

SECURITY IN THE INVESTMENT MANAGEMENT COMPANY ORGANICALLY IN THE POLISH EXAMPLE. SELECTED ISSUES

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Abstract

This work is an analysis and an attempt to answer the thesis that the current financial crisis created the need for coordination of the financial policy of companies, including the theory of sustained development. It is a continuation of the research conducted within the framework of the research project in cooperation with the European Business Club. The main aim of the Author is to analyse the main trends in sustained development, with a special focus on social liability of business [Przybytniowski, J.W., 2003, 2008, 2009, 2010, 2011, 2012; Przybytniowski, J.W., Stasch, A., 2012].

Key words: ecology, sustained development, ecological safety, damage, insurance

Abstrakt

Opracowanie ma charakter analizy i odpowiedzenie na tezę iż obecny kryzys finansowy stworzył potrzebę koordynacji polityki finansowej przedsiębiorstw z uwzględnieniem teorii zrównoważonego rozwoju. Jest kontynuacją badań prowadzonych w ramach projektu badawczego we współpracy z European Business Club. Podstawowym celem Autora jest analiza głównych kierunków zmian w zakresie funkcjonowania zrównoważonego rozwoju, ze szczególnym uwzględnieniem społecznej odpowiedzialności biznesu. [Przybytniowski, JW, 2003, 2008, 2009, 2010, 2011, 2012; Przybytniowski, J.W, Stasch, A. , 2012].

Słowa kluczowe: ekologia, zrównoważony rozwój, bezpieczeństwo ekologiczne, szkoda, ubezpieczenie

Introduction

Contemporary companies face the key problem of environmental protection. The changing economic conditions and social expectations cause that a company, beside its financial, production and marketing aspects, is forced to set targets in the area of environmental protection. The protection of the environment is becoming a field in which the need for investment in company operations is also growing. The requirements of environment quality are increasing, as well. They refer also to the ecological aspects of company operations, as the basic areas of its activity are facing the problems of environmental protection. It is happening while the provisions and

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acts of law controlling the use of environment are increasing [Journal of Laws No. 62, item 627, with later amendments], the ecological awareness of the society is growing, the value of technology and products in compliance with ecological requirements is rising, the competitiveness of companies and the necessity to adapt to the European market needs are increasing. The main aim of this article is to analyze the awareness of potential threats to the environment, ecological investments in a company and the cost of restoring the polluted environment to its original state, as well as the importance of business insurance as a method of reducing the risk of ecological damage [Przybytniowski, Stasch, 2012]. This article is an analysis and an attempt to answer the thesis that the current financial crisis created the need for coordination of the financial policy of companies, including the theory of sustainable development. It is a continuation of the research conducted within the framework of the research project in cooperation with the European Business Club. The main aim of the Author is to analyze the main trends in sustained development, with a special focus on social liability of business.

1. Specificity of ecological investment decisions in a company

According to Central Statistical Office, investment in environmental protection differs from the concept of investment in the balance sheet law. Until 2001 Central Statistical Office listed investment expenditure on environmental protection, however, since 2002 it has been using the category of expenditure on environmental protection, while these concepts do not differ from each other. Investment expenditure is either financial expenses or expenses on tangible assets, the purpose of which is to create new fixed assets or improve the existing fixed assets, as well as expenses on the so-called initial investment [*Central Statistical Office (GUS)*, 2003]. Investment in this meaning does not include all the titles mentioned in the Accounting Act – it does not include land and land rights.

Investment in environmental protection can be of two types:

- 1) „end-of-pipe” investment – its specificity is the reduction or neutralization of pollutants created during the production process. Such investment does not reduce the amount of produced pollutants but limits their negative consequences, and is undertaken mainly in the public sector.
- 2) „integrated” investment – is a part of the production process, it reduces and changes at its very source the quality of produced pollutants into more environmentally-friendly ones (cleaner production effect).

Both of these types of investment in environmental protection will be acquired from certain fixed assets assigned for investment purposes. These assets can be connected with three environment components: water protection, land protection and air protection.

In order to improve the natural environment there are, first of all, investment projects, but also organizational and technical measures, e.g.:

- 1) Changes in technology,
- 2) Change of fuels,
- 3) Fitting protective equipment,
- 4) Systems of registering and controlling the state of the environment.

Both “end-of-pipe” and “integrated” investments improve the state of the natural environment. However, according to the principle of liquidating pollution at its source, while choosing a method of environmental protection, it is now preferred to use the methods which, firstly, prevent emissions, then recycle and, finally, the third one, neutralize pollution.

Ecological risk [Maśniak, 2003; Mayers, Smith, 2010, Przybytniowski, 2012; Przybytniowski, Stasch, 2012] results from the lack of knowledge about the future of investment projects which a given entity wants to realize. Predicting the results for the natural environment which will result from new projects seems an additional aspect of the uncertainty. This uncertainty can arise from unawareness of basic processes occurring in the environment as well as long-term effects of changes which appear in this environment. It is also impossible to make a precise assessment of loss and profit which may appear in the natural environment. Ecological risk can be analyzed from the point of view of the following criteria:

1. Time of risk occurrence;
2. Sources of risk;
3. Problem areas of the natural environment;
4. Spheres of company activity which cause threat to the natural environment;
5. Risk of financing pro-ecological investment [Doś, 2007].

The problem of risk is the most important at the first stage of an investment project, due to the fact that investment decisions taken refer to the future which cannot be predicted with complete certainty. The success of an investment project will depend on the quality of work done and decisions taken [Burzyńska, Fila, 2007].

2. Company competitiveness in terms of its pro-environmental operations

Using modern principles of management is not only the expression of ecological awareness of companies but also an instrument of competition. The fact that companies use environmental systems contributes to improving the company market image, but also facilitates creating its market position. The interests of customers, receivers of manufactured goods, turn towards healthy and safe products, packed in recyclable packaging, and even with the use of new pro-ecological technologies.

The changing economic conditions and social expectations cause that, apart from production, financial and marketing aspects of company management, there are environmental protection goals set, and even human life and health ones, as well. Due to a number of factors referring to ecological hazard, companies face problems of liability for the natural environment. Looking for ways to modify manufacturing processes, or to change them, can definitely contribute to improvements in environmental protection and improve the company market position, as well. It is thought that companies more and more substantially decide to integrate with the natural environment through technologies and products meeting ecological requirements [Penc, 1999].

The basic reasons influencing company ecological activity are, first of all:

1. Growing number of provisions and acts concerning the regulation for a user and of environmental protection;
2. Growing ecological awareness of the society;

3. Increasing social pressure to improve the quality of the environment and increasing ecological requirements of consumers;
4. Decreasing interest in technologies and products non-compliant to ecological requirements;
5. Necessity to adapt to the requirements of the European market, compliant to certain standards;
6. Growing field of action to gain profits and a favorable position in the business environment, including ecological development.

Company ecological development means choosing a strategy and building such structures and culture that environmental protection could integrate with all its functions and tasks. Careful calculation requires working out proper scenarios. While preparing definite actions, you can use any ways to improve production processes in terms of environmental protection – offensive strategy. A company can look for new technologies to meet environmental demands – innovative strategy. It can also remove from the market certain products and technologies which do not meet ecological criteria – defensive strategy. A company can also undertake action to comply strictly with the provisions of law so as not to be exposed to penalties – passive strategy.

Company ecologization is a process which leads to the improvement of environmental parameters of company operations, to its permanent and ecological sustainable development, and, in particular, to:

1. Decrease environmental inconvenience of goods and services offered by a company;
2. Include environmental protection requirements and the rational management of its resources at all stages of its functioning, including the process of supplies and materials acquisition for its own production, and the post-production and/or post-consumption stage of its product function.

Company ecologization means introducing certain changes in a company, which will influence its impact on the environment. Competitive advantage gained as a result of pro-ecological activities and behaviors implemented in a company, is important as an element of competitiveness only when:

- 1) certain conditions and ways of external cost accounting and internalization are established,
- 2) conditions for common and effective execution of obligations for using the environment are created,
- 3) ecological awareness of the society, connected with the change of customer preferences and models, grows.

Potential benefits of ecological operations include:

- 1) reaching the market cost advantage resulting from the increase in company economic effectiveness after the reduction of costs connected with the use of the environment,
- 2) reaching the product advantage resulting from the growth in product quality and attractiveness, and the increase in customer satisfaction and trust in a company.

The image of an environmentally-friendly company holds a more and more important place in maintaining a highly competitive market position, as well as in the process of building a long-term market strategy of competitive advantage. Spreading

systems of environment management has a great share in creating the attitudes of environmental competitiveness. [Burzyńska, Fila, 2007].

3. The assessment of economic effectiveness of an investment project in renewable energy sector on an example of a biomass heating station. (Case Study)

The aim of the project is to produce and distribute heat coming from RES which is straw and, thus, reduce the emission of air pollutants in the area. This investment project is located in a small town in the Zachodniopomorskie Voivodeship. The commune is of eminently rural character – arable land constitutes 48% of the commune area, which in long-term perspective will ensure stable straw supply for the heating station. The investment project consists of a boiler-house of 4 MW of power with an alternative heat source of 1 MW of power, fuel storage area and a heat transmission pipeline of the total length of 2 km, together with 5 heat exchangers. Ultimately the heating station is to heat about 90% of all the municipal and cooperative stock of the town. Industrial plants are an additional group of receivers however, considering the stability of heat reception, the calculation takes into account only municipal and cooperative receivers. The total heating area is 26970 m², which gives ca 75000 m³. The average annual heat production is estimated at 20227,5 GJ, straw intake of 2000 t. pa. Revenue calculation accounts for the income from heat and warm water sales, the income from ordered capacity, fixed and variable grid fees for heat transmission services and from subscription fees. The calculation of heat and warm water prices is based on the investor's data. It is the amount of Gross 25.38 PLN/GJ and Gross 15.25 PLN/m³, respectively. The cost of acquiring pressed straw is assumed at 120 PLN/t, as in the investor's data. The investment project is financed from four sources: investor's own resources, EkoFund subsidy, preferential credit from WFOŚiGW in Szczecin and Contractor's trade credit.

In order to assess the financial performance of the investment project, there was a cash flow statement prepared from the company point of view (Table 4), on the basis of the investor's data. The lifecycle of the heating station was established for 15 years, i.e. period of depreciation of boilers - basic fixed assets of the venture. The forecast does not include changes in the net working capital because in case of this kind of venture they are not of vital significance. To calculate the project NPV, the discount rate at 8.43% has been adopted. The project financial performance has been confirmed: NPV amounts to 291.132 PLN, PI ratio equals 1,13, whereas IRR is at 10,62%. The PP amounts to 7.2 years, while DPB is 11.9 years. It is indicated that financial performance indicators include the preferences in terms of financing sources, created by the state. This venture is not profitable without such support as a preferential credit or subsidy, amounting to 74.5% of investment outlays. Performance indicators are as follows: NPV equals 1,001,352 PLN, PI ratio stands at 0,72, while IRR amounts to 3,43%. PP is 11.5 years, whereas DPB indicated that the outlays will not pay back during the lifecycle of the project.

The next step of the analysis is to prepare the Cash Flow Statement from the society's point of view and assess the economic performance of the venture. The following corrections have been made:

- 1) The impact of those elements of the cash flow which include transfers has been eliminated. There are two transfers identified: income tax and subsidy (The Profit and Loss Account does not include indirect taxes);
- 2) The amount of cash flow has been corrected by the value of external effects. The identified external benefits of the project are its contribution to improving the quality of air in the atmosphere. Project realization will contribute to a significant reduction of CO₂ and SO₂ emissions, and dust, in relations to the sources of heat used so far. The assessment of external environmental benefits of the project was based on the assessment of loss avoided by replacing the energy generated from fossil fuels with energy ecologically cleaner. Economic performance will be evaluated using the estimated unit environmental benefits of energy produced from renewable sources on the basis of the Contingent Valuation Method (CVM) - 2,01 PLN/GJ and an alternative assessment - 28,61 PLN/GJ, for the evaluation based on ExternE methodology.

The estimation of external costs has been omitted since the emission of pollutants from straw incineration is very low, and the exhaust outflow from the incinerator is fitted with a dust collector of 95% capacity and a chimney 20 m high.

- 3) Important possible corrections of market prices concern the heat selling price and the cost of straw acquisition. However, no significant price variations have been found between the prices set in the financial statement and the cost-effective prices reflecting the social value of the goods.
- 4) To calculate ENPV of the venture, the social discount rate has been adopted at 5.5%, recommended by the EC, and alternatively at 3%, recommended by EPA.

In a comparative evaluation, applying the assessment of environmental benefits at the lowest level, i.e. 2.01 PLN/GJ, and a higher social discount rate at 5.5%, the economic performance has been proven, although it is at a low level: ENPV amounts to 185,184 PLN, B/C indicator at 1,05, whereas ERR equals 6,26%. PP is 9.5 years and DPB – 13.9 years. While applying a lower social discount rate at 3%, the level recommended by EPA, the venture shows much higher economic performance: ENPV stands at 906,126 PLN, B/C indicator amounts to 1.25, while DPB – 11.4 years. It needs emphasizing that the venture is not financially effective without the support of the state (NPV -1 001.352 PLN, PI 0.72, IRR 3.43%).

The alternative cost-effective calculation adopting the assessment of environmental benefits at the level of 28.61 PLN/GJ, based on the ExternE methodology, indicated a much higher economic performance of the venture. While applying a higher social discount rate at 5.5%: ENPV amounts to 5,646,995 PLN, B/C indicator stands at 2.56, whereas ERR equals 24.54%. PP amounts to 3.9 years and DPB 4.5 years. While applying the social discount rate at 3%: ENPV amounts to 7,401,989 PLN, B/C indicator stands at 3.04, whereas DPB equals 4.2 years [Ligus, 2010].

4. Ecological insurance – market experience

We realize how important an insurance agreement is when damage occurs. Looking at market experience in insuring against ecological risks [Korzeniowski, 2002], the damage (fire) which happened in a Lithuanian refinery of Mazėikių is a good example. As a result of the fire the fixed property of the company became

significantly depleted. For a long period of time the plant worked at lower capacity, which brought a loss in its possibilities to make a planned profit, as well as, due to the damage, some petroleum-derived products leaked out in the area of 800mkw and caught fire and Mazøeikiuø Nafta spent quite a lot of its resources to eliminate damages occurring in the natural environment. Mazøeikiuø Nafta was insured in three British companies - Liberty International Underwriters, AIG Europe Limited and SCOR UK Company Limited. It is not known, however, what the insurance cover was and for which amount the insurance agreement had been executed. The Lithuanian refinery reported that the company loss reached over 40 mln dollars, however the projected Net profit of the company in the year of disaster was lower by 38 mln dollars. In addition, after the fire the refinery in Mazøeikiuø underwent three stages of reconstruction, before it returned to its normal operations. About nine months had to pass before Mazøeikiuø reached the same production level as before the fire.

Analyzing the insurer's statistics, such great disasters, bringing millions of losses, happen relatively seldom in industrial plants [Przybytniowski, Stasch, 2012b]. In Poland, the latest well-known damage, estimated at over 100 mln PLN, happened in the energy sector – in Turów Power Plant and in Kraków Heat and Power Plant.

For years it is standard to offer insurance in case of personal or property damage to the third party, which arise from negative impact on the environment. Where we deal with an injured party and where there can be claims reported, insurers offer civil liability insurance in connection with business activity conducted, including also the liability connected with its negative impact on the environment [compare: Przybytniowski, 2012, Przybytniowski, Stasch, 2012b].

Conclusion:

1. The resources of the natural environment are fundamental to economic activity. Proper economic expansion creates conditions for their appropriate use.
2. The appearance and evolution of problems of environmental pollution in the theory of economy caused more attention to be paid to the concept and structure of natural resources. Ecological problems are considered both in terms of the exhaustibility of natural resources and in terms of the impact of human investment ventures on the environment.
3. Gaining competitive advantage in terms of pro-environmental investment is now becoming more and more important. The size and character of the advantage gained determines both the possibilities of improving the economic and financial performance and the level of independence from competitors.
4. Considering ecological constraints upon company operations and implementing pro-environmental measures need to be treated today as a potential source of economic benefits for the company. The new philosophy of company operation, oriented at modern ecological instruments will be predominant in the next years.
5. In terms of economics, ecological responsibility consists in encouraging entrepreneurs who are potentially ecologically harmful, to take prevention-related decisions, i.e. to take ecological responsibility as an economic instrument for environmental protection.

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