The risk in the aspect of the arrangement of financial strategies of Polish coal-mines – selected theoretical and practical problems

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Abstract

Business activities of production companies can be financed in a number of ways. So far the coal mining industry in Poland has not been privatised, and consequently coal mines, unlike typical commercial companies, aren't able to use numerous financial instruments and ways of raising capital. Therefore, the key aim of this paper is to discuss the financing opportunities of coal mining companies in Poland. In particular, the paper deals with the aspects connected with formulation of financial strategies for coal mines, with focus on related risks.

Key words

Financial strategies, sources of financing, risk, cost of capital, coal mines, Poland

1 Introduction

Risks in the coal mining industry may concern their investment, financial and operating activities. In particular, the issue worth consideration is the risk related to financing of coal mining companies, as this is a current problem in Poland due to the global financial crisis. (The crisis has also affected the coal mining industry in Poland. It incurred substantial losses as a result of disadvantageous trends in the Polish economy and, in many cases, wrong financial decisions made by management boards of some coal mining companies). A number of coal mining companies have started to report negative performance figures, largely due to a drop in coal prices. (The companies that deal with coal mine production in Poland are Jastrzębska Spółka Węglowa S.A., Kompania Węglowa S.A., Katowicki Holding Węglowy S.A.). This primarily concerns Jastrzębska Spółka Węglowa S.A, which produces coking coal. Kompania Węglowa S.A., in turn, generated the net profit of PLN 18.4 million [1] for the period from 1 January to 31 July 2009, i.e. this company's resources comprise higher quality coal, for which the selling prices on the global markets still remain favourable. Negative trends, however, prevail in the Polish coal mining sector. Due to the economic downturn, the global recession and a growing risk of conducting business activities in the industry, coal mining companies are left with reduced financing opportunities. There's a shortage of funds for projects and modernization of the Polish coal mining sector. A fall in revenues from sales of coal has brought about a need to look for new solutions concerning the sources of finance for these companies. (In the Polish coal mining industry revenues from sales are the key source of finance for day-to-day operations of these business entities).

This paper aims at discussing the issues mentioned above and, in particular, the problems related to formulation of appropriate financial strategies, which may be applied in the coal mining sector.

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2 Risk and opportunities of financing the activities of coal-mines

Practically, there are a variety of ways in which coal mines can finance their activities. However, such significant solutions as, for instance, the issue of shares on the Warsaw Stock Exchange or the issue of other financial instruments, i.e. bonds, in order to raise funds for financing of investments in the coal mining industry aren't available for these companies. (Although, in Poland attempts have been made by one of the coal mining companies named above to issue so-called 'coal bonds', but this isn't a commonly used source of capital). It should be noted that any decision on the selection of the source of finance for a company or a specific project in this company should take into consideration two important aspects, i.e. capital acquisition costs and risks related to acquisition of capital from a specific source. An important point here is also availability of the given funds. In general, the cost of capital is the price that a coal mine is willing to pay in order to be able to use this capital. For a capital provider, in turn, this price is regarded as a rate of return, which is expected for lending the capital. Both the capital provider and the recipient also calculate the risks in this area. There may be different types of risks related to financing of coal mining companies. It should also be noted that the risks related to financing of a coal mining company should be looked upon from the angle of the financial risk category. According to T.T. Kaczmarek „[..] a financial risk is a state of uncertainty, which occurs when financing business activities with borrowed capital"[2]. „The financial risk is significantly affected by interest rate fluctuations, which are extremely difficult to predict"[2]. Essentially, these two terms, i.e. the cost of capital and the risk are inseparably interrelated. The cost of capital is an interest rate which is changeable, due to various factors such as inflation. (These fluctuations may be considered as a risk). The more expensive the source of capital becomes, the higher the interest rate. This dependency results from a mechanism, which is well-known in practice and well-described in the literature, i.e. the ultimate value of the interest rate is essentially the total of the risk-free interest rate and the so-called risk premium, and can be expressed as:

$$\textit{interest rate} = \textit{risk-free rate} + \textit{risk premium}$$

The risk-free interest rate may, for instance, be the value of interest on treasury bonds (so-called safe securities). Considering the fact that the coal mining industry in Poland is a high risk industry, the risk premium will be expressed by a relatively high interest rate, i.e. higher than in other sectors of the economy. (This method is used e.g. by banks when granting credits to companies in Poland). Therefore, the discount (interest) rate, which reflects the cost of capital (rate of return) in discount methods, includes the risk. In addition to that, attention should be drawn to the fact that the financial risk is also connected with a lack of financial liquidity experienced by a coal mining company. Furthermore, this risk also comprises a shortage of capital, which could be sufficient to complete a project in the company. As emphasized by Z. Marciniak „[…] the changes in value may be caused by numerous internal and external factors, which affect cash flows and the cost of capital"[3]. „The following types of risks are listed:

- price risk, due to changes in prices of goods,
- interest rate risk, due to changes in interest rates,
- exchange rate risk, due to changes in interest rates,
- market risk, due to changes in prices, interest rates, foreign exchange rates,
- credit risk, due to changes in debtors' credit ratings,

- liquidity risk, due to a shortage of funds,
- capital risk, due to the company's insufficient equity,
- political risk, due to measures taken by governments of foreign countries,
- off-the-balance-sheet risk, due to the effect of risk factors on off-the-balance-sheet items,
- activity risk, due to external factors,
- operational risk, due to e.g. mistakes in management procedures, and, to a smaller extent, in settlement of transactions and payments,
- technological risk, due to unreliability e.g. of computer hardware, machines and equipment,
- liquidation risk, due to quick liquidation of items, e.g. securities before their maturity,
- environment-related risk, due to changes in the economic situation and the economic policy, e.g. taxes, competitors' activities,
- risk of changes in purchasing power, due to changes in purchasing power of money,
- risk of wars, revolutions and force majeure events"[3].

No matter how the risk category is understood, however, risks should always be analysed separately for a specific source of finance. The activities of a coal mining company are financed with its equity and borrowed capital. As stated by A. Duliniec „[…] a company's stated capital includes its equity and capital borrowed from shareholders and creditors and, in terms of the purpose it's collected for, it's divided into operational capital and risk coverage capital, i.e.:

stated capital
=
equity + borrowed capital
=
operational capital + risk coverage capital"[4].

This division results from the layout of the company's balance-sheet, and more specifically, from the structure of liabilities, which are made up of equity and borrowed capital. The coal mines tend to use a few sources of capital at the same time. Then, the cost of capital (the desirable rate of return) may be determined by the Weighted Average Cost of Capital (WACC), according to a commonly-known formula [5]:

$$WACC = \sum_{i=1}^{z} s_i \cdot c_i$$

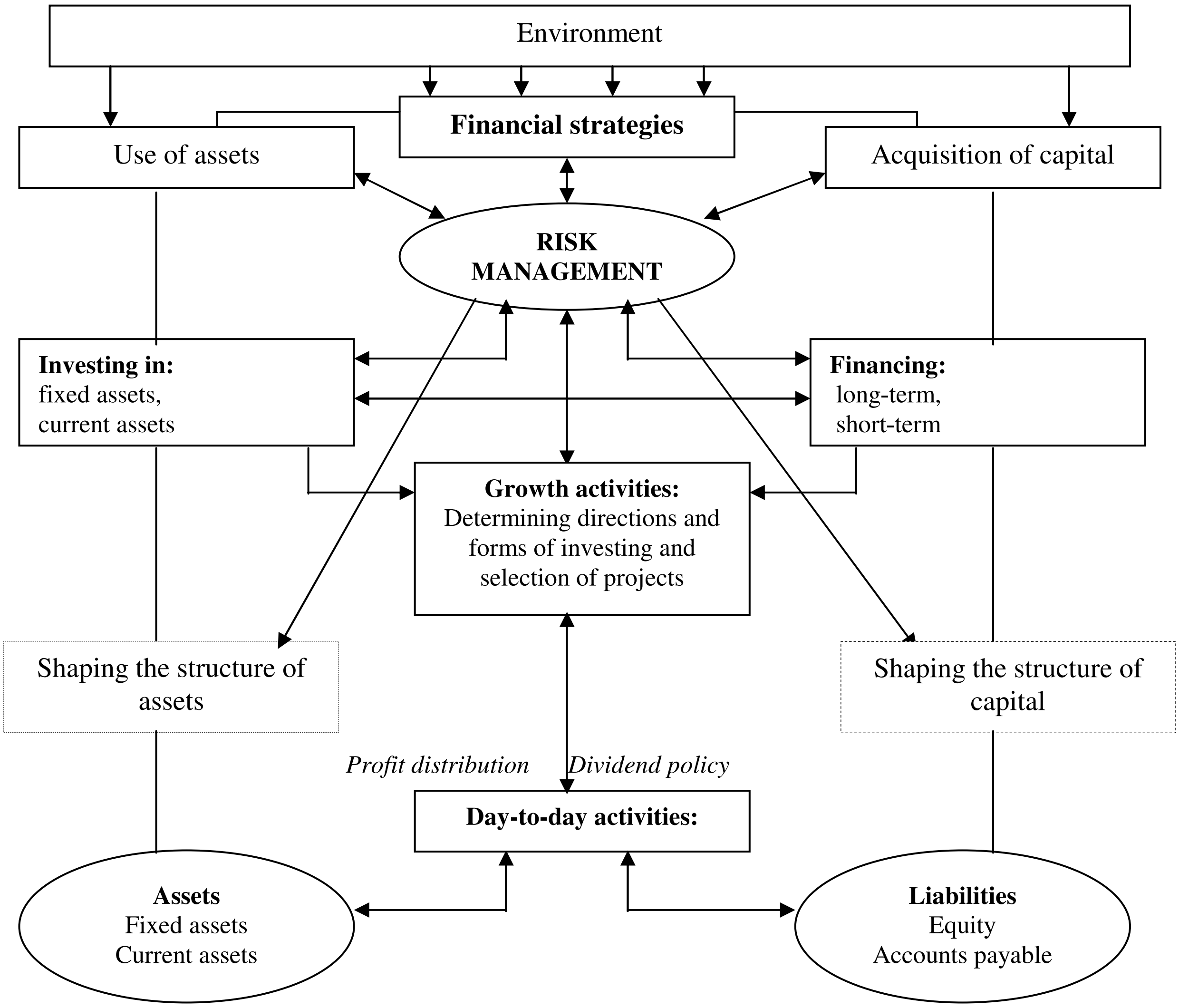
where:
c_i – the cost of capital from the *i-th* source,
s_i – the share of the *i-th* source in total capital,
i – the i-th source of capital,
z – the number of sources of capital.

In addition to the cost of capital as such and the related risk, an important thing when selecting the source of finance - as mentioned before - is availability of capital. In general, in the time of the world global financial crisis, the access to capital for business entities, i.e. in form of e.g. bank credits, has been dramatically reduced by banks. Therefore, in order to finance the activities of the coal mining company, various combinations of sources of capital should be taken into consideration. The weighted average cost of capital is calculated and, depending on the results, appropriate financial decisions are made. Therefore, when analyzing the various sources of capital and calculating this cost, one may take into account the following: the cost of preferred share capital, the cost of ordinary share capital, retained profits, costs of bank credits, the cost of capital from issue of bonds, and the cost of capital from financial lease. At the same time, it should be emphasized that these are not all the potential sources of finance for coal mining companies but they may be regarded as the main ones. „However, the financing strategy clearly depends on the selection of the sources of financing, which is an important element and component of the financial strategy”[6].

3 Identifying main financial strategies of Polish coal-mines

As mentioned before, apart from the financial risk, financing of Polish coal mines‘ activities is inseparably connected with the financial decisions to be made. „Financial decision addresses the problems of how much capital should be raised to fund the firm‘ operations (both existing and proposed), and what the best mix of financing is“[7]. Managers in coal mining companies have to make such decisions, in addition to investment decisions, which, in turn, concern the ways in which the funds are to be spent. In order to invest capital, then, one should first raise it, which is inseparably connected with a risk of making wrong decisions in both these areas. Therefore, risk management is needed in this respect. The decision-making areas for a company‘s financial strategy are illustrated by figure 1.

Figure 1: Decision-making areas for a company's financial strategy



Source: [12]

As show on figure 1 „the financial strategy should take into account the financial and material processes occurring within the company"[6]. Looking at figure 1, it's also easy to define the notion of the financial strategy. The Polish literature on the subject presents two different approaches to this definition. For example, according to A. Duliniec „[...] a financial strategy is a combination of strategic decisions related to the financing of the company and its investment activities and affecting the dividend policy"[4]. No matter how the financial strategy is defined, though, the key element is always the fact that the capital is acquired from the capital market and the financing of the coal mine company is inseparably connected with the selection of the appropriate financial strategy for the company. „Taking into account the income-risk relationship, the following principles should be adhered to when selecting the sources of financing:

- the principle of maintaining the financial liquidity, according to which the size and structure of capitals employed in the company should contribute to its solvency,
- the principle of maintaining the right level of risk, which is secured by a specific size of the equity employed in the company,

- the principle of financial efficiency, which indicates a need to create such a combination of sources of finance which makes the cost of capitals lower and the company's goodwill as high as possible,
- the principle of maintaining the company's independence and financial self-reliance, which means maintaining such a debt level which prevents borrowed capital providers from affecting the company's key decisions,
- the principle of shaping the optimum image of financing, in order to maintain such a financial structure which is well perceived and evaluated by the company's environment"[8].

Table 1 shows the basic financial strategies of companies in a synthetic manner, including the risk aspect.

Features	***Defensive strategy***	***Offensive strategies***
Corporate aims	- stabilisation of economic and market value - elimination of current risks - financial security - maximizing profits in short periods - survival	- increase in economic and market value - increase in shareholder value - growth
Attitude to risk	- limitation of risk situations in a company - aiming at minimising risk - limitation of threats connected with uncertainty - acceptance of risk within the limits of objective conditions in which a company operates (risk of necessity) - the company's passive attitude - control over the company's exposure to risk	- acceptance of higher risk levels - deliberate exposure to risk situations - acceptance of speculative risk - favouring innovative actions - active attitude shown in risk situations - using risk to increase value
Security against effects of risks	- favouring traditional forms of security - full risk security - using maximum security for risk covered by insurance (including voluntary insurance)	- acceptance of non-secured risk - acceptance of financial innovations - transfer of insurance risk only within obligatory insurance
Operating activities	- stabilisation of cash flows - limitation of operational risk	- increase in cash flows - increase in operational risk
Financial activities	- acceptance of safe capital structure - low level of financial leverage	- acceptance of capital structure with higher risk level - high level of financial leverage
Investment activities	- acceptance of investment projects with low risk level - constructing safe portfolios of capital assets	- acceptance of investment projects with high risk level - constructing portfolios of capital assets with higher risk level

Table 1: Comparison of corporate financial strategies in risk situations

Source: [9]

Taking into consideration the general situation in Poland, and in particular the financial situation of coal mining companies, these entities are currently implementing the defensive strategy. The situation with investment strategies is similar, as coal mining companies in Poland have implemented the stagnation strategy due to the financial crisis. Therefore, investments are only made when necessary. Moreover „the acceptance of the appropriate corporate strategy towards risk brings about:

- lower risk of exposing the company to the financial crisis and related costs (costs of bankruptcy),
- lower impact of changeable market parameters on income (cash flows),
- higher financial credibility of the company in the eyes of its shareholders, creditors and potential investors,
- higher credit rating of the company and opportunities to acquire capital in an advantageous way,
- less conflict of interest between the company's shareholders and creditors,
- lower price fluctuation of the company's securities (mainly shares) on the market, which determines the chances of generating profits on capital for shareholders,
- use of all the opportunities created by the environment and limitation of related threats,
- higher goodwill achieved through: increase in expected net earnings, a decrease in a discount rate, higher difference between the rate of return on investment and the proposed expected rate of return for capital providers"[9].

A key issue here is also risk measurement. Risk quantification is basically the most essential stage from among all the stages described by the field of science called risk management. Analysing the activities of the coal mining company in its entirety, we may also use the achievements of such methods as EaR (Earnings At Risk) and CFaR (Cash Flow at Risk). „CFaR is the maximum value of the deviation between the company's actual cash flow and the planned value in the period in question"[10]. (Besides, „CFaR measures the worst shortfall in cash factors due to unfavourable movements in market risk factors"[13].) In turn, „EaR is the maximum value of the deviation between the company's earnings and the planned value in the period in question"[10]. „The EaR formula is presented below:

$$P(E \leq E_0 - EaR) = \alpha$$

where:
E – earnings in the period in question, it's a random variable,
EaR – earnings at risk,
E_0 – planned earnings in the period in question,
α - tolerance level"[10].

In order to measure risk, one may also follow the VaR (Value at Risk) approach, which is becoming increasingly popular in Poland. In general, „VaR is a potential maximum reduction of the value with specific probability in the given time horizon"[3]. In terms of the risk related to issue of securities, such as shares or bonds, the issuer's risk is not as high as the buyer's (investor's) risk. In practice, there are some views claiming that this risk, i.e. the issuer's risk, is only theoretical and minimal. Furthermore, whether the issue of securities is successful or not depends on numerous factors. The costs to be borne by every company which issues shares or bonds are quite high. (For instance, the experts in Poland have found out that the minimum value of the issue of municipal bonds by municipalities or communes has to amount to PLN 10 million at least, in order to be profitable). It depends, first of all, on the economic situation of the company issuing shares. Secondly, the important things are the type of shares and the form of subscription chosen. From the point of view of the coal mining company, the risk related to that should be treated as the lack of a possibility to sell shares at an expected price. (That's also the case when bonds are issued, i.e. the risk faced by coal mining companies is basically the risk of a failure to find a potential buyer for bonds.) In particular „Polish issuers of securities list the following risks related to the issue:

- risk of competitiveness of the entire Polish economy compared to the world outside,
- risk of re-privatisation claims - the risk may be related not only to tangible assets but also rights e.g. to trademarks,
- risk of negotiations and adjustment to the EU standards,
- risk of strategic decisions of the State Treasury - may be related to the plans of liquidating the entire sectors, e.g. the coal mining industry,
- risk of fiscal doubts,
- risk of the speed of conveying financial information – results from inadequacy of financial statements provided by issuers, in particular monthly reports, which can conceal a lot of disadvantageous events in the company's activities,
- risk of business licences,
- risk of reduction in foreign investor's shareholdings,
- risk of environmental protection and related potential limitations to business activities"[11].

Reference

[1] *Zysk Kompanii Węglowej.* Website: http://www.teberia.pl/news.php?id=10697

[2] KACZMAREK, T.T.: *Zarządzanie ryzykiem w przedsiębiorstwie eksportującym.* ODDK, Gdańsk, 2001, p. 65.

[3] MARCINIAK, Z.: *Zarządzanie wartością i ryzykiem przy wykorzystaniu instrumentów pochodnych.* Szkoła Główna Handlowa w Warszawie, Warszawa, 2001, p. 105, 112-113.

[4] DULINIEC, A.: *Finansowanie przedsiębiorstwa.* PWE, Warszawa 2007, p. 146, 130.

[5] BREALEY, A.R., MYERS, C.S., MARCUS, J.A.: *Fundamentals of Corporate Finance.* Fifth Edition. McGraw-Hill, Inc., New York 2007, pp. 323-328.

[6] KŁOSOWASKA, B., TOKARSKI, A., TOKARSKI M., CHOJNACKA E.: *Strategie finansowania działalności przedsiębiorstw*. Oficyna Wydawnicza, Kraków 2006, p. 12, 13.

[7] PIKE, R., NEALE, B.: *Corporate Finance and Investment*. Pearson Education Limited, Inc., Harlow 2003, p. 6.

[8] BEDNARSKI, L., WAŚNIEWSKI, T.: *Analiza finansowa w zarządzaniu przedsiębiorstwem*. FRR w Polsce, Warszawa 1996, p. 369. From: KŁOSOWASKA, B., TOKARSKI, A., TOKARSKI M., CHOJNACKA E.: *Strategie finansowania działalności przedsiębiorstw*. Oficyna Wydawnicza, Kraków 2006, p. 20.

[9] *Strategie finansowe przedsiębiorstw w sytuacjach ryzykownych.* Praca zbiorowa pod redakcją G. Łukasik. Akademia Ekonomiczna im. K. Adamieckiego w Katowicach, Katowice 2004, p. 57, 57-58.

[10] *Zarządzanie ryzykiem*. Redaktor naukowy K. Jajuga. Wydawnictwo Naukowe PWN, Warszawa 2007, p. 383.

[11] DEMBNY, A.: *Budowa portfeli ograniczania ryzyka. Wykorzystanie modelu W.F. Sharpe'a.* Wydawnictwo CeDeWu Sp. z o.o., Warszawa 2005, pp. 84-85.

[12] WILIMOWSKA, Z., WILIMOWSKI, M.: *Sztuka zarządzania finansami*. Oficyna Wydawnicza Ośrodka Postępu Organizacyjnego, Bydgoszcz 2001, p. 711. From: KŁOSOWASKA, B., TOKARSKI, A., TOKARSKI M., CHOJNACKA E.: *Strategie finansowania działalności przedsiębiorstw*. Oficyna Wydawnicza, Kraków 2006, p. 12.

[13] JORION, P.: *Financial Risk Manager Handbook.* Fourth Edition. John Wiley&Sons, Inc., Hoboken-New Jersey 2007, p. 249.

Summary

Under the effective legal regulations, coal mining companies in Poland as economic entities which conduct business activities following the principles of self-financing and the cost-benefit analysis, in theory may use a number of available sources of finance. However, lack of privatization may lead to the lack of opportunities for raising funds, for example through issue of shares on a stock exchange. Also, management boards of coal mining companies are quite unwilling to take any actions in this respect.

This paper is an attempt at identification of the issues connected with formulation of financial strategies employed by Polish coal mining companies, with focus on the risk occurring in this area. It provides only a synthetic approach to these issues.