

# CORPORATE BOND MARKET OF REAL ESTATE DEVELOPMENT COMPANIES IN POLAND

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## Abstract

The aim of the article examines the features that determine the attractiveness of bonds as a financing instrument for real estate development projects in Poland, and the share of debt securities and bonds in the financing structure of real estate development companies. The implementation of such a formulated purpose required the application of methods of statistical description. Research was conducted on the basis of data from the statistics made by Fitch Ratings Polska, Catalyst, Narodowy Bank Polski, Związek Banków Polskich and the financial statements of bond issuers. The basic research period covers the years 1998-2012. However, due to the lack of published data about the structure of financing of development companies, interest rates, the nominal value, the bond structure by the buyers, the type, the purpose of issuance and the form of security, long-term studies were reduced to shorter periods. Results of the research indicate that the corporate bond market of development companies was in the phase of intensive growth in 2004-2012. Availability of funds obtained through the issuance of bonds increased by the establishment of appropriate infrastructure in 2009. The downturn in the real estate market initiated a series of structural changes in the financing of development companies in 2008-2009. High margins and restrictive creditworthiness assessment brought on a search for alternative sources of financing. Due to restrictions imposed by the Act of 29th April 2012 on the protection of the buyer of a dwelling or a single-family-house, it became important to provide flexible funding sources for development projects, including bond issuances.

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## INTRODUCTION

The history of the real estate development market in Poland dates back only 22 years. After a period of economic recession in the early 1990s, the economic situation in the construction industry underwent a gradual improvement starting in 1994. This was conducive to the dynamic growth of the real estate development market. This period did not last long. In the second half of 1997 a gradual downturn in the construction industry began, which accelerated rapidly in July 2000. It led the real estate development market to the recession in 2002-2004. A vast improvement in the economic situation took place in the first half of 2004. At that time there was a clear revival primarily on this market. It was due to lowercost mortgage loans and increasing lending

activity carried out by banks. In 2006, the economic recovery turned out an unprecedented 'boom' in the history of the real-estate market. This lasted until mid-2007.

In the period of the greatest growth in investment in construction, i.e. in 2007, the main source of financing were bank loans and customer prepayments. However, due to the scale of the projects, developers often used other sources of funding –such as corporate bonds. It should be mentioned that the first issuance of such type of securities in Poland, carried out by developers, took place in 1998. Further developers' bonds appeared on the market in 1999-2000. However, these issuances were incidental, and their importance in the investment financing process was low.

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In 2008, the situation on the Polish real estate development market underwent sudden collapse. This was due to the global financial crisis. Changes in the domestic credit market were attributed to it. At that time, banks reported a deterioration in the loan portfolio. This led to a tightening of credit procedures for both real estate development companies and their customers. As a result, there was a significant slowdown in lending activity in the real estate sector. Developers, looking for resources to finance investments, turned their attention to, inter alia, corporate bonds. Since 2010, the popularity of this instrument in the development sector has been growing steadily.

Therefore, the aim of this article examines the:

- 1) features that determine the attractiveness of bonds as a financing instrument for development projects,
- 2) the share of debt securities in the financing structure of real estate development companies in 2005-2012,
- 3) the share of bonds in the financing structure of real estate development companies in 2004-2012.

## RESEARCH METHODS AND DATA SOURCES

The dataset applied in this paper includes yearly data on financing of real estate development companies in Poland, in particular the involvement of bonds. Also, the study presents the most important characteristics of bonds issued by them:

- 1) total value of issued bonds,
- 2) maturity date,
- 3) type of interest rate,
- 4) interest rate value,
- 5) nominal value of the bond,
- 6) type of bonds,
- 7) form of security,
- 8) purpose of issuance.

The implementation of the purpose of this article required the application of methods of statistical description, especially in the analysis of the structure. Research was conducted on the basis of data from the studies made by Fitch Ratings Polska, Catalyst – Warsaw Stock Exchange bond market, Narodowy Bank Polski, Związek Banków Polskich, and the financial statements of bond issuers listed on Catalyst. The basic research period covers the years 1998-2012.

However, due to the lack of published data about the structure of financing of real estate development companies, interest rates, the nominal value, the bond structure by the buyers, the type, the purpose of issuance and the form of security, long-term studies were necessarily reduced to shorter periods.

## BONDS AS A SOURCE OF FINANCING FOR REAL ESTATE DEVELOPMENT INVESTMENTS

The concept of a bond, as a financial instrument, should be understood as a debt instrument that certifies a contract between the borrower (obligor) and the lender (obligee) as spelled out in the bond indenture. The issuer pledges to pay the loan principal (the nominal value of the bond) to the bondholder on a fixed date (maturity date) as well as a fixed rate of interest for the life of the bond (Act of 29th June 1995 on bonds). Bonds may be classified on the basis of various criteria (Machała, 2001, p. 216-218; Dębski, 2002, p. 216-224; Ross et al., p. 219-224). Due to the purpose of this study the most important criteria of division include:

- 1) type of issuer (government, municipality and corporate),
- 2) type of bonds (ordinary, convertible into shares, etc.),
- 3) maturity date (short-term, medium-term and long-term),
- 4) form of security (secured, unsecured),
- 5) type of interest rate (fixed, floated, zero-coupon).

A real estate development project is characterized by features that determine its specific nature. Firstly, its subject matter is real estate. Secondly, the property development project requires the involvement of high expenditure for a relatively long period of time. These expenditures usually exceed the financial capacity of a single investor, hence the high share of foreign capital in financing these investments. Thirdly, property investments have a unique character, conditioned by the uniqueness of the land property location. This means there is a wide range of investment opportunities and solutions, also in the field of finance. Finally - fourth, the outcome has a long period of utilization - in the case of real estate development investments, which bring rental income - on the one hand, this means obtaining income from rents in the long term; and on the other hand, the

need to spend money on repairs and modernization. In addition, the profits generated from rents in the long term are generally more reliable than income from other investments, which carry a lower risk (Adams, 1992, p. 220; Kucharska-Stasiak, 1999, p. 36; Ostaszewski, Cicirko, Kreczmańska-Gigol & Russel, 2009, p. 274). Therefore, the specific features of property development investments, especially their high capital intensity, leads to a high share of foreign capital in the structure of their financing. In turn, specific characteristics of the bonds determine the attractiveness of this instrument, as a source of capital for development projects. These advantages are:

- 1) possibility of fund raising with a significant value,
- 2) flexibility of bonds,
- 3) relatively low cost of capital raised through the issuance of bonds,
- 4) determination of the purpose of the issuance is not a mandatory obligation of the issuer,
- 5) assets acquired for funds raised through the issuance of bonds may be the entity's own contribution in the procedure of applying for a bank loan,
- 6) the issuer does not need to make their own contribution.

The issuance of bonds enables an entity to accumulate a large amount of loans from many lenders. These opportunities, because of the limits on capital, repeatedly are much larger than in the case of bank loans (Ostaszewski et al., 2009, p. 274).

The flexibility of bonds is the next feature that makes this instrument particularly well suited to the process of financing a development project. First, the developer - as an issuer of bonds - determines the conditions of issue. This makes it possible to fit the schedule of starting the next tranches of capital to the various stages of the construction works. The developer determines the interest payment conditions. The advantage is also a convenient repayment schedule, because the interest is paid first, whereas the borrowed capital - at maturity of the bonds. The maturity date is also fixed by the developer. Thanks to this, a redemption of bonds is financed from the revenue from sales of completed investments. The necessity for repayment of capital in a single mode is indicated as the main disadvantage of bonds, because it means a significant financial burden for the developer. However, this disadvantage can be easily eliminated because it is possible to carry out another series of bond issuance in this situation.

The proceeds would be used to repay debt under the previous series. Such a procedure is referred to as a debt rollover (Machała, 2001, p. 221). It should be noted that an extremely large share of bonds in the structure of the financing company can cause loss of liquidity, and consequently - bankruptcy. This concerns three development companies: Religa Development, Alterco and Gant Development. All companies had serious liquidity problems. They were caused by, among other things, huge short-term debt related to the volume of bonds issued by the company. Long before filing for bankruptcy, Religa Development had problems with the interest payments. The high ratio of the value of bonds to stock market capitalization was observed in a number of real estate companies listed on the Warsaw Stock Exchange, for example, Ronson Europe (40%), BBI Development NFI (41%), Robyg (43%), Marvipol (49%) and Gant Development (146%). In the case of the latter company, bankruptcy was the result of its extremely large level of debt. The auditor's report accompanying the financial statements for the first quarter of 2012 shows that activity of the company depended on the continuity of funding through bank loans, bond issues, deferring repayment of liabilities or rollover maturing bonds.

Another way to avoid having to repay the capital in a single mode is the issue of convertible bonds. This provides an optimal combination of debt and equity financing (Ostaszewski et al., 2009, p. 274; Sulima, 2011, p. 418). In practice, this solution is equivalent to the conversion of debt capital into equity, which enhances the company's financial independence. An important advantage of bonds, as a source of financing for property development investments, is the ability to pay interest in the first place, and the capital on the day of redemption. In this way the debt servicing costs over the investment period are low. This leads to a reduction in the financial burden of the project in the development phase and thus increases its chance of success.

An important argument taken into account in the decision making process about the bond issue is the cost of capital. As is clear from the analysis - the average cost of a loan to a real estate development company granted by a bank in 2011 amounted about 8-8,5% per year. In the same period, the cost of capital associated with the issuance of bonds stood at an average level of about 9% (<http://www.corporatebonds.pl/felietony/409>). In certain situations, raising funds

by issuing bonds can be much cheaper than a loan, especially if the series of bonds is related to non-monetary benefits (Ostaszewski et al., 2009, p. 274). They include rights to participate in the future profits of the issuer, the conversion of bonds into shares of the issuer, or subscription rights to new shares of the issuer with priority over the existing shareholders. With regard to the development companies, benefits of this type can provide - as already mentioned - the reduction of the financial burden of repayment of capital raised through the issuance of bonds.

The bond issuer is not required to determine the purpose of the issuance (Act of 29th June 1995 on bond). This enables use of funds raised in a way that ensures the implementation of a number of strategic actions, which leads to maximizing the level of efficiency of the company. Strategic decisions are made by developers under the pressure of macroeconomic factors, particularly the situation in the economy and the real estate sector, legislative changes, financial market conditions and changing customer preferences. The variability of these factors, in conjunction with the long-term nature of the realization process of a property development project, will significantly complicate the estimation of boundary conditions influencing the level of efficiency of the investment. For this reason, the instruments ensuring high flexibility in the allocation of funds raised are relevant. For example, during a downturn in the real estate market implementation of a multi-stage investment can be stopped. The funds raised through the issue of bonds, originally intended for the project in question, can be used for another purpose, such as the purchase of land for future investments or repayment of existing obligations.

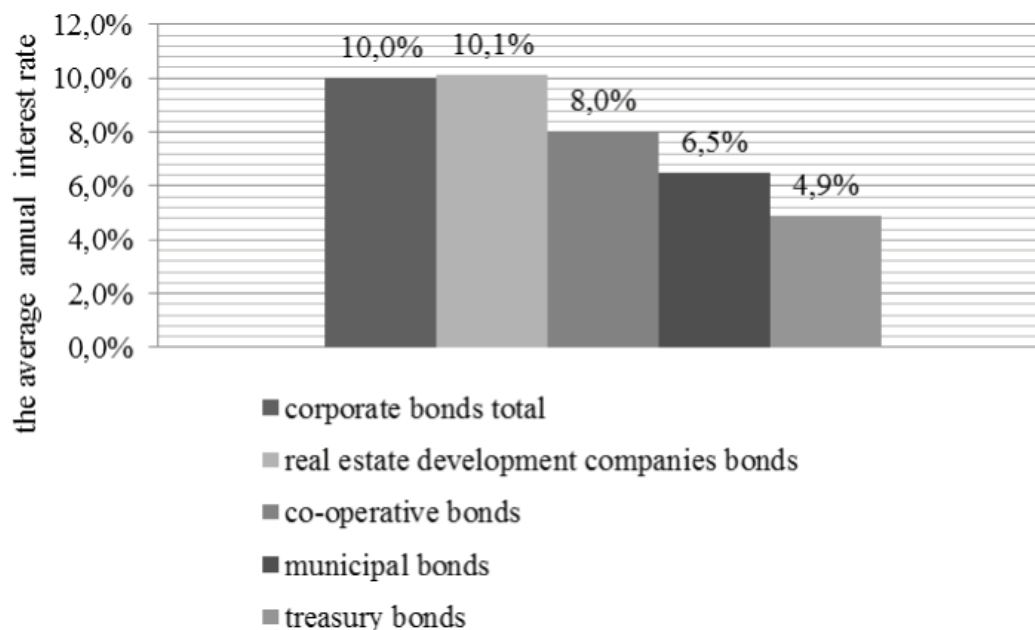
The funds raised through the issue of bonds may provide funding for a land purchase, which becomes the property of the developer. Then, when applying

for a bank loan, he can declare the land purchased as his own contribution. This solution is particularly favorable for the developer, because the initial stages of a property development project are the most capital intensive. For example, the achievement of the 'zero state' (the level of the building basement) in the construction of a five-storey building involves the expenditure accounting for about 16% of the total cost of construction, and for the four-storey building - 13%. In addition, for the four-storey housing and commercial building a share of the cost of the 'zero state' is - 15%, and for the five or ten floor apartment building - 16% (System of Computer Information on Prices in the Construction Industry [SEKOCENBUD], 2012). The implementation of the so-called 'unwrought building' consumes nearly 50% of the total investment expenditures (SEKOCENBUD, 2012). It is worth noting that the financing of a development project by issuing bonds - as opposed to bank loans - does not require an entity's own contribution, nor to demonstrate an appropriate level of pre-sale or signed rental agreements for commercial investment. In this way, the companies with a short business history can afford to raise capital to finance investment by issuing bonds. The decisive factor in raising capital through the issuance of debt securities in the assumed amount is investor demand. Developers' bonds have a number of advantages that make this instrument an attractive investment. These are:

- 1) relatively high interest rates,
- 2) relatively short maturity dates,
- 3) security of the bondholders' interests.

The attractiveness of bonds - as an investment - is determined primarily by relatively high interest rates (Figure 1).

Figure 1: The average annual interest rate on the bonds on the Catalyst in 2012



Source: Own elaboration based on annual statistics of Catalyst (<http://gpwcatalyst.pl/>)

The average annual interest rate on the development companies bonds listed on the Catalyst in 2012 stood at 10,1%, i.e. 0,1 percentage points above the interest rates on corporate bonds in general. A slightly lower coupon bond was noted in co-operative (8%) and municipal (6,5%) instruments. Treasury bonds were characterized by the lowest interest rate (4,9%).

The relatively short period to maturity of bonds is very important – especially because of the difficulties in determining the level of anticipated risk. In the case of securities listed on the public market trading is possible. This significantly increases the level of liquidity of these bonds. Thus investing in these instruments is not associated with the need to freeze the funds for a long period of time.

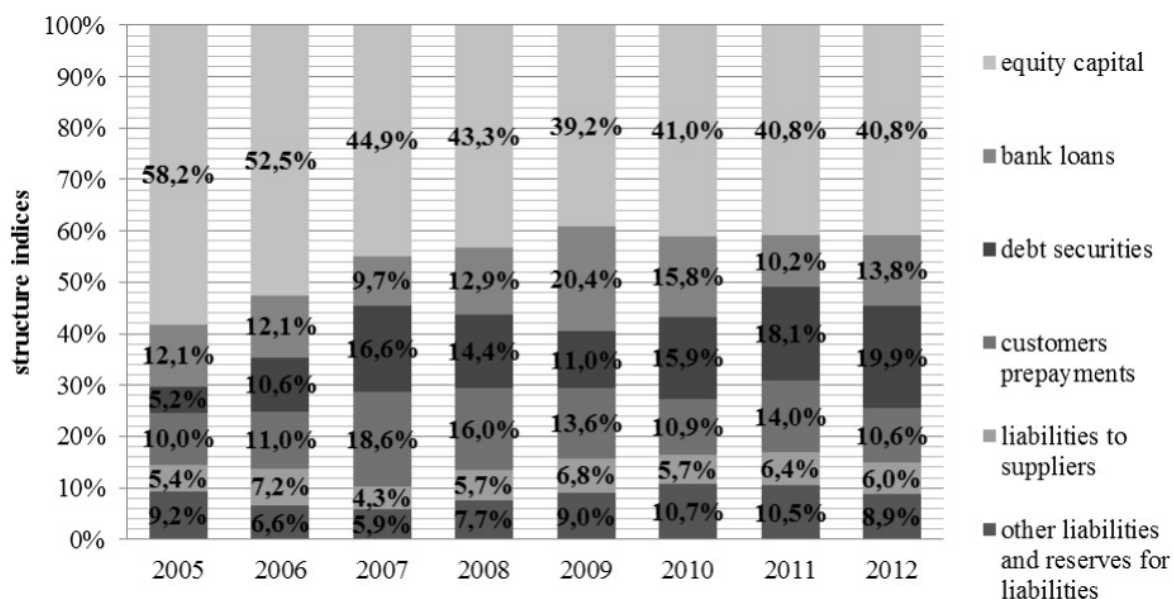
In the case of real estate development bonds, the interests of the bondholder frequently are secured by a mortgage established on the real estate. This is an additional incentive to invest in these instruments, because it is an important factor influencing the level of investment risk. In the case of loss of liquidity

or the bankruptcy of the real estate development company the bondholder claims are paid from funds from the sale of the property on which the mortgage was established.

### DEBT SECURITIES IN THE FINANCING STRUCTURE OF THE REAL ESTATE DEVELOPMENT COMPANIES IN 2005-2012

As K. Jajuga (2009) pointed out “A bond is an instrument of the capital market, usually issued for at least one year.” However, in business practice short-term securities issued on the basis of the Act of 29th June 1995 on bonds are often used, i.e. those with a maturity of less than one year. In addition to these bonds companies also benefit from other short-term debt (KPD). They are known as debenture bonds or commercial paper. These take the form of a promissory note. Typically, these are discount instruments which are used to enter into short-term loans on the money market (Duliniec, 2011, p. 34).

Figure 2: The structure of financing of large real estate development companies in Poland in the second quarters of 2005-2012



Source: Łaszek, Augustyniak, Widlak, Olszewski & Gajewski, 2012

In 2005-2007 a systematic increase in the share of debt securities in the financing structure of large development enterprises in Poland was observed (Figure 2). In 2007, this share was at the high ratio of 16,6%. This reflects - on the one hand - the scale of demand for external financing in the real estate development industry. These companies, in response to intensified market demand, significantly increased the scale of their operations at that time. On the other hand, it reflects an excellent economic situation in the financial markets, which was a strong incentive to leverage the activities of the development companies. As a result, the domestic debt market, particularly the bond market, became an alternative for bank loans for large development enterprises (Górka, 2012, p. 225-226). In the years 2008-2009 the share of debt securities in the financing structure of development companies decreased and was respectively 14,4% and 11%. It should be noted that during that period in the corporate bond sector, taken as a whole, the same trends were observed (Fitch Ratings Polska, 2012). The collapse of the global financial markets that occurred in the third quarter of 2008, led to a deep recession in the real estate sector. The increased uncertainty which accompanied the economic events of 2008-2009 caused an increase in the aversion of

investors to invest their funds in securities issued by developers. There was also an increase in risk margins for companies that decided to raise funds from new debt issuance, i.e., to about 150-300 basis points over WIBOR compared to 20-50 basis points in 2007 (Górka, 2012, p. 226). In 2010-2012 there was again a systematic increase in the share of debt securities in the financing structure of the real estate development companies. It amounted respectively to 15,9%, 18,1% and 19,9%. Availability of funds obtained through the issuance of bonds increased by:

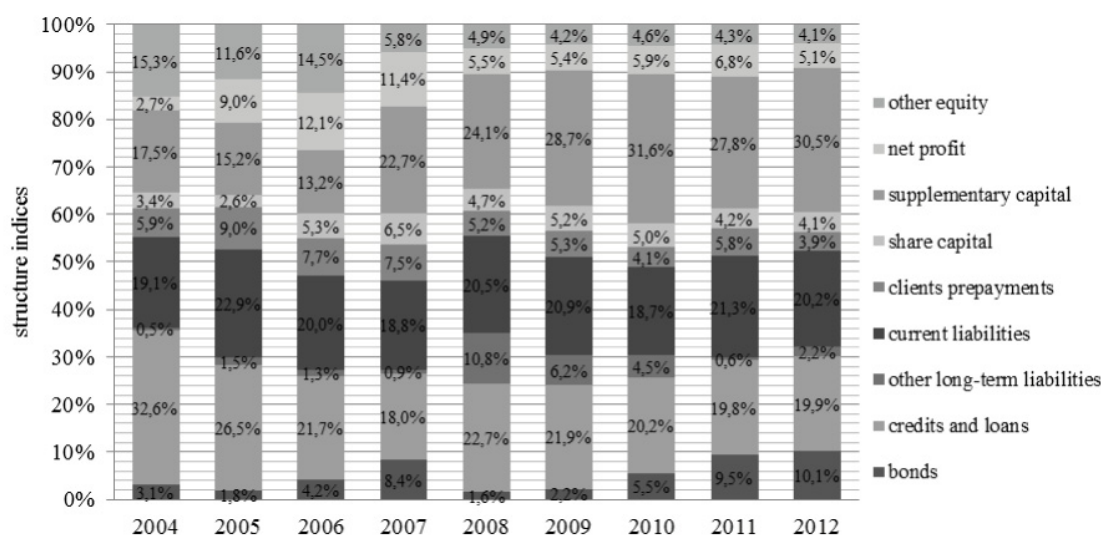
- 1) establishment of the first Polish investment funds dedicated to non-Treasury bonds in 2009 (Górka, 2012, p. 226),
- 2) launching a centralized platform trading in non-Treasury bonds – Catalyt,
- 3) changes in the creditworthiness assessment of companies and the restrictions introduced by banks in the availability of mortgage loans which were forced by the downturn in the real estate market. In the third quarter of 2011, the value of newly granted mortgage loans amounted to 12,774 billion PLN, while in the third quarter of 2012 – 10,021 billion PLN. The average value of a loan in the third quarter of 2012 stood at 199,746 PLN, i.e. by 1.47% compared to the average value of the loan in the second quarter of 2012 (Związek Banków Polskich [ZBP], 2012).

- 4) entry into force of the Act of 29th April 2012 on the protection of the buyer of a dwelling or a single-family-house (Dz.U. of 16th September 2011). Solutions that were used by Polish legislators were modelled on the provisions firmly rooted in Western countries. A key element of the security policy implemented is the so-called escrow account, which is largely intended to limit the possibility of shifting the financial risk to the customers. For this purpose the new law provides two types of escrow account: open and closed. An open escrow account is an instrument for the accumulation of the cash paid by the purchaser for purposes specified in the real estate development company contract. The pay-out of the funds deposited takes place in accordance with the schedule of the development investment. In the case of a closed escrow account the pay-out of the funds deposited is made after the transfer of ownership to the buyer of the apartment as a single instalment.

Although each of these factors contributed to the changes in the structure of financing development projects, the enforcement of the new legislation initiated far-reaching changes in the system of financing housing development investments. Before the new law came into force, developers could use the clients' funds, so-called prepayments, without any restriction. Because of this there was a steady flow of funds for investments that enabled companies to maintain financial liquidity. Due to limitations imposed by the new law, it will be important to provide flexible financing for development projects, including bond issues (REAS, 2012a). Market analysis of housing projects in the third quarter of 2012 confirms the significant impact of the Act on the development market. After a substantial increase in developers' investment activity, expressed in the number of constructions started in the second quarter of 2012 (there was a 27% increase compared to the second quarter of 2011), in the next, third quarter there was a significant decrease in the number of dwellings under construction. This decrease was 58% compared to the previous quarter (Główny Urząd Statystyczny [GUS, 2013]). A decrease was also noted in the number of

dwellings for which permits had been granted. In the third quarter of 2012, 40021 permits were issued, compared to 49842 permits in the previous quarter (a decrease of almost 25%) (ZBP, 2012). It should be noted that due to the characteristic for the real estate market time lags, the full effects of this law are expected in 2013-2014. The dwellings offered before 29th April 2012 (when the Act on the protection of the buyer of a dwelling or a single-family-house was enforced) will be likely to be sold – according to data of REAS the average time needed to complete a sale offer of dwellings in the second quarter of 2012 ranged from approximately 19 months to 25 months (REAS, 2012b). It is worth mentioning that it is indicated that the reasons for time lags should be seen primarily among the factors of endogenous origin, which are associated with specific investments in real estate. Mainly three types of time lags are distinguishable: the price mechanism lag, the decision lag and the construction lag. First, there is a small price elasticity of supply and demand. The time which must elapse for the market to fully react to changes in real estate prices and rents is called the price mechanism lag. Secondly, because of the slow internal decision-making processes of large companies (which are able to invest large sums), investors also react with a lag to rising prices (decision lag). Thirdly, when they finally decide to invest, new construction has to be planned and construction companies have to be contracted. The time that passes until a project has been built is called the construction lag (Rottke, Wernecke & Schwarz, 2003, p. 327-345; Wang, 2001, p. 142; Załączna, 2005, p. 49; Wiśniewska, 2004, p. 77). The structure of financing of the development companies, shown in Figure 2, presents the total share of all debt securities but it does not explain the proportion of bonds. As the analysis of available financial statements in the period 2004-2012 shows, the share of bonds in financing development companies steadily increased (Figure 3).

Figure 3. The share of bonds in the financing of development companies in Poland in 2004-2012



Source: Own elaboration based on development companies financial statements listed on Catalyst platform

In 2004, the share of bonds in the financing of development companies was 3,1% and in 2005 it decreased to 1,8%. At the time of the boom in the development market, i.e. in 2006-2007 there was an increase of this indicator. It amounted to 4,2% in 2006 and 8,4% in 2007. In 2008, after the collapse of the real estate market, the share of bonds in financing development companies sharply decreased. In 2008, this percentage was only 1,6% and in 2009 – 2,2%. In 2010 the share of bonds in financing the development companies had more than doubled (5,5%). In turn in 2011 bonds already accounted for 9,5% of total liabilities. In 2012, the upward trend was continued - the value of this ratio stood at 10,1%.

### KEY CHARACTERISTICS OF CORPORATE BONDS ISSUED BY DEVELOPMENT COMPANIES IN 1998-2012

Among the most important characteristics of the bonds issued by development companies are distinguished:

- 1) total value of issued bonds,
- 2) maturity date,
- 3) type of interest rate,
- 4) interest rate value,
- 5) nominal value of the bond,
- 6) type of bonds,
- 7) form of security,
- 8) purpose of issuance.

The first issuances of development companies in Poland took place in the late 1990s (Figure 4).

Figure 4. Total value of bonds issued by real estate development companies in Poland in 1998-2012



Source: Own elaboration based on data (Fitch Ratings Poland, 1998-2012; <http://www.gpwcatalyst.pl/>)

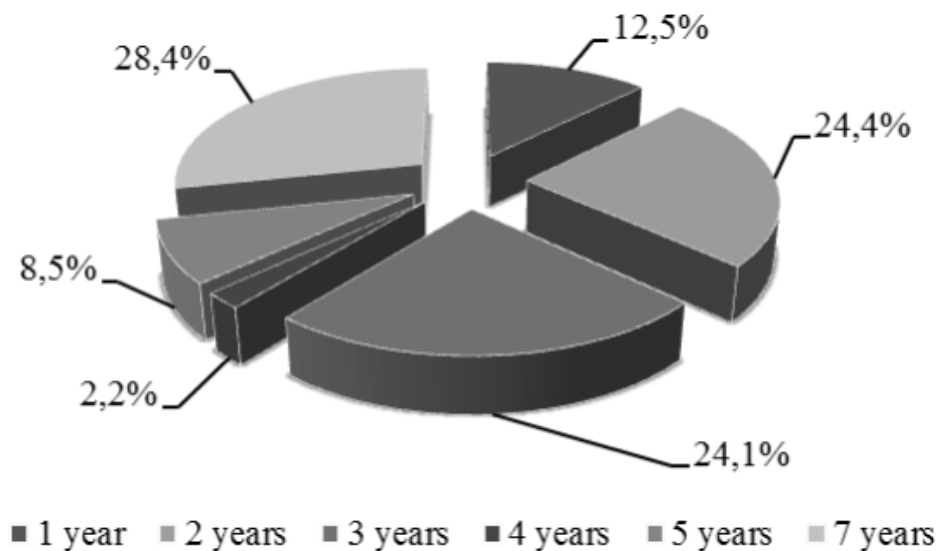
The first time real estate development corporate bonds were issued was by POLNORD DOM in 1998 (POLNORDDOM was spun off from POLNORD as a real estate developer. POLNORD is one of the most experienced companies in the construction and real estate development market in Poland. The company was founded in 1977 as a general contractor of construction export office. In 1988, as an executive company, it was named POLNORD. In 1999, the company made its IPO on the Stock Exchange in Warsaw. In 2006 there was a reconnection of POLNORD and POLNORD DOM. 2007 saw the first listing of the company in the WIG 20 - the index of the largest companies on the Warsaw Stock Exchange). The value of the issuance was 0,7 million PLN. Also in 1999-2000 POLNORD DOM - as the only developer in Poland - had made further bond issuances (Fitch Ratings Poland, 1998-2012). After a break in 2001-2003, in 2004 the issuances of bonds with a total value of 220 million PLN were noted. They were carried out by two companies: Dom Development and Echo Investment (Dom Development has been operating since 1996 and specializes in residential construction. In October 2006 the company made its IPO on the Warsaw Stock Exchange. Echo Investment commenced operations in 1994, as Echo Press. At that time it was a publishing company. In 1996, the company made its debut

on the Warsaw Stock Exchange and commenced operations in the real estate development market in the scope of residential, commercial, office and hotel construction). In 2005, there was only one issuance, amounting to 5,199 million EUR. In order to enhance the comparability of the data in Figure 2 the values were converted to PLN at a weighted average euro exchange rate applicable in 2005 (Narodowy Bank Polski [NBP], 2013). This issuance was carried out by NDI (The company was founded in 1991 as Nederpol, a Polish-Dutch company. In 1995, it changed its legal form and was converted into a joint stock company - Nederpol Development & Investment SA. In 2002 it changed its name to NDI SA. It is involved in residential, office, commercial, and - infrastructure investments, including two stages of the A1 highway). In turn, in 2006 there were two issuances with a total value of 130 million PLN. They were conducted by Dom Development and Echo Investment. Increased activity of real estate development companies - issuers of corporate bonds was noted in 2007 (Dom Development, Echo Investment, NDI SA, BBI, GANT, Geo Flat and House, GTC SA were issuers). The total value of all issuances amounted to 1492,96 million PLN. In 2008-2009, the total value of bonds issued by the developers declined to the level of 36 and 54,9 million PLN. As already mentioned, such a reduced issuance value, with respect to 2007, was a

result of the slump in the property market. However, a steady increase in the value of developers' bonds was observed in the years 2010-2012. Finally, in 2012, developers issued bonds with a total value of PLN

1721,586 million (Figure 4). Due to the maturity date criterion, the largest share in the issuances total value were those of 7-year bonds (Figure 5).

Figure 5: The structure of the real estate development corporate bonds according to the criterion of maturity date in 1998-2012



Source: Own elaboration based on data(Fitch Ratings Poland, 1998-2012;<http://www.gpwcatalyst.pl/>)

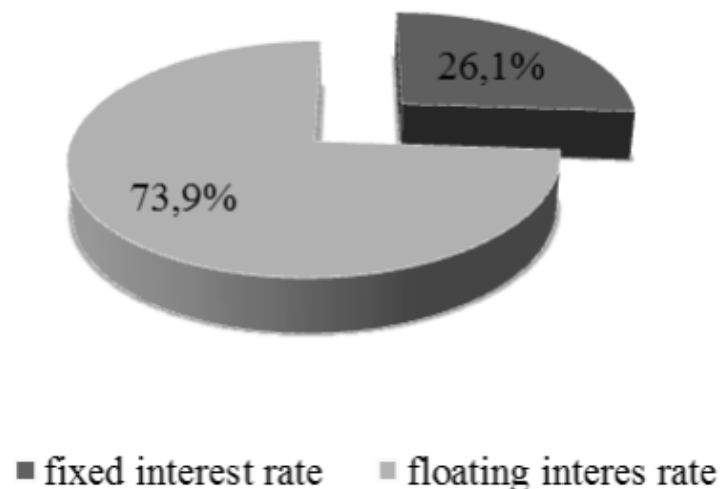
The high proportion (28,4%) of bonds with 7-year maturity results from the high nominal value of each of these instruments. Only three such issues were reported during the period considered. Their value amounted to 100, 120 and 150 million PLN, and issuers were some of the largest real estate development companies in Poland (They were: GTC SA, a holding company listed on the Warsaw Stock Exchange, engaged in projects in Poland, Romania, Croatia, Serbia, Bulgaria, Czech Republic, Russia, Slovakia, Hungary and Ukraine, as well as the previously mentioned NDI SA and Echo Investment). It can be assumed that the strong position of these companies on the development market was a factor that allowed them to obtain capital through such large and long-term issuances. The maturity date of these bonds implies a relatively high level of their risk. A slightly lower share of total value of issuances were noted on 2-year (24,4%) and 3-year (24,1%) bonds, which are classified as medium-term instruments. Due to the relatively long maturities, they are less urgent than

current liabilities. The conditions influencing the level of investment risk can be correctly estimated within a two or three year time horizon. It can be concluded that these bonds combine the advantages of short and long-term sources of funding. It should also be noted that the issuances of maturities of two to three years fits very well into the lifecycle of most development investments. This means that the investment process can be partly financed by funds from the issuance of bonds, which are subsequently bought back by proceeds from the sale of completed real estate.

Bonds with annual maturity accounted for 12,5% of the total value of issuances carried out in 1998-2012. Five-year debt securities (8,5%) were slightly less popular. 4-year bonds had the lowest rate of only 2,2%.

Debt securities with variable interest rates dominated in the structure of the bonds issued by the real estate development companies in 2010-2012. They accounted for 73,9% of all issuances. The share of fixed rate bonds was 26,1% (Figure 6).

Figure 6: The structure of the real estate development corporate bond market according to the criterion of type of interest rate in 2010-2012

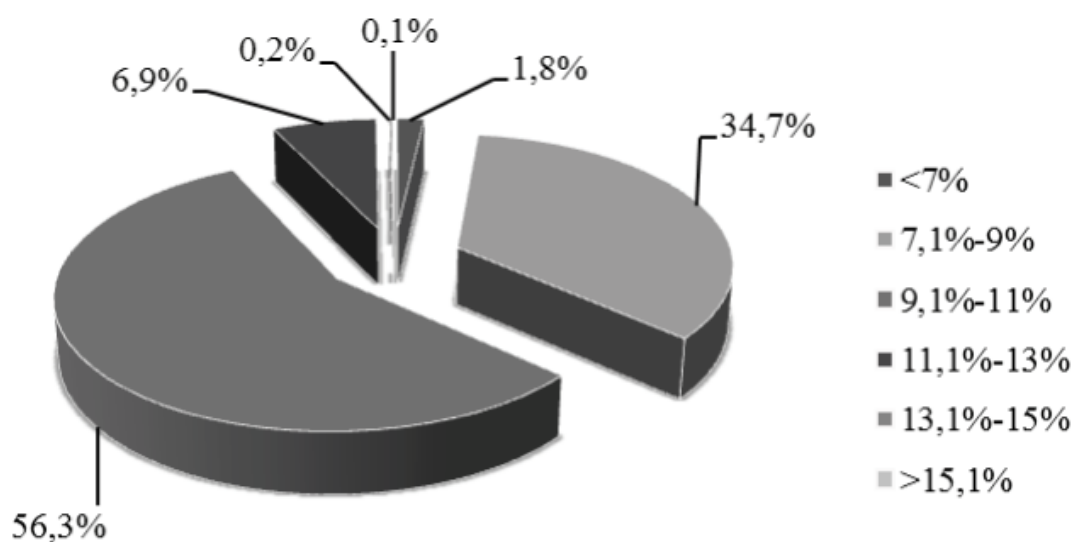


Source: Own elaboration based on data(<http://www.gpwcatalyst.pl/>)

The largest share in the structure of the bonds issued by the developers were debt securities bearing interest

ranging from 9,1% to 11%. They accounted for 56,3% of total issuances (Figure 7).

Figure 7: The structure of the real estate development corporate bond market according to the criterion of interest rate on bonds in 2010-2012

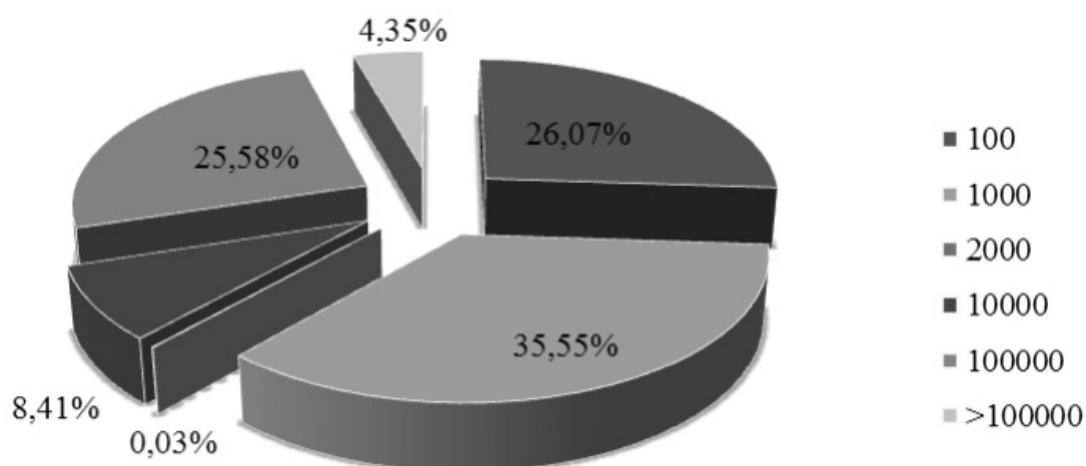


Source: Own elaboration based on data(<http://www.gpwcatalyst.pl/>)

34% of the bonds issued in 2010-2012 had an interest rate at a level of 7,1% to 9%. The relatively high coupon rate of 11,1% - 13% were noted for 6,9% of the debt securities. The smallest, amounting to respectively 0,2% and 0,1%, was the proportion of bonds bearing interest at intervals of 13,1% to 15% and above 15%. In the case of the latter, only two issues were recorded, the first of which was bought out in time. In the second case there was a liquidation bankruptcy of the issuer (Religa Development SA was

listed on the NewConnect. On November 7, 2012 the company went into liquidation bankruptcy). In 2010-2012 the structure of the bonds issued by development companies according to the criterion of nominal value of bonds was dominated by securities with a denomination of 1000 PLN. They accounted for 35,6% of the total value of issued bonds. They were intended primarily for institutional investors (Figure 8).

Figure 8: The structure of the real estate development corporate bond market according to the criterion of nominal value of bonds in 2010-2012

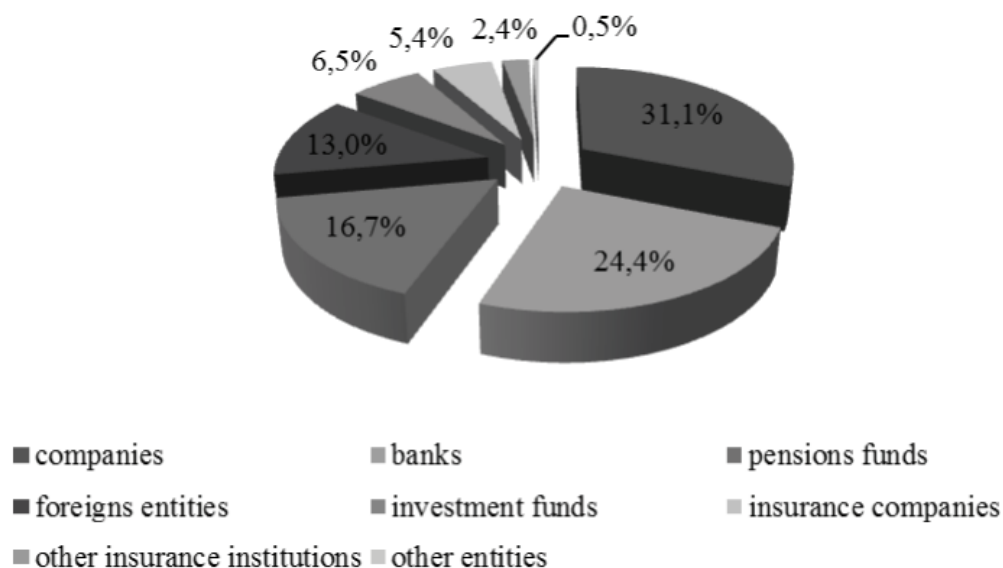


Source: Own elaboration based on data (<http://www.gpwcatalyst.pl/>)

Debt securities with a nominal value of 100 PLN had a high (26,1%) share in the structure of bonds issued by developers. A slightly smaller proportion (25,6%) were bonds with a unit value of 100 thousand PLN.

Four bond issuances with unusual denominations (2 thousand PLN, 10 thousand PLN and 250 thousand PLN) were recorded in 2010-2012. They were respectively 0,03%, 8,4% and 4,4% of all issued bonds.

Figure 9: The structure of the corporate bonds according to the criterion of buyers of bonds in second quarter of 2011



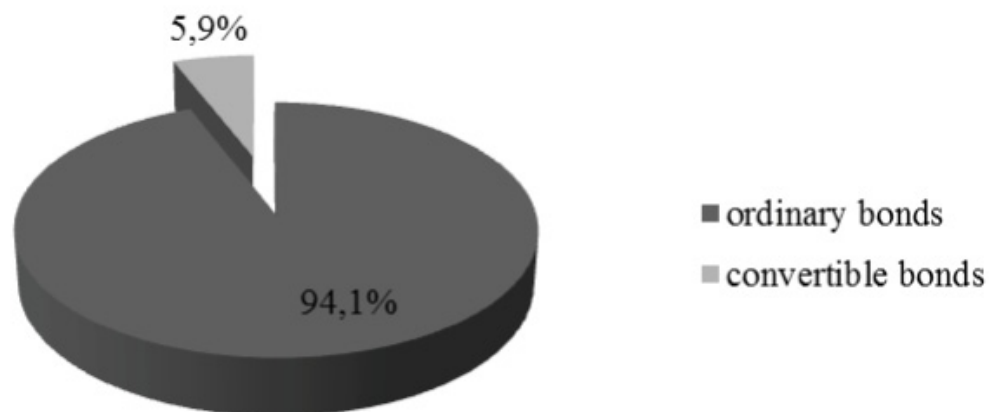
Source: Górką, 2012, p. 228

As can be seen from Figure 9, the largest group of buyers of corporate bonds were companies (31,1%), banks (24,4%) and pension funds (16,7%). The group of foreign investors was significant (13%). In turn, investment funds, insurance companies and other financial institutions had only a few percent share in the structure of the corporate bond market. The smallest share, only 0,5% was the participation of

other entities. It is likely that within this group there were also individual investors.

Among the long-term debt securities issued by development companies ordinary bonds predominated. They accounted for 94,1% of the issuances in 2010 -2012. The percentage of convertible bonds amounted to only 5,9% (Figure 10).

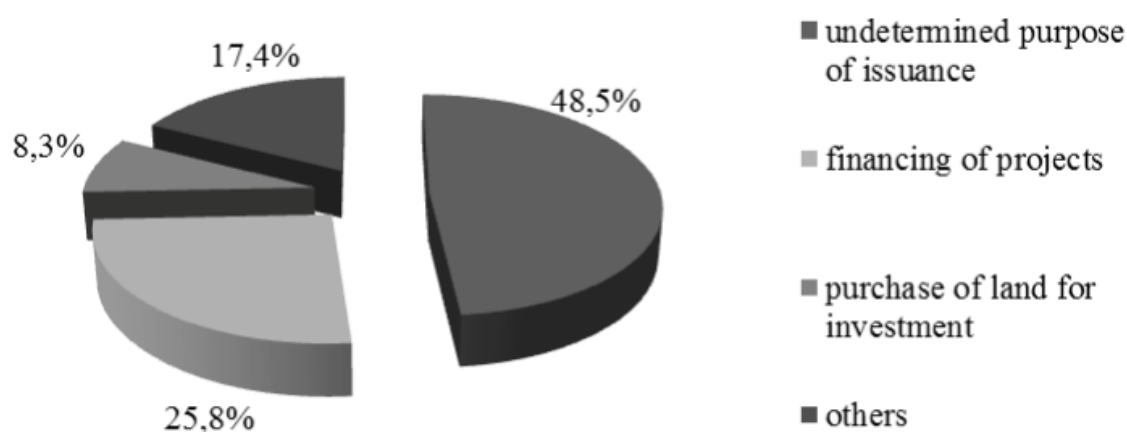
Figure 10: The structure of the real estate development corporate bond market according to the criterion of their type in 2010-2012



Source: Own elaboration based on data(<http://www.gpwcatalyst.pl/>)

The largest percentage (48,5%) of bonds issued by developers were debt securities with an undetermined purpose of issuance (Figure 11).

Figure 11: The structure of the real estate development corporate bond market according to the criterion of purpose of issuance in 2010-2012

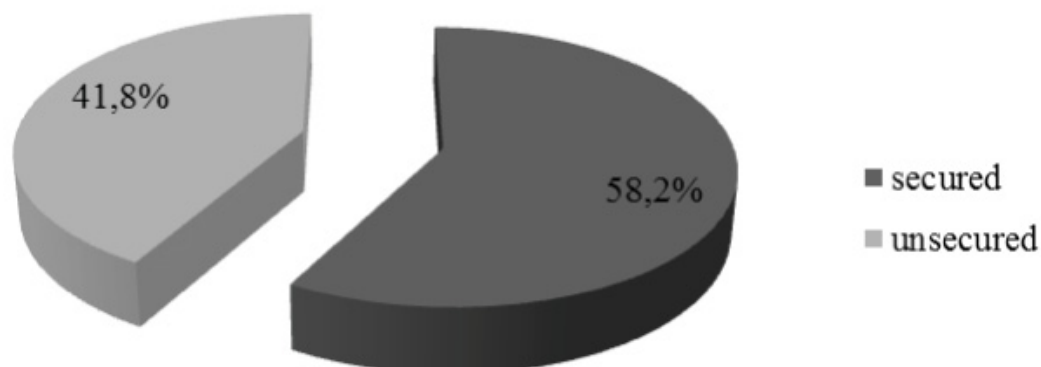


Source: Own elaboration based on data(<http://www.gpwcatalyst.pl/>)

As is apparent from information notes of real estate development companies, the funds raised from the issuances were used to finance the projects in 25,8% of total value of issued bonds. The purchase of building land was indicated as the purpose of issuance in the case of 8,3% of the total bonds issued. For the rest (17,4%) of the bonds indicated other purposes. Among them were: repayment of loans, liabilities from bonds, including securing funds for interest payments, optimize the structure of financing and purchase of own shares for their redemption.

The majority (58,2%) of bonds issued by the developers had collateral. Most often it was mortgage established on the real estate. In some cases, a registered pledge on investment certificates, the share capital of the issuer, the guarantor surety, financial blockade of the issuer's shares or a contract for the provision to a third party were used as collateral. 41,8% of the debt securities issued by the developers did not have any protection (Figure 12).

Figure 12: The structure of the real estate development corporate bond market according to the criterion of form of security in 2010-2012



Source: Own elaboration based on data(<http://www.gpwcatalyst.pl/>)

## CONCLUSIONS

On the basis of the study it can be concluded that:

- 1) the first issuances of real estate development companies in Poland were carried out in the late 1990s,
- 2) increased activity of developers in the field of bond issuance was noted in 2007. This reflected the scale of demand for external financing in the real estate development industry. In response to the increased market demand the scale of operations of development companies increased significantly.
- 3) in the years 2008-2009 the value of bonds issued by developers declined significantly. This followed the collapse of the global financial markets and a deep downturn in the real estate sector. However, in 2010 - 2012 a systematic increase in the value of bonds issued by development companies was noted. Their share in the funding structure of developer activity stood at the levels, respectively of 2,4%, 4,7%, and 8,2% of total balance sheet liabilities.
- 4) in 1998-2012, due to the criterion of maturity date, the largest share in the total issuances were 7-year bonds (28,4%). During the same period, there were a slightly smaller percentage of 2-year bonds (24,4%) and 3 year bonds (24,1%).
- 5) in 2010-2012 debt securities with floating interest rates (73,9%) predominated in the structure of the bonds issued by developers. 56,3% of the issued bonds had debt securities bearing interest ranging from 9,1% to 11%.
- 6) a high share of bonds with a nominal value of 1000 PLN or more (73,9%) indicated that they were

intended primarily for institutional investors. Among the long-term debt securities issued by development companies predominated ordinary bonds (94,1%). The percentage of convertible bonds reached only 5,9%. The largest percentage (48,5%) of the issued bonds were debt securities with an undetermined purpose of the issuance. Most of the bonds issued by the developers (58,2%) had a collateral. Most often it was a mortgage established on the real estate.

Results of the research indicate that the corporate bond market of real estate development companies in Poland was in the phase of intensive development in the years 2004-2012. Availability of funds obtained through the issuance of bonds increased by the establishment of appropriate infrastructure in 2009. Then there were established the first Polish investment funds dedicated to non-Treasury bonds and launched a centralized platform trading in non-Treasury bonds – Catalyst. In addition, the downturn in the real estate market initiated a series of structural changes in the financing of real estate development companies in the period 2008-2009. High margins and the restrictive creditworthiness assessment lead to a search for alternative sources of financing. The enforcement of the Act of 29th April 2012 on the protection of the buyer of a dwelling or a single-family-house was also significant. Due to restrictions imposed by the new law, it became important to provide flexible funding sources for development projects, including bond issuances.

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## ACTS

Act of 29th June 1995 on bonds.

Act of 29th April 2012 on the protection of the buyer of a dwelling or a single-family-house.