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# Tightness of Financial Covenants Embedded in Corporate Bonds Issued by Real Estate Companies in Poland

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ABSTRACT

Purpose - Analysis of the debt potential of real estate companies and answering the question how restrictive the covenants in question are and which factors influence their restrictiveness.

Design/methodology/approach - Verification of the correlation between Headroom Ratio and variables describing the issuer's financial situation, type of activity and number of covenants. The study covered also the determination of types of issuers that have the highest average and median of Headroom Ratio as well as in relation to companies with the same covenants it was checked the association between the threshold values and the financial performance. Finally, there was carried out the simulation of usage of ratios typical for corporate financing as covenants and confronting the Headroom Ratios with ones resulting from the currently binding covenants.

Findings - Headroom for the analysed bond issue programmes is very high. The Headroom Ratio is neither statistically correlated with the financial performance of issuer nor type of activity.

Research limitations - Bond issuers under review do not have external ratings, which made it impossible to investigate the relationship between Headroom Ratio and rating

Research implications The findings are particularly important for the development of the residential and commercial real estate market. The conclusions of the research can be used in the process of structuring the terms and conditions of corporate bond issues. They are also important and new information about leverage potential and risk monitoring capabilities.

| | |
|---|---|
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## INTRODUCTION

Covenants are obligations of a debtor to a creditor. Their spectrum and the adopted threshold values determine the extent of the creditor's control. The degree of restrictiveness of the covenants identified with the number of control areas and the thresholds results from the current financial situation of the debtor and its prospects described in the financial projections. The degree of stringency is also closely linked to the cost of funding. Covenants can be divided into: financial (indicative or quantifiable), obliging, prohibitive, limiting and proprietary (Niedziółka, 2015). A different division allows for distinguishing the following types of covenants:

non-financial (e. g. a commitment to take a specific action within a given period or a commitment not to make defined decisions),

financial in nature of indicators (e. g. obligations not to exceed a certain value of a given ratio or to maintain the value of another one at a level higher than a certain threshold),

financial related to thresholds expressed in monetary units (e. g. a commitment not to incur, without the consent of the creditor, financial obligations more than a certain amount or to spend on CAPEX no more than the amount agreed).

The subject of the analysis in this paper are financial covenants of an indicative nature embedded in the terms and conditions of issues of bonds of companies belonging to real estate companies present on the organized debt securities market, the which of it in Poland is Catalyst. In turn, financial covenants of an indicative nature can be divided into the following groups:

binding the amount of allowed indebtedness with the ability to service it, e.g. Net Debt/ Earnings Before Interest Taxes Depreciation and Amortisation (“ND/EBITDA”), Debt Service Coverage Ratio (“DSCR”), Project Life Coverage Ratio (“PLCR”), Loan Life Coverage Ratio (“LLCR”), Interest Cover Ratio (“ICR”),

linking an amount of debt with equity or total assets, (structural covenants, including e. g. ND/Total assets or ND),

covenants monitoring working capital management (e. g. the current ratio or borrowing base approach).

The covenants are intended to synthetically present, define the limits of the risks it will take and provide a tool for periodic monitoring (Achleitner, Braun &Tappeiner, 2009) as well as the goals of their implementation are (Niedziółka, 2014):

adjustment the cost of financing to the current level of risk,

limiting activities that may lead to an increase in risk,

controlling the degree of coverage of credit exposure by collateral,

activating or deactivating financing, e.g. in case of Conditions Precedent ("CPs") or Event of Default ("EoD").

Monitoring of risk related to real estate investment is carried out with the use of not only covenants describing the condition of the real estate company, but also with the use of indicators linking the level of financing with the value of the property or its price, i.e. Loan-To-Value ("LTV") or Loan-To-Price ("LTC") - these risk management formulas are described by Tuluram and Attili (2012). This paper focuses on covenants embedded in bond issue programs of holding companies of capital groups operating on the real estate market. The survey covered all 24 capital groups. Based on the consolidated results for 2019 (in 3 cases for 2018 due to the lack of publication of the results for 2019 till mid of June 2019), the current value of indicators acting as covenants was determined. The aim of the study is to analyse the debt potential of real estate companies and to answer the question how restrictive the covenants in question are and which factors influence the restrictiveness level. To compare the results obtained, they were parameterized using Headroom Ratio ("HR").

The paper also presents the structure of covenants occurring in bond issue programs and attempts to answer the question about the reasons for the relatively rare use of covenants typical for corporate financing like ND/EBITDA.

The issues analysed in this paper are particularly important for the development of the residential and commercial real estate market. The covenants determine the potential scale of financing real estate companies using bond issues. After the subprime crisis, bonds became an attractive alternative to bank credit, given the cost 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 became the trigger for real estate companies to look for flexible funding sources like bond issues (Gostkowska-Drzewicka, 2014, p. 15).

The article is divided into 3 parts. The first one is dedicated to the literature related to defined forms of real estate financing and the role of financial covenants. The second part presents the research methodology whereas the third one covers the description of results and the discussion of findings.

## LITERATURE REVIEW

From the point of view of companies operating on the commercial and residential real estate market, the credit policy of institutional investors is important. It is one of the factors describing the ROE of real estate investors. Risk-averse investors conduct underwriting policy focusing on keeping safe relation between amount of financing and real estate value and cash flow generated by financed projects. Cremer (2019) proposes a model aimed at clarifying the determinants of credit policy and credit exposure limits applied by lenders. It takes into account the impact of market parameters volatility and cash flow policy limits on variability in initial acceptable leverage. Cremer notes that initial leverage is endogenous in case of the credit policy while cash flow forward-looking measures are the most significant factors determining risk management. Olsson (2015) specifies the rationale for the choice of sources of financing for real estate investments, pointing out the low level of debt to equity ratio, high capital needs and good development prospects as factors determining the choice of financing in the form of bond issues. The issue of bonds may be carried out both by a real estate company which carries out many projects and has been operating on a continuous basis for many years (Corporate Finance)or by a newly established special purpose vehicle (Project Finance). The process and forms of financing commercial real estate in Poland were described in detail by Czerkas (2010). The author presents the differences between the Corporate Finance and Project Finance approaches, which in turn is subject to in-depth analysis by Wojewnik-Filipkowska (2008). Both forms of real estate financing require monitoring in which financial covenants play an important role. Yhip and

Alagheband (2020) proposed a risk monitoring and scoring tool for IPRE (income producing real estate) projects, in which, among other things, debt service capacity indicators and LTV and LTC ratios used in covenant construction are crucial. The use of covenants allows to identify high-risk customers, which the bank can devote more time and attention within the monitoring process. Within this stream of research Billett, King and Mauer (2007) showed that the negative correlation between the level of leverage and development potential can be weakened using financial covenants. Rajan and Winton (1995) concluded that debt collateralisation and introduction financial covenants foster creditor's motivation to monitor it. The authors of studies on the role of financial covenants relatively often wonder what kind of debtors covenants are used for. For example, in the case of companies characterised by high cash flow and significant profitability and low-income volatility, cash flow covenants are more common (Demerjian, 2007). On the other hand, regarding companies reporting losses, low profitability and high variability of income, covenants referring to equity or net worth are relatively more common. Reisel (2014) determined that relatively rarely covenants are included in the terms and conditions of issues of companies with low probability of default and issuers with high growth potential. Demiroglu & James (2007) proved that companies with weak financial performance and tiny investment potential are characterised by covenants established in a relatively more restrictive manner. Paglia and Mullineaux (2006) noted that a wider spectrum of financial covenants is used for high-risk exposures, while covenants are implemented relatively less frequently for companies with high growth potential and transparent ones. The breadth of covenants also depends inter alia on whether the exposure is secured. Ismail (2014), on the other hand, formulated a conclusion that to some extent contradicts the results of the research carried out by Reisel and Demironglu and James, as well as Paglia and Mullineaux. Based on an analysis of French listed companies during the period from 2003 to 2009, Ismail concluded that covenants were being incorporated into contracts with profitable companies with good growth prospects and this applies to syndicated loans. Paglia and Mullineaux (2006) pointed out that the number of covenants in the agreement and their level of restriction is influenced by the number of

creditors. The bigger it is, the bigger the breadth of covenants. This last statement coincides with the conclusion reached by Ismail (2014). A similar conclusion was also reached by Bradley and Roberts (2015), who demonstrated that exposures arranged by investment banks and syndicated loans are more likely to contain covenants than other types of debt instruments. Covenants are used more often in times of recession than expansion and for debtors with high spreads. The types of covenants and their levels depend on the risk of the issuer's industry (Królikowska & Sierpińska-Sawicz, 2016). The above-mentioned authors, while researching coal companies, came to the conclusion that the greatest precision is in the way the indicators describing the maximum permissible debt are defined (compared to other covenants). An important issue is the problem of restrictiveness of covenants in terms of their number and threshold values. Mather (2008) interviewed lending officers from 48 Australian banks. Based on this, he came to the conclusion that there is a very large variation in the spectrum of covenants embedded in contracts and the restrictiveness which manifests itself in the setting of levels of indicators considered safe and the frequency of verification of covenants. Pittman and Zhao (2019) prove that the existence of financial covenants is a determinant of decisions made by managers responsible for accounting and reporting. These choices are aimed at solutions that do not infringe on financial covenants. The authors have proven that the level of restrictiveness of financial covenants is positively correlated with the probability of financial statement misstatements. This applies primarily to performance covenants, to a lesser extent capital covenants. Sierpińska-Sawicz (2018), based on the analysis of credit agreements concluded with companies listed on the Warsaw Stock Exchange, came to the conclusion that covenants mismatched to the debtor's specificity or too restrictive ones contribute to limitation of the company's development and are a factor hindering restructuring as well as sometimes also increasing the risk of bankruptcy of the issuer. Brycz, Pauka and Śmieja (2015) examined the degree of restrictiveness of covenants in bond issue programmes listed on Catalyst, and it was found that covenants occur in a relatively low number of issues. These are mainly covenants describing the maximum acceptable level of debt. The aforementioned authors concluded that the number of

covenants and the headroom (proving restrictiveness) are not related to the size of the issuer and its financial leverage. Królikowska and Sierpińska-Sawicz (2016) noted that the financial covenants embedded in loan agreements are characterised by a higher level of stringency than those in the bond issue programmes. do Rosario Correia (2008) shows that structuring the terms and conditions of the bond issue, limiting the risks arising from agency problems, has the effect of reducing the cost of financing. In turn Ivashina and Vallee (2019) concluded that the yield's rise is often due to the introduction of additional clauses weakening negative covenants. Datta, Iskandar-Datta and Pattel (1999) proved that, in the case of bonds with speculative riatings, among other factors, the covenant's restrictiveness has a significant impact on the yield. In turn, Bozanic, Cheng and Zach (2018) concluded that the level of contractual uncertainty is positively correlated with the original margin and the use of covenants which level determines the financing price. In case of high-yield bonds, the implementation of restrictive covenants increases the value of the issuers with speculative ratings by 2.4%, as shown by Green (2018). It is also impossible to omit the literature related to the issue of covenant violations, especially during the crisis. Demiroglu and James (2007) noticed that the infringements of the covenants have a significantly smaller impact on the CAPEX and the issuance of new debt in case of tightly set covenants. Falato and Liang (2016) proved that the breach of the covenants usually results in a significant reduction in employment. This is particularly true if, as an effect of a violation, creditors have rights to accelerate, restructure or terminate a facility. Based on an analysis of a sample of 779 corporate bonds issued by U. S. companies Lugo (2020) concluded that once a crisis unfolds, the importance of negative pledge and sale-leaseback covenant are growing. In this case, covenants limiting the possibility of risky investment projects are less important. This is due to the obvious fact that during the crisis companies have limited motivation to carry out such projects.

## RESEARCH METHODOLOGY

As of mid-June 2020, bonds of 24 companies (mainly holding companies of capital groups) operating on the real estate market were listed on the

organised bond market Catalyst. Out of these, 4 specialized in the execution of commercial projects (mainly warehouses and offices), 12 conducted development activity in the field of residential real estate, and the remaining 8 were active in both commercial and residential segments. The bonds were denominated primarily in PLN (19 issuers). Only in 5 cases, the currency of issue was euro which should be associated with the involvement in the commercial real estate segment which sales prices and rental rates are determined in this currency. Euro issuance is therefore a form of natural currency hedging. In the case of each issuer, financial covenants were applied, but in 2 cases the ratios were related to the economic and financial situation of the issue guarantor. Table 1 lists covenants with their frequency of occurrence.

Table 1. Financial covenants used in bond issues of developer groups listed on Catalyst (as of 15. 06. 2020)

| Financial covenant | % of total issuers |
|---|---|
| ND/EBITDA – consolidated | 4.17% |
| ND/Equity– consolidated | 45.83% |
| ND/Total assets– consolidated | 25.00% |
| ND/(Equity + ND) – consolidated | 8.33% |
| Liabilities/Total assets– consolidated | 8.33% |
| Equity/Debt– consolidated | 4.17% |
| LTV– consolidated | 4.17% |
| Overcollateralisation Ratio– consolidated | 4.17% |
| Non-encumbered tangible assets/(Face value of bonds + total coupons) – consolidated | 4.17% |
| ND/Inventory– consolidated | 4.17% |
| ND/Equity – standalone | 4.17% |
| Equity/Total assets– consolidated | 20.83% |
| Financial Debt/Total assets– consolidated | 4.17% |
| Secured ND/Total assets– consolidated | 4.17% |
| Financial Debt/Equity– consolidated | 4.17% |

Source: own elaboration.

Figure 1 presents the structure of the developer companies listed on Catalyst in terms of the number of covenants used.

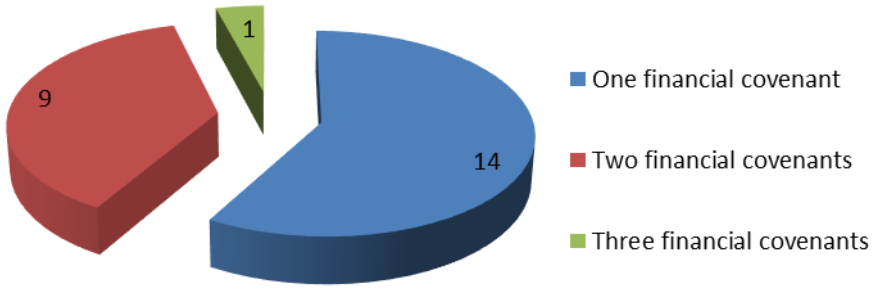


Figure 1. Distribution of bond issuers according to the number of covenants (companies operating in the real estate market)

Source: own elaboration.

The subject of the study is the scale of potential additional debt financing that can be obtained by real estate companies, given the limitations resulting from the financial covenants included in the terms and conditions of bond issues. To be able to compare this potential the HR (Headroom Ratio) was proposed, defined as follows:

$$HR=H/DCx100 \quad (1)$$

where:

DC – Debt Capacity, i.e. the maximum debt allowed without breaching any financial covenant. If there is more than one covenant, this means a minimum value among the values determined based on individual covenants.

H – Headroom.

H = DC – ND

ND – current level of ND.

The next stages of the study were respectively:

verifying the relationship between HR and selected variables, describing the issuer's financial situation, type of activity and number of covenants,

determining which types of issuers have the highest average value and median HR (depending on the type of activity and number of covenants),
in relation to companies with the same covenants, checking the relationship between the threshold values for covenants and the financial situation,
simulating the use of indicators typical for corporate financing as covenants and confronting the calculated HR with HR resulting from the currently binding covenants.

## RESULTS & DISCUSSION

Based on the consolidated figures of all companies active on the real estate market and listed on Catalyst HR was determined. Due to the fact that as at the end of the analysis (15.06.2020) 3 companies have not yet published audited consolidated results for 2019, data for 2018 were used. Despite the availability of interim data, due to the seasonality of the real estate market, their annualisation was abandoned. The list of companies numbered from I to XXIV is contained in Appendix 1.

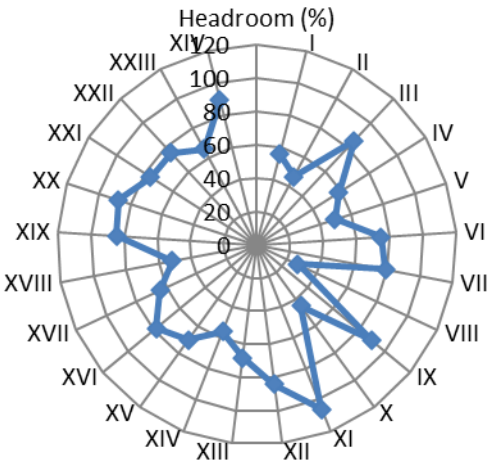


Figure 2. HR of real estate companies listed on Catalyst market

Source: own elaboration.

The relationship between HR and the financial situation of the issuer was then verified, as well as between HR and the type of business and then

between HR and the number of covenants. The correlation coefficients and values of test statistics t are shown in Table 2:

Table 2. Potential determinants of HR

| | Pearson's linear correlation coefficient | The value of test statistics t |
|---|---|---|
| ND/EBITDA and HR | -0,142 | -0,673 |
| Indebtedness ratio and HR | -0,237 | -1,146 |
| Number of covenants and HR | -0,116 | -0,550 |
| Type of activity and HR | -0,209 | -1,005 |
| Total assets and HR | 0,032 | 0,148 |
| Equity and HR | 0,056 | 0,265 |

Source: own elaboration.

Taking HR as a measure of the covenant's restrictiveness the differences between the mean and median HR values were checked taking into account two criteria: the number of covenants (expecting that the higher the number of covenants, the lower the headroom) and the type of business (residential, commercial and residential, commercial). The results are presented in Table 3.

Table 3. Mean and median of HR based on criteria of type of activity and number of covenants

| | Mean | Median |
|---|---|---|
| Type of activity | | |
| Residential | 77,00 | 78,50 |
| Residential and commercial | 67,53 | 65,60 |
| Commercial | 63,38 | 60,00 |
| Number of covenants | | |
| 1 covenant | 70,54 | 75,61 |
| 2 covenants | 68,35 | 69,45 |
| 3 covenants (1 issuer) | 46,60 | 46,60 |

Source: own elaboration.

This analysis shows that the least restrictive covenants were defined for companies implementing housing projects and, as originally assumed, for those that were obliged to respect only one covenant. The hypothesis that the selection of covenants and the assumed threshold values, due to the high value of the headroom, do not constitute a significant restriction for issuers in terms of development and new debt, was also verified. For this purpose, the headroom was checked using typical for corporate finance ratios like

ND/EBITDA (threshold of 3.0 and 3.5) and the indebtedness ratio (Liabilities/Total Assets) with limits 0.6 and 0.7. The use of the ND/EBITDA ratio and the value of 3.0 (without other covenants) would benefit only 2 real estate companies and 3.5 operators 3 entities, respectively. In turn, if the indebtedness ratio is set at the level of 0,7 HR would be higher for 6 entities. 5 companies would benefit if covenant is established at 0.6. It is quite interesting that for one entity, it would even be beneficial to use both covenants at more restrictive levels compared to the current ones. Only entity no. VIII can be classified as one of the issuers with relatively conservatively defined covenants (ND/Total Assets does not exceed 0.4). In this case HR takes the smallest value in the whole audited sample. As many as half of the surveyed entities were used ND/equity covenant, however, different threshold values were adopted. For this reason, the relationship between the threshold value and ND/EBITDA, indebtedness ratio, total assets, equity level and HR was verified. Again, no strong statistical correlation was identified for the significance level 0.05. This is confirmed by the data in Table 4:

Table 4. Relation between the covenants' thresholds and selected variables

| | Pearson's linear correlation coefficient | The value of test statistics t |
|---|---|---|
| Threshold and ND/EBITDA | 0,005 | 0,017 |
| Threshold and indebtedness ratio | 0,272 | 0,894 |
| Threshold and equity | -0,179 | -0,575 |
| Threshold and HR | 0,047 | 0,149 |
| Threshold and total assets | -0,191 | -0,615 |

Source: own elaboration.

Real estate companies listed on Catalyst in some aspects are not different from issuers representing other industries. Covenants based on balance sheet dominate. Cash flow ratios are very rarely used. This provides weak credit risk protection for bondholders and is also low restrictive for management since it requires relatively low efforts to avoid breach of covenants. The number of covenants and their restrictiveness are not related to the financial situation of the issuer. The above may be due to the large dispersion of the lenders as opposed to bank loans, where the headroom is set at up to 20%. These conclusions are in line with the findings of the Brycz, Pauka and Śmieja (2015) study. The use of financial covenants in real estate

companies listed on Catalyst does not cause any restrictions on further debt and development. This is indicated by high headroom and HR. In one case HR even exceeds 100 which results from the negative net debt (cash balance exceeds financial liabilities). In view of the existence of covenants for each issue of the analysed bonds issued by real estate companies it should be concluded that covenants are a sine qua non conditions for the issue to take place. This finding is in line with the conclusions drawn by Billett, King and Mauer (2007). This is also coherent with results achieved by Demiroglu & James (2007). The liberalisation of covenants' restrictions is also confirmed by Becker & Ivashina (2016).

Real estate companies, compared to other industries are usually characterized by high variability of cash and profitability (Ludwiczak, 2020). For this reason, they are relatively rare in their case, covenants based on EBITDA or Operating Cash Flow ("OCF") - the study carried out in this article confirms this and its conclusions in this respect are consistent with Demerjian (2007). The study therefore shows that the type of covenant used depends on the type of industry as confirmed, inter alia, by Królikowska and Sierpińska-Sawicz (2016). The main theoretical contribution resulting from the study is the Headroom Ratio estimation methodology, considering the actual covenants, their relationships and the threshold values used. HR is a new tool for assessing the covenant's restrictiveness which can be confronted with other measures. The findings may be used in the process of structuring the terms and conditions of corporate bond issues. They are also important and constitute new information about leverage potential and risk monitoring capabilities of corporate bond issuers operating in the real estate market. The results of the research allow to conclude that the covenants defined for real estate companies listed on Catalyst do not create significant barriers to development and further leverage. Covenants do not represent a significant challenge for companies' CFOs and as the study showed, replacing them with typical covenants used by banks for corporate finance would result in a lower headroom. Covenants are defined with a large headroom, but at the same time the financial situation of most issuers is so good in terms of leverage that even its increase within the limits set by the covenant should not change the positive assessment of the financial situation. The

study also shows that the covenants used in most cases do not provide the possibility of monitoring debt service capacity which should be crucial from the perspective of the bondholders.

This is due to the fragmented nature of the capital providers and their limited impact on the terms of the issue. It proves the use of the take it-or-leave it approach instead of active participation of bondholders in the structuring. Another practical conclusion from the analysis is the lack of correlation between HR and the issuer's financial standing. This means that it is not possible to infer the issuer's risk based on the distance between the current index value and the covenant threshold. Equally importantly, no such significant relationship has been observed between the ND/Equity covenant threshold (most used) and the financial situation of the issuer. At the same time, it was observed that the more covenants, the lower the average value and median HR is, which may indicate that the introduction of different covenants limits the possibility of increasing leverage. Despite described contributions the research is not without limitations. Limitations related to the conducted research include a relatively small number of issuers and one analysis period. In addition to the need, already mentioned, to use 2018 data for the 3 companies, limitations include the fact that the analysed bond issuers do not have an external rating. For this reason, no additional study has been carried out on the relationship between HR and the level of credit risk, which is reflected in the rating. In the future, the survey will be extended to include issuers from other countries of Central and Eastern Europe and subsequently the whole of Europe (by European Union and other countries, as well as by the euro zone and non-euro zone countries). Another direction of research is to confront the results specific to real estate companies with the results obtained based on a sample built from companies representing other industries. Further exploratory areas include also study of the relationship between the amount of covenant and the price of financing.

## CONCLUSION

The analysis of financial covenants embedded in the real estate bond issue programs of companies present on the Catalyst market, carried out in this paper allows to formulate the following conclusions:

the implementation of financial covenants is a condition for effective placement of bond issues, which is evidenced by the fact that each bond program contains from one to three financial covenants,

in case of each issuer the covenants are defined at the consolidated level and in one case additionally at the individual level. The above solution limits the risk of excessive leverage in the form of the issuer (most often the holding company) using the funds from the issue of bonds as its own contribution to projects implemented by special purpose vehicles,

the dominant group of covenants are indicators referring to the level of debt against total assets or equity. From the perspective of bondholders, this means the risk of transfer of overleverage due to the lack of reference to the generated Free Cash Flow ("FCF") and the possibility of manipulating the total assets or equity values (for example through revaluation of shares or intangible assets),

although the analysed companies conduct regular and repeatable activities in the scope of execution of development projects and their subsequent sale, only in one case a typical corporate finance covenant in the form of ND/EBITDA was used. This means that only in the above-mentioned case the covenant plays role of monitoring measure for cash flow generated by the issuer. All other analysed debtors are not obliged to present debt service capacity ratios, i.e. ratios linking FCF, OCF or EBITDA with net debt. . This also creates much more headroom for external financing than if such a covenant were set at a moderate level (i.e. between 2.5 and 4.0),

the headroom for additional indebtedness is very high. Its minimum value for the analysed companies exceeds 27%, while the median is 72.5%. In banking practice, the headroom of covenants in relation to the value of the indicator resulting from the projections or the current value does not usually exceed 20%. This means that the implemented covenants do not have a disciplinary function and are not a debt mitigating factor,

replacement of the existing covenants with typical corporate finance ratios used by banks would reduce the possibility of further indebtedness of bond issuers,

covenant's restriction, measured by HR, is not related to the financial situation of the issuers, just as the covenant thresholds are not correlated with the financial standing.

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## ANNEX 1

List of analysed real estate companies (in an alphabetical order)

Atal S.A.
BBI Development SA
Capital Park SA
Develia SA
Dom Development SA
Echo Investment SA
Geo, Mieszkanie i Dom sp. z o.o.
Ghelamco Invest Sp. z o.o.
Globe Trade Centre SA
Griffin Real Estate Invest SA
HB Reavis Finance PL 2 sp. z o.o
i2Development SA
Inpro SA
JHM Development SA
JW Construction Holding SA
Lokum Developer SA
Marvipol Development SA
MLP Group SA
Polnord SA
Polski Holding Nieruchomości SA
Robyg SA
Ronson Development SE
Vantage Development SA
Victoria Dom SA