6. REMEDIAL RESTRUCTURING AS A WAY TO EXTEND THE FINAL STAGE OF AN ENTERPRISE BASED ON THE EXAMPLE OF POLISH HARD COAL MINING

6.1. Introduction

The company lifecycle has four basic stages, i.e. foundation, development, maturity and final stage, with the companies attempting to extend particular stages characterised by satisfactory development pace, i.e. development and maturity, using any ways possible. In the final stage, the company terminates its activity and inevitably heads for liquidation. It experiences a crisis caused by internal or external factors, or by their mutual coupling. At this stage, the company may strive to extend the lifecycle, but due to the state of collapse it is in, this task is difficult and usually fails (Nawrocki and Jonek-Kowalska, 2016). A standard way of exiting the crisis and extending the final stage or maturity is the remedial restructuring.

The remedial restructuring can be carried out within the existing company resources by means of:

- improved management;
- improved work organization;
- cost reduction;
- increased motivation;
- human resources improvement;
- improved quality of products and processes.

It is also possible to “make the company leaner” in order to reduce expenditure and, consequently, improve efficiency faster than if the resources were unchanged, though in a more radical and controversial way. In such a situation, the following
measures are adopted:
- elimination of inefficient production chain links;
- sales of some assets;
- shutdown of certain facilities;
- dismissals;
- product line limitations.
Since the 1990s, the Polish hard coal mining has been struggling with the problem of temporary and long-term economic ineffectiveness of particular mines and, consequently, the entire mining companies. It has also been subject to remedial restructuring to extend the lifecycle of the companies themselves and the whole sector. The major premise justifying that process is to maintain the energy security of Poland for which hard coal has still been a key power resource (Karbownik and Turek, 2011). Nonetheless, an important priority for the remedial restructuring in the mining sector is also the job retention in the Upper Silesian Coal Basin (Dubiński and Turek, 2009; Gumiński, 2014).

Given the above circumstances, the major objective of this article is to analyse and assess the use of remedial restructuring as a way to extend the final stage of an enterprise based on the example of Polish hard coal mining. To achieve the objective formulated in this way, the first part of the article presents the reasons and symptoms of crisis in Polish hard coal mining in the context of the lifecycle of two mining companies, excavating power coal, i.e. Kompania Węglowa SA and Katowicki Holding Węglowy SA (Korski et al., 2016). Next, the scope of the remedial restructuring in years 2015–2016 was characterised. For the studies, the reference works’ studies, market condition analysis in the Polish hard coal mining and the profitability assessment, including its all determinants, were used (Hąbek and Wolniak, 2016; Manowska et al., 2017).

6.2. Methodology

To assess the operations of two studied mining companies and to identify their current development stage in the research section of the article, the total return on assets (1) and return on sales were used.
Remedial restructuring as a way to extend…

\[ ROA = \frac{FR}{A} \]  

(1)

where:
FR — net financial result;
A — total assets.

\[ ROS = \frac{FR}{RV} \]  

(2)

where:
FR — net financial result;
RV — sales revenue.

What is more, chain indexes of dynamics were used for crisis symptom analysis for production costs and sales revenue (3).

\[ I = \frac{i_t}{i_{t-1}} \]  

(3)

where:
i_t — value of the variable in time \( t \),
i_{t-1} — value of the variable in time \( t-1 \).

For the studies, the data derived from the financial statements of the analysed companies for years 2003–2016 and the materials of the Ministry of Economy, concerning mean hard coal selling prices and production costs in the Polish hard coal mining were used.

6.3. Symptoms and causes of crisis in the Polish hard coal mining

As already mentioned, the analysis of the mining company lifecycle was applied for two mining companies excavating power coal in the Upper Silesian Coal Basin (USCB). First of them is Katowicki Holding Węglowy SA (KHW SA) founded in 1993 by consolidating independent mines operating in USCB those days. Initially, KHW SA comprised 11 of them. The second coal mine analysed is Kompania Węglowa SA established in 2003 by way of merging 5 coal companies. Initially, it comprised 23 mines.

A typical symptom of crisis in a company is the deteriorated net financial result which, in a longer perspective, results in liquidity loss and limited own capital
inflow. A long-term profitability loss exerts an adverse impact also on the abilities to obtain own and third-party external capital. Cumulation of all the above symptoms leads to the company bankruptcy and the termination of the final stage with its liquidation. Given the above, Figures 1 and 2 show the return on assets and on sales respectively in the analysed mining companies.

Fig. 1. Total return on assets in Kompania Węglowa SA (KW SA) and Katowicki Holding Węglowy (KHW SA) in years 2004–2016 [in %]
Rys. 1. Całkowity zwrot z aktywów w Kompanii Węglowej SA (KW SA) i w Katowickim Holdingu Węglowym (KHW SA) w latach 2004-2016 [w %]
Source: own compilation based on the financial statements.

A characteristic feature of the return on assets for both companies, in the entire analysed period, is its high changeability, caused by significant financial market fluctuations which indicates high risk associated with the operations of those mining companies.

Fig. 2. Return on sales in Kompania Węglowa SA (KW SA) and Katowicki Holding Węglowy (KHW SA) in years 2004–2016 [in %]
Rys. 2. Zwrot ze sprzedaży w Kompanii Węglowej SA (KW SA) i w Katowickim Holdingu Węglowym (KHW SA) w latach 2004-2016 [w %]
Source: own compilation based on the financial statements.
The best period in terms of ROA and ROS achieved were the years 2007–2012. At that time, the analysed indexes are positive. Their highest values are recorded in 2011. Since 2012, a sudden fall of financial results in both analysed mining companies has been recorded (Turek and Michalak, 2011).

The dynamics of revenue and own costs in both companies is presented synthetically in Table 1 and 2.

### Table 1
Chain indexes of dynamics for sales revenue and the mining production costs in Kompania Węglowa SA in years 2005–2016

<table>
<thead>
<tr>
<th>Specification</th>
<th>Years</th>
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<tr>
<td></td>
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<td>2005</td>
<td>2006</td>
<td>2007</td>
<td>2008</td>
<td>2009</td>
</tr>
<tr>
<td>chain index for revenue</td>
<td></td>
<td>0.977</td>
<td>0.960</td>
<td>0.986</td>
<td>1.285</td>
<td>1.000</td>
</tr>
<tr>
<td>chain index for costs</td>
<td></td>
<td>0.996</td>
<td>0.993</td>
<td>1.000</td>
<td>1.158</td>
<td>1.005</td>
</tr>
<tr>
<td>chain index for revenue</td>
<td></td>
<td>1.211</td>
<td>0.882</td>
<td>0.967</td>
<td>0.872</td>
<td>0.180</td>
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<tr>
<td>chain index for costs</td>
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<td>1.131</td>
<td>0.910</td>
<td>1.428</td>
<td>0.887</td>
<td>0.167</td>
</tr>
</tbody>
</table>

Source: own study.

### Table 2
Chain indexes of dynamics for sales revenue and the mining production costs in Katowicki Holding Węglowy SA in years 2005–2016

<table>
<thead>
<tr>
<th>Specification</th>
<th>Years</th>
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<tr>
<td></td>
<td></td>
<td>2005</td>
<td>2006</td>
<td>2007</td>
<td>2008</td>
<td>2009</td>
</tr>
<tr>
<td>chain index for revenue</td>
<td></td>
<td>0.972</td>
<td>1.117</td>
<td>0.958</td>
<td>1.012</td>
<td>1.159</td>
</tr>
<tr>
<td>chain index for costs</td>
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<td>1.005</td>
<td>1.139</td>
<td>1.010</td>
<td>1.048</td>
<td>1.080</td>
</tr>
<tr>
<td>chain index for revenue</td>
<td></td>
<td>1.059</td>
<td>0.957</td>
<td>1.001</td>
<td>0.929</td>
<td>0.949</td>
</tr>
<tr>
<td>chain index for costs</td>
<td></td>
<td>1.030</td>
<td>0.971</td>
<td>0.982</td>
<td>1.050</td>
<td>0.942</td>
</tr>
</tbody>
</table>

Source: own study.
Sales revenue in Kompania Węglowa SA grew on a year-to-year basis solely in 2008 and 2011. In Katowicki Holding Węglowy SA, the growth periods are slightly more numerous and they cover the following years: 2006, 2008, 2009, 2011 and 2013. The increase in the sales revenue in 2008–2013 in both companies results primarily from the increased hard coal price in that period (Fig. 3).

According to Figure 5, it can be seen explicitly that in years 2008–2012 the coal price exceeded the unit mining production cost, thanks to which the analysed companies were able to achieve good financial results and positive economic efficiency.

For the unit production costs, it is possible to notice high fluctuations of their level and a more numerous group of growth periods. In Kompania Węglowa SA the unit production cost grows in 2008, 2009, 2011 and 2013. For Katowicki Holding Węglowy SA, the costs grow continuously from 2005 to 2011, and also in 2013. This results from two key circumstances. The first of them is the increase in the remuneration level (Bąk and Michalak, 2018), being more than 50% of the total costs in the Polish hard coal mining, in relation to the pressure from trade unions and the

* Years 2015–2016 are when Kompania Węglowa SA was liquidated. High dynamics index in 2016 results from practical termination of operations by the company in 2015. The value of sales revenue in 2016 refers to Polska Grupa Górnicza.
requirements of mining teams. The other is a very high overhead cost level, reaching 80% which, given decreasing output, exerts an adverse influence on the unit mining production cost (Vaněk et al., 2017).

The slump of hard coal prices in 2013, in connection with the growing unit costs, contributes to the end of the boom in the Polish coal mining. The efficiency fall is so serious that the losses absorb equity which is negative in both companies in 2013–2014, and its absolute value grows. Consequently, both companies lose their liquidity and are on the verge of bankruptcy (Wolniak and Skotnicka-Zasadzień, 2012).

6.4. Course of remedial restructuring in 2016–2017

In connection with the bankruptcy of two largest mining companies and, consequently, the possible loss of energy security by Poland, a decision was made to carry out deep restructuring of both companies. The first stage was the audit in all mines belonging to KW SA and KHW SA. Its objective was to take stock of all assets and record the results of each of them to separate the efficient and inefficient plants. What is more, a decision was made to sell some non-productive assets to obtain some funds to complement the capitals. Also, buyers were found for some mines operating within the mine structures, which were transferred to Węglokoks SA or Tauron Wydobycie, depending on the excavated coal type (power or coke coal).

The second restructuring stage was the liquidation of mines which were inefficient due to excessive unit production costs, deposit recovery or high level of natural hazards. Such plants were transferred to Spółka Restrukturyzacji Kopalń SA which manages the assets and personnel of the liquidated mines by 2018 or 2012. The funds for the liquidation are obtained from the state budget, according to the European regulation, assuming governmental donations for mining plants solely when they are liquidated. The workers from the liquidated mines were offered a chance to use the severance pays and social protection or opt for an early retirement. Some of them were employed in the operating mines.

The third stage of remedial restructuring was the creation of a new mining company from the mines left in Kompania Węglowa SA and Katowicki Holding Węglowy SA, called Polska Grupa Górnicza (PGG). The structure of that company contains solely mines having a long-term operating perspective and likely to achieve
positive economic efficiency, meaning the ones which excavate good quality coal for a low unit cost. The said consolidation was to enable PGG to operate in market economy conditions, without any financial support from the state, in accordance with the applicable European Union restrictions, assuming complete competitive advantage of the hard coal mining (Bijańska and Wodarski, 2017).

Moreover, to assure a market for the existing hard coal companies, Polska Grupa Górnicza was merged with the power sector and is supervised by 2 power companies. This was the fourth, and last, currently, remedial restructuring stage in Polish coal mining in years 2016–2017. It is worth adding here, that in 2017 the newly-created group managed to improve profitability significantly, although it has not been positive yet.

6.5. Conclusions

This article presents remedial restructuring as a way to extend the final stage in the Polish hard coal mining sector. In 2013–2014, due to the decrease of hard coal prices on the global and Polish market and the increase in unit production costs in Polish mining companies, the sector witnessed the most serious crisis in history. As a result of that crisis, 2 largest mining companies faced bankruptcy. To prevent their liquidation and energy security loss of Poland, it was decided to carry out a deep restructuring of the sector, covering 4 following stages: audit of the existing mines and mining companies, liquidation of inefficient mines, amalgamation of the remaining companies in Polska Grupa Górnicza, and consolidation of the newly-created company with the power sector.

The introduced changes made it possible to extend the final stage of the studied companies. In 2017, the efficiency of the newly-created group grew thanks to removing any mines with insufficient resources, excessive production costs and excessive natural hazard level. However, to ensure further effective operations of the Group, it is necessary to ensure cost-related discipline, consistent human resources management and effective dialogue with the community.
Acknowledgements

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Bibliography


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**Abstract**

The major objective of this article is to analyse and assess the use of remedial restructuring as a way to extend the final stage of an enterprise based on the example of Polish hard coal mining. To achieve the objective formulated in this way, the first part of the article presents the reasons and symptoms of crisis in Polish hard coal mining in the context of the lifecycle of two mining companies, excavating power coal, i.e.: Kompania Węglowa SA and Katowicki Holding Węglowy SA. Next, the scope of the remedial restructuring in years 2015–2016 was characterised. For the studies, the reference works’ studies, market condition analysis in the Polish hard coal mining and the profitability assessment, including its all determinants, were used.

**Keywords:** remedial restructuring, mining company, company lifecycle, crisis management, Polish hard coal mining.

**STRESZCZENIE**

Głównym celem niniejszego artykułu jest analiza i ocena wykorzystania restrukturyzacji naprawczej jako metody przedłużenia ostatniego etapu przedsiębiorstwa na przykładzie polskiego górnictwa węgla kamiennego. Aby zrealizować to założenie, w pierwszej części artykułu przedstawiono powody oraz oznaki kryzysu w polskim górnictwie węgla kamiennego w kontekście cyklu życia dwóch przedsiębiorstw górniczych wydobywających węgiel energetyczny, to jest: Kompania Węglowa SA i Katowicki Holding Węglowy SA. Następnie
scharakteryzowano restrukturyzację naprawczą w latach 2015-2016. Na potrzeby badania zastosowano analizę dotychczasowych publikacji, analizę rynku polskiego górnictwa węgla kamiennego i ocenę rentowności, z uwzględnieniem wszystkich determinantów.

Słowa kluczowe: restrukturyzacja naprawcza, przedsiębiorstwo górnicze, cykl życia przedsiębiorstwa, zarządzanie kryzysowe, polskie górnictwo węgla kamiennego.