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## **Evaluating the profitability of selected mining companies in Poland at the beginning of the 21<sup>st</sup> century**

### **Introduction**

Since 2000, in Poland's economy there have been considerable legal, environmental and socio-economic transitions taking place, which influence the profitability of mining companies. Those are include:

- increase in the competitiveness in the market for raw materials, due to, among others, Poland's accession to the EU;
- increase in demand for most raw materials resulting, among others, from dynamic growth of the state economy, as well as due to general trends in global economy (e.g. demand resulting from the procurement by China);
- changes to the ownership structure of entities, e.g. transformation of numerous state-owned companies into private-owned entities, mergers and takeovers (also by overseas owners), which often resulted in organisational changes involving an increase in the vertical integration, i.e. a single entity offering its product processed to a higher degree than just the very raw material;
- changes in the prices of mineral raw materials, involving the stagnation of most of them between 2000 and 2003, followed by an increase between 2004 and 2007;
- strengthening of the Polish currency in relation to most other currencies, especially between 2007 and 2008, which weakens the position of exporters and boosts import (low raw material prices as converted to PLN);

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- increasing demand for environmental protection and the necessity to undertake projects in that field, and the threat of limitations or difficulties emerging in mining raw materials, also related to creating the Natura 2000 network zones;
- necessity of social consultations which often prolongs the time needed to start up new mining facilities.

Favourable external factors, present in the market for raw materials in the recent years, have led to an increase in the economic efficiency of entities involved in the mining business. This phenomenon is well reflected in indices presented by GUS (the Central Statistical Office) for the entire mining sector. Such indices clearly indicate that:

- the amount of production sold (at nominal prices) increased from PLN 27 billion in 2000 to PLN 37 billion in 2006 (regardless of the reduction of exploitation in the hard coal section);
- the revenue on sales increased from PLN 32.5 billion in 2000 to PLN 36.5 billion in 2006;
- the expenses-to-revenue ratio decreased, i.e. from 2000 to 2002, it was above 100%, and in 2006, 84.5% respectively;
- an increase of profit took place, while in 2000, negative financial result was observed for companies in that sector (PLN -0.68 billion), whereas in 2006, it was PLN 4.6 billion;
- since 2003, an increase of net profitability indices has been observed, by 8.1% in 2003, 12.2% in 2004, 11.4 in 2005 and 12.0 in 2006.

The statistical data for the entire sector reveal a visible improvement. This paper aims to analyse indices for individual entities in the energy and metal sectors, in order to compare their profitability and operating efficiency. Three basic indices have been used to assess the profitability:

- return on sale (ROS), expressed as the relationship between the net profit and revenue on sales of products, goods and materials;
- return on assets (ROA) – the net profit to overall assets ratio;
- return on equity (ROE), understood as the net profit in relation to the own capital.

Selected profitability indices are intended to assess the efficiency and managerial capabilities of a company to generate profits from the means employed, or to effectively locate new capital (Sierpińska, Jachna 2007), and, by so doing, they illustrate the transitions that occurred in the entities in question. In order to establish the profitability of individual companies, the share of production cost in the revenue on sales was added. In order to determine indices for the producers of raw materials for the power and metallurgy, financial data compiled from the profit and loss accounts of 20 Polish mining companies, between 2000 and 2006, were analysed (table 1). This way, over 250 financial statements available in LEX-Legal and Economy Information Resource have been analysed.

TABLE 1

List of mining companies analysed

TABELA 1

Wykaz przedsiębiorstw górniczych poddanych analizie finansowej

Sector	Mining companies
Energy raw materials	Nadwiślańska Spółka Węglowa S.A.
	Lubelski Węgiel Bogdanka S.A.
	Jastrzębska Spółka Węglowa S.A.
	Rudzka Spółka Węglowa S.A.
	Kopalnie Węgla Kamiennego Kazimierz Juliusz Sp. z o.o.
	Kopalnia Węgla Kamiennego Budryk S.A.
	Gliwicka Spółka Węglowa S.A.
	Katowicki Holding Węglowy S.A.
	Kompania Węglowa S.A.
	Rybnicka Spółka Węglowa S.A.
	Zakład Górniczo-Energetyczny Sobieski – Jaworzno II Sp. z o.o.
	Kopalnia Węgla Brunatnego Bełchatów S.A.
	Kopalnia Węgla Brunatnego Adamów S.A.
	Kopalnia Węgla Brunatnego Konin S.A.
	Kopalnia Węgla Brunatnego Turów S.A.
	Polskie Górnictwo Naftowe i Gazownictwo S.A.
Metal raw materials	Grupa Lotos S.A.
	KGHM Polska Miedź S.A.
	Zakłady Górnicze Trzebieńka S.A.
	Zakłady Górniczo-Hutnicze Bolesław S.A.

Source: own study

### 1. Energy raw materials sector

Based on the official financial data, in the group of energy raw materials, producers of hard coal (11), brown coal (4), oil and natural gas (2) and metal raw materials (3) are analysed. For other entities, it was impossible to ensure continuity of financial data in the period analysed, due to considerable changes in their ownership structure.

### 1.1. Profitability of hard coal producers between 2000 and 2006

In the 70-ties of the past century, there were 76 hard coal mines present in Poland, in 1993–70 and only 34 nowadays. The reason for liquidation of most of the mines was their alleged unprofitability (Blaschke 2008), and new ownership structures were created for the profitable companies. By so doing, in 1993, as a result of organisational restructuring of the hard coal mining industry, 7 coal mining companies and 2 independent mines of Bogdanka and Budryk were established. Restructuring processes lasting in the following years took place within those separated entities. Such structure remained until January 31, 2003, when another ownership changes were implemented, as a result of which Kompania Węglowa S.A was established (untill 2002, acting as Państwowa Agencja Restrukturyzacji Górnictwa Węgla Kamiennego S.A. – National Agency for Restructuring the Hard Coal Mining), which incorporated mines belonging to Rudzka and Nadwiślańska Coal Company (Gawlik 2006). After the following transitions and liquidation of a number of entities in Poland (as result of mainly administrative decisions between 2000 and 2006, the mining output was decreased from 102 081 thousand Mg to 89 342 thousand Mg (Balance of ... 2001, 2007)); from January 1, 2007 the following structure is in place:

- Kompania Węglowa S.A. (KW) – 17 mines,
- Katowicka Grupa Kapitałowa which incorporates Katowicki Holding Węglowy S.A. (KHW), with 5 mines and 1 mining company ltd.;
- Jastrzębska Spółka Węglowa S.A. (JSW) – 5 mines,
- Południowy Koncern Węglowy S.A. (PKW) – 1 two-phase mine – Kazimierz-Juliusz,
- KWK Budryk S.A. – 1 mine,
- Lubelski Węgiel Bogdanka S.A. (LWB) – 1 mine,
- Siltech Sp. z o.o. – 1 mine.

In order to allow the restructured companies to operate, in 2003 debt of PLN 18.1 billion was written off and the entities concerned were allowed to pay further debts of PLN 2.5 billion in instalments (Strategy... 2008). Such restructuring policy resulted in positive financial results of most of the coal companies-the revenue increased which influenced the indices in individual companies, for example:

- in JSW in 2003, the net profit increased to PLN 800 million from PLN 2.9 million in 2002,
- Kazimierz-Juliusz Mine, in 2003 achieved almost 150 times higher profit than that of the previous year.

Also, in 2004, additional off-market phenomena took place, which affected the indices:

- Budryk Mine achieved the profit of PLN 0.5 billion, 11 times higher than that of 2003, which resulted in a great increase in profit of the other activity involving revenue on sales of fixed assets and writing off some debts;
- KHW made a net profit of PLN 1.4 billion, 22 times higher than that of the past year, which resulted from restructuring activity involving writing off public and legal debts, which, in turn, added to the reduction of expenses and the increase of revenue by 179%.

After 2004, no such rapid changes of profitability indices were observed in the coal companies anymore. ROS has stabilised at the level of 2–4% on average, except for Bodganka Mine – approx. 7–9% and JSW (table 2). The decrease of the index in 2006, for most of the companies, resulted from the worsening of economic situation, further decrease in output and decrease of average coal selling price (especially for the coking coal, from 191.69 PLN/Mg to 183.62 PLN/Mg) (Information... 2006). Nevertheless, none of the companies showed a strict correlation between the average coal price and the ROS; in 2006, for example, despite the reduction of prices, the index increased at KW Kazimierz-Juliusz (profit stabilisation occurred for reduced revenue), and similarly, at Bogdanka Mine. Only for the KW negative value of the index was observed.

Relatively low profitability of mines did not result from direct share of generation cost in the revenue on sales (i.e. the production phase). The share of generation cost in the revenue on sales is decreasing in a great number of companies, which may be an indication of a more rapid increase of revenue than that of generating cost, as well as the increase of profitability of basic activities of the hard coal mines, irrespective of the reduction in their output (figure 1).

Taking into consideration the ROA, it was concluded that the best situation took place in 2 independent coal mines: Kazimierz-Juliusz and Budryk (figure 2).

TABLE 2

Index of ROS for selected producers of hard coal in Poland, between 2000 and 2006 [%]

TABELA 2

Kształtowanie się wskaźnika rentowności sprzedaży netto dla wybranych producentów węgla kamiennego w Polsce w latach 2000–2006 [%]

Mining Company	ROS index						
	2000	2001	2002	2003	2004	2005	2006
Lubelski Węgiel Bogdanka S.A.	6.12	10.91	4.24	5.93	15.46	7.77	9.86
Jastrzębska Spółka Węglowa S.A.	-8.32	-2.02	0.13	32.73	32.24	17.96	7.37
Kopalnia Węgla Kamiennego Kazimierz-Juliusz Sp. z.o.o.	1.98	1.76	0.15	21.70	1.92	3.05	4.76
Kopalnia Węgla Kamiennego Budryk S.A.	2.72	3.37	4.67	9.44	76.34	1.00	2.96
Katowicki Holding Węglowy S.A.	5.35	0.93	2.38	52.15	4.55	2.71	3.22
Nadwiślańska Spółka Węglowa S.A.	-7.83	-3.17	-4.17	-	-	-	-
Rudzka Spółka Węglowa S.A.	-11.09	-12.00	706.53	-	-	-	-
Gliwicka Spółka Węglowa S.A.	-11.23	0.04	0.03	724.90	-	-	-
Kompania Węglowa S.A.	10.79	11.69	-49.46	-9.41	5.07	2.96	-1.16
Rybnicka Spółka Węglowa S.A.	-17.46	-4.80	-23.81	1143.82	-	-	-
Zakład Górnictwo-Energetyczny Sobieski-Jaworzno II Sp. z.o.o.	0.17	1.11	1.58	1.89	5.48	-	-

Source: own calculations based on financial data from the entities

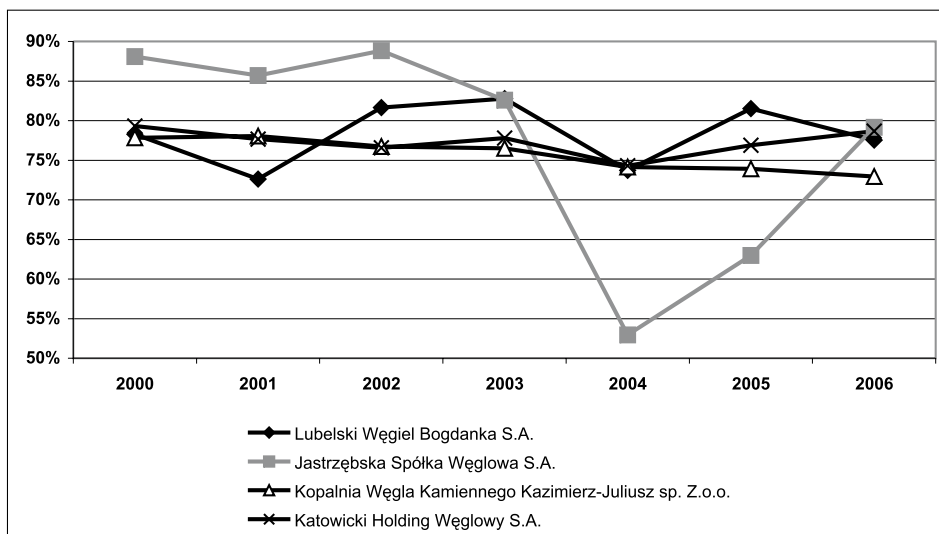


Fig. 1. The share of generation cost in the revenue on sales in selected mining companies between 2000–2006

Source: own studies based on LEX-Legal and Economic Information Resource

Rys. 1. Kształtowanie się wskaźnika obciążenia przychodów ze sprzedaży produktów kosztami ich wytworzenia w wybranych przedsiębiorstwach górniczych węgla kamiennego w latach 2000–2006

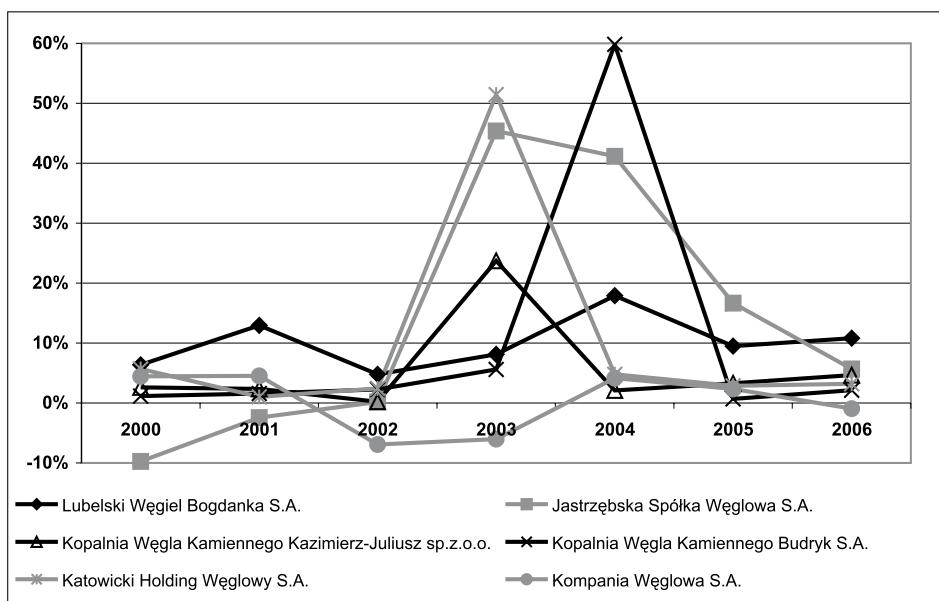


Fig. 2. Index of ROA in selected hard coal mining companies between 2000 and 2006

Source: own studies based on LEX-Legal and Economic Information Resource

Rys. 2. Kształtowanie się wskaźnika rentowności aktywów ogółem w wybranych przedsiębiorstwach górniczych węgla kamiennego w latach 2000–2006

The ROE index was considerably varying in analysed companies, yet, since 2003, it remained positive. This means that the general financial standing of the hard coal mining companies is relatively good. As far as the profitability of own capital is concerned, the best situation was found in LWB, a company in which the increase of the index between 2000–2006 was from 8.24% to 14.73%, and the worst situation was observed for KW (figure 3).

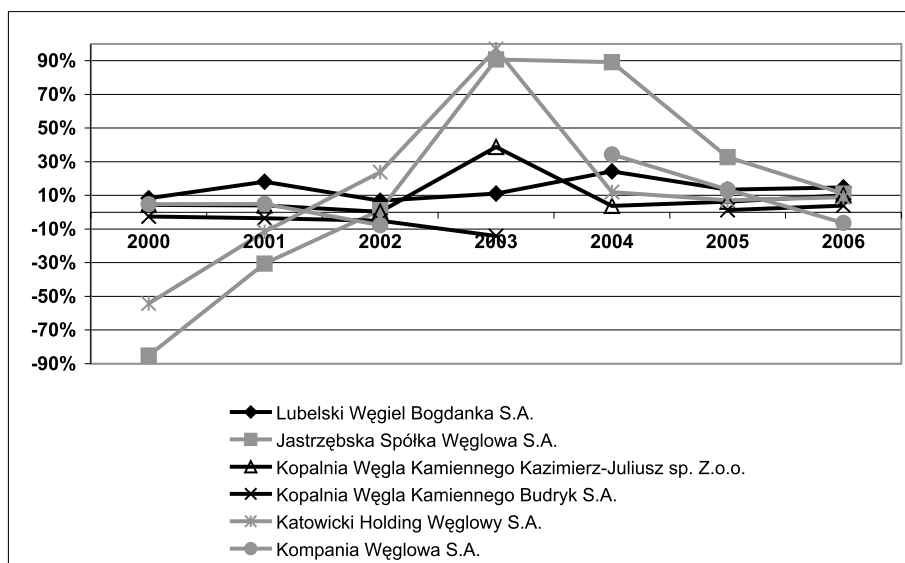


Fig. 3. Index of ROE in hard coal mining companies between 2000 and 2006  
Source: own studies based on LEX-Legal and Economic Information Resource

Rys. 3. Kształtowanie się wskaźnika rentowności kapitału własnego w przedsiębiorstwach górniczych węgla kamiennego w latach 2000–2006

According to the analysis of hard coal mining companies, with the changes present at the market for raw materials, further reduction of cost, especially that not related directly to production of coal, will be required in order to maintain competitive position of mining companies. The investment in both, maintenance and development of production capabilities and implementation of new technologies will be of crucial importance here. According to experts, a policy for the hard coal mining sector should be developed, and should involve securing the needs of the domestic market and allow potential export, which brings measurable financial profits (Markowski, Blaschke 2008).

### 1.2. Profitability of brown coal producers between 2000 and 2006

There was a slightly increasing trend apparent in brown coal mining between 2000 and 2006 (59 486 thousand Mg to 60 846 thousand Mg) (Balance... 2001, 2007). Exploitation was carried on in four mines: Adamów, Turów, Konin and Bełchatów, being the stock com-

panies of the State Treasury. The ROA index in those mines was from (–3.95%) to 40.43%. Considerable increase in that factor was observed for three mines in 2005 and 2006 (except KWB Konin). In Adamów mine, it was due to the increase of profit resulting mainly from the financial operations of the company, and – as regards Turów in 2006 – it resulted from a considerable increase of revenue on other operations, and slight decrease of other operating cost. The most stable values of that index were observed in KWB Bełchatów S.A. (table 3). Evolution of the ROS index for producers, as this was the case of coal mine, however, was not correlated with the coal selling prices, which highest value reached in 2005 – 45.50 PLN/Mg, increased from 44.01 PLN/Mg in 2004.

TABLE 3

Index of ROS for analysed brown coal mines [%]

TABELA 3

Wielkość wskaźnika rentowności sprzedaży netto dla analizowanych kopalni węgla brunatnego [%]

Mining Company	ROS index						
	2000	2001	2002	2003	2004	2005	2006
Kopalnia Węgla Brunatnego Adamów S.A.	–3.95	4.61	1.62	1.68	–0.51	1.67	7.74
Kopalnia Węgla Brunatnego Turów S.A.	3.78	2.99	1.51	3.87	–2.44	6.56	40.43
Kopalnia Węgla Brunatnego Bełchatów S.A.	1.58	3.05	3.03	4.17	1.29	8.37	4.58
Kopalnia Węgla Brunatnego Konin S.A.	0.14	3.74	0.82	0.43	0.12	0.54	–3.17

Source: own calculations based on financial data from the entities

The share of cost in the revenue on sales oscillated, in most cases, between 70 and 80%, i.e. several percent points less than that of the hard coal mines (figure 4).

The ROA index in the analysed mines remained at a stable level of around 3% and was usually several percent points lower than that of the hard coal mines. Such level does not imply worse management of the property and lower profit generating capability, but its increasing trend (due to the increase of net profit) is a positive phenomenon, especially for Turów and Adamów mines, where it was found considerably higher in 2006 (figure 5) as a result of the increase of the net profit.

The index of ROE in brown coal mines discussed oscillated, in most cases, around 10% and was usually higher than that of the hard coal mines, which, in turn, reflects the improvement in the utilisation of own resources available. For individual brown coal mining companies, the index varied from 0 to 14%, only for Turów mine, between 2005 and 2006, it suffered considerable fluctuations i.e. –35.12% in 2005 (that time, the company showed a negative value of own unit capital, which was due to uncovered net loss on overall operations of the past years), and 196.48% in 2006 (such increase of the index value was caused by increasing the revenue of other operations by more than 23 times as compared to the previous year, and reduction of other operating cost – such value is not presented in figure 6). Out of the mines analysed, KWB Bełchatów, again, showed the highest values of the index.



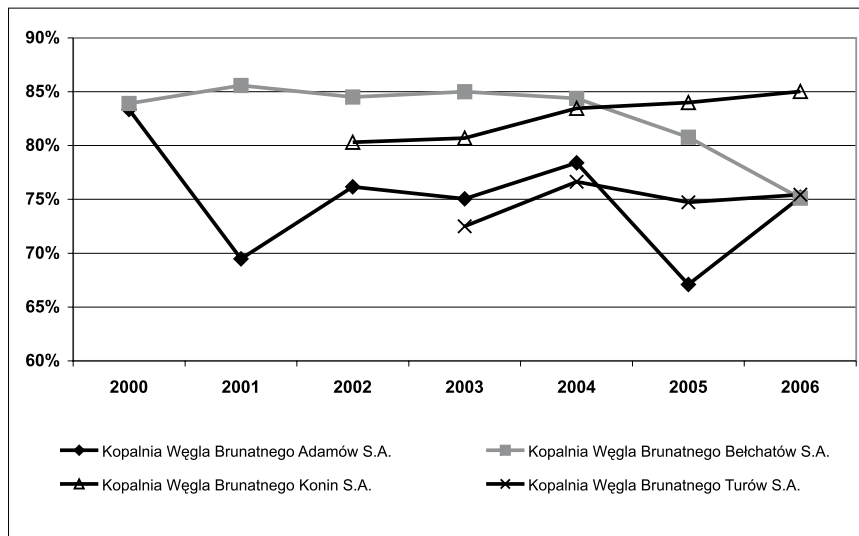


Fig. 4. The share of generation cost in the revenue on sales in mining companies between 2000–2006  
Source: own studies based on LEX-Legal and Economic Information Resource

Rys. 4. Kształtowanie się wskaźnika obciążenia przychodów ze sprzedaży produktów kosztami ich wytworzenia w przedsiębiorstwach górniczych węgla brunatnego w latach 2000–2006

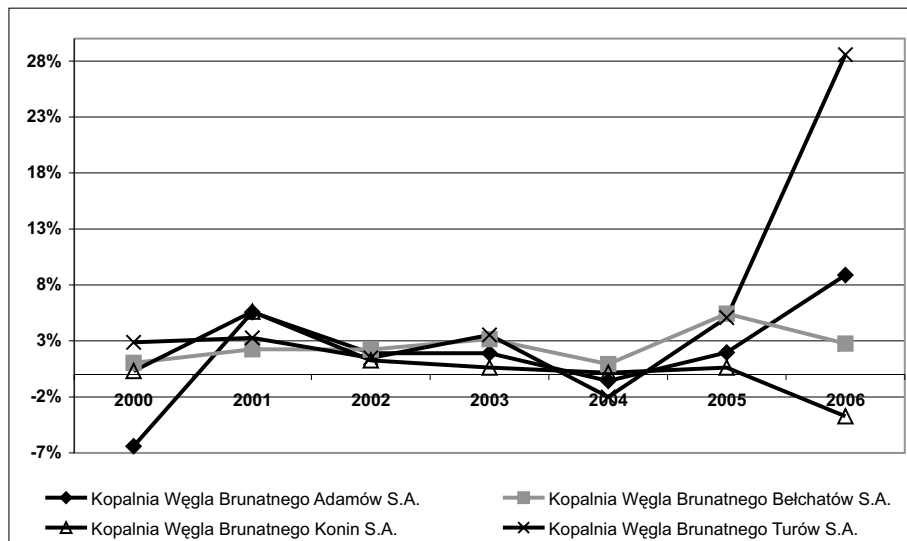


Fig. 5. Index of ROA in brown coal mining companies between 2000 and 2006  
Source: own studies based on LEX-Legal and Economic Information Resource

Rys. 5. Kształtowanie się wskaźnika rentowności aktywów ogółem w przedsiębiorstwach górniczych węgla brunatnego w latach 2000–2006

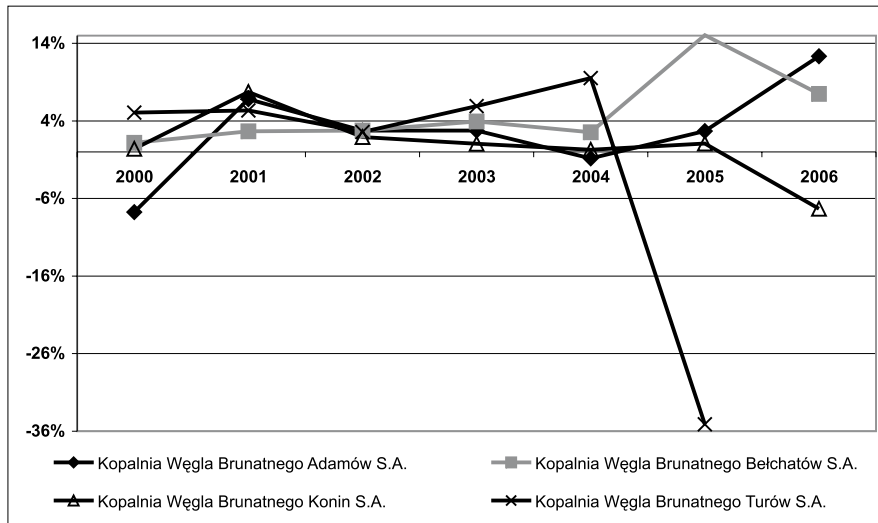


Fig. 6. Index of ROE in brown coal mining companies between 2000 and 2006  
Source: own studies based on LEX-Legal and Economic Information Resource

Rys. 6. Kształtowanie się wskaźnika rentowności kapitału własnego w przedsiębiorstwach górniczych węgla brunatnego w latach 2000–2006

### 1.3. Profitability of oil and gas producers between 2000 and 2006

In the recent years, the exploitation of oil and natural gas in Poland has revealed a growing trend. For oil, from 353.4 thousand Mg in 2000 to 783.63 thousand Mg in 2006, and for natural gas from 4481.07 million m<sup>3</sup> in 2000 to 5261.36 million m<sup>3</sup> in 2006 r. (Balance... 2001, 2007) The oil and gas is exploited by:

- Polskie Górnictwo Naftowe i Gazownictwo S.A. (PGNiG S.A., Polish Oil and Gas Mining Company),
- Przedsiębiorstwo Poszukiwań i Eksploatacji Ropy i Gazu Petrobaltic S.A. (Petrobaltic Oil and Gas Searching and Exploitation Company) incorporated in Grupa Lotos.

The ROS index for PGNiG S.A. between 2000 and 2006 had an increasing trend—from -5.46% to 15.12%. Until 2005, this involved mainly an increase of the net profit (revenue on operations varied), and in 2006, lower dynamics of sales increase was observed (PLN 15.2 billion) than that of the net profit (PLN 1.3 billion), also due to increased exploitation of oil and increase in prices. In 2006, 15.2% profit was included in 1 PLN of sales. For Grupa Lotos S.A., between 2003 and 2005, the sales profitability index was increasing, yet, in 2006, it decreased, which was due to the decrease, by 81,08% in the revenue on other operations as compared to the previous year, and resulted in a decrease of the net profit (table 6, figure 7).

TABLE 4

Index of ROS for companies dealing with the exploitation of oil and natural gas  
between 2000 and 2006 [%]

TABELA 4

Wielkość wskaźnika rentowności sprzedaży netto dla przedsiębiorstw zajmujących się wydobyciem  
ropy naftowej i gazu ziemnego w latach 2000–2006 [%]

Mining Company	ROS index						
	2000	2001	2002	2003	2004	2005	2006
Polskie Górnictwo Naftowe i Gazownictwo S.A.	-5.46	-1.76	3.28	3.29	8.77	11.47	15.12
Grupa Lotos S.A.	-	-	-	2.94	5.20	6.23	3.50

Source: own calculations based on financial data from the entities

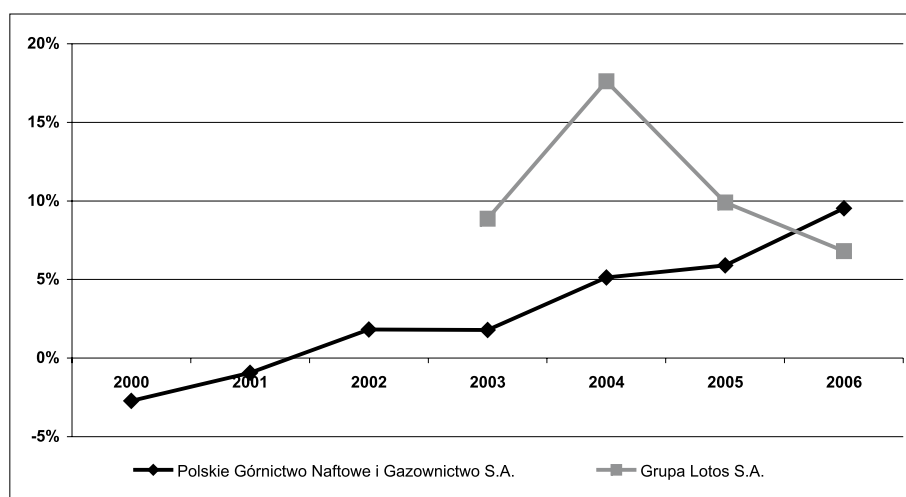


Fig. 7. Index of ROA for companies exploiting oil and natural gas in Poland, between 2000 and 2006  
Source: own studies based on LEX-Legal and Economic Information Resource

Rys. 7. Wielkość wskaźnika rentowności aktywów ogółem w przedsiębiorstwach wydobywających  
ropę naftową i gaz ziemny w Polsce w latach 2000–2006

In PGNiG S.A. the overall ROA index varied a little, however, it maintained the increasing trend. In Grupa Lotos, however, the value of the index, following a rapid increase in 2004, decreased to the lowest level in 2006 (figure 7). The ROE factor was similar. In PGNiG S.A. between 2000 and 2006 it increased gradually to 15.25% in 2006 (fig. 8). In Grupa Lotos, however, the changing trends were identical as in the overall asset profitability.

The results of Grupa Lotos were not, hence, directly linked to the level of market prices for raw materials, in contrast to PGNiG S.A., as the oil prices Brent, FOB North Sea were gradually increasing from USD 4.66/GJ (2000) to USD 10.64/GJ (2006) and USD 11.83/GJ (2007). (Energy... 2008) Prices of natural gas showed similar trends, e.g. average annual

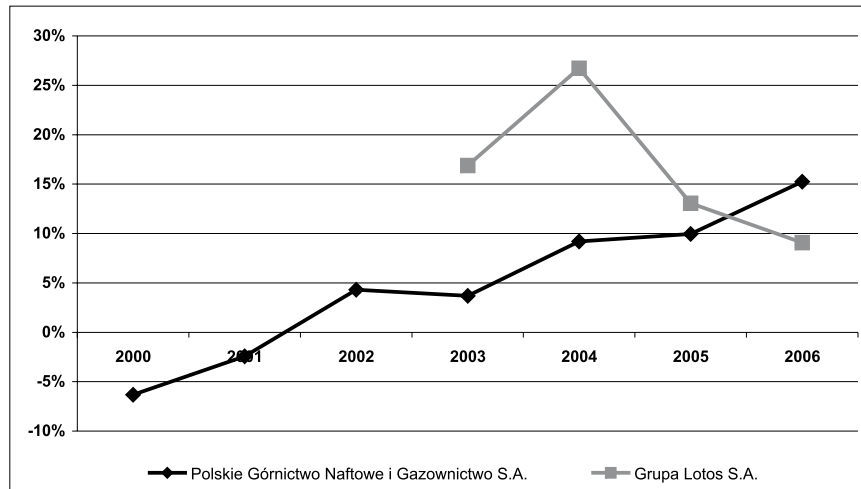


Fig. 8. Index of ROE for companies exploiting oil and natural gas in Poland, between 2000 and 2006  
Source: own studies based on LEX-Legal and Economic Information Resource

Rys. 8. Wielkość wskaźnika rentowności kapitału własnego w przedsiębiorstwach wydobywających ropę naftową i gaz ziemny w latach 2000–2006

prices of gas imported via pipelines to the EU, increased from USD 2.64/GJ (2000) to USD 6.94/GJ (2006), with a decrease by 0.55% in 2007.

## 2. Metal raw materials sector

Poland is an important producer and exporter of copper, silver, zinc and lead. The only Polish mining producer of copper and silver is KGHM Polska Miedź S.A, whereas ZG Trzebieńka S.A and ZGH Bolesław S.A. are the suppliers of zinc and lead. The output of copper ore in 2000 was 27 142 thousand Mg (513 thousand Mg copper content and 1 363 Mg silver), and in 2006 – 25 903 thousand Mg (553 thousand Mg copper content and 1462 thousand Mg silver). Output of zinc and lead in 2000 was 4 862 thousand Mg (185 thousand Mg zinc and 69 thousand Mg lead) and in 2006 – 4 287 thousand Mg ores (153 thousand Mg zinc and 70 thousand Mg lead). (Balance... 2001, 2007).

### 2.1. Profitability of copper, zinc and lead producers between 2000 and 2006

The ROS index of metal raw material producers varied significantly between 2000 and 2006 from (–20.39%) in 2001, at w ZG Trzebieńka S.A, to 29.09% in 2006 at KGHM Polska Miedź S.A. That resulted from a considerable change of metal prices in that period and fluctuations of US dollar exchanging rates. The best situation, from the point of view of sales profitability in the analysed period, occurred at KGHM Polska Miedź S.A., where the ROS

increased from (-4.51%) in 2001 to 29.09% in 2006. On the other hand, in companies dealing with exploitation and processing of zinc and lead, the profitability indices were positive after 2003, oscillating within the range from 2.65% to 21.81% in 2006 (table 7).

The share of production cost in revenue on product sales between 2000 and 2006 was varying, with a decreasing trend, however, which is a favourable condition, as it indicates faster growth of revenue than that of the cost. Only in 2002, at ZGH Bolesław S.A., the cost of production was above the revenue achieved. Such indices are considerably lower than those for the energy raw materials (figure 9).

TABLE 5

Index of ROS for companies dealing with the exploitation and processing of metal raw materials, between 2000 and 2006 [%]

TABELA 5

Wielkość wskaźnika rentowności sprzedaży netto w przedsiębiorstwach zajmujących się wydobywaniem i przetwarzaniem surowców metalicznych w latach 2000–2006

Mining Company	ROS index						
	2000	2001	2002	2003	2004	2005	2006
KGHM Polska Miedź S.A.	12.40	-4.51	5.67	8.68	22.69	28.62	29.09
Zakłady Górnicze Trzebieńka S.A.	1.59	-20.39	-10.31	2.08	5.94	2.65	21.80
Zakłady Górniczo-Hutnicze Bolesław S.A.	6.25	0.35	-4.46	-4.78	9.05	3.87	21.81

Source: own calculations based on financial data from the entities

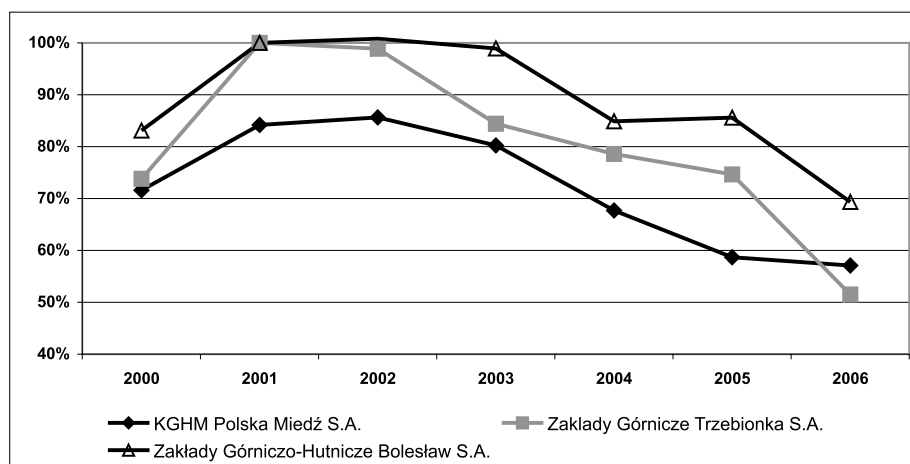


Fig. 9. The share of generation cost in the revenue on sales in mining companies dealing with metal raw materials between 2000–2006

Source: own studies based on LEX-Legal and Economic Information Resource

Rys. 9. Kształtowanie się wskaźnika obciążenia przychodów ze sprzedaży produktami kosztami ich wytworzenia w przedsiębiorstwach górniczych surowców metalicznych w latach 2000–2006

The overall ROA indices and own capital indices for the discussed mining companies indicate, from 2003, increasing trends. In 2006, the ROA index was greatest at ZG Trzebieńka S.A. and 28,06% net profit was generated by PLN 1 (figure 10). In 2006, also the ROE indices achieved great values. At ZGH Bolesław S.A., in 2006, that index reached the level of 70%, while in other sectors it did not exceed 15% (figure 11).

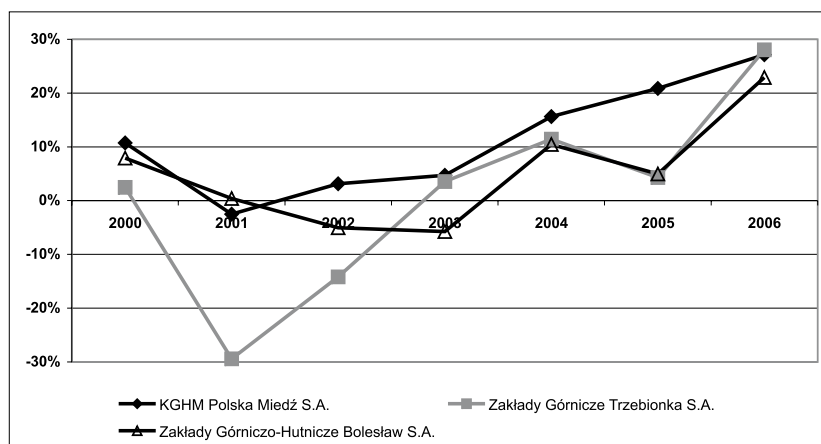


Fig. 10. Index of ROA in mining companies dealing with exploitation of metal raw materials between 2000 and 2006

Source: own studies based on LEX-Legal and Economic Information Resource

Rys. 10. Kształtowanie się wskaźnika rentowności aktywów ogółem w przedsiębiorstwach górniczych surowców metalicznych w latach 2000–2006

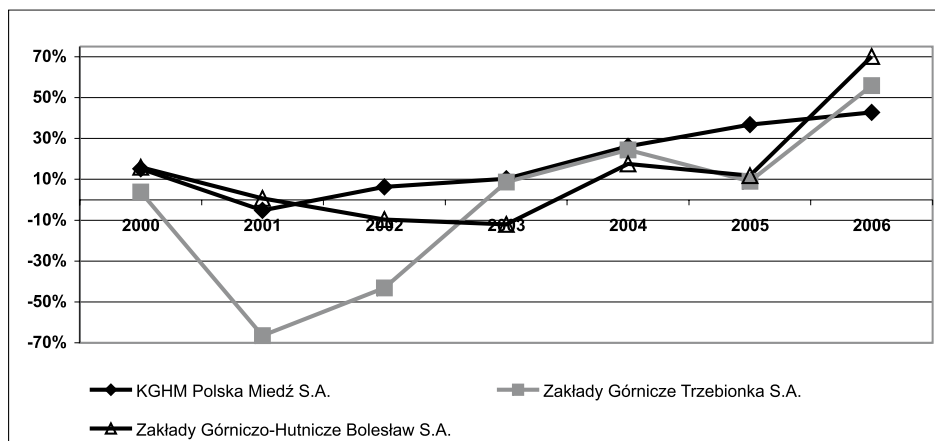


Fig. 11. Index of ROE in mining companies dealing with exploitation of metal raw materials between 2000 and 2006

Source: own studies based on LEX-Legal and Economic Information Resource

Rys. 11. Kształtowanie się wskaźnika rentowności kapitału własnego w przedsiębiorstwach górniczych surowców metalicznych w latach 2000–2006

The increase of basic profitability indices in 2006 at ZGH Bolesław S.A. and ZG Trzebionka S.A. resulted from a high positive level of financial results related to a considerable increase in prices of those metals. At ZGH Bolesław S.A. the net profit increase in 2006 by 667.7% resulted from the achievement of considerable profit on financial operations (increase of revenue from PLN 2.8 million in 2005 to PLN 41.4 million in 2006 and the decrease of financial cost from PLN 12 million to PLN 5.5 million). At ZG Trzebionka S.A., the revenue on sales of products, goods and materials increased by 65.88%, and the cost of production of such products and materials decreased by 9.16%. As compared to 2005, that company achieved over 13 times increase of net profit.

### Summary

The indicative analysis of mining companies was based on data from the years 2000–2006. It was aimed at comparing the profitability and operating efficiency of individual units, and pointing out the influence of changing market conditions on their activity. Most of the companies analysed took advantage of favourable conditions in the market for raw materials, and, by so doing, improved their economic performance. An apparent correlation between the price levels and profitability indices was present. Most prices of the raw materials mined in the country in the nominal format of PLN/Mg increased in the years 2003–2006 (despite the decrease of US dollar rates in 2006, from 3.3 PLN/USD (March 29, 2006) to 2.86 PLN/USD (December 5, 2006)). In 2006, the ROS index reached the top values in the companies dealing with metal raw materials, at the level of 20% on average. With regard to the energy raw materials, it is around 5% for hard coal mines, and around 8% for brown coal mines. On the other hand, in oil and natural gas mining companies, its value varied from 3 to 15%. The share of production cost in sales of products, in the group of metal raw materials, indicated a decreasing trend and was around 70% on average. The present situation was mainly caused by the cost growing faster than the revenue. In the energy raw material sector, such index was much higher – around 75% in brown coal mines, and 75–80% in hard coal mines. As the analysis of indices proves, the efficiency of mining is considerably influenced by high cost of other operations, which is particularity visible in hard coal mines.

Due to the specifics of the international market for raw materials, individual mining companies have no direct influence on the price level for the raw materials delivered. The companies should therefore take advantage of good economic conditions and implement modernisation and development projects, which – in the mining sector – require considerable funds. However, the level of investment is not correlated with the profitability indices. According to the national statistics, the dynamics of investment expenditure in the mining sector, only in 2005 was higher than the country's average (statistical report for the industrial sector, 2008). The current ROA index for all analysed companies, proves capabilities of their property to make profits and to ensure creditworthiness (banks expect this index to be 2–6%). However, investing in the mining sector – especially in case of energy raw materials – requires also a long-term development plan to exist for that sector.

## REFERENCES

- Balance of mineral resources and underground water in Poland as of December 31, 2006, PIG Warsaw, 2007.
- Balance of mineral resources and underground water in Poland as of December 31, 2000, PIG Warsaw, 2001.
- Information on the progress of restructuring of hard coal mining sector in 2006, taking into account synthetic conclusions regarding incomplete fulfilment of program assumptions for 2004–2006, www.mg.gov.pl, dated 2008-07-22.
- Strategy for the hard coal mining sector in Poland between 2007–2015, www.mg.gov.pl, dated 2008-07-22.
- Bla schke W., 2008 – Hard coal mines, profitable or not?, Wspólne Sprawy, no. 7 (183).
- Data from the Central Statistical Office, www.stat.gov.pl, dated 2008-07-22.
- Energy prices and taxes. Quarterly statistics, II 2008, OECD/IEA 2008.
- Ga wlik L., 2006 – Studies of the cost of acquisition of hard and brown coals in order to determine optimum fuel structure in the production of electric energy. Published by IGSMiE PAN, Cracow.
- Marko wski J., Bla schke W. – Coal prices: profits not for us! www. górnictwo.wnp.pl dated 2008-07-12.
- Sierpińska M., Jachna T., 2007 – Methods for making financial decisions. Study of cases and examples. Published by PWN, Warsaw.
- Financial statement of the entities – LEX Legal and Economic Information Resource.

**OCENA RENTOWNOŚCI FUNKCJONOWANIA WYBRANYCH PRZEDSIĘBIORSTW GÓRNICZYCH W POLSCE  
NA POZĄTKU XXI WIEKU**

Słowa kluczowe

Rentowność, sektor górnictwa, zmiany struktury własnościowej

Streszczenie

W polskiej gospodarce od 2000 roku dokonują się istotne zmiany prawne, środowiskowe i społeczno-ekonomiczne, które wpływały na rentowność przedsiębiorstw górnictwa. Korzystne uwarunkowania zewnętrzne panujące w ostatnich latach na rynku surowców powodowały zwiększenie efektywności ekonomicznej podmiotów działających w sekcji górnictwo i kopalnictwo. Potwierdzenie tego zjawiska odzwierciedlają wskaźniki prezentowane przez GUS dla całej sekcji górnictwo i kopalnictwo. W artykule poddano analizie wskaźnikowej poszczególne podmioty działające w branży energetycznej i metalicznej, w celu porównania ich rentowności i efektywności działania. Do oceny ich rentowności wykorzystano 3 podstawowe wskaźniki:

- rentowności sprzedaży netto (ROS), wyrażony stosunkiem zysku netto do przychodów ze sprzedaży produktów, towarów i materiałów,
- rentowności aktywów ogółem (ROA) – stosunek zysku netto do aktywów ogółem,
- rentowności kapitału własnego (ROE), rozumianego jako zysk netto w stosunku do kapitału własnego.

Przeprowadzona analiza wskaźnikowa firm wydobywczych bazowała na danych z lat 2000–2006. Jej celem było porównanie rentowności i efektywności działania poszczególnych podmiotów oraz wskazanie wpływu zmieniających się warunków rynkowych na ich działalność. Większość z analizowanych firm wykorzystwała sprzyjającą koniunkturę na rynku surowców, poprawiając w ten sposób podstawowe wyniki ekonomiczne. Obecny poziom wskaźnika rentowności aktywów ogółem dla wszystkich analizowanych podmiotów potwierdza zdolność ich majątku do przynoszenia dochodów, jak i możliwość uzyskiwania kredytów (banki oczekują, aby wskaźnik ten osiągał poziom 2–6%). Jednak prowadzenie inwestycji w górnictwie – a szczególnie w przypadku surowców energetycznych – wymaga również istnienia długoterminowego programu dotyczącego rozwoju tej branży.



EVALUATING THE PROFITABILITY OF SELECTED MINING COMPANIES IN POLAND  
AT THE BEGINNING OF 21<sup>ST</sup> CENTURY

Key words

Profitability, mining sector, ownership changes

Abstract

Since 2000, in Poland's economy there have been considerable legal, environmental and socio-economic transitions taking place, which influence the profitability of mining companies. Favourable external factors, present in the market for raw materials in the recent years, have led to an increase in the economic efficiency of entities involved in the mining business. This phenomenon is well reflected in indices presented by GUS (the Central Statistical Office) for the entire mining sector. The present paper aims to analyse indices for individual entities in the energy and metal raw material sectors, in order to compare their profitability and operating efficiency, based on economic and financial data available in LEX-Legal and Economy Information Resource. Three basic indices have been used to assess the profitability:

- return on sale (ROS), expressed as the relationship between the net profit and revenue on sales of products, goods and materials [GUS];
- return on assets (ROA) – the net profit to overall assets ratio;
- return on equity (ROE), understood as the net profit in relation to the own capital.

The indicative analysis of mining companies was based on data from the years 2000–2006. It was aimed at comparing the profitability and operating efficiency of individual units, and pointing out the influence of changing market conditions on their activity. Most of the companies analysed took advantage of favourable conditions in the market for raw materials, and, by so doing, improved their economic performance. The current overall ROA index for all analysed companies, proves capabilities of their property to make profits and to ensure creditworthiness (banks expect this index to be 2–6%). However, investing in the mining sector – especially in case of energy raw materials – requires also a long-term development plan to exist for that sector.

