the dream will remain a dream only.

If we dream all together, the dream will mark a beginning of a new reality.

H. Camara

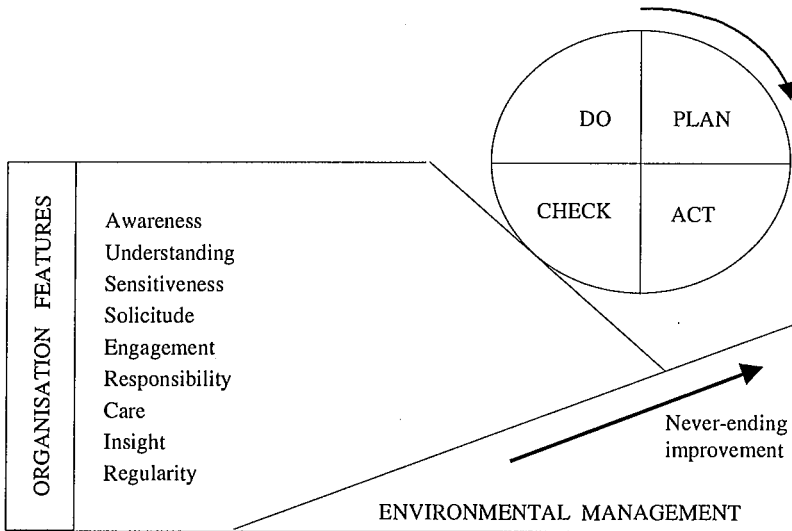
It would seem that the economic development of the world, so much desired and awaited practically by all, has no "dark sides" and that it can be the pride of mankind. On the contrary, it can be seen that what has been the pride of mankind so far, is rapidly becoming its curse. It is this negative other side of the progressive process of industrialisation and urbanisation that causes an increasing appropriation and, first of all, pollution of natural environment, in which man lives. Fortunately, however, a growing common awareness of the threats, which result from a one-sided perception of the technological progress, is clearly noticeable. Societies undertake more and more intensive efforts to turn this unfavourable situation round. This care for the prevention of the destruction of natural environment and for the breaking of the wasteful exploitation of natural resources is articulated more and more intensely and results in the fact that the word *ecology* is present in the economy more and more often. At the same time it becomes a particularly important current subject of interest of today's organisations and institutions.

Ecology is a sphere of natural sciences, which investigates mutual relationships between lively organisms (or their groups), and the external world, which surrounds them, i.e. natural environment. In this determination of interests, the problems of environmental ecology (the so-called *sozology*) with its main principle proclaiming "*the unity of every organism with the environment*" acquires a special meaning. The beginning of publicising ecological matters

dates from the 1970s as already then a specific kind of controversies between ecology and economy arose in particular in the face of the ascertainment that the seemingly huge reserves of raw materials are soon to be exhausted. In addition, a wider interest in the energy obtained from nuclear power stations appeared.

The first steps taken were only temporary and connected, first of all, with the reduction of a negative influence of end-pipe substances to the environment. However, as the importance of the problem and the threat to mankind were understood clearer, the idea of pure production appeared to evolve towards standardised systems of organisation management in such a manner as to make the effects of its activity profitable for the environment it operates in. In 1992 the British Standards Institute published the document entitled "*Specification for Environmental Management Systems*" which introduced the first standard for technical systems of environmental management called BS7750. Consequently, this led to the establishment of a concept of durable sustainable growth, that is to say the carrying out of uninterrupted economic growth in order to guarantee a respect of natural resources and appropriate environmental protection.

Diagram 2.1.
A never-ending process ecological management improvement.



Source: Authors' own elaboration.

This growing interest in ecological problems was also reflected in the Declaration for the United World adopted by the United Nations Organisation in which there is a very characteristic statement: *"I will do all to reduce the adverse effect on the environment, to protect other creatures and to respect the beauty of the Earth"*. However, this positive change of attitudes in the environment of an organisation, primarily in the industrial states, entails far-reaching consequences. The not-long-ago "fashionable" topic of environmental protection has now become society's basic and objective manner of thinking. In addition to the changes in people's (i.e. consumers') behaviour, the idea of environmental orientation had a stronger influence on the legislation as a result of the public opinion pressure. It can be assumed that the problem of environmental protection changed from hitherto "narrow theme" for the elite to a general people's endeavour to maintain their environmental heritage. This pro-ecological approach manifests itself especially in the observable change of the manner of thinking and behaviour of organisations, institutions, parties and associations.

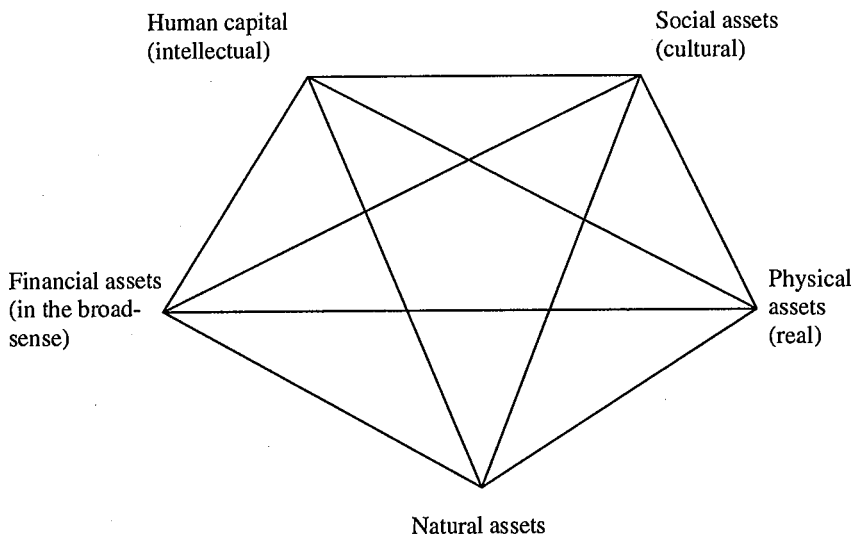
Pro-ecological groups and various "green" parties in rich countries have for many years demonstrated their critical attitudes towards the system, which used the ideology of competitiveness and liberalisation. In their own postulates they mainly stress the necessity to save and protect natural environment and demand strict limitations to man's activity which endangers the environment. They often accept the role of an uncompromising guarantee of this specific kind of generation liability.

Additionally, following the publication of The Club of Rome's main work entitled *"The Limits to Growth"*, the awareness of the danger began to grow. A strongly emphasised postulate of giving the economic development processes the features of eco-development i.e. the development, which respects the need to maintain and protect ecosystems. This denotes a necessity to supervise the activities of all economic subjects and public bodies and to check "the egoistic" tendency of being exclusively profit-oriented.

Economy must, therefore, take into account this process of reorientation of social attitudes. Especially industrial enterprises become, so to speak, forced to settle their own problems connected with the protection of the environment, so as to be perceived as ecologically responsible. One can even attempt at making a statement that ecology-oriented branches and organisations will be unquestionable leaders of the future, as for many organisations and institutions the connection between economy and ecology is inseparable. All the more so as finance became a central point of the so-perceived relationship, which, undoubtedly, has the decisive influence on the awareness of the persons responsible for it in an organisation. Usually, however, an active method

of environment protection is treated in an organisation as a course of action forced by legal regulations or the pressure of social opinion. Therefore, the ethical relation of the industry with the environment and with our future often seems to be receded into the background for alleged economic reasons and yet natural assets are strongly correlated with other assets (see Diagram 2.2.).

Diagram 2.2.
Correlation between natural assets and other kinds of assets.



Source: Authors' own elaboration.

This is why the pro-ecological approach requires, also from financial institutions and perhaps especially from them, to maintain a specific equilibrium between what is profitable in the purely economic sense (economical subjectivism) and what is profitable in the ecological dimension (ecological objectivism). It seems that a departure from thinking in the subjective categories "we win, they lose financially", because, after all, business is a fight for economic survival and he who is stronger survives for the benefit of objective thinking in the categories "we win our environment together or we lose it together", for the benefit of future generations. Obviously, this reorientation will certainly not happen overnight, and a change of attitude in

banking financial institutions is not easy for conspicuous reasons. It requires psychological (as far as teaching the sensitiveness to widely perceived problems of environmental protection is concerned), cultural, and institutional changes. One should understand, however, that in the future no one will ask "*why they did it*" because each pro-ecological activity will be most natural, subconscious so to speak, but the very dramatic question "*why they did not do it*" will certainly be asked. Moreover, there is no contradiction between the words "economy" and "ecology". The Greek word "oikonomikos" denotes the management of a property and as part of philosophy it had an ethical normative character making it possible to assess what was good and what was evil. In turn, the Greek words "oikos" – house and "logos" – learning, mean the adaptation of an organism to its habitat. Observing man's activity and its results during centuries one can notice that at first he did not differentiate between what was good and what was evil and did not adapt himself to the environment but on the contrary, for a long time he adapted the environment to himself. It was not until he realised the effects of his invasive and resource-grabbing activity that he gave a new dimension to ecology i.e. the dimension natural environment protection. Additionally, what links the two words is a common prefix eco- which, jokingly, may mean that economy should be ecological and ecology economical.

Thus, financial institutions are facing a task to achieve a state of equilibrium between the social and environmental aspects of activities and to carry them out according to the financial plan in order to produce the expected financial results. It turns out that financial decisions should be made not only on the basis of financial characteristics of the *subject to be financed* (especially its creditworthiness) but first of all on the basis of *the object to be financed* (i.e. objective verification of how environment-friendly the products and services supplied by the subjects interested in financial services are [or will be]). So, it can be accepted that common sense, engagement and ecological care of these financial institutions make it possible to finance exclusively those activities and projects which do not cause any danger of damage to natural environment or the danger is reduced to a necessary minimum. From the point of view of ecologicistic requirements, the ecologicality of a logistics system and business processes performed within it should be defined, beginning from the planning stage of a product and service, their design, production and management of the delivery chain and post-sale service.

So is it possible in the economic and mainly financial approach to ecological problems not to pay greater attention to the necessity to perceive the cause-effect relationships or lend more weight than so far to the multi- or

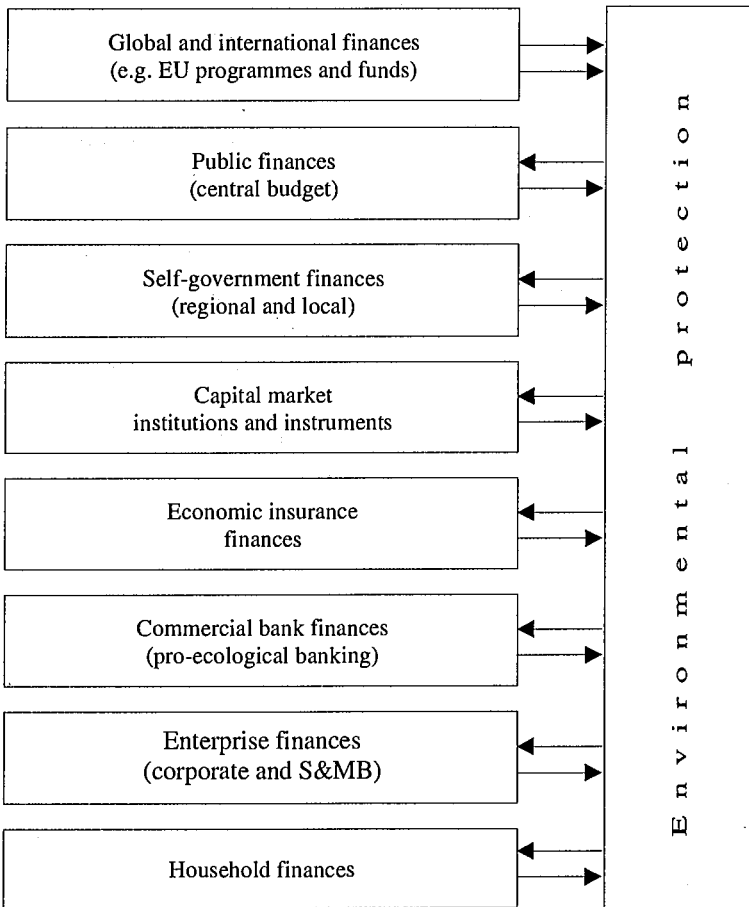
interdisciplinary expression of research into these problems? All the more so as during the past years two phenomena were outlined, i.e. a specific "politisation" of the world's economic problems and a specific "economisation" of many phenomena and processes in the sphere of the politics.

One can be tempted to extrapolate this general ascertainment on the ground of study of finance itself. However, as early as in the beginning of considerations, one ought to emphasise the fact that one of the main assumptions of relative underdevelopment of economic sciences is the inability of traditional disciplines to express fully the object and range of the reality. The mono-disciplinary approach, which is often represented in Economics, proved insufficient to make a full scientific analysis possible, although each science has its own successes and is in a position to indicate some regularities of development. In many cases, and with reference to the relations economy/ecology, the multi-disciplinary expression would prove more valuable (the coexistence of many spheres), and even more interdisciplinary (the co-operation of many spheres). Therefore, the financial reality constitutes a strictly integrated whole whose investigation by separate scientific disciplines can be justified only by its complexity and multi-aspectness as well as difficulty in a full and simultaneous expression of all problems. In the light of this one can, as it seems, venture the argument that while investigating today's economy, including the financial reality, the traditional, i.e. mono-disciplinary expressions, will be more and more often of little adequacy and insufficient from the point of view of the complexity and changeability of the object of research.

Economic (financial) phenomena and processes are not autonomous, but are only aspects of a complex, various, and internally well-ordered wholes, and therefore they can be explained on the ground of this whole only, i.e. with reference to the crossing, overlapping and mutually influencing economic, political, social, natural, cultural, demographic and technical-technological phenomena. Obviously, a full recognition of mutual cause-effect relationships requires a versatile outlook and a multi- and interdisciplinary approach. It seems that the "unified approach", which consists in the strict linking of economic (also financial) and extra economic (including mainly institutional) factors should be represented. In the light of this approach every category analysed by Economics (including the study of finance) has both an economic and extra economic character simultaneously. For these reasons there are many unsolved but undoubtedly intriguing financial and ecological problems, both for theory and for practice. They can be examined at many levels, i.e. in the areas of the global and international finance, the public finance (the state budget, taxes etc.), the municipal finance (regional and local), the finance of

commercial investment banks (together with financial markets and financial engineering), the insurance finance (property and life) and the corporate and household (personal) finance. Each of the listed sub-disciplines of the study of finance experienced a real revolution in the past years. New markets, institutions and financial instruments appeared. Among them many added the prefix “eco-”, which was not incidental. The relationships between the world of finance and environmental protection are presented in Diagram 2.3.

Diagram 2.3.
Main relationships between the world of finance and environmental protection.



Source: Authors' own elaboration.

Taking into consideration the above-mentioned issues it should be assumed that the following rules of conduct ought to be acknowledged as most important in every organisation's holistic approach to ecological problems:

- the rule of precision: every organisation should specify its own policy in the field of natural environment protection, so that it should be univocal for market and environment partners because *“when we see clearly the aim we want to achieve, we have gone more than half of the way. Efforts alone turn to the aim achieved”* (Chemical Works Police S.A. in the programme “Responsible Care” adopted the responsibility for the safety of people and the state of the environment in a completely voluntary manner, not affected by standards or rules of law),
- the rule of usefulness: the interest in ecological issues should exhibit advantages (value-added) which the organisation will gain in accordance with the rule: *“if we know what this will give us, we will achieve it”* (e.g. the Refinery Trzebinia S.A. made the process of distribution of fuels air-tight and started a system of recovery of volatile steams of hydrocarbons at the level of about 95%),
- the rule of feasibility: the policy of an organisation as regards the environment should be developed on the basis of real possibilities of its implementation according to the rule: *“measure your strength by your intentions, discriminate between ‘what you want’ and ‘what you can’”* (Chemical Works Alwernia S.A. made it possible to reduce the quantity of waste material to 50% per production unit),
- the rule of respect of time: the strategy of an organisation activity which is focused on environment protection should be developed on the basis of essential requirements and needs of society (often not articulated), therefore suitable time for its full formulation is needed according to the principle that *“by hurrying we may overlook essential assumptions but by acting too slowly, we will make things happen without our involvement”* (by employing specialists from the Institute of Oil Technology from Cracow and from the British firm Echo Microbiology the Polish Oil Syndicate Orlen S.A. detected anaerobes in the oil which caused corrosion of tanks and pipelines. This effected in the necessity to disinfect the whole production-distribution system),
- the rule of unity: in its care for the protection of the environment an organisation must concentrate on selected areas, the “key themes”, because *“he who takes too much, will express it wrongly in the end”* (e.g. the Bank Ochrony Środowiska S.A. sponsored, among other things, the programme of owl protection in the Roztoczański National Park).

Today's European Union environmental law comprises about 200 acts which refer, among other things, to water and air pollution, the economy of waste material and chemical substances and biotechnology. The Polish Standard Committee must accept at least 80% of the existing European standards by the end of 2002, and there are about 9.5 thousand standards. To date the Polish Standard Committee has already implemented more than 5 thousand standards in force in the EU countries. In Poland the new environment protection law (in force since 1st October 2001) also requires e.g. that a businessman who intends to start an activity must, among other things, take actions to protect the environment against its negative influence.

More and more often the so-called "green logistics" becomes conspicuous. Its task is to measure and reduce the negative influence of the logistic activity on ecology. If a logistic system comprises a set of elements such as, for example, production, transport and stockpiling of these elements together with the relationships between them and between their properties, which condition the offer of the logistic process, it is the influence of transport on the environment which appears to be a key issue. All the more so as according to the UN data the emission of greenhouse gases may grow by 40% by the year 2010 from the transport sector only. Therefore, the proper formation of logistic processes, i.e. of sets of mutually related or mutually reacting activities gains particular importance and, therefore, all the elements which enter and leave the logistic system during the carrying out of the logistic process must be taken into account during the identification of environmental aspects. It appears that the identification of environmental aspects is an incessant process which determines the current, the past and the potential influence (positive or negative) of activities of an organisation on the natural environment. This process also includes the identification of the potential influence of rules, legal regulations and economic impact on the organisation and the logistics of its activities. It may also include the identification of influence on health and safety and the assessment of the environmental risk connected with this. The identification of environmental aspects, that is to say the elements of activities, products and services which lead to influencing the environment becomes the most important task for an organisation. The following are the main environmental aspects: physical (e.g. noise, heat, vibrations, odour, dust), chemical (toxic, oxidative, reducing, explosive, flammable substances and those causing corrosion), operating (discharge, emission, leakage) and natural (results of the synergic effect: weather, heat, cold). All of them cause advantageous and disadvantageous changes in it, therefore, it is necessary to identify as many environmental aspects as possible remembering that they are the reasons which may produce results, i.e. changes in the natural environment. Special care

is provided for the protection of the surface of the Earth, manifesting itself in the reduction of waste material in the place of their origin, rationalisation of the economy of waste material and in the elimination or reduction of the threats to people and the environment which are the consequence of man's activity and the so-called old pollution. The definition of admissible emission of fuel-combustion-related pollution to the atmosphere, municipal waste and dangerous materials (the Ruling of the Minister of the Environment of 30th July 2001 on the discharge of pollutants from technological processes and operations to the air) may cause e.g. a stoppage of the work of municipal waste material combustion plants, if in normal conditions the amount of dust emitted to the air exceeds 600 mg/m³ of dry waste gases. Therefore, investment in ecology can be remunerative for local governments because it may result in reduced ecological charges paid by a gmina. Additionally, tourist attractiveness of the region may increase, which will certainly bring additional profit.

Therefore, for the documentary evidence of a better orientation of an organisation to the matters of the protection of the environment the following approach making it possible to obtain affirmative answers to the following questions, becomes indispensable:

- Can we do it well? – an analysis of current possibilities of the manufacturing process and its possible negative influence on the environment.
- Do we do it well? – monitoring the process of implementation, with special emphasis given to strict control of harmful effects on the environment.
- Do we intend to do it well? – assuring a full realisation of the manufacturing process with due care given to the reduction of the negative influence on the environment to the indispensable minimum (relevant to the technological process).
- Can we do it better? – research in the manufacturing process and its changes aimed at a reduction of its harmful influence on the environment.

It seems that every responsible organisation should carry out a specific review of the following diagnostic areas of its own business activity:

- the magnitude, the frequency and the directions of the influence on the sectors of the environment,
- the organisation of the energy economy and possibilities to save energy e.g. by a proper selection of energy factors,
- the adopted raw material economy, the manner of the selection of raw materials and possibilities to save them,

- the possibility to reduce waste material, the susceptibility to recycling, transport and utilisation,
- the noise level within and outside the enterprise of an organisational unit,
- the current state of technological and organisational advancement of the manufacturing processes and possibilities to make suitable changes,
- the results of own environmental activities and the activity of contracting parties, subcontractors and suppliers,
- the possibilities to prevent and reduce the occurrence of the emergency situations which have a negative influence on the environment,
- the ability to obtain external information related to the widely understood environmental problems.

The organisation whose system of management comprises the system of environmental management has undeniable foundations, which will make it possible to implement bravely efficient ecological and economic aims. In the long run this also gives considerable superiority over competition, which leads economic benefits. This is why an organisation should implement an effective and well working system of environmental management, to protect man and the environment against a harmful influence of its activities, products and services on health and on the environment. Responsible organisations should actively participate in the maintenance and improvement of the intact environment, however, a constant development of legislation on the one hand and the changing moods in society with reference to ecological products and production on the other, are a huge economic risk. Therefore, the environmental idea as an economic factor should be brought to the foreground and perceived as a chance for an organisation. The fact that today's ecological victors will also be future economic victors cannot be questioned. Not only desirable reactions to market pressure, but also the ethical duty of organisations and their social responsibility are helpful in retaining an undamaged and healthy environment to future generations.

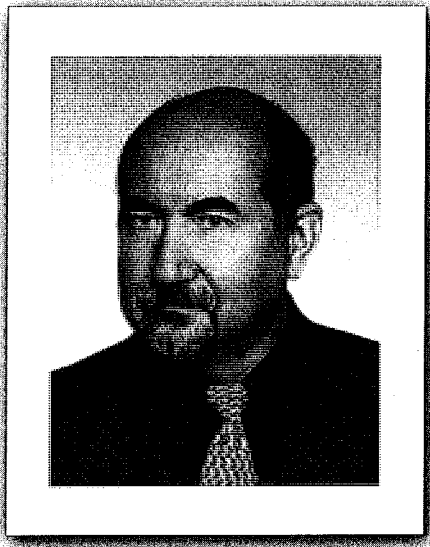
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Jerzy Bogdanienko

CHAPTER 3

**THE ECOLOGICAL SENSITIVITY
OF COMPANIES AS A FACTOR
OF COMPETITIVE SUPERIORITY**



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THE ECOLOGICAL SENSITIVITY OF COMPANIES AS A FACTOR OF COMPETITIVE SUPERIORITY

The necessity to be equal to the increasingly severe competition becomes a more and more serious challenge for today's managers, which makes them use all possible factors to cope with this new situation. One of the key elements of the strategy leading in this direction is the increased importance of social responsibility of enterprises. Related to this is the so-called "Green Management" which, as a manifestation of social responsibility, influences the image of an enterprise and draws more attention while seeking competitive superiority. Lastly, due to the costs and sale value, it affects the results obtained and, therefore, this aspect of activity of a company should be paid more attention to.

Although theoreticians of management have been raising the issue of social responsibility of an organisation for years, it is in globalisation that entails the risk of causing large-scale negative effects that the importance of this problem has grown considerably. Social responsibility is understood as an obligation of an organisation to undertake various activities aimed at exerting a positive influence on the community the organisation operates in, or at least minimise the negative results of its activity. This is most often done at the cost of resignation of part of the short-term profits and by allocating them to social aims, but this results in permanent improvement of the image of the firm in the public opinion and in increased competitiveness in the long run.

The classical qualification of "social responsibility of a corporation" is based on two principles: charity and stewardship, having their sources in the Bible, but in economic practice most often connected with the name of the American millionaire, Andrew Carnegie, who gave away all his huge fortune during his life time. The charity principle requires that the more fortunate society members should help the less fortunate, so people of means should support the poor. The stewardship principle requires that companies and the rich should treat themselves exclusively as stewards entrusted with fortunes

and working for the benefit of the whole state.¹ In the fifties and sixties these principles were universally accepted in American economic circles who acknowledged that "authority produces responsibility". Contrary to this were the opinions held simultaneously by others. They claimed that companies should only produce goods and services efficiently, and the solving of social problems should be left to the persons and government institutions engaged in it.

Social responsibility in the above sense has a common basis with ethics, which is generally defined as the science of moral rights and duties of people who make decisions concerning human interrelations. It will be possible, of course, to avoid ethical problems in economic activity. The problems concerning ethics are examined on four levels: the level of society, organisation of environment, internal policy, and individual employees. The first level analyses the social results of the existing economic system. On the second level are stakeholders i.e. suppliers, customers and the remaining groups of people from outside who are influenced by the decisions of the company. The third category results from the internal policy of the company, so it concerns the relationships between the employer and the employee and defines their rights and duties. The last level is the manner of mutual treatment of people within a given organisation who are to strive for a common aim in the company and to fulfil a common mission.

The **notion of entrepreneurial ethics** can be generally understood as an attitude of a company to its own employees, customers and the local community, which requires that the company should treat each group in an honest and fair manner. The care of a company for ethics is expressed in the endeavour of its management and employees to observe the laws and regulations concerning such matters as the protection of natural environment, the safety of products and their quality, the rules of honest marketing and sale, honest rules of employment and wages, creating jobs for the disabled and engagement in activities for the benefit of the local community. A need to introduce a social quality mark in enterprises is more and more often discussed. Today's managers of respectable companies begin to institutionalise the ethics in their company code of practice: establish offices of ethics spokesmen, committees deciding in the matters of ethics and programmes for the analysis of social problems and ethical training.

These activities are expensive and prove most effective if realistic rules of conduct were worked out at the very beginning and the costs and results of

¹ Stoner, J. and Wankel, Ch. (1992). Kierowanie (pp. 112 and following). Warsaw: PWE.

these activities were exactly estimated and considered. It is essential that the industry and the government should cooperate in the laying down of these rules. Ethical conduct, as we have already said, increases profitability in a longer perspective, because such an attitude raises confidence and attracts customers, attracts and retains most valuable employees, supports the welfare and opportunity to survive of the community in which it operates.

It is, however, necessary that members of senior management should be openly committed to the matter of ethical conduct and propagate this commitment by their own attitude, the company policy and management methods. This requires, among other things, an extension of the idea of marketing into the idea of "social marketing".

In accordance with the idea of "social marketing" the role of an organisation consists in the definition of market needs and the delivery of a desirable product or service in a manner more effective and more efficient than that of its competitors, with a simultaneous maintenance or increase of society welfare.

The idea of social marketing requires that three elements should be balanced, namely:

1. the company profit.
2. satisfaction of consumer need.
3. public interest taken into account.

The raising of the level of socially responsible marketing requires parallel activities from three sides.

Firstly, the society should use legal regulations in order to make the identification of illegal, anti-social and anti-competitive practices possible.

Secondly, companies must acquire an ethical code, build the tradition of ethical conduct and ascertain that its employees fully comply with these rules.

Thirdly, all business people must demonstrate "social consciousness" in contacts with customers and other partners. In practice an increasing number of companies appeal to social assessment in order to improve their own picture in the customers' eyes.

In this context it is worth drawing attention to the aspect of social responsibility of companies, especially strongly underlined lately, namely the protection of the natural environment.

The increasingly popular world trend to protect the natural environment causes a need to adapt companies to the new conditions connected with this and, consequently, more and more clearly leads to the ecologisation

of companies and the ecologisation of management. The first notion, i.e. **ecologisation of companies** is a broader one. It should lead to a permanent and ecologically sustainable development based particularly on:

1. the introduction of environment-friendly changes in production technologies,
2. the reduction of pollution and of waste material emitted by the company,
3. the reduction of resource and energy consumption of the company,
4. the minimising of ecological external costs of products manufactured by the company.

However, the process of ecologisation of management also referred to as “green management” consists in such changes in the resources of knowledge, skills and management techniques in the company which assure the obtainment of a high effectiveness of production with a simultaneous minimisation of its negative influence on the natural environment.

The new approach of companies to management, compatible with the idea of eco-development gave rise to the creation of management models included in a series of international standards. Today the standards of ecological management of the International Organisation for Standardisation series ISO 14000 are most widely acknowledged. They are a system of guidelines to ecological management as they define ecological aspects in product standards as well as the principles of eco-audit which helps to assess the effectiveness of pro-ecological activities of a company. The ISO 14001 standard recommends that such basic elements as the structure, responsibility, manners, procedures and resources for the implementation of ecological policy, and tasks and aims were co-ordinated with other functions of the company.

The law and ecological regulations are of basic importance in motivating to ecological management because failing to observe them may lead to a ban on a definite production, service etc. activity. These motives, connected with administrative and legal enforcement which marks the scope of the ecologisation of management, i.e. the necessity to have such an organisation which will enable the monitoring of the concordance of the company activity with the law and ecological regulations. The manager’s personal responsibility should also be pointed out: in Western Europe severe penalties are imposed on managers for damage caused to the natural environment. However, ecologisation of management is not only a result of a constraint following from legal regulations as there are many more motives for ecologisation of enterprise management, which issues, to a large extent, from purely economic premises. These motives comprise:

- increased charges for the use of the resources of the environment and the growing charges for the emission of pollutants and the attempt to reduce them,

- appearance of new, more effective and simultaneously environment-friendly technologies of production, transport and storage to replace those hitherto existing,
- reduction of losses caused by the negative influence of pollution on the employees' health, which has an effect on the efficiency and productiveness of machines and devices,
- banks and insurance agencies more and more often demand a detailed description of risk, including ecological risk, before signing a loan or insurance agreement, because they do not want to expose themselves to a possible co-responsibility these institutions could be involved in.²

First of all, the “polluter pays” principle is universally applied. According to this principle the polluter is charged with the costs of disturbing the state of the environment, what is the most often practiced manner of internalisation of the results of external interference with the natural environment. This can be done in many variants:

- by forcing businesses to adapt to administratively established admissible standards of pollutant emission. Fines are imposed for exceeding the standards.
- offering transferable rights to environmental pollution, the so-called emission trade, on condition the admissible level of pollution in the region as a whole is maintained.
- imposing on the polluters a tax dependent on the scope of potentially harmful activity, the so-called Pigou tax, which is considered the most proper manner of motivating the producer to protect the environment and encouraging him to invest into clean technologies.
- granting the polluters preferential credits for protective installations and definite financial relieves if emission is decreased.
- application of licence and exploitation fees for the use of environment resources.
- initiation of obligatory insurance and ecological deposits in the case of performing an activity which threatens the environment.³

The scope of possible economic reactions is comparatively wide; we gave here only example solutions. There is also a moral pressure, deepened by the

² See Kopitsky, J.J. and Betzenberger, E. (1997). Bankers Debate... Should Banks Lend to Companies with Environmental Problems. In: Green Management. A Reader. The Dryden Press.

forecasts of increasingly limited resources, conducive to saving them, and those of irreversible degradation of the natural environment. This is connected both with the increased activity of non-government ecological organisations, scientific associations or informal civil groups representing a given local community, as well as with the increased ecological consciousness of the young generation.

At last this becomes transformed into economic influence because it results in growing consumer ecological requirements. A company which does not satisfy suitable standards will not sell its products on the domestic market, but especially abroad. The protection of the environment becomes also a tool of competitive struggle. Ecologisation motives connected with a positive image of a company result mainly from the recently observed, especially in developed countries, permanent increase of interest of society, i.e. consumers, in the state of the environment. This interest extorts increased sensitiveness of particular companies to the problems of ecology. Especially in the last decade, the idea of the so-called "green consumerism" has been developed, which has been a reaction of societies to the deteriorating state of the natural environment. Ecologically conscious consumers believe that by their own decisions in the micro scale they can contribute to the decrease of pollution in the macro scale. Ecological organisations publish more and more "green consumer guides" which postulate to avoid the products and services which:

- are a challenge to health,
- require the use of excessive amount of energy and of raw materials,
- contribute to the production of excessive waste material,
- are produced from materials coming from dying out species of plants and animals, from threatened areas or as result of cruel behaviour in relation to living beings,
- cause damage to other societies, especially in the Third World.⁴

The "green marketing" leads to a change in human consciousness attitudes, which is reflected in consumer decisions and, consequently, influences the production of goods and services. This is, of course, a prolonged process because it is based on a deep psychological conditioning both in the consumers and the producers. Some theoreticians point to the need to take two aspects into account: willingness to pay (WTP) resulting from a higher price or additional costs of ecological products and willingness to accept (WTA),

³ Baumol, W.J. and Oates, W.E. (1988). The Theory of Environmental Policy. Cambridge University Press.

⁴ Morden, A.R. (1993). Elements of Marketing. Guernsey Press.

i.e. the accord to the negative results of threats to the environment.⁵ These difficulties are additionally deepened by the well-known problems connected with the complexity of economic appraisal of outlays for the protection of the environment resulting from the incomplete measurability of components of the calculation and from the limited efficiency of activities undertaken, which produces a considerable risk connected with investments of this type.⁶

Nevertheless, this pro-ecological change in the style of consumption is perceptible and extorts from companies the adaptation of their own image to the trends binding on the market. In connection with this, the care for a company's proper "green image" becomes a strong impulse to the ecologisation of management. The first step in a company that decides to introduce environmental management, is ecological audit. The notion of ecological audit (environmental review) should be perceived as a process of systematic and complete analysis of the activity of a company focused on the protection of the environment. An audit is a method of gathering information and identifying problems. An audit helps to ascertain that the protection of the environment in a company is carried out in a professional and conscious manner but not in a fragmentary and incomplete manner.

An audit should comprise:

- the determination of all the legal requirements which should be met by a company and products manufactured by it,
- the determination of the influence of every manufactured product in all the life-cycle of the product on the environment and the influence of the environmental management procedures on the competitiveness of the products,
- the appraisal of the activity of the company based on the internal criteria, standards, principles and practices in the light of the existing system of management of the protection of the environment,
- the description of the accepted principles of the policy and procedures during the acquisition of raw materials and sale of products,
- the information about cases of violation of the regulations pertaining to the protection of the environment.⁷

⁵ Pearce, D.W. and Turner, R.K. (1990). Economics of Natural Resources and the Environment. New York: Harvester Wheatsheaf (WTP – willingness to pay, WTA – willingness to accept).

⁶ See Winpenny, J.P. (1993). Values for the Environment. A Guide to Economic Appraisal. Her Britannic Majesty's Stationery Office, London (Polish translation: Warsaw: PWE, 1995).

⁷ Poskrobko, B. (1996). Zarządzanie środowiskiem. Warsaw: PWE.

The basic advantages of the ecological audit include not only the fact that it provides a basis for making decisions, also in the aspect of environmental costs, and increases the ecological consciousness of employees, but also the fact that it uncovers the range of problems related to the protection of the environment and makes the defining of environmental policies easier and increases the external reliability of the company.

The ecologisation of a company serves to guarantee the company a permanent market position on internal and foreign markets and the possibility to implement its basic mission and permanent development in the accepted time horizon of strategic management and planning thanks to the carrying out of the following aims:⁸

1. decreased energy and material consumption in the production process, transport, storage etc.,
2. environment-friendly technological changes in production, i.e. reduction of pollutants and waste material generated by the company,
3. reduction of environmental arduousness of goods and of services offered by the company.

The level of minuteness of detail of the system of environmental management is relative to the size of the company as well as the specificity of its activity. The system of environmental management makes a connection of environmental policy with the development strategy of the company possible. The construction of ecological strategy and its implementation are linked with investments, but these are the inevitable investments, which condition the future of the company in the long perspective. We can use here the idea proposed by E. Frese and J. Kloock who presented a typology of companies from the point of view of the manner of taking into account ecological aspects in the aims of their activity. These aims can generally be treated as material, which can be reduced first of all to the care for profit, and then ecological aspects are taken into account, first of all from the point of view of their financial results; or as formal aims which are contained in the strategy of the company which is then publicised. Simultaneously, important for the appraisal of a company is also the way it treats these aims: in a passive or active manner, so they are a result of pressures from outside or an indication of the attitude and commitment of the management and approach of employees.

⁸ Czaja, S. and Fiedor, B. (1998). W zgodzie z wymaganiami rynku i środowiska, Eko – profit, 1.

In this light four models of the pro-ecological policy of companies appear as shown in the table.

Table 3.1.
Types of pro-ecological attitudes of companies.

Environmental policy	Aims	
	Material – economic	Economic and ecological
Active	Type A company	Type B company
Passive	Type C company	Type D company

Source: Frese, E. and Kloock, J. [after:] K.Zimniewicz. (1999). Współczesne koncepcje i metody zarządzania (p.174). Warsaw: PWE. Author's own elaboration.

Companies A and B consciously perform their ecological policy resulting from their organisational culture as a set of short-term activities in the form of improvements introduced or as an element of a well-thought-out strategy. In this instance it depends not only on the understanding that it is sometimes worthwhile to sacrifice short-term advantages for long-term ones but on the recognition of the protection of the environment as a value per se.

Companies C and D apply a passive ecological policy which is extorted on them by the environment, not only in their direct attempts to avoid punishment for the encroachment on the environment as is the case of company C, but even if this results from their publicly declared aims in the form of improved public relations, so in the shaping of a more advantageous image of the company, if the position of the firm is not strong, as is the case of company D.

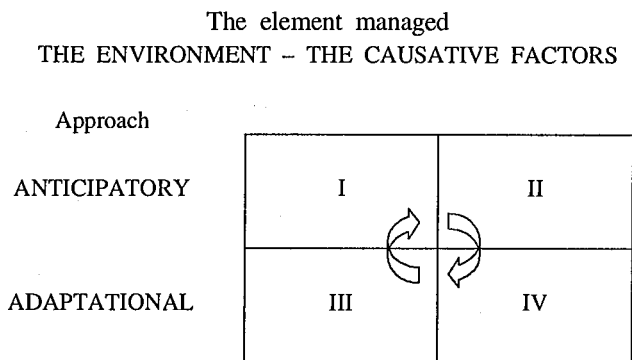
The classification of companies can also be made from the point of view of two other criteria: the approach to ecological problems taking into account the degree of anticipation in the appraisal of the results of production activities and undertakings connected with them and aimed at minimising their influence on the environment as well as the character of these undertakings which can be resolved into the management of the state of the environment or the factors which cause a change in this state.⁹ The former criterion is a choice between

⁹ Janikowski, R. (2000). Zarządzanie ekologiczne w ujęciu systemowym, Ekonomia i Środowisko, 1.

the prevention of negative results of the activities carried out and the removal of the harmful consequences that have already occurred. The latter criterion can be defined as activities directed outside or inside, i.e. to the processes carried out in the company and the attitudes of employees', which is labelled causative factors.

Thus the causative factors are manners of product manufacturing and consumption resulting in a definite pressure on the environment. This is important insomuch that except for radical events a great influence on the natural environment is exerted first of all by a mass, recurrent behaviour of all participants of the social life which is related to culture, ethics and the knowledge of ecological aspects of the human activity, sometimes qualified as the tyranny of little decisions or the destruction by small increases.¹⁰ It is then necessary to change this type of influence on the environment. From the point of view of a company this can be taken into account in the form of an analysis of the manner of inclusion of ecological aspects in the rules of its functioning in order to evaluate the possibility to intensify positive behaviour. This is then a classification of companies based on, generally speaking, four types of ecological management, as shown in the diagram.

Diagram 3.1.
Basic classes of ecological management.



Source: Author's own elaboration based on: Janikowski, R. (2000). Ecological Management in System Formulation, Economy and Environment, 1.

¹⁰ Odum, W.E. (1982). Environmental degradation and the tyranny of small decisions, Bioscience, 32; Gamble, D.J. (1979). Destruction by insignificant increments. Northern Perspectives, 7.

Thus, we distinguish four types of companies depending on whether they implement:

- Type I consisting in the anticipatory management of the environment, which consists in the anticipatory creation of appropriate conditions for the industrial or service activity,
- Type II consisting in the application of suitable safeguards and preventive actions in the company itself, which limit the generation of waste materials, etc.,
- Type III consisting in the adaptational management of the environment, i.e., in the simplest terms, in the elimination of damage,
- Type IV consisting in the improvement of the existing productive system under the influence of recorded negative consequences of its utilisation.

Of course, there are different conditions and motivations for the application of individual classes of ecological management. The first two conditions and motivations result from the pro-ecological culture of the company intensified by the pressure of the consumers and social organisations. The next two follow from the endeavour to avoid financial charges connected with the disturbance of the natural environment. Developing the view presented in the paper by R. Janikowski, we can state that in the most favourable procedure model, activities of Type I, which prevent the danger to the environment on the basis of past experiences, are primary in nature. It should be accompanied by activities of Type II which are indispensable when, in spite of that, it turned out that certain designed processes disturb the state of the environment. It should also be accompanied by the implementation of activities of Type III for the purpose of the neutralisation of those negative consequences, which were impossible to be prevented. Finally, one should aim at implementing activities of Type IV in the environment itself. The activities make it possible to prepare the environment for a definite activity in the most efficient way possible in order to prevent the activity from causing negative consequences. One should protect oneself against the negative consequences by increasing the permissible capacity of the environment for harmful factors as well as its immunity and the ability to purify itself. It usually requires complex, long-term and long-range activities connected with serious investment expenditure, most often, in the regional system which is anchored not only in the strategy of the companies but also in the spatial policy implemented in co-operation with other units and with financial support from outside. The more efficient the activities of Type I undertaken by companies are, the easier it will be.

Concluding these considerations, it is worth paying some attention to the issues of globalisation and increasing global competition, which have been so frequently discussed recently. There are certain chances here for the common organisational and financial undertakings, which can solve the growing problems of today's world including the ecological problems. However, there are also significant dangers connected with it. The very competitiveness cannot reconcile social justice, economic efficiency, the maintenance of growth tolerable for the environment as well as the desirable diversity of the present-day world. Since the present-day economic and civilisational development blur national boundaries for the flow of products, services, capitals, people, information and ideas, national interests become less and less significant. On the one hand, globalisation gives enormous possibilities of growth, unattainable while acting within the national market, but on the other hand, as we have already mentioned, competitiveness has also been globalised and has changed its nature. *"Today it often means competing without rules and boundaries and it has a global dimension with big world-wide capital and industrial groups as the main actors."*¹¹ By creating global networks, these groups gain power which is difficult to describe and they can influence the fate of people all over the world.

As a result, the following disadvantageous phenomena increase:

- social and economic differences within and between countries,
- devastation of natural systems indispensable for life on Earth,
- concentration of power in highly-irresponsible economic units.

For obvious reasons, the market cannot properly shape the future, because it is short-sighted. Therefore, a socially advantageous economic development will not follow automatically from the co-operation of a large number of various companies representing various interests.

The merger of thousands of half-blind organisations will not make it possible for them, each of them separately and all of them together, to perceive significant real threats and to acquire the sense of direction. Neither will it assure justice, order and security.¹²

Today, all the worldwide companies are privately owned. All the global companies put such a big capital to profit, are so complex and their

¹¹ Grupa Lizbońska. (1996). *Granice konkurencji*. Warsaw: Poltext.

¹² Tempel, G. (1970). *Chairman as God*. London: Anthony Blond.

management is so complicated that no country or government has state officials and politicians who are sufficiently experienced to understand these great enterprises and embrace them as a whole. Only the chairmen of these companies and sometimes their long-standing secretaries know what is going on in the company as a whole. At the same time, there is no international institution, whatsoever which could oppose the companies.

We have currently about 200 state leaders and only 30 chairmen of global companies. The comparison is thus overwhelming. We can assume that the consequences of the decisions taken by these people can get out of control in consideration of the fact that these are often enormous and long-term decisions. Their decisions have an impact on human race as a whole, because global companies have become providers for the whole mankind. Since global companies widely apply diversification of their products, more and more people in the world use, on a daily basis, products, which at a closer look turn out to originate from the same company.

The scale of this issue should be realised: today three global companies supply almost three quarters of the world population in a similar way as three bakers and one post office are completely sufficient for one village. As it has been described by the author of the paper entitled "Chairman as God"¹³: *"Soapsuds flowing in the Rhine, the Thames, the Mississippi, the Congo and the Mekong Rivers come from the boxes or bottles produced by only three companies."*

The chairmen take decisions, in the first place, bearing the widely understood interests of the company in mind. Problems arise when the interests of the company are not convergent with the interests of the mankind. *"It may seem terrifying,"* says the previously quoted author, *"that the mankind is fully dependent not in some exceptional situations, but in its everyday life, on tens of chairmen of the biggest international companies, and in the future perhaps on five people, who have certainly as narrow awareness of the direction in which the human race should follow as each of us, and they probably do not care about that at all."*

Involvement in politics is an important aspect of global companies. Taking advantage of their all-embracing influence, they create a political climate which is favourable for them. When they encounter any extra economic barriers in their activity, they make use of their influence often disregarding local needs and the condition of the natural environment. From the point of view of the company, this is just an ordinary inconvenience, while from the point of view of the inhabitants it can be a threat for their civilisation.

Big companies manifest extreme inclination for the simplification of the reality. As a result, the gap between the all-embracing magnitude of the decisions of individual people and their possibility to perceive the consequences

of these decisions is widening. Global companies performing activities in the scale of our planet shape its image and everyday life of billions of people. Since the influence of gigantic enterprises will increase in the near future and they will embrace more and more spheres of contemporary man's life, it may become really dangerous.

For the time being, the prevailing choice in the search for the new rules of management of the "global world" is the choice emphasising competitiveness, i.e. the scenario of survival. However, competitiveness is not, as we have mentioned, an effective instrument for solving problems of development, employment, distribution or social care. It cannot reconcile social justice, economic effectiveness and growth bearable for the environment. We should agree with the main idea stated in the previously quoted report saying that for the elimination of the emerging dangers it is increasingly necessary to formulate clearly outlined principles and frames of co-operation at the global level, i.e. some socially acceptable and democratic form of global government. This idea re-emerges after every summit of influential international organisations. The economic integration implemented within the European Union should also follow in this direction and its significance for the future of all the European and world societies should be perceived in that direction.

So far no success in this area has been achieved. The recent Summit of Balanced Growth in Johannesburg, South Africa in 2002 can be an example here. However, this process is proceeding and it is facilitated by the emergence of so-called global conscience thanks to the quick exchange of information in the global scale. The global conscience is able to shape and express global needs, aspirations and personal development aims for the whole world population, which, to some extent, makes it possible to control the actions of governments and unanimously oppose disadvantageous decisions of powerful international corporations. Appreciating the importance of international integration in this context, we should accept the inevitable cost connected with it, a partial loss of the ability to take autonomous decisions.

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Waldemar Tarczyński

CHAPTER 4

CAPITAL MARKET AND ECOLOGY



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CAPITAL MARKET AND ECOLOGY

1. CAPITAL MARKET IN THE SYSTEM OF MARKET ECONOMY¹

In order to consider the capital market and the possibility of linking it with ecology and environmental protection, this important element of market economy should first be placed in the whole system of relationships in the area of widely understood finances and capital. Undoubtedly, the capital market is an integral part of the financial market, which creates a steering system for the market economy and at the same time is steered itself. While attempting to define the financial market in a most general way, we can state that the financial market is a place where transactions of sale and purchase are made, which results in exchange of money flows between parts of a transaction. In fact, it is important to remember that financial instruments are both assets and liabilities. As components of the financial capital, they are precisely assets for their owners. For the issuing parties, they mean contracting obligations. Therefore, they will always be noted down in their liabilities. In practice, three segments of the financial market are distinguished:

- money market;
- capital market;
- foreign exchange market.

Until recently, the time criterion treated as a kind of boundary between the money and capital market has been adopted as the fundamental criterion which made it possible to distinguish these two markets. As the financial

¹ Subsection was written on the base Tarczyński, W. and Zwolankowski, M. (1999). Financial Engineering. Warsaw: Placet.

market dynamically developed at the end the 20th century, it became clear that this criterion might play a secondary role. For example, in the case of so-called rolling-up of the money market instruments (e.g. rolling up bonds, which is a general practice) it comes as a rule to the prolongation of the date of their repurchase for over a year. Therefore, the fundamental criterion of distinction between the capital and the money market should be rooted in the economic function of these markets. In general, the money market serves the process of distribution, because, through its specific instruments and operations, it creates liquidity in the whole economic system. In turn, economic subjects commanding sufficient financial liquidity are able to engage in business transactions and influence the circulation of goods and services. The capital market makes it possible for economic subjects to raise capital for investment purposes. Consequently, through investments, it influences the conditions of production for enterprises operating in the real sphere and creates the conditions for economic development. Table 4.1. presents a list of essential differences between the money and capital market.

Table 4.1.
Essential differences between the money and capital market.

Differentiating criterion	Money market	Capital market
Nature of the dominant financial flows	Short-term	Medium-term and long-term equity and loan capital
Stocks in circulation	Treasury bills, commercial bonds and similar instruments constructed on the basis of the bill of exchange (and based on the principle of discount)	Stocks, bonds and investment certificates
Time-limit for the exercising of rights to the financial instrument (its period of repurchase)	Up to one year	Over one year or simply without giving the time limit for claims (e.g. as in the case of stocks)
Trade centre	It does not exist in the physical sense	The stock exchange is the centre of trade
The volume of individual transactions (retail or wholesale market)	The wholesale market for big institutional subjects	The retail and wholesale market at the same time (block transactions)
The nature of performed functions	It serves the sphere of distribution mainly through the regulation of liquidity in economic turnover	It serves the share of production mainly by raising capital for investment purposes

Source: Tarczyński, W. and Zwolankowski, M. (1999). *Financial Engineering*. (p. 15). Warsaw: Placet.

In principle, the money market is the main area of the central bank's interventionist activity. In particular, it refers to those operations of the open market, which should be treated as the most flexible instruments of money market regulation. In turn, in the strategy of commercial banks, the money market is the most important area of effective management of financial liquidity. In the narrow sense, the money market is a centre of trade between banks and their claims kept in their clearing accounts in the central bank. If commercial banks are parties to such transactions, the transactions result in a horizontal levelling of liquidity in the banking sector. The participation of the central bank and commercial banks in such transactions leads to the vertical levelling of liquidity in the banking sector.

The foreign exchange market, in turn, includes the totality of foreign exchange transactions together with the institutions helping to conduct them (mainly commercial banks) as well as a set of rules introducing order into the process of monetary transactions and the whole of facilities and activities leading to the transactions².

The capital, money and foreign exchange markets as markets forming the financial market are strongly linked. Investors perceive these markets as a global area for their strategy. Even small changes in the preference of investors regarding the expected earning capacity, the degree of liquidity and the risk of a financial instrument can lead to the transformation of their financial assets and consequently the flow of money between conventional boundaries of the financial market segments.

As a good example we can give an investor who sells treasury bills (a typical instrument of the money market) and for the obtained money purchases shares at the stock exchange (instruments of the capital market), which are more hazardous than treasury bills but at the same time are characterised by a higher rate of return.

The financial markets create the fundamental decisive parameters – interest rates, foreign exchange rates and stock prices. There is no doubt that owing to these parameters it is possible to create the bases for the system of functioning of economic subjects. The financial market also makes it possible to allocate resources on the basis of equivalence and efficiency. Its mechanism functions in the direction of an effective reallocation of the resources from the place of their creation to the place of their use, because the balance prices (here – the interest rates or foreign exchange rates) always prefer the most efficient

² See Zabielski, K. (1994). *International Finances*. (p. 168). Warsaw: PWN.

ones. The financial market also evaluates the current efficiency and expected earning capacity of an investment. Owing to that, the financial market becomes the foundation and pillar of enterprise through the creation of various forms of financing for the companies seeking capital as well as through the diversification of the form of ownership of companies.

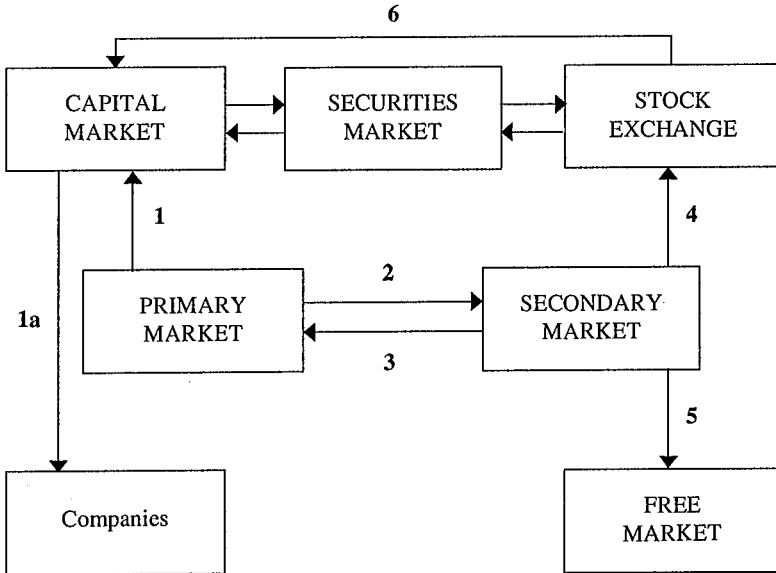
Companies provide for their capital needs in the capital market through the issue of stocks and on the basis of individualised credit agreements. Therefore, the stock exchange and commercial banks, which among others control the credit solvency of companies, are the monitoring organs of companies.

The capital market to some extent imposes short-term management on companies; whereas, banks prefer long-term to short-term management. Investors and shareholders require that companies produce evidence of quickly achieved earning capacity. The monthly or quarterly cycle of publishing basic finance statements by companies becomes a forced cycle of suitable profit growths.

Diagram 4.1 presents the mechanism of capital market functioning in the context of the securities market and the stock exchange. The capital market, owing to its links with the primary market of securities (1), starts to fulfil its fundamental mission in the economy – it mobilises capitals for investment purposes.

By giving the instrumental form to the saving process (the possibility of investing capitals, e.g. in stocks) we influence the conditions for the implementation of the economic development. The primary market is the market for the issue of stocks and bonds. The first stock transactions are made in this market and the issuing parties are parties to these transactions. The secondary market, in turn, is the market for further trade in the previously issued securities. Investors are parties to these transactions and in general the issuing parties do not participate in them directly. There are definite capital flows between the primary and secondary market as well as functional links, which have a significant influence on the efficiency of the whole capital market (2 and 3). The primary market creates the supply of stocks for the secondary market. Good market conditions in the secondary market create demand for capital, which results in demand for new issues of stocks reported by the investors. The stock exchange has a crucial importance for the secondary market. It ensures the concentration of securities in the secondary circulation and demand for them.

Diagram 4.1.
Relationships: the capital market –
the securities market – the stock exchange.



Source: Tarczyński, W. and Zwolankowski, M. (1999). *Financial Engineering*. (p. 30). Warsaw: Placet.

In terms of a definition, the stock exchange is understood as regular meetings of people who want to conclude a buy-sell contract of securities. The meetings take place in a given place and time and are subjected to definite standards and principles. It is also defined as meetings of people mediating in the transactions. Tradable securities are the object of the transactions, the prices of these transactions being fixed on the basis of the system of supply and demand and then made public³. In this context, it is possible to present the following basic functions of the capital market:

- mobilisation of capital;
- transfer and allocation of capital;
- evaluation of capital.

³ Tarczyński, W. and Zwolankowski, M. (1999). *Financial Engineering*. (p. 31). Warsaw: Placet.

In practice, the capital market brings together subjects with the surplus of savings and subjects with the deficit of savings. The capital mobilisation combined with its transfer and final allocation should be viewed as factors creating the conditions for economic development.

Concluding the discussion of the essence of the capital market in the economy, one should also mention the functions of the stock exchange, which is an immanent feature of the capital market. These functions are the following⁴:

- mobilisation of capital;
- normalisation (selection);
- spreading private ownership;
- information.

It follows unequivocally from the information about the capital market presented above that this is a good environment for gaining means for investment activity in the area of environmental protection. This is all the more visible when we consider the fact that companies are more and more interested in this problem, not only because of the fines for the devastation of the natural environment. The fact that financial institutions become aware of the influence of ecology on their commercial activities and begin to make use of this ecological motivation in competitive rivalry explains why taking action in this direction is not a matter of choice, but a matter of choosing definite strategies of practical conduct.

The systematically increasing level of ecological awareness of the society, which perceives the dangers stemming from the neglect in this area, is also favourable for such an orientation. Consequently, it becomes natural that there is a systematic improvement of the mechanisms of environmental protection financing with the allowance for the requirements of the market economy as well as more and more pro-ecological attitudes of the society. Certainly, it is not easy and it still requires many changes especially in commercial financial institutions including their attitude in the capital market. Investment funds belong to those institutions which can relatively quickly introduce those changes into their strategies, because, on the one hand, they have significant capital at their disposal and, on the other hand, they are quite flexible. One thing is certain: in the name of common good and the social and economic development we should as soon as possible put an end to the myth saying that

⁴ Tarczyński, W. and Zwolankowski, M. (1999). Financial Engineering. (pp. 32-36). Warsaw: Placet.

the principles of a commercial and financial institution functioning exclude ecological criteria in the process of decision taking.

2. VENTURE CAPITAL INVESTMENT FUNDS IN THE FINANCING OF ENVIRONMENTAL PROTECTION

Venture capital funds, which due to their specificity can most easily come into being on the market in the context of ecology and time horizon of the investment, deserve special attention among a whole range of investment funds offering their services on the capital market. This subsection has been devoted to the discussion of such funds.

In most general terms, venture capital (elevated risk capital) is one of the forms in which the development of companies can be financed externally. This is a short-term or long-term capital invested in proprietary securities of those economic subjects whose stocks are not introduced into public circulation with the intention to resell them in order to withdraw the engaged capital and cash the profits based on the increased value of the company.

We can also meet investors who expect to gain profit from the dividend and not from the long-term increase in the company value. No matter how venture capital is defined, it will always be true that the direct return of the invested capital will be linked to the share in the expenditure approved by the owners of the company (dividend) or the profit from the resale of the owned securities. It is the investor himself who decides about the form of the expected profit at the very beginning of the investment when he chooses a given investment strategy.

In practice, the term venture capital functions as a concept referring to an investment consistent with the above descriptions as well as a financial institution which carries out this kind of activity. Venture capital funds are investment funds, which are non-banking financial institutions with the non-deposit nature. In the capital market, they perform the function of a financial agent, who participates in the allocation of free financial resources and leads to the flow of surplus funds to companies in which a venture capital investment will be implemented. In practice, this is done by raising equity in a company. Then the fund purchases the raised capital in the form of equity instruments. By definition, venture capital funds perform the role of financial investors in these transactions, the moment and way of leaving the investment programme being defined in advance.

In venture capital investments, a relatively high risk is strictly connected with above the average profits. However, it should be remembered that venture capital funds actively participate in the management of a company throughout the duration of a project. In addition to the capital, a company obtains necessary knowledge, which makes the proper use of the capital possible. It is the active attitude of the fund that guarantees the achievement of the intended aims. It means that this is certainly not a speculation capital, which is passive. Venture capital is active, but the investor has the status of a financial investor and not a sector investor. In practice, the participation of a venture capital fund in the management of the company assumes the form of intensive advising, although sometimes the management of the company can be taken over.

The fact that, at the beginning of the investment, it is determined for what period the capital is brought into the company is an important feature of venture capital financing. This is a relatively long period and it is usually enclosed in the period of 5 to 10 years. It results from the fact that structural changes which lead to the development of a company are always long-term in nature. For the investor, this is certainly a weak point of the investment, which is not flexible and thus its risk is increased. A potentially big profit gain, if the project succeeds, is a retribution for this risk.

Investment is usually made through the purchase of stocks or shares in the company (usually this is a purchase of the raised capital). In the first period, the fund does not gain measurable profits, because it usually renounces on the realisation of running profits in order to give the company a chance to develop. Obviously, this is only a temporary renouncement, because owing to that it is possible to obtain a much higher income in the successive stages of the investment. After a project has finished, a venture capital fund sells the stocks or shares that it possesses. It can be done through the stock exchange or repurchase by a strategic investor or the company's management. This is a very important feature of venture capital investments, because the investing party never aims at being the co-owner of the company for a period longer than the one foreseen in the project.

The funds usually direct their offer towards those small and medium companies, which have a promising product at their disposal. The inflow of capital into small and medium companies from the outside is very profitable for them. In the first place, a venture capital fund takes over part of the risk connected with the functioning of a company. The market image of such a company improves because it can gain easier access to banking credit. The inflow of venture capital is also an impulse for a dynamic development of the

company, which gains a better position on the market. Failure of the project can mean for the investor the impossibility of withdrawing the invested capital.

On one hand, in this type of funds, it is easy to account for the ecological aspects of each investment, which increases its value and, in the long-term, settles the question of the investment's attractiveness and its increased rate of return. On the other hand, it is certain that purely ecological investments can be successfully financed in this way. It is natural, because the actual high rate of return for such investments can only be realised in the long-term and its manifestation is rarely direct. This often means a significant increase in the value of a company or the subject realising an investment (e.g. it can be a commune). Let us briefly present the specific character of the investments made in the system of venture capital.

The aims for the demand of venture capital are diverse. For example, it can be a demand for the means needed for the formation of a company, for financing its development, for the restructuring of a company or for the introduction of a strategic investor with new production technology. A purely ecological investment, such as a sewage treatment plant or waste utilisation, can be suggested as the aim. Each aim possesses an investment programme elaborated in detail. Each of these aims can account for aspects connected with environmental protection. Irrespective of the aim, there are certain common stages of investment implementation that can be distinguished in venture capital investing. In practice, two main stages are distinguished⁵:

- the early stage,
- the expansion stage.

The early stage consists of three sub-stages:

- seed financing,
- start up financing,
- first stage financing.

Seed financing includes the elaboration of an investment project. An idea which has to be theoretically studied arises at this stage. As a rule, the costs of this sub-stage are not very high. A small team in the company elaborates ideas, often on the basis of the prime costs of the company. If venture capital funds already participate at this stage, the costs can be much higher. In practice, funds rarely appear at this stage. It is estimated that only 2% to 5% of the

⁵ See Węclawski, J. (1997). Venture Capital as a New Instrument in Financing Companies. (p. 23). Warsaw: PWN.

whole financial engagement is transferred to companies at that moment. It is caused by a high risk of this sub-stage, which in only 50% of cases concludes in a way making the passage to the next stage possible. Moreover, the participation in this sub-stage requires contribution on the part of the managers (experts in a given sector), who are not full time employees of the fund. The earning power of the capital engaged at this stage is often defined as a minimal factor of the paid capital.

The financing of this sub-stage is most often done by way of direct investments. We should remember that the engagement by the funds at this stage can be profitable. A possible loss at this stage is relatively small if compared to the amount planned for the whole investment. If the diversification of the investment portfolio is big enough, the risk of losing a substantial part of the capital is practically equal to zero when the fund participates in the sub-stage of seed financing. If this is an investment project developed in a commune, for example, it is obvious that full time employees of the office must participate in this stage.

Start up financing is the moment at which venture capital appears most often. Investments made at this sub-stage have an indirect nature, which means that the capital is brought into companies through funds. The investment directors determine precisely the chance of the project's success here. At this sub-stage, the source of financing the project must be found. It is postulated that the company should possess about 20% of the capital necessary for the implementation of the project. Obviously, before entering the project, a venture capital fund carries out its own evaluation of the project prepared by a team of experts with a special allowance for the expected rate of return and the possibilities of leaving the project.

First stage financing begins after the changes which are the aim of the project have been introduced in the company. At this stage, the capital is brought into the company on favourable conditions. The fund does not expect substantial financial benefits at this sub-stage. This is a period of investment. The costs of this sub-stage are high and it is practically impossible to achieve profits at this stage. The demand for capital on the part of the company is also the highest. If the first stage is well implemented there are good chances that the whole project will be successful.

The expansion stage consists of three substages:

- second stage financing,
- third stage financing,
- fourth stage financing.

During the expansion stage the first measurable profits appear. In **second stage financing** we deal with the continuation of the investment process started in the first stage. It means that the investment risk and the demand for capital are still high. The problems connected with competitive rivalry and the practical enlargement of the company appear. Owing to the advancement of the process of changes, banking credits often appear at this stage. At this stage, the preparatory works before leaving the investment are started. For example, it can be a process of company transformation or the introduction of a strategic investor. Obviously, these works depend on the purpose which was determined in the investment project.

Third stage financing includes the development of production and the construction of one's own distribution system as well as linking of small firms acting in the same sector and in the area of potential interests of the company. It refers to practically all subjects which can profit (not only financially) from the implemented investment. Transition to this stage is complete when the market potential that the company has at its disposal ensures further expansion on the market. At this stage, the company can profit from the effect of production scale as well as the position elaborated on the market earlier in the project. At this stage, venture capital funds can start to realise their profits from invested means. Stocks and shares can be sold on the market (other companies, a strategic investor or the stock exchange) or to the remaining owners of the company.

Fourth stage financing takes place when the project has ended in success and the company plans a public issue of shares, for which it needs additional capital (it refers to the coverage of costs of the admission to stock exchange circulation and the issue).

In practice, when an ecological investment is directly the subject of an investment (for example a sewage treatment plant), the potential benefits of the fund are realised indirectly. It is possible for the costs of sewage disposal to rise (and it usually happens) and the gained profits are transferred mainly to the fund through the person managing the investment. According to the regulations being in force, those potential entrepreneurs who do not have sewage treatment plants at their disposal can appropriate definite means to make use of this investment. This simple example shows how easy it is to answer the question whether it is possible to make money investing in environmental protection. The benefits become obvious in the long-term. A simple analysis of the typical stages implemented within a venture capital investment indicates that the adaptation of such a procedure for ecological investments implemented by public utility companies is almost automatic. The final settlement of accounts is done in a different manner, because part

of the benefits is indirect, but the rate of return from the investment does not have to differ from the guiding standards of venture capital funds.

In the practice of the capital market, in spite of the fact that venture capital funds have explicitly stated main aims, they can adopt different forms depending on the detailed aim of activity, the scope of activity, their legal form, source of the capital, etc. Consequently, on the basis of the detailed aim of activity we distinguish:

- **commercial funds** – these are funds whose main aim of activity is the maximisation of profit from the purchased stocks and shares through their sale (*PEKAO Capital Fund in Łódź* is an example of such a fund),
- **aid funds** – these are funds, which have other aims than the maximisation of income. For example, it can be an aid of the developed countries directed to the enterprises in the developing countries (*American-Polish Enterprise Fund* is an example of such a fund). Practically, this kind of funds can immediately participate in a direct way in the investments aiming at the protection of environment.

Depending on the way in which a fund has been created and joined with the managing company we can distinguish:

- **independent funds** – these are funds created on the basis of the capital belonging to private persons or financial institutions. They aim at achieving maximal rate of return through the purchase of stocks or shares in companies and their subsequent sale with big profit.
- **dependent funds** – these are funds created in the first place by public institutions and companies. In addition to gaining profit, these funds have other aims, for example, protection of the natural environment (aid funds).

In turn, depending on the scope of activity we can distinguish:

- **universal funds** – these funds engage in practically all forms of investment in the prime capital of small and medium firms. In practice, this group of funds dominates the market.
- **specialised funds** – they are directed into a definite sector, group or area and they specialise in definite kinds of financial instruments. Of course, the scope of specialisation can be defined in much broader terms.

The territorial range of activity is another important criterion in the division of funds. According to this criterion the following funds are distinguished:

- **regional funds** – they invest only in companies operating and seated in a given area (it can be a province for example). This group of funds will be

very important in view of the entrance of Poland into the European Union. A significant part of aid means (including pro-ecological investments) is directed to the members of the Union in the form of regional help.

- **national funds** – they operate in the whole country. They have usually branches in different parts of the country and they reach companies in different economic centres through these branches.
- **international funds** – they are very similar to national funds but they differ in that the branches are foreign agencies, which raise capital and invest in different countries in the world.

Depending on the way in which the capital is gathered and on the fluctuation of their shareholders the funds are divided into:

- **open funds** – these funds gather capital through the sale of participation units on the financial market. The number of the participation units is not limited and every willing person can buy an unrestricted number of shares, thus supplying the fund with capital. The owner can sell all or part of his shares at any moment. These funds aim at buying securities, which can be easily sold. For that reason, venture capital funds are practically non-existent in this form.
- **closed funds** – the amount of capital is determined in advance and the number of stocks or shares is stable in such funds. Of course, during its activity, the period of investment and the period of gaining new shareholders the fund can raise the amount of the owned capital. These funds are usually created for a definite period and for the purpose of achieving a definite aim. After the aim has been achieved, the funds are dissolved. Most of the currently operating venture capital funds are funds of this kind.

Another important distinction of funds can be introduced on the basis of their activity in the investment process. We distinguish the following funds here:

- **active funds** – they are prepared for the active support of a company at all stages of the implementation of an investment project.
- **passive funds** – they invest definite financial means in a company and while the investment continues they limit themselves only to the control of the project implementation (this is usually done through the participation in supervisory board meetings) without participating in any form in the current management of the company.

Of course, there can be many other types of venture capital funds. The most important ones were presented above.

The investment process in venture capital funds, regardless of the kind of fund (of course within the frames of the presented divisions), includes certain common elements, without which it would be difficult to talk about a good investment project. An analysis of the project is the first stage. The investment projects, which have been selected by the fund in the pre-operational stage and during the operation of the fund are subjected to the process of a further analysis and selection. The full scope of the analysis and selection includes the following stages:

- selective analysis,
- detailed analysis
- final verification of the project.

The stages of **analysis and selection** are standardised to a great extent. The standardisation aims at identifying all the information necessary for taking decisions as well as improving the process of analysis and ensuring the comparability of projects. A positive investment decision results in the initiation of financing as well as management and monitoring of the investment by the fund. From the point of view of the fund efficiency (costs and invested time), the quality of respective stages of analysis is very important. It means that projects with the maximal probability of implementation should be qualified for the successive stages of analysis.

Selective analysis is done during contacts with the company and on the basis of fundamental information, which is possible to obtain. It can be an application form, which determines:

- the formal and legal aspects of operation (the structure of ownership and a short history of operation),
- organisation of the company,
- description of the scope of activity as well as characterisation of the product and the market,
- the basic financial data (balance-sheet as well as profit and loss account),
- evaluation of the competitive position of the company,
- an outline of the investment project.

Such an analysis makes it possible to get acquainted with the initial information regarding the project at an angle of the project's compatibility with the fund's investment policy. On the basis of this analysis the project is admitted for further analysis or it is rejected. As a result of the selective analysis a report is elaborated. This stage of analysis is particularly important when an entrepreneur applies for the project to be examined at his own

initiative. When the fund has identified an investment project itself, a large scope of a selective analysis is carried out before contacting the company.

A detailed analysis is the follows this stage. Within the frame of **detailed analysis** the fund carries out an analysis of the financial condition of a company and verifies presented forecasts and assumptions of the investment project. On the basis of this analysis, a conception of the fund's participation in the project is determined. The conception includes the dimension and period of the engagement, financial instruments and planned ways of withdrawal. A detailed analysis is carried out on the basis of the detailed information provided by the company. The information should refer to the legal, organisational an financial aspects of the company's operation as well as the assumptions of the investment project. As a result, an investment fund is created at this stage and this is the basis for subsequent elaboration of report from a detailed analysis. The report should include:

- an analysis of the company's economic and financial situation,
- an evaluation of the business plan's assumptions together with a macro-economic and trade analysis,
- a strategic plan for the company,
- a technical feasibility study for the project,
- a description of the financial engagement assumptions for the fund together with the planned structure of the transactions and the method of the investment implementation,
- an initial pricing estimate of the project.

The final verification of the project should be preceded by a signature of a letter of intent, which defines the conditions of co-operation with the company, financial instruments used in the transaction, proportional contribution of the parts to the transaction, the number of stocks or shares purchased by the fund as well as the definition of supervision over the company throughout the duration of the project. Within the process of the verification, a detailed structure of the transaction is defined, a legal and accounting audit is carried out, a final pricing evaluation of the project is done and ways of leaving the investment are determined. Since it is necessary for the company to cover partially the cost of particular stages in the project analysis, a fee for these activities is fixed. The fee usually amounts to 2 or 3% of the total sum of the capital invested by the fund.

The final stage in the process of project analysis consists in the preparation of an investment memorandum, which includes all the key information about the project together with an exact description of the transaction

structure. After the memorandum has been accepted, a project of the investment agreement is prepared. During this stage, detailed conditions of the transaction are defined. The project of the agreement is then negotiated with the company. The signature of the letter of intent practically means that the parties have joined the project. Funds usually invest by purchasing stocks or shares and ensuring their own influence over the direction of development and current activity of the company either by gaining suitable share in the company's capital or on the basis of separate agreements. Other suitable financial instruments include bonds convertible into shares and bonds with the right to purchase a new issue of shares. These instruments allow to limit the risk of investment effectively and they can be applied in addition to the purchase of shares.

It is also possible to use such instruments as optional agreements, which give the right to repurchase or take over stocks (shares). This kind of agreements is also used while constructing the way of the investment implementation. Funds also allow the possibility of investing in debts of companies in order to convert them into stocks or shares later.

The funds exercise a direct supervision over the implemented project through the participation in supervisory boards or general meetings of shareholders. The way and scope of fund's interference with the management of the company and exercising supervision over projects (companies) is precisely defined in the documents describing the structure of the transaction. Funds aim at the standardisation of the information received from the company. In justified cases, when the project is burdened with big operational risk, funds create supervising teams made up of experts in given areas. The information provided by the company is verified during visits in the company.

The monitoring of the project is defined by a standard procedure, whose main aim is the control of the current condition of the company and its reference to the assumptions adopted earlier both in the context of the economic situation of the company and the feasibility of leaving the investment by the fund. If deviations from the assumptions occur, monitoring results in the implementation of corrective activities as well as a possible change of the fund's strategy in relation to the investment and its re-evaluation. Reports are prepared for the monitoring of subjects and an evaluation of the investment is done at least once a year. The fund aims at the implementation of management systems in companies (managerial accountability) which allow the fund to receive current information indispensable for the proper supervision without an additional effort on the part of the company. If a company needs running consultative help, funds offer such services on commercial basis.

Defining the strategy of leaving the investment and the evaluation of the investment's feasibility are very important elements of the investment project's success. The foreseen way of leaving the investment requires periodical verification in order to determine its efficiency and compare it with alternative solutions. The adopted strategy should imply the structure of the final transaction and the way in which the investment should be managed. The most common ways of leaving the investment are the following:

- sale of the stocks or shares to a trade investor,
- introducing the company into public trading,
- managerial buy-out,
- remission of stocks or shares,
- liquidation of the company,
- sale of the company or its part.

The interest of companies in the opportunities offered by venture capital funds is systematically increasing. The number of venture capital subjects organised at the territory of Poland is also rising. It is mainly the banks that create separate subjects, which have venture capital as the aim of their operation. However, the interest is increasing at a much higher rate than the number of investments of this kind. On one hand, it is caused by the lack of general acquaintance with this investment formula among Polish entrepreneurs and a prolonged process of negotiating investment agreements, on the other.

A small number of managerial staff in companies with potentially big developmental possibilities is another factor hampering the development of venture capital in Poland. In the first stage, the elaboration of a good venture capital project requires gaining very exact information about the financial and economic situation of the company. Many firms which are potentially interested in venture capital do not want to give such information. It seems that as the awareness of the benefits connected with the participation in a well-elaborated venture capital project grows, these barriers will be gradually liquidated.

The hitherto activity of venture capital funds in Poland has concentrated on financing the expansion stage of a company and to a lesser extent on the investment activity. The venture capital investments made so far lack on sector strategies. There is no doubt that the development of the capital market, especially the stock exchange, is an important factor furthering the development of venture capital in Poland. It is beneficial for the development of an out-of-the-stock-exchange market of securities circulation, which is a very important market for venture capital funds allowing them to find a way of leaving their investments. The lack of suitable legal and tax regulations is the

last element, which contributes to the fact that the development of this form of investing is not as fast as we might expect.

It is important that the formation of friendly environmental conditions is necessary for the financing through venture capital. The conditions include the technological and economic progress, the legal system, the social system and the environmental protection (which is consistent with the principle of sustainable social and economic development). It seems that the government policy favouring the development of capital market and the opening to the world at the threshold of the European Union membership create a very favourable atmosphere for the development of venture capital in Poland. More favourable legal and administrative conditions for the funds should be created on this basis. The legal system must be favourable for innovative and pro-ecological processes as well as their implementation.

The presented considerations regarding venture capital funds lead to the principal conclusion that with a well-constructed investment project with ecological elements or a purely ecological project, a commercial fund can also earn money and as a rule such investments are burdened with smaller risk than typical commercial projects. Ecological investments return in long term and there is no doubt that this is consistent with the essence of venture capital investing.

3. METHODS OF THE MULTIDIMENSIONAL COMPARATIVE ANALYSIS FOR THE REQUIREMENTS OF CLASSIFICATION AND GROUPING OF ECOLOGICAL INVESTMENTS FINANCED WITHIN THE FRAMES OF THE CAPITAL MARKET

The dynamic development of the capital market in Poland in recent years causes an equally dynamic development of analytical methods applied for the study of this market. There is no doubt that the investment decisions taken at the capital market belong to the group of issues for which it is necessary to use tools making the analysis of multi-feature phenomena possible. It has led to the creation of a natural area for the application of a multidimensional comparative analysis (*MCA*). This is especially important for ecological investments. As a rule, they are very expensive and they must often be implemented within a commune. The rate of return is realised in the long term. Because of that, it is necessary to evaluate investments both

in the company and at a higher level, for example at the level of a commune. This is not an easy process, but without a good rating of these investments (in the sense of logic and financial capabilities), it is simply impossible to implement it effectively. The *MCA* methods, which make it possible to order investments in a relatively objective way (classification and grouping) and elaborate a sensible plan of their implementation, can be helpful here. Potential possibilities of *MCA* techniques are presented below. The techniques can be used within the frame of ecological investments which lead directly to the protection of the natural environment in the first place and indirectly to earning money by the investor.

Literature says that the task of *MCA* methods is to order a relatively homogeneous set of objects (features) in order to take decisions regarding the choice of an object (feature) according to a pre-established criterion⁶. Generalising this definition, we can say that *MCA* is a structurally coherent set of statistical methods which serve the purpose of an intentional selection of information regarding the elements of a certain set and the purpose of detecting regularities in reciprocal relations of these elements⁷. Programming most of the methods and placing them in standard statistical packages available on the market is an important fact from the point of view practical application of *MCA* methods. It makes their application relatively easy from the formal point of view. It is problematic to indicate substantively which of the suggested methods can be applied for the solution of a particular problem.

From the point of view of the capital market, this is a very important tool allowing to increase of the efficiency of decisions, especially investment decisions taken in the conditions of limited means.

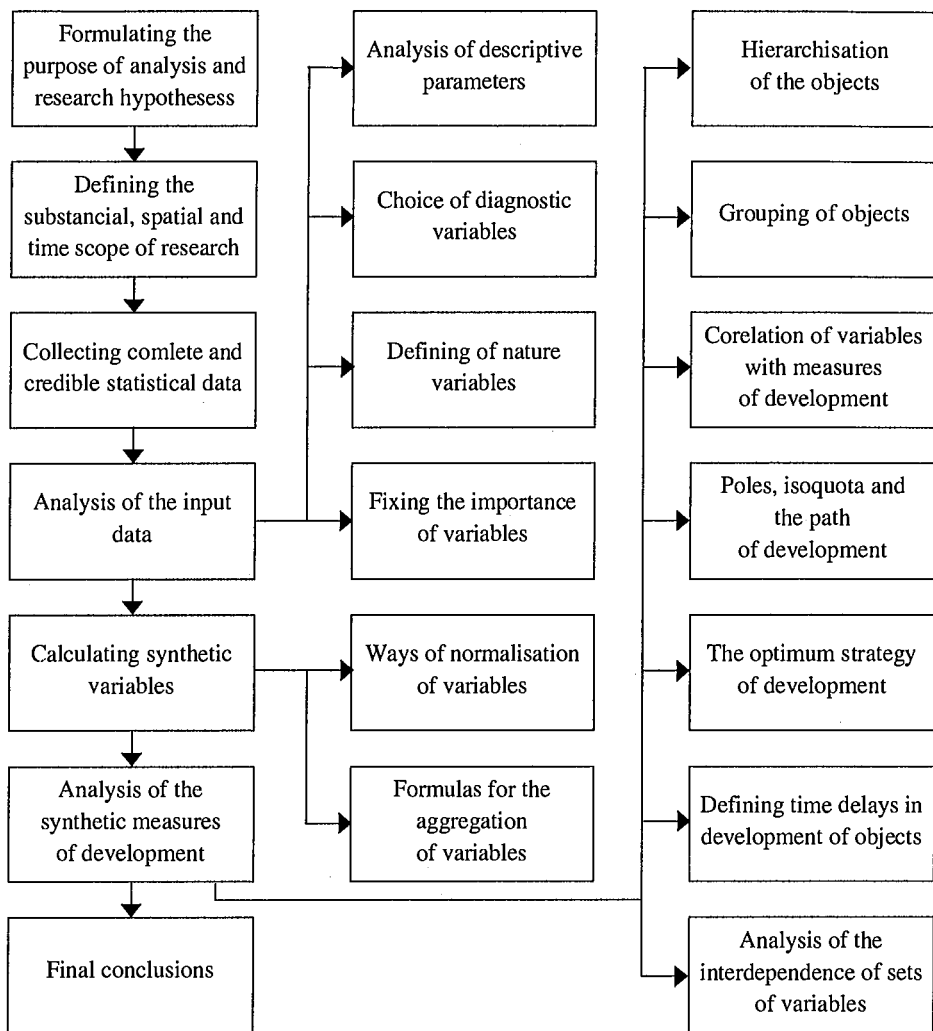
In the paper by Grabiński and others, it is possible to find a scheme of conduct within the frame of *MCA*, which presents the enormous potential of these methods. Of course, a detailed procedure of conduct depends on the particular problem; however, fixed elements of this conduct allow to indicate the area for the applications of *MCA*. This scheme is presented in Diagram 4.2.

We should remember that the stages presented above can consist of many substages; however, they can always be assigned to the main stages distinguished

⁶ See Grabiński, T. and Wydymus, S. and Zeliaś A. (1989). Methods of Numerical Taxonomy in the Modelling of Social and Economic Phenomena. (p. 84). Warsaw: PWN.

⁷ Grabiński, T. and Wydymus, S. and Zeliaś A. (1989). Methods of Numerical Taxonomy in the Modelling of Social and Economic Phenomena. (p. 84). Warsaw: PWN; from Gorzelak, G. (1981). Statistical Comparative Analysis – Theory and Practice, Statistical News, 8.

Diagram 4.2.
Stages of the multidimensional comparative analysis.



Source: Grabiński, T. and Wydymus, S. and Zeliaś A. (1989). Methods of Numerical Taxonomy in the Modelling of Social and Economic Phenomena. (p. 88). Warsaw: PWN.

earlier. It follows from the scheme presented in Diagram 4.2. that the stages from the fourth to the sixth one are the most developed. In practice, these stages require the highest accuracy and they can cause many problems. From the point of view of the applications of *MCA* methods for the capital market, the methods and techniques of multi-feature comparisons of objects according to a pre-established criterion are the most essential. In the first place it refers to the issue of object hierarchisation and their sets apprehended in multi-dimensional spaces of features from the point of view of a certain characteristic which cannot be measured in a direct way. The degree of desirability of an ecological investment (the necessity to implement it in the first stage) is also such a characteristic. For an investor, this is a matter of an answer to the following question: what should I invest in order to earn most and bear the smallest possible risk and at the same time assure a logical sequence of further pro-ecological investments?

A fundamental evaluation of an investment project includes tens of different variables. The problems which appear when an objective evaluation of an investment attempt make the methods of one-dimensional statistics useful only to a small extent. It is precisely the *MCA* methods that allow to overcome these difficulties. In Jajuga's book,⁸ it is possible to find one of the first suggestions in Polish literature regarding the application of these methods for the capital market, especially for capital management. The following areas for the application of *MCA* methods are listed there:

- analysis of stock prices,
- analysis of stock profit rates,
- analysis of beta coefficients for stocks,
- analysis of companies in the following areas: the expected rate of return from the company's stocks, the risk connected with the company's rates, price to profit coefficients, the coefficients of the financial condition of the company.

The possibility of the objective classification of an investment should be recognised as the most important possibility of applying the *MCA* method in the capital market. There are many characteristics applied in such an evaluation. These are historical data regarding the rate of return and the risk of analogical investments implemented earlier as well as historical data connected with

⁸ Jajuga, J. (1993). *Multidimensional Statistical Analysis*. (pp. 252-256). Warsaw: PWN.

the economic and financial condition of a company or the subject implementing an investment (for example a commune). Owing to the synthetic measures of development, it is possible to express many characteristics by means of one number and, what is more, it can be done in an objective way. The methods of grouping, in turn, give the possibility of building a system of investment in the scale of a province or the whole country.

The synthetic measures of development are in the first place applied for the linear ordering of multi-feature objects according to the level of development of the phenomenon being examined. From the point of view of accountability, they are relatively easy and particularly useful in the analysis of numerous sets of objects described by many diagnostic features. Synthetic measures of development are often called taxonomic measures of development and they make it possible to replace a description by many diagnostic features with one aggregate quantity – a synthetic variable. It is particularly important that within one analysis it is possible to make use of measurable and qualitative features, which cannot be directly measured. It refers to the very analysis, by means of which it is possible to research economic phenomena, which are impossible to be measured directly (e.g. the desirability of an investment).

The starting point and the basis of the considerations is a two-dimensional X matrix which includes observations of diagnostic features regarding the objects under being examined (investments):

$$X = [x_{ij}] \quad (i = 1, \dots, n; j = 1, \dots, m), \quad (1)$$

where:

X – the matrix of observations made for the variables describing particular objects (investments),

n, m – number of objects and number of variants.

The Z synthetic measure of development is a function, which converts the X matrix of observations into the z vector⁹:

$$Z = f(x_1, x_2, \dots, x_m), \quad (2)$$

⁹ Nowak, E. (1990). The Taxonomical Method of the Classification of Social and Economic Objects. (pp. 85-86). Warsaw: PWE.

$$z = \begin{bmatrix} z_1 \\ z_2 \\ \dots \\ \dots \\ \dots \\ z_n \end{bmatrix} \quad (3)$$

The elements of the z vector refer to the synthetic measures of development for the objects from 1 to n . Their values allow to arrange objects in a linear order according to the features describing the level of the examined phenomenon which were used in the Z function. These features are called diagnostic variables and they can be threefold: stimulants, destimulants and nominants. The distinction of the nature of variables is made on the basis of the analysis of the direction in which they influence the phenomenon being examined. Those features, whose values testify to the higher level of development, are called stimulants. Destimulants are those variables whose decrease in value testifies to a higher level of development of the phenomenon being examined. The term nominants, in turn, refers to those features for which the desirable level, from the point of view of the phenomenon's development, is found in a certain numerical interval. An unfavourable condition for these variables occurs when they have a higher value from the upper limit of the interval and a lower one from the bottom limit (in a special case a standard can occur instead of the interval). Since the diagnostic variables are added up in the process of the conversion of the X matrix into the z vector by means of the Z function in order to simplify the calculations, it is more convenient to present all the variables in the form of stimulants. Most often, the conversion of destimulants into stimulants is accomplished by way of a simple arithmetic operation. One of the following formula can be used for that purpose:

$$x_{ij} = \frac{1}{x'_{ij}} \quad \text{OR} \quad x_{ij} = c_j - x'_{ij},$$

where:

x_{ij} – the values of the destimulant converted into a stimulant,

x'_{ij} – the original values of the destimulant,

c_j – signifies a constant which for the purpose of avoiding negative values can be fixed at the level consistent with the relation $c_j \geq \max_i \{x'_{ij}\}$

After such a conversion the increasing values of the features will inform about a higher (more favourable) level of development for a given phenomenon. The process of conversion should be carried out in a way which preserves a similar level of the variability of variables and as far as possible preserves a sensible economic interpretation of the converted variables.

A quotient or differential approach can be used for the conversion of nominants into stimulants, which leads to the following alternative formula¹⁰:

$$x_{ij} = \begin{cases} \frac{x'_{ij}}{n_j} & (x'_{ij} \leq n_j) \\ \frac{n_j}{x'_{ij}} & (x'_{ij} > n_j), \end{cases}$$

$$x_{ij} = \begin{cases} x'_{ij} - n_j & (x'_{ij} \leq n_j) \\ n_j - x'_{ij} & (x'_{ij} > n_j), \end{cases}$$

where:

x_{ij} – value of the j nominant in the object i object,

n_j – the nominal level of the j variant (a standard).

In practice, there are many known methods applied for the construction of synthetic measures of development. The methods usually differ in the way the distances between objects are calculated and in the method used in the standardisation of variables. We should remember that the beginnings of the use of synthetic variables for the purpose of ordering objects characterised by many variables are included in the papers by Professor Hellwig, who was the first to suggest in 1968 that synthetic variables should be used for the purpose of ordering social and economic objects according to the level of their development¹¹. The scheme of the method proposed by Hellwig makes use

¹⁰ Walesiak, M. (1996). Methods of Marketing Data Analysis. (p. 37). Warsaw: PWN.

¹¹ Hellwig, Z. (1979). A Multidimensional Comparative Analysis and its Application for the Research of Multifeature Economic Objects. Lecture prepared for the first conference entitled Taxonomical Methods and their Applications in Economic Research. Poland: Szklarska Poręba; Hellwig, Z. (1968). The Application of the Taxonomical Method for the Typological Division of Countries on the Basis of the their Level of Development as well as Resources and Structure of Qualified Staff. Statistical Review, 4.

of the concept of a standard of development and consists in assigning characteristics for the object of a standard, which is an abstract object with the best values of diagnostic variables observed for all objects. In the next stage, the distances of each object from the object of the standard are calculated. In this way a measure is obtained and it can be used for the purpose of classification and grouping of the objects being examined according to the level of phenomenon described by diagnostic variables.

Let us trace all the steps in the creation of a synthetic measure of development. We assume that the problem has been defined and the statistical data regarding diagnostic variables which influence the examined investments have been gathered. We also assume that all the data have been presented in the form of stimulants. It means that a two-dimensional X matrix has been constructed in accordance with description (1). In order to make further arithmetic operations on the data included in the X matrix possible, its standardisation should be carried out and it should be presented in the form of a standardised Z matrix. As a rule, the normalisation of diagnostic variables (features) is consistent with a general formula, which can be written in the following way¹²:

$$z_{ij} = \frac{x_{ij}}{x_{oj}} \quad (i = 1, \dots, n; j = 1, \dots, m), \quad (4)$$

where:

- z_{ij} – standardised observation x_{ij} from the X matrix,
- x_{ij} – value of the i object and the j feature,
- x_{oj} – the basis of the diagnostic feature standardisation.

It follows from (4) that, in principle, particular methods of standardisation differ as far as the basis of standardisation is concerned. There are many solutions in this area. It is worth mentioning the most important ones (including those from the point of view of practical application):

$$x_{oj} = \sqrt{\frac{\sum_{i=1}^n (x_{ij} - \bar{x}_j)^2}{n-1}}, \quad (5)$$

¹² Nowak, E. (1990). The Taxonomical Method of the Classification of Social and Economic Objects. (p. 89). Warsaw: PWE.

$$x_{oj} = \frac{\sum_{i=1}^n x_{ij}}{n}, \quad (6)$$

$$x_{oj} = \max_i \{ x_{ij} \} - \min_i \{ x_{ij} \}, \quad (7)$$

$$x_{oj} = \sqrt{\frac{\sum_{i=1}^n x_{ij}^2}{n}}. \quad (8)$$

However, most often the standardisation of X matrix through the standardisation on 0-1 is proposed (it means that, after standardisation, every diagnostic variable on average equals to 0 and its standard deflection is equal to 1). Therefore, instead of formula (4) the following expression is proposed¹³:

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{S_j}, \quad (9)$$

where:

\bar{x}_j - arithmetic average for the j variable (feature):

$$\bar{x}_j = \frac{\sum_{i=1}^n x_{ij}}{n},$$

S_j - standard deflection for the j variable:

$$S_j = \sqrt{\frac{\sum_{i=1}^n (x_{ij} - \bar{x}_j)^2}{n-1}}.$$

After the z_{ij} elements of Z matrix have been determined, an object of the standard is created. It consists in the selection of the biggest value from every

¹³ Grabiński, T. and Wydymus, S. and Zeliaś A. (1989). Methods of Numerical Taxonomy in the Modelling of Social and Economic Phenomena. (p. 93). Warsaw: PWN.

column of the Z matrix. In this way, a standard object is created with the best co-ordinates (standardised values of diagnostic variables) that have been observed in reality:

$$z_{01}, z_{02}, \dots, z_{0m}; \quad z_{0m} = \max_i \{z_{ij}\}.$$

The next stage consists in the calculation of the distance of each object from the standard object. As in the case of standardisation, there are also more possibilities in this case. The Minkowski's formula is the most general formula, which serves the purpose of the calculation of distances:

$$d_{ij} = \sqrt[p]{\frac{\sum_{j=1}^m |z_{ij} - z_{0j}|^p}{m}}. \quad (10)$$

For the value of $p=1$ we obtain the urban distance (Hamming's distance), while for $p=2$ the Euclidean distance is most often applied¹⁴:

$$d_i = \sqrt{\frac{\sum_{j=1}^m (z_{ij} - z_{0j})^2}{m}} \quad (i = 1, \dots, n). \quad (11)$$

The Euclidean distance can be applied for the comparison of the level of the examined phenomenon described by diagnostic variables (features) in objects. By logical reasoning, the smaller the value of the d_i distance, the better, because the distance of a given object from the standard is smaller. Unfortunately, the synthetic variable expressed by the formula (11) is not standardised, which can make the analytical process carried out on its basis much more difficult. In order to fulfil the requirement of standardisation and lead to the change in the preference of the variable, i.e. to the situation, in which its higher values will testify to a higher level of the examined phenomenon (in order for it to be a stimulant), the following formula can be used:

¹⁴ Other definitions of distance which can be used in practice we can find for example in Grabiński, T. and Wydymus, S. and Zeliś A. (1989). Methods of Numerical Taxonomy in the Modelling of Social and Economic Phenomena. (pp. 29-30). Warsaw: PWN.

$$z_i = 1 - \frac{d_i}{d_0}, \quad (i = 1, 2, \dots, n), \quad (12)$$

where:

- z_i – a synthetic measure of development for the i object,
- d_i – the distance of the i object from the standard object appointed according to the formula (11),
- d_0 – the standard which makes sure that z_i assumes a value in the interval from 0 to 1.

Practically, the following values are adopted as the standard of a variable:

- the maximal value of d_i :

$$d_0 = \max_i \{ d_i \}, \quad (13)$$

- the sum of the value of the d_i variable:

$$d_0 = \sum_{i=1}^n d_i, \quad (14)$$

- the range of the d_i variable:

$$d_0 = \max_i \{ d_i \} - \min_i \{ d_i \}, \quad (15)$$

- the statistical maximal value of the d_i variable:

$$d_0 = \bar{d} + 2 \cdot S_d, \quad (16)$$

where:

- \bar{d} – the arithmetic average of the d_i variable,
- S_d – standard deflection of the d_i variable.

It seems to follow from the analysis of particular proposals that formula (16) is the best one. However, it is worth replacing the constant 2 in this formula (resulting from the rule of three sigmas and the assumption of the normal arrangement) with a certain constant a , whose value should be established in a way which guarantees that the values of z_i will be included in the interval from 0 to 1. It leads to the following formula:

$$d_0 = \bar{d} + a \cdot S_d, \quad (17)$$

Taking advantage of the relation (17) and the information that $0 \leq z_i \leq 1$ and $d_i > 0$ it is possible to calculate the border value for the constant a :

$$a \geq \frac{d_{i\max} - \bar{q}}{S_d}, \quad (18)$$

where:

$d_{i\max}$ – is the maximal value of d_i .

The closer the synthetic measure of development described by formula (12) is to unity, the closer the object is to the standard. The closer the measure is to zero, the lower the development level of the examined phenomenon in a given object.

The application of diagnostic variables freed from denomination for the construction of a synthetic measure means that their importance in the description of the examined phenomenon is the same. Therefore, in formula (11), the weights for diagnostic variables are the same and equal to 1. In practice, this kind of approach is not always justified. The knowledge of the person constructing a synthetic measure, previous research or other premises can point to the necessity of settling another influence of particular variables. In order to achieve this aim and account for different influence of particular diagnostic variables in the synthetic measure, systems of weights adequate for a given research are constructed. On the basis of their character two kinds of weights are distinguished¹⁵:

- substantial weights – they refer to the substantial values of variables and they are usually fixed by the method of experts,
- statistical weights – they refer to the statistical values of variables and they are fixed by means of statistical tools.

Regardless of the adopted system, correctly constructed weights should be standardised and their sum for all the variables should be equal to 1:

$$0 \leq w_j \leq 1; \sum_{j=1}^m w_j = 1, \quad (j = 1, 2, \dots, m).$$

¹⁵ Nowak, E. (1990). The Taxonomical Method of the Classification of Social and Economic Objects. (p. 34). Warsaw: PWE.

The higher the value of the weight added to the variable, the bigger its influence on the examined phenomenon. In the substantial sense and from the statistical point of view, the formula preferring variables with the biggest variability should be adopted as a favourable system of weights, because these variables differentiate the examined phenomenon to the biggest extent. The system of weights based on the coefficients of the variability of diagnostic variables is expressed by the following formula:

$$w_j = \frac{V_j}{\sum_{j=1}^m V_j}, \quad (j = 1, 2, \dots, m), \quad (19)$$

where:

V_j – coefficient of the j diagnostic variable before standardisation (for original data), which is calculated by dividing the standard deflection of the variable by its average value:

$$V_j = \frac{S_j}{\bar{x}_j}.$$

In order to account for weights in the synthetic measure of development, it is enough to multiply every square of difference by the appropriate weight in formula (11):

$$d_i = \sqrt{\sum_{j=1}^m w_j \cdot (z_{ij} - z_{0j})^2}, \quad (i = 1, 2, \dots, n), \quad (20)$$

where all the designations are the same as in the preceding formula.

Therefore, in the final structure of the synthetic measure (12), it is possible to use formula (11) if the variables do not have to be differentiated or formula (20), when it is advisable to account for the different degree of their influence on the phenomenon being examined.

A synthetic measure of development constructed in this way objectively describes the changes occurring in the examined sets of diagnostic variables (features). The most important advantage of this measure is the fact that, in the subsequent analyses, one deals with one synthetic variable (feature), which gives information regarding the direction and size of the changes occurring in the processes described by optionally numerous sets of diagnostic variables. The presented concept of a synthetic measure of development is a static proposal. It means that the value of the measure is calculated on the basis of

the variables distinguished for a given day, on the basis of the data originating from previous periods or on the basis forecasts following from the projections regarding a given investment.

Making use of such measures as synthetic linear measures seems to be the proper way for a relatively objective classification of ecological investments. While making use of these kinds of procedures it is problematic to fix correctly the diagnostic variables, which, on one hand, make it possible to describe objectively given investments, and on the other hand, make it possible to differentiate the variables. The advantage of this method is the fact that it is possible to account for qualitative variables (for example, expressed by the binary system) as well as differentiated preferences both at the level of a company and a commune. This is an especially important advantage of the approach, because without a working system of classification for ecological investments the means appropriated for this purpose are usually used inefficiently. We should also remember that the system of long term investment in ecological projects constructed on the basis of the classification can be coherent and the advantages from completed and already "working" investments can be reinvested in the successive stages of the programme. This kind of approach is also desirable from the point of view of the possibilities of using European Union aid funds appropriated for the protection of environment and invested mainly within regions (under the supervision of the voivodship's marshal offices).

Thanks to the techniques of multidimensional comparative analysis, which was pointed out at the beginning of this subsection, it is possible to group investments in the scale of a region and the country as well as fix general priorities, which cannot be objectively done the use of these methods. In the first place, it results from different influence of representations from different regions at the central level. This is very important for timeless ecological investments with measurable benefits visible in the long term.

4. SUSTAINABLE DEVELOPMENT AND MEANS FOR ENVIRONMENTAL PROTECTION

According to the guidelines of the European Union, the social and economic development of regions should be achieved in accordance with the regional strategies of development. This is a new phenomenon in Poland, which results from a very short history of Polish self-government. Consequently, it is necessary to elaborate such documents as strategies for provinces or cities,

which, on one hand, should account for their specific character and, on the other hand, ensure a sustainable development of the whole country. The category of sustainable development is a very important element of this type of documents. The category refers to proportional development and at the same time a development consistent with the natural environment, which, in turn, means the necessity to take it into consideration as one of the key priorities of ecology. Good and consistent schemes in this area stand the chance of obtaining significant aid funds for ecological and pro-ecological investments.

Works in this area are done both in provinces (they are supervised by voivodship marshal offices, which have the biggest possibilities of making applications for aid funds for investments connected with environmental protection) and in cities. It is important to co-ordinate the strategies approved by members of the local government, because neither cities nor provinces are autarkical. The most commonly made error consists in presenting solely an analysis of the natural environment and a record of ecological potential in the strategic documents which are the basis for the preparation of investment projects. The documents only casually mention how to make use of this wealth in the social and economic practice and how to increase the state of possession in this area or how to reconstruct what has been destroyed by careless human activity. There is no doubt that the means available for these purposes are not fully used in Poland. It would be possible to achieve a significant increase in the use of these means by practical application of the methods for multidimensional comparative analysis, which was discussed in the previous subsection. In order to authenticate the sensibleness of a given grouping of investment or classification, each analysis of this kind should be enriched with a classical SWOT analysis in the area of ecology pointing to the chances and dangers as well as strong and weak points of the areas in which a given investment is made. Frame programmes of the European Union (5 or 6) clearly indicate that these are serious priorities in the Union and there is a big chance that this kind of activities and investments will be refinanced. This is particularly significant when we consider that the offsetting of the spatial development refers to the whole European Union, which was written in the document entitled: *The European Perspective of Spatial Development*.

So far, many activities aiming at the establishment of common European and transborder natural protected areas have been taken. The Lower Oder River Valley Park can be a good example of an initiative implemented in this area. It has the status of a landscape park on the Polish side and the status of a national park on the German side, although the object and form of protection are the same. Of course, such activities cannot harm the social and economic

development of the countries. Therefore, being aware of the fact that this kind of protection can among others result in the limitation of freedom of localisation for production plants which are burdensome for the environment, it is important to co-ordinate general ecological activities with pro-ecological activities of those companies whose operation is most harmful for the environment. Innovative activity, which makes it possible to handle the dangers for the natural environment in a better way, is especially helpful here. Therefore, apart from the means for investments, which will be less and less difficult to obtain (especially in view of the increasing awareness of people in this area), it will become difficult to elaborate plans of integrated management accounting for all the aspects of human activity. If we consider, for example, problems with European rivers, it becomes obvious that, without integrated actions in the whole Europe, it will not be possible to avoid enormous costs resulting from floods, which in most cases in addition to fate causes results from irresponsibility of the man in his everyday activities. We should remember that after joining the European Union, Poland will have to implement two principal directives regarding environmental protection: the bird directive and the habitat directive, which means joining the *NATURA 2000* network. Undoubtedly, this is a challenge, which requires a significant mobilisation of financial resources. The principal sources of the financial capital for such undertakings can be found in the first place in funds appropriated for the support of regional development (ministries), regional contracts and aid funds from abroad. Here, the capital market can only be an additional source of supply and it refers mainly to ecological investments connected with technological progress in human economic activity.

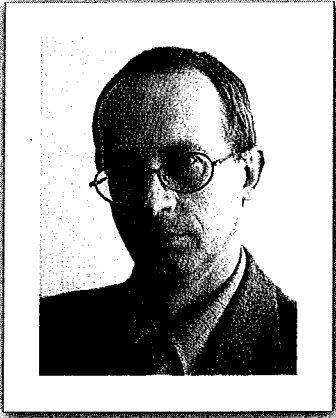
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CHAPTER 5

**VALUATION OF BUSINESSES
WITH NATURAL RESOURCES**



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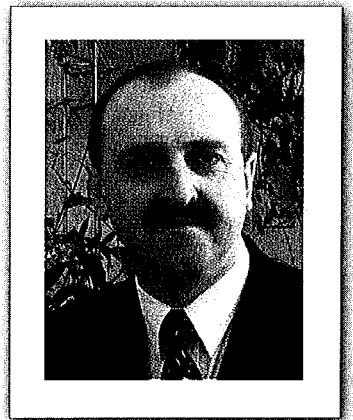
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VALUATION OF BUSINESSES WITH NATURAL RESOURCES

1. INTRODUCTION

In the case of valuations carried out by means of income-based methods, the value of a business is treated as the present value of its cash flow (or any other type of economic income) generated by a business's resources. However, the scenarios being the subject of valuation are usually those representing the most probable course of events. Meanwhile, a business's resources also generate different possibilities of their usage that can be launched depending on the development of the situation. In the case of the traditional approach, we take into consideration only a specific scenario of the development of a situation; however, broadening the scope of analysis by allowing for the possibilities of taking certain actions related to available resources, we also take into account and value the whole spectrum of possible scenarios of development.

Unique rights or possibilities held by a business and enabling flexibility of action and better adjustment to uncertainty may be treated as options. In contrast to financial options, they have been named real options.¹ In economic literature,² the use of the analysis of real options has been described as a "revolution of real options in decision making". Applying the analysis of real options and using the formal method, it is possible to allow for the factors related to the uncertainty of the implementation of action plans in an uncertain surrounding. Such an approach can be applied in the case of valuation of businesses holding real options in their assets or liabilities. These

¹ In the economic sources published in the Polish language one may come across another way of translating this term, namely as an "actual option" – see Jajuga T. (2002). *Strategiczne zarządzanie ryzykiem przedsiębiorstwa a opcje rzeczowe*. In: *Zarządzanie Finansami – klasyczne zasady – nowoczesne narzędzia*. (Vol.II). (pp. 75-85). Szczecin: Uniwersytet Szczeciński.

² Coy P (1999, July 6). *Exploiting Uncertainty*. *Business Week*, 3632, pp. 118-124.

factors have so far been allowed for only in the qualitative analysis accompanying the formal valuation of a business.

The purpose of this article is to present the issues related to the valuation of businesses owning natural resources, including the real options valuation.

2. LIMITATIONS CONCERNING THE APPLICATION OF VALUATION OF BUSINESSES USING THE DCF METHOD

The income-based method of valuation of businesses which is most often used in practice is the method of discounted cash flow (DCF). It is based on the concept of discounting the forecast free cash flow with the alternative cost of the capital reflecting the market risk of a business. In the case of investment appraisal, the net present value (NPV) is a method analogical to the concept of DCF.

In the DCF method, the calculation formula is not very complicated numerically. Yet the practice of its application proves that the idea lying behind its usage is frequently misunderstood and the key input parameters as well as the results of the analysis are often interpreted in the wrong way.³ Apart from the mistakes in using it, the method also breeds real difficulties in its practical applicability, and these include:⁴

- valuation of the cost of capital,
- forecasting the cash flow and the value beyond the period of the detailed forecast,
- valuation of the effect of synergy of the investment projects,
- valuation of the influence of current projects on the future possibilities of development.

The cost of capital is a DCF method parameter very difficult to be correctly estimated. We can estimate the historic cost of capital,⁵ but it is difficult to do so with its future value (and, thus, the future risk) based on the simple

³ Zarzecki D. (1999). Metody wyceny przedsiębiorstw (pp. 222-232). Warsaw: Fundacja Rozwoju Rachunkowości w Polsce; Drury C. and Tayles M. (1997). The Misapplication of Capital Investment Appraisal Techniques. Management Decision, 35, pp. 86-93.

⁴ Myers S.C. (1987). Finance Theory and Financial Strategy. Midland Corporate Finance Journal, 1, pp. 6-13.

extrapolation of trends, especially in the days of such frequent and quick structural changes taking place on the economic, technological, political, or social grounds. What is more, a business may hold options related to its liabilities, influencing the cost of its capital and, thus, its value.⁶ Liabilities such as equity capital of a business drawing credits,⁷ convertible bonds, preferred shares, operating leasing contracts or management share can be considered as options.

While the cost of capital is a parameter difficult to estimate, forecasting the value of the future cash flow and the value beyond the period of the detailed forecast is a much more difficult task. This has several reasons among which the most important ones are:

- 1) the necessity to plan the activity of a business for a considerably long period of time, unusual for normal operational needs, and
- 2) the difficulties in forecasting the macroeconomic variables. These are very often accompanied by a lack of knowledge of sophisticated methods and techniques of forecasting, which very frequently ends up in a simple extrapolation of short-term trends into the whole period of the forecast. In such a case, errors resulting from overlooking the long-term changes in the field of competition, inflation, technology or long-term periodicity may occur.

The valuation of the synergy effect of the projects realised in a business is a detailed problem concerning the valuation of cash flow; however, because of its importance, this issue has to be approached with exceptional attention. Since many valuations are carried out with the assumption of introducing changes into a business's activity (e.g. investment projects, organisational change, the modification of a product or launching a new one) it is extremely important to estimate the influence of the effect of synergy between respective projects on their value. A number of practical problems frequently occur,

⁵ Although in this case, in Polish practice, we come across numerous limitations resulting from the imperfectness and the scope of the Polish securities' market. Byrka-Kita K. (2002). Wyznaczenie współczynnika beta metodą regresji liniowej oraz przy zastosowaniu technik Blume'a i Vasicka. In: Zarządzanie Finansami – klasyczne zasady – nowoczesne narzędzia. (Vol.I). (pp. 315-326). Szczecin: Uniwersytet Szczeciński.

⁶ Copeland T. and Koller T. and Murrin J. (1997). Wycena: mierzenie i kształtowanie wartości firmy (pp. 451-459). Warsaw: WIG-Press.

⁷ See the classical article on the valuation of options – Black F. and Scholes M.S. (1973). The Pricing of Options and Corporate Liabilities. Journal of Political Economy, 81, pp. 637-654.

especially in businesses requiring organisational changes or changes in business systems (including the accounting systems). For instance, setting limits of responsibility and the scope of action for the organisational units in a business or determining the actual economic effectiveness of respective actions and products can be a basic problem.

Estimating the effect of current projects on the future possibilities of development is of basic importance for the valuation of intangible assets belonging to a business. These are connected with the most valuable options increasing the value of a business. However, these aspects of activity cannot be assessed using the DCF method, which is its main limitation. Such interdependencies of subsequent projects and the possibilities of reacting flexibly to the development of the situation constitute the factors creating an additional value. Investments being the first phase of a larger project or being of diagnostic nature (e.g. launching a new product into the market, exploitation of a new mineral deposit) cannot be valued using the DCF method in isolation from the remaining activities. Their value results from the fact that further activities will be able to be carried out only after the completion of the first phase. However, the activities from the first phase are very often not effective economically. Neither are they a simple sum of both the first stage and the subsequent ones because in the case of an unfavourable development of the situation they enable either stopping the actions in the further stages or introducing a series of other adjusting actions. Apart from the value of current projects, allowed for in the case of valuation using the DCF method, it is thus essential to estimate additionally the possibilities and unique rights held by a business. These elements are frequently considered as real options.

3. REAL OPTIONS IN THE ACTIVITIES OF BUSINESSES OWNING NATURAL RESOURCES

Both businesses and respective investment projects can consist of tangible and intangible assets or the possibilities of development and the assets in use. While the DCF method is very well applicable in the case of valuation of tangible assets being currently in use, other methods should be applied in the case of valuation of intangible assets or the possibilities of development. It is widely known that the market tends to assign higher value to businesses with intangible assets and extensive possibilities of further development. If we wanted to compare the market value of the equity capital of businesses with the capitalised value of their forecasted profits, it would turn out that major differences usually occur in favour of the market valuation. Moreover,

if we allow for the fact that the market valuation does not include the bonus for the majority shareholdings, the differences will be even bigger from the point of view of majority shareholders.

The value of natural resources owned by a business are very often estimated in a simplified way. Most frequently, their market value or the cost of their exploitation is used for the purposes of valuation. Meanwhile, natural resources open up numerous possibilities of their economic usage in the future. They are most often purchased by a business with this intent. Thus, they have a much bigger value for a business than it results from their current market valuation or the cost of their purchase. Natural resources owned by a company constitute a number of options to be used; these may be estimated using the methods of options valuation.

An option is a right, belonging to its owner, to purchase or sell a specific amount of the base asset, at a fixed execution price and a specific moment in the future or before that moment. In contrast to financial options, real options are created on a business's assets, including natural resources owned by a business. The usage of natural resources in a business's activity is a right or a possibility, but not a necessity. Thus, a business with such a possibility or right has real option similar to the financial one. The execution of the option takes place when it is beneficial to its owner. The decision concerning the execution of the option may be postponed and the losses could be limited to the level of option acquisition costs.

The issues concerning the analysis and valuation of real options were mentioned as early as in 1977 by Myers, who named the flexibility included in capital investments as growth options.⁸ Yet, such situations were thoroughly analysed and described in economic literature only in the mid-1980s. It was then that the methodology of valuation of financial options was adapted to the valuation of real options. At first, the concept of real options was used for the purposes of broadening the evaluation of the effectiveness of investments. The research focused upon the analysis of situations including options of different kind. Among numerous real options analysed by different authors we can distinguish between the following:

- growth option (Trigeorgis and Mason),⁹

⁸ Myers S.C. (1977). Determinants of Corporate Borrowing. *Journal of Financial Economics*, 5 (2), pp. 147-175.

⁹ Trigeorgis L. and Mason S.P. (1987). Valuing Managerial Flexibility. *Midland Corporate Finance Journal*, 1, pp. 14-21.

- option to defer (McDonald and Siegel),¹⁰
- option to alter operation scale (Pindyck),¹¹
- option to abandon (Myers and Majd),¹²
- option to shut down and restart (Brennan and Schwartz).¹³

In practice, businesses usually have many real options that interact between one another. Since the values of interdependent options cannot be added in a simple way, their valuation is rather complicated.¹⁴ Natural resources owned by a business usually generate practically all of the above mentioned simple options. The ones resulting from natural resources are connected with uncertainty related to them. This uncertainty may be of economic or technological nature. The ownership of land planned for commercial construction, e.g. for warehouse, generates the defer option. Owning such an asset as a piece of land, a business is not usually obliged to start investing instantly. The possibility of adjusting the moment of the beginning of investing to the current situation on the market of storing services has its own value and may contribute to a considerable increase of the effectiveness of investment in the case of performing storing services in the situation of a high and not fully satisfied demand. During the process of investing, the possibility of delaying the execution of developers' investments enables the adjustment of the pace of their realisation to the changing demand for apartments. Such an option results from the accurate planning of developers' investment and adjusting to it the contracts for the construction of apartments. The options mentioned above result from economic uncertainty, which is external in relation to the processes taking place in a business and is connected with the overall economic situation. This generates the option to defer a business's actions meant for the acquisition of additional information concerning uncertain future.

Technological uncertainty is not co-related with the economic situation in any way whatsoever and additional information concerning the profitability of

¹⁰ McDonald R. and Siegel D. (1986). The Value of Waiting to Invest. Quarterly Journal of Economics, 4, pp. 707-727.

¹¹ Pindyck R. (1988). Irreversible Investment, Capacity Choice, and the Value of the Firm. American Economic Review, 5, pp. 969-985.

¹² Myers S.C. and Majd S. (1990). Abandonment Value and Project Life. Advances in Futures and Options Research, 4, pp. 1-21.

¹³ Brennan M.J. and Schwartz E.S. (1985). Evaluating Natural Resource Investment. Journal of Business, 58 (2), pp. 135-157.

¹⁴ Trigeorgis L. (1993). The Nature of Option Interactions and the Valuation of Investment with Multiple Real Options. Journal of Financial and Quantitative Analysis, 2, pp. 1-20.

actions may be obtained only through the step-by-step approach, thus generating the growth option. The ownership of land and holding a licence for exploitation enables the usage of the growth option, since one of the kinds of uncertainty concerning this asset is the uncertainty as to the deposit's size and yield. A gradual exploitation of a deposit makes it possible for the owner to limit excessive investment expenditures and to determine the deposit's size and yield more accurately. During the process of exploitation of a deposit of natural resources options related to economic uncertainty may occur. Depending on the current price of mined minerals, the option to shut down and restart the exploitation may become a valuable one. The value of this option, however, will be high only when the cost of shutting down and restarting the exploitation are respectively low. A lack of flexibility in adjusting the employment structure will certainly act as a high cost of shutting down and restarting the exploitation, thus, considerably decreasing the value of such an option in the case of Polish mining industry.

4. THE PARAMETERS OF THE OPTIONS VALUATION

A growth option is a typical real option reflecting a business's strategic possibilities. An option of this kind occurs when the investment undertaken during the first stage enables growth and expansion of a business's activity in the following stage. Such a situation may concern the gradual utilisation of natural resources. The option approach consist in a business's withdrawal after the first stage, thus minimising its losses, if the effectiveness of the utilisation of natural resources turns out to be relatively small. On the other hand, however, the first stage enables a business to gain experience and learn the specificity of local markets, products, technology, consumers' behaviour etc., which decrease the uncertainty connected with planning and implementing of actions on a larger scale during the further stages of natural resources utilisation. The discussed option is analogical to the American call option. Respective parameters indispensable for the valuation of the growth option, have their equivalents in those applied to the valuation of financial options. (see Table 5.1.).

The present value of cash flow generated as a result of utilising natural resources and the investment expenditures necessary for launching the project are the two basic data indispensable for the valuation of an option. The data correspond to the parameters used in the DCF model. The net present value of

a development project equals the difference between these values. It frequently happens that at the moment of the valuation of an option the net present value (NPV) of development projects equals less than zero. This is because of the uncertainty as to what the future values of cash flow will be. The exploitation of natural resources which broadens the possibilities of development of a business constitutes the base assets of the option.

Table 5.1.
The analogy between the variables influences the value real and financial options.

Real option	Variable	Financial option
The present value of cash flow generated by the investment (V)	$V = S$	Share price (S)
Investment expenditures (I)	$I = X$	Option execution price (X)
Time remaining before the expiry of an investment opportunity (T)	T	Time remaining before the expiry of an option (T)
Uncertainty of investment cash flow measured by its variance (σ^2)	σ^2	Variability of share price determined by the variance (σ^2)
Risk-free discount rate (r_f)	r_f	Risk-free discount rate (r_f)
The decrease of the value of the project as a result of the activities carried out by competition (y)	y	The amount of the dividend paid from the base instrument (y)

Source: Luehrman T.A. (1998, July/August). Investment Opportunities as Real Options: Getting Started on the Numbers. *Harvard Business Review*, 76 (4), pp. 51-67.

Time and the uncertainty concerning the cash flow related to the option are two very important parameters determining its value. The interdependence between these parameters and the value of the option is directly proportional, which means that both the longer time of option duration and the bigger uncertainty increase the value of the option.

The option duration time depends on the time in which a business holds unique rights or opportunities of action. It should be noticed, however, that differences in relation to financial options will occur in this place. If in the case

of financial options the duration time is determined with high accuracy, in the case of real options it is usually estimated and depends on a number of factors. The ownership of land may be used in different ways and the growth option related to it does not expire on the execution of the option, i.e. the completion of selected investment on the owned area. The determination of unique rights held by a business makes one of the difficulties one may come across when estimating the duration of an option. Even in the case of land ownership, certain investment opportunities may become outdated as a result of actions taken by competitive companies. For instance, in spite of owning a piece of land, a business may have limited possibilities of its utilisation for the purposes of a planned construction of office buildings if the competitive companies satisfy the local market demand before the completion of the planned investment. As a result of such activities, the option related to the construction of office buildings in this area will considerably decrease its value. On the other hand, however, a business may use other opportunities of economic utilisation of its natural resources, for the purposes of the construction of parking space or other commercial facilities. It may also utilise the defer option which consists in postponing the decision concerning the construction of office buildings while waiting for the development of the local market and the increase in the demand.

The uncertainty connected with cash flow exerts positive influence upon the value of an option. Bigger uncertainty results in a higher probability of a considerable scattering of final results. Because of the asymmetry of income and losses in an option, however, a business is exposed to the danger of incurring a loss up to the amount of the price of option purchase and the expenditures for its maintenance only (e.g. land or forest tax paid periodically, expenditures on the indispensable protection and/or recovery of resources etc.). If an option should not yield expected profits in the future (allowing for the above-mentioned expenses incurred on its maintenance), a business will simply not execute it, thus losing only the funds spent on the purchasing of the option and its temporary maintenance.

Uncertainty is measured by the annual variance of the value of cash flow generated by a development investment. The variance may be estimated in one of a few possible ways:

- by treating the variance of cash flow from similar projects launched by a business in the past as the variance of cash flow connected with the projects in option. A respectively high degree of similarity is an indispensable condition in this case;
- by acknowledging the variance of a parameter constituting the main

source of uncertainty. In the case of natural resources this may be the variance of the prices of the mined mineral;

- by acknowledging the variance of the values of businesses involved in the same type of economic activity as the projects creating the growth option. Such variances may be compared if the activity of companies of a given line of business is homogenous and analogical to the business activity planned within the growth option;
- by calculating the variance of cash flow on the basis of the probability distribution of input variables and the Monte-Carlo simulation.

The valuation of options can be carried out using the Black-Scholes¹⁵ formula or the Cox, Ross and Rubinstein¹⁶ formula for the binomial model. Both methods of valuation of options are based on the replicating portfolio proposed by Black and Scholes, which consists of a base asset and a loan. The net cost of the purchase of the replicating portfolio equals the value of the option. The Black-Scholes formula, however, does not allow for the possibility of an earlier execution of the option. In such a case, one should apply the correction of the value of options or calculate their value using the binomial method of a respectively big amount of sub-periods. One can also assume that the value calculated using the Black-Scholes formula constitutes the lower limit of the value of an option.

5. REAL OPTIONS CONNECTED WITH NATURAL RESOURCES – AN EXAMPLE OF VALUATION

Let us assume that the business being valued owns natural resources in the form of a heap of sand remaining as a waste material after the exploitation of a gravel pit. The natural resources are located in the land being the property of the business and, because of their artificial character, do not require a license necessary for their exploitation. The sand may be sold as a full-quality product. Yet at the moment of carrying out the valuation of the business, the demand for sand is so small that the income resulting from selling it would only balance the costs of launching its sale. Let us assume then that the present value of income

¹⁵ Black and Scholes 637-654.

¹⁶ Cox J.C. and Ross S.A. and Rubinstein M. (1979). Options Pricing: A Simplified Approach. *Journal of Financial Economics*, 7, pp. 229-263.

from the sale of sand amounts, at the moment of the business's valuation, to $V = 1000$ currency units, and the present value of costs of launching the sale (placing the machinery for loading etc.) $I = 1000$. At today's prices, the valuation of the exploitation of the natural resources carried out using the income-related method would thus lead us to the following result:

$$NPV = V - I = 0$$

The forecasts concerning the increase of the price of sand, which would increase the value of the resources, are difficult to defend from the point of view of their accuracy, since none of the experts can actually foresee the exact moment and scale of the increase of the price of sand in the future. Yet the natural resources can be treated as a call option. It is commonly known that the variability of the prices of sand has amounted to yearly average of 10% over the past few years. The price of sand is the major uncertainty factor connected with the assessment of the value of the resources. The other parameters of the option are the following:

- $S = V = 1000$ – the present price of the base asset,
- $X = I = 1000$ – the price of the execution of the option,
- $T = 20$ – the time remaining before the expiry of the option – it is assumed that after this period the cost of the exploitation of the natural resources will considerably increase as a result of natural overgrowth process,
- $r_f = 5.5\%$ – the risk-free discount rate.

The Black-Scholes¹⁷ formula will be thus applied in order to calculate the value of the growth option. For given parameters, the value of the option amounts to:

$$C = 1000 \cdot N(2.683281573) - 1000 \cdot e^{-5.5\% \cdot 20} \cdot N(2.236067977) = 667.7$$

The deposit or, to be more precise, the possibility of its exploitation in favourable market conditions has, at given assumptions, the value of 667.7 currency units. Thus, there is a considerable difference between this figure and the value obtained using the DCF method. Valuating a business using the income-related method, one should increase its value by the value of the option

¹⁷ Black and Scholes 637-654.

resulting from the sale or individual exploitation of the deposit in favourable economic conditions.

6. RECAPITULATION

As a result of carrying out the above analysis as well as providing a numeric example, we may thus conclude that the options connected with natural resources (as well as with other assets of similar character) may considerably change the value of a business. Practical difficulties related to the valuation of an option are connected with the proper identification of real options and an accurate estimation of the value of input parameters determining the value of an option. Errors in estimating the parameters usually result in considerable differences as to the value of an option, yet a complete disregard of the value of real options in the valuation of a business leads to the lowering of its value. In spite of the difficulties in determining the input parameters, the analysis and valuation of real options have to be considered as an extremely useful and undoubtedly prospective tool, supplementing and enriching traditional approaches to the valuation of businesses, especially in the case of the valuation of businesses with considerable natural resources at their disposal.

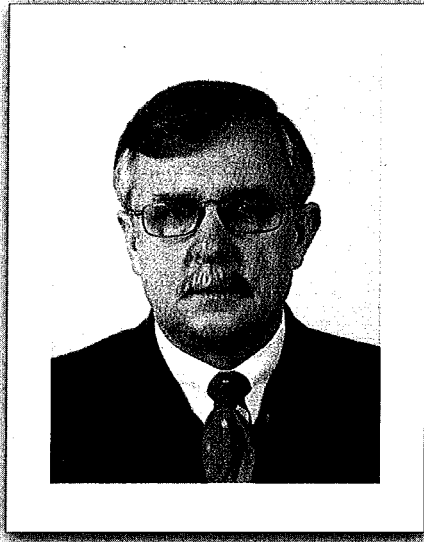
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Sławomir Sojak

CHAPTER 6

**ACCOUNTING AND THE PROBLEMS
ASSOCIATED WITH THE PROTECTION
OF NATURAL ENVIRONMENT**



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ACCOUNTING AND THE PROBLEMS ASSOCIATED WITH THE PROTECTION OF NATURAL ENVIRONMENT

1. INTRODUCTION

Businesspeople must take ecological problems in management into account more and more often. Natural resources such as water, wood, minerals, vegetation, and animals, on which the quality of life depends, undergo increasing degradation as a consequence of economic activity. The protection of the environment cannot be ignored either by state governments, enterprise owners or managers. More and more numerous ecological movements remind them about this. Those guilty of ecological damage should take economic consequences, for example, in the form of ecological taxes¹. They are understood as all the taxes imposed on the polluters of the environment (air, land, water and other natural resources). These taxes are a consequence of the "polluter pays" principle adopted in the West in the 1960s. Unlike other taxes, these are not of a fiscal but of a preventive character. They are aimed at a limitation of the pollution of natural environment.² The ecological taxes found in the world can be divided into the following groups:

- taxes on emission of combustion gases,
- taxes on other air pollutants,
- taxes on energy consumption (coal, gas, electricity),
- taxes on wrappings,
- taxes on water pollutants,
- taxes on land pollutants.

¹ Rudziecki, M. (1998, March 3). Zanieczyszczający płaci. Rzeczpospolita. See also: Głuchowski, J. (2002). Podatki ekologiczne (p. 19). Warsaw: Dom Wydawniczy ABC.

² Rudziecki.

The obligatory instruments of Poland's ecological policy comprise:³

- charges (for water consumption, sewage disposal, storage of waste material etc.),
- grant-in-aids and subventions, preferential crediting rules, income-tax relief,
- penalties and indemnities (for excess quantity and kind of substance introduced into the air, exceeding the admissible noise level etc.),
- direct regulations – the system of legal standards concerning the use of natural environment.

The pro-ecological policies of particular states, especially of high ecological standards and, in particular, of preventive and sanction character, (ecological taxes, penalties and indemnities) can have an influence on the level of costs of enterprises and, consequently, on their competitiveness (product profitability) and the value of the enterprise.

2. ACCOUNTING AND NEW COMMUNICATION NEEDS

Ecological matters count more and more in the economic calculation of enterprises. This creates a new objective for the system of accounting. In the subject literature one can find an increasing number of books (unfortunately, not in Poland yet) and other publications on this subject. There is, however, no uniform terminology. Thus, we have such terms as: green accounting,⁴ ecological accounting,⁵ environmental accounting,⁶ and sometimes a mixture of them.⁷

³ Marcinkowska, M. (1999). Wpływ przedsiębiorstw na środowisko naturalne – co pokazać w rachunkowości. Warsaw: Zeszyty Teoretyczne Rady Naukowej SKwP (Vol.50), p. 94.

⁴ Kuzior, A. and Strojek, M. (1995). Co wiedza księgowi o "zielonej" rachunkowości. Warsaw: Zeszyty Teoretyczne Rady Naukowej SKwP (Vol.33), pp. 34-41.

⁵ Marcinkowska 104.

⁶ Marcinkowska 104; Kuśmierski, K.S. (2000). Rachunkowość środowiskowa. Warsaw: Zeszyty Teoretyczne Rachunkowości SKwP (Vol.1), pp. 150-160; Schaltegger, S. and Burritt, R. (2000). Contemporary Environmental Accounting. Issues, Concepts and Practice, Greenleaf Publishing; Everett, J. and Neu, D. (2000, March). Ecological Modernization and the Limits of Environmental Accounting? Accounting Forum.

⁷ Gray, R. (1994). Accounting for Environment. Green Accounting.

This work is not aimed at a unification of notions and terms related to the problems of the protection of natural environment in the accounting aspect although, as follows from further analysis of the literature, such attempts been undertaken by some institutions and authors. In this presentation of views the original terminology used in the literature referred to has been kept.

There is no doubt that pro-ecological activity of enterprises should have its own reflection in accounting and that accounting exerts an influence on pro-ecological activity of enterprises.⁸ This is so because it communicates financial (financial accounting) and non-financial information (management accounting) indispensable in decision-making processes ‘... which have an influence on the minimisation of future destructions or liquidation of changes that have been caused’⁹ by an enterprise. Management accounting is often defined by a maxim “different costs for different purposes”, which means that providing information about costs (and advantages) depends on concrete needs,¹⁰ in this instance, connected with the protection of natural environment.¹¹ Accountants are expected to take active part in the debate on the protection of the environment in following aspects:¹²

- ecological terminology,
- manner of measurement and acquisition of indispensable information,
- recording and inspecting ecological undertakings for the purpose of their proper allocation,
- transfer of data on ecological activity to different subjects interested in this information,
- audits confirming the reliability of this information,
- manner of assessment of the values a real measurement of is not possible.

⁸ Gray, R. and Bebbington, J. (2001). Accounting for the Environment. (p. 13). SAGE Publications; Parker, J.E. (1971, October). Accounting and Ecology: a Perspective, The Journal of Accounting, p. 46; Nadolna, B. (2002). Controlling ekologiczny jako narzędzie zarządzania środowiskiem w przedsiębiorstwie. Systemy controllingowe przedsiębiorstw i instytucji (pp. 147-157). Wrocław: AE.

⁹ Stępień, M. (1993). Próby standaryzacji zagadnień ekologicznych w rachunkowości, Zeszyty Teoretyczne Rady Naukowej SKwP (Vol.23), p. 110.

¹⁰ Sojak, S. (2000). Rachunkowość zarządcza w warunkach inflacji (p. 22). Toruń: TNOiK.

¹¹ Bennett, M. and James, P. (2000). The Green Bottom Line. Environmental Accounting for Management. Current Practice and Future Trends (p. 74). Green leaf Publishing.

¹² Owen, D. (1992). Green Reporting (p. 75). London: Chapman & Hall. In: M. Stępień 110-111.

The tasks outlined above prove that accounting perceived traditionally has not yet provided information about the ecological activity of enterprises. Attempts at a settlement of the problems in this area were undertaken both in some countries and on an international scale. For example, the United States Environmental Protection Agency prepared an elaboration called "*An Introduction to Environmental Accounting as a Business Management Tool. Key Concepts and Terms*".¹³ The effect of the fifteenth session of the Intergovernmental Group of Experts for International Standards of Accounting and Reporting (ISAR) in Geneva in 1998 is a report entitled "*Environmental Financial Accounting and Reporting at the Corporate Level*"¹⁴ consisting of two parts:

- Interim Statement of Best Practice Guidance for Environmental Financial Accounting and Reporting,
- Linking Environmental and Financial Performance: A Survey of Best Practice Techniques.

3. AMERICAN PROPOSALS

The American document draws attention to various ways of understanding the term environmental accounting. It can refer to management accounting, financial accounting and national income accounting. However, the document attributes the greatest importance to environmental accounting used for the purpose of internal management of a firm.¹⁵ Environmental costs related to particular products, manufacturing processes and assets possessed are very important for proper management decision-making. They should be aimed at:

- reduction of environmental outlays,
- increased receipts,
- improved effectiveness of environmental protection.

The way enterprises define their environmental costs depends on the purpose they intend to use them for (e.g. allocation of indirect costs between

¹³ Spitzer, M. and Elwood, H. and Lago, C. and Bailey, P. (1995). An Introduction to Environmental Accounting as a Business Management Tool: Key Concepts and Terms. Washington.

¹⁴ Environmental Financial Accounting and Reporting at the Corporate Level. United Nations Conference on Trade and Development. Geneva 03.12.1997. In Polish literature see Kuśmierski 150-160 and also Marcinkowska 106-108.

¹⁵ Environmental Financial Accounting and Reporting at the Corporate Level 7.

the products manufactured, budgeting, designing new products or processes and the like decisions) and on their experience in this field. It should be noted that it is difficult to include part of these costs in exclusively environmental costs.¹⁶ *“The success of environmental accounting does not depend on whether it will make an accurate classification of environmental costs incurred by a firm. It is aimed at assuring that suitable information is deliverable to those who need it”*.¹⁷

Thus, the communication of information about environmental costs for different groups of their users is a very important function of environmental accounting. The users may comprise, for example, partners who can extort a reduction of costs (losses) of environmental protection on the management and, consequently, improvement of the quality of the environment. This can be achieved by separating the costs of environmental protection from general management costs (where they are “hidden” along with other costs) and attributing them to appropriate products or processes which they generate. Appropriate allocation of the costs of environmental protection can be achieved in two ways:¹⁸

- by the use of an appropriate analytic cost record, so an extension of a system cost account,
- by an allocation of costs outside the system of cost account within the framework of so-called operating records (off-the-books).

In this work basic notions and terms used in environmental accounting are defined. The commonly used terms are presented in Table 6.1. It often happens that terms of different interpretation and meaning are hidden under the same name. Their interpretation and meaning depends on what aspect of specific problems of environmental accounting they are examined in, for example in the costs account, capital budgeting or designing new products or processes.

According to the document discussed *‘an environmental costs account denotes a system which provides additional information about the costs within the existing procedures and an allocation of these costs to appropriate products or processes’*.¹⁹

¹⁶ Environmental Financial Accounting and Reporting at the Corporate Level 7.

¹⁷ Environmental Financial Accounting and Reporting at the Corporate Level 12.

¹⁸ Environmental Financial Accounting and Reporting at the Corporate Level 19-23.

¹⁹ Environmental Financial Accounting and Reporting at the Corporate Level 30.

Table 6.1.
Selected terms, their potential range and application.

Terms	Cost range	Use
<ul style="list-style-type: none"> - Environmental accounting - Environmental cost account - Full cost account - Environmental full cost account - Product (process) life - Product (process) life cost 	- Internal costs	<ul style="list-style-type: none"> - Cost account - Capital budgeting - Designing new products (processes) - Other (e.g. performance cost account)
	- External costs	<ul style="list-style-type: none"> - Cost account - Capital budgeting - Designing new products (processes) - Other (e.g. performance cost account)

Source: Spitzer and Elwood and Lago and Bailey 30.

4. THE UNITED NATIONS ORGANIZATION PROPOSALS

The document prepared by the Expert Working Group appointed by the UNO contains basic definitions connected with the ecological performance important for the reporting of enterprises. The most important definitions are:²⁰

- **the environment** is our natural physical surroundings and includes air, water, land, flora, fauna and non-renewable resources, such as fossil fuels and minerals;
- **environmental costs** comprise the costs of steps taken, or required to be taken, to manage the environmental impacts of an enterprise's activity in an environmentally responsible manner, as well as other costs driven by the environmental objectives and requirements of the enterprise;
- **environmental assets** are environmental costs that are capitalised and amortised over the current and future periods because they satisfy the criteria for recognition as an asset;

²⁰ Environmental Financial Accounting and Reporting at the Corporate Level 4-5.

- **environmental liabilities** are obligations relating to environmental costs that are incurred by an enterprise and that meet the criteria for recognition as a liability;
- **to capitalise** is to record an environmental cost as an integral part of a related asset, or as a separate asset, as appropriate.

Environmental costs should be capitalised if they refer, immediately or indirectly, to future benefits for a company resulting from the following activities:²¹

- increased production capacity, improved safety of use or efficiency of other components of the assets already possessed by a firm,
- reduction or prevention of future environmental pollution,
- protection of the environment.

They refer then to investment outlays.

In compliance with the document discussed, disclosure of information about costs and environmental liabilities should take place in enterprise reports in order to facilitate an analysis of particular entries in balance sheets and profit and loss accounts. This information can be brought to light in report notes or in separate environmental reports. Decisions concerning the scope of information brought to light should be relative to how crucial and rational their gaining is.²²

Information about the relationships which occur between effects of activities for the benefit of the protection of the environment and financial results of an enterprise is contained in the second part of the document. It comes from an analysis of solutions in this scope carried out voluntarily by enterprises and concerning:²³

- the measurement and communication of effects of environmental activities in the way they would be most useful for potential users,
- the utilisation of these data on capital market while making investment decisions by shareholders or potential shareholders.

This report comprises guidelines for shareholders related to a disclosure of environmental matters in annual reports. The suggested scope of environmental reporting in the report for shareholders is shown in Table 6.2.

²¹ Environmental Financial Accounting and Reporting at the Corporate Level 6.

²² Environmental Financial Accounting and Reporting at the Corporate Level 10-11.

²³ Environmental Financial Accounting and Reporting at the Corporate Level 13-14.

Table 6.2.
Proposals of environmental information for presentation
in an annual report.

Annual report element	Recommended environmental disclosure(s)
Directors report	<ul style="list-style-type: none"> - corporate commitment to continuous environmental improvement - new disclosures since last report
Business segment review	<ul style="list-style-type: none"> - segmented environmental performance data (if not provided in the environmental review - see below) - new disclosures and improvements since last report
Environmental review	<ul style="list-style-type: none"> - scope of the review - corporate environmental policy statement - key environmental issues facing the company - extent of world-wide compliance - description of environmental management systems and international standards (e.g., ISO) organisational responsibilities - performance data based concerning energy use, materials use, pollutant emissions and waste disposal routes - sector-specific data concerning industry - financial data on environmental costs - financial estimates of savings and benefits flowing from pro-environmental efforts - cross-reference to other environmental reports - independent verification statement
Operating & financial review	<ul style="list-style-type: none"> - key environmental issues facing the company - short and medium-term plans - progress in addressing changes required by future legal requirements - actual and projected levels of environmental expenditure - legal matters pending
Report of the Directors	<ul style="list-style-type: none"> - environmental policy statement (if not provided elsewhere)
Environmental policy statement	<ul style="list-style-type: none"> - estimation of provisions and contingencies - capitalisation policies - depreciation policies
Profit & loss account	<ul style="list-style-type: none"> - environmental charges - other environmental costs and benefits
Balance sheet	<ul style="list-style-type: none"> - environmental provisions - environmental costs capitalised - environmental liabilities
Notes to the accounts	<ul style="list-style-type: none"> - contingent environmental liabilities (plus explanations)

Source: Environmental Financial Accounting and Reporting at the Corporate Level 19-20.

The document discussed also proposes the usage of certain indicators (measurements) of environmental undertakings informing about corporate activities, which influence the environment. Unfortunately, there is not a single, universally accepted manner of measurement in this scope. Therefore, the document refers to standard ISO 14000 and to the practical indicators used by Swiss banks. Some indicators are exemplified in Table 6.3.

Table 6.3.
Environmental performance indicators.

Indicator category	Example
Financial indicators	<ul style="list-style-type: none"> – Environmental costs in relation to investment outlays. – Investment outlays for environmental protection in relation to total investment outlays. – Environmental costs in relation to: <ul style="list-style-type: none"> • operating costs, • profit on sale, • value added. – Energy use costs in relation to material costs. – Reduced costs (measurable benefits) resulting from environmental protection or purchase of recycled materials.
Performance efficiency indicators	<ul style="list-style-type: none"> – Energy used in relation to energy unused. – Energy used in relation to usage standards. – Percentage of materials, products and other assets undergoing utilisation. – Reduction of harmful emissions in relation to investment outlays

Source: Environmental Financial Accounting and Reporting at the Corporate Level 16-17.

5. PROPOSALS OF SCIENTIFIC SOCIETY

The above statements prove that the traditionally perceived accounting requires an information base extended by ecological problems. This is expected by both internal and external users of information and obtained either by means of an introduction of new information about the influence of companies on the environment into the conventional accounting (finance statements) or by distinguishing a new category of accounting, ecological accounting. In the

former case we only mean conventional accounting “enriched” by ecological information, while in the latter, ecological accounting existing along with (or beside) the conventional accounting.²⁴ The former approach is based on the maxim mentioned already according to which accounting (management accounting) is treated as a system providing “*different costs for different purposes*”, in this instance, taking into account information needs relating to costs and benefits flowing from the protection of natural environment. M. Bennett and P. James divide environmental costs into:²⁵

- internal environmental costs i.e. expenses which are either wholly or partially related to natural environment. They comprise, among other things, the costs of protective devices, licences, charges, penalties, ecological taxes etc.,
- external environmental costs i.e. expenses which are incurred by society and other economic subjects, not included in the “causer’s” costs of activity (e.g. environmental losses caused by dust, gas etc. emission),
- environmental opportunity costs, for example as a result of excess electric energy use, excess ecological charges.

This can be presented diagrammatically as in Diagram 6.1.

In this case we have ‘environmentally oriented’ accounting.²⁶

The creation of ecological accounting separate from conventional accounting results, among other things, from the following reasons:²⁷

- the scope of ecological accounting differs principally from conventional accounting; ecological accounting is oriented to the qualification of the corporate influence on the environment, while conventional accounting is oriented to financial aspects,
- most often there are different sources of gaining ecological and financial information,
- different users are the recipients of ecological and financial information,
- ecological information is most often expressed in measures other than financial.

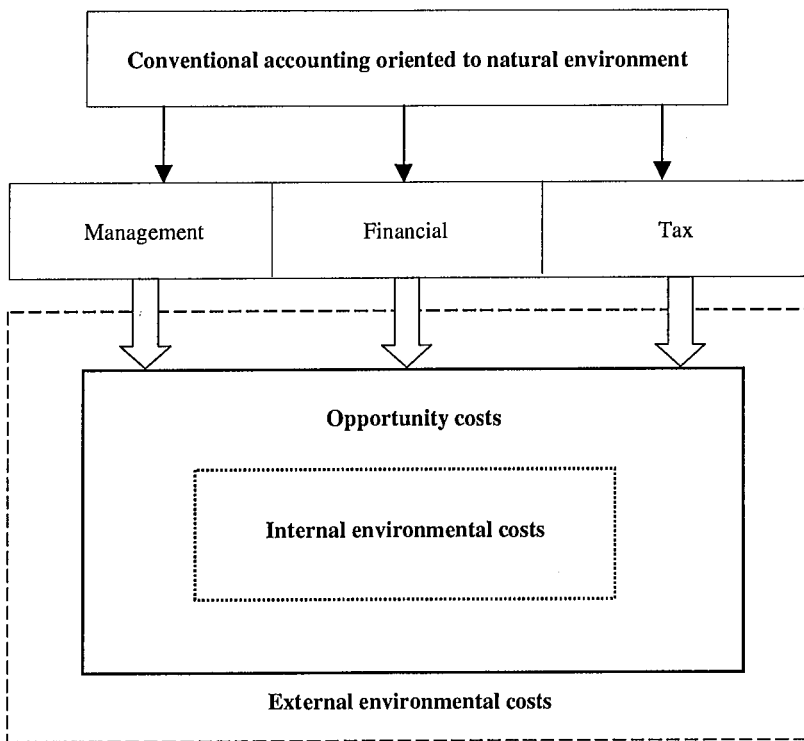
²⁴ Bennett and James 74.

²⁵ Bennett and James 56.

²⁶ Environmental Financial Accounting and Reporting at the Corporate Level 30-60.

²⁷ Schaltegger and Burritt 62.

Diagram 6.1.
Conventional accounting oriented to natural environment.



Source: Author's own elaboration.

Ecological accounting conducts a measurement of the influence of a company on the environment in natural units such kilograms, joules. It may be, similarly to conventional accounting, divided into the following subsystems:²⁸

- the subsystem of internal ecological accounting (management),
- the subsystem of external ecological accounting (financial),
- other subsystems.

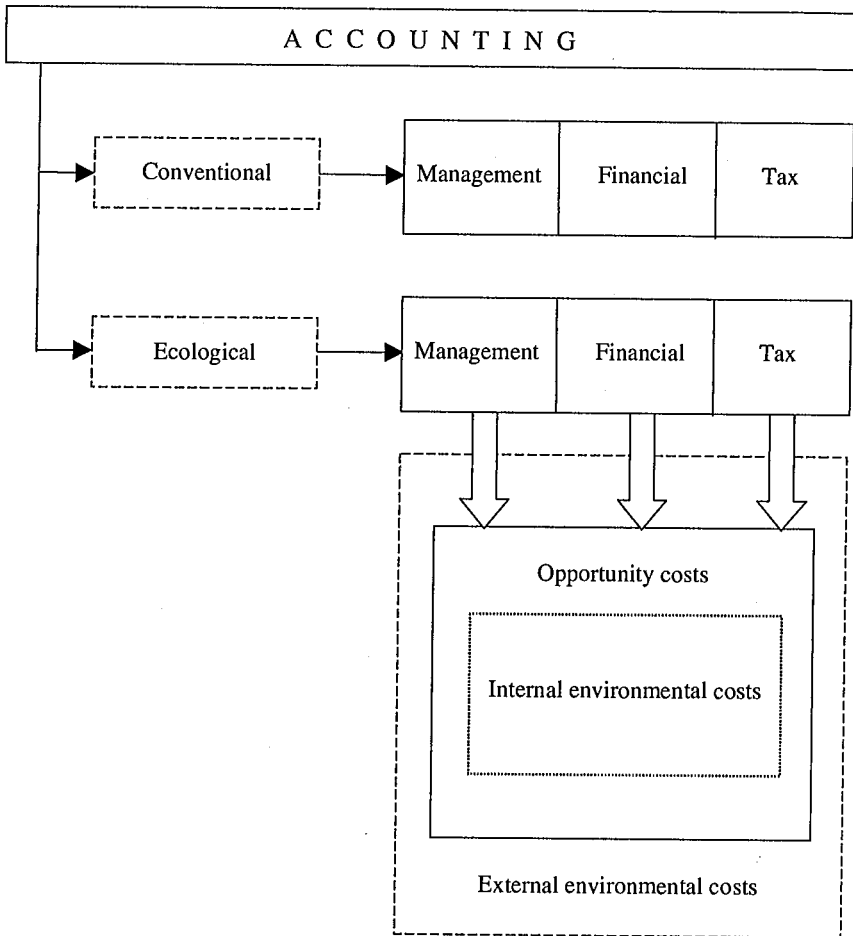
²⁸ Schaltegger and Burritt 62.

This is presented graphically in Diagram 6.2. However, their characteristic from the point of four criteria:

- information and record identification,
- verification,
- information disclosure and
- its use

is presented in Table 6.4.

Diagram 6.2.
Accounting systems.



Source: Author's own elaboration.

Table 6.4.
A characteristic of selected systems of environmental accounting.

Type of accounting	Information collection and aggregation	Information verification (audit)	Information disclosure	Use of information
Financial accounting	Company must estimate environmental assets and liabilities.	External auditor analyses the impact of environmental liabilities on financial income summary and assets of a company.	Disclosure of some certain environmental liabilities is required by law in some countries.	Shareholder communication in financial reports.
Management accounting	Various kinds of information about environmental costs are collected for the purposes of decision-making processes.	Internal auditors may verify the manner of information collection	External disclosure is not obligatory.	Information used exclusively for internal evaluation of profitability.
Tax accounting	Company must determine ecological tax liabilities.	Tax authority can verify the amount of this tax.	Ecological tax liabilities must be disclosed and paid.	Evaluation of tax burden and communication with tax authority.
Internal ecological accounting	Voluntary monitoring and recording of various "relationships" of a company with the environment.	There is no external audit because information recording is voluntary.	Exclusively for internal purposes of an enterprise.	For evaluation by managers.
External ecological accounting	Obligatory ecological impacts are estimated, classified and recorded.	Verifiers can verify the records of monitoring.	Monitoring records must be disclosed to public institutions interested.	For communication to shareholders and other public institutions interested.
Other ecological accounting	Can be the basis for determining ecological taxes and emission allowances.	Auditors can verify records and accuracy of monitoring.	Records of monitoring must be disclosed to auditors and public institutions interested.	For communication to auditors and other public institutions interested.

Source: Schaltegger and Burritt 68.

6. ECOLOGICAL ACCOUNTING IN POLAND

The enterprises which operate in Poland do not provide information about investment outlays or costs of environmental protection to a wide group of users of financial statements, although such reporting is supplied for publication in statistical annuals of the Main Statistical Office.²⁹ According to the Main Statistical Office the cost of environmental protection is *'an equivalent of the amount of other most precious economic and social benefits from which it is necessary to resign in exchange for undertaking environmental protection expressed in terms of money'*.³⁰ The costs are divided into:

- **economic costs** – expenditures of lively or objectified labour used for various undertakings of a protective character (also for the management of the protection of the environment, research, education etc.),
- **social costs** – all extra economic disadvantages which society must accept when it takes up undertakings in order to achieve a given level of environmental protection.

This classification does not differentiate the commonly adopted and accepted in the West partition of costs of environmental protection into enterprise costs and society costs allocated outside the enterprise, i.e. internal and external costs.³¹ It does not include opportunity costs, either.

According to the Ministry of Environmental Protection, Natural Resources and Forestry *'the costs of environmental protection comprise investment outlays for undertakings which serve the protection or improvement of the state of natural environment and the running costs of environmental protection activities diminished by the subventions received for the carrying out of pro-ecological tasks'*.³²

²⁹ The share of investment outlays for environmental protection in the total investment outlays in the national economy in 1999 and 2000 amounted to 6.8% and 4.9% respectively. But the receipts from ecological funds created from current charges and indemnities for environmental pollution amounted to 4.3 thousand million PLN and 4.6 thousand million PLN respectively in the same years. See: Rocznik Statystyczny Rzeczypospolitej Polskiej 2001 (2001). (pp. 33-35). Warsaw: GUS. For a specification of indicators of evaluation of ecological activity results in selected enterprises operating in Poland. See: Borys, G. (2001). Tradycyjna rachunkowość przedsiębiorstwa a rachunkowość ekologiczna. In B. Micherda (Ed.), Ewolucja polskiej rachunkowości na tle rozwiązań światowych (pp. 39-40). Kraków: AE.

³⁰ Definitions of terms in environmental protection: GUS (1993). Warsaw: GUS, p. 111.

³¹ Majchrzak, I. (2002). Koszty ochrony środowiska w rachunku kosztów. In J. Gierusz and M. Jerzemowska and T. Martyniuk (Eds.), Rachunkowość wobec procesów globalizacji. Gdańsk: UG; Gajda, A. (2002). Koszty ochrony środowiska w rachunkowości przedsiębiorstwa, Przegląd Organizacji, 1, p. 26; Schaltegger and Burritt 68.

In **environmental protection investment outlays** are included all costs of the creation of new or reproduction and modernisation of used components of fixed assets which increase a company's resources. These can comprise outlays for the construction of a company sewage treatment plant or installation of dust filters.

The **running costs of environmental protection** include non-investment outlays related to undertakings reducing the negative influence of an enterprise on the environment. These can comprise:³³

- running costs of protective devices (energy, raw materials, wages, insurance etc.),
- costs of environment monitoring (control and measurement devices),
- running costs of ecological laboratory,
- costs of research and development (e.g. costs of preparing a new technology to reduce the quantity of raw materials used, a new system environmental monitoring),
- costs of education, training and information in the area of environmental protection,
- management expenses (i.e. operating costs of a department of environmental protection, costs of implementation of a certified system of environmental management,
- charges for economic use of natural environment which comprise, among other things, licence fees (for extraction of mineral raw materials), exploitation and service charges (for transport of communal waste material) and ecological charges (for surface water intake and sewage disposal, for emission of gas and dust pollutants, for storage of waste material at waste disposal sites etc.),
- ecological taxes.

6.1. ECOLOGICAL COSTS IN ACCOUNTING RECORDS

Identification, measurement and classification of particular kinds of environmental protection costs are indispensable for a proper economic calculation in a company. These costs can comprise:³⁴

³² Gajda 26.

³³ Gajda 27.

³⁴ Gajda 27.

- costs of the basic operating activity,
- costs of the remaining operating activity,
- financial costs (connected with financial operations),
- extraordinary losses.

In most cases the running costs of environmental protection will be included in the costs of basic operating activity. An exception can be, for example, the operating costs of a sewage plant, which also supplies services outside an enterprise. Then an appropriate part of costs will comprise the costs of the remaining operating activity.

Basic operating activity costs can be recorded by means of two systems: generic and functional.

In the generic system the costs of environmental protection can be recorded in the following accounts:

- amortisation, e.g. amortisation of dust extraction devices.
- material and energy use, e.g. the costs of energy used up by a company sewage plant.
- external services, e.g. the costs of transportation of communal waste material.
- wages, e.g. the costs of remuneration for environmental protection department employees.
- taxes and charges, e.g. the charges for air pollution, for storage and utilisation of waste material.

The costs of environmental protection in the functional system will be included in:

- departmental costs, e.g. operating costs of closed water circulation in the production department.
- costs of auxiliary activity, e.g. operating costs of protective devices supplying services both for the company and external customers.
- costs of general management, e.g. the costs of implementation and improvement of an environmental management system, costs of research and development, costs of monitoring, charges for storage of waste material.
- selling costs, e.g. the costs of transport of valuable raw materials obtained from recycled waste material, fit for sale.

As can be seen in the above, environmental protection costs are recorded in different 'places' of costs recording systems, and current charts of accounts do not propose a separate account 'Costs of environmental protection'. The sys-

tem of accounting records is not prepared for an identification, measurement and record of costs of environment protection.³⁵ Taking into account the fact that these costs may by no means be omitted in, for example, budgeting, in the evaluation of economic efficiency of pro-ecological investments accounting must equal to the new communication needs.

6.2. ENVIRONMENTAL ACCOUNTING IN SCIENTIFIC RESEARCH

Poland has not wide experience in environmental accounting. However, there has been a growing interest in this issue lately. The proof is in the publications cited, but research in this area is scarce. An exception is Marta Stępień's³⁶ research work. It follows from the author's research that in a significant majority of enterprises examined (72%) ecological problems are measured, also most (59%) respondents acknowledge considering these accounting problems important. On the other hand, however, the management does not know the issues related to environmental protection and their economic calculation to a sufficient degree.

In the respondents' opinions (members of the boards, chief accountants, environmental protection managers) accumulation of information indispensable for the economic calculation which takes costs, losses and ecological liabilities into account has a very big and/or big influence on the economic activity of an enterprise (see Table 6.5.). Great importance attributed to the identification of ecological costs (investment, running costs) is a consequence of this point of view. It also results from the table discussed that in accounting allocation of total costs to products of labour and processes is not valued highly, whereas it is one of the most important objectives for accounting in proper management decision-making, related to profitability of products and their influence on the environment.

It results from Table 6.6. that respondents do not count on environmental protection reports, both internal and external, to have a significant influence on solving the ecological problems enterprises face. The same applies to the ecological audit.

³⁵ See also: Hellich, E. and Paszula, M. (2001). Koszty ochrony środowiska w systemie rachunku kosztów. In: B. Micherda 82-93; Borys 32-40.

³⁶ Stępień, M. (2002). Ekologiczny aspekt pomiarów ekonomicznych dokonywanych w rachunkowości przedsiębiorstw (questionnaire survey) – wybrane problemy. In J. Gierusz and M. Jerzemowska and T. Martyniuk (Eds.), *Rachunkowość wobec procesów globalizacji* (pp. 545- 558). Gdańsk: UG.

Table 6.5.
Scope and degree of influence of accounting on the taking of ecological aspects into account in the economic activity of company (in %).

Scope of activity of accounting	Degree of influence		
	Very big and big	Average	Little or none
Creation of information indispensable for economic calculation (costs, losses, liabilities, ecological use of fixed assets)	71	16	6
Internal economic ecological reporting	40	33	18
Financial risk assessment	47	21	21
Identification of costs of compliance with the law	58	23	9
Identification of costs of disposal, storage and utilisation of waste and spoilage	61	16	18
Identification of costs of energy consumption and spoilage	60	27	8
Identification of costs of ecological programmes, management and monitoring	40	29	21
Identification of costs of ecological investments	60	21	12
Identification of costs of compliance with designs	39	25	24
Identification of costs of ecological design of a product	43	22	20
Allocation of general ecological costs to products and processes	33	29	24
Calculation of "total costs", i.e. those including the influence of the activity of an enterprise on the environment	48	28	17
Measurement of probable ecological liabilities	34	30	24
Implementation of appropriate accounting policies	41	35	15

Source: Stępień, M. Ekologiczny aspekt pomiarów ekonomicznych dokonywanych w rachunkowości przedsiębiorstw (questionnaire survey) - wybrane problemy 550.

It is noteworthy how chief accountants perceive ecological problems. They consider the influence of identification of environmental protection costs the most important from the point of view of a possibility to protect the environment (82% of accountants), whereas increased ecological awareness is perceived as the least essential by financial and accounting services. This proves that the importance of accounting in the solving of ecological problems

is underestimated. Interestingly, similar conclusions were drawn from the research carried out in Great Britain, New Zealand and Canada at the beginning of the nineteen nineties.

Table 6.6.
Degree of influence of chosen activities on the possibility to solve ecological problems (in %).

To what degree these activities might contribute to the solving of ecological problems?	Degree of influence				
	Very high	High	Average	Low	None
Internal ecological reporting	6	14	37	27	4
External ecological reporting	6	20	42	20	2
Ecological audit	7	19	34	13	7
Appropriation to ecological reserves	3	12	21	33	7
Measurement of probable ecological liabilities	3	13	33	19	10
Disclosure of ecological problems in financial statements	2	24	26	24	5
Use of ethical and ecological criteria in the investment process	13	37	23	9	3
Identification of environmental protection costs	13	46	18	11	0
Total cost calculation i.e. those including the influence on the environment	9	43	18	11	1
Allocation of general ecological costs to products and processes	2	18	35	17	4
Ecological risk assessment	7	20	37	13	5
Identification of ecological losses	6	29	26	15	5
Establishment of a verifier with great powers	11	24	27	12	10
Financial risk assessment of ecological activity	1	19	35	15	5
Increased ecological awareness of production employees	9	40	15	17	4
Increased ecological awareness of financial and accounting service	1	27	23	29	4

Source: Stępień, M. Ekologiczny aspekt pomiarów ekonomicznych dokonywanych w rachunkowości przedsiębiorstw (questionnaire survey) - wybrane problemy 555.

7. CONCLUSION

Let the summary of the above considerations consist of the conclusions from the research presented here which simultaneously constitutes challenges to the accounting in Poland. The main objectives of accounting in the scope of environmental protection following from the research carried out can be defined as follows:

- measurement of costs, losses and of ecological liabilities,
- development of rational criteria of classification of environmental protection costs, recording and disclosure in financial reporting,
- recording and disclosure of ecological liabilities in financial reporting,
- appropriation to ecological reserves,
- taking costs and effects in activities influencing the environment into account in economic calculation.

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P A R T I I

**FINANCIAL MARKET TOWARDS
ENVIRONMENTAL PROTECTION**

Marta Penczar

CHAPTER 7

**THE IDEA OF SUSTAINABLE
DEVELOPMENT IN FINANCIAL
INSTITUTIONS**



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THE IDEA OF SUSTAINABLE DEVELOPMENT IN FINANCIAL INSTITUTIONS

1. THE IDEA OF SUSTAINABLE DEVELOPMENT (SOCIAL RESPONSIBILITY)

An increased interest of political, advisory and business circles in the idea of sustainable development¹ has been observed for the past several years. European Commission has stressed the importance of providing an overall European framework, aimed at promoting quality and coherence of CSR practices across the European Union, through developing broad principles, approaches and tools, and promoting best practice and innovative ideas at the EU level². The European Union is directly involved in issues concerning market behaviour through a wide range of policies with international impact, such as trade, competition, development and social policy.

The connection of needs, essential from the point of view of both the institution and groups of enterprises operating in its environment (the employees, shareholders, borrowers, the local community) in the business strategy is a fundamental principle of sustainable development. It is assumed that the maximisation of an enterprise shareholders' value, while maintaining an equilibrium in satisfying the expectations of the remaining stakeholders (stakeholders' value) by integrating economic, social and pro-ecological activities, should be the aim of the activity of today's organisation.

¹ On the corporate level the idea of sustainable development is referred to as 'Corporate Social Responsibility' – CSR.

² Corporate Social Responsibility & Socially Responsible Investing: A European Framework (2002). Report by the Federal Trust for Education and Research, Chaired by Sir Brian Unwin, p. 8.

This idea provides for continuous improvement of a corporation's activity which results both from the changes in the consumers' social awareness as well as the managers' understanding that the introduction of high management culture which comprises, among other things, the implementation of detailed principles of social and ecological responsibility results in increased effectiveness and competitiveness of the institution, in a higher level of its employees' motivation, in new customers gained and, consequently, in the organisation's increased economic effectiveness.

The process of globalisation of the economy results in increased interest in global responsibility. The experience of "responsible business" in the European Union shows that obtaining good financial results by enterprises is not sufficient but it is first of all necessary for them to engage in the solution of environmental and social matters and to exert a positive influence on the environment in order to enjoy permanent and sustainable development. The European committee draws the organisation's attention to the threats to their economic results if they do not respect the principles of social and ecological responsibility. Having joined the European Union the Polish enterprises will have to adapt to the standards of conduct of their economic partners: suppliers, buyers, creditors, social and pro-ecological institutions etc. In the near future they will also have to create actively the standards of civilised and responsible business.

The institutions which will implement the idea of sustainable development in their own business strategies may count on definite advantages which may include, among other things:³

- improvement of the image and reputation of the company,
- increased sale and consumers' loyalty to the products and services of the company perceived as socially and ecologically responsible,
- increase of productiveness and quality of products and a fall of costs as a result of the activities of the company which are oriented to the increase of the employees' motivation,
- higher level of control and risk management in different areas of activity: in finance and consumer attitudes,
- the company's increased ability to maintain its staff and to make their work more attractive by a reducing the costs of recruitment of new, unskilled workers and additional costs of their training.

³ European SMEs and social environmental responsibility. (2002). Observatory of European SMEs, No 4. European Commission, p. 12.

Table 7.1.
Examples of co-operation of particular groups of stakeholders with the 'socially responsible' enterprise.

Groups of stakeholders	Range of co-operation of stakeholders with the "socially responsible" enterprise
1) Shareholders and owners	<ul style="list-style-type: none"> - Formulating the mission of the enterprise comprising also other than financial aims, - Reports of the practices of "the social responsibility" of the enterprise.
2) Employees	<ul style="list-style-type: none"> - Employees' participation in the management of the enterprise, - Assurance of work safety to the employees, - Improvement of communication between the employees and the management, - Helping the employees to reconcile their work, family life and their own intellectual development.
3) Customers, consumers	<ul style="list-style-type: none"> - The monitoring of quality, safety and aspects of environment protection in the products and services offered by the enterprise, - Immediate response to the customers' remarks and suggestions.
4) Natural Environment	<ul style="list-style-type: none"> - Agreement to minimise the negative influence of the enterprise on the environment, - An analysis of the complete cycle of a product.
5) Local community	<ul style="list-style-type: none"> - Involvement in the charitable activity and assessment of the needs of the community, - Partnership with social organisations which support the economic success of an establishment, - Sensitivity to local customs and culture.
7) Suppliers	<ul style="list-style-type: none"> - Refusing to cooperate with the establishments which take advantage of illegal practices (e.g. children's work), - Checking the practice of 'social responsibility' in the whole delivery chain, - Immediate response to suppliers' remarks and suggestions.

Source: Own elaboration based on European SMEs and social environmental responsibility 14.

The idea of sustainable development comprises first of all the activities of an enterprise run in compliance with the interest of all the groups operating in its environment: the stakeholders (the psychological and sociological capital). A stakeholder is every definable group or individual that can affect or can be affected by the activity of an enterprise by means of its products, strategies and

manufacturing processes, e.g. shareholders, employees, customers, consumers, suppliers, ecological organisations and the local community.

Stakeholders are the capital of an enterprise, equally important as financial capital (money, financial instruments, investments), the technological capital (the technological infrastructure) and the natural capital (pertaining to nature). Today's management strategies take into account these four basic forms of capital.

The maximisation of an enterprise shareholders' value is one of the main aims of its activity, while at the same time the awareness of social responsibility among investors is on the increase. A growing interest of investors and shareholders in the purchase of units of participation in funds which invest in 'socially responsible' enterprises is also observed. These funds take into account the activity of an enterprise in favour of the natural environment, the quality of products, and the co-operation with the society and workers.

The increase in value of an enterprise is determined to an ever-greater degree by its 'soft assets'. Among them well-motivated employees, working in compliance with the ethical code, have the highest value. In the future these assets will decide on the competitive superiority on the quickly changing market. The employers' assurance of honest reward for the work done and of safe working environment is the purpose. It is also observed that employment policy more and more often provides for delegating authority to the middle managers and employees themselves (co-management). Simultaneously, the socially responsible enterprise aims at:

- improvement of information flow in the enterprise,
- setting up circumstances advantageous for joining professional work with family life,
- improvements of employees' level of education by means of continuous training.

Research confirms that the care of an enterprise for the satisfaction of its employees results directly in the increase of the quality of products/services, higher productiveness of work and, consequently, to the increase in the profitability of a corporation and shareholders' value added.

Simultaneously, it is observed that the care for the workers' matters leads to the increased level of customer satisfaction. Working in a friendly environment may in the future result in an essential competitive superiority of the enterprise.

The 'socially and ecologically responsible' enterprises endeavour to build long-term relationships with their customers by means of suitable understanding

of their needs and assurance of high-quality products and services. The care for customer satisfaction with the quality of services offered leads directly to the increase in value of the shares, the participation of the enterprise in the market as well as of the rate of return from the investments performed.

The orientation to the customer is of key importance also due to the changes that are taking place in consumer attitudes. The increasing customer awareness of the environment protection issues and of the maintenances of social and ethical behaviour of corporations result in the consumers' readiness to pay more for a given product/ service if it has been produced in compliance with the pro-ecological technologies and in the corporations of high social culture.

The socially responsible enterprise also takes care for its own business partners and suppliers. The development of long-term ties with suppliers is conducive to high quality and a reduction of costs. The issue, among other things, is the support of an honest price for materials delivered, so that the activity of the supplier should bring him a profit part of which can be invested in quality development. Co-operation with suppliers should not be examined in a short period of time. Close relationships of an enterprise with business partners also consist in the improvement and development of the suppliers' know-how.

The pressure of consumer groups causes, that corporations undertake co-operation only with the suppliers who do not break human rights (juveniles' work, poor working conditions). The strategy of responsibility for business partners declared by many enterprises all over the world is often referred to as the PYMWYMI rule ("put your money where your mouth is") which means, generally speaking, maintaining business relations only with these suppliers who share the values which are compatible with the philosophy of the ordering enterprise.

2. THE ROLE OF FINANACIAL INSTITUTIONS IN CONTRIBUTING TO SUSTAINABLE DEVELOPMENT

As competition on the market and shareholders' expectations for return from invested capital grow, the idea of sustainable development becomes important. Simultaneously, the development of modern technologies causes that customers expect low prices of services, high quality and quick of action. On the other hand, new technologies make instant access to information and swift motion on global markets possible for shareholders.

The growing competition on the capital market, its saturation and the barrier of demand as well as increased investment risk are the factors which

induce a deeper analysis of the present and future situation of enterprises which are the object of investment decisions. The choice of proper criteria of assessment of companies becomes more complicated for financial analysts and potential shareholders. Institutional investors should then determine the degree of risk of the influence of the state of the natural environment changes on the whole investment portfolio, demand disclosure of the information about threats connected e.g. with climate changes, increase investments in clean energy.

The idea of sustainable development must become the style of activity of most of the enterprises which want to achieve a permanent market position and do not want to be the aim of attacks by different social groups unsatisfied with their styles of activity. **The modern and aware banking sector, fulfilling its economic and social function in the economy, has a task to support this process.** This can be supported by lending institutions which may, to some extent, extort from given credit enterprises the necessity to undertake activities aimed at limiting the negative influence of the activity of the enterprise on the natural environment and local community.

In its own activity the financial sector has to do with the problems of environment and with social responsibility first of all⁴:

- the investor who provides investment capital to economic subjects,
- the creator of financial products which strengthen sustainable development: the green investment funds,
- the stakeholder who cares for the prevention of the development of the environmental protection risk,
- the subject polluting the environment.

Generally, sustainable development in financial institutions can be considered in the following aspects⁵:

- environmental risk management,
- the financial infrastructure,
- the internal operations of a banks,
- the social responsibility,
- the marketing,
- 'sustainable' financial products.

⁴ The role of financial institution in achieving sustainable development. (1997, November). Report to the European Commission, by Delphi International LTD in association with Ecologic GMGH, p. 1.

⁵ Industry as a partner for sustainable development. Finance and Insurance. (2002). UNEP's Finance Industry Initiatives. UNEP United Kingdom, p. 53-55.

2.1. ENVIRONMENTAL RISK MANAGEMENT

The problems of enterprises related to the protection of the environment may have serious implications for their ability to service debts or carry out investments by an enterprise because a negative public opinion about financing enterprises which pollute the environment may influence the reputation of the bank and its stock exchange quotations.

Therefore, it is a key matter for a banking institution which accepts the principles of sustainable development to take into account the risk of a lack of ecological and social responsibility in making credit decisions and analysing credit risk. To simplify the credit procedure some banks do not carry out their own quantification of the risk of a negative influence of an enterprise on the natural environment, but take advantage of the publications of international institutions (e.g. The World Bank) which assess this risk in the particular countries, sectors and business lines.

In order to minimise the credit risk these banks aim at a total cessation of giving credits to the sectors of the economy, which do not comply with rules of social responsibility, even to a basic degree. On the other hand, it should be taken into account that the financing of projects in these sectors will be taken over by another bank for which the risk of lacking social responsibility and a negative influence on the natural environment is not essential, so it is not taken into account in making credit decisions. This is why “socially responsible” banks sometimes make decisions to finance non-ecological undertakings, but only in consideration of the fact, that thanks to the rules of sustainable development accepted by the banking corporation they will be able to influence the enterprises in a positive way and to contribute significantly to the reduction of their negative influence on the environment. This proves that financial institutions play a significant part in the spreading of the idea of sustainable development.

2.2. THE FINANCIAL INFRASTRUCTURE

The “socially responsible” bank sector should also actively operate on the market of the financing of the infrastructure connected with the protection of the environment such as sewage treatment plants, water mains, pro-ecological building orientated to the effective use of energy and natural resources.

2.3. THE INTERNAL OPERATIONS OF A BANK

The acceptance of the rules of sustainable development by a financial institution entails the need to introduce systems of environmental management (e.g. ISO 14001). The basic tool for the implementation of the environmental management is the analysis of the life cycle of the product. The implementation of systems of environmental management is also necessitated by the increasing sensitivity of the society and customers as regards the problems, which are essential in respect of the environment. A bank's active policy for the protection of the environment contributes, among other things, to the strengthening of the image of an enterprise and leads to the improvement of cost steering. The activity of a bank in this respect should include, among other things, the programmes of effective use of energy, recycling, waste material reduction (e.g. paper) and education of employees, suppliers and customers in the area of threats to the natural environment.

It should be noticed that today few banks as yet have certificates of implementation of environmental management. These results partly from the fact that the activity of banks exerts a low negative influence on the natural environment compared with industrial enterprises. Nevertheless, the banks which already have the systems of environmental management in place include: BBVA Banco Bilbao Vizcaya Argentaria SA (some regions), Deutsche Bank (the head office), UBS and Credit Suisse.

Among other things, a periodical publishing of reports of the observance of the rules of environment protection by a bank is an essential element which underlines the involvement of the bank in the principles of sustainable development. It should be emphasised, however, that depending on the country, its tradition and customs, a varied approach to this type of reports is observed. Reports concerning the influence of financial institution on the natural environment are relatively popular in Europe. The American banks pay greater attention to the reports related to the engagement of a bank in the activity for the community. French and Italian banks do not publish any reports of this kind.

2.4. THE SOCIAL RESPONSIBILITY

Financial institutions should effectively cooperate with the local community in which they operate in order to help to solve definite social problems which are chosen and acknowledged by the management of the enterprise as essential for the support of the long-term interest of the enterprise and for the strengthening of its reputation. Such co-operation may, among other things,

Table 7.2.
Selected examples of commercial banks operating in Poland
with their activity aimed at the benefit of the community.

Bank	Examples of activities
PKO BP SA	<ul style="list-style-type: none"> • PKO BP for the benefit of the National Culture.
Pekao SA	<ul style="list-style-type: none"> • Support, among other things, of The Great Theatre in Warsaw, the National Theatre, the Royal Castle in Warsaw, the National Museum in Warsaw, the National Museum in Cracow, the Gallery of the Contemporary Art "Zachęta" and the Łódź Ballet – Meetings. • Engagement in the charity for the benefit of children. The Warsaw Hospice for Children regularly takes part in the finals of J. Owskiak's Wielka Orkiestra Świątecznej Pomocy (The Great Orchestra of Christmas Aid). The Pekao SA bank also took part in the fund raising event the "Penny Heap" held by Towarzystwo Nasz Dom (the Association Our House). • As far as sports are concerned the Pekao SA bank concentrates its expenses on lawn tennis and particularly on the Szczecin Pekao Open tournament.
ING BSK SA	<ul style="list-style-type: none"> • Sponsorship of the Ludwig van Beethoven Easter Festival in Cracow, the Competition for the Best Student "Primus Inter Pares", the Associations of the Squadron of the Cavalry of the Polish Republic, the lioness "Inga" in the Chorzów ZOO, the exhibitions "Long live the emperor. Pictures of Napoleon in the Polish collections" – the Silesian Museum, the Golf Club "Cracow Golf and the Country Club". • Co-operation with the National Symphonic Orchestra of the Polish Radio and of the Television.
BIG BG SA (now Bank Millenium)	<ul style="list-style-type: none"> • Jazz in Poland – Anthology 1950-2000. • Millennium is a sponsor of future managers. • Teresa Roszkowska's varnishing-day. • Stanisław Lem awarded the "Golden Sceptre" prize. • BIG Bank GDAŃSKI Millennium awards the best students. • The Mecaenas of the Gdańsk Culture 2000. • a new work by Wojciech Kilar.
Kredyt Bank SA	<ul style="list-style-type: none"> • Financial support of the film production: <i>Ogniem i mieczem, Pan Tadeusz, Przedwiośnie, W pustyni i w puszczy, Quo Vadis.</i> • Cultural activity (which the Bank has supported): The Foundation Pro Musica Camerata, the Warsaw Chamber Opera, the Musical Theatre ROMA, the Polish Concert Agency of Łódź, the publishing house Ossolineum: the Kredyt Bank SA is a patron of the publication of the "History of Private Life", organisers of the Musical Festival in Łańcut, the Kielce Culture Centre. • Financial support of the sport activity: Tour de Pologne, Grand Prix MTB 2002.

Source: Author's own elaboration.

help to restore old, forgotten plants, which will immediately result in the regional economic growth and increased employment. The building of long-term relationships with the community is also visible in the charitable activity of banks, in the sponsorship of sport and cultural events and in giving "grants" for the developing, dynamic enterprises. Examples of public initiative of banks include also the support of the vocational activity, work aimed at the development of ecological awareness, assistance in educational professional and civil programmes, preparation and distribution of educational materials.

Co-operation of a financial institution with the local community also manifests itself in the building of positive relationships with the employees. Sustainable employment policy of the bank should take into account, among other things, the possibility to raise the employees' qualifications, the equality of rights of men and women and the employee participation in the profits of the corporation.

In its strategy for the benefit of the local community a financial institution should follow the principle of partnership and mutual advantages, but in particular, monitor the social effects of its own activity.

2.5. THE MARKETING

Banks can use the aspect of environment protection and "social responsibility" for the promotion of their own services to customers who are not indifferent to the current problems and who wish to cooperate with the institutions which implement the idea of sustainable development. A special form of marketing activity is the so-called "Cause Related Marketing". These are the activities during which financial institutions and non-profit organisations create relationships based on partnership in order to achieve definite aims. This is a sui generis exertion of the influence simultaneous engagement in the achievement of laudable aims on the behaviour of consumers. One of the examples of Cause Related Marketing is the promotion of credit cards of a bank linked with information about the co-operation of the financial institution with a charitable organisation. The bank achieves its aim as a result of the improved image of the enterprise on the market while the non-profit organisation receives part of profits in return and allocates them to laudable aims. The research carried out in Western Europe shows that social support for this type of marketing strategies grows. This is reflected in the customers' freedom to choose the charitable aim they have decided to support. However, an exact diagnosis of the potential bank customers' needs is essential because the values they share are dependent on educational, geographical, social etc. conditions.

2.6. 'SUSTAINABLE' FINANCIAL PRODUCTS

Environment friendly enterprises need external financing, especially for new, pro-ecological technologies. A financial institution can play a decisive role in the development of pro-ecological undertakings of economic subjects by offering, among other things, preferential credits for pro-ecological aims, units of participation in pro-ecological investment funds etc. On the other hand, taking into consideration the growing interest of investors and society, pro-ecological products and services should be perceived as an opportunity for a bank to increase profits resulting from, among others, the conquest of a niche market.

On the national market of bank services, it is the Bank Ochrony Środowiska SA that is an institution specialising in the financing of pro-ecological undertakings. The bank co-operates with organisations dealing with the financing of environmental protection i.e. with the National Fund for Environmental Protection and Water Management, the Foundation 'Mała Wieś' (A Small Village) with Provincial Funds for Environmental Protection and Water Management, the M. Rataj Foundation Polish Village 2000, the European Fund for the Development of the Polish Rural Areas and with other assistance funds. In its offer the bank provides, among other things, help in obtaining credits for:⁶

- devices and products serving the protection of natural environment;
- thermo-modernising undertakings;
- agro-tourist investments;
- the construction or modernisation of water treatment plants;
- the utilisation of waste material;
- the utilisation of renewable sources of electrical and thermal energy;
- the construction of little household sewage treatment installations.

Simultaneously, the Bank assures its potential customers of a complex advisory care comprising:

- access to the information contained in the bank database about enterprises working for the benefit of environment protection (design and consulting firms, firms engaged in construction-assembly works, those manufacturing and distributing environment protection devices);
- linking businesses interested in carrying out pro-ecological tasks;

⁶ The product offer of the Bank Ochrony Środowiska SA.

- providing advice and information about the sources of financing pro-ecological investments;
- making ecological reviews;
- advising on the choice of the best technologies serving the protection of the environment;
- training related to the preparation and the carrying out of pro-ecological investments.

On the other hand, customers may take advantage of deposit services of the Bank and deposit their savings in the pro-ecological 'Investments with the Souslik'. The bank policy is to allocate from its own resources 0.50 PLN per each investment deposited towards the programme of the spotted souslik protection implemented by the Complex of the Zamojski Landscape Parks.

The increasing care for the natural environment becomes the main expectation of society from enterprises and financial institutions.

3. THE FINANCING OF ENTERPRISES VS. CREDIT RISK IN THE LIGHT OF THE IDEA OF SUSTAINABLE DEVELOPMENT AND OF SHAREHOLDERS' VALUE ADDED

Credit institutions responded to the new challenges issued by the idea of balanced growth considerably later than other sectors of the economy. This results partly from the fact that banks as a rule are perceived as friendly sectors, not threatening the natural environment. However, due to the nature of their activity, more attention should be paid to the risk of failing to protect the environment in credited enterprises and its consequences to the bank and to the shareholders.

Nowadays there is increasing awareness of the banking sector of the range of opportunities and threats related to the risk of a lack of social and ecological responsibility in enterprises.

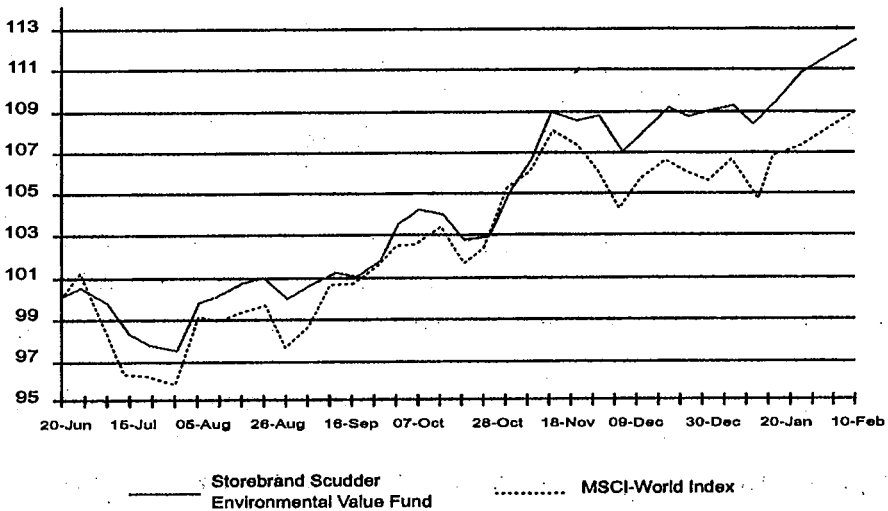
A financial institution in its own activity faces a direct risk of a lack of environmental protection in a situation where it contributes to the emergence of ecological (environmental) problems on the one hand and, on the other, faces an indirect risk being a consequence of non-ecological activities of its customers. In the instance of credit activity the risk of a lack of ecological responsibility plays an essential part at, for example, fixing the price of the credit collateral value. The borrower's wasteful activity related to natural

environment may contribute to considerable depreciation of the collateral, e.g. land and, consequently, to the increase of credit risk for the bank.

The risk of a lack of environment protection accompanies 'asset management', too. At present there is a growing awareness among potential investors of a possible loss of profits caused by ignoring the environmental risk by analysts. This results, among other things, from the fact that the success of an investment undertaking in an enterprise which is part of an investment portfolio of a financial institution, depends also on the care and the taking into account of the influence of a given investment on the natural environment.

On the other hand, investors perceive potential opportunities of increased value-added on the funds allocated in pro-ecological investments. The 'green investments funds' include exclusively "socially responsible" enterprises in their own investment portfolios. The awareness of enterprises as far as the protection of natural environment is concerned and the co-operation with employees, suppliers and the local community, result directly in an improved image of the enterprise, increased trust which, consequently, contributes to the increased value of shares quoted on the capital market and the shareholders' increased value.

Chart 7.1.
A comparison of the value of
Storebrand Scudder Environmental Value Fund with MSCI - World Index
(Morgan Stanley's Capital International World Index).



Source: Blumberg, J. and Korsvald, A. and Blum, G. Environmental Performance and Shareholder Value. World Business Council for Sustainable Development, p. 24.

The idea of sustainable development in the management of an investment fund was used, among other things, by the consortium of the Norwegian insurance agency Storebrand and the American investment fund Scudder, Stevens & Clark in 1996. The aim of this fund was to obtain a higher rate of return by including the analysis of the environmental protection factors in the traditional financial analysis. The fund invested into enterprises with the highest index rate as regards the responsibility for the natural environment and society in each branch.

The bank analysis of the activity of an enterprise as far as protection of the environment and social responsibility are concerned serves not only the risk assessment of the success of an investment undertaking, but also influences the assessment of the gaining of external capital and joint rating. The influence of the assessment of the activity of firms in terms of 'social responsibility' may then prove to be of key importance in the context of changes in the capital adequateness in the banking sector (The New Basel Capital Contract) and to the dependence of the size of financing on the joint rating of enterprises.

Financial institutions can and should limit risk while making credit and investment decisions by the inclusion of aspects of the protection of the environment in the analyses of credit departments in a bank. The purpose of it, among other things, is⁷:

- 1. a search of elements of the protection of the environment among the traditional analyses, and indicators which are still being used.**
- 2. the assessment of the integration of pro-ecological factors with the business strategy of a corporation.**

The credit division officer should obtain, among other things, the answers to the following questions in the conversation with the representative of the enterprise, which applies for a credit:

- Which elements of the protection of the environment can be related financially with the activity of the enterprise?
- What is the level of awareness of the key aspects of the protection of the environment among the management staff and how deeply are they embedded in the structure of a corporation, so that the enterprise would be able to use fully its competitive superiority?
- Does the pro-ecological activity contribute to the increase of risk in the enterprise, or else it is an opportunity for a quicker development?

⁷ Based on: Blumberg and Korsvald and Blum 14-15.

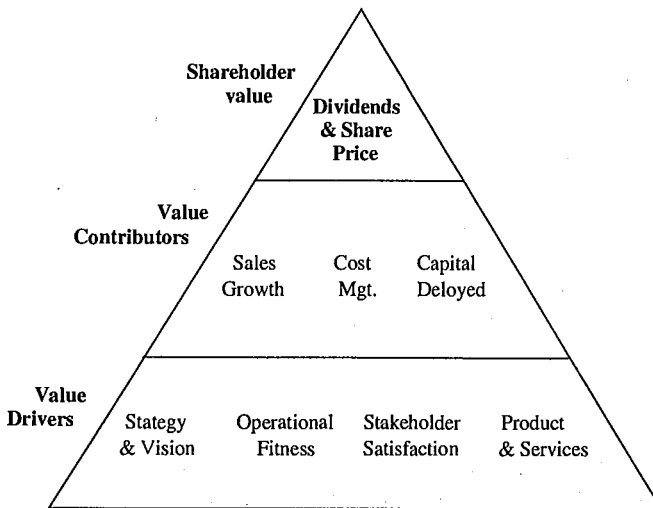
- Is there in the enterprise a system of management, where there are aims, plans and programmes of protection of the natural environment set?
- Where and how is this system introduced into operation: in the production, marketing, the 'R+D' department?
- When and to what degree did the factors of protection of the environment influence the profitability of the corporation and what are further expectations?

3. the extension of the present assessment of the enterprise on the basis of new aspects concerning the protection of the environment.

The financial model of assessing the value of an enterprise that has been used so far should be additionally extended by qualitative aspects of the borrower's activity in the sphere of the protection of the environment. The new idea may comprise the original analytical model used in the bank on the basis of four value factors: strategy, operational activity, products and satisfaction of stakeholder groups (similar to Rappaport model) and qualitative aspects added to them.

The above-mentioned four value factors are base elements in the model of the pyramid of shareholder value added.

Diagram 7.1.
The pyramid of shareholder value added.



Source: Blumberg, J. and Korsvald, A. and Blum, G. Environmental Performance and Shareholder Value. World Business Council for Sustainable Development, p. 18.

In the pyramid, the shareholders' value added is created on the basis of the so-called value increase factors (increase of sale, management expenses, the capital employed) whose activities are supported by four value factors. In a corporation with a 'socially responsible' management system the elements of environment protection should be included just into these four base value factors.

In order to make a final calculation of the shareholders' value added, including also the profitability of the enterprise, both the management staff of the enterprise and the financial analysts should find answers to following questions, which refer to value factors in the scope of:

a) strategy/vision;

Do the vision and the strategy of the corporation refer to the changes, which take place in the natural environment? Are the intended actions in the sphere of environmental protection feasible?

b) operational activity;

What costs of the protection of the environment are borne by the corporation and what is their tendency (increasing/decreasing)? Has the inclusion of aspects of environment protection in the operational activity contributed to the increase or decrease of the position of the corporation?

c) stakeholders' satisfaction;

Has the interest of pro-ecological firms which belong to the institution been taken into account in the operational strategy of the institution? What is the social assessment of the engagement of the corporation in the protection of natural environment? Do the products and services offered by the institution satisfy the customers' expectations?

d) products and services;

Does the institution develop products and services based on a lower risk and extend the functionality of its products and services?

4. the use of all accessible sources of information.

The information concerning the level of the use of pro-ecological factors of value creation by the enterprise may come from many sources. A direct contact with the management staff of an enterprise by means of telephone calls, questionnaires and visits on the business premises is one of the basic sources. At such a meeting the credit division officer may, among other things, ask questions concerning the awareness of the protection of the environment in the enterprise (point 4). Annual reports as well as environmental reports published regularly by the corporation should be treated as an additional source of information about the enterprise and

its socially responsible activities. Credit division officers should also pay attention to the sectoral analyses carried out to examine the influence of a given business on the natural environment.

It should be expected that in the foreseeable future the credit activity of banks will, to a large degree, be based on the confidence in the customers in:

- the stability or at least the predictability of the activity of an enterprise as far as economic results, environment protection and co-operation with the community are concerned,
- the qualities of the information delivered (revealed) by the borrower and third parties: book-keeping, rating agencies, certifying organisations,
- the accuracy of the borrower's own assessments and evaluation of its business plan, quality of management, intellectual capital, goodwill and investor relations.

The level of confidence will also be dependent on the three basic factors: the complexity of a financial transaction, the anonymity of the transaction (a direct contact and a conversation with the borrower are especially advisable in a credit transaction) and the credit period (the shorter the period the less is the bank interested in the company's long-term development plan).

Simultaneously, the 'socially and ecologically responsible' financial institutions will be forced to emphasise a further reduction of costs, a limitation of risk and the development of new and innovative forms of financing.

4. CONCLUSION

To sum up, it should be emphasised that the idea of sustainable development acquires a special meaning in the long-term time horizon. A suitable care of the natural environment and economic infrastructure in co-operation with the community today will result in a higher living standard in the future.

From the corporate point of view the acceptance of the idea of the 'socially responsible' business contributes directly to the improvement of shareholders' value (which is the main aim of the activity of every enterprise) with a simultaneous satisfaction of the needs of all stakeholders.

However, sustainable development in financial institutions is especially essential from the point of view of the risk of a lack of ecological and social responsibility. This risk is connected both with the credit activity of banks and 'asset management' as well as with the activity of retirement funds, where

a long investment horizon extorts a special care for the safety of investment decisions and a relatively high and stable return from the capital.

It should be expected that in the coming years the idea of sustainable development in Poland will gain more importance, with a view of Poland's accession to the structures of the European Union, where the rules of social responsibility are already implemented. The Polish enterprises which want to raise their own competitiveness will then have to adapt their management systems in the sphere of social and ecological responsibility.

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CHAPTER 8

**ENVIRONMENTAL & SOCIAL
RESPONSIBILITY OF BANKS**



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ENVIRONMENTAL & SOCIAL RESPONSIBILITY OF BANKS

1. INTRODUCTION

This chapter discusses environmental and social responsibility of banks in the wider context of corporate social responsibility (CSR). It argues that business, and financial institutions in particular, should manage environmental and social issues strategically with strong leadership from the Board and senior management. Corporate social responsibility (CSR) is a relatively new concept and has many different interpretations, definitions and advocates – not-always taking a business-friendly perspective. Banks have a pivotal role in the socio-economic environment and, particularly with large international banks, there are persuasive reasons why they should play an active, leadership role in the debate on environmental issues. There are also sound commercial reasons why banks should place CSR at the heart of decision making and drive the agenda rather than be driven by it.

2. THE CONCEPT OF CORPORATE SOCIAL RESPONSIBILITY

2.1. DEFINITION

The term corporate social responsibility (CSR) has received wide international recognition and it is used to include a variety of issues including environmental and social issues. The preferred definition of CSR is that used by the EU Commission in its July 2001 Green Paper 'Promoting a European Framework for Corporate Social Responsibility', i.e.¹,

¹ Promoting a European framework for corporate social responsibility (2001, July). Green Paper. European Commission.

'A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis'.

A number of points can be made from this definition:

1. the definition clearly identifies the need to integrate social and environmental concerns within business operations; this, as the chapter later develops is a critical issue for management.
2. the term stakeholders is used; this gives formal recognition to a concept, which is now well established, that business must operate within a wider social context so as to satisfy a number of key constituents i.e. shareholders, customers, society/government, staff, not just the singular concept of shareholders interests.
3. the definition refers to a voluntary basis: this gives recognition to the fact that CSR requires 'buy-in' from business and business leaders in order to be effective, although some of the constituent parts of CSR e.g. environmental policies have a statutory basis and rigorous enforcement.

There are many international initiatives, which have helped to define CSR in a global context and encourage business to become engaged. A number of these initiatives are set out in the appendix: 'International guidance and best-practice'.

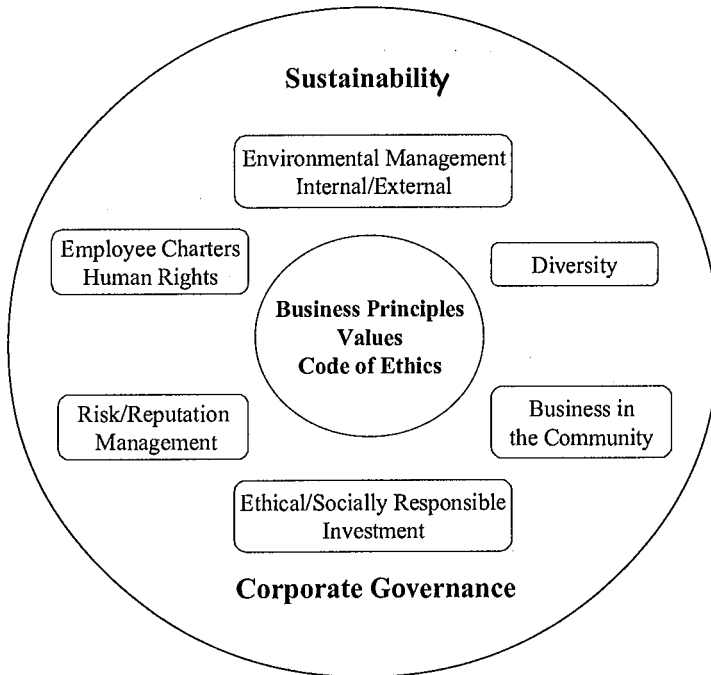
2.2. THE COMPONENT PARTS OF CSR

CSR is a multi dimensional concept governing a variety of issues. The component parts of CSR are:

- **Company values:** often expressed in a Code of Ethics or Business Principles:
- **Environmental management;** which is composed of two parts:
 - a) environmental management of the company's own facilities, equipment, premises etc. and
 - b) environmental management as it relates to credit risk or the contingent liability of the lender.
- **Employee charters/human rights;** this can include policies on staff behaviour, harassment, equal opportunity as well as basic human rights and legal and ethical responsibility relating to employment.
- **Diversity;** this reflects a mix of people and ideas that resembles the social or ethnic mix of the markets in which the business operates and thereby contributes to a wider perspective on business and social issues.

- **Business in the Community;** which includes philanthropy, corporate giving, community activity and sponsorship, but business development expenditure and direct business related activity is not generally part of CSR.
- **Ethics or Socially Responsible Investment;** this refers to the firms' own investments or financial instruments and those that it manages in a fiduciary capacity through pension funds or asset management subsidiaries or through discretionary portfolio management.
- **Risk/reputation management;** banks are required to have effective risk management process for market, credit and operational risk; reputation risk is generally seen as part of operation risk as is environmental risk.

Diagram 8.1.
The component parts of corporate social responsibility.



Source: Author's own elaboration.

In addition, the terms '**sustainability**' and '**corporate governance**' are used in the context of CSR. **Sustainability** is defined as '*Development that meets the needs of the present without compromising the ability of future generations to meet their*

own needs'.² **Corporate governance** is defined by the OECD defines corporate governance as '*a set of relationships between a company's management, its board, its shareholders, and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined*'.

It is a regulatory requirement that banks have formal processes for compliance with corporate governance standards; it is also expected that companies manage their social responsibility in accordance with best international practice on a par with their management of financial and economic obligations. For this reason companies are increasingly reporting on their achievements in CSR and/or environmental management and are using social accounting or audit approaches for verification.

3. EUROPEAN COMMISSION: PROMOTING A FRAMEWORK FOR CSR

The European Commission published a Green Paper '*Promoting a European Framework for Corporate Social Responsibility*' in July 2001 and followed this with a further communication and feedback concerning '*Corporate Social Responsibility: Business Contribution to Sustainable Development*' in July 2002³. These papers provide a useful and comprehensive account of the main strands of the argument for adopting CSR as well as giving the perspectives of business, trades union, civil society, investors and consumer organisations, all of whom have contributed to the EU consultative process.

The European Action Framework for CSR, which is contained in the July 2002 paper, acknowledges that the main function of an enterprise is to create value through producing goods and services that society demands, thereby generating profit for its owners and shareholders as well as welfare for society, particularly through an ongoing process of job creation. However, new social and market pressures are gradually leading to a change in the business priorities and in the horizon of business activity. There is today a growing perception within companies that sustainable business success and shareholder

² 1997 World Commission on Environment and Development.

³ Communication from the Commission concerning Corporate Social Responsibility: A Business Contribution to Sustainable Development. (2nd July 2002). Commission of the European Communities.

value cannot be achieved solely through maximising short-term profits, but instead through market-oriented yet responsible behaviour. Companies are aware that they can contribute to sustainable development by managing their operations so as to enhance long term economic growth and increase competitiveness whilst ensuring environmental protection and promoting social responsibility, including consumer interests.

It is the view of the Commission that:

- CSR is behaviour by businesses over and above legal requirements, voluntarily adopted because businesses deem it to be in their long-term interest;
- CSR is intrinsically linked to the concept of sustainable development: businesses need to integrate the economic, social and environmental impact in their operations;
- CSR is not an optional 'add-on to business' core activities – but about the way in which businesses are managed.

What distinguishes today's understanding of CSR from the initiatives of the past is the attempt to manage it **strategically and** to develop instruments for this. It means a business approach, which puts stakeholder expectations and the principle of continuous improvement and innovation in CSR at the heart of business strategies.

The Commission points to the growing recognition and demand for CSR:

- globalisation has created new opportunities for enterprises, but it also has increased their organisation complexity. The increasing extension of business activities abroad has led to new responsibilities on a global scale, particular in developing countries.
- consideration of image and reputation play an increasingly important role in the business competitive environment, as consumers and Government ask for more information about the conditions in which products and services are generated and the sustainability impact thereof.
- financial stakeholders look for the disclosure of information going beyond traditional financial reporting so as to allow them better to identify the success and risk factors inherent in a company and its responsiveness to public opinion.
- as knowledge and innovation become increasingly important for competitiveness, enterprises have a greater interest in attracting and retaining highly skilled and competent personnel.

3.1. RESPONSE TO THE COMMISSIONS GREEN PAPER

The Commission received more than 250 responses to its Green Paper. About half of these responses came from employers' organisations, business associations and individual enterprises. All respondents welcomed the Green Paper and confirmed the usefulness of an open debate about the concept of CSR. Almost all parties – social partners and other respondents to the Green Paper – supported Community action in this field. However, there are also significant differences between the positions expressed:

- enterprises stressed the voluntary nature of CSR, its integration in the sustainable development context and argued that its content should be developed at a global level. Enterprises emphasised there would not be 'one-size-fits-all' solutions. In the view of businesses, attempts to regulate CSR at EU level would be counterproductive, because this would stifle creativity and innovation among enterprises, which drive the successful development of CSR. This could lead to conflicting priorities for enterprises operating in different geographical areas;
- trade union and civil society organisations emphasised that voluntary initiatives are not sufficient to protect workers and citizens' rights. They advocated a regulatory framework establishing minimum standards and ensuring a level playing field. They also asked for effective mechanisms to ensure a company's accountability for its social and environmental impact;
- investors stressed the need to improve disclosure and transparency of company practices, rating agency methodology and investment management of socially responsible investment (SRI) funds and pension funds;
- consumer organisations underlined the importance of trustworthy and complete information about the ethical, social and environmental conditions in which goods and services are produced and traded so as to guide them in their purchase choices.

4. A BUSINESS VIEW ON CSR

There are however differing views on how CSR is viewed by companies within Europe. Research published in April 2002 by Business in the Community found that:⁴

1. Europe's corporate leaders are convinced that responsible business practice leads to greater innovation, competitiveness and profitability,
2. only a minority sees CSR as the responsibility of every department in their own company,

3. few have measured the impact of environmental, social and economic issues on their businesses,
4. for these business leaders, the issues that will affect performance in the next 5 years are:
 - attracting and retaining a talented staff,
 - ability to innovate,
 - corporate reputation.
5. concern with reputation together with the argument for corporate social responsibility, is driven primarily by the views and expectations of customers.
6. about half of the companies stated environmental issues as important to performance. They gave strong backing to the idea that responsible social and environmental behaviour pays dividends, especially if it is in the mainstream part of the business activities.
7. nearly 80% agreed that companies that integrate responsible practices will be more competitive and 73% accept that sustained social and environmental engagement can significantly improve profitability. 76% agree that innovation and creativity are helped by responsible business practice.
8. when it comes to integrating responsible behaviour into all aspects of the business, there is considerable divergence. The majority of companies have boardroom statements or codes of conduct. Less than a third have assessed the risks and opportunities presented by environmental, ethical and social issues. Only half are setting targets for their performance in these areas.

Approximately 200 Chief Executives, Chairmen and Directors in 10 European countries participated in the study.

The study reveals disagreement between business leaders in the UK and the rest of Europe about who in the company should take charge of corporate social responsibility. While 43% of UK directors believe all departments should be involved, this view is shared by just 10% of top executives elsewhere in Europe. Business in the Community says this shows the UK is further along the road of integrating corporate social responsibility than the rest of Europe. Nearly 60% of the executives in Europe – excluding the UK – consider that CSR should reside in the marketing department (only 37% of UK leaders agree)⁵.

⁴ This is a UK business-lead organisation that campaigns for greater corporate social responsibility.

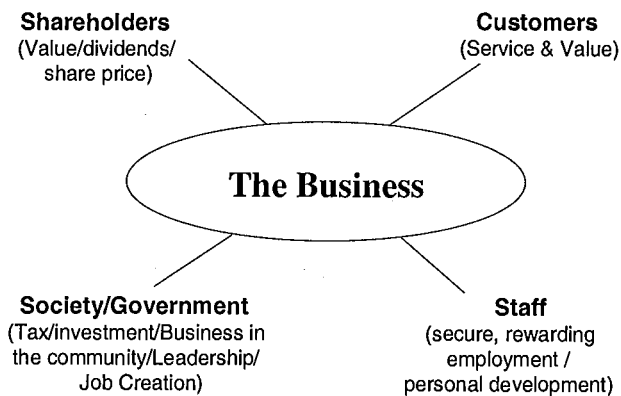
⁵ This research was conducted by NOP and Brand Architecture International in H1 2002.

4.1. THE EUROPEAN PERSPECTIVE AND STAKEHOLDER PHILOSOPHY

The EU Commission's perspective on CSR and sustainability strongly reflects a European perspective on the role of companies in society. It also links with many of the other international initiatives on CSR and sustainability, such as the OECD Guidelines for Multi-National Enterprises, the UN Global Compact, the International Labour Organisation Conventions etc (see appendix). The case for business (and banks) to adopt the CSR agenda is well made and is in keeping with the mainstream development of business thinking and strategy throughout Europe.

The nexus for developing the theory and practice of CSR is acceptance of the stakeholder philosophy in business. In the previous section I have defined stakeholders as shareholders, customers, society/government and staff. There are perhaps other stakeholders including suppliers, management, the general public etc but for our purposes the four shareholder definition is adequate.

Diagram 8.2.
Stakeholder approach.



Source: Author's own elaboration.

The stakeholder theory has its origins in the writings of organisational theorists such as Thompson (1967); the word first appeared in an internal memorandum at Stanford Research Institute (now SRI International) in 1963. The stakeholder concept was originally defined as *'those groups without whose*

support the organisation would cease to exist'. The Swedish Management theorist, Eric Rhenman, who is perhaps the originator of the term was instrumental in developing the stakeholder thinking in Scandinavia, where the concept became one of the cornerstones of industrial democracy.⁶

4.2. THE STEREOTYPE ANGLO-AMERICAN VIEW

The view that public companies should adopt a stakeholder philosophy, rather than a maximising shareholder value philosophy, creates a dichotomy which strikes at the heart of the definition of business and capitalism. This is often stereotyped as the European perspective as against the Anglo-American perspective. It is helpful to put forward the alternative i.e. the singular view of business since in practice many companies, while acknowledging the stakeholder philosophy, work by the rules of the shareholder value concept. CSR is often seen as aspirational, perhaps associated with good public relations and is sometimes challenged on the basis that it diverts attention from the real business agenda of serving customers at a profit and enhancing shareholder value. Much of the debate on the corporate scandals in the US focus on the accountability of business to the wider society and the degree to which the extreme free market philosophy has dominated big business practices in the US in recent years.

4.2.1. The free market theorist – Milton Friedman

Milton Friedman, the doyen of market economics, is generally accepted as the proponent of the singular focus. His argument, that companies should not be in the business of ethics – let alone worrying about social responsibility, morals or the environment – is summed up by his view that *'there is one and only social responsibility of business – to use its resources and engage in activities designed to increase its profits'*. Others, in support of this view, believe that profit maximisation and private ownership of companies creates the greatest choice:

- for consumers in a free and competitive market place,
- for shareholders, since they can choose to use the return from their investment to fulfil their own social, moral or ethical goals and
- for management/staff, since they do not have to consider the trade-offs.

⁶ See Nasi, J. Understanding Stakeholder Thinking. Helsinki: LSR – Julkaisut Oy.

There is no implication, nor should there be, that the singular pursuit of profit should operate outside the law. However, it implies that the legal and regulatory environment is sufficiently robust to ensure that business and individual companies operate on a level playing field within competitive markets and do not denigrate human rights or the earth's natural resources. The role of Government in regulating the market boundaries and setting legal and regulatory standards is acknowledged in this theory.

4.2.2. Adam Smith ... sometimes misrepresented

Long before the time of Milton Friedman, the Scottish philosopher/economist, Adam Smith developed his philosophy of business. He is credited as the father of modern economics. Adam Smith's views have often been misrepresented as being an endorsement of self-interest, suggesting that self-interest would act in the best interest of all. There is a clear recognition in *'The Wealth of Nations' (1776), that the idealised link between self interest and social benefit was in fact flawed in practice'*. In particular, Smith recognised that the pursuit of self-interest, particularly by the merchants and capitalists, could damage the interest of other classes. He argued that business decisions should always be made with a view to the implications for other people. Smith was also a great believer in competition. He fully recognised the dangers of monopoly and oligopoly and the powers which business could use to abuse its market position. Smith believed in the beneficial effects of competitive markets and their ability to produce fairer allocation of resources in an economy. He could see problems and dangers in the free operation of markets, but nevertheless believed that a market-lead economy was the best method for developing a modern economy⁷. Adam Smith's central message was that 'ethics are the social expression of self interest in a society in which we can indeed *'see ourselves (sic) as others see us'*⁸ Adam Smith should not be seen as an unqualified supporter of free market economics, rather as a philosopher who was well ahead of his time.

Whichever academic view one takes the reality of business life in the 21st century suggests that Friedman's free market capitalist view of the world is not the appropriate model for global or international companies. Businesses

⁷ Munn, C. and Gallagher, N. (2000, September). Ethics, Integrity and Reputation. Chartered Institute of Bankers in Scotland, Institute of Bankers, Ireland.

⁸ Jones, I. and Pollitt, M. (1998). The Role of Business Ethics in Economic Performance. Macmillan Press Ltd.

operating in a European context accept the more liberal view and tend towards the stakeholder philosophy.

5. PARTICULAR ISSUES FOR THE FINANCIAL SERVICES SECTOR

Financial institutions play a pivotal role in business and in society. Many banks compete internationally and are part of the global financial markets. Some are true global players. ING (the Dutch Bank) for example has more than 50 million clients in 65 countries; The Royal Bank of Scotland is the second largest Bank in Europe, 5th in the world, with 105,000 staff world-wide. Banks have a unique position and a special responsibility when it comes to meeting the demands for a wider role in society. The case for banks adopting a CSR strategy is strong for the following reason:

- **Trust – the basis of banking.** Banking depends on trust and the integrity of its people; managing large businesses with a high people-dependency creates particular challenges for banks; ethical standards and strong corporate culture based on trust is a pre-requisite of success in the finance industry.
- **Brand investment and brand value.** Banks both domestically and internationally invest heavily in building their brand; to quote from an Allied Irish Bank document on building the brand:

‘A brand lives in the minds of its customers and is shaped by the sum total experiences a customer has with an organisation, its products and its people.

This underlines the degree to which trust lies at the heart of customer interface and brand value.

- **Large employers – complex cultural issues.** The major international banks are large employers in their home market and internationally, this creates the particular challenge of transmitting the corporate values and culture across areas of wide diversity of cultures, traditions and corporate governance structures; CSR is a unifying theme, which helps manage this diversity.
- **Payments mechanism and financial crime.** Banks are at the heart of national and international payments mechanisms, many governments view this as a public good; the payments mechanism is a profitable business but is a major technological and compliance challenge; ensuring that the payments mechanisms are not corrupted through money laundering

and other financial crime is a huge challenge to banks and to governments everywhere.

- **Suppliers of credit and capital raising.** As the major suppliers of credit, as agents for environmental and credit risk raising capital from the bond and equity markets, and as traders in credit derivatives banks face significant social and ethical issues as well as an environmental risk in credit decision-making; among the many difficult ethical issues banks are now facing is the actual or potential conflicts of interest in managing integrated financial services organisations.
- **Socially responsible investment.** Banks are major investors both on their own behalf, through venture capital and strategic partnerships, through the management of investment funds, pensions funds and private portfolio management; increasingly, socially responsible investment (SRI) is gaining popularity among mainstream investors; social and environmentally responsible policies provide investors with an indication of sound internal and external management; as the demand for SRI funds increases, many investment banks are responding by bringing out specialist ethical funds; since July 2000, the UK Trustee Act requires all pension fund trustees to disclose whether they have policies on socially responsible investing.
- **Significant supply chains.** Banks spend heavily on outside suppliers and can exert strong influence on the behaviour of their suppliers; most banks have well developed procurement policies to ensure that the standards and values of their suppliers will not put at risk the reputation of the Bank from an ethical/environmental perspective; increasingly, as banks outsource critical functions such as technology and back-office operations, they are forced to take an active role in assessing the social responsibility of their suppliers.
- **Environmental management of facilities.** The challenges for banks in managing their own facilities, equipment and energy use in an environmental friendly manner are significant and go beyond adhering to the legal or regulatory requirements; banks with clear policies and active 'engagement' on environmental issues can turn environmental management into a risk mitigant as well as a cost saving/profit enhancing activity.

In summary, banks have particular issues when it comes to CSR. Much is to be gained from participating and engaging with government, with special interest groups and with industry in the local markets. There is an even stronger case for banks working together internationally in developing the CSR agenda and managing the issues arising from their corporate social responsibility.

6. THE COMMERCIAL CASE FOR ADOPTING CSR

A case for adopting CSR from a **commercial perspective** is worth examining because often this is the 'hard issue' when it comes to persuading management and the Bank to allocate significant resources to this function or activity. The ethics or business principles argument appears simple (no bank would wish to appear unethical or unconcerned with ethics) but developing it into a formal policy and publishing (often for public consumption) its business principles or code of ethics or its environmental and social policies is sometimes considered to be high risk and '*creating a stick to beat us with*'. However, there are significant benefits to ethical policies.

*'Ethics has a crucial role in maintaining social cohesion – as social cohesion diminishes, the transaction cost of doing business rises.'*⁹

In large organisations management of people and compliance with law, regulation and codes of conduct are extremely complex and difficult matters. Compliance is a necessary though insufficient basis upon which companies, and banks in particular, can operate. The benefit of cohesiveness in an organisation that has a strong positive culture and high standards of ethical conduct more than outweighs the costs of time and resources in establishing a formal code of ethics or CSR programme. Companies with a good track record in this respect can operate with lower levels of formal supervision i.e. lower transaction cost of doing business. There are many other convincing arguments for adopting CSR programmes:

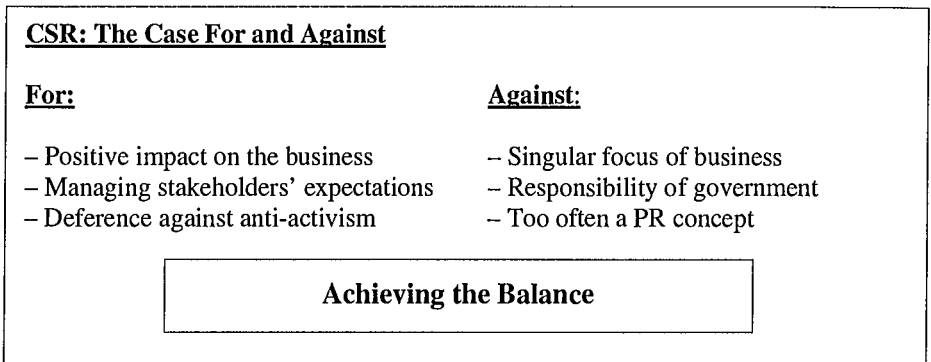
- it enhances the public perception of the bank,
- it increases trust with customers and staff,
- it helps attract and retain high quality staff,
- it fosters good relationships with government/regulators and non-government organisations,
- it enhances risk management and the relationship with regulators.

Much research is currently being undertaken on whether ethical practices and CSR improve the long term viability and profitability of businesses. The evidence so far tends to be anecdotal and largely dependent on which measurement of long term viability and profitability is used. Studies of stock

⁹ See Jones and Pollitt.

markets have clearly shown that corporate reputation and brand value are significant determinants of positive long term share price performance. Equally, reputation damage through adverse publicity on CSR or business ethics is seriously damaging to a company's share price. This has been borne out strongly in recent high profile cases in the US and in Europe and it is reflected in the overall performance of international stock market indices, particularly in 2002.

Diagram 8.3.
The positive and negative impact.



Source: Author's own elaboration.

6.1. THE COMMERCIAL CASE FOR ENVIRONMENTAL MANAGEMENT IN BANKING

The business case for effective environmental management is strong and increasingly persuasive. There are two strands to this case as far as banks are concerned. The first is to ensure that in their credit and risk management policies and practices, banks carefully evaluate the environmental risks of their customers, particularly those in environmentally sensitive sectors.

*'Environmental risk is the risk of incurring a liability with a cost of rectifying environmental pollution which happened in the past or is still occurring. It can also include the cost of taking measures to prevent pollution happening in the future.'*¹⁰

¹⁰ Allied Irish Banks internal document on Risk Management.

Environmental risk guidelines and operating procedures point out to lenders the legal and regulatory requirements, identify the main risks to the bank, provide a listing of those designated activities which are covered by environmental protection legislation in the relevant jurisdiction and providing a singular checklist which must be completed in the case of all lending applications to the Bank's credit committee.

The second is to ensure that Banks act in a responsible manner in the management of their own facilities, premises, technology and supply chains in the interest of good environmental practices and sustainability. Banks' internal environmental management is also designed to reduce business risk. Reduction of waste, increased energy and resources efficiency and reduced obsolescence may significantly reduce costs and improve efficiency. To be effective, however, these policies must be actively managed on a co-ordinated basis across the organisation and be subject to measurement and verification. Ideally, targets should be set as part of the business plan and performance measured against agreed criteria as it would be in other areas of banks' performance management.

*'The Group's approach is to integrate environmental management into the core of our business activities. Based on ISO14001 principles, the planning for, operation, measurement and review of environmental performance is therefore integrated into the mainstream management systems.'*¹¹

6.2. THE CASE AGAINST ADOPTING CSR – THE COMMERCIAL VIEW

It is also worth considering why there is an opposition to CSR and what are the 'commercial' views that often persuade boards and management to pay lip service to CSR.

Banks operate in one of the most highly regulated areas of business and most banks allocate significant resources to comply with all legal and regulatory obligations – usually with a margin of safety added in for good corporate governance. Why then should well-managed, competitive, market-focussed businesses be obliged to adopt higher standards than those applied to other constituent members of society?

Banks everywhere recognise the imperative of providing good customer service and of developing their reputation and brand to support their marketing

¹¹ Environmental Report 2000/01. (2001). The Royal Bank of Scotland.

efforts. Good marketing practice will include advertising, sponsorship and, for retail and community banks, judicious support for community developments – where the expected return can be seen in new business figures. This is not to suggest that banks are not conscious of their social responsibility; rather to suggest that, by good performance in the market place and by winning and retaining customer loyalty, banks are fulfilling their obligation to society; in a truly competitive market this will be seen to benefit the consumer as well as the producer. Frequently, the CSR agenda is driven by public representatives (Government, NGOs, local authorities, special interest groups). It is sometimes used as a means to embarrass or force business to take on a role that is seen as more appropriate to Government's responsibility or to public policy. Thus, CSR can be seen by management as the imposition of costs above and beyond those necessary to comply with the law in such areas as environmental responsibility, employment, human rights etc.

This is a strong argument against an obsessive or unquestioning adoption of CSR without making the commercial case to justify it. CSR is sometimes seen as a 'politically correct 'concept', which diverts management attention from the main focus of the business and the interests of its customers, its staff and particularly its shareholders.

Bank management and boards need to carefully consider the arguments for and against adopting a full CSR programme and then develop their response so as to achieve the best solution for the bank, given its market conditions and strategic aspirations. As previously stated there is no 'one-size-fits-all' solution to CSR; it is a **voluntary** process and should remain so.

7. WHAT ARE THE ALTERNATIVES AND WHAT ARE THE RISKS?

The next section considers the alternatives to CSR and the risks inherent in three of these alternatives:

- dependence on externally determined **corporate governance** standards to set the boundaries for business,
- reliance on shareholders and **shareholder activism** to correct the imbalance of corporate power,
- doing nothing in the face of **anti-capitalist activism**.

7.1. CORPORATE GOVERNANCE

Corporate governance is described in an earlier part of the chapter as the 'glue' that binds the component parts of CSR together. Why then is it seen as an alternative to CSR.

Corporate governance is a neutral term but can be used as a positive in encouraging best practice in business management – on a voluntary basis; or perhaps as a threat or negative factor when it is backed by strong statutory powers and the apparatus of enforcement. The case for voluntary codes of practice in corporate governance is well made by Sir Adrian Cadbury who was the principal architect of the UK 'Committee on the Financial Aspects of Corporate Governance' [the Cadbury Report] in 1992. This report is still the cornerstone of the UK and Irish corporate governance best practice for public companies. Cadbury is an advocate of voluntary rather than statutory codes:

*'The danger of relying too much on statutory regulation in the corporate field is that it may lead to business and personal morality being considered as distinct and separate. If standards of business conduct are thought of as being primarily set by the law then compliance with the law may come to be seen as all that is required even though conformity to the law would normally count as a minimum requirement setting the floor to acceptable conduct.'*¹²

The Cadbury view on voluntary codes fits well with the EU view of the voluntary basis for adopting CSR but if corporate scandals force the hand of government then there may be no alternative to statutory controls. CSR programmes, without strong and fundamental ethical practices are at best worthless and more likely a dangerous threat, to corporate freedom and to fair competition. However, Cadbury may not win the argument – not because he is wrong in his views on good ethics – but rather because of the behaviour of some businesses and the political pressures to do something to 'clean up' corporate America. This has significantly advanced the case for the statutory basis for corporate governance.

Whilst commenting at the World Summit in Johannesburg (August/September 2002) a campaigner for Christian Aid, a UK charity, used the opportunity to press for statutory regulation in saying *'the summit is taking place just*

¹² Cadbury, A. (1998). The Role of Voluntary Codes of Practice in Setting Ethics. In Jones and Pollitt.

as massive corporate scandals are undermining economic growth and confidence throughout the world. There is widespread recognition self-regulation has failed’.

The US Government’s response to the corporate scandals of was to pass the Sarbanes-Oxley Act in July 2002. The Securities and Exchange Commission (SEC) has implemented rules to accompany the Act and is be responsible for enforcement. The Act imposes very strict requirements on US quoted companies and non-US companies with a US listing i.e. ‘foreign private issuers’. Some of the requirements could be counterproductive and are seen as a barrier to adoption of voluntary corporate governance and ‘best practice’ standards as commonly applied in Europe. It will be more difficult to find non-executive directors willing to take on the extra legal responsibility in a US listed company; it will also be difficult to find CEO’s and Finance Directors of the calibre required and with the risk appetite to take the additional legal responsibility. Corporate reform is necessary in the US and perhaps elsewhere. The response to the crises of confidence in public companies underlines the degree to which corporate governance is becoming statutory and being driven by the behaviour of a few high profile company directors and senior executive officers.

7.2. SHAREHOLDER ACTIVISM

Shareholder activism is growing as institutional investors, pension funds, trustees and groups of private investors realise that they have significant ownership rights which heretofore have not been fully exercised. Bob Monks (a veteran US lawyer turned activist) is a strong advocate of shareholder power. He puts forward a view that:

‘The real crisis is that corporate power has become unmistakable and intrusive. We know that corporations dominate the political financing process. We know that lobbyists dominate the law making process. We know that conglomerates own the television stations and newspapers. The question is how long a society can tolerate the illegitimate allocation of resources [that results].’¹³

Monks believes that his calls for better corporate governance have been influential in the UK but went unheard in the US. He objects to the US Congressional attempts to impose new controls on wayward companies:

¹³ How to bring US companies under control (2002, August 7). [Financial Times](#).

'External controls of the kind being put forward do not work. Corporations will always be able to hire better lawyers and better lobbyists ... when push comes to shove these guys (chief executives) all cheated.'

Monks believes that the legal framework is already in place, it just requires the Executive Branch of Government to decide that they are going to enforce the law. In order to have a market that works you need to have a counterpoint to corporate power. Shareholders are the only people who have the chance to do something. The solution is shareholder activism or participatory capitalism. He points out that US industry is owned by 100m shareholders (through mutual funds, pension funds, as well as direct investment). It is essential for the health of the system that these 100m people participate in the process of capitalism. Monks advocates that pension funds and mutual fund trustees be obliged to act in accordance with their fiduciary duty and he calls for effective enforcement to ensure that the **existing law** is upheld.

These views are matched by an influential Financial Times Journalist, Peter Martin.¹⁴ In his final article in the Financial Times *'Ah, shareholders, let us be true to one another'* he wrote:¹⁵

'Shareholders no longer trust managers, managers and pensioners no longer trust the figures and no one trusts the authorities and legislators who have permitted such a flawed set of corporate relationships to come into existence.'

Shareholder activism is a growing trend and is being supported by influential Fund Managers, such as Hermes Pensions Management Ltd in the UK. They have published 'The Hermes Principles' – a blueprint for effective 'engagement' or shareholder activism.

7.3. ANTI-CAPITALIST ACTIVISM

The riots on the streets of Genoa, Seattle, London and many more besides; the sight of activists invading the boardrooms of banks in London, threatening the managers and executives of banks who lend to a government supported research company that tests its biomedical products on animals (Huntington Life Sciences PLC), and assaulting its managing director, should send a message to all business leaders. Something is amiss; tightening security may protect

¹⁴ He died in August 2002.

¹⁵ Martin, P. (2002, July 16). Ah, shareholders, let us be true to one another, [Financial Times](#).

executives in the short term but it is better to examine the cause and see if there is more to it than meets the eye. Several business commentators and academics have tried to examine the issues to see if there is a serious message for business. If there is a consensus among these commentators, it is that powerful forces lie behind these apparently mindless acts and riots. There is a strong anti-capitalist business movement and it is capable of inflicting serious damage to individual businesses as well as to the basis on which our free enterprise economy works.

One influential writer on the subject is Naomi Klein, an award winning journalist and best selling author. She is Canadian, writes a weekly column in the *'Globe and Mail'*, Canada's national newspaper, is a frequent media commentator and has guest lectured in Harvard. Her best-selling book *'No Logo'*¹⁶ is an attempt to analyse and document the forces opposing corporate rule, and to lay out the particular set of cultural and economic conditions that make the emergence of that opposition inevitable. The forces she refers to are:

- the surrender of culture and education to marketing,
- the elimination of cultural choices through the forces of mergers, franchising, synergy and corporate censorship,
- labour market trends that are creating increasingly tenuous relationships to employment for workers – including self employment, out-sourcing and part-time and temporary work.

The central thesis of *'No Logo'* is that there is a strong and growing activism directed against high profile companies – particularly those with strong global brands. It aims to undermine their credibility. The author exposes what is believed to be exploitation of human rights, destruction of the environment and undermining of individual, regional or national cultures. These high profile companies, such as Nike, Coke, Starbucks, McDonalds, Shell, Microsoft are seen as all-powerful (more so than governments and unaccountable, other than to their shareholders). The brand is seen as the 'Achilles Heel' of these businesses and activists are exploiting this weakness. The book argues, very persuasively, that the global companies have not acted responsibly on human rights. In exploiting the concept of global brands they have created a reaction by the very people that they try to influence – the young/socially aware/educated people who know how to cause maximum damage to the brand. The author takes an almost exclusively North American perspective, with a minor aside on the UK,

¹⁶ Klein N. (2001). *No Logo*. Flamingo/Harper Collins.

Germany and the Netherlands (Shell and Marks and Spencer are mentioned). It is firmly based on the American model of business and corporate responsibility. There is however, a brief reference to the use of codes of ethics or business principles by companies, with her view that

'Codes of conduct are awfully slippery'.

Klein's book is not a manifesto to the brand hijackers but rather a wakeup call to international or multinational businesses to take seriously the threat of anti-capitalism. It is a valuable contribution to the case for adopting genuine CSR programmes and a warning against the use of PR 'spin' and the superficial response of so many high-profile companies.

7.4. SUMMARY

In summary, the adoption of CSR programmes are seen as more acceptable than the alternatives:

- statutory corporate governance and enforcement,
- shareholder activism,
- anti-capitalist activism.

8. CASE STUDY: SHELL

To illustrate the point in previous sections I have chosen Royal Dutch/Shell Group of Companies as an interesting case study. All of the information I have used on Shell is in the public domain.

Shell has a long track record in publicly proclaiming its Business Principles and Ethical Codes – long before it was fashionable to do so. Shell has been an admired and successful company for many years – its brand and logo have at times been among the most admired and recognised symbol of business success, within the industrial sectors. It is also been well managed and a major competitor force in a highly developed international business. It is not a newcomer to social responsibility. But perhaps it misjudged the mood of the times, or it was just unlucky in being “caught in the headlights”, or perhaps its standard slipped, who can judge?

In 1995, two major events projected Shell into the international spotlight of adverse publicity. The decommissioning of oil rigs in the North Sea and a decision, supported by governments, to scuttle the Brent Spar platforms in deep waters off the coast of Scotland, lead to a major protest by Greenpeace who occupied the rigs, and brought the media with them, as they saw it, to prevent

a potential environmental disaster. Also in November, the execution of a Nigerian political activist and Nobel Peace Prize nominee, Ken Saro-Wiwa, who had been campaigning for the rights of his kinsman, the Ogoni people in the Niger-Delta, where Shell had been successfully extracting oil and gas for many years with the strong support of the Nigerian Government. Accusations that Shell had influenced the Nigerian Government in pursuing its action against the local communities, and the activists led by Ken Saro-Wiwa, brought immense adverse publicity and outrage by civil rights leaders aimed at the Nigerian Government and particularly at Shell. It sparked major criticism of multi-national companies.

This brief account does not adequately explain the serious issues at the heart of these environment, political and human rights issues. However they resulted in a significant blow to Shell's corporate reputation and its share price. The consequence of these incidents (and there were several other issues of a similar nature around that time) was to force Shell to examine its core values and business principles. This it did; it formed a high level Social Responsibility Committee in 1997; published revised Business Principles in 1998; and published its first Social Responsibility report in 1999. The Shell Report is now considered a benchmark for social reporting and few would disagree with its position as a leader in the CSR movement.

The Shell Report 2001 covers such topics as: living our values, human rights, diversity and inclusiveness, sustainable development principles, protecting the environment, respecting and safeguarding peoples health, safety etc, working with shareholders, promoting our principles etc. It has a detailed verification section using international accounting forum KPMG and PricewaterhouseCoopers and containing masses of figures to set out its health, safety and environmental performance targets.

Shell is clearly a leader in the field of CSR but how has it benefited from its considerable investment? Perhaps that's too difficult to answer. A better question might be – how much worse could it have been and, has Shell's leading contribution to the debate on CSR influenced policy-makers and other companies in a positive way?

9. CSR: A STRATEGIC MANAGEMENT ISSUE

Having made the case for (and against) adoption of CSR programme, a key decision for the Chief Executive or Board is how the programme should be managed. Key decisions must be taken such as: should it be directed from the centre of the organisation or should it be part of a business unit responsibility; should it be managed independently within each country or region;

should the individual component parts be managed separately or as part of one single programme; who should be charged with accountability for CSR?

It is the authors view that management of CSR is a matter for the individual bank and must fit with the Bank's organisation structure and management style. There is however a need for clear leadership in developing and communicating CSR policies and practices. This does not imply that each of the component parts must be managed centrally. There are considerable advantages to managing the component parts within individual businesses and within the function most appropriate e.g.:

- in environmental management, the customer/credit issues are dealt within the Credit Risk Management or lending function whereas internal environmental issues such as water, waste and energy use are dealt with in the Facilities Management/Premises/Manufacturing area of the Bank.
- the Social Affairs function generally deals with the Bank's community support or sponsorship programme – the Head of Public Affairs generally has responsibility in this area.
- Corporate Governance and Ethics are sometimes managed within the Compliance function although Corporate Governance may be associated with the Finance or company secretarial function.
- the HR function generally has responsibility for internal policies on employment, representation rights, harassment, diversity etc.

— **Integration**

In most instances banks are not starting with a clean sheet on CSR or with the component parts. Most banks have environmental policies (internal and external), most have programmes for community affairs, sponsorship and charitable donations. All banks have corporate governance policies and reporting requirements. A key decision is whether to integrate these components or to continue to manage them separately.

— **Local conditions**

Since most large banks operate internationally, serious consideration is needed on the degree to which local conditions, local customs, local legal and regulatory codes apply and are consistent with one another or the 'corporate' policy. Most banks that develop a formal code of ethics or business principles will do so on a global or international basis since the fundamental values of the business will not vary by region or country. However, there will be local practices and customs and the way values and codes are reflected in these local practices may vary. Organisations have to decide on how they apply

common standards across the geographic or regional entities in order to achieve the most effective overall governance.

— **Line management involvement**

Within banks there is often a tension between the ‘top-down policies’ and ‘the bottom-up practices’. In the area CSR a key issue is the degree to which line management of the business is involved in the process and can shape the policies as well as having to adhere to the standards. Most organisation theorists would proffer the view that a combination of top-down and bottom-up approaches are best suited to implementing complex strategies. CSR is certainly a complex strategy and requires participation and involvement from many parts of the organisation in order to achieve success.

— **Accountability**

Accountability for CSR or its component parts is a critical success factor in all organisations. Accountability depends on:

- a) clear management responsibility and a clear ‘chain of command’ for this responsibility,
- b) some form of measurement or quantification so that realistic objectives or targets can be set and those accountable can be measured against performance.

The Royal Bank of Scotland’s approach is to integrate environmental management into the core of its business activities. Based on ISO 14001 principles, the planning, operation, measurement and review of environmental performance is integrated in to mainstream management system. Responsibility and accountability in RBoS is devolved throughout the organisation. The centralised environmental management function, which reports through its Manufacturing Division, has the role of advisor, facilitator and co-ordinator for the Group. It is also responsible for the collation and reporting to the Group Executive Management Committee, the Group Board and for reporting externally on environmental performance (extract from The Royal Bank of Scotland Environmental Report 2001).

— **Public profile**

CSR is not a closed system. It is, by definition, a matter on which the business must engage with a wide cross-section of interests internally and externally. Therefore, CSR in most businesses is likely to have a public profile, sometimes a very high public profile depending on the scale of the business and its role in the community. In order to control this process and reflect the best interest of the business, it is essential that the high-level representative role and

public communication role on CSR is handled at the very highest level of an organisation. This generally implies the Chairman or Chief Executive or Head of a Division takes the public responsibility for external communication on CSR and for endorsing the messages on CSR internally. It is also necessary at times to interact at high-level with government, NGOs and public interest groups. Again, there is a high political sensitivity and a need for this role to be discharged by a skilled and senior person in the organisation. This points clearly to the need for Chief Executive/Chairman to lead the programme in the public arena. Detailed interaction with the various external bodies and internally with the different parts of the organisation, can be handled effectively through the CSR office/officer, if such exists.

— Compliance

It is generally accepted that performance targets are a necessary part of successful internal environmental policies. This also applies in areas such as health and safety and related policy areas. In an integrated CSR programme with business principles/ethics at the heart of the programme, the issue of measurement, performance and compliance becomes more complex. However without an effective compliance process, CSR programme will have little effect. An internal compliance and reporting process is necessary though not sufficient to ensure success. A combination of strong and positive incentives, reflected in performance management and reward, combined with a compliance process, to ensure that the high-level aspirations, as well as the detailed legal and regulatory obligations are fully met, is perhaps the right combination – a carrot and stick approach. It is generally accepted that effective voluntary compliance policies for CSR rather than strict laws are the best means of achieving success.

As previously argued, statutory codes have their place in the wide spectrum of corporate governance, and the trend is steadily in that direction, but much can be achieved through adoption of “best practice” and voluntary codes for CSR within businesses at national and international levels.

— Direction

A key decision of those adopting a full CSR agenda is who should direct the overall policy, should it be the Chairman, the Chief Executive, a Head of CSR? Clearly, if CSR is to be taken seriously and embedded in the organisation it must be lead from the top and depending on the governance structure of the organisation this should be at or close to Chief Executive/Chairman level. However, whether it should be focussed on an individual or a specialist function is a matter for some debate. Many firms operate on the basis of devolved responsibility; implementing the component parts in the context of an overall

CSR strategy, but with co-ordination through CSR committee chaired by a senior executive or the Chief Executive/Chairman. This is an effective way of pulling all the strands together and reflecting the diversity of the component parts but it still leaves the question of overall accountability and where to locate the 'focal point' for driving the CSR strategy through the organisation.

10. CONCLUSION

This chapter examined the wide concept of Corporate Social Responsibility (CSR), a relatively new concept which is still evolving. It is important for financial institutions to take a wide perspective since many of the elements or component parts of CSR- e.g. environmental and social issues are closely linked to other elements, and the boundaries are often difficult to define. Banks should therefore examine carefully how they are addressing these important issues and ensure that they are being integrated in the strategic management process and that they are being given the appropriate degree of management focus and time. The risk of not managing CSR strategically is that it will surface sometime in the future as a problem with no obvious solution within the business and control of the CSR agenda will thus be ceded to outside forces.

APPENDIX

CSR: INTERNATIONAL GUIDELINES AND BEST PRACTICE

There are many international initiatives, which have helped to define CSR in a global context and encourage business to become engaged. Many of these are known as 'type 2' initiatives where business works with government and other social partners (as distinct from 'type 1', which is government to government). It is generally agreed that a top-down approach to sustainability and, CSR lead only by government has not, and will not, be successful and therefore, process of 'engagement' (type 2) is now seen as the way forward. A number of these initiatives are set out below.

Caux Principles for Business: (issued in 1994) The Caux Principles are an aspirational set of recommendations covering many areas of corporate behaviour. They *'seek to express a world-wide standard for ethical and responsible corporate behaviour and are offered as a foundation for dialogue and action by business and leaders world-wide'*. Issued in 1994, the Principles are sponsored by the Caux Roundtable (comprised of senior business leaders from Europe, Japan and North America). No formal mechanism for corporate commitment to these principles exists.

Global Reporting Initiative (GRI): (issued in 1999, but development is ongoing). The GRI is an international reporting standard for voluntary use by organisations reporting on the economic, environmental and social dimensions of their activities, products and services. Using input from reporters and report users, the GRI has sought to develop a list of specific indicators for reporting on social, environmental and economic performance. Note that the GRI, since it is a non-financial reporting framework, does not provide recommendations on business conduct, but the framework is necessarily underpinned by norms for business conduct. The GRI is lead by the Coalition of Environmentally Responsible Economies (CERES) and includes NGOs, corporations, consultancies, accounting firms, business associations, academics and others. The GRI does not assess companies' conforming with its reporting guidelines.

Global Sullivan Principles: (issued in 1999) The Global Sullivan Principles are an aspiration standard developed with the input of several multinational corporations. The principles include eight broad directives on labour, business ethics and environmental practices of multinational companies and their business partners. Issued in 1999, the Principles were written by the Reverend Leon Sullivan. The original Sullivan Principles provided guidelines for companies

doing business in South Africa during the period of apartheid. Companies endorse the Principles by publicly pledging to integrate them into their operations. Continuing support requires that companies individually provide an annual letter to Reverend Sullivan restating their commitment and outlining progress to date.

OECD Guidelines for Multinational Enterprises: (revised in 2000) The Guidelines are recommendations covering nine areas of business conduct addressed by governments to multinational enterprises. While observance of the recommendations by enterprises is purely voluntary, adhering governments sign a binding decision to participate in Guidelines implementation and to promote their observance by enterprises operating in or from their territory.

Principles for Global Corporate Responsibility – Benchmarks: (revised in 1998). The ‘benchmarks’ are designed to provide a ‘model framework’ through which stakeholders can assess corporate codes of conduct, policies and practices related to corporate social responsibility expectations. The principles were revised in 1998 to include the input of a range of human rights, environmental and labour groups, religious organisations and companies. The standard contains nearly 60 principles the sponsors consider ‘fundamental to a responsible company’s actions’. Finally the standard includes ‘benchmarks’ to be used by external parties to assess the company’s performance related to the recommended policies and practices. Benchmarks’ sponsors (several religious bodies and NGOs based in the United Kingdom and North America) do not seek endorsements from companies.

Social Accountability 8000 (SA 8000): (issued in 1998) SA 8000 is a voluntary, factory based monitoring and certification standard for assessing labour conditions in global manufacturing operations. SA 8000 is modelled after the quality and environmental auditing processes developed through the International Standards Organisation in its ISO 9000 and ISO 14000 standards. SA 8000 relies on certified monitors to verify factory compliance with the standard. The sponsor of the standard, Social Accountability International (an NGO) is currently reviewing the standard.

United Nations Global Compact: (issued in 1999) The UN Global Compact was announced at the World Economic Forum in Davos, Switzerland in January 1999 and formally launched in September 2000. UN Secretary General Kofi Annan called on world business leaders to ‘embrace and enact’ a set of nine principles in their individual corporate practices and by supporting complementary public policy initiatives. The standard includes specific practices

that endorsing companies would commit to enact. Endorsements from companies are sought under the Global Compact.

FORGE Group: In the UK, a consortium of some of the UK's leading financial services organisations, including Aviva, Abbey National, The Royal Bank of Scotland, Barclays, Lloyds TSB, Prudential, Royal and Sun Alliance came together with consulting support from PricewaterhouseCoopers in 1997 to produce "*Guidelines on Environmental Management and Reporting for the Financial Service Sector – a practical toolkit*". The consortium was sponsored by the UK Department of Trade and Industry; the Association of British Insurers (ABI) and the British Bankers Association (BBA) also gave their assistance and a recognition to the guidance. The FORGE Group have produced a further "*Guidance on Corporate Social Responsibility*" (in November 2002); in this publication it consulted widely with organisations such as Amnesty International, Business in the Community, Universities Superannuation Scheme etc. This publication, a practical toolkit is (as indeed was its predecessor on environmental management) a most useful step-by-step guide to developing, communicating and embedding a CSR programme within financial institutions. Its approach is to set out on a step-by-step basis guidance to:

- improve understanding of the relevance of CSR,
- increase engagement of financial services companies in responding to CSR,
- build on the initiatives that companies are already taking,
- develop a systematic and structured approach to CSR,
- provide a foundation for progressing and implementing CSR management and reporting,
- provide a practical toolkit and a sharing of current knowledge re CSR management and outline the process to identify priority CSR issues,
- provide best practice guidance, developing and implementing CSR management, reporting framework.

The Association of British Insurers (ABI): have drawn up disclosure guidelines on social responsibility for the benefit of institutional shareholders and have set out basic disclosure principles which will guide investors in seeking to engage with companies in which they invest. In drawing up guidelines for this purpose they are mindful of statements made at multinational level through the Guidelines for Multinational Corporations published in 2000 by the Organisation for Economic Co-operation and Development, as well as by the European Union and UK Government. These, coupled with legal disclosure obligations on UK pension funds and local authority investments, point to clear responsibilities both for companies and for institutions that investment them.

The ABI believe that institutional shareholders are anxious to avoid unnecessary prescription or the imposition of costly burdens, which can unnecessarily restrict the ability of companies to generate returns. Indeed, by focusing on the need to identify and manage risks to the short and long term value of the business from social, environmental and ethical matters, the ABI guidelines highlight an opportunity to enhance value through appropriate response to these risks. It is not the intention of these guidelines to set a limit on the amount of information companies should provide on their response to social, environmental and ethical matters. Some shareholders with specific ethical investment objectives may seek more specific information. Some companies may choose to make additional information available in order to enhance their appeal to investors. The ABI hopes that in elaborating these guidelines it will provide a helpful benchmark for companies seeking to develop best practice in this area. The guidelines take the form of disclosures, which institutions would expect to see included in the annual report of listed companies. Specifically they refer to disclosures relating to Board responsibilities and to policies, procedures and verification. It should be stressed that these are **voluntary** guidelines.

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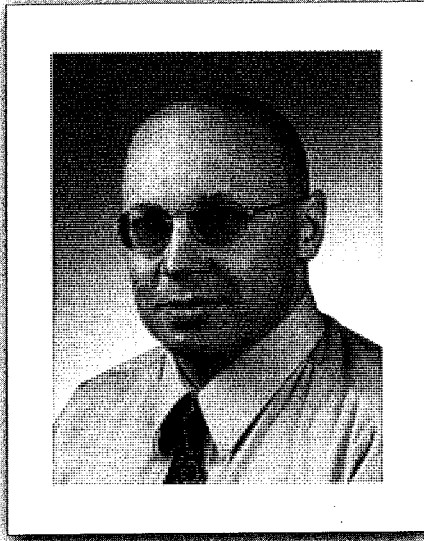
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Leszek Dziawgo

CHAPTER 9

**THE INFLUENCE OF ENVIRONMENTAL
PROTECTION ON THE
INTERNATIONAL FINANCIAL MARKET
WORLD TENDENCIES AND THE POLISH MARKET**



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THE INFLUENCE OF ENVIRONMENTAL PROTECTION ON THE INTERNATIONAL FINANCIAL MARKET

WORLD TENDENCIES AND THE POLISH MARKET

1. INTRODUCTION

It is no doubt that international financial market institutions function under ecological pressure in the positive sense of the word pressure. Today, it seems that it is the society recognising the requirements of environmental protection who forces adaptation of companies to the international environmental standards. Numerous examples in the economic reality as well as a wide discussion taking place among economists and financiers confirm this state of affairs.¹

An increasing importance of environmental protection in society has been noticed on the international financial market. One could indicate several cases where famous financial institutions maintain or gain clients thanks to the use of environmental protection aspects when they offer their own products and services. Like in the past, when companies in goods production and service sectors treated it as an opportunity to gain a leading position on the competitive market and to distinguish themselves favourably on it in order to gain and maintain customers, also now financial institutions treat this in the same way. The support of the protection of natural environment by a financial institution may draw society's attention to this particular institution and be conducive to a greater social approval for its activity. Consequently, this can strengthen its market position and thus increase the value of the company.

¹ E.g. *The Banker*. (2002), 4.

Sound research practices require it to be important not only to describe the existing reality but also to show, or foresee, the directions of development of the selected processes. This chapter follows this idea, too. It is aimed at drawing attention to examples of behaviour and offers of financial institutions, which operate on the international financial market and have taken environmental protection into account and to the way ecological banks are functioning, also in Poland as one of the most important emerging markets. It's aim is also to provide information on the questionnaire survey results related to the Polish financial market in the aspect of the clients' pro-ecological attitudes.

2. THE ECOLOGICAL IMAGE OF A FINANCIAL INSTITUTION

Today no serious financial institution can afford to neglect the problem of environmental protection because this would have a disastrous effect on its perception by the society where it operates. It can be said that financial institutions are beginning to demonstrate certain expansiveness in their approach to environmental protection. It must even be admitted that the creation of a so-called ecological image of an enterprise is now necessary.

In their functioning on the market financial institutions adapt the issue of environmental protection in many ways. They undertake activities of local, national and international range. Pro-ecological activities of financial institutions can be classified as those connected with their economic activity and related, among other things, to organisation of work or part of their trade offer which has been linked with the financing of the protection of the environment and to those unrelated directly with the economic activity of the company but having a positive influence on its image.

This chapter is focused on those pro-ecological initiatives of financial institutions, which are connected with their economic activity. Other scopes, such as a more or less occasional "ecological" sponsoring will be omitted because such activities are perceived rather superficially and are not quite convincing. Therefore, this article presents authentic examples of activities of financial institutions, which influence the creation of a positive image of a company.

3. THE ENVIRONMENTAL MANAGEMENT SYSTEM

Generally, the ecological policy of the most important financial institutions of today's financial market is conducted in an integrated and complex manner under the supervision of one member of the Board. The integrated and complex system of relationships with the natural environment is referred to as Environmental Management System (EMS) and comprises the following areas of functioning of a financial institution: organisation of work and economic process, social pro-ecological initiatives, co-operation between a financial institution and other institutions and organisations of environmental protection, environmental protection sponsoring, ecological risk, trade offer, information policy etc. The process of management of the relationships with the natural environment is obviously co-ordinated nationally and internationally. The placement of supervision of the implementation of ecological policy in the position of a member of the Board assigns proper importance to the pro-ecological activities and ensures efficiency.

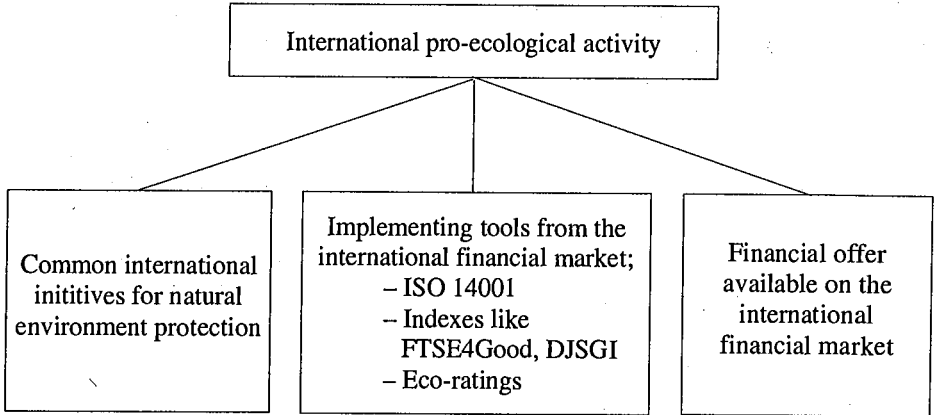
4. INTERNATIONAL COOPERATION OF FINANCIAL INSTITUTIONS

The solution of certain questions on the global international financial market requires co-operation on an international scale. This is also true for the adaptation of international financial institutions to the functioning in a society, which recognises the requirements of the protection of the environment. This co-operation takes place on different planes and in a diverse range. The selected planes of such international co-operation are represented in Diagram 9.1. They are as follows:

- international initiatives with the participation of financial institutions,
- the use of tools recognised on the international financial market for the measurement and assessment of pro-ecological behaviours: standards ISO 14001, so-called eco-reports and eco-balance sheets and appropriate stock indexes (FTSE4Good, Dow-Jones-Sustainability-Group-Index (DJSI)),
- bank offer related to the financing of the protection of the environment along with offer of eco-investment funds.

Actions undertaken in financial institutions underline for customers, contracting parties and stockholders the determination of managers of a financial institution to support the protection of the environment.

Diagram 9.1.
The activity of pro-ecological financial institutions
on the international scope – chosen aspects.



Source: Author's own own elaboration.

5. INTERNATIONAL INITIATIVES WITH THE PARTICIPATION OF FINANCIAL INSTITUTIONS

5.1. UN DECLARATION

The UN declaration '*Banking and Environment*' (UNEP Statement by Financial Institutions on the Environment and Sustainable Development) is well known globally. The declaration was issued in 1992. Till April 2002 it was signed by 195 banks from 49 states,² mainly from Germany – 53 banks. Among the signatories, there are many significant banks known on the international financial market. Their presence confirms the importance of the problem of the engagement of financial institutions in the global ecological policy. This also confirms the quality of pro-ecological transformation on the international financial market.

² Full list in Appendix 2.

The signatories of the declaration commit themselves, among other things, to the following:

- regarding sustainable development as a fundamental aspect of sound business management,
- regarding the financial service sector as an important contributor towards sustainable development,
- observing the regulations of the law in the scope of the protection of the environment,
- recognition of ecological risk,
- paying attention to the attitudes of the customers of financial institutions concerning the protection of the environment,
- organisation of work in compliance with the requirements of the protection of the environment,
- ecological verification of the financial services offered,
- informing about the implementation of a pro-ecological policy in a financial institution,
- having a dialogue with various communities on the protection of the environment.³

Although it is difficult to overestimate the effectiveness of the Declaration, it is, undoubtedly, a serious step towards the engagement of an institution of international financial market for the benefit of the idea of sustainable development and integration of these institutions in the achievement of this success. One can add that among the signatories, there are also banks from Poland.⁴

5.2. INTERNATIONAL UNEP CONFERENCES – FINANCIAL INSTITUTIONS IN THE FACE OF THE PROTECTION OF THE ENVIRONMENT

The United Nations Environmental Programme (UNEP) conference held in November 2000 in Frankfurt was an excellent example of continuous co-operation on an international scale. The theme of the conference was the utilisation of the financial market institution in the protection of natural environment.

³ The text of the declaration in Appendix 1.

⁴ Letter from K. Pietraszkiewicz, Director General of the Union of Polish Banks of 19.09.1995 to the author.

That was a consecutive meeting of financial institutions under the auspices of the UN aimed at an exchange of ideas, reflection and exchange of experience in the scope of a broader participation of financial institutions in the implementation of the idea of sustainable development.

The conference was co-convened by the Deutsche Bank AG – one of world's greatest banks today, which points to the growing importance of the problem of engagement of banks and the world of finance in the protection of the environment on our globe. There were many leading financial institutions among the conference participants: insurance companies, management companies of investment funds and, of course, banks, as well as representatives of the academic world, politics and institutions connected with environmental protection.

The importance of the conference was evident by the presence of numerous renowned banks, such as: Barclays Bank, Bayerische Hypotheken und Vereinsbank, Bayerische Landesbank, Asian Development Bank, Bank Sarasin, Citigroup, Credit Suisse, Den Norske Bank, Deutsche Bank, Development Bank of Japan, Dresdner Kleinwort Benson, European Bank of Reconstruction and Development, European Investment Bank, ING, Japan Bank for International Cooperation, Lloyds TSB, Merrill Lynch, Morgan Stanley, Rabobank, Raiffeisen Zentralbank, Royal Bank of Canada, Swedbank, Royal Bank of Scotland, the World Bank with International Finance Corporation, UBS, Westpac Banking Corporation. There was also the Swedish bank Skandinaviska Enskilda Banken (SEB, a significant stockholder of the Polish Bank of Environmental Protection Bank Ochrony Środowiska), and the BOŚ S.A. itself, too.

6. STANDARDS, INDEXES AND ECO-RATING

Certain internationally recognised tools are used in order to measure the engagement of firms and financial institutions in the activities for the benefit of the protection of the environment. They include, among other things, qualitative standards, stock indexes and eco-rating.

The qualitative standards concerning ecological aspects in management such as EMAS (Environmental Management and Audit Scheme) and ISO 14001 are universally well known. Standard ISO 14001 is already being widely used on the international banking market. Renowned banks have decided to make efforts aimed at achieving this standard. At present the following banks are among those which have obtained this standard: German Deutsche Bank AG and Dresdner Bank AG, the British Barclays Bank, the Swiss bank UBS and others.

In the Swiss capital group Credit Suisse Group whose main element is the Credit Suisse bank, the following aims until 2004 were adopted during the implementation of standard ISO 14001:

- reduction of heat consumption by 10%,
- reduction of electricity consumption by 10%,
- reduction of paper consumption by 15%,
- recycling of 60% of paper,
- recycling of 15% of copier paper.⁵

Owing to their position on the international market the above-mentioned banks determine certain standards for the remaining banks, so it can be expected that other banks will also make efforts in order to obtain a standard of the ISO 14001 series.

In financial institutions, like in other enterprises, attention is drawn to such organisation of work and of the process of management that would make it possible to save maximum resources (paper, electricity, heating, gas, water, etc.) and to limit the production of pollution (waste, emission of pollutants into the atmosphere). The management of the use of resources and of the production of pollutants becomes a standard in a modern financial institution. Obviously, this is conducive to the rationalisation of costs of functioning, which is more and more important in every enterprise. Simultaneously, one cannot deny that such activities have some effectiveness in the scope of the protection of the environment. The effects of pro-ecological activities in financial institutions are described in their reports and eco-balance sheets, which is also a standard of conduct already.⁶

Another indication of a pro-ecological activity of a financial institution, which is an element of the brand value management with the acknowledgement of the requirements of the protection of the environment, is its endeavour to include stocks of a given financial institution in appropriate stock indexes. Such indexes include specialist stock exchange indexes constructed on the basis of selected issuers recognised as SRC – Socially Responsible Corporate, including those environment-friendly because of their goods and services, their manner of production or other advantages. Such pro-ecological stock indexes play a double role on the international financial market. They make it possible

⁵ Internet, <http://www.csg.ch/ecoreport> 98.

⁶ Our commitment to the environment. (2000). Extract from the UBS Environmental Report 1998-99; Environmental report promoting sustainability. (2001). HypoVereinsbank.

for investors to identify a pro-ecological issuer and facilitate the measurement of the value of an investment in time. The most important indexes concerning social and ecological responsibility of companies are: Dow-Jones-Sustainability-Group-Index (DJSJI introduced in 1999) and the latest FTSE4Good (2001). If an issuer acquires stocks in the above-mentioned indexes it is properly publicised.⁷

Eco-rating assessments are also performed on the international market. The system of eco-rating assessment resembles the well-known system of credit – rating. Eco-rating is an assessment and classification of an economic undertaking with regard to its fulfilment of the requirements of the protection of natural environment.

The application of the tools described ought to be acknowledged as an evidence of a growing importance of the protection of the environment in the functioning of financial institutions and the management of their value.

6.1. DOW JONES SUSTAINABILITY GROUP INDEX

The Dow Jones Sustainability Group Index was launched in 1999 and is fully integrated with the Dow Jones Global Index. The Dow Jones Sustainability Group Index track the performance of the top 10% companies in the Dow Jones Global Index which are leaders in terms of sustainability. The selection process is based on the corporate sustainability assessment. Three groups of criteria are taken into account in the assessment process: economic, environmental and social. In 1999 the DJSJI index family consisted of one global index (DJSJI World Index), three regional indexes (DJSJI Europe Index, DJSJI North America Index, DJSJI Asia Pacific Index) and one country index (DJSJI USA Index).

For each of them four narrower, specialised sustainability indexes were prepared from which alcohol industry, gambling industry, tobacco industry were excluded. In October 2001 a new group of sustainability indexes of Dow Jones Group Index was launched: Dow Jones STOXX Sustainability Index and Dow Jones EURO STOXX Sustainability Index.

The Dow Jones Sustainability Indexes include the stocks of the following financial institutions: UBS, Deutsche Bank, FoereningsSparbanken, Lloyds TSB Group, ABN AMRO, BNP Paribas, Barclays, HSBC Holdings, HypoVereinsbank,

⁷ Press release HVB Group. (2002, August 2). Muenchen.

Abbey National, Royal Bank of Scotland, UniCredito Italiano, Group Santander Central Hispano, Societe General.

6.2. FTSE4GOOD INDEX

One of the most prestigious indexes useful in the assessment of socially responsible companies is FTSE4Good. It is the latest index of this type and its importance is confirmed by such institutions as the Financial Times and the London Stock Exchange, which, to a certain extent, were the initiators of this index. Index FTSE4Good is a useful tool in the measurement of the value of companies recognised as socially responsible. The following criteria were acknowledged in the selection: impact on the natural environment, relationship with stakeholders, observing and support of human rights. The functioning of the FTSE4Good was provided for in four variants: FTSE4Good Global Index for global market, FTSE4Good US Index for American market, FTSE4Good Europe Index for Europe market and FTSE4Good UK Index for British market.

The fact that numerous financial institutions have been included in the FTSE4Good indexes should be acknowledged as symptomatic. The institutions include e.g.: Deutsche Bank, Commerzbank, Bayerische Hypo- und Vereinsbank, Danska Bank, BNP Paribas, Credit Lyonnais, Allied Irish Bank, ABN Amro, ING Group, Skandinaviska Enskilda Banken, Credit Suisse, UBS, Barclays, HSBC Holding, Lloyds TSB Group, Westpac Banking Corp., Royal Bank of Canada, Citigroup, Yasuda Fire & Marine Ins., Goldman Sachs Group, Mellon Financial Corp., Merrill Lynch and others.

6.3. ECO-RATING

Eco-rating is used on the international market, too. The eco-rating system resembles a well-known system of credit – rating. The use of eco-rating makes it easier for subjects to have an orientation in the scope of identification of subjects conducive to the protection of the environment and, consequently, facilitates investment of capital. There many subjects which conduct eco-rating. They include, among others, the Oekom agency, or the Innovest.⁸ The Innovest rated a few dozen banks from the ecological perspective. In turn, the Oekom agency rated dozens of banks and assurance agencies, among others: Allied

⁸ Innovest Strategic Value Advisors.

Irish Bank, Banco Bilbao Vizcaya, Banco Santander Central Hispano, Bank Austria, Bank Ochrony Środowiska, Banque Nationale de Paris (BNP), Barclays Bank, Commerzbank, Credit Lyonnais, Credit Suisse, Den Danske Bank, Deutsche Bank, Dresdner Bank, HSBS Holdings, HypoVereinsbank, ING, Julius Baer, Lloyds TSB, National Westminster Bank, Paribas, Royal Bank of Scotland, Skandinaviska Enskilda Banken, Societe Generale, Svenska Handelsbanken, Sumitomo Mitsui Banking, UBS, UniCredito Italiano, Bankgesellschaft Berlin, Bayerische Landesbank, Landesbank Baden-Wuerttemberg, Landesbank Hessen-Thueringen, Landesbank of Saar, Landesbank Sachsen, Landesbank Schleswig-Holstein, Norddeutsche Landesbank, Westdeutsche Landesbank, AXA, Allianz, CGU, Fortis, Gerling, Muenchener Rueckversicherungs, Norwich Union, Prudential, Storebrand, Swiss Re, Victoria Versicherungen and many others. Ecological and eco-ethical banks were also subject to eco-rating: ABS Alternative Bank Schweiz, Banca Popolare Etica, Ekobanken, Freie Gemeinschaftsbank BCL, GLS Gemeinschaftsbank, Oekobank, ShoreBank Pacific, Triodos Bank, UmweltBank and others.

7. ENVIRONMENTAL RISK

It is extremely important to take into account ecological risk and its management in the functioning of a modern financial institution and of a modern bank. The inclusion of ecological risk in the credit activity of a bank is today one of most general indications of acknowledgement of the requirements of the protection of the environment in the whole bank market sector. It should be born in mind, however, that an ecological risk may not only mean a credit risk, but a risk of the entire activity of a bank. So it should also be perceived in a wider perspective, too.

The ecological risk occurring in a borrower is an integral part of the credit risk. Such an approach is no longer questioned. One cannot speak about an honest analysis of a credit risk without taking into account the ecological aspect of the borrower's activity.⁹ In modern banks the ecological risk management has already become a standard.

⁹ Klein, C.M. (1996). Auch der Umweltschutz bringt attraktive Renditen, Boerse Online, 48; von Boehm-Bezing C.-L. (1996). Eine nachhaltige Entwicklung. Die Rolle der Banken, conference 'Umwelt und Finanzdienstleistungen', Koeningswinter 04-05.07.1996; Juncker K. (1991, November 29). Umweltschutz - ein Bankgeschaef, conference 'Umwelt und Banken', Frankfurt nam Main; Ackermann J. (1997, May 21). Die strategische Bedeutung der Umweltrisiken bei Kreditvergaben

In the bank service of companies this refers to both corporate and investment banking. Analysing the components of ecological risk it can be noticed that ecological risk for bank denotes:

- credit risk,
- liability risk (risk of inherited assets),
- reputation risk.

In observance of the regulations of the protection of the environment and ecological attitudes of society may result in the risk of failing to begin or continue an economic activity and, consequently, the risk of failing to repay a credit. This dependence between the ecological risk and the credit risk is the most frequently mentioned dependence between the ecological risk and the risk of the activity of a bank. However, it is not the only a dependence. In the case of a bankruptcy of a borrower and takeover of its assets by the bank there may occur a necessity to incur ecological costs, such as e.g. sanitation of soil, utilisation of waste material etc. Such a risk appears then, as well. Not a lesser risk for a bank is the risk of a loss of its good reputation, when it turns out that the activity financed is harmful environmentally.

No wonder that modern banks make efforts to reduce the ecological risk. The ecological risk assessment is conducted by banks themselves or by means of external experts. Besides, an analyst personnel is being trained, analyst teams specialising in ecological risk assessment are appointed, reviews of loan portfolios are also carried out with a view to the environmental risk.

8. BANK OFFER

Another indication of using the protection of the environment in the management of a financial institution is a preparation of an offer for customers, which takes into account ecological aspects in the investment process. The fact that a bank has such an offer at its disposal is an important argument for the

an die Industrie, Gerling Consulting Gruppe Schweiz, Zuerich; Borys G. (2000). Ryzyko ekologiczne w działalności banku, Warsaw: Biblioteka Menedżera i Bankowca; Hansen, S. and Zaugg B. (1994). Umwelt-Chancen und -Risiken im Kreditgeschaef, Schweizer Bank, 10; Łyszczak M. (1996). Innowacje finansowe w zakresie ochrony środowiska. (Vol.732). (p. 61). Wrocław: AE; Rohe B.F (1992). Beim Umweltschutz sachlich – ein Ansatz der Banken, Die Bank, 5; Manski, E. (1992). Oekologische Kriterien der Kreditvergabe, Die Bank, 11; Gwizdała, J. (1997). Źródła finansowania ochrony środowiska w gospodarce rynkowej Polski. In K. Piotrowska-Marczak and M. Wypych (Ed.), Finanse i bankowość – przekształcenia systemowe (p. 225). (Vol.I). Łódź: Absolwent; Borys, Ryzyko ekologiczne w działalności banku.

community, which confirms a firm and tangible (i.e. financial) engagement of a given financial institution in the protection of the environment.

Such an offer comprises e.g. preferential credits, special purpose deposits, participation units in ecological investment funds, investment certificates and other securities issued by banks.

The mechanism of creating preferential credits is already quite well known. In general, offering this type of credits is possible due to donation of third institutions which are statutorily appointed to support the protection of the environment and have at their disposal certain funds for this purpose. So in the case of offering preferential credits, banking institutions are used as a channel of distribution of public and private resources designed for the financing of pro-ecological economic undertakings. This follows from the fact that bank credit procedures are especially useful in the estimation of the reality of the economic projects presented as far as their creditworthiness, repayment guarantee and borrower monitoring are concerned.

However, the offer of deposits related to the financing of the protection of the environment may be regarded as particularly interesting. As it is less well known, it is worth a closer look. Some significant banks have such offers at their disposal. This type of deposits is also well known on the Polish market. They can also be found in the Swiss banking. One of the cantonal Swiss banks, Zuercher Kantonalbank, has offered savings accounts whose means have been used for preferential credits thanks to a lower interest on deposits. Although this type of offer not constituted an essential part of the whole offer of the bank, the management of the bank considered it necessary to introduce such an offer to the local community.¹⁰ Another cantonal bank, the Basellandschaftliche Kantonalbank, acted in a similar way.¹¹

Investment certificates are also an interesting idea. These are issues designed for the financing of pro-ecological economic undertakings. The certificate is a security issued on the basis of a set of stocks of selected enterprises whose value guarantees the repayment of the certificate. The investor who choose a given certificate know which projects they co-finance. A prominent French bank BNP Paribas offered the following investment certificates on the capital market: "umwelt: ethik24-Zertifikat", "alternative energy", "water". Similar products were offered by Westdeutsche Landesbank: certificates

¹⁰ Jahresbericht 1995. (1996). Zuercher Kantonalbank, Umweltprodukte der ZKB; Letter from H.S. Schwarz of Zuercher Kantonalbank of 21.01.1997 to the author.

¹¹ Geschaeftsbericht 1995. (1996). Basellandschaftliche Kantonalbank.

“Brennstoffzellen”, “New energy activ” and “Wassertechnik activ”; by Dresdner Bank: certificate “alternative energy”; by UBS Warburg: certificate “Fuel Cell II”; by ABN AMRO: certificate “New energy” and by Merrill Lynch – ITSELF: “certificate Sink 50 Sustainability”. Ecological indexes are useful in the construction of certificates. The HypoVereinsbank issued a certificate based on the Dow-Jones-Sustainability-Group-World-Index.¹² The Dow-Jones-STOXX-Sustainability-Index was also used by the Westdeutsche Landesbank and the Merrill Lynch investment bank.¹³

The banks which operate in capital groups often use investment funds to offer the so-called ecological investment funds. This makes it possible to use “the ecological effect” for both the whole capital group and for the bank itself. Numerous examples of such banks can be given, such as: Credit Suisse, UBS, ABN AMRO, SEB, Deutsche Bank, ING, Erste Bank, BfG Bank, Sparkasse Oberoesterreich, Bank Sarasin, Bank Pictet and others.

Another proposal of banks for the customers who take into account ecological aspect in the investment process is the service of the asset management type. In this instance, portfolio investments in the offer of assets management contain stocks, bonds and other assets of the issuers who have been acknowledged as natural environment-friendly. The services of this type offered e.g. by UBS, ING – Baring Asset Management and Dresdner Bank are well known. Also in the offer of private banking the taking into account of ecological aspects on a customer’s request can be pointed out, as e.g. in Credit Suisse.

8.1. THE ECOLOGICAL BANK

A separate problem is the functioning of the so-called ecological banks in which operational activity is subordinate to the main aim, namely the financing of the protection of the environment. There are already various banks acknowledged as ecological. The Bank Ochrony Środowiska S.A. in Poland and the UmweltBank AG in Germany are the two most prominent ecological banks. There are three reasons to claim this:

- efficient connection of organisational and operational principles of a commercial bank with the financing of the protection of the environment,
- relatively large sums in the profit & loss account and balance sheet,
- shares quoted on the stock exchange.

¹² *Environmental Report Promoting Sustainability*. (2001). (p. 18). HypoVereinsbank.

¹³ Letter from F. Borstelmann and U. Schulte zu Sodingen, Westdeutsche Landesbank employees of 22.07.2002 to the author.

In both banks the rules of commercial banking have been efficiently connected with the financing of the protection of the environment. The banks work as typical commercial banks but specialise in the financing of the protection of the environment and in pro-ecological economic undertakings. Additionally, protection of the environment is taken into account in the entire operating activity of the bank. In the course of their activity, both banks have gained numerous customers and worked out large sums in the profit & loss account and balance sheet. They are quite big financial institutions of a relatively stable market rating. They are also the only banks, which specialise in the financing of the protection of the environment and have their stocks quoted on stock exchanges. This is an additional asset in the gaining of customers and financing of the protection of the environment and an approval of the quality of these banking institutions in their satisfaction of the standards of conducting an economic activity.

8.1.1. Bank Ochrony Środowiska S.A. – Poland

Poland, which is one of most important emerging markets, is also a country where one of the best organised ecological banks has been operating for a long time: the Polish Bank Ochrony Środowiska S.A. (BOŚ S.A.), established in 1991. The shares of the bank have been quoted on the Warsaw Stock Exchange on the primary market since 1997. The principal stockholders of the bank are (2001): the Skandinaviska Enskilda Banken AB – 47.04 % and the National Fund of Environmental Protection and Water Management – 44.36%. At the end of 2001 the particular items of its balance were as follows: the balance-sheet total nearly 5.2 billion PLN (1.27 billion EUR)¹⁴, credit portfolio 3.65 billion PLN (0.9 billion EUR), total deposits 4.35 billion PLN (1.1 billion EUR). Since 1998 the bank has been assessed by the international agency Fitch, which gave BOŚ S.A. credit-rating on the “BBB-” level in 2001. In the year 2001 the BOŚ S.A. possessed shares in, among others, the following institutions: the Brokerage House BOŚ SA (99.89% of shares), the Financial Companionship BOŚ Sp.z o.o. (100% of shares), the Central European Rating and Analyses Centre CERA S.A. (now Fitch Ratings Polska) (0.83% of shares).

The Bank Ochrony Środowiska S.A. has 56 outlets at its disposal in Poland. The offer of the bank comprises preferential pro-ecological credits. Pro-ecological credits are given in co-operation with, among others, the National Fund for Environmental Protection and Water Management, the Voivodeship

¹⁴ 1 EUR = around 4.10 PLN; 1 billion = 1 thousand million.

Funds for Environmental Protection and Water Management, the European Fund for the Development of Polish Villages 'Counterpart Fund' and the World Bank. The preferential credits given to the end of the year 2001 totalled about 260 million EUR, which constituted more than 30% of the credit portfolio of the bank. The Bank Ochrony Środowiska has also a complex deposit offer, including special purpose deposits, which are related to the financing of particular initiatives in the scope of the protection of the environment. These are very unique proposals, e.g.:

- Ekoplus deposits,
- Eco-deposits,
- Jubilee deposits,
- 'Osprey' deposits.

From every such deposit the Bank Ochrony Środowiska S.A. allocated a certain amount from its own resources for the financing of selected purposes such as: the programme for the protection of the lynx (155,369 PLN allocated), the programme for the protection of owls (39,742.50 PLN), the programme for the protection of the porpoise (17,738 PLN), the programme for the protection of the osprey (22,281 PLN).¹⁵ The latest deposit offers include:

- the hedgehog deposit,
- the spermophile deposit.

In addition, the BOŚ S.A. issues the 'Ekobonus' securities. At the end of the year 2001 the liabilities of this type were worth 70 million PLN (1.6% total deposits of the bank).¹⁶

8.1.2. UmweltBank AG – Germany

UmweltBank AG was established in 1997, and in the year 2001 its shares were admitted to the stock exchange in Frankfurt, in the Freiverkehr segment. This bank is in the development phase. At the end of 2001 its balance-sheet total amounted to 322 million EUR, the value of credits given was 181 million EUR, and the value of accepted deposits 209 million EUR.¹⁷ Due to its engagement in the financing of pro-ecological economic undertakings it was rated the highest 'AAA' level by the Zuercher Kantonalbank eco-rating.

¹⁵ Letter of 12.08.2002 from R.Pawlicka, Director of Department of Retail Banking BOŚ S.A., to the author.

¹⁶ Bank Ochrony Środowiska, Annual Report 2001.

¹⁷ Geschaeftsbericht UmweltBank 2001.

In the bank offer there are interesting deposit products: UmweltPluskonto, UmweltSparbuch, UmweltSparvertrag, UmweltSparbrief. In the distribution of the bank there are also titles of participation in ecological investment funds: Sarasin ValueSar Equity, Sarasin OekoSar Portfolio, SEB Invest OekoLux, SEB Invest OekoRent. The bank offer also comprises credits, including preferential credits whose cost is dependent on the level of recognition of the requirements of the protection of natural environment.

9. THE SECURITIES MARKET

The influence of the protection of the environment on the financial market is also observed on the international stock market. A considerable part of the transactions of financing pro-ecological economic undertakings is conducted on the international securities market. Numerous banks, investment funds, pension funds, asset management companies, brokerage houses, investment clubs, individual investors, consulting agencies, eco-rating agencies, insurance companies and, of course, issuers are involved in transactions of this type. Such instruments of the securities market as shares, bonds, investment certificates, commercial papers and others are universally used. Tools for assessment and measurement of the ecological risk (ecological quality) the above-mentioned ISO 14000, EMAS standards, ecological stock indexes DJSGI and FTSE4Good as well as eco-rating are also applied.

Among the issuers recognised as environment-friendly one can indicate such enterprises as, among others, Tomra Systems, Deutsche Telekom, Frauenthal Keramik, Gerresheimer Glas, Omega Environmental, The Body Shop, Bank Ochrony Środowiska, Grontmij, Jenbacher, Mayr-Melnhof Karton, Timberland, Triodos Groenfonds, Wedeco, Whole Foods Market, SolarWorld, Eurofima, Shimano, Deutsche Bundesbahn, Deutsche Ausgleichsbank and others. Government issues and those of international institutions are also present in eco-investment fund portfolios, asset management companies, or investment clubs. These also include bonds issued by Denmark, Sweden, Austria, Finland and Germany. These countries were acknowledged as highly complying with the natural environmental protection principles.

10. ECO-INVESTMENT FUNDS

An ecological investment fund is a fund in whose investment policy both economic and ecological criteria are taken into account. The accumulated financial means are invested in the securities of the issuers who respect the

requirements of the protection of the environment in their economic activity in a special manner or, with the first condition maintained, they manufacture environmental protection technology products. Investment funds of this type are becoming more and more popular. They operate in the United States, Great Britain, Germany, Switzerland, Austria, Belgium, Holland, France, Sweden, Finland, Australia, and even in Japan. It is estimated that about 200 funds of this type function on the international financial market and about 40 billion USD are accumulated there. Table 9.1. presents the data concerning ecological investment funds on selected markets.

Table 9.1.
Eco-investment funds on selected financial markets (30.06.2002).

Country	Number of funds	Value of assets (in billion EUR)
United States	49	25.0
Great Britain	33	3.0
France	17	0.6
Holland	18	1.4
Germany-Austria-Switzerland- Luxemburg	61	2.6

Source: Oeko-Invest. (2002), 265; Oeko-Invest. (2002), 268.

Ecological investment funds are offered by capital groups in which banks operate as well as by investment funds companies independent of banks.

For example, the Swiss bank UBS, one of the leading world banks, offered eco-investment funds to its customers not only on the European market (e.g. UBS EF Eco Performance), but also on the Japanese one (UBS Eco-fund "Eco-hakase"). Moreover, this bank's asset management offers products for investors who take into account environment protection criteria. Another significant Swiss bank, Credit Suisse, is also active on the market of eco-investment funds. CS EF (Lux) Global Sustainability and CS Fellowship Fund belong to this bank group.

These are not the only examples of engagement of the Swiss banking in the offering of investment opportunities in compliance with customers' preferences taking into account the protection of the environment. A group of renowned private and cantonal banks also has an interesting offer. The Swiss Bank Sarasin offers ecological investment funds Sarasin Oeko-Sar and ValueSar Equity, whereas Bank Pictet offers Pictet Sustainable Equities – Switzerland and

Pictet Global Sector Fund Water. In turn, the Deutsche Bank group was offered DWS Panda-Renditefonds, DWS Sustainability Leaders Fund. Another good example is the activity of the Dutch ING which offers participation units in ecological investment funds on the European, American and Australian markets. On the European market the ING offers participation units by means of ING Investment Management, ING Bank, Postbank, BBL, Aeltus, while on the American market, in co-operation with the firms which manage the funds of SRI (Socially Responsible Investment) Calvert, Pax World, Citizens type. On the Australian market ING created the ecological investment fund ING Sustainable Investments Global Share Trust.¹⁸

There are many similar examples from different countries. In Japan serious financial associations and banks, among others, Yasuda, Nikko, Daiwa, Sanwa Bank, Dai-ichi Kangyo, Sumitomo Bank are present on the market of ecological investment funds.

11. POLAND

As has already been mentioned, Poland is a country with a wide experience in the use of financial institutions even banks, in the financing of the protection of natural environment. The aforesaid Bank Ochrony Środowiska SA is a leader on the Polish market.

However, the Bank Ochrony Środowiska SA is not the only commercial financial institution in Poland committed to the financing of the protection of the environment and which offers concrete financial products on the market. The others include LG Petro Bank S.A. (EkoloKata), Kredyt Bank S.A. (the Visa Electron card for young people) and Union Investment Towarzystwo Funduszy Inwestycyjnych S.A. (Investment Fund Uni XXI Century).

The LG Petro Bank offered the investment deposit EkoLokata. The Bank transferred from its own resources initially the amount of 0.3% and then 0.1% of the value of every deposit to the environment protection and water management funds.¹⁹

The Credit Bank S.A. offered the Visa Electron Junior card. In the years 1998-1999 the bank transferred half of the charge for the issue of the card to

¹⁸ ING in society 2001. (2002). ING Group.

¹⁹ Letters of 15.09.1997 and 12.08.1998 from Ł.W. Bald, Vice Director, Department of Retail Banking of LG Petro Bank S.A., to the author.

the Sea Station of the University of Gdańsk for the purpose of financing a programme of reproduction of grey seals in the Baltic Sea.²⁰

Another example is the investment fund UniXXI Century administered by Union Investment Towarzystwo Funduszy Inwestycyjnych S.A. It was assumed in the investment policy of this fund that part of the hoarded resources would be invested in the assets of stock – quoted companies of the environment protection sector.

In addition, many foreign financial institutions involved in Poland have the knowledge and experience indispensable for the introduction of an offer of ecological investment funds (Credit Suisse, ING, ABN AMRO, Deutsche Bank, SEB).

Table 9.2.

List of companies with ISO 14001 certificate, whose shares are quoted at the Warsaw Stock Exchange, divided into particular markets.

Primary market	Secondary market	Free market
Amica	Apator	Fasing
Cersanit	Groclin	
Dębica	Hydrobudowa	
Elektrobudowa	PollenaE	
Ferrum	Polna	
GPRD	Yawal	
HydroGd		
Kable Holding		
Kęty		
Kogeneracja		
Mennica		
MostostalWar		
PNK Orlen		
Rafako		
Sanok		
Stalprod		
Stomil		
ZEW		
Żywiec		

Source: Modrzyński, P. (2003). ISO 14001 w polskich spółkach giełdowych. Unpublished materials.

²⁰ Letter of 12.08.2002 from B. Budzyńska-Bartosik, Head of Department of Retail Customers of Kredyt Bank SA to the author.

In Poland one can also show examples of issuing municipal bonds which can be acknowledged as pro-ecological owing to the aim of the issue, e.g. the financing of sewage treatment plants, sewage systems or waste disposal sites. These issues include those of Śrem, Lubaszowa, Osieczna, Ruciane-Nida, Tczew, Wieruszów, Krzeszyce, Szamocin, Krasnobród and others.

It is possible to indicate interesting opportunities to invest on the Warsaw Stock Exchange including the requirements of environmental protection. A number of companies have ISO 14001 certificate, which is some advice for investors is shown in Table 9.2.

11.1. COMPLEX SURVEYS CONCERNING THE INCLUSION OF THE ECOLOGICAL CRITERION IN THE OFFER OF FINANCIAL INSTITUTIONS

11.1.1. Introduction

Taking into consideration the possibilities to use the financial market for the financing of environmental protection and bearing in mind society's involvement in this process, it seems necessary to conduct a survey of the public opinion. Attempts at conducting such surveys are made in many countries.

In Poland, unique, complex and simultaneously successful surveys have been conducted on a representative sample of Polish society. In this way, on one of the most important emerging markets, the society's approach towards pro-ecological engagement of financial institutions and a financial offer connected with the financing of environmental protection were identified.

The results of the survey have made a more complex analysis of the issue possible and they may be useful in the creating of financial institutions' offers directed at individual investors who take into consideration the ecological criterion in addition to the economic one.

11.1.2. Survey results 1997 & 2002

The survey conducted in Poland was aimed at gaining preliminary knowledge about the perception of the engagement of financial institutions in environmental protection and the readiness of individuals to invest with respect to ecological criterion. Therefore, the survey dealt with the demand side of the market. The first survey was conducted on March 4-11, 1997 on a representative sample of Polish adults of 1,213 people. The survey was repeated 5 years later on April 5-8, 2002 on a representative sample of Polish

adults at the number of 1,044 people. The surveys were based on the questionnaire method, created by the Author of the project and conducted at his request by CBOS (The Public Opinion Research Centre).

The results of the survey are presented in the following categories:

- 1) for the whole sample (1,213 people),
- 2) for those who declared having savings (496 people).

This enables to generate crucial information. This enables us to generate opinions typical of the whole population, then typical of the people who have savings and, finally, to find out the preferences of those people who have no savings at the moment but who could have free capital in the future.

The questions were formulated in the simplest possible way in order to be understood by respondents from the representative sample of society. It was necessary to conduct the survey on such a broad spectrum of the society. Not always are the answers given to similar questions in 1997 and in 2002 compatible. It is so due to some changes of rules about answering questions in the survey of 2002. The changes are marked at the respective questions.

An analysis of the answers collected was aimed at grasping the basic proportions. Too detailed an analysis was avoided assuming that at this stage of a preliminarily survey of the perception of involvement in environmental protection and the readiness of people to invest based on ecological criterion and the conditions of such an investment, it will lead to too detailed reflections.

Moreover, a more substantial preliminary interpretation of basic proportions will be justified. Many collected answers require a further detailed survey for a correct commentary and a proper diagnosis.

On the basis of the presented data for 1997 we can see that a crucial part of respondents (almost 33%) choose investments connected with environmental protection as a possibility of getting involved in environmental protection. The same opinion is also expressed by almost 43% of savers. Such a result may be considered high. It supports people's high readiness to invest – save with taking into account ecological criteria. Therefore, it is worth noting that in the questionnaire the form of supporting environmental protection by means of ecological investments is inferior only to the forms of supporting the environment by education and consumption. Citizens' support of environmental protection by education is ranked number one. The next of the forms is consumption with respect to the requirements of environmental protection. Next, as mentioned before, investing connected with environmental protection and the 4th form is taking part in the political life by means of elections and voting for parties and candidates with an appropriate programme. 5 years later,

Table 9.3.

Question 1. Citizens can get involved in environmental protection in many ways. Which of the following ways do you consider most appropriate? [It is possible to choose more than one positive answer with evaluating the degree of their importance]

Specification	1997		2002	
	Total (1,213)	Respondents with savings (496)	Total (1,044)	Respondents with savings (193)
a) Getting and propagating the knowledge about environmental protection	64.5%	70.2%	58.0%	64.8%
b) Buying goods produced with respect to the environment	59.1%	67.6%	62.5%	66.9%
c) Voting for candidates and parties which include in their programmes the issue of environmental protection	30.8%	36.4%	28.0%	26.2%
d) Saving money in bank accounts, bonds etc. which are invested in business activities fostering environment	32.8%	42.7%	16.6%	23.1%
e) Another way	8.7%	10.0%	6.8%	11.6%
f) Citizens should not get involved in environmental protection. It should be done by institutions and organisations specially appointed for it	16.1%	7.5%	14.6%	11.8%

in 2002, the situation looks different. A significant drop of interest in the environmental protection can be noticed. It may be a result of a definitely worse economic situation in 2002. Also, a lower percentage of answers for the remained spheres of civic activities connected with environmental protection such as collecting and propagating environmental protection education, political activity, or taking advantage of the financial market offers has been noticed. The highest decrease is connected with the use of offers of the

financial market connected with environmental protection, namely 17% for all the respondents and 23% for those owning savings.

However, it can be said further that these are relatively high indications for such a form of activities for the benefit of environmental protection. It can also be added that activity in this field dropped from the 3rd place in 1997 to the 4th in 2002, ranked behind consumption, education and political activity.

In general, answers related to consumer attitudes towards environmental protection stayed at the same level, even during the worse period in the economy. This fact is even more optimistic when we look at the increase of positive answers of all the respondents between 1997 and 2002. Moreover, this activity was ranked number one by the respondents leaving behind education which was in the leading position in 1997.

Table 9.4.

Question 2. Should banks and mutual fund/investment companies offer 'ecological' products, i.e. those which lead to environmental protection (e.g. bank deposits from which pro-ecological enterprises are financed)?

Specification	Percentage of indications in survey 2002	
	Total (1,044)	Respondents with savings (193)
a) Yes	77.8%	84.2%
b) No	18.3%	14.4%
c) It is hard to say	3.9%	1.4%

The question was asked only in the 2002 survey. The results in the table imply that social acceptance of this type of financial offers is crucial. The data is more promising than that which was presented in the table related to the next question and connected with readiness to respect the engagement of financial institutions in environmental protection when choosing an institution in which savings will be kept. To sum up, financial offers connected with environmental protection will find acceptance on the market and definitely they should not create too negative reactions. The results may be acknowledged as optimistic but they should be treated with some caution.

It is worth noticing that in 1997 almost 46% respondents (definitely yes, rather yes), were ready to take into consideration the choice of the financial institution which is engaged in environmental protection, in contrast to about 27% respondents who express the opposite opinion (rather no, definitely no). Among the respondents with savings, this percentage is even higher – over 59%

were ready to consider the ecological engagement of institutions, whereas the opposite opinion is expressed by almost 32%.

Table 9.5.

Question 3. If you were choosing the form of saving your money, would you take into consideration the factor whether a given bank, mutual fund/investment company or the issuer of securities is engaged in environmental protection?

Specification	1997		2002	
	Total (1,213)	People with savings (496)	Total (1,044)	People with savings (193)
a) Definitely yes	16.1%	23.7%	7.4%	8.3%
b) Rather yes	29.6%	35.6%	22.0%	26.6%
c) Rather not	19.1%	22.1%	29.0%	31.8%
d) Definitely no	8.3%	9.7%	17.8%	21.3%
e) It is hard to say	26.9%	8.8%	23.8%	12.1%

The question was repeated in 2002. In comparison to 1997, the readiness to consider the engagement of financial institutions in environmental protection drop to 29% for the whole all respondents and to 35% for those owning savings (yes, rather yes). The percentage of individuals who are not willing to pay attention to the engagement to financial institutions in environmental protection when consigning their savings to them has decreased – respectively 45% and 53%. Despite that, it can be said that quite a large group of individuals in 2002 as high as 1/3 respondents appreciates the engagement of financial institutions in environmental protection. The number is hard to be neglected.

The presented data concerning the respondents' of readiness to consider the environment of a financial institution in environmental protection are promising. It is worth noticing, though, that the notion of involvement in environmental protection has not been clearly defined. The respondents' answers should be interpreted as a sign of approval for the involvement of financial institutions in the effort towards environmental protection.

Relying on the results presented in Table 9.6. it is possible to speak of a high level of trust to bank deposits of the respondents who were ready to consider the involvement of a financial institution in ecology. Almost half of the respondents from the general group and from the group with savings choose

bank deposits as an appropriate instrument for collecting funding for the financing of ecological projects. Other financial instruments taken into account by the respondents were bonds and shares. A low esteem for participation in an investment fund is noticed in all the groups of respondents.

Table 9.6.

Question 4. Which form of investing your savings would you choose if they were to finance environmental protection? [It is possible to choose more than one positive answer with evaluating the degree of their importance]; [It refers to those whose answer to question no. 2 was positive i.e. they chose answer a) or b)]

Specification	Percentage of indications in survey 1997	
	Total (554)	Respondents with savings (294)
a) Bank deposits	49.5%	48.5%
b) Bonds	17.0%	20.1%
c) Shares	17.3%	14.5%
d) Share certificates (mutual funds shares and investment companies shares)	7.1%	9.7%
e) Others	0.9%	0.8%
f) It is hard to say	8.4%	6.6%

Specification	Percentage of indications in survey 2002*	
	Total (1,044)	Respondents with savings (193)
a) Bank deposits	32.5%	40.1%
b) Bonds	9.9%	16.0%
c) Shares	5.7%	5.6%
d) Share certificates (mutual fund shares and investment companies shares)	4.5%	6.5%
e) Others	1.7%	2.7%
f) It is hard to say	45.6%	29.3%
g) Refusal to answer	0.1%	—

* The question was asked to the whole group and only one answer could be chosen.

The question was repeated in 2002, although in a little different form (see the commentary to the table). However, some conclusions can be drawn from the answers. In 2002 a similar balance of answers was acquired. Bank deposits are still most popular than bonds come next. It is worth noticing, though, that within the group of savings owners' participation in an investment fund in 2002 was more common than in shares. The above-mentioned result may be considered promising, bearing in mind the increasing popularity of ecological investment funds.

The above-mentioned distribution of preferences concerning financial instruments appropriate for gaining individual customers' funding for financing ecological projects may be considered an important guideline about the order of introducing individual instruments on the market. Regardless of the content of the question asked about the usefulness of a financial instrument in ecological investing it may be assumed that respondents, in their answers, gave an indication of their own preferences about individual financial instruments, which does not necessarily have to change the picture of a situation when it comes to choosing the right instrument for ecological investments.

Table 9.7.

Question 5. Would you tend to invest your money in financial deposits or bank deposits to be used for the purpose of financing environmental protection even if you had less profit from them than from other deposits but at the same level of risk?

Specification	1997		2002	
	Total (1,213)	Respondents with savings (496)	Total (1,044)	Respondents with savings (193)
a) Definitely yes	5.9%	9.8%	5.7%	5.7%
b) Rather yes	23.7%	29.9%	19.4%	21.4%

It may be assumed that both in 1997 and in 2002 a relatively large group was ready to invest using an offer connected with the financing of environmental protection even if it generated a lower income than other investments. A decrease of this readiness is visible after five years in 2002. However, the above results can be considered promising. It may also be assumed that there is a group of people in the Polish society which is stable in its size and with firm pro-ecological attitudes as far as their own finances are concerned, especially in the 'definitely yes' category.

Having asked the question about the readiness to give up income it is obvious that it will be appropriate to ask another one about the part of income one would be willing to give up in the process of ecological investing. The question was also asked.

Table 9.8.

Question 6. How much lower profit would you accept?

[It refers to those whose answer to question no. 5 was positive i.e. they chose answer a) or b)]

Specification	1997		2002	
	Total (359)	Respondents with savings (198)	Total (262)	Respondents with savings (52)
By 5%	63.4%	65.4%	74.0%	69.2%
By 10%	22.5%	21.2%	12.6%	19.2%
By 20%	2.0%	1.0%	3.4%	5.8%
It is hard to say	12.0%	12.3%	9.9%	5.8%

Commenting on the data from 1997, it is possible to say that the highest tolerance towards resigning from a part of income considers the lowest range, which was foreseeable. The result for all categories of respondents is similar. Over 60% of respondents in each category accepting a resignation from the income in investing with respect to the ecological aspect, are ready to give up on the income, but only up to 5% of it. Over 20% respondents agreeing to resign from part of their income would even be ready to sacrifice 10% income from investments. Only few are ready to resign from a greater part of their income, whereas in 2002 the readiness to resign from a part of income dropped significantly. More respondents than before ready to resign from a part of income would accept a drop of income by only 5%. Also, indications concerning resignation from 10% income dropped quite drastically also in the total number of respondents. However, the readiness for resignation from 20% income increased. This is an intriguing result. Therefore, it is necessary to look at the data collected cautiously.

The data presented in Table 9.9. can be interpreted as a test on ecological attitude of financial institutions in customers' opinion. Mainly in banks, as they dominate the Polish financial market. The majority of bank customers were convinced that the financial resources collected were not used by banks for the financing enterprises with respect of environmental protection regulations. The distribution of answers to a question asked was also an indication of

a serious negligence of banks in the creating of their own ecological image among clients. The results for 2002 should be assessed as even more pessimistic. The group of people who believe that financial institutions do not use their financial resources properly from the ecological point of view has decreased, yet the number of people favourably estimating bank activities in the same matter has also dropped. It is worth noticing, the percentage of respondents without any opinion in this matter has also increased.

Table 9.9.

Question 7. Do you think your savings are currently used for environmental protection i.e. only the businesses which do not engage in any activities against the environment are financed with this money?* [People who did not have any savings were excluded]

Specification	Respondents with savings	
	1997 (496)	2002 (193)
a) Yes	11%	6.5%
b) No	55%	35.9%
c) It is hard to say	34%	57.6%

* Refers to savings owners.

To sum up, the majority of clients do not consider banks, or more generally, financial institutions, trustworthy institutions in ecological matters. It confirms a really small involvement of financial institutions in environmental protection in their clients' opinion. Financial institutions were assessed as not trustworthy from the ecological point of view. This fact leads to sad reflections. Certainly, the so-called 'ecological image' of financial institutions, including banks, requires hard work from public relations and marketing departments of the banks.

In order to highlight the importance of the data included in Table 9.9. a few most often expressed opinions from 2002 justifying the respondents' opinion on a lack of trust for the ecological attitude of financial institutions are given. Thus, 7.1% respondents have never heard of banks caring for the environment; 4.7% respondents think banks and investment funds care only for their own financial results; 2.9% think no improvement in the environment is noticeable; 1.4% do not trust quoting dishonesty and scandals; 1.3% believe that in Poland no attention is paid to environmental protection. Only 1.5% respondents admitted they knew that banks and investment funds financed environmental protection.

Table 9.10.

Question 8. Do you know any Polish or foreign industrial, commercial or service companies (including banks, investment funds, share-quoted companies) which particularly foster environmental protection? Name them.

Specification	1997		2002	
	Total (1,213)	Respondents with savings (496)	Total (1,044)	Respondents with savings (193)
a) Yes	7.8%	13.8%	7.7%	16.0%
b) No	92.2%	86.2%	91.9%	84.0%
c) It is hard to say	–	–	0.4%	–

Analysing the data included in the above table one can say that respondents knew few firms they would be ready to call ecological. This was the case in both 1997 and 2002. The best informed were the respondents from the group with saving. Analysing the data on should pay attention to a crucial problem of society's little knowledge of the of firms involved in environmental protection (assuming the respondents' opinion concerning the positive ecological evaluation of a given firm is justified). The problem concerns establishing the actual state and making an assessment a firm from the ecological point of view (and in future also monitoring of firms chosen ecologically). Eco-rating would certainly be very useful here.

Table 9.11.

Question 9. Do you think those who invest their savings in business activities fostering environmental protection should have an opportunity to be tax-exempt?

Specification	Total (1,213)	Respondents with savings (496)	Others (717)
a) Yes	84.2%	87.9%	81.6%
b) No	7.6%	8.1%	7.3%
c) It is hard to say	8.2%	4.0%	11.1%

The question was asked in 1997 only. Commenting on the data contained in Table 9.11. it should be stated that the society is ready to accept tax exemption for those investing their savings in companies fostering environmental

protection. It is accepted to the highest degree by respondents from the group with savings.

11.1.3. General assesement of survey results

The research conducted in 1997 and 2002 on a representative sample of Polish society aimed at an introductory reconnaissance of the problem of perceiving by the Polish society the involvement of financial institutions in environmental protection, society's readiness to invest with the ecological criterion taken into account as well as a preliminary formulation of conditions on which such an investment could take place. The results of the survey can be very useful in creating an offer for clients, which would be connected with the financing of environmental protection.

When commenting on the collected results one should be cautious in interpreting them. It should be borne in mind that for all the received answers to each question asked, further detailed researches can be conducted. Keeping this in mind it is possible to say that the research results are very promising.

It turns out that a significant part of respondents accept a possibility to support ecological changes by their own investing with respect to ecological criterion and not limiting themselves to only ecological education, socio-political activities or to consumption of goods with respect to environmental protection requirements. The overwhelming majority of the respondents also expressed their conviction that financial institutions should offer their clients products and services connected with environmental protection. A crucial part of the respondents admit that when deciding to invest money they are ready to respect the involvement of a given financial institution in environmental protection. Moreover, preferences of the investors respecting the environmental protection criterion concerning financial instruments were defined. Also, a group of investors ready to respect the ecological criterion in the process of investing was identified and a degree of readiness to resign from a part of income in the process of ecological investing in case of such a need was described. Apart from this it was stated that among respondents with savings there is a conviction that their savings generally are not invested with respect to environmental protection in financial institutions which are in charge of the savings. The state of society's knowledge on the subject of companies, which can be treated as ecological, was defined. A positive opinion of society on the matter of tax releases for investors investing with respect to ecological criterion is also known.

It is worth pointing out that, as a rule, within the group with savings pro-ecological attitudes are more often shown than in the general group.

It is noticeable that the subject of environmental protection within the context of saving in 2002 lost its popularity. It may result from a definitely worse economic situation in 2002 in comparison with 1997. As it is known, the question of environmental protection is more dependent on the state of economy and its social expectations connected with. Unemployment and vague economic perspectives could influence the results of the research. Certainly, it is worth continuing this type of research and repeat it in the years of better economic situation.

12. CONCLUSION

On the international financial market one can find numerous cases of engagement of financial institutions in the protection of natural environment and creation of their own ecological image for the purpose of maintaining or gaining customers. Managers use many resources to confirm the firm and concrete engagement of their institution in the protection of natural environment and to convince their shareholders, customers and contracting parties about it. This aim is important because this conviction influences the market value of the firm. Therefore, many renowned banks are engaged in the functioning of ecological investment funds or they offer financial products related to the financing pro-ecological economic undertakings and other initiatives for the benefit of the protection of the environment. Moreover, well-organised commercial ecological banks appeared on the banking market.

It can be expected that the process of adjustment of financial institutions to the functioning in society which recognises the requirements of the protection of the environment will advance. Probably new and more efficient international initiatives will be undertaken for the engagement of financial institutions in the protection of the environment. Such tools as ecological certificates, ecological indexes and eco-rating will be more widely used. It can also be expected that also in the offer of international financial institutions more and more proposals will be found of customers' pro-ecological expectations taken into account.

New ecological trends on the international financial market are perceptible also in Poland, which is one of most important emerging markets. Undoubtedly, the establishment and functioning of the biggest ecological bank, the Bank Ochrony Środowiska S.A., is a great Polish success. Another success is the fact that research into the possibility of engagement of society in financing of the protection of the environment by means of the financial is carried out in Poland.

APPENDIX 1
UNEP STATEMENT BY FINANCIAL INSTITUTIONS ON THE
ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

(Revised version, May 1997)

We members of the financial services industry recognize that sustainable development depends upon a positive interaction between economic and social development, and environmental protection, to balance the interests of this and future generations. We further recognize that sustainable development is the collective responsibility of government, business, and individuals. We are committed to working co-operatively with these sectors within the framework of market mechanisms toward common environmental goals.

1. Commitment to Sustainable Development

- 1.1. We regard sustainable development as a fundamental aspect of sound business management.
- 1.2. We believe that sustainable development can best be achieved by allowing markets to work within an appropriate framework of cost-efficient regulations and economic instruments. Governments in all countries have a leadership role in establishing and enforcing long-term common environmental priorities and values.
- 1.3. We regard the financial services sector as an important contributor towards sustainable development, in association with other economic sectors.
- 1.4. We recognize that sustainable development is a corporate commitment and an integral part of our pursuit of good corporate citizenship.

2. Environmental Management and Financial Institutions

- 2.1. We support the precautionary approach to environmental management, which strives to anticipate and prevent potential environmental degradation.
- 2.2. We are committed to complying with local, national, and international environmental regulations applicable to our operations and business services. We will work towards integrating environmental considerations into our operations, asset management, and other business decisions, in all markets.
- 2.3. We recognize that identifying and quantifying environmental risks should be part of the normal process of risk assessment and

management, both in domestic and international operations. With regard to our customers, we regard compliance with applicable environmental regulations and the use of sound environmental practices as important factors in demonstrating effective corporate management.

- 2.4. We will endeavor to pursue the best practice in environmental management, including energy efficiency, recycling and waste reduction. We will seek to form business relations with partners, suppliers, and subcontractors who follow similarly high environmental standards.
- 2.5. We intend to update our practices periodically to incorporate relevant developments in environmental management. We encourage the industry to undertake research in these and related areas.
- 2.6. We recognize the need to conduct internal environmental reviews on a periodic basis, and to measure our activities against our environmental goals.
- 2.7. We encourage the financial services sector to develop products and services which will promote environmental protection.

3. Public Awareness and Communication

- 3.1. We recommend that financial institutions develop and publish a statement of their environmental policy and periodically report on the steps they have taken to promote integration of environmental considerations into their operations.
- 3.2. We will share information with customers, as appropriate, so that they may strengthen their own capacity to reduce environmental risk and promote sustainable development.
- 3.3. We will foster openness and dialogue relating to environmental matters with relevant audiences, including shareholders, employees, customers, governments, and the public.
- 3.4. We ask the United Nations Environment Programme (UNEP) to assist the industry to further the principles and goals of this Statement by providing, within its capacity, relevant information relating to sustainable development.
- 3.5. We will encourage other financial institutions to support this Statement. We are committed to share with them our experiences and knowledge in order to extend best practices.
- 3.6. We will work with UNEP periodically to review the success in implementing this Statement and will revise it as appropriate.

We, the undersigned, endorse the principles set forth in the above statement and will endeavor to ensure that our policies and business actions promote the consideration of the environment and the sustainable development.

Source: Internet, www.ubs.com/e/

APPENDIX 2

FINANCIAL INSTITUTIONS INITIATIVE SIGNATORIES

List of Signatories to the UNEP Statement by Financial Institutions on the Environment & Sustainable Development (by country, as of October 2002)
Listed alphabetically by company.

Number of Signatories: 195 plus 2 Associate Members from 49 Countries

Albania

American Bank of Albania – Banka Amerikane e Shqiperise

Andorra

Banca Internacional D'Andora – Banca Mora
Credit Andorra

Angola

Banco Africano de Investimentos
Banco Nacional de Angola

Argentina

Banco Frances

Australia

National Australia Bank
Westpac Banking Corporation

Austria

Bank Austria
Bank Für Tirol und Vorarlberg Aktiengesellschaft
Bankhaus Carl Spengler & Co. Aktiengesellschaft
Creditanstalt-Bankverein
Osterreichische Investitionskredit Aktiengesellschaft
Osterreichische Kommunalkredit Aktiengesellschaft
Raiffeisen Zentralbank Austria AG

Brazil

Banco do Estado de Sao Paulo SA
Banco Nacional de Desenvolvimento Economic e Social
BBV Brasil

Bulgaria

Balkanbank Ltd.

Canada

Bank of Montreal
Canadian Imperial Bank of Commerce
Export Development Corporation
Royal Bank of Canada
Scotia Bank (The Bank of Nova Scotia)
Toronto-Dominion Bank

Chile

Banco BHIF

China

Bank of Shanghai

Colombia

Banco Ganadero

Cyprus

Bank of Cyprus

Denmark

Unibank
Nordea Bank⁴

Finland

Kansalhs-Osake-Pankki

France

Banque Populaire du Haut-Rhin
Caisse des depots
Credit Local de France
Société Générale Group

Germany

Bankhaus Bauer AG
Bankhaus C.L. Seeliger
Bankhaus Max Flessa & Co.
Bankverein Werther AG
Bayerische Handelsbank AG
Bayerische Hypo-und Vereinsbank
Bayerische Landesbank Girozentrale
Beneficial Bank AG
Bezirksparkasse Heidelberg
BfG Bank AG
B.Metzler seel. Sohn & Co. KgaA
Commerzbank AG.
Conrad Hinrich Donner Bank AG
DEG - German Investment and Development Company
Degussa Bank GmbH

Delbrück & Co., Privatbankiers
Deutsche Ausgleichsbank
Deutsche Bank AG
Deutsche Bank Saar
Deutsche Pfandbrief-und Hypothekenbank AG
Deutsche Postbank AG
Dresdner Bank AG
DZ Bank
Eurohypo AG,
Europäische Hypothekenbank der Deutschen Bank
Fürstlich Castell'sche Bank, Credit-Casse
Hamburgische Landesbank Girozentrale
Hesse Newman Co Bank (BNL Group)
HKB Hypotheken-und Kommunalkredit Bank
Investitionsbank des Landes Brandenburg
Kreditanstalt für Wiederaufbau
Kreissparkasse Düsseldorf
Kreissparkasse Göppingen
Landesbank Baden-Württemberg
Landesbank Schleswig-Holstein Girozentrale
LBS Badische Landesbausparkasse
Merck Finck & Co.
M.M.Warburg & Co.
Sal. Oppenheim jr. & Cie
SchmidtBank KGaA
Schröder Münchmeyer Hengst AG
Schwäbische Bank AG
Service Bank GmbH & Co. KG
Sparkasse Heidelberg⁵
Sparkasse Leichlingen
Sparkasse Staufen
Stadtsparkasse Hannover
Stadtsparkasse München
Stadtsparkasse Wuppertal
UmweltBank AG
Vereins-und Westbank AG
Volksbank Siegen-Netphen eG
WestLB

Greece

Commercial Bank of Greece

Hungary

Budapest Bank RT.

National Savings and Commerical Bank Ltd.

Iceland

Landsbanki Islands

India

Bank of Baroda

Ireland

Bank of Ireland Group

Italy

Banca Monte dei Paschi di Siena S.p.A
Credito Italiano
Istituto Nazionale di Credito Agrario S.p.A.
SanPaolo IMI S.p.A

Japan

Development Bank of Japan
Good Bankers Co. Ltd.
Nikko Asset Management Co. Ltd.
Nikko Cordial Corporation
Shiga Bank
Sumitomo Mitsui Banking Corporation

Jordan

Arab Bank, PLC
Export Bank of Africa Ltd.
Middle East Investment Bank, S.G. Group

Kenya

Kenya Commercial Bank Group

Kuwait

National Bank of Kuwait SAK

Mexico

Banco National de Obras y Servicios Publicos SNC
BBV Probusa

Morocco

BMCE Bank

The Netherlands

Algemene Spaarbank voor Nederland
FMO – Netherlands Development Finance Company
Rabobank
Triodos Bank

Nigeria

FSB International Bank plc

Norway

Den norske Bank ASA

Peru

Banco Continental

The Philippines

Bank of Philippine Islands
Development Bank of the Philippines
Global Business Bank
Land Bank of the Philippines
Metropolitan Bank and Trust Company
Philippine Bank of Communications (PB Com)
Planters Development Bank
Rizal Commercial Banking Corporation

Poland

Bank Depozytowo-Kredytowy S.A.
Bank Gdański S.A.
Bank Ochrony Środowiska
Bank Handlowy w Warszawie SA
Bank Polska Kasa Opieki S.A.
Bank Przemysłowo-Handlowy S.A.
Bank Rozwoju Eksportu S.A.
Bank Śląski S.A.
Bank Zachodni S.A.
National Fund for Environmental Protection and Water Management
Polski Bank Inwestycyjny S.A.
Pomorski Bank Kredytowy S.A.
Powszechna Kasa Oszczędności – Bank Państwowy S.A.
Powszechny Bank Gospodarczy S.A. w Łodzi
Powszechny Bank Kredytowy S.A.

Portugal

Banco Comercial Português³
Banco Portuges do Atlantico SA
IPE Capital, SA

Puerto Rico

BBV Puerto Rico

Romania

Romanian Commercial Bank SA

Russia

Econatsbank

Slovenia

Kreditna banka Maribor d.d.

Spain

Banca Catalana S.A.
Banco Bilbao Vizcaya S.A.
Banco del Comercio S.A
Banesto, Banco Espagnol de Credito
BBV Privanza, Banco S.A.
Caixa Catalunya

Finanzia, Banca de Credito S.A.
Santander Central Hispano¹

Sweden

Ekobanken-Din Medlemsbank
JAK- Jord, Arbete, Kapital
Skandinaviska Enskilda Banken
Svenska Handelsbanken
Swedbank AB

Switzerland

Bank Sarasin & Cie
Banque Cantonale de Geneve
Basellandschaftliche Kantonalbank
Black Emerald Group
Credit Suisse Group
EPS Finance Ltd.
Luzerner Kantonalbank
Sustainable Asset Management
UBS AG
Zurcher Kantonalbank

Thailand

Thai Investment and Securities Co. Ltd

Turkey

Finansbank
Garanti Leasing

Uganda

Uganda Commercial Bank

United Kingdom

Abbey National Plc.
Barclays Group Plc.
Cooperative Bank
Friends Provident Life Office
HSBC Holdings Plc.
ISIS Asset Management²
Lloyds TSB Bank
NatWest Group
Prudential Plc.
Royal Bank of Scotland Plc.
Standard Chartered Plc.
Woolwich Plc.

United States of America

Citigroup
Community Capital Bank
EBI Capital Group LLP
FleetBoston Financial

Innovest Strategic Value Advisor Inc.
Republic National Bank

Venezuela
Banco Provincial
Corporacion Andina de Formento

Associate Members

Coopers & Lybrand, United Kingdom
Ecosecurities, United Kingdom

Notes:

- * Bayerische Hypotheken-und Wechselbank, Germany / Bayerische Vereinsbank AG, Germany (merged 1998).
 - ** Föreningsbanken, Sweden / Sparbanken Sverige AB, Sweden (merged 1997).
 - *** Union Bank of Switzerland / Swiss Bank Corporation (merged 1998).
 - **** Südwestdeutsche Landesbank Girozentrale, Germany/ Landesgirokasse Bank, Germany & Landeskreditbank (merged 1998).
 - ***** Salomon Inc. formally signed the Statement in 1997 and then Citigroup signed in 2000.
- ¹ Banco Santander and Banco Central Hispano merged in 1999.
 - ² Friends Ivory & Sime Trust Company, United States of America no longer exists, Parent company is ISIS Asset Management.
 - ³ Banco Bilbao Vizcaya changed name in 2001 to Banco Comercial Português, Portugal.
 - ⁴ Uni Bank merged and changed name in 2000 to Nordea Bank.
 - ⁵ Bezirkssparkasse Heidelberg changed its name to Sparkasse Heidelberg.

Source: Internet, http://www.unepfi.net/fii/signatories_country.htm.

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Władysław L. Jaworski

CHAPTER 10

**POSSIBILITIES FOR A BANK
ENGAGEMENT IN ENVIRONMENTAL
PROTECTION**



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POSSIBILITIES FOR A BANK ENGAGEMENT IN ENVIRONMENTAL PROTECTION¹

All bank activities in the area of environmental protection can be collected into a total general system of ecological management. An engagement of a bank in ecology can, or even should, be used for marketing purposes. There are different ways of engagement of a bank in environmental protection. Firstly, there are credits for ecological purposes.

One can distinguish two kinds of credits:²

1) from entrusted means.

A credit from entrusted means refers to a situation in which a bank offers financial means received from other sources, national or foreign, on the terms agreed-upon earlier. The bank commission is the price for administering the financial means delivered from outside.

2) from own resources with a surcharge to interest made by external institutions.

A credit offer with a surcharge to the credit interest by external institutions is started with the use of the financial means a bank has at its disposal. The aims are, as a rule, agreed-upon with an external institution, national or foreign, which supports this offer. Surcharges to interest make a given credit offer more attractive for borrowers and make the acquisition of investors interested in the area of investment defined in the offer possible.

¹ Parts of A. Wisniewska's MA thesis have been used in this paper.

² Przewodnik – Źródła finansowania inwestycji ekologicznych. Ministerstwo Ochrony Środowiska. Internet, <http://www.mos.gov.pl/przewodnik>.

Credit from a bank's own resources not profiting from support funds from outside is usually a commercial credit. Ecological projects have rights equal to other investment proposals and compete with them for access to the financial means of a bank according to such criteria as certainty of investment, security of credit repayment or amount of the bank's prospective earnings.

Not all banks offer special purpose credits. Such an additional financing can be perceived as controversial because in a way it is regarded as a "subsidy". Some banks are considering other options to support the protection of environment: if the ecological risk is greater, the credit interest increases, too. In this way encouragement to take ecological matters into consideration is created.

When giving credits for ecological purposes the question of checking if the means are used correctly is particularly important. If a credit has been given on preferential terms in order to carry out a pro-ecological project, one ought to check whether it is being used so.

Every commercial activity uses up natural resources and leads to environment pollution in the form of issuing pollutants waste material or causing industrial accidents. All this influences the surroundings of enterprises, which may react to it in various ways to protect itself and the environment from a negative influence.

Examples of the kinds of risk a bank may face:

- depreciation of security value if pollution is detected;
- reduction of a borrower's financial ability to carry out his own investment because additional expenses must be spent on treatment;
- investor's failing to include necessary devices, indispensable for starting his own investment for environmental reasons;
- occurrence of a situation when amounts connected with environmental protection have priority over a liability of a bank;
- prolonged trials for repairing damage or its compensation, which incriminate the reliability and image of the borrower and indirectly result in commercial troubles;
- the risk that after a possible takeover of a guarantee by a bank it will become jointly responsible for undefined future ecological damage related with it.

Unexpected costs may mean that a company will have difficulty in loan/credit repayment. The profits of the company may also sustain a loss on account of production stoppages, image deterioration etc. This can cause a slump in profits leading to an increased risk of loss of liquidity if the company

does not possess enough capital. The stability of assets value must be attentively monitored. Any pollution found on the premises of a company may significantly change the bases on which credit is given. In such a situation it is important to take ecological risk into account at a potential customer's credit – rating.

Evan Henry, vice-president of Bank of America said at a UNEP³ conference that banks would certainly be subject to pressure for being more responsible ecologically. In his opinion the management of ecological transaction and image risk should be a minimum reaction of a bank. Such an activity will result in an inevitable influence on partners, bank customers, in order to work in a more responsible manner. A victory of both parties, natural environment and financial institutions, would be the final effect.

The Swiss Bankers Association proposes a 3-stage process of ecological risk.⁴ It is presented in Diagram 10.1.

The experience of the Swiss banks shows that a majority of customers reacts favourably to questions about ecological risk and appreciate professional advices on the identification of this risk and its management.

A bank can also support environmental protection by accumulation of capitals for the financing of pro-ecological undertakings. This is so important because the sources of financing environmental protection are usually limited, and such a bank activity enlarges their amount. Funds can be raised in two ways:⁵

- by preferential offers – the customer resigns from part of the interest,
- by offers based on market solutions – the customer receives market interest.

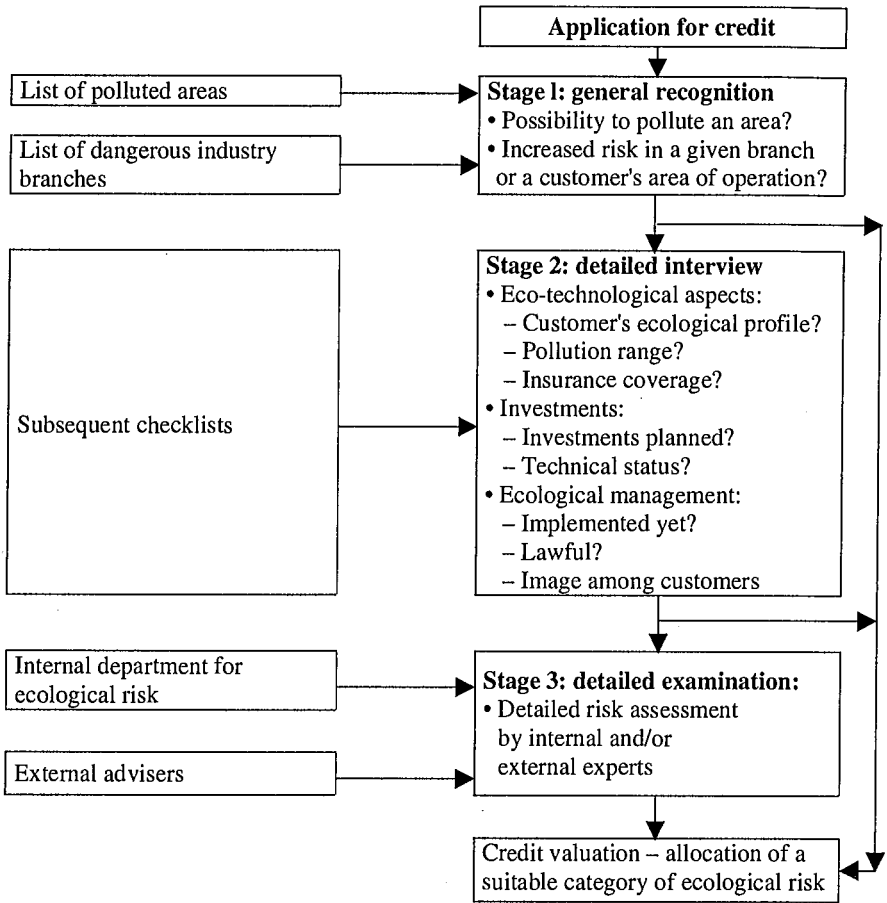
Customers sensitive to ecology can be inclined to accept lower interest rates on deposits. A universal bank can run a special ecological deposit line. Resources obtained in this way would be intended for preferential interest credits granted for pro-ecological purposes. The interest of the credit would

³ Fifth International Roundtable Meeting on Finance and the Environment. (1999, September 9-10). United Nations Environment Programme. Financial Institutions Initiative. Chicago. Internet, <http://www.unep.ch/etu/finserv/Chicago-internet.htm>.

⁴ Environmental Management in Financial Institutions. Swiss Bankers Association. Internet, <http://www.unep.ch/etu/finserv/sba/>.

⁵ Dziawgo L. (1998). Bank a ochrona Środowiska. Wykorzystanie banków w gromadzeniu kapitałów w celu finansowania ochrony Środowiska. Bank i Kredyt, 3.

Diagram 10.1.
The process of ecological risk assessment.



Source: Environmental Management in Financial Institutions. Swiss Bankers Association. Internet, <http://www.imep.ch/etu/finserv/sba/>.

be so much lower as much lower is the deposit interest. This, however, is only possible when customers are so much committed, so much promote environmental protection that they are inclined to resign from part of their income. The quantity of resources that can be raised in this way may be a problem here. One ought, however, to bear mind that a marketing effect of such activities can be achieved even with small amounts of resources collected from ecological investments and credits given from these funds.

L. Dziawgo suggests the use public resources for surcharges to ecological deposits in the same way as surcharges of third institutions are used for ecological credits. A bank would accept deposits, defined as ecological, at the market interest rate. Half of the interest, for example, would be offered at the expense of a bank and the other half would be surcharged from public resources. Credits given from the resources collected in this way would be at half the market rate interest and, naturally, intended for pro-ecological purposes. This system would make banks seek customers – depositories and its offer of preferential credits would attract customers.

The same author describes a different method, too. Resources are obtained from depositories of ecological preferences on market terms. The resources would be traded on financial markets with ecological criteria taken into account. Part of the profits is designed for a programme of preferential credits, for surcharges to credits for pro-ecological purposes. This way, if need be, investments on preferential terms could be financed. The author is of the opinion that gaining new passive and active customers would balance the bank costs of administering such a programme and resignation of part of profits.

The raising of funds for ecological purposes may also be done by specialised investment funds. Ecological investment funds take the issuer's ecological activity into account in the investment process. Two kinds of funds can be distinguished:⁶

- investing in ecological technology, e.g. in companies, which specialise in water treatment, air purification or recycling;
- investing in companies which comply with the requirements of environmental protection in their production process or service delivery to a degree higher than average although their activity may not be connected with it.

The advantages of ecological investment funds are the same as those of general funds: deposit diversification, liquidity, managers' knowledge and experience, investor's time saved. Additionally, they assure an easy qualification of the ecological profile of a company, the managers of the fund have easy access to such information. In addition, the activity of ecological funds can contribute to a better discipline of the issuers who are under constant observation of investors. Such form of investing also creates a demand for

⁶ Dziawgo L. (1997). *Papiery wartościowe w ochronie środowiska*. Toruń: TNOiK.

securities issued by ecological issuers, which also serves the promotion of pro-ecological behaviour in the economy.

It is noteworthy that purely ecological funds appear comparatively seldom. We find mainly ethical-ecological funds.

Banks can also offer their own shares and bonds, which serve a reimbursement of the financing of environment protection. This applies first of all to the groups of banks qualified as ecological, that is to say those which were established in order to finance ecological undertakings.

Lack of matter-of-fact information connected with ecological results of companies is another obstacle in the functioning and development of ecological savings market. A development of institutions dealing with eco-rating is necessary.

The engagement of banks in environmental protection will be really practical only when violation of environmental protection law will significantly influence the company standing. This refers especially to the inclusion of ecological risk assessment to a general assessment of credit reliability and possibilities to develop a credit action for the financing of pro-ecological investments.

Environmental protection will have to be taken into account as a factor, which exerts an impact on the situation of companies. Consumers' ecological awareness will be growing, too, and this will affect the situation of companies by creating a demand for ecological products. Banks will then have to pay greater attention to the matters connected with the protection of the environment. The pro-ecological re-orientation of banks will result from a number of factors:

- granting a credit to a company which does not maintain admissible parameters of environmental loading or encumbered with ecological liabilities may, in certain cases, endanger its credit reliability and credit repayment ability.
- acceptance by a bank of guarantees of credit repayment on subjects encumbered with ecological liabilities (e.g. old polluters) may be a reason for serious trouble when it comes to execute these guarantees.
- engagement of banks in branches undergoing strong structural changes which result from e.g. production limits due to excessive hazard for people's health and environmental loading without a prior diagnosis of the developmental situation of companies-borrowers can bring a loss to a bank.
- banks which declare pro-ecological engagement can more easily gain access and obtain licences to service national or foreign financial capital

designed for subsidising or crediting environmental protection programmes. Such an ecological external resource investment can bring to a bank measurable financial and promotional advantages, moreover, banks of a distinct pro-ecological orientation can attract investments or capital shares, private or public, from persons, institutions or companies with similar views on the importance of environmental problems and which optimistically rate the future development of this branch of economic activity.

- banks, which are familiar with ecological tendencies on the developed countries markets, can limit the risk of erroneous credit decisions in pro-export investments of domestic companies. Banks aware of ecological circumstances that may limit the access of certain goods to the markets of some countries, may warn the potential borrower against starting an investment whose effect would be a production of goods prohibited for ecological reasons. Banks conscious of the complexity of ecological problems can avoid risk by refusing a credit to such domestic investors.
- banks of pro-ecological orientation can derive benefits more easily by attracting committed and honest employees, having broad horizons, conscious of not only economic and financial conditioning of “good” investment credits but also of ecological limitations. This is insomuch important that in mature market economy only a company with a good ecological structure may survive, because objective circumstances of economic development make the criterion of economic effectiveness overlap more and more often with the criterion of ecological effectiveness.

One of the main aims of banks is to limit the risk of non-repayability of credits. Banks will be facing a problem of assessing the ecological reliability of a borrower, a guarantor and an object of guarantee, e.g. an enterprise, a building, a complex of building, an immovable property.

Banks will be interested in the ecological aspects of production technology and qualitative-ecological features of products; these must be taken into account as a criterion of evaluation of the reliability of a borrower whose intention is to produce goods for export to e.g. the EU countries. If a bank wants to be fully protected against ecological risk it must, in principle, conduct an “ecological review” of the investments planned, assess energy and raw material balances, check the compliance of its technological design with the regulations of environmental protection in force in Poland and abroad, with quality standards, with standards for product admission to exploitation or consumption.

This can be a doubling or supplementing of activities of a borrower but it is an important safeguard to protect a bank from a risk.

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CHAPTER 11

**A STANDARD CHART OF SOCIAL
ACCOUNTS FOR ECOLOGICAL BANKS**



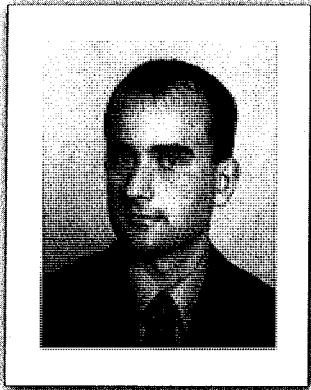
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A STANDARD CHART OF SOCIAL ACCOUNTS FOR ECOLOGICAL BANKS

1. INTRODUCTION

There have been several attempts to develop ecological banking in order to improve environmental conditions. The banks involved in financing environmental activities may be grouped into *three categories*. Banks doing profit-oriented normal banking business find profitable activities in the field of environmental finance or they use environment-oriented activities as a marketing instrument and means of public relations. Other banks, especially public banks, are involved in the performance and implementation of environmental programmes. The third type of banks referred to in German as eco-banks (ecological banks, Ökobanken, Umweltbanken) are of private or public or of mixed ownership. They concentrate on banking for environmental purposes. In this contribution we are dealing with the latter type of banks. The above-mentioned types of banks pursue different goals. The first group is clearly profit-oriented and applies the normal *goal system* of banks. The second category of banks has, with respect to our topic, three main groups of goals to achieve. The first one consists of profit-oriented goals necessary to maintain the equity capital, to form reserve capital and to guarantee the autonomy of the bank according to its statutes in order to fulfil its main goals. These are public goals of various kinds. Among them there may be the third group of goals, which are of main interest for our investigation. These are the environmental goals, which are gaining in importance in the EU and in membership candidate countries. The eco-banks have to follow two main groups of goals. On the one hand they should achieve environmental goals and on the other hand they are also forced to achieve profit-oriented goals to guarantee their survival unless public or private owners are willing to subsidise the banks by providing new capital. The last strategy may run into difficulties because of limited capital of a private owner or because of subsidisation control of the European Commission. This situation causes twofold difficulties. To follow its goals, an eco-bank needs

instruments to find out how banking operations affect the fulfilment of environmental goals and it has to report and assess their environmental successes. However, these instruments have not been satisfactorily developed yet. In particular, an environment-oriented bookkeeping system, which allows assessing the periodical success, is not available although some attempts to identify the ecological success of projects or single operations or to account for external environmental effects have been debated. Therefore, *we propose a chart of social accounting for eco-banks*. To do so, the following *sub-questions* have to be dealt with:

1. Which are the relevant characteristics of eco-banks and what is their goal structure in principle?
2. How are the operations of eco-banks related to the achievement of environmental goals?
3. What attempts at environmental bookkeeping are already available?
4. What are the basic requirements and features of a chart of social accounting of eco-banks?
5. How should the chart look like and how should it be applied?

In the *second section*, we characterise the development of eco-banks and analyse their structures and activities necessary to develop the environmental accounting system. The second section looks into banking operations in more detail to see how they have been considered in success assessment. A review of environmental accounting is offered in the third section and the need for a more adequate accounting system is derived. The basic decisions to be made when formulating an appropriate accounting system are discussed in the fourth section, whereas the fifth section aims to introduce the reader to the system of accounts. In the summarising section, the limits of such an approach are discussed and the need for practical application of the accounting system is stressed.

The bookkeeping system we suggest is entirely new, although already applied in homes of elderly people,¹ energy provision² and tourist facilities.³

¹ Schmitz, B. (1980). *Gesellschaftsbezogene Rechnungslegung für Altenpflegeheime*. Baden-Baden.

² Tsimopoulos, T. (1989). *Gesellschaftsbezogenes Rechnungswesen für Energieversorgungsunternehmen*. Frankfurt.

³ Friedrich, P. and Jahn, K. and Valjak, G. and Wonnemann, H.G. (1993). Ein gesellschaftsbezogenes Rechnungswesen am Beispiel der Stadthalle Osnabrück. In: *Zeitschrift für öffentliche und gemeinnützige Unternehmen*. (Vol.16). (pp. 245-247).

In our paper, we concentrate on *the development of the chart*. Further projects should deal with practical applications in banks. However, before reaching this phase of development, an appropriate discussion of possible features of the chart is needed. Herewith, we try to contribute to solve this problem. For the sake of simplicity, we refer to the empirical conditions of Germany.

2. ECO-BANKS – STRUCTURE AND GOALS

In Germany, there operate three types of banks dealing with environmental activities. Some of them have signed the UNEP-declaration.⁴ An inquiry made by the Judge Institute of Management of the University of Cambridge of 400 German and British banks and building societies has shown that 68% of them expect a growing significance of environmental aspects for their businesses. 53% of them thought that ecological aspects open new chances for business whereas 10% fear dangers and 3% suppose both developments to happen.⁵ The reasons for engagement concern primarily the engagement of and motivation of staff, communication with staff, reporting about environmental impacts, environmental sponsoring, development of the so-called green products, municipal planning, requirements stemming from the EU-Eco audit regulation^{6,7} as well as application of ISO 14001⁸ and measures aimed at cost saving and careful resource handling. Moreover, it is a means of marketing⁹ as some enterprises; investors, insurance companies, controllers, auditors and rating agencies get more sensitive to the environmental effects of business.¹⁰ On the other hand, there are some barriers to ecological activities. Short-sighted capitalists prefer investments with high profits and short depreciation periods.

⁴ Siegmann, K.A. (2000). Deutsche Großbanken entwicklungspolitisch in der Kreide? Entwicklungsverträglichkeit deutscher Bankengeschäfte am Beispiel Brasiliens und Indonesiens. SÜDWIND-texte 12. Siegburg.

⁵ Green Finance. Umweltmanagement in Banken Sparkassen und Versicherungen. (2002). (p. 5). Umweltbundesamt. Berlin.

⁶ The European EU-eco audit regulation is officially called Eco-Management and Audit Scheme (EMAS). Banks can be certificated within Europe.

⁷ Schimmelpfeng, L. and Machmer, D. (1996). Öko-Audit und Öko-Controlling (p. 13). Taunusstein.

⁸ It is a norm of private law of the International Organization for Standardization (ISO) and applicable for certification in and outside the European Union.

⁹ Green Finance. Umweltmanagement in Banken Sparkassen und Versicherungen.

¹⁰ Green Finance. Umweltmanagement in Banken Sparkassen und Versicherungen 7.

Moreover, there is a lack of appropriate social accounting and its reflection in cost accounting. Decisions are primarily profit-based and present value is assessed through high discount rates.¹¹ Therefore, banks and insurance companies prefer to present environmental reports only.

Banks of the first type include Commerzbank, Dresdner Bank, Raiffeisenbank Dellmensingen, Raiffeisenbank Witzenhausen, Volksbank Eisenberg, Volksbank im Siegerland and Volksbank Stadthagen. *Reports* are published by public *banks of the second type* such as Bausparkasse Schwäbisch Hall, Bayerische Landesbank, Deutsche Ausgleichsbank, Kreditanstalt für Wiederaufbau, Kreissparkasse Göppingen, Kreissparkasse München, Landesbank Baden-Württemberg, Landesbank Berlin, LBS Badische Landesbausparkasse, LBS Bayerische Landesbausparkasse, Sachsen LB Landesbank Sachsen Girozentrale, Sparkasse Bruchsal, Sparkasse Dortmund, Sparkasse Frankfurt, Sparkasse Köln, Sparkasse München, Sparkasse Oberhausen, Wüstenrot Bausparkasse and also by *banks of the third type* including GLS Gemeinschaftsbank Bochum, Öko-Bank Frankfurt, Umweltbank AG Nürnberg and some insurance companies¹². The reports show that banks of the first and second type try to achieve environmental aims. This is shown by some examples and by improvements in internal resource management. Some of the above measures refer to *internal ecological activities of the banks*. Deutsche Bank has developed a rainwater collection system for watering the lawns and flushing toilets. Kreditanstalt für Wiederaufbau (KfW) has built a gas-fired cogeneration block-type thermal power station to reduce CO₂ emissions. Sparkasse Staufen-Breisach, Frankfurter Sparkasse, and Stadtparkasse München have reduced costs by gas-powered cars, electric cars, route planning and motor pool management for staff members. Dresdner Bank and Landesbank Baden-Württemberg procure ecological goods such as green electricity, natural food for use in the canteens as well as solar energy for heating purposes. Waste management reduces the costs of Bayerische Landesbank and Stadtparkasse Hannover. Special products have been developed such as eco-oriented operator models and finance by green shares, ecological investment funds, green bonds, ecological life insurance,¹³ contracting, environmental insurance

¹¹ Gerling, R. and Schmidheiny, S. (Eds.). (1996). Sustainable Development. Finanzmärkte im Paradigmenwechsel. München.

¹² Allianz Versicherungs-AG, Generali Lloyd Versicherungen, Münchner Rück, Provinzial Versicherungen, RheinLand Versicherungen, Volksfürsorge, VICTORIA Versicherungen, oeco capital Lebensversicherung AG.

¹³ Mehr Wert. Ökologische Geldanlagen. (2001). Umweltbundesamt. Berlin.

policies, energy-saving loans and programmes, rating and debt-for-nature swaps by Deutsche Bank, HypoVereinsbank, oeco capital, Dresdner Bank and Stadtsparkasse München, KfW, Sparkasse Bruchsal-Bretten and by others. KfW, Kreissparkasse Göppingen, Sparkasse Heidelberg and Volksbank Raiffeisenbank Werra-Meißner developed guidelines for environmental management. Landesbausparkasse Baden-Württemberg and Sparkasse Heidelberg have formulated management systems. Raiffeisenbank Dellmensingen and Volksbank-Raiffeisenbank Werra-Meißner use indicators for controlling purposes. Deutsche Ausgleichsbank practises special environmental education. Stadtsparkasse Köln and several insurance companies conduct environment research and risk-analysis. While all the above-mentioned banks are engaged in public relations and reporting,¹⁴ some banks, such as Commerzbank, and Kreissparkasse München Starnberg, have developed schemes for sponsoring environmental activities.¹⁵

As the examples show, *private banks* are still profit-oriented. However, as far as *environmental goals* are complementary to *profit goals* or when environmental tasks open chances for new profitable businesses, they are willing to achieve environmental goals. With *public banks*, the situation is different. Their mission includes explicit public, economic, social, political and environmental goals¹⁶ as they serve as instruments of public policy.¹⁷ Profit orientation is a sub-goal pursued to ensure the financial autonomy of a public bank. Therefore, although environmental goals are among the important goals of public banks, other public aims may have priority.

An even more important role is played by environmental and ecological goals in the third type of ecological banks. Three of them are well-known in Germany. *GLS Gemeinschaftsbank eG* was founded in 1974. With its headquarters

¹⁴ Green Finance. Umweltmanagement in Banken Sparkassen und Versicherungen 58.

¹⁵ Green Finance. Umweltmanagement in Banken Sparkassen und Versicherungen 62.

¹⁶ Eichhorn, P. and Friedrich, P. (1976). Verwaltungsökonomie I. Baden-Baden; Friedrich, P. (1977). Die Operationalisierung der Unternehmensziele. In: P. Eichhorn, (Ed.), Auftrag und Führung öffentlicher Unternehmen Speyer, (pp. 107-127); Greiling, D. (1996). Öffentliche Trägerschaft oder öffentliche Bindung von Unternehmen. Baden-Baden; Graef, M. (2001). Der öffentliche Auftrag in den Geschäftsberichten öffentlicher Unternehmen. Baden-Baden.

¹⁷ Thiemeyer, Th. (1970). Gemeinwirtschaftlichkeit als Ordnungsprinzip. Berlin; Thiemeyer, Th. (1975). Wirtschaftslehre öffentlicher Betriebe. Reinbek bei Hamburg.; Thiemeyer, Th. (Ed.). (1990). Instrumentalfunktion öffentlicher Unternehmen. Baden-Baden; Kosiński, J.A. (2002). Bank Gospodarstwa Krajowego – A State-owned Bank as an Instrument of Business Promotion in Poland. In: The Development of Economic Science and its Practical Applications. Masaryk. (pp. 206-216). Brno: University Brno.

in Bochum and subsidiaries at Bochum, Stuttgart, and Hamburg, the bank serves 24,000 customers. It is a registered co-operative with 11,500 members who have agreed to forgo any dividend payment for their shares in the co-operative. The bank focuses very much on providing finance for around 1,400 ecological and social projects ranging from organic agriculture to housing schemes and training and support services.¹⁸ The bank invites non-profit organisations and project managers to apply for favourable loan terms. About 25% of its loans are interest-free with borrowers having only to pay a small charge to cover the bank's loan administration costs. The bank is not engaged in normal credits, normal private housing finance or payment transactions. Its main concern is financing ecological farming, natural food provision, and green energy. It manages participation funds through a daughter firm, GLS Beteiligungsaktiengesellschaft AG, to operate wind parks, to produce green energy, support ecological agriculture and support social and residential communities. 53.58% of credits are allocated to eco-agriculture, natural food production, and green energy.¹⁹ A special fund has been established to restructure the activities of creditors to avoid bad debts and to save ecological projects.²⁰ Moreover, several foundations exist which are active in ecological farming, green energy, and development aid and are controlled by a daughter firm Gemeinnützige Treuhandstelle e.V.²¹ Therefore, apart from purely environmental goals and activities, other social aims and social success play an important role too.

Öko-Bank eG was founded in 1988 as a co-operative and is owned by 25,000 members. The bank has subsidiaries in Frankfurt, Berlin and Freiburg; it operates as an all-round bank and has 35,000 clients. All banking services,

¹⁸ GLS Gemeinschaftsbank eG. (2002a). Lagebericht des Vorstandes der GLS Gemeinschaftsbank eG. In: Geschäftsbericht 2001, GLS Gemeinschaftsbank eG, Gemeinnützige Treuhandstelle e.V., GLS Beteiligungs AG (Eds.). Bochum, pp. 14-18.

¹⁹ Geschäftsbericht 2001 der GLS Beteiligungsaktiengesellschaft. (2002). Beteiligungsaktiengesellschaft AG. In: GLS Gemeinschaftsbank eG, Gemeinnützige Treuhandstelle e.V., GLS Beteiligungs AG, (p. 28). Bochum.

²⁰ GLS Gemeinschaftsbank eG. (2002b). Bericht des Aufsichtsrates an die Mitglieder der GLS Gemeinschaftsbank eG, In: Geschäftsbericht 2001, GLS Gemeinschaftsbank eG, Gemeinnützige Treuhandstelle e.V., GLS Beteiligungs AG (Eds.). Bochum, p. 19.

²¹ GLS Gemeinschaftsbank eG. (2002c). Jahresbericht des Ausgleichs- und Sicherungsfonds bei der GLS Gemeinschaftsbank eG und der Gemeinnützigen Treuhandstelle e.V. In: Geschäftsbericht 2001, GLS Gemeinschaftsbank eG, Gemeinnützige Treuhandstelle e.V., GLS Beteiligungs AG (Eds.). Bochum, pp. 19-20; GLS Gemeinschaftsbank eG. (2002d). Jahresbericht der Gemeinnützigen Treuhandstelle e.V. In: Geschäftsbericht 2001, GLS Gemeinschaftsbank eG, Gemeinnützige Treuhandstelle e.V., GLS Beteiligungs AG (Eds.), Bochum, pp. 22-25.

e.g. cheque accounts, are offered to gain more independence from other banks. Moreover, Ökobank manages savings accounts, capital savings accounts, promotion accounts, etc. It makes payment transactions and it is engaged in insurance business and retirement schemes. The bank manages its own environment fund called "Ökoveision". Moreover, it trades in ecological funds and participates in funds such as wind park Zodel, solar park Sonnen, and voltaic installations Heidelberg. Its ecological financing concerns energy saving housing, solar equipment, and ecological farming. Other social projects are financed too. 1/3 of the credits are provided rather cheaply. The bank benefits from the guarantee funds of co-operative banks, which helped to overcome insolvency problems when difficulties with some bad debts arose. As a consequence, Ökobank merged with GLS Gemeinschaftsbank.²² The range of banking business of GLS Gemeinschaftsbank eG will be extended to include a more socially oriented investment banking offer. Consequently, social aims were and still are relevant in the bank's hierarchy of goals²³.

Umweltbank AG at Nürnberg is nearly totally focused on ecological aims. Established in 1997, today it has 4,000 shareholders. In business with 24,000 clients, it tries to combine ecological banking and commercial success in the field of ecology. The shares are tradable at the Frankfurt Stock Exchange. The bank is mainly involved in direct financing and consulting in ecological finance. Therefore, the bank specialises in providing environmental finance and loans. In 2000, the bank financed 1,300 projects worth 263 million DEM (approx. 133 million EUR) in the sectors of solar energy, wind energy, bio-energy, ecological housing, and ecological agriculture. Clients can invest in eco-investment funds or in ecological ventures such as wind energy funds. The bank attracts capital through environment accounts, environmental savings accounts, growth-oriented savings programmes, ecological savings contracts and ecological savings assets. The capital is allocated solely to environmental investments. In consulting, the bank helps ecology-oriented firms to launch their shares on the stock exchange. Credits are provided on the basis of an ecological rating. There are special checklists, which show under what conditions credits are given to investors in housing. Apart from the supervisory committee, there is a special council evaluating environmental projects and related financial engagements. Special projects in military industries, big or atomic power stations are not financed. This bank is a truly ecological bank,

²² GLS Gemeinschaftsbank eG. 2002a and 2002b.

²³ Bankspiegel. Zeitschrift für ein modernes Bankwesen. (2002). Öko Bank, GLS Bank. (Vol.21). (pp. 10-23).

concentrating on ecological banking only. Therefore, its goal system is focused on environmental aims.

Experts expect that *green capital market* will be growing. Although financial interests may be the primary motivation for savers etc., reputation of a bank or firm grows when its shares are considered as green shares. On the German market there are green shares of around 100 firms, some of which are officially traded at the stock exchanges. There operate more than 24 eco-funds, 10 companies offer certificated shares and many direct investments exist. There is a need for information about the risks, consequences and benefits of these investments. When considering future chances of green investments, one has to take into consideration substantial subsidisation which can make many projects profitable as is the case with wind power stations which are cross-subsidised by atomic power stations. If subsidies shrink and financial means get more scarce or become needed for other purposes, it becomes even more necessary to evaluate possibilities of environmental success of investments and the social success of eco-banking.

3. OPERATIONS AND THEIR ENVIRONMENTAL IMPLICATIONS

Banking operations have social and environmental implications. Many examples were given when showing characteristics of eco-banks. The banks show social and environmental implications because of their existence *as economic units*. They use *stock of production factors*. These assets, such as location, buildings, installations, parking lots and space, telecommunication installations, installations for environmental protection, cars²⁴ but also current assets of the bank, are not available for other social or economic purposes. Their structure may hinder or support economic and social activities and the respective decision-making. The assets may show the purposes to which participations or current assets, reflecting short term investments in green funds etc., are devoted. Thus, realisation of environmental goals is affected. Moreover, assets are physically related to their environment such as toxic emissions of stored goods, or more safe storage. They physically affect the

²⁴ Bilanzierungsgrundsätze und – richtlinien für betriebliche Umweltbilanzen der Finanzdienstleister mit Standardkontenrahmen. (1997). (p.11). Verein für Umweltmanagement in Banken. Sparkassen und Versicherungen. Bonn.

environment or influence the perception of the environment by human beings. The amount and structure of *capital* has similar implications. Equity capital reflects the possibilities and autonomy of the bank's owners and managers in their decision-making process aimed at the realisation of the above-mentioned goals. However, equity capital also demonstrates that the invested capital is not available for other goals. There are not many direct physical relations between environmental consequences and a bank's existence. Only assets effects or possible access to finance of green investments are of considerable importance. Deposits show that capital owners have deposited capital for a short or longer term at the disposal of the bank, which can use the deposits to fulfil its ecological aims. Although essential direct physical relations with the environment do not exist, banks may influence the environment and society through banking activities or wrong use of capital. Sometimes consumption effects occur through the effects of consumption changes caused by banking policy with respect to savings or crediting of consumption. This is true for other liabilities too.

Current operations deal with *asset businesses*. They concern current account credits, discount credits, acceptance credits, surety credits, investment credits, construction and buildings finance, and investments in securities. Social and environmental impacts are associated with the performance of such operations and with their effects. These effects are related to energy consumption, water consumption, emissions, waste water, solid waste such as paper, batteries, electronic waste, fuel consumption and, as far as banks use cars, to noise pollution.²⁵ Less important are waste heat, packing material and vibrations. The technical combination of labour, installations, electricity, paper, information etc. is linked with such physical consequences. They influence the resources within the bank and the environment such as electricity, water and fuel consumption, travelling or manpower. Moreover, the above factors have an impact on the achievement of the bank's goals. Other effects result from *the allocation of financial assets* and *providing loans* outside the bank. The use of financial resources affects production and consumption. The banks incur special risks caused by environmental conditions and legal consequences of environmental damage.²⁶ These effects of providing credits also have physical implications such as changes in emissions, in damages, in sustainability, in inventions and in the use

²⁵ Bilanzierungsgrundsätze und – richtlinien für betriebliche Umweltbilanzen der Finanzdienstleister mit Standardkontenrahmen 28.

²⁶ Schaltegger, St. and Figge, F. (1999). Finanzmärkte – Treiber oder Bremser des betrieblichen Umweltmanagements. In: E. Seidel (Ed.), Betriebliches Umweltmanagement im 21. Jahrhundert. Berlin. (pp. 287-299); Green Finance. Umweltmanagement in Banken Sparkassen und Versicherungen.

of goods. Eco-efficiency should be improved.²⁷ Further social and environmental implications stem from the influence on the decision-making of debtors. Their production, investment or consumption may be considerably affected. By controlling the flow of financial means, the banks determine to a certain extent the purposes for which the financial means become available. The group of *deposit functions* of a bank concerns the deposits business, taking up loans, and issuing of bank bonds. Again, these businesses imply internal bank activity, which may have the environmental implications stated above. As the bank attracts the financial means involved, they are not at the creditors' disposal for other activities. These activities might be more or less of environmental influence. Banks are engaged in the *service business*, which again is linked with production. Some of the services are explicitly related with advising in favour of sustainable resource allocation or respective investments. *Cash payment transactions*, transfer business, deposits business, transactions with notes and coins, need production and resource inputs. Internal environmental effects are linked with them. As far as they are managed to support the environmental goals as mentioned above, they show environmental effects too. *Securities transactions* such as securities trading, portfolio management, and security issuing cause production and are partly related to environmental issues, e.g. if environmental securities are traded. Green shares help to finance firms specialised in environmental techniques, pioneer firms and the so-called eco-leaders. Some participations are partly used to finance eco-pioneer firms. Eco-funds influence the management of firms and their accounting to document the environmental effects of the firms' operations. Green bonds as well as ecological life insurances and building loan agreements direct financial means to ecologically relevant investments.²⁸ Further transactions concerning property management, consulting and intermediation need resources and production. Their production as well as their influence on other decision-makers show many environmental external effects.

As the world population increases, *natural resources* become more scarce and regeneration of resources more difficult.²⁹ Adaptations in production measures, the need to recycle, transformation of economies to safe resources, the struggle for survival of some populations as well as the tension of ensuring leisure of rich nations, a religious turn back to beliefs concerning the goods and bad sides

²⁷ Eco-Efficiency. (1998). Paris: OECD.

²⁸ Mehr Wert. Ökologische Geldanlagen.

²⁹ Putnoki, H. (1990). Optimale Wasserpreise. Baden-Baden; Eco-Efficiency.

of nature, forecasted climate changes, etc., increase sensitivity to *environmental problems*.³⁰ New environment-oriented capital markets develop in the field of environmental finance.³¹ Financial markets grow through financing new ecological products and services, cost-reducing investments, hardware and software installation projects as well as projects aimed at decreasing environmental risks.³² Financial means should be partially reallocated to the provision of environmental loans, insurance business and investment business to preserve the natural environment, to avoid social conflicts and wars and to restructure the capital stocks etc. However, there are crowding-outs, which may reduce production of other goods necessary for environmental improvements. Many co-ordination problems with respect to economic units occur. Many substitution processes have to be forecasted. Such are the consequences of less frequent use of atomic power in the preservation of woods in under-developed countries experiencing energy shortages. Therefore, management tools must be available to identify the environmental effects and to find out advantages and disadvantages of environmental activities.³³

4. APPROACHES TO ENVIRONMENTAL ACCOUNTING

Accounting systems are needed for identification, documentation, and specifying the achievement of environmental goals. The existing approaches are based on different methods.³⁴ On the one hand, there are accounting systems which concentrate on the *internal effects* of an economic unit on the environment.³⁵ Other approaches are more focused on the *external effects of the operation* of firms or other economic units.³⁶ Moreover, there is *project related*

³⁰ Gutner, T.L. (2002). Banking on the Environment. Cambridge Mass.

³¹ Schaltegger and Figge.

³² Schaltegger and Figge.

³³ Bräuning, D. and Eichhorn, P. (2002). Evaluation and Accounting Standard in Public Management. Baden-Baden.

³⁴ Seidel, E. and Zensus, St. (1990). Ökologisches Rechnungswesen. Literaturstudie für den VDI e.V. Manuskript, Düsseldorf.

³⁵ Müller-Wenk, R. (1978). Die ökologische Buchhaltung. Frankfurt; Schaltegger, St. and Sturm, A. (1995). Öko-Effizienz durch Öko-Controlling. Zürich; Bilanzierungsgrundsätze und - richtlinien für betriebliche Umweltbilanzen der Finanzdienstleister mit Standardkontenrahmen.

³⁶ Braunschweig, A. and Müller-Wenk, R. (1993). Ökobilanzen für Unternehmungen. Bern, Stuttgart, Wien; Liedtke, C. and Orbach, T. and Rhon, H. (1997). Betriebliche Kosten- und Massenrechnung. Wuppertal.

accounting (internal, external or both) or *period related* approaches.³⁷ As far as the identification of advantages and disadvantages is concerned, one may distinguish between methods based on net benefit analysis,³⁸ cost effectiveness analysis³⁹ and utility analysis.⁴⁰ Some approaches concentrate on *cost accounting*,⁴¹ others comprise social and ecological accounting⁴² while still others stem from attempts at *social accounting*.⁴³ Some approaches concentrate on *documentations* etc. in the framework of eco-auditing⁴⁴ or on the ISO 14001 standard,⁴⁵ eco-controlling⁴⁶, or on *environment management*.⁴⁷ Some deal with identifying evaluated effects, others with environment-oriented planning⁴⁸ and still others with integration into *eco-audit*.⁴⁹ Accounting concentrates on the contribution of a single economic unit⁵⁰ or on changes concerning the *entire economy*.⁵¹

Environmental *cost accounting* approaches have been developed. Among others, there exist approaches based on *full costing*.⁵² *Direct costing* is applied⁵³ and discussed with respect to achievement of cost minimisation, profit aims etc.⁵⁴ Environmental cost-type accounting, environmental cost-centre accounting,

³⁷ Stahlmann, V. (1999). Unterstützung des Umweltmanagements durch Umweltrechnung. In: E. Seidel (Ed.), Betriebliches Umweltmanagement im 21. Jahrhundert. (pp. 231-254). Berlin et al.

³⁸ Marggraf, R. and Streb, S. (1997). Ökonomische Bewertung der natürlichen Umwelt. Heidelberg, Berlin; Stephan, G. and Ahlheim M. (1996). Ökonomische Ökologie. Berlin et al.; Developing an Environmental Accounting System. Year 2000 Report. (2000). Japan Environmental Agency. Tokyo.

³⁹ Schaltegger, St. and Sturm, A. (1992). Ökologieorientierte Entscheidungen in Unternehmen. Ökologisches Rechnungswesen statt Ökobilanzierung. Notwendigkeit, Kriterien, Konzepte. Bern.

⁴⁰ Etterlin, G. and Hürsch, P. and Topf, M. (1992). Ökobilanzen. Mannheim; Stahlmann, V. (1994). Umweltverantwortliche Unternehmensführung. Aufbau und Nutzen eines Öko-Controlling. München; Corino, C. (1995). Ökobilanzen. Düsseldorf; Stahlmann, V. (1999).

⁴¹ Freese, E. and Kloock, J. (1989). Internes Rechnungswesen und Organisation aus der Sicht des Umweltschutzes. In: Betriebswirtschaftliche Forschung und Lehre. (Vol.41). (pp. 1-29); Roth, U. (1992). Umweltkostenrechnung. Wiesbaden.

⁴² Seidel, E. and Heupel, Th. (2003). Umweltkostenrechnung. Siegen (forthcoming).

⁴³ Eichhorn, P. (1974). Gesellschaftsbezogene Unternehmensrechnung. Göttingen; Ziehm, F. (1974). Die Sozialbilanz – notwendiges Führungsinstrument oder modische Neuheit. In: Der Betrieb. (Vol.27). (pp. 1489-1494); Tsimopoulos; Schellhorn, M. (1997). Umweltrechnungslegung. Wiesbaden.

⁴⁴ Schellhorn; Schimmelpfeng and Machmer.

⁴⁵ Schimmelpfeng and Machmer.

⁴⁶ Seidel, E. (1995). Ökologisches Controlling – Zur Konzeption einer ökologisch verpflichteten Führung von und in Unternehmen. In: Wunderer, R. (Ed.), Betriebswirtschaftslehre als Führungslehre. (pp. 353-357). Stuttgart; Seidel, E. (1998). Umweltorientierte Kennzahlensysteme – Leistungsmöglichkeiten und Leistungsgrenzen, Entwicklungsstand und Entwicklungsaussichten. In: Seidel, E. and Clausen, J. and Seifert, E.K. (Eds.), Umweltkennzahlen. Planungs-, Steuerungs- und Kontrollgrößen für ein umweltorientiertes Management. (pp. 9-31). München; Schaltegger and Sturm; Stoltenberg, U. and Funke, M. (1996). Betriebliches Ökocontrolling. Wiesbaden.

environmental cost-unit accounting as well as environmental process cost accounting systems⁵⁵ were developed.⁵⁶ *Different types of costs* such as internal costs of environmental measures up to social costs were defined.⁵⁷ Therefore, cost accounting approaches are rather sophisticated. However, they are seldom adapted for banks. Their main advantage is the fact that they provide *guidelines* for transferring environmental disadvantages and advantages into costs or cost savings. They also explain how these disadvantages and advantages can be expressed in monetary terms, e.g. internalised costs.⁵⁸ They give hints useful in assessing which part of ecological monetary consequences are reflected in commercial accounting and they demonstrate where environmental costs occur in production processes. Normally, these accounting procedures do not separate costs caused by the economic unit from those where other economic units are involved too. Therefore, *double accounting* is a severe problem.

⁴⁷ Freimann, J. (1999). *Jenseits von EMAS. Umweltmanagementsysteme – Erfahrungen und Perspektiven*. In: E. Seidel (Ed.), Betriebliches Umweltmanagement im 21. Jahrhundert, (pp. 131-145). Berlin et al.; Seifert, E. (1999). "Sustainable Enterprise" – wie alles anfang. In: E. Seidel (Ed.), Betriebliches Umweltmanagement im 21. Jahrhundert. (pp. 167-178). Berlin et al; Stahlmann (1999).

⁴⁸ Seidel and Clausen and Seifert; Seidel, E. and Clausen, J. and Seifert, K. (1998). Umweltkennzahlen. Planungs- und Kontrollgrößen für ein umweltorientiertes Management. München.

⁴⁹ Schellhorn; Stahlmann. (1999).

⁵⁰ Eco-Efficiency.

⁵¹ Eco-Efficiency; Environmental Indicators. (1998). Paris: OECD.

⁵² Many contributions are cited there, and in Seidel, Zensus (1990); Fleischmann, E. and Paudtke, H. (1977). *Rechnungswesen. Kosten des Umweltschutzes*. In: Vogl, J. and Heigl, A. and Schäfer K. (Eds.), Handbuch des Umweltschutzes. Loseblattsammlung, Grundwerk, part M/III-7, Landsberg; Handbuch Umweltkostenrechnung. (1996). (pp. 43-67). Umweltbundesamt. München; Neumann-Szyszka, J. (1994). Kostenrechnung und umweltorientiertes Controlling. Möglichkeiten und Grenzen des Einsatzes eines traditionellen Controllinginstrumentes im umweltorientierten Controlling. Wiesbaden; Fichtner, K. and Loew, T. and Seidel, E. (1997). Betriebliche Umweltkostenrechnung. Berlin; Janzen, H. (1998). *Umweltbezogene Kostenrechnung aus der Perspektive unternehmerischen Risikomanagements*. In: Zeitschrift für Betriebswirtschaftslehre. Supplementary. (Vol.1). (pp. 85-105); Seidel and Heupel.

⁵³ Schreiner, M. (1999). *Zukunftsperspektiven im Entsorgungsmanagement*. In: E. Seidel (Ed.). Betriebliches Umweltmanagement im 21. Jahrhundert. (pp. 219-227). Berlin, et al.; Roth; Lange, Ch. and Fischer, R. (1998). *Umweltschutzbezogene Kostenrechnung auf Basis der Einzelkosten- und Deckungsbeitragsrechnung als Instrument des Controlling*. In: Zeitschrift für Betriebswirtschaftslehre. Supplementary. (Vol.1). (pp. 107-122).

⁵⁴ Handbuch Umweltkostenrechnung 68.

⁵⁵ Herbst, S. (2001). Umweltorientiertes Kostenmanagement durch Target Costing und Prozesskostenrechnung in der Automobilindustrie. Lohmar.

⁵⁶ Handbuch Umweltkostenrechnung; Seidel and Heupel.

⁵⁷ Kapp, K.W. (1963). Social Costs of Business Enterprise. Bombay, London; Stephan and Ahlheim;

Eco-balances are directly applied in banks, savings banks and insurance companies.⁵⁹ They concentrate on physical consequences of inputs into the banks production process and on those related to their outputs. A scheme of accounts is developed as shown in Table 11.1.

Physical environmental effects of production activities and that of some fixed assets are identified and measured by performance indicators. However, the resulting indicators are only partly integrated, e.g. technically with energy consumption. A set of guidelines and recommendations with respect to indicator formulation and so-called accounts are provided. A utility analysis as offered by other authors is needed for eco-banks. The ecological effects measured are only those caused by *physical effects of bank activities*. Effects of loan provision, investments or other types of banking operations with respect to ecological successes of other economic units are normally not identified. Accounting is more focused on showing ecologically relevant bank activities. The division of accounts into inputs and outputs is not related to disadvantages and advantages of bank operations. There exist ecological effects related to business with clients or debtors. Besides, deferrals of contributions to success by other economic units do not occur. Reporting in the sense of public relations seems important. Environmental activities are mainly reported positively as a win-win situation.⁶⁰ However, positive ecological effects are often related to negative ecological or social effects. A success measure is needed to show advantages and disadvantages of banking operations. As most of banking operations concern monetary phenomena, the success measure should be expressed in monetary terms. In addition, social effects of a bank are not determined by ecological effects only. Therefore, a success measure is needed, which comprises ecological and other social effects in monetary terms.

Endres, A. and Holm-Müller, K. (1998). Die Bewertung von Umweltschäden. Theorie und Praxis sozioökonomischer Verfahren. Stuttgart et al.

⁵⁸ Seidel and Heupel.

⁵⁹ Bilanzierungsgrundsätze und – richtlinien für betriebliche Umweltbilanzen der Finanzdienstleister mit Standardkontenrahmen; Association for Environmental Management in Banks, Saving Banks and Insurance Companies. Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. (1998). Environmental Management in Financial Institutions. Bonn.

⁶⁰ Seidel and Heupel.

The above-mentioned existing approaches based on *net cost-benefit analysis* are not linked to banking. A “social accounting bookkeeping system” should identify the social value stemming from the operations of the eco-bank. There are several approaches to a social accounting system, which are known as human resource accounting, social audits, corporate social accounting, and social indicator analysis.⁶¹ They try to stress the social advantages and disadvantages of a project.

Many *weaknesses* are shown because environmental and social value approaches do not sufficiently consider the following:⁶²

- periodical social success of a bank within one year,
- complete presentation of transactions,
- set of techniques for the choice and evaluation of transactions to be applied to them all,
- conventions dealing with an equal application to all institutions involved,
- deferral of social successes and failures to individual institutions, e.g. enterprises,
- principles for the verification of transactions,
- periodical specification of transactions,
- unilateral dimensioning of advantages and disadvantages,
- common and specified assignment and grouping system,
- periodically specified financial bookkeeping of changes in success and in stock, bookkeeping system, and
- efficient links to other bookkeeping systems.

⁶¹ Dierkes, M. (1974). Die Sozialbilanz. Frankfurt; Eichhorn; Mintrop, A. (1976). Gesellschaftsbezogene Rechenschaftslegung. Zürich; Fischer-Winkelmann, W.F. (1980). Gesellschaftsorientierte Unternehmensrechnung. München; Wysocki, K. (1981). Sozialbilanzen. Stuttgart. New York; Schmitz; Friedrich, P. (1991). Problematik des Kontenrahmens eines gesellschaftsbezogenen Rechnungswesens. In: Faller, P. and Witt D. (Eds.), Dienstprinzip und Erwerbsprinzip. Baden-Baden.

⁶² Friedrich, P. and Feng, X. and Jahn, K. and Valjak, G. and Wonnemann, H.G. (2000). Economic Effects of Locating Tourist Facilities. In: Tourism Sustainability and Territorial Organisation. (pp. 143-174). APDR: Coimbra.

Table 11.1.
Scheme of Eco Balance.

Account	Unit	Account	Unit
1. Fixed assets		2. Fixed assets	
1.1. Premises	m ²	1.1. Premises	m ²
1.2. Buildings	m ²	1.2. Buildings	m ²
1.3. Facilities	units or m ²	1.3. Facilities	units or m ²
1.4. Technical equipment	units	1.4. Technical equipment	units
1.5. Operating equipment	units	1.5. Operating equipment	units
2. Current assets		2. Current assets	
2.1. Paper	kg	2.1. Product carrier paper	kg
2.2. Office materials	kg or units	2.2. Refill articles	kg or units
2.3. Promotional material	kg or units	2.3. Promotional material	kg or units
2.4. Electronic data carriers	kg or units	2.4. Electronic data carriers	kg or units
2.5. Incoming mail	kg	2.5. Packaging material	kg or units
2.6. Operating funds	kg or units	2.6. Business entertainment	L or kg
2.7. Usage materials and substitutes	kg or units	2.7. Gifts in kind	kg or units
2.8. Packaging materials	kg or units		
2.9. Food and luxuries	kg		
3. Water		3. Water	
3.1. Drinking water	kg	3.1. Sewage	kg
3.2. Rain water	kg	3.2. Evaporation	kg
3.3. Ground- and surface water	kg	3.3. Seepage	kg
4. Energy		4. Energy	
4.1. Electricity	kWh	4.1. Loss of energy	kWh
4.2. District heating	kWh	4.2. Fed-in electricity	kWh
4.3. Gas	kWh		
4.4. Oil	kWh		
4.5. Regenerative energy	kWh		
5. Air		5. Air	
		5.1. Emitted CO ₂	kg
		6. Waste	
		6.1. Paper for recycling	kg
		6.2. Other waste for recycling	kg
		6.3. Waste for disposal	kg

Source: Association for Environmental Management in Banks, Savings Banks, and Insurance Companies, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, 1998, p. 16.

5. BASIC FEATURES OF THE ACCOUNTING SYSTEM

To compensate for this deficit, we have developed a chart of social accounting. Several *basic decisions* should be made.⁶³

As there is no *social welfare function* available, such an accounting system must be based on a cost-benefit analysis, a cost-effectiveness analysis, or a utility analysis where utilities are measured by social indicators. For the purposes of eco-bank social accounting, we refer to cost-benefit analysis.

Advantages and disadvantages may be seen reflected in money, time or other measures such as physical amount of pollution. In order to assess the social value of eco-bank activities, we have adopted a cost-benefit approach where we have measured social value in *money*.

Therefore, to identify social values, we have applied the *willingness-to-pay approach*. Direct social benefits are measured directly by consumer surplus and turnover related to eco-bank operations. Some social benefits are measured indirectly. Income increases, money value of time savings, decrease of costs, e.g. of environmental protection, less compensation from insurance companies, reductions in insurance premiums, higher values of shadow prices, higher values based on hypothetical demand functions⁶⁴, increases in property values and leases express higher ability to pay for external benefits of eco-bank operations. Social costs incurred by an eco-bank are determined by costs and input-oriented producer surpluses. Methods used to identify social benefits serve to measure external social costs.

To include long lasting effects and the corresponding social advantages and disadvantages, we have defined stocks of advantages (social assets) and stocks of disadvantages (social liabilities). In particular, in order to evaluate the stocks of environmental benefits and costs, the auditor has to decide in favour of which generation they should be evaluated. The chart considers the *time horizon of generations involved* – normally all those affected by the eco-bank activities. However, the evaluation has to be done by the present generation.

⁶³ Friedrich, Problematik des Kontenrahmens eines gesellschaftsbezogenen Rechnungswesens 197.

⁶⁴ Cf. the numerous citation of evaluation methods there; See Inter-Agency Committee on Water Resources (1958). Proposed Practices for Economic Analysis of River Basin Projects. Washington D.C.; Friedrich, P. (1969). Volkswirtschaftliche Investitionskriterien für Gemeindeunternehmen. Tübingen; Parta, D. and Sen, A. and Marglin, St. (1972). Guidelines for Project Evaluation. New York; Stephan and Ahlheim; Marggraf and Streb.

The *group of persons* whose willingness to pay counts must be determined. This is rather difficult.⁶⁵ If eco-banks' operations concentrate on a specified region, then the welfare of inhabitants of that region should be maximised and not the nation-wide, EU-wide or global welfare. As the ability-to-pay concept uses prices, which are partly determined on a nation- or EU-wide basis and the European capital market is more and more integrated, when applying the ability-to-pay system we refer to persons affected by the existing prices. Moreover, all the above holds true when environmental changes lead to changes in social value according to the willingness to pay methods applied⁶⁶.

Therefore, the region involved is the one in which changes in welfare occur. The *region* is mainly the one in which the eco-bank is embedded by its delivery and procurement activities, by its bank operations and where environmental consequences are noticed.

Due to information problems, the *transactions and effects* to be included are those more directly linked to the eco-bank. This automatically restricts the number of persons and the size of the region considered in social accounting, too.

Social benefits, social costs, social assets and social liabilities can be grouped according to environmental effects or taking into account various banking operations. Social assets and social liabilities are grouped by long-lasting effects. Our grouping is primarily based on banking operation, e.g. banking products, which are sub-grouped according to environmental effects. Although our social chart is bank-specific, it can be combined with social charts of institutions operating in other sectors.

To avoid *double accounting*, we allocate social benefits and social costs as well as stocks to institutions which, through co-operation and joint actions, caused environmental and other social effects. The definition of the delineation criteria represents a severe problem. We have developed *deferral criteria* to spin off social benefits and social costs not caused by the eco-bank. Social benefits and costs reflected within the commercial profit assessment of the bank are assumed to stem from the bank activities.

There is a need for social charts comprising all economic units involved in economic operations or affected by them. To avoid various legal, social,

⁶⁵ Friedrich, P. and Jutila, S. (2001). Aspects of Policies of Regional Competition. In: P. Friedrich, and S. Jutila (Eds.), *Policies of Regional Competition*. (pp. 13-60). Baden-Baden.

⁶⁶ This is unsatisfactory as some nations or regional authorities are only interested in the welfare of their own inhabitants not counting the disadvantages or advantages occurring in other regions. This is partly due to regional competition (Friedrich, Jutila, 2001). Appropriate methods for regional cost-benefit analysis are needed.

political and economic difficulties, the chart concentrates on the eco-bank. It considers the other economic units in so far as they contribute to social benefits or costs. For them, not an entire social accounting becomes necessary.

The so-called alternative situation or development is an important measure of social welfare.⁶⁷ What would happen if eco-bank operations did not take place? In a simple profit assessment, it is assumed that in this case no profit would be made. This assumption is far too simple. A capital-owner may gain profits elsewhere. However, in a commercial bookkeeping system, the alternative situation is non-existence of the firm linked to a non-profit situation. We also follow this reasoning by assuming that eco-bank operations take place only on condition that the eco-bank exists and no additional social benefits or social costs occur if the eco-bank operations are not executed.

There are several *principles governing the structure of accounting charts*. Some of them offer insights in production processes, e.g. show how and where environmental burdens are caused and where they stem from, other principles are focused on the closing procedures of accounting. They document especially the relations to other economic units. As we try to identify the social net benefit of the eco-bank, we apply the closing principle.

The chart and accounting system is fundamentally influenced by the *style of accounting*. The cameralistic principle of single entry bookkeeping using one-sided accounts but showing the financial consequences and steps to realise operations is much related to the process type of accounting. Therefore, we use the principle of *double-entry bookkeeping*, which is already used in commercial bookkeeping based on the above-mentioned principle of closing.

According to our basic decisions concerning the chart, the following *basic relations* are applied:

$$\begin{aligned}
 \text{Social Net Benefit (SNB)} &= \text{consumer surplus} + \text{turnover} + \text{monetary value of external effects} \\
 &\quad \text{(direct measurement)} \qquad \qquad \qquad \text{(indirect measurement)} \\
 &- \text{producer surplus} - \text{costs} - \text{monetary value of external effects} \\
 &\quad \text{(direct measurement)} \qquad \qquad \qquad \text{(indirect measurement)}
 \end{aligned}$$

When rearranged, the term is as follows:

$$\begin{aligned}
 \text{Social Net Benefit (SNB)} &= (\text{consumer surplus} - \text{producer surplus}) + (\text{external benefits} - \text{external costs}) \\
 &\quad \text{additional social accounting} \qquad \qquad \qquad \text{additional social accounting} \\
 &+ (\text{turnover} - \text{costs}) \\
 &\quad \text{commercial profit assessment}
 \end{aligned}$$

⁶⁷ Friedrich, Problematik des Kontenrahmens eines gesellschaftsbezogenen Rechnungswesens 202.

Thus, one is able to develop a social bookkeeping system, which comprises:

- (1) Social accounting = an additional social accounting + commercial bookkeeping
- (2) Current SNB = additional social success operating statement + commercial profit and loss account
- (3) Total social balance = additional social balance + commercial balance

As the commercial bookkeeping system is known to bankers, business administrators and economists and is available for banks, firms and other institutions of private or public law using commercial bookkeeping, we concentrate on *additional social accounting* in (1) and *total social balance* (2) integrating social and commercial success. As in commercial bookkeeping, additional social accounting transactions are considered related to flows on the one hand and stocks on the other, and booked by double entry. Both bookkeeping systems lead to total social balance representing total social net benefit.

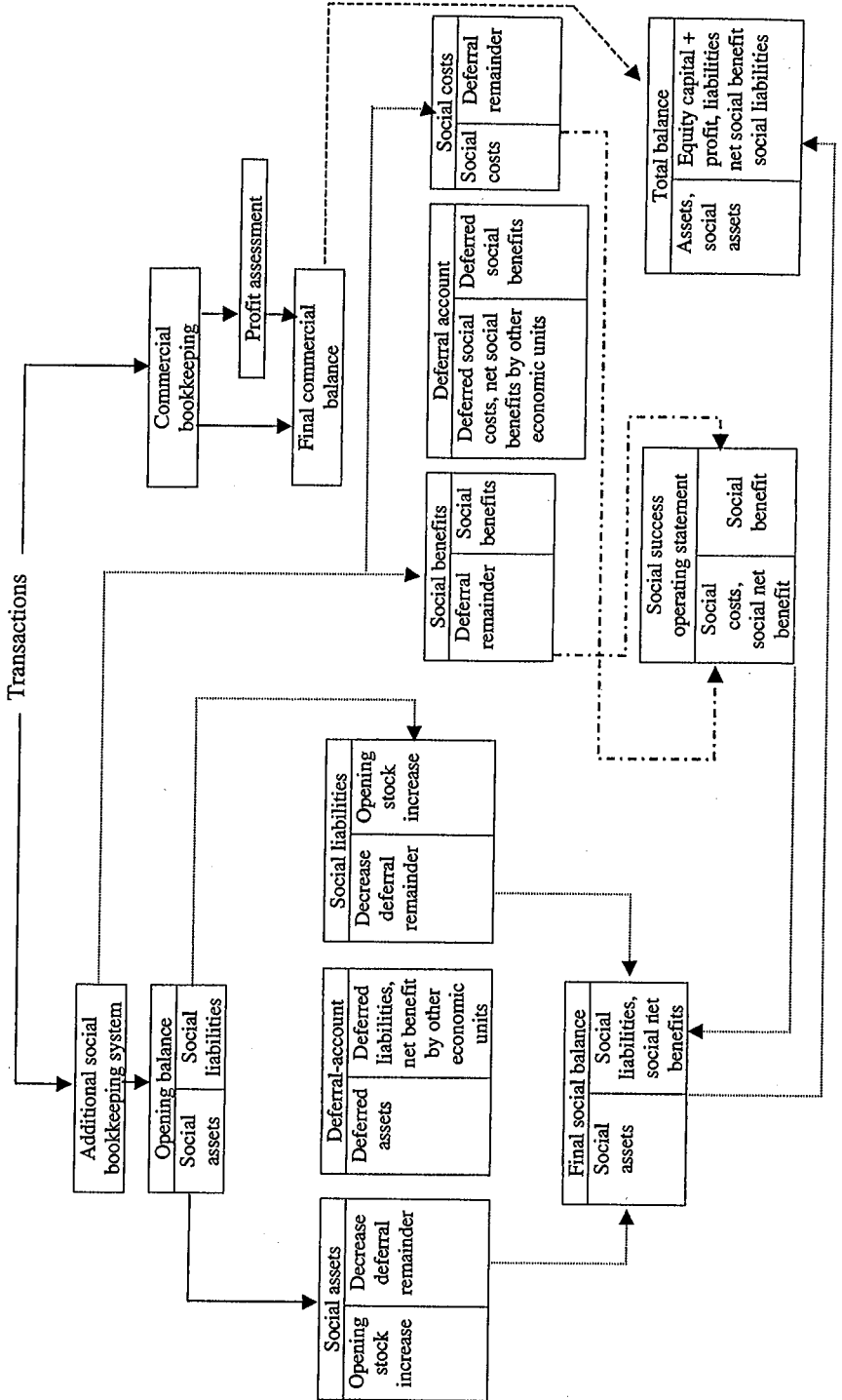
6. THE CHART OF SOCIAL ACCOUNTING AND BOOKKEEPING RULES

Firstly, we turn to the *additional social accounting* and the *additional social success operating statement*. Flows are accounted in additional current social benefits accounts, as also in additional current social cost (see Diagram 11.1.). Cross entries are to be made in an additional social cash account (see Tables 11.6., 11.7. and Diagram 11.3.). Special deferral accounts help to spin off social benefits and social costs, which are not due to the operation of the eco-bank.

Stocks are reflected as social assets and social liabilities. Social assets comprise social benefits lasting longer than one period. Social liabilities are defined as social costs that prevail also longer than one period. Therefore, *stock accounts* include longer lasting additional social benefits and longer lasting additional costs. There are also deferral accounts for social assets and liabilities not caused by the eco-bank (see Table 11.2.).

The system of accounts is shown in Diagram 11.2., where a *plan* of additional social accounts is demonstrated. It is structured according to effects of the eco-bank's operations and environmental characteristics of the transactions.

Diagram 11.1.1.
Total Social Bookkeeping System.



Classification numbers 0 to 3 refer to additional social assets, whereas those expressing social liabilities are numbered 3 to 4. Current additional social benefits and costs are booked in accounts numbered 5 to 6. The technical accounts for opening balances and final balances, operating successes are mentioned under number 7. Deferrals of stocks are included in account number 8 and deferrals of current successes are included in account number 9.

Diagram 11.2.
Accounting Groups.

assets	}	Classification	0: Material social assets, human social assets
		"	1: Social cash
		"	2: Social claims
liabilities	}	"	3: Social equity, adjustments
		"	4: Social liabilities and social net benefit
social benefits	}	"	5: Social benefits
social costs	}	"	6: Social material and staff costs
technical accounts	}	"	7: Opening social balance, final social balance Social success operating statement
		"	8: Deferral stocks
		"	9: Deferral successes

The plan of accounts reflects the aspects of eco-banking mentioned in section 3. An example for an eco-bank is shown in Tables 11.5. to 11.7. and Diagram 11.3. *Social additional assets* result primarily from: the value of the bank, environmental improvement in agriculture and forestry, improvements with respect to animals, plants and forests, increased savings and improvements in energy provision, waste reduction, environmental improvements in traffic modes, environmental improvements in infrastructure, environmental improvements with firms, and those with households. Moreover, there are social assets such as the bank itself, an increase in knowledge gained from different activities of the eco-bank and a value change in the real estate neighbouring the

premises of the eco-bank. There are also additional adjustments of social assets, adjustments of the value of the bank, and adjustments of liabilities related to the eco-bank. Lost green fields, and long-lasting environmental burdens and losses related to the economic units, sectors and environment mentioned before, changes in real estate values as well as social losses related to the allocation of financial means to environmental activities, symbolise other *additional social liabilities*.

Social benefits stem from operations of the eco-bank related to its asset businesses. It concerns current account credits, discount credits, acceptance credits, surety credits, investment credits, construction and buildings finance, and investments in securities. As social benefits of short-term transactions are considered in commercial bookkeeping, additional social benefits accounts concentrate on the latter three types of transactions. The *deposit functions* are related to deposit business, taking up loans, issuing of bank bonds which may have environmental implications reflected in the corresponding accounts. Banks are engaged in *service business*. Less important are *payment transactions* in cash, transfer business, collecting business, transactions of notes and coins as they rarely show additional social benefits and costs. *Securities transactions* such as trading of securities, portfolio management, and security issuing are partly related to environmental issues if environmental securities are traded. Special additional social benefit and cost accounts result. *Other transactions* concerning property management, consulting and intermediation, show many environmental external effects thus leading to additional social benefits accounts. There are other additional social benefits, which stem from non-environmental social effects on firms, households etc. Tax receipts of the host town, and social benefits from indirect tax receipts are considered too.

Social costs are related to the above mentioned bank operations. Social costs comprise costs of finance, commercial losses compensated by a public owner, depreciation of bank buildings and installations, and depreciation of knowledge, social costs of accidents, additional travel costs and time losses. Sponsoring also leads to additional social benefits and social costs.

Relations between transactions and types of additional social benefits and costs are demonstrated in Table 11.2. It shows the many relations between a transaction and the resulting additional social benefits and costs. They are of different intensity marked by **A**, **b** and **c**, where **A** indicates high, **b** medium and **c** low intensity. As the many dependencies should be reduced for the bookkeeping system, we concentrate on type **A** relations.

Table 11.2.
Bank Activities and their Social Benefits.

		payment trans- actions	deposits	credits	guaran- tee	credits to public sector	building loan contract	bonds and investments	participation
cultivation	soil quality			b	c			b	c
	health improvement			b	A			b	c
landscape	landscape			c	c	c		c	c
energy	wind			A	A	A	A	A	b
	water			A	A	A	A	A	b
	sun			A	A	A	A	A	b
	biomass			A	A	A	A	A	b
waste	other			A	A	A	A	A	b
	reduction of waste			A	b	A	c	b	b
building project	saving of water, energy and emissions			A	c	c	A	c	c
	building quality			A	A	c	c	c	c
means of transportation	energy saving			b	c	b		c	c
	prevention of harmful substances			b	c	c		A	c
	accident avoidance			b	c	c		c	c
infrastructure project	production of material infrastructure services			b	c	A		c	c
	buildings for traffic installations			c	c	A		c	c
	production of safety services			c	c	c		c	c
	administration buildings			c	c	A		c	c
enterprises	saving of resources			A	A	b		A	c
	less damage from production			A	A	c		A	c
	less damage from finished products			A	c	c		b	c
	general payment reserves for environment		c						c
households	saving resources			b	b			c	
	health improvement			c	c			c	
	damage prevention			c	c			c	
	general payment reserves for environment		A				b	c	
labour	increase in environmental knowledge								
other	other								
	inland revenue (= Steuereinnahmen)	c	b	b	c	c	c	c	c
	budget effects	c	c	b	c	c	c	c	c

A STANDARD CHART OF SOCIAL ACCOUNTS FOR ECOLOGICAL BANKS

issues of securities	book-entry administration	foreign transactions	insurance	consulting service	construction of the bank	choice of factors of production	equipment	sponsoring
		b						c
		b			b	b	A	c
				A				
				A		b	c	
				A			c	
				A				
				A	A	b	c	
c				b	b	A	A	b
					b		c	
				b	b			
							b	
							c	
					b	b	b	
		c		b	A	A	A	b
		c	A	b				b
			b					b
b		c	c	c				b
c		A	c	b				b
c		c	c	b				b
c		c	c	c				b
b		b	b	b				b
								b
c	c	c	c	c	b	b	c	
c	c	c	c	c	b	b	c	

Table 11.3.
Bank Activities and their Social Costs.

		payment trans- actions	deposits	credits	guaran- tee	credits to public sector	building loan contract	bonds and investments
cultivation	overpriced products			b	c			c
	increased subsidies			b	b	c	c	c
energy	energy loss			b	A	b		c
	impairment of noise, landscape			b	A	b		A
waste	increase in waste			b		b		
building project	increase of costs			b	c	A	A	c
means of transportation	higher energy prices			b	b	c	c	A
	higher risk of accident			b	c	c	c	b
infrastructure project	land and capital commitment			A	c	A		c
	external effects of routes			A	c	A		c
enterprises	inefficient production technique			c	A			b
	blockade of other technologies			A	A			c
households	higher taxes			c	A	b	c	c
	higher product and energy prices			c	b	b	b	b
	purpose of evasion			c	c	c	c	c
bank	opportunity projects			b	c	c		c
	burden an estate			c	c			c
	burden through buildings							
	interest differential at deposits		c				c	
other	different capital appropriation			c	b	b	b	c
	loss in inland revenues	c	b	c	c	c	c	c
	negative budget effects							
	social benefit and costs							

A STANDARD CHART OF SOCIAL ACCOUNTS FOR ECOLOGICAL BANKS

participa- tion	issues of securities	book-entry administra- tion	foreign transactions	insurance	consulting service	construction of the bank	choice of factors of production	equipment	sponsoring
c					b				
c					b				
c	c				A	c	b	c	
					A	A			
b							A	A	
c					b	A			
c					b			b	
c					c	c		b	
c					c	c	c		
					c				
c	c		b	b	c		A		
c	b		b	b	c				
	b		b	c	c				
c	b		b	b	c				
	c		b	c	c		A	c	
	c		b	c	c	b		b	
c					c	c		b	
c						c		A	
	b								
c	b					c		b	A
c	b	c	c	c	c	c	c		
							c		

The *additional social asset accounts* and *additional social liability accounts* showing stocks of social benefits and social costs are oriented to the rows, whereas current accounts of social benefits and costs are related to the columns of the matrix. Some operations cause several kinds of additional social benefits and social costs, e.g. credits not captured within the commercial bookkeeping system. The evaluation has to be made applying the methods mentioned above.

Letter A symbolises asset accounts and L is related to liabilities (see Table 11.7. and Diagram 11.3.). B stands for Benefits and C for Costs, whereas V refers to adjustments of assets, W to adjustments of liabilities and T to technical accounts (see Table 11.7. and Diagram 11.3.). The first *number* of an account refers to a category of accounts according to chart number. The second number means the type of benefits and costs, whereas the third number denotes a sub-type related to the kind of social benefits and social costs or to those caused by special bank operations. The fourth digit shows with 1 that no deferral is necessary and with 2 that a split has to be made. These characteristics are reflected in Table 11.5. showing *additional social balance* and *additional social operating success statement* as well as *total balance* which comprises commercial and additional social balance.

At the very *beginning of a period*, we take the final total social balance of the preceding period, the underlying final additional social balance and the final commercial balance as a starting point for additional social bookkeeping and the related commercial bookkeeping. *Transactions* are accounted for with their commercial consequences within the commercial bookkeeping. The additional social assessment takes place on the social accounts mentioned above⁶⁸. After reconciling the additional social benefit and additional social cost accounts, the remainder of these accounts, including social depreciation, is extended to the additional operating social net benefit account (Diagram 11.1. and Table 11.4.).

The additional operating social net benefit account remainder is closed to the *additional final social balance* (see Table 11.6.). There, the remainder of the additional social assets, social cash and the remainder of the additional social liabilities, along with the additional social value adjustments to additional social assets (see Table 11.6.), are assembled in the additional final social balance. The following step includes the additional social balance, uniting with the final commercial balance to form the total final social balance (see Table 11.7.).

⁶⁸ Examples for accounting transactions are given in Friedrich, Jahn, Valjak, Wonnemann (1993, pp. 245-274) and Friedrich, Feng, Jahn, Valjak, Wonnemann (2000, pp. 167-169).

This procedure concerning the additional social bookkeeping is *illustrated by six transactions*.

Social assets from wind energy A0312 increase because a *wind park* is financed. A stock of social benefits is created which is booked in A0312 on the left side. The benefits are in A1001 on the right. As the bank's clients are involved in the establishment and operation of the wind park, the social benefits have to be split and booked on the right-hand side of A0312 and on the left-hand side of the deferral to clients T8202 account.

A *value adjustment* of the wind park has to be made expressed by a percentage of the lower costs of repository of atomic waste. The amount is booked as depreciation on the right of the value adjustment account V3312. Cross booking takes place in the social depreciation account C6501. Its remainder is extended to the social operating success statement T7101 on the left.

When establishing the wind park, a *subsidisation over several years* of the installations is fixed. This demonstrates a social liability related to wind energy, which is booked on the right-hand side of L4312 and marked on the right side of social cash A1001 too. A deferral of subsidisation costs has to be made to the clients. The amount deferred is booked on the left-hand side of L4312 and on the right-hand side of deferral to clients account T8202. The remainder to social balance of L4312 extends to the right of T7201.

A *value adjustment* is to be made to social liabilities connected with the wind park. This means that a social burden is going to be lowered. Therefore, an appreciation of the costs of subsidisation is accounted and booked in value adjustment of liabilities of wind energy on the left side of W3312 and the right side of B5801. The remainder of W3312 is extended to the social balance T7201 on the left. The remainder of B5801 is booked on the right of the social operating success statement T7101.

The choice of production factors by the bank may lead to a *decrease in waste*. The social benefits consist of better health of the employees reflected in lower health costs for them. The respective amount is booked in social benefits from choice of production factor account B5402 and a cross entry is made at social cash A1001 on the left. As suppliers provide the technology, part of the benefits is due to the suppliers. Therefore, a deferral to suppliers is considered on the right-hand side of account B5402 and in the deferral to suppliers account T9312 on the right. The remainder of social benefits B5402 extends to social operating success statement T7101 to the right.

Social costs are linked to *negative budget* changes in public sector S6702. Taxes of clients have been saved by the operations of the bank expressing this

Table 11.4.
Technical Accounts.

T7101 Additional Operating Social Success Statement of the Bank	
Social costs	Social Benefits
C6002 Social costs from credits	B5002 Social benefits from credits
C6012 Social costs from credits to public sector	B5012 Social benefits from credits to public sector
C6022 Social costs from guarantees	B5022 Social benefits from guarantees
C6032 Social costs from building contracts	B5032 Social benefits from building contracts
C6042 Social costs from investments in bonds, securities	B5042 Social benefits from investments in bonds, securities
C6052 Social costs from participations	B5052 Social benefits from participations
C6102 Social costs from deposits	B5102 Social benefits from deposits
C6202 Social costs from payment transactions	B5112 Social benefits from issued bonds and securities
C6222 Social costs from book entry	B5202 Social benefits from payment transactions
C6232 Social costs from foreign transactions	B5222 Social benefits from book entry
C6302 Social costs from insurance	B5232 Social benefits from foreign transactions
C6312 Social costs from consulting	B5302 Social benefits from insurance
C6322 Social costs from sponsoring	B5312 Social benefits from consulting
C6401 Social costs from choice of production factors	B5322 Social benefits from sponsoring
C6501 Depreciation	B5402 Social benefits from choice of production factors
C6601 Social costs from revenues	B5501 Social benefits from revenues
C6701 Social costs from negative budget effects	B5602 Social benefits from budget effects
C6802 Other Social disadvantages	B5702 Other Social advantage
B4871 Positive additional social net benefit	B5801 Appreciation

disadvantage. The taxes saved are booked on the right-hand side of C6702 and in social cash A1001 on the right. As taxes are paid by the clients, deferrals are necessary on the right of C6702. Cross entry takes place on the right side of the deferral account T9302. The remainder of C6702 extends again to the social operating success statement.

The consolidated remainders of the deferral accounts T8202, T9302 and S9312 show the net *benefit of other economic units*. These remainders of T8202, T9302 and T9312 are extended to the social cash account A1001. Its remainder is transmitted to social balance T7201, where it normally is found on the right side as social cash.

The reconciliation of the social operating success statement gives as a remainder an additional social net benefit on the left side, which is extended to the *net social benefit account* B4871 and through its remainder extended to the right side of additional social balance (see Table 11.6.). The additional social balance is consolidated with the commercial one to the *total social balance* where the total social net benefit results as a sum of consolidated commercial profit and additional social net benefit. This is shown in Diagram 11.3.

One can expect that if *total social net benefit* turns out positive with banks of the *first category*, many social benefits and costs will be reflected in the commercial bookkeeping. Also, if the additional social net benefit is negative, total social net benefit might be positive because of consolidated profits. Oftentimes, the additional social net benefit is small but positive. Then, total social net benefit exceeds the consolidated commercial profit. With the *second category* of banks, many additional social benefits and costs are with “other social benefits B5702 and costs C6802”. Therefore, total social net benefit may be considerably bigger than the consolidated commercial profits. As *eco-banks* are not profit-oriented institutions, their total net social benefit depends largely on the additional social profit from environmental effects.

Table 11.5.
Additional Operating Social Success Statement of the Bank.

T7101 Additional operating social success statement of the bank
T7201 Additional social balance (opening or final)
T7301 Total social balance of the bank (opening or final)
T8202 Deferral to clients (stocks)
T8212 Deferral to suppliers (stocks)
T9302 Deferral to clients
T9312 Deferral to suppliers

Table 11.6.
Additional Social Balance.

T7201 Additional Social Balance	
Additional social assets	Additional social liabilities
A0101 Value of the bank	L4212 Liabilities from landscape damaging
A0202 Cultivation	L4302 Liabilities from permanent energy savings
A0212 Landscape	L4312 Liabilities from wind power
A0302 Permanent energy savings	L4322 Liabilities from water power
A0312 Wind	L4332 Liabilities from sun power
A0322 Water	L4342 Liabilities from biomass power
A0332 Sun	L4352 Liabilities from other power
A0342 Biomass	L4402 Liabilities from infrastructure (traffic)
A0352 Other	L4412 Liabilities from infrastructure (equipment)
A0402 Infrastructure (traffic)	L4502 Liabilities of enterprises (resources)
A0412 Infrastructure (equipment)	L4512 Liabilities of enterprises (less damages)
A0502 Enterprises (resources)	L4602 Liabilities of households (health)
A0512 Enterprises (less damages)	L4612 Liabilities of households (durable consumption goods)
A0602 Households (health)	L4001 Social Cash
A0612 Households (durable consumption goods)	L4602 Value changes of buildings and property
A0702 Labour	B4871 TotAdditional social net benefit
A1001 Social Cash	L4902 Lost green fields
A2082 Other social assets of the bank	V3602 Value changes of own buildings, equipment and property
A2602 Value changes of own buildings, equipment and property	V3612 Value changes of third buildings, equipment and property
A2612 Value changes of third buildings, equipment and property	B4871 Additional social net benefit
W3902 Value adjustment to green fields	V3101 Value adjustment to the value of the bank
W3212 Value adjustment to landscape damaging	V3202 Value adjustment to cultivation
W3302 Value adjustment to permanent energy savings	V3212 Value adjustment to landscape
W3312 Value adjustment to wind power	V3302 Value adjustment to permanent energy savings
W3322 Value adjustment to water power	V3312 Value adjustment to wind
W3332 Value adjustment to sun power	V3322 Value adjustment to water
W3342 Value adjustment to biomass power	V3332 Value adjustment to sun
W3352 Value adjustment to other power	V3042 Value adjustment to biomass
W3402 Value adjustment to Infrastructure (traffic)	V3352 Value adjustment to other
W3412 Value adjustment to Infrastructure (equipment)	V3702 Value adjustment to Labour

W3502 Value adjustment to enterprises (resources)	V3082 Value adjustment to other social assets
W3512 Value adjustment to enterprises (less damage)	V3602 Households (health)
W3602 Value adjustment to households (health)	V3612 Households (durable consumption goods)
W3612 Value adjustment to households (durable consumption goods)	

Table 11.7.
Total Social Balance of the Bank.

T7301 Total Social Balance of the Bank	
Assets	Liabilities
Commercial Balance	Commercial Balance
1. Cash reserve	1. Deposits from other banks
2. Assets at the Deutsche Bundesbank	2. Amounts owed to other depositors
3. Assets at the National Giro	3. Promissory notes and other liabilities evidenced by paper
4. Cheques/Bills	4. Liabilities held for trading purposes
5. Claims on other Banks	5. Provisions
6. Claims on customers	6. Other liabilities
7. Securities	7. Shareholders equity
8. Intangible assets	7.1 Subscribed capital
9. Other assets	7.2 Additional paid-in capital
10. Accruals and deferred income	7.3 Retained earnings
Additional Social Part	Additional Social Part
A0101 Value of the bank	L4212 Liabilities from landscape damaging
A0202 Cultivation	L4302 Liabilities from permanent energy savings
A0212 Landscape	L4312 Liabilities from wind power
A0302 Permanent energy savings	L4322 Liabilities from water power
A0312 Wind	L4332 Liabilities from sun power
A0322 Water	L4342 Liabilities from biomass power
A0332 Sun	L4352 Liabilities from other power
A0342 Biomass	L4402 Liabilities from infrastructure (traffic)
A0352 Other	L4412 Liabilities from infrastructure (equipment)
A0402 Infrastructure (traffic)	L4502 Liabilities of enterprises (resources)
A0412 Infrastructure (equipment)	L4512 Liabilities of enterprises (less damages)
A0502 Enterprises (resources)	L4602 Liabilities of households (health)
A0512 Enterprises (less damages)	L4612 Liabilities of households (durable consumption goods)

A0602 Households (health)	L4001 Social Cash
A0612 Households (durable consumption goods)	L4602 Value changes of buildings and property
A0702 Labour	B4872 Total social net benefit (consolidated profit 7.4+ additional social net benefit (B4871))
A1001 Social Cash	L4902 Lost green fields
A2082 Other social assets of the bank	V3602 Value changes of own buildings, equipments and property
A2602 Value changes of own buildings, equipments and property	V3612 Value changes of third buildings, equipment and property
A2612 Value changes of third buildings, equipment and property	V3101 Value adjustment to the value of the bank
W3902 Value adjustment to green fields	V3202 Value adjustment to cultivation
W3212 Value adjustment to landscape damaging	V3212 Value adjustment to landscape
W3302 Value adjustment to permanent energy savings	V3302 Value adjustment to permanent energy savings
W3312 Value adjustment to wind power	V3312 Value adjustment to wind
W3322 Value adjustment to water power	V3322 Value adjustment to water
W3332 Value adjustment to sun power	V3332 Value adjustment to sun
W3342 Value adjustment to biomass power	V3042 Value adjustment to biomass
W3352 Value adjustment to other power	V3352 Value adjustment to other
W3402 Value adjustment to Infrastructure (traffic)	V3702 Value adjustment to Labour
W3412 Value adjustment to Infrastructure (equipment)	V3082 Value adjustment to other social assets
W3502 Value adjustment to enterprises (resources)	V3602 Households (health)
W3512 Value adjustment to enterprises (less damage)	V3612 Households (durable consumption goods)
W3602 Value adjustment to households (health)	
W3612 Value adjustment to households (durable consumption goods)	

Diagram 11.3.
Six Transaction Examples.

A0312 Social assets from wind energy	
Lower costs of repository (A1001)	Deferral of lower costs of repository (T8202) Remainder to social balance (TS7201)
V3312 Value adjustment to wind energy	
Remainder to social balance (T7201)	Depreciation of lower costs of repository (C6501)
L4312 Social liabilities of wind energy	
Deferral of costs of subsidisation (T8202) Remainder to social balance (T7201)	Cost of subsidisation (A1001)
W3312 Value adjustment to liabilities of wind energy	
Appreciation of costs of subsidisation (B5801)	Remainder to social balance (T7201)
T8202 Deferral to clients (stocks)	
Deferral from (A0312)	Deferral of costs of subsidisation (L4312) Remainder to (S1001)
T9302 Deferral to clients	
Remainder to (A1001)	Deferral from (C6702)
T9312 Deferral to suppliers	
Remainder to (A1001)	Deferral from (B5402)
C6501 Depreciation	
Depreciation of lower costs of repository (V3312)	Remainder to social operating statement (T7101)
B5801 Appreciation	
Remainder to social operating statement (TS7101)	Appreciation of costs of subsidisation (W3312)
S1001 Social cash	
Lower costs of subsidisation (L4312) Lower health costs from waste (B5402) Remainder from (T8202) Remainder of social cash to social balance (T7201)	Lower costs of repository (A0312) Saved taxes (C6702) Remainder from (T9302) Remainder from (T9312)
T7101 Social operating success statement	
Remainder from (C6501) Remainder from (C7101) Net social benefit to (S7201 through B4871)	Remainder from (B5801) Remainder from (B5402)
B5402 Social benefits from choice of production factors	
Deferral of lower health costs from less waste to suppliers (T9312) Remainder to oper. success statement (T7101)	Lower health costs from less waste (A1001)
C6702 Social costs from negative budget	
Saved taxes (A1001)	Deferral of saved taxes to clients (T9302) Remainder to social operating success statement (T7101)
T7201 Social balance of bank	
Remainder social assets from wind energy (A0311) Value adjustment to liabilities from wind energy (W3312) Social cash from (A1001)	Remainder from social liabilities of wind energy (L4312) Value adjustment to wind energy (V3312) Net social benefit from (S7101)

7. LIMITS OF SOCIAL ACCOUNTING FOR ECO-BANKS

There are several arguments in favour or against social accounting systems. They refer to the type of accounting system suggested here or generally to social accounting of social bank accounting as such.

The first group of arguments includes:

- (1) The basis of our social accounting is an individualistic welfare theory⁶⁹ that does not necessarily reflect true evaluation by a society. The role of social groups like priests, functionaries, military officials, civil servants, trade unions, parties, parliaments, and courts in determining social welfare is ignored. Moreover, it implies severe assumptions about the value of one Euro of willingness to pay, ignoring the fact that it may come from a rich or poor individual. So-called compensation tests in comparing willingness to pay are offered in literature on welfare theory. Their validity is discussed.
- (2) The exchange and co-ordination of social and economic goods is not only co-ordinated through markets in money terms such as horizontal and vertical transfers of goods and money, but also by commands as well as external effects. Although difficulties arise, net benefit analysis is the best-developed social evaluation scheme existing. As banks are essential in money markets and money circulation, and as their aims refer to monetary indicators, *net-benefit analysis* seems adequate. The weaknesses of evaluation methods based on cost-benefit analysis cannot be overcome as long as the social accounting system relies on evaluation in money terms.
- (3) The bookkeeping system suggested here has to be applied to *several banks* of the three types in order to develop improved willingness to pay methods for social benefits and costs. Therefore, the chart must be adapted. Then, the conventions of deferral are of necessity much more specific.
- (4) The chart of social accounts must be further elaborated if *isolated social net benefits* of the group of clients or owners are to be assessed. Some social benefits and costs are to be excluded. More principles of deferral of social benefits and costs have to be developed, because deferral has to show not

⁶⁹ Graaff; Ahlheim, M. and Rose, M. (1989). *Messung individueller Wohlfahrt*. Heidelberg.

only the net benefits not due to the eco-bank but also those which are not relevant to the net benefit of the above-mentioned groups of stakeholders. Additional corrections of social benefits and costs, which are booked in commercial bookkeeping, have to be elaborated and considered in additional accounts in the additional social accounting. Total social net benefit and total social assets and liabilities can be assessed in principle.

- (5) Some auditors argue that social accounting based on cost-benefit analysis tries to integrate too many evaluations and is not appropriate for stressing social environmental implications of bank activities.⁷⁰ However the above-mentioned goal structure of banks and their role in society require such a *broad approach* combined with commercial bookkeeping. It may also be combined with cameralistic accounting or based on other mediums of evaluation such as time, inhabitants etc.

The second group of arguments includes the following:

- (1) The approaches applied to environmental accounting are rather weak. This is especially true for *banks*. Most of their *eco-balances* are not more than reporting on the basis of indicators in physical terms without reference to their social or entrepreneurial goals.
- (2) More sophisticated systems of environmental accounting are expensive and offer much insight into banking operations. Banks try to avoid making such information available to the public and to their competitors. Therefore, these reports are rather not informative.⁷¹ They are used more to convince the public that banks operate with consideration for *green ideological requirements*. They escape to reporting on physical effects to environment without separating the contributions of other economic units and they concentrate on environmental implications not essential for banks.
- (3) On the other hand, EU and national laws, introduction of the European Eco Management and Audit Scheme (EMAS) Regulation⁷² and the development of investment markets in environmental protection call for environmental management of banks.⁷³ Therefore, an efficient social and

⁷⁰ Schellhorn.

⁷¹ Umweltbericht. (2001). Umweltbank. Nürnberg; Geschäftsbericht. (2001). Umweltbank. Nürnberg.

⁷² Freimann; Kramer, M. (1999). Internationales Umweltmanagement in Mittel- und Osteuropa. In: E. Seidel (Ed.), Betriebliches Umweltmanagement im 21. Jahrhundert, (pp. 147-165). Berlin et al.

⁷³ Dyllick, T. (1999). Wirkungen und Weiterentwicklungen von Umweltmanagementsystemen. In: E. Seidel (Ed.), Betriebliches Umweltmanagement im 21. Jahrhundert, (pp. 117-130). Berlin et al.

environmental accounting system should be developed. A further extension of our chart may be appropriate. To overcome the disadvantages of providing information to competitors, regulations are required similar to those concerning commercial accounting. Only an aggregated version of the additional social success operating statement, the additional social balance and the total social balance should be published.

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CHAPTER 12

**ECO-RATING: A SUPPORTIVE TOOL
FOR DECISION MAKING PROCESSES
IN BANKS CONCERNING FINANCE
INVESTMENTS**



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ECO-RATING: A SUPPORTIVE TOOL FOR DECISION MAKING PROCESSES IN BANKS CONCERNING FINANCE INVESTMENTS

1. INTRODUCTION

Sustainable development i.e. social and economic development which integrates political, economic and social actions with maintaining the equilibrium of nature and sustainability of key natural processes to ensure satisfaction of basic needs of individual communities or individuals of both: present and future generations, requires an effective execution of several principles. One of them is the polluter pay principle. This rule has been in force in all developed countries world-wide, also in Poland. The principle has been expressed in the following articles of the Polish Environmental Protection Act:

Art. 6.

- 1. Any person that undertakes activity likely to negatively impact the environment, is obliged to prevent such impact.*
- 2. Any person who undertakes activity which negative impact on the environment has not been entirely recognised is, guided by providence, obliged to undertake all possible preventive measures.*

Art. 7.

- 1. Any person that causes environmental pollution incurs the costs of removing the effects of this pollution.*
- 2. Any person who may cause environmental pollution incurs the costs of preventing this pollution.*

As it results from the essence of the 'polluter pay' principle, corporate persons both: who are likely to cause and who have already caused a negative

Table 12.1.
A survey of random events to showcase materialisation
of environmental risk.

Events determined by powers of nature (natural disasters)	
<ul style="list-style-type: none"> • Droughts • Hurricanes • Storms • Hail squalls • Floods 	<ul style="list-style-type: none"> • Tornadoes • Earth quakes • Volcano eruptions • Plagues • Landslides
Events determined by human factor	
I. Deterioration of environmental quality	
<ul style="list-style-type: none"> • Deterioration of air quality • Deterioration of water quality: <ul style="list-style-type: none"> – Inland surface waters, – Inland groundwaters, – Inland sea waters, – Territorial sea waters, – International seas and oceans waters 	<ul style="list-style-type: none"> • Deterioration of soil and land quality • Deterioration of acoustic quality of the environment • Deterioration of magnetic fields quality in the environment • Release of genetically modified organisms to the environment • Deterioration of landscape aesthetics
II. Disturbing the natural equilibrium	
<ul style="list-style-type: none"> • Exceeding ecological capacity of some areas • Productivity reduction of : <ul style="list-style-type: none"> – forest areas, – arable land, – fisheries 	<ul style="list-style-type: none"> • Reduction or loss of nutrition qualities of food of plant and animal origin • Genetic modification of food • Modification of food chain of humans and animals • Bioterrorism
III. Reducing availability of natural resources	
<ul style="list-style-type: none"> • Depleting resources of fossil fuels • Depleting water resources: <ul style="list-style-type: none"> – groundwaters (including medicinal waters), – for household purposes • Change of water conditions in soil 	<ul style="list-style-type: none"> • Reduction of resources: <ul style="list-style-type: none"> – forests, – arable land • Biodiversity reduction
IV. Implementing limitations and administrative restrictions in environmental policy	
<ul style="list-style-type: none"> • Refusal or cancellation without compensation of the following licenses and consents concerning: <ul style="list-style-type: none"> – gas or particulate matter discharge to the air, – discharge of sewage effluent to water of soil, – waste generation • Limiting the property use due to environmental protection 	<ul style="list-style-type: none"> – waste disposal, – noise emission to the environment, – emitting electromagnetic fields to the environment • Imposing the duty of environmental audit

Source: Borys, G. (2002). Ryzyko ekologiczne i jego systematyka na gruncie teorii ubezpieczeniowej. In: S. Czaja (Ed.) Instrumenty rynkowe w ochronie środowiska. (Vol.29). Wrocław-Jugowice: Ekonomia i Środowisko.

impact on the environment must pay the costs of its reclamation, remediation or rehabilitation. This simultaneously means that institutions financing corporate persons should be informed not only about conventional investment risk related to a given economic activity but about an environmental risk accompanying this activity as well. Therefore an eco-rating system should be set up for individual corporate persons as a benchmarking mechanism for evaluating their environmental credibility. The rationale for eco-rating rests on its utility as a risk indicator to the financial sector expressing environmental performance of potential investments.¹ The eco-rating system is intended as a green equivalent of a credit – rating system; as a tool which non-technical people could use to independently gauge environmental performance/risk associated with a corporate person.

2. ENVIRONMENTAL RISK

Any human activity is accompanied by various types of risks, including environmental risk.² While environmental risk *sensu stricte* comprises deterioration of environmental quality, disturbing equilibrium of natural ecosystems or natural disasters; *sensu largo* it encompasses health, material, cultural and financial risks as well.³

Up-to-date, banking institutions have not been sufficiently taking into account environmental risk determined by cause factors of human pressure on the environment in their decision-making processes concerning financing investments. Nonetheless, financing bodies should be familiarised with the type and magnitude of risk load accompanying a given investment. At the same time stress should be put to communicate this risk in a relatively easy way so as to make it comprehensive to a potential addressee without an expert-knowledge required.

¹ Dziawgo, D. (2002). Ekologiczne fundusze inwestycyjne w Japonii. In: A. Budnikowski, M. Cygler (Eds.). Globalizacja gospodarki a ochrona środowiska, Warsaw: SGH.

² Zięba, S. (1998). Dylematy bezpieczeństwa ekologicznego, Lublin: Katolicki Uniwersytet Lubelski.

³ Borys, G. (2002). Ryzyko ekologiczne i jego systematyka na gruncie teorii ubezpieczeniowej. In: S. Czaja (Ed.) Instrumenty rynkowe w ochronie środowiska. (Vol.29). Wrocław-Jugowice: Ekonomia i Środowisko.

3. ENVIRONMENTAL IMPACT ASSESSMENT AND ECO-RATING

Environmental Impact Assessment (EIA) procedure is a key instrument of European Union environmental policy⁴ required under the terms of Directive 97/11/EC amending Directive 85/337/EEC on assessment of the effects of certain public and private projects on the environment.⁵ Article 2 says that *'Member States shall adopt measures necessary to ensure that, before consent is given, projects likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects'*.

Article 5(1) of Directive 97/11/EC requires the Developer to provide to the Competent Authority the information set out below in so much as the information is relevant to the given stage of the consent procedure and to the specific characteristics of the project and of the environmental features likely to be affected, and the developer may reasonably be required to compile the information having regard, *inter alia*, to current knowledge and methods of assessment. As it may be concluded from the above, eco-rating must become a part of the environmental impact assessment process.

Environmental information requirements for EIA and eco-rating:

1. description of the project (investment), including in particular:
 - a description of the physical characteristics of the whole project and the land-use requirements during the construction and operational phases,
 - a description of the main characteristics of the production processes, e.g.: nature and quantity of the materials used,
 - an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed project.

⁴ Environmental Procedures. (1992). European Procedures for Reconstruction and Development. European Bank for Reconstruction and Development; Janikowski R. (1999a). Environmental Management. Warsaw: Akademicka Oficyna Wydawnicza PLJ.

⁵ Guidance on EIA. (2001a). EIS Review, European Commission. Luxembourg; Guidance on EIA Screening. (2001b). European Commission. Luxembourg; Guidance on EIA Scoping. (2001c). European Commission. Luxembourg.

2. an outline of the main alternatives studied by the developer and an indication of the main reasons for this choice, taking into account the environmental effects.
3. a description of the aspects of the environment likely to be significantly affected by the proposed project, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.
4. a description of the likely significant effects of the proposed project on the environment resulting from:
 - the existence of the project,
 - the use of natural resources,
 - the emission of pollutants, the creation of nuisances and the elimination of waste, and the description by the developer of the forecasting methods used to assess the effects on the environment.
5. a description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.
6. a non-technical summary of the information provided under the above headings. *Only for the eco-rating system – a non-technical description of the environmental information expressed on a symbolic scale.*
7. an indication of any difficulties (technical deficiencies or lack of know-how) encountered by the developer in compiling the required information.

Table 12.2.

Checklist of criteria for evaluating the significance of impacts.

- | |
|--|
| <ol style="list-style-type: none"> 1. Will there be a large change in environmental conditions? 2. Will new features be out-of-scale with the existing environment? 3. Will the effect be unusual in the area or particularly complex? 4. Will the effect extend over a large area? 5. Will there be any potential for transfrontier impact? 6. Will many people be affected? 7. Will many receptors of other types (fauna and flora, businesses, facilities) be affected? 8. Will valuable or scarce features or resources be affected? 9. Is there a risk that environmental standards will be breached? 10. Is there a risk that protected sites, areas, features will be affected? |
|--|

11. Is there a high probability of the effect occurring?
12. Will the effect continue for a long time?
13. Will the effect be permanent rather than temporary?
14. Will the impact be continuous rather than intermittent?
15. If it is intermittent will it be frequent rather than rare?
16. Will the impact be irreversible?
17. Will it be difficult to avoid, or reduce or repair or compensate for the effect?

Source: Guidance on EIA, Scoping. (2001c). European Commission. Luxembourg.

Eco-rating must be based on the above presented assessment procedure i.e. environmental impact assessment (EIA). This procedure ensures that the assessment is made in a complex, multidimensional and adequate way. Person conducting the assessment should be an independent expert or a team of experts.

The principal difference between eco-rating and EIA is the way in which the assessment is communicated. Based on a comprehensive EIA, an aggregated assessment is presented to the financial sector. This assessment can be presented as a system of scores, usually in a 5-degree scale. The scale may be expressed by letters or by numbers.

A developed eco-rating system should take into account three perspectives and should be expressed in a following form:

XYZ

where:

- X – assessment of environmental risk resulted from the likelihood of environmental degradation occurrence due to historical contamination potentially present at a given investment site,
- Y – assessment of environmental risks which may be caused by an ongoing operation of a given investment,
- Z – assessment of environmental risk likely to be caused by a potential technical or technological failure.

Simple eco-rating forms can be limited only to one assessment perspective.⁶ However, regardless of the number of adopted assessment

perspectives, eco-rating informs about the impact of an analysed investment on the environment and the magnitude of the potential environmental risk. The way of assessment communication i.e. a symbol descriptor (a letter or number) does not require special expert-knowledge from the addressee what means that the addressee may be a non-technical person working in a bank or other financial institution.

4. CASE STUDIES

4.1. ECO-RATING OF HOTELS

The purpose of this eco-rating system is to recognise the environmental achievements that are established by a hotel being awarded 1 to 5 green leaves; 1 for a minimum of committing to a set of environmental principles, and 2 through 5 for results in applying those principles.⁷

The criteria for each level are as follows:

1. leaf: The hotel has identified and initiated measures to improve environmental performance in areas such as energy use, water conservation and waste reduction.
2. leaves: The hotel has moved beyond awareness of sound environmental practice and achieved real results in reducing environmental impacts of its operations.
3. leaves: The hotel has shown excellent progress in environmental performance in all areas of facility operations and management.
4. leaves: The hotel has shown national industry leadership in terms of environmental performance for both hotel management and facilities.
5. leaves: This designation is reserved for hotels serving as world leaders in environmental performance which continually introduce new policies and practices for others in the industry.

⁶ Lewis, K.A. and Newbold, M.J. and Broom, C.E. (1997a). Eco-rating for optimizing pesticide use at farm level – Part 2: Evaluation, examples and piloting. *Journal of Agricultural Engineering Research*, **68**, pp. 281-289; Lewis, K.A. and Newbold, M.J. and Hall, A.M. and Broom, C.E. (1997b). Eco-rating for optimizing pesticide use at farm level – Part 1: Theory and development, *Journal of Agricultural Engineering Research*, **68**, pp. 271-279.

⁷ *Green Leaf Eco-Rating Program*. (1998). Hotel Association of Canada, Toronto.

4.2. ENVIRONMENTAL RATING AND EVALUATION SYSTEM FOR THE TEXTILE INDUSTRY

It is a rather simple system for evaluation of the environmental impact of textile production through the complete life cycle. The system is developed to cover all stages in the life cycle of textile production, which have been developed through the past 10 years by Novotex for the production of Green Cotton® textiles. The aim of the system is to get quantitative measurements for the environmental impact in each stage of the life cycle of textiles. By this, the status of each activity is made, and, over time, it can be evaluated, if the companies involved are still improving the environmental impact of the production. Both subjects are demanded by system for all companies delivering goods or services in the production of Green Cotton® textiles, and they are general demands for companies participating in the EEC order no. 1836/93 of 29 June 1993 on environmental management and auditing (EMAS).

The system is build up by a number of questions, divided into 5 main environmental topics, which constitute the fundamental structure of the model. These main topics are:

- environmental management,
- life cycle assessment,
- communication,
- production,
- product/intermediate product.

Each of these main topics is subdivided into a number of environmental topics, which are thematic groups of questions. Each question has four possible answers, to be attempted as multiple choice to be ticked of. The answers are given an evaluation by a number between 0 and 6, where 0 is indicating the lowest and 6 the highest environmental quality, based on our present knowledge and technology. The answers are given freely in this interval of numbers. Indirectly, the evaluation gives cut off values and values of best practice on the topics described, but cut off values are only used on the higher levels of evaluation, that is the main environmental topics or the questionnaire as a whole, and never on the individual questions.

4.3. ENVIRONMENTAL RATING FOR THE PHOTO AND OFFICE EQUIPMENT SECTOR

In an environmental rating conducted by Innovest Strategic Value Advisors (ISVA) Ricoh Co., Ltd. received the highest score possible (AAA) in the photo and office equipment sector. This was the highest rating among the 11 companies evaluated (Canon Inc., Minolta Co., Ltd., Fuji Photo Film Co. Ltd., Ricoh Co., Ltd., Agfa-Gevaert Gruppe, Eastman Kodak Co., IKON Office Solutions, Inc., Moore Corporation Limited, Pitney Bowes Inc., Polaroid Corporation, Xerox Corporation).

ISVA conducts environmental ratings based on evaluations of the environmental efficiency and sustainability of companies in the survey. It collects information on up to 60 criteria, based on environmental reports and publications provided by each company, from the following three perspectives:

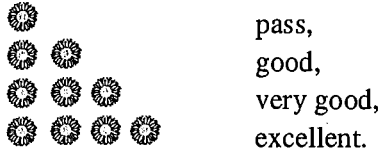
- 1) environmental management capacity,
- 2) environmental risk factors; and
- 3) strategic opportunity factors.

Ricoh was rated particularly highly for the following factors:

- identifying itself as a 'global citizen' the entire Ricoh Group has put environmental management into practice, integrating the pursuit of profits with environmental conservation.
- Ricoh's commitment to reducing its environmental impact on society by developing innovating energy conservation technologies and employing them in Ricoh products with the highest volume of expected shipments. A good example of the company's success in this field can be seen in its digital, multifunctional copiers for the office equipment market.
- the high quality of Ricoh's environmental accounting, and its continued improvements toward its goal of using it as an environmental management tool.

4.4. ECOHOMES – THE ENVIRONMENTAL RATING FOR HOMES

EcoHomes is a straightforward, flexible and independently verified environmental assessment method, with environmental performance expressed on a scale of pass to excellent, and depicted by sunflowers:



It is an easily understood, credible label for new and renovated homes including houses and apartments. It rewards developers who improve environmental performance through good design, rather than high capital cost solutions. Benefits include:

- a) demonstrating sustainability credentials to planning authorities to assist a smooth passage through the planning process,
- b) demonstrating 'green' credentials to investors helps to minimise investment risk and increase the appeal to ethical investors,
- c) demonstrating superior environmental design to customers, resulting in:
 - reduced running costs through greater energy and water efficiency, and reduced maintenance,
 - healthy, comfortable and flexible internal environments,
 - access to local amenities,
 - less dependence on the car,
 - allowing developers to be one step ahead of regulation.

The issues assessed are grouped into the seven categories:

- energy,
- transport,
- water,
- ecology and land use,
- pollution,
- health and well being,
- materials.

EcoHomes assessments can be carried out at the design stage in a similar way to eco-rating. Every house type on site is considered, but the award is given for the whole development. This enables developers to use the result to promote whole sites – every house that is part of the development has the same rating. The Environmental Rating for Homes considers the broad environmental concerns of climate change, resource use and impact on wildlife, and balances these against the need for a high quality of life, and a safe and healthy internal environment. All the issues of the eco-rating are optional, making it flexible and enabling developers to adopt the most appropriate aspects of sustainability for their particular development and market.

5. CONCLUSIONS

Bankers are not environmental specialists and they will never be. However, they must make decisions, which, in consequence, may bring a number of negative effects to the environment. It should be underlined here, that there are no investments, which would not cause environmental risks. So far, environmental risks determined by cause factors of human pressure on the environment have not been appropriately taken into account in decision-making processes concerning financing investments made by banks. Therefore, institutions of the financing sector should have knowledge on the types and magnitude of environmental risks accompanying a given investment. The way of communicating the magnitude of environmental risk should be relatively simple so that no additional expert-knowledge is required for the addressee to understand it.

Eco-rating as a system, which allows presenting assessment of potential environmental risk accompanying a given investment in an integrated way. The system should be designed in such a way as to reliably assess the risk related to the likelihood of environmental degradation occurrence caused by contamination present at the investment site. Additionally, the system also should take account of the risks caused to the environment by routine operations assumed in an investment as well as potential technical or technological failures. Eco-rating must be performed by independent environmental experts and should constitute a part of the environmental impact assessment procedure. A synthetic environmental assessment should be expressed in a form of a degradable scale similar to other conventional ranking systems.

Eco-rating is definitively a tool, which may effectively support decisions made by banks to finance investments. It enables presenting all aspects

of environmental risk related to a given investment in a comprehensive way. It also means that institutions financing corporate persons will be provided information not only about a conventional risk related to a given type of economic activity, but about environmental risks accompanying it as well. This will ensure conditions favourable for making correct decisions by banking sector. Incorporating an eco-rating system to decisions-making processes will result in diminishing the liability of the banking sector for damages and environmental degradation. This liability should be transferred to experts who develop the eco-rating assessments. It is important the implementation of the eco-rating system shall accelerate the procedure of credits granting since the system would simplify the communication and decision making processes among persons who are not environmental experts. It may be expected that eco-rating will become a commonly used tool in the nearest future, especially that works are well in advance to develop and put this system to practice.

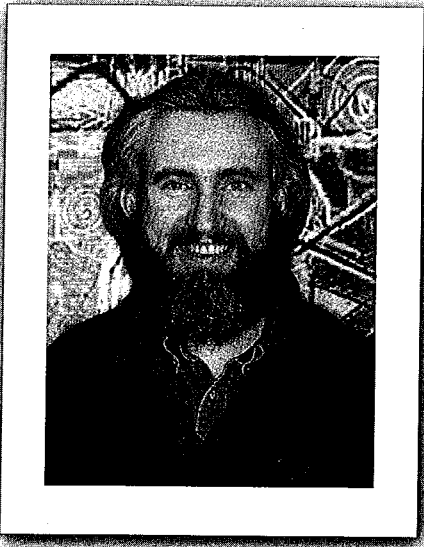
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Richard Nicholls

CHAPTER 13

**FINANCIAL SERVICE PROVIDERS
AND THE ENVIRONMENT:
A GREEN MARKETING PERSPECTIVE**



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Research interests include: the role of the customer in service production and delivery (including the customer as a contributor to green service quality); human interaction and its management in service production and delivery; methods of detecting service quality/ customer satisfaction; and service quality management in post-socialist transition economies. Currently writing a book on customers as part of the service production system. British, but lives mainly in Poland.

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FINANCIAL SERVICE PROVIDERS AND THE ENVIRONMENT: A GREEN MARKETING PERSPECTIVE

1. INTRODUCTION

In recent years financial service providers have paid increasing attention to green issues. They have done so in a variety of ways and for a variety of motives. The greening of financial services is part of a broader trend, namely, consumerism. Consumerism has been defined as “*the process of advancing the cause of consumers – members of the public in their role as purchasers and users of goods and services – and listening to what they have to say*”.¹ Consumerism has impacted financial service providers in a diversity of ways, including issues such as: pricing practices, truth in advertising, truth in lending. Such issues were mainly related to providing financial consumers with value for money, green consumerism is more altruistic in that it is directed at protecting the environment rather than the consumer.

From the mid 1980s, when environmental issues became mainstream, consumers were encouraged, through publications such as the Green Consumer Guide, to show they cared through what they bought. The adoption of green purchasing habits reflected two important factors: the prevailing high levels of awareness and concern about issues such as the hole in the ozone layer; combined with products that allowed consumers to feel they were doing their bit to help in a practical and effortless manner. For perhaps the first time, consumers had a direct way of being able to affect high-profile issues that threatened their own well-being.²

¹ Locke, S. (1994). Future directions for consumerism and their implications for business. In J. Robin (Ed.), The Consumer Revolution: Redressing the Balance. (p. 174). London: Hodder and Stoughton.

² Mackenzie, D. (2000, January 10). You can still shop to save the world. New Statesman.

The greening of financial services can also be seen within the context of the increasing realisation that green issues are applicable to service environments as well as to manufacturing ones. Grove *et al.* point out that most literature on green marketing issues has been directed at physical goods, with little attention paid to the greening of the service sector.³ They stress that even though services are marked by an intangibility, the processes which support them usually do require various physical resources and can generate waste. Indeed, they provide illustrations, using the 3R's environmental management framework, of how retail banks could tackle the environmental ramifications of their process: retail banks could:

- (a) **reduce** resources by reducing the size of monthly bank statements;
- (b) **recycle** resources by collecting paper (e.g. computer print-outs) used in daily operations;
- (c) **reuse** resources by converting to pens, printer cartridges etc., which are refillable rather than disposable.

Having set the context, the remainder of this paper will discuss and illustrate the range of green marketing activities, which can be found within financial service organisations. A useful framework for presenting this discussion has been provided by Menon and Menon,⁴ who suggest that green marketing activities can be classified as tactical, quasi-strategic or strategic. Tactical greening involves a shift in functional activities. For example: a bank might sponsor a "tidy-up the environment" campaign. Quasi-strategic greening involves a substantial change in business practice. For example: a bank setting up an Internet banking service. Strategic greening requires a substantial fundamental shift in corporate philosophy. For example, a bank adopting clear environmental criteria for selecting its investments for its unit trusts.

A financial service providers choice or balance of green marketing activities can often be elucidated by awareness of the various corporate motivations and pressures for greening. Polonsky outlines a number of

³ Grove, S.J. and Fisk, R.P. and Pickett, G.M. and Kangun, N. (1996). Going green in the service sector: Social responsibility issues, implications and implementation. European Journal of Marketing, 30 (5), pp. 56-66.

⁴ Menon, A. and Menon, A. (1997, January). Enviropreneurial Marketing Strategy: The Emergence of Corporate Environmentalism as Marketing Strategy. Journal of Marketing, pp. 51-67.

⁵ Polonsky, M.J. (2001, September). Reevaluating Green Marketing: A Strategic Approach. Business Horizons.

pressures, both external and internal, which can bring about green marketing activities.⁵ These are:

- satisfying consumer demand;
- reacting to a competitor's greening actions;
- supplier requests to modify inputs;
- cost, and
- philosophy.

2. TACTICAL GREENING

Tactical greening involves a shift in functional activities. For example:

- seeking to be identified with good green causes:
- sponsorship of environmental projects 'Clean up the world'
- attempting to present favourable images in areas where banks are vulnerable:

such as efforts to show that paper is recycled.

Tactical greening carries the danger that, over the long term, the financial service provider will be unable to sustain its desired green position. Indeed, banks which try to greenwash themselves (i.e. position themselves as green but with more spin than substance) are likely to be held to a higher standard than others lacking the same eco-values. Polonsky argues⁶ that "true" green marketing, meaning as a complex and integrated strategic tool, has moved well beyond the mere ecological posturing of the early 1980s. He writes "*A good deal of environmental promotion has been labelled 'greenwash', having little if any real ecological meaning. This type of superficial tactical greening is no longer appropriate and both consumers and regulators are unwilling to accept it. Communicating substantive environmental information is a more appropriate approach to take, but requires real activity changes to be meaningful*". Polonsky does not totally reject tactical greening activities but insists that the goals of such activities should be clear and over-claiming should be avoided. Indeed, Polansky draws attention to the fact that there are two main perspectives organisations can take to communicating their environmental achievements: firms can use the fact that they are environmentally responsible as a marketing tool or they can become environmentally responsible without

⁶ Polonsky, *Reevaluating Green Marketing*.

promoting this fact.⁷ As an example of the former Polansky offers the Body Shop, where the service concept itself is based on environmentally friendly products. An example of the latter is Coca-Cola. Polansky suggests that it may be wise, from the viewpoint of potential future negative backlash, for firms not to over publicise their environmental achievements “given the limited scientific knowledge at any point in time”.

3. QUASI-STRATEGIC GREENING

Quasi-strategic greening involves a substantial change in business practice. This could include introducing some green-type financial products. New product development has a range of meanings: from major innovations to mere style changes. Thus, new green financial product development covers:

- designing brand new green market offerings,
- removing suspect “anti-green” elements from existing products.

Thus an environmental investment fund is a good example of quasi-strategic greening. Environmental investment funds include those funds which:

- support firms operating in green activities (e.g. recycling plants),
- support firms operating in a green way (e.g. energy-saving enterprises),
- merely avoid suspect sectors.

More generally, environmental investing belongs to the field of socially responsible investing (SRI)⁸. SRI is an investment process that appraises the social and environmental consequences of investments, both positive and negative. Social investment requires investment managers to incorporate qualitative analysis of corporate policies and practices.

Avoiding suspect sectors is a rather passive approach. Investment managers increasingly need to screen potential investments. Screening is the practice of including or excluding securities from investment funds based on social and/or environmental criteria. This is done either:

- (a) by an in-house research team or
- (b) by an outside organisation, such as the Ethical Investment Research Service.

⁷ Polansky, M.J. (1994, November), An Introduction to Green Marketing. Electronic Green Journal, 1(2).

⁸ Other terms are sometimes employed to describe SRI. For example: ethical investing, natural investing, and socially aware investing.

There is a debate over whether environmental criteria should be used passively simply to filter out unsuitable investments, or whether a more hand-on approach should be adopted with an attempt being made to encourage firms to be more environmentally responsible. A recent trend is the use of engagement (or shareholder advocacy), here firms are not excluded from investment fund portfolios, rather the fund manager undertakes to use its influence as a shareholder to press firms to adopt best practices. The UK's University Superannuation Scheme, with 153,000 members and 22 billion GBP of assets, uses engagement. Companies are not screened out but USS tries to influence their corporate policies on environmental (and other) issues.

Another issue is whether certain sectors should simply be avoided by green investment funds (for example: avoid the oil industry because of pollution) or whether to adopt a 'best of sector' approach, and invest in companies which do most to adhere to environmental policies.

Whatever the questions being debated there is clear evidence from the US that environmentally responsible investment is on a strong upward trend. In a recent report the Social Investment Forum found the field of socially and environmentally responsible investment to be "healthy and expanding".⁹ Their evidence included:

- assets in professionally managed, socially screened investment portfolios rose 36% between 1999 and 2001.
- the growth rate for socially screened portfolio assets was over one and a half times that of all professionally managed assets in the US.
- nearly 12% of assets under professional management in the US is involved in socially responsible investing.
- there are 230 mutual funds in the US that incorporate social screening into the investment process.

The above illustrates that the market for new, environmentally-inspired, financial products is buoyant. In the words of the Social Investment Forum: *"There is a growing realisation among corporate leaders and academics that the adoption of principles of sustainability can co-exist with long-term corporate profitability."*

⁹ 2001 Report on Socially Responsible Investing Trends in the United States. (2001). Social Investment Forum. Washington: Social Investment Forum Foundation and Social Investment Forum.

4. STRATEGIC GREENING

Strategic greening requires a substantial fundamental shift in corporate philosophy. It requires a holistic approach, co-ordinating all actions of the firm so as to integrate environmental issues across all functional areas. In contrast to quasi-strategic greening, strategic greening activities form part of overall corporate philosophy. In the words of Polonsky, to be effective at strategic level firms need to “*internalise concern for the environment as part of the corporate modus operandi. This is crucial, and requires a long-term view*”.¹⁰

An interesting example of a bank, which follows a strategic green marketing approach, is The Co-operative Bank. This bank’s green approach is closely woven to its ethical policy (see below). Its ethical policy defines types of borrower it will not lend to. The Co-operative bank will **not**, for example:

- “*invest in any business involved in animal experimentation for cosmetic purposes*”,
- “*support any person or company using exploitative factory farm methods*”.

The Co-operative Bank also has a separate “ecological mission statement” which outlines how the bank recognises four fundamental truths:

1. Nature cannot withstand a progressive build-up of waste derived from the Earth’s crust.
2. Nature cannot withstand a progressive build-up of society’s waste, particularly artificial persistent substances, which it cannot degrade into harmless materials.
3. The productive area of nature must not be diminished in quality (diversity) or quantity (volume) and must be enabled to grow.
4. Society must utilise energy and resources in a sustainable, equitable and efficient manner.

The ecological mission statement makes the interesting point that in financial services the knock-on ecological impact of lending decisions is greater than the direct ecological impact of the daily operation of a bank. It states:

“We, The Co-operative Bank, will continue to develop our business taking into account the impact our activities have on the environment and society at large. The nature of our

¹⁰ Polonsky. Reevaluating Green Marketing.

activities are such that our indirect impact by being selective in terms of the provision of finance and banking arrangements is more ecologically significant than the direct impact of our trading operations."

The Bank encourages its business customers to take a proactive stance on the ecological impact of their own activities, and will invest in companies that avoid repeated damage to the environment. The Bank will not invest in any business or organisation that, as a core activity relies on:

- the extraction or production of fossil fuels which may contribute to problems such as global climate change and acid rain.
- the manufacture of chemicals which may contribute to problems such as ozone depletion or which may accumulate in nature.
- the unsustainable harvest of natural resources such as timber clearance which may lead to deforestation.

Such ecological verbiage is supported in a number of ways. For example, ecological financial services for both business and personal customers: preferential banking rates for businesses investing in or providing environmental solutions; greenlease – an asset finance package to help assist in the acquisition of environmental technology at a low cost; environmental consultancy and advice for business; ecological Affinity Visa cards (for the RSPB and for Greenpeace) for personal customers; a mortgage product which commits to offsetting the carbon dioxide emissions arising from electricity use; free energy surveys for mortgage customers.

Such ethical and environmental policies and products have featured extensively in advertising campaigns in order to differentiate the bank from its competitors. The bank's customer base has risen dramatically: from under one million in 1992 to 1.7 million in 1999, with one in three of new customers citing the ethical policy as their main reason for joining. Moreover, customers are involved in reviewing the bank's ethical policy. Indeed, its slogan is: "The Co-operative Bank – Customer led, ethically guided". The bank has published externally audited "partnership" reports, which scrutinise the extent to which the bank pursued its ethical policy and its social and environmental mission statements.

5. CONCLUSION

Green banking is still very small-scale in the UK, but its presence exerts pressure on more mainstream banks to take environmental implications of banking seriously. The high profile of The Co-operative Bank in promoting environmental banking has helped to make bank customers and savers more aware that their money might be financing activities they find offensive; and thus has contributed to the increasing popularity of “green” investment funds, e.g. the Stewardship range of Friends Provident.

This chapter has illustrated the range of approaches to green marketing in financial services. Although many financial service providers seem to be more interested in making their communications green, some financial service organisations have pursued green marketing with much more vigour and attempt to design, promote, price and distribute financial products that will avoid harming the environment.

In conclusion the author offers the words of Rachel Baird in the *New Statesman*, proposing that the UK *“is far richer for having alternatives to the practices and values of orthodox banks. The very existence of alternatives requires mainstream banks to justify doing “business as usual”. It also provokes savers into thinking about what their money is used for and gives them the choice to live more closely by their values”*.

APPENDIX

THREE CASE STUDIES

Below are three case studies on green financial service providers. Case one describes the origins and clear green focus of Triodos Bank. Case two outlines the approach of the Royal Bank of Scotland Group to sustainable banking. Case three outlines the Socially Responsible Investment opportunities available through Progressive Asset Management (PAM), and illustrates some of the tools by which PAM ensures investors are closely involved in environmental investment decisions.

Case 1: Triodos Bank

The Triodos initiative was started in the 1960's in the Netherlands by a group of anthroposophists who wanted to find innovative ways to finance anthroposophical projects. The name Triodos (pronounced Tree-oh-dod), comes from the Greek word 'trihodos' which means threefold path. This refers to a view of society, which distinguishes three areas:

- education and culture,
- human rights,
- economics.

The name was chosen to reflect the aim of achieving positive cultural, social and economic benefits.

In 1980 Triodos was registered as a bank in the Netherlands. It now has offices in the UK, the Netherlands and Belgium. Investment decisions are not based on simple negative screening criteria, i.e. just avoiding negative activities. The Bank has a formalised investment policy of only making loans to organisations and businesses, which create social and environmental 'added-value'. Under this policy Triodos has developed to support a broad range of activities, including organic farming, fair trade retail business, social housing initiatives, renewable energy companies and community services.

Triodos Bank is an interesting example of a financial service provider taking a strongly strategic approach to green marketing. Firstly, it is a bank with a clear and prominent environmental mission:

- It lends exclusively to organisations with social and environmental objectives.

- It has regular newsletters to let savers see what their money is supporting.
- It lets savers direct their savings into types of activities they are interested in.
- It attempts to monitor the environmental/ethical outlook of its customers.
- It encourages its customers to adopt environmentally-friendly practices.

Triodos Bank views environmental objectives on the same level as other, more traditional, corporate objectives (namely, financial criteria). Green issues are at the philosophical foundations of the bank, and its slogan is "*Triodos Bank – For a decent profit*". Environmental values are at the heart of its decision-making process. Triodos even publishes an annual list of everyone it has lent to. It is a clear, but rare, example of a financial service provider following a strategic enviropreneurial approach.

Triodos allows savers to invest their money into specific areas, such as organic farming. The bank offers a choice of interest rates, from 0% up to a maximum, but pointing out that the more cheaply Triodos can obtain money, the more cheaply it can recycle it to deserving borrowers.

Triodos Bank attempts to run its own internal operations in a self-demonstrating environmentally-friendly fashion. This relates to the use of energy, transport, water, paper and other office materials, cleaning materials and includes the development of paperless systems. Indeed, Triodos Bank annual accounts include an environmental report. This report examines the sustainability of the bank's business activities. Activities are placed into two groups:

- effects of lending activities, and
- effects of office activities.

Triodos builds environment values into its operating procedures and its human structure: it has an Internal Environmental Care Handbook and environmental managers for each branch. It attempts to determine the environmental impact of itself as an organisation. This environmental impact relates mainly to energy, water and paper consumption and to transport.

Triodos Bank, however, likes to stress it is as much a bank as any other bank. It has quite a wide range of services. The Ecological Building Society, on the other hand, is a good example of a green financial service provider occupying quite a focused niche position. It provides finance specifically for borrowers who want to reclaim derelict properties or build or renovate properties with energy-saving features.

Case 2: The Royal Bank of Scotland Group

The Royal Bank of Scotland Group is Europe's second largest banking group, and one of the world's largest banks. The Group's approach to sustainable banking is summarised in its statement of environmental policy.

Policy

The Group recognises that concern for the environment and the quality of life is an integral and fundamental part of the way in which we conduct our business.

The group is firmly committed to creating strong business growth, which is not achieved at the expense of the environment, quality of life or social equity.

Background Information

In 1992, the Rio Earth Summit brought the term "Sustainable Development" into the public consciousness. "Sustainable Development" now informs almost all international and national policy and in May 1999, the Government published its strategy for sustainable development in the UK, "A Better Quality of Life" which embraces:

- maintenance of high and stable levels of economic growth and employment,
- social progress which recognises the needs of everyone,
- effective protection of the environment,
- prudent use of natural resources.

The challenge is not simply about managing direct operational impacts on the environment; such as energy, raw materials, waste and transport, but also to recognise that our economy and environment are inter-dependent and inextricably linked with social responsibility.

Objectives

The objectives of the Group Environmental Policy are to safeguard the organisation's assets and reputation while encouraging the development of business opportunities, and may be summarised as follows:

- progressively integrate environmental and social considerations into business decisions.
- develop and implement management systems which ensure high standards of environmental performance and, where possible, exceed regulatory environmental standards.

- establish relevant performance indicators along with associated improvement targets.
- collate and publish relevant information about our performance.
- minimise waste and promote prudent use of energy, raw materials and other resources.
- raise awareness amongst staff and, where appropriate, other stakeholder groups.
- play a part in community initiatives.
- encourage the use of products and services from suppliers whose environmental policies are compatible with our own.
- where practical, develop new products and services, which seek to achieve greater sustainability while continuing to enhance resource efficiency and improve delivery mechanisms.

* * *

The policy recognises that the Group, as a financial services provider, impacts the environment in two ways: (1) through its own operations, and (2) through its core business, the lending of money to customers. The Group sees itself as having three key roles.

1. Playing its part in the Financial Services Sector:

- influencing the development of law, regulation and standards,
- raising awareness, holding events and publishing environmental advice.

2. Operating responsibly:

- maintaining high standards of stewardship in its operations,
- purchasing strategy through its supply chain.

3. Working with customers and business partners:

- setting environmentally sound credit and lending criteria,¹¹
- through business relationships and projects.

The financial services sector, through its internal operations, tends not to generate complex or significant environmental impacts. The Group, however, is aware that its large size means that the consumption of energy, use of

¹¹ The environmental criteria in the Group's credit assessment and approval process cover the following areas: resource depletion, climate change, pollution, waste, effects on human health and loss of species and habitat.

transport, production of solid waste and use of water does create environmental considerations. Accordingly it has sought to employ good operational environmental practice. For example, the Group attempts to maximise its use of new and innovative telecommunications and IT developments to avoid unnecessary travel by both customers and employees.

Case 3: Progressive Asset Management (PAM)

Founded in 1987, Progressive Asset Management (PAM) claims to be the first independent broker/dealer to specialise in socially responsible investing. PAM serves clients world-wide, providing individuals and institutions with resources for investing for financial return and social progress. PAM provides social research, social screening for investments, community investing services and support for shareholder activism. In 1999, Progressive Asset Management, Inc. formed a strategic alliance with Financial West Group to establish the PAM Network as the Socially Responsible Investment Division of Financial West Group.

In their promotional material PAM emphasise their social research methodology. By following a consistent research methodology, PAM ensures that companies within each manager's universe of investment candidates match individual investor's social objectives. There are three main stages to the methodology.

Stage 1: Basic Data Gathering

Basic information on a company is assembled from public documents and business publications. This data is the foundation of the research and analysis, and includes:

- annual reports,
- coverage in daily press,
- articles from trade publications.

As well as publications of relevant government journals and other business publications and regulatory bodies.

Stage 2: Literature Reviews and Company Contacts

- PAM conducts comprehensive literature searches and makes direct contact with the companies where complex social evaluations are required.
- A variety of databases and information from the publications and research of social action groups are used.

- Contact is established with the company's investor relations department and PAM sends questionnaires to the company requesting specific information.

Stage 3: *Interviews*

If necessary, interviews are conducted to complete the picture of a company. These interviews include: company managers, customers, community groups, employees, government regulators, and/or social action organisations.

All information gathered in the initial stages of research is compiled into a permanent database which is continuously updated. Information from a variety of sources, including the media, human rights, environmental, labour groups etc, is continuously monitored for information on any controversial issues that may affect a company's social standing. PAM's own original research may be supplemented with outside research from a variety of sources.

PAM provide clients with four ways to incorporate their social concerns in their investment portfolios:

1. Avoiding companies that do not match chosen social criteria.
2. Engaging in shareholder advocacy with companies to encourage improvement in their social/environmental performance.
3. Seeking out companies with positive social/environmental records.
4. Participating in community impact investing.

PAM is an excellent example of a financial service provider who have instigated elaborate procedures with which to screen investment portfolios. PAM use extensive questionnaires with clients in order to establish investors' financial and social objectives. Use of a financial questionnaire to establish an investor's financial objectives, for example: risk tolerance and time horizon requirements, is relatively common. Use of a social questionnaire to establish an investor's social priorities is, however, rare.

The aim of PAM's social questionnaire is to elicit from investors their values and objectives regarding a range of social and environmental issues commonly impacted by corporate business practice. Social screening allows socially aware investors to match their personal values to their investment decisions. The social questionnaire incorporates ten social screens, namely: product, environment, employee relations, military contracting, nuclear power, alcohol, tobacco, gambling, animal testing, and repressive regimes. The full social questionnaire consists of 9 A4 pages and can be found at www.pamny.com. Below is an extract from the social questionnaire relating to environment.

E N V I R O N M E N T

This screen avoids companies with poor performance in the areas of hazardous waste, environmental regulatory problems, toxic emissions, environmentally detrimental products and/or controversies involving environmental justice. The screen will exclude particular industries that have a history of severe environmental impact, such as petroleum refining or mining. Selection of the "Best of the Industry" box will include companies with the best environmental records in the excluded industries. The criteria for this screen are described in greater detail below.

Strict Avoidance

3

Moderate Avoidance

2

No Avoidance

1

Hazardous Waste: The company currently faces substantial liabilities at hazardous waste disposal sites or has responsibility in relation to numerous Superfund sites.

Regulatory Problems: The company has a recent (typically within the last 5 years) record of fines, civil suits, or major controversies relating to air, water, land or noise pollution or has been found to violate federal or state environmental regulations consistently.

Toxic Emissions: The company has particularly high legal emissions of toxic substances as defined and recorded by the U.S. Environmental Protection Agency (EPA).

Detrimental Products: The company's products, processes or services are particularly damaging to the environment. These include producers of ozone depleting chemicals such as chlorofluorocarbons (CFCs), or hydro chlorofluorocarbons (HCFCs).

Environmental Justice: The company's environmental practices have adversely affected the community (ies) in which it does business.

Industry Exclusions: Industries with a history of severe environmental impact will be excluded entirely. Those industries include, but may not be limited to petroleum extraction and/or refining, mining, chemical manufacturing, and petrochemical-based agricultural pesticides or fertilisers.

"Best of the Industry": Check here for a screen that will include companies from the industries mentioned under Industry Exclusions immediately above, but only those with the strongest environmental records.

Shareholder Advocacy: If you circled "2" or "1" above for this category, please check here to indicate your desire to participate in shareholder advocacy on this issue.

Issue Strength: Check here if you would like for PAM to identify companies with positive, proactive records in this issue area for possible inclusion in your portfolio.

Issue Weighting: Check here if you are willing to tolerate relatively poorer records in other issue areas if a company has a particularly positive record in this area.

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Danuta Dziawgo

CHAPTER 14

**INDIVIDUAL INVESTORS TOWARDS
ENVIRONMENTAL PROTECTION**

THE INTERNATIONAL MARKET AND POLAND



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INDIVIDUAL INVESTORS TOWARDS ENVIRONMENTAL PROTECTION

THE INTERNATIONAL MARKET AND POLAND

1. INTRODUCTION

Environmental deterioration of Nature is both a global and an individual problem because it influences each of us. At the same time, though, each of us can support environmental protection.

Individuals express their opinions and preferences in many ways e.g., by spending money, which is called consumption. Investing money on the financial market is also a form of expressing opinions. There is a tendency among people to invest their own capital in paying attention to ecological consequences of the investment decisions they made. It is impossible to support environmental protection effectively if there is no certainty in what way the invested money works. There are more and more examples of investors' interest in ecological aspects of their investments.

It seems obvious that an effective environmental protection policy requires social support. The wider the range of the support is the more effective the policy will be. Therefore, a key question can be asked whether social support of environmental protection should also consider financial operations of individuals and what forms the support should take. In other words, if and if yes then in what form, individuals could meet their ecological preferences by means of individual investments. This process would be called financial eco-investment.

On the other hand, the management of an economic subject is very much interested in how the market assesses their enterprise. The price of shares is the most tangible measure of expectations of the market for the company. Therefore, the top management of companies is interested in achieving high share prices. One of the elements which influences share price and its stable

increase is the structure of shareholders. At present, it seems that the role of individual investors, and in particular individual shareholders, has been valued on the international financial market again. It is noticed though, among others, that the offering of loyalty programmes to individual shareholders by these companies was derived from loyalty programmes offered to clients. This form of financial care for individual shareholders shows most clearly that the management of companies appreciates the advantages of the fact that their shares are owned by individual shareholders.

On the international financial market shares and their successive issues are used by companies for gaining capital necessary for its operation and development. Therefore, relations with investors and their satisfaction from the performance and strategy of the company are very important on the international market. Investors' satisfaction, in return, results in the success of successive stock and share issues, which directly influences the price of gaining capital and the level of share prices, and, in the long run, the value of the company. It also refers to individual investors, including individual shareholders. Therefore, company boards cannot neglect the importance of individual shareholders as investors and also as consumers.

2. THE AIM OF THE CHAPTER

The aim of the chapter is to indicate examples of how ecological criteria influence investment preferences of some of the individual investors. It may turn out, though, that on the international financial market the fourth factor, i.e. the influence of financial transactions on the environment, will have to be taken into account along with the commonly used parameters of financial transactions such as safety, profitability and liquidity.

In this chapter examples of financial eco-investment activities of individual investors on the financial market will be presented. In addition to this, the results of public opinion surveys on investment in Poland as an example of an emerging market country will be shown.

The surveys dealt with the level of knowledge about stock rights, the opinion about the level of corporate governance in Poland in the respondents' opinion and their readiness to participate in the Annual General Meeting (AGM). These are key questions in the case of implementing and developing individual investment in Poland, and also for the development of eco-ethical investment. People have to have special knowledge about their rights, about financial market, and then some money to invest properly in the way most

convenient for them. Identification of such opinions is a starting point for the development of individual investment and also, at the same time, eco-ethical investment in Poland and in other emerging markets.

3. THE IMPORTANCE OF INDIVIDUAL SHAREHOLDERS ON THE INTERNATIONAL CAPITAL MARKET

It seems that one of the most important changes which have taken place on the present capital market is again appreciation of the role of individual shareholders. At present, nobody is questioning the significance of individual investors any more. They are an important, significant element of the present international financial market.

The significance of small investors results from the fact that they create a certain counterbalance for institutional investors processing a high capital. A stable flow of a part of savings of society to the stock exchange is not insignificant. It indicates changes in the reallocation of society's financial resources and an increase in the level of savings in the national economy.

The importance of individual shareholders on the international financial market is significant, as proved by statistics. In many developed countries, shares are directly owned by over 20% of adults (e.g. Denmark, Greece, Canada, The United States, Switzerland, Sweden, Great Britain). Only in the case of Germany, France and Japan the level is between 6-10%. It results from two main reasons: in these countries it is popular to invest through investment funds or a great part of savings of individuals is deposited in banks. In these countries, traditionally, the banking system dominates the financial market.

Nevertheless, also in these countries, traditionally based on banks, the situation is changing. For example, in Germany direct investment at the Stock Exchange is becoming more and more common. It is manifested in the fact, that the number of individual investors increased twofold in 2000 (compared to 1999). As a result, Deutsche Boerse set up a special enquiry system for small investors available through the Internet.

As an example, the value of shares owned by individual investors at the New York Stock Exchange at the end of 1998 was 41%.¹ At the London Stock

¹ Internet, <http://www.nyse.com>.

Exchange, dominated by financial institutions, individual investors owned shares, which amounted to 9% share market at the end of 1999.² Also, at the Japanese Stock Exchanges market share value of shares owned by Japanese individual investors was 19% of the stocks capitalisation (31.03.2001).³

Moreover, individual investors own shares indirectly: through investment funds and pension funds. In the case of pension funds, participants of the fund do not have any significant influence on the funds turned over to the institutions. However, in the case of investment funds, investors may, at any moment, withdraw themselves from their investments. At such a high level of share in the capitalisation of stock exchanges, a sudden withdrawal of individual investors investing in shares directly and through investment funds, from investing in shares, could cause an international capital shake-up.

4. THE ECOLOGICAL BACKGROUND

A call for recognising natural environment in economy is known as a sustainability concept. Professor Rob Gray defined sustainability as not only an environmental issue, but also a social one. Sustainability can be referred to as eco-efficiency and eco-justice. The first element refers to the issues of the physical environment and its use, the other is the social issue.⁴ Our economic future relies on our environmental future and the financial sector together with investors has a key role to play.

In practice, the sustainability concept is widely used, among others, by 'sustainable and responsible investment' (SRI) or the concept of 'socially responsible investment' (SRI) which originated in the US. In Europe, though, and specially in Great Britain, the movement is referred to as 'ethical investment'.⁵ In this text the terms 'socially responsible investment' and 'ethical investment' will be used interchangeably.

SRI could be defined as an investment process that considers social and environmental consequences of investments, both positive and negative, within

² Internet, <http://www.londonstockexchange.com>.

³ Internet, <http://www.tse.or.jp>.

⁴ Gray R., Bebbington J., Sustainable development and accounting: Incentives and Disincentives for the adoption of sustainability by Transnational Corporation,

Internet, <http://www.les.man.ac.uk/cpa96/papers.htm/gray.htm>.

⁵ Also other expressions are used, for example: social investing, socially aware investing, mission-based investing, natural investing.

the context of financial analysis. In that process financial resources in companies that meet certain standards or criteria are identified and then invested. It is designed to deliver sustainable value to society as a whole, as well as to shareholders. SRI is then an investment, which allows investors to take into account social justice, economic development, peace, healthy environment, as well as conventional financial considerations.

In a practical sense SRI can be grouped into three categories:

- portfolio screening – the inclusion or exclusion of stocks and shares, bonds, investment funds or other investments on ethical, social and environmental grounds,
- shareholder engagement – shareholders use their status and try to improve a company's ethical, social and environmental behaviour by means of dialogue, pressure, and support for responsible management and voting at AGMs (Annual General Meetings),
- community investing – supporting a particular case or activity by financing through investment or loans. Community investing includes microcredit and loans.⁶

However, the problem is that ethics is differently interpreted by different investors. Moreover, in different countries, due to their history and different present social conditions, different factors are included within the framework of SRI, e.g., in the US an important place in SRI plays a fight against racial discrimination and discrimination between sexes and recently also sexual discrimination. Thus in Europe as well as in Japan such questions within SRI are not raised. Among the elements of SRI which are taken into account in the world are mainly environmental protection, care for employees, care for clients, support of social local initiatives, attitude to the handicapped, testing products on animals. The so-called principle of resistance from investing in 'sinful branches', which include such industries as tobacco, alcohol, gambling, pornography and weapons, is also taken into account within SRI.

A very important factor within the framework of SRI is environmental protection. It is reflected in an increasingly frequent modification of the term 'ethical investment' into 'eco-ethical investment' in order to emphasise the importance of environmental protection in the modern world. Because in

⁶ As an example Grameen Bank of Bangladesh can be mentioned, which by November 2000 had lent 3.2 billion USD to over 2 million people and 90% of them were women and 100% classified as very poor with the repayment rate of 90%; see: Internet, <http://www.asria.org>.

practice eco-investment can hardly be separated from ethical investment, therefore, they will be analysed together.

It could be argued that hardly any business can ever be 'environmentally friendly', that all businesses involve some environmental damage. But the best a company can do is clear up its own mess and reduce its impact on the environment. And this is what eco-ethical investment concentrates on.

Seemingly, the above-mentioned trends result in an evolution on capital markets, which started in the 1970s and which can be now identified. Individual investors, and more and more often also institutional investors, especially pension funds as well as part of investment funds, are not interested in financial results only. They also insist on care for natural environment and human capital, which means they invest their financial resources according to the SRI principle.

Today, when nearly one out of eight dollars under professional management in the United States is involved in socially responsible investing it is noticeable that the phenomenon is not marginal and can be skipped, described as a one-season trend or an investors' whim. In the United States only the amount of money invested according to the principle of SRI in investment funds exceeds now the level of 2.3 billion USD,⁷ and the total amount in professionally managed investment assets of all types in the United States is estimated at 19.9 trillion USD compared to 16.3 trillion USD in 1999.⁸

At the same time, more and more people are interested in ethical and environmental issues. An increasing number of consumers have ethical and social concerns. Green and ethical consumers form a major group within the population. For example in 1996, MORI identified 41% of the adult British population as green consumers.⁹

The results of a study conducted in the US show that 79% of consumers take corporate citizenship into account in making their purchasing decisions, and 36% considered it an important factor. Similarly, 75% of respondents reported taking corporate citizenship into account in making investment decisions; while 12% said they would even consider a less profitable stock if the company was a good corporate citizen.¹⁰

⁷ In the sum are included pension funds, mutual funds, foundations, religious organizations and community development financial institutions.

⁸ 2001 Nelson's Directory of Investment Managers. In: 2001 Report on Responsible Investing Trends in the United States. Social Investment Forum 2002.

⁹ Memorandum by the All-Party Parliamentary Group on Socially Responsible Investment, Internet, <http://www.fsa.gov.uk>.

Another survey found that 28% of Americans who own corporate shares either directly or indirectly report buying or selling shares on the basis of employment practices in companies, their community involvement, or business ethics, and another 10% reported considering doing so. The same survey found that 45% of Americans reported 'punishing' companies they viewed as socially irresponsible by avoiding products or services.¹¹

5. EXAMPLES OF ECO-ETHICAL INVESTMENT POSSIBILITIES AVAILABLE TO INDIVIDUALS

Individual investors can invest their money according to their eco-ethical values and principles:

- through investment funds,
- through pension funds,
- through insurance funds,
- through asset management companies,
- through investment clubs,
- individually.

In the last two above-mentioned opinions they can use eco-rating or ecological indexes as helpful tools. If investors invest money individually or through investment clubs on securities market, then they can also use the power of shareholder advocacy. Shareholders own a part of the companies they invest in, and with this ownership they have both rights and responsibilities.

It should also be mentioned that the offer proposed to individual investors is quite wide. It results from the fact that there is a demand on the market for such products and therefore they are on the offer.

Because in other parts of the book ecological indexes, eco-rating, asset management offers, and pension funds are covered, in this part SRI funds, investment clubs and shareholder activism will be presented.

¹⁰ 2001 Corporate Citizen Watch Survey, Hill & Knowlton/Harris Interactive. In: 2001 Report on Responsible Investing Trends in the United States. Social Investment Forum 2002, p. 30.

¹¹ Environics International December 2000 survey. In: 2001 Report on Responsible Investing Trends in the United States. Social Investment Forum 2002, p. 31.

5.1. ECO-ETHICAL INVESTMENT FUNDS

5.1.1. Evolution

An investment fund is an amount of money, managed by an investment company, which pools money from investors and invests it in a diversified portfolio, mainly in securities. There are a great deal of different kinds of investment funds in the world (e.g., mutual funds, unit trusts, UCITS – undertaking for collective investment in transferable securities) and a great deal of different kinds of funds carefully observe their investment policy.

The following stages of development of investment funds that also take non-financial criteria into account in their policy can be listed.

Stage I. Ethical funds.

They promoted religious convictions and value driven concerns, relying on investors' high level of awareness. They invested in securities chosen on the basis of a negative selection method, i.e. for example they did not invest in gambling, weapon, alcohol, tobacco, political regimes – the so-called elimination of 'sinful securities'. Their significance was connected with the fact, that the biggest pension funds from the United States and Great Britain invested their funds in this way.

Stage II. Technological funds.

Their establishment was connected with the introduction of legal regulations protecting environment, in particular the reduction of pollution emission. In effect, a need for modern technologies limiting the use of environment, e.g., filters, recycling, cleanup, was created. As a result, investment fund resources started to be invested in ecological technologies as profitable in the long run. However, it turned out that funds of this type are based on a relatively small number of investment without a possibility of diversification, hence their high level of susceptibility to market change risk. The high risk resulted in a shift of resources to the next type of funds.

Stage III. Eco-efficiency funds.

The notion 'eco-efficiency' means the economic use of resources in companies. Investments are made through the identification of 'the best in their class' company for each type of sector. The subjects are referred to as eco-efficiency leaders in reference to ecological efficiency. Sometimes a list of negative criteria is used here excluding a certain branch from the investment.

As a result, the moves have increased the dynamics of this type of funds in the world, mainly in Europe and Japan. It also increased the willingness of companies to introduce aspects of natural environment into their development strategies.

Stage IV. Social responsibility funds.

At present, the development of eco-ethical funds is being observed. The trend is an answer to the social need, which appeared supported by legal regulations. Nowadays, when the key to a company success is public trust in a given subject, the main emphasis is put on relations between the company and its customers. An increasing significance of corporate governance may be evidence for this. It also refers to financial institutions offering investment funds. Financial institutions have to adjust to the preferences of their customers. On the other hand, an increasing need for products and services offered by socially responsible companies may be noticed. Thus, both these phenomena are not separated from each other and they have a common root: an increase of social awareness and sensitivity.

The eco-ethical funds will be presented as exemplified by the United States and Europe.

5.1.2. The United States

There are 230 mutual funds in the United States that incorporate social screening in the investment process. In 1999, 168 such funds were identified (in 1995 there were 55 such funds and 139 funds in 1997). The assets of mutual funds were 153 billion in 2001 and 154 billion USD in 1999 in spite of a sustained market downturn (in 1995 collected assets in such funds were 12 billion, and 96 billion USD in 1997).¹²

In the United States separate accounts are very common. Money value put on such accounts is growing faster than any other kind of investment in the USA. Separate accounts which could be referred to as socially screened are privately managed portfolios with respect to social and environmental criteria on behalf of individual investors by asset management institutions. The individual investors can be: religious organisations, municipal and state governments, unions, foundations, universities and colleges, insurance

¹² 2001 Report on Socially Responsible Investing Trends in the United States. (2002). (p. 12). Social Investment Forum.

companies, corporations, individuals turning to professional investment managers to tailor personal portfolios. The assets collected on these accounts rose from 150 billion USD in 1995, 433 billion in 1997, 1,343 billion in 1999 to 1,870 billion in 2001 (increase by 39% between 1999-2001).¹³

In the first half of 2002, there was net flow of assets to SRI funds in the US; net inflow was 47 million USD while for all the US funds net outflow was of almost 13 billion USD.¹⁴ This is noteworthy.

5.1.3. Europe

On June 30, 2001, 251 ethical funds were operating in Europe,¹⁵ in comparison with 159 funds in 1999. Ethical investment can be therefore considered as a rapidly growing part of the investment funds industry. Around 66% of these funds are placed in the United Kingdom, France, Sweden and Belgium.¹⁶

Figures about assets collected in these funds are also interesting. They increased to 15.1 billion EUR in mid 2001 from 11.1 billion EUR in 1999, that is by 36%. Two countries: the United Kingdom and Italy collected 50% of all European ethical assets. The biggest assets increase was placed in France – more than 10 times compared with 1999 and in Germany (four times).

An average number of assets in eco-ethical funds is still very low and has decreased from 74 million to 60 million EUR. The average eco-ethical fund is around 60% smaller than the average European fund (140 million EUR).¹⁷

Ethical funds are still a very limited portion of all funds in Europe (around 0.1% in Germany to 1.45% in Belgium and Switzerland). But the rate of asset growth is promising. Between 1999 and mid 2001, the asset growth rate for all EU funds rose by +12.3%, but for ethical funds by +35.9%.¹⁸

¹³ 2001 Report on Socially Responsible Investing Trends in the United States 13.

¹⁴ Bauee W. (2002, August 1). Investors Continue to Put Money into SRI Mutual Funds, 01.08.2002, Internet, <http://www.socialfunds.com>.

¹⁵ These funds use ethical, social and environmental screens for portfolio selection, are marketed as socially responsible investment products, are available to the public, are UCITS funds (Undertaking for Collective Investment in Transferable Securities).

¹⁶ The classification was done according to parent company's fund domicile.

¹⁷ FEFSI, Internet, <http://www.fefsi.com>.

¹⁸ Green, social and ethical funds in Europe 2001. SIRI Group/Avanzi with the support of CSR Europe and Euronext, SiRi Group, p. 8.

5.2. ECO-ETHICAL INVESTMENT CLUBS

5.2.1. The idea of investment clubs

The idea of investment clubs originated in the United States in 1898, however, their development took place after the crash on Wall Street in 1929. In its pure form an investment club is an organisation which concentrates a small number of members, who are ready to invest a given amount of money in securities every month. At the same time, the invested sum is not a high amount of money for an individual member. The club members divide industries they analyse between themselves. The result of their analyses is presented by them at meetings. Investment decisions are made by majority voting. The important element here is the educational aspect: club members develop their knowledge, improve their investing skills, exchange comments and experience. Groups of investors usually consist of 5-20 members. Each of them pays a certain amount of money every month. Club members have a common account at the broker's firm, they elect president and vice-president of the club, who are authorised to place stock orders, and a treasurer.

The highest number of investment clubs operates in the United States: approximately 60,000. In France there are approximately 18,000 investment clubs, in Great Britain over 10,000 investment clubs are registered. But the number of investment clubs in the world is difficult to estimate.

In Poland this form of active, systematic, 'collective' investment is still not very popular. Currently, the first 6 investment clubs have started to operate.

Eco-ethical investment clubs will be presented on an example of two investment clubs, one from Sweden and the other one from Austria.

5.2.2. Investment club Sisyfos

Sisyfos is a shareholders club in whose investment policy economic criteria as well as non-economic ones are included. Sisyfos is an example of a socially responsible investment club. Its activity is concerned with handling ethical issues, among other environmental issues, in the corporations in which they hold shares. Sisyfos argues that it is necessary to take stands on how profit is made: the members of the club do not want to maximise profit at any cost.¹⁹

¹⁹ Based on information received from Sisyfos.

Sisyfos was established in 1993 in Sweden with 32 members, where investing through investment clubs is less popular than individual investment. The club has two aims, according to the statutory agreement:

1. promoting sustainable development in four dimensions through an active ownership. The corporations in which the club holds shares should do as much as possible to contribute to:
 - ecologically sustainable development,
 - gender equality in working life and in corporate decision-making bodies,
 - justice in relation to people and the environment in the third world,
 - research and development in order to promote a quicker conversion of industry and society towards a social and ecologically sustainable world.
2. the appreciation of shares should be equal to the appreciation of ordinary funds holding shares over a business cycle.

Sisyfos argues that history convincingly shows that business rules change and that they can be changed. However, history also shows that changes of the rules do not come by themselves: 'there is always a need for action, to get away with resistance and to push for corporate actions in specific directions'. Sisyfos is therefore critical about methods used by the ethical funds and their idea of 'good corporations'. All corporations, in Sisyfos' opinion, can be improved and action is the best way to do it: a passive buy-and sell strategy may have short-time media consequences but it does not promote a long-term sustainable development.

Sisyfos is actively engaged through its shares in corporations that are influential, both materially and symbolically, for the development of a sustainable future: Volvo, H&M, and Nordea, among others. They have no illusion that these companies are involved in actions they are critical of. But they can see that corporations have changed for the better when pushed. *'Every corporation can always improve their performance due to our criteria: our work is therefore a Sisophean one'*. According to that policy the club's name came from Sisyphus.

Sisyfos collects information and knowledge directly from corporations it invests in, from competitors, codes of conduct, and through various media. They push for improvement of the corporations through systematic and measurable activities: concrete, goal-oriented and measurable environmental policies and environmental programmes, concrete equal representation

programmes as well as the functioning systems of codes of conduct and an inspection of suppliers in third world countries. They write letters to them with questions and put demands at their shareholder meetings. Sisyfos members prefer a well-informed and constructive dialogue instead of unproductive confrontation or passive buy-and-sell actions.

Their Sisophean policy is built on the assumption that all corporations have a destroying environmental impact, large or small, but that all corporations can improve their performance in this respect, now and in the future. Therefore, they do eco-screening in the sense that they scrutinise the corporations' environmental impact and their effort to reduce this impact. However, Sisyfos does not exclude the purchase of any shares because of the corporations' environmental impact or the quality of their environmental work.

At the beginning, they did not have so much money, therefore they decided to buy 10 shares of 10 big companies in different sectors. Now they still keep shares of 10 big companies with different sectors, but the number of shares increased from 10 to 100-700.

They also use the shareholders' advocacy policy. They have written to the boards and presented themselves as well as their priority, and asked what they were doing in some fields. For example:

- environment – do they have a policy, are they certified with ISO 14000 or EMAS?
- equal opportunities – do they have a programme how to get more women on the board? If their line of business is dominated by men, do they work actively to get more women?
- trade – if they trade with countries in the third world, is it based on just relations in economy and do they accept trade unions?
- R&D – do they invest in research and development? How much and with what kind of aims?

5.2.3. Oekoinvestmentklub

Oekoinvestmentklub was established in July 1990 in Austria. This club can also be classified as an eco-ethical club because an investment decision process in it takes into consideration ecological, social and ethical criteria.

The club portfolio is divided into two groups. First, money is put in the international shares quoted on the stock exchanges. This part of portfolio is evaluated once a month. The second part is invested in young companies,

mainly German, whose shares have not been quoted on the stock exchanges yet. The evaluation of this part of portfolio is once a quarter. This type of investment was introduced in the summer 1999.

The club's members meet each first Tuesday of the month. The participation in the meeting is not obligatory but financial decisions can be voted only by those who participate in the meeting. The clubs have 190 members, mainly Austrians, but there are also 15 Germans, two Swedes, one Italian and one Swiss in them.

The club uses negative and positive criteria in three areas: sustainability, ethics and ecology. They treat the concerns as a whole.

In the sustainability area they use positive criteria. They look at economical resource use, development of human capital and a sustainable use of products. They are especially interested in:

- use of renewable energy,
- ecological construction materials,
- lack of chemistry in farming,
- natural food products,
- information policies of companies (e.g. do they publish eco-balance sheets).

In the ethical criteria they use negative screening. They do not invest in:

- alcohol production industry,
- tobacco industry,
- drugs,
- gambling industry,
- genetic technologies,
- weapons industry,
- companies trading with companies from countries in which human rights are not respected.

In ecology they also use negative screening. They do not invest in companies involved in:

- nuclear energy,
- chemical industry (except soft chemistry),
- motor industry,
- air-base industry.

5.3. INDIVIDUAL INVESTMENT AND SHAREHOLDER ADVOCACY

Shareholder advocacy or shareholder activism is a way in which shareholders can claim their power as company owners to influence corporation behaviour. Shareholder advocacy consists of a dialogue with company management and with formal shareholder proposals, known as shareholder resolutions.

A few years ago the proposals about environmental programmes and key environmental indicators seemed very unrealistic. But business and business environment have changed. Today, such environmental proposals start to be a commonplace in business activities. Perhaps current proposals seem also too radical and unrealistic, but in a few years' time they may also start to be a common standard.

It should be pointed out here that a growing number of social investors are using their roles as corporate owners to advocate their issues in the company. Shareholders with social or environmental concerns can express themselves through a dialogue with a company management, a shareholder resolution or divestment. Also, some organisations use this opportunity to influence companies. For example, in March 2000, Greenpeace announced that it had acquired 4,400 shares of Royal Dutch/Shell.²⁰ This means that this organisation is also starting to go into a new role: shareholder advocacy.

The shareholder activism trend or the idea of proxy politics started in 1966. In that year Saul Alinsky helped to organise the black community against Eastman Kodak. The community group he assisted convinced the owners of 39,000 Kodak shares to sign over their proxies to it, in opposition to Kodak management. In the end, the company agreed to implement a minority-hiring program agreeable to the dissidents.²¹

Then, in 1968 and 1969, a group of young physicians – the Medical Committee for Human Rights – challenged Dow Chemical's production of napalm for use in Vietnam. The SEC ruled in 1969 that the groups of proxy's request 'that the company shall not make napalm' was not admissible under its rules governing the proxy statement. The Medical Committee went to court and persuaded, breaking the ground for other shareholders' proposals to come.

²⁰ Five top social investing stories of 2000. Internet, <http://www.socialfunds.com>.

²¹ Welsh, H.J. (1988, December). Shareholder Activism, Multinational Monitor, 12.

Again, in 1970 General Motors' Annual General Meeting (AGM), in the proxy resolutions, corporate responsibility at GM was questioned. Although that resolution received only less than 3% of AGM shareholders' votes, it was important, because it was so often discussed in the media. In the proxy resolutions corporate responsibility at GM was questioned. After that, a new kind of debates between shareholders, public and management of companies was initiated.

And then in 1985 resolutions about South Africa divestment policy started.

The success of a proxy resolution could be measured by how many times the resolution is voted. According to the US policy, 3% is required for the first-time resolution to qualify for resubmission in the following year, 6% if it is a second-year proposal and 10% if it is in the third year.

Initially, in 1988 nearly 95% of all the resolutions that came to votes were eligible for resubmission but now the situation is different and nearly all resolutions are voted at least once. Shareholder activists have a growing impact. What is most important, is that managers start to answer the questions of shareholders, even individual, small shareholders.

It can also result from the scandals in the US connected with Enron, Global Crossing, WorldCom, Quest, Tyco, and others, which in the end led to an increase of interest in shareholder activism. In 2002 nearly 712 resolutions were proposed in US companies, including 261 focusing on social issues. For example, in 2002 the following resolutions were voted at the AGM:

- Coca-Cola – increase container recycling,
- Eastman Chemical – report on cigarette filter health effects; report on greenhouse gas emissions,
- Exxon Mobil – obtain power supply from clean, renewable sources; preserve watershed from development,
- PepsiCo – increase container recycling; label gene-engineered food.

²² The face-to-face questionnaire on a nationwide representative sample of Polish citizens over 15 years old was conducted between August 3 and 5, 2002. It was a questionnaire conducted in a group of 1,017 people. The statistical error is +/- 3.1%, with confidence interval 95%.

²³ The telephone questionnaire about the opinion of stock investors was conducted between 30.07 – 12.08.2002 as a questionnaire of a random sample of 200 stock investors from Warsaw area. Those having shares comprised 86.5% sample. Although the results of the survey cannot be treated as representative they give a certain insight in the standpoints and opinions of the stock investor group.

6. POLISH PUBLIC OPINION ABOUT INVESTMENT – SURVEY 2002

6.1. INTRODUCTION

The results of researches presented below may serve as an introductory indication of the opinion of Poles on the topic of investing on the financial market and an introductory indication of the level of education among Polish society on investing. Among others the following problems are presented: what rights shareholders have from owning shares, readiness to participate in Annual General Meetings (AGM), what main factors are/would be taken into consideration by individuals in the process of making decisions about buying securities, the loyalty of shareholders as consumers, the readiness to take some SRI elements into consideration.

The questionnaire was conducted by **TSN OBOP – Ośrodek Badania Opinii Publicznej** (The Public Opinion Research Centre), on the basis of the Author's project and at her request. One of the questionnaires was conducted on a representative sample of Polish society,²² whereas another one was conducted on a random sample of 200 stock exchange investors from Warsaw area.²³ The surveys aimed at an introductory analysis of behaviour and preferences of potential individual investors in Poland as well as individual investors trading financial securities at the stock exchange.

The questions analysed are part of a wider survey **financed from the resources of The State Committee for Scientific Research (Komitet Badań Naukowych) in Warsaw and Nicholas Copernicus University in Toruń.**

Because a similar research has never been conducted in Poland, this one has a novelty character.

Moreover, another survey on a representative nation-wide sample of Polish society was conducted by **Centrum Badania Opinii Społecznej CBOS** (The Centre for Surveying Public Opinion).²⁴ The aim of the survey was to find out if

²⁴ The face-to-face questionnaire on a nation-wide representative sample of Polish citizens over 18 years old was conducted between April 5 and 8, 2002 in a group of 1,044 Polish citizens. The statistical error is +/- 3.1%, with confidence interval 95%. It is necessary to characterize briefly the respondents who took part in it. The percentage of people without any financial savings in this sample was as high as 81.2% (in the OBOP survey: 79.1%; both results are within the statistics error at the level of +/- 3.5%).

in the present difficult economic situation as well as at high unemployment the Polish are sensitive to certain elements, which are part of socially responsible investment. The results of the answers to this question, formed by the Author of the project, were quoted as the last results. The characteristics of respondents and ranges in which they were grouped were presented in three appendixes.

The questionnaires' questions were put in the simplest possible way so that they would be comprehensible for respondents from representative samples of society. This was necessary in order to conduct the survey at such a wide social range.

Due to the novelty of the research conducted it seemed that at this stage a high number of open questions in which respondents form their answers by themselves is more appropriate and reliable than closed questions.

6.2. SURVEY RESULTS

6.2.1. Shareholders' rights

Respondents were asked about their knowledge of rules they are entitled to as shareholders. The question was addressed both to respondents from the representative sample as well as stock investors. The collective answer is presented in table 14.1.

Table 14.1.
The range of answers to the question:
'What rights does a shareholder have thanks to owning shares?'

Specification	Percentage of answers	
	Nationwide sample (1,017 people)	Stock investors (200 people)
Participation rights in company profits, dividends	21.3%	58.0%
Share in managing company, attendance in the AGM	13.8%	42.0%
Possibility to turn shares on the stock exchange	7.1%	8.5%
You are a co-owner	3.8%	4.5%
A right to look inside in company financial situation	1.4%	1.0%
Participation in company losses	0.9%	—
I am not interested in it	0.5%	0.5%
Subscription rights	0.4%	—
Others	1.9%	3.0%
Shareholder does not have any rights	1.2%	9.0%
Hard to say	60.0%	4.0%

Note: Respondents could give more than one answer, therefore the total percentage is not 100.

The question asked was an open one in which possible answers were not implied. However, in the category 'others' the answers given were properly associated with shareholders' rights thanks to owning shares.

But an indication in the representative sample that a shareholder participates in company losses is an evidence for lack of knowledge about the essence of shares.

Analysing the range of answers to the questions a high diversity for 'hard to say' answer draws attention: 60% for the representative sample against 4% for the group of stock investors. Most often respondents in both groups indicated the fact that a shareholder has a right to participate in profits worked out by a company in the form of dividends and may take part in company management mainly through participating in the shareholders AGMs. Moreover, in the stock investors group as many as 9% respondents said that 'a shareholder had no rights'. The answer may result from the order of questions asked. The previous question asked in this group was: 'Do companies, in your opinion, look after small shareholders?'

When analysing answers from the point of view of the social range of respondents from the representative sample it can be stated that the knowledge of rights shareholders have is high among respondents at the age of 15-49 (over 45% of correct answers in the respective age ranges). However, the knowledge is low among respondents between 50-59 years of age (34%) and the lowest in the range of 60 years and over (only 21%). The highest percentage of correctly given answers was in the range of 30-39 years: 54%.

In addition, it can be noticed that the level of education clearly correlates with the knowledge of shareholders' rights. The percentage of correct answers within a given range of respondents grows with the level of education: 21% among respondents with primary education to 81% with higher education.

In the case of the analysis of respondents according to their place of residence the highest percentage of correct answers occurred among respondents living in towns with population of up to 20,000 (59% of answers in this range were correct) and in towns with population of 20,000-100,000 and over 500,000 (48% and 47% respectively). The lowest indicator of correct answers was among people living in villages: 30%.

When analysing respondents from the point of view of their socio-professional background, definitely the highest indicator of correct answers was in the range of managers and specialists: as many as 88%. The next ranges are pupils and students (59%) and entrepreneurs (56%). The lowest indicator was among old-age pensioners (24%) and the unemployed (30%).

Moreover, the percentage of correct answers increases with the increase of income per capita in a household (from 33% to 54%) and with self-assessment of financial situation (bad: 32%, good: 60%).

Shareholder rights are also better known by men than women (respectively 49% and 33% of correct answers within a given range).

6.2.2. Participation in Annual General Meetings

The question about readiness to participate in Annual General Meetings (AGM) is a consequence of questions asked earlier. Both groups of respondents were asked this question in the form of a closed question, but in a slightly different form resulting from the specifics of the groups analysed.

Table 14.2.

The range of answers to the questions: "If you were (are) a small shareholder, would you participate in Annual General Meetings?"
[question addressed to a nation-wide sample]
"Do you participate in AGM?" [question addressed to respondents from stock investors sample].

Specification	Percentage of answers	
	Nation-wide sample (1,017)	Stock investors (200)
Yes	31.4%	9.5%
No	19.1%	90.5%
Hard to say	49.5%	–

When analysing the results of answers obtained to this question, it can be observed that in the social cross-section of respondents from the representative sample women declare a lower inclination to participate in AGM than men (26% vs. 38% of positive answers).

Respondents in the range of 60 years of age and over declare the lowest inclination to participate in AGM (18%), and the highest is declared by young people in the bracket of 15-19 years of age (49%). Most respondents who declared lack of interest in participation in AGM were in the age bracket of 30-39 (27%).

Readiness to participate in AGM grows additionally with the increase of education: from 26% for respondents with primary education to 45% for those with university education.

Interestingly, the “no” answer was chosen by 16% respondents living in villages and as many as 27% respondents living in towns with a population over 500,000. Lack of readiness to participate in AGM decreases with the size of the place in which a respondent lives. Simultaneously, the greatest number of respondents choosing the “yes” answer were from towns with population of 20,001-100,000 (42%), and the smallest from villages (23%).

The greatest number of positive answers occurred in the range of managers and specialists (55%), and then pupils and students (48%). Moreover, the range of private entrepreneurs is interesting because the percentage of “yes” and “no” answers is similar (39% and 40% respectively). A similar situation occurs in the group of unemployed respondents but at a lower level (26% and 25% respectively).

Moreover, readiness to participate in AGM decreases with the level of self-assessment of financial standing from 42% (good) to 27% (bad).

As far the respondents’ income is concerned; analysis shows that the highest percentage of undecided persons appears in the range of respondents who earn the lowest income per capita in a household (55%). The highest percentage of “yes” indications appears in respondents earning between 401-700 PLN per capita (39%) and lowest in the bracket 251- 400 PLN (26%). In turn, the lowest indicator of readiness to participate in AGM, i.e. “no” answers, appears in respondents of the highest income per capita (over 700 PLN): 23% of respondents from this group chose the “no” answer. Most of all undecided respondents were from the group of the lowest income: 55% of respondents from this group chose the “hard to say” answer.

In the following question respondents were asked for a justification of their earlier answers. They are presented in the following two tables, with a division into the justification of positive and negative answers (see Tables 14.3. and 14.4.).

Respondents from the nation-wide group gave also the following justification for why they attended AGM:

- to know what assets they have at their disposal,
- care for my business,
- because I do not like racketeering,
- to get to know what money I will get,
- I want to know how they invest my money,
- to help poor children,
- to be sure that my stocks are in good hands,
- to take care of my own money, it is my business; I must take care of my own business,

- I would like to find out who will be on the board,
- in order not to be deceived.

Respondents from the individual investors group gave also the following justification why they attended AGM:

- I like being informed about everything,
- at AGM I can get information that will not appear in the press,
- I want to know more what is happening in the company more than the newspapers write,
- it is my duty as an employee,
- it is worth meeting those who manage and control the company in order to assess what they represent themselves,
- to spy the presidents' theft.

Table 14.3.
The range of answers to the question:
“Why would/do you participate in AGM?”

Specification	Percentage of answers	
	Nation-wide sample (319 people)	Stock investors (19 people)
To be acquainted with the financial condition of the company	31.6%	—
To take care of my own business	30.0%	—
To exert influence on the company performance	23.3%	63.2%
It's my right and duty	—	21.1%
I take part if I have a greater number of shares	—	10.5%
To have up-to-date information about the market	7.5%	—
To gain experience	5.1%	—
Because I already took part in this and I know what it looks like	2.6%	—
In order not to be with deceived	1.0%	—
Others	13.1%	5.3%
Hard to say	1.4%	—

Note: Respondents could give more than one answer, therefore the total percentage is not 100.

Although as far as the preceding question about for the readiness to participation in AGM is concerned a considerable percentage of persons chose the variant "I do not know", it should be observed that respondents from the representative sample who chose the answer "yes" (would be ready to take part in AGM) were able to justify it. The highest level of answers "It is hard to say", only just 10%, occurred only occasionally, in the range of persons earning 251-400 PLN.

Respondents from following groups justified their readiness to participate in AGM en bloc: 30-39 years of age, 50-59 years, and over 59 years of age, respondents with higher education, respondents living in towns of 20-100 thousand inhabitants and over 500 thousand inhabitants, managers and specialists, private entrepreneurs, workers, farmers, housewives, retired employees and pensioners, unemployed, respondents assessing her own financial situation as bad, respondents earning an income between 401-700 PLN and above 700 PLN per household.

Table 14.4.
The range of answers to the question:
'Why would you not like to attend Annual General Meetings?'

Specification	Percentage of answers	
	Nation-wide sample (194 people)	Stock investors (181 people)
I would have no influence on company decisions, my opinion would not count	47.9%	58.6%
I am not interested in it	14.1%	11.0%
There is no need	11.2%	–
I have no time or will	7.7%	18.8%
Because nobody keeps me informed about it	–	7.7%
I don't understand it	–	2.8%
Because of the costs related to participation	–	1.7%
Because I took part in it and I know what it is like	0.6%	–
Others	14.0%	4.5%
Hard to say	8.5%	0.6%

Note: Respondents could give more than one answer, therefore the total percentage is not 100.

Respondents from the nation-wide group gave also the following justification why they did not attend to AGM:

- I am no longer interested I – have shares, but I have no profits from them,
- I have no certainty that the truth will be told there,
- I do not know, what one should do with shares,
- waste of time,
- what for?; there is no need,
- let others go to meetings,
- in my opinion doesn't count, it's no use,
- because I would only be a listener.

Respondents from the individual investors group gave also the following justification why they did not attend AGM:

- formalities connected with registration are time-consuming,
- I have no time to play,
- I'm preoccupied with speculation, not investing,
- I do not believe I could do anything there, change anything,
- I am too old for that,
- I get information about the company from sources other than AGM,
- I'm not interested in internal affairs, only in shares,
- on account of fees,
- it's too expensive,
- the shares I have do not give me a right for that; I do not even know if such a small investor as I am may attend AGM,
- I haven't been invited there yet; if I am, then I will go; I have too few shares to be invited.

An analysis of the results obtained from the point of view of social cross-section of respondents from the representative sample indicates that they were often unable to justify their negative attitudes as far as their participation in AGM meetings was concerned. As many as 40% of respondents from the range of pupils and students could not give any reason, why they would not take part in AGM. In the group of young persons aged 15-19 it was 39%.

In the case of the most frequently given answer, i.e. "I have no influence on the decisions on the company", such a justification was given by as many as 64% of respondents from the range of persons with higher education, 58% respondents aged 20-29, managers and specialists (55%), private busi-

nesspersons (54%), as many as 70% of respondents with a good self-assessment of their financial standing and 61% of respondents from the range of persons with the highest income per capita in a household.

Very alarming, especially from the point of view of the financial market development, is a conviction that one has no influence on the company among well educated persons, persons occupying important positions or working in their own companies, persons earning good salaries.

Commenting on the results obtained, one should emphasise first of all lack of knowledge of procedures connected with participation in AGM. This is also distinctly visible in the group of stock investors. Simultaneously, half of the respondents in both groups think that their opinions in AGM would not matter. It should be pointed out that more than 90% of respondents from the stock investors group do not take part in AGM. However, more than 30% of respondents from the all-Polish sample expressed their readiness to participate in this body. This has undoubtedly an optimistic undertone.

6.2.3. Regard for small shareholders' interest

In both surveys respondents were asked to express their opinions if companies look after small investors' profits or not. The answers are presented in Table 14.5. The question was a so-called closed question, with a possibility to choose one out of three answers.

Table 14.5.
The range of answers to the question:
'Do companies, in your opinion, look after small investors?'

Specification	Percentage of answers	
	Nation-wide sample (1,017)	Stock investors (200)
Yes	6.1%	6.5%
No	38.0%	85.0%
Hard to say	55.9%	8.5%

In both groups the level of positive answers to the question is very low, at the level of only 6%. However, as many as 85% stock exchange investors were of an opinion, that companies do not look after small investors. This is a significant result. It shows a low level of culture present on the Polish financial market, lack of the so-called 'good practice', corporate governance.

But simultaneously this is a very important element in the process of gaining capital on the financial market. It seems then, that such a high level of lack of trust of stock investors in companies is not optimistic, especially on the present level of capital market development in Poland. These data are alarming.

An analysis of answer results to this question in the social cross-section of respondents from the representative group also delivers interested observations. The highest coefficient of positive answers, as many as 10%, occurred in respondents aged 30-39. Young people, in turn, evaluated most critically investor relations of companies: as many as 45% in this range were of the opinion that companies do not care for the interest of small stockholders. The lowest percentage of indications in both variants of answers were from persons aged 60 and more: 2.8% "yes" and 25% "no". In this range lack of opinion on this theme dominated, the highest in all groups: as much as 72%.

In turn in the case of an analysis of respondents in respect of education one can observe a distinct fall of percentage of indications "I do not know" occurring together with increased level of education (from 70% for primary education to 38% for higher education). Simultaneously, only 3% of respondents with primary education were of the opinion that companies take care of the interest of small shareholders. The highest percentage of positive indications: 9% occurred in the range of respondents with basic vocational education and 8% with higher education. Persons with the highest level of education gave most negative answers to this question: 54%.

As far as an analysis of respondents in respect of their place of residence is concerned, differences are not so distinct, with the exception of respondents living in the country. The answer "I do not know" was chosen by nearly half of respondents in every range (from 47%-51%), and the answer "no" by 41%-47% of respondents, with the exception of persons living in the country. In this range the answer "I do not know" was chosen by as many as 67% of respondents, and answer "no" by 28%.

An analysis of respondents in respect of belonging to social and professional group lack of answer "yes" by private entrepreneurs is surprising, but also characteristic in its significance. Respondents from this range clearly chose the answer "no": 67%. The highest percentage of positive answers occurred in the range of civil servants and of those employed in services: 12%, and then in the range of workers: 10%. In turn, the negative answer was chosen by respondents from the range of private entrepreneurs (67% mentioned earlier), and then managers and specialists: 56% and pupils and students: 50%.

Persons assessing their own financial situation as good chose the answer “yes” in 11%. Simultaneously, respondents from this range gave most answers “no”: 52%.

These relations are similarly with reference to the wealth of respondents. Respondents the highest income per capita in a household are relatively most divergent in their own estimations: there were 8% of “yes” answers and 43% of “no” answers.

Respondents were also asked for the reasons of their opinions. Chosen reasons are presented below, with a division into positive and negative answers and with a division into groups of respondents.

Table 14.6.

The range of answers to the question:

“Why, do you think, companies care for small stockholders’ interest?”

Specification	Percentage of answers	
	Nation-wide sample (62 people)	Stock investors (13 people)
Companies care for small shareholders, so that they buy as many their shares as possible, they are important for the company	38.2%	7.7%
Companies are profit-driven and small shareholders bring these profits	11.4%	–
Companies must respect the opinions of shareholders [owners]	10.4%	–
I am satisfied with the company whose shares I possess	–	7.7%
There are more small and medium-sized shareholders	4.6%	–
Companies have advantages from all shareholders, also from small ones	4.6%	–
Respondent knows this from his/her own experience because he/she is/was a small shareholder	3.2%	–
Because they want to gain a friendly attitude of small investors	2.6%	–
Because they pay dividends to their shareholders regularly	2.5%	–

Note: Respondents could give more than one answer, therefore the total percentage is not 100.

In addition, of the interesting answers justifying the opinion that companies care for the interest of small investors the following can be quoted:

1. all-Polish sample:
 - I do not know exactly, but there is logic in their care,
 - they are a development impulse for the company.
2. stock investors' sample:
 - I invest only in companies, which care,
 - I haven't heard they don't care, we have a good law.

The fact that among respondents from the representative group which said that companies cared for the interest of small shareholders, young respondents aged 15-19 found it most difficult to justify their opinions (37% of this range answered "hard to say" or "I do not know"), respondents with primary education (34%), respondents living in towns up to 20 thousand inhabitants and 100-500 thousand inhabitants (30% and 22% respectively), to learner respondents in the range pupils and students (34%), respondents with good self-assessment of their financial situation (23%), respondents with income per capita of 251-400 PLN (23%).

Table 14.7.

The range of answers to the question: "Why do you think companies do not care for the interest of small shareholders?"

Specification	Percentage of answers	
	Nation-wide sample (386 people)	Stock investors (170 people)
Small shareholders are not important for a company, only rich and significant shareholders, those with major blocs of shares	53.8%	41.3%
Companies care for themselves only, not for stockholders, a shareholder must care for himself	14.2%	1.2%
Companies do not communicate all information, do not inform fairly about their financial situation	4.6%	25.1%
Companies are dishonest and they deceive	—	9.6%
Small shareholders have no opportunity to make decisions about company affairs	4.3%	7.7%
Companies do not pay dividends or very few dividends	3.6%	18.0%
The respondent knows it from his/her own experience because he/she is/was small shareholder	2.7%	—

Note: Respondents could give more than one answer, therefore the total percentage is not 100.

In addition, of the interesting answers justifying the opinion that companies do not care for the interest of small investors the following can be quoted:

1. all-Polish sample:
 - because presidents “wheel and deal”,
 - big investors will not be deceived, but small are easily taken in,
 - because the poor are there to be used by the rich,
 - market situation proves that companies do not rely on the small e.g. entrepreneurs.
2. stock investors sample:
 - the small are treated as capital givers, as “cannon fodder”,
 - only a big one counts, someone who “can do harm to the board”, e.g. to remove from their posts; they respect these and favour them,
 - managers deceive, and the best proof is that so many of companies go bankrupt,
 - they write summons for themselves only,
 - they offer nothing more than necessary, and yet not always,
 - from articles in the press,
 - they do not keep prognoses.

Simultaneously, in the analysis of reasons for negative opinions by respondents from the representative sample on whether companies care for the interest of small shareholders, a very low percentage of answers ‘hard to say’ is noteworthy, that is to say failure to justify one’s negative opinion (from lack of occurrence of the answer “I do not know” to 10% of indications maximum). Only in one case, civil servants and employees of services, the answer “I do not know” reached 15% of the answers of respondents from this range.

This is an interesting observation, considering the fact that many more of persons were unable to justify their positive answers, even as many as 37% of respondents in a given range.

It should also be noted their own negative opinion was justified en bloc by respondents aged 15-19 and 50-59, private entrepreneurs, farmers, housewives, pensioners, pupils and students, unemployed, and also respondents earning 401-700 PLN per capita.

Commenting on the results obtained, one should notice that the percentage of answers from the all-Polish sample respondents who justified their opinion by their own experience, is on a level similar to both those who confirmed that companies care for the interest of small shareholders, and those of a different opinion. It was similar in the case of justifications by payment of dividends or

lack of payments. In the stock investors sample such an answer did not occur, because they answered just on the basis of their own experience.

For investors the answer to this question was also an opportunity to express their opinions about certain events on the market more widely. For example, some of them are quoted below.

- I observe a tendency to mistreat shareholders in favour of greater care for customers.
- even the best company goes bankrupt if it is mismanaged. At present companies are badly managed, have no “confidences in people”, and in effect “people in them”.
- information policy in companies is “poor”. For example, companies wait with the announcement of a prognosis till the last moment, and the reality is usually disappointing anyway.
- firstly companies themselves speculate with own shares, and secondly they communicate different information to different groups of investors in order to manipulate with the share price.
- what has been going on the stock exchange for the past few years, is a sheer fraud. Companies do not inform fairly; instead, they misinform to achieve their own advantage.

It seems that these opinions and observations can be commented briefly that investors are clearly disappointed. The best point, however, is a statement of one of the respondents: **there is logic in that a company cares for small investors.**

6.2.4. Factors taken into consideration when making investment decisions

Respondents from both groups were asked a question about three most important factors they would respect when buying shares or other securities. It was an open question. The results are presented in Table 14.8.

Respondents from the individual investors group enumerated also the following elements, which they consider when buying shares or other securities:

- other people’s opinions,
- the structure of the company board,
- sentiment towards a given company,
- share underprice,
- the importance of the company in the economy,

- co-operation with foreign companies,
- information from newspaper,
- specialist forecast,
- capital knowledge of the company,
- management system,
- tax-free profit,
- entertainment,
- I invest in bank shares because of a lower risk and a greater certainty of maintaining share value,
- market psychology (the respondent listed this factor 3 times),
- profits (the respondent listed this factor 3 times).

At the same time 2.0% sample did not respond to this question.

Table 14.8.

The range of answers to the request: 'Please list three most important factors you would respect when buying shares or other securities'.

Specification	Percentage of answers	
	Nation-wide sample (1,017)	Stock investors (200)
Trustworthiness and good financial condition of company	20.8%	46.0%
Interest rate and forecasted profit	15.1%	40.5%
Share price	12.6%	29.5%
Liquidity and security in share sale	—	16.0%
Economic situation on the market	—	15.5%
Prestige and popularity of company brand name	9.3%	14.0%
Sector of industry in which the company operates	1.9%	13.0%
Development strategy of company	2.9%	12.5%
Company share price over time	6.2%	11.5%
Fundamental analysis	—	7.5%
Technical analysis	—	6.0%
Amount of own financial resources	2.6%	4.5%
Financial situation in the country and abroad	0.3%	4.0%
Risk level	3.5%	—
Number of shares, size of issue	0.3%	3.5%
Patriotism, whether the company is Polish or not	0.1%	0.5%
P/E indicator	—	0.5%
Hard to say	59.6%	2.0%

Note: Respondents could give more than one answer, therefore the total percentage is not 100.

Respondents from the nation-wide sample also listed the following elements, which they respect when buying shares, or other:

- market stability,
- number of employees,
- the quality of company management,
- observation of behaviour of other market players (are they also buying),
- confidential and private information,
- what is the demand for the company products,
- share prices for 6 months,
- year of setting up the company,
- exchange rate of currencies,
- increasing company capital,
- availability of company's financial data,
- information from the press.

At the same time as many as 60% sample did not give any answer to the question.

The majority of answers given is included in the fundamental analysis. However, due to their indication by respondents they were quoted separately. In addition, it is possible to indicate the fact that the terms 'technical analysis' and 'fundamental analysis' were not mentioned even once by the respondents from the representative group. It is also worth noticing that as many as 60% respondents from the representative group did not indicate any factor they would respect when investing in securities. This is a surprising proportion. It would seem, then, that such economic categories as income or profit are generally known and considered.

It seems that it should also be noted that a few respondents indicated the factor whether the company is Polish or not as a factor they would take into consideration when buying securities. In the representative group the people who indicated the factor were men at the age range of 30-39, with secondary and college education, living in towns up to 20,000 inhabitants, unemployed, with their self-assessment of financial situation as bad, with income per capita in the range of 401-700 PLN. However, the fact that the respondents mentioned this factor themselves seems very interesting from the sociological point of view.

6.2.5. Shareholders' loyalty as consumers

On the capital market relations with investors and their satisfaction from the activity and adopted by a company are very important. The satisfaction of investors results then in a success of subsequent issues of bonds and securities, which directly influences the cost of capital acquisition and level of share price and, finally, the value of a company. Therefore, the aspect of loyalty to a shareholder as an investor and also as a consumer cannot be disregarded, because he generates additional, stable demand.

Another question asked referred just to certain loyalty and awareness of an individual investor and potential individual investor as a consumer.

One can assume that if a shareholder was a loyal consumer, chances are that he/she would also participate in shareholders' activism.

Table 14.9.

The range of answers to questions: 'At the moment of doing shopping, would you choose goods/services of the company whose shares you own?'
[question addressed to respondents from stock investors sample]

Specification	Percentage of answers	
	Nation-wide sample (1,017)	Stock investors (200)
Yes	55.6%	40.1%
No	11.9%	59.9%
Hard to say	32.5%	—

In the analysis owing to the social cross-section of respondents from representative sample, it is worth noticing that readiness to prefer goods and of services of a company at the moment of shopping was declared to the highest degree by respondents from the age bracket 50-59 (63% of positive answers vs. 8% negative, i.e. the difference is 55% points). The lowest percentage of positive answers appeared in the age bracket 20-29 (55%).

It is interesting to analyse respondents because of the level of their education. It can be observed that the higher the level of education, the higher the level of positive answers in each bracket (from 44% for primary education to 65% for secondary and higher education), but simultaneously the percentage of negative answers is also higher (from 6% to 22% respectively), but the percentage of answers 'hard to say' decreases (from 50% to 13% respectively).

The highest readiness to prefer products of the company whose shares they would possess, is shown by housewives (63% “yes” vs. 5% “no”), civil servants and employees of services (66% vs. 10% respectively) and managers and specialists (72% in the face 16% respectively).

Commenting on the results obtained it is worth pointing at the high level of awareness of shareholders as consumers: as much as 40%. The result obtained in the representative group was still higher. This may be an evidence of a high level of readiness and openness of Polish society to loyalty programmes, not only those offered to stockholders but also to consumers.

It is a very high percentage and denotes high awareness of an individual shareholder in Poland also as a consumer. It also indicates an occurrence of ties (probably both financial, and emotional) with the company whose owner (in part) one is. And also thanks to one’s shopping receipts from the sale of one’s company grow. Simultaneously, however, the high, as much 60% level of stock investors’ negative answers that they do not prefer products of the companies whose shares they have when doing shopping is striking. Undoubtedly, this problem should be examined.

For comparison, a similar research was conducted at the request of Paris Stock Exchange. On average, almost 42% of French shareholders buy products and services of the companies, whose shares they own, and 37% recommend them also to their friends and relatives. **Polish shareholders have an awareness as consumers similar to the French shareholders, they feel responsible for the future of ‘their’ companies and therefore support them in the way available to them – as buyers and consumers of products produced by ‘their’ companies.**

Table 14.10.

The range of answers to the question: ‘Would you recommend products/services of the company whose shares you would own to your friends/relatives?’ [question addressed to respondents from the nation-wide sample]

Specification	The percentage of respondents from the nation-wide sample (1,017)
Yes	55.6%
No	11.9%
Hard to say	32.5%

Another question was addressed to respondents from the representative sample. It referred to recommending products “of one’s own” company to the family and friends. The percentage of positive answers to this question tops surpasses that obtained in France. Nearly 56% of respondents would be ready to recommend goods and services of the companies they would be joint owners to their own families and friends. From the point of view of the companies this is the best group of consumers, who require the lowest outlays to be gained and maintained.

Analysing the answers of respondents from the representative sample from the point of view of its social cross-section one ought to note that the highest inclination to recommend goods to family and friends is demonstrated by young people in the age bracket of 15-19 years (63% of answer “yes” vs. 9% of answers “no”).

Like in the previous question, there is a distinct tendency here that the higher the level of education in either group, the higher the percentage of answers, both positive (43% of respondents with primary education vs. 68% with higher education), and negative (5% in vs. 18% respectively).

The highest differences between the “no” and “yes” answers occurred in the following social and professional groups: managers and specialists (76% of “yes” vs. 14% on “no”), housewives (50% vs. 3%), pupils and students (67% vs. 11%), civil servants and employees of services (62% vs. 9%).

The level of a certain type of loyalty seems very high in Poland. This is very promising, also from the point of view of initiation of loyalty programmes for customers, in which different discounts, rebates and prizes are offered.

6.2.6. Prospects of socially responsible investment in Poland

Among the elements of SRI which are taken into account in the world mainly are those which are listed in Table 14.11. Out of the elements are taken into account within SRI and which are not listed in the table below, the so-called principle of resistance from investing in ‘sinful branches’, which include such industries as tobacco, alcohol, gambling, pornography and weapons, should be indicated.

An increasing importance of the eco-ethical movements results the fact that it seemed important to ask respondents from a representative sample of Polish society a question if apart from financial criteria they would also be ready to consider other elements, except for financial, in the process of making

an investment decision. The question was asked in the closed form with the possibility of multiple choice in ranking the indicators.

At the same time, it should be noticed that in Table 14.8. respondents answers about factors they would take into account when buying securities are presented. Only one of the given elements was a non-financial factor. However, it is not included in the SRI criteria, i.e. patriotism.

Table 14.11.

The range of answers to the question: 'If you were a shareholder, what criteria would you take into account when making a decision about buying/selling shares of different companies?'

Specification	Whole (1,044)		Respondents with savings (193)	
	In the first place	Total	In the first place	Total
Testing products on animals	5.9%	9.5%	9.0%	12.5%
Attitude to the handicapped	22.9%	46.2%	17.1%	41.1%
Economic-financial (profit)	28.9%	47.7%	35.7%	58.9%
Supporting social initiatives	5.3%	30.5%	7.3%	33.8%
Environmental protection	7.1%	43.0%	8.0%	45.4%
Care for employees	16.7%	57.1%	14.6%	60.3%
Care for customers (e.g. reacting to complaints)	5.3%	36.4%	5.4%	39.0%
No opinion	7.8%	7.8%	3.0%	3.0%
Refusal to give an answer	0.1%	0.1%	0.1%	0.1%

Note: Respondents could give more than one answer, therefore the total percentage is not 100.

It seemed that the majority of respondents would choose the economic criterion as number one. It would be justified by the economic situation. However, the range of votes are very interesting: most, but only 29% of respondents chose profit, whereas as many as 23% of respondents indicated the attitude to the handicapped as the most important criterion which they would take into account when making a decision about investing in shares. Out of the criteria composing SRI presented for respondents' choice, a high importance is given to the care for employees, economic results, attitude to the handicapped and environmental protection. Moreover, what is interesting is a relatively low level of choosing care for the customer. Respondents definitely chose the criterion of testing products on animals as the one they would least often take

in to consideration in the process of making investment decision. These are interesting results, but they require further research.

Within the group of people with savings, answers and their gradation were a little different from those in the whole sample. Definitely, most respondents chose in the first place economic financial criteria as those, which they would take into account when buying shares of a company. But also in this group there is a high level of answers about the companies' attitude to the handicapped and care for employees. Also here, the lowest number of answers was given to the criterion of testing products on animals.

It is also important to analyse potential investment preferences of those who, in the first place, put profit as the criterion, which they would consider when making decisions about investing in shares. The number of those respondents was 302. In the second place they put care for employees (26%) and care for clients (19%). In parallel, as many as 52 respondents from that group did not choose the second and next criterion (17%) apart from the economic-financial one. Definitely, testing products on animals was not considered by the respondents as a crucial factor, which would be taken into account when making decisions about buying shares.

6.3. SUMMARY OF THE SURVEY RESULTS

Keeping in mind the fact, that investment accounts are being closed, it is optimistic to see that despite a bear market present at Warsaw Stock Exchange for a few years, new investment accounts are being opened and new individual investors start investing at the stock exchange. In the sample of 200 individual investors investing in the stock exchange, the number of those who opened investment accounts in 1991 and in 1992 was 39.²⁵ In 2001 and 2002, though, investment accounts were opened by 15 people.²⁶ At the same time, stock investors were of a different age. Within the group with investment accounts for the longest time the age range is 36-74 years. Among those who have opened an investment account in the last year and a half, the age range is 18-56 years.

Although the results of the survey should be treated with a big dose of reservation, and the survey conducted on a group of stock investors was not

²⁵ Which is a 20% sample.

²⁶ Which is a 8% sample.

conducted on a representative sample, however, even from this research a conclusion can be drawn that investing at the stock exchange is still gaining a great deal of interest and that new investment accounts are being opened by people of different ages. It seems that it is possible to be optimistic to some extent as far as prospects for investing in Poland through the stock market are concerned.

It should also be noted that some of the answers, especially from the group of stock investors, are very mature and indicate a high level of knowledge of the financial market, its mechanisms and also the knowledge of their rights as well as market practice.

However, the presence of a 40% group from the nation-wide sample who answer each question with 'it is hard to say' should not be left unnoticed. It seems necessary to continue educational activities about the knowledge of the financial market and its mechanisms.

Also potential individual shareholders seem ready to accept the implementation of certain elements of SRI and, in particular, the care for employees, environmental protection and the attitude to the handicapped.

It also seems reasonable to ask a question if the development of individual investments in Poland is at all important and necessary for our economy. It seems that the answer to the question is positive for the following reasons at least:

- it will strengthen the Polish capital market, both from the point of view of the liquidity of traded securities as well as their diversity due to an increase in demand,
- an increase in supply of the number of companies whose shares are traded on particular markets because of an increase in demand can be forecast,
- it will increase the participation of Polish society in the process of investing on the Polish capital market, which, in turn, will influence the reallocation of capital resources of Polish society and may also increase the level of savings in the state economy; it certainly is an important macroeconomic aim,
- may be an important part of the process of integration with the European and international financial market,
- it will make the protection of individual investors' interests easier,
- it would make a Warsaw Stock Exchange strategic alliance with another subject possible on more favourable conditions.

Summarising the perspectives of the development of individual investing in Poland it seems that an increased interest in investing at the stock exchange would be possible if share prices increased, there was a better economic situation and society had more financial resources. Also a change in society's negative perception of the privatisation process in Poland would be helpful.²⁷ At the same time, as results from the survey conducted, educational efforts concerning instruments of the financial market and the essence and operational rules of the stock exchange should not be neglected. Tax regulation would definitely have a significant importance for increasing investments at the stock exchange.

As more important factors slowing down and making the increase of the participation of Polish society in the capital market impossible, the following can be listed:

- lack of sufficient trust in companies whose shares are traded at the stock exchange,
- lack of sufficient trust in capital market, its institutions and mechanisms,
- lack of sufficient knowledge of operating market principles,
- relatively low level of knowledge.

7. CONCLUSION

Concluding, the article shows that ecological criteria influence investment preferences of some part of individual investors. It seems that among the commonly used parameters of financial transactions the fourth factor will be taken into account, i.e. the influence of financial transactions on the environment, probably together with others non-economic parameters from ethical range.

²⁷ The results of the CBOS survey conducted periodically, indicate that privatization, in society's opinion, is an unfair process, in which the interest of the economy and society are overlooked to the advantage of the foreign capital. For example in August 2000 CBOS asked the question: **'Who took the highest advantage of privatization?'** The highest result was in the answer 'swindlers and dodgers' (53%), then 'foreign capital' (46%) and administration officers taking part in the process of privatization' (40%), which implies a conviction of gaining financial advantages by those who were not entitled to. In turn, in the opinion of Polish society, **those who lose most from privatization** are: 'the majority of citizens' (78%), 'Polish economy' (57%) and 'employees of the privatized companies' (55%). Thus, unfortunately, a negative perception of privatization by society does not help to create a modern, strong and stable capital market in Poland; see: Opinie o przemianach własnościowych oraz obecności kapitału zagranicznego w polskiej gospodarce, CBOS, August 2000, Internet, <http://www.cbos.com.pl>.

It also seems that, among others, pro-ecological behaviour of individual investors will result in future in the competition between companies not limited down to prices, costs or quality. The issue of environmental protection will also be used for gaining support from customers, shareholders and bondholders.

The Poland's case shows that Poles are ready to take into account some of the eco-ethical criteria in their investment decision process, especially the company attitude to the handicapped, care for employees and environment.

It should be pointed out here that in a different research conducted in Poland in 2000 by Demoskop 55% of Polish respondents indicated that environment pollution resulting from human activities would lead to destruction of mankind in the 21 century. At the same time 72% of respondents believed that the ozone hole would cause health problems of many people in the years to come. Such a high level of answers in a situation when in Poland there is a high level of unemployment and difficult economic situation shows that environmental protection is an important and recognised topic.²⁸

²⁸ Świadomość ekologiczna Polaków. (2000). Warsaw: Demoskop.

APPENDIX 1.
The characteristics of respondents from the representative sample (1,017 people)
- research done by TSN - OBOR

Sex		Age (years)		Education		Place of residence		Socio-professional group		
		15-19	20-29	Elementary	Vocational	Village	Towns up to 20,000	Managers & specialists	Private entrepreneurs	
Female	52%	10.5%	19.5%	27.2%	26.2%	Towns 20,000-100,000	36.9%	7.0%	3.1%	
Man	48%	15.7%	19.6%	33.2%	33.2%	Towns 100,001-500,000	20.0%	10.1%		
		31-40	41-50	University level	12.5%	Towns over 500,000	18.9%	10.8%		
		51-60	over 60				11.8%	5.3%		
								5.7%		
								31.1%		
								12.4%		
								14.5%		
Household income per person		Self-assessment of wealth position								
		Up to 250 PLN	47.2%	Good		11.5%				
		251 - 400 PLN	14.4%	Average		61.9%				
		401 - 700 PLN	18.8%	Bad		26.6%				
Over 700 PLN	19.6%									

APPENDIX 2.
The characteristics of respondents from the stock exchange investors sample (200 people)
- research done by TSN - OBOR

Sex		Age (years)		Education		Ways of making financial transactions		Years of opening investment account in brokerage house	
Female	33%	18-20	0.5%	Elementary	1.5%	In person	72.5%	1991	13.7%
Man	67%	21-30	15.0%	Vocational	3.0%	By phone	55.0%	1992	5.5%
		31-40	22.0%	Secondary	42.0%	By Internet	23.5%	1993	9.5%
		41-50	30.5%	College	9.0%	Other ways	1.0%	1994	13.7%
		51-60	21.5%	Graduate	2.0%			1995	10.0%
		over 60	10.5%	Post-graduate	42.5%			1996	8.9%
								1997	10.0%
								1998	7.4%
								1999	5.8%
								2000	7.4%
								2001	4.7%
								2002	3.2%

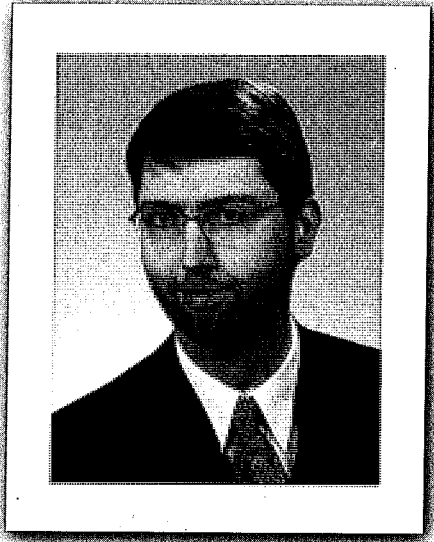
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CHAPTER 15

**GOOD MONEY,
GOOD INDICES, GOOD RETURNS**



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1. SOME FUNDAMENTAL ISSUES TO AGREE ON

Socially responsible investing has been enjoying more and more interest from the media, academics and investment community over the past quarter of a century. What started as a kind of activists driven initiative, has been institutionalised in the form of ethical funds and stock indices. The first ethical mutual fund (Pax World Fund) was created in 1971. Fifteen years later the first ethical fund was created in the U.K. (Friends Provident Stewardship Fund). Now in the US alone, fifty-four socially responsible mutual funds have been created and the amount of money invested on the basis of social or ethical criteria exceeds 1.5 trillion USD worldwide¹.

Moreover, studies clearly indicate that the significant proportion of the public is expecting their money to be invested in businesses obeying ethical rules, which is a promising sign for the future of providers of socially responsible investment instruments. A recent study of more than 25,000 respondents from 23 countries on six continents has led to the following conclusions²:

- in forming impressions of companies, the focus on corporate citizenship is placed ahead of either brand reputation or financial factors,
- two in three respondents want companies to go beyond their role of making a profit, paying taxes, employing people and obeying laws – they want companies to contribute to broader goals of the society as well,
- more than one consumer in five admit either rewarding or punishing companies based on their perceived social performance.

¹ Vogel, D. (2002, August 20). Business Ethics Should Begin at Home, Wall Street Journal.

² EnviroNics International's worldwide 1999 Millenium Poll. Available at: Internet, http://www.oldgrowthfree.com/public_support.html.

Despite much publicity given to social and environmental issues in business, there is still a lack of agreement on what is moral, ethical and socially responsible in business. One of the reasons for this lack of consensus stems from the fact that social responsibility, as it is understood now, entails a number of loosely related issues such as: environmental issues, human rights (with particular emphasis on children labour), relationships with employees, local communities and shareholders, animal testing, etc.

Probably the best approach to assess ethical profile of a company is to look at all these areas separately. Although, it is difficult to meet highest standards in all the areas mentioned above, there is a perception that overall ethical/social profile of companies classified as socially responsible appears to be higher than the average.

Social dimension to business has been well recognised for a number of years: Peter Drucker in his *Concept of Corporation*, saw large business as “a social structure that brings together human beings in order to satisfy economic needs and wants of a community”³. Despite social dimension to business activity, development of the world economy creates an irresistible impression that maximising shareholder value has always been diminishing the social functions of businesses.

Historically, business behaviour which had some ethical aspect to it very often had really little to do with morality. As Richard Donkin mentions⁴, in the 18th century spinning mill owners created incentives to their employees providing houses sometimes supplemented by farm stock. At first, only children and women worked in the mills while men maintained their independence as self-employed weavers. Some manufacturers such as Titus Salt in Bradford and George Pullman in Chicago created mill communities with shops and churches in an effort to influence employees’ moral development. Nevertheless, it seems obvious that looking after various social and spiritual needs of employees and their families and supporting local communities was only a way of increasing productivity which was the ultimate objective of business owners rather than a desire to be perceived as an ethical business.

The 20th century industrialisation in former communist countries had some similar features: the whole cities with shopping centres, leisure amenities, hospitals, cinemas etc. were created around big factories with the only

³ Drucker, P. (2002, March 22). *Concept of a Corporation*, 1946. In: R. Donkin (Ed.), *Paternalism gives way to short-termism*, Financial Times.

⁴ Donkin.

difference being communist ideology supposed to replace churches in moral development of employees. Both instances are questionable from the ethical point of view: the first one was driven by the sheer strive to maximise profits whereas the latter was driven by the ideology, which was at the very foundation of totalitarian regimes.

More recently, the story of some corporations which have been labelled unethical and punished for shortfalls in some of the “ethical” areas named above, were receiving prizes for outstanding achievements in other areas. Let us look at the most striking examples.

Enron was long regarded as an exemplary corporate citizen⁵. The firm was a generous supporter of community institutions in Houston. The company lobbied the Bush administration in favour of an international agreement to address global warming in expectation that it would be able to create a market for carbon trading. Indeed, the company pleased many environmentalists with its investments in alternative energy.

Merck, a drug company, recently criticised for misreporting some revenue, received a prestigious award in 1991 from the Business Enterprise Trust (established to recognise exemplary corporate social performance). It was honoured for its decision to develop and distribute a drug effective against river blindness that threatens 85 million of the world’s poorest people. Since 1987, Merck has been distributing this medicament free of charge to all international aid agencies at an annual cost of USD 100 million.

Xerox has recently paid 10 million USD to settle a civil suit filed by the U.S. Securities and Exchange Commission accusing it of misstating profits by almost 3 billion USD over the period of four years. Yet, Xerox has also been a recognised international leader in environmental management, pioneering a programme that recycled its copy cartridges as well as the copier itself.

Finally, Arthur Andersen in the 1980s provided substantial funds to promote teaching of ethics in business schools throughout the U.S.

Do these examples mean that we should forget about ethical behaviour in business altogether? I think that socially responsible investing is still at its very early stages of development and we will probably see even more scandals involving companies having a good reputation for ethical behaviour. This, however, can not undermine an overall positive impact of SRI rules on the

⁵ This example as well as the these of Merck, Xerox and Arthur Andersen come from: Vogel.

development of business ethics over the past 25 years and benefits for societies are clearly visible.

So, what criteria should be used by investors who would like to invest their money in businesses, which follow ethical rules? Next chapter will present an overview of various views on how to tell the difference between an ethical business and an unethical one.

2. SELECTION CRITERIA

Expectations of investors who want to invest their money in ethical business are high and the universe for ethical business rather limited. Ben Sills has quoted an interesting story, which presents this dilemma⁶. The story is as follows: Greger Hart, President of Swedish consulting firm Etik Analytikerna, is posing the question on how to define ethical investments universe to a group of conference delegates.

“Take the whole of the developed world and remove all the tobacco companies – that’s about 3%,” he says. “And all alcohol.” That raises an eyebrow from delegates, but Hart goes on: “Take out atomic, biological and chemical weapons, and pornography. Okay? Now get rid of child labour, poor union recognition and poor environmental records.” That’s more than 20% of the market struck off, and he hasn’t finished yet. “Conventional weapons?” Out they go. Hart smiles to himself as the developed world market shrinks in his hands. “Bribery, sexual discrimination, racial discrimination?” Gone. “And sweatshops, unfair wages, forced labour.” Hart stands back, pleased with his work. Less than 20% of the developed world market remains. As Sills concludes, not much is left for the ethical investment universe.

Some sources quote as many as 16 various ethical issue areas, which can be applied in the process of assessment of companies’ ethical profile⁷. A variety of views on what is ethical and what is not almost asks for a question: Would anybody survive if to apply all the criteria that various groups of society consider to be ethics-related?

⁶ Sills, B. (2001). Moral Guidance, *Global Investor*, 145.

⁷ For example, Investor Responsibility Research Centre lists the following 16 areas: alcoholic beverages, animal testing, board diversity, contraceptives & abortifacients, defence contracting, environment, fair employment, firearms, gambling, human rights, labour relations, “maquiladoras”, Northern Ireland, nuclear power, tobacco, weapons production. For more details, see: Internet, <http://www.irrc.com>.

2.1. INVESTMENT POLICIES

The common feature of majority of bodies setting selection criteria for their portfolios and indices is pragmatism. As it seems to be almost impossible to satisfy everybody's views on ethics, some compromises and trade-offs are necessary. Ritchie Lowry from Boston College has defined five strategies, which can be applied in the investment process, taking into account social and environmental issues⁸, namely:

- all-or nothing,
- proportionate impact,
- best of industry,
- primary versus secondary involvement,
- actual versus potential problems.

I. All-Or-Nothing

This strategy involves the most stringent social screening – no investment connections to companies with bad environmental records, that use animals in product testing, that have a connection to the nuclear-power industry, etc. Since this strategy is so exclusive, it is sometimes difficult to apply. For example, some industries such as pharmaceuticals are inherently environmentally polluting, and an absolute screen would lock out some investment opportunities in companies that have been in the vanguard of dealing with this problem (Johnson & Johnson and Merck & Company). Such companies as Procter & Gamble have made a serious attempt to radically reduce the number of animals used in the testing of products but argue that tests on rats and mice are still necessary in order to protect humans who may accidentally misuse a product. Recently, P&G has announced that it had discovered an adequate alternative to animal testing and would be sharing it with others through the Johns Hopkins Centre for Alternatives to Animal Testing. However, in spite of these limitations, a limited number of absolute social screens can be applied successfully. During the years that both individual and institutional investors avoided investments in any companies doing business with or in South Africa, research indicated no evident impact on portfolio return, when the performance of screened portfolios was compared to the performance of unscreened portfolios over time.

⁸ Lowry, R.P. Some Simple Steps & Strategies For SRI. Internet, <http://www.goodmoney.com>.

II. Proportionate Impact

Some socially concerned investors deal with the problems inherent in absolute screening by using the strategy of proportionate impact. This strategy is based upon the axiom that for every action there is an equal and opposite reaction. There is some price to be paid for industrial production, so the real question is "what price in comparison to other alternatives?" This strategy is most evident in environmental screening. For example, when Magma Power (now merged with CalEnergy) was developing geothermal energy fields in Northern California, there were hundreds of small earthquakes a day. The company tried to combat this by recycling used water back underground. In addition, drilling releases gases such as hydrogen sulphide that can be harmful to plants, animals and humans. However, the Magma fields were located in a desolate and unpopulated area inhabited essentially by rattlesnakes. Furthermore, dangerous emissions from geothermal exploration are insignificant when compared to emissions from some other forms of energy exploration and use. The proportionate impact strategy can also be applied to other screens. During the years of South African divestiture, some socially concerned investors were willing to invest in companies doing business in South Africa so long as the company record for equal employment opportunities was excellent, the products and services supplied by the company did not have a direct connection to the maintenance of the apartheid system, and/or the community policies of the company were directed toward the elimination of apartheid. Similarly, funds that screen for military sales and contracting, such as Pax World Fund, often use a proportionate screen (for example, no more than 5% of gross sales from defence contracts) so as not to exclude companies that sell food to the army.

III. Best of Industry

This strategy involves a kind of a free market model where companies within the same industries compete with one another for the best records on a variety of social issues (for example, environmental awareness and the best records for the recruitment, training and promotion of women and family-friendly practices). There are a variety of sources that rank *the best* companies on various social issues. The Council on Economic Priorities (CEP) annually gives awards in a number of categories to companies with especially outstanding policies. In 1993, CEP gave first place *Corporate Conscience Awards* to The Clorox Company for community involvement with youth, Pitney Bowes for equal employment opportunity, and Merck & Company for responsiveness to employees. In the last several years, books have been published that describe

the most family friendly companies and the best companies for women, the best companies to work for, the best companies for African Americans and other minorities, and the best companies for gays and lesbians.

IV. Primary Versus Secondary Involvement

This strategy requires investors to decide whether or not they are concerned if an investment has a secondary involvement with a social problem. It involves asking how far back in the industrial process one wants a particular social screen to go. For example, is it acceptable if a coal utility purchases coal from a mining company with a bad environmental record? The so-called *hamburger connection* is an example of this strategy. Fast-food companies, such as Burger King, have been criticised for purchasing beef from around the world. The problem is that vast amounts of rainforest land are being cleared to provide range land for cattle. The clearing not only destroys thousands of potentially valuable plants and animals, but it also contributes to the greenhouse effect. In addition, slash-and-burn clearing adds pollutants to the air. In contrast to the usual pattern, McDonalds' outlets in the U.S. use only beef purchased from ranches in the American Southwest.

V. Actual Versus Potential Problems

The final strategy involves investors in deciding whether to exclude investments with potential social problems as well as those with actual problems. For example, because a utility has a good and safe record for operating nuclear power plants (New England Electric System), it does not negate the fact that this technology still entails major environmental risks. A 1992 study by the Environmental Action Foundation and the Energy Conservation Coalition estimated that the spent fuel generated by the nuclear industry without any new reactors would total 75,100 metric tons by the year 2020. There is currently no place to put that much radioactive nuclear waste.

Some examples of how the idea of socially responsible investment has been put in action in the form of investment funds and indices are described below.

2.2. GOOD MONEY⁹

Good Money created and monitors on a regular basis performance of two indices: Good Money Industrial Average (GMIA) and Good Money Utility Average (GMUA). These indices have been monitored over more than quarter of a century. Both consist of over 20 companies each, coming from, respectively,

24 and five industries. Both indices have been created in order to monitor performance of stocks of companies obeying certain environmental rules against Dow Jones Industrial Average and Dow Jones Utility Average, where not all companies declare their interest in following SRI rules.

2.3. DOMINI 400 SOCIAL INDEX¹⁰

The Domini 400 Social Index is the nation's first socially and environmentally screened index. It was created and launched in May 1990 by the social research firm of KLD Research & Analytics, Inc. (formerly Kinder, Lydenberg, Domini & Co., Inc.) in order to serve as a benchmark for social investors, and to determine how social screens affect financial performance. The Domini Social Equity Fund was launched in 1991 to provide investors with an opportunity to invest in a portfolio based on the Index. The Index is maintained by KLD. It is composed of the common stocks of 400 companies that meet the social criteria.

To construct the Index, KLD first applied to the S&P 500 a number of traditional social screens. Roughly half of the S&P 500 companies qualified for the Index in this initial screening process. Approximately 150 non-S&P 500 companies were then added with two goals in mind. One goal was to obtain a broad representation of industries, so that the Index would more accurately reflect the market available to the socially responsible investor. Another goal was to identify companies that are particularly strong models of corporate behaviour. KLD maintains an extensive database of corporate accountability information on more than 4,000 publicly traded companies and bases its decisions on research into the following factors:

- I. **Exclusionary Screens:** KLD seeks to exclude the following types of companies from the Index:
 - **Tobacco and Alcohol** – companies that manufacture tobacco products or alcoholic beverages;
 - **Gambling** – companies that receive identifiable revenues from gambling enterprises;

⁹ Detailed description of Good Money indices as well as changes which have been made over the past quarter of a century are described at Internet, <http://www.goodmoney.com>.

¹⁰ Prospectus (2001, November 30). Domini Social Equity Fund. Domini Social Bond Fund, pp. 18-21.

- **Nuclear Power** – companies that have an ownership share in, or operate, nuclear power plants; and
 - **Weapons** – companies that manufacture firearms or receive more than 2% of their gross revenues from the sale of military weapons.
- II. **Qualitative Screens:** KLD considers the following criteria when evaluating companies for a possible inclusion in the Index and may exclude companies based on poor performance in these areas:
- **Environmental Performance** – the company's record with regard to fines or penalties, waste disposal, toxic emissions, efforts in waste reduction and emissions reduction, recycling, and environmentally beneficial fuels, products and services;
 - **Employee Relations** – the company's record with regard to labour matters, workplace safety, employee benefit programmes, and a meaningful participation in profits either through stock purchase or profit-sharing plans;
 - **Diversity** – the company's record with regard to the hiring and promotion of women and minorities, particularly to management positions and the board of directors, including the company's record with respect to the availability of benefit programmes that address work/family concerns, innovative hiring programmes for the disabled and progressive policies toward gays and lesbians;
 - **Citizenship** – the company's record with regard to its charitable activities and its community relations in general, including its relations with indigenous people; and
 - **Product-Related Issues** – the company's record with regard to product safety, marketing practices, and commitment to quality.

2.4. AQUINAS FUNDS

Aquinas is an example of investment fund with a strong religious profile. Its family of mutual funds has two missions; to achieve its investment objectives and to promote Catholic and family values as outlined by the National Council of Catholic Bishops' investment guidelines. Aquinas shareholders share the same investment goals as investors in other mutual funds. The Fund believes that its auxiliary mission, to support Catholic and family values, represents a positive addition and motivation for a socially minded investor.

The Funds follow a policy of socially responsible investing understood here as screening issuers for policies on issues including abortion, contraceptives, weapons of mass destruction, gender and race discrimination, human rights,

economic priorities, environmental responsibility, fair employment practices and tobacco. The Funds may invest in a company whose policies on these issues do not satisfy the adviser's criteria. In such event, the Funds will attempt to change the company's policies or activities. If the Funds are unable to engage in positive dialog, or are unable to make a reasonable progress toward their goals with respect to these issues, they will exclude the company from their portfolios.

2.5. DOW JONES SUSTAINABILITY INDICES¹¹

The Dow Jones STOXX Sustainability Indices track the European sustainability leaders. The DJSI STOXX components are the leading 20% of the Dow Jones STOXX 600 Index. A regional subset – the DJSI EURO STOXX – derived from this benchmark covers the sustainability leaders in the Eurozone. Furthermore, for both indexes specialised subsets are available that exclude companies of the tobacco, alcohol, gambling, armaments and the firearms industry. The Dow Jones STOXX Sustainability Indexes are the following:

1. Regional Indices:

- Dow Jones STOXX Sustainability Index – DJSI STOXX,
- Dow Jones EURO STOXX Sustainability Index – DJSI EURO STOXX.

2. Specialised Indices:

- Dow Jones STOXX Sustainability Index – DJSI STOXX excludes Alcohol, Gambling, Tobacco, Armaments and Firearms,
- Dow Jones EURO STOXX Sustainability Index excluding Alcohol, Gambling, Tobacco, Armaments and Firearms,
- DJSI EURO STOXX ex All.

The Dow Jones Sustainability World Indices (DJSI World) track the performance of companies that lead the field in terms of corporate sustainability – on a global basis. All indices of the DJSI World family are assessed according to the same corporate sustainability methodology and respective criteria.

The Dow Jones Sustainability World Indices (DJSI World), consist of a composite index and five narrower, specialised indices excluding companies

¹¹ More information available at: Internet, <http://www.sustainability-index.com>. An analysis of the Dow Jones Sustainability Indices also included in: Cerin, P and Dobers P (2001). What Does The Dow Jones Sustainability Group Index Tell Us? Eco-Management and Auditing, 8, available at: Internet, <http://www.dobers.se/EMA01.pdf>.

that generate revenue from alcohol, tobacco, gambling, armaments & firearms or all of these industries:

- Dow Jones Sustainability World Index excluding Alcohol,
- Dow Jones Sustainability World Index excluding Tobacco,
- Dow Jones Sustainability World Index excluding Gambling,
- Dow Jones Sustainability World Index excluding Armaments & Firearms,
- Dow Jones Sustainability World Index excluding Alcohol, Tobacco, Gambling, Armaments & Firearms.

This set of indices was first published on September 8, 1999.

2.6. FTSE4GOOD¹²

FTSE4Good is the most recent from the initiatives discussed in this article. Although this family of ethical indices has been only recently launched, it has received a positive response from investment community and has already made socially responsible investment more popular.

For inclusion in FTSE4Good, companies need to satisfy criteria based on three principles:

- working towards environmental sustainability – Environmental Criteria,
- developing positive relationships with stakeholders – Social and Stakeholder Criteria,
- up-holding and supporting universal human rights – Human Rights Criteria.

The companies excluded from the indices are those that have been identified as having business interests in the following industries¹³:

- tobacco producers,
- companies manufacturing either parts for, or whole, nuclear weapons systems,
- companies manufacturing whole weapons systems,
- owners or operators of nuclear power stations,
- companies involved in the extraction of uranium.

¹² All the information included here come from Internet, <http://www.ftse4good.com>.

¹³ For the purpose of this article I will focus on the environmental criteria only. Full set of criteria relating to social & stakeholder and human rights issues has been described on Internet, <http://www.ftse4good.com>.

Companies who qualify for inclusion into indices have been categorised by the impact they make on the environment into the following categories¹⁴:

- **high impact industries:** agriculture, air transport, airports, building materials & quarrying, chemicals & pharmaceuticals, construction, major system engineering, fast food chains, food, beverage & tobacco, forestry & paper, mining & metals, oil & gas, power generation, road distribution and shipping, supermarkets, vehicle manufacturing, waste and pest control,
- **medium impact industries:** DIY & building supplies, electronic & electrical equipment, energy & fuel distribution, engineering & machinery, financials not elsewhere classified, hotel, catering & facilities management, manufacturers not elsewhere classified, ports, printing & newspaper publishing, property developers, retailers not elsewhere classified, vehicle hire, public transport,
- **low impact industries:** Information Technology, media, consumer & mortgage finance, property investors, Research & Development, leisure not elsewhere classified (gyms and gaming), support services, telecoms, wholesale distribution.

Depending on the industry, companies are supposed to meet the following entry criteria, which were presented in Table 15.1.

The criteria for each of the three categories include the following:

For policy:

- a) core indicators:
 - policy refers to all key issues,
 - responsibility for policy at board or department level,
 - commitment to the use of targets,
 - commitment to monitoring and audit,
 - commitment to public reporting.
- b) desirable indicators:
 - globally applicable corporate standards,
 - commitment to stakeholder involvement,
 - policy addresses product or service impact,
 - strategic moves towards sustainability.

¹⁴ Based on the EIRIS classification. For more information on these classifications are to be found at Internet, <http://www.eiris.org>.

Table 15.1.
Criteria for inclusion into FTSE4Good index.

	High impact companies	Medium impact companies	Low impact companies
Policy	Policy must cover the whole group and either meets all five core indicators plus at least one desirable indicator, or four core plus two desirable indicators.	Policy must cover the whole company and meet at least four indicators, at least three of which must be core.	Companies must have published a policy statement including at least one commitment indicator.
Management	If environmental management systems (EMS) are applied to between one and two-thirds of company activities, all six indicators must be met, and targets must be quantified. If EMS are applied to more than two-thirds of company activities, the company must meet at least five of the indicators, one of which must be documented objectives and targets in all key areas. ISO certification and EMAS registrations are considered to meet all six indicators and are assessed on that basis.	EMS must cover at least one third of the company and meet at least four indicators. If less than one third coverage, must have six indicators, including quantitative objectives and targets. ISO14001 certified or EMAS registered systems are considered to meet all six indicators.	No requirement
Reporting	Report must have been published within the last three years, cover the whole group, and meet at least three of the four indicators. Corporate reports which do not cover the entire global operations of the listed company must meet all four core indicators, Or three core indicators together with two desirable indicators.	No requirement	No requirement

Source: Internet, <http://www.ftse4good.com>.

For management:

- presence of environmental policy,
- identification of significant impacts,
- documented objectives and targets in key areas,
- outline of processes and responsibilities, manuals, action plans, procedures,
- internal audits against the requirements of the system (not limited to legal compliance),
- internal reporting and management review.

For reporting:

- a) core indicators: — text of environmental policy,
— description of main impacts,
— quantitative data,
— performance measured against targets.
- b) desirable indicators:
 - outline of a EMS,
 - non-compliance, prosecution, fines, accidents,
 - financial dimensions,
 - independent verification,
 - stakeholder dialogue,
 - coverage of sustainability issues.

Full listing of FTSE4Good Europe and FTSE4Good Global Index and FTSE4Good Europe Index is presented in appendices¹⁵.

2.7. EIRIS¹⁶

The Ethical Investment Research Service (EIRIS) was set up in 1983 with the help of churches and charities which had investments and needed a research organisation to help them put their principles into practice. EIRIS has played a vital role in assisting FTSE with their works on FTSE4Good.

EIRIS has made an effort to create a number of ethical indices based on various criteria¹⁷ in order to examine the relationship between ethically screened universes and financial performance compared with that of an unconstrained universe, the FTSE All-Share Index. In order to reflect the diversity of criteria used by ethical investors and the different approaches they apply to define their universe of ethical stocks, five different indices have been created. The constituents were defined by applying the selected ethical criteria to EIRIS research database and the index calculation was then done. The ethical criteria and constituents were not revised in light of the performance data; the results presented below are for the original indices devised. The universe of companies from which the constituents of the

¹⁵ Internet, <http://www.ftse4good.com>. Accessed June 2002.

¹⁶ Information on EIRIS comes from the organisation's website: Internet, <http://www.eiris.org>.

¹⁷ This study is described in: Havemann, R. and Webster P. (1999). Does Ethical Investment Pay?, EIRIS.

following ethical indices have been drawn is the FTSE All-Share Index excluding the Investment Trusts sector¹⁸. EIRIS indices are described below.

2.7.1. The charities' avoidance index¹⁹

This index is based on the ethical criteria a number of charities commonly use for selecting investments. Some of these charities use additional criteria in other areas. The index excludes companies identified by the following activities:

- alcohol or tobacco production or gambling (>3% turnover),
- alcohol or tobacco sale (>10% turnover),
- military involvement (sale or production of strategic goods or services for military users including weapons),
- pornography (publish, print or wholesale magazines containing pornographic material or distribute cut 18 certificate films or videos).

In May 1999 this index included 534 companies which represented 56% of the FTSE All-Share Index by market value. Compared with the FTSE All-Share the Charities' Avoidance Index is overweight in consumer goods and utilities and underweight in resources and general industrials.

2.7.2. The environmental damage avoidance index²⁰

This index excludes companies identified as creating environmental damage of most concern to EIRIS clients. Criteria were selected from each environmental area on the basis of use by EIRIS clients and seriousness of environmental damage. This index excludes any companies from the FTSE All-Share Index which are identified by selected criteria under the following headings:

- greenhouse gas production,
- intensive farming,
- nuclear power,
- supply and use of ozone depleting chemicals,
- manufacture and marketing of pesticides,

¹⁸ Investment Trusts were not included because of the difficulty in tracking the ethical status of their underlying investments.

¹⁹ Havemann and Webster 15-16.

²⁰ Havemann and Webster 16-17.

- pollution convictions (general pollution and water pollution),
- PVC manufacture,
- road building, fuel retail and vehicle use,
- tropical hardwood use, retail and extraction,
- water pollution – breaches of discharge consents.

In May 1999 this index included 507 companies which represented 54% of the FTSE All-Share Index by market value. Compared with the FTSE All-Share Index the Environmental Damage Avoidance Index is overweight in services and financials and underweight in general industrials, utilities and resources. In fact, there are no companies left in the resources sector.

2.7.3. The responders' index²¹

This index identifies those companies which appear to be responding to ethical issues and attempts to reflect the approach of investors who seek to invest in companies whose policies and practices they wish to encourage. This index is constructed by using positive criteria only and therefore no companies are excluded for activities of concern to many ethical investors. Positive criteria were selected under the following areas:

- community involvement,
- disclosure,
- equal opportunities,
- environmental initiatives,
- training,
- trade union recognition.

Points were allocated from +1 to +3 for each criterion according to its significance and how many companies were identified. For example, a criterion such as energy efficiency certification where few companies achieve the standard was weighted more highly than one such as having an environmental statement where many companies achieve the standard. Those companies scoring +5 or more in total were selected as the constituent companies of the index.

In May 1999 this index included only 235 companies, considerably less than the previous two indices but by market value it includes proportionately more at 74% of the total. As we might expect the Responders' Index is

²¹ Havemann and Webster 18-19.

predominantly made up of the larger companies. Looking at the sectoral structure, it is underweight in services, basic industries and financials and overweight in resources and consumer goods.

2.7.4. The ethical balanced index²²

This index is constructed by first identifying activities of concern to most EIRIS clients and removing companies involved in them, and secondly by weighing a number of positive and negative criteria commonly used and selecting companies that score two or more overall. The weightings of criteria reflected the level of involvement and use by clients. The exclusion criteria included:

- animal testing services,
- gambling (>10% turnover),
- weapons production, nuclear weapons involvement and major arms,
- exporters,
- operators of nuclear power stations,
- manufacture of ozone depleting chemicals,
- marketing of pesticides with banned ingredients,
- pornography (publish, print or wholesale magazines that CPC says contain pornographic material),
- irresponsible third world marketing,
- tobacco production (>10% turnover),
- tropical hardwood extraction/use of large quantities.

Negative criteria used to rate companies include criteria from the following areas: advertising complaints, alcohol, animal testing, gambling, greenhouse gases, health & safety convictions, human rights, intensive farming, military, nuclear power, ozone depleting chemicals, pesticides, political donations, pollution convictions, pornography, PVC, roads, third world, tobacco, tropical hardwood, water pollution.

Positive criteria used to rate companies include criteria from the following areas: community involvement, disclosure, environmental initiatives, equal opportunities, and positive products & services.

²² Havemann and Webster 19-20.

In May 1999 this index included 340 companies which accounted for 47% of the FTSE All-Share index by market value. The Ethical Balanced Index was the most restrictive index in terms of the market capitalisation left. The index is heavily overweight in services and overweight in financials and utilities. It is underweight in consumer goods, resources and general industrials.

2.7.5. The environmental management index²³

This index identifies companies that have made progress on environmental management. The indicators used for environmental management include:

- corporate environmental statements,
- environmental reports,
- environmental reporting awards,
- adoption of environmental management systems such as EMAS or ISO 14001,
- alternative energy development and energy efficiency certification.

This index does not include any measurement. Points were allocated from +1 to +4 for each indicator used according to its significance and the number of companies identified. Those companies scoring a total of more than 3 points were selected as the constituent companies of the index. It should be noted that this index does not include any measure of environmental damage.

In May 1999, this index included 117 companies which accounted for 57% of the FTSE All-Share index by market value. It is the smallest index of the five in terms of the number of constituents but again many of these are larger companies.

3. PERFORMANCE OF INDICES VERSUS KEY BENCHMARKS

The ultimate test for any investor is the question: "*Is THIS going to give me a return matching return on investments which are not labelled as socially responsible?*". Statistically, the answer should be "yes". In 52 studies looking at relationship between corporate social responsibility and financial performance results were as follows:

- 33 of the studies found a positive relationship between social responsibility and financial performance,

²³ Havemann and Webster 21-22.

- 5 studies found a negative relationship between social responsibility and financial performance,
- 14 studies found no relationship²⁴.

Nevertheless, various studies come to very different conclusions. Let us look then at the performance of funds and indices mentioned in the previous section of this chapter.

1. Good Money²⁵

Both GMIA and GMUA have substantially outperformed respective Dow Jones indices. Between 1976 and 2000 every US Dollar invested in GMIA portfolio brought c. 20 USD, as opposed to investment in DJIA portfolio, which brought c. 7 USD. Similarly, every Dollar invested in GMUA portfolio brought c. 4.5 USD as opposed to 2.8 USD invested in DJUA. For both Good Money indices average annual growth ratios were higher whereas annual drop ratios were lower than these for respective Dow Jones indices.

2. Domini Funds²⁶

Domini Social Equity Fund has generally underperformed its benchmark index (S&P 500) with the exception for the period of the past 12 months²⁷. Domini Social Bond Fund has performed very much in line with its benchmark index (Lehman Brothers Aggregate Bond).

3. Aquinas Funds²⁸

Similarly to Domini Social Equity Fund, Aquinas Value Fund has generally underperformed S&P 500 with the exception for the past 12 months²⁹ when decline in the fund value was slower than it was for the S&P 500 index. The same refers to Aquinas Growth and Aquinas Small Cap funds. Aquinas Fixed Income fund outperformed S&P 500 in 3 year and in 5 year average category.

²⁴ Roman, Hayibor and Agle (1999) after: Internet, http://www.oldgrowthfree.com/public_support.html.

²⁵ For detailed information on GMIA and GMUA performance against Dow Jones please refer to: Internet, <http://www.goodmoney.com>.

²⁶ Information comes from biz.yahoo.com.

²⁷ as of September 2002.

²⁸ Information on the fund's performance are available at finance.yahoo.com but also accessible through the funds website Internet, <http://www.aquinasfunds.com>.

²⁹ As of September 2002.

4. Dow Jones Sustainability Indices³⁰

The comparison of performance of DJSI against Dow Jones Group Indices (DJGI) between 1993 to 1998 indicates that the DJSI outperforms the DJGI. A regional exception to this is Europe, where the DJSI has slightly underperformed the DJGI. According to the Dow Jones Sustainability Group Indices GmbH, the reason for the performance difference in favour of the DJSGI is that those corporations included in the DJGI have been more profitable than their DJSGI counterparts at dealing with economic, social and environmental opportunities and risks.

5. FTSE4Good³¹

All FTSE4Good indices (UK, Europe and US) have been outperforming their FTSE benchmarks significantly. For example, FTSE4Good UK tracked back to early 1996 outperforms FTSE-All shares consistently by c. 20%.

6. EIRIS Indices³²

Despite the large differences in the size and sectoral structure of particular indices their performance is remarkably similar to the FTSE All-Share Index over the eight and a half-year time period they were calculated. These indices had tracking errors of between 2% and 4% but volatility for three of the five indices was lower than that of the FTSE and the other two had only marginally higher volatility. This research indicates that investment universes constructed on an ethical basis can provide a balance of risk and return which doesn't look materially different from the FTSE All-Share Index.

4. CONCLUSIONS

A socially responsible investing is a viable option for people who want to invest their money in businesses, which obey certain ethical rules and receive good returns. A review of funds and indices presented in this article, although somewhat anecdotal, shows that ethical portfolios perform very much in line with benchmark indices. In a sense, this gives even more credibility to the idea

³⁰ Cerin and Dobers.

³¹ Information available at Internet, http://www.ftse4good.com/firm_indexp3.asp.

³² For detailed analysis of performance of particular indices see: Havemann and Webster 23-26.

of SRI – exceptionally high returns tend to be a rare commodity and ethical funds are here no exception. By the way, if stocks of ethical companies were to be outperforming benchmark indices on a consistent long-term basis then soon every single company in the world would obey SRI rules and comparative performance analyses would not be relevant any more.

Studies show clearly that investing in ethical stocks bears risks similar to any investment in publicly traded securities. The only difference is that investors who take seriously into account SRI rules can be sure that they have done their best to invest their money in business which made an effort to protect natural environment and contribute to development of communities where they operate. This is good and positive. Even if sometimes these businesses are a bit too creative in their accounting policies but it is a totally different story...

APPENDIX 1

CONSTITUENTS OF FTSE4GOOD EUROPE INDEX

Name	Country	Thomson Multimedia	France
AGFA-Gevaert	Belgium	Total Fina Elf Sa	France
Bekaert	Belgium	Valeo	France
Dexia	Belgium	Adidas-Salomon	Germany
Fortis SA/NV	Belgium	Allianz AG	Germany
Interbrew	Belgium	Altana	Germany
KBC Holdings	Belgium	BASF	Germany
Mobistar	Belgium	Bayer AG	Germany
Carlsberg (A)	Denmark	Bayerische Hypo-Und Vereinsbank	Germany
Carlsberg (B)	Denmark	BMW (Br.)	Germany
Coloplast B	Denmark	Commerzbank	Germany
Danske Bank A/S	Denmark	Degussa AG	Germany
Group 4 Falck	Denmark	Deutsche Bank	Germany
ISS A/S	Denmark	Deutsche Telekom	Germany
Novo-Nordisk B	Denmark	Gehe	Germany
Novozymes A/S	Denmark	Generali Holding	Germany
TDC	Denmark	Henkel KG PREF	Germany
Vestas Wind Systems	Denmark	Infineon Technology	Germany
Elisa Communication	Finland	Karstadtquelle	Germany
Nokia	Finland	Lufthansa Reg	Germany
Sampo Oyj	Finland	MLP Ord	Germany
Sonera	Finland	Muenchener Rueckversicherungs Reg	Germany
Stora Enso R	Finland	SAP	Germany
Tietoator Oyj	Finland	Schering	Germany
Accor	France	Volkswagen	Germany
Alcatel	France	Alpha Bank	Greece
Assurance Generale De France	France	Altec C.A. Information & Comm Systems (Cr)	Greece
Aventis	France	Bank of Piraeus (Cr)	Greece
AXA	France	Coca-Cola HBC	Greece
BNP Paribas	France	Comml Bank Of Greece	Greece
Cap Gemini	France	Cosmote Mobile Communications	Greece
Castorama Dubois	France	EFG Eurobank Ergasias Bank	Greece
Credit Lyonnais	France	Hellenic Exchanges Holdings	Greece
Equant	France	Inform P. Lykos (Cr)	Greece
France Telecom	France	Intracom S.A (Cr)	Greece
L'Oreal	France	Natl Bank Of Greece	Greece
LVMH	France	Sarantis	Greece
Pernod Ricard	France	Vodafone Panafon	Greece
Pinault-Printemps/La Redoute	France	Allied Irish Banks	Ireland
Rexel (Ex CDME)	France	Bank of Ireland	Ireland
Soc Generale De France	France	Elan Corporation	Ireland
Societe Television Francaise 1	France	Irish Life & Permanent	Ireland
Sodexo	France	Banca DI Roma	Italy
ST Microelectronics	France	Banca Fideuram	Italy

Banca Nazionale Del Lavoro	Italy	Nordea AB	Sweden
Benetton	Italy	SCA B	Sweden
Bipop-Carire	Italy	Skand Enskilda Bkn A	Sweden
Generali Assicurazioni	Italy	Skandia Forsakring	Sweden
IntesaBci	Italy	SKF A	Sweden
Italgas	Italy	SKF B	Sweden
Mediaset	Italy	Svenska Handelsbnk	Sweden
Mediobanca	Italy	ABB	Switzerland
RAS	Italy	Adecco	Switzerland
Rolo Banca	Italy	Baloise	Switzerland
San Paolo-Imi	Italy	Credit Suisse Group	Switzerland
Uni Credito Italiano	Italy	Rentenanstalt (Swiss Life) Registered	Switzerland
ABN Amro Hldgs.	Netherlands	Swatch Group AG BR	Switzerland
Aegon NV	Netherlands	Swatch Group AG REG	Switzerland
ASML Holding	Netherlands	Swiss Reinsurance	Switzerland
Fortis NV	Netherlands	Swisscom	Switzerland
Heineken NV	Netherlands	UBS AG	Switzerland
ING Group	Netherlands	Zurich Financial Services	Switzerland
Koninklijke Philips Electronic	Netherlands	Abbey National	UK
Reed Elsevier NV	Netherlands	Alliance & Leicester	UK
Royal Dutch Petroleum	Netherlands	Allied Domecq	UK
Royal KPN	Netherlands	Amersham	UK
Unilever NV CVA	Netherlands	Amvescap	UK
DnB Holding Asa	Norway	ARM Holdings	UK
EDB Business Partner	Norway	Astrazeneca	UK
Fred Olsen Energy	Norway	AWG	UK
Gjensidige Nor Sparebank	Norway	BAA	UK
Hafslund ASA B	Norway	Barclays	UK
Merkantildata	Norway	BBA Group	UK
Norsk Hydro	Norway	BG Group	UK
Storebrand	Norway	BOC Group	UK
Telenor A/S	Norway	Boots Co	UK
Tomra Systems	Norway	BP	UK
Erste Bank Der Osterreichischen	Austria	British Airways	UK
EVN Energ-Versorg	Austria	British Land Co	UK
Telekom Austria	Austria	British Sky Broadcasting Group	UK
Verbund Oesterreich Elektrizitats	Austria	BT Group	UK
Voest-Alpine Stahl	Austria	Bunzl	UK
Banco Comercial Portugues	Portugal	Cable & Wireless	UK
BPI-SGPS	Portugal	Cadbury Schweppes	UK
Vodafone Telecel-Communic Pessoais	Portugal	Capita Group	UK
Bankinter	Spain	Carlton Communications	UK
Gas Natural	Spain	Centrica	UK
Electrolux Ser B	Sweden	CGNU	UK
Ericsson B	Sweden	CMG	UK
Europolitan	Sweden	Colt Telecom Group	UK
Foreningssparbanken Ser A	Sweden	Compass Group	UK
Gambro AB A	Sweden	Diageo	UK
Gambro B	Sweden	Dimension Data Holdings	UK
Hennes & Mauritz B	Sweden	Dixons Group	UK
Nobel Biocare	Sweden	Electrocomponents	UK

Emap	UK	Rank Group	UK
EMI Group	UK	Reed Elsevier	UK
FKI	UK	Reuters Group	UK
GlaxoSmithKline	UK	Rexam	UK
Granada	UK	RMC Group	UK
GUS	UK	Royal & Sun Alliance Insurance Group	UK
Hammerson	UK	Royal Bank Of Scotland Group	UK
HBOS	UK	Safeway	UK
Hilton Group	UK	Sage Group	UK
HSBC Hldgs	UK	Sainsbury (J)	UK
Imperial Chemical Industries	UK	Schroders	UK
Invensys	UK	Schroders N/V	UK
Kingfisher	UK	Scottish & Newcastle	UK
Land Securities	UK	Scottish & Southern Energy	UK
Lattice Group	UK	Scottish Power	UK
Legal & General Group	UK	Severn Trent	UK
Lloyds TSB Group	UK	Shell Transport & Trading Co	UK
Lonmin	UK	Shire Pharmaceuticals Group	UK
Marconi	UK	Six Continents	UK
Marks & Spencer Group	UK	Slough Estates	UK
Matalan	UK	Smith & Nephew	UK
Misys	UK	Smith (WH) Group	UK
mmO2	UK	South African Breweries	UK
Next	UK	Spirent	UK
Northern Rock	UK	Standard Chartered	UK
Old Mutual	UK	Tesco	UK
P & O Princess Cruises	UK	Unilever	UK
Pearson	UK	United Business Media	UK
Peninsular & Oriental Steam Nav Co	UK	United Utilities	UK
Premier Farnell	UK	Vodafone Group	UK
Provident Financial	UK	Whitbread	UK
Prudential	UK	WPP Group	UK

APPENDIX 2

CONSTITUENTS OF FTSE4GOOD GLOBAL INDEX

AMP	Australia	Hudson's Bay Co.	Canada
ANZ Bank	Australia	Magna International CL A	Canada
Australian Gas Light	Australia	Manulife Financial	Canada
Fosters Group	Australia	MDS Inc	Canada
Gandel Retail Trust	Australia	Molson Class A	Canada
General Property Trust	Australia	Natl Bk Of Canada Cap	Canada
Macquarie Bank	Australia	Nexfor	Canada
MIM Holdings	Australia	Nortel Networks Corporation	Canada
Natl Australia Bk	Australia	Nova Chemicals Corp	Canada
News Corp	Australia	Power Corp Canada	Canada
News Corp Pref	Australia	QLT	Canada
Southcorp Holdings	Australia	Rogers Communications B	Canada
Suncorp-Metway	Australia	Royal Bank Of Canada	Canada
Tabcorp Holdings	Australia	Sears Canada	Canada
Telstra Corp	Australia	Shaw Communications Inc CL B	Canada
Westpac Banking Corp	Australia	Shell Canada CL A	Canada
Woolworths	Australia	Sun Life Financial	Canada
AGFA-Gevaert	Belgium	Suncor Energy	Canada
Bekaert	Belgium	Telus Corporation	Canada
Dexia	Belgium	Thomson Corporation	Canada
Fortis SA/NV	Belgium	Toronto-Dominion Com	Canada
Interbrew	Belgium	TransAlta Corporation	Canada
KBC Holdings	Belgium	Transcanada Pipeline	Canada
Mobistar	Belgium	Zarlink Semiconductor	Canada
Abitibi-Consolidated	Canada	Carlsberg (A)	Denmark
Alcan	Canada	Carlsberg (B)	Denmark
Aliant	Canada	Coloplast B	Denmark
Bank of Montreal	Canada	Danske Bank A/S	Denmark
Bank of Nova Scotia	Canada	Group 4 Falck	Denmark
BC Gas	Canada	ISS A/S	Denmark
BCE Emergis	Canada	Novo-Nordisk B	Denmark
Brasco Corporation	Canada	Novozymes A/S	Denmark
Brookfield Properties Corp	Canada	TDC	Denmark
Canadian Imp Bank	Canada	Vestas Wind Systems	Denmark
Canadian National Railway	Canada	Elisa Communication	Finland
Canadian Tire Corp A	Canada	Nokia	Finland
Celestica	Canada	Sampo Oyi	Finland
CGI Group CL A	Canada	Sonera	Finland
Dofasco	Canada	Stora Enso R	Finland
DuPont Canada A	Canada	Tietoanator Oyj	Finland
Fairfax Financial Holdings	Canada	Accor	France
Finning International	Canada	Alcatel	France
Four Seasons Hotel	Canada	Assurance Generale De France	France
Great-West Lifeco	Canada	Aventis	France

AXA	France	Natl Bank Of Greece	Greece
BNP Paribas	France	Sarantis	Greece
Cap Gemini	France	Vodafone Panafon	Greece
Castorama Dubois	France	Hang Seng Bank	Hong Kong
Credit Lyonnais	France	Hutchison Whampoa	Hong Kong
Equant	France	Allied Irish Banks	Ireland
France Telecom	France	Bank of Ireland	Ireland
L'Oreal	France	Elan Corporation	Ireland
LVMH	France	Irish Life & Permanent	Ireland
Pernod Ricard	France	Banca DI Roma	Italy
Pinault-Printemps/La Redoute	France	Banca Fideuram	Italy
Rexel (Ex CDME)	France	Banca Nazionale Del Lavoro	Italy
Soc Generale De France	France	Benetton	Italy
Societe Television Francaise 1	France	Bipop-Carire	Italy
Sodexho	France	Generali Assicurazioni	Italy
ST Microelectronics	France	IntesaBci	Italy
Thomson Multimedia	France	Italgas	Italy
Total Fina Elf Sa	France	Mediaset	Italy
Valeo	France	Mediobanca	Italy
Adidas-Salomon	Germany	RAS	Italy
Allianz AG	Germany	Rolo Banca	Italy
Altana	Germany	San Paolo-Imi	Italy
BASF	Germany	Uni Credito Italiano	Italy
Bayer AG	Germany	Acom	Japan
Bayerische Hypo-Und Vereinsbank	Germany	Aisin Seiki Co	Japan
BMW (Br.)	Germany	Anritsu	Japan
Commerzbank	Germany	Benesse	Japan
Degussa AG	Germany	Central Japan Railway	Japan
Deutsche Bank	Germany	Chiba Bank	Japan
Deutsche Telekom	Germany	Dai Nippon Printing	Japan
Gehe	Germany	Daiichi Seiyaku	Japan
Generali Holding	Germany	Denso Corporation	Japan
Henkel KG PREF	Germany	East Japan Railway	Japan
Infineon Technology	Germany	Eisai	Japan
Karstadtquelle	Germany	Fuji Photo Film	Japan
Lufthansa Reg	Germany	Gunma Bank	Japan
MLP Ord	Germany	Hachijuni Bank	Japan
Muenchener Rueckversicherungs Reg	Germany	Honda Motor Co	Japan
SAP	Germany	Ito Yokado Co	Japan
Schering	Germany	Japan Telecom	Japan
Volkswagen	Germany	Kuraray	Japan
Alpha Bank	Greece	Matsushita Communications	Japan
Altec C.A. Information & Comm Systems (Cr)	Greece	Matsushita Electric Ind	Japan
Bank of Piraeus (Cr)	Greece	Millea Holdings	Japan
Coca-Cola HBC	Greece	Mitsubishi Corpn	Japan
Comm Bank Of Greece	Greece	Mitsubishi Estate	Japan
Cosmote Mobile Communications	Greece	Nissan Motor	Japan
EFG Eurobank Ergasias Bank	Greece	NTT	Japan
Hellenic Exchanges Holdings	Greece	NTT Docomo	Japan
Inform P. Lykos (Cr)	Greece	Omron Corp	Japan
Intracom S.A (Cr)	Greece	Osaka Gas	Japan

Sony Corp	Japan	Nordea AB	Sweden
Takara Holdings	Japan	SCA B	Sweden
Takefuji	Japan	Skand Enskilda Bkn A	Sweden
Toppan Printing	Japan	Skandia Forsakring	Sweden
Toyota Motor	Japan	SKF A	Sweden
West Japan Railway	Japan	SKF B	Sweden
Yamaha	Japan	Svenska Handelsbnk	Sweden
Yasuda Fire & Marine Ins	Japan	ABB	Switzerland
ABN Amro Hldgs.	Netherlands	Adecco	Switzerland
Aegon NV	Netherlands	Baloise	Switzerland
ASML Holding	Netherlands	Credit Suisse Group	Switzerland
Fortis NV	Netherlands	Rentenanstalt (Swiss Life) Registered	Switzerland
Heineken NV	Netherlands	Swatch Group AG BR	Switzerland
ING Group	Netherlands	Swatch Group AG REG	Switzerland
Koninklijke Philips Electronic	Netherlands	Swiss Reinsurance	Switzerland
Reed Elsevier NV	Netherlands	Swisscom	Switzerland
Royal Dutch Petroleum	Netherlands	UBS AG	Switzerland
Royal KPN	Netherlands	Zurich Financial Services	Switzerland
Unilever NV CVA	Netherlands	Abbey National	UK
DnB Holding Asa	Norway	Alliance & Leicester	UK
EDB Business Partner	Norway	Allied Domecq	UK
Fred Olsen Energy	Norway	Amersham	UK
Gjensidige Nor Sparebank	Norway	Amvescap	UK
Hafslund ASA B	Norway	ARM Holdings	UK
Merkantildata	Norway	Astrazeneca	UK
Norsk Hydro	Norway	AWG	UK
Storebrand	Norway	BAA	UK
Telenor A/S	Norway	Barclays	UK
Tomra Systems	Norway	BBA Group	UK
Sky City Entertainment Group	New Zealand	BG Group	UK
Warehouse Group	New Zealand	BOC Group	UK
Erste Bank Der Osterreichischen	Austria	Boots Co	UK
EVN Energ-Versorg	Austria	BP	UK
Telekom Austria	Austria	British Airways	UK
Verbund Oesterreich Elektrizitats	Austria	British Land Co	UK
Voest-Alpine Stahl	Austria	British Sky Broadcasting Group	UK
Banco Comercial Portugues	Portugal	BT Group	UK
BPI-SGPS	Portugal	Bunzl	UK
Vodafone Telecel-Communic Pessoais	Portugal	Cable & Wireless	UK
City Developments	Singapore	Cadbury Schweppes	UK
Wing Tai Holdings	Singapore	Capita Group	UK
Bankinter	Spain	Carlton Communications	UK
Gas Natural	Spain	Centrica	UK
Electrolux Ser B	Sweden	CGNU	UK
Ericsson B	Sweden	CMG	UK
Europolitan	Sweden	Colt Telecom Group	UK
Foreningssparbanken Ser A	Sweden	Compass Group	UK
Gambro AB A	Sweden	Diageo	UK
Gambro B	Sweden	Dimension Data Holdings	UK
Hennes & Mauritz B	Sweden	Dixons Group	UK
Nobel Biocare	Sweden	Electrocomponents	UK

Emap	UK	Slough Estates	UK
EMI Group	UK	Smith & Nephew	UK
FKI	UK	Smith (WH) Group	UK
GlaxoSmithKline	UK	South African Breweries	UK
Granada	UK	Spirent	UK
GUS	UK	Standard Chartered	UK
Hammerson	UK	Tesco	UK
HBOS	UK	Unilever	UK
Hilton Group	UK	United Business Media	UK
HSBC Hldgs	UK	United Utilities	UK
Imperial Chemical Industries	UK	Vodafone Group	UK
Invensys	UK	Whitbread	UK
Kingfisher	UK	WPP Group	UK
Land Securities	UK	Adc Telecommunications	USA
Lattice Group	UK	Adobe Systems Inc	USA
Legal & General Group	UK	Advanced Micro Dev	USA
Lloyds TSB Group	UK	Aetna	USA
Lonmin	UK	Aflac	USA
Marconi	UK	Agilent Technologies	USA
Marks & Spencer Group	UK	Air Products And Chemcom	USA
Matalan	UK	Allstate Corp	USA
Misys	UK	Alltel Corp USA Altera Corp.	USA
mmO2	UK	AMBAC Financial Grp	USA
Next	UK	Amerada Hess Corp	USA
Northern Rock	UK	American Intl Group	USA
Old Mutual	UK	Amsouth Bancorporation	USA
P & O Princess Cruises	UK	Anheuser-Busch	USA
Pearson	UK	AOL Time Warner	USA
Peninsular & Oriental Steam Nav Co	UK	Aon Corp	USA
Premier Farnell	UK	Applera Corp – Applied Biosystems	USA
Provident Financial	UK	Applied Materials	USA
Prudential	UK	Arrow Electronics	USA
Rank Group	UK	AT&T	USA
Reed Elsevier	UK	AT&T Wireless Services	USA
Reuters Group	UK	Automatic Data Process	USA
Rexam	UK	Autonation	USA
RMC Group	UK	Avaya	USA
Royal & Sun Alliance Insurance Group	UK	Avnet	USA
Royal Bank Of Scotland Group	UK	Avon Products	USA
Safeway	UK	Bank of New York	USA
Sage Group	UK	Bank One Corp	USA
Sainsbury (J)	UK	Baxter Intl	USA
Schroders	UK	BB&T Corporation	USA
Schroders N/V	UK	Bear Stearns Companies	USA
Scottish & Newcastle	UK	Becton Dickinson	USA
Scottish & Southern Energy	UK	Best Buy Company	USA
Scottish Power	UK	Biogen Inc	USA
Severn Trent	UK	Block (H & R) NPV	USA
Shell Transport & Trading Co	UK	BMC Software	USA
Shire Pharmaceuticals Group	UK	Boston Scientific Corp	USA
Six Continents	UK	Burlington Northern	USA

Cablevision Systems Corp	USA	Gillette	USA
Cadence Design Systems	USA	Golden West Financial	USA
Capital One Financial	USA	Goldman Sachs Group	USA
Caremark Rx	USA	Goodrich	USA
Cendant Corp	USA	Grainger (W W)	USA
Chubb Corp	USA	Greenpoint Finl	USA
CIENA Corp	USA	Guidant Corp.	USA
Cigna Corp	USA	Harley-Davidson	USA
Cincinnati Fin Cp	USA	Harrah's Entertainment Corp	USA
Cisco Systems	USA	Hartford Financial Services Group	USA
Citigroup	USA	Hasbro	USA
Citizens Communications	USA	HCA	USA
Clear Channel Commun.	USA	Hilton Hotels Corp	USA
Coca-Cola	USA	Home Depot	USA
Coca-Cola Enterprises	USA	Household International	USA
Comcast Special A	USA	Huntington Bancshares	USA
Computer Associates	USA	I2 Technologies	USA
Conexant Systems	USA	Ims Health	USA
Conoco	USA	Intel Corp	USA
Conseco	USA	International Paper	USA
Cooper Industries	USA	Intuit	USA
Costco Wholesale Corp	USA	JDS Uniphase Corporation	USA
Countrywide Credit Indus	USA	John Hancock Financial Services	USA
Cox Communications A	USA	Johnson & Johnson	USA
CVS Corp	USA	Johnson Controls	USA
Cypress Semiconductor	USA	Juniper Networks	USA
Dana Corp	USA	K Mart Corp	USA
Darden Restaurants	USA	Keycorp	USA
Delphi Corporation	USA	Kimberly-Clark	USA
Delta Air Lines	USA	Knight-Ridder	USA
Diamond Offshore Drilling	USA	Kohl's Corp	USA
Disney (Walt) Company	USA	Lauder (Estee)	USA
Dollar General	USA	Lehman Bros	USA
Donnelley (Rr) & Sons	USA	Level 3 Communications	USA
Dow Jones & Co	USA	Lexmark International Inc	USA
Du Pont De Nemours	USA	Liberty Media A	USA
Dun & Bradstreet (New) Corp	USA	Limited Brands	USA
Eastman Kodak	USA	Lincoln National Corp	USA
Ebay	USA	Liz Claiborne	USA
Electronic Data Systems-EDS	USA	Lowes Cos Inc	USA
Fannie Mae	USA	Lucent Technologies	USA
Federated Dept Stores	USA	Marriott International	USA
Fifth Third Bancorp	USA	Mattel	USA
First Data	USA	May Dept Stores	USA
First Tenn Natl	USA	MBIA	USA
FleetBoston Financial Corporation	USA	MBNA Corp	USA
Franklin Resources	USA	McGraw-Hill Companies	USA
Freddie Mac	USA	McKesson	USA
Gannett	USA	Medtronic	USA
Gap	USA	Mellon Financial Corp	USA
Georgia-Pacific Group	USA	Merck & Co	USA

Merrill Lynch	USA	Sprint Fon Group	USA
Metlife	USA	Sprint PCS Group	USA
Micron Technology	USA	SPX Corp	USA
Microsoft Corp	USA	St Joe Co (The)	USA
Nat Semiconductor	USA	St Paul Companies	USA
National City Corp	USA	Starwood Hotels & Resorts	USA
New York Times CL A	USA	State Street Corp.	USA
Nike Inc Cl B	USA	Stilwell Financial	USA
Nordstrom	USA	Sun Microsystems	USA
Norfolk Sthn Corp	USA	Sunoco	USA
Northern Trust	USA	Suntrust Banks	USA
Novell	USA	Synovus Financial	USA
Office Depot	USA	Target Corp	USA
Pall Corp	USA	Tellabs	USA
Parametric Technology	USA	Tenet Healthcare	USA
Paychex	USA	Texas Instruments	USA
Penney (J C)	USA	TJX Companies	USA
Pfizer	USA	Toys 'R' Us	USA
Pitney Bowes	USA	Transocean	USA
PMC-Sierra	USA	Tribune Co (Del)	USA
PMI Group	USA	Union Pacific Corp	USA
PNC Financial Services Group	USA	Unisys Corp	USA
Procter & Gamble	USA	Unitedhealth Group	USA
Progressive Corp Ohio	USA	Unumprovident Corporation	USA
Qualcomm	USA	US Bancorp (New)	USA
Qwest Communications	USA	Veritas Software USA	
Radioshack Corp	USA	Verizon Communications	USA
Readers Digest A	USA	VF Corp	USA
Rockwell Automation	USA	Viacom CL B	USA
Safeco Corp	USA	Wachovia	USA
Sanmina-SCI	USA	Walgreen	USA
SBC Communications	USA	Washington Mutual	USA
Schwab (Charles) Corp	USA	Washington Post Com CL B	USA
Scient Atlanta	USA	Wells Fargo & Company	USA
Scripps (E.W) A	USA	Weyerhaeuser	USA
Sears Roebuck & Co	USA	Whirlpool Corp	USA
Servicemaster Co	USA	Worldcom Group	USA
Siebel Systems	USA	Xilinx	USA
SLM Corp	USA	Yahoo	USA

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Andreas Knörzer

CHAPTER 16

**SUSTAINABILITY – A CONCEPT FOR
ENHANCING ENTERPRISE VALUE**



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As a specialist in sustainable investment research he has published various studies and articles and speaks regularly on the subject.

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SUSTAINABILITY – A CONCEPT FOR ENHANCING ENTERPRISE VALUE

1. SYNOPSIS

Sustainability is increasingly becoming a vital component of business strategy, while socially responsible investment is proving to be a rapidly expanding market segment that offers attractive returns. These two trends are interconnected. Companies are dealing with consumers who are far more aware, and have to cope with new environmental and social crises and challenges. They also face investors who are increasingly less prepared to assume appropriate risks without receiving adequate compensation, but who on the other hand are choosing to invest in companies with a good track record in sustainable management. This is particularly true of institutional investors with large volumes to invest, such as pension funds. Modern concepts for sustainability analysis, such as the one developed by Bank Sarasin & Co. Ltd, show that sensible and economically viable environmental and social criteria can be applied, and can also constitute areas of entrepreneurial action. There is increasing evidence not only from scientific studies, but also from the investment returns generated in practice, that sustainable business strategies can actually pay off.

2. INTRODUCTION

Nowadays there is good reason why companies should consider a business strategy that is geared towards sustainability. Incorporating environmental and social aspects into corporate strategies is becoming an imperative for successful business practice. This hypothesis has been supported by unpleasant events or crises that repeatedly occur, reinforcing the importance of sustainable growth in people's minds. Many leading industrialists, for example, have been shocked by the sharp hike in energy prices caused by booming demand, the tight control

of oil supplies by OPEC, and the helplessness of the government when faced with the energy crisis in California in 2000, as well as the growing concerns that many people are voicing about the effects of globalisation. At the same time, companies offering products and services are increasingly having to sell them to consumers who are much better informed, and who above all pay attention to environmental criteria when making their purchases. An empirical study carried out by Meffert and Bruhn¹ on the environmental awareness of consumers over the period 1977 to 1996 produced some interesting results, which can be summarised as follows: Consumers have a better understanding of environmental issues, heightened environmental awareness and, above all – a crucial factor for strategic business decisions – they are conducting their lives in a far more environmentally friendly way. The latest debates on BSE, the use of GMOs in the food industry etc. are likely to have reinforced these trends in recent years.

Capital markets are not immune to these trends either. Lenders, analysts and portfolio managers are being forced to take environmental and social criteria into consideration when assessing the opportunities and risks presented by companies looking to raise capital, and pressure to do so is likely to increase in future. Furthermore, this trend is becoming more apparent with large institutional investors, such as pension funds. Since July 2000, for example, all UK pension funds are obliged to publicly state whether they apply environmental and ethical criteria to their asset management procedures, and if so, how. According to a survey conducted by the Social Investment Forum in England, 48% of all pension funds, together accounting for 69% of the total assets managed by pension funds, want to see the portfolio managers in charge of their money take into account the financial consequences of environmental and social aspects during asset management.² A similar trend can be observed in Germany following the recently passed pension reform. Pressure is therefore building among financial backers for companies to take sustainability criteria into consideration in their business strategies. This article describes the growth in sustainable investment products as a business incentive for companies looking to raise capital. With the help of an analysis concept geared towards environmental and social criteria, it also highlights areas of entrepreneurial action and demonstrates the financial benefits of sustainable business and investment strategies.

¹ Meffert, H. and Bruhn, M. (1996). Das Umweltbewusstsein von Konsumenten. *Environmental awareness in consumers*. *Die Betriebswirtschaft*, 56, p. 631.

² Press Release. (October 5, 2000). UK Social Investment Forum.

3. DEFINITION OF SUSTAINABILITY

Sustainability is a common term nowadays, and one that is frequently misused. In Europe, it generally focuses far until recently too much on purely environmental aspects. Especially in view of the quickening pace of globalisation, which is also having a profound effect on newly industrialised and developing economies, the definition of sustainable growth formulated in the report produced by the Brundtland Commission in 1987³ is more pertinent than ever before, and harks back to one of the time-honoured principles of the forestry industry: “Meeting the needs of the present without compromising the ability of future generations to meet their own needs.” The report highlights the importance of achieving the right balance between growth, social justice and environmental protection. Another important aspect is that growth must be considered over the long term. Sustainable companies therefore take into account strategic financial, social and environmental criteria in order to enhance their enterprise value over the long term.

4. SUSTAINABILITY – INCREASINGLY IMPORTANT ON CAPITAL MARKETS

Ethical investment has come of age in recent years. According to a survey published by the German Social Investment Forum⁴, in 2001 in Germany as much as 2.4 billion EUR* had already been invested in a broad range of products, primarily geared towards environmental criteria but focusing in part on social criteria as well. This is an increase of 50% within a year and the amount is fourfold the size of investments at the end of 1999. A similar study made by Cerulli Associates reckons that ethical investments in Switzerland are somewhere in the region of 7.4 billion CHF: 4.1 billion CHF invested by institutional investors and 3.3 billion CHF by private clients. As some funds are offered in Switzerland and Germany as well, there are some double counts in these funds (both studies include the entire fund volume in each case). Even so, the market share commanded by sustainable investments is still modest, at less than 1%. However, the bigger market share of sustainable investments in the

³ Our Common Future. (1987). The World Commission on Environment and Development. Oxford: Oxford University Press.

⁴ Internet, <http://www.forum-ng.de>. as of September 2002.

* 1 billion = 1 thousand million.

UK (around 3%) and in particular the growing market share in the US of ethical investments with a broad variety of content, up from 8% to 12% over the period 1997 to 2001⁵, demonstrate the potential waiting to be exploited, and one that certainly will be exploited given the changing overall conditions. At the same time, investors are being attracted by constantly improving financial returns and more transparent investment concepts. The first stock indices to take sustainability into account – the NPI Social Index, the Dow Jones Sustainability Group Index and the FTSE4GOOD – have already been developed for measuring performance, and will be followed by others. This should attract even more attention from institutional investors. It is also worth remembering the traditional lending business, where the big Swiss banks have been evaluating environmental and social criteria for years now as part of their risk assessment, after concerns about massive write-downs in industries with a strong environmental impact. Sustainability is even becoming more of an issue in the field of private equity investment (i.e. unlisted companies).⁶

5. BANK SARASIN'S SUSTAINABILITY ANALYSIS IDENTIFIES IMPORTANT AREAS OF ACTION FOR SUSTAINABLE BUSINESS PRACTICES

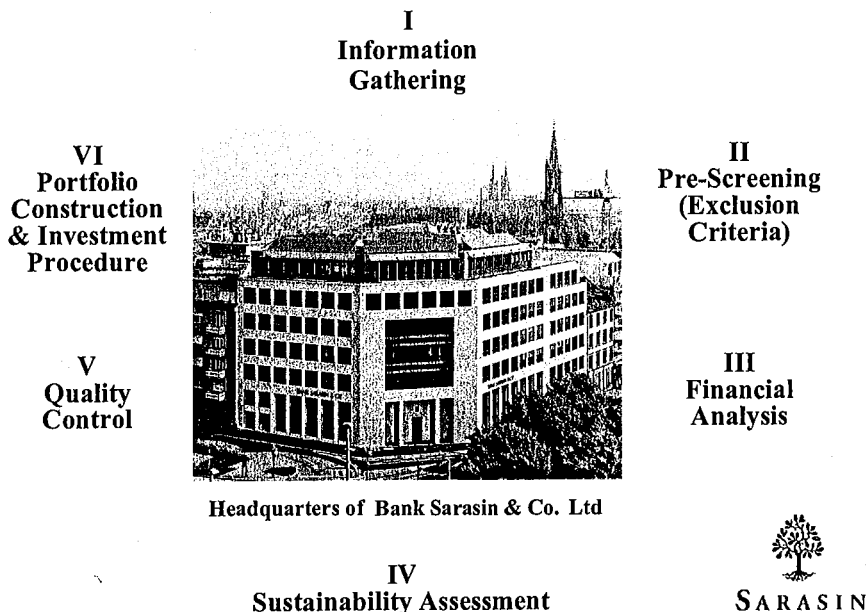
One of the prerequisites for successful investment is a consistent analysis and investment process that is not just communicated in a transparent way and consistently put into practice, but one that can also be verified by external controls. This ensures a systematic and disciplined approach, and produces results (good or bad) that can be measured objectively. The object is to record the performance-specific criteria, not only in relation to environmental and social benefits but also with respect to the financial result. The six-step analysis and investment process (see Diagram 16.1.) developed by Bank Sarasin & Co. Ltd meets all these conditions.

It may seem obvious, but efficient Information Gathering (step 1) is a key prerequisite for an effective analysis process. One of the most important aspects

⁵ Report on Socially Responsible Investing Trends in the United States Social Investment Forum. (2001). Available at: Internet, <http://www.socialinvest.org>.

⁶ Furrer, B. (2001). Sustainable Private Equity. Publication No. 246 of the Swiss Banking School. Haupt: Berne.

Diagram 16.1.
Overview of the analysis and investment process.



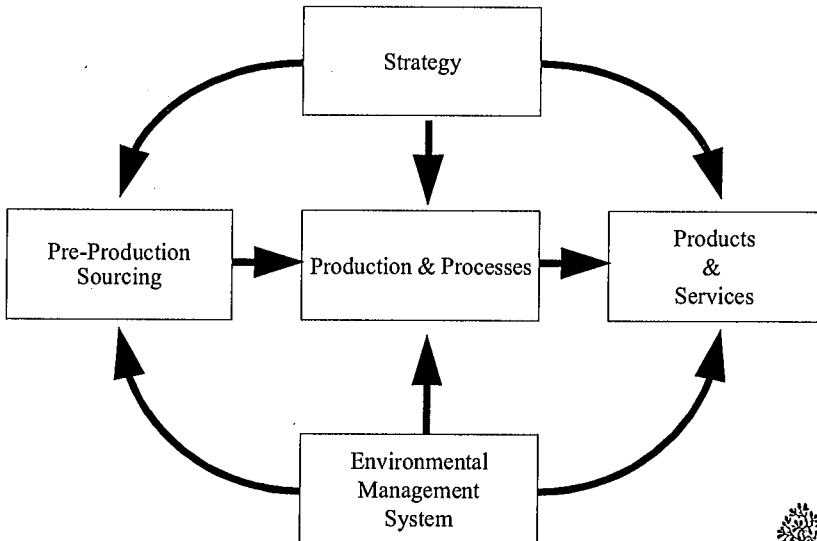
here is that analysts engaged in sustainability research have to base their investigations on a far broader catalogue of questions than do traditional financial analysts. This allows them to produce an assessment of a company that takes aspects into account that have previously been unexplored. This information can be collected, for example, from sources such as trade unions, environmental organisations, industry federations, competitors, clients, suppliers, human rights groups and research institutes. The first job is to assess all the information available from third parties. This information is supplemented by personal visits to the company, management interviews, and – especially in the USA and Japan – information from research partners. Bank Sarasin’s analysts first consider the relevant factors for a particular industry, which allows them to ask the right questions for specific sectors.

There are quite specific (and often different) client preferences as regards the business activities that should be excluded in principle from the investment universe. This stage, which occurs before the very detailed analysis process itself, is known as “Pre-Screening” (step 2).

In addition to the analysis of sustainability criteria, we also have to consider the financial aspects of an equity or bond investment (step 3). Here we examine both qualitative (management, product mix, earnings visibility) and quantitative criteria (earnings growth, margins, profitability ratios and especially cash flow estimates). Obvious correlation, such as the link between environmental and financial aspects, can increasingly be identified. Companies with a poor environmental record who have yet to make capital-intensive investments in environmental protection systems may for example be “penalised” in the financial analysis stage, as this means they will have less free cash flow which has a negative impact on the shareholder value for the time being.

At the heart of Sarasin’s sustainability concept lies the actual sustainability analysis (step 4). Where possible, qualitative criteria are supplemented by quantitative data. One innovation, and one that makes the concept so advanced, is that equal importance is attached to both the environmental and social dimension as a key element in the approach to sustainability. The environmental rating process is based on the Life Cycle concept (see Diagram 16.2.), and involves an assessment of a company’s environmental strategy and environmental management systems.

Diagram 16.2.
Environmental assessment: the life cycle concept.

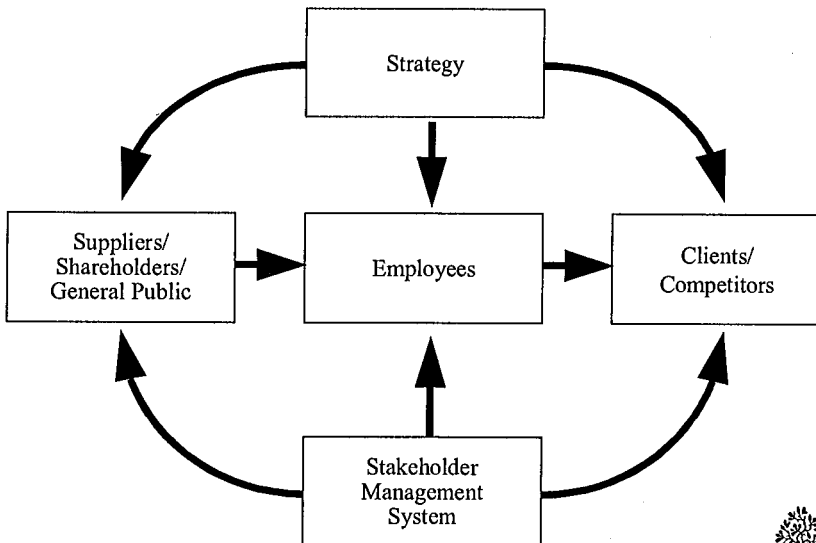


SARASIN

The assessment evaluates all three stages of the product life cycle (pre-production, production, use of products and services) on the basis of the seven environmental criteria identified by the World Business Council for Sustainable Development (WBCSD): reduction of energy intensity, material intensity and toxicity, improved revalorisation, wider use of renewable resources, durability and service intensity. It seems that industrial corporations in particular have made greater efforts in recent years to improve the environmental protection measures implemented in their own production facilities. For many companies, however, one of the big challenges is to give more consideration to environmental criteria in their products and services. The first initiatives in this field, such as those undertaken by the retailer Coop or the consumer goods manufacturer Henkel, have clearly demonstrated that a sustainable strategy can bring handsome financial rewards if it is correctly communicated and implemented in a credible fashion.

Our social assessment is based on Stakeholder Analysis (see Diagram 16.3.), an approach that examines the relationships a company has built with its key stakeholders, such as suppliers, investors, the public, employees, clients and competitors.

Diagram 16.3.
Social assessment: the stakeholder concept.



Where appropriate, these relationships are also assessed on the basis of a “life cycle”, by examining the building up, maintenance and termination of a relationship. This can be justified in financial terms, as it has been shown that companies have to spend a lot more on acquiring clients or attracting qualified employees than on maintaining these relationships.

Sarasin plots these companies against the horizontal and vertical axis of a two-dimensional sustainability matrix developed in house by our research team. On the vertical axis, the company is compared with its peers within the industry group (“best in class” approach), while on the horizontal axis the absolute sustainability rating is entered for the industry itself (i.e. the sustainability of the products and technologies). There are 35 different industries or areas of activity available for this. For example, businesses that use fossil fuels, bulk chemicals, the car industry or mining all receive a low sustainability score, banks and retailers are given an average score, while companies engaged in the production of renewable energy, or software houses, receive a higher than average sustainability score. Initially we assess an industry’s environmental and social risk exposure using a set of criteria along the life cycle of the products (see Diagram 16.4).

Diagram 16.4.
An Example for a Sector Rating on the Food Industry.

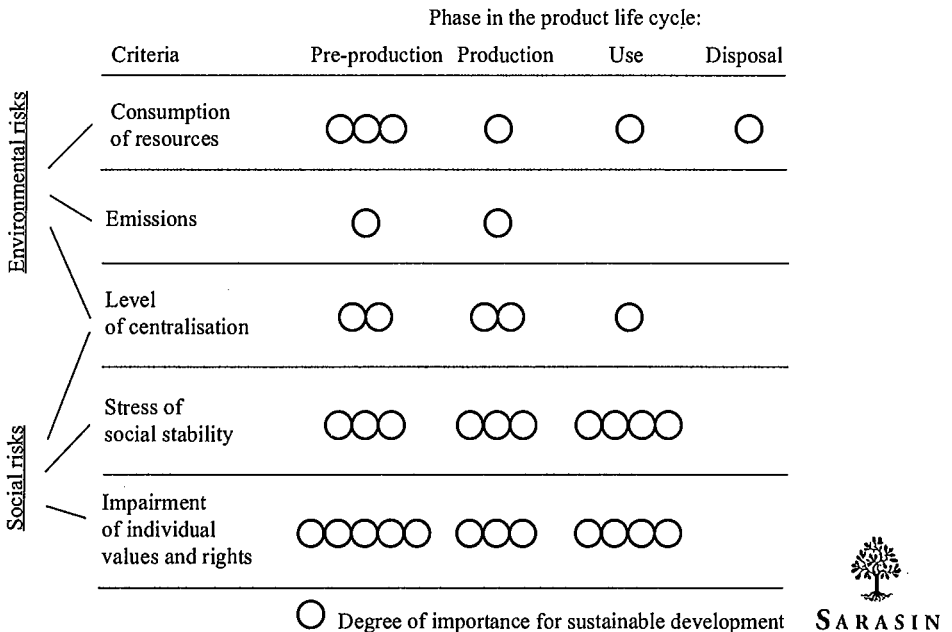
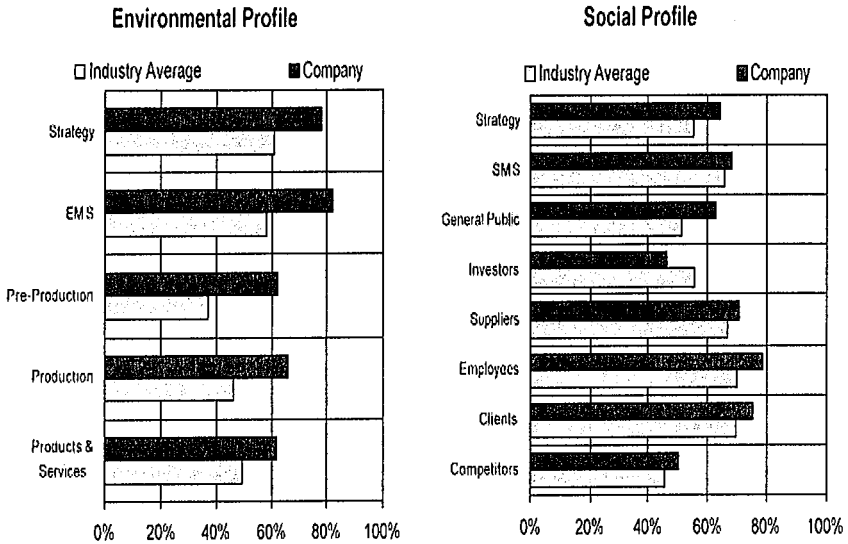
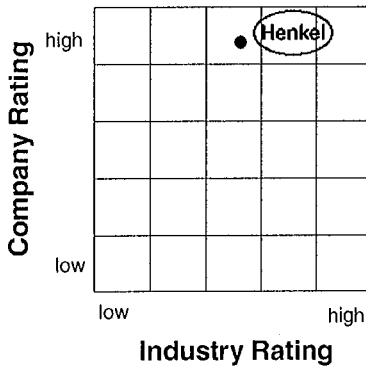


Diagram 16.5. illustrates this matrix by showing the positioning of the Henkel Group (well-known for its Persil washing powder), which has an excellent track record in sustainability.

Diagram 16.5.
Sarasin Sustainability Matrix®.
Shown by Henkel Group example as of August 31, 2002.



Sarasin Sustainability Matrix®



Quality Control is an ongoing process (step 5). Here, for example, we compare the results of our own research with the findings of independent institutions, reports, etc. Feedback from the company being assessed is also important. Here we have been able to note growing acceptance of the findings. Another point worth mentioning is the annual external audit that is performed on the instructions of clients.

The results of our sustainability research and the positions plotted on the sustainability matrix provide the basis for the next stage, Portfolio Construction (step 6). Here we put together sustainability portfolios with very different compositions, where clients can not only specify the sustainability rating of their investments (e.g. all companies with “average” scores or higher), but also relative sustainability portfolios, where the stocks are rated relative to the selected benchmark index. In doing so, we are also able to take into account clients’ sustainability requirements and risk preferences.

6. COMPANIES WITH SUSTAINABLE BUSINESS PRACTICES SHOW ABOVE-AVERAGE PERFORMANCE

In recent years a series of scientific studies have shown that environmental criteria are an important part of modern business management and demonstrated their importance with positive examples.⁷ For companies listed on the stock market, however, it is their long-term share price performance that ultimately confirms whether environmentally responsible conduct or sustainable strategies have helped to enhance their value. Back in 1997, Bank Sarasin published a report in collaboration with the Business Studies Centre of the University of Basel which analysed the relationship between environmental criteria and shareholder value⁸, and in 1999 we produced another study examining the hypothesis that companies with better than average environmental and social ratings also perform better on the stock market.⁹ Of the 65 blue-chip European

⁷ See Schaltegger, S. and Sturm A. (1995). Eco-efficiency through Eco-Controlling. Schäfer Poeschel: Zurich; Schaltegger, S. et. al. (1996). Corporate Environmental Accounting. Chichester: John Wiley.

⁸ Schaltegger, S. and Sturm A. (1997). The Environment and Shareholder Value. Basel: WWZ/ Sarasin Report.

⁹ Butz, Ch. and Plattner, A. (1999). Socially responsible investment: A statistical analysis of returns. Basel: Sarasin report.

companies studied in the comprehensive report, a strong correlation was established between environmental rating and outperformance against a recognised benchmark index. This correlation was particularly evident in industries with a particularly strong environmental impact, such as chemicals, pharmaceuticals, etc. No significant correlation was identified between stock market performance and social rating. This is probably because the rating standards for environmental criteria were introduced into the market much earlier than the social ratings. Most recently a study conducted in co-operation with the European Business School (ebs) and the Centre for European Economic Research (ZEW) supports the view that sustainability is at least not penalising returns, in the opposite the sector rating in fact is adding to performance. A study by Schaltegger and Figge¹⁰ looked at seven European car manufacturers, and drew the conclusion that social responsibility can also be quantified in financial terms in some cases.

Table 16.1.

Performance of selected funds with an environmental/sustainable investment theme as of July 31, 2002 in EUR^{a)}.

International blue chip funds	-1 year	-2 years	-3 years
Sarasin ValueSar Equity	-30.73%	-37.29%	-9.57%
UBS-Eco-Performance	-34.36%	-42.18%	-21.45%
CS Global Sustainability	-32.32%	-45.75%	-23.78%
Swissca Green Invest	-31.97%	-41.93%	-26.78%
SAM Sustainability Index Fund	-29.32%	-43.10%	
<i>MSCI World Index</i>	-32.43%	-40.06%	-21.65%
International small/mid-cap funds (with high % of classical environmental stocks)			
ÖkoVision ^{b)}	-25.26%	-20.09%	-2.34%
Activest Lux Eco-Tech	-31.73%	-36.75%	-11.16%
KD Fonds Öko-Invest	-46.58%	-58.32%	-29.63%
International mixed funds (with substantial bond quota)			
Sarasin OekoSar Portfolio	-14.94%	-18.13%	2.59%
Prime Value Mix	-10.26%	-12.49%	1.88%
JB MI-Fonds Eco	-10.60%	-13.40%	-4.53%

a) Ranked by 3-year-performance; b) Management: Bank Sarasin & Co. Ltd
Source: Micropal.

¹⁰ Figge, F. And Schaltegger S. (1999). What is 'Stakeholder Value'? Developing a catchphrase into a benchmarking tool. Luneburg: Center for Sustainability Management.

The ranking of the stakeholder values identified in the study for the most important stakeholder groups – employees, investors and government – correlates very closely with the sustainability ratings produced by the highly respected analysis teams of SAM Sustainable Asset Management Group, oekom research GmbH and Bank Sarasin & Co. Ltd.

Table 16.1. which shows the performance of various representative environmental or sustainability funds, confirms that this can have a positive impact on the returns provided the funds are managed in a professional manner. Products geared specifically towards blue chips as well as those targeting more classical environmental instruments and those with a strong small/mid-cap bias, have mostly done very well over the last three years, as have funds investing both in equities and bonds. This is a sign that the whole market segment has become far more professional than in the past.

7. SARASIN SUSTAINABLE INVESTMENT – A SUCCESS STORY

Bank Sarasin started to assess environmental problems and opportunities in 1989 by integrating these aspects into the financial analysis of corporations. In 1994, Sarasin launched its first retail sustainability product: Sarasin OekoSar Portfolio – the first eco-efficiency fund world-wide. At that time only one person was working part-time on that field and assets were 20 million CHF (see Table 16.2.).

Two years later, when Bank Sarasin became one of the first Swiss private banks to sign the UNEP Statement by Financial Institutions on the Environment & Sustainable Development, another person joined while the managed volume had more than tripled. In the next following two years Bank Sarasin became co-manager of the Swiss pension foundation ethos and took over the management of “ÖkoVision” which is regarded as the greenest fund in the German speaking countries. At the end of 1998, five employees managed already 626 million CHF of assets according to sustainability criteria. In the same year the concept of eco-efficiency was complemented by the social stakeholder concept. Thus, OekoSar became one of the first true sustainability funds. In 1999, a pure equity fund with the identical sustainability approach was launched: Sarasin ValueSar Equity.

Since then a large number of sustainability products were launched leading to an enormous increase in assets as well as in manpower.

Today, Bank Sarasin is able to offer a comprehensive range and variety of sustainability products (see Diagram 16.6.).

Table 16.2.
Sarasin Sustainability Matrix®.
Growth of Sarasin Sustainable Investment.

	Full time equivalents		Assets-under-Management (million CHF)	
	Bank	SSI	Bank	SSI
1994	380	1	n.v.	20
1996	397	2	n.v.	66
1998	493	5	28,000	626
1999	566	7	36,000	1,046
2000	711	11.5	41,400	1,730
2001	864	14.5	39,900	2,480



Diagram 16.6.
Sarasin Sustainability Matrix®.
A Comprehensive Range of Products Sarasin
Sustainable Investment as of November, 2002.

Sarasin Funds	SAST Sustainability	Own-Label Fonds	Managed Accounts	Private Equity
• Sarasin OekoSar Portfolio	• BVG Sustainability	• OkoVision	• Equities Switzerland	• New energies invest AG
• Sarasin ValueSar Equity	• Sustainable Equities CH	• Auxvita	• DJ Stoxx 50	
• Sarasin FairInvest Balanced	• Sustainable Equities ex CH	• New Energy	• Equities Global	
• Sarasin FairInvest Bond	• Sustainable Bonds CHF	• Hypo Global Value	• Balanced	
	• Sustainable Bonds Int'l ex CHF			



At the end of 2001, a team called Sarasin Sustainable Investment comprising 18 employees (14.5 full-time equivalents) were managing almost 2.5 billion CHF in assets according to sustainability criteria representing more than 6% of the total assets under management. A number Bank Sarasin is very proud of because there is – besides those who are totally specialised on sustainability – hardly a “classic” asset manager with a proportion of that size. And we are still trying to improve that number.

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Mizue Tsukushi

CHAPTER 17

**HISTORY OF SRI AND
ECO-FUNDS IN JAPAN**



Mizue Tsukushi, is a pioneer in implementing SRI products into the Japanese market. Former Deputy General Manager of Institution Marketing Department, UBS Trust and Banking Co., Ltd. in Tokyo.

After received a language certificate of the French Civilization Course at the University of Paris in 1979, Ms. Tsukushi started her career at Technip, a French engineering company and then went on to join TOTAL CFP, a French oil major. In 1988, she moved to the financial industry, starting as the Deputy Representative at Kredit Bank, Belgian bank's Tokyo office and moving on in 1990 to UBS Trust and Banking as the Marketing Officer in charge of institutional customers, and left in 1998.

She is a member of the special advisory committees for the Ministry of the Environment, the Ministry of Education, Culture, Sports, Science and Technology, the Ministry of Economy, Trade, and Industry, the Government of Japan. She was awarded 1st prize in "*Women of the year 2000: Women Entrepreneur Section*" for her successful launch of "Eco-Fund", the first environmentally friendly mutual fund in Japan.

The Good Bankers Co., Ltd. is among the first signatories of this UNEP financial institution initiative in Japan, along with other two financial institutions.

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HISTORY OF SRI AND ECO-FUNDS IN JAPAN

1. INTRODUCTION

The first SRI fund in Japan, Nikko Eco Fund, was launched in August 1999 by the joint efforts between The Good Bankers Co., Ltd., the first independent SRI research and advisory company in Japan, and Nikko Cordial Group, one of the largest investment banks.

The Good Bankers Co., Ltd. was established on 14th July 1998 by Ms. Mizue Tsukushi and her highly motivated female friends who wanted to apply their experiences in the financial services industry in solving the environmental and social problems. The Good Bankers was, in fact, the first and only independent investment advisory company in Japan, fully devoted to social investment research, at the time of its foundation. As stated in the "Statement on Establishment" in the appendix, The Good Bankers was established aiming at cleansing the bad reputation of Japanese banking industry, which had been tarnished by a series of financial scandals and the snowballing non-performing loans under the stagnant economic conditions.

2. ECO FUNDS AND SRI FUNDS

The concept of the Socially Responsible Investment (SRI) was originally born in the United States and then Europe as early as 1920s. Certain religious groups, university funds and many other socially aware organisations and conscious people first took into considerations various social issues when making an investment decision. Such SRI funds generally seek not only maximising investment returns but also non-monetary objectives set by respective funds, such as environment protection, equal opportunity, contribution to community, etc. in pursuit of sustainable development of the society.

Typically U.S. SRI funds adopt negative screening criteria such as tobacco, alcohol, weapons, nuclear, pornography, etc. Within a broad spectrum of the SRI funds, eco-funds, generally known as “green funds” or “ecology funds”, are those focusing on environmental aspects as screening criteria for selecting investment targets. Eco-funds typically invest in environmentally friendly companies and the companies providing customers with superior eco-friendly products or services.

3. NIKKO ECO FUND – FIRST ECO-FUND IN JAPAN

Nikko Eco Fund made an exciting debut in August 1999, gathering more than 100 billion JPY of capital within four months after the inception. Shortly after the sensational debut of Nikko Eco Fund, other financial institutions released similar SRI funds within a short period of time, and the total size of Japan’s SRI market reached 200 billion JPY altogether in January 2000, only six months after the first SRI fund was launched. The rapid emergence of the huge SRI market marked a milestone in the history of investment trusts market and SRI market in Japan. Nikko Eco Fund won the Good Design Award 2001. A summary of the retail SRI funds launched in Japan so far is shown in the attached table.

3.1. ECO-FUND INVESTORS

According to a survey conducted after the successful release of Nikko Eco Fund, more than 90% of the investors investing in Nikko Eco Fund were individual investors including many first time investors, female and young investors, representing a significantly different class of investors from the traditional investors, male over 40 years old regularly investing in stocks and funds. Average size of the purchase was 3 million JPY per person. In this sense, it can be said that Nikko Eco Fund opened up a new type of investor group and it is also true that a new type of investors contributed to the creation of the eco-fund and the SRI market in Japan.

Judging from the quite strong reactions from the eco-fund investors, Japanese individuals seemed to have long waited for this type of financial products. In 1990, the Postal Savings Bureau introduced a scheme called a “Postal Savings for International Voluntary Aid Program” in which 20% of savings incomes were contributed to international co-operation projects

Table 17.1.
SRI Retail Funds in Japan.

Fund name	Manager	Fund type	Launch date	Size in millions JPY (19.11.2002)	Screening company
Nikko Eco Fund	Nikko Asset Management	Domestic equity	20.08.1999	42,333	Good Bankers
Green Open (buna no Mori)	Sompo Japan Asset Management	Domestic equity	30.09.1999	7,358	Sompo Japan
Eco Fund	DLIBJ Asset Management	Domestic equity	22.10.1999	4,911	Good Bankers
Dr. Eco	UBS Global Asset Management	Domestic equity	29.10.1999	3,873	Japan Research Institute, UBS
Green Wing	UFJ Partners Asset Management	Domestic equity	28.01.2000	2,960	UFJ Research Institute
Wing of Tomorrow (Asu no Hane)	Asahi Life Asset Management	Domestic equity	28.09.2000	4,396	Mitsubishi Research Institute
Sea & Sky (Umi to Sora)	Mitsui Sumitomo Marine Asset Management	Domestic balanced	31.10.2000	1,174	InterRisk Research Institute & Consulting
Nikko Globe A	Nikko Asset Management	Global equity	17.11.2000	1,984	SAM
Nikko Globe B	Nikko Asset Management	Global equity	17.11.2000	1,135	SAM
Mrs. Green A	Daiwa SB Investments (T.Rowe Price)	Global equity	15.06.2001	3,014	Innovest
Mrs. Green B	Daiwa SB Investments (T.Rowe Price)	Global equity	15.06.2001	4,935	Innovest

or NGOs working for the social welfare of the developing countries. In spite of the sluggish economy in Japan in the last decade, almost 26 million people have participated in this scheme. We were convinced that investors were not 100% interested in maximizing investment profits but many of them were willing to contribute to the society in some ways.

4. IMPACT ON BUSINESS CORPORATIONS

As the eco-fund market grew rapidly, Japanese corporations got more and more aware of the significance of environmental issues within the context of their business operations. In the early stage, they were rather sceptical of the meaning of eco-funds, but have gradually recognised the need to deal with the environmental issues more progressively. Whether or not included in or excluded from the eco-funds depend upon the eco-efficiency and environmental friendliness of the corporations. Eco-funds, for the first time, built in a mechanism in the financial market to link the corporate environmental performance and their stock performance, and this mechanism turned out to be a powerful driving force to facilitate sustainable development of our society. As a matter of fact, eco-funds are driven by the SRI concept in a sense that corporate environmental friendliness is immediately reflected in the stock market, and the companies with superior environmental management benefit from high stock valuation to be achieved, and the companies trying harder to achieve higher environmental solution are able to deliver more competitive products or services than their rivals. Through such a market mechanism, re-distribution of capital takes place from one company to another and eventually eco-efficient society is going to materialise. Socially responsible investments are the basic idea behind the eco-fund mechanism.

Environmental awareness of business corporations has recently increased significantly particularly after the COP3 Kyoto Protocol was signed in December 1997. Emergence of eco-funds in 1999 and gradually increasing pressures from eco-research firms world-wide, including The Good Bankers, were attributed to the overwhelming changes in their attitude towards environmental issues. In Japan, the number of corporations achieved ISO 14001 accreditation, which is a proxy for the environmental awareness of business corporations, jumped from 44 in March 1996 to over 9,467 as at the end of June 2002, about 1/4 of the total accreditations achieved world-wide.

Here is another story demonstrating the clear change in their attitude towards environmental awareness. When the Good Bankers started environmental research in 1998, many of the Japanese companies were quite

sceptical of the environmental research and reluctant to provide necessary data and information. Moreover many companies rejected to meet with or talk over telephone with environmental research analysts. However, success of the eco-funds dramatically changed the corporate attitude towards the environmental research. At present as eco-funds got popular in Japan, most of the Japanese corporations are quite co-operative in responding to the environmental research. Many of them are even keen to obtain feedback and want to know how their stocks are rated and how they can climb up to a higher ecological rating. An increasingly large number of Japan's leading companies are now implementing the environmental managerial accounting, and the number of companies issuing the environmental reports is significantly increasing. According to the Ministry of Environment, the number of companies publishing the environmental reports has increased from 169 in 1998, 270 in 1999, and now about 600 in 2002. They know the merit of being environmentally friendly, and dealing with the environmental issues progressively turns out to be a clear incentive.

5. OVERSEAS REACTIONS

Eco-funds support the management efforts to tackle environmental problemmes by business corporations. Advanced companies speed up R&D efforts to develop eco-friendly technologies and products at a competitive price. Japanese companies are generally good at application of new technologies to their products, and it is true with environmental technologies or eco-friendly technologies. Successful application of environmental solutions made Japanese electronics and automobile manufacturers the world leaders in terms of environmental measures. Overseas media, research institutions, fund managers pay a close attention to the rapid growth of eco-funds in Japan and superior environmental progress among Japanese corporations.

6. ECO-LEADERS AND ECO-INNOVATORS

Most of the eco-funds in Japan, including Nikko Eco Fund, apply positive screening rather than negative screening in belief that encouraging people works better than discouraging people. Eco-funds typically invest in the companies in two different categories, "Eco-leaders" and "Eco-innovators". "Eco-leaders" are the well-managed companies from the viewpoint of environmental performance. Usually the best-in-class approach is taken to identify

such companies. In contrast, “Eco-innovators” are those developing and providing customers with environmentally innovative products or services, which would make a breakthrough in betterment of environments. These eco-innovators are able to use such products or services as their competitive edge in doing their business.

7. RESEARCH CRITERIA AND RESEARCH PROCESS

Research criteria for typical eco-funds are as follows:

- 1) Environmental Management System (EMS): top management commitment, environmental policy in relation to management strategy, the ISO14001 accreditation, information disclosure such as environment report or sustainability report, environmental managerial accounting, etc.;
- 2) Environment performance in the production process, including energy saving, greenhouse gas reduction, etc.;
- 3) Development and supply of eco-friendly products and services;
- 4) Social criteria: varying from one fund to another, but some typical examples are equal opportunities, contribution to or involvement in community activities, education program for employees and community members, etc.

In conducting environmental/social research, primary sources of information are as follows:

- 1) publicly available publications such as environmental reports, sustainability reports, annual reports and web-site;
- 2) dialogues in the form of interview and telephone conversations;
- 3) questionnaire answers;
- 4) hearing from stakeholders, technical experts, etc.

Fund managers, in charge of the eco-funds, narrow down investment universe using the above ecological/social screening and eco-rating as well as conventional financial analysis, and then construct their portfolio.

The screening criteria applied to the SRI funds are quite different from one nation to another. Compared to overseas criteria, Japanese criteria do not have exclusionary criteria since corporate and cultural backgrounds in Japan are much different from those counterparts’.

Some industry sectors like automobile and power generation are in fact responsible for tremendous amount of pollutants, emissions and greenhouse gas, but it is not realistic to abolish such industry. Japanese eco-funds are generally aiming to co-operate with business corporations and encourage them to take appropriate measures within the context of their business. In our approach, we believe that seeking for the solution to help companies improve environmental policy is more important than just pointing out their shortcomings. We do not eliminate the corporations simply because their products or services are environmentally overloaded. We urge them to improve the situation and give credits if they move in that direction.

Despite such differences in screening criteria between the Western world and Japan, we believe that the ultimate goals are not quite different. The key is to choose companies that have good environmental policy and performance and that have ecologically innovative technology. In the past, since "environment" was treated as external diseconomy to the market mechanism, classical investors looked at financial analysis alone. However, now that eco-fund has added environmental aspects to company evaluation criteria, every corporate manager will have to deal with the environmental performance and financial performance equally.

8. NEXT AGENDA

There are a number of measures to be taken for Japanese eco-fund and SRI market to grow further and work well as a dynamic power to change the society for the better.

1) Performance Evaluation Method

Currently environmental research mainly focus on three aspects, environmental management system (EMS) such as environmental policy, organisational structure, ISO 14001, environmental accounting, etc., environmental performance with respect to production process and finally environmentally friendly business development either in the form of products or services. At present, no standardised evaluation methods have been developed yet. Without such standardisation, there will be confusion on the part of business corporations and investors as to what should be done to identify good or bad. Going forward, relevant performance evaluation methodology should be developed so as to be able to compare the environmental management performance of different companies and different industry sectors. For stock

valuation, many popular evaluation methods have been developed and widely utilised. Some of the examples are Price-to-Earning ratio (PER), Price-to-Book ratio (PBR), Return-on-Equity ratio (ROE), etc. We hope to see that some standard evaluation methods for environmental evaluation will be developed and widely used in the near future. In any event, to make a fair environmental evaluation, fair disclosure of environmental performance data is absolutely essential. For this, standardisation of environment reporting needs to be done as well.

2) Institutional Investor Participation and Tax Incentives

Further expansion of the Eco-fund market would require vigorous participation by institutional investors such as pension funds, insurance companies, trust banks, labour unions, etc. The money managed by institutional investors, in fact, belongs to individuals. The first eco-fund boom in 1999 awakened individual investors. They wanted make sure if their money was properly invested in environmentally friendly companies to fulfil their social responsibility through the purchase of the SRI funds. These individual investors were quite thoughtful and seriously considered the SRI as one of their investment alternatives. Once such a tendency starts, nobody can stop it! Some domestic institutional investors have already taken part in the SRI area. In December 2000, a pension fund for the Tokyo metropolitan teachers and officials started a tailor-made eco-fund for the first time as pension funds. Japanese government has already recognised the significant role of financial vehicles, particularly eco-funds, to realise sustainable society. Like other countries of the world, public pension funds should play an important role for the development of eco-funds and SRI funds. Government should extend appropriate tax incentives to promote eco-funds and the SRI funds.

3) Investor Educations

Eco-fund market reached 200 billion JPY in January 2000 but subsequently shrank to 78 billion JPY as of today, mainly due to a persistent fall in stock prices and a lack of fresh interest on the part of investors. A government survey conducted in May 2002 revealed that only 10% of the adults were interested in stock investments while 80% were not. Also 90% were not interested in investment trusts or government bonds at all. Major reasons for such a low interest in securities investment were attributed to lack of proper knowledge (33%), lack of money (about 30%), a worry over investment losses (about 30%). They also mentioned that securities brokers are not trustworthy (43%). This survey clearly shows the urgent needs to provide proper investor education and to change the tarnished image pertaining to securities brokers.

4) Diversified Product Menu

Currently eleven retail SRI funds and a SRI pension fund exist in the Japanese market to the best of our knowledge. All of these funds were launched during the first eco-fund boom period from 1999 to 2000. Since then no SRI fund has been released yet as the market condition deteriorated. The variety of the SRI funds at present is rather narrow and retail investors only have a few choices for selecting the SRI funds. SRI among the institutional investors is even far behind the retail market. Pension schemes are theoretically among the potential investors in the SRI funds. However, except for a pension fund in Tokyo, no pension plan has commenced investing in the SRI. Unlike the U.S., U.K. and Europe, Japanese public and private pension funds focus on corporate governance and compliance issues and are still hesitated to invest in eco-funds or the SRI funds. In the near future, however, a broader spectrum of retail and institutional money, particularly DC pension plans, might be willing to invest in eco-funds and the SRI funds.

Existing eleven retail funds and a pension fund featuring the SRI characteristics invest in fairly large companies listed in the domestic and overseas stock exchanges only. Many of the eco-innovators, developing and providing innovative environmental technologies are generally small and unlisted. There must be SRI funds investing in small-sized, unlisted eco-venture in order to finance such small ventures. Eco-bond funds are also promising. The funds would invest in the fixed income securities issued by eco-ventures, eco-friendly companies.

8.1. SOME PROPOSITIONS

The success of eco-funds shows that general public, a tiny force as a single individual, can influence effectively the future direction of the world. It is quite important to build up the sound infrastructure, which enables the ordinary people to participate in the big project like "green technology development" with their small money through financial instruments such as "eco-fund".

Several additional measures as mentioned below should be taken to promote the new financial movement mentioned above.

- 1) Stimulate co-operation between public sector and private sector in developing and spreading eco-funds.
- 2) Accelerate development and discovery of green technology by scientists and business corporations.

- 3) Encourage vigorous discussions, arguments and exchanges of information among scientists, technical experts and general public on the technologies for sustainable development.
- 4) Give tax incentives to motivate eco-fund investors.
- 5) Educate general public more about the critical situation of the environment and any other meaningful information related to this area, such as green technologies, investment alternatives, etc.

8.2. GOING FORWARD

According to the survey conducted in January 2001 by one of the major newspaper, Yomiuri Newspaper, 61% of the general public stated that Japan should be the nation to protect nature and environment on the Earth and 77% of them replied that they did not mind if their standard of living and convenience would be sacrificed for the sake of protecting nature and environment. In Japan, and presumably also in other parts of the world, there is an increasing criticism against the society in the 20th century characterised by mass-production and mass-consumption. The 21st century is sometimes referred to as the Century of the Environment. As a powerful financial instrument, eco-funds will no doubt play more significant role in guiding our society and economy towards more environmentally friendly ones.

The eco-fund market was born in 1999 and has been raised by individual investors. Going forward, eco-fund market will be open to institutional investors such as life and casualty insurance, banks, trust banks, as well as public pension, corporate pension, Postal Saving, Post Office Insurance, etc.

In fact, many governments in the world are very keen to turn their industry into environmentally friendly and very competitive “green industry” and try to attract “green money” into their homeland. Japanese government is not the exception. In December 2000, Japanese government decided to clearly mention in its Long-term Environmental Plan, the national environmental policy to promote investments for environment protection and speed up the corporate management efforts dealing with environments, and in addition, asked financial institutions to study the financial schemes or products as a tool to meet domestic investors desire to invest in environmentally friendly enterprises and eco-business against the background of increasing interest in environments.

The Ministry of Environment in Japan also made a comprehensive study about eco-fund market in Japan and in other countries, and concluded that the specific attitude of a business corporation towards environment clearly

influenced the stock price and fund raising ability of that particular corporation. In the global front, green funds or eco-funds play an important role to help building the social infrastructure supporting implementation of the key national policies. This is the current status of eco-funds world-wide and this tendency will be further reinforced but will not be eroded into the future.

In the field of socially responsible investment, Japan lagged behind the United States and Europe. However, the success of the Nikko Eco Fund boosted the SRI concept among Japanese investors and Japanese industry. In fact, investors in Japan were catching up quickly in learning how to integrate a social component to the management of their wealth. This new concept awakened “sleeping investors” such as female, young generation, labour unions, etc. Eco-fund proved that such a mechanism could be applied in many ways for the sustainable development of the world. The eco-fund has shown that the key factor for changing the world is ordinary people. It is important to build up the sound financial infrastructure enabling ordinary people to participate in the big project like “green technology development”, which they might have never thought about before. The amount of the money each ordinary person owns may look very small, but it can go a long way towards sustainable development of the society through “eco-fund mechanism”.

APPENDIX

PROFILE OF THE GOOD BANKERS CO., LTD.



History

The Good Bankers Co., Ltd. was established on 14th July 1998 by Ms. Mizue Tsukushi and her highly motivated female friends who wanted to apply their experiences in the financial services industry in solving the environmental and social problems. It was the first and only independent investment advisory company in Japan, fully devoted to social investment research, at the time of its foundation. Purpose of establishing The Good Bankers was clearly stipulated in the following "Statement of Establishment" written by Ms. Tsukushi and other co-founders.

Statement on Establishment

Following the collapse of the bubble economy in the 1990s, Japan has experienced a mixture of problems such as crash and prolonged downturn in the stock market, bad-debts of financial institutions, and a string of broker scandals. Both foreign and domestic investors have given a hard look at Japanese financial market loaded with these problems.

According to the May 1997 edition of the magazine Forbes Japan, the financial sector ranked on top of the "useless sector ranking" survey. Also, the International Institute for Management Development, a Swiss research company holding an annual meeting of political and business leaders in Davos, conducted a survey on the financial markets in different countries regarding their level of sophistication and the degree of contribution to the industrial development. The results revealed that Japan lagged behind not only Hong Kong and Singapore, but also Malaysia, Thailand, and India. (27 January 1997, Nikkei)

Under these circumstances, why is it that no voice has been heard from the financial industry against these results? If above views are true, what is the raison d'être for the Japanese financial industry? How is it possible for any one to work in the financial industry with pride?

With a sense of crisis for the circumstances the Japanese financial industry is placed in, we, a group of women financial professionals, have formed a study group and continued our research. As a result, we reached a conclusion that since the end of all the economic activities is the pursuit for happiness and better quality of life, the financial sector should also be able to advance its ideals by providing financial products and services that contribute to the

development of the society, and eventually create new markets and clear up the stagnation covering the Japanese financial industry.

To propose the concept of socially responsible investment (SRI), an investment method which contributes to the betterment of the society and clearing the stagnated Japanese financial industry, and also to provide financial products and services that meet the varied needs to respond to the changing financial market following the financial “big bang”, we have determined to establish a financial services company by women financial professionals, Good Bankers.

– New wine must be put into new wineskins...

14 July 1998

By Founders of the Good Bankers

Corporate Objective – Better Future

The objective of the Good Bankers Co., Ltd. is to contribute to making our society a better and more sustainable one by using financial tools such as socially responsible investing (SRI). It is our strong belief that the ultimate purpose of any economic activity is to maximise the well being of human kind. It is, therefore, the responsibility of the financial services industry to provide products/services that would contribute to the health of society. Since the establishment of the company, the Good Bankers has vigorously introduced the concept of SRI into Japan and has promoted this concept through various channels. Today, we see a growing awareness in Japan of the social responsibility of investment. The time to support this trend by providing the Good Bankers’ know-how on SRI and to contribute to the betterment of society is now. By working together, we can provide a better future.

Major Business Activities

- Plan and develop SRI products such as environmentally friendly funds, eco-funds, etc.
- Make environmental and other SRI research covering Japanese corporations.
- Provide investment advisory services by offering environmental and SRI screening.
- Promote the concept of SRI through lectures and publications.
- Market overseas SRI products.
- Provide incubator banking: help small companies find capital funding and develop marketing strategies.

Clients

The Good Bankers provides environmental and social research with following clients at present:

1. Environmental Research only:
 - Nikko Eco Fund, which was launched on 20th August 1999 as the first SRI product in Japan
 - DLIBJ Eco Fund, which was launched on 22nd October 1999
2. Environmental and Social Research:
 - The Mutual Aid Association for Tokyo Metropolitan Teachers and Officials for the first tailor-made SRI fund in Japan, launched on 1st December 2000
 - Overseas clients, such as Ethibel (on a project-by-project basis)

Core Staff and Network

TSUKUSHI, Mizue: President & CEO

Founder of the firm and the pioneer in SRI industry in Japan. Former Deputy General Manager of Institutional Marketing Department, UBS Trust & Banking Co., Ltd. in Tokyo.

IKEDA, Sho: Director & Chief Operating Officer

Former Head of Corporate Research and Chief Portfolio Manager for Japanese Equities at Nikko Asset Management Co., Ltd. Also Assistant Manager, Treasury Department and International Group at Hitachi, Ltd.

ODDOUX, Jacques, Ph.D: Director

Chemical consultant. Expertise in R&D management, industrial production, sales and licensing. Former Director Advisor in Côte d'Ivoire, R&D Senior Vice President with an international engineering company.

TSUKUSHI, Naoki: Director

Graduated from Media Communication Master Course, University of Technology, Sydney, resident in Sydney, Australia, in charge of information gathering on contemporary knowledge about eco-research and SRI in Australia

TAKEUCHI, Masataka: Auditor

CPA, partner of Chuo Aoyama Audit Corporation

Global Alliances

The Good Bankers has built a global network of strategic alliances with many leading SRI research institutes, top-ranked universities, SRI financial institutions, technical experts and journalists in the world. Joint SRI research and joint marketing are implemented on a project-by-project basis.

- University of Tokyo, Centre for Collaborative Research (Japan)
- Tokyo University of Agriculture and Technology (Japan)
- Wuppertal Institute for Climate, Environment and Energy (Germany)
- Zürcher Kantonalbank (Switzerland)
- Ethibel (Belgium)

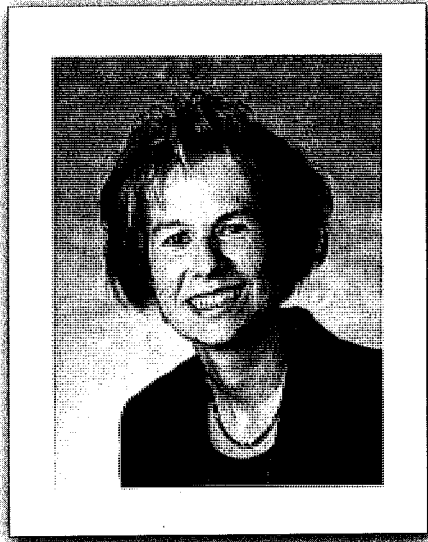
The Good Bankers works closely with various organisations, working groups and individuals devoted in the SRI, such as ASrIA, TBLI, UNEP FI and a broad spectrum of technical experts, environmental researchers and journalists world-wide.

The Good Bankers works closely with technical experts, environmental researchers and journalists in Japan as well as in the world.

Ingeborg Schumacher

CHAPTER 18

**CAN PENSION FUNDS
BECOME NEW FORCES THAT DRIVE
SUSTAINABLE DEVELOPMENT?**



Ingeborg Schumacher, MA, since 1996 she has worked in UBS Global Asset Management's Socially Responsible Investments Team, which is responsible for managing the UBS Eco Performance Portfolios and constructing portfolios with an ecological and social screening. She also handles internal and external marketing and public relations duties for the launched funds.

In parallel to her business career, she continuing her earlier studies in ecology and business management at the universities of Lüneburg (Germany) and Avignon (France) with a dissertation work on socially responsible investment for pension funds at Switzerland's University of St Gallen.

Ingeborg Schumacher gives presentations at conferences and seminars and has also written a number of scientific papers. Since 2001 she has worked on the board of Forum Nachhaltige Geldanlagen and represented UBS at Eurosif.

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CAN PENSION FUNDS BECOME NEW FORCES THAT DRIVE SUSTAINABLE DEVELOPMENT?

1. INTRODUCTION

Pension funds are emerging as one of the most powerful players in the equity markets. Their investment power and long-term investment perspective become a force for sustainable development. Demographic changes accelerate the need for additional occupational and individual saving schemes, and put pressure on the funds to achieve a high performance. Socially Responsible Investments (SRI) could serve these needs, as beside social and environmental benefits they promise long-term financial benefits. Some pension funds have always been active in exercising their rights and power as dominant stockholders to influence governance structures of companies and encourage involvement in SRI. The presence of these funds is less visible than that of retail funds, but their investment volumes are much higher. This paper assesses drivers for pension fund involvement in SRI. As there are only a limited number of players in the process, the barriers preventing pension funds from taking more active roles are identified. Finally, the potential impacts of regulatory developments, such as disclosure rules for pension fund SRI strategies, are also discussed.

2. PENSION FUNDS: ECONOMIC POWERS UNDER THREAT

2.1. GROWTH AND SIGNIFICANCE OF PENSION FUNDS IN EQUITY MARKETS

“The emergence of institutional investors as the dominant holders of financial assets and as increasingly important participants in capital markets is one of the distinguishing features of the present financial landscape – and one that is likely to become more prominent in the years ahead.”¹

The importance of pension funds as institutional investors increases due to extraordinary amounts of capital managed by these organisations. Table 18.1. shows total managed assets in relation to national GDP and their dominance of local markets.

Table 18.1.
Worldwide pension holdings 1998.

Country	Total equity held by pensions (billion USD)	Pension investment as % of GDP	Pension investment as % of market capitalisation
France	91.3	6.4	13.5
Germany	103.2	4.8	12.5
Italy	47.9	4.1	13.9
Netherlands	126.0	32.9	26.9
Switzerland	105.8	40.0	18.4
United Kingdom	842.7	62.1	12.3
United States	3,761.9	45.8	33.7

Source: Monks, R.A.G. and Minow, N. (2001). *Corporate Governance* (2nd ed.). (p. 82). Blackwell Publishing.

Differences in the table above are related not only to country size, but also to the different national regulations that affect pension funds, since the characteristics of individual social security systems are political decisions. Historically, where the state scheme has been particularly generous there

¹ *Institutional Investors 1998. Statistical Yearbook.* (1999). (p. 9). Paris: OECD.

has been little need for anything else. The three-pillar-model gives responsibility to the state, employer and the employee for payments into the system. Generally, there is a consensus, that an equivalent spread on the three pillars can ensure the most appropriate protection of pension payments.

Despite their enormous and ever-increasing amount of managed assets, social security systems are facing severe problems: these result from negative demographic developments, unemployment and early retirement. Lower birth rates, a later entry into employment markets due to longer education periods, and increasing life expectancies have resulted in fewer contributors supporting more pensioners for a longer time. As contributions decrease, while expenses increase, the sustainability of pension systems is called into question.

At present, 16% of the population of Western Europe is over 65, but by 2030 that percentage will have climbed to 25% and by 2050 to 30%. The maintenance of present levels of pensions relative to average earnings in such circumstances will prove very expensive, if not impossible. According to calculations by PriceWaterhouseCoopers, the break-even contribution rate in France will climb from 16% to 28% of pay over the next 50 years, in Germany from 17% to 28% and in Italy from 20 to 46%.²

Table 18.2.
Asset allocation of pension funds.

Country	Domestic equities	Domestic bonds	Foreign equities	Foreign bonds	Real estate	Cash/ other
Germany	6	71	3	4	13	3
Netherlands	15	47	19	10	7	2
Sweden	20	64	8	–	8	–
Switzerland	10	25	5	7	16	37 ³
United Kingdom	53	9	22	6	2	8

Source: *European Pension Fund Managers Guide*, (1998). (Vol.1).

Facing these burdens the provision systems are confronted with the pressure of becoming professional in order to better anticipate and fulfil the growing liabilities. At the same time, there are different activities to supplement the systems by different options. Beside the state insurance also

² Riley (2000)

³ Includes loans to employer, mortgages and other short- term loans.

occupational and individual pension schemes are promoted, as the recent German pension reform reflects.

If to consider that increasing amounts of private savings are also managed by investment funds, the asset allocation for retirement benefits presents an issue. Regulations affect investment policies, either limiting foreign investments, for example, or setting restrictions on equities or alternative assets. Deregulation has removed some of these barriers, but the result has been a somewhat worrying build-up of the equity ratio over the past few years.

There are indications that there is an increasing participation of pension funds in Socially Responsible Investments. The following paragraphs try to evaluate how and why pension funds enter into the market. Economic pressures can be a driver, if these investments are shown to provide better long-term returns. Despite its trendiness, it is clear SRI is still emerging as an investment style and that threats and barriers are hindering the development of SRI. The activity pattern and the argumentation allows the comparison with the active shareholder involvement towards a better Corporate Governance by pension funds. This debate has been brought to the forefront by the well-respected multinationals on both sides of the Atlantic. Therefore the question can be posed: *Do Socially Responsible Investments allow pension funds better investments and therefore higher returns, in addition to the positive effects regarding society and the own pensioners?*

3. INSTITUTIONAL MARKET OF SOCIALLY RESPONSIBLE INVESTMENTS: NUMBERS AND OUTSTANDING EXAMPLES

3.1. BRIEF INTRODUCTION: HOW CAN PENSION FUNDS BECOME INVOLVED IN SRI?

As there is no common definition of Socially Responsible Investments, pension funds have different tools for SRI:⁴

The oldest method is *negative screening*, which involves the exclusion of certain companies, or industry sectors, on the basis of environmental, social

⁴ Definitions from: Burgess, C. (2002). Socially Responsible Investment Survey 2002. (p. 2). London: Deloitte & Touche.

or ethical criteria. The most common set of negative criteria includes policies against investments in companies involved in weapons manufacturing, tobacco or gambling. Some environmental funds go further to exclude complete sectors like automobile or oil due to their high environmental impacts. This approach can be implemented quite easily, but imposes higher risks from a portfolio management perspective. Although negative screening enables investors to implement their values in their investment decisions, it does not provide any incentives for excluded companies to improve.

Positive screening is applied to construct investment portfolios consisting of companies, which have been actively selected on the basis of their strong performance on environmental, social or ethical issues. Screening is either used to construct portfolios out of the best in class of each sector (which might be defined as the top 20% companies in a given sector or to define an over- or underweight compared to a given benchmark). However, as risk considerations provide an obstacle for institutional investors to invest only into a limited – positively screened – investment universe and the rapid growth of SRI might further reduce liquidity for these selected stocks, this weighting strategy might be an alternative for large pension funds, which seek diversification. On the other hand, this approach lacks transparency and credibility, as controversial stocks are included in the portfolios. Therefore, it is often combined with *Engagement*, the use by investors of robust dialogue with Boards or management of companies with the aim of altering corporate behaviour in relation to environmental, social or ethical issues. Engagement can either be exercised as a dialogue behind closed doors or also by *Shareholder Activism*, the exercise of shareholder powers through general “protest” voting at Annual General Meetings or the support of SRI-related shareholder resolutions.⁵ Engagement should be a process in which investors attempt to persuade companies with regard to change of identified areas of improvements: Improving “lagging” companies instead of “cherry picking” leaders. It is also suitable for investors adopting passive investment approaches as there is no deviation from a benchmark. It allows investment companies to use their influence as major investors across their whole portfolio (not just an ethical fund segment) to encourage companies to improve their SRI performance (like Henderson or Friends Ivory & Sime, which also manage pension money). The main concern facing Engagement is the lack of transparency, pointed

⁵ An initial survey of 2002 shareholder SRI-related resolutions in the US indicated 251 resolutions have been submitted to companies (Interfaith Center on Corporate Social Responsibility).

out in a Deloitte & Touche survey in 2000, that only very few fund managers measure the success of their active engagement.⁶

3.2. DEVELOPMENT OF SRI MARKET BY INSTITUTIONAL INVESTORS

Compared to a large number of surveys on the retail SRI fund market,⁷ fewer figures are available for the institutional market. This can be easily explained by the fact that many pension funds do not invest in public funds, but manage their assets independently or in individual portfolios, which are not usually disclosed.⁸ Sparkes describes the amount of retail SRI investments as the tip of an iceberg “you can only see 20% of the total- compared to institutional money”.⁹ In addition to the 3.3 billion GBP in funds in the United Kingdom, 23.5 billion GBP are managed by churches and charities and 25 billion GBP by pension funds according to social-environmental criteria. Cerulli calculated the volume of institutional SRI portfolios to be 1,336 billion USD, not including the 14 million USD by mutual funds.¹⁰ The US Social Investment Forum cites that 13% of US assets under professionally managed portfolios are socially screened. This figure is questionable, however, because it includes portfolios, which apply only one negative criterion, like an exclusion of tobacco companies. Institutional investor interest in SRI is also reflected by the launch of specific institutional funds. In Switzerland, for example, all relevant asset classes of pension funds are now available with a SRI screening, either in separated funds or a defined asset allocation strategy.¹¹

⁶ Burgess, C. and Osborn-Barker, T. (2000). Socially Responsible Investment – Response of investment fund managers. (p. 4). London: Deloitte & Touche.

⁷ Cerulli Associates (2001). Investing for the Future. Socially Responsible Investing Issue. The Cerulli Global Edition. Ecoreporter (2001) SIRI (2001) shows dynamic trend of SRI funds: While 1999, 159 SRI funds were offered in Europe, the number increased to 251 in 2001, while the managed assets increased by 40%.

⁸ The SPI-Finance working group by German and Swiss banks developed 2000 an indicator: Green Assets under Management, which also includes individual mandates managed by financial institutions. See Internet, <http://www.spi-finance.com>.

⁹ Sparkes, R. (2000). A business outlook on SRI – Or seeing the wood for the trees. (p. 2). Speech at Triple Bottom Line Investing Conference in Rotterdam, 2. November 2000.

¹⁰ Cerulli 3.

3.3. EXAMPLES FOR PENSION FUNDS INVOLVED IN SRI

The most prominent pension funds involved in SRI are located in the US, the UK and Switzerland. You can identify a certain pattern, as most of them are public funds, often representing academics. The potential of their investment capabilities can be enormous, as the California Public Employees' Retirement System (CalPERS)¹² example shows:

*CalPERS grows about 1 billion USD every two months, in a year that is more than four times the median market value of a Fortune 500 industrial company, in a year, enough to buy all the common stock of GM with enough left to buy five tankfuls of gasoline for each vehicle it makes.*¹³

CalPERS is respected for its pioneering role in Corporate Governance. The company made its first commitment to corporate governance in 1984, and since then has actively engaged companies. At the end of the 1980s, CalPERS published its according investment targets and strategies, also referring to its fiduciary obligations. In 1994, CalPERS announced that it would begin factoring labour management relations and other aspects of human resource management and workplace practices into its analysis of company performance in connection with the fund's investment and voting decisions.¹⁴ Recently, CalPERS provoked discussions within the SRI community as it announced that it would blacklist four Southeast Asian markets (Thailand, the Philippines, Indonesia, Malaysia) on ethical grounds. Tessa Tennant, the representative of the Asian SRI Forum, criticises the ban as she prefers engagement and the backing of proactive companies within these countries.¹⁵

TIAA CREF (Teachers Insurance Annuity Association-College Retirement Equities Fund), the largest US institutional investor started, initiated a Social Choice Fund to which beneficiaries can specifically channel their investments in 1990. In 1993, TIAA-CREF issued the following statement regarding social

¹¹ Institutional funds are offered by Ethos, NEST, Prevista, Sarasin, UBS.

¹² Internet, <http://www.calpers.com>.

¹³ Monks, R.A.G. and Minow, N. (2001). *Corporate Governance* (2nd ed.). (p. 111). Blackwell Publishing.

¹⁴ Brancanto, C.K. (1997). *Institutional Investors and Corporate Governance: best practices for increasing value*. (p. 67). Chicago: Irwin Professional Publishing.

¹⁵ DresdnerKleinwortWasserstein SRI News, 25 February 2002.

responsibility: “TIAA-CREF believes building long-term shareholder value is consistent with directors giving careful consideration to social responsibility issues and the common ground on the community.”¹⁶ The board was asked to develop policies and practices on issues like equal employment or the environmental impact of corporate operations and products. Based on this policy, TIAA-CREF has supported shareholder resolutions on a number of social issues. The Fund has also made an effort to communicate directly with management on the issues it deems particularly important. The sheer size of its equity portfolio and the voting power it exercises in a number of corporations results in a degree of influence unattainable by most institutional investors.

The Universities Superannuation Scheme (USS) is one of the largest pension schemes in the UK, with 22 billion GBP in assets. Following an SRI commitment by its academic members in November 2000, three people were hired to address SRI issues.¹⁷ In order to obtain scientific background information and strategic advice for its investment strategy, USS started a series of discussion papers to examine the relationship between financial performance on social, environmental, ethical and governance issues and consequent implications for long-term investors. The first paper: “Climate Change – A Risk Management Challenge for Institutional Investors”¹⁸ points out investment implications, as institutional investors are uniquely suited to take particular actions. Surveys on the SRI commitment by UK pension funds also mention the pension funds from BBC, Nottinghamshire County Council, Lancashire County Council or BT as exceptionally involved.¹⁹

In Switzerland two players have stimulated the role of pension funds in SRI, above and beyond involvement in corporate governance and public execution of voting rights: the Geneva pension fund *CIA* and the foundation *ETHOS*. The increasing equity ratio in the strategic asset allocation of the pension fund of teachers and administration staff of Geneva has stimulated a profound discussion about the use of their membership rights. Facing the

¹⁶ Brancanto 126.

¹⁷ USS has defined the following SIP: “The trustee pays regard to social, ethical and environmental considerations in the selection, retention and realisation of fund investments to the extent, that it is consistent with its legal duties to do so. To this end, having consulted with the participating employers, it has adopted a policy of active engagement with those companies in which the fund is invested concerning the ethical, environmental and social policies pursued by those companies...” Green, D. (2001). *Just Pensions. Socially Responsible Investment and International Development*, May p. 9.

¹⁸ Internet, <http://www.usshq.co.uk/INVMNT/climch/framclim.htm>.

¹⁹ Ellipson (2001), *Ethical Performance 2001*.

significance and the value of these rights, it was decided to systematically exercise voting rights for Swiss and foreign equities. CIA was also a founding member of the ETHOS foundation (Fondation d'investissement pour un développement durable²⁰), which bases its investment decisions on a social-environmental analysis of companies. This procedure does not only reflect ideological values, but also the target to combine the economic efficiency with the socio-environmental one, in order to increase the long-term value of a company.

4. MOTIVATION FOR SRI BY PENSION FUNDS: SAME STORY AS CORPORATE GOVERNANCE?

The analysis of the active pension funds shows that in most cases their SRI involvement is based on or supplemented by public shareholder activism or direct influence on the Corporate Governance in their stock-holdings. The drivers are quite similar: apart from political considerations the improvement of the governance structures intends to positively affect financial performance. Similar is also the players pattern, the majority of public pension funds and the limited number of actors, at least of those, who are quoted in the news.

4.1. PERFORMANCE POTENTIAL: LINKS TO CORPORATE GOVERNANCE

According to a survey by Credit Lyonnais Securities Asia (CLSA) Emerging Markets, "Asian companies that rank highest in corporate governance outperformed equity market benchmarks by a 14.4% average."²¹

The launch of the Dow Jones Sustainability Group Index (DJSI) was supported by an impressive market entry of the index. A back-test was conducted which calculated how the DJSI would have performed from 1994 to 1999 which showed a significant outperformance compared to the traditional Dow Jones Global Index. The impressive chart should prove, that sustainability enhances corporate profitability and investors return.²²

²⁰ In May 2002 Ethos has 92 pension fund members and total assets of 750 million CHF. Internet, <http://www.ethosfund.ch> (24.5.2002).

²¹ Internet, http://www.tiesweb.org/work/better_corporate_governance_pays_off.htm (21.5.2002).

²² Internet, <http://www.sam-group.com/e/susindex/djsi.cfm>.

The story is similar, a better social responsibility and governance structure might lead to higher long term company's performance and more attractive returns for the investors. The analysis of soft factors as non-financial measures and the quality of management gain importance not only since accounting measures are questioned. Surveys of measures determining long-term shareholder value include customer and employee satisfaction as well as social responsibility. Brancanto sums up as follows: *"These strategic performance measurements will greatly assist institutional investors who invest for the long term and can encourage investors to stay with a company, when sole reliance on financial measurements might suggest otherwise."*²³

An example of the impact of SRI investors on a set of companies is aptly explained by an Access to Drugs campaign for South Africa official: *"we have heard from senior management that they believe this wake-up call helped them to prevent serious reputational damage. The engagement activities, alongside those of the others involved, helped protect a goose that had laid some valuable golden eggs."*²⁴

Based on the historical experience of a close link between institutional social investing and corporate governance activism the geographic differences in SRI activities can be easily explained: the Anglo-Saxon countries favour the engagement approach, while in Continental Europe pension funds mainly work by portfolio screening, as shareholder activism and the exercise of votes is still in an emerging state.²⁵

4.2. INVESTMENT CAPABILITIES: OPPORTUNITIES TO EXERCISE ACTIVE OWNERSHIP

Why could pension funds or institutional investors in general be appropriate to exercise active roles as owners of companies? Some authors²⁶ define pension funds as "ideal owners". "Their ownership, by virtue of their size and their time horizons, is as close to permanent as possible. And because of this near-permanent stake, their interest is far-sighted enough to incorporate the long-

²³ Brancanto 41.

²⁴ Thamotheram, R. (2001). USS: The Rise of SRI: a European perspective. Unpublished handout.

²⁵ Ethos is an often-quoted exception within the Swiss pension funds. (In a Robecco survey of Swiss pension funds 56% of the institutions said, that they did not vote).

²⁶ Monks and Minow 156.

term interests of the corporation and (as essential element of those interests) the interests of the employees, customers, suppliers and the community. Why should they get involved in SRI?"²⁷

- As the arguments for Corporate Governance and SRI indicate, shareholder activism in this direction can enhance corporate profits and therefore investor performance. Many investors focus on the short term, but pension funds are more concerned about long-term performance. Thus, pension funds are operating on a time scale which could allow corporate governance and SRI initiatives to pay off.
- Due to their size and investment capabilities, institutional investors are better informed and able to monitor management at lower relative cost than small shareholders. The holdings of pension funds are large enough to alleviate the free-rider problem that makes shareholder information and action economically irrational.
- Pension plans are less restricted by commercial conflicts of interest than are other institutional investors such as banks, insurance companies, mutual funds and other classes of institutional investors.²⁸
- The trend of indexing makes pension funds both universal and permanent shareholders. *"If you can't sell, you must care."* Their holdings are so diversified that they have the incentive to represent the ownership sector (and the economy) generally rather than any specific industries or companies.
- One important incentive for shareholder activism is legal obligations like the duty for US pension funds to exercise their voting rights.²⁹

²⁷ The advantages are partly listed by Monks and Minow 120f.

²⁸ An example of this conflict of interest is quoted by Monks and Minow 123: *"We are very reticent to position ourselves as an activist shareholder in domestic or international securities. The problem for us is how we are perceived by our customer base. The risks are such that it probably does not make sense for us to take an aggressive position. I can imagine many of your partners do have a lot more freedom since they apparently have no other business interests with portfolio companies."* (Frank V. Cahouet, Chairman, President and Chief Executive Officer of Mellon Bank Corporation).

²⁹ In the Avon Letter, the Department of Labor asserted the fiduciary act of managing plan assets that are shares of corporate stock including voting proxies pertaining to those shares. See Brancanto 110.

4.3. MORAL IMPETUS?

*The investment of such huge sums (830 billion GBP in pension funds) is bound to have an effect on the wider world. As such the nature of the investments made on their behalf shapes the world in which fund members live, work, and retire. In many ways, whether or not investors are aware of it, investment decision-making has an ethical dimension.*³⁰

From the macro perspective, pension funds should take into account the best interests of society, which cannot only be defined as financial interests.

*However, if pension promises are to be honoured, we need a peaceful world, an environment that is revered and human dignity that is respected.*³¹ Pensioners can only enjoy their retirement, when they live in a healthy environment and stable society. Pension funds could influence these factors by pushing companies by their investment decisions in this direction. Looking at the severe financial burden due to the demographic changes, this discussion is not led with great passion. The moral aspect to integrate social and environmental criteria cannot be the only reason for SRI.

4.4. PRESSURE BY EMPLOYEES

Surveys show the importance of employee involvement in the decision-making process regarding social and environmental criteria: Oesch³² points out, that the parity management allows the employee representatives to bring in their position. Another condition is the profession of the represented employees, which means that a dominant position of socio-cultural professions is likely to lead to a higher interest in SRI.

The campaign *Ethics for USS* is a good example of the pressure brought to bear by scheme members of a large pension fund. It was set up in 1998 to persuade USS to adopt a comprehensive ethical and environmental investment policy. The campaign was supported by 3,500 individual members as well as the Association of University Teachers, and seems to have been successful.³³

³⁰ John Denham (1998), quoted by Sparkes, R. (2000). A business outlook on SRI – Or seeing the wood for the trees. (p. 5). Speech at Triple Bottom Line Investing Conference in Rotterdam, 2. November 2000.

³¹ Alan Pickering, Chairman of National Association of Pension Funds. In: Green 2.

³² Oesch, D. (2000). L'intégration des critères sociaux et écologiques dans la politique d'investissement des caisses de pension en Suisse. Une étude mandatée par le Réseau pour la responsabilité sociale dans l'économie (NSW/RSE). (p. 55).

³³ Sparkes, A business outlook on SRI – Or seeing the wood for the trees 4.

5. BARRIERS FOR SRI: WHY DO YOU ALWAYS READ THE SAME NAMES?

The listed examples of pension funds involved in SRI correspond perfectly with the most prominent players in shareholder activism on Corporate Governance or other issues. In general, the situation can be described as follows: *“Pension funds and insurance companies have become classic absentee landlords, exerting power with responsibility and making exacting demands upon companies without recognising their reciprocal obligation as owners.”*³⁴

5.1. LITERATURE REVIEW: PROBLEMS REGARDING ACTIVE SHAREHOLDER ACTIVISM

Although there are a number of encouraging arguments as to why institutional investors could and should take an active role as shareholders, the number of obstacles is long, which explains the mostly passive behaviour of pension fund managers. The following reasons are cited:

- the obligation to maximise value of funds imposes fears, that the implementation of an SRI policy either by positive or negative screening leads to lower returns because a divesting policy implies higher transaction costs and screening results in less diversification compared to a standard portfolio.
- another form of conflict of interest can occur if investment institutions become privy to insider information about the company as a result of the engagement process, which could cause the fund to consider insider trading. If they exercise pressure on the companies publicly, they can attract negative perception by the markets, so that stock prices of their affected holdings might fall.
- one general problem is also valid for large pension funds: diversification needs and the preference to invest in large caps to avoid major stakes in companies in order to keep liquidity reduces governance efforts, as the costs for relatively small holdings are not rewarded.

³⁴ Short, H. and Keasey, K. (1997). Institutional shareholders and corporate governance. In: K. Keasey and M. Wright. Corporate Governance: Responsibilities, Risks and Remuneration. (p. 26). John Wiley and Sons Ltd.

- stapledon points out another reason for the passive role of pension funds, at least for the UK market: He identified, that in 1993, 78% of directly invested UK occupational pension funds used solely external fund managers while only 14% managed their investments wholly “in-house”.³⁵
- in addition the lack of legal or practical justification for institutional investors to become involved in governance on matters of particular concern to employees or to the public or practical difficulties with staying informed about foreign holdings lead to a more passive role.

5.2. LEGAL

The debate on shareholder activism and Socially Responsible Investment by pension funds often raises the question if trustees are legally permitted to consider other than pure financial criteria. The legal framework in which pension funds operate generally imposes strict requirements on pension fund trustees to invest pension funds in a prudent fashion while taking the interest of the plan members into account. This generally means achieving a reasonable or in some cases a legally defined minimum rate of return per a certain risk.³⁶ In the US this debate is particularly controversial taking into account the experience with the below-average performance of socially targeted investments. Private pension funds are regulated by ERISA³⁷, which imposes a “prudence rule” and “sole and exclusive benefit rule”. Some authors³⁸ see a conflict that the non-economic criteria of social investing relate primarily, if not exclusively, to personal interests of an ideological or political nature; others (Leibig, CEP) cannot identify a restriction. Some states even impose an SRI strategy: The California legislature has provided that *“the retirement fund shall be used as much as reasonably possible to benefit and expand the business climate within the State of California, as long as such use would be consistent with sound investment policy.”*³⁹

³⁵ Stapledon, G.P (1996). Institutional shareholders and Corporate Governance. (p. 34). Oxford: Clarendon Press.

³⁶ Sturm, Dr. A. and Badde, M. (2001). Socially Responsible Investment by Pension Funds. (p. 22). A State-of the Knowledge Report. Ellipson AG, Basel 2/2001.

³⁷ Employee Retirement Income Security Act of 1974 by the U.S. Dept. of Labor.

³⁸ Vieira (1983), p. 69.

³⁹ Leibig, M.T. (1980). Social investments and the law: The case for alternative investments. (p. 18). Conference on Alternative State and Local Policies, Washington D.C 1980.

The UK guide “Just Pensions” for trustees and fund managers sums up the legal question.⁴⁰

Trustees cannot:

- put their own personal values ahead of acting in the interests of the beneficiaries,
- follow investment strategies which they are conscious will be to the financial detriment of beneficiaries having no investment choice.

Trustees can:

- take account of SRI to deliver improved financial returns, added non-financial benefits.

Just Pensions quotes Yve Newbold, who chaired the NAPF Committee of Enquiry into Voting Execution, that trustees may be in danger of incurring legal risk by not considering social issues.⁴¹

5.3. PERFORMANCE THREATS

From a portfolio- theory perspective, the impact of socially-based screening and/or exclusion might lead to portfolios, that deviate substantially from market portfolios. These ethical portfolios bear inefficiencies and lack of diversification, which might result in unsatisfying compensation for the unsystematic risk. To identify the impact of a social screening and the correlation of environmental and financial performance, a number of empirical surveys have been conducted, mainly in the US. Schäfer/Stederoth⁴² classify three types of studies:

- 1) event studies,
- 2) the comparison of a synthetic portfolio with a market portfolio and
- 3) the analysis of screened portfolios.

⁴⁰ Green (2001), p. 7 (only part of arguments quoted).

⁴¹ “The requirement to state in the SIP the extent to which social, environmental or ethical consideration are taken into account in investment decisions means that for all but the smallest trust funds a position of having no such policy would or could be called into question as being unsound in the climate of today’s heightened awareness of the influence of such issues on corporate reputation and value.” (Statement by Yve Newbold, April 2001).

⁴² Schäfer, H. and Stederoth, R. (2001). Portfolioselektion und Anlagepolitik mittels Ethik-Filtern – ein Überblick zum Stand der empirischen Kapitalmarktforschung. Forschungsprojekt ethische Kapitalanlagen an der Universität Siegen.

Their studies do not identify a significant underperformance of ethical portfolios although the problem remains, that the surveys can only identify a correlation between environmental performance and financial performance, but no causality. Therefore, it will be difficult to argue, that the environmental performance is the only driver of higher financial returns. The analysis of screened SRI portfolios show some typical effects, which have a significant impact to the funds performance: they have a higher percentage of small companies compared to other funds; they tend to have an overweight in technology stocks; and global portfolios often have an overweight in European stocks. These factors seem to exercise high impact to a different performance. Therefore Sturm/Badde recommend that the most realistic pension fund strategy is over- and underweighting combined with shareholder activism, unless the pension fund has a large surplus.⁴³

5.4. RESOURCES

“For many institutional shareholders, the main obstacle to doing so [SRI] is not opposition to the idea, which can often make good business sense, but the apparent difficulty of putting it into practice with the limited resources available”⁴⁴.

SRI is still a recent development. Since only a limited amount of external or standardised information about companies is available, and because of the complexity of social and environmental issues, few pension funds have the capability and resources to deal with these issues. Sturm/ Badde suggest two strategies to implement an SRI strategy, according to the classical “make-or-buy” decision:⁴⁵

1. develop the skills and know-how needed to screen and analyse stocks and bonds in-house,
2. investing in SRI funds without building up in-house know-how on socially responsible investment aspects.

Because of competition, weak equity markets, and the additional costs of implementing an SRI strategy can be a difficult burden for pension funds.

As previously mentioned, the combination of these issues provides an obstacle to a policy of relying on institutional investors as a primary mechanism

⁴³ Sturm and Badde 20.

⁴⁴ Green 2.

⁴⁵ Sturm and Badde 21.

of corporate governance. “There might be lots of noise and action, and there might be talk about all the new, awakened shareholders and institutional investors, but there’s really not much more than a dozen pension funds involved.”⁴⁶ Legal issues also prevent institutional investors from being informed and activist shareholders: “*What is needed? The current laws are adequate in theory. In practice, they have not being enforced.*”⁴⁷ The following paragraph highlights changes that could speed up the pension funds involvement in SRI.

6. THE FUTURE: DISCLOSURE RULES STIMULATE DEBATE

Governments in different European countries are playing important catalyst roles in SRI pension funds strategies. In order to stimulate public debate on SRI strategies, governments have introduced disclosure rules.

6.1. OVERVIEW: INTRODUCTION OF DISCLOSURE RULES FOR PENSION FUNDS GLOBALLY⁴⁸

The first initiative came into force in July 2000, the *UK Pension SRI Disclosure Regulation*. It requires trustees of occupational pension funds to disclose in their Statement of Investment Principles:

- the extent (if at all) to which social, environmental and ethical considerations are taken into account in their investment strategies,
- the policy (if any) directing the exercise of the rights (including voting rights) attached to investments.

The goal of the UK government was not to introduce a compulsory integration of SRI criteria and policies of each pension fund but to increase transparency regarding these issues.⁴⁹

⁴⁶ Monks and Minow 122.

⁴⁷ Monks and Minow 186.

⁴⁸ Information from: Kirein F. (2002): Perspectives on pension fund disclosure worldwide. Presentation at Eurosif Conference, Frankfurt, April 24th, 2002.

⁴⁹ The private sector has a key role in making globalisation work better for poor people. In recent years, there has been growing public interest in corporate social responsibility. This has brought issues such as child labour, corruption, human rights, labour standards, environmental and conflict

If the interest from insured and pension funds can be stimulated, the number of funds and shareholder pressure will increase, which could enhance pressure on corporations to achieve a better social and environmental performance. Based on this argumentation the initiative can be understood as part of the national environmental policy.

The 2002 introduced *German pension reform* does not only provide financial incentives for occupational pension models and individual savings schemes (Riester-Rente), but also codifies a disclosure regulation. The new certified private and occupational pension schemes will have to report whether ethical, environmental and social aspects are taken into account. The occupational schemes have to fulfil an annual obligation on the application of SRI considerations. The disclosure rule for private schemes has a loophole, however: those products that are not SRI-registered are relieved from the annual disclosure rule. Therefore few Riester products actually report on social, environmental or ethical considerations.

In *Belgium*, pension institutions will have to issue every year a report on the management of the pension commitment. This will include information “how social, ethical and environmental aspects are taken into account.”

France has introduced several new disclosure rules, both at the company and investor levels. Based on the history of social reporting a compulsory green reporting will affect French companies. All publicly quoted firms will be required to include data on environmental and social impacts in their annual financial reports. In February 2001 the inclusion of a “disclosure” amendment in the law on the generalisation of Employee Savings Plan states that “investment managers may consider social, environmental and ethical matters.” In addition, the law on the French Pension Reserve Fund makes clear that the fund has to report annually to the board of trustees how it has taken into account social, environmental and ethical considerations.

The Australian Senate passed an amendment to the Financial Services Reform Bill (FSRB) in 2002 requiring all financial services product disclosure statements to state “the extent to which labour standards, environmental, social or ethical considerations are taken into account in the selection, retention or

into trade, investment and supply chain relationships. By applying best practice in these areas, business can play an increased role in poverty reduction and sustainable development. Many companies have also realised important commercial benefits, in terms of reputation, risk management and enhanced productivity. Greater business engagement can be encouraged by improving understanding and raising awareness of the potential benefits for business from socially responsible behaviour. British Government Position on CSR. (2000). Making Globalisation work for the poor, White Paper.

realisation of the investment.” Because the Australian amendment includes all managed investment products the Australian rules.

In addition to these rules already implemented similar activities have been started in Canada, Switzerland, Austria and Sweden. As the disclosure rule counts on market mechanism by the stimulation of a higher demand, their success can be questioned.

6.2. IMPACT OF DISCLOSURE RULES: EXAMPLE UK

How important and effective is the disclosure regulation as a driver?

A survey undertaken briefly after the UK regulation came into effect found that 49% of pension funds, accounting for 78% of assets, have passed some kind of amendment to their Statements of Investment Principles.⁵⁰ This UKSIF survey seems promising might lead one to conclude that disclosure rules can stimulate pension fund engagement in SRI. Other surveys come to a less positive conclusion, in particular regarding the implementation of the SRI commitment in their Statement of Investment Principles (SIP).

A survey by Friends of the Earth⁵¹ also found that most occupational pension funds contained SIP including SRI in some form. 90% of their survey respondents made reference to ethics or CSR in their investment principles. They identified the problem “that many had few or no demonstrable accountability mechanisms to ensure that the fund managers were taking SRI considerations into account (no independent stakeholder verification).” About 50% had some sort of engagement (i.e. corporate governance policy) and associated monitoring mechanism (voting rights). In the section of their survey entitled “monitoring,” they identified that less than a third of the funds were able to demonstrate how they were monitoring and reporting on ESE issues.

Guptara presented at the 2001 National Association of Pension Fund annual meeting the results of a survey regarding the impact of the July 2000 regulation⁵² to the question whether more money is now being allocated on an SRI basis. He received disappointing answers: “*Though some respondents*

⁵⁰ Mathieu E. UKSIF October 2000. Internet, <http://www.uksif.org/library/welcome/frameset.shtml>.

⁵¹ Top 100 UK pension funds – how ethical are they? (2001). Friends of the Earth. Available at Internet: <http://www.foe.co.uk/pubsinfo/briefings/html/20010828104434.html>.

⁵² Guptara, P (2001). The Impact, to April 2001, of the UK government’s Summer 2000 legislation on SRI. Presentation at the National Association of Pension Funds. May 2001.

had the impression that more money “must” be going into SRI-based funding decisions, none of my respondents to date knew of any actual decisions to this effect, specifically as a result of the impact of the legislation.” One of his questions intended to find out whether recruitment/performance criteria have changed for individuals working in Fund Management. Again only a few respondents felt that recruitment/performance criteria had been influenced, but no one was able to quote anything very specific and the vast majority reported “no change” in these. The question regarding the structural handling could not bring more concrete answers either: “Some companies have appointed specialist staff; others have expanded from having one or two staff to several; but most have not changed their internal composition or structure as a result of the legislation, and overall the amount of expansion appears to be limited.”

These surveys indicate that there seems to be a large gap in implementation, as evidenced by the lack of recruitment of new staff or the application of accounting mechanisms. That monitoring seems to be a non-issue is due to a lack of interest by employees and the public.

7. CONCLUSIONS AND NEXT STEPS

Coming back to the question whether pension funds can become a new driver for sustainable development, the possible answer can be: *Yes, but ...*

Looking at their financial clout, pension funds represent the largest source of long-term investment in most capital markets. Due to the shift from state pension systems to occupational and individual schemes, their size will tend to increase in the mid-term. The analysis of different markets points out an increasing interest and money from pension funds in SRI. This market trend has built on a long tradition in Anglo-Saxon countries and recent initiatives in Continental Europe like Switzerland, France, Italy. Some of the concrete figures provided by certain organisations are questionable, such as the impressive 13% market share of SRI investments reported within the institutional market in the US.

The introduction of disclosure rules for pension fund to report on their use of ethical and environmental criteria shows the increasing interest from governments in Europe but also in Australia to use the financial market as a driver for sustainable development. The European Commission has also become involved by publishing the White Paper on Corporate Social Responsibility and supporting the European organisation EUROSIF (European

Social Investment Forum). Studies reviewing the recently introduced disclosure rules have identified a large gap between pension fund SRI rhetoric and reality.

This gap can be explained in part by the reluctance of an active involvement in shareholder activism regarding Corporate Governance, as well as financial considerations and a lack of public interest.

As pension funds are bound by a fiduciary duty, risk-return requirements have to be respected. Several surveys (see Schäfer/Stederoth 2001, for example) have found, SRI portfolios are often characterised by higher risk because of their higher inclusion of SMEs and tech stocks as well as their deviation from benchmark asset allocation. One question that presents itself is if SRI is only appropriate for pension funds with solid asset liability structures. When you have a look at the SRI Indices like the DJSGI or the FTSE4Good (which are based on the European approach of positive screening), they also bear higher risk: they cannot be accepted as a benchmark for a pension fund strategy, because their deviation from traditional benchmarks is too high.⁵³ From this technical perspective, some experts argue that engagement is the only suitable strategy for institutional investors like pension funds. Taking the lack of accounting and monitoring into account, which has been identified among UK fund managers⁵⁴ some accompanying measures should be taken to stimulate the public debate and the interests of pension plan members for SRI.

The legal framework affecting pension funds has an important impact on fund size and investment strategy, both on asset allocation and the openness to non-financial criteria like those in SRI. It has been shown that initiatives such as those taken in Europe can lead pension funds to take on a more active role regarding the social and environmental consequences of their investments. Nevertheless, there is much room for improvement. The involvement of pension funds in SRI should function as a market mechanism to move the targeted companies to become more sustainable. Therefore all market players need to be involved in order to raise awareness and self-interest. The activities should address in principal three target groups:⁵⁵

1. pension plan members and the public. Goal should be to raise awareness of public and pension plan members of SRI issues through better provision of investment information and agenda setting.

⁵³ See Chan, L. (2001). Sustainability Investment. (p. 16ff). London: UBS Warburg Global Equity Research.

⁵⁴ Top 100 UK pension funds – how ethical are they?

⁵⁵ Sturm and Badde p. 8f.

2. pension funds, their managers, trustees, banks. Goal should be to raise awareness and support decisions through training, conducting research, screening, proxy voting, coalitions with institutional investors.
3. companies. Goal should be to raise awareness about the positive impacts of SRI by rating of companies and providing information on SRI issues and roadshows.

Some steps have already been taken, at least to facilitate information-gathering on the corporate environmental and social performance. Due to the demand from institutional investors (until now mainly SRI fund managers and churches), fundamental market players have begun become more engaged in SRI:

1. the number and the service quality of external rating agencies has increased, which is also achieved by European or Global networks (SIRI, EIRIS-Network)
2. the Global Reporting Initiative (GRI) works on social and environmental reporting schemes, which will provide a common standard for the companies reporting and therefore external evaluation.⁵⁶
3. sell-side brokers like Dresdner Kleinwort Wasserstein and HSBC offer information about the social and environmental performance of companies⁵⁷.
4. indices based on social and environmental criteria provide an easy access to SRI investments or benchmarking own SRI portfolios.⁵⁸

These developments might improve the information exchange between SRI investors and companies, but the crucial question is when the pension plan members will take a stronger interest in the way their money is invested. The success of individual SRI options and initiatives like Ethics for USS demonstrate the potential of their power.

⁵⁶ Internet, <http://www.globalreporting.org>.

⁵⁷ Dresdner Kleinwort Wasserstein Socially Responsible Investment News, HSBC Sustainability & Securities.

⁵⁸ Dow Jones Sustainability Group Index, FTSE4Good, Social Domini Index.

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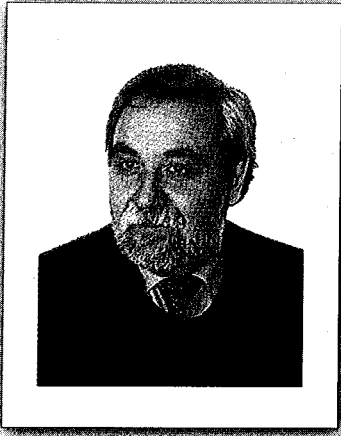
P A R T I I I

**POLISH EXPERIENCE
IN FINANCING
ENVIRONMENTAL PROTECTION**

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CHAPTER 19

**THE FINANCING OF ENVIRONMENTAL
PROTECTION IN POLAND DURING
THE TRANSFORMATION PERIOD**



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THE FINANCING OF ENVIRONMENTAL PROTECTION IN POLAND DURING THE TRANSFORMATION PERIOD

1. INTRODUCTION

The research in the influence of lively organisms on the environment was named ecology in the mid 19th century. Ecology of man was part of this science, which examined the influence man exerted on his environment.¹

Today's understanding of the notion ecology was introduced by R. Carson only in 1962. His book entitled: "*The Quiet Spring*" was the first publication in which the conviction about man's exceptionality and his capability of subduing nature was rejected.

Subsequent theoreticians of ecology showed that there exists correlation of society and environment.² In the following years the issues connected with the above relationship were touched upon not only by ecologists and sociologists, but also by specialists from other spheres, e.g. medicine, biology, geography, technological sciences, law and economy.

The range of research into ecology in the framework of economics was very modest at first. The situation changed only after UNO Secretary General, U Thant, released the report "*Man and his environment*",³ in 1969 and especially

¹ Górka, K. and Poskrobko, B. and Radecki, W. (2001). *Ochrona Środowiska* (p. 10). Warsaw: PWE.

² See Bookchin, M. (1996). *Ekologia społeczna*. Słupsk: WSP; Kastowski, K. and Rafiński, M. (1992). *Idee ekologii w świadomości społecznej* (p. 64). Poznań-Daszewice: Sourus.

³ Ginsbert-Gebert, A. (Ed.). (1976). *Ekonomiczne aspekty ochrony środowiska* (p. 5). Warsaw: Arkady.

after the UNO Conference in Stockholm in 1972⁴ which motivated economists to make a deeper analysis of this problem.

One of the results of appropriate research work was the ascertainment that excessive use of natural environment, being a result of uncontrolled economic development, threatens human development. This is so because it leads to a too big waste of resources and degradation of the quality of air, water and land. In relation with the above, research workers created the theory of sustainable development, in the framework of which they paid attention, caring future generations, to the need to include the problems of natural environment protection in the economic practice.⁵

The implementation of this theory is time-consuming and labour consuming, it requires considerable financial outlays and, first of all, convincing the communities those changes are necessary. Therefore, at present only some states, including the countries of the European Union, acknowledging the critical importance of the need to protect natural environment, try to subordinate their economies to the assumptions of the sustainable development theory.

On joining the European Union Poland will have to undertake a considerable effort, especially considering the delay in activities for the protection of the environment in this country, to adapt the functioning of her economy to the obligatory requirements in force in the member states of this organisation. Indispensable investments require, however, suitable resources.

Moreover, pro-ecological activities are extorted by a series of international treaties Poland is a party to.

In this text a division of sources of financing the protection of natural environment in Poland into national and foreign is used. This division seems to be clear, although some means are difficult to classify univocally due to their origin. Especially including commercial banks in national institutions may arouse controversies, because in most cases their assets come from abroad.

⁴ World conference on saving the Earth environment in Stockholm entitled "The only one Earth" with 1200 delegates from 114 countries participating.

⁵ Kaczmarek, A. (1999). Miejsce ochrony środowiska w systemie gospodarczym. In: S. Swadźba (Ed.), Systemy gospodarcze i ich ewolucje (p. 188). Katowice: AE.

2. FINANCING ENVIRONMENTAL PROTECTION BY NATIONAL INSTITUTIONS

2.1. THE NATIONAL FUND FOR ENVIRONMENTAL PROTECTION AND WATER MANAGEMENT (NFOŚiGW)

The main national investor is the above-mentioned National Fund for Environmental Protection and Water Management (NFOŚiGW). Its means come first of all from charges for the use of environment and from penalties for pollution. Moreover, it obtains receipts from the repayment of credit and loan instalments and the interest on them, from its own activity and from a foreign aid.

In 2001 the receipts of the Fund amounted to 1,809 million PLN (1,539 million PLN in 2000). In 2000 nearly 36% of the Fund receipts were in charges and penalties (in 1990 it was 94.1%, while in 1998 – 44.1%). The share of the receipts from this source will constantly decrease owing to a progressive restructuring of enterprises and disappearance of big state enterprises of poor financial condition, which cannot afford investments in the protection of natural environment or payment of penalties or charges. In effect, more and more enterprises comply with the standards and stop paying penalties for polluting natural environment. However, the share of receipts from the repayment of loan and credit instalments is growing (27.6% in 1998, 37% in 2000). The receipts from the interest on loans and credits also play an essential part (27% in 2000).⁶

The expenses of the Fund in 2001 equalled 1,964 million PLN (1,303 million PLN in 2000). Considerable means were allocated to the protection of water and water management (see Table 19.1.). This situation resulted from an absence of suitable water infrastructure, indispensable for the correct functioning of the environment and, first of all, for people's health.

At the end of 2001, 151 million PLN in monies and treasury bills and bonds remained unused, that is to say almost half less than in the preceding year. Failing to utilise resources fully means, of course, a limited possibility

⁶ Raport Roczny NFOŚiGW za rok 2000. (2001). (p. 5). Warsaw: NFOŚiGW.

to finance new projects, but it is justified by the necessity to guarantee resources for the continuation of investments begun earlier.

Table 19.1.
Expenses of NFOŚiGW for the protection of the environment
in 1990, 1998, 2000 and 2001 (in millions of PLN).

Specification	1990	1998	2000	2001
Air protection	2.8	280.9	387.7	587.8
Protection of water and water management	4.6	465.6	456.1	548.3
Protection of the surface of the Earth	0.2	56.0	102.8	119.9
Protection of nature	0.6	40.5	33.9	40.4
Environment monitoring	–	9.65	12.3	26.1
Ecological education	0.1	15.4	22.5	23.7
Extraordinary threats and other domains	–	195.2	117.6	330.9

Source: Own elaboration based on the NFOŚiGW data.

2.2. VOIVODESHIP, POWIAT AND GMINA FUNDS

Receipts obtained by voivodeship funds that mainly came from their operational activity, amounted to 1.5 billion PLN* on the average in 1998-2000 (see Table 19.2.).

The expenses of voivodeship funds in 2001 increased by 8.9% in relation to the preceding year and amounted to 1,431.9 million PLN (according to GUS). Simultaneously, in 2000, although a considerable fall of national expenses on the protection of natural environment took place, voivodeship funds spent amounts greater than in the preceding year for this purpose, but less than their receipts were.

Particularly the costs of the functioning of voivodeship funds increased, on the average by 21.3%, to the level of 5% of the total aid given by them. In 2000 these costs exceeded the level of 1998 (58.5 million PLN), when there were 49 funds. Thus it can be assumed that the results of reorganisation did not produce expected effects in this area. In reference to the above, attention should be paid to the management of the funds in question, and especially to the number of staff employed.

All funds achieved credit balance in 2000, but its volume was very diverse. Particularly, three funds worked out lower profits than in the preceding year (the Łódź fund by 55%, the Dolnośląski one by 34.4% and the Lubuski one by 4.3%).

A comparison of the effectiveness of voivodeship funds allows to ascertain that the richest funds are not the best ones. The Opolski Fund should be awarded for 2000; it did not work out the greatest profit, but it obtained the best relation between the aid rendered and the charges, as well as between profit and charges plus costs of the aid rendered. With the same criteria, the Dolnośląski Fund should be acknowledged as the worst.⁷

Table 19.2.
Receipts and expenses of Voivodeship Funds of the Protection of Environment and Water Management in 1998-2000 (in millions of PLN).

Specification	1998	1999	2000
I. Balance of monetary means and State Treasury securities at the beginning of the year	261.6	322.1	339.3
II. Receipts	1,459.8	1,315.1	1,521.1
Including:			
Receipts from penalties and charges	805.5	641.7	653.5
From repayment of credit and loan instalments	334.8	397.6	464.9
From interest on credits and loans granted	142.5	138.8	167.5
Other	177.0	137.0	235.2
III. Expenses	1,399.3	1,297.9	1,412.9
Including:			
Financing of environmental protection	1,244.1	1,153.8	1,231.4
Office and RN maintenance	58.5	49.7	60.3
Other	96.7	94.4	121.2
IV. Balance of monetary means and State Treasury securities at the end of the year	322.1	339.3	447.5

Source: NFOŚiGW materials.

To sum up, voivodeship funds fulfil their duties well and their existence should not be a subject of a discussion, one ought, however, to consider seriously the manners of controlling their expenses.

In 2001 powiat fund receipts reached the amount of 138 million PLN and spent 118.1 million PLN. Most of the expenses were earmarked for waste deposition.

⁷ Czy wojewódzkie fundusze są efektywne? (2001). *Ekofinanse*, 10, pp. 26-28.

* 1 billion =1 thousand million.

Gmina fund receipts reached the amount of 503.1 million PLN in 2001 (567.8 million PLN in the preceding year), and spent 506.4 million PLN (504.6 million PLN in 2000). Most of the means (127.8 million PLN) were designed for water protection and least (5.1 million PLN) for the monitoring of the environment.

2.3. OWN INVESTMENTS OF ENTERPRISES

The role of own investment of enterprises in the financing of the protection of natural environment in Poland constantly grows. In 1992 they made up 20% of the total outlays for the protection of the environment, while at present they amount to about 50%.⁸ Simultaneously, some authors indicate that the assessments of investment effort of enterprises are underestimated, because many of their investments are not considered "ecological", even though they produce ecological effects.⁹ This, however, has no influence on the oscillations of the amounts of investment outlays.

The reason for such a great interest of enterprises in activities for the benefit of natural environment protection, which in effect cause change of technology, is the wish to reduce the amounts of charges for the use of natural resources, and especially the wish to avoid the necessity to pay high penalties for polluting natural environment. Considerable expenses born by enterprises in the given period will result in higher savings in the future. Additionally, these changes improve the situation of enterprises in relation to their competitors. Poland's oncoming accession to the European Union, which marks an urgent necessity to adapt enterprises to the European Union pollution standards, is also a strong stimulus for pro-ecological investments of enterprises. Non-observance of these can cause a necessity to bear costs considerably greater than the obligatory penalties in Poland at present.

On the other hand, today's economic situation of the country influences the value of pro-ecological investments unfavourably. Namely, especially the enterprises which are in financial difficulty, in their endeavour to reduce costs, in the first instance they quite often resign from pro-ecological investments. In effect, the considerable fall of expenses for the protection of natural environment that was observed in 2000, was, first of all, a consequence of reducing the outlays discussed in the sector of enterprises.¹⁰ Also in 2001

⁸ In 2001 r. their share equalled 51.8%. See *Ochrona Środowiska 2002*, p. 378.

⁹ Górka and Poskrobko and Radecki 161-162.

¹⁰ *Ochrona Środowiska 2002*, p. 378.

outlays for this purpose underwent reduction, fortunately, however, to a degree considerably lesser than had been expected (by 6.1% instead of 20% expected). Also in 2002, in spite of signs of improvement of economic growth rate in the third and fourth quarters; one should expect a fall in the value of investments discussed owing to the economic situation of enterprises and continuous atmosphere of uncertainty regarding business conditions in 2003 and in the following years. It should be expected that in the case of improvement of the condition of the economy and increased sense of security among investors, expenses of enterprises for the protection of the environment could increase considerably in the next years.

2.4. FINANCIAL INSTITUTIONS

Financial institutions are an important element of the infrastructure of financing the protection of natural environment in highly developed countries. In Poland, however, their role is still small, as means from this source make up only about 12% of the total expenses for the protection of natural environment.¹¹

Almost half of the activities in this sector are undertaken by the Bank Ochrony Środowiska S.A. which, in spite of a considerable share of foreign capital in its stock capital, finances a greater part of investments from the national means.

This is first of all a credit activity. Credits are granted both according to commercial and preferential terms. The latter are possible thanks to co-financing the interest on credits¹² by NFOŚiGW (84.2%), voivodeship funds (10.5%), and also from foreign means (5.3%).¹³

The Bank also undertakes other kinds of pro-ecological activity. Particularly this takes place in form of purchasing stakes in commercial companies which operate on the ecological market, organisation and handling of enterprises' and local authorities' bonds and bills issues, means from sale intended for ecological purposes and the so-called eco-deposits.¹⁴ The Bank

¹¹ *Ochrona Środowiska 2002*, p. 378.

¹² From the point of view of a bank all credits are granted on commercial terms, only in the latter subjects other than borrower pay the interest to the bank.

¹³ *Raport roczny 2001*. (2002). Warsaw: Bank Ochrony Środowiska, p. 28.

¹⁴ These consist in the fact that a bank earmarks part of its profit for pro-ecological purposes, i.e. most often for the financing of special credit lines for environment protection investments. This type of deposits is quite popular abroad. They have a slightly different form in Switzerland,

also engages in advisory activity in legal, economic and technical aspects of environment protection.

Some other banks also extend credits for purposes connected with the protection of natural environment, e.g. by opening special credit lines, but the credits are granted by them according to commercial rules. Resources granted from these lines are usually co-financed by foreign institutions. E.g. the Bank Inicjatyw Społeczno-Ekonomicznych gives credits for municipal investments from the means of the World Bank and the Nordic Investment Bank. The Górnośląski Bank Gospodarczy offers preferential credits from the means of a voivodeship environmental protection fund while the LG Petro Bank introduced in July 1998 the Eco-deposit on which it transfers 0.05% of its own resources for environmental protection investments.

As regards leasing of pro-ecological devices and installations in Poland there are even less initiatives in the sphere of leasing pro-ecological devices and installations than in banking. Only two institutions carry out relatively extensive activity in this area: EKOLEASING S.A. established by BOŚ S.A., specialising in the leasing of devices and of installations serving the protection of natural environment and Credit Lease S.A., where the service for those investing in the protection of the environment consists, among other things, in supporting the customer in the carrying out of pro-ecological investments in such a manner, as to give him a sense of someone who will help him to carry out the investment (by giving legal assistance, help in the organisation of capital assets delivery, especially from abroad etc.).

3. FOREIGN SOURCES OF FINANCING ENVIRONMENTAL PROTECTION INVESTMENTS IN POLAND

In spite of the multiplicity of sources, the total foreign aid obtained amounts to only 4-8% of the total expenses in Poland for this purpose.¹⁵ This aid is, however, an essential factor, because it is often conditioned by mobilising similar or even of greater means from national sources.

that is the customer voluntarily waves one percentage point of his deposit so that preferential credits from the bank means may be cheaper by one percentage point. Such an initiative is practical only in societies of high ecological awareness.

¹⁵ Czudak-Kiersz, J. and Walczak, K. (2002). Za rok do Unii. *Ekofinanse*, 11, p. 7.

3.1. MEANS FROM THE EUROPEAN UNION

The European Union means earmarked for the protection of the environment in Poland are certainly best known, as their share in foreign means is the greatest. PHARE was the first EU programme for candidate countries.¹⁶ It was aimed at supporting the transition from centrally planned economy to market economy.

Within the framework of this aid in 1994 Ecological Partnership Fund PHARE (EPF PHARE) was established, earmarked exclusively for environment protection. Since 1996 its means have been spent on supporting activities connected with the implementation of the European Treaty by the Ministry of Environmental Protection.¹⁷ Since 1997 all PHARE funds have been designed for the preparation of candidate countries to EU membership.¹⁸

During the activity of PHARE Poland received 131.9 million Euro for the protection of the environment, which amounts to about 7.8% of the total amount of means granted to our country from this fund.¹⁹

Since 2000 it has been possible to use new pre-accession funds: PHARE II, SAPARD and ISPA. Ecological support can be obtained from each of them. The means from PHARE II fund can be used for structural investments including environment protection. The money is earmarked for large ecological projects and for the co-financing of road infrastructure (also with regard to the requirements of the environment). All voivodeships will be granted this aid in 2003.

From part of PHARE II fund designed for environmental protection aid can also be obtained in the scope of the Programme of Transborder Cooperation within the framework of "Big Projects" (over 300 thousand EUR) and "Little Projects" (up to 50 thousand EUR). Moreover, non-government institutions supporting initiatives in the area of the protection of natural environment can obtain grant-in-aids from the programme PHARE Access.

Poland receives about 450 million Euro from the PHARE fund annually, whereas about 72 million EUR was planned for environmental protection in 2000-2003.

¹⁶ Kadys, E. (2002). Przedakcesyjne fundusze pomocowe. Poland Hungary: Assistance to Restructuring their Economies. *EkoFinanse*, 6, p. 31.

¹⁷ Nie tylko PHARE. (1999). *EkoFinanse*, 5, p. 14.

¹⁸ Kadys 33.

¹⁹ Pod kuratelą Funduszu. (2002). *EkoFinanse*, 7-8, p. 14.

SAPARD is a fund oriented on agriculture, including pro-ecological investments in this sector.²⁰ One part of the fund, namely the “The Development and Improvement of the Infrastructure of Rural Areas” serves both purposes. Within the framework of this distribution means can be used for the extension of water-supply and sewage infrastructure (water supply in one gmina up to 840 thousand PLN), sewage disposal and treatment (up to 1,700 thousand PLN per gmina), energy supply (420 thousand per gmina) and waste management (1,300 thousand PLN per gmina). The total national and EU outlays may not exceed 437 million EUR.²¹

Within the framework of this fund Poland is supposed to receive 171.5 million Euro before the end of 2003. These funds are relatively small with regard to the needs, but Poland is a country, which has received the greatest, from among EU candidate countries, sum of help within the framework of the SAPARD programme.

It is difficult to estimate what part of this sum will in fact be spent on environmental protection investments, especially on the account of difficulties with obtaining the required investors' own contributions. Making allowance for other urgent needs of Polish agriculture one should not expect large investments on natural environment protection aims from this source. This statement is justified, for example, by the fact that in July 2002 agricultural-environmental and forestation initiatives were excluded from SAPARD.

ISPA is also intended for the need of the environmental protection in 50% and the remaining 50% for transport.²² As regards natural environment protection the fund is aimed at supporting investments in such areas as: delivery of potable water, sewage discharge and treatment, utilisation of waste material, and the protection of air. All projects subsidised by this fund must be economically effective. Simultaneously, only special projects can be subsidised from this fund, i.e. projects, related to the document “The strategy of utilisation of the ISPA fund as a supplementary instrument for the implementation of the state's ecological policy”. The value of an individual project should exceed 5 million EUR, because investments carried out within the framework of this fund include problems, which due to their size are impossible to carry out with the help of the already existing funds. Self-governments or gmina associations can be the beneficiaries of the financial assistance coming from this programme.

²⁰ Kadys 32.

²¹ Program akcesyjny SAPARD. (2002). *EkoFinanse*, 2, p. 38.

The process of admitting funds is quite long. An applicant submits documents to the NFOŚiGW which accepts them throughout the duration of the programme. Then the NFOŚiGW makes an initial verification of the documents, and later makes a detailed examination of the projects. As a result of this examination, applicants are usually asked to submit additional documents. After shortlisting (together with the Ministry of Environmental Protection) the best projects, the applications together with a recommendation are transferred to the Minister who accepts them and sends to the European Commission Directorate for Regional Development of the. The Directorate sometimes suggests indispensable corrections. After considering the possible corrections, if a project assessed favourably, it goes to the ISPA Administering Committee. If the project is favourably examined also by this body, a financial memorandum, which sets the rules according to which the subsidies will be granted, is prepared. The assessment of the project by the European Committee lasts for about four months.

In spite of the complexity of the procedure, in the year 2000 Poland used all the grant-in-aid money (176 million EUR) for 22 projects, part of which is still in the process of realisation. In 2001, 381 applications for subsidies were submitted and 22 of those were approved by the Ministry of Environmental Protection.

Generally, within the framework of the fund discussed, 1,040 billion EUR is to be given out annually until 2006. It is also estimated that Poland should receive between 30% and 37% of this sum. Between 156 and 192 million EUR a year will be spent on environmental protection.²³ This will cause an increase to about 8%, of the participation of foreign resources in total ecological investments in Poland.

3.2. RESOURCES FROM ECO-CONVERSION

Eco-conversion of the Polish foreign debt is an important element of foreign financial assistance for natural environment protection in Poland. As is generally known, 10% of the Polish foreign debt to any country may be converted into pro-ecological funds if a given country signs a respective contract with Poland. Financial means within the framework of eco-conversion

²² Kadys 31.

²³ Pomoc przed akcesją. (1999). *EkoFinanse*, 10, pp. 7-8; Projekty 2000-2002 (2002). *EkoFinanse*, 2, p. 13.

come from the Polish State budget (from the division "foreign debt service") and are administrated by the Eco-fund, an institution especially established for this purpose.

At present contracts for eco-conversion of the Polish debt have been signed with Finland (the contract was signed in 1990, so still before the Eco-fund was established, and managed by a special team appointed for this purpose), with the United States (signed in 1991 for the sum of 370 million USD), with France (signed in 1993 for the sum of 66 million USD), with Switzerland (signed in 1993 for the sum of 63 million USD), with Sweden (signed in 1997 and 1999 for a joint sum of 13 million USD), with Italy (signed in 1998 for the sum of 32 million USD) and with Norway (signed in 2000 for the sum of 27 million USD).²⁴

Additional resources of Eco-fund come from the investments of sums it has at its disposal and from donations. So far two such donations have been obtained, for the total of 3.9 million USD (from the Norwegian authorities in 1997 and from Switzerland in 2000)²⁵.

Since 1995 the receipts from the Eco-fund have equalled about 60 million PLN annually.²⁶ Until the year 2000 the Eco-fund obtained about 200 million USD, which is 35% of the amounts contained in contracts signed earlier. Moreover, talks with several countries about the exchange of the Polish debt into pro-ecological investments are taking place. Hopefully, this amount will grow in the coming years.

The Eco-fund co-finances only investment projects, but does not support research projects in the area of natural environment protection, its monitoring or ecological education etc.

Giving grant-in-aids or loans from the Eco-fund is usually based on the principle of competitions, which allows to choose the most effective solutions. Moreover, the Eco-fund has its own sector and regional programmes, which are introduced to the public together with an offer of financial assistance. The investors who have developed projects know the aim and the possibilities of subsidising as well as the requirements of the Eco-fund. All projects carried out by the Eco-fund are subject to strict control and are often divided into many stages. The means for the following stage are given only after the completion of the preceding one.

²⁴ Sprawozdanie z działalności EkoFunduszu w roku 2001 (Report of Eco-fund Activity in 2001).

²⁵ Internet, <http://www.ekofundusz.org.pl/pl/dzeko9900.htm>, accessed: 18.11.2002.

²⁶ Internet, <http://www.ekofundusz.org.pl/pl/dzeko9900.htm>, accessed: 18.11.2002.

The joint value of the investment subsidised by the Eco-fund until 2001 equals about 750 million PLN (of which 150 million PLN in 2001 only). This sum was spent on more than 600 projects in five different areas, such as: reduction of gas emission which cause climate changes on Earth, reduction of the transborder transport of sulphur dioxide and nitrogen oxides as well as elimination of low sources of their emission, protection of potable water resources, reduction of pollutant flow into the Baltic Sea, waste material management, reclamation of polluted soils as well as protection of biodiversity.²⁷

3.3. MEANS FROM INTERNATIONAL ORGANISATIONS AND THOSE BASED ON BILATERAL AGREEMENTS

International means earmarked for the protection of natural environment in Poland come primarily from the World Bank. This organisation has supported pro-ecological initiatives in Poland since as early as 1990.

A great number of projects were financed from the World Bank funds. The projects included, among others, the Programme Strategy for Environmental Management which consumed 18 million USD and was completed in 1996. This programme comprised 4 groups of activities: institutional strengthening of the environmental protection management, a review of compliance with the requirements and effectiveness of environmental protection in industry, management of air quality as well as water resources planning and management.

A World Bank credit of 200 million USD was granted for the liquidation of the flood effects in Poland.

Additional 104 million USD were lent by the Forestry Development Programme realised by World Bank²⁸. In the programme of forestry development has also participated the European Investment Bank that has lended additional 16 million USD.

Furthermore, the European Investment Bank is involved in various other undertakings whose joint total amount till the end of the 1990s was estimated at about 100 million USD.²⁹ One of its main activities has been the co-financing of pro-ecological funds provided by the Polish banks. Thanks to such support e.g. Kredyt Bank S.A. credited pro-ecological undertakings at the amount of about 5 million EUR.

²⁷ Priorytety EkoFunduszu. (2002). *EkoFinanse*, 11, p. 28.

²⁸ Fundusze na dystans. (1999). *EkoFinanse*, 8, p. 32.

²⁹ *Fundusze na dystans* 33.

The European Bank for Reconstruction and Development is also preoccupied with a similar activity.³⁰

International means intended for the protection of natural environment in Poland include also the Global Environmental Fund (GEF) which came into being in 1991 on the initiative of the World Bank, UNEP and UNDP as a result of the Earth Summit in Rio de Janeiro. The means for this aim are given in the form of grant-in-aids and can be received by states taking advantage of the assistance of the World Bank and UNDP.³¹

Its aim is to support developing countries in the area of environmental protection. The GEF funds can be spent on financing both investment undertakings as well as research and study projects and investments connected with energy consumption. For example, in Poland, which is a country second after Mexico to have taken advantage of GEF funds, replacement of coal stoves by gas and oil ones was financed at the amount of 25 million USD and the amount of 5 million USD was spent within the Polish Project for Effective Lighting for the development of industry manufacturing energy-saving fluorescent lamps and their promotion.³²

In spite of this, some countries support the initiatives connected with the protection of natural environment in Poland within the framework of bilateral agreements. They deliver donations for definite purposes that are usually advantageous for the donors as well. For example, some Scandinavian countries co-financed investments in Poland in the protection of air as well as improvement of water quality in the Baltic Sea. Other countries supported other areas as well, e.g. ecological education.

Until 1999 Poland received such aid from 11 countries at the amount of 134 million USD, while 66 projects at the amount of 96 million USD were in process, and another aid of 198 million USD³³ was planned. Some of these projects have not been completed yet. At present the scale of this support is decreasing and will most likely disappear shortly after our accession to the EU.

However, amounts earmarked for helping to adapt the Polish law to the EU legislation and for the implementation of the provisions of Agenda 21 are on the increase. Among the greatest donors in this area are the United States, Denmark, Germany and Japan. Suitable works are usually carried out by

³⁰ Inwestycje z eko-euro. (2002). *EkoFinanse*, 11, p. 42.

³¹ EkoFundusz i GEF (1999). *EkoFinanse*, Z, pp. 28-29.

³² *EkoFundusz i GEF* pp. 29-30.

³³ *Nie tylko PHARE*, p. 13.

specialists from the donor country, and Poland only checks the compatibility of these projects with the State Ecological Policy.

4. THE PROSPECTS OF FINANCING NATURAL ENVIRONMENT PROTECTION IN POLAND

Joining the European Union is now Poland's most important challenge. This is connected, among other things, with the fulfilment of the requirements of the environment quality. The process of adaptation to membership takes place in two stages. The first one consists in the adaptation of the Polish law to the EU legislation, while the other in the implementation of the environmental protection regulations. The latter stage will be considerably longer, more difficult and more expensive.

The transition period for Poland's adaptation to the EU standards in the area of natural environment protection is 12 years maximum. Moreover, it follows from the estimation of the Ministry of Environmental Protection that liabilities until the year 2015 will require investments of 12,000 million PLN annually.³⁴ Therefore, in order to satisfy the EU requirements, Poland should spend about 2-3 times more than she does today. Meanwhile, it is estimated that the amount of investment outlays for natural environment protection in Poland as of late 1990s would enable to satisfy the EU requirements as regards the quality of natural environment in our country within 14 to 30 years.³⁵ However, the outlays have been reduced recently, which means that the period will be longer.

On the other hand, it is forecasted that in the years to come outlays for the protection of natural environment in Poland will increase, but they will be only by slightly greater than they were in 1998 (see Table 19.3.). One of the arguments for this increase is that the funds from the European Union after the accession of Poland should constantly increase. It is estimated that in the years 2004-2006 Poland will receive the total of about 2.7 thousand million EUR for environmental protection from the structural and regional funds. Moreover, the role of financial institutions should grow. On the other hand, it must be taken into account that bilateral aid as well as support for non-government organisations will decrease.

³⁴ Czas na projekty. (2002). *EkoFinanse*, 7-8, p. 31.

³⁵ According to PHARE-DISAE 17 years, World Bank 17 years – optimistic version, 33 years – pessimistic version. Estimation from 1999 r.

Table 19.3.
Sources of financing environmental protection in Poland
in the years 2002-2010 (in millions of PLN).

Financial sources	2002	2003	2004	2005	2006	2007	2008	2009	2010
Own means of enterprises and territorial self-government units	4,500	5,040	5,760	6,120	6,120	6,120	6,120	5,760	5,760
Cohesion Fund and structural funds	--	--	3,060	3,420	3,600	3,600	3,600	3,240	3,240
Ecological funds	1,800	1,980	2,160	2,160	2,340	2,340	2,340	2,340	2,340
State budget	126	144	144	162	180	180	180	180	180
Pre-accession funds and foreign assistance	750	750	750	720	108	108	72	72	72
Total	7,326	8,064	11,664	12,222	12,348	12,348	12,312	11,592	11,592

^{a)} a mean exchange rate 1 EUR = 3.6 PLN was used for conversion.

Source: *EkoFinanse* (2002), 5, p. 45.

Table 19.3 shows, among other things, that investments of enterprises and ecological funds should considerably increase. In the case of the latter this can denote an expected growth of charges for the use of natural environment and penalties for polluting it. Today's postulates to increase the users' burden i.e. to raise the amount of the mentioned charges and penalties, to introduce new product and deposit charges, in spite of their considerable level, are the only measure to equal the burden of the users of natural environment in Poland with the burden level of the EU users.

In effect this will entail a further burden for enterprises, and if their financial condition does not change, it may result in decreased expenses for the protection of natural environment, the more so as the indispensable increase of enterprise investment outlays will not be completely financed by credits, because a difficult financial condition of economic subjects on the one hand will diminish their readiness to take on liabilities and, on the other hand, it will discourage banks from giving them credits. Therefore, it should be considered whether the introduction of extra liabilities in the sector of enterprises should not be replaced by other charges e.g. by introducing charges for polluting natural environment by households.

The "polluter pays principle" is a very common principle connected with environmental protection worldwide. Sometimes this can result in serious financial difficulties, especially if the reason is sudden, and results extensive.

In highly developed countries it is possible to protect oneself from such a possibility by a purchase of a suitable insurance policy. In Poland the system of insurance connected with environmental protection practically does not exist, in spite of an ever-stronger demand of the market for this kind of services. It can be supposed that soon, as a result of adapting to the EU requirements, as well as pressure from customers and authorities, such policies will be commonly introduced and insurance will become an essential element of financing outlays for the protection of natural environment (particularly as far as damage removal is concerned).

Simultaneously, in order to immobilise the foreign means shown in Table 19.6. which for the year 2004 are planned at about 4 billion PLN,³⁶ a 30-40% contribution of Polish subjects will be necessary (see Table 19.4.). Taking into account a difficult situation of Polish investors this can be a barrier difficult to overcome.³⁷

Table 19.4.
The share of national and assistance means in the financing of environmental protection in Poland in 2002-2010 (%).

Financial sources	2002	2003	2004	2005	2006	2007	2008	2009	2010
Share of national means	87.7	88.8	66.0	66.1	70.0	70.0	70.0	71.4	71.4
Share of assistance means	12.3	11.2	34.0	33.9	30.0	30.0	30.0	28.6	28.6

Source: *EkoFinanse* (2002), 5, p. 45.

Moreover, in order to use the entire aid that will be granted from the Cohesion Fund in 2004, Poland must submit project applications to the European Commission at least 6 months in advance. Taking into account the fact that so far preparation of a project has taken about 15 months, Poland may find it difficult to use the whole amount.³⁸

³⁶ 70%, i.e. about 700 million euro + about 30% own contribution.

³⁷ Currently such difficulties take place in the SAPARD programme because investors are unable to collect an amount required to start the assistance, cf. e.g.: Sapard na start. (2002). *EkoFinanse*, 7-8, p. 23.

³⁸ Czas na projekty 32.

5. CONCLUSION

The mechanism of financing investments for the protection of natural environment introduced in Poland at the turn of the past decade became a model for other post-communist countries. It has undergone constant changes, though.

The position of ecological funds, initially dominating was gradually reduced. Its role was gradually taken over by own investments of enterprises because investments resulted in reduced pollution caused by them and consequently lower penalties for polluting natural environment. Simultaneously, the implementation of new technologies resulted in a lower use of natural environment resources which, in turn, has caused a fall in charges for the use of natural environment.

Moreover, the methods of financing investments connected with the environmental protection in Poland from national sources are less and less effective. This means that they have to be improved and later even changed.

Secondly, the activity of financial institutions in the financing of natural environment protection in Poland grows. However, nowadays it is limited primarily to the credit activity on both preferential and commercial principles but it should be expected that this situation will improve in the nearest years, especially if crediting pro-ecological investments is facilitated.

It may be also assumed that leasing will play greater and greater role. It appeared quite late in the environmental protection but it enjoys a growing interest and leasing institutions direct their offer more and more often to investors from this area.

As regards spending, since 1989 there have been only insignificant changes in the structure of outlays for three main investment groups (protection of air, water resources, and the surface of Earth), but adapting to the requirements of the EU makes Poland pay greater attention to the protection of the surface of the Earth and, in particular, to waste management. In the second State Ecological Policy such changes have been foreseen. In order to fully carry out the outlays designed in this document, the national investment effort should be increased.

In effect, in connection with the oncoming accession of Poland to the European Union the needs in the area of financing environmental protection grow rapidly, thus increasing the discrepancy between the possibilities and the liabilities. According to authorities, this situation will be controlled thanks to

the increased share of foreign aid, but this denotes increased own outlays by national investors.

On the other hand, it results from the alarming signals coming from, among others, representatives of ecological funds that no substantial increase of means for financing investments connected with natural environment protection in Poland will take place as quickly as the government thinks. Though, statistical data for the third quarter and estimations for the fourth quarter of 2002 indicate a gradual improvement of the rate of economic growth, convincing the investors, particularly from the enterprise sector, that subsequent outlays are necessary, may take a great deal of time.

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CHAPTER 20

**FINANCING ENVIRONMENTAL
PROTECTION FROM PUBLIC SOURCES**



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FINANCING ENVIRONMENTAL PROTECTION FROM PUBLIC SOURCES

In the age of technology development, inventions spreading in geometric progression, economic rules imposed by the market that lead to maximisation of profits at limited risk, a number of dangers appears. One of them is devastation of the environment, in which people live, work and rest.

We need to bear in mind, however, that there are many designations connected with the word 'environment', which additionally belong to different categories. We can discuss a social, natural or economic environment. A short study cannot deal with all aspects of the problem, therefore, some selection is needed.

In this paper the word environment will be interpreted as Nature and only the issues that relate to its financing will be considered. Our intention is to emphasise connections between the environment and economy. Consequently, the following statement is of special importance: *"The complexity of relations occurring within the system of natural environment hinders the proper use of the environment's resources in the socio-economic development, as it confines the possibility of forecasting and modelling changes in the environment and it may disable economic evaluation of the effects of changes introduced to the environment."*¹

On one hand, there are the forces of Nature that determine its development and on the other hand we face an acceleration of social development that leads to degradation of the environment. Between these two processes we can find human activities that necessitate environmental protection so to ensure safe existence of the next generations.²

¹ Bernaciak, A. and Gaczek, W.M. (2001). Ekonomiczne aspekty ochrony środowiska (p. 12). Poznań: AE.

² See the discussion of the subject in: Górka, K. and Poskrobko, B. and Radecki, W. (2001). Ochrona środowiska (p. 10). Warsaw: PWE.

Provisions of the nature protection law³ of 16 October 1991, that lists out what nature actually comprises, require identification of groups of tasks that need to be fulfilled. These are: conservation of ecological processes and stability of ecosystems, protection of ecological variety, conservation of the geological heritage, ensuring further existence of species of plants and animals, protection of green sites in urban and rural areas, conservation of habitats and restoring them to adequate condition, formation of people's attitudes towards nature.

Relevant actions take various shapes, such as establishment of national parks, landscape parks, nature reserves, or introduction of protected areas.⁴ This by no means is a complete list, as there are many other undertakings, for instance taking into account effects of manufacturing activities. *“Entering into new sites with investment projects, expansion of development activities and motorization, growing consumption, open borders, etc., have become a source of a building up of pressure on the natural environment.”*⁵

On December 7, 2000, the nature protection law was amended, the major reason for this being the need to adjust it to the EU legislation. This law was additionally enhanced by the act of July 27, 2001 that introduced the environmental protection law.⁶ Despite these legal actions intended to protect the environment from devastation, many provisions in both the laws did not meet expectations and the previously cherished hopes. For instance, the mandatory protection of land surrounding areas of environmental importance was abolished. Besides, limited lists of activities banned in protected areas were introduced. As a consequence, many activities are allowed, unless specified on the lists. Another novelty is the disbandment of the Nature Protection Guard. It seems, though, that the state control does need some support from a civic service. Of course it is worth considering whether particular types of services should be dispersed or integrated, i.e. whether the Forestine Guard, Fishery Guard and others should function separately, or rather as a consolidated service with multiple tasks covering all aspects of environmental protection.

Agriculture, being a component of the natural environment, is a separate item. Modern trends in Europe are particularly supportive of the so-called natural farming. Trying to follow the trends Poland passed the natural farming

³ Dziennik Ustaw 114, item 492.

⁴ Gwiazdowicz, M. (2002, March). Ochrona przyrody w Polsce. Wybrane problemy. Sejm's Office, Bureau for Studies and Experts' Opinions. Report no. 202.

⁵ Gwiazdowicz 3.

⁶ Dziennik Ustaw (2001), 100, item 1085.

act on March 16, 2001.⁷ It is of special importance as the number of farms producing natural food in Poland is relatively low, around 2,000.⁸ Considering Poland's accession to the European Union this issue bears an additional aspect. A growth in natural farming activities and steady high quality of their produce may provide additional opportunities to expand exports. The possible development of this segment of agriculture builds on the availability of SAPARD funds offered for this purpose under the pre-accession aid.

Obviously, environmental protection is not the responsibility of one country only, hence the initiative to set up a consistent network of protected areas in Member States is so important. This programme has been named Nature 2000. Poland joined this initiative at the beginning of the year 2000 and selected protected areas that meet requirements for being included in the network.

"The project implementation will require commitment and co-operation not only on the part of environmental protection administration at various levels, but also on the part of local governments, NGOs and academic communities. Its success hinges on the organisational and financial enhancement of the environmental protection administration, as well as its staffing.⁹

The National Program Preparing for the EU Membership approved by the Polish Committee for European Integration in April 2000 provides for tasks related both to agriculture and the environment.¹⁰ Regarding agriculture, the Agency for Agriculture Restructuring and Modernisation will make payments under the SAPARD initiative. As regards the environment, the National Programme lists 17 goals and its Appendix identifies pertinent EU funds offered under the programme PHARE. The goals focus on new ecological policy, improved quality of waters, waste recycling, improved quality of air, conservation of habitats, protection of wildlife, use of genetically modified species, implementation of laws relating to forest seed production, execution of the National Forestation Programme, monitoring of forested areas, adjustment of Polish laws to the EU requirements that set standards for "construction" and mechanised household equipment noise, creation of laws regulating public and private undertakings and access to environmental information, development of systems

⁷ *Dziennik Ustaw* (2001), 38, item 452.

⁸ Gwiazdowicz 9.

⁹ Gwiazdowicz 13.

¹⁰ *Opinions on Narodowy Program Przygotowania do Członkostwa w Unii Europejskiej*. (2000, June). Sejm's Office. Bureau for Studies and Experts' Opinions. Report 177.

for monitoring of the environment and control of the sources of emissions, adjustment of the Polish environmental laws to EU solutions, establishment of a system of permits aiming to prevent and limit pollution, improved nuclear safety and protection against radiation.

The success and effectiveness of all actions depend not only on the climate created by the state and on legal solutions generated on its recommendation, but also on the empowerment of local agencies and their initiatives. The decisions that were recently made in this area are expected to change the present situation. One of them is the cancellation of the law making municipalities pay the costs of preparing land development plans for protected areas. At the same time, however, the local government law excludes the possibility of refunding municipalities' incomes lost as a result of exempts from taxes and land charges that population living in national parks and nature reserves is entitled to.

The following opinion deserves a full support: *"Besides, the budget and fiscal policy is the primary tool for achieving goals of balanced growth, that is such model of economic development which should ensure the future generations' access to natural resources and natural environment of adequate quality. Market inconsistencies leading to abuse of the environment and unjustified subsidisation of certain types of manufacturing activities and consumption should be reduced by appropriately designed economic instruments: taxes or charges."*¹¹

Here, decisions such as the abolishment of corporate income tax relieves on environmental investments seem very dangerous. Another example is the solution allowing to deduct donations for environmental purposes from income. In many countries, for instance in Germany, the tax law is amended so to replace fiscal burdens on labour with charges on activities and products hazardous for the environment.¹²

Undoubtedly, environmental protection involves certain investments that translate into funds the public has to allocate to this purpose.

Yet, resources must be in proportion to the needs that are estimated according to the quality of the environment. As a case in point we can use the quality of waters and the degree of land devastation.

Table 20.1. shows that the purity of Polish waters leaves much to be desired, most of them are in purity classes II and III. The most alarming is

¹¹ Sobolewski, M. (1999, October). *Ekologiczne aspekty reformy podatkowej*. Sejm's Office, Bureau for Studies and Experts' Opinions. Information no. 688.

¹² Sobolewski 11.

Table 20.1.
Purity of monitored waters.

SPECIFICATION	Length (km)		Physio-chemical criterion						Bacteriological criterion		
	in Poland	incl. monitored distances	waters in purity class			excessively polluted waters	waters in purity class				
			I	II	III		I	II	III		
TOTAL 1990	10429	8621	6.0	27.9	30.3	35.8	—	3.0	16.8	80.2	
1995	6733	6188	2.9	20.3	33.8	43.0	0.0	3.1	11.8	85.1	
1998	6733	6175	3.0	21.7	36.1	39.2	0.0	2.4	26.6	71.0	
1999	6733	6175	3.3	25.8	39.0	31.9	—	3.9	29.7	66.4	
Wisła ^c	1047	979	0.9	19.2	47.4	32.5	—	0.9	22.0	77.1	
Soła	89	68	21.9	78.1	—	—	—	—	40.1	59.9	
Dunajec ^d	247	156	13.1	39.7	34.7	12.5	—	22.1	50.2	27.7	
Wisłoka	164	164	14.1	—	—	85.9	—	14.1	20.5	65.4	
San	443	316	6.9	42.5	21.1	29.5	—	—	72.4	27.6	
Kamienna	138	128	—	11.6	58.8	29.6	—	11.6	45.4	43.0	
Wieprz	303	303	—	20.5	34.7	44.8	—	—	36.0	64.0	
Pilica	319	285	—	72.1	27.9	—	—	—	58.7	41.3	
Narew	448	416	—	32.7	62.1	5.2	—	31.9	54.0	14.1	
Bug	587	570	—	14.4	44.0	41.6	—	—	58.4	41.6	
Odra	742	742	—	1.2	65.0	33.8	—	—	18.9	81.1	
Mała Panew	132	124	—	14.9	61.0	24.1	—	12.3	21.3	66.4	
Nysa Kłodzka	182	165	10.7	48.2	35.3	5.8	—	—	44.4	55.6	
Bystrzyca	95	89	12.7	6.6	24.3	56.4	—	—	34.7	65.3	
Barycz	133	123	—	47.3	51.1	1.6	—	—	—	100.0	
Bóbr	270	254	—	69.1	30.9	—	—	—	22.7	77.3	
Nysa Łużycka	198	198	43.4	3.6	7.9	45.1	—	—	—	100.0	
Warta	808	778	—	23.9	16.2	59.9	—	—	—	100.0	
Noteć	388	317	—	36.9	42.4	20.7	—	3.7	8.8	87.5	

^a Rivers are arranged hydrographically.

^b Including border distances; for lengths of border distances see section "Geography", table 6, p. 4.

^c Including Mała Wisła.

^d Including Czarny Dunajec.

Source: Statistical Yearbook of the Republic of Poland (2000), (p. 20). Warsaw: GUS.

Table 20.2.
Sanitary rating of water used by population.

Specification	Towns					Rural areas					
	registered objects (as of 31 Dec.)	total	incl. monitored			registered objects (as of 31 Dec.)	total	incl. monitored			
			water rating (%)					water rating (%)			
			good	Indis-tinct	bad			good	indis-tinct	bad	
WATER PIPELINES											
Public	1990	894	894	89.1	6.9	4.0	4823	4821	90.0	6.1	3.9
	1995	969	966	91.6	6.1	2.3	6366	6347	89.7	6.3	4.0
	1998	982	981	94.6	4.0	1.4	7046	7038	91.8	5.4	2.8
	1999	1014	1013	94.6	4.1	1.3	7295	7280	90.6	6.4	3.0
Company	1990	774	773	87.8	6.8	5.4	3678	3656	82.2	9.1	8.7
	1995	713	706	90.5	5.3	4.2	3061	3004	78.8	11.0	10.2
	1998	625	617	90.9	5.9	3.2	2352	2336	82.2	10.4	7.4
	1999	725	699	88.3	6.1	5.6	2132	2083	80.9	11.5	8.1
Local	1990	7317	6256	78.5	7.9	13.6	35566	28319	70.5	10.5	19.0
	1995	5598	4805	79.2	7.8	13.0	27126	20138	75.4	9.1	15.5
	1998	4389	3746	83.6	6.4	10.0	20812	14685	79.2	7.5	13.3
	1999	3912	3396	85.0	5.9	9.1	18277	12509	80.4	6.8	12.8
WELLS											
Public	1990	4287	3905	28.9	25.6	45.5	3055	2832	34.7	14.4	50.9
	1995	3394	2844	33.1	24.0	42.9	1749	1509	37.6	22.0	40.4
	1998	2800	2273	37.0	25.8	37.2	1029	854	44.8	23.0	32.2
	1999	2689	2236	33.4	25.5	41.1	960	763	38.4	24.1	37.5
Company	1990	364	285	59.3	11.9	28.8	4388	3735	52.7	11.3	36.0
	1995	179	120	61.7	9.1	29.2	1792	1373	60.2	13.3	26.5
	1998	125	92	68.5	11.9	19.6	872	680	69.9	10.8	19.3
	1999	443	94	62.8	11.7	25.5	1993	767	61.4	13.6	25.0
Local	1990	57644 ^A	4264	41.7	6.7	51.6	808168 ^a	27962	30.9	8.0	61.1
	1995	.	1102	43.5	6.8	49.7	.	4925	39.7	6.3	54.0
	1998	.	788	42.8	6.7	50.5	.	3631	35.4	7.3	57.3
	1999	.	487	53.2	5.5	41.3	.	2654	31.6	26.9^b	41.5^b

^a Incomplete register.

^b Rates incomparable with the previous years because of the selection of controlled objects.
Source: Statistical Yearbook of the Republic of Poland. (2000). (p. 22). Warsaw: GUS, 2000.

the fact that the rate of excessively polluted waters fits within the range of 85.9% to 5.2% and that 12 rivers from 17 are polluted in more than 20%

A consequence of this situation is the rating of water used by population (Table 20.2.).

The presented data show that the unsatisfactory rating of water used by population is more relevant to rural than urban areas. Fortunately, however, this situation improved in the decade of 1990-1999.

Another example concerns land (Table 20.3.) and its quality measured by the degree of devastation.

Table 20.3.
Devastated and degraded land in need of reclamation and development and reclaimed and developed land.

LAND	1990	1995	1998	1999
	Hectares			
Devastated and degraded (as of 31 Dec.)	93679	72245	74240	72786
Reclaimed (within a year)	2665	2698	2729	2026
Developed (within a year)	2264	1864	1573	1032

Source: Statistical Yearbook of the Republic of Poland. (2000). (p. 17). Warsaw: GUS.

Here data shows that after 1990 the area of devastated and degraded land diminished, but rates of reclamation and development went down as well. The exemplary data provoke the question about what actions are undertaken in Poland to change the situation. The most important role is played by investment outlays on environmental protection (Table 20.4.).

The largest outlays were disbursed on the protection of air, waste water disposal and water protection. In the period 1998-1999 the share of funds allocated to environmental protection in GDP decreased, whereas funds for water economics remained at the same level.

An important issue is what tangible effects were produced by the incurred outlays (Table 20.5).

The situation, when measured by outcomes such as erected facilities or kilometres of pipelines, is very ambiguous. For instance, in the period 1998-1999 the sewerage was enlarged, but the number of facilities such as sewage works decreased.

Generally, funds for environmental protection can be received from:

- national budget;
- local governments' budgets;
- earmarked funds, including public business organisations;
- foundations;
- personal resources;
- foreign aid funds.

From the standpoint of the government's policy the most important on the list are means provided by public sources.

Table 20.4.
Investment outlays on environmental protection and water economics
(current prices).

SPECIFICATION	1998	1999
	MILLION PLN	
Environmental protection	9018.7	8584.9
incl. protection of:		
Waters	3425.8	3765.2
incl. outlays on:		
municipality sewage works	1325.7	1471.0
sewerage removing waste water and precipitation	1567.1	1752.3
Air	4643.6	4042.2
incl. outlays on new fuel burning techniques and technologies and improvement of boiler-houses and heat-generating plants	1513.8	1491.7
The surface of land	824.3	703.5
Nature, landscape and biological variety	8.2	6.8
incl. protection of nature and landscape	8.1	4.9
From noise	36.6	16.2
Water economics	1748.2	1766.7
incl. outlays on:		
water intakes and connections	936.1	832.8
water treatment plants	214.1	232.5
water reservoirs and stages of fall	196.9	232.1
regulation and embankment of rivers and streams	197.6	240.8
embankments and pump stations	203.5	228.5
SHARE IN INVESTMENT OUTLAYS IN NATIONAL ECONOMY (%)		
Environmental protection	8.0	6.8
Water economics	1.5	1.4
SHARE IN GDP (%)		
Environmental protection	1.6	1.4
Water economics	0.3	0.3

Source: Statistical Yearbook RP (2000). (p. 33). Warsaw: GUS.

Table 20.5.
Tangible effects produced as a result of implementation
of environmental and water economics projects.

SPECIFICATION	1998	1999
Environmental protection		
Sewage works		
facilities	419	366 ^a
incl. sewage works		
biological	234	188
with improved removal of biogenes	42	53
capacity of sewage works dam ³ /d	694	858 ^a
mechanical	144	164
chemical	50	63
biological	318	311
with improved removal of biogenes	182	320
Sewerage (km) removing:		
sewage	3322	4108
precipitation	306	395
Capacity of installations put into operation – thousand T/r – regarding:		
reduction in dust emissions	78.4	81.2
gas emissions	226.4	258.4
rendering waste harmless	717	1107
incl. storage	625 ^b	869
waste recycling for one's own use	555	816
Reclamation of waste storing areas (ha)	296	148
Water economics		
Capacity of water intakes ^c (dam ³ /d)	404	325
Water treatment (dam ³ /d)	182	382
Water pipelines (km)	11018	8832
Capacity of water reservoirs (hm ³)	8.7	0.7
Regulation and embankment of rivers and streams (km)	777	447
Firewalls (km)	309	266

^a In addition, 717 farmstead sewage treatment units with total capacity amounting to 758 m³/d were put into operation.

^b Estimates.

^c Excluding connections in the power industry.

Source: Statistical Yearbook of the Republic of Poland. (2000). (p. 34). Warsaw: GUS.

Public funds available for environmental protection have various forms. Particular significant are those that play the role of incentives, that is charges and penalties. Penalties are imposed on the environment users in order to modify their behaviour or to recoup damages they have caused.

According to the environment protection and formation law¹³ charges are charged for emission of pollutants into the air, cutting out of trees or bushes. By virtue of waste regulations of 1997¹⁴ charges have to be paid for storing waste in indicated places. On the other hand, water and water installations regulations¹⁵ make enterprises pay for their use of water and water installations, i.e. consumption of water and discharging waste to the sewer.

Another category is charges for mining minerals.¹⁶ This money is divided between a municipality (60%) and the National Fund for Environmental Protection and Water Management (NFOŚiGW) (40%).

The next group is funds accumulated from penalties imposed for breaching environmental regulations, for instance violation of the allowed emission of pollutants into the air, noise exceeding prescribed standards, accumulation or storage of waste in places other than marked for this purpose, discharging waste water that does not comply with pertinent standards, causing damage to green areas. The penalties are viewed as a sanction and their rates vary depending on the quantitative and qualitative parameters of changes caused in the environment. A special role in this group of funds is played by subventions. They are important as their design intends to award all those who undertake environment-friendly activities, e.g. to reduce hazards to the environment.

Another type is preventive funds. These can be provided by:

- company resources,
- earmarked funds,
- grants from the national budget,
- bank credits,
- loans,
- issues of bonds, including municipal bonds.

¹³ Dziennik Ustaw (1980), 49, item 196.

¹⁴ Dziennik Ustaw (1997), 96.

¹⁵ Dziennik Ustaw (1993), 133.

¹⁶ Dziennik Ustaw (1994), 27.

Companies' own funds come from profits available for distribution, depreciation allowances, effects of fixed assets' revaluation, that are allocated also to environmental investments. Grants offered by the national budget are spent on specific purposes, such as special economic units functioning within national parks. Bank credits play a special role in financing environmental protection. In this area, worth noting is the Bank for Environmental Protection (BOŚ) established in 1990. It raises funds both domestically and abroad to finance environmental projects. The strategic stakeholder in the Bank is the National Fund for Environmental Protection and Water Management (NFOŚiGW). The Bank offers preferential loans and the difference between preferential and market interest rates are refunded by the National Fund for Environmental Protection and Water Management (NFOŚiGW).

Bonds have become an important source of funding. One of their issuers is municipalities. Most frequently, municipalities spent the money they raised on environmental projects, including sewage works.

A special role among organisations providing resources for environmental purposes is funds. In Poland operate two basic funds: The National Fund for Environmental Protection and Water Management (NFOŚiGW) and the Farming Land Protection Fund (FLPF). A supplementary role is played by the Forest Fund administered by the Regional Enterprise "State Forests".

Considering the weight given to environmental protection for social and economic reasons and the level of natural resources, the degree of their pollution and the growing needs in this area on one hand, and the amounts spent on environmental protection that are offered by various sources, mainly public, on the other, we need to answer the question 'is the money managed rationally'? To analyse this theme of our discussion let us use an illustration based on data showing amounts provided by the national budget and those raised by the aforementioned funds.

The state budget has a separate section 41 that encompasses environmental expenditures. Up-to-date pertinent data can be found in Table 20.6.

The above data shows that the municipal economy, environmental protection, botanical and zoological gardens as well as natural sites and protected objects of nature accounted for less than 50% of all funds available in section 41. It should be added, however, that amounts allocated to strictly meant environmental protection were insignificant; for instance, the protection of biological variety and landscapes consumed 11,000 PLN and the Chief Environmental Protection Inspectorate received 10,332 thousand PLN to finance its activities.

Table 20.6.
Environmental expenditures from the national budget in 2001.

Specification	2001 budget law	Amended 2001 budget	Blocked expenditures	Amended budget allowing for amounts blocked	Execution in 2001	6:5
	Thousand PLN					% %
1	2	3	4	5	6	7
Total:	158,218	164,109	10,215	153,894	153,759	99.9
From which:						
– current expenses	148,440	150,640	8,203	142,437	142,354	99.9
– capital expenditures	9,778	13,469	2,012	11,457	11,405	99.5
The total amount was used to fund expenditures in sections:						
Forestry	44,851	45,964	4,353	41,611	41,610	100.0
Services	13,143	13,143	1,383	11,760	11,733	99.8
Public administration	28,505	28,694	917	27,777	27,757	99.9
National defence	217	217	121	96	96	100.0
Education	1,777	1,777	274	1,503	1,491	99.2
Municipal economy and environmental protection	11,398	11,546	690	10,856	10,800	99.5
Botanic and zoological gardens as well as natural sites and protected objects of nature	58,327	62,768	2,477	60,291	60,272	100.0

Source: Report on the execution of the national budget for the period 1. Jan. - 31 Dec. 2001. (2002). Board of Ministers (p. 169). Warsaw.

In the other group of expenditures most funds were used to finance The National Association of National Parks (from 60,272 thousand PLN available in this section it received 57,710 thousand PLN), and investments used 10,617 thousand PLN.

Considering proportions of sources contributing to environmental protection financing, the earlier mentioned funds need some attention. Their most recent role is illustrated by data in Table 20.7.

Based on the data we can conclude about several characteristic phenomena. Among revenues of the National Fund for Environmental Protection and Water Management prevail charges and expenditures mainly aim to offer financial assistance to environmental protection. The only source of income of the Farming Land Protection Fund is charges for changing the status of farming land for non-farming.

Table 20.7.
Environmental funds – available resources and expenditures.

SPECIFICATION	1995	1998	1999
	Million PLN		
THE NATIONAL FUND FOR ENVIRONMENTAL PROTECTION AND WATER MANAGEMENT			
Available funds	2507,3	4050.3	4321.9
Amount of funds as of the beginning of the year	484.2	591.7	1149.3
Total	2023.1	3458.6	3172.6
Under the law	1460.1	1988.8	1629.2
Liabilities due to:			
Charges	1250.7	1695.3	1436.7
incl. these for:			
Air pollution	656.2	942.3	790.2
Discharging of waste water	253.6	319.1	237.4
Water consumption	169.1	232.5	184.8
Waste storing	170.0	82.3	164.5
Penalties for breaching environmental regulations	31.9	30.7	21.3
incl. penalties for exceeded:			
Standard levels of pollutants in waste water	19.8	17.0	12.4
Maximum emissions of air pollutants	10.2	9.1	6.9
Own funds	563.0	1469.8	1543.4
incl.:			
Loan repayments	209.2	749.1	870.9
Grants returned as unused in due time	2.8	1.2	0.8
Interest rates on:			
Loans	160.6	375.2	358.4
On-demand bank account	17.1	40.6	17.6
Financial operations	129.6	169.9	156.2
Expenditures	1806.1	2899.3	3488.6
Grant for:			
Environmental protection	1644.4	2571.0	3087.5
Mining and geological resources	87.8	96.7	85.3
Funds as of 31 Dec	701.2	1151.0	833.3
FARMING LAND PROTECTION FUND			
Available funds	44.3	104.3	94.3
Incl.:			
Funds as of 1 st January	12.5	24.0	15.2
Charges for changing farming land's status for non-farming	31.8	80.3	74.3
including:			
Annual payments	18.2	51.1	54.2
One-time payments	10.6	25.5	14.6
Expenditures	28.1	89.6^p	68.5
Level of funds as of the end of the year	16.2	14.7	25.8

Source: Statistical Yearbook of the Republic of Poland, GUS, Warsaw 2000, p. 35.

Compared with 2000 total 2001 resources of the National Fund for Environmental Protection and Water Management increased 3.4%. Characteristically, the non-investment expenditures grew and investment expenditures declined (by 37,715 thousand PLN). Environmental grants consumed 177,712 thousand PLN. In total Fund's expenditures (878,710 thousand PLN) money used to support its Supervisory Board and the Fund's Office accounted for 38,692 thousand.

Regarding its environmental goals in 2001 the Fund financed investments relating to water economics (43,054 thousand PLN), reclamation of areas degraded by the Russian Federation's military – 2,227 thousand PLN, removal of hazardous waste – 10,481.5 thousand PLN, monitoring of forested areas – 2,267 thousand PLN.

On the other hand, in 2001 the Farming Land Protection Fund's resources were largely allocated to local FLPFs as a result of the flood in 1997.

In its reports¹⁷ the Office Superior Chamber of Control points to the fact that NEPWEF funds are not managed properly. The fund has not identified its long-term goals, therefore its strategy of operations has gaps. Even though funds for environmental purposes are being increased, the level of deposited funds and those used in capital transactions is still high. There are also some other reservations provoked by procedures used to analyse applications for grants. In addition, the NEPWEF employs around 300 persons. Compared with 1999, in 2001 its personnel grew by 50 persons. In 2001 a loan of 50,000 thousand was granted that did not bring any environmental effects. Consequently, the SFO recommends stronger supervision on the part of the relevant minister.

The Central Farming Land Protection Fund did not give reasons such criticism. In this case the SFO's recommendation is that the local Funds should receive new means after those received earlier have been accounted for.

The above discussion leads to concrete conclusions.

Due to the co-operation on the European forum and the approaching date of Poland's accession to the EU we have been able to observe intensified environmental protection activities.

Public funds used to finance environmental protection, especially investment funds, are very scarce compared with the degradation of the environment in Poland.

¹⁷ Analiza wykonania budżetu państwa i założeń polityki pieniężnej w 1999 roku. (2000). (Vol.II). Synteza wyników kontroli w częściach budżetu państwa oraz Państwowych Funduszach Celowych (pp. 426, 414). Warsaw.

The system used to finance environmental activities is characterised by a dispersion of its resources. The most questionable is finance management in the National Fund for Environmental Protection and Water Management that plays an important role for all monetary resources allocated to environmental protection. These resources require more intense supervision. The outlined reservations show that the management of public finance allocated to environmental protection is not quite rational.

So rather than complaining that the funds are tight, its better to improve their management.

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Zofia Zawadzka

CHAPTER 21

**THE FINANCING OF PRO-ECOLOGICAL
INVESTMENTS IN POLAND**



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THE FINANCING OF PRO-ECOLOGICAL INVESTMENTS IN POLAND

The financing of investments connected with environmental protection in Poland is a relatively new but quickly developing area of activity on financial markets.

The condition of natural environment in Poland is gradually improving owing to the restriction of some types of economic activity and the increase in investment outlays for the protection of natural environment.

The increased restrictiveness of the regulations on the use of natural environment and the formation of ecological awareness in society have also had an indirect influence here.

The results achieved by Poland in the protection of environment mostly result from the creation of an integrated system of financing pro-ecological enterprises early in the 1990s. This system is also recommended by the World Bank and the European Commission.

1. ECOLOGICAL FUNDS IN THE FINANCING OF PRO-ECOLOGICAL ENTERPRISES

The system of environmental protection in Poland is based, in the first place, on environmental protection and water management funds (the National Fund as well as provincial, district and communal funds). Ecological funds have been called into being in order to make sure that the sources of financing pro-ecological enterprises remain independent from the state budget. Excessive dependence on the condition of the budget and scarcity of financial means have led to the decrease of means for investment in many cases and consequently the suspension or slowdown in the process of implementation. The creation of the funds was to have rendered the amount of the expenditure for pro-ecological activity independent of the current budgetary situation and assure

the continuity of financing. Fines for polluting the natural environment are the basic source of the receipts in the funds. Currently, the funds are the best-known source of subsidies and loans for the subjects, which undertake pro-ecological activities.

The following funds operate in Poland:

- the National Fund for Environmental Protection and Water Management (NFOŚiGW),
- 16 provincial funds for environmental protection and water management (WFOŚiGW),
- 373 district funds for environmental protection and water management (PFOŚiGW),
- 2489 communal funds of environmental protection and water management (GFOŚiGW).

NFOŚiGW occupies the most important place among the ecological funds due to the scope of its activity and the amount of means accumulated and spent. The National Fund was founded in 1989. The main reason for its foundation was to assign specific public financial means and to appropriate them for the purposes directly connected with the protection of natural environment. NFOŚiGW is the biggest institution supporting the implementation of ecological enterprises in Poland.

The activity of the National Fund includes the following 10 areas of environmental protection:

- protection of the air, e.g. by the construction of the installations limiting the emission of harmful gases and dust pollutants into the atmosphere and by saving energy and raw materials,
- protection of waters and water management, e.g. by the construction and modernisation of sewage-treatment plants, sanitary sewage systems, water treatment stations and reservoirs,
- protection of the Earth's surface, e.g. by the construction and modernisation of storage yards, utilisation plants for municipal, industrial and dangerous waste material as well as composting plants; undertakings serving the purpose of implementation of non-waste technologies, recovery and disposal of recyclable materials, liquidation of overdue plant pesticide dumps and reclamation of lands degraded by the army and the industry,
- preservation of nature and landscape, e.g. consisting in protective treatment in national and landscape parks, liquidation of the consequences of disasters caused by air pollution, fires and insects,

- forestry, i.e. the implementation of the National Programme of Woodiness Increase as well as the tasks connected with the protection of forest ecosystems,
- environmental monitoring consisting, among other things, in equipping provincial inspectorates of environmental protection, scientific institutes and universities with appropriate laboratory base,
- counteracting extraordinary hazards to the environment by the purchase of specialist equipment for the units of National and Voluntary Fire-Brigade as well as sea rescue service; carrying out studies on the occurring dangers and preparing operational and rescue plans,
- mining by the liquidation of mining damage, reclamation of brown coal, sulphur and sand excavations,
- geology, i.e. research studies regarding the geological structure of the country, rational management of resources and drawing maps of Poland,
- ecological education, i.e. enterprises providing society with access to knowledge on its natural environment and shaping pro-ecological attitudes in everyday life,
- expert opinions and research studies carried out within different projects.¹

The National Fund exercises control over significant financial means, which are appropriated for the refinancing of investments aiming at the improvement of the condition of the natural environment in accordance with the principle of sustainable development and the standards being in force in the European Union. The amount of money spent for the implementation of ecological investments has systematically increased. The National Fund spent about 9 million PLN in 1990. In 1999, it spent 1.7 billion PLN. In 2000, 1.2 billion PLN was appropriated for environmental protection. During the twelve years of its existence, the Fund has appropriated almost 12 billion PLN for the protection of natural environment, thanks to which almost twelve thousand ecological project have been implemented.² The National Fund is an important partner for local governments, companies and other subjects implementing ecological investments. Owing to the multiplier effect, the means spent by the Fund contribute to the activation of larger means from other domestic and foreign sources.

Thanks to the financial support of the Fund, many steel mills, industrial plants, power stations and heat and power generating plants have been

¹ The National Fund in 2002. The Long List of Priorities. (2001). *EkoFinance*, 2, pp. 6-7.

² Statistical data after: The Importance of the National Fund. (2001). *EkoFinance*, 2, p. 21.

modernised. Many sewage-treatment plants, water, sewage and sanitary systems, waste sites as well as industrial and communal waste utilisation plants have been constructed. Rare and perishing species of fauna and flora have been saved and natural value has been restored to the devastated areas on the whole territory of Poland.

The best-known projects financed by the Fund include:

- in the area of atmosphere protection – construction of the installation for the desulphurisation of combustion gases in Łaziska and Koziernice electric power stations, modernisation tasks in Turów electric power station, construction of the hydro-cracking complex in Mazowieckie Refineries, modernisation of heat engineering systems in such cities as Poznań, Jelenia Góra, Kielce and Radom,
- in the area of water protection – construction or development of sewage-treatment plants in Poznań, Kalisz, Gdańsk-Wschód and Świnoujście,
- protection of the earth's surface – construction of a solid waste material neutralisation plant in Warsaw, management of the dumping ground in 'Turów' Brown Coal Mine, construction of a communal waste material utilisation plant in Białystok.³

Ecological charges are the basic source of the financial means that the National Fund and the other funds have at their disposal. 'Ecological charges' is a colloquial expression for the charges paid by economic subjects for the use of the natural environment and changes introduced in the environment. The words 'use' and 'changes' refer to the emission of air pollution, devastation of the greenery and an economical use of water resources. Ecological charges have been introduced by the acts making up the law on environmental protection.⁴ The amount of the charges is fixed every year by the Cabinet. The charges paid by the users of the natural environment put a burden on their costs of production, thus they express the implementation of the 'polluter pays' principle. In the system of environmental protection, the charges perform two fundamental functions: the stimulating function – as the stimulator of pro-ecological behaviours and the budgetary function – as the source of financial means appropriated for the implementation of pro-ecological investments.⁵

³ *Ekofinance*. (1999). 12, p. 23.

⁴ The Law of Environmental Protection (Ustawa Prawo Ochrony Środowiska), enforced on 1st July 2001 and substituted the Law of 31st January 1980 r, changed and amended many times.

⁵ Koszulap, B. and Płotkowski L. (1999). W stronę urynkowienia. *Ekoprofit*, 3, p. 45.

In particular, the financial means at the disposal of the National Fund come from:

- charges for the storage of waste material and fines for the improper storage of waste material,
- charges and fines for the salination of surface water and the emission of nitric oxides into the atmosphere,
- the remaining charges for the business related use of the environment and changes introduced in the environment as well as charges for the extraordinary use of waters and water installations; receipts from the fines for the violation of the conditions for the use of natural environment.

The receipts of the National Fund also include means from: shares in companies, interests on granted loans, issue of bonds, profits from the sale and possession of securities, contracting loans, bank accounts and interests on deposits, inward payments from other funds, receipts from pro-environmental enterprises, voluntary inward payments from places of employment, voluntary inward payments, endowments and donations of physical and legal persons, material considerations and means coming from funds. We can observe that the structure of the receipts from particular sources is changing. The share of the amounts from the repayment of loans together with the interest as well as the share of the receipts from capital investments and financial operations has increased, while the share of charges and fines has decreased. It proves the fact that the means appropriated for the refunding of enterprises in the preceding years have been used effectively.⁶

The general principles of financing investment enterprises by the National Fund as well as provincial, district and communal funds are defined by the Act on Environmental Protection. In accordance with this Act, each fund applies its own criteria as well as evaluation and selection procedures of the supported investments and it is also guided by its own principles of granting and sinking loans.

NFOŚiGW can grant subsidies or loans to the subjects, which implement pro-ecological investments directly or indirectly by means of co-operating banks. In this case, it makes the means available to the banks for granting credits for environmental protection programmes and projects which it has indicated or for subsidies to the interest of preferential banking credits and loans granted for

⁶ Źródła i zasady finansowania inwestycji w ochronie środowiska. (2001). (p. 12). Białystok: Informator.

this purpose. For years, the National Fund has traditionally co-operated with the Bank Ochrony Środowiska, in which it has its share.⁷ Since 1994, NFOŚiGW has also participated in the granting of consortium credits together with the interested banks, most often with the Bank of Ochrony Środowiska.

While granting loans, the National Fund applies interest rates linked to the rediscount rate of bills of exchange set by the National Bank of Poland. The level of the interest rates depends on the kind of subject, to which a loan is granted and the receipts of the budget per capita. The interest rate fluctuates between 0.1 and 0.7 of the rediscount rate of bills of exchange and the lower the receipts the lower the interest rate. For example, when loans are granted to the city of Warsaw, the annual interest rate amounts to 0.5% of the rediscount rate of bills of exchange. When loans are granted to administrative districts, the interest rate amounts to 0.2% of the rediscount rate of bills of exchange and when loans are granted to cities with the right of an administrative district the interest rates range from 0.1 (with the budget receipts per capita below 1,652 PLN) to 0.5 (with the receipts exceeding 2,188 PLN). The kind of financial enterprise also influences the level of interest rate. For example, when a local government unit finances an enterprise connected with water protection or waste management, the annual interest rate amounts to 0.4% of the rediscount rate of bills of exchange and to 0.5% in the case of protection against noise. The loans granted by the Fund can be partially sunk (up to 15% of the amount of a loan can be sunk) if definite conditions have been fulfilled.⁸ The principles of granting and sinking loans by the Fund are altered in particular years.

Provincial funds of environmental protection and water management constitute the second tier in the system of ecological funds. They were founded in 1989. The provincial funds together with NFOŚiGW as well as the district and communal funds make up an important part of the financial system of implementing the state ecological policy on the basis of extra-budget public resources. Both the National Fund and the provincial funds have a legal status and in the sense of the Act on Public Finances they are respectively a state expedient fund and provincial expedient funds. Both funds lead their independent financial activity refinancing the tasks described in the Act and covering the operational costs from their own means as well as from receipts obtained. The National Fund and the provincial funds can make the financial

⁷ From NFOŚiGW means. *Małe linie kredytowe*. (2001). *EkoFinanse*, 2, pp. 28-33.

⁸ NFOŚiGW w 2002 r. *Pożyczki i dotacje*. (2002). *EkoFinanse*, 2, pp. 8-12.

means available to banks which then grant them as credits, loans and subsidies to indicated programmes and enterprises as well as additional payments to the interest of preferential credits and loans granted for environmental protection. Similarly, both these funds can manage entrusted foreign means granted by state governments or international organisations.

49 provincial funds operated till 1998. After the administrative reform, their number decreased to 16 on January 1st, 1999. These funds can gather means from the same sources as NFOŚiGW. The means coming from ecological fines are the basic source of their receipts (in 1999, they constituted almost 50% of the receipts). Refunds from loan instalments are the second important source of receipts (they amounted to 30% in 1999).⁹ As in the case of the National Fund, it is possible to observe a tendency to a relative downfall in the percentage of fines in the receipts in favour of the refunds from loans. In the structure of the expenses, in turn, the percentage of subsidies is decreasing in favour of loans.

We should pay attention to the fact that particular provincial funds manage with different efficiency, which can be measured by means of a set of indicators, which take into consideration, for example, the dynamics in the increase of the funds property, the relation between the funds property and the charges, the relation between the costs and the profit, the aid granted and the charges as well as the profits and the charges. The ranking prepared for provincial funds in 2000 showed that the funds operating in the following regions were characterised by the highest efficiency: Opole, Małopolska and Podkarpacie.¹⁰

With the creation of administrative districts as local government administrative units, district environmental protection and water management funds started to operate on January 1st, 1999. The receipts of PFOŚiGW are transferred to the starosty's account. These receipts include:

- 10% of the receipts from the charges for the storage of waste materials and fines for the improper storage of waste material,
- 10% of the receipts from the remaining charges for the economic use of the environment and introduction of changes in the environment as well as special use of water and water installations and receipts from the fines for the violation of the conditions for the use of environment.

⁹ NFOŚiGW w 2002 r., p. 15.

¹⁰ Czy wojewódzkie fundusze są efektywne (2001). *EkoFinanse*, 10, p. 26-28.

The receipts can also include: receipts from the enterprises organised in favour of environmental protection and water economics, voluntary inward payments from businesses, voluntary inward payments, endowments and donations from natural and legal persons, material considerations and means from foundations.

In 1999, the receipts from charges and fines as well as voluntary inward payments, endowments and donations made up 96% of the total amount of the receipts nation-wide. The scope of expenditure at the district level is defined in the Act on Environmental Protection. The means from district funds can only be appropriated for the implementation of enterprises connected with the storage and neutralisation of waste material including co-financing of investments, which are made at the level higher than the district level.¹¹

Communal funds of environmental protection and water management make the last level in the system of ecological funds. They were founded in 1993. They are neither organisationally nor legally distinct in the organisational structure of the local government. They do not have a legal status; therefore, they are not capable of granting loans. The commune administration has the means at its disposal.

The receipts of the communal funds include:

- 100% of the charges and fines for the removal of trees and shrubs,
- 50% of the charges and fines for the storage of waste material if the stockyard is located on the territory of a given commune,
- 20% of the remaining charges for the economic use of the environment and introduction of changes in the environment as well as special use of waters and water installations and receipts from the fines for violating the conditions of using the environment.

Apart from a dozen or so communes which house stockyards of industrial waste which bring high earnings, most Polish communes have tens or several hundred zlotys in the accounts of the funds. These means are naturally insufficient for investments. The scope of the enterprises undertaken by communes is defined in the Act on Environmental Protection. They aim at giving grants-in-aid. In 1999, the funds appropriated most money for the protection of waters (32%).¹²

¹¹ NFOŚiGW w 2002 r., p. 58.

¹² NFOŚiGW w 2002 r., p. 59.

The proportional partition of the receipts from the collected charges and ecological fines is an important element of environmental protection financing.¹³ Provincial administration and provincial inspectors of environmental protection maintain separate banking accounts for the purpose of gathering and redistributing the receipts from charges and fines. These earnings, increased by the receipts from banking account interests and reduced by the charges for the execution of due amounts as well as the costs of banking operations, have to be transferred to the banking accounts of the funds until the 15th day of the month following the appearance of the money on the account of the provincial administration and the provincial inspector of environmental protection. Before transferring the receipts from the fines into the banking accounts of the provincial funds and the National Fund, the provincial inspector reduces the incoming by 20% and transfers the amount to the Main Inspector of Environmental Protection. The transferred sum is appropriated for the improvement in the functioning of the Environmental Protection Inspection and for bonuses for the employees. In general, the receipts from the charges and fines constitute 20% of the communal fund income and 10% of the district fund. The receipts from charges and fines for the store-keeping and storage of waste material make up 50% of the communal fund receipts and 10% of the fund of the administrative district at whose area the waste material is stored. The amount, which is left after the partition between the communal and district fund is divided in the following proportions: 35% as the income of the National Fund and 65% as the income of the provincial fund.

In 2000, the structure of the most important receipts into the system of ecological funds was the following:

- a) receipts from charges and fines: 41.1% (in 1998: 49.0%),
- b) receipts from the restitution of loan instalments: 27.1% (21.7%),
- c) receipts from the interest on loans: 14.4% (and 10.8%),
- d) receipts from financial operations: 3.3% (4.9%).¹⁴

It confirms the previously mentioned tendency to decrease the receipts from charges and fines, which also partly results from a worse recoverability of instalments, and the tendency to increase the receipts from the repayment of loan instalments together with interest and from financial operations.

¹³ These issues are regulated by Art. 402 of the Law of Environmental Protection. More in: Prawo Ochrony Środowiska. Co nowego w finansach. (2001). *EkoFinanse*, 6, pp. 34-41.

¹⁴ Bilans funduszy. (2001). *EkoFinanse*, 10, p. 5.

In 2000, the distribution of the means between particular levels of the fund system was the following: the National Fund received 34% of the means, the provincial funds received 42%, the district funds received 5% and the communal funds received 19%.

The structure of the expenditure in 2000 was the following:

- a) loans and subsidies: 93.6% (in 1998: 92.7%),
- b) additional payment to preferential credits: 1.3% (2.1%),
- c) extinctions of debt – 5.1% (5.3%).

In 2000, the proportion of subsidies in the general payments amounted to 38.5% (in 1998 it amounted to 38.1% and in 1999 to 31.5%) and the proportion of loans amounted to 61.5%.¹⁵

The system of financing environmental protection is supplemented by the means from the central budget, local government budgets, various national funds and from foreign aid. In recent years, we can observe a gradual limitation of the dominant role of ecological funds among the sources of financing in favour of means from companies, communal budgets and economical units. Subsidies are replaced with loans to a larger and larger extent.

2. FUNDS AND AID PROGRAMMES AS PART OF THE SYSTEM OF FINANCING ENVIRONMENTAL PROTECTION

The outlays for environmental protection are predominantly funded from Polish sources. Poland also receives foreign aid for the purposes of environmental protection, mainly subsidies from the PHARE, SAPARD and ISPA programmes as well as subsidies granted by particular countries within the bilateral aid.

Funds as well as national and foreign aid programmes grant non-refundable financial aid in different forms. The most common forms of the aid include:

- monetary aid for agreed-upon investment tasks or projects,
- consulting aid,
- aid in training,
- aid in making the preferential credit available (the subsidies are then transferred to the banks which cover the difference between the interest rate of the preferential and commercial credit).

¹⁵ Bilans funduszy p. 5.

On the Polish market, there are many foundations and funds financing environmental protection. They include among others:

- the EcoFund Foundation appointed by the Ministry of Finance for the purpose of effective management of financial means coming from the conversion of part of the foreign debt (so-called eco-conversion of the debt) into means for the support of enterprises in environmental protection important for a given region of the country and in global scale (but not for the financing of local enterprises) and for the purpose of granting subsidies or loans for these tasks,¹⁶
- the Fund for Global Environment GEF which aims at the protection of global natural environment,
- the Danish Environmental Protection Aid Fund for Eastern and Central Europe DANCEE operating in Poland since 1991, from which it is possible to obtain a subsidy or a loan for financing of projects in the area of environmental protection,¹⁷
- the Polish and Swiss Committee of Auric Means supporting environmental protection, health protection and social assistance in the form of subsidies or loans,
- the European Fund of Polish Rural Development operating since 1990, which aims at the development of the farm sector in Poland, especially the infrastructure and small initiative; the Fund grants subsidies and loans,
- the Rural Development Foundation supporting the development of rural areas.

The European Union programmes such as ISPA, SAPARD and PHARE constitute a separate group of funds.

According to the decisions of the European Commission, Poland and other European Union candidate countries can profit from the Union means within so-called pre-accession funds such as: ISPA, SAPARD and PHARE. These programmes are to help the candidate countries financially and teach them how to make use of the means of structural funds in the future in accordance with the procedures being in effect in the European Union. The ISPA and SAPARD programmes are sector programmes focused on protection of the environment, development of transport infrastructure and development of rural areas.¹⁸ The PHARE

¹⁶ Offer of a EkoFundusz. (2001). *EkoFinanse*, 6.

¹⁷ DANCEE. (2000). *EkoFinanse*, 12.

¹⁸ Before EU accession. Programme SAPARD. (2000). *EkoFinanse*, 1, p. 26-32.

programme supports mainly regional activities. These programmes are managed by the European Union while Poland receives foreign aid for financing environmental protection on the basis of international contracts and agreements. Foreign aid contribution in this area is not significant. In 2000, it jointly accounted for less than 4% of the investment outlays (see the following schedule). The European Funds mentioned earlier contribute the largest amounts to this aid.

Table 21.1.
The participation of selected countries in the financing of ecological undertakings between 1991-2000.

Specification	%
The European Union	42.3
Denmark	20.2
Netherland	10.7
USA	9.9
Finland	4.8
Sweden	4.3
Germany	2.9
Others	5.0

Source: Protection of the environment 2001. (2001). GUS. p. 509.

3. BANKS AND OTHER FINANCIAL INSTITUTIONS

Commercial banks show an increasing interest in financing environmental protection enterprises seeing an interesting area of credit expansion there. Most often, banks cooperate with national and foreign funds or other subjects financing ecological enterprises. Banks grant credits from:

- the entrusted means,
- their own means with the additional payment to the interest covered by external institutions,
- their own means on commercial basis.

The Bank Ochrony Środowiska (BOŚ) has been known as the bank financing investments in the area of environmental protection for years. The number of banks interested in this area has steadily increased. The offer

of almost all the commercial banks operating in Poland includes financing ecological investments. The banks include among others: Bank Gospodarki Żywnościowej, Bank Gospodarstwa Krajowego, Bank Inicjatyw Społeczno-Ekonomicznych, Bank Rozwoju Eksportu. The objective scope as well as the conditions of financing are diverse.

Financing through shares or loans offered by investment funds is a new form of financing, which has recently appeared on the market. So far this form of financing has not been very significant, but, in perspective, it has a big potential of development. Leasing can also become an alternative form of financing. Leasing of devices for environmental protection can be a convenient and relatively cheap tool of financing for subjects, which lack financial means and good credit securities. There have appeared several institutions offering leasing on the Polish market, e.g. ECOLEASING, an investment and leasing company whose main shareholder is the Bank of Environmental Protection.

Table 21.2.

The importance of different sources of financing environmental protection in Poland (in percentage points).

Sources of financing	1997	2000
In-house means of enterprises and communes	47.0	153.4
Means from the central budget	3.0	2.2
Means from provincial budgets	2.8	1.6
Means from district budgets	—	0.2
Means from communal budgets	1.8	1.4
Means from abroad	3.8	3.9
Ecological funds	16.9	20.0
Credits and remaining national means including banking credits	16.5	11.7
Others	8.2	5.6

Source: *Environmental Protection 2001*, p. 441

The analysis of the structure of the sources of environmental protection financing in Poland in recent years leads to the conclusion that most of the means come from the in-house means of companies and communes. Comparing the proportion of this form of financing in 1997 and 2000 we can observe an increase of over 6 percentage points. Means from ecological foundations are the second largest source of financing. The significance of the aid from

foreign funds is not big. It is anticipated that there will be an increase in this area, but the contribution from these sources will probably not exceed 5.0%.

The system of financing and supporting enterprises in the area of environmental protection in Poland is undergoing constant evolution. New ecological foundations come into being, successive banks and investment funds grant credits for investments in environmental protection and the scope of co-operation between ecological funds and commercial banks widens. Owing to the use of banks for the co-financing of environmental protection, the contribution of the private sector to the support of ecological enterprises increases.

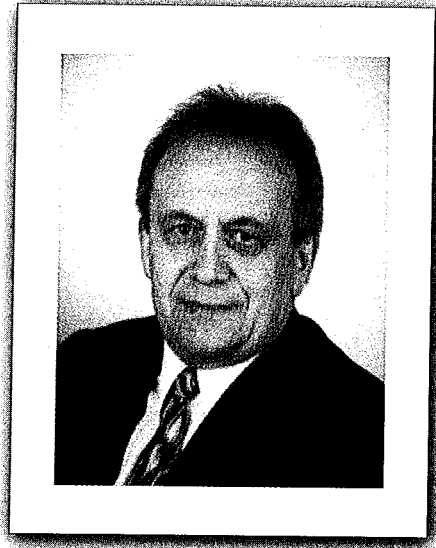
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Kazimierz Górka

CHAPTER 22

**THE PROBLEMS OF THE FUNCTIONING
OF ENVIRONMENTAL FUNDS
IN POLAND**



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THE PROBLEMS OF THE FUNCTIONING OF ENVIRONMENTAL FUNDS IN POLAND

In Poland environmental funds have played a specific role in the financing of environmental protection, because not so long ago they covered up to 40-50% of all investments in this field. Compared to other countries, the funds are characterised by a fully developed system and great independence. Recently, however, their importance has been decreasing due to both the falling charges for using the environment as well as a reduction of public aid and a fuller implementation of the rules of market economy. Particularly recently the criticism of all **special purpose** funds operating in Poland has intensified. There have also been some attempts to close most of them. The Polish **Environmental funds**, however, have their own special character working to their advantage. The aim of this article is to estimate the management of environmental funds and to join the debate on the prospects of this source of financing protective undertakings.

1. ECONOMIC OUTLAYS FOR THE PROTECTION OF THE ENVIRONMENT

In the 1990s Poland made great progress in the reduction of the degradation of the natural environment as the emission of most pollutants decreased by 40-60%. At first this was the result of a fall of industrial production, caused by the economic crisis, but after 1995 the main factors of this improvement were structural changes in industry as well as intensification of protective undertakings. This new ecological policy was supported by increasing financial means earmarked for the protection of the environment but, unfortunately, only till 1998 (see Table 22.1.).

Table 22.1.
Investment outlays for environmental protection
in Poland in 1990-2001.

Specification	1990	1995	1997	1998	1999	2000	2001
Outlays in thousands of millions PLN							
– current prices	0.42	3.17	7.35	9.02	8.58	6.57	6.17
– prices in 1995	1.34	3.17	5.26	5.86	5.25	3.80	3.46 ^{a)}
– prices in 2000	2.17	5.14	8.96	10.06	9.03	6.57	5.98 ^{a)}
Participation in w %							
– in investment outlays in national economy	3.6	6.7	8.1	8.0	6.8	4.9	5.1
– in gross national product	0.7	1.0	1.6	1.6	1.4	0.9	0.8

a) estimated data

Source: *Ochrona Środowiska*. (2001). (p. 440). Warsaw: GUS; *Rocznik Statystyczny GUS*. (2001). (p. 324). Warsaw: GUS, and other GUS materials plus own calculations.

The essential progress in the investments in environmental protection is testified by the share of these investments in the national income (GNP). Before 1990 it was even below 0.5%, and in 1996 it reached 1.6%. This value is comparable with that of highly developed countries although in Poland the outlays per one inhabitant are still much lower. Similarly, the participation of the examined outlays in the total investment expenses in the national economy started to grow to reach an apogee of 9.4% in 1996.

Unfortunately, since 1999 we have been observing a distinct slowdown of ecological investments, resulting in the fall of all indicators. Thus, while investment outlays in fixed prices in the years 1995-2000 grew by about 20%, they dropped by almost 30% in 1998-2000. In 2001 the outlays dropped by a further 6% in comparison to 2000. This decrease is then greater than that in general indicators of economic development.

To supplement the report data of investment outlays (Table 22.1.) it is worth quoting the estimated running costs of environmental protection which GUS has been publishing for only several years now. Table 22.2. shows that exploitation expenses of protective devices and the maintenance of environmental protection service surpass pro-ecological investment outlays by 5-7% (in the year 2000 exceptionally by more than 50%), whereas household expenses in this area are considerably higher. Thus, joint expenses for environmental protection in Poland exceed 32 billion PLN per year.*

Table 22.2.
Running costs and other expenses for environmental protection
in Poland in 1998-2000 in thousands of millions PLN.

Specification	1998	1999	2000
Running costs in the public and economic sector	9.51	9.20	10.10
Household expenses for services and equipment as well as products for environmental protection	..	14.02	15.66

Source: *Ochrona Środowiska* 473.

The tendencies of change in the **structure of economic outlays for environmental protection** are an important issue. Table 22.3 shows the generic structure of investment outlays. The year 2000 is characterised by a return of relatively high outlays on the protection of water (in 1990-94 about 50%), because in 1995-1999 the high outlays were spent on air protection. About 30% of the outlays on water protection are used to construct and modernise municipal sewage plants. In comparison to the European Union countries, Poland spends relatively less on waste management, which ought to be changed.

Table 22.3.
The generic structure of investment outlays for environmental
protection in Poland in 1990-2001 (in %).

Specification	1990	1995	1998	2000	2001
Water protection and sewage management	48.3	36.6	39.0	50.9	53.1
Air and climate protection	30.6	53.4	51.4	36.8	35.0
Earth surface protection and waste management	20.8	9.5	9.1	9.9	7.5
Landscape, biodiversity and environmental protection	0.2	0.2	0.1	0.1	0.1
Protection against noise	0.1	0.3	0.4	0.7	0.5
Total	100	100	100	100^{a)}	100^{b)}

a) including unsettled 1.6% b) including unsettled 3.8%

Source: Own calculations based on: *Ochrona Środowiska* (2001), (p. 440). Warsaw: GUS; *Ochrona Środowiska* (2002), (p. 377). Warsaw: GUS.

* 1 billion = 1 thousand milliom.

The expenses of the economic sector (75-76%) for air (31-35%) and water protection (20-22%) dominate in the structure of running costs. It is worth emphasising that 24-26% of running costs are spent on ecological charges in the economic sector for the emission of dusts and gases, water intake, sewage discharge, storage of waste material, excavation of minerals and exclusion of agricultural land and forest production. About 25% of running costs is spent on the public sector. In the structure of household expenses, the purchase, assembly and construction of facilities and products used directly for environmental protection dominates with 76.4% (including 55% for air protection and 12% for biodiversity and landscape protection). The remaining 23.6% is spent on service charges for transport and sewage treatment as well as waste disposal.

The structure of investment outlays with respect to their financing sources is most helpful for the estimation of the application of environmental funds. In Table 22.4. this structure is shown for the period of 1997-2001, because earlier data given by GUS were presented in a different arrangement so they do not compare.

Table 22.4.
The structure of investment outlays for environmental protection in Poland by sources of financing in the years 1997-2001 (in %).

Specification	1997	1998	1999	2000	2001
Own resources of enterprises	47.0	50.2	46.2	53.4	51.8
Environmental funds	16.9	16.2	24.6	20.0	23.7
Central budget means	3.0	2.6	2.0	2.2	2.1
Local budget means	4.6	3.8	3.2	3.2	2.0
National credits and loans	16.5	12.5	12.9	11.7	12.2
Means from abroad	3.8	7.3	5.9	3.9	3.2
Other means	8.2	7.4	5.2	5.6	5.0
Total	100	100	100	100	100

Source: *Ochrona Środowiska* (2001), (p. 441). Warsaw: GUS; *Ochrona Środowiska* (2002), (p. 410). Warsaw: GUS.

The first and basic group of sources of financing are own means of enterprises. Their participation in the 1990s grew from about 35% to 65% (including credits and loans, because they are repaid from the means of enterprises). In industry the participation of own means is considerably higher. The increasing tendency in the participation of own means in the

financing of protective investments is right because it results from the essence of market economy, including "the polluter pays" principle. Means from amortisation and profit of enterprises are supported by various kinds of credits and loans (but quite carefully so far, as is shown in Table 22.4.).

The second group is composed of **environmental funds**, which at first dominated with the percentage of 40-50%, but in the second half of the 1990s this percentage dropped to 20-25%. This tendency is concordant with the rule of limiting social aid, but in Poland, according to the opinions that have been prevailing so far, the role of environmental funds was decisive in the animation of protective investments and, which is already less promoted, it would be a pity to resign from this source of financing environmental protection. The postulates to reduce or even liquidate formally environmental funds that have occurred lately,¹ can be criticised in the light of a fall of investment outlays for environmental protection and still high tasks in this area connected, among other things, with the adaptation to European Union standards.

Budget means are the third source of financing. Their share in 1997-2001 dropped from 7.6% to 4.1%, which is a tendency acceptable in a period of system transformation. As far as the means of local budgets are concerned, the share of voivodeship budgets in 2000 equalled 1.6%, district budgets 0.2% and gmina budgets 1.4%. In 2001 these indicators were 1%, 0.3% and 0.8% respectively.

The fourth group is composed of **foreign means** whose share has been 4-6% (with a decreasing tendency lately). However, as Poland uses pre-accession funds, and in the future is going to use European Union cohesion and structural funds, the share of foreign means is expected to grow, according to various prognoses, even to 12-15% or more.

The structure of outlays for environmental protection **by investors** is also characteristic. And so the share of enterprises as investors in investment expenses was 62-67%, but in 2000 it fell to 52.3%. The share of gminas was 31-35%, and in 2000 it rose to 44.4%. In 2001 the share of gminas rose to 46.6%, but it is difficult to estimate whether this will be a permanent tendency. The participation of budget units in these expenses amounts to 2-3% (nearly 2% in 2001).

¹ Finansowanie ochrony środowiska (editorial debate). (2002). *Przegląd Komunalny*, 3; Zlikwidować fundusze? (2002). *EkoFinanse*, 7-8; Fundusze i Agencje: Dlaczego część z nich warto zlikwidować. (2002). *Gazeta Wyborcza*, 127.

2. RECEIPTS AND EXPENSES OF ENVIRONMENTAL FUNDS

Environmental funds in Poland do not use budget grant-in-aids, which makes them different from most other **special purpose** funds and, generally, also from environmental funds in other Central and Eastern European countries. The main source of these funds is charges for economic use and for introducing changes in the natural environment, though there appear new tendencies in this area (Table 22.6.). The Ecofund, which operates as a foundation is an exception. It was established within the framework of the so-called eco-conversion and is financed from the national budget in amounts equal to the reduction of foreign debts.

Charges for the use of the environment and penalties for non-observance of ecological regulations feed, in proportions presented in Table 22.5. (obligatory from 1999), first of all **environmental protection and water management funds**. It can be easily inferred from the table that the financial means from charges and penalties are crumbled and that poviats funds are equipped most poorly. All these four kinds of funds are typical environmental funds both in respect of the way of their establishing as well as destination, though there appear essential differences in the rules of their functioning.

Table 22.5.

The participation of each fund of environmental protection and water management in the receipts from charges and ecological penalties (in %).

Sources of receipts	National Fund	Voivodeship funds	Poviat funds	Gmina funds
Charges and penalties for discharge of salty water and emission of nitric oxide	100.0	–	–	–
Charges for waste material storage and penalties for misstorage	11.2	28.8	10.0	50.0
Charges and penalties for tree and shrub removal	–	–	–	100.0
Other charges and penalties.	19.6	50.4	10.0	20.0

Source: Ochrona środowiska. (2001). (p. 439). Warsaw: GUS.

Charges for taking over farming grounds for non-agricultural purposes supply the Farming Land Protection Fund. The fund is relatively small and is used mostly for economic purposes. The charges for taking over forest land for

other purposes go to the Forest Fund, which has at its disposal means several times greater than FPF. However, the Main Statistical Office (GUS) has not been publishing any data on this subject for a long time, although not only the manner of establishing this Fund but also prior directions of utilisation speak for its inclusion in environmental funds.

Table 22.6.
Receipts of environmental funds in Poland in 1995-2000.

Specification	1995	1997	1998	1999	2000
Receipts of the funds of environmental protection and water management in thousands of millions of PLN in current prices including:	2.02	2.87	3.46	3.17	3.78
• charges and penalties in %	63.40	57.80	50.00	46.10	38.10
• repayment of loans and their interests in %	18.30	28.20	32.50	38.70	41.40
• receipts from financial operations in %	6.40	4.3	4.90	5.00	3.30
• other receipts in %	11.90	9.70	12.60	10.20	17.2
Receipts in thousands of millions PLN in prices of 2000:					
• funds of environmental protection and water management	3.28	3.50	3.86	3.33	3.78
• including receipts from charges and penalties	2.08	2.02	1.93	1.54	1.44
• Farmland Protection Fund	0.05	0.07	0.09	0.07	0.07
• Ecofund	0.10	0.11	0.12	0.13	0.14
Total	3.43	3.68	4.07	3.53	3.99

Source: Own calculations based on: *Ochrona Środowiska*. (2001). (pp. 406, 491, 494).

Table 22.6 shows clearly the stabilisation of the amount of receipts of environmental funds as well as a falling tendency in receipts from charges and penalties. In 1997-2000 the receipts from charges and penalties in fixed prices fell by almost 29%. It is estimated that in 2001 the receipts dropped by 10%, and for 1997-2001 the fall amounted to 33%. This is of course related to the amount of investment outlays earmarked for environmental protection in Poland.

The fall of receipts from charges and penalties is due to two interrelated factors, in addition to the progress in the decrease of pollutant emission. These factors comprise the new rules for ecological charges and a worsening financial situation of firms, which does not encourage them to settle this type of obligations in time. Thus, in accordance with the new Law of Environmental Protection and decentralisation of management, the subjects which profit

from the natural environment not only record pollution by themselves, but also, on their own, set the amount of due charges according to the rates updated annually by the rulings of the Council of Ministers and pay them into the account of their Marshal's office. Poor awareness of this duty among small businessmen in connection with economic stagnation and weak control causes such behaviour of the payers. Mediocre control of statements and calculations of payments results, among other things, from competence contestation between the inspection of environmental protection and municipal services which should also be interested in ecological fund receipts, but did not live up to the task. The action undertaken by the Department of Environment will probably solve this problem, but the issue of decreasing receipts from charges and penalties remains unsolved.

Changes of the structure of environmental fund receipts are an essential matter. The least mobile is the structure of charges and penalties. In the case of environmental protection and water management funds more than 50% of the receipts from charges and penalties come from air pollution, about 35% from water intake and sewage discharge, about 10% from waste storage. The enforcement of charges equals 80-85%. The receipts in question come mostly from charges, because penalties comprise only 2-2.5% of all receipts. The enforcement of penalties is very low because, for example, in 2000 out of 404,85 million PLN due only 29.12 million PLN (mostly for excessive sewage), that is only 7.2% was paid. However, taking into account postponements and allowing payment of penalties in instalments, the figure is considerably higher. For example, in the year 2000, 333 million PLN in penalties was postponed and 4.8 million PLN was allowed to be paid in instalments on the grounds of the total of 718 administrative decisions. In the same year, 1,482 decisions amounting to the total of 334.4 million PLN were not executed.

The structure of receipts presented in table 6 clearly depicts a falling tendency of the share of charges and penalties in the receipts of environmental protection and water management funds: they amount to only 38% of the receipts, and even less in the case of the National Fund for Environmental Protection and Water Management (NFOŚiGW): only 35%. This is a result of conferment of the status of legal persons to the National Fund and to voivodeship funds in connection with their economic activity: granting loans, which is commonly accepted and purchase of securities, companies entering with shares etc., which arouses controversies. Repayment of loans and their interests now amounts to 41% of the fund receipts, and in the case of NFOŚiGW even more than 58% (in 2000). This provides a basis for the qualification of the National Fund as well as voivodeship funds into revolving

funds. Poviats and gmina funds use only ecological charges (and donations) and do not conduct other activity in addition to giving grant-in-aids. It is worth adding that the participation of charges for the removal of trees and shrubs in the receipts of gmina funds increased during the examined period from about 10% to 23-27%.

Table 22.7 shows the internal structure of environmental funds and water management funds. The observable structural changes prove the decentralisation of fund means, mostly because of the establishment of poviats funds and administrative increase of the participation of gmina funds in the receipts from charges and ecological penalties.

Table 22.7.
The structure of receipts of environmental protection and water management funds in 1997-2000.

Specification	Total receipts						Receipts from charges and penalties in 2000	
	1997	1998	1999		2000		millions PLN	%
	%	%	millions PLN	%	millions PLN	%		
National Fund	46.2	45.0	1,281	40.4	1,539	40.7	543	35.5
Voivodeship funds	40.7	41.2	1,411	44.5	1,517	40.1	510	33.3
Poviat funds	—	—	—	—	159	4.2	143	9.3
Gmina funds	13.1	13.8	481	15.1	568	15.0	335	21.9
Total	100	100	3,173	100	3,783	100	1,531	100

Source: Own calculations based on: *Źródła Środowiska*. (2001). (pp. 494, 498, 502-503).
Warsaw: GUS..

The receipts of the Farmland Protection Fund amounts to 1.5-2% (in 2000 1.8%) while the receipts of the Eco-Fund to 3-3,5% of Poland's receipts of environmental funds. The receipts of the Eco-fund equal 28-32 million USD of annually reduced foreign debts, with a growing tendency for a few more years (in principle to 2010).

The expenses of environmental funds also show a growing differentiation. The first tendency consists in the increase of participation of loans given at the cost of grant-in-aids and other forms of unreturnable aid. However, in the case of all environmental protection and water management funds the relation between returnable and unreturnable aid has remained on a similar level of 57:43 or 55:45 for the past few years, which is a result of increased grant-in-aids given by poviats funds and especially gmina funds (Tables 22.8. and 22.10.). In the case of the National Fund and voivodeship funds this tendency is very distinct already (Table 22.9.).

Table 22.8.
The participation returnable and unreturnable aid given
by funds of environmental protection and water management
in the years 1998-2001 (in %).

Specification	1998	1999	2000	2001
Loans and credits	57.4	64.7	57.5	55.4
Grant-in-aids, surcharges and amortisation	42.6	35.3	42.5	44.6
Total	100	100	100	100

Source: Own calculations based on NFOŚiGW; *EkoFinanse*. (2002), 7-8, p. 7.

The National Fund designs 73-74% of rendered aid to loans and credits, and the rest to grant-in-aids, surcharges and amortisation as well as to capital shares (which is most challenged from the point of view of economic rules). The policy of voivodeship funds is similar, for example 72.3% of financial assistance was spend on loans in 2000 (among others in the Małopolskie Voivodeship 84.7%, in the Śląskie Voivodeship 73.1%, in the Dolnośląskie Voivodeship 42%) and 27.3% on grant-in-aids.

About 90% of NFOŚiGW aid is used for investments, the remaining 10% for the state ecological monitoring, fight with extraordinary environmental hazards, ecological education, research and impact assessment etc. (excluding 2% of the total expenses for the Fund maintenance). The generic structure of investment expenses of NFOŚiGW is similar to the structure presented in Table 22.3. The assistance of voivodeship funds is characterised by a similar structure: protection of water and water management over 50% (more than the national indicator), protection of air 28-33 %, protection of the surface of earth and waste management 8-9%, and fight with extraordinary hazards and ecological education almost 2% (as in the case of NFOŚiGW). Powiat funds allocate over 60% of their expenses to the storage and neutralisation of waste material. Gmina funds, in turn, finance water protection, flood control and water management to about 40% of the expenses, air protection 15-20%, waste material management 9-10%, preservation of nature and landscape 9-12%, ecological education nearly 3% of the total expenses.

Table 22.10. shows the internal structure of expenses of environment protection and water management funds. Its content correlates with the structure of receipts (Table 22.7.). This confirms a decentralisation of the financial means of NFOŚiGW.

Table 22.9.
The generic structure of NFOŚiGW expenses
in the years 1997-2000 (in %).

Specification	1997	1998	1999	2000	Changes 1997-2000
Loans and credits	59.4	59.1	70.2	67.7	+8.3
Grants-in-aid, surcharges and redemptions	28.6 ^{a)}	30.0 ^{a)}	17.3	25.6	-3.0
Bond and share purchase in companies	4.9	0.6	8.0	0.3	-4.6
Expenses from foreign funds	4.2	1.8	2.7	3.4	-0.8
Running costs of operation	1.7	1.7	1.0	2.6 ^{b)}	+0.9
Other expenses	1.2	9.4	0.8	0.4	-0.8
Total	100	100	100	100	-

Source: Own calculations based on the ground: *Ochrona Środowiska*. (1999). (p. 410). Warsaw: GUS; *Ochrona Środowiska*. (2001). (p. 449). Warsaw: GUS.

The Farmland Protection Fund has spent 60-80 million PLN per year lately, which constitutes only 2-3% of the total expenditures of environmental funds. 77-80% of the expenses of FPF are earmarked for the construction and modernisation of roads for the purpose of agriculture, the rest falls to the fertilisation of soil, reclamation of wasteland and construction and renovation of water reservoirs.

Table 22.10.
The structure of expenses of environmental protection
and water management funds in 1996-2000 (in %).

Specification	1996	1997	1998	2000	Changes 1996-2000
National Fund	49.4	45.4	38.1	41.8	-7.6
Voivodeship funds	38.2	41.6	48.8	39.0	+0.8
Powiat funds	-	-	-	3.0	+3.0
Gmina funds	12.4	13.0	13.1	16.2	+3.8
Total	100	100	100	100	-

Source: Own calculations, as in tables 22.7 and 22.9.

The Ecofund used to spend 100-135 million PLN annually, and 150 million PLN in 2001, which equals 3-4% of the expenses examined. The structure of the expenses is as follows: air and climate protection 42-60%, the Baltic and

sewage management 29-35 %, and biodiversity protection 14-21%. This structure results, to a large degree, from the preference of the creditors who agreed on a conversion of the Polish debt.

In Table 22.11. the data on the receipts and expenses of environmental funds, with special regard given to NFOŚiGW, were presented synthetically. These data confirm once again the falling tendency in managing environmental funds. The relatively low participation of the expenses of the funds in the means at their disposal (71-83%) draws attention. It could be explained by delays during the year in transfers of charges and by organisational indispositions of funds or by high interest on loans, as well as by insufficient preparation of potential investors. In addition, the participation of the expenses earmarked for environmental protection in total expenses has worsened and NFOŚiGW expenses for non-ecological purposes have already achieved 9% of these expenses. The facts mentioned are a premise of critical estimations of the functioning of environmental funds (with the exception of the Eco-fund).

Table 22.11.
Management of environmental funds in 1995-2000.

Specification	1995	1997	1998	1999	2000
Environment protection and water management funds in thousand million PLN in current prices:					
Total receipts	2.02	2.87	3.46	3.17	3.78
Means at disposal	2.51	3.31	4.05	4.32	4.62
Total expenses	1.81	2.74	2.90	3.49	3.27
– Including financial aid earmarked for environmental protection ^{a)}	1.73	2.55	2.67	3.17	2.99
The participation of expenses in the means at disposal in %	72.1	2.8	1.6	80.8	70.8
The participation of financial aid in total environmental protection expenses	95.6	93.1	92.1	90.8	91.4
Expenses in thousand million PLN in the prices of 2000:					
The expenses of NFOŚiGW	2.93	3.34	3.23	3.67	3.27
– Including those earmarked for environmental protection	2.81	3.11	2.98	3.34	2.99
The expenses of FPF	0.05	0.07	0.10	0.07	0.08
The expenses of the Eco-fund.	0.08	0.09	0.10	0.11	0.13
Total expenses of environmental funds	3.06	3.50	3.43	3.85	3.48

Source: Own calculations based on: *Ochrona Środowiska*. (1991). (p. 494). Warsaw: GUS and table 6.

3. STRENGTHS AND WEAKNESSES OF ENVIRONMENTAL FUNDS

It is first of all the affluence of environmental funds in Poland that is their strength thanks to which they can play an essential part in the financing of environmental protection. Simultaneously, they are an important factor for stimulating enterprises to undertake protective actions and to reduce the emission of pollutants. This is so because ecological charges, which are their main source, especially on poviats and gmina levels, perform not only funding but also stimulating functions to an ever-greater extent (which is criticised by opponents).

In the first instance environmental funds began to support gmina investments, mainly the construction of sewage treatment plants and waste management, and lately such undertakings as removal and neutralisation of toxic waste material from graveyards (there are still 60 thousand tons of them) and asbestos, the construction of combustion plants for medical waste material and dangerous waste disposal sites, reclamation of land after sulphur mines (in this instance NFOŚiGW is the only institution financing this project). One needs to add preservation of nature and landscape as well as biodiversity (where Ecofund is the greatest payer) on which the budget, not to mention private enterprises, only reluctantly spend their money. Thus, in this area the role of the funds cannot be overestimated but it gets acceptance from the point of view of the rules of public aid, whose services in this case do not infringe on the rules of competition. It has been postulated lately to expand the idea of equal treatment of all economic subjects and consequently to reduce economic preferences also in municipal activities, yet the aims of environmental funds in this field can be acknowledged as natural.

The importance of environmental funds as an independent source of financing investments and other undertakings (including research and education) is particularly great during a period of budget difficulties, when the support of environmental protection by the state has no due place in the hierarchy of economic and social needs. Another reason is an unfavourable financial standing of companies, especially in heavy industry, the most arduous environmentally, and little ecological awareness of businessmen, mostly in small industries.

An important advantage of the funds is, what in many countries is usually undertaken by state agencies and chambers of commerce or by other entrepreneur organisations, promotion of technological progress in environmental

protection, especially the so-called integrated technologies (instead of “end-of-pipe” investments), as well as energy-saving investments. In this way the development of industry producing equipment for environmental protection and energy production from renewable resources is supported. These investments, in turn, generate new workplaces.

NFOŚiGW serves an important function in the implementation of foreign aid, also from the resources of the European Union. Thus, in 1990-2002 Poland received 131.9 million EUR from the PHARE fund for environmental protection and to this end the National Fund signed 640 different contracts. At present there is a possibility to obtain 1,200 million EUR within the framework of the ISPA programme and the Fund has already signed memoranda initially for the amount of 572 million EUR to be spent on water and sewage management (90%) and on waste utilisation. From 2004 onwards, in the case of Poland's joining the EU, the Fund will probably serve grant-in-aids from the Cohesion Fund and from structural funds in the amount of 700 million EUR annually. These resources are earmarked for the financing of infrastructure and pro-ecological investments of public character and this is why a commercial bank should not be the implementation unit).

A well-organised and coherent system of environmental funds in Poland is their strength. Of course, one can enumerate certain shortcomings, which have already been and will be mentioned, but they do not discredit the whole system. So in the conditions of the transformation of the economy, the system of environmental funds proved to be a good and practical solution, adapted to the specificity of the Polish economy, which has already been appreciated in the West since the conference of ministers of environmental protection in Lucerne in 1993. Good opinions of the European Union and also of the OECD about this theme are still a commonplace.²

The numbers in Table 22.12. prove the strength of the funds of environmental protection and water management. It appears that the financial assistance of the funds reached 3.1-3.6 billion PLN annually in the last years and was twice as high as the receipts from charges and penalties (3.6 times higher in the case of NFOŚiGW in 2001!). This situation, profitable for the beneficiaries of the financial assistance on the “market” of grant-in-aids and of preferential loans, is the result of a widely understood capital activity of the National Fund and of voivodeship funds.

² OECD recommendation for NFOŚiGW; *Ekofinanse*. (2000), 7-8, p. 42.

Table 22.12.

Feeding the funds of environmental protection and water management from charges and penalties versus the aid provided by these funds for environmental protection in the years 1998-2001.

Specification	1998	1999	2000	2001
Feeding by Marshall's offices from charges and penalties in millions of PLN	1,662	1,446	1,571	1,433
Aid for investors provided by NFOŚiGW in millions of PLN	2,714	3,228	3,060	3,585
The aid-to-supply ratio in %	163.3	223.2	194.8	250.2

Source: Materials NFOŚiGW; *Ekofinanse*. (2002), 7-8, p. 7.

The structure of aid rendered in 1998-2001, according to the detailed data from Table 22.12.:

- a) loans and credits 58.7%
 - b) unreturnable aid 41.3%
- including:
- grant-in-aids 35.2%
 - surcharges 1.2%
 - amortisations 4.9%

Loans and credits with nearly 59% share dominate in financial assistance (with 73% in the National Fund and voivodeship funds). In unreturnable assistance, grant-in-aids have so far amounted to 85.2%, amortisation of loans due to a correct realisation of investment tasks – 11.8% and surcharges to preferential credits – 3%.

The role of the funds in question on the loan and credit market is manifested by the fact that they spend 1.6-2 billion PLN on this aid, including 0.8-1.2 billion PLN annually from NFOŚiGW. The National Fund estimates its "financial power" even at 1.6 billion PLN annually. This amount is nearly 10 times greater than credits for protective investments given by the Bank Ochrony Środowiska SA. These credits do not exceed 200 million PLN annually.³ For example, in 2000 this Bank granted 1074 credits at the amount of 132.4 million PN (123.3 thousand PLN per credit on average).

³ Zlikwidować fundusze? (2002). *Ekofinanse*, 7-8, p. 6.

Evaluating the functioning of environmental funds so far, one can also point to their many **weaknesses**. The first group of critical estimations results from the theoretical premises of modern Economics which claims that the complicated rules of free competition must be observed in market economy and therefore public aid should be limited to special cases and special purpose funds clearly specified as to their purpose and time horizon. Charges, in turn, should be replaced by taxes paid to the budget, which is driven by more objective criteria in granting services than merit-based special purpose funds. In their ecological policies the majority of countries try to follow these premises, but practical considerations cause that even in fully developed countries the implementation of new rules is gradual and rather slow. Meanwhile, state agencies and special purpose funds in Poland have grown so much that more than 20% of public means, which they have at their disposal, remains beyond the control of the state budget as well as municipal budgets.

A theoretical objection that the resources are merit-based finds its confirmation in practice in the unsatisfactory efficiency of the management of environmental fund means (excluding irrational and wasteful cases caused by poor management staff, to be discussed later). The National Fund and voivodeship funds have already worked out lists of priority programmes as well as criteria and procedures for granting financial means, which makes it possible to check the purpose of the undertakings and to execute a suitable course of conducting projects. They are being continually improved and open to the public (available on the Internet) and supervised by external auditors and NIK (the Supreme Chamber of Control) and additionally by the European Commission and OECD. However, these procedures in principle skip economic efficiency evaluation, although formally, this question must be answered. This evaluation is, in general, difficult with regard to the incommensurableness of the effects of non-productive investments. Then, one of the measurements is the so-called cost-efficiency, i.e. the amount of investment outlays as calculated per effect unit in a natural measurement but, for a full evaluation, standard or model indicators or another system of reference are indispensable, which is usually not easy. First estimations indicate that the funds finance, for example, similar sewage treatment plants but with very diverse investment outlays per 1 m³ of sewage treated, and so not all grant-in-aids and loans are effective, though they are given for target projects to be properly carried out as far as their organisational-technological aspects are concerned.⁴

⁴ There is much evidence that budget means are not used effectively, particularly those from self-government budgets.

Sometimes another objection is raised, namely that environmental funds as *para budgets* cause the so-called effect of driving services and commercial resources out of the market of environmental protection, but Professor Bogusław Fiedor and Professor Tomasz Żylicz do not agree with such an opinion claiming that, on the contrary, the funds counter react. And so, by means of financial assistance in the form of grant-in-aids and preferential loans they encourage self-government subjects to undertake investment projects and to supplement their limited means with commercial credits.⁵

The fragmentation of the resources of NFOŚiGW' is a major weakness, since some gmina and powiat funds have little receipts at their disposal, below 50 thousand PLN annually. Not only is it impossible to subsidise larger projects, but their insufficient resources make them earmark for other, communal goals, often against the rules of rationality. According to the assessment made by the Ministry of Finance and other controlling institutions the means of these funds are the ones used in the worst possible way.

In addition, a three-level organisation of NFOŚiGW would certainly be better. In 1998 an opportunity appeared to strengthen the existing three-stage structure by the replacement of gmina funds with powiat funds (or vice versa) in connection with the new administrative division of the country being prepared then (and not the creation of a separate powiat fund). The author of this text was then an advocate of changes but simultaneously an opponent of the establishment of another fund on the basis of the existing system of charges for the use of the environment.⁶ A similar opinion was shared by, among others, the professors mentioned already. The closing of the gmina funds, mostly not affluent, would strengthen powiat funds, which could become useful institutions with regard to the concentration of financial means and also their connection with local self-governments and local finances. Such a solution, however, was incompatible with idea to maintain or increase the powers of gminas within the framework of changes in the state and self-government administration, which was a right idea. Thus, the variants of maintaining the three-stage structure, but with strengthened gmina funds, or with powiat funds only, which were much more affluent than they are now, did not obtain political acceptance in spite of a support by experts. Life proves that experts, not the politicians, were right...

⁵ The financing of environmental protection – editorial debate. (2002). *Przegląd Komunalny*, 3, p. 76.

⁶ Górka, K. (1998). *Optymalna struktura funduszy ekologicznych w świetle planowanych reform ustrojowych*. Typescript, Warsaw: MOŚZNiL, p. 5.

In addition to the irrational management of the fund means resulting from the use of merit-based criteria, fragmentation of funds and the tendency to seek new sources of receipts (e.g. by purchase of securities) there appear indications of wastefulness which, in a better system of management and proper staff selection as well as observance of the rules of democracy would not take place, for example:

- excessive purchase of securities (e.g. the in 1999 the Voivodeship Fund in Kraków spent considerably more for this purpose than for financial aid) and purchase of stocks and shares of “strange” companies for reasons other than objective (e.g. the Łódź Voivodeship Fund in 2000-2001 spent more than 50 million PLN for this purpose),
- multiplication of posts and assigning managerial posts to politicians who later help to swindle money for other purposes,
- wasteful purchase of expensive cars, superfluous training, etc.

The politicisation of funds is exceptionally big, which has resulted in the signing by the National Fund, just before the elections, contracts for the amount of 4.5 billion PLN for 3 years in advance, earmarked for controversial purposes.⁷

In spite of criticism, the NFOŚiGW system fulfils its basic purposes. The shortcomings found can be removed if there is a political will and a more efficient system of management of the national economy. So far both the actual and the planned changes in the system of NFOŚiGW can be qualified as gradual, though the future ones were intended to be far-reaching. Now the government has announced drastic changes, aimed at the closure of the funds shortly, but there is still no conception prepared of new sources of financing the programmes of environmental protection which require public resources.

4. THE PROSPECTS OF ENVIRONMENTAL FUNDS

Polish experience, and especially western models as early as the 1990s indicated the necessity of changes in the system of charges and environmental funds. Directions of these changes were quite clearly defined: supplementing and then substituting the charges for the use of the environment by product

⁷ Żelichowski, S. (2002). Pieniądże na życie. *Nowe Życie Gospodarcze*, 1, p. 20-21.

and deposit charges, and eventually by ecological taxes. As regards the funds, proposals were less explicit and more controversial with regard to the fact that environmental protection and water management funds acquired the features of revolving funds. For this reason, proposals to privatise and transform them into para-banking institutions or foundations were put forward.

Environmental funds are often evaluated against the total of special purpose foundations and state agencies operating in Poland. In 1990-91, as part of the so-called shock therapy, some of them were closed. However, their number rose up quickly again, especially as regards state- agencies. The recent public finance crisis caused a return of criticism and postulates to close down agencies and special purpose funds. This time the odium of criticism did not fail to reach the environmental funds. The only exception is the Ecofund, which enjoys good reputation. It is worth adding that thanks to statutory changes the Ecofund can already give not only grant-in-aids but also preferential loans, which will increase the means at the disposal of the Foundation.⁸

Following the pronouncements of some politicians and even economic activists, it could have been believed until quite lately that they do not understand the differences in the manners of creating environmental funds and other special purpose funds, which are based on budget-based grant-in-aids. However, in June 2002 a great propaganda campaign exploded for the purge of public finances which comprised, among other things, postulates to pay ecological and other charges (e.g. for failing to employ the disabled) to local budgets, and not to the existing special purpose funds (e.g. NFOŚiGW and the State Fund for the Rehabilitation of the Disabled). At this opportunity conspicuous facts of mismanagement and lack of a possibility to control some agencies and voivodeship environmental funds by the parliament were revealed. Press articles used sharp expressions like "legal robbing", "holy cows", or "farm cleaning".⁹ Also many facts and numerical data were mentioned, for example, that in 2002 only two agricultural and two military agencies (housing and property sale) obtained budget grant-in-aids at the amount of 3.6 billion PLN from the state.

Eventually, a proposal was prepared for the debate of the Council of Ministers in June 2002 to liquidate the tasks and means being the competence of voivodeship funds of environmental protection and water management and

⁸ Trzaskowski, S. (2002). Jubileusz Ekofundusz. Na półmetku. *Nowe Życie Gospodarcze*, 11, pp. 32-33.

⁹ Nowakowski, A. (2002). Sprzątanie folwarków. *Gazeta Wyborcza*, 127.

the Farmland Protection Fund and also several other special purpose funds and transfer them to marshals of voivodeships. Similarly, it is postulated that poviats environmental funds should be transferred to starosts and gmina funds to voivodes.

The proposal mentioned above (there are also other proposals, e.g. to link territorial funds with the National Fund or to close down them) is not internally consistent and does not assure an achievement of national aims in environmental protection, because, among other things, it provides for neither substitution sources of financing ecological programmes in the public sector, nor the ones connected with Poland's accession of the European Union. Poviats and gmina funds are now, too, at the disposal of self-governments, but their direct delivery to starosts and voivodes and the voivodeship funds to marshals denotes that special purpose funds will cease to be special purpose means. Members of self-government councils and MPs may have other preferences extorted by temporary needs and by other factors. The Polish law of public finances does not provide for pre-assumed purpose-oriented budget expenses. Therefore, members of self-government councils or MPs have *carte blanche* in this matter. The proposal in question would then require many legal changes. A possible provision of environmental protection in the budgetary law will change only little, because practice will mean a dispersion of means for different purposes and a temporary *patching of the budget*.

A simplification of the structures by liquidation of the funds is only apparent. One can transfer the grant-in-aid institution to the budget, but this will lengthen exceedingly the qualification and realisation procedures (in comparison to the procedures of specialised and experienced special purpose funds). Also transfer of resources to preferential loans in commercial banks is not a rational solution, either, because they are not prepared for this. A separation of the unreturnable aid from the returnable one will be difficult because of public aid regulations (grant-in-aids may burden the costs of a project only within certain limits, which in certain cases would now be attained more easily).

To sum up, one can quote T. Żylicz's opinion that the reasons for the fund liquidation are doubtful, especially regarding the effects of public finance reform, but environmental protection will certainly lose, because an important "financial lever in investment processes"¹⁰ will disappear. The government draft

¹⁰ Żylicz, T. (2002). Można więcej stracić niż zyskać (interview). *Ekofinanse*, 7-8, pp. 16-18.

for changes in environmental funds has been undertaken without a strategic vision, and is only an element of a politicians' concept of activities on a short run, without listening to experts. Let us hope history of errors resulting from the primacy of politics over economy will not be repeated!

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Tomasz Żylicz

CHAPTER 23

**THE 'POLLUTER PAYS' PRINCIPLE
AND THE POLISH ENVIRONMENTAL
FUNDS SYSTEM**



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THE 'POLLUTER PAYS' PRINCIPLE AND THE POLISH ENVIRONMENTAL FUNDS SYSTEM

1. THE LAWFULNESS OF PUBLIC CONTRIBUTION TO THE FINANCING OF ENVIRONMENTAL PROTECTION

The Polluter Pays Principle is probably the best-known guideline for environmental protection policy.¹ However, at least two alternative definitions of this notion are used. In its wider meaning, the PPP proclaims that the polluter is financially responsible for any damages resulting from his activity, no matter if the activity is legal or not. Such broad an extent of responsibility is theoretically possible within the jurisdiction of many countries and, in an addition to that, the OECD (Organization of Economic Co-operation and Development) has been encouraging it since 1991. Nevertheless, most policies apply a narrowed interpretation. The PPP *sensu stricto* means that the polluter is financially responsible for complying with all the regulations established by appropriate authorities in the field of environmental protection.

It turns out that even the narrow version of the PPP, officially accepted by the OECD since 1972, is hard to apply in practice. Most economically developed countries subsidise environmental protection in some ways.² The alternative term for PPP could be the "non-subsidy principle". Important exceptions to this principle are, however, recognised and tolerated. There is an approval for

¹ The Polluter-Pays Principle. (1992). OECD Analyses and Recommendations. Environment Directorate. Paris: OECD. (OCDE/GD(92)81).

² The Polluter-Pays Principle.

subsidising polluters in order to comply with environmental protection regulations as long as three conditions are satisfied:³

- 1) the subsidy does not distort international trade and investment significantly (if it does, it creates an unjustified advantage over competitors from other countries and we are dealing with so-called ecological dumping);
- 2) industries left without the subsidy would encounter serious difficulties; and
- 3) the subsidy applies to a clearly defined transition period and it is related to particular social-economic problems, which accompany the implementation of the country's environmental policy.

In cases where precise determination of the financial responsibility of a polluter is either impossible or impractical, governments sometimes apply the "Polluters Pay Principle" (note the plural form), charging polluters with overall environmental protection costs. According to this principle, polluters are charged more or less proportionally to the emission-measured scale of environment exploitation. This way, public funds meant to aid protective activity that is necessary to adapt to the standing regulations are raised. The French fees for sulfur dioxide emissions, repaid to the polluters in order to subsidise their environmental activity, are a well-studied example. Similar programmes may also be found in the Netherlands, although Dutch authorities prefer to justify charging the polluters *en bloc* and raising funds for environment management according to the so-called causation principle. In Poland, the sums obtained from pollution fees also cover a major part of the environment investment costs and they have become a significant component of the country's environment clean-up program.⁴

There are thus a number of reasons to subsidise polluters. It also turns out that some cases of such aid are perceived as admissible forms of withdrawal from the PPP. If the polluter is a non-commercial subject, e.g. a municipal wastewater-treatment plant, the (possible) subsidies are usually treated liberally as they do not lead to market distortions. Subsidies to private sector agents are problematic though. The European Union (EU) has worked out detailed instructions in this matter. Since subsidies are granted mostly from funds coming from state authorities of various levels, the EU directions concern

³ The Polluter-Pays Principle.

⁴ Żylicz, T. (1995). Pollution Taxes as a Source of Budgetary Revenues in Economies in Transition. In: L.Bovenberg and S.Cnossen (Eds.). Public Economics and the Environment in an Imperfect World (pp. 203-218). Boston: Kluwer.

any public aid and they are enclosed in several legal documents, including the European Treaty.⁵

2. EUROPEAN UNION REQUIREMENTS CONCERNING PUBLIC AID

European regulations identify a substantive range of projects, which may receive additional financing from public funds. Until recently this range was so broad that virtually any environment investment task could apply for such additional financing. Only the relative share of the aid was subject to significant limitations. It was not until the year 2000 that the range was narrowed radically and now hardly any other projects than those dealing with renewable sources of energy may count on aid from public funds. The withdrawal of renewable energy from the sharpened application of the PPP's results from the importance that the EU attaches to the arrangements of the Kyoto Protocol.

The degree of public aid for environmental investments is estimated by comparison of the gross subsidy equivalent with eligible costs. The equivalent is an estimated direct subsidy high enough to substitute a different form of aid, such as low-interest loan, grace period, debt cancellation or interest-rate subsidy. The equivalent is to be estimated excluding taxes, which explains the term "gross". Eligible costs, on the other hand, are strictly related to environmental protection and do not result from any other tasks. The above mentioned rule is followed in order not to diminish the relative share of environment-targeted subsidy by artificially increasing the range of investment tasks.

The EU determines the admissibility of a grant by establishing gross subsidy equivalent limits for each project category. Investments meant to comply with new environment regulations may be subsidised up to 15%. The maximum subsidy rises to 25% if the investment is carried out by a small or medium-sized company. The subsidy for investments taking place in regions with an unusually low life standard – and this is how all of Poland is qualified – is 30%. A higher share of the aid is allowed if the investment leads to achieving far more effective environmental protection than required by regulations. It reaches 30% and may be increased by another 10% in the

⁵ Peszko, G. (1998). Analiza i ocena zgodności procedur i ustawodawstwa regulującego działalność funduszy ochrony środowiska i gospodarki wodnej z wytycznymi Wspólnoty w sprawie pomocy publicznej przeznaczonej na ochronę środowiska. Warsaw: Ministry of Environment.

case of small or medium-sized companies. Slightly different limits apply to projects taking place in areas with special regional development programs; they result from separate European Commission settlements.

Furthermore, limits for some cases of aid for informative, training and consulting activity in the field of environmental protection have been created; they may reach 50% for small and medium-sized companies. An even higher limit – up to 100% of eligible costs – may be achieved within public aid granted to increase demand for environmentally friendly products. Subsidising operating costs is regulated much more sharply though. Usually, these costs cannot be covered by public aid although the European Commission allows some exceptions at individual course. They concern exclusively waste utilisation and reduced rates for newly introduced environment taxes.

It was not clear for some time how the EU would deal with aid granted from public funds not coming from the state budget (for example those granted by Polish environmental funds). Some analysts claimed that Union rules apply only to state budgets. Precedent-setting cases considered by EU organs in the 1990s proved that interpretation wrong. Since Polish environmental funds are likely to be perceived as state budget-derived subsidy instruments, it must be recognised that the financed projects should comply with certain requirements.

In this context, the European Commission's decision to acknowledge the Dutch fund composed of manure production fees as a public aid instrument bearing all consequences of project financing rules is particularly significant. The Commission was of the opinion that the fund may only be used to finance investment expenditures and only on a limited scale, taking into consideration any other budget aid received by farmers in three consecutive years.

New guidelines (*Community 2000*) in paragraph 84 note the difficult environmental situation of some countries applying for EU membership and state briefly that their needs concerning public aid will be analysed during accession negotiations.⁶ Environmental funds are not mentioned explicitly in the instructions but it is obvious that the rules of their functioning will be a matter of the negotiations. In the light of the Dutch precedent, the Polish government will not be able to ask for the funds to be qualified as compliant with the Polluter Pays Principle. It can, however, ask for recognition of some project selection criteria as acceptable forms of public aid, at least during the transition period.

⁶ Community guidelines on state aid for environmental protection 2000. (2000). Brussels European Commission.

3. THEORETICAL EFFICIENCY OF ENVIRONMENTAL PROTECTION SUBSIDY

Economists argue that welfare increase is caused by taking up projects with higher benefits than costs. Both categories are of course to be understood as present values of the benefit and expenditure flow, discounted at the same discount rate reflecting the capital's social value. Projects worth taking up are thus characterised by a positive social Net Present Value (NPV). They may be characterised alternatively by an Economic Rate of Return (ERR) which exceeds a pre-determined discount rate. Projects that fit into this category are called economically efficient.

The above criteria do not determine financial viability. In order to be financially viable, a project must have a positive NPV, that is to say its expenditures must be lower than the total of benefits gained individually by the project proponent. This may be brought down to the necessity of reaching an Internal Rate of Return (IRR) higher than the bank rate at which the capital is attainable for the proponent.

The maximisation of social welfare requires taking up economically efficient projects, whereas the market encourages only those financially viable. The conclusion is that sensible interference with the market should involve projects that are economically efficient but financially non-viable. Economically inefficient projects should not be carried out at all while financially viable ones will be taken up spontaneously by the market itself (see Table 23.1.).

An economically efficient project may be financially non-viable for any of the reasons below:

- the potential investor is not aware of all individual benefits of taking up the project;
- the potential investor may not fully take over the benefits that fall into the category of "public good" created by the project;
- the project proponent does not have access to the credit market at appropriate conditions.

Environmental protection is an example of an activity that is subject to such barriers and it often ends up not being taken up on a sufficient scale.

Each reason may be eliminated or diminished by enhancing environmental awareness, by "internalising costs" (charging environment users for environmental damages caused by their activity – the PPP *sensu largo*) and by

Table 23.1.
Efficiency and interference with the market.

Project characteristics		Economic efficiency	
		Yes	No
Financial viability	Yes	The project should be carried out and the market itself will guarantee it	The project should not be carried out
	No	The project should be carried out though the market itself does not guarantee it; it is necessary to interfere externally (e.g. by way of subsidy from a public fund) or by creating an appropriate market	The project should not be carried out; the market itself will not allow it

Source: Author's own elaboration.

making credits more accessible. Yet so far nowhere in the world has it been possible to eliminate the difference between economic efficiency and financial viability using these methods. In theory, all environmental protection levels may be reached by manipulating property rights or by sharpening environmental requirements, thus forcing economic agents to identify individual benefits with social ones. Practical implementation of such requirements is hard or even impossible, however. In this case, subsidising is the only solution; it is also a reliable way of achieving financial viability.

This is why it is common for OECD countries to violate the PPP making only sure it does not lead to serious trade distortions. It is nevertheless puzzling why the practice of circumventing the PPP became codified with regard to protecting competition and not the maximisation of social welfare. The quickest conclusion would be that EU organs act under pressure, mostly from free trade interest groups, but the problem is more profound.

Although it is crucial for a country to tell the difference between economic efficiency and financial viability in order to be able to interfere with the market

in a sensible way, it is also very difficult. The problem is caused by both concepts. The project proponent is motivated to claim financial non-viability while none from the outside can wholly identify neither the costs nor the financial benefits of the project. The determination of economic efficiency would additionally require full monetary assessment of project benefits. This task calls for information that is either unreliable or controversial: how can one convincingly estimate the value of health or better forest protection expected due to emission decrease?

4. DO POLISH ENVIRONMENTAL FUNDS VIOLATE THE PPP?

Overviews of Polish environmental funds showed that their vast majority were compliant with EU formal requirements.⁷ The only real problem is caused by the accumulation of aid from different public sources. Some tasks recognised as compliant with EU regulations could actually obtain aid from a few different funds, surpassing the admissible aid share limit. At the same time, overviews and analyses that concentrated on the rationality of fund subsidies have shown that funds lack procedures with which they could assess both economic efficiency and financial viability reliably.⁸ The choice is usually based on criteria that do not guarantee social optimal conditions of the aid's direction and/or scale.

Since the beginning of system transformation, the Polish government has declared the PPP as one of the foundations of its environmental policy.⁹ Yet Poland is, and will continue to be for many years, much less wealthy than EU countries. This is why achieving higher efficiency and maximising the benefit from public aid must be given an even higher priority than in wealthier countries where capital is more abundant. Funds ought to adopt the PPP and

⁷ Peszko; Raczka, J. and Żylicz, T. (1998). Municipal Development Agency. Report for the Ministry of Environment. Warsaw.

⁸ Anderson, G. and Żylicz, T. (1999). The role of Polish environmental funds: Too generous or too restrictive? Environment and Development Economics, 4, pp. 413-448; Peszko, G. and Żylicz, T. (1998). Environmental Financing in European Economies in Transition. Environmental and Resource Economics, vol.11, 3-4, pp. 521-538; Raczka and Żylicz.

⁹ Polityka ekologiczna państwa. (1990). Warsaw: Ministry of Environment; Zarys polityki ekologicznej: instrumenty ekonomiczne. (1990). Warsaw: Ministry of Environment; Druga Polityka Ekologiczna Państwa. (2000). Warsaw: Government Printing Office.

by far improve project selection procedures not just with the aim of complying with EU regulations but to implement the country's economic and environmental policy better.¹⁰

Since 1989, environmental funds have become a distinct component of environmental protection policy in Poland. The fund system has been evolving, starting from establishing the National Environmental Protection and Water Management Fund as a corporate body in 1989 and separating 49 regional environmental protection and water management funds from the state budget in 1993. In the same year municipal environmental funds were established as subaccounts in municipal budgets. Due to the administrative reform of 1998, the number of regional funds was reduced to 16 and new county budgetary funds were created following the establishment of a new administrative level. In 1992 the Minister of Finance established the EcoFund to administer sums obtained from debt-for environment swaps negotiated with some of the Paris Club countries.

Apart from such a diversified system of Polish environmental funds, there exist international programs channelling some specific sectors of environmental protection in Poland. The programs include Phare, GEF (*Global Environmental Facility*), as well as bilateral assistance schemes provided by some countries.

In addition, several commercial entities have specialised in environmental financing. They operate under market conditions, but often offer their customers assistance in identifying an appropriate source of public financing so that the entire financial package could demonstrate the financial viability of a project. This sort of co-operation between the commercial sector and environmental funds was initiated by the Environmental Protection Bank Inc. (BOŚ SA) in 1991 and a couple of large banks joined later. Banks offer their assistance in emitting municipal bonds or securities of other agents who undertake environmental investments.

The share of public funding in environmental investment became significant after 1990 and transitionally – in 1992 – reached even more than 50%. By the late 1990s it fell below 30%. In 2000 it reached almost 50% again, but its rigorous estimation is difficult because of statistical classification problemmes: the scope of environmental fund activities differs from the total environmental investment as recognised by the Central Statistical Office and estimated at 6.6 billion PLN in 2000.

¹⁰ Anderson and Żylicz.

The distribution of environmental fund beneficiaries is interesting, too. Research undertaken in the early 1990s has shown that the funds contribute 12% to selected projects in firms.¹¹ At the same time the average contribution by the funds to all projects was almost twice as high.¹² One can conclude from this that firms were less generously supported by the funds than municipal entities.

On the one hand, the remarkable contribution of environmental funds pleases those who founded the national environmental policy in the early 1990s. On the other hand, however, it raises concerns about possible driving out commercial entities from the sector. Bank managers complain about environmental funds offering cheap credit, spoiling the market and depriving them of their potential clients. Detailed analyses do not confirm this view. A survey of municipal investment demonstrated that virtually the only loans taken by municipal entities are those for environmental purposes.¹³ In other words, environmental funds do not drive out commercial financing, but – on the contrary – they open up a segment of the market that otherwise would have been as inaccessible for banks as the market for municipal investment in infrastructure, education, medical care etc. It turns out that sectors which do not have similar extra-budgetary funds have failed to generate bankable projects.

There are several circumstances making Polish environmental funds valuable partners in environmental investment market. First of all, environmental investments create so-called positive externalities (or mitigate negative ones) and thus provide benefits that do not accrue to investors inevitably. As a result, although socially desirable, projects of this kind may not produce financial revenues required by the investor in order to justify expenditures. Therefore, a subsidy from a public fund is a vital condition for the project to be undertaken. Moreover, Polish environmental funds call for co-financing and hence force investors to look for additional funding in order to close the financial gap. The funds themselves always provide for partial financing only. An additional factor that stimulates investors' interest in the commercial sector is the funds' willingness to support complex projects. Such projects result in environmental improvements not necessarily because of "end-of-pipe" installations, but rather because of activities aimed at all stages of production and consumption.

¹¹ Broniewicz, E. and Poskrobko, B. and Żylicz, T. (1994). Internalizing environmental impacts of industry in Poland: Preliminary empirical evidence. Warsaw University: mimeo.

¹² Anderson and Żylicz.

¹³ Raczka, J. and Żylicz, T. (1998). Municipal Development Agency. Report for the Ministry of Environment. Warsaw.

The funds may support projects that are at least partially commercial and consequently these suit better bank criteria.

The funds' requirement that beneficiaries provide additional financing of their projects brings the Polish system closer to EU rules. Nevertheless, Polish regulations are not quite compatible with these rules. The divergence stems from the fact that in Poland "additional" financing may come from other public sources, which happens when, for instance, the National Fund co-operates with the EcoFund or a regional fund. The lack of compatibility may also result from an excessive contribution of a given fund. There is an obvious tendency for justifying funds' activities by having rules interpreted liberally or seeking for higher public share limits in the transition period. This, however, does not seem to be a reasonable solution from the point of view of the system efficiency. A more appropriate solution would be to defend the funds' flexibility provided that their project selection rules are sound. The rules should leave no doubt that beneficiaries receive support just to compensate for the costs that cannot be directly recouped through commercial revenues and not in order to boost their competitive advantage.

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Grażyna Borys

CHAPTER 24

**THE PRO-ECOLOGICAL REORIENTATION
OF POLISH BANKS IN THE LIGHT OF
THE UNITED NATIONS DECLARATION:
'BANKING AND ENVIRONMENT'**



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THE PRO-ECOLOGICAL REORIENTATION OF POLISH BANKS IN THE LIGHT OF THE UNITED NATIONS DECLARATION: 'BANKING AND ENVIRONMENT'

1. INTRODUCTION

An outstanding Polish philosopher, Henryk Skolimowski, in his book entitled *Visions of the New Millennium* wrote: "We are the victims of our own triumph. We wished very much to master nature and we were successful. But we overdid it a little. We wished nature to serve us, thinking we would be happier but by hurting nature we hurt ourselves". Simultaneously, H. Skolimowski announced that the 21st century would be the century of ecology, which would allow us to break free from spiritual numbness and to introduce harmony in social life and in the relations of man with nature.¹

The importance of ecological factor for the development of banking in the new millennium seems to be appreciated by managements of many banks all over the world. The "*Declaration of banks on the protection of environment and possibilities of sustainable development*", prepared under the auspices of UNEP in 1992, well-known under the name: The UNO Declaration "Banking and Environment" is the proof of it. It is noteworthy that just in the year the Declaration was issued, 100 banks from 34 countries representing all continents signed it. Among them there were 14 Polish banks. The first provision of the Declaration reads: "We consider sustainable development as the fundamental aspect of efficient management", and the third: "We think that the sector of financial services

¹ Skolimowski, H. (1999). Wizje nowego milenium (p. 7). Cracow: EIB.

*together with other areas of economy, plays an essential part in the assurance of permanent development". In the following provisions of the Declaration its authors declare: "We are aware of the fact that development demands involvement of the whole economic unit and that it is an integral component of patterns of civil attitude of economic organisations so much sought by us."*²

Nearly 10 years have passed since the Ecological Initiative of Financial Institutions was established under the auspices of the United Nations Organization Environmental Programme, which is a good opportunity to present the results of the research carried out in 1998-1999. This research aimed at:

- an empirical verification of the declaration of will by the Polish bank-signatories of the UN Declaration "Banking and Environment", that they will execute a pro-ecological reorientation of their own activity, and
- an identification of theoretical and practical barriers as well as the diagnosis of reasons for the difficulties encountered by the banks which actively engaged themselves in the implementation of the provisions of the Declaration.

At the beginning the research was to include all Polish-based signatories of the Declaration "Banking and Environment:" 14. It turned out, however, that after the period of essential changes in ownership and restructuring of the banking sector during the system transformation of the nineties in Poland, on 1 January, 1999 only 9 of them were running independent enterprises. Therefore only they could be the subject of research. The banks are:

1. Bank Handlowy w Warszawie SA,
2. Bank Ochrony Środowiska SA w Warszawie,
3. Bank Polska Kasa Opieki SA w Warszawie,
4. Bank Przemysłowo-Handlowy SA w Krakowie,
5. Bank Rozwoju Eksportu Bank SA w Warszawie,
6. Bank Śląski SA w Katowicach,
7. Bank Zachodni SA we Wrocławiu³.
8. Powszechna Kasa Oszczędności Bank Polski SA w Warszawie,
9. Powszechny Bank Kredytowy SA w Warszawie,

² Financial Services and the Environment. Survey 99 UNEP (1998). UNEP Financial Institutions Initiative 1998. UNEP Regional Office for Europe, pp. 11-13.

³ After merging with Wielkopolski Bank Kredytowy its today's name is Bank Zachodni WBK SA.

On the verge of the year 2000 they constituted 11.69% of the total number of banks operating in Poland (excluding co-operative banks). They are of various origin (Table 24.1.).

Table 24.1.
Important dates in the history of banks which signed
UN Declaration "Banking and Environment".

Specification Banks	Date of establishment and legal form	Date of commencement of operational activity	Date of transformation into joint-stock company	Date of entry in the commercial register	Date of debut on GPW
Bank Handlowy w Warszawie SA	30.04.1870 SA	15.07.1870	-	27.03.1954	30.06.1997*
Bank Ochrony Środowiska SA	15.09.1990 SA	02.05.1991	-	09.01.1991	03.02.1997
Bank Polska Kasa Opieki SA	17.03.1929 SA	03.02.1930	-	29.10.1929	30.06.1998
Bank Przemysłowo-Handlowy SA	11.04.1988 BP	01.02.1989	14.05.1991	31.10.1991	07.02.1995
Bank Śląski SA	11.04.1988 BP	01.02.1989	08.10.1991	18.10.1991	25.01.1994
Bank Zachodni SA	11.04.1988 BP	01.02.1989	16.10.1991	16.10.1991	-
BRE Bank SA	11.12.1986 SA	1997	-	23.12.1986	06.10.1992
Powszechna Kasa Oszczędności Bank Polski SA	07.02.1919 BP	1919	18.01.2000	12.04.2000	-
Powszechny Bank Kredytowy SA	11.04.1988 BP	01.02.1989	1991	25.11.1991	20.10.1997

* Back at the stock exchange after 60 years.

where SA - public company, BP - State owned.

Source: Orzeszko, T. (2001). Polские банки - сыgnатарии Декларации ООН "Banking and Environment" на тле krajowego sektora banków operacyjnych. Część I. Ogólna prezentacja polskich banków - сыgnатарии Декларации ООН Banking and Environment". Wrocław: Prace Naukowe AE, no. 908, p. 167.

Three of them have long and rich history:

- Bank Handlowy w Warszawie SA, established in 1870, is one of Poland's oldest banks and the first Polish banking establishment in the form of a joint stock company;
- Powszechna Kasa Oszczędności BP w Warszawie descends from the Pocztaowa Kasa Oszczędności established in 1919. Subject to many reforms and reorganizations it operated as a state bank until 2000 when it was commercialised and transformed into a fully-owned subsidiary of the State Treasury;
- Bank Polska Kasa Opieki SA w Warszawie was established in 1929 as a full subsidiary of the Pocztaowa Kasa Oszczędności.

The other five banks in this group came into being in the late 1980s. Only the BRE Bank SA was established, from the start, as a joint-stock company with majority of shares owned by the State Treasury in 1986. The remaining four banks, i.e.: BPH, BSK, BZ and PBK, had a common beginning: they were established in 1989 as state banks by separating from the structures of the Narodowy Bank Polski. Together with five other banks they created the so-called group of "the great nine". In 1991 they were transformed into sole shareholder companies of the State Treasury and then privatised in the subsequent years.

The youngest bank in the group is BOŚ, established in 1990 as a joint-stock company. Its originators and founders were individuals interested in the protection of environment and its effective financing.

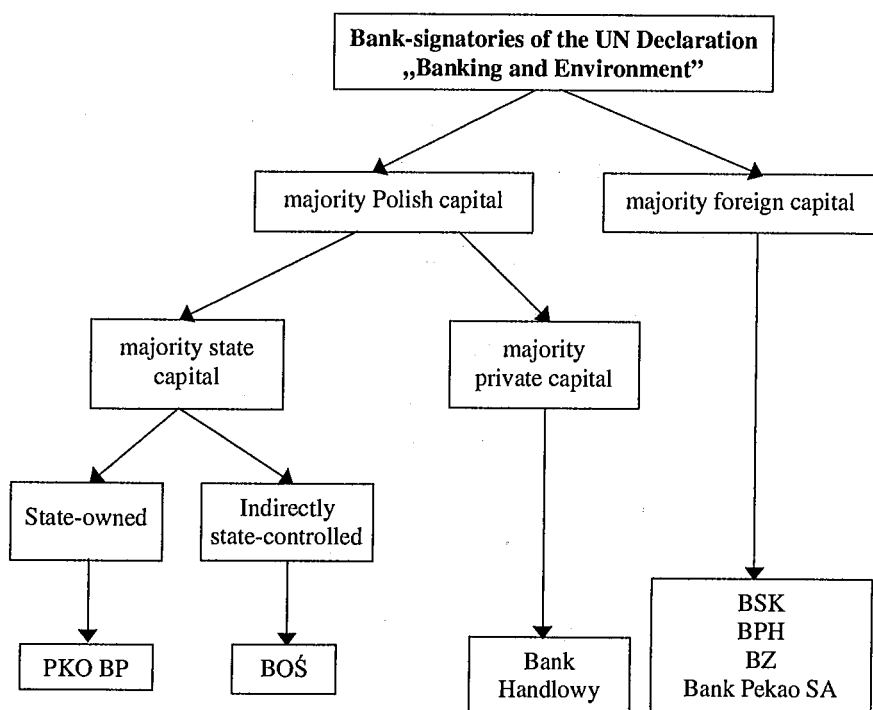
To sum up, four of the banks subject to analysis started their activity as joint stock companies (Bank Handlowy, Bank PekaO SA, BOŚ, BRE Bank SA), and the remaining five at first operated as state organisations and were later commercialised by means of transformation into sole shareholder companies of the State Treasury and later privatised. At the end of 1999, except for PKO BP and BZ which were not privatised, the stocks of the remaining seven banks were quoted on the Warsaw Stock Exchange.

The variety of origin of the Declaration signatories resulted in their ownership structure (Diagram 24.1.). At the end of 1999 there were five banks with majority Polish capital and four with majority foreign capital in the group of the organisations described. Among the first ones there was one state-controlled bank and three banks with majority private capital.

In 1997-1999 banks described in this paper had at their disposal 1,800 to 1,950 million PLN equity; the total value of this capital in the sector of commercial banks (excluding co-operative banks) in Poland amounted

to about 26-30%. These banks together have considerable assets, which in the years examined constituted over half of the assets of all Polish operating banks. However, the value of the assets of particular banks was very diverse. The biggest banks managed assets as many as fifteen times greater than the assets of the smallest bank.

Diagram 24.1.
Classification of bank-signatories of the UN Declaration
“Banking and Environment” according to then origin
of their own assets (as of 01.01.2000).



Source: Orzeszko 172.

The head offices of 6 of the banks which signed the Declaration are situated in Warsaw, and the remaining ones in Wrocław, Katowice and Cracow. The banks examined, in addition to their head offices, have a huge network of outlets of different types, located all over Poland. At the beginning of 2000 their number was about 8.3 thousand. This meant that they made up 69% of all banking outlets in Poland.

The following research methods and techniques were used to examine the pro-ecological reorientation of the banks operating in Poland:

- the method of analysis of professional literature and publications available (periodicals and bank reports, the Internet etc.),
- the method of financial analysis,
- methods of the analysis of available bank documents (e.g. concerning credit risk assessment procedures, statutes, organisational structures etc.),
- techniques of interviews with employees of banks,
- questionnaire techniques.

2. A SYNTHETIC PRESENTATION OF THE RESULTS OF THE RESEARCH IN THE PRO-ECOLOGICAL REORIENTATION OF SELECTED BANKS IN POLAND

2.1. GENERAL SUBJECT RANGE OF RESEARCH

The following problems were included in the subject range of the research:

- pro-ecological reorientation of management systems in banks,
- pro-ecological reorientation of the strategy of operation of banks,
- ecologisation of the credit risk assessment procedures and banking practice,
- ecologisation of bank products,
- pro-ecological reorientation of internal and interbank communication systems,
- pro-ecological reorientation of external communication systems.

2.2. PRO-ECOLOGICAL REORIENTATION OF THE MANAGEMENT SYSTEMS OF BANKS

The integration of environment protection problems and sustainable development with banking activity can only be carried out by means of the pro-ecological reorientation of systems of management of banks. The occurrence of the following facts can be regarded as diagnostic for the process of pro-ecological reorientation of management systems of bank signatories of the Declaration:

- obtaining international certificates confirming the implementation of environmental management system (ISO 14000, EMAS, ICC),
- appointing positions/teams/units responsible for ecology in their organisational structures (for environment protection, sustainable development) with explicit definition of their scope of competence,
- delegating the issues of environment protection and sustainable development to the Board member,
- including skills or knowledge of the environment or sustainable development into the standard qualifications required of employees.

The survey carried out has shown that between 1997-1999 none of the Polish signatories of the Declaration obtained international certificates of implementation of environmental management or made any preparations in order to obtain one of the certificates (ISO 14000, EMAS, ICC) in the nearest future⁴.

Only two banks created the post or section dealing with ecology in their organisational structures. In one of them such post was established in the Department of Credit Risk. The duties assigned to this post include among other things:

- initiation of the ecological risk assessment procedure in the procedures of risk assessment in providing credit facilities for entities,
- providing bank employees with opportunities of seeking advice with reference to ecological risk assessment procedures,
- making annual ecological reports.

In the organisational structure of the other bank there is a Department for Ecological Projects. Its responsibilities are:

- initiation and carrying out tasks aiming at the ecological mission fulfilment,
- working out the strategy of environment such financing (supported by credit facilities),
- co-operation with ecological organisations, funds and foundations and with other sources of funding designed for environment protection in the joint financing of protective undertakings,
- development and improvement of bank products for ecological projects,

⁴ It is interesting that only one of the banks has the international certificate ISO 9001.

- elaboration and implementation of instruction in credit applications' assessment methods regarding their ecological and economic justification,
- Elaboration of expert appraisals and opinions related to the issues of environment protection for bank authorities.

The Department employs about 16 staff members. Simultaneously, in each branch of the Bank specialists in environment protection are employed (1-3 persons).

In two banks only ecological problems lie within the competence of a designated Board member.

There is only one bank where skills in or knowledge of environment protection and sustainable development are listed among the qualifications required of staff.

2.3. PRO-ECOLOGICAL REORIENTATION OF THE ACTIVITY STRATEGY BANKS

The research in the pro-ecological reorientation of the strategic activity of bank-signatories of the UN Declaration "Banking and Environment" was aimed at providing an answer to the following questions:

- Does a verbal declaration of will to execute a pro-ecological reorientation of the strategic activity of the banks find acceptance/support/ interest on the part of their stockholders/owners?
- Has the verbal declaration of will to execute a pro-ecological reorientation of the bank's strategy of activity been confirmed in statutory provisions, mission statements and/or records of strategies?
- Did the banks have, in the period examined, an ecological strategy/policy written down in a special document?
- Did the banks, in the period examined, include tasks referring to ecological policy in the area of their own activity?
- Did the banks, in the period examined, include ecological risk in their own investment activity?
- Did the banks, in the period examined, conduct an internal ecological review of products offered and procedures applied?

As results from the research, stockholders of only two banks expressed their interest in and support for their pro-ecological strategy of activity. In the case of one of these banks the attitudes of stockholders are additionally

justified by the ecological aim for which the bank was established. In the second case the notification of its interest in pro-ecological reorientation is made by EBOR. This interest is expressed, among other things, in:

- acceptance of the ecological strategy/policy of the Bank,
- defining the requirements for annual ecological reports to be submitted by the Board,
- formulation of eco-ethical criteria in financing economic projects by the Bank.

Simultaneously, it is worth noticing that foreign bank-signatories of the UN Declaration "Banking and Environment" were among the stockholders of four of the remaining seven banks (G, H, E, F), and the State, which has the statutory and legal obligation to protect the environment and to observe the principles, was among the stockholders of five of them (A, B, E, F, I).⁵

Only one bank had in its status the provision clearly referring to its pro-ecological strategy of activity, in fact an ecological specialisation, reading:

"The Bank in its own activity supports particular undertakings connected with the protection of natural environment, especially:

- 1) *protection of the air, waters, the surface of the earth, forests and natural resources,*
- 2) *undertakings concerning the storage and economic utilisation of waste,*
- 3) *development of production and services supporting protection of the environment and initiatives undertaken for ecological reasons."*

The mission of the bank is to *"Support the processes of ecological development by offering complex financial and advisory services to those who carry out undertakings for the protection of natural environment in Poland, the stimulation of initiatives and the ecological education of society"*.

According to the provisions of the strategy of the bank, its priorities concerning strategic aims are:

- sustainable development,
- strengthening of its position in the banking sector,
- maintaining its leading role in the financing of environment protection,

⁵ In order to present results of the pro-ecological reorientation survey of banks for their identification, the letters of the alphabet from A to I will be used. This order does not comply with the order the banks were presented in the Introduction. It was established by means of drawing lots.

- pursuing its pro-ecological mission in the process of adapting Polish economy to the ecological standards required by the EU,
- gaining a maximum number of customers by promoting the bank as a stable, safe and successful banking establishment which offers a full range of bank services and additionally, a variety of pro-ecological credits.

In the case of the remaining banks ecological aims were neither included in their mission statements nor in their strategies of activity.

Only two of the banks examined declared that in the years 1997-1999 they had an ecological strategy/policy elaborated in a special document. Only three of the banks examined (C, D and G) said they had their own internal programmes of pro-environmental undertakings. In bank C this programme comprised the management of waste recycling of materials and raising ecological awareness of employees, while in bank D it was concerned with the increased effectiveness of energy and fuel consumption. In bank G the programme focused on the effectiveness of water, energy and fuels consumption as well as the management of waste and recycling of materials. The two following banks (E and F) admitted having no special, written programme of pro-environmental activities, but within the framework of their day-to-day operation they performed activities aimed at:

Bank E

- increased effectiveness of energy consumption,
- management of waste and recycling of materials,
- raising ecological awareness of employees.

Bank F

- increased effectiveness of thermal fuel energy consumption,
- management of waste and recycling of materials,
- raising ecological awareness of employees.

Four of the banks examined declared that, in the analysed period, they took ecological risk into account in their own investment activity.

Only two banks carried out an internal ecological review. In the former this review included banking procedures, and in the latter both products and banking procedures.

2.4. THE ECOLOGISATION OF THE EXAMINATION OF THE PROCEDURES OF CREDIT RISK AND BANKING PRACTICE

The problems of ecologisation of examination of the procedures of credit risk and banking practice played a distinctive role due to the importance attributed to them by the UN Declaration, and also because of the size of credit action in the banks examined. The Signatories of the Declaration state that: *"We think that qualitative and quantitative identification of environmental risk should be included in the standard set of risk factors, evaluated and taken into account in management practice, both in national and international operations. We think that compliance by our customers' with the appropriate regulations for the protection of environment and implementation of confirmed environmental practice constitute essential factors for the effectiveness of economic management."*

The joint credit exposure of the bank-signatories, expressed in the total amount of receivables, constantly grew over the years examined from about 72 billion PLN to nearly 124 billion PLN*. This corresponded to their share in the total value of receivables in the sector of commercial banks (excluding co-operative banks) in Poland, at the level of about 48-56% (Table 24.2.). The first place in the group as regards the total value of receivables was again occupied by the two biggest banks, i.e. Pekao SA and PKO BP. Their receivables, at the end of the period examined, reached nearly 32 billion PLN and 29 billion PLN respectively. These banks had almost a fourth of the receivables of the whole banking sector, excluding the National Bank of Poland (NBP). The banks with the least credit engagement were: BOŚ SA and Bank Zachodni WBK SA; their receivables at the end of 1999 reached the level of just over 3 billion PLN and 5 billion PLN, and their influence on the level of receivables of operating banks was insignificant (their share in the total receivables of the whole banking sector was 1% and 2% respectively). The receivables of the remaining five banks reached the total of 9.4 billion PLN to 13.7 billion PLN.

The indices of the share of receivables insecure in credits in the banks examined compared to the sector of commercial banks are presented in Table 24.3.

* 1 billion = 1 thousand million.

Table 24.2.
Total receivables of bank-signatories of the Declaration
"Banking and Environment" on the background of the nation-wide
sector of operational banks in the years 1997-1999.

Specification	1997			1998			1999		
	Mi. PLN worth	Share in %		Mi. PLN worth	Share %		Mi. PLN worth	Share in %	
Total commercial banks	142,666.8	100	-	184,216.5	100	-	234,317.8	100	-
Commercial except co-operatives	133,986.3	-	100	172,855.9	-	100	221,444.9	-	100
Declaration signatories	72,294.5	50,7	54,0	82,991.3	45.1	48.0	123,560.0	52.7	55.8
	Mi. PLN worth								
Bank Handlowy S.A.	12,607.5			12,283.5			13,666.9		
Bank Ochrony Środowiska S.A.	1,974.6			2,209.4			3,128.3		
Bank Polska Kasa Opieki S.A.	12,441.6			13,455.6			32,182.4		
Bank Przemysłowo-Handlowy S.A.	6,215.6			7,050.7			9,686.9		
Bank Śląski S.A.	6,392.1			7,923.1			10,597.5		
Bank Zachodni S.A.	4,189.1			5,068.1			5,039.4		
BRE Bank S.A.	4,194.6			7,060.1			9,413.4		
Powszechna Kasa Oszczędności BP	18,560.8			20,904.6			29,165.9		
Powszechny Bank Kredytowy SA	5,721.6			7,036.2			10,679.3		

Source: Janusz, A. (2001). Polskie banki - sygnatariusze Deklaracji ONZ "Banking and Environment" na tle krajowego sektora banków operacyjnych. Część II. Skala działania polskich banków - sygnatariuszy Deklaracji ONZ Banking and Environment". Wrocław: Prace Naukowe AE, no. 908, p. 182.

In the group of bank-signatories of the Declaration the share index value of insecure receivables in credits was, in the years 1997-1999, generally at a lower level than in the whole sector of commercial banks. Only in 1998, Bank Śląski SA and in the next period Bank Zachodni SA showed indices higher than average for the sector. However, the increasing tendency of the analysed value in the nearly entire population may worry, which is also characteristic for the sector of operating banks. Only in PKO BP the index examined grew consistently smaller each year. Due to the lack of data it is difficult to univocally estimate the situation in BPH SA, as regards the criterion in question.

Table 24.3.

The indices of the share of insecure receivables in credits in bank-signatories of the UN Declaration "Banking and Environment" compared to the sector of commercial banks in Poland in the years 1997-1999.

Specification	1997	1998	1999
	Receivables insecure to credits in %		
Commercial banks sector	10.2	10.5	13.3
Bank Handlowy S.A.	3.5	5.1	12.8
Bank Ochrony Środowiska S.A.	2.1	3.6	4.4
Bank Polska Kasa Opieki S.A.	3.8	3.9	12.1
Bank Przemysłowo-Handlowy S.A.	4.0	3.2	No data
Bank Śląski S.A.	9.4	12.2	9.6
Bank Zachodni S.A.	7.6	9.2	18.5
BRE Bank S.A.	1.6	6.7	4.6
Powszechna Kasa Oszczędności BP	8.3	6.2	5.3
Powszechny Bank Kredytowy SA	6.5	9.1	12.1

Source: Janusz 187.

Among the bank-signatories of the Declaration BRE Bank SA and BOŚ SA in 1997 in 1999 and in addition to the latter also BPH SA and Bank Pekao in 1998 SA showed the lowest share of insecure receivables in credits. In the two first mentioned units and in PKO BP this share did not exceed 10% in any year examined.

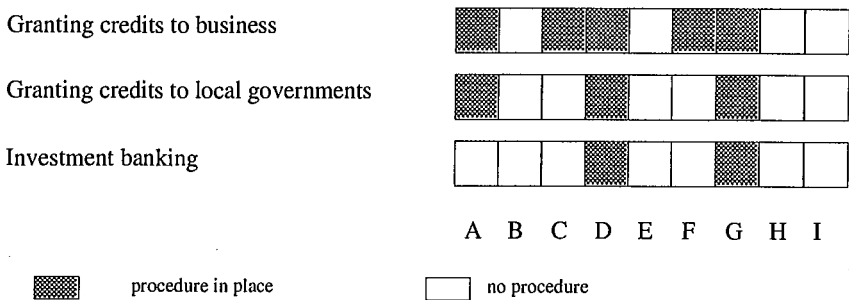
The following factors and circumstances were adopted as diagnostic for the process of ecologisation of credit risk examination and of banking practice by the bank – signatories of the UN Declaration:

- written procedures of credit risk examination comprising its ecological aspects in place,
- range of ecological aspects included in the procedures of credit risk assessment,
- kind of ecological risk identifiers used by banks in the process of creditworthiness assessment,
- applying methods of inspection and reduction of ecological risk in the processes of granting credits and their types,
- the development of 'cases database' of ecological risk occurrence in banks' credit activities,

- preparing reviews of credit portfolios by banks in relation to the degree of exposure to ecological risk,
- taking into account, ecological risk in the processes of advising in financing big investment projects by banks,
- type of ecological risk identifiers most often used by banks in advising for financing big investment projects.

According to the surveys performed, less than half of the banks elaborated written procedures of credit risk assessment involving its ecological aspects (Figure 24.1.).

Figure 24.1.
Banks which elaborated written procedures of credit risk assessment including ecological aspects.

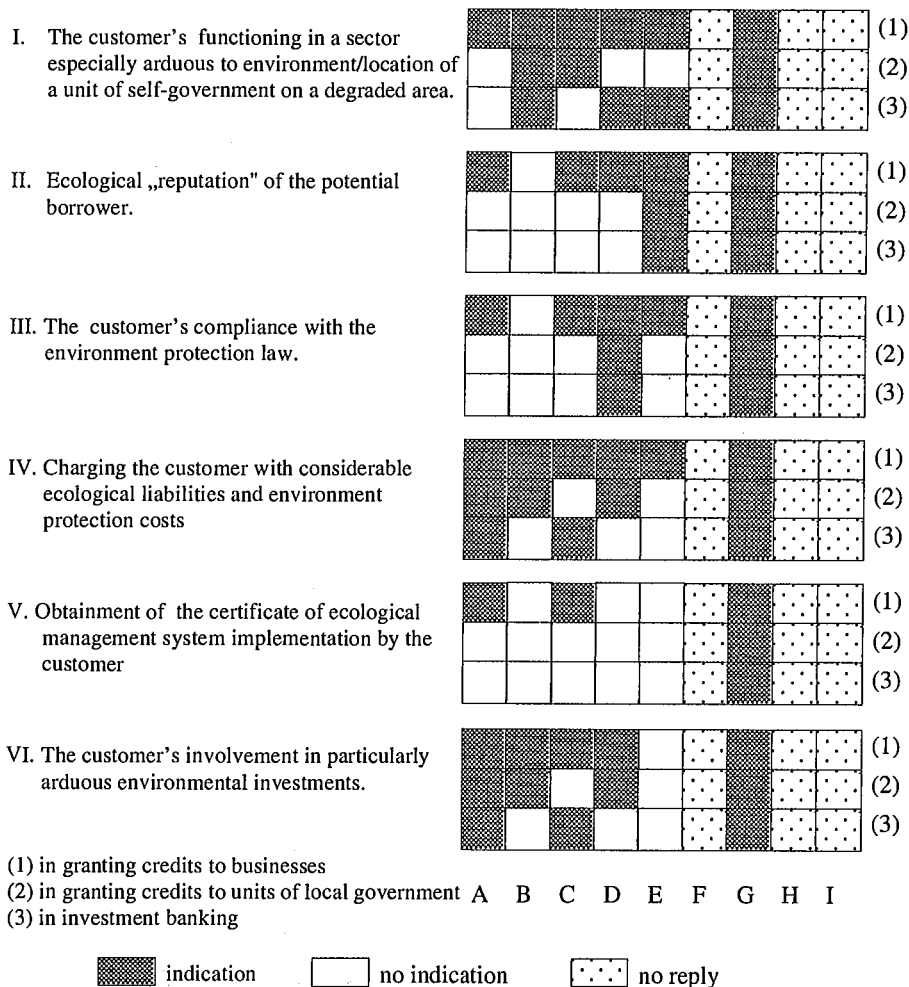


Source: Own elaboration based on questionnaire surveys and interviews.

Written procedures involving ecological aspects in the credit risk assessment of businesses were declared by five banks, whereas in bank F this procedure refers only to the service of preferential credit for thermo-modernisation⁶. Elaborated written procedures, involving ecological aspects in the process of creditworthiness assessment of local government units were declared by three banks. Only two banks declared that they had procedures involving ecological aspects in the process of providing investment banking services.

⁶ This credit is granted for thermo-modernizing undertakings designed to reduce energy consumption in residential buildings, loss of energy in local heating sources, replacement of conventional sources of energy for unconventional ones. See: Law of 18 December 1998 on supporting thermo-modernizing undertakings, Journal of Law no. 162 item 1121.

Figure 24.2.
Identifiers of ecological risk indicated
by banks in their credit activity.



Source: Author's own elaboration based on questionnaire surveys and interviews.

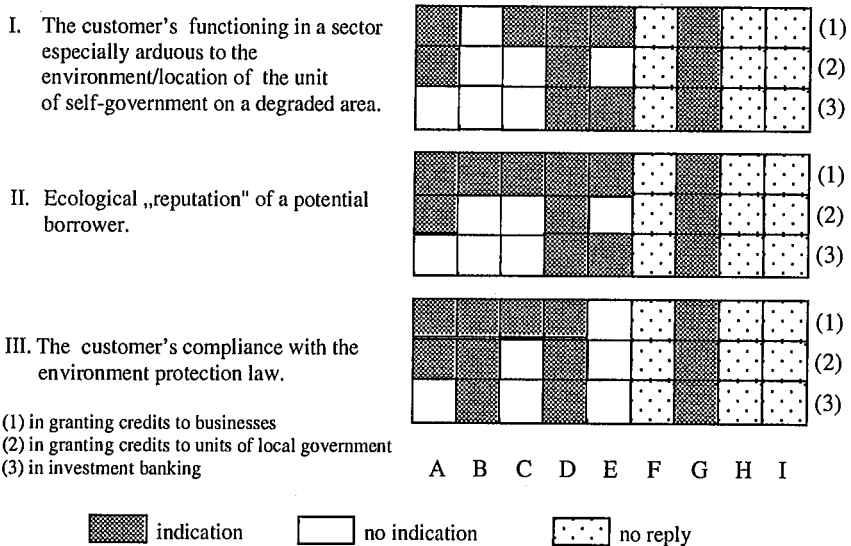
Following the verification of questionnaire declarations by means of interviews with staff members of credit departments it turned out that special, complex procedures involving aspects of ecological assessment of credit risk are functioning in two banks only, whereas in the former this procedure refers to the assessment of credit risk in operations with businesses, and in the latter

it refers to the granting of credits for investments which are aimed at the protection of environment and attainment of ecological and economic effects by an investor. In the remaining banks ecological aspects in their credit-granting procedures are treated in a marginal manner.

Banks acknowledge the following as basic identifiers of ecological risk associated with widely understood credit activity:

- customer’s functioning in a sector particularly arduous to environment (I),
- location on a particularly degraded area, especially if the potential borrower is a unit of local government (I),
- ecological “reputation” of potential borrower (II),
- the customer’s compliance with the environment protection law (III),
- charging the customer with considerable ecological liabilities and environment protection costs (IV),
- obtainment of the certificate of ecological management system implementation by the customer (V),
- the customer’s involvement in particularly arduous environmental investments (VI) (Figure 24.2).

Figure 24.3.
Methods of control and reduction of ecological risk
used by banks in granting credits.



Source: Author’s own elaboration based on questionnaire surveys and interviews.

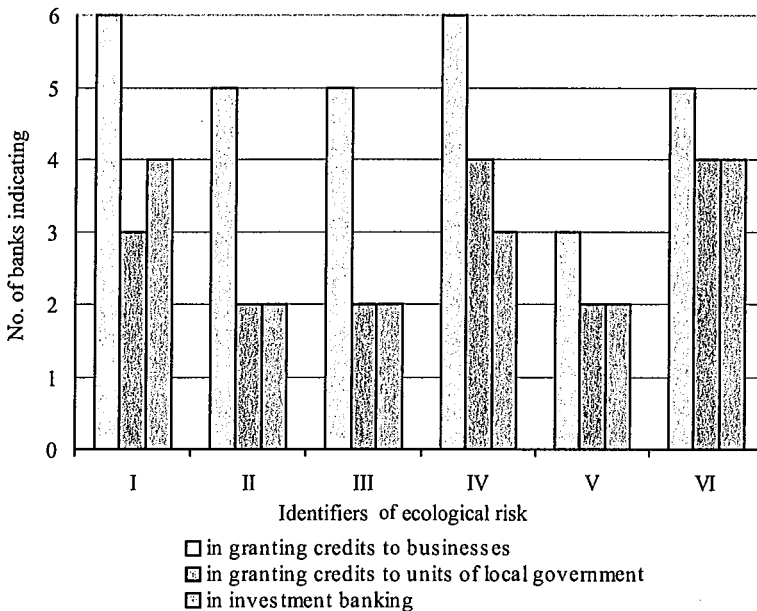
Chart 24.1. shows the frequency of referring by banks to a particular identifiers of ecological risk in their credit activity.

The figures show that banks link ecological risk, first of all, with the process of granting credits to businesses. They consider the fact of customer's belonging to a sector especially arduous to environment and charging the customer with considerable ecological liabilities and environment protection costs, the most important identifiers of this risk.

Six of the banks examined declared that they used various methods of inspection and ecological risk reduction in their credit activity. The methods included:

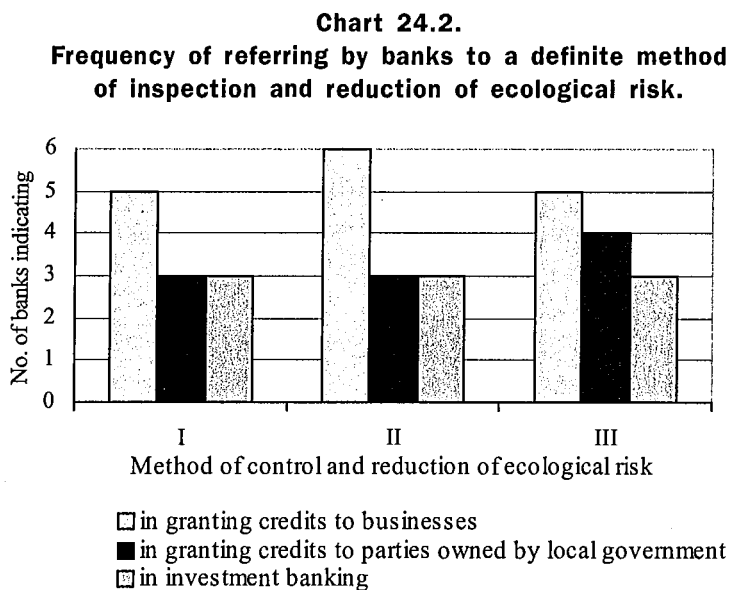
- I. method of credit refusal,
- II. method of special clauses inclusion to the loan agreement,
- III. method of co-operation with the customer in order to solve the problem (Figure 24.3.).

Chart 24.1.
Frequency of referring by banks to a particular identifier of ecological risk in their credit activity.



Source: Author's own elaboration based on questionnaire surveys and interviews.

The frequency of referring by banks to a definite method of inspection and reduction of ecological risk is shown in Chart 24.2.



Source: Author's own elaboration based on questionnaire surveys and interviews.

The diagram indicates that banks used methods of inspection and reduction of ecological risk most often in the processes of granting credits to businesses. The method used by the greatest number of banks was including special clauses in loan agreements. Next, the most often used method was credit refusal. One of the banks, when using this method, applied the so-called list of ecological exceptions (Table 24.4.).

Only one bank, in the years 1997-1999, elaborated the 'bank of ecological risk cases occurrence in the processes of credit granting'.

Only one bank, in the period examined, conducted an analysis of its own credit portfolio in relation to the degree of exposure to ecological risk.

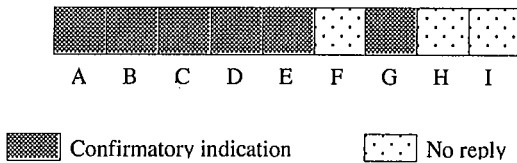
Six banks declared that they took into account ecological risk in their own advisory practice of financing large investment projects (Figure 24.4.).

Table 24.4.
List of ecological exceptions.

<p>A. INVESTMENT PROJECTS</p> <ol style="list-style-type: none"> 1. Trade in wild flora and fauna and goods produced from them which are the subject of the CITES Convention; 2. Introduction of genetically changed organisms to the natural environment; 3. Production, distribution and sale of pesticides (such as organo-chlorines and other similar compounds) and herbicides circulation which is banned by international treaties; 4. Sea-fishing by means of drift nets longer than 2.5 kilometres; 5. Production, storage or processing of radioactive products and waste; 6. Storage, processing, disposal of dangerous waste; 7. Production of equipment and devices containing biphenyl polyvinyl chlorides; 8. Production of electric devices containing biphenyl polyvinyl chlorides; 9. Production of products containing asbestos; 10. Trans-frontier trade in waste material and waste products.
<p>B. FINANCING OF TRADE IN:</p> <ol style="list-style-type: none"> 1. venison and venison products which are the object of the CITES Convention; 2. genetically changed organisms which are to be introduced to natural environment; 3. pesticides, herbicides; 4. radioactive materials and waste; 5. chloride carbonates, halons; 6. electric or hydraulic devices containing oil and those containing more than 0.005% of biphenyl polyvinyl chlorides; 7. products containing asbestos.

Source: Information obtained from bank sources.

Figure 24.4.
The range of implementing ecological risk factors by banks in providing advice for financing large investment projects.



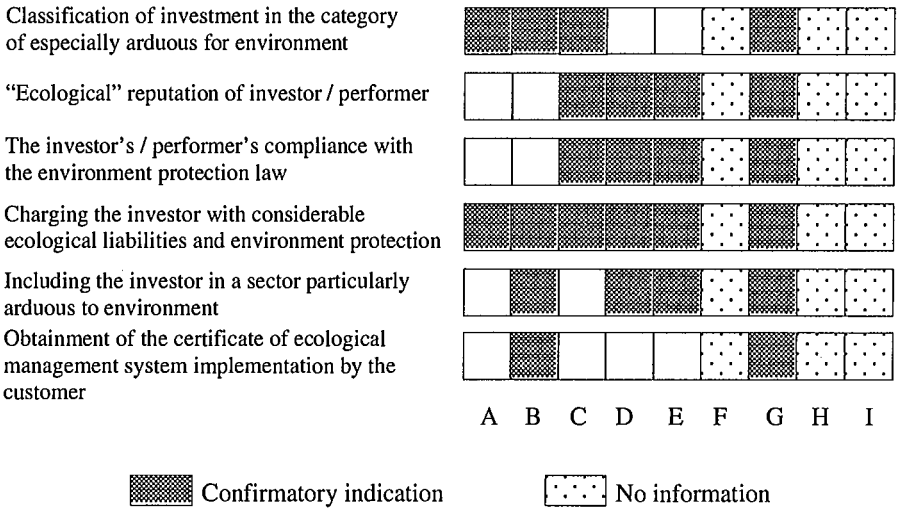
Source: Author's own elaboration based on questionnaire surveys and interviews.

The most often used identifiers of ecological risk referring to large investment projects include:

- I. classification of investment in the category of especially arduous for environment.
- II. 'ecological' reputation of investor/performer.
- III. investor's/performer's compliance with the environment protection legislation.
- IV. charging the investor with considerable ecological liabilities and environment protection costs.
- V. including the investor in a sector particularly arduous to environment.
- VI. obtainment of the certificate of ecological management system implementation by the customer.

Figure 24.5 presents the frequency of seeking advice in financing large investment projects with regard to listed risk identifiers. It follows that banks most often make use of the identifier, which indicates charging the investor with considerable liabilities and environmental costs.

Figure 24.5.
Frequency of implementing definite identifiers of ecological risk by banks in advising at financing large investment projects advice.



Source: Author's own elaboration based on questionnaire surveys and interviews.

2.5. ECOLOGISATION OF BANK PRODUCTS

The inquiry into the ecologisation of bank products aimed at answering two questions:

- How many bank-signatories of the UN Declaration “Banking and Environment” had “green” products in their offer in the years 1997-1999?
- What kind of “green” products were on bank offer?

Six banks (A, B, C, D, F and G) declared that they offered “green” products, mostly credits, in the period examined. In four banks this product contained credits for thermo-modernisation projects, granted on the basis of the law of 18th December, 1998 on supporting thermo-modernisation undertakings and an agreement with the Bank Gospodarstwa Krajowego. In three banks the “green” product was the credit for modernisation of heating devices and a thermo-insulation credit with surcharges to the interest paid by regional funds for environment protection and water management. One bank offered credits from special EBJ lines for undertakings aimed at the protection of environment and reduction of energy consumption.

The product offer of only one bank exceeded “green” credits by far and included among others:

- credit lines from the resources of national, foreign and international financial institutions,
- preferential credits for pro-ecological purposes with surcharges to the interest or bonuses consisting in the amortisation of part of the granted credits paid from ecological funds,
- commercial credits for purposes related to environment protection,
- consortium credits for big investment undertakings related to environment protection,
- “green” deposits where the bank assigned a certain percentage ad valorem of accepted deposits from its own resources or a percentage of interest costs from deposits entrusted with a bank for investments related to environment protection,
- advising on legal, economic and technological aspects of environment protection for interested subjects,
- service of financial settlement of ecological funds as well as foundations and enterprises working in the sphere of environment protection,
- service of grants awarded for the purposes related to environment protection by international and foreign financial institutions whose resources are designed for subsidising protective investments.

2.6. PRO-ECOLOGICAL REORIENTATION OF INTERNAL AND INTERBANK COMMUNICATION SYSTEMS

The inquiry into the pro-ecological reorientation of internal and interbank communication systems was to answer the following questions:

- Whether and with the use of what forms internal communication in bank-signatories of the Declaration on ecological themes took place?
- What was the range and intensity of internal communication on ecological themes?
- Whether there existed a system of interbank communication, referring to ecological aspects between the Polish signatories?

The inquiry showed that only in two banks internal communication referring to ecological aspects was established. The basic forms of this communication were:

- training and instruction,
- ecological reports for the Board of Directors and for the Supervisory Board.

In both banks training and instruction were carried out systematically, but were limited thematically and addressed only to a definite group of employees. In one of these banks the form of communication on ecological themes covered the credit risk section employees, and the subject matter of the instruction included assessment procedures of this risk. As far as the other bank is concerned, the instruction was addressed to the chiefs of Credit Departments in branches, specialists in environment protection in the bank Head Office and its branches, and employees of the Department of Cooperation with Customers. The subject matter of the instruction was relatively broad and covered:

- legal foundations of environment protection and sustainable development,
- marketing of “green” bank products,
- outside-bank sources of financing protective undertakings,
- European assistance programmes for environment protection,
- ecological risk appraisal and assessment,
- monitoring of advancement of investments in the sphere of environment protection.

The limited scope of training and instruction was in a glaring disproportion to employment in bank-signatories of the UN Declaration (Table 24.5.).

Table 24.5.
Employment in Banks – signatories of the Declaration
“Banking and Environment” on the background of the national
sector of operating – banks in the years 1997-1999.

Specification	1997			1998			1999		
	No.*	Share in %	Share in %	No.*	Share in %	Share in %	No.*	Share in %	Share in %
Total commercial banks	172,227	100.0	–	174,043	100.0	–	174,736	100.0	–
Commercial banks except co-operatives	147,095	–	100.0	149,067	–	100.0	149,638	–	100.0
Declaration Signatories	100,230	58.20	68.14	100,891	58.00	67.68	102,422	58.61	68.45
	Number								
Bank Handlowy S.A.	4,229			4,125			4,473		
Bank Ochrony Środowiska S.A.	1,205			1,430			1,600		
Bank Polska Kasa Opieki S.A.	24,794			25,380			24,329		
Bank Przemysłowo-Handlowy S.A.	6,177			6,583			6,631		
Bank Śląski S.A.	6,719			6,939			6,964		
Bank Zachodni S.A.	6,964			6,985			6,894		
BRE Bank S.A.	1,694			2,153			2,154		
Powszechna Kasa Oszczędności BP	42,442			40,807			40,880		
Powszechny Bank Kredytowy SA	6,006			6,489			8,497		

* Number of full-time employees.

Source: Orzeszko 179.

These banks were a strong group of employers. In the years 1997-1999 they employed the total of more than 100 thousand workers, which was about 58% of the total employment in the sector of operational banks. In PKO BP alone over 40 thousand people were employed. The ecological awareness stimulation in such a large group of workers would have essential meaning for the idea of sustainable development implementation.

Another form of internal communication were ecological reports in one bank and ecological statements in the other. Ecological reports were also available for addressees outside banks. They presented:

- characteristics of the state of the environment in Poland and expenditures on its protection,
- the role of the bank in the system of environment protection,
- ecological effects of investments credited by the bank,
- new ecological products of the bank,
- the activity of the bank representatives in pro-ecological organizations,
- directions of international cooperation in the sphere of sustainable development, environment protection etc.

The ecological statement made in the other bank had the form of a standardized report comprising information about:

- most important pro-ecological activities,
- events testifying important ecological problems of customers,
- reasons for occurrence and most essential cases of difficult liabilities being the consequence of ecological problems,
- manner of customers' monitoring in relation to ecological risk.

In the years 1997-1999 the most valuable form of inter-bank communication on ecological themes was the Inter-bank Group for Ecology in which participated the "Leaders for Ecology" representing bank-signatories of the UN Declaration. Unfortunately, the frequency of leaders' meetings grew smaller year by year. The meetings practically disappeared in the year 2000.

2.7. PRO-ECOLOGICAL REORIENTATION OF EXTERNAL COMMUNICATION SYSTEMS

The inquiry into the pro-ecological reorientation of systems of external communication was to answer two principal questions:

- whether and in what form the bank-signatories of the UN Declaration engaged into a dialogue on ecological themes with the society,
- whether representatives of the banks systematically participated in the meetings of the Declaration signatories under the auspices of the UNEP

The inquiry showed that external communication (with customers, stockholders, public opinion etc.) on ecological themes, during the period

in question, was not well developed. The observed forms of communication include:

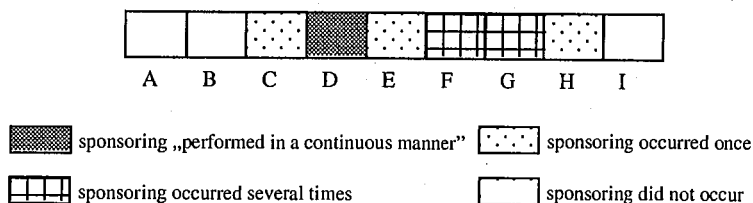
- annual ecological reports,
- information on ecological themes in annual activity reports,
- information about the pro-ecological activity of banks in the bulletins published by them or commonly available periodicals,
- ecological sponsoring.

Only one bank published annual ecological reports. Information on ecological themes was presented in the annual activity reports of two banks only, and only in one case it was systematically elaborated.

Six of the banks examined published commonly available bulletins/periodicals, and one sponsored the publication of such a periodical. Only one bank placed information about pro-ecological activity in bulletins/periodicals in a systematic manner. Two other banks provided such information incidentally in the years 1997-1999. They were exclusively of marketing character.

The banks were involved in ecological sponsoring to a limited extent (Figure 24.6).

Figure 24.6.
Scope of performing ecological sponsoring by banks.



Source: Author's own elaboration based on questionnaire inquiry and interviews.

The main areas of sponsoring were:

- education,
- trainings and organization of conferences,
- publishing,
- protection of rare species of plants and animals,
- spreading the information about the state of the environment.

Representatives of only two banks systematically participated in annual meetings of all signatories under the auspices of the UNEP.

2.8. SUMMARY AND CONCLUSIONS DRAWN FROM THE INQUIRY

Summing up the results of the inquiry into pro-ecological reorientation of bank-signatories of the UN Declaration "Banking and Environment" one can state that:

1. In the years 1997-1999, nine banks had ethical commitments resulting from the signing of the Declaration of Banks on Environment Protection and Possibilities of Permanent Development under the auspices of the UNEP. These banks were universal commercial banks. They constituted 11.69 to 14.46% of the total number of operational banks (excluding co-operative banks). The share of their basic capital in the total value of this capital in the sector of operational banks (excluding co-operative banks) was at the level of 26-30%. They had significant assets, constituting more than half of the assets of all operational banks and had a huge network of local operational outlets at their disposal (ca. 8.3 thousand in 1999);
2. None of the banks examined had international certificates of ISO 14000, EMAS, ICC etc. and none of them undertook steps aiming at obtaining such certificates in the future. Only in two banks a post/organizational unit for ecology issues was created and only in two banks ecological problems were in the competences of a Board member. Only in one bank the qualification requirements of employees included, among other things, the knowledge and skills in the area of environment protection and of sustainable development;
3. Only in one bank the provisions of the UN Declaration "Banking and Environment" were used in its mission statement. Only two banks had an ecological strategy/policy and an intra-enterprise programme of pro-ecological undertakings formulated in a special document. The stockholders of only two banks showed interest in elaborating and implementing the strategy/ecological policy. Representatives of the State Treasury in the supervisory boards of the banks examined, expressed no interest in their ecological strategy/policy;
4. Only two banks followed special, complex credit risk assessment procedures which comprised ecological aspects, but only one of them developed the "bank of cases" of ecological risk occurrence for giving credits to businesses. Six banks declared that they took ecological risk into account in their advisory practice for financing big investment projects;
5. Only two banks conducted internal ecological reviews in the period

examined. In one of them the review comprised bank procedures, in the other both bank procedures and bank products were reviewed;

6. Six banks had "green products" on offer. These were mainly preferential credits. The product offer of just one bank presented a full range of green bank products;
7. Internal communication on ecological themes took place in two banks only, and its basic form was training and instruction. Only one bank, in principle, communicated with the environment on ecological issues in a continuous a systematic way. The communication was conducted by means of ecological reports, information about its pro-ecological activity presented in marketing materials and professional periodicals, annual reports and ecological sponsoring.

Summarising, a general conclusion can be drawn that only two banks fulfilled their ethical commitments to carry out a pro-ecological reorientation of their own activity, which they accepted voluntarily by signing the Declaration of Financial Institutions on the Environment and Sustainable Development. The statutory purpose of one of them was, from the moment of establishment, the support of projects related to environment protection. The stockholders of both banks were interested in the accomplishment of their ecological aims.

In spite of the fact that both banks attempted at obtaining ecological aims, their strategies them were completely different. One accepted the strategy of ecological policy which consisted in:

- offering individual financing packages to customers who submitted their own programme of environment protection and restitution and
- supporting innovation in enterprises aimed at the reduction and elimination of their negative influence on the environment by means of financial, advisory and informative services as well as own and delegated risk monitoring.

The other pursued the strategy of environmental ethics which consisted in the application of socially responsible criteria of depositing and investing its own resources and the resources of depositaries as well as the strategy of avoiding ecological risk in granting credits and investing.

Resulting from interviews conducted with employees of the banks examined, basic factors of this state of affairs are:

- low ecological awareness of bank employees and management who do not perceive the relationships (chances/sources of failure) between banking and ecology;

- structural and ownership transformation in the banking sector which resulted in big changes in management staff and instability of the long-term performance strategy;
- deficient development of ecological accountancy in businesses and self-government units which causes that banks are not in the position to assess whether and to what extent ecological risk is connected with a given customer or investment project;
- insufficiently developed ecological sector (referring to clean production, technology, investment performance) which would generate significant demand for banking services;
- ineffective and insufficiently developed legislation in the area of environment protection and sustainable development, which does not generate the demand for pro-ecological activity of businesses.

3. CONCLUSION

The results of the survey of pro-ecological reorientation of Polish-based bank-signatories of the UN Declaration "Banking and Environment" do deviate fundamentally from the results of the survey on this problem conducted in 1998 by the UNEP and presented at a conference for financial institutions in Chicago in September 1999.⁷ As Thomas Keidel rightly emphasizes, for some time a suspicion has been growing in academic circles, that the Declaration is only a declaration of will for financial institutions its purpose being a certain effect achieved in the environment of these institutions.⁸ Thanks to the intention of aims expressed they would like to prevent the public opinion from making a negative judgement that financial sector subjects have done nothing for environment protection. One could also think that these institutions would like to meet political pressures halfway, so that, among other things, the European Union and national legislators would not feel obliged to enact environmental regulations for the financial sector.

To make this stern judgement an objective, it would be necessary to focus on the necessity to increase efforts, in national and international scale, for the

⁷ Financial Services and the Environment. Survey 99 UNEP (1998). UNEP Financial Institutions Initiative 1998. UNEP Regional Office for Europe.

⁸ Keidel, T. (1999, September). Berücksichtigung von Umweltrisiken durch Banken. UmweltWirtschaftsForum, 7Jg, H.3, p. 22.

development of the idea of ecological and environmental accountancy and for the elaboration of International Standards of Accountancy referring primarily to the presentation of assessment and information about natural environment in annual financial statements and reports made by enterprises.⁹ This would allow for real progress in environmental risk evaluation and assessment by banks and other financial institutions.

⁹ Kuśmierski, K. S. (2000). Rachunkowość środowiskowa. Zeszyty Teoretyczne Rachunkowości, 1. Warsaw: SKwP, p. 151.

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**Wiesława Przybylska-Kapuścińska
Jacek Wojciechowski**

CHAPTER 25

**BANK OCHRONY ŚRODOWISKA S.A.
AS AN ELEMENT OF AN INTEGRATED
FINANCING SYSTEM OF POLAND'S
NATURAL ENVIRONMENT**



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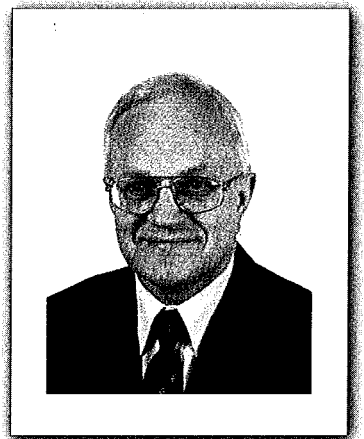
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BANK OCHRONY ŚRODOWISKA S.A. AS AN ELEMENT OF AN INTEGRATED FINANCING SYSTEM OF POLAND'S NATURAL ENVIRONMENT

1. INTRODUCTION

Industrialisation processes are inseparably connected with interference in man's natural environment. In many countries, including Poland, this interference has resulted in nature degradation and a large-scale water, air and soil pollution. Clean environment has not only an economic importance. Human health depends on the possibilities of medical sciences to a small degree only. The quality of natural environment as well as genetic conditioning and mode of life decide on the health state of communities that characterised by such indicators as: life expectancy, infant mortality and premature births. Most of the so-called civilisation diseases, circulatory, oncological and even skin diseases are caused by unfavourable conditions of natural environment. Mankind has faced the problem of how to compensate for a long-time negligence and clean the earth surface, water and air and redress their natural features.

Contemporary technologies enable production processes that do not result in unfavourable changes in the environment. However, all the states, not excepting the most developed, lack financial means to redress the pollution accumulated for many years. Also, there are insufficient resources to implement technologies that would not cause new kinds of pollution.

In Poland the scale of degradation of the environment has reached a considerable size. Until the system transformation in 1989, the centrally planned, inefficient economy was managed in such a way that an uncontrolled and irrational, simply wasteful use of natural resources took place.

Like other countries, Poland has also lacked financial means for environmental protection. Therefore, in preparing to the system transformation

in the late 1990s ecological circles sought ways to increase society's pro-ecological awareness as well as to assure means for the financing of ecological investments.

During the debates of the so-called "Round Table", the government and the opposition agreed that a system of environmental protection would be established in Poland. The system would consist of ecological funds and a bank to support the funds. Environmental protection was given the highest priority.

In the Constitution of 1997 art. 5 was included with the following text: *"The Republic of Poland shall ensure the protection of the natural environment pursuant to the principles of sustainable development."* In this way environmental protection became a duty of public authorities.

2. GENERAL CHARACTERISTICS OF FINANCING THE PROTECTION OF THE NATURAL ENVIRONMENT IN POLAND

The current system of financing of the protection of natural environment in Poland is pursuant to the provisions of the Law of Environmental Protection of 27th April 2001 (Journal of Law of 20.06.2001). The system is connected with the implementation of the aims and tasks that result from the State Ecological Policy and the Government Programme called 'The Ecological Development of the State'. The system is aimed at an integration of many sources of financing of the protection of the natural environment, both the budgetary and the non-budgetary ones. The system comprises activities of many subjects. This ensures an optimisation of decision-making both in terms of investment directions and ecological effectiveness perceived as minimisation of expenditures for a definite ecological effect.

The following subjects are involved in the protection of the environment in Poland:

<ul style="list-style-type: none"> • State Budget • Ecological funds • Banks 	<ul style="list-style-type: none"> • Foundations and agencies • Businesses • Foreign institutions
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The above-mentioned subjects use the following financing tools:

<ul style="list-style-type: none"> • Donations • Preferential credits • Commercial credits 	<ul style="list-style-type: none"> • Internal resources • Equity investments • Foreign assistance
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Capital expenditures for the protection of the environment according to the sources of financing and investor groups are shown in Tables 25.1. and 25.2.

Table 25.1.
Investment expenditures for the protection of the environment
according to sources of financing.

SOURCES OF FINANCING	1997	1998	1999	2000	2001
Total (in millions of PLN, current prices) <i>including: (in % of the total)</i>	7,354.2	9,018.7	8,584.9	6,570.3	6,168.9
Budget (central, of voivodeship, countrys and gminas)	7.6	6.4	5.2	5.4	4.1
Ecological funds	16.9	16.2	24.6	20.0	23.7
Banks (domestic credits and loans)	16.5	12.5	12.9	11.7	12.1
Foundations and agencies incl. expenditures not financed	8.2	7.4	5.2	5.6	5.1
Businesses and gminas (internal resources)	47.0	50.2	46.2	53.4	51.8
Foreign subjects	3.8	7.3	5.9	3.9	3.2
Total (%)	100.0	100.0	100.0	100.0	100.0

Source: Author's own calculations based on GUS, Ochrona Środowiska 2002.

Table 25.2.
Investment expenditures for the protection of the environment
according to investor groups.

INVESTOR GROUPS	1997	1998	1999	2000	2001
Total (in millions of PLN, current prices) <i>including: (in % of the total)</i>	7,354.2	9,018.7	8,584.9	6,570.3	6,168.9
Enterprises	62.4	67.1	62.4	52.3	51.5
Gminas	34.9	31.0	35.5	44.4	46.6
Budgetary units	2.7	1.9	2.1	3.3	1.9
Total (%)	100.0	100.0	100.0	100.0	100.0

Source: Author's own calculations based on GUS, Ochrona Środowiska 2002.

1. The State Budget and the budgets of units of local government

This source is used to finance supra regional investments carried out by the units of local government in the form of grants. Investments in to water economy are financed from this source, too. From the point of view of an investor, budget grants are the most economical ways of financing investments.

2. Ecological funds

The following ecological funds are found in Poland:

- The National Fund for Environmental Protection and Water Management,
- voivodeship funds for environmental protection,
- country funds for environmental protection,
- gmina funds for environmental protection.

These funds operate pursuant to the provisions of the Law of Environmental Protection of 27th April, 2001 (Journal of Law of 20th June, 2002). The National Fund and voivodeship funds for environmental protection and water management have the status of legal persons whereas country and gmina funds do not have the status, therefore the fund means are managed by units of local government.

According to the “polluter pays” principle ecological funds collect means from fees for the use of the environment and fines for exceeding pollution limits. They also collect receipts from undertakings carried out for the benefit of the natural environment and water economy, voluntary payments by enterprises and natural persons, legacies, donations, performance in kind and means from foundations. The following may also be the income of the National and Voivodeship Funds for Environmental Protection and Water Management:

- income from financial operations, especially from shares possessed in companies from interest on loans granted for the implementation of pro-ecological tasks, from interest on bank accounts and deposits, profit from sale and from securities possessed,
- means from bond issue and profits from undertakings carried out for the benefit of the natural environment and water economy,
- other payments and income.

The volume and structure of the funds for natural environment protection and water management in 1998-2001 are shown in Table 25.3.

3. Banks

Most Polish banks have investment credits, including those for ecological undertakings on offer. The following banks have foreign means designed for environmental protection: Bank Rozwoju Eksportu S.A. (BRE S.A.) and Kredyt Bank S.A. These banks have funds obtained from the European Bank for Reconstruction and Development. On the basis of local agreements Bank

Table 25.3.
The volume and structure of natural environment protection and water economy funds.

Specification	1998	1999	2000	2001
	in millions of PLN	in millions of PLN	in millions of PLN	in millions of PLN
Means at disposal	4,050.3	4,321.9	4,615.7	5,266.4
The balance of means at the beginning of year	591.7	1,149.3	832.7	1,287.0
Total receipts:	3,458.6	3,172.6	3,783.0	3,979.4
1. Statutory, inclusive of receipts from:	1,988.8	1,629.2	1,828.4	1692
a) payments, inclusive of those for:	1,695.3	1,436.7	1,413.1	1,288.1
– air pollution	942.3	790.2	761.0	731.9
– sewage discharge	319.1	273.4	299.0	228.7
– water consumption	232.5	184.8	198.8	183.3
– waste material storage	82.3	164.5	153.6	143.2
b) fines for failure to obey regulations of environment protection inclusive of those for:	30.7	21.3	29.1	24.0
– exceeding pollution limits in sewage	17.0	12.4	21.8	17.7
– exceeding the limits of pollutant emission into air	9.1	6.9	4.6	3.8
2. Income surplus of country and gmina funds			53.5	
3. Internal	1,469.8	1,543.4	1,901.1	2,287.4
a) instalment payments	749.1	870.9	1,024.4	1,286.7
b) return of unused grants	1.2	0.8	0.3	
c) loans obtained		0.4	13.3	
d) interest:				
– on loans	375.2	358.4	543.5	535.1
– on at sight vista accounts	40.6	17.6	11.0	
4. On financial operations	169.9	156.2	123.8	
5. Other	133.8	139.1	185.0	
Total expenditures:	2,899.3	3,488.6	3,271.1	3,613.8
Financial assistance for:				
1. Environmental protection	2,571.0	3,087.5	2,903.8	144.7
2. Mining and geological needs	96.7	85.3	88.8	103.2
3. Running costs of activity	78.4	73.9	94.7	
4. Country and gmina fund income surplus transferred to voivodeship funds			53.5	60.9
5. Other	154.2	241.9	183.8	231.8
The end-of-year balance of means	1,151.0	833.3	1,291.3	1,354.0

Source: Author's own calculations based on GUS, Ochrona Środowiska 2001 and 2002.

Table 25.4.
Ecological fund expenditures designed for environmental protection in 2000-2001.

Total funds in thousand PLN	3,114,772.90	4,020,683.4
including:		
1. The National Fund	1,303,631.00	1,964,175.0
2. Voivodeship funds	1,214,553.70	1,431,969.7
3. Country funds	92,023.30	118,143.2
4. Gmina funds	504,564.90	506,395.5

Source: Author's own calculations based on GUS, Ochrona Środowiska 2001 and 2002.

Śląski S.A. and Bank Zachodni WBK S.A. also grant preferential credits. However, the scale of preference credit activity is not significant. The European Bank for Reconstruction and Development has a substantial part in crediting environmental investments of supra regional importance. It finances the investments which require considerable expenditures and are carried out mainly by local government units. Bank Ochrony Środowiska S.A. is a leader in preferential crediting.

4. Foundations and agencies

The following are the foundations and agencies, which finance, in various forms, undertakings in the field of environmental protection:

- The European Fund for the Development of Polish Rural Areas – Counterpart Fund,
- The Foundation for the support of Rural Water Supply,
- The Agency for Agricultural Restructuring and Modernisation,
- EkoFundusz (EcoFund),
- The Foundation for Polish-German Cooperation,
- The Global Environmental Fund (GEF/SGP).

The European Fund for the Development of Polish Rural Areas was established in 1990 as a result of an agreement between the Polish government and the ECC. This fund is designed, among other things, for investments in rural environmental protection.

The Foundation for the support of Rural Water Supply was established in 1987 by the Primate of Poland. Its basic aim is to support the construction

of rural water supply installations and water treatment plants. Its means come from grants of Polish and Foreign foundations and institutions. The results of the Foundation's pro-ecological activity in 2000 by voivodeship are shown in Table 25.5.

Table 25.5.
The effects of the activity of the Foundation for the support of Rural Water Supply in 2000-2001.

Specification	Number						Amount of assistance (in thousands of PLN)	
	of completed investments		including sewage treatment plants given to use		of households connected to sewage systems			
Construction of mini-sewage treatment plants								
	2000	2001	2000	2001	2000	2001	2000	2001
Total of voivodeships	2	2	-	-	137	165	722	450
Lubelskie	-	1	-	-	-	123	-	200
Podlaskie	1	-	-	-	89	-	322	-
Pomorskie	-	1	-	-	-	42	-	250
Wielkopolskie	1	-	-	-	48	-	400	-
Construction of sewage systems and sewage treatment plants								
	2000	2001	2000	2001	2000	2001	2000	2001
Total of voivodeship	20	11	10	3	1,513	1,188	5,081	2,876
Dolnośląskie	1	1	-	-	32	389	163	300
Kujawsko-pomorskie	1	-	1	-	240	-	300	-
Opolskie	-	1	-	1	-	-	-	250
Lubelskie	3	-	2	-	315	-	720	-
Lubuskie	1	-	1	-	40	-	300	-
Łódzkie	1	1	1	-	40	50	392	207
Małopolskie	1	2	1	-	-	172	200	538
Mazowieckie	2	-	1	-	31	-	466	-
Podkarpackie	1	1	-	-	125	25	300	52
Podlaskie	1	-	-	-	97	-	300	-
Pomorskie	1	1	-	1	81	-	200	568
Śląskie	2	1	-	-	293	178	500	300
Świętokrzyskie	1	1	1	-	-	344	300	268
Wielkopolskie	4	2	2	1	219	30	940	393

Source: GUS, Ochrona Środowiska 2001 and 2002.

Table 25.6.
The directions of spending the EcoFund grants in 1998-2001.

Financial aims	1998			1999			2000			2001		
	number of projects	grants		number of projects	grants		number of projects	grants		number of projects	grants	
		in thousands of PLN	in %		in thousands of PLN	in %		in thousands of PLN	in %			
Total	70	91,886	100	109	105,307	100	85	134,220	100	128	151,663	100
The protection of:												
- air	4	15,729	17	3	31,089	30	2	34,065	25	4	24,366	16
- The Baltic Sea	7	26,277	29	12	26,883	26	4	38,779	29	20	24,106	16
- climate	24	29,271	32	38	23,242	22	34	30,204	23	46	67,277	44
- biological variety	34	19,233	21	54	21,688	21	39	24,597	18	52	25,499	17
- waste management	-	-	-	2	2,405	2	6	6,575	5	6	10,415	7

Source: GUS, Ochrona Środowiska 2001 and 2002.

The Agency for Agricultural Restructuring and Modernisation finances, mainly by means of grants, ecological undertakings carried out in rural areas by local government units.

The EkoFundusz (EcoFund) is a foundation established by the Polish Government in 1992 for the management of the financial means that come from the conversion of a part of the foreign debt of the State (the so-called debt eco-conversion) into the support of environmental protection undertakings. The EcoFund is also aimed at facilitation of transfer of best technologies to the Polish market and stimulation of the development of the Polish environmental protection industry. The EcoFund finances various undertakings by means of grants that amount to as much as 80% of the expenditures in the case of environmental protection undertakings.

In 1998-200 Poland received the total of 92.2 million USD as the EcoFund receipts. The eco-conversion pursuant to the agreement with the USA gave the greatest amount, i.e. 72.6 USD. The directions of the grant use in 1998-2001 are shown in Table 25.6.

The Foundation for Polish-German Cooperation gives grants for, among other things, infrastructural projects in the scope of environmental protection. Cooperation with a German partner is necessary for the carrying out of projects.

The Global Environmental Fund (GEF/SGP) started a programme of small grants to support the undertakings that result in an improved state of the natural environment in Poland by means of the protection of biological variety, the use of renewable energy, the application of energy-saving technologies and the protection of water resources.

5. Businesses

All the forms of financial support for pro-ecological undertakings are of a fragmentary character, i.e. they finance only part of expenditures necessary for the implementation of the projects. The projects carried out by businesses, i.e. those profit-oriented, receive support mainly in the form of low-interest credits (preference credits) and rarely in the form of grants. The internal resources of these subjects are therefore the main source of financing environmental protection investments.

3. FOREIGN INSTITUTIONS

These subjects include primarily European Union agencies. The European Union established the following programmes to help financing environmental protection:

- The Phare Programme,
- The ISPA Programme,
- The SAPARD Programme.

Between 1991-2000 Poland received 117.6 million US dollars from the Phare Programme and carried out 138 projects. About 398 million EUR is set aside for the years 2000-2006.

ISPA, 'the European Union Pre-accession Fund', was established pursuant to the Ruling of the Council of Europe of 21st June 1999 as an instrument of the Pre-accession Structural Policy directed to the adjustment of the candidate states to the Community standards in the scope of infrastructure and provision of financial support to the activities in the areas of natural environment and transport.

Pursuant to Art. 1 Section 3 of the Ruling 'the Community assistance provided within the framework of ISPA' should support the aims defined in the Partnership for Membership for each beneficiary state, the national programmes for the improvement of the state of natural environment and the transport infrastructure network'. In April 1999 Poland presented 'The National Programme of Preparation for Membership (NPPC) which contains a timetable of the implementation of priorities and intermediate tasks based on the first version of the Partnership for Membership and also defines the administrative structures and sources of financing indispensable for this aim.

In the environmental sector the assistance from ISPA is earmarked mainly for investments connected with the quality of air, potable water supply, sewage treatment and waste management, whereas in the transport sector, for investments connected with the development and modernisation of transport infrastructure of international importance, particularly the Trans European Transport Network (roads and railways). The amount of the assistance depends on economic indicators i.e. GNP per inhabitant and statistical indices i.e. the area and population of a given country as well as actual shortages in the infrastructure in the sectors of environmental protection and transport.

Only public sector units such as a local government, a self-government organisation, a municipal enterprise or another public subject are eligible to

Table 25.7.
The total amount of foreign assistance in Poland
related to environmental protection.

Region of origin of assistance	Number of projects	Amount Total in millions of USD	Structure	
			in %	
			Total	grants given
Total	508	289.5	100.0	34.0
European Union: PHARE Programme	142	110.1	38.0	80.2
ISPA Fund	—	—	—	—
Belgium	6	2.2	0.8	100.00
Denmark	150	54.4	18.8	70.0
Finland	87	17.4	6.0	100.0
Holland	35	33.3	11.5	97.4
Japan	3	4.4	1.5	100.0
Norway	26	4.7	1.6	100.0
Germany	2	9.4	3.3	100.0
The United States of America	10	36.5	1.0	52.8
Switzerland	3	2.8	4.4	97.7
Sweden	31	12.8	12.6	100.0
Great Britain	13	1.5	0.5	93.8
SCOPE OF WORKS				
Investments	228	191.7	66.2	26.0
— construction of installations and devices				
delivery of measurement, test	36	94.9	32.8	15.1
and monitoring equipment	25	17.1	5.9	100.0
— delivery of technical equipment	145	70.6	24.4	87.2
— working out technical drafts,				
purchase of licenses	22	9.1	3.1	98.9
Pre-investment projects	135	51.5	17.8	89.4
— studies and expert assessments	86	22.4	7.7	94.5
— technological and economic statements	20	15.6	5.4	95.1
— general plans	29	13.5	4.8	97.1
Other projects	145	46.4	16.0	82.1
— related to management and financing	16	5.0	1.7	84.7
— related to training	41	7.8	2.7	64.5
— studies related to monitoring	11	5.0	1.7	87.7
— non-investment deliveries	21	13.4	4.7	97.8
— other interdisciplinary	56	15.2	5.2	79.5

Source: GUS, Ochrona Środowiska 2002.

apply for grants from the ISPA fund, which is a public fund. When spending a public fund means the European Commission must, in accordance with the EU law on the protection of competition, avoid favouring some firms, which would increase the probability of getting support from the ISPA by these units. Poland did not use any means from this program until 2000.

The SAPARD Programme supports agricultural modernisation and the development of rural areas. 168.68 EUR per year is set aside for Poland for the period 2006-2006. The procedure of using the means by particular beneficiaries of the Programme was started in 2002.

There are many more sources in addition to the above-mentioned foreign institutions. However, the assistance given by them is limited most frequently to small undertakings of local character.

The value of foreign assistance received by Poland for environmental protection in 1991-2001 is shown in table 25.7 by area (country) of origin and scope of works.

4. A CHARACTERISTIC OF THE BANK OCHRONY ŚRODOWISKA S.A.

The Bank Ochrony Środowiska S.A. was established on 28th September 1990 as a commercial bank with a distinct mission of financial service of pro-ecological projects. In its commercial activity the Bank follows the rules of eco-development and uses accessible tools, supports the implementation of Poland's ecological policy and simultaneously is an important link in the system of financing pro-ecological investments and in banking system. The founders of Bank were the National Fund for Environmental Protection and Water Management and legal and natural persons working in a widely understood sphere of the protection of the environment. The Bank soon opened outlets in the whole country. At the end of 2001 the Bank had a network of 56 outlets, including 21 branches, 8 sub-branches and 27 agencies. The specific character of the bank and its mission are also determined by the composition of the bank stockholders. At the end of 2001 the National Fund for Environmental Protection and Water Management alongside with the Voivodeship Funds for Environmental Protection and Water Management had the total of over 50% votes. The Bank co-operates with country and gmina funds for the protection of the environment, too. In order to carry out its own mission the Bank employs more than 50 specialists in environmental engineering. They supervise the carrying out of the investment undertakings, which are financed by the Bank.

Table 25.8.
The ranking of the Polish commercial banks in 2002.

No.	Bank	Balance-sheet total net	Internal funds	Financial result net	ROA	ROE	Solvency ratio
1.	PKO BP	84,534.9	4,126.0	721.0	1.8	41.9	13.0
2.	Bank Pekao S.A.	66,722.5	6,409.6	181.8	0.5	6.3	14.8
3.	BPH PBK	42,576.0	4,977.6	93.4	0.4	4.1	16.7
4.	Bank Handlowy	32,704.6	5,864.1	139.6	0.8	5.0	18.2
5.	ING Bank Śląski	27,571.6	2,703.6	132.3	1.0	10.4	12.0
6.	Bank Zachodni WBK	27,018.0	2,416.5	140.6	1.1	13.3	13.1
7.	BRE Bank	24,692.2	1,918.5	-97.4	-0.8	-10.5	11.0
8.	Kredyt Bank	24,603.0	2,092.1	3.2	0.0	0.3	11.2
9.	BIG Bank Gdański	19,311.4	1,510.9	101.0	1.0	14.5	8.0
10.	Bank Gospodarki Żywnościowej	18,698.3	1,037.5	48.0	0.5	9.9	10.2
11.	Raiffeisen Bank Polska	6,923.3	468.4	11.3	0.4	4.9	11.4
12.	Bank Ochrony Środowiska	5,280.9	563.3	26.3	1.0	9.7	14.7
13.	Bank Polskiej Spółdzielczości	4,664.3	238.9	0.7	0.1	no data	13.0
14.	Bank Gospodarstwa Krajowego	4,695.5	202.5	32.1	1.5	21.0	10.6
15.	Fortis Bank Polska	4,160.4	509.3	19.0	0.9	7.8	19.1
16.	Deutsche Bank Polska	3,883.5	no data	no data	no data	no data	23.3
17.	ABN Amro Bank	4,400.6	292.4	29.0	1.5	20.3	18.4
18.	Lucas Bank	3,656.1	240.5	61.1	3.6	48.6	10.8
19.	Górnośląski Bank Gospodarczy	3,313.8	189.3	22.3	2.7	no data	12.4
20.	GE Capital Bank	2,953.1	289.0	34.7	2.4	24.9	10.0
	BOŚ S.A. participation	1.3%	1.6%	1.6%	-	-	-
	Mean value	-	-	-	0.8	10.1	13.6

Source: Authors' own calculations.

The Bank Ochrony Środowiska S.A. is a strong link in Poland's banking system. As far as its own funds are concerned, which amounted to 529.0 million PLN on 30.06.2002, it occupies the 11th place amongst commercial banks. It has a high solvency ratio: 14.7% as of 30.06.2002. The Bank achieves good financial results, too. In the first half-year of 2002 the Bank earned 26.6 million PLN net profit.

According to the 'Gazeta Bankowa' (The Banking Magazine) Bank Ochrony Środowiska S.A. is found on the list of 500 of Greatest Enterprises in Poland. It occupies the 144th place there.

The basic economic indicators characterising the standing of the Bank Ochrony Środowiska S.A. among 20 greatest banks in Poland as of 30.06.2002 are shown in Table 25.8.

The good financial standing and the maintenance of a stable position of the Bank Ochrony Środowiska S.A. in the banking sector were confirmed by a high rating assigned in December 1998 by the Fitch IBCA Rating Agency. In addition, the Bank is included in the group of the greatest ecological companies of Europe, Japan and the USA, which form the NAX index (Nativ-Aktien-Index).¹

The dissemination of ecological ideas in the community together with the increase of financial pro-ecological tasks resulted in employment growth. This additionally contributed to the increased number of agencies serving the customers.

Table 25.9.
Employment in BOŚ S.A. in 1995-2001.

	31.12.1995	31.12.1996	31.12.1997	31.12.1998	31.12.1999	31.12.2000	31.12.2001
Number of employees	897	1,054	1,205	1,430	1,592	1,694	1,740

Source: Authors' own elaboration on the basis of BOŚ S.A. Annual Reports.

As of 31st December 2001 the bank employed 1740 staff, i.e. 46 persons more than in 2000. However, the greatest increase of employment took place in 1998: by 225 of persons. The employment policy was subordinate to the

¹ Annual Report BOŚ SA. (2000). (p. 15). Warsaw: BOŚ.

long-term strategy of bank development, which assumed dynamic growth of the scale of its activity with a simultaneous development of a network of local agencies.

In addition to the increased number of employees the bank consistently tried to implement a policy of strengthening the capital base² by means of re-investment of net profit and new share issues.

In order to increase the number of customers, the Bank Ochrony Środowiska S.A. has developed a promoting activity on a large scale. It contains the medial, publishing, expositional and external advertisement as well as direct selling. Moreover, BOŚ S.A. S.A. is involved in sponsoring and charitable activity, which contributes to the creation of a friendly image of the bank in relation to man and the environment. Among other things it sponsors projects related to social activity, science and education, ecology, culture and art.³

Additionally, along with ecological funds, it opened accounts where money designed for help for flood victims flowed.⁴

In 1995 BOŚ S.A. S.A. began to cooperate with the World Bank in the scope of administering resources of the Global Environmental Facility (GEF). Within the framework of the GEF project a gas boiler-room was put in operation in Cracow, and also Poland's first energy-saving, multi-family block of flats was inhabited.

BOŚ S.A. maintains relations with other banks and foreign institutions, too. It established closer relations with its own equivalent in Austria, the Kommunal Kredit Bank in Vienna. As far as the financing of investment projects related to ecology are concerned, the Bank co-operates with the Exim Bank (Export –Import Bank of the USA). This type of co-operation is aimed at the promotion of BOŚ S.A. on the international market.⁵

The gaining of a new stockholder, the Swedish banking-insurance group SEB (Skandinaviska Enskilda Banken) contributed to the introduction of changes and modernisation of the strategy of management and improvement of sale techniques as well as starting new distribution channels.⁶

² Annual Report BOŚ SA, various years.

³ Raport ekologiczny BOŚ S.A. (2000). (p. 26). Warsaw: BOŚ.

⁴ Piekut, H. (1998). Dotacje NFOŚiGW, EkoFinanse, 5, p. 30.

⁵ Ekos-press. (1999). EkoFinanse, 6, p. 17.

⁶ Raport Roczny BOŚ S.A. (2000). (pp. 4-26). Warsaw: BOŚ.

5. THE COOPERATION OF BANK OCHRONY ŚRODOWISKA S.A. WITH ECOLOGICAL FUNDS

A characteristic feature of BOŚ S.A. is the credit activity targeted at the support of ecological undertakings. Pro-ecological credits are given from the Bank own resources, and also from the resources of the institutions, which co-operate with the Bank. One of these institutions is the National Fund for Environmental Protection and Water Management (NFOŚiGW) which finances the protection of the environment by means of BOŚ S.A. thanks to credit lines. A great interest in this credit offer on the part of small investors, self-governments, gminas and communal institutions resulted in its continuous renewal until today. The management of this undertaking is connected with the fact that the bank has a large number of agencies in Poland, and this facilitates the access to these resources by investors, a better supervision of the carrying out of the tasks and the achievement of significant ecological effects.⁷

A great majority of credits for investments in the protection of the environment is granted on preferential terms. The preference means lower than for commercial credits interest rate and easier terms of credit repayment. The right to preference is connected with the obtainment of definite ecological effects. The scale of preference depends on the concordance of an investment with the priorities of the state ecological policy and on the kind of the borrower. Greater preference is understood as a lower interest rate and more convenient terms of payment than those, which can obtain by non-commercial subjects. Most often these are the units of local government.

Taking into account the objective criterion preferential credits given by the Bank refer to the following spheres:

- the protection of water in the framework of which the construction and modernisation of communal, industrial and rural sewage treatment plants and new technologies to limit water consumption and reduction of sewage quantity are financed,
- water economy in the framework of which the construction of small hydroelectric power stations, the creation of closed circulation of water, the re-usage of water, the purchase of flood devices and the regulation of rivers and streams are financed,

⁷ Ekos-Press. (1999). *Ekofinanse*, 2, p. 7.

- the protection of the atmosphere in the framework of which the purchase and implementation of new devices and technologies restricting the emission of dust and gas pollution, (with special regard to sulphur dioxide and nitrogen oxides), the modernisation of boiler rooms in order to exchange coal fuel for gas or oil fuel, the investments consisting in the use of unconventional sources of energy, and gasification are financed,
- the protection of the earth in the framework of which the reclamation of the earth surface, the safe storage of communal and industrial waste material and the installations for their combustion, the composting and processing aimed at economic utilisation and the implementation of low-waste and waste-free technologies are financed.

The co-operation of the Bank Ochrony Środowiska S.A. with the National (NFOŚiGW) and Voivodeship Funds for Environmental Protection and Water Management (WFOŚiGW) concerns preferential credits for investments connected with the protection of water and of water economics, the protection of the atmosphere, and also of the surface of the Earth⁸.

This type of credits may include⁹ (from point of view of the objective criterion):

- credits from the BOŚ resources and at its own risk with surcharges from the NFOŚiGW and the WFOŚiGW. Both these funds participate in the costs of service of pro-ecological funds by covering the difference between the preferential and commercial interest rates. The right to preference is connected with definite ecological effects to be obtained. Their scale, however, depends on the legal status of the borrower and the compatibility of his policy with the priorities of the State ecological policy,
- credits from the NFOŚiGW and the WFOŚiGW resources at the bank's risk. The decision to give a credit is made by the bank following an approval of an application for preferential credits by these Funds. If the credit is not paid off by the borrower, the bank is obliged to return the amount due to the NFOŚiGW and the WFOŚiGW,
- credits from the NFOŚiGW and the WFOŚiGW resources and at their risk. These credits are granted by the funds but administered by the Bank,
- syndicated credits. They are granted jointly with the NFOŚiGW and the

⁸ Lewandowska, G. (2000). Bank Ochrony Środowiska S.A. – Partnerem w interesach, *Coś o BOŚ*, 2, p. 9.

⁹ *Prospekt emisyjny BOŚ S.A.* (2001). (pp. 262-263). Warsaw: BOŚ.

WFOŚiGW. The Bank plays the role of a leading subject and representative of the consortium. These credits are given on commercial principles in the part concerning the NFOŚiGW and the WFOŚiGW.

The total amount of preferential credits in 1999 grew larger by 13.3 million PLN in relation to 1998, however, at the end of 2000 the Bank could not boast their subsequent increase, because due to the decreased level of indebtedness of these credits from the NFOŚiGW and the WFOŚiGW resources the stocks went down from 41.7%.¹⁰

In addition, BOŚ S.A. also offers pro-ecological credits at a commercial interest rate. These may include:¹¹

- credits for purchasing energy-saving equipment,
- credits for purchasing a car recycling equipment, particularly in disassembly shops
- credits for purchasing electronic weighing systems for facilities connected with waste management,
- credits for modernisation of street lighting in gminas.

In 1999 the Bank began granting credits from its own resources for thermo-modernising undertakings. This term denotes measures taken to reduce energy consumption in buildings. One of the conditions necessary to obtain this credit is the energy audit aimed at a correct specification of the kind of works to be done and benefits to be obtained. BOŚ S.A. was the first bank to sign an agreement with the Bank Gospodarstwa Krajowego and to date has remained a leader in granting this kind of credit. Benefits are connected with very favourable interest rates, which amount to 17.3% p.a. if the credit period is 3 years and 18% p.a. for credits of a longer period.¹²

The following forms of co-operation have been developed during the 10 years of activity:

- service of credits commissioned by ecological funds and financed from the resources of these funds,
- crediting investments indicated by the funds from the resources of the Bank and surcharges to the interest from the funds,
- granting credits in by means of the credit lines actuated by ecological funds.

¹⁰ Prospekt emisyjny BOŚ S.A. (2001), p. 171.

¹¹ Raport Ekologiczny (1999), p. 19.

¹² Kasprzak, G. (2001). Termomodrenizacja z premią, Coś o BOŚ, 6, p. 11.

Table 25.10.
The BOŚ pro-ecological credits in 1997-2001.

Pro-ecological credits	Number					Value in w millions of PLN				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
In cooperation with the National Fund for Environmental Protection and Water Management										
Total	3,449	690	500	297	180	686.5	179.3	151.6	99.0	146.0
Including: the protection of:										
– air	3,048	443	141	64	52	443.1	38.5	6.4	24.3	71.3
– water	207	191	324	196	83	173.7	80.7	137.	61.5	58.6
– earth	56	44	35	36	31	54.1	37.3	8.2	12.8	12.7
– nature	3	2	–	–	–	5.2	20.0	–	–	–
– water economy	34	10	–	1	14	10.3	2.8	–	0.4	3.4
ecological education	1	–	–	–	–	0.1	–	–	–	–
In co-operation with Voivodeship Funds for the Protection of the Environment and Water Economy										
Total	152	1007	1388	729	602	25.6	57.3	56.4	33.3	18.2
Including: the protection of:										
– air	123	951	1353	679	537	8.1	24.8	40.2	23.3	12.4
– water	28	42	27	44	58	15.9	25.9	13.9	8.7	2.1
– earth	1	13	7	5	6	1.6	2.7	2.3	1.1	3.3
water economy	–	1	–	1	1	–	0.3	–	0.2	0.4

Note: In 1997 inclusive of credits for natural persons

Source: GUS, Ochrona Środowiska 2002.

The service of credits commissioned by ecological funds consists in making an assessment of the investment and taking over the financial risk of repayment of the credit. The Bank makes an economic assessment of the borrower in respect of his ability to repay the credit and an assessment of the investment from the formal and legal point of view, and also estimates the possibility to achieve ecological effects. Having granted the credit, the Bank supervises its correct utilisation, including the carrying out of the investment in technological and ecological respects. The financial means for these credits are assured by ecological funds. They are activated in the mode of payment of invoices made by the performers of an investment or suppliers of machines and devices. The concordance of the invoices with the actual state of affairs is confirmed by a bank employee who is specialist in

environmental engineering. Therefore, a control of the utilisation of public resources is assured.

The quantity and value of pro-ecological credits of given by the Bank Ochrony Środowiska S.A. in 1997-2001 are shown in Table 25.10.

The territorial distribution of credits given by the Bank for the protection of the environment presents itself interestingly. In 2000 the greatest value of credits was given in the following voivodeships: Mazowieckie, Zachodniopomorskie, Wielkopolskie and Łódzkie. These four voivodeships were given more than 50% of the total value of the credits given. In 2001 the majority of credits (in terms of value) were given in the Pomorskie and Kujawsko-Pomorskie voivodeships.

The pro-ecological credits given by the Bank Ochrony Środowiska S.A. by voivodeship in 2000-2001 are shown in Table 25.11.

Table 25.11.
Pro-ecological credits given by BOŚ
by the territorial criterion in 2000-2001.

Voivodeships	Total				Including:							
	Number of credits		Value in millions of PLN		Air protection				Water protection			
					Number of credits		Value in millions of PLN		Number of credits		Value in millions of PLN	
	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001
Poland	1,074	782	132.4	164.2	743	589	47.6	83.7	288	141	70.3	60.6
Dolnośląskie	73	37	1.2	0.7	64	27	0.6	0.4	8	9	0.1	0.1
Kujawsko-pomorskie	67	42	5.8	42.5	54	32	2.0	0.5	7	5	1.5	40.4
Lubelskie	26	14	7.1	2.5	1	5	0.0	1.4	20	5	6.5	0.5
Lubuskie	5	1	1.2	0.4	1	-	0.0	-	2	-	0.6	-
Łódzkie	123	101	10.3	4.6	93	61	4.3	2.1	30	39	6.0	2.1
Małopolskie	86	23	8.8	5.2	8	3	0.4	0.4	74	13	6.3	3.6
Mazowieckie	46	14	22.5	1.9	6	7	3.9	0.3	36	3	15.7	0.5
Opolskie	204	122	4.1	2.0	199	119	2.9	2.0	3	3	1.0	0.0
Podkarpackie	23	3	4.9	1.2	9	-	0.5	-	14	-	4.4	-
Podlaskie	19	18	4.6	4.9	12	9	2.3	0.2	6	5	1.3	0.3
Pomorskie	24	18	9.0	69.8	10	10	4.1	68.6	12	7	4.9	0.7
Śląskie	161	232	9.2	13.5	140	204	5.8	4.4	17	21	2.4	5.4
Świętokrzyskie	5	5	0.7	0.9	-	-	-	-	5	4	0.7	0.3
Warmińsko-mazurskie	41	39	7.5	6.5	14	18	1.2	1.7	1	12	3.0	3.0
Wielkopolskie	68	16	17.5	4.5	36	2	4.1	0.2	32	12	13.4	3.6
Zachodniopomorskie	103	97	18.0	3.2	96	92	15.5	1.6	7	3	2.5	0.0

Source: GUS, Ochrona Środowiska 2001.

Giving credits with surcharges to the interest from funds is the most desirable form of co-operation of the funds with the Bank from the point of view the benefits for the protection of the environment. The essence of these benefits consists in the utilisation of the effect of 'the financial leverage'. If this form of financing pro-ecological investments is applied, the bank engages its own resources.

The resources of ecological funds are designed to cover part of the credit interest. Such a credit is of preferential character for the borrower who pays the interest from the credit lower than the borrowers drawing credits for purposes not related with the protection of the environment.

An example of a credit granted

Let's make the following assumptions to illustrate the effect of the "financial lever":

- the commercial credit interest rate is 10%,
- the average crediting period for pro-ecological investments is 5 years,
- the amortisation of credits made by ecological funds is 30% of the credit amount,
- the grants of ecological funds constitute 30% of the investment estimate value,
- the preferential interest on credits for pro-ecological purposes is 0.5 commercial rate,
- the credit volume of the ecological fund is 20 millions PLN p.a.,
- the average amount of preferential credit is 2 millions of PLN.

Making the above assumption we can calculate that the fund can give 10 credits annually from its own resources. If surcharges are taken into account, the value of credits multiplies.

Let's assume, for simplicity, that the fund will 1 million zlotys for interest surcharges.

Using the following formula: credit yield = credit × interest on credit

it is possible to determine the grantable amount of credit with surcharges applied.

$$1,000,000 = (x) \text{ credit amount} \times 5\%$$

$$x) \text{ credit amount} = \frac{1,000,000}{0.05} = 20,000,000 \text{ PLN}$$

$$\text{credit amount} = 20,000,000 \text{ PLN}$$

Adding the credit amount to the remaining amount we get:

$$19,000,000 + 20,000,000 = 39,000,000.$$

By applying surcharges both the number and value of credits can be increased.

In our example the number of projects carried out grew from 10 to 20, while the credit amount increased from 20 million PLN to 39 million PLN.

Taking into account the fact that in Poland the National Fund for the Protection of the Environment and Water Management and 16 Voivodeship Funds for the Protection of the Environment and Water Economy are operating, then taking the above assumptions, the possibilities to credit pro-ecological investments are:

$$17 \times 39,000,000 = 663,000,000 \text{ PLN.}$$

In the example presented it is a significant amount on the scale of the whole country. With falling interest rates, the credit depth may proportionally grow at the same surcharge amount. It is essential to assume that ecological funds use various forms of grants and loan amortisation as a surcharge to the interest rate is a form of grant of amortisation.

Surcharges at 1,000,000 PLN per annum from each of the 16 Voivodeship Fund for Environmental Protection and Water Management constitute about 2.5% of their income from fees for the economic utilisation of the environment and fines for failing to observe standards. In spite of undoubted benefits, the application of the 'financial lever' has little significance in the financing of the protection of the environment. In 2000 the Bank Ochrony Środowiska S.A. granted only 364 credits of the total value of 21.3 million PLN from its own resources with the surcharges from the voivodeship funds for the protection of the environment and water economy.

A form similar to credits is the **issuance of industrial revenue bonds with surcharges to the interest**. It enables the application of the 'financial lever' in the case of financing communal investments from the resources collected from bond issuance. The bank is an agent of this issuance whereas the fund pays extra to the bond interest. The costs of this kind of financing with surcharges are slightly lower compared to when drawing credits.

Giving credits within the framework of credit lines consists in financing small investments. Here the bank makes decisions individually, acting strictly according to the rules established by ecological funds. The credit lines operating in 2001 related to the following kinds of investments:

- the construction of small and mini sewage treatment plants,
- the construction of sewage piping,
- the construction or modernisation of water treatment plants,
- waste management,
- the utilisation of renewable sources of electric and thermal energy,
- the adaptation of public transport buses to gas fuel and the purchase of gas combustion engines.

The Bank Ochrony Środowiska S.A. co-operates also with the European Fund for the Development of Polish Rural Areas 'Counterpart Fund' and with the 'M. Rataj Polish Village 2000' Foundation.¹³ The range of this co-operation is small, however. In 2000 the Bank Ochrony Środowiska S.A. gave 15 credits of the value of 2.2 million PLN from the resources of the European Fund for the Development of the Polish Rural Areas and 6 credits of the value of 0.2 million PLN from the resources of the 'Polish Village' Foundation.

6. OTHER FORMS OF PRO-ECOLOGICAL ACTIVITY OF THE BANK OCHRONY ŚRODOWISKA S.A.

In addition to the characterised manifestations of the activity, the BOŚ S.A. also carries out an investment – oriented activity directed to pro-ecological undertakings. It is managed indirectly by the bank and indirectly by the BOŚ S.A. brokerage house. Since January 1995 the BOŚ S.A. brokerage house has been a member of GPW S.A. (Warsaw Stock Exchange), KDPW S.A., CeTO S.A. (OTC) and Chamber of Brokerage Houses.

The investment – activity of the Bank consists of: organisation and service of industrial bond issue, commercial securities of firms, restructuring of enterprises and services, advising on financing of ecological undertakings.

At the end 1998 the BOŚ S.A. Brokerage House was in the lead amongst broker firms as regards the turnover in the GPW (Warsaw Stock Exchange). The company is also one of the most active subjects on a newly established market of short-term contracts.

One of the most prominent products of BOŚ S.A. is a bond. This was one of the first bank bonds and the first convertible bond in the post-war Poland. Its issuance was aimed at gain monies for an increased credit activity of the bank in the area of the protection of the environment as well as encouragement to purchase the bank stocks.¹⁴

Since November 1995 BOŚ S.A. has actively participated in the market of industrial revenue bond issue. After winning an auction for the town of Tarnobrzeg and the gmina of Niepołomice bond issue it became Poland's

¹³ *Prospekt emisyjny BOŚ S.A.* (2001). (p. 144). Warsaw: BOŚ.

¹⁴ Dziawgo, L. (1997). *Papiery wartościowe w ochronie środowiska* (p. 145). Toruń: TNOiK.

first organiser of industrial revenue bond issue selected according to the law of public procurement.¹⁵

Besides, BOŚ S.A. was also involved in the leasing activity. In order to meet the needs, the bank proposed new financial services: redemption of leasing liabilities and leasing. As a consequence of such an activity a limited liability company "EKOLEASING" was established. The company specialises in the leasing of machines and of devices serving the protection of natural environment e.g. of electro-filters, generators and wind mini power stations.¹⁶

As far as investment is concerned, BOŚ S.A. plans further increase of engagement of the bank into stocks and shares of other subjects, strengthening the capital group and also an expected investment of purchase of stocks of subjects operating on the insurance market and of other investment funds, too.

7. THE EFFECTS OF THE BANK ACTIVITY

Since the beginning of its own activity the Bank Ochrony Środowiska S.A. has been an important link in system of financing the protection of the environment in Poland. The system which operated in the early 1990s and was based on the non-returnable manner of financing, was enriched by a more effective way spending resources in form of credits offered by the Bank.

The importance of the Bank in the financing of the protection of the environment is depicted by the participation of the value of pro-ecological credits given in the total outlays on the protection of the environment in Poland. In mid nineties this participation was about 10%. In the following years, after the inclusion of "integrated investments" in 1996 in the protection of the environment, the participation of the Bank decreased.¹⁷

In the year 2000 investment outlays for the protection of the environment in Poland amounted 6.6 billion PLN, while the amount of credits paid by BOŚ S.A for the same purposes amounted to 401 million PLN, which was more than 6 % of national outlays. In 2001, however, the assistance means for the protection went down a little to the level of 6.2 billion PLN and constituted about 4.8 % of the total public pro-ecological outlays.

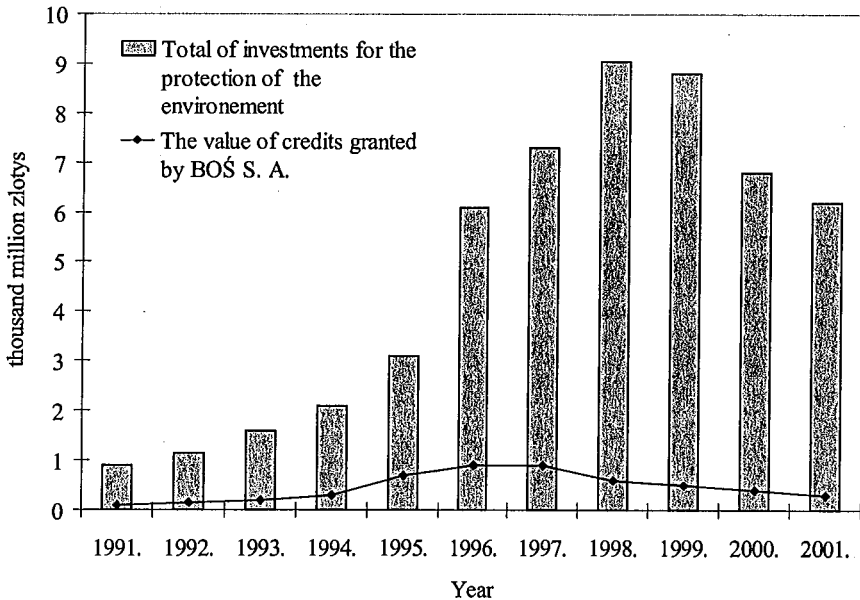
¹⁵ Dziawgo 145.

¹⁶ Zierkiewicz, J. (1997). Leasing a bank, *Leasing*, 4, p. 17.

¹⁷ Integrated investments denote the undertakings where ecological effects are not the sole purpose of the investments.

Chart 25.1.

Outlays for the protection of the environment and values of pro-ecological credits paid by BOŚ S.A. in 1991-2001.



Source: GUS, *Ochrona Środowiska 2001*.

Table 25.12.

The BOŚ S.A. part in the outlays for the protection of the environment in Poland (in thousands of PLN).

Years	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total outlays	913	1,152	1,628	2,137	3,171	6,138	7,354	9,019	8,585	6,570	6,200
Credit value	109	151	211	330	701	907	919	623	545	401	297
Participation of BOŚ S.A. credits in total outlays in %	12	13	13	15.4	22	14.8	12.5	6.9	6.3	6.1	4.8

Source: Authors' own calculations based on GUS, *Ochrona Środowiska 2001*.

A measurable improvement of the state of the environment was an ecological effect of the investments credited by the Bank Ochrony Środowiska S.A. in the examined years. The practical results of the assistance given by the Bank Ochrony Środowiska S.A. are represented in Table 25.13.

Table 25.13.
The ecological effects of the investments credited
by BOŚ S.A. in years 1991-2001.

Period	Emission reduction (Mg/year)			Sewage treatment plant capacity (in m ³ /d)	Length of sewage piping network (km)	Capacity of waste site
	Dusts	SO ₂	NO _x			
1991-1993	14,000	4,600	no data	432,000	189	561
1994	25,000	10,000	78	211,211	102	592
1995	10,360	3,200	5,500	258,613	347	2,400
1996	17,980	165,217	5,890	150,631	796	1,604
1997	27,210	132,521	6,571	287,302	627	3,233
1998	10,314	35,922	1,769	311,619	434	2,140
1999	10,491	37,880	1,140	294,134	394	1,014
2000	4,486	4,240	294	148,026	624	880
2001	1,394	419	120	221,014	369	1,452
Total	121,235	393,999	21,362	2,314,558	3,882	13,876

Source: BOŚ S.A. Raport roczny 2001

8. CONCLUSION

The dynamic development of the Bank Ochrony Środowiska S.A. observed over the past eleven years testifies about increased ecological consciousness of the representatives of the public authorities and of common people, both in cities and in villages. The needs of the economy and the economic calculation indicate a necessity to take into account the amount of alternative costs connected with a negligence of the role of the environment.

In spite of the still existing failures and harms caused by irrational exploitation of natural resources in Poland, indications of improvement of the

situation in the protection of the environment is noticeable at present. And the Bank Ochrony Środowiska S.A. has its undeniable participation in it and a market success.

Aware that there is still much to be done, we trust that the Bank will continue to be the 'ecological leader'.

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Editorial Board

Leszek Dziawgo, Prof. of Nicholas Copernicus University, UMK, PhD, post-doctoral degree holder (habilitation) and Danuta Dziawgo, PhD.



Both are associated with the Faculty of Economic Sciences and Management, Nicholas Copernicus University. Authors and co-authors of many books and science and popular science articles. They have conducted several research projects, including those financed by the Polish Committee for Scientific Research. They did research work in Poland and abroad, among others in Germany, Switzerland, Sweden, Japan, Austria, Great Britain and the United States.

The team of authors

The team of authors is composed of excellent specialists from Poland, Great Britain, Germany, Switzerland and Japan. Co-operation between the circles of theoreticians and practitioners should become closer in order to meet the challenges of today.

There are two doctors Honoris Causa of Nicholas Copernicus University are on the team.

The subject of the book

Undoubtedly, the international financial market is subject to “**ecological**” **pressure** in the positive sense of the word. It seems that at present a process of adaptation of financial institutions to the functioning in the society which respects the requirements of natural environment protection takes place. Numerous symptoms of a positive influence of environmental protection on the functioning of financial institutions have already been observed in many countries and in Poland as well.

We are keenly interested in leaving future generations a more sustainable world to live in



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