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PROVISION OF LOANS AS A STRATEGIC CHOICE OF AN ENTERPRISE

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Abstract

The article presents motives and purposes of provision of loans by non-financial enterprises. Moreover, it describes how provision of loans influences both the internal and market situation of lenders who are not listed on the stock exchange. We point out effects of provision of loans by non-financial enterprises, while, based on literature review, we signal the market reaction (positive and negative) to information about lending activities of non-financial enterprises. On the one hand, the phenomenon of providing loans by non-financial enterprises may be considered positive, as it provides financing for entities with limited access to bank loans or provides liquidity management in a business group. On the other hand, it may lower the viability and amount of investment of companies providing loans. Loans obtained from outside the business group enable borrowers and the business group to use a tax shield, yet they increase the bankruptcy costs and limit the investment of lenders. An empirical study was carried out with the use of a panel approach (generalized method of moments GMM). The research sample includes 31 075 observations from the financial statements of limited liability companies and unlisted joint-stock companies for the years 2003-2014.

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INTRODUCTION

In order to implement development strategies or strategies focusing on stability or survival, a company may use financial instruments which are suitable to internal sources of finance or for the aspirations of management. Making a strategic decision a company builds its market position and image, which are the key factors to consider by investors. A good balance between short-term and long-term financial goals, assuming a company's substantial value growth, should be the starting point for making the choice of strategy. As a consequence of the implemented strategy some enterprises may be, to some extent, forced to provide loans not only within the business group (in order to manage the liquidity appropriately) but also outside the group – e.g. to counterparties who need to increase their ability to continue their operations. Such choices made by management may be dictated by efforts to reduce business risk and maintain their current position.

The aim of the article is to analyze the extent to which lending activities of non-financial companies serve as a tool for implementation of their financial strategy, and to what extent the tactical activities focused on short-term effects and benefits are more dominant. In this article the authors discuss, based on the results of their empirical research on panel data of 4 600 private enterprises in the period between 2003-2014, the effect of lending on a company's viability, growth opportunities (sales growth rate) of lenders and the size of dividends they pay (or shares in profit in the case of limited liability companies). Minor shareholders of a lending company may be at a disadvantage as a result of the opportunistic behavior of major shareholders and the transfer of funds from lender to borrower within and outside the business group. The exception may be private companies whose shareholders are not members of management and do not have any decision-making authority in regard to lending. It may be assumed that intra-group lending has a stronger impact on viability reduction than in the case of loans provided outside the business group. In the case of enterprises incurring higher agency costs, i.e. managed by external managers, providing intra-group loans may deteriorate the situation of minor shareholders, e.g. limit the dividend payment or lender's growth opportunities. On the one hand, it is related to the risk of a major shareholder's tunneling to the disadvantage of minor shareholders, on

the other hand it is related to the withdrawal of funds from the lending company. These funds may be otherwise used for investment or contribute to the exploitation of new investment opportunities.

FINANCIAL STRATEGIES OF ENTERPRISES

The way an enterprise operates on the market is determined by the company's strategy which defines its strategic goals, including the firm's position on the market, form of competition, choice and manner of delivering key values, and methods of achieving a competitive edge (Yang, Kueng & Hong, 2015). The financial strategy plays a vital role in a company's general strategy, as its key mission is to specify the way of creating value for shareholders or, in broader terms, stakeholders. A company's strategy may be targeted at development, stability, or survival. For that purpose, the company utilizes a wide range of financial instruments, the choice of which is dependent on the strategy implemented by the company, while taking into account the firm's internal capabilities, including management's aspirations and market opportunities and expectations. It requires defining the type and scope of appropriate and permitted methods and adequate asset allocation. Enterprises may deploy different strategies targeted at development, stability, or survival that may be implemented through e.g. expansion and continuous increase of asset productivity, cost optimization, scope of using financial leverage, or focusing on net profit, etc. Based on that, a company can build its market position and image which are crucial aspects considered by current and potential investors. Namely, in order to create value for shareholders or stakeholders, it is necessary to implement an appropriate strategy which can be achieved by recognizing relevant factors that affect a firm's value (Trigeorgis, 1996). Therefore, the most important goal for a private enterprise is generation of continuous value growth for shareholders, which requires great effort and engagement from a company's management (Brandenburger & Stuart, 1996). At the same time, a company must take care of its proper functioning on an ongoing basis, and report growth of short-term revenues and current financial stability. Thus, balancing short-term and long-term goals that assume a company's value growth may serve as a starting point for the choice of the strategy (Lehmann, 2004; Varaiya, Kerin & Weeks, 1987). Implementation of the adopted strategy may encourage

companies to provide loans, not only inside but also outside the business group, to recipients and suppliers who can preserve their ability to continue business activity and, as a consequence, limit the business risk. One of the main aims of this article is to answer the question of to what extent solving this dilemma is crucial for enterprises' financial strategy, and to what extent tactical activities focusing on current effects and ad hoc benefits are dominant.

FINANCING COMPANY ACTIVITY WITH DEBT

An enterprise may be financed using financial leverage, with a bank loan or a loan from another non-financial company serving as a source of finance. According to results from the European Commission's survey on access to sources of finance of enterprises (SAFE, 2017), internal funds were the only source of finance for 26% of SMEs in the European Union in 2013, while 15% of SMEs were financed with loans from related companies, partners, family or friends (13,4% SMEs in Poland).

Trade credit provided by suppliers is a dominant source of finance of enterprises. In the literature, the “redistribution effect” between bank loans and trade credit (a delay of payment for supply or service) is considered a mechanism mitigating the limitation in access to finance, particularly strongly felt in a period of restrictive monetary policy of financial crisis (Meltzer, 1960; Blasio, 2005; Love, Preve & Sarria-Allende, 2007; Garcia-Appendini & Montoriol-Garriga, 2013; Wawryszak-Misztal, 2013; Ziętek-Kwaśniewska, 2013). Due to the redistribution effect, enterprises who have better access to finance provide the trade credit to companies with the capital shortfall.

The choice of debt as a financing instrument brings different further connotations for a company's internal situation and perception of its financial standing. On the one hand, financing with debt increases bankruptcy cost and risk of default. On the other hand, according to trade-off theory, due to the tax shield, it causes increase of the enterprise's value. The literature on business groups (Ignatowski, 2011) underlines the role of loans provided within the internal capital market in liquidity management as well as in financing investment projects of enterprises experiencing limitations in access to bank loans.

There are few studies in the literature on perceiving

company lending as a redistribution channel for financial resources (Nehrebecka & Bialek-Jaworska, 2016; Bialek-Jaworska, 2017; Bialek-Jaworska, 2018). A particular focus on financing companies with loans provided by non-financial enterprises is noted in tax regulations. Recently, these regulations have focused not only on loans from partners but, since 2018, also on loans provided by unrelated entities (outside the business group) who exceed their financing available after successful evaluation of the company's creditworthiness.

The research on provision of loans focuses on public companies (mainly in China and Chile) and the problem of expropriation (‘tunneling’) from minor shareholders for the benefit of major shareholders who are focused on obtaining a higher and more certain rate of return than the dividend rate. (He, Lu & Ongena, 2016; Buchuk, Larrain, Muñoz & Urzúa, 2014). Several studies on international corporations focus on analyzing the impact of thin capitalization rules on transfer of profits and internal financing of related or co-related companies in business groups, with the parent company in the USA. Studies of the German market analyze the demand side, i.e. loans from partners as an alternative to bank loans or equity infusion.

An enterprise may lend money to another company from the common business group – such a loan is referred to as an **intra-group loan**. On the internal capital market, provision of loans facilitates transferring funds – referred to as “funnel leverage” in a business group (He et al., 2016). The internal capital market may shift the lending from less effective projects to more effective ones. Moreover, the reallocation of intra-group loans is more common and plays a more important role in countries with less developed external (outside the business group) capital markets (Stein, 1997). Buchuk et al. (2014) proved that intra-group loans in Chile improve business investment and the rates of return from those investments, due to strict regulations and disclosure of information on the provided loans.

Intra-group loans are provided between enterprises belonging to the same business group, while **inter-corporate loans** are often provided between companies with some sort of business relationship, e.g. recipients and suppliers or companies from the same industry, belonging to different business groups. Among the reason for lending by non-financial companies, there is a possibility that companies providing inter-corporate loans may have

the ‘informative’ advantage over banks with regard to verifying and monitoring borrowers. Lenders may benefit from inter-corporate loans by lending at a higher interest rate than in the case of alternative investments (e.g. bank deposits). **Inter-corporate loans** are an alternative source of financing for borrowers with limited access to bank loans, such as small and medium enterprises not listed on stock exchanges. Inter-corporate lenders, especially state-owned companies in China or large private enterprises in Poland, have better access to external sources of finance than private small and medium enterprises.

Informal financing, fast-growing in China (due to widespread government interventions and limitations in access to sources of finance), leads state-owned companies and large enterprises to provide loans to small and medium enterprises, which supports rapid growth of the Chinese economy (Allen, Qian & Qian, 2005). The formal financial sector allocates credit ineffectively, due to strong asymmetry of information and poor law enforcement. Informal channels of financing, based on reputation and relationships between lenders and borrowers, may fill the gap by ensuring a higher level of control, monitoring and execution of receivables due to the provided loans (Stiglitz, 1990). As direct lending activities are prohibited in China, trust loans were introduced in order to facilitate access to interbank loans. According to the regulations on financing in China, non-financial enterprises may grant loans to other companies as trust loans in a process coordinated by banks or other financial institutions. Lenders and borrowers may negotiate loan conditions, subject to financial regulations concerning e.g. amount, interest rate, maturity or purpose of financing. Banks act only as intermediaries on behalf of lenders and coordinate lending procedures, i.e. agreement signing, loan disbursement, loan repayment, etc. However, banks bear no credit risk from such loans, as they are often treated as off-balance-sheet items.

MOTIVES AND PURPOSES OF LOAN PROVISION BY NON-FINANCIAL ENTERPRISES

Among probable motives for loan provision by non-financial enterprises to other companies within or outside the business group are:

1) **company financial policy** concerning the redistribution effect of the lender’s savings (cash

holdings) and access to bank loans through lending, while limiting investment in fixed assets. By providing loans, non-financial enterprises mitigate the effects of rationing of bank loans provided to enterprises with limited access to sources of finance, especially in periods of restrictive monetary policy or financial crisis. According to the economic literature, lending activity of non-financial enterprises plays a similar role to redistribution of bank loans through the trade credit channel.

2) **avoiding taxation with the use of a limited liability company** as an intermediary in transferring funds from individuals (owners) to their partnership. The main motivation for providing inter-corporate loans is double taxation of interest paid to a partner (by the partnership) resulting from the impossibility of recognizing this interest as a tax deductible cost, due to exclusion of the possibility to recognize the interest on capital as a source of income from tax deductible costs.

3) **deferral of the risk of borrower default** in the case of increasing risk of insolvency as a result of losing liquidity instead of making capital contributions (a share capital which is too low increases the risk of a company’s default),

4) **avoiding monitoring by bank-lenders** of a partnership whose owner is responsible, on his assets, for a company’s debt. This problem is particularly important in the Polish economy, as partnerships represent 90% of the corporate sector and are exposed to limitations in access to bank loans, as a result of asymmetry of information between them and bank-lenders. The asymmetry of information is caused by the non-transparent character of these partnerships resulting from the strong influence of tax law on accounting, which lowers the quality of financial reporting and use of simplifications in accounting. In 2010, 19 out of 27 EU countries announced the ability for small enterprises (non-corporate businesses) to choose simplified tax accounting, which substantially deviates from general accrual tax accounting rules. Due to the highest eligibility threshold in the European Union of 2 million EUR, 89% of Polish enterprises do not prepare financial statements. The second highest eligibility threshold of 1.5 million EUR applies in Greece, while the third highest of only 700 000 EUR in Austria (Bergner & Heckemeyer, 2017).

From a demand-side point of view, the following motives drive a company’s decision to borrow from non-financial enterprises:

1) **mitigating limitations in access to sources of**

finance, because making agreements for financing inside the business group is easier, and as a consequence cheaper than with external financial intermediaries (financial institutions). According to the hypothesis concerning financial benefits, investment and return on equity (ROE) of borrowers should increase. Moreover, intra-group loans impact the structure of capital in the enterprise, i.e. companies who received loans should be excessively indebted in comparison with similar companies outside the business group. Lenders need to replace expensive external financing (e.g. bank loans due to bond issuance) with inexpensive loans from related entities. Buchuk et al. (2014) proved that recipients of loans provided by non-financial companies have higher leverage ratios than other companies by 7-10%, while external debt ratios (external debt in relation to total assets) are about 6% lower. This proves strong **substitution between external debt and intra-group loans** in those companies.

2) **limiting risk of default of related companies** (Gopalan, Nanda & Seru, 2007 – study of Indian companies) due to increase in return on equity (ROE). Companies indebted to banks may be forced to take a loan from a non-financial enterprise in order to comply with conditions defined in the loan agreement (e.g. meeting the deadline for bank loan repayment).

3) **increase in a borrowers' investment**, financed with loans from non-financial enterprises (Buchuk et al., 2014; Almeida, Kim & Kim, 2015),

4) **avoiding monitoring by a bank** – it indirectly confirms the amount of loans provided to unrelated companies, such as partnerships who do not keep accounting books and do not report financial statements. 89% of the corporate sector in Poland, i.e. most partnerships, do not keep accounting books (not including 4,2 million entities who conduct their activity as self-employment),

5) the alternative hypothesis is usage of **intra-group loans as a remedy for less developed capital markets** (Khanna & Yafeh, 2007). Market frictions, such as asymmetry of information or agency problems, limit the enterprises' access to finance or expose companies to high financing costs, limiting their investment and development.

6) **tax avoidance** is less important for borrowers, considering their possibility of benefiting more from taking a bank loan, due to a non-interest tax shield without restrictions imposed by regulations on thin capitalization. In the case of financing a company with loans provided

by shareholders, only a limited part of the interest is considered a tax-deductible cost. To a certain extent, tax avoidance may motivate borrowers to take loans from minor shareholders (with less than 25% of shares) or other companies (who act as intermediaries for loans provided by non-corporate entities or major shareholders of borrowers).

7) **opportunistic behavior of major shareholder** who use loans provided by a company where they have a low share in cash flows to a company where they have a high share in cash flows. The key element of the **tunneling hypothesis** is deterioration of the financial situation of the lending company's minor shareholder, due to controlling the shareholder's moral hazard regarding his opportunistic behavior. It may be expected that lenders have lower than typical rates of return on equity (ROE) and lower than typical dividends, due to the provided intra-group loans.

INFORMATION SIGNALLED TO STAKEHOLDERS BY LOANS PROVIDED BY COMPANIES

The structure of loans is an important factor depending on whether the loans were provided within or outside the internal capital market of a business group, as either type of loan signals a different situation of the lender and borrower to particular groups of stakeholders.

Providing loans outside the business group may signal to investors the lack of investment projects which they may finance. However, loans provided outside the business group improve the access to bank loans of companies who experience rationing of finance from banks. According to the literature, **if the effect of signaling outweighs the effect of credit reallocation, the capital market may react to inter-corporate loans provided among listed companies.** Due to the lack of information disclosure by public companies in Poland, this study is conducted on a sample consisting of private enterprises.

Inter-corporate loans, based on frequent contact between borrowers and lenders, often provide the alternative source of finance (e.g. intra-group loans from a controlling shareholder) to companies with greater growth opportunities (increasing sales growth rate) but limited access to loans. Therefore, financial results and size of investment should be higher after receiving an inter-corporate loan, which causes positive market

reaction to the signal about the received loan. However, providing intra-group loans may indicate that lenders have not considered any valuable investment projects and shows a potentially unfavorable financial situation of companies belonging to a particular business group, at the time of providing the intra-group loan.

Thus, it may be expected that **enterprises providing loans will have lower profitability, lesser growth opportunities** (approximated by sales growth rate) and will **pay lower dividends** than comparable companies who do not provide loans.

Enterprises with higher financial leverage are less likely to provide inter-corporate loans, but there is no evidence on such dependency in the case of **providing intra-group loans** (He et al., 2016). Companies with higher market-to-book (P/B) ratios provide loans within the business group less often, while intra-group loans are not dependent on P/B ratio (Allen et al., 2005). Due to low execution of formal legal agreements, bank loans or loans provided by financial institutions may be subject to strong restrictions.

He et al. (2016) studied the impact of inter-corporate loans on long-term performance of lenders and borrowers. They proved that the lender's rate of return on assets (ROA) decreases after the inter-corporate loans is provided, especially in the case of enterprises with high P/B ratios. ROA also decreases after the intra-group loan is provided, which proves the lack of implementation of valuable projects in companies providing loans and financial difficulties of the business group. ROA decreases particularly when companies with high P/B ratios provide inter-corporate loans, in contrast to companies with low P/B ratios. This indicates that loans are not appropriately allocated, if companies with greater growth opportunities provide inter-corporate loans, instead of companies with lesser growth potential. However, borrower's ROA increases after receiving an intra-group loan, especially from controlling shareholders. Investment expenditure increases to a lesser degree in companies providing inter-corporate loans than in the receiving party, particularly in the case of inter-corporate lenders with high P/B ratios. This finding confirms that investors anticipate investment opportunities in companies providing loans.

Providing intra-group loans by a company listed on the stock exchange to another company in the same business group is related with negative market reactions. It suggests that uninformed investors perceive usage of

the internal capital market as a signal of rescuing the business group from default, or that the lender has no possibility to finance valuable projects. Providing inter-corporate loans to companies outside the business group (informal loans) causes insignificantly negative market reactions. This finding indicates that uninformed investors perceive informal loans as unfavorable investments, probably because of lack of specialist knowledge in the field of lending. Providing inter-corporate loans may signal to investors the lack of projects which may be financed, while providing intra-group loans informs about the unfavorable financial situation of a particular business group (He et al., 2016).

RESEARCH HYPOTHESES

Searching for motives for providing loans by non-financial enterprises, it may be expected that loans provided within the business group by private enterprises have lower interest rates than bank loans. Such loans not only guarantee financial flexibility and direct access to finance with no requirements on creditworthiness, but they also influence the decision on implementing investment projects burdened with higher risk. It may be expected that providing loans within the business group, especially by private enterprises (not listed on the stock exchange), reduces the profitability of lenders financing themselves at a higher cost. The additional compensation for the lender's resignation from his profit margin and agreeing to a lower interest rate than the market rate (as in the case of bank loans) may be the dividend payment due to shares held in the borrower's equity. The opposite situation occurs in the case of providing loans to companies outside the business group. The reference point for interest rate on inter-corporate loans is the statutory rate in case of delay of payment due to the provided trade credit (i.e. deferment of payment for delivery of goods or services). Because of the supposedly higher interest rate on loans provided outside the business group, it may be expected that providing intra-group loans will decrease the lender's profitability to a greater extent than in the case of inter-corporate loans. According to the tunneling hypothesis, intra-group loans grant larger shareholders access to higher cash flows than cash flows previously generated directly by the company-borrower. Under imperfect market conditions, it is beneficial for shareholders who use the company's resources to provide intra-group loans

to the company, where they have higher cash flow rights. Due to the tunneling hypothesis, minor shareholders of the lending company may be at a disadvantage because of the opportunistic behavior of the major shareholder. The lower return on equity (ROE) related with provision of intra-group loans confirms the opportunistic behaviors of controlling shareholders, as lenders tend to transfer their funds to borrowers. On the other hand, the limitation related with thin capitalization may affect costs of intra-group loans and reduce the lender's benefits (due to the non-interest tax shield), contrary to loans provided to unrelated companies (where the lender has an indirect or direct share in equity below 25%). Tax law in Poland, binding until 2017, did not restrict the possibility to book the interest from loans granted from unrelated entities (lenders) as a tax-deductible cost. Therefore, in the regression on lenders' profitability, a negative coefficient of provided loans and higher, in absolute terms, coefficient of intra-group loans may be expected.

H1 (tunneling hypothesis): Providing loans decreases the lender's profitability.

A lender's minor shareholders may be at a disadvantage, due to the opportunistic behavior of a controlling (major) shareholder and transferring money from the lender to borrower within and outside the business group. The exceptions are private companies, where shareholders are not members of management and, as a consequence, do not have any decision-making authority regarding provided loans. It may be expected that **H1A:** Providing intra-group loans has stronger impact on the reduction of the lender's profitability than in the case of inter-corporate loans. So, we expect a negative coefficient at the *loan_other* variable in the following equation:

$$roa_{it} = \beta_1 roa_{it-1} + \beta_2 roa_{it-2} + \beta_3 loan_bg_{it} + \beta_4 loan_other_{it} + \beta_5 leverage_{it} + \beta_6 growth_{it} + \beta_7 tangibility_{it} + \beta_8 tax_spread_{it} + \beta_9 equity_inv_{it} + \beta_{10} size_b_{it} + \varepsilon_{it} + u_{it}$$

In the enterprises incurring higher agency costs, i.e. managed by external managers who do not have any common interest with owners, providing intra-group loans may deteriorate the situation of minor shareholders, as it leads to lower dividend payment, or even limits the lender's growth opportunities. This may be caused by tunneling of the lending company's shareholders (especially minor ones) by controlling shareholders who receive loans from the company which

incurs agency costs, due to the separation of ownership and management functions. Therefore, the following hypotheses are formulated:

H2: Providing loans within and outside the business group reduces the lender's growth opportunities, as a result of withdrawing funds from the company, which may be otherwise invested and lead to taking advantage of incoming investment opportunities. Thus, we expect negative coefficients at the *loan_other* and the *loan_bg* variables in the following equation:

$$growth_{it} = \beta_1 growth_{it-1} + \beta_2 growth_{it-2} + \beta_3 loan_bg_{it} + \beta_4 loan_bg_{it-1} + \beta_5 loan_other_{it} + \beta_6 loan_other_{it-1} + \beta_7 roa_{it} + \beta_8 savings_{it} + \beta_9 capex_{it} + \beta_{10} capex_{it-1} + \beta_{11} leverage_{it} + \beta_{12} leverage_{it-1} + \beta_{13} tax_spread_{it} + \beta_{14} equity_inv_{it} + \beta_{15} size_b_{it} + \varepsilon_{it} + u_{it}$$

H3: Loans provided to related companies reduce the dividend payment. This means that we expect a negative coefficient at the *loan_bg* variables in the following equation:

$$share_in_profit_{it} = \beta_1 share_in_profit_{it-1} + \beta_2 share_in_profit_{it-2} + \beta_3 leverage_{it} + \beta_4 growth_{it} + \beta_5 loan_bg_{it} + \beta_6 loan_other_{it} + \beta_7 roa_{it} + \beta_8 savings_{it} + \beta_9 savings_{it-1} + \beta_{10} tax_spread_{it} + \beta_{11} size_b_{it} + \varepsilon_{it} + u_{it}$$

RESEARCH SAMPLE

The research was conducted on the sample of panel data on 4 600 enterprises (31 075 firm-year observations), containing unbalanced panel data from annual financial statements (balance sheet and income statements) of Polish private¹ enterprises (limited-liability companies and joint-stock companies) in the 12-year period of 2003-2014 from the Bisnode database created based on reports acquired from the National Court Register archive.

The sample structure is presented in Table 1. Enterprises operating in more capital-intensive industries (manufacturing, investments in real estate) provide loans more often to related (in terms of capital) or 'well-acquainted' (e.g. partnerships) companies due to the better access to bank loans, while service companies provide loans to other companies due to their higher cash flow from operating activity. For the service industry, including professional, scientific and technical activities, holdings and managing of real estate, cash holdings are

¹ that are not quoted on the stock exchange

Table 1: Structure of research sample of lenders by industry

PKD	Industry	Share %
10-39	Manufacturing	41%
49-53	Transportation	7%
55-56	Hotels and restaurants	3%
58-63	Information & communication	9%
68	Real estate	17%
69 & 71-75	Professional, scientific and technical activities	10%
70	Holding activities	7%
77-82&95	Rental and lease, maintenance and repair of equipment	6%

Source: based on positive values of investment concerning receivables due to provided loans

vital. While for the capital-intensive industries, including manufacturing and real estate, the availability of bank loans plays the most important role. Holding companies provide loans to related companies within the business group more often than to others.

The research was conducted with the use of two-stage GMM estimation of the Arellano-Bond dynamic panel model for microeconomic data on loans provided within and outside the business group and other factors determining viability, growth opportunities and the size of dividend payment of the lending company. The correlation matrix presented below indicates low correlation among variables in the model.

RESEARCH APPROACH

Table 2 presents definitions of variables used in the research on the effects of lending activities of non-financial firms on shareholders and other stakeholders of lending companies.

Table 3 contains the correlation coefficients between variables included in the research on the sample of companies not listed on the stock exchange.

THE MECHANISM OF THE INFLUENCE OF A COMPANY'S LENDING ACTIVITY ON ITS FINANCIAL SITUATION

The results of two-stage GMM estimation of the Arellano-Bond dynamic panel model of impact of lending

Table 2: Definitions of variables used in the study of effects of lending by non-financial enterprises

Variable	Definition of variable
<i>Ltbankloan</i>	long-term bank loan liabilities / total assets
<i>Savings</i>	cash holdings and cash equivalents / total assets
<i>loan_other</i>	receivables from other entities (outside the business group) due to granted long- and short-term loans / total assets
<i>loan_bg</i>	receivables from related entities (within the business group) due to granted long- and short-term loans / total assets
<i>Capex</i>	investment in tangible fixed assets / total assets
<i>equity_inv</i>	investment in shares of related entities (within the business group) / total assets
<i>tax_spread</i>	ttax avoidance (difference between the nominal and effective tax rate (income tax / gross profit))
<i>Leverage</i>	structure of capital, measured as total liabilities / total assets
<i>Roa</i>	return on assets = net profit / total assets
<i>size_b</i>	size of lending company, approximated by a natural logarithm of total assets
<i>Growth</i>	growth opportunities of lending company, approximated by sales growth rate
<i>Tangibility</i>	fixed tangible assets / total assets
<i>share_in_profit</i>	net profit withdrawals during the financial year / total assets

Table 3: Matrix of correlations between variables considered in the analysis of provided loans

	ltbankloan	roa	loan_bg	loan_othr	Leverage	growth	tangibility	tax_spread	size_b
ltbankloan	1								
roa	-0.1328	1							
loan_bg	-0.014	-0.0205	1						
loan_othr	0.0286	-0.015	-0.031	1					
leverage	0.1846	-0.1489	-0.0262	-0.0219	1				
growth	0.0226	0.0523	-0.0076	-0.0091	0.0365	1			
tangibility	0.3099	-0.2013	-0.1351	-0.1113	-0.0186	-0.0255	1		
tax_spread	-0.0724	0.2879	-0.0595	-0.0633	-0.2065	0.001	-0.0382	1	
size_b	0.0845	-0.1776	-0.0091	-0.1241	-0.0881	-0.0244	0.2356	0.0979	1

Source: own calculations in STATA ver. 15

on lender's viability (Table 3) are **in line with the tunneling hypothesis (H1)**, and thus confirm the assumption on the negative impact of financing the business group with loans on return on assets.

This indicates that minor shareholders of the lending company may be at a disadvantage due to the opportunistic behavior of a controlling shareholder. The negative impact of intra-group lending on return on assets (ROA) may confirm the opportunistic behavior of a major shareholder and transferring funds from lender to borrower within and outside the business group, except for private companies where shareholders are not members of management. As a consequence, shareholders who are not members of management do not have any decision-making authority with regard to lending activities. Allocating resources of non-financial enterprises to provide loans limits their flexibility of financing in the case of new growth opportunities and prevents the enterprises from engaging in implementation of investment projects. Otherwise, such investment projects would likely lead to greater profits, improvement in competitive position, and higher viability of the lender. This conclusion is indicated by the positive relationship between growth opportunities (approximated by sales growth rate) and return on assets.

Larger lenders achieve a lower return on assets, except for companies managed by external managers. Higher return on assets among lenders is achieved by less indebted companies, who have a lower share of tangible fixed assets in total assets. Tax avoidance enables enterprises to allocate additional resources to investment, and therefore achieve higher viability. The interesting finding is that private companies, not listed on the stock exchange, with higher capital engagement in related companies achieve lower ROA. This may result from participation in covering losses incurred by those

related entities or lending at a lower interest rate than costs incurred due to external financing, e.g. from banks or other financial institutions. This finding argues in favor of inter-corporate lending, which does not require participation in covering losses incurred by borrowers, while often enabling a gain of higher interest income. However, analyses of the whole sample (model 1) as well as the sample of companies managed by the owner (shareholder) (model 3) indicate the negative effect of inter-corporate loans on return on assets. Only in the case of the sample of companies managed by professional managers (members of management not holding shares in the company's equity) the dependency between providing inter-corporate loans and lender's viability is insignificant. The results confirm, in line with the assumptions, that providing intra-group loans reduces the lender's return on assets to a higher extent than providing inter-corporate loans (higher, in absolute terms, coefficient of intra-group loans) (**H1A**).

Lending activity may solve the agency problem related with a borrower's debts, limiting the demand for specific loan covenants and profit smoothing. Repayment of interest on loans from shareholders reduces dividend payment volatility, and therefore reduces demand for dividend payments and profit smoothing.

Providing loans within and outside the business group reduces the lender's growth opportunities, as a result of withdrawal of the resources, which may be otherwise invested and contribute to seizing potential investment opportunities. Thus, there is no basis for rejection of the **hypothesis H2**.

Decrease in growth opportunities is also affected by higher savings, indirectly resulting from investment reduction. The exception is a sample of companies managed by the owner, where cash holdings turned

Table 4: Results of two-stage GMM estimation of the Arellano-Bond dynamic panel model of impact of lending on lender's viability

	total		non-family		manager-owner	
	ROA		ROA		ROA	
roa	0.3071	***	0.2817	***	0.3021	***
L1.	(0.0187)		(0.0287)		(0.0280)	
	0.0627	***	0.0528	***	0.0495	***
L2.	(0.0110)		(0.0168)		(0.0149)	
loan_bg	-0.1929	***	-0.2291	***	-0.1330	***
	(0.0314)		(0.0491)		(0.0412)	
loan_other	-0.0785	**	-0.0240		-0.0827	**
	(0.0329)		(0.0573)		(0.0414)	
leverage	-0.1035	***	-0.1071	***	-0.0958	***
	(0.0197)		(0.0323)		(0.0241)	
growth	0.0086	***	0.0086	***	0.0074	***
	(0.0013)		(0.0018)		(0.0018)	
tangibility	-0.1622	***	-0.1479	***	-0.1703	***
	(0.0137)		(0.0193)		(0.0186)	
tax_spread	0.4809	***	0.4777	***	0.4653	***
	(0.0233)		(0.0362)		(0.0288)	
equity_inv	-0.0852	***	-0.0873	***	-0.0813	**
	(0.0248)		(0.0299)		(0.0397)	
size_b	-0.0117	**	-0.0013		-0.0184	**
	(0.0055)		(0.0075)		(0.0077)	
N	31 075		15 344		15 731	
Sargan test	74.22	[0.0232]	54.90	[0.0875]	82.76	[0.0043]
Arellano-Bonda test for autocorrelation in errors of first differences						
AR(1)	-18.78	[0.0000]	-13.70	[0.0000]	-12.20	[0.0000]
AR(2)	-1.17	[0.2417]	-2.29	[0.0220]	1.45	[0.1463]
AR(3)	-0.06	[0.9498]	1.25	[0.2115]	-1.49	[0.1371]
AR(4)	0.62	[0.5344]	-0.34	[0.7311]	1.82	[0.0692]

Significance level: 1% (***), 5%(**). Standard Errors provided in parentheses under corresponding coefficient.

Source: own calculations in STATA ver. 15

Table 5: Results of two-stage GMM estimation of the Arellano-Bond dynamic panel model of impact of lending on lender's growth opportunities

	total growth		manager-owner growth		professional manager growth	
growth	0,0447	**	0,0384	**	0,0563	*
L1.	(0,0179)		(0,0182)		(0,0327)	
growth	0,0212	***	0,0210	***	0,0148	**
L2.	(0,0059)		(0,0079)		(0,0068)	
loan_bg	-0,9622	***	-1,2924	***	-0,7539	***
	(0,2793)		(0,4061)		(0,2456)	
loan_bg	-0,4059	*	-1,0136	**	0,2815	
L1.	(0,2396)		(0,4602)		(0,1934)	
loan_other	-0,7522	***	-0,7627	***	-0,7873	**
	(0,1982)		(0,2563)		(0,3491)	
loan_other	-0,1890		-0,3024		0,2892	
L1.	(0,1487)		(0,2077)		(0,2038)	
roa	0,9252	***	0,8774	***	0,8919	***
	(0,1132)		(0,1393)		(0,1624)	
savings	-0,5303	***	-0,3376		-0,7209	***
	(0,1797)		(0,2293)		(0,2121)	
capex	-0,2604		-0,4383		-0,1733	
	(0,1956)		(0,2832)		(0,1166)	
capex	-0,0583		-0,0339		-0,1942	*
L1.	(0,0936)		(0,1315)		(0,1076)	
leverage	0,0690		0,0446		0,1316	
.	(0,1034)		(0,1148)		(0,1512)	
leverage	0,1016		0,0886		0,1789	
L1.	(0,0782)		(0,1021)		(0,1296)	
tax_spread	0,6270	***	1,0505	***	0,7851	***
	(0,2031)		(0,2703)		(0,2343)	
equity_inv	-1,1677	***	-1,1358	***	-0,7690	***
	(0,2798)		(0,4363)		(0,2780)	
size_b	0,3003	***	0,3542	***	0,1921	
	(0,0945)		(0,1223)		(0,1255)	
Number of observations N	20,061		10,444		9,617	
Sargan test	101,7362	[0.0000]	58,2989	[0.1705]	74,3268	[0.0015]
Arellano-Bonda test for autocorrelation						
AR(1)	-5,1077	[0.0000]	-4,0278	[0.0001]	-2,8920	[0.0038]
AR(2)	-0,2871	[0.7740]	-0,0221	[0.9824]	-0,3465	[0.7290]
AR(3)	1,0868	[0.2771]	0,7872	[0.4312]	0,1421	[0.8870]
AR(4)	1,0597	[0.2893]	0,0617	[0.9508]	1,2629	[0.2066]

Significance level denoted as: 1% (***), 5%(**), 10% (*). Standard Errors provided in parentheses.

Source: own calculations in STATA ver. 15

out not to be statistically significant. Lower growth opportunities characterize lenders with higher share of capital in the business group, which may result from using their resources for financing related or co-related companies with limited access to sources of finance. Higher growth opportunities are positively correlated with

profitability, size of a company (represented by higher share in the market), and tax avoidance which enables gathering additional funds to develop and increase sales. Providing loans to entities outside the business group leads to reduction in dividends paid in the whole sample, contrary to intra-group lending. This proves

Table 6: Results of two-stage GMM estimation of the Arellano-Bond dynamic panel model of impact of lending on dividend (share in profit) paid by lenders

	total share_in_profit		professional manager share_in_profit	
share_in_profit	-0,3458	***	0,1191	***
L1.	(0,0261)		(0,0120)	
share_in_profit	0,0004		0,1264	***
L2.	(0,0089)		(0,0081)	
leverage	0,1114	***	0,0776	***
	(0,0303)		(0,0253)	
growth	-0,0025	**	-0,0006	
	(0,0012)		(0,0011)	
loan_bg	0,1738	***	-0,1777	***
	(0,0503)		(0,0298)	
loan_other	-0,1478	**	0,0971	
	(0,0754)		(0,0659)	
roa	0,1960	***	0,1933	***
	(0,0106)		(0,0087)	
savings	-0,0050		-0,1558	***
	(0,0321)		(0,0310)	
savings	0,1043	***	0,1028	***
L1.	(0,0304)		(0,0229)	
tax_spread	-0,0754	**	-0,0230	
	(0,0326)		(0,0356)	
size_b	-0,0493	***	-0,0884	***
	(0,0163)		(0,0102)	
rok	0,0297	***	0,0296	***
	(0,0026)		(0,0021)	
Number of observations N	1,404		700	
Sargan test	78,1761	[0.0109]	45,9609	[0.3115]
Arellano-Bond test for autocorrelation				
AR(1)	0,5971	[0.5505]	-1,6906	[0.0909]
AR(2)	0,9301	[0.3523]	1,8249	[0.0680]
AR(3)	0,8840	[0.3767]	-1,3759	[0.1689]
AR(4)	-0,8802	[0.3788]	1,1523	[0.2492]

Significance level denoted as: 1% (***), 5% (**), 10% (*). Standard Errors provided in parentheses under corresponding coefficient.

Source: own calculations in STATA ver. 15

that providing inter-corporate loans leads to controlling shareholders' tunneling. In the case of loans provided to other (not related by capital) enterprises, the results are in line with **hypothesis H3**, in contrast to intra-group loans. Moreover, in the sub-sample of firms managed by professional managers (not having any shares in the firm they manage) loans provided to related firms reduce the dividend payment.

This finding indicates that in firms incurring higher agency costs, i.e. managed by external managers who do not have common interest with owners, providing intra-group loans deteriorates minor shareholders' situation, as it leads to lower dividend payments. It proves that there is a negative effect of loans provided in the form of tunneling (especially to the disadvantage of minor shareholders) by shareholders-loan receivers.

The results of this study are in line with **hypothesis H3** on the sub-sample of companies incurring agency costs due to separation of ownership and management functions. Higher dividends are paid by smaller, more profitable lenders, with higher leverage (a share of debt in the capital structure). Tax avoidance and greater growth opportunities (higher sales growth rate) limit the dividend payment. Moreover, in companies managed by professional managers (not having shares in the company they manage), incurring higher agency costs, maintaining their cash holdings for the purpose of potential new investment opportunities (higher financial flexibility) limits the dividend payment as well. Collecting funds (excess liquidity) has a similar effect on limiting dividend payment as providing intra-group loans.

CONCLUSIONS

The positive impact of shareholders on a company's market value growth and capitalization should be the foundation for making every decision on company management. However, the growth of a company's economic value and market power does not always translate into the welfare growth of each shareholder. The presented results indicate, with extreme caution, unequal benefits from applying the described financial mechanism toward minor shareholders and subsidiaries. Namely, providing loans within and outside the business group has negative impact on return on assets (ROA) of a lender. The only exception are inter-corporate loans provided by private companies where shareholders are

not members of management, i.e. companies other than family companies. Such loans do not have a statistically significant impact on return on assets. Moreover, the negative effect of lending on return on assets is stronger in the case of intra-group loans than in the case of inter-corporate loans. Providing loans within and outside the business group also reduces the lender's growth opportunities, as a result of withdrawal of resources which may have been otherwise invested to take advantage of upcoming investment opportunities.

Enterprises providing intra-group loans and having higher shares of capital in the business group achieve lower growth opportunities. This may result from utilizing their resources for financing to related companies or companies with limited access to sources of finance.

Providing inter-corporate loans has a negative effect on dividend payment as opposed to providing intra-group loans. This finding indicates that providing inter-corporate loans leads to shareholder tunneling. In the case of enterprises incurring higher agency costs, i.e. managed by external managers, who do not have any common interest with owners, intra-group lending causes decrease in dividend payment. This brings evidence that there are negative effects of lending in the form of shareholder tunneling for the benefit of shareholders receiving loans from the company. This implies the opportunistic behavior of controlling shareholders and transferring funds from lender to borrower within and outside the business group. Providing loans by private enterprises (not listed on the stock exchange) with higher capital engagement in related entities leads to achieving lower viability. It may result from participation in covering the losses incurred by those related entities or from lending at a lower rate than the cost incurred due to external financing, e.g. from banks or other financial institutions. This argues in favor of providing inter-corporate loans, which does not require participation in covering a borrower's losses, while providing a gain in higher interest income.

The reason behind the unequal benefits from provided loans to the disadvantage of minor shareholders is mostly the information asymmetry reflected in the advantage of managers in access to information about the company (particularly including decision-making). It results from the limited ability of shareholders to verify financial statements prepared without disclosing full information, and also from the difficulty in monitoring management activity related with agency problems. At the

same time, a manager in line with the homo oeconomicus concept pursues – benefiting from information asymmetry – maximalization of personal utility (Donaldson & Davis, 1991; Ross, 1973). The information asymmetry justifies the rationality of the interim manager's tactical thinking, due to the fact that current decisions are burdened with lower risk, are easier to justify and lead to faster verification (e.g. improvement of liquidity ratios). The manager's risk-aversion leads not only to limiting the amount of dividend paid but also to retaining the profit. Disposable financial resources may be used by managers for less risky activities, such as lending activities to strengthen its influence on affiliates or companies related in terms of common members of the management board. However, this type of activity does not improve a company's economic value or competitive position and may be even treated as inconsistent with principles on corporate governance. Especially nowadays, corporate governance is perceived as a form of preventing potential conflict of interest between smaller and larger shareholders whose interests

are presented by the manager. Corporate governance is closely linked to strategy – it is essential for achieving sustainable competitive advantage as well as consistent and favorable financial results (Daily, Dalton & Cannella Jr., 2003; Hendry & Kiel, 2004). Corporate governance understood in such a way helps building positive motivation for investors, at the same time reducing the danger of minor investors falling into the psychological trap of learned helplessness syndrome. Different actors participating in a company's functioning play certain types of games to gain influence or benefits. This game has different, individual rationality and power of impact and is reflected particularly in the moral hazard of controlling shareholders who use their dominant position for their own benefit, which often leads to deterioration of a company's financial situation or worsening the prospects of achieving profits. Implementation of such a strategy is contradictory to the idea of *corporate governance* and has a negative impact from the perspective of a company's market credibility.

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