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ROBERT RANOSZ*

# ANALYSIS OF BONDS AS AN INSTRUMENT FOR FINANCING MINING INVESTMENTS

# ANALIZA OBLIGACJI JAKO INSTRUMENTU FINANSOWANIA INWESTYCJI GÓRNICZYCH

The purpose of this article is to examine the structure of financing for mining enterprises in the years 2007-2013, with particular emphasis on bonds. The document pays special attention to Polish mining enterprises. The financing structure analysis was based on data collected from financial statements (cash flows) of the largest mining companies in Poland, and their comparison with the results of global mining enterprises pursuant to reports prepared by international advisory firms. The article takes into account capital sources such as: corporate bonds, bank loans and issue of shares. As indicated by the performed analysis, mining enterprises both around the world and in Poland are increasingly eager to take advantage of obtaining business financing from issue of corporate bonds. It should also be recognized that in the analyzed period, both global and Polish mining enterprises deviate from forms of financing such as issue of shares. This may be caused by the fact that the bonds market in Poland is becoming increasingly popular, mainly due to interest rate on bonds being lower in comparison with bank loans. Another reason may be that banks and potential buyers of shares are less eager to finance this type of investment due to a relatively substantial risk acceptable to bondholders.

**Keywords:** bonds, options embedded in bonds, bonds in mining

Celem niniejszego artykułu jest zbadanie struktury finasowania przedsiębiorstw z sektora górniczego w latach 2007 do 2013, ze szczególnym uwzględnieniem obligacji. W opracowaniu skupiono szczególną uwagę na polskich przedsiębiorstwach górniczych. Badanie struktury finansowania zostało oparte o zgromadzone dane ze sprawozdań finansowych (przepływów pieniężnych) największych spółek górniczych w Polsce oraz porównano je z wynikami światowych spółek wydobywczych na podstawie raportów międzynarodowych firm doradczych. W artykule wzięto pod uwagę takie źródła kapitału jak: obligacje korporacyjnej, kredyty bankowe oraz emisję akcji. Jak wynika z przeprowadzonej analizy firmy górnicze zarówno na świecie jak i w Polsce coraz chętniej korzystają z finansowania swojej działalności z emisji obligacji korporacyjnych. Należy również stwierdzić, iż w analizowanych latach spółki górnicze zarówno światowe jak i polskie odchodzą od takich form finansowania jak emisja akcji. Sytuacja taka może być powodowana faktem, iż rynek obligacji w Polsce staje się coraz popularniejszy, przede wszystkim z uwagi na to, że ich oprocentowanie w porównaniu z kredytami bankowymi jest niższe. Kolejnym powodem

* AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY, FACULTY OF MINING AND GEOENGINEERING, AL. A. MICKIEWICZA 30, 30-059 KRAKOW, POLAND
E-MAIL: rranosz@agh.edu.pl

może być fakt, iż banki oraz potencjalni nabywcy akcji coraz mniej chętnie chcą finansować tego rodzaju inwestycji z uwagi na stosunkowo duży poziom ryzyka, które akceptują obligatariusze.

**Słowa kluczowe:** obligacje, opcje w obligacjach, obligacje w górnictwie

# 1. Introduction

There are many sources of financing the business activity of mining enterprises. The basic sources of financing include equity financing (retained profits, issue of shares) and foreign capital financing (e.g. bank loans, issue of corporate bonds) (Sierpińska & Bąk, 2013). In the case of an issue of debt securities included in foreign capital, it should be mentioned that bonds are similar to hybrid capital instruments (convertible bonds). The main characteristic of convertible bonds is the possibility of converting debt into a company's equity. At this point, it should also be noted that there are some continuously developing alternative sources of financing. Such sources of financing include primarily Streaming, Royalty and Offtake. The main distinctive feature of the aforementioned sources of financing is the fact that they all concentrate on obtaining raw materials, whereas traditional sources of financing are mainly focused on repaying the loan capital.

A mining company, just like any other company, should finance its business with both equity and foreign capital. The need to finance business activity not only with equity is directly related to the value thereof. Speaking about value, we generally mean the value for shareholders, whose main interest is in the payment of dividend. Hirschleifer and Thakor confirm that the value of the enterprise and the level of its indebtedness are positively correlated (Hirschleifer & Thakor, 1989). However, it should be remembered that constant incurring debt by an enterprise may lead to a loss of liquidity and, what follows, a bankruptcy of this enterprise. Therefore, in order for the enterprise to increase its value from the shareholders' point of view, it must have an optimal capital structure (Modigliani & Miller, 1958). Hence, it may be said that an increase of the share of foreign capital in financing may increase the value of the enterprise if the weighted capital cost is relatively low (Sekar, 2014).

The choice of an appropriate source of financing depends on a number of factors. However, in many cases it is determined by the cost of the acquired capital (from the perspective of a capital acquirer), which directly affects the value of mining enterprises (Kustra & Kubacki, 2009). In the case of credit institutions, the risk associated with the given investment is also important, apart from the amount of the interest. While considering basic sources of financing, bonds are the most flexible source of capital, and thanks to additional options embedded therein, they meet the needs of investors and the company obtaining capital.

Therefore, the author of the publication formulates a hypothesis that mining enterprises should increase their debt through issue of bonds, since financing the business activity of mining enterprises with such capital increases the effectiveness of the given enterprise's functioning. An increase of effectiveness is connected with decreasing the costs of capital and reducing the risk for investors. Bonds usually have a lower interest rate than bank loans, which may result from the fact that banks have better access to information and may monitor the market better, thus they have more knowledge than bondholders (Altman et al., 2010) on investment risk. Therefore, bondholders can accept bigger risk. They can also accept bigger risk than potential investors who purchase shares – therefore, it is more difficult to obtain capital during crisis through issue of shares. So during a crisis enterprises obtain capital through issue of bonds not shares (Mustafa et. al., 2015; Baur & Brian, 2009).

## 2. Bonds and their types

Bonds are one of the sources of financing the business activity of enterprises; first of all, they constitute an alternative to bank loans. Pursuant to the Bond Act of 29 June 1995, Article 4 – "a bond is a security issued in a series, where the issuer states that it is a debtor to the owner of the bonds (bondholder), and that it undertakes to perform a given obligation for the benefit of the owner of the bonds". Furthermore, the same article stipulates that the aforesaid obligation may be of a pecuniary or non-pecuniary nature (Bond Act, 1995). Therefore, the bond is a financial instrument (and also a security), where the issuer is the debtor to the bondholder (the owner of the bonds), who undertakes to periodically pay the interest and buy out the bonds for the benefit of the owner of the bonds. The above means that the bond issuer incurs a debt towards the bondholder and undertakes to pay this debt, including the interest. Therefore, the bond is a capital market instrument, usually issued for the period of one year (Jajuga, 2009). From the point of view of the issuer, the bond provides a possibility (instrument) of temporarily using non-bank funds, usually medium- or long-term. The aforementioned period may in some cases be significantly longer than the term of the credit granted by the bank. Since the bond is an external source, it may be considered by the issuer as an alternative source of obtaining capital compared with the issue of shares and bank loans. In comparison with shares, bonds are a much cheaper source of financing the business activity of an enterprise due to the fact that the interest on the interest paid to the bondholders is written off as financial costs from the base result of the company before calculating the income tax. This means that the cost of capital obtained from bonds is lower than the cost of the capital obtained from shares, with respect to which no such write-off applies. Additionally, a dividend is paid to shareholders from the profit after tax, which also makes the capital source more expensive (Dębski, 2010; Panfil, 2008).

Each of the issued series of bonds has special features, i.e. parameters that determine their type and value. The basic parameters characterising the bonds may include the following: (Jajuga, 2009):

- Nominal value – the value on which the interest is accrued and which is paid at the time of the buyout of the bonds by the issuer to the bondholder.
- Buyout date – the date on which the bondholder obtains from the issuer an amount equal to the nominal value.
- Interest (or the coupon rate) – the interest rate defining the amount of the interest paid to the bondholder.
- Interest payment dates – the frequency, with which the interest is paid, e.g. once per year, once per half a year, once per quarter.
- Issue price – the price at which the bonds are sold to their first bondholder at the time of issue.

When considering "ordinary" bonds, it must be stated that this source of financing – unlike capital – obtained through the issue of shares, does not grant any share in the company. On the other hand, in comparison with bank loans bonds are incorporated on securities (not based on a contract) and may be subject of marketing on the organised market (Puzyrewicz, 2011).

When reviewing the literature concerning bonds and their types, many criteria of their division may be noted. The main criterion of bond selection is their division according to:

- Type of issuer – enterprises (corporate bonds) and self – government units (municipal bonds) that issue bonds, usually for the purpose of financing public utility investments and budget deficit through the State Treasury, may be issuers. In the case of the State, the bonds are issued for a longer period of time (more than a year), but sometimes the period is shorter, and then such bonds are called treasury bills (Puzyrewicz, 2011; Dębski, 2010).

- Time period to buyout – in the literature, the above-mentioned periods include three time frames: up to one year (short-term bonds), from 1 to 5 years (medium-term bonds), and longer than 5 years (long-term bonds). Nonetheless, it should be noted that the presented division is rather symbolic, as the investment period is an individual criterion decided by each investor independently (Puzyrewicz, 2011; Najlepszy, 2000).
- Mode of issue – the public or private issue of bonds. Private issue means a proposal to acquire bonds sent to a maximum of 99 named addressees. This means that the choice of private issue excludes the possibility of it being advertised in the mass media. Public issue provides for a broad scope of marketing activities, but also makes it necessary to prepare a prospectus (or memorandum) and present it to the Financial Supervision Authority (Puzyrewicz, 2011). The Polish Act on Public Offerings allows the selling of bonds on the primary market by public offering, without the necessity to perform the approval procedure. Obviously, this special process refers only to bonds offered on the primary market. According to the Act, the above-described procedure may be used in the case of the following bonds (Bond Act, 1995):
  - Offered to eligible investors only.
  - Offered to each investor that acquires securities based on the value calculated according to the price of issue or sales price of at least EUR 50,000 at the time of establishing such a price.
  - The nominal value is at least EUR 50,000 at the time of establishing the nominal value of the aforesaid securities.
- Type of marketing – the issued bonds may be marketed on the organised market and outside of it (Puzyrewicz, 2011).
- Types of benefits – the bonds may also be divided according to the type of benefit; in compliance with the Bond Act, they may be of a pecuniary or non-pecuniary nature. The basic bond type refers to bonds on which the amounts are paid in cash. The holders of such bonds receive cash benefits due to subsequent interest coupons and capital repayment (the principal) (Puzyrewicz, 2011). Apart from the bonds related to cash benefits only, the Bond Act provides for bonds that enable the investor to also obtain other amounts – in addition to or instead of cash benefits. Such bonds include:
  - Bonds with the right to share in the issuer's profits – the right to participate in the issuer's profits according to the algorithm defined in the terms and conditions of the issue (Puzyrewicz, 2011).
  - Bonds with a buyout date – bonds with one buyout date may not be redeemed before the maturity date, whereas bonds with many buyout dates (multiple dated bonds) allow the issuer to redeem the bonds and the bondholder to request their redemption only on a few previously set dates (Kudła, 2009).
  - Bonds with a priority right – such bonds give the right of redemption according to the predefined prices before the buyout date. If the issuer is granted the aforesaid right, such a bond is called *callable*. On the other hand, if the bondholder is granted the aforesaid right, such a bond is called *puttable* (Puzyrewicz, 2011). According to (Reilly & Brown, 2001), a clause related to the timely buyout of the bonds is aimed at creating a special fund (sinking fund), i.e. a kind of provision for the gradual redemption

of the bonds so that the entire issue is redeemed on a predetermined date. The issuer may also establish other funds, for example to handle payments of the interests.

- PIK (pay-in-kind) securities – bonds and preference shares, in the case of which the interest (or dividend) is paid in a cashless manner – in the form of new securities. The issuer decides on the method of payment, bearing in mind that the cashless method of paying debt is usually possible within the first periods only. (Juszczyk & Nagórka, 2009)
- Increasing rate bond – bonds with an increasing coupon rate. In this case, the issuer defines the value of the coupon in the first period, as well as the terms and conditions of its increase in the subsequent periods (Kudła, 2009)
- Extendable bonds – the issuer may extend the bond relationship beyond the maturity date (Kudła, 2009)
- Convertible bonds – bonds that give the bondholder the right to take up the issuer's shares in exchange for the bonds. In the literature (Dębski, 2010; Rutkowski, 2007; Brigham & Houston, 2005), convertible bonds are considered an instrument that combines the features of both a debt and a share, where initially it is the debt on which the interest is paid and which may be redeemed within the stipulated deadline (in the conversion period) or converted into shares, in which case it becomes equity.
- Exchangeable bonds – bonds that are structured similarly to convertible bonds, but with the difference that the bonds are converted to shares or stocks of an entity other than the issuer of the bonds (Kudła, 2009)
- Partly paid bonds – bonds are acquired in instalments. Part of the payment is made at the time of receiving the bonds, whereas the remaining amount is paid at a later date. The investor may give up paying the remaining amount of the bonds, but in such cases it will lose the advance payment. (Kudła, 2009)
- Bonds with warrants – a method of financing where the company incurs the cost of financing in the form of an interest coupon, whereas the remaining costs in the form of a warrant are borne by the owners (as in the case of a loan with the right to participate in the capital) (Kudła, 2009).

• Type of interest – in this case, the bonds may be divided into fixed-interest bonds, variable-rate bonds, discount bonds (zero coupon), or indexed bonds (Jajuga, 2009; Puzyrewicz, 2011; Panfil, 2008; Brigham & Houston, 2005).
• Security – the bonds may be secured by a mortgage or second general mortgage (Dębski, 2010; Panfil, 2008). The bonds may also be secured by other securities (subordinated) or equipment of the company (Reilly & Brown, 2001).
• Investment risk level – the risk level is determined by rating agencies. In most cases the ratings are similar. The risk score is measured on a scale from A to D, where A means a bond with the lowest credit risk, and D with the highest credit risk. According to (Brigham & Houston, 2005), bonds with triple and double As are maximally safe, whereas those with single A and triple Bs are safe enough to be considered for investment purposes – they are called *bonds with investment rating*. Such bonds may be acquired by banks and other institutional investors. The authors (Brigham & Houston, 2005) also state that bonds with double Bs and lower ratings, called *junk bonds*, are highly speculative and show increased probability of default if handled by the issuer. On the other hand, the author (Dziawgo, 1998) believes that investing in such bonds is not risky at all, and may bring extraordinary profits.

## 3. The analysis of bonds as an instrument for financing mining investments

As mentioned in the introduction, mining enterprises may raise capital, among other things, through the issue of shares, corporate bonds and bank loans. What is worth mentioning is that one of the largest concerns rendering advisory and audit services, EY, also focuses on such sources of capital. In accordance with the report of the aforementioned company entitled "Mergers, acquisitions and capital raising in mining and metals, 2013 trends, 2014 outlook, changing gear", the following sources of financing have been provided in the mining industry (REY, 2014a): Initial Public Offering (IPO), Follow on Public Offer (FPO), convertible bonds, ordinary corporate bonds, bank loans.

In the further part of the article, the said sources have been generalised in the following manner:

- issue of shares – Initial Public Offering (IPO) and Follow on Public Offer (FPO),
- bonds – convertible bonds or ordinary corporate bonds,
- bank loans.

The share of the above-mentioned sources of financing changes over time. Bank loans, the share of which in the entirety of financing capital fluctuates around 50%, remain one of the most popular sources of capital. Nonetheless, within the last eight years the structure of such sources has been changing; even though the share of bank loans remains at an almost unchanged level, it is noticeable that mining enterprises more often benefit from the issue of bonds, and the share of this source of capital has been increasing at the expense of the issue of shares. The sources of capital for mining enterprises are compared in Table 1.

TABLE 1

Sources of financing for major mining enterprises [USD billion]

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|
| Issue of shares | 88.2 | 61.2 | 76.8 | 67.7 | 67.2 | 27.3 | 27.0 |
| Bonds | 49.2 | 50.4 | 75.4 | 78.0 | 86.2 | 116.1 | 95.6 |
| Bank loans | 110.8 | 171.7 | 62.4 | 183.9 | 187.1 | 106.0 | 148.9 |
| Total | 248.2 | 283.2 | 214.7 | 329.5 | 340.4 | 249.4 | 271.6 |
| **Share of particular sources in financing** | | | | | | | |
| Issue of shares | 35.5% | 21.6% | 35.8% | 20.5% | 19.7% | 11.0% | 10.0% |
| Bonds | 19.8% | 17.8% | 35.1% | 23.7% | 25.3% | 46.5% | 35.2% |
| Bank loans | 44.6% | 60.6% | 29.1% | 55.8% | 54.9% | 42.5% | 54.8% |
| Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

*Source:* the study based on (REY, 2014a).

On the basis of Figure 1, the most popular sources of capital in the analysed period (2007 – 2013) are bank loans that constitute on average 50% of share during almost the entire period. It may also be noticed that, within the discussed time frame, bonds, the popularity of which is generated at the expense of the issue of shares, are becoming more preferred. This correlation is presented in Figure 2.

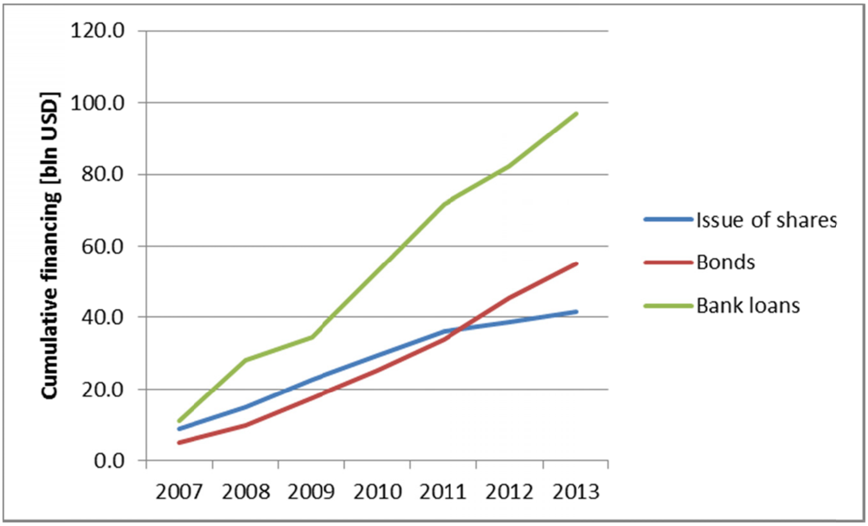


Fig. 1. Cumulative financing for mining enterprises worldwide.
*Source:* the study based on (REY, 2014a)

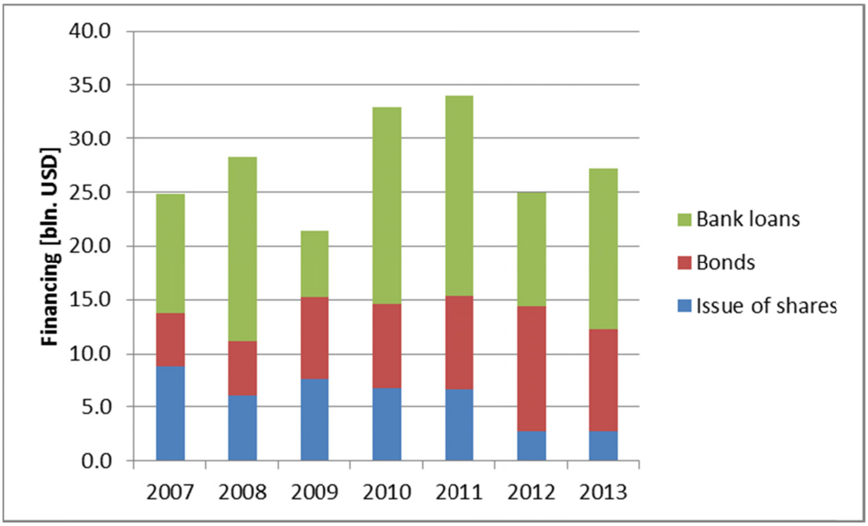


Fig. 2. Financing of mining enterprises worldwide for years 2007-2013.
*Source:* the study based on (REY, 2014a).

It may be observed that since 2007 the interest of mining enterprises in raising capital through the issue of shares has been decreasing, whereas their willingness to obtain financing through bonds has been increasing. From 2007 to 2013, all mining enterprises worldwide obtained nearly USD 200 trillion of capital, out of which more than USD 550 billion through the issue of bonds, which constitutes a share of almost 30% in the aforementioned sources of capital.

In the case of Polish mining enterprises, the situation is slightly different. On the basis of the collected financial statements (cash flow) and reports of EY concerning global mining, a comparison similar to the one in Table 2 was made for the Polish mining sector (coal and copper mining). The following mining enterprises have been considered in the analysis: LW Bogdanka S.A., KGHM Polska Miedź S.A. (also KGHM International LTD), Jastrzębska Spółka Węglowa, Kompania Węglowa, Katowicki Holding Węglowy. Tables 2-7 present selected sources of financing the business activities of the above-mentioned Polish mining enterprises in the years 2007-2014.

LW Bogdanka was the first analysed company. The data concerning selected sources of capital are presented in Table 3.

TABLE 2

Selected sources of capital for LW Bogdanka S.A. [PLN million]

| | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| Issue of shares | 0.0 | 0.0 | 521.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 521.1 |
| Bonds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 150.0 | 500.0 | 650.0 |
| Bank loans | 50.0 | 70.0 | 180.0 | 0.0 | 100.0 | 100.0 | 0.0 | 3.0 | 503.0 |
| Total | 50.0 | 70.0 | 701.1 | 0.0 | 100.0 | 100.0 | 150.0 | 503.0 | 1674.0 |

*Source:* author's own elaboration on the basis of (FS Bogdanka for the years 2008÷2014).

According to available data (see Table 2), the main source of financing the business activities of LW Bogdanka until 2012 were bank loans and issue of shares. After 2012, within the next two years, the company obtained capital through the issue of debt securities in the form of bonds. In the period from 2007 to 2014, the company obtained in total PLN 1.6 billion. The percentage share of the aforementioned sources of capital were distributed more or less equally.

Another company analysed in terms of the sources of capital was Jastrzębska Spółka Węglowa. The data concerning selected sources of financing are presented in Table 3. In 2007 and 2014 it was not possible to gather all the necessary data.

TABLE 3

Selected sources of capital for Jastrzębska Spółka Węglowa S.A. [PLN million]

| | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| Issue of shares | NA | 0 | 0 | 0 | 5838 | 0 | 0 | NA | 5838 |
| Bonds | NA | 0 | 0 | 0 | 0 | 0 | 51 | NA | 51 |
| Bank loans | NA | 16.4 | 198.3 | 1.3 | 125.7 | 91.6 | 79.1 | NA | 512.4 |
| Total | NA | 16.4 | 198.3 | 1.3 | 5963.7 | 91.6 | 130.1 | NA | 6401.4 |

*Source:* author's own elaboration on the basis of (FS JSW for the years 2008÷2013).

Jastrzębska Spółka Węglowa S.A. mainly obtains capital from bank loans. The years 2011 and 2013 were exceptions. Since in 2011, the company has obtained PLN 5.8 billion through issues of shares, and in 2013 issued debt securities of the total value of PLN 51 million. In the years 2007-2013, JSW S.A. obtained PLN 6.5 billion in total. In 2011, this amount was mainly obtained through the issue of shares.

The sources of financing for KGHM Polska Miedź S.A. are presented in Table 4.

TABLE 4

Selected sources of capital for KGHM Polska Miedź S.A. [PLN million]

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | Total |
|---|---|---|---|---|---|---|---|---|---|
| Issue of shares | 0.0 | 0.0 | 0.0 | 2082.2 | 0.0 | 0.0 | 0.0 | NA | 2082.2 |
| Bonds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1593.0 | 0.0 | NA | 1593.0 |
| Bank loans | 89.7 | 77.7 | 98.1 | 121.2 | 141.0 | 1439.0 | 1597.0 | NA | 3563.8 |
| Total | 89.7 | 77.7 | 98.1 | 2203.4 | 141.0 | 3032.0 | 1597.0 | NA | 7239.0 |

*Source:* author's own elaboration on the basis of (FS KGHM, 2008 for the years 2008÷2013).

The financing of the business activities of KGHM S.A. was mainly based on obtaining capital through bank loans. In the period from 2007 to 2013, the company obtained PLN 3.5 billion in total. The second largest source of financing in the discussed years was the issue of shares. In 2012, KGHM S.A. issued bonds for the total amount of nearly PLN 1.6 billion. Issue of shares by the Company was mainly related to foreign investments.

Kompania Węglowa S.A. was another company analysed in terms of the source of capital. A comparison of the selected sources is in Table 5.

TABLE 5

Selected sources of capital for Kompania Węglowa S.A. [PLN million]

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | Total |
|---|---|---|---|---|---|---|---|---|---|
| Issue of shares | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | NA | 0.0 |
| Bonds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 1031.3 | NA | 1031.4 |
| Bank loans | 96.3 | 5.8 | 203.7 | 16.7 | 11.9 | 151.1 | 7.9 | NA | 493.4 |
| Total | 96.3 | 5.8 | 203.7 | 16.7 | 11.9 | 151.2 | 1039.1 | NA | 1524.7 |

*Source:* author's own elaboration on the basis of (FS KW for the years 2008÷2013).

Unlike the previous mining enterprises, in the years 2007-2013, the main sources of financing in terms of value in Kompania Węglowa S.A. were debt securities. Nonetheless, it should be mentioned that capital obtained through the issue of bonds was obtained in one year (2013); in the previous years the company financed itself only through bank loans. In the discussed years the company obtained nearly PLN 500 million in total.

Katowicki Holding Węglowy S.A. was the last analysed company. Table 6 presents selected sources of financing.

TABLE 6

Selected sources of capital for Katowicki Holding Węglowy S.A. [PLN million]

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | Total |
|---|---|---|---|---|---|---|---|---|---|
| Issue of shares | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | NA | 0.0 |
| Bonds | 0.0 | 0.0 | 233.3 | 331.2 | 245.5 | 1104.6 | 274.7 | NA | 2189.4 |
| Bank loans | 74.6 | 90.5 | 31.2 | 88.2 | 30.0 | 0.0 | 0.0 | NA | 314.5 |
| Total | 74.6 | 90.5 | 264.6 | 419.4 | 275.5 | 1104.6 | 274.7 | NA | NA |

*Source:* author's own elaboration on the basis of (FS KHW for the years 2008÷2013).

The last of the examined Polish mining enterprises was Katowicki Holding Węglowy S.A. The company, similarly to KW S.A., obtained the highest amount of capital through the issue of debt securities. However, contrary to the previous company the capital obtained in the total amount of PLN 2.2 billion was distributed in time in the period from 2009 to 2013. The share of bank loans in the sum total of the analysed sources of financing was ambiguous.

According to the data concerning the selected sources of capital of Polish mining enterprises, the highest amount of capital obtained since 2007 was disclosed by KGHM Polska Miedź S.A., which obtained capital of more than PLN 7 billion. In second place was Jastrzębska Spółka Węglowa S.A., which obtained over PLN 6 billion for the said period. As can be seen in the cases listed above, Polish mining enterprises are more willing to raise capital through the issue of bonds. The collective and incremental obtaining of capital by the above-mentioned mining enterprises is presented in Tables 7 and 8, respectively, and the correlation is additionally shown in Figures 3 and 4.

TABLE 7

Selected sources of capital for Polish mining enterprises in total [PLN million]

| | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| Issue of shares | 0.0 | 0.0 | 521.1 | 2082.2 | 5838.0 | 0.0 | 0.0 | 0.0 | 8441.3 |
| Bonds | 0.0 | 0.0 | 233.3 | 331.2 | 245.5 | 2697.7 | 1507.0 | 500.0 | 5514.8 |
| Bank loans | 310.6 | 260.4 | 711.4 | 227.4 | 408.6 | 1781.7 | 1684.0 | 3.0 | 5387.0 |
| Total | 310.6 | 260.4 | 1465.8 | 2640.8 | 6492.1 | 4479.4 | 3191.0 | 503.0 | 19343.0 |

*Source:* author's own elaboration on the basis of (FS Bogdanka, for the years 2008÷2014) (FS JSW for the years 2008÷2013) (FS KGHM for the years 2008÷2013) (FS KW for the years 2008÷2013) (FS KHW for the years 2008÷2013).

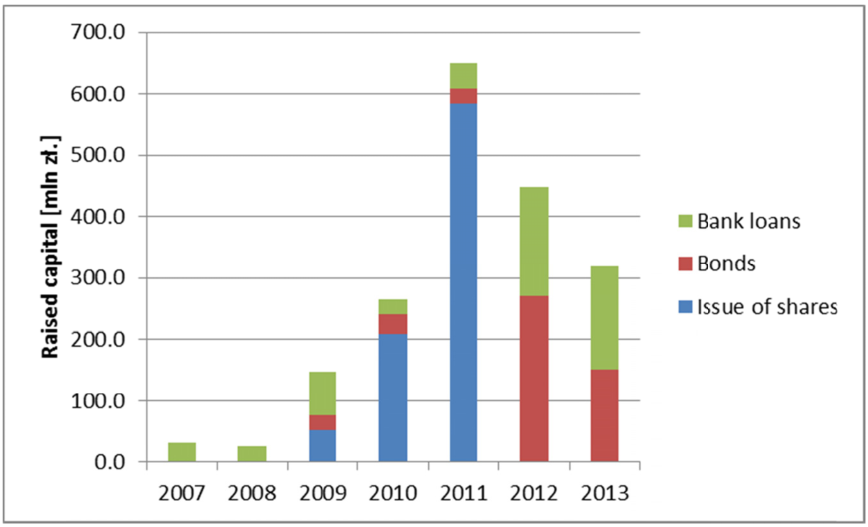


Fig. 3. Capital obtained by selected Polish mining enterprises in the years 2007-2013.
*Source:* author's own elaboration on the basis of (FS Bogdanka for the years 2008÷2014) (FS JSW for the years 2008÷2013) (FS KGHM for the years 2008÷2013) (FS KW for the years 2008÷2013) (FS KHW for the years 2008÷2013)

According to Table 8 and Figure 4, in the years 2007-2008, Polish mining enterprises financed their business activities mainly through bank loans. In this period, over PLN 571 million was obtained in total. It can be noted that the capital obtained through the issue of corporate bonds has been increasing since 2009. When considering the period from 2009 to 2013, it may be stated that mining enterprises were more interested in this form of financing. In the years 2009-2011, shares were also issued for the total amount of PLN 8.4 billion. JSW S.A. had the greatest share in this source of financing by obtaining capital of PLN 5.8 billion in 2011.

TABLE 8

Selected sources of capital for Polish mining enterprises in ascending order [PLN million]

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|
| Issue of shares | 0.0 | 0.0 | 521.1 | 2603.3 | 8441.3 | 8441.3 | 8441.3 | 8441.3 |
| Bonds | 260.6 | 260.6 | 493.9 | 825.1 | 1070.6 | 3768.3 | 5275.3 | 5775.3 |
| Bank loans | 260.6 | 521.0 | 1232.3 | 1459.7 | 1868.3 | 3650.0 | 5334.0 | 5337.0 |
| Total | 521.1 | 781.5 | 2247.3 | 4888.1 | 11380.2 | 15859.6 | 19050.6 | 19553.6 |

*Source:* author's own elaboration on the basis of (FS Bogdanka for the years 2008÷2014) (FS JSW for the years 2008÷2013) (FS KGHM for the years 2008÷2013) (FS KW for the years 2008÷2013) (FS KHW for the years 2008÷2013).

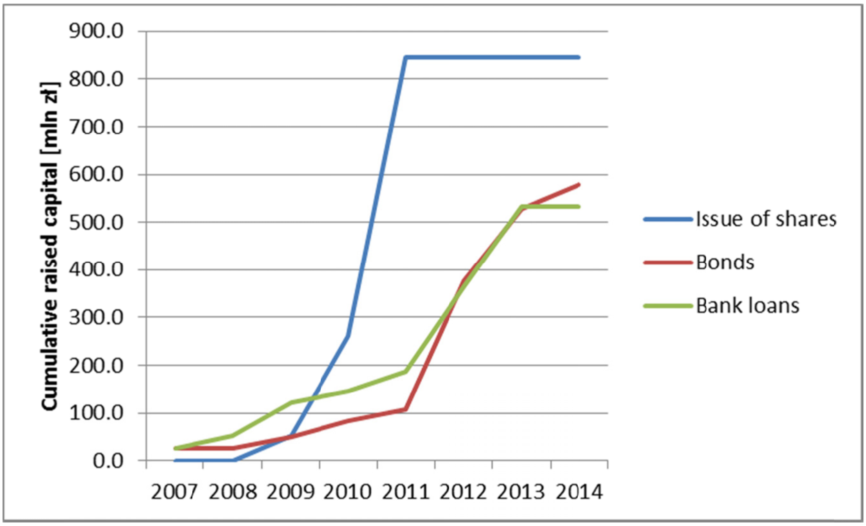


Fig. 4. Capital obtained by selected Polish mining enterprises in the years 2007-2013 in ascending order.
*Source:* author's own elaboration on the basis of (FS Bogdanka for the years 2008÷2014) (FS JSW for the years 2008÷2013) (FS KGHM for the years 2008÷2013) (FS KW for the years 2008÷2013) (FS KHW for the years 2008÷2013)

By 2014, Polish mining enterprises had obtained nearly PLN 20 billion in total. Almost half of this capital (PLN 8.4 billion) was obtained through the issue of bonds. In comparison with the data concerning mining enterprises worldwide, more capital was generally obtained in

Poland (since 2007) through the issue of bonds than bank loans. The share of bonds in general financing is the result of the last three years. A rapid growth of bonds issue is mainly connected with issue of bonds by KGHM S.A.; most of these funds were assigned to foreign investments.

## 4. Summary

As presented in this publication, Polish mining enterprises are attempting to increase the share of bonds in investment financing. This growth has been particularly visible since 2011. This may be caused by willingness to increase the value of the enterprises for shareholders. This thesis may be true for KGHM S.A., which has been generating profit for owners during the analyzed period. Nevertheless, this dependence is not always true in case of other Polish mining enterprises. As is common knowledge, these companies are facing a difficult financial situation, which is mainly the result of low prices of raw materials on international markets. Therefore, increasing foreign capital through issue of corporate bonds may result from the fact that financial institutions, such as banks, are less likely to grant loans due to significant risk, which in turn is acceptable to bondholders.

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