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An Assessment of the Strategy of Working Capital Management in Polish Energy Companies

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ABSTRACT

Working capital is a kind of a buffer that protects an enterprise against the loss of financial liquidity. Therefore, managing it is a key element from the point of view of financial security in every company. The purpose of the articles is to analyze working capital management in the largest Polish energy companies. In general, state-owned companies, especially those operating in the energy sector, have no problems with managing liquidity or working capital. However, recently in Poland, the turmoil associated with an increase in energy prices resulting largely from political licks have caused rapid drops in energy companies in the market. In such a situation, it is worth analyzing the working capital management strategies in detail. The analysis was carried out on the group of the largest Polish energy companies.

Keywords: Working Capital, Energy Companies, Strategy
JEL Classifications: G10, G33, Q43

1. INTRODUCTION

Polish energy companies controlled by the state have been recently very often used by politicians as a tool to fight for the votes. Freezing of an increase in energy prices is certainly very good news for consumers. However, for the financial situation of the largest energy companies, this is a serious decision that will have the major impact on their financial results as energy companies have applied for higher tariffs because they increased their costs. It should be reminded that it was the rising prices of CO_2 emission allowances - in addition to more expensive coal - that was one of the main reasons for the current electricity price discussed in Poland in 2018. The fees related to CO_2 emissions are a heavy burden on the finances of enterprises operating in the energy sector. This is, among others, due to the fact that the Polish energy industry is largely based on coal. In addition, brown coal is a major contributor to the consumption structure, which is accompanied by an average higher CO_2 emission than hard coal. An increase in the costs of CO_2 emission allowances resulted in an increase in costs in energy companies, which decided through the increase in energy prices, transfer some of these costs to recipients. However, the Polish government froze prices, which caused a sharp decline in the value of enterprises in the markets and reduced profits. This resulted in the appearance of poor financial results, which was negatively received by the shareholders and caused further declines in the value of enterprises on the stock exchange. When analyzing Polish energy companies it should be remembered that Poland's coal-based energy sector is particularly sensitive to the tax associated with CO_2 emissions. A decrease in the value of enterprises and profits is bad news for shareholders. In such a situation, an important area of management worth analyzing is the area related to financial security. To this end, working capital management strategies in the largest Polish energy companies were assessed.

2. LITERATURE REVIEW

The weakness of the Polish power industry can be seen in comparison with other European companies in the industry. Enel

has been able to increase its value over the last months. The French EdF is at zero, while CEZ and Engie are slightly under the line, which means they are doing much better than PGE, Tauron, Energa or Enea, where investors losses reach even up to 30%.

As the example of Polish political games shows, they may be one of the barriers to the development of energy companies, but a review of literature suggests various other barriers and factors affecting the sustainable energy market. The barrier most often discussed in the literature concerns the complexity of technology, often lacking technological know-how (Cagno et al., 2013) and the lack of financial resources (Meijer et al., 2019). For SMEs, the literature review also confirms that SMEs are struggling with a shortage of qualified staff and a lack of knowledge and experience in marketing and communication (Foxon, 2005; Del Rio et al., 2019).

In turn, the most important factor driving sustainable energy commercialization is the availability of complementary resources, such as knowledge or capital (Kaufmann and Todtling, 2002; Karytsas and Choropanitis, 2017; Engelken et al., 2016; Darmani et al, 2014). A literature review indicates that financial investment can contribute to sustainable technology and development in the sustainable energy sector. To do this one needs to have free financial resources and, above all, an ability to settle current liabilities. An appropriate working capital management policy should be pursued. There are authors who argue that without positive working capital it is very difficult to develop. Thanks to efficient working capital management, the company can free up capital to achieve more strategic goals, reduce financial costs and improve profitability (Lind et al., 2012).

Literature on working capital management included the statement that companies can increase their profitability by shortening CCC (Shin and Soenen, 1998; Deloof and Jegers, 1996; Lazaridis and Tryfonidis, 2006; Grosse-Ruyken et al., 2011). The long stock cycle reduces the risk of interruptions in supply, price fluctuations and business losses due to a shortage of products (Blinder and Maccini, 1991; Wang, 2002), and the company can sometimes achieve higher sales and strengthen customer relationships thanks to generous credit policy (Long et al., 1993; Deloof, 2003; Shah, 2009). Companies require working capital to overcome the mismatch between the time between payments and incomes, which introduces working capital financing as a complementary channel connecting real and financial sectors (Mahmoudzadeh et al., 2018).

Table 1: Average results for current financial liquidity ratios

Index of current liquidity	2018 (I-IV quarter)				2017 (I-IV quarter)			
	IV	III	II	I	IV	III	II	I
Company 1	1.9	1.8	2.2	2.4	2.3	2.8	2.2	2.1
Company 2	1.5	1.5	1.6	1.6	1.4	1.4	1.4	1.5
Company 3	1.0	0.6	1.0	1.0	1.0	1.3	1.0	1.0
Company 4	0.7	1.0	1.0	1.1	1.2	2.1	1.7	2.0

Source: Author's own research

Net working capital is the fixed capital which finances the company current assets. It is always a positive working capital. The amount of net working capital can be calculated as the difference between equity and fixed assets. The level and amount of working capital allows determining the financial security of the company.

In the literature one can find different opinions on this subject. There are authors who recommend maintaining high levels of net working capital, there are also those who strongly criticize such a condition (Deloof, 2003; Zimon and Zimon 2019a). However, it should be remembered that, when managing working capital, it is not allowed maintaining too high positive net working capital levels. Research has shown that higher levels of working capital allow enterprises to increase sales volume and get larger discounts in case of earlier payments(Baños-Caballero et al., 2003; Zimon and Zimon, 2019b). Thus, a high level of working capital may also positively affect the growth of the company value. The authors also state that it is necessary to create an appropriate working capital management policy by analyzing the relations between individual components of working capital (Kim and Chung, 1990; Sartoris and Hill, 1983; Shipley and Davis, 1991).There are many methods. The literature presents three main, classic strategies for managing net working capital:

- Conservative
- Moderate
- Aggressive.

The conservative strategy consists in maintaining current assets at a high level and short-term liabilities at a relatively low level. Enterprises implementing such strategies maintain a high level of cash and stocks. It is a safe strategy for the company.

The aggressive strategy is to keep current assets at a low level compared to current liabilities, the level of which is clearly higher. However, the managers will try to maintain a slight advantage of current assets over current liabilities.

The moderate strategy is to minimize the weaknesses of previous strategies and maximizing their benefits (Zimon, 2018)

3. RESEARCH METHODOLOGY

The analysis was carried out on a group of the most important state-owned energy companies in Poland. They are the largest energy distributors in Poland. Their value in the index of listed companies

Table 2: Structure of current assets in the enterprises analyzed

	Company 1		Company 2		Company 3		Company 4	
Years	2018	2017	2018	2017	2018	2017	2018	2017
Inventories	0.34	0.30	0.16	0.20	0.27	0.23	0.12	0.06
Receivables	0.45	0.38	0.54	0.48	0.28	0.35	0.23	0.31
Cash in hand and bank	0.15	0.27	0.28	0.30	0.45	0.43	0.69	0.61

Source: Author's own research

Warsaw Stock Exchange ENERGY (WIG ENERGA) is about 90%. These companies supply practically the entire area of Poland with energy. In comparison to other units appearing on the market, they have the cheapest electricity prices offered to individual consumers. The financial statements for the years 2018 and 2019 were used for the research. Individual quarters were analyzed to refine the research. In order to establish a working capital management strategy, an analysis was performed using selected financial ratios.

4. RESULTS

The first element analyzed was the level of net working capital. The enterprises surveyed in 2018 and 2018 have positive working capital. It is true that it is low, but in every company the current assets are higher than short-term liabilities. The next step was to conduct a financial liquidity analysis. Table 1 presents the results for the current financial liquidity ratio in individual quarters of 2017 and 2018.

When assessing the results of current financial liquidity indexes in individual years, it can be seen that the majority of entities have low financial liquidity in individual quarters. In the case of one company, the results of current financial liquidity are at a high level. However, on the basis of data from Table 1 it should be stated that the results indicate risky management of financial liquidity. Table 2 presents the structure of current assets in the enterprises analyzed.

When analyzing the results presented, it is clearly visible that inventories in all enterprises constitute a small share significantly deviating from the receivables. This situation should be assessed positively as this least liquid component of current assets is low in the structure of current assets. Often in stocks there is a position that is characterized by poor turnover, they are actually storage deposits, but are included in the balance in the item inventory. They overstate the current liquidity ratios artificially. The largest share in the analyzed enterprises are receivables from customers and a high share in the structure is cash. In the case of low results of the financial liquidity index, such a structure of current assets allows safe functioning of the analyzed enterprises.

In order to determine the working capital management strategy, it is worth comparing the receivables turnover rates on days and the liabilities to suppliers in days. Detailed results are presented in Tables 3 and 4. Table 3 presents the results on the turnover of receivables from recipients in days.

When assessing the results presented, it should be stated that they are in every enterprise at a similar level and reach on average from 40 to 68 days and the average result for them is about 55. These results should be assessed as very good. In addition, there is a downward trend in the analyzed units from year to year. The results of receivables in days should be compared with the results of turnover ratios for suppliers on days. The detailed results for the turnover of liabilities in days are presented in Table 4.

The companies analyzed extended the repayment period in days in the presented quarters of 2017 and 2018. Comparing the results of liabilities turnover in days with the receivables turnover rates in days, a clear difference can be seen. Enterprises receive much faster receivables from customers, thus they are financing long-term liabilities to suppliers. This state of affairs may indicate that the level of net working capital is low or may even be negative in certain quarters. In the case of receivables turnover in days and liabilities, there are very large differences, however, this state of affairs facilitates the management of financial liquidity and working capital.

Indices of credit position confirm the fact that the analyzed units use foreign capital and are borrowers. Table 5 presents the credit positions of enterprises in 2017 and 2018.

When assessing the ratios from Table 5 it can be seen that the entities analyzed are the borrower. They finance themselves to a large extent with foreign capital and short-term liabilities. In the analyzed period, they increase the level of this financing by their position as a borrower.

In the next Table 6 the inventories turnover ratios for days are presented.

The results analyzed should be assessed as low. The results of the company no. 4 differ slightly from the others but it should be assessed positively, because the turnover in days decreases.

Table 7 presents the results of the operational cycle, i.e., the index informing about the effectiveness of business management (de Almeida and Eid 2012).

Table 3: Turnover of receivables from customers in days in the enterprises analyzed

Turnover of receivables in days	2018 (I-IV quarter)				2017 (I-IV quarter)			
	IV	III	II	I	IV	III	II	I
Company 1	48	51	56	63	65	66	68	70
Company 2	58	60	59	59	60	58	58	58
Company 3	44	43	43	42	44	44	40	40
Company 4	54	53	50	51	58	66	66	68

Source: Author's own research

Table 4: Turnover of liabilities towards suppliers in days in the enterprises analyzed

Turnover of liabilities in days	2018 (I-IV quarter)				2017 (I-IV quarter)			
	IV	III	II	I	IV	III	II	I
Company 1	87	83	80	81	83	83	86	87
Company 2	117	115	110	104	100	90	84	84
Company 3	103	95	92	92	90	87	88	89
Company 4	138	139	110	111	103	100	97	99

Source: Author's own research

When analyzing the results presented positively, one should assess the decrease in the operational cycle and the fact that it achieves not high results. Therefore, enterprises improve the efficiency of managing their resources.

Table 8 concerned the cash conversion cycle. So information for how many days the company has to finance its activities with its own capital (Farris and Hutchison 2002; Richards and Laughlin 1980). And here the comparison of receivables turnover ratios in days and liabilities in days indicated that the result of the cash conversion cycle would be at a low level. Indeed, only in a few quarters the result fluctuates around the value 0. In other cases the results are negative. The detailed results are presented in Table 8.

5. CONCLUSION

The analysis of the management strategies of state-owned companies is a difficult task, especially when it concerns entities operating in the energy sector. In the industry, market knowledge, technology, and qualified staff are the foundations for achieving success. However, there is a group of barriers, often typically political ones, which may weaken the efficiency of property management of state-owned enterprises and negatively affect financial results and security. Financial security allows maintaining an adequate level of net working capital. It is generally assumed that a positive level of net working capital is a buffer that protects individuals from bankruptcy (Zimon 2018). However, the need for working capital ought to be adjusted to its actual state. Its high level, according to many authors, affects negatively the financial results of individuals. In the enterprises analyzed its level is minimal.

When analyzing the results of individual measures, it is clearly necessary to reject the conservative policy of working capital management. This conclusion is confirmed by the results of cash conversion ratios and financial liquidity. Low liquidity, sometimes negative net working capital and a clear predominance of liabilities towards suppliers over receivables from recipients confirm that the conservative strategy should be rejected.

There are several indexes whose results definitely indicate aggressive strategies. This is evidenced by low financial liquidity, a negative conversion cycle and a high turnover ratio of liabilities towards suppliers. However, aggressive strategies are assessed as very risky. In companies that were analyzed, such a situation does not exist because cash is much faster, on average about 30 days affect compared to the deadlines for settling liabilities towards suppliers. The strategy used in the largest energy companies is definitely oriented towards a moderate one.

While analyzing and assessing working capital management strategies in energy companies, it should be noted that they chose moderate - aggressive strategies. Low financial liquidity, low level of working capital, payment deadlines indicate aggressive management. Fast turnover of receivables in days and inventories in days indicates moderate management of working capital. In addition, the negative cash conversion cycle informs that the company is not forced to finance its operations with working capital. The results of the analysis clearly indicate that the company finances its operations with external assets, liabilities to suppliers. This is probably due to the specificity of the industry and the fact that these are state-owned companies. The specificity of the industry causes that the fees for energy are practically always on time, the recipients are afraid of the consequences and always calculated penalty interest. The scale of operation allows obtaining long deadlines for repayment of liabilities. Such a situation guarantees managers, even with low net working capital level, appropriate planning of financial flows, which leads to maintaining financial liquidity at all times.

The oretically, enterprises should negotiate better prices of raw materials purchased at the expense of even shortening the payment terms, which would improve financial results. Increasing the profits would certainly be well received by the Polish state, because it would be able to draw more funds from the paid dividends.

Table 5: Indices of credit position in the enterprises analyzed

Credit position	2018	2017
Company 1	0.44	0.71
Company 2	0.40	0.52
Company 3	0.34	0.46
Company 4	0.32	0.40

Source: Author's own research

Table 6: Inventories turnover in days in the enterprises analyzed

Inventories turnover in days	2018 (I-IV quarter)				2017 (I-IV quarter)			
	IV	III	II	I	IV	III	II	I
Company 1	22	24	19	18	17	16	18	23
Company 2	37	37	37	36	37	31	30	31
Company 3	20	23	23	20	22	26	28	26
Company 4	55	52	54	57	65	70	65	65

Source: Author's own research

Table 7: Operating cycle in the enterprises analyzed

Operating cycle	2018 (I-IV quarter)				2017 (I-IV quarter)			
	IV	III	II	I	IV	III	II	I
Company 1	70	75	75	81	82	82	86	93
Company 2	95	97	96	95	97	89	88	89
Company 3	65	67	67	62	66	67	68	89
Company 4	109	105	104	108	123	136	131	133

Source: Author's own research

Table 8: Cash conversion cycle in the enterprises analyzed

Cash conversion	2018 (I-IV quarter)				2017 (I-IV quarter)			
	IV	III	II	I	IV	III	II	I
Company 1	-16	-8	-5	0	-1	-1	0	93
Company 2	-22	-18	-14	-9	-3	-1	4	5
Company 3	-38	-28	-25	-30	-24	-20	-20	-23
Company 4	-29	-34	-6	-3	20	36	34	34

Source: Author's own research

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