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Loan and Guarantee Funds

Development

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Introduction

Small and medium enterprises have hindered access to capital almost on a world-wide scale (Abraham, Schmukler, 2017). This phenomenon is called a capital, financing or McMillan gap (Frost, 1954). In order to counteract this market inefficiency, governments establish various public aid mechanisms aimed at facilitating SMEs access to external funds.

Poland developed quite unique public aid mechanism, where loans, guarantees and seed capital are provided to a significant extent by various non-profit organisations or entities established by the central government agencies (i.e. Bank Gospodarstwa Krajowego – BGK) or local governments. These organisations services often exceed financing and include training and advisory services, which are usually financed from the EU and national budgets.

The book which we are pleased to offer to the reader discusses the problem of financing small and medium-sized enterprises (SMEs) and the role played by loan and guarantee funds in minimising their capital gap.

Loan funds tend to provide services to SMEs that focus their business activity on the region preferred by a fund (usually the one where the fund has its headquarters). To qualify for financial support, SMEs must pay their tax and social insurance obligations in a timely manner and avoid all types of business activity that might be perceived as environmentally harmful or unethical (i.e. related to gambling, tobacco production etc.). The range of eligible loan purposes includes investment projects, operating capital, or a mix of both.

Guarantee funds issue guarantees upon the consideration of the risk of their potential client becoming insolvent. Such funds often assist their customers handling bank procedures, provide training, and subsequently monitor them to ensure smooth cooperation with banks. Guarantee funds issue guarantees for loans provided by banks and non-banking institutions that signed cooperation agreements with them, which limits the borrowers' options for choosing the lender.

As mentioned before, in addition to grants, non-bank loans and guarantees are an essential mechanism the SMEs' capital gap reduction in Poland backed by EU funds. It results from the fact that the European Union has decided to reduce the amount of direct subsidies granted to SMEs in favour of financial instruments such as loans, guarantees and venture capital between 2014 and 2020. The

argument in favour of this decision was low effectiveness and negligible leverage of subsidies, as well as cases of misuse of grants. Entrepreneurs attempted to adapt their needs to the range of projects supported by the EU so that they were eligible for EU funding.

The effects of loan and guarantee funds are known (Beck et. al., 2010), but there is a lack of information on the effectiveness of the use of public funds by them. An assessment of the financial sustainability of SME support organisations is necessary to minimise the loss of public funds used in an inefficient way. The reliance of loan and guarantee funds on government and EU grants makes it necessary to assess the costs and benefits of public support for such funds. Furthermore, it is important to determine what factors influence the performance of the loan and guarantee funds so that their assessment in different countries and regions takes into account performance constraints. Existing research results focus on assessing the impact of the use of loans and guarantees by entrepreneurs and the scale of their use (Cowling, Mitchel, 2003; Cowling et al., 2018; Dvouletý et. al., 2019), without information on how organisations providing non-bank loans and loan guarantees deal financially and to what extent they depend on external financing.

Taking the above into consideration, the following research questions need to be asked:

1. What are the business models of loan and guarantee funds in Poland and have they evolved over time?
2. How stable are the loan and guarantee funds? Is it likely that they will become financially independent? What changes and what kind of support from the central government would they need to continue their business in the long term (after the EU funding becomes unavailable)? How do different elements of business models (including the width of value proposition, the quality of information channels and cooperation with partners or possessed resources) affect the stability measures of loan and guarantee funds in Poland?
3. What is the impact of the level of regional development on the stability and efficiency of loan and guarantee funds in Poland?

The questions are very important considering the unfavourable events in the market, including a weakening of the banking sector after the financial downturns (financial crisis 2008, the influence of Brexit on the EU economy, coronavirus crisis 2020) that may result in lower values and numbers of loans for the SME sector, more stringent lending criteria and refusals to finance riskier companies (small and micro organisations). The research questions translate into research objectives presented below.

The first objective is to identify and analyse business models of loan and guarantee funds in Poland. It also covers the study of the loan and guarantee funds business models over time. The mechanism of functioning of guarantee funds in Poland sets restrictions on their business models. These restrictions may affect or even distort our results – loan and guarantee funds have limited possibilities to

adjust their offer (supply) to potential clients' preferences (demand). The parameters of the offer of financial instruments (target group, repayment period, interest rate) are to a large extent determined by the body providing capital to the fund for the programme. According to the Polish Association of Loan Funds, granting capital for financial instruments in the EU Financial Framework for the years 2014–2020 with the use of the tendering system further aggravated this problem.

The second objective of the research is to assess the influence of business models of loan and guarantee funds on their stability. Currently, loan and guarantee funds mainly use financing regional operational programmes, funds from Bank Gospodarstwa Krajowego and JEREMIE (Joint European Resources for Micro to Medium Enterprises) initiatives. If in the following years the inflow of EU funds for the distribution of loan and guarantees is lower, it will be necessary to modify the business models of loan and guarantee funds to continue the stimulation of the SMEs sector development. There are many market signals that raise concerns, such as the weakening in the banking sector. The question that needs to be answered is whether the operating organisations offering financial support for SMEs have the capacity for long term development (an increase of the loan share), whether they may be financially independent and/or what changes and support from the governing authorities they require to continue their activities in the long term (assuming no access to EU funds).

The third objective of the research discussed in this book is the assessment of the impact of the level of development of the region – as indicated by (1) the value of fixed capital per capita in the region, (2) the number of enterprises per 1,000 inhabitants weighed by size category, (3) the registered unemployment rate, (4) the average monthly disposable income per capita, (5) the share of protected areas in the total area of the region, (6) the saturation with expressways and highways and (7) the number of public benefit organisations per 1,000 inhabitants – on the effectiveness of aid schemes for SMEs (measured by the number and value of guarantees granted and the financial performance of guarantee institutions) and their sustainability.

The following research methods were used to achieve the goals:

- 1) analysis of regulations, information on websites of loan and guarantee funds in order to collect information on their business models,
- 2) analysis of the content of financial statements of organisations operating loan and guarantee funds, in order to assess their effectiveness and stability,
- 3) regression analysis, structure analysis,
- 4) in-depth interviews with one director of a loan fund and the director of a guarantee fund,
- 5) a focus study that clarified the results of previous steps of our research, and disclosed additional factors influencing the business models of loan and guarantee funds.

The book is divided into five chapters. Their structure is described in details below.

In the first chapter, based on the literature study, we presented the definitions of the SMEs capital gap and the approaches provided by researchers to measurement, analysis and interpretation of this gap. This chapter also covers an overview of regional growth and development theories, used later in chapter 5.

In the second chapter, we present research on the capital gap in Poland and the role of loan and guarantee funds in closing it. Our research shows that the value of loans and credits guaranteed by guarantee funds was increasing in the analysed period, thus reducing the SMEs' capital gap. However, at the same time, we find that the potential of the guarantee and loan funds is still underexploited. Moreover, the analysis also shows that loan and guarantee funds are changing their business models, focusing their activities not on supporting SME investments but on operational support, e.g. by allowing them to participate in tenders and by guarantying contracts with international customers.

In the third chapter, we describe, basing on the results of focus research and in-depth interviews, the process of establishing loan and guarantee funds and evolution of their business models since their inception in the early 1990s. The provided analysis shows that loan and guarantee funds modified and often enriched almost all their business model elements.

In the fourth chapter, we describe the organisation of loan and guarantee schemes and funds in nine other European countries to illustrate the variety of guarantee schemes within Europe. France, the United Kingdom, Turkey, Austria, the Czech Republic, Germany, Hungary, Slovakia and Italy are included in the analysis. We discuss various aspects of the organisation of loan and guarantee schemes in these countries compared to the system functioning in Poland. It provides a bigger picture of guarantee and loans distribution mechanisms.

In the last, fifth chapter, we analyse with the use of statistical methods, the performance of loan and guarantee funds in Poland. We answer the research questions relating to the stability of loan and guarantee funds and the relationship between the level of regional development and their performance. One of our most important conclusions is the negative influence of grants received by the loan and guarantee funds in the previous year on their stability. A possible explanation is the following.

The reason for this can be the limitation of the range of decisions that managers of the funds can take to adjust their offer to the expectations of SMEs. The necessity to fulfil the requirements from grant agreements (limiting the range of clients and type of instruments) does not allow loan and guarantee funds to build long term relationships with their clients. At the same time, we conclude that there exist regional differences in results achieved by loan and guarantee funds. However, the negative correlation between number and value of granted guarantees with the value of fixed assets held by entrepreneurs indicates the appropriate allocation of state and UE aid by directing guarantees to entrepreneurs who do not have sufficient collaterals for bank loans.

The findings of our study fill a research gap in assessing the effectiveness of SME support schemes on the part of the guarantee institutions and thus on the cost side. The conclusions of the research discussed in the book are important for researchers, financial experts and economists, but also for politicians making decisions affecting the development and growth of SMEs and spending government funds.

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Chapter I

Capital gap – a barrier for development

1. Regional and local development

Space is regarded by regional science (or regional economics) as a source of economic advantages or disadvantages which may be explained by the endowment of production factors, accessibility and effects of the proximity of productive processes which lead to economies and reductions in production and transaction costs. Over time the perception of space and its role in local and regional development processes has been changing. Four main groups of theories may be identified in that regard: (1) location theories, (2) regional growth and regional development theories, (3) local development theories and (4) local growth theories (Capello, 2011).

Location theories appeared in the first half of the XX century and aimed to explain the spatial distribution of economic, mostly production, activities in an economy. As such, they lie at the heart of both regional science as well as economics (Thisse, 1987). The approach which is used in location theory is predominantly microeconomic in nature and emphasises minimising transportation and production costs of individual economic agents. Following Capello (2011) it needs to be emphasised that location theories build on earlier industrial location choice theories (Weber, 1929; Lösch, 1954), residential location choice theories (von Thünen, 1826; Alonso, 1960; Fujita, 1989) and urban hierarchy theories (Christaller, 1933).

Regional growth and regional development theories appeared and were developed in the 1950s and the 1960s. They concentrate on spatial aspects of economic growth and territorial distribution of income and aim at identifying the determinants of regional growth which is perceived as an increase of employment and improvement of individual well-being (Capello, 2011). Unlike the location theories which emphasised a predominantly microeconomic approach, this group of theories assumes a macroeconomic approach, either Keynesian (North, 1955) or neoclassical (Borts, Stein, 1964).

Local development theories – which have been developing since the mid-1970s – emphasise a diversified and non-homogenous nature of space, unlike the previous two groups of theories which assumed that territorial units were internally uniform. Similarly to regional growth and regional development theories, the main objective of local development theories was to identify determinants of development. However, attention shifted from a regional to local perspective and the definition of development evolved into increased territorial competitiveness (Capello, 2011). The approach used in this group of theories was qualitative in nature. It re-emphasised the importance of agglomeration economies which were present already in location theories and which gave rise to perceiving space through the lens of economic and social relations. The main determinants of territorial competitiveness which were identified included exogenous determinants such as diffusion of innovation (Hägerstrand, 1952) multinational companies (Blomstrom, Kokko, 1988) as well as endogenous determinants like local innovators (Camagni, 1991) or innovation networks which enable the creation of learning regions or territories (Lundvall, 1992).

The last group of theories that are worthy of note are the local growth theories. They appeared first in the 1990s with the same aim as the regional development theories, but they use advanced mathematical tools and economic models aimed at explaining imperfect competition. These theories assume that space is polarised – development processes tend to concentrate due to increasing returns of learning processes, economies of scale and location economies (Capello, 2011). Some of the notable achievements in this field include the endogenous growth models (Lucas, 1988; Romer, 1986) or the New Economic Geography (Krugman, 1991).

Given the diversity of theoretical approaches to the concept of local and regional growth and development, numerous ways of measuring the development of territories exist. Some emphasise technological progress (defined as knowledge development, accumulation and diffusion) and the regions' ability to develop new technologies and/or to assimilate the existing ones (de Groot et al., 2001). Others point out the relationship between regional development and human capital, knowledge and creativity (Nijkamp et al., 2010). Mellander and Florida (2012) underline growing geographic divergence of skills across regions and their effects on regional innovation, wages, incomes and economic development.

The academic debate on the notion of regional development recognises the need for flexibility and adapting one's approach to defining development and identifying its core determinants depending on the specificity of a given territory – its history, geography, developmental aspirations and strategies, existing institutions and available resources (Michalak, Turała, Waniak-Michalak, 2020). There exists no universal formula for development which would suit every municipality or region independently of its overall context (Pike et al., 2014). Rural development is but one example of possible ambiguity in terms of meaning which a change of context may introduce (Torre, Wallet, 2015).

The determinants of development which are approached and analysed in the literature include, amongst others: the geographical mobility of investors (Migueléiz et al., 2010), knowledge transfer mechanisms and knowledge transfer agents (Simonen, McCann, 2010), universities and commercialisation of university research (Bergman, 2010), migrations and their impact on labour markets (Rodríguez-Pose, Tselios, 2010). It indicates the wealth of available approaches and measures. Given the above, the accessibility of financial and non-financial capital (social and human) is the fundamental prerequisite of local and regional development. That is why we attempt to tap into this stream of literature and contribute to the ongoing debate on the functioning and performance of loan and guarantee schemes introduced as the means of closing the capital (financing) gap as defined by the MacMillan Committee (Frost, 1954).

The local and regional development and growth theories, the general overview of which is presented above, are a foundation upon which policymakers build their solutions to the challenges of the contemporary world. In many countries, and indeed between countries, the problem of divergent development of regions exists which tends to increase as people migrate due to differences in salaries and the quality of life. It, in turn, makes the big cities even bigger, overcrowded and causes even more significant discrepancies in the development of different regions. The solutions come in the form of either spatially-blind policies which emphasise people's mobility and aim to boost their incomes, productivity and knowledge or, alternatively, in the form of place-based policies which assume that the interactions between institutions and geography are critical for development (Barca et al., 2012).

The guarantee and loan schemes which are analysed in this book may be perceived as an example of the first group of policies and related instruments, corresponding with the regional growth and regional development theories' approach. Thus the following chapters highlight the European Union's efforts aimed at supporting regional development through boosting the development of SMEs, providing specifically an analysis of the principles governing the functioning of guarantee and loan funds, their business models and approaches to measuring their efficiency, using Poland as a case study.

2. Capital gap in small and medium enterprises

2.1. Capital gap – phenomenon explained

Small firms are likely to face hindered access to external financing due to lack of adequate collaterals and limited financial track records. The innovative SMEs have the biggest problems with access to finance (Lee et al., 2015). The reasons

include riskier business models and difficulties in assessing the value of intangible assets which are the outcome of innovative projects. As some researchers emphasise, the projects which are the most interesting and valuable for the economy usually have problems with access to capital (Freel, 2007). Enterprises investing in innovative projects, especially start-ups, cannot receive financing from banks as these are not interested in the long-term growth of the company's value. In most of countries, banks seek for quick returns and are not patient investors waiting for results of innovations (Mazzucato, 2013). A large part of innovative enterprises fails, making it impossible to repay the loan. Investments in new projects often require specialist knowledge which can be delivered by, for example, venture capital funds or business angels. The banks focus rather on projects with low investment risk and high probability of positive cash flows after they are implemented (Mina et al., 2013).

However, the main reason for the difficult access to finance for SMEs is the information asymmetry. Banks do not have all the information about entrepreneurs applying for credit, necessary for risk assessment. Lack of audited financial statements, often lack of detailed records of economic events, conviction about limited knowledge of entrepreneurs in the field of financial management result in automatically assigning higher credit risk to small and micro companies than to other companies. This fact increases lending costs and a reduction in the value of loans. It is the so-called "credit rationing" causing the capital gap (Huang et al., 2014). At the same time, the conviction of entrepreneurs is that it is difficult to obtain a bank loan which causes many "good" companies not to apply for a loan because they are afraid of having their application rejected, wasting time and money in the process (Kon, Storey, 2003). The situation got worse after the global financial crisis in 2008. Since that time, banks have restricted rules of lending, and the value of assets of SMEs that could be used as collaterals decreased (Lee et al., 2015).

The avoidance of "moral hazard" by banks is manifested in rationing credit (Huang et al., 2014). The moral hazard occurs when the lender loses control over the loan and the borrower's behaviour. An entrepreneur may, after receiving a loan, start behaving in a riskier way than described in a contract with a bank or a business plan. It will consequently expose the bank to the loss of the funds. In order to avoid this kind of situation, banks limit the amounts allocated to small and micro enterprises, thereby avoiding risk. The guarantee funds created in many countries were supposed to minimise the phenomenon of "credit rationing". These organisations, apart from providing guarantees, took over the task of monitoring of the borrower which was aimed at decreasing the risk of breaking the terms of the SMEs' agreement with a bank. In practice, as shown by focus group research results,¹ the lack of funds for other activities than conducting guarantee activities

1 Focus research held on November 11th, 2018. One of the respondents stated: "Management fees do not cover the tasks of the loan and guarantee funds, but some funds decide to do so [participation in EU-funded programmes], having no other options, as participation in

did not allow guarantee funds to monitor borrowers effectively. Thus a moderate impact of the implementation of guarantee programmes on the phenomenon of “credit rationing” may be expected.

Another phenomenon which directly affects the SMEs is the capital gap which is the amount of money which the companies, mostly SMEs, are unable to acquire in order to finance the ongoing operations and investments. The capital gap phenomenon is used to justify government intervention in credit markets relevant to smaller firms, via subsidising investment and credits through various credit instruments, including loan guarantees.

The capital gap occurs when the entrepreneurs’ capital demand is higher than the funds offered by private investors. The reasons for this are high investment risk and relatively high costs of preparation and monitoring of a small loan compared to larger ones. Hence entrepreneurs in the early stages of company development who often put forward innovative business ideas (bearing a high risk of failure) have difficulties in raising capital (Lepczyński, Penczar, 2013). Already in the 1970s researchers indicated that a significant aversion of banks to credit risk would increase the capital gap for some enterprises (Keasey, Watson, 1994). Others believed that the capital gap for SMEs does not exist because entrepreneurs make their own decisions as to whether and when to use external funding while investors are willing to invest money in new undertakings (Richard, 2006). Some researchers indicate that measurement of the financing gap for SMEs is difficult because of lack of data (Ključnikov, Belás, 2016).

The aim of support systems for the SME sector is to reduce the capital gap for small and medium-sized enterprises. However, neither the number of institutions in the business environment nor their capital resources are sufficient for the financing gap to be significantly reduced. These systems include such instruments as: loan guarantees, loans, subsidies, venture capital and investments of angel investors (Baldock, Marson, 2015; Schans, 2015). Some studies indicate that the use of one of the listed forms of funding by an enterprise increases the banks’ trust and reduces the barriers in obtaining commercial funding (Meuleman, De Maeseneire, 2012).

The conditions for granting a loan include the fulfilment of financial criteria as well as criteria which relate to the security of funding. In that respect, the economic conditions in a given sector of activity exert an impact on the enterprises’ capacity to obtain loans irrespective of their performance (Waniak-Michalak, 2015). Another dimension of the problem is revealed insofar as innovative projects implemented by small entities and characterised by a high risk for both financial intermediaries and enterprises are concerned. Investments of this type are more likely to be supported by non-returnable subsidies or by venture capital within government-led support

regional development programmes prolongs their activity. However, this results in the fact that they do not have money either for monitoring of entrepreneurs or for promotion. In order to attract customers, it is necessary to use one’s contacts and travel around the country talking to entrepreneurs. It resembles the work of a salesman”.

initiatives (Mazzucato, 2013). The policy of the European Union, including the allocation of funds for the capitalisation of venture capital funds, contributed to the increase in popularity of this form of financing among entrepreneurs in the 1990s. Only in 2010 venture capital funds in Central and Eastern Europe gained 64% of the value of their funds in the form of public funding (Central and Eastern Europe Statistics, 2013: 7). In 2014 and 2017 these values were smaller, but grants were still one of the main sources of capital for venture capital funds (39 and 26% respectively) (Central and Eastern Europe Statistics, 2018: 9).

The results of studies (Zawistowski, 2013) indicate that newly established businesses, enterprises without a credit history and micro and small companies which frequently face the problem of low liquidity, educational barriers and unfavourable tax regulations have particularly difficult access to commercial funding (Kaousar, Wehinger, 2015). Some enterprises start looking for external funding at times of insufficient investment maturity, and as a result, their credit applications or investment bids are rejected (Mason, Harison, 2004). Strong market concentration caused by the competitive advantage of several large entities may also be the reason for hampered access to capital. Small entrepreneurs must look for a niche, but it is difficult for them to demonstrate to the bank their capability to survive over a longer period. Research shows that nearly 53% of companies go bankrupt in the first four years of their operation (Duan et al., 2009). Also, financial institutions do not have access to full information about SMEs' financial performance. Therefore, they attribute to them a higher credit risk (Biernat, Planutis, 2013).

SMEs are more susceptible to the change of external factors, such as inflation or exchange rates. The reasons for this are low financial provisions and limited possibilities of using derivative instruments that allow hedging against risk (e.g. forward contracts or options). Also, taxes and fees are a greater burden for small and medium-sized enterprises than for large companies, considering the share of these charges in generated revenues. What is more, SMEs carry out simplified accounting which means that some financial institutions automatically attach a higher credit risk to such entities (Amadhila, Ikhida, 2016).

Loan and guarantee funds can play a decisive role in closing the capital gap for small and medium-sized enterprises (Waniak-Michalak, 2017). Their activities lead to an increase in the supply of capital for SMEs, which does not mean, however, that it will be used properly. One of the reasons may be the inability of SMEs to meet the boundary conditions necessary to obtain funding, such as: the value of the investment, activity in a specific industry, region, the need to hire new employees, innovation of investment projects. According to North et al. (2010), manufacturing companies may have the greatest problems with obtaining financing and providing adequate collateral for loans. This results from the fact that production activities require much higher capital outlays compared to service provision. The fact, in turn, leads to difficulties in acquiring suitable capital providers and thus to withdrawal from the implementation of an investment project, even on a reduced scale.

2.2. Theoretical approaches to capital gap

Unequal access to information leads to the situation where it is very difficult for banks to identify “good” borrowers (Mori, 2009). The asymmetry of information affecting the increase of the capital gap can be explained amongst others by the agency theory. The different interests of creditors and entrepreneurs mean that part of the information is not accessible to all parties of the contract as it may be withheld or biased, either consciously or unconsciously (Jensen, Meckling, 1976). Thus, the bank may evaluate the risk as higher than it would having access to full information.

However, access to all information may not be in the interest of the borrower (Sampford, 2017). Leaving behind the ethical aspects, the main resource for SMEs is the knowledge of the fundamental know how behind their business model, hence their reluctance to share information for fear of disclosing business secrets.

The information asymmetry between SMEs and creditors is a particularly pressing issue for start-up companies (Serrasqueiro et al., 2012). The reason is mainly shorter duration of the relationship between the bank and the newly established SMEs. Longer cooperation of the bank and the firm usually leads to lower interest rates and collaterals. However, as some researchers indicate (Angori et al., 2019) medium-sized enterprises may be more prone to suffer from lock-in effects and financing constraints which arise from an exclusive and long-term relationship with just one bank. The change of the bank, after a long time can result in high switching costs for the enterprise which may lead the bank to abuse its position and behave as a quasi-monopolist (Angori et al., 2019).

The lack of access to full information about the borrower and the mismatch between the interests of banks and SMEs leads to the growth of agency costs. These costs are manifested both as an increase in interest rates on loans and greater expectations with regards to collaterals that often exceed the value of loans, rejection of good applications as a result of ineffective selection system and losses resulting from setting the interest rate at an excessively high level. Studies confirm that excessive interest rates lead to a decrease in the timeliness of repayment of liabilities as well as to more frequent bankruptcies (Tsuruta, 2008). Other researchers indicate that the higher collaterals and interest rates for SMEs do not result from the information asymmetry and ability to reduce risk but from reduction of screening efforts (Dias Duarte et al., 2017).

The pecking order theory of Myers and Majluf (1984) and Myers (1984) can suggest that the low use of debt by SMEs is their decision. Especially the SMEs from developing countries rely mostly on internal sources of capital (Islam, Mozundar, 2007). According to the pecking order theory entrepreneurs choose the sources of financing in a following order:

- internal sources;
- debt capital as it requires smaller intervention of the investor in the company;

- issue of shares if their owners are ready to open up the firm's equity to external investors and to dilute their ownership and control.

Most of SMEs will not use the issue of shares as the sources of financing so their financing decisions will be taken between equity and debt (Serrasqueiro et al., 2016). As a consequence, Beck et al. (2008) posit that many small firms start their projects undercapitalised with inadequate financial resources.

Debt financing requires the company to focus on projects that generate positive cash flows in order to repay the debt. Thus, the use of debt forms of financing also brings benefits to owners who can count on stable income while avoiding unprofitable and too risky projects. The pecking order theory assumes that as long as companies can use their free cash flows, they will not demand debt, therefore, when assessing the capital gap for SMEs the available cash resources of these companies should be taken into account, effectively reducing the capital gap.

2.3. Measurement of the capital gap

Methods for measuring the equity gap evolve with the increasing emphasis of politicians on reducing inequalities in access to finance for different types of units. Often the methodology is adjusted both for calculation purposes and data availability. Not in every country and not for every type of unit all financial data is available. For many years, a large number of researchers have been concerned about the existence and size of the capital gap. However, there is still a high degree of uncertainty as to the method to be used to quantify the size of the phenomenon (Gualandri, Venturelli, 2008).

The capital gap in SMEs can be calculated using a survey method or statistical methods (Marszałek, Daszyńska-Żygadło, 2015):

- the method developed by Gilchrist et al. (2012) – the financing gap is calculated as a difference between the optimal amount of capital in the economy and the actual capital accumulated in companies;
- the method developed by DGA Inc. and the European Investment Fund – the financing gap is estimated by multiplying total loans issued by banks and the share of loan applications rejected by banks;
- a method developed by Tamowicz (2007) – the capital gap is derived by multiplying the number of companies with difficult access to financial sources by the percentage of companies using investment loans and by the average size of credit;
- a method developed by Venturelli and Gualandri (2008) which estimates the fast growing innovative companies' demand for capital with an assumption of constant capital structure.

Generally, three approaches may be outlined. The first is based on estimating the demand for funding, in line with the Venturelli and Gualandri method. In this

approach the demand for credit by the SMEs that should have the biggest difficulties in receiving external financing should be estimated. The SMEs in the capital gap are usually the firms operating on the market for less than one year, using simplified accounting and not preparing financial statements, but also innovative companies with risky projects. The second approach requires that the amount of not-awarded funding is determined. In this approach the information on rejected applications for bank loans or percentage of firms that have had the applications rejected should be recorded. The third approach is based on the assumption that the depreciation deductions and a depreciation reserve developed by a company can serve as the main source of financing investments in fixed assets should be taken (Pronyaeva, 2016). The investments of companies in the following year should be higher than the depreciation deductions minus tax savings (cash savings) resulting from the calculation of depreciation charges in the previous year. In this case, according to the pecking order theory, the investment needs for asset replacement will be met first from internal sources of the enterprise and then by external financing; a lower value of investments of enterprises in fixed assets than the depreciation deductions in the previous year (minus tax benefits – cash savings) will indicate the existence of the capital gap. Moreover, in the financing gap, the investment needs of newly established SMEs and SMEs using simplified accounting (where the value of fixed assets is not possible to calculate) should be added.

3. Guarantee and loan schemes as policy instruments for support of small and medium enterprises

The European Union has supported regional development, research and innovation through grants and other financial instruments for many years. The European Council in Lisbon in 2000 decided to reduce the state aid and concentrate on horizontal policies and indirect support, also for small and medium-sized enterprises. Instead of giving grants directly to small business, guarantee funds and schemes are created in many countries to help small and medium-sized enterprises (SMEs) obtain bank loans and increase their creditworthiness. Such schemes are introduced in many countries throughout Europe, Asia and America, as described by Llisterri (1997). As Griffith-Jones and Fuzzo de Lima (2004) emphasised, guarantee schemes play an important role as mechanisms for support of private investments in the case when the investors' trust is low. It usually happens when the economic problems occur, and the downturn comes. The guarantee schemes were developing at a particularly fast pace at the beginning of the 21st century when

the loan guarantee mechanisms turned out to be a remedy for the risk aversion of investors which appeared in the aftermath of the global financial crisis.

The guarantee schemes provide guarantees for banks, taking into account the risk of insolvency of the company requesting the loan (Sanneris, 2015). Because the funds help the entrepreneur to complete the formalities required prior to obtaining the loan, organise additional training, and also take the responsibility of monitoring the borrower, the cost of the loan can be lower than in other conditions (Garcia-Tabuenca, Crespo-Espert, 2010; Zecchini, Ventura, 2009). Some authors emphasise that guarantee funds bring several benefits to economic development. The guarantees, provided mostly within schemes financed by public funds, enable the value of small business loans to be increased by up to 100% (Cowling et al., 2018). Bradshaw (2002) argues that the consequences of the support may include an increase in the number of employees, and the decrease in the default rate.

Moreover, the guarantee schemes can improve SMEs' financial situation (D'Ignazio, Menon, 2013) and increase the value of their assets. However, if companies that use the guarantees are on the brink of bankruptcy and the loans are necessary simply for survival on the market, the loan will not allow further investment or expansion. In this way, the cost of the support may outweigh the benefits (Schich et al., 2016).

Some researchers indicate that guarantees for SMEs have a more significant impact in less developed regions (Armstrong et al., 2014) and the case of weaker companies (Garcia-Tabuenca, Crespo-Espert, 2010). The guarantee funds are set up in different regions to support entrepreneurship, enforce the economy or contribute towards equalising the differences in regional development. Harrison and Mason (2007) observed different results in regions of the UK in terms of number, the value of guarantees as well as SMEs' failure rates. The question that arises is whether the better results (both financial and non-financial) of the schemes can be expected in more or less developed regions.

Chapter II

Loan and guarantee funds in Poland – attempt at closing the capital gap

1. Economic transformation in Poland

The banking system in Poland in the 1990s was still weak, meaning that the main problem for entrepreneurs was not the lack of collaterals but lack of sources of external financing. The first attempts to restore the banking system were made already in 1986–1987 when nine regional banks as well as PKO BP, PEKAO S.A. and Bank Handlowy were separated from the National Bank of Poland (the central bank). These banks had limited financial resources, however. There were also about 1,500 local cooperative banks in Poland at that time in Poland, but none of them was able to carry out effective lending.

The loan and guarantee funds in Poland were established mostly in small cities, where high unemployment was recognised. The average registered unemployment in Poland at the beginning of the 1990s was very low (about 0.3%). Still, it started to grow as of 1992 as a result of the liquidation of unprofitable big state-owned companies. Some of the more spectacular bankruptcies included: URSUS – a company producing equipment for the agriculture industry which collapsed in 1993, Stocznia Gdańska (shipyard in Gdansk) which went bankrupt in 1996. Many of those who lost their jobs in bankruptcies of large state-owned companies decided to set up their businesses. Sixty-eight thousand of new companies and 558 thousand of new proprietorships were registered in Poland between 1990 and 1995 (Figure 1).

Poland faced a high inflation rate at the beginning of the 1990s (it amounted to 600% in 1990), intensified by problems with supply and access to raw materials (Dmochowska, 2014). Those who chose to start up their businesses found it challenging to finance current expenditures due to rapid price changes and high-interest rates on bank loans (up to several hundred percent per annum). In this period, therefore, mainly service and trading companies were established, which

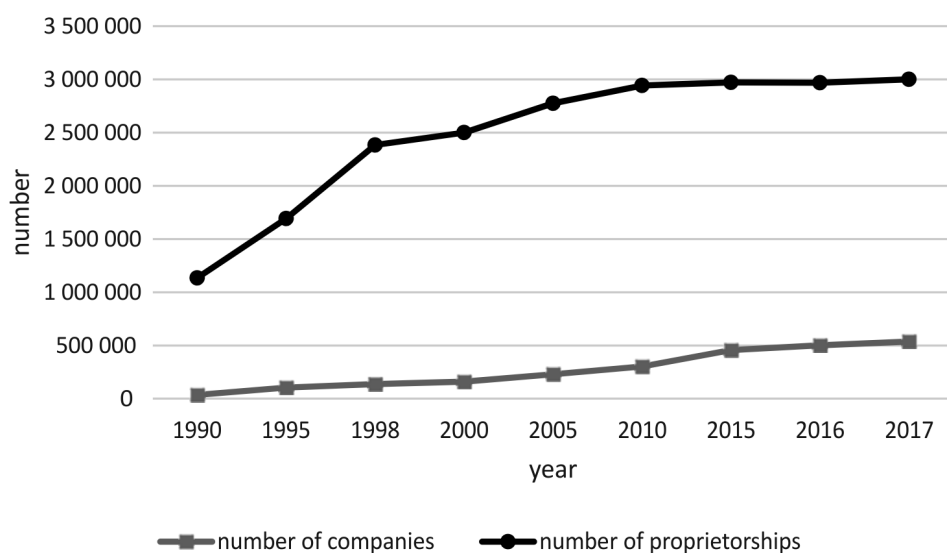


Figure 1. Number of enterprises in Poland (1990–2017)

Source: prepared by the authors based on the Statistics Poland database (www.stat.gov.pl).

were characterised by lower capital intensity. The problem was escalated by the fact that loan funds' financing was limited to USD 20 thousand (a limit imposed by the World Bank, more in Waniak-Michalak, Michalak, 2018). In that period (the 1990s) investments in the public sector were higher than those in the private sector (Dmochowska, 2014). Only the introduction of pre-accession funds (mainly grants for enterprises) in 1994 contributed to the improvement of the economic situation of the country. The highest registered unemployment rate was recognised in 1994 when it reached the level of 16.4%. Following this year, the rate of unemployment was decreasing until 1999. In 2000, when the economic boom ended, it started growing once more, reaching the level of 20% in 2002–2003 (Figure 2).

The first reason for the decrease of unemployment in Poland before 2000, was the money from the European Union pre-accession funds. The funds were used for grants for small and medium enterprises and infrastructure development. The second major reason was joining the EU in May 2004, when the unemployment started to decrease again.

Nowadays, more than half of medium-sized companies and two fifths of micro and small enterprises are currently using bank loans (Figure 3).

As at the end of 2018, banks in Poland granted over PLN 373,1bn in loans to enterprises, of which over 55% (PLN 205.4bn) – was granted to the SME segment. Medium enterprises assess the access to bank loans more positively than small firms, however most of the SMEs think that the bank loans are accessible for them. Despite the fact, most of SMEs do not plan to use debt financing, except for the credit line in a current account (Indicator, 2019).

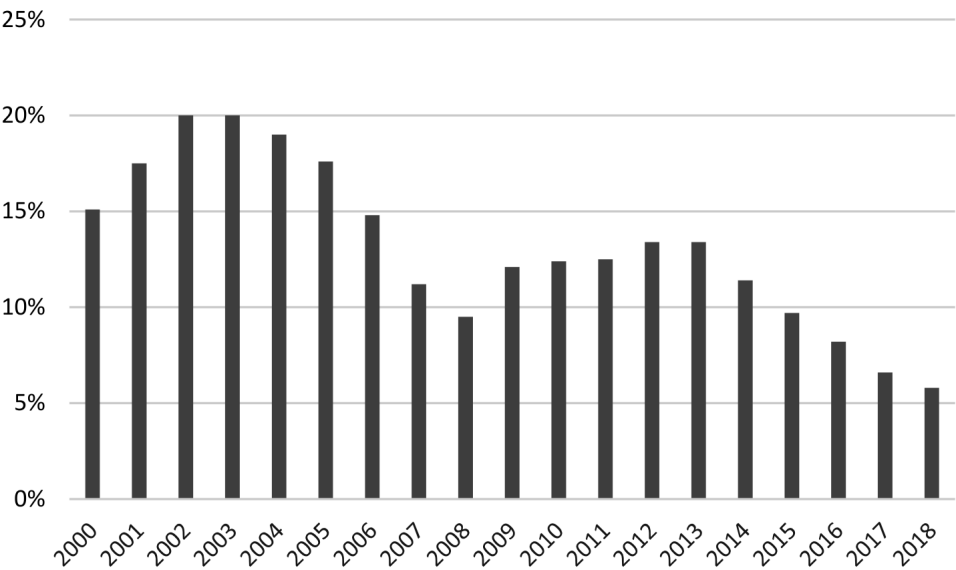


Figure 2. Registered unemployment in Poland (2000–2018)

Source: prepared by the authors based on Statistics Poland data, Retrieved June 10, 2020 from: <https://stat.gov.pl/obszary-tematyczne/rynek-pracy/bezrobocie-rejestrowane/stopa-bezrobocia-rejestrowanego-w-latach-1990-2020,4,1.html>

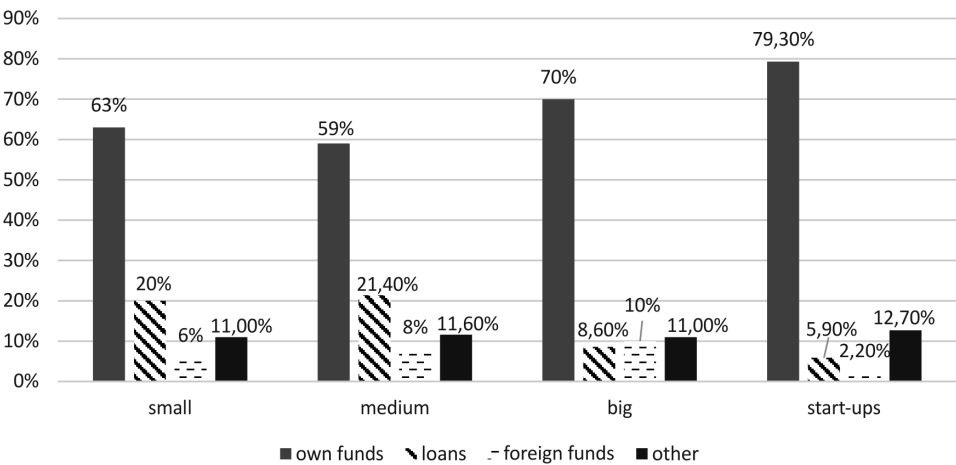


Figure 3. Sources of funding of SMEs in Poland (2018)

Source: prepared by the authors based on Skowrońska, Tarnava (ed., 2018).

2. Loan funds in Poland

Apart from credit guarantee funds, there are registered about 80 different organisations such as foundations, associations and companies which act as loan funds providing loans and advisory services to micro, small and medium enterprises in Poland. Some of them, under regional operational programmes, also support start-ups. Most of the loan funds operate regionally, providing support only to the entities from a chosen region. Some of them managed to expand beyond the administrative borders of one region and – in a few cases operate on the national scale, achieving leading results. Two examples of such funds were the *Polska Fundacja Przedsiębiorczości* or the *Fundusz Mikro*.

The offer of loan funds is partially regulated by the Act of the *Minister for Regional Development*. Public loans with the interest rates lower than the reference rate of European Commission must meet the following conditions: (1) may not exceed EUR 1.5m or – in case of road transport – EUR 750 thousand per company, (2) the contribution of the enterprise must be at least 20%, (3) the loan cannot be used to purchase means of transport, (4) the investment must be maintained for at least three years and (5) for de minimis aid the loan may be granted for 100% of eligible expenditure.

Loan funds grant investment, operating or operating-investment loans. Some funds participating in the JEREMIE initiative offer special preferential conditions to borrowers in terms of interest rates, loan margins and own contribution. Most loan funds do not limit the scope of investments, i.e. they do not indicate what kind of investment projects may be financed from a loan (e.g. purchase of fixed assets, repairs, purchase of the real estate, etc.). The offer of loan funds is wide for entrepreneurs, although its diversification is more related to financial conditions of granted loans than to the scope of investments or type of activity that can be financed. Companies intending to use a non-bank loan should document their activity for at least three months before applying for the loan.

Apart from loan funds, enterprises may also benefit from loans granted by *Narodowy Fundusz Ochrony Środowiska i Gospodarki Wodnej* (the National Fund for Environmental Protection and Water Management) and regional funds for environmental protection and water management. The National Fund for Environmental Protection and Water Management offers loans, subsidies to interest rates on loans, subsidised redemption of companies' bonds for renewable energy production and other environmental protection projects.

Some funds under regional operational programmes have taken on the task of financing start-ups. The market of loan funds in Poland is very diversified. It is possible to distinguish both very large funds, whose capital exceeds tens of millions of zlotys, and small funds, granting several loans annually and having small financial resources at their disposal.

Non-banking loans for SMEs in Poland are granted mainly by units operating as not-for-profit legal entities such as foundations, chambers of commerce, associations. Most of them were established in the 1990s. More details on the process of development of loan and guarantee funds in Poland since their inception are provided in Chapter III.

Currently, 59 funds are active (cooperate with *Polski Związek Funduszy Pożyczkowych*) in Poland (at the end of 2018). The total capitalisation of loan funds in 2018 amounted to PLN 2.99bn (Figure 4). The value of loans granted by many funds increased significantly between 2012 and 2014 as a result of the JEREMIE initiative (Mika et al., 2017). The loans are granted to the SMEs which meet the following eligibility criteria: they conduct their primary activity in the area supported by the fund (in accordance with the regulations), have no tax arrears, pay their social insurance liabilities on time and conduct no industrial activity described as harmful to the environment or commonly considered unethical.

The reports on the implementation of regional operational programmes in Poland show that in the years 2012–2014 the value of loans granted by many funds increased significantly as a result of the implementation of the JEREMIE initiative. The significant drop in the value of capital and value of loans is noticed in 2017 when most of the loan funds had to return the money from the previous financial perspective 2007–2014 (Figure 4).

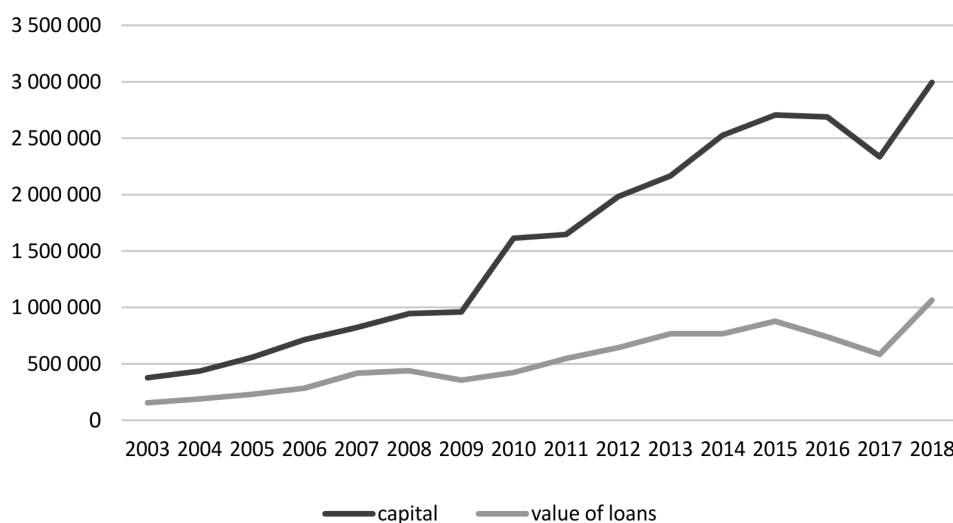


Figure 4. Value of capital and loans granted by loan funds in Poland in thousand of PLN (2003–2018)

Source: prepared by the authors based on the reports of *Polski Związek Funduszy Pożyczkowych*.

The value of non-banking loans has started to increase rapidly since 2009. The reason for this was a change in the average value of granted loans. Loans

up to PLN 10 thousand dominated between 2000 and 2008 but the share of medium value loans (PLN 50–120 thousand) increased significantly between 2006 and 2013 (Figure 5).

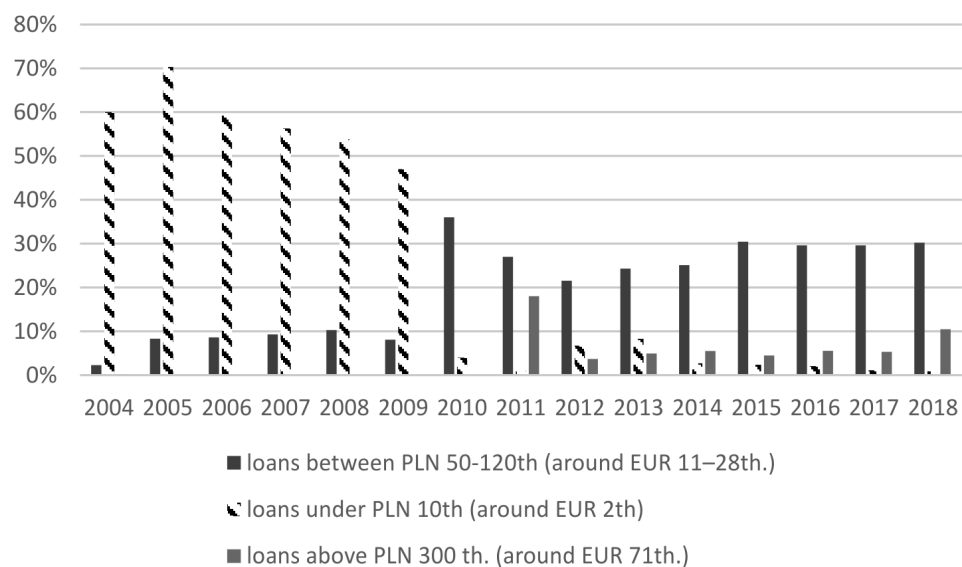


Figure 5. Structure of non-banking loans by number of loans and loan size (2004–2018)

Source: prepared by the authors based on the reports of Polski Związek Funduszy Pożyczkowych.

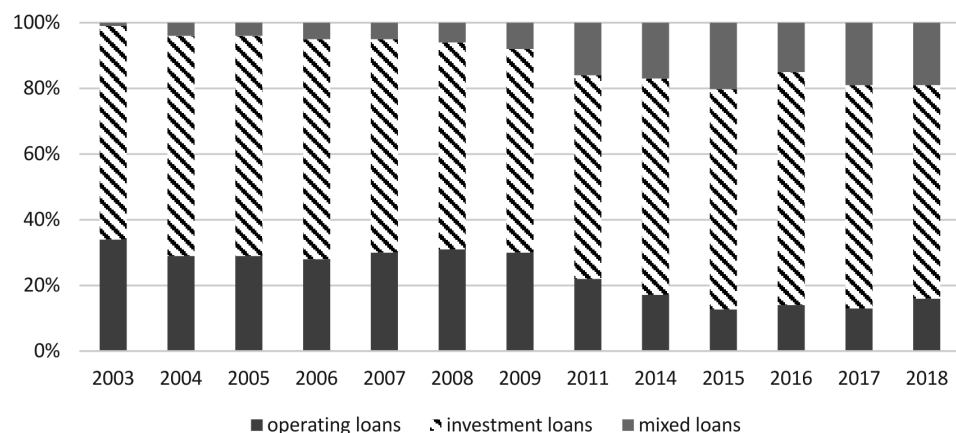


Figure 6. Structure of non-banking loans according to loan type and number of loans (2003–2018)

Source: prepared by the authors based on the reports of Polski Związek Funduszy Pożyczkowych.

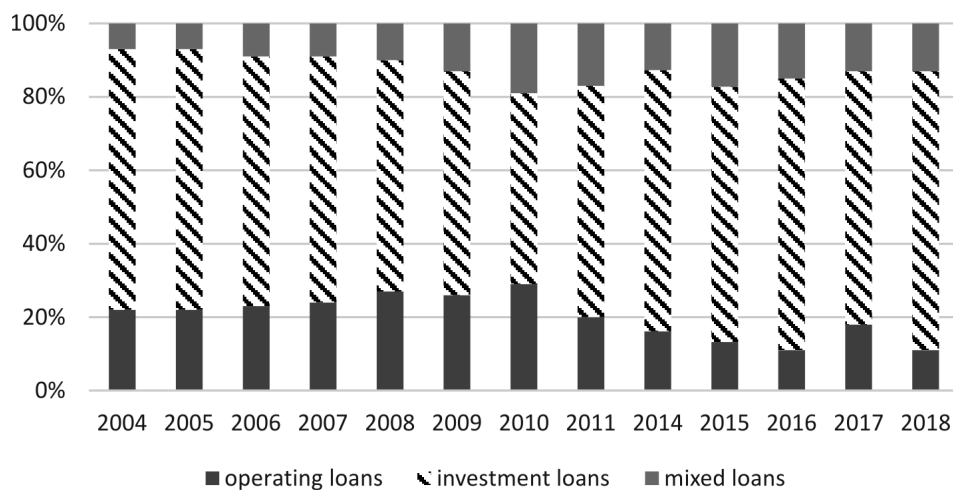


Figure 7. Structure of non-banking loans according to loan type and value of loans (2004–2018)

Source: prepared by the authors based on the reports of Polski Związek Funduszy Pożyczkowych.

Since the beginning of the loan funds' activity, entrepreneurs have most often applied for loans for investment purposes. The lowest demand for investment loans occurred in 2010 (Figure 6 and 7) and this is explained by the financial crisis which weakened investment moods of entrepreneurs. While the share of investment loans is almost unchanged in the period of activity of the loan funds, proportions between mixed loans and strictly operating loans are changing. In recent years, entrepreneurs started to focus mainly on investments, while at the beginning of the Polish transformation, entrepreneurs also needed operating assets.

3. Guarantee funds in Poland

As in other countries, the credit guarantee funds in Poland were established as an instrument to support small and medium-sized enterprises in accessing external financing. Many entrepreneurs who have benefited from the assistance of these institutions, in the form of guarantees, considered that the guarantee provided by the funds enabled them to develop their economic activities and survive on the European market. These institutions have been operating worldwide since the end of the 19th century (the first guarantee funds were established in France and Belgium, and now operate in 85 countries in Europe, North, South and Central America, Africa and Asia). An overview of guarantee funds in nine European countries is presented in Chapter IV.

The EU funds remained the primary source of financing for the credit guarantee funds up until 2007. The task of financing the development of this type of financial instrument was transferred in 2007 from the central government to the regional government level. Since that time, each of the sixteen regions in Poland has created its own regional policy and support programmes for SMEs.

Credit guarantee funds in Poland act as legal entities in the form of a limited liability company or are run by NGOs. They hold financial resources to secure guarantees granted to entrepreneurs starting their business activity and small and medium entrepreneurs, according to the Law on Business Activity (*Prawo Działalności Gospodarczej*). The amount of their capital should be relevant to the size of their activity but it should not be lower than PLN 500 thousand.

In order to mitigate business risk, guarantee funds use limits for the amount of guarantees granted. According to the recommendations of the Ministry of the Economy, the level of the guarantee amounts to 3–5% of the fund's capital per beneficiary. Moreover, the value of guarantees cannot exceed 70–80% of the loan. Other collaterals must cover the remaining 20–30%.

The value of guarantees has been in Poland increasing since the beginning of 2000, but the number of guarantees started to decrease as of 2010. The guarantee funds granted guarantees mostly for operating loans between 2004 and 2009. The trend has been reversed since 2010 with little benefit for investment purposes. Guarantees for loans and credits from cooperative banks also increased slightly. However, it should be noted that guarantees for investment projects still account for a small percentage of the guarantee structure. This is due to the fact that entrepreneurs applying for a guarantee for an operating loan, often have a worse financial position than other entrepreneurs, shorter credit history and business history. In addition, such entrepreneurs often, due to their shorter period of activity, do not yet have assets that could be used as collaterals for a loan or use simplified forms of accounting or reporting for taxation purposes (lump sum, revenue and expense ledger or tax card) which do not allow to generate all the financial data necessary to analyse the financial situation of the entrepreneur. Thus, the risk of granting credit to such a company is higher, which connects with higher collaterals required by banks.

Guarantees granted by guarantee funds often bring measurable benefits to the entrepreneur related to the reduction of credit costs. However, the interest rate of the credit or loan applied for by the entrepreneur should not be lower than the reference rate of the European Commission published in the Official Journal of the European Communities. Some guarantee funds have been offering guarantees under the JEREMIE initiative since 2009. JEREMIE guarantees are granted on financial terms more favourable for the entrepreneur than standard guarantees; however, in accordance with the objectives of the regional operational programmes, they are limited to a specific group of beneficiaries.

According to the data of National Association of Guarantee Funds, 38 guarantee funds operated in Poland at the end of 2018. The total capitalisation of guarantee funds in 2018 in Poland was PLN 989m (about EUR 223.6m) (Figure 8). The guarantee systems, financed mostly by the state and the UE, usually need the external counter-guarantees (Cardone-Riportella, García-Mandaloniz, 2017). It increases the credibility of guarantee funds and enables to grant more guarantees. The guarantee funds in Poland also used the counter-guarantees of the European Investment Fund and the state development bank (Bank Gospodarstwa Krajowego).

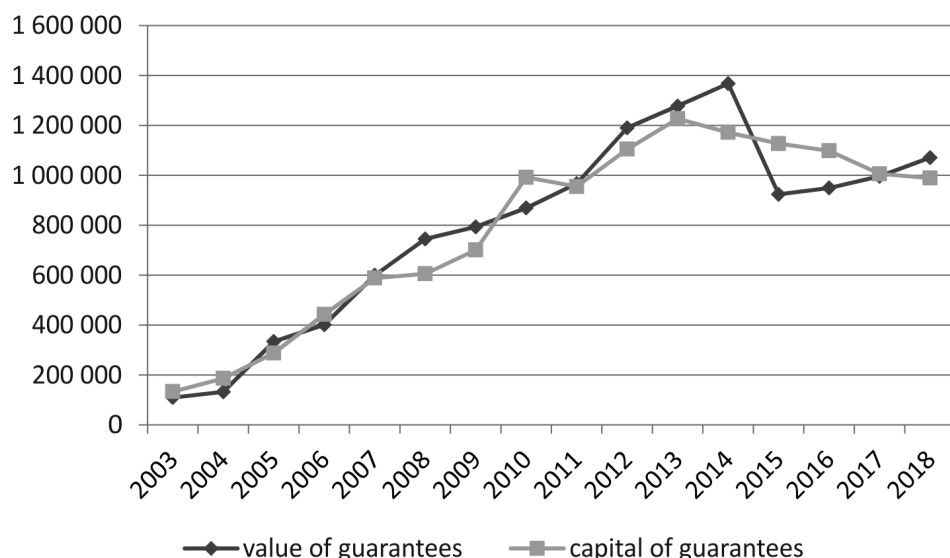


Figure 8. Capital of guarantee funds in Poland and value of guarantees in thousands of EUR (2003–2018)

Source: prepared by the authors based on the reports of Krajowe Stowarzyszenie Funduszy Poręczeniaowych.

Guarantee funds started operating in Poland slightly later than loan funds. The most important task of public authorities was to create conditions for the development of entrepreneurship by enabling Poles to set up their businesses. The purpose of loan funds was not to develop companies but to help them to start. When, after a few years of loan funds' activity, the companies wanted to grow, and loans for small enterprises were available, they could apply for loans with guarantees provided by guarantee funds. It was the next stage of supporting the creation of the private sector in Poland.

As shown in Figure 9, the value of the guarantee capital increased systematically between 2004 and 2012 and only started to decrease towards the end of 2013. The main reason was the liquidation of some guarantee funds and the end of the previous EU financial perspective (2007–2013). At the same time, an increase in the value of guarantees was noted, with a significant drop noted only in 2015.

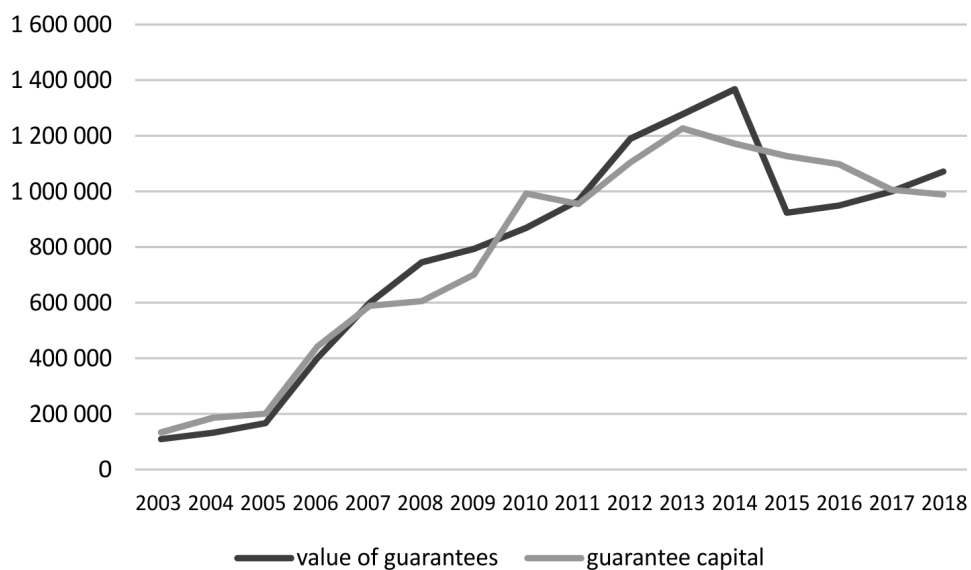


Figure 9. Value of guarantees and the guarantee capital of guarantee funds in Poland in thousands of PLN (2003–2018)

Source: prepared by the authors based on the reports of Krajowe Stowarzyszenie Funduszy Poręczeniowych.

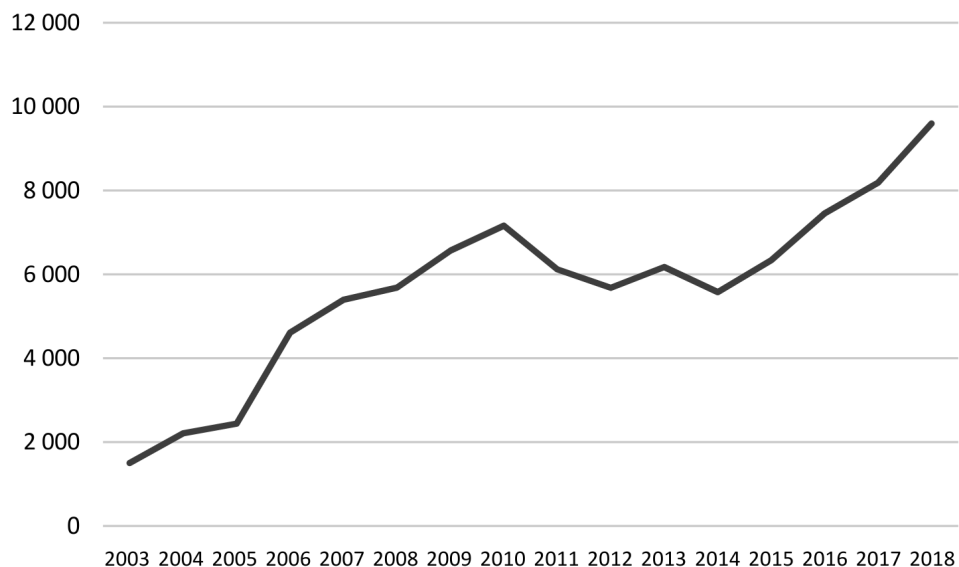


Figure 10. Number of guarantees granted by guarantee funds in Poland (2003–2018)

Source: prepared by the authors based on the reports of Krajowe Stowarzyszenie Funduszy Poręczeniowych.

Analysing Figures 9 and 10 it can be observed that despite the increase of the value of guarantees since 2010, the number of guarantees was decreasing from 2010 until 2014. As the value of the guarantee increased at the same time, the average value of the guarantee increased as a result of the decrease in the number of guarantees. The reason may be the increase of investment activity of SMEs or the tendency of guarantee funds to reduce risk and resources allocated for financing working capital needs. These statements are justified by the structure of the guarantees granted (Figures 11 and 12).

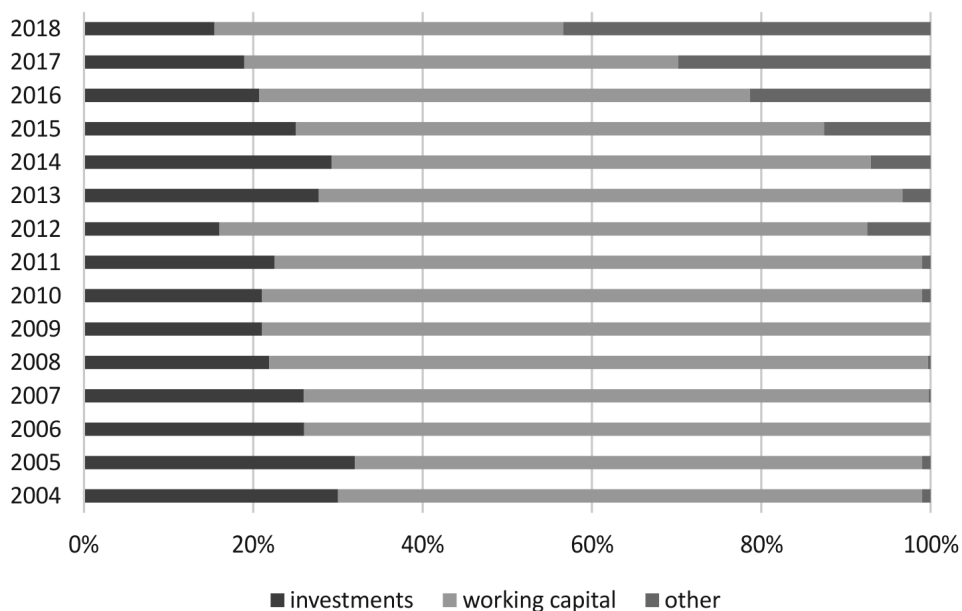


Figure 11. Structure of guarantees by value of granted guarantees (2004–2018)

Source: prepared by the authors based on the reports of Krajowe Stowarzyszenie Funduszy Poręczeniowych.

From 2004 to 2009, the guarantee funds granted guarantees usually for operating purposes. Since 2010, the trend has been reversed with investment goals receiving growing attention. However, it should be noted that guarantees for investment projects still account for a small percentage of the guarantees' structure (Figure 12). This is due to the fact that entrepreneurs applying for a guarantee for working capital loans often have a worse financial situation than other entrepreneurs, a shorter credit and business history. In addition, such entrepreneurs often, due to their shorter period of activity, do not yet have assets that could be used as collaterals for a loan or they use simplified forms of accounting and taxation (lump sum or tax card) which do not allow to generate all the data necessary to analyse the financial situation of the entrepreneur. Thus, the risk of granting working capital loans is higher, which is reflected by more stringent bank requirements, including the need for additional collaterals.

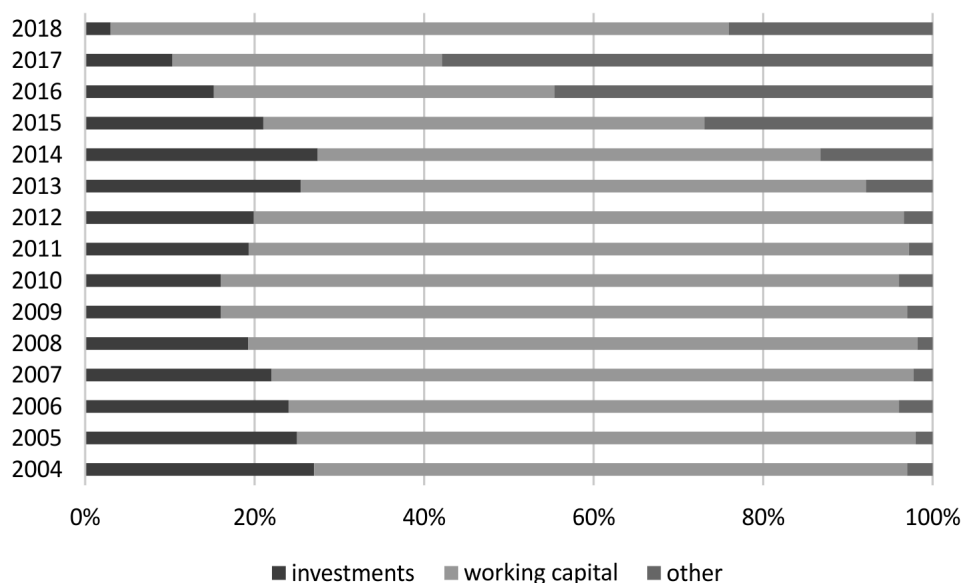


Figure 12. Structure of guarantees by number of granted guarantees (2004–2018)

Source: prepared by the authors based on the reports of Krajowe Stowarzyszenie Funduszy Poręczeniowych.

Although, in terms of value, guarantees to banks still account for the largest part of the guarantees granted (their share dropped from 65% to 54%), guarantees to other entities increased from 57% to 67% (Figure 13 and 14). This is caused by a change in the business models of guarantee funds. The growing popularity among entrepreneurs of portfolio guarantees offered by Bank Gospodarstwa Krajowego and the complexity of the rules of granting guarantees under operational programmes in the 2020 perspective have resulted in significant changes in the type of guarantees. According to BGK's data, by the end of May 2019, guarantees in the amount of PLN 59.7 billion were granted under the programme. The *de minimis* guarantees concerned loans of over PLN 106 billion. By that time, over 149 thousand entrepreneurs had taken advantage of the programme. In 2018, the guarantee funds most often guaranteed leasing, commercial and tender liabilities.

In order to increase the creditworthiness of credit guarantee funds, a rating methodology for these entities was developed under the programme entitled "Directions for the development of loan and guarantee funds for small businesses and medium-sized enterprises in the years 2009–2013" [Kierunki rozwoju funduszy pożyczkowych i poręczeniowych dla małych i średnich przedsiębiorstw w latach 2009–2013]. The ratings were assigned to 26 funds cooperating with the Polish

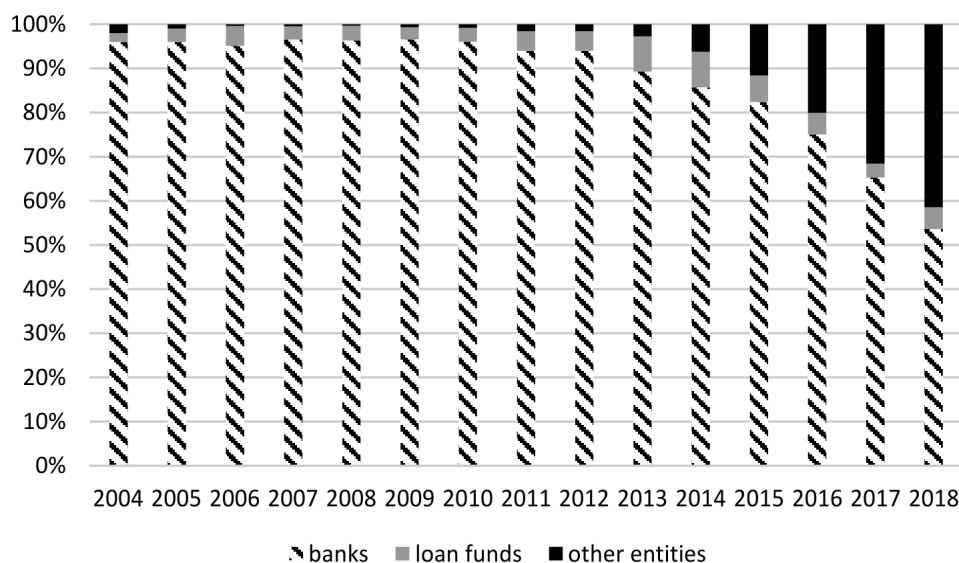


Figure 13. Structure of guarantees granted by type of lending institution and value (2004–2018)

Source: prepared by the authors based on the reports of Krajowe Stowarzyszenie Funduszy Poręczeniowych.

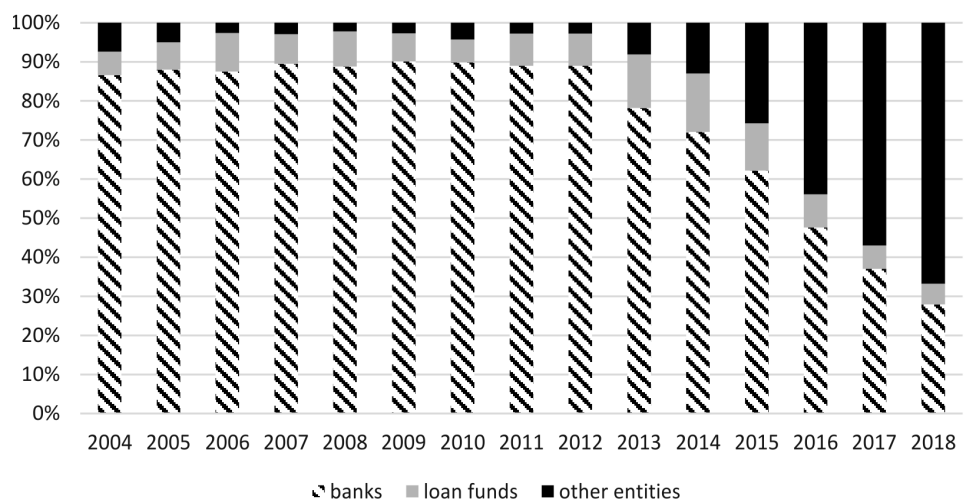


Figure 14. Structure of guarantees granted by type of lending institution and number (2004–2018)

Source: prepared by the authors based on the reports of Krajowe Stowarzyszenie Funduszy Poręczeniowych.

Agency for Enterprise Development by a consortium of PKF Capital and BCRA – Credit Rating Agency AD (Table 1). The credit rating agency EuroRating currently monitors the credit risk of the guarantee funds with quarterly verification of the ratings. Ratings are assigned to guarantee funds at the request of these entities. The database included ratings for 16 funds in 2019. All of them had a stable perspective. However, due to lack of funding the rating of guarantee funds could not be repeated in the years 2015–2019 prepared by PKF Capital and BCRA – Credit Rating Agency AD.

However, not every rating of guarantee funds is attractive for banks. On the basis of existing national and EU legislation, only the so-called “recognised rating” is really useful (Lewicki, 2013). A rating at investment level reinforces the position of the fund in the market and banks, once guaranteed by a fund with a recognised rating, may release reserve capital kept to cover potential liabilities with a high risk of default. It should be noted that in 2010, Bank Gospodarstwa Krajowego made its first attempt to assign ratings to guarantee funds. Eight guarantee funds obtained ratings assigned by the Polish Agency EuroRating Ltd., not recognised by ESMA (European Securities and Markets Authority), which automatically decreased the attractiveness of this rating to banks. However, the ratings assigned by the EuroRating are used in the partial assessment of the credibility of the guarantee funds (including, for example, the actual current capital exposure of the fund) (Lewicki, 2013).

Table 1. Rating of 26 guarantee funds in Poland (2013)

Rating long-term		Rating short-term	
Rating	Number of the funds	Rating	Number of the funds
A	9	A1	8
BBB	13	A2	11
BB	4	A3	4
B	0	B	3
Total	26		26

Source: prepared by the authors based on *Wstępne listy rankingowe – “Przetestowanie i wdrożenie usługi pilotażowej w zakresie planowania i finansowania przedsięwzięć gospodarczych w MŚP”* [Preliminary ranking lists – “Testing and implementation of a pilot service for planning and financing business projects in SMEs”], PARP, Warsaw, 2013, Retrieved June 10, 2020 from: <http://pokl.parp.gov.pl/index/index/2938>

4. Role of loan and guarantee funds in closing the capital gap in Poland

As mentioned in Chapter I, the guarantee and loan funds are expected to contribute to closing the SMEs' capital gap. The research results discussed in this book allow us to assess the influence of the implementation of loan and guarantee schemes on the capital gap closure, using Poland as an example and a case study. The following assumptions arising from the review of literature have been adopted in assessing the SMEs' capital gap:

Some small and medium-sized enterprises do not want to use loans, even if favourable financial conditions are available, due to the lack of expansion aspirations or aversion to the debt financing. Instead, these companies use retained profits and grants. Therefore, the first step in the research should be to determine the share of enterprises willing to use bank loans or other financial instruments such as loans and guarantees.

Not all small and medium-sized enterprises should be included in the group of companies having difficulties in obtaining a loan on market conditions – some of them do not seek market funding from other sources, also for the above mentioned reasons. The following groups of entities are to be considered as those having difficulty in using debt financing: newly established companies (Żołnierski, Zdura-Lichota, 2008), firms using simplified accounting and those that do not prepare financial statements (Waniak-Michalak, 2010).

The research conducted by the International Finance Corporation, the World Bank Group and McKinsey Co. indicates that the average demand for a credit amounts to 20% of SMEs' revenues.

Table 2 shows the estimates of the capital gap for micro, small and medium-sized companies in Poland. The capital gap has been determined using three approaches: (1) unfulfilled demand for credit method, (2) not-awarded funding method and (3) depreciation deductions method. The amount of loans for SMEs was established on the basis of reports of the Polish Financial Supervision Authority.

A gradual drop in the capital gap, especially for micro-enterprises, was noticed between 2008 and 2013, but it rose again in 2015 (Figure 15). This is due to a smaller number of newly established businesses (decrease by 14%) which was caused by the financial crisis. The total number of small and medium-sized enterprises also decreased (by 5%). At the same time, the number of entities maintaining comprehensive bookkeeping and a revenue and expense ledger increased, causing the share of companies settling accounts in the form of a flat rate or tax card to decrease by 25%. What is more, in the years between 2014 and 2017, the guarantee funds and other organisations supporting SMEs were waiting for the money from the 2014–2020 EU financial perspective. The tenders for the realisation of new guarantee schemes did not start up until the end of 2016. This fact may explain, at least partly, why the capital gap started to grow again.

Table 2. Capital gap in Poland (2017)

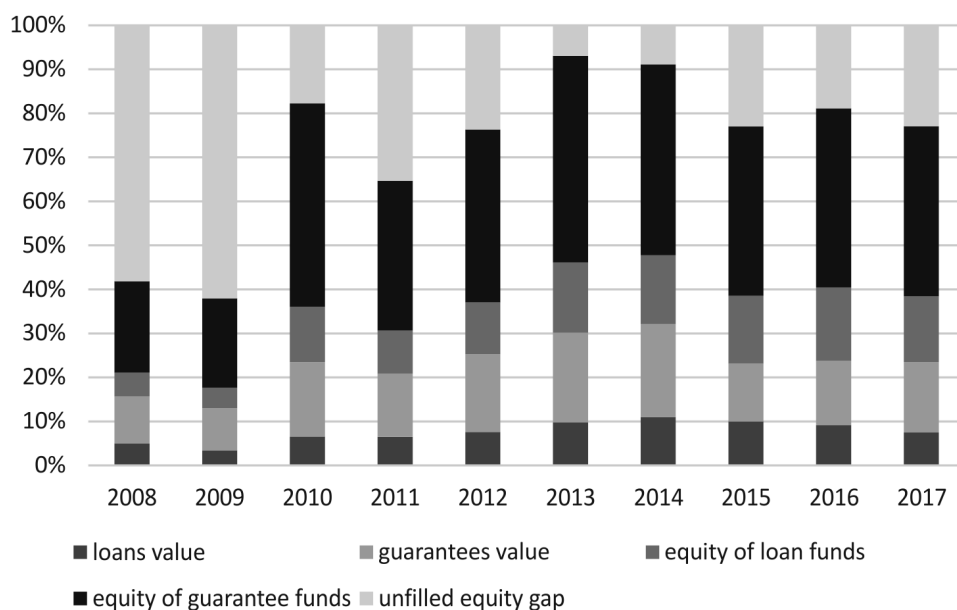
Size of the enterprises	(1) capital gap: demand for funding method (PLN billions)	Number of enterprises*	Revenues (PLN billions)**	(2) capital gap: not-awarded funding (PLN billions)	(3) capital gap: depreciation deductions (PLN billions)
Micro	12.82	583 656	237.47	7.30	5.69
Small	0.30	1 182	5.59	0.27	5.74
Medium	0.28	217	5.12	0.25	3.20
Total	13.40	585 055	248.18	7.81	14.63

* in the capital gap according to demand for funding method

** of enterprises in the capital gap according to demand for funding method

Source: prepared by the authors.

The analysis shows a low share of non-bank loans and guarantees in the SMEs' capital gap (Figure 15). It may be a result of low capital resources of the loan and guarantee funds as well as inadequate human resources. Many funds are managed by a small number of employees. The average number of persons employed in a loan

**Figure 15.** SMEs' capital gap fulfillment in Poland (2008-2017)

Source: prepared by the authors.

fund is 21, and their knowledge and abilities with regard to a comprehensive promotion of forms of support are limited (ASM, 2014). In addition, the loans granted by organisations also involved in other activities (e.g. business incubators) are treated by them as a secondary form of support that they provide (Alińska, 2012).

Furthermore, only approx. 25% of these funds' equity goes to companies operating on the market for less than one year; that is the ones from the capital gap area (PZFP, 2018). The necessity to monitor these companies and the risk of bankruptcy results in limiting the offer of loan funds for start-ups which, based on the programme's assumption, was to be the objective of these funds.

In Poland, differently than in other countries, the most important tool of public policy in the early 1990s were loans, not guarantees.

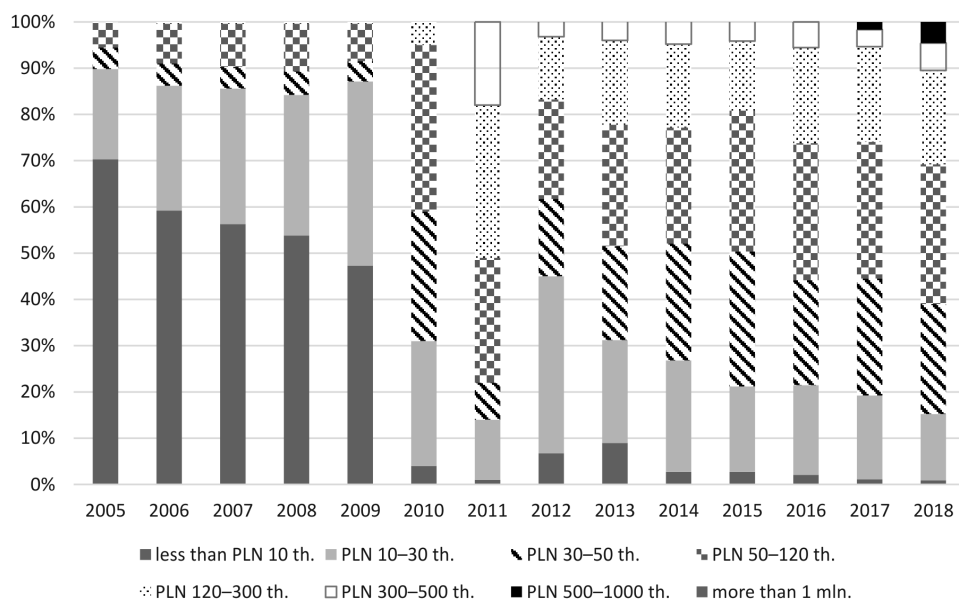


Figure 16. The structure of loans by size and number (2005–2018)

Source: prepared by the authors.

Across the country, the number of loans fell significantly between 2007 and 2010, partly due to a change in lending policies by loan funds as well as a change in business needs. The support of the funds was more often used by companies looking for larger co-financing (Figure 16) which caused a decrease in the number of loans (Figure 17) and an increase in their value (Figure 18). The exclusion of the biggest loan fund (Micro Fund) from the system of non-bank loan funds in Poland was one of major events which had significant influence on the number of issued loans. The Micro Fund granted low value loans, its loans accounted for over 60% of the total number of non-bank loans and 30% of their value between 2003

and 2009. For this reason, the exclusion of this loan fund resulted in a significant reduction in the total number of non-bank loans and an increase in the average value of loans over the period 2010–2013.

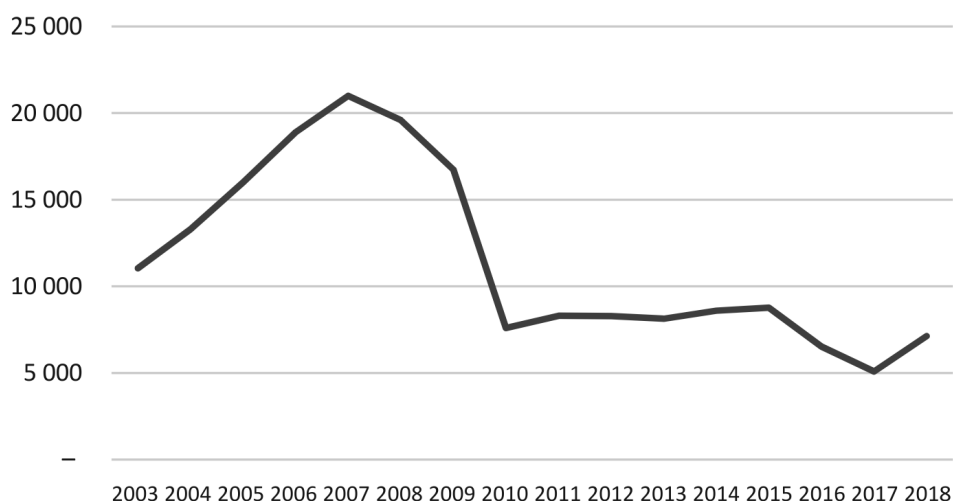


Figure 17. Number of loans issued (2003–2018)

Source: prepared by the authors based on the reports of Polski Związek Funduszy Pożyczkowych.

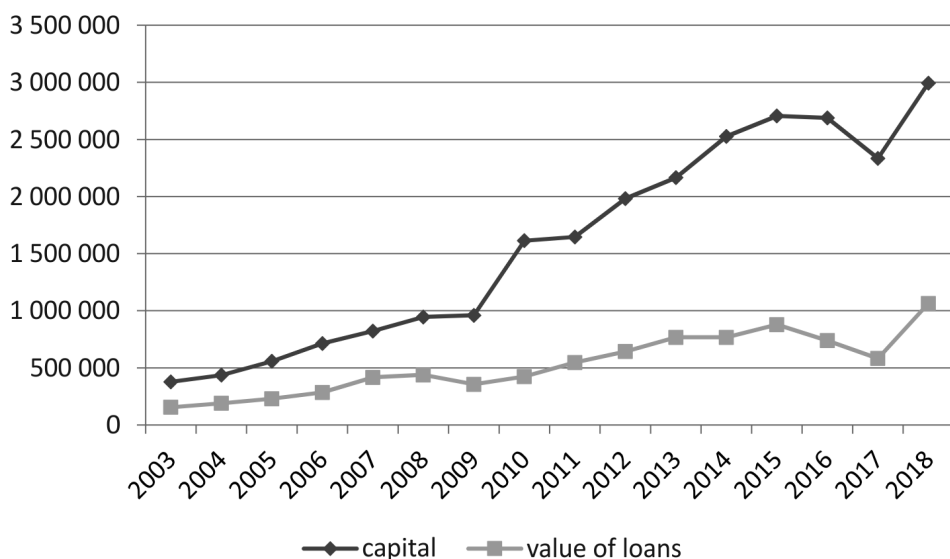


Figure 18. Capital and value of loans issued by loan funds in Poland in thousands of PLN (2003–2018)

Source: prepared by the authors based on the reports of Polski Związek Funduszy Pożyczkowych.

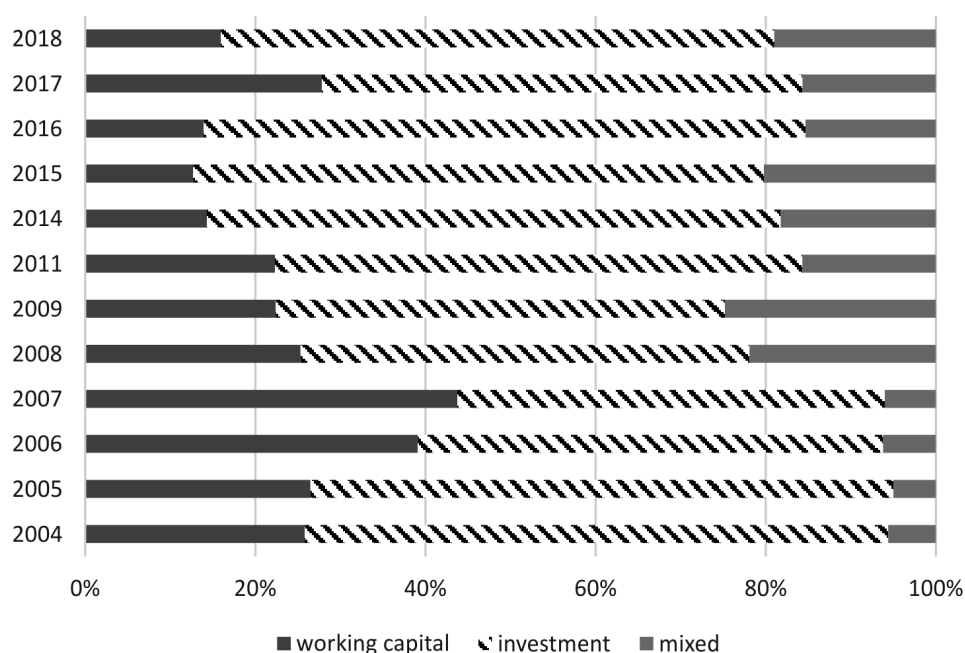


Figure 19. Investment loans, working capital loans and mixed loans in total number of loans (2004–2018)

Source: prepared by the authors based on the reports of Polski Związek Funduszy Pożyczkowych.

The decrease in the value of loans and the capital of the loan funds was due to delays in the implementation of loan programmes under the operational programmes co-financed by the EU (Figure 19). Tenders started only in 2016, with the inflow of funds from won tenders as late as in 2018. This fact shows how strongly the activity of the loan funds depends on EU support. Delays in the implementation of operational programmes, the introduction of tenders as a form of selecting financial intermediaries (granting financial instruments), will weaken the relationship between entrepreneurs and loan funds and thus make it difficult to minimise the capital gap.

An increasingly significant group of liabilities guaranteed are different types of guarantees than credit guarantees (Figure 20 and 21). These are tendering, export or contract performance guarantees, which accounted for 70% of all guarantees in 2018. In terms of the number of transactions, the number of guarantees reached 50% of guarantees in 2018. It is an increase of 7 percentage points in relation to 2017, and in terms of their value – 36% (increase by 11 percentage points).

The analysis indicates an increase of the share of loans and guarantees in filling the capital gap for SMEs, which is due to the increase in the activity of these funds in the period between 2007 and 2013, mainly under the JEREMIE initiative. It should be noted, however, that there is still an unused potential of loan and guarantee funds. It is also important to emphasise that guarantee and loan funds start to support more of other needs of SMEs, not only investments.

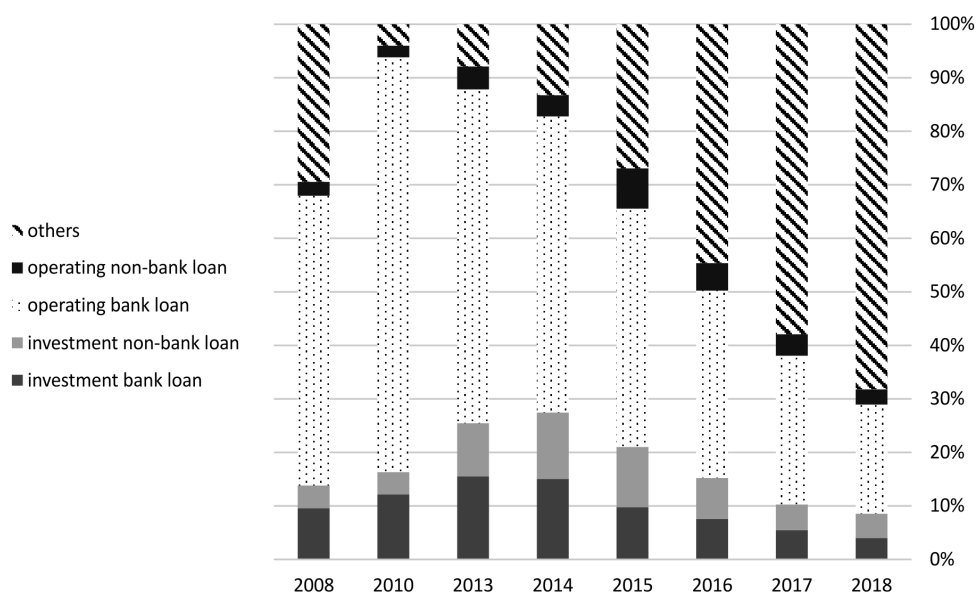


Figure 20. Types and number of guarantees granted in Poland (2008–2018*, in % of the structure)

* Data for 2009, 2011 and 2012 was not available

Source: prepared by the authors based on reports of Krajowe Stowarzyszenie Funduszy Poręczeńiowych.

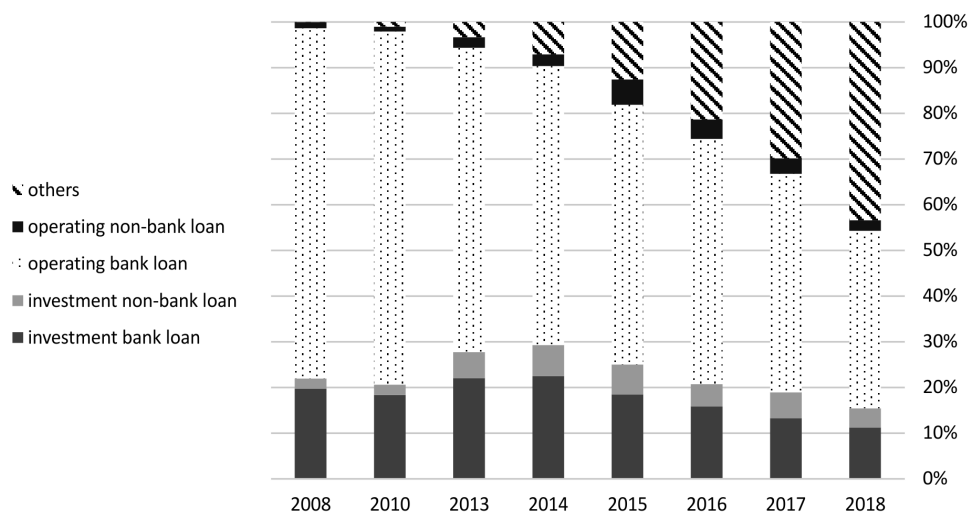


Figure 21. Types and value of guarantees granted in Poland (2008–2018*, in % of the structure)

* Data for 2009, 2011 and 2012 was not available

Source: prepared by the authors based on reports of Krajowe Stowarzyszenie Funduszy Poręczeńiowych.

The calculation of the capital gap, which has been presented above only considered investment loans, neglecting operating loans and guarantees of tender securities or end-use securities. Moreover, some guarantee funds grant guarantees for non-banking loans offered by loan funds. In this case, a double support effect may be observed, when the same amount of the loan is covered by a guarantee fund and, at the same time, by a loan fund. Following this, the calculation of the capital gap presented above can be considered as incorrect – the results obtained previously should be increased by the demand for funding for non-investment activities of SMEs. At the same time, the value of the capital gap covered by loan or guarantee funds should be decreased in order to recognise the doubled support of loan and guarantee funds.

The double support by guarantee and loan funds is an unnecessary burden in the system of eliminating the capital gap for SMEs. Public funds become engaged twice for the same loan to become possible – for the loan itself as well as for the guarantee. The problem could be easily solved by abolishing the obligation for entrepreneurs to provide additional collaterals to use loan funds' support. The funds released in such a way could then be used for other purposes or to increase the resources of loan funds.

Currently, credit guarantee funds in Poland reach an equity multiplier (the ratio of active guarantees to the capital held) of 150%. Based on the experience of other countries, it must be stated that this is not a satisfactory level. A similar comparison can be made between the value of guarantees granted in Poland and other countries in relation to the GDP. The analyses carried out on behalf of the European Commission show that 1 EUR should contribute anywhere between 2 to 10 EUR to the generation of financial instruments. It means that the equity multiplier should be in the range of 2–10 (IBnGR, 2010).

Loan funds in Poland usually use 50% of their capital. The remaining capital is located in bank accounts to cover any losses related to the granting of funding to entities with higher credit risk (Alińska, 2012). With the possibility of using incentives for the persons managing loan funds to increase the capital employed in lending, and the increased activity of guarantee funds, the capital gap for SMEs could decrease significantly.

Assuming the use of 98.5% – instead of the current 50% – of loan funds' equity for lending (with an assumed 1.5% of provision for expected losses due to insolvency of borrowers) and the equity multiplier of guarantee funds of 4.0 – which is the highest value achieved by one of the guarantee funds in Poland – the capital gap for SMEs would decrease by 78%. The increase of activity of guarantee funds may be affected by activities conducted in recent years, such as the rating for guarantee funds, BGK's (Bank Gospodarstwa Krajowego) and EIB's re-guarantees for loan guarantee funds which lead to an increase in the number of banks cooperating with the loan guarantee funds. The EU financial support has been essential for the level of activity of loan and guarantee funds as well as for venture capital funds between 2014 and 2020.

The greatest increase in the funds in the programme's budget as compared to previous years is observed with regards to, among other tools, repayable financial instruments. Entrepreneurs will be able to use innovation support under the OP Innovative Economy and assistance from the Regional Operational Programmes, loans and guarantees for investment projects (Thematic objective 3 "Improving the competitiveness of SMEs, the agricultural sector and the fisheries and aquaculture sector").

The task of the loan and guarantee funds created since the beginning of the 1990s in Poland was the elimination or reduction of the capital gap for the entities from the SME sector. This gap (called the Macmillan Gap) was defined at the beginning of the twentieth century by the Committee of Finance and Industry, which was involved in studying the financial system of the United Kingdom. The European Commission has set itself an objective to create mechanisms, structures and organisations whose task would be to reduce barriers to SME access to investment financing, and innovation in particular. Guarantee and loan funds are not able to fill the capital gap of SMEs in Poland: neither the number of funds nor the capital resources which are available to them may guarantee that this gap is significantly reduced. Another reason, as mentioned before, for this may be the low level of capital used, which for loan funds is only slightly over 50%. The remaining amounts, due to the risk of operation and non-collectability of part of the loans, are deposited in bank accounts and do not contribute to increasing the multiplier effect. What is more, to increase the level of use of loan and guarantee funds it is necessary to promote their activity, for which most of the funds do not have financial or human resources to whom such tasks could be assigned.

Chapter III

Development and business models of loan and guarantee funds in Poland

In this section we describe and analyse development and business models of loan and guarantee funds since their establishment from the early 1990s till the end of the second decade of XXI century. In preparing this section the following sources were used:

- results of scientific literature research,
- results of the analysis of available reports on the functioning of the funds,
- results of in-depth interviews with managers of selected funds,
- results of focus group with selected fund managers.

Both loan funds and guarantee funds are organisations that create value in similar ways. However, there exist some significant differences between them. A useful tool for explaining those differences is analysis of their business models. The two most common approaches (Nielsen, Lund, 2012) to the understanding of the business model concept are:

- a narrow approach – in which the business model is understood as a way of generating revenues,
- a broad approach – in which the business model is understood as a way of creating value by the business.

In the narrow sense, the business model was defined by Amit and Zott (2001). According to their definition, a business model means a specific way, a method in which an entity using it can generate revenues. In the broad meaning, according to Afuah (2004), a business model is a set of actions that the entity carries out, the manner in which it is done them and the moment of their implementation, using available resources to offer benefits to clients who expect them in such a way that the unit has made a profit.

Various authors proposed numerous and diverse lists of business model elements – the overview is presented in Table 3 below.

Table 3. Components of a business model

Author(s)	Specific components
Gordijn et al. (2001)	actors, market segments, value offering, value activity, stakeholder network, value interfaces, value ports, and value exchanges
Linder, Cantrell (2001)	pricing model, revenue model, channel model, commerce process model, internet-enabled commerce relationship, organisational form, and value proposition
Petrovic et al. (2001)	value model, resource model, production model, customer relations model, revenue model, capital model, and market model
Afuah, Tucci (2001)	customer value, scope, price, revenue, connected activities, implementation, capabilities, and sustainability
Weill, Vitale (2001)	strategic objectives, value proposition, revenue sources, success factors, channels, core competencies, customer segments, and IT infrastructure
Ostervalder, Pigneur (2009)	value proposition, customer segments, channels, customer relationships, cost structure, key activities, key resources, key partners, revenue streams

Source: Morris et al. (2005); Ostervalder, Pigneur (2009).

We decided to use the concept of a Business Model Canvas put forward by Ostervalder and Pigneur (2009). The canvas consists of 9 elements which Ostervalder and Pigneur refer to as the building blocks. This concept enables a comprehensive investigation of how organisations function and allows for an in-depth analysis of the way they create value. Table 4 presents the main business model components, their definitions and questions that are asked when exploring an organisation following this concept.

Table 4. Business model composition

Business model composition	Definition of the building block	Questions asked in the process of analysing the building block
1	2	3
Customer Segments	It defines the different groups of people or organisations an enterprise aims to reach and serve.	For whom does the organisation create value? Who are the organisation's most important customers?

1	2	3
Value Propositions	It describes the bundle of products and services that create value for a specific Customer Segment.	What value does the organisation deliver to the customer? Which one of organisation's customers' problems does it help to solve? Which customer needs does the organisation satisfy? What bundles of products and services does the organisation offer to each Customer Segment?
Channels	It describes how the organisation communicates with and reaches its Customer Segments to deliver a Value Proposition.	Through which Channels do organisation's Customer Segments want to be reached? How does the organisation reach them? How are organisation's Channels integrated? Which ones work best? Which ones are most cost-efficient? How does the organisation integrate them with customer routines?
Customer Relationships	It describes the types of relationships the organisation establishes with specific Customer Segments.	What type of relationship should the organisation establish and maintain with each of its Customer Segments? Which ones have been established? How costly are they? How are they integrated with the rest of organisation's business model?
Revenue Streams	It represents the revenues the organisation generates from each Customer Segment.	For what value are the organisation's customers really willing to pay? For what do they currently pay? How are they currently paying? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenues?
Key Resources	It describes the most important assets required to make the business model work.	What Key Resources do the organisation's Value Propositions and/or Distribution Channels and/or Customer Relationships and/or Revenue Streams require?
Key Activities	It describes the most important things the organisation must do to make its business model work.	What Key Activities do the organisation's Value Propositions and/or Distribution Channels and/or Customer Relationships and/or Revenue Streams require?

Table 4 (cont.)

1	2	3
Key Partners	It describes the network of suppliers and partners that make the business model work.	Who are the organisation's Key Partners? Which Key Resources does the organisation acquire from its partners? Which Key Activities do partners perform?
Cost Structure	It describes all costs incurred to operate a business model.	What are the most important costs inherent in the organisation's business model? Which Key Resources and/or Key Activities are the most expensive?

Source: prepared by the authors based on Ostervalder, Pigneur (2009).

The value proposition is critical for the performance of loan and guarantee funds. The bundle of products and services included in the value proposition influence the decisions of customers (SMEs) whether to use or not the offer of a fund. Elements of the value proposition that are important for SMEs include the number of offered instruments, provision of other services (i.e. consulting services), prices (fees) and other elements of the offer including the maximum period of a loan or a guarantee agreement. What is more, the SMEs expect that the value proposition coming from loan and guarantee funds will be stable in the foreseeable future.

One of the problems that SMEs face is insufficient knowledge on the possible sources of financing (including the subsidised funding provided by loan and guarantee funds). Therefore, a crucial element for closing the capital gap is information channels (Cowling, 1998). Nowadays, the most efficient information channels (defined from a perspective of relatively low cost to the effect) are web pages and social media. Former research shows that loan and guarantee funds face the problem of insufficient resources to manage their operations (Waniak-Michalak, 2016) properly. High available funds without reasonably well-remunerated managers are not able to close the capital gap. Performance of organisations, including the loan and guarantee funds, also depends on cooperation with partners like banks and technological parks. These institutions may help to find borrowers of non-bank loans among their clients.

We identified three main phases in the development of loan and guarantee funds in Poland:

- 1) 1992–2003 – the period before Poland's accession to the EU,
- 2) 2004–2013 – the first period after EU accession,
- 3) 2014–2020 – the second period after accession.

These periods were determined on the basis of criteria of access to different sources of loan and guarantee funds and changing EU policies. In the first period, the primary source of financing for guarantee and loan funds was foreign transformation aid and EU pre-accession funds. In the second period, the main source of financing for guarantee and loan funds was negotiated within the framework of Poland's accession to the EU and the Financial Framework 2007–2013. In the third period, the primary source of financing for guarantee and loan funds consisted of the resources from the Financial Framework 2014–2020. The adopted dates are somewhat debatable, as usually the money from a given multi-annual EU budget is used and settled for 1–2 years after the end of the financial perspective.

1. Phase I: 1992–2003

The first loan funds started to operate in Poland in 1992, while the system of guarantee funds was first created in Poland in 1994. Both systems are still in operation, unlike in other countries, such as Tunisia, where the system failed (Bechri et al., 2001). In Poland, like in other countries, loan and guarantee funds are very often co-financed from EU sources, governmental sources and private money. The system was based on experience from similar projects in Asia, Latin America, and Africa. In the first phase the Polish government, the World Bank, the European Union, the US Congress, the Canadian government, the British government and Bank Gospodarstwa Krajowego (BGK)¹ were the main actors (institutions) that participated in the establishment and development of these funds. To finance the creation of the loan and guarantee schemes, several programmes were used.

a. Small Business Development Project TOR#10

The programme had two editions – the first in 1993 and the second in 1995. The cost of TOR#10 (Small Business Development Project) was covered in 60% by the World Bank with the state budget financing the remaining 40%. The resources were sufficient to form 74 public institutions, including 34 loan funds and

1 More details on the development of loan and guarantee funds in Poland with the use of Actor-Network Theory approach can be found in the paper H. Waniak-Michalak, J. Michalak (2019). *Development of a Successful Microfinancing System: Actor-Network Theory Perspective*. "Management: Journal of Contemporary Management Issues", vol. 24(2).

31 business incubators (Matusiak et al., 2005). Most of them operate until today. More than 50% of the institutions were set up in regions where the rate of unemployment was the highest and almost half of them are still active in cities with less than 50 thousand inhabitants and in villages. The value of the programme was nearly EUR 7m.

b. Polish-American Enterprise Fund

In 1989, the U. S. Congress decided to establish the Polish-American Enterprise Fund, whose mission was to support the development of the market economy in Poland (through supporting culture, education and other local initiatives). After five years of operation, the Fund extended its activity by granting micro-credits to entrepreneurs through the newly created Micro Fund, which currently has the status of a banking institution in Poland and against the founders' expectations is still in operation. The purpose of the Micro Fund was and still is to commercially support the smallest enterprises which could not receive commercial financing, i.e. bank loans. The value of the programme was close to EUR 11m.

c. Canadian-Polish Enterprise Programme

The Canadian-Polish Enterprise Programme has been carried out under the auspices of the Canadian-Polish Enterprise Foundation since 1997. The tasks of the Canadian-Polish Enterprise Foundation have been taken over by the Polish Enterprise Foundation based in Szczecin since 2003. The Foundation received a non-refundable grant of EUR 7m from the Canadian government. The money let the Foundation provide financial support (guarantees and loans) to more than 1,500 small and medium-sized enterprises and to train 18,000 entrepreneurs. Moreover, the Foundation used the money to establish a guarantee fund (POLFUND) in 2001. It is now one of the biggest guarantee funds in Poland. The value of the support provided by the Foundation was EUR 46m.

d. PHARE

PHARE (Poland and Hungary: Assistance for Restructuring their Economies) was a programme of the European Commission created in 1989 to provide financial support to countries which were candidates for accession to the European Union. Under the Local Initiatives Programme (PIL) financed with this money, the first guarantee funds appeared in Poland at the beginning of the 1990s. The aid to Poland

between 1990 and 2003 amounted to approximately EUR 3.9bn. Some money was used to create guarantee funds. Eight guarantee funds were active between 1994 and 2003. Five of them still operate in 2018. Each fund received between 150 and 300 thousand EUR (Gajewski et al., 2000). The programme was continued until 2007. The capital of the five guarantee funds mentioned above was EUR 7.5m in 2018 while the value of guarantees which they granted in 20 years of their activity amounted to EUR 41m.

e. Polish-British Programme of Entrepreneurship Development

In 1994 the programme started to support the development of small and medium enterprises in two regions of eastern Poland. Within the programme, two guarantee funds were created. Initially, money for the functioning of the credit guarantee funds was on an account in the United Kingdom. This increased bureaucracy and significantly prolonged the process of granting the guarantees. It was not until a few years later that the UK Government agreed to transfer these resources to the accounts of credit fund institutions, which greatly facilitated the development of their activities. The guarantee funds founded with the British government money turned out to be the most successful. Their capital on the last day of 2018 was EUR 29m and the value of all granted guarantees in over 20 years of their activity amounted to EUR 117m.

In 1994 *Fundusz Gwarancyjny dla Małych i Średnich Przedsiębiorstw* (the *Guarantee Fund for Small and Medium Enterprises*) in BGK was set up by the Polish government with the capital PLN 45m (close to USD 18.5m). The Guarantee Fund for Small and Medium Enterprises had an easier start than regional organisations providing loans and guarantees. Firstly, BGK, as a banking institution supported by the state, had a better negotiating position than regional guarantee and loan funds. Secondly, BGK, which was established in 1924 and reactivated in 1989, had the infrastructure, employees, and knowledge of the financial market.

The Polish government intended to differentiate the ways in which the guarantees were granted. The *Guarantee Fund for Small and Medium Enterprises* was supposed to allocate larger scale guarantees on the central level while the regional guarantee funds were supposed to provide smaller guarantees on the regional and local level. In this way, the aim of the Polish government was to create the network consisting of local and regional guarantee funds and one central guarantee fund. Therefore, in 1997 the *Guarantee Fund for Small and Medium Enterprises* was changed into the *National Credit Guarantee Fund* that could provide guarantees up to EUR 1.5m not only to SMEs but also big enterprises and public entities.

The World Bank as the next institution that participated in the creation of the loan and guarantee schemes in Poland used its experience in the development

of similar schemes in other countries of Asia or Africa (Matusiak et al., 2005). In the case of #TOR 10 programme, the starting capital was treated as a non-returnable subsidy in the development of SMEs in Poland. The money was supposed to be lost after a few years. Unexpectedly, the capital is used by some funds until today.

At the same time, fund employees had to gain experience, sometimes learning from mistakes. The first loan granted by the National Association for the Support of Entrepreneurship was not returned regularly. The investment failed, and money had to be executed in a lengthy process. The bad experiences forced loan fund managers to develop procedures and adopt rules for assessing creditworthiness applied by banks. As the first loans were limited to USD 20 thousand, loan funds financed mainly the establishment of businesses in trade or service sectors. The amount they could have granted was not sufficient to set up a production activity. However, the loan funds were to be for entrepreneurs the kindergarten (that's why the amount of the loan was so small) and allow them to go to the 'school' of financing on the market conditions (Waniak-Michalak, Michalak, 2019).

In the 1990s, the guarantee funds in Poland received money for founding capital, which they could deposit in banks at high-interest rates. Interest earned on deposits was an important source of additional revenues for the funds. These revenues enabled covering part of administrative costs. Moreover, the money from the initial capital was used to cover salary costs, sometimes very high, for the members of the management boards. The low capital endowment caused the bankruptcy of some funds in a short period and a lack of results, as banks did not treat the funds with little capital as serious business partners. The first guarantee funds created in the 1990s had to face the desire of some people to get rich quickly, the reluctance of bankers and the lack of strategy. The fund managers who were interviewed in 2018 commented in the following way (Waniak-Michalak, Michalak, 2019):

- Interviewee 2: *Some of the funds did not achieve good results at that time and today, because they are waiting for a customer who does not know about them and does not come to them;*
- Interviewee 1: *Some of the managers of the guarantee and loan funds decided to participate in the creation of the loan-guarantee system only to get rich fast and in an easy way. However, they noticed that this strategy is short-term. Those managers, whose loan and guarantee funds survived realised that it is better to manage the fund effectively, because the second chance for such a stable and prominent position may not appear quickly again. Some regional loan and guarantee funds in Poland also collapsed as a result of poor management.*

Loan and guarantee funds had to face several major obstacles to become sustainable. The first challenge was access to skilled people who were able to find

customers and evaluate their creditworthiness. Most funds solved this problem employing people with some experience in the banking sector. The second obstacle was gaining the trust of entrepreneurs and learning to cooperate with them. Another of the fund managers interviewed in 2018 stated: *The beginnings were difficult. First, the people, the entrepreneurs had to believe that this was not a scam. Later they had to learn how to estimate their investment needs – this required direct discussions with customers and the development of procedures* (Waniak-Michalak, Michalak, 2019). The trust of entrepreneurs was critical, as recommendations from satisfied customers were the primary source of gaining new customers and developing a network of contacts. The third problem in the case of guarantee funds was finding bank partners. This difficulty was solved mostly by employees who had previously worked in banks. They were able to find banks through their former colleagues.

There were 73 loan funds created during this phase. 35 out of 73 loan funds established in this phase survived until 2018. The initial capital of loan funds was too small (less than USD 125 thousand) to maintain the continuous provision of loans and to build the customer base. As far as the guarantee funds are concerned, 53 of them were set up in this phase. Thirty-two of them operated still in 2018. Similarly to loan funds, the limited capital of guarantee funds significantly restricted their capacity to build relationships with banks. If the guarantee fund had small capital, no experience in operating and a limited number of employed specialists, the chance for the cooperation of the bank and the guarantee fund was minimal. That is why some of the regional loan and guarantee funds collapsed during this phase.

Loan and guarantee funds were created as NGOs, whose main goal was to support SMEs in closing their capital gap. They were supposed to cooperate, not compete. During the first phase, loan and guarantee funds started to cooperate in a more organised manner. National Association of Guarantee Funds was initiated in 1996 and Polish Association of Loan Funds was set up in 2002. These associations aimed to promote guarantee and loan funds and organise experience exchange among organisations supporting business development.

The visualisation of generic Loan and Guarantee Funds Business Models in the form of Business Model Canvas in phase I (1992–2003) is presented in Table 5 (loan funds) and Table 6 (guarantee funds) below.

Table 5. Business Model Canvas – Generic Business Model of Loan Funds in phase I

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
Funding Institutions: governments, World Bank, European Union, U. S. Congress, BGK	Finding customers Gaining customers' trust Loans provision Loans monitoring and risk management Development and improvement of procedures	Access to financing (loans), easier procedures, lower financing costs (in some cases), speed of obtaining a loan, lower collateral requirements	Networking Grassroots marketing	SMEs
Key Resources		Channels		
Employees (specialists in various types of projects) Fixed assets (offices, equipment for the technological parks) Financial resources (equity)		Own offices		
Cost Structure		Revenue Streams		
Salaries, depreciation of fixed assets, write-offs of unpaid loans		Interest on loans, fees for granting loans and for other operations, subsidies, interests on deposits		

Source: prepared by the authors.

Table 6. Business Model Canvas – Generic Business Model of Guarantee Funds in phase I

Key Partners Banks Funding Institutions: governments, World Bank, European Union, U. S. Congress, BGK	Key Activities Finding banks Gaining banks' trust Guarantees provision Loans monitoring and risk management Development and improvement of procedures	Value Proposition Facilitating access to financing (by granting guarantees), easier procedures than at insurance companies, lower guarantee costs (in some cases),	Customer Relationships Indirect relations (with a bank as an intermediary)	Customer Segments SMEs
Cost Structure				
Salaries, depreciation of fixed assets, paid guarantees				
Revenue Streams				
Fees on guarantees and other operations, subsidies, interests on deposits				

Source: prepared by the authors.

2. Phase II: 2004–2013

The second phase starts in 2004 with Poland's accession to the EU. As a result of the accession Polish entrepreneurs and loan and guarantee funds gained new sources of financing and hope for further development. The European Council decided to reduce direct public aid and partially replace it with financial, revolving instruments, also for small and medium enterprises. The decision was made in Lisbon in 2000.

In the second phase, the rules on repayable aid (including revolving financial instruments like loans and guarantees) under the public aid offered by the EU changed the business models of loan and guarantee funds. In the 2007–2013 budget, the amount channelled to repayable aid increased, the scope of financial instruments to be implemented, and the range of potential recipients of assistance widened. The financial instruments were offered within the following EU programmes: Operational Programme Innovative Economy (intended as a support mechanism for capital investments and loans), Operational Programme Development of Eastern Poland (intended as a means of supporting the issue of loans and guarantees), Operational Programme Human Capital (with the emphasis on the issue of loans) and 16 Regional Operational Programmes (emphasising both loans and guarantees). The repayable instruments were intended to support the SME sector and projects in the field of urban development, energy efficiency and use of renewable energy in buildings. During this period financial instruments were offered under the Fund of Funds Formula or directly through financial intermediaries and they were 'tailor-made'. No standardised instruments were offered. The Polish Ministry of Infrastructure and Development estimated that about EUR 1bn was distributed in the form of financial instruments within this Financial Framework. It equalled to 1.5% of the aid allocated to Poland in this seven-year period (Żbik, 2015).

The funds which had the possibility to offer repayable instruments under the Regional Operational Programmes were selected in competitions. However, the fees (management costs) did not depend on the effectiveness of the funds, that won competitions.

Loan and guarantee funds received additional financing from the EU regional development programmes, but the requirements for them increased. They were obliged to reach particular results, otherwise, they had to pay penalties. Therefore, the managers of these funds had to change their business models. Initially, guarantee funds granted only loan guarantees. Later, the funds began to guarantee various financial instruments (tender deposits, loans, factoring and leasing instruments, etc.) because the needs of entrepreneurs changed.

Many loan and guarantee funds decided to run additional activities to cover their fixed costs: consulting services, renting of office space, operating technological parks. Some of the organisations started to offer both: loans and guarantees. During the previous phase, guarantee funds operated as an indirect support tool

for entrepreneurs. If the client wanted to use the guarantee, the bank had to submit the application of the entrepreneur to the guarantee fund.

Due to the implementation of repayable instruments under the EU budget 2007–2013, the business models of loan and guarantee funds evolved. Firstly, those loan and guarantee funds that won the competitions organised within the EU support programmes increased their capital significantly. It has exacerbated the trend towards differentiation of fund sizes. Secondly, the funds participating in the competitions were supposed to offer tailor-made instruments of a particular type, which partially forced them to specialise. Thirdly, participation in the competitions increased the funds' willingness to cooperate. It was particularly pressing for the smaller ones which often created consortia. Changes in the financial framework 2007–2013, due to a partial reduction in management fees, have also partly led to the diversification of activities. Some loan funds started to develop other activities, such as office rental, advisory and training activities. Some guarantee funds have started to introduce different types of guarantees (tender guarantees, export contracts guarantees, contract performance bonds guarantees).

The visualisation of generic Loan and Guarantee Funds Business Models in the form of Business Model Canvas in phase II (2004–2013) is presented in Table 7 (loan funds) and in Table 8 (guarantee funds) below.

Comparison of the generic business models for loan and guarantee funds in the second phase exhibits many similarities. First, both loan funds and guarantee funds shared the same target group of customers – small and medium enterprises (SMEs) and, to a smaller extent, non-governmental organisations (NGOs). In many situations, funds limited their target customers to a given type of enterprises, for example, start-ups, firms from a certain region or industry. The selection of the target group was based on the main purpose of the loan and guarantee funds – to provide access to finance for companies whose access to capital was hindered. Second, the key activities and key resources used by loan and guarantee funds were also similar. The key activities embraced: provision of financial instruments, acquisition of financing, financial monitoring and risk management as well as development and improvement of procedures for assessing creditworthiness or debt recovery. In turn, the most important resources included employees (specialists in various types of projects), fixed assets (offices) and financial resources (equity). Use of similar resources and realisation of comparable activities translated into an analogous cost structure. In most cases, the dominant cost elements consisted of employees' salaries, followed by the depreciation of fixed assets. Some funds suffered from high costs of write-offs due to unpaid loans or paid guarantees.

Table 7. Business Model Canvas – Generic Business Model of Loan Funds in phase II

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
Investors, local governments, BGK (decreased role), EIB, business associations, fund associations, guarantee funds	Loans provision financing Loans monitoring and risk management Development and improvement of procedures Maintenance of good relations with partners Fixed assets (i.e. technological parks) management	Access to financing (loans), easier procedures, lower financing costs (in some cases), speed of obtaining a loan, advice (e.g. assistance in a business plan development), lower collateral requirements	Short and long term relations (customers returning for loans for new investments or in new programmes) Personal relations with customers	SMEs, NGOs
Key Resources				
Employees (specialists in various types of projects) Fixed assets (offices, equipment for the technological parks) Financial resources (equity)				
Channels				
Own offices, websites, local governments' websites				
Cost Structure				
Salaries, depreciation of fixed assets, write-offs of unpaid loans				
Revenue Streams				
Interest on loans, fees for granting loans and for other operations, rental, revenues from training and consultancy, subsidies				

Source: prepared by the authors.

Table 8. Business Model Canvas – Generic Business Model of Guarantee Funds in phase II

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
Banks, local governments, BGK (decreased role), business associations, fund associations, loan funds	Guarantees provision Acquisition of financing Loans monitoring and risk management Development and improvement of procedures	Facilitating access to financing (by granting guarantees), easier procedures than at insurance companies, lower guarantee costs (in some cases), Facilitating foreign expansion by provision export guarantees	In many cases one-time relations, indirect relations (with a bank as an intermediary)	SMEs, NGOs
Key Resources		Channels		
Employees (specialists in various types of projects) Fixed assets (offices) Financial resources (equity)		Banks offices, banks' webpages, own offices, websites, local governments' websites		
Cost Structure		Revenue Streams		
Salaries, depreciation of fixed assets, paid guarantees		Fees on guarantees and other operations, subsidies		

Source: prepared by the authors.

At the same time, the generic business models of loan and guarantee funds in that phase show some significant differences. One of the most important dissimilarities was their relationships with banks. For guarantee funds, the banks were one of the most critical partners enabling them to reach target customers with a value proposition which was complementary to the banks' value proposition, as it provided trusted collateral. Contrastingly, banks and loan funds treated each other as competitors because their value proposition was, to some extent, substitutable. However, in many cases, the level of substitutability was not high because loan funds offered their loans to customers who often were not able to obtain bank loans due to lack of collateral or short credit and operations history. The difference in value propositions between banks and loan funds was that the latter had simpler procedures for granting loans.

The obvious difference between generic business models of loan and guarantee funds were also elements of their value proposition. Some resulted from the nature of the offered financial instruments – loans or guarantees. Loans were used to purchase fixed assets or increase working capital. Guarantees, in turn, enabled obtaining financing from banks, international expansion or participation in tenders. Moreover, loan funds often provided a wider range of services such as: consulting, renting of office space, providing access to technology parks' infrastructure.

The differences in value proposition and relations with banks were translated into other elements of the business model, including customer relations, channels and key activities. Significant differences were exhibited in the way of establishing and maintaining relations with clients. In the case of loan funds, the main channels were own offices, web pages, local governments and business associations. Relationships were often of a long-term nature as entrepreneurs returned to loan funds many times in order to obtain new loans. A certain limitation in terms of maintaining long-term relationships arose from new requirements which were introduced within the EU support programmes – they provided the required characteristics of clients and excluded the possibility of renewing loans to some of the previous clients. For guarantee funds, the main channels, apart from their own offices and web pages, were banks' offices and their websites. Relationships were more often indirect and one-time, due to the intermediation of banks.

Another significant development relating to the key partners occurred in 2009 when BGK became an independent institution that could issue the guarantees in its name as well as in the name of the State Treasury. In the same year, the National Credit Guarantee Fund was liquidated, and the BGK took over its resources. The CEOs of regional guarantee funds taking part in the focus group research (in November 2018) have since then perceived it as their rival who 'changed sides' – BGK started to provide loans and guarantees itself. According to them, BGK was supposed to support local and regional funds and not replace them. They also

indicated that BGK could not be efficient in lending operations, as the regional funds know better the problems of business owners in the region than the central organisation.

However, this competition was limited for both loan funds and guarantee funds as BGK only lent to SMEs which had had accounts with it for at least six months before they applied for such a guarantee. It significantly limited the target customer group. BGK also provided almost exclusively portfolio guarantees and funds for individual guarantees. Consequently, individual agreements between BGK and small and medium-sized enterprises became rare.

During the second phase, two other major events occurred that changed the landscape for loan and guarantee funds in Poland. The first important occurrence was the outburst of the financial crisis of 2007–2009, which led to reduced economic growth, worsening of the financial situation of SMEs and the decrease in lending by banks and loan funds. The decreased loan offer was the consequence of changes in regulations enforced by the financial sector supervisory institutions (see also Konopczak et al., 2010). It resulted in a lower value of guarantees granted. Another effect was the deterioration of credit and loan portfolios, the loss of part of the loans and the need to disburse guarantees.

The effects of the crisis were spread over time – as can be seen in the value of guarantees paid (Figure 22) as well as in the percentage of accepted guarantee applications (Figure 23).

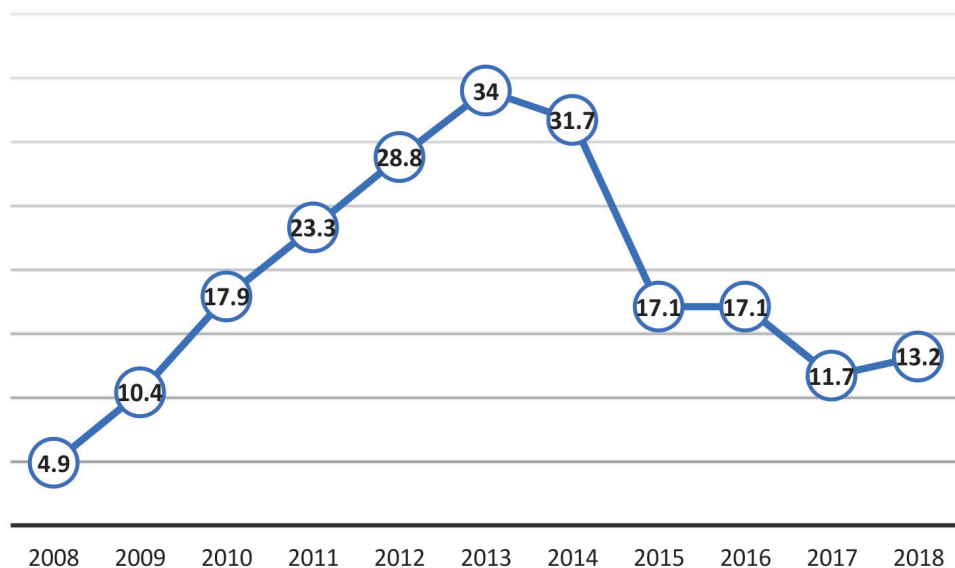


Figure 22. Value of guarantees paid by guarantee funds in millions of PLN (2008–2018)

Source: own elaboration on the base of data of Krajowe Stowarzyszenie Funduszy Poręczeniaowych.

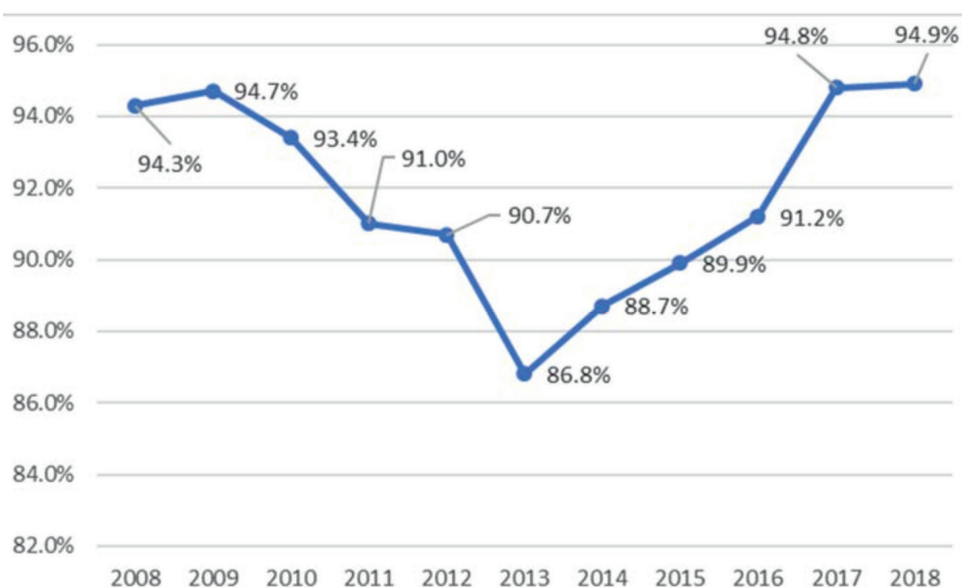


Figure 23. Percentage of accepted guarantee applications (2008–2018)

Source: own elaboration on the base of data of Krajowe Stowarzyszenie Funduszy Poreczeniowych.

The second major event was the transformation of the biggest loan fund (Fundusz Mikro) into a fully commercial financial institution. Fundusz Mikro specialised in granting small loans for all purposes of small enterprises with minimum formalities. The CEO of Fundusz Mikro took over control of 100% of ownership in this organisation and transformed it into a bank in 2010. Fundusz Mikro granted twice more loans than all the other loan funds operating in Poland in each year of its operation prior to 2010. After Fundusz Mikro stopped to be a loan fund, the number of loans provided by funds dropped dramatically (by 55%). As the private bank, Fundusz Mikro could not get grants and participate in the creation of the support system for SMEs any more. It continued to issue loans for SMEs but with much higher interest rates, higher even than commercial banks, and of low values. Undoubtedly, the network of loan funds became weaker without Fundusz Mikro.

3. Phase III: 2014–2020

Due to the not fully satisfactory effects of repayable aid under the Financial Framework 2007–2013, including: (1) the low efficiency of spending the funds transferred in the form of contributions from operational programmes, (2) lack

of rules for combining several forms of EU support financed under one investment and (3) limited scope of monitoring of the activities of final recipients, the European Union changed the rules for allocating funds for repayable instruments in the Financial Framework 2014–2020 (for further information see: Żbik, 2015).

Firstly, the EU extended the scope of support through repayable financial instruments (including loans and guarantees). Financial aid in the form of financial instruments was enabled for actions under eleven thematic objectives (in all situations in which market failure in a given area was diagnosed). Secondly, the EU proposed the following differentiated options for implementing repayable support:

- tailor made;
- off-the-shelf (risk-sharing portfolio loan, limited portfolio guarantee, renovation loan);
- loans and/or guarantees offered directly by the managing authority of the operational programme.

Secondly, the EU allowed to combine financial instruments with grants, interest rate subsidies, guarantee fee subsidies and technical assistance grants. Thirdly, the EU made management costs and fees dependent on the performance of the fund (basic and performance-based remuneration). In addition, a tender mechanism was introduced in most regions to select funds offering repayable instruments within EU support.

Fourthly, the EU has extended mandatory reporting from the very beginning of the financial perspective and extended monitoring of financial instruments.

The changes in the Financial Framework 2014–2020 intensified transformation in business models of loan and guarantee funds. The modification which was introduced in most regions was the introduction of tenders which replaced competitions as the instrument for allocation of financing. This led to increased competition for allocated funds and temporary reduction of management fees, formation of consortia and distribution of repayable instruments of new entities (e.g. cooperative and commercial banks). The changes resulted in the promotion of larger and more efficient funds, at the expense of smaller ones. The generally positive outcome also had a downside as it made access to such funding more difficult in some regions due to the fact that the regional offices of a given institution could have had differentiated capacity for meeting the newly introduced requirements.

The visualisation of generic Loan and Guarantee Funds Business Models in the form of Business Model Canvas in phase III (2014–2020) is presented in Table 9 (loan funds) and in Table 10 (guarantee funds) below.

Table 9. Business Model Canvas – Generic Business Model of Loan Funds in phase III

Key Partners Investors, local governments, BGK (sometimes perceived as a competitor), EIB, business associations, fund associations, guarantee funds	Key Activities Loans provision Acquisition of financing Customer search Loans monitoring and risk management Development and improvement of procedures Consortia development Fixed assets (ie. technological parks) management Reporting	Value Proposition Access to financing (loans), easier procedures, lower financing costs (in some cases), speed of obtaining a loan, advice (e.g. assistance in a business plan development), lower collateral requirements, trainings	Customer Relationships Long term relations (customers returning for loans for new investments or in new programmes) Personal relations with customers	Customer Segments Profiled SMEs, NGOs, unemployed
	Key Resources Employees (specialists in various types of projects) Fixed assets (offices, equipment for the technological parks) Financial resources (equity)	Channels Own offices, websites, local governments' websites, social media (ie. Facebook)		
	Cost Structure Salaries, depreciation of fixed assets, write-offs of unpaid loans	Revenue Streams Interest on loans, fees for granting loans and for other operations, rental, revenues from training and consultancy, subsidies		

Source: prepared by the authors.

Table 10. Business Model Canvas – Generic Business Model of Guarantee Funds in phase III

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
Banks, local governments, BGK (BGK sometimes perceived as a competitor), business associations, fund associations, loan funds	Guarantees provision Acquisition of financing Customer search Consortia development Risk management Development and improvement of procedures Reporting	Facilitating tenders participation by providing a tender guarantees, Facilitating access to financing (by granting guarantees), easier procedures than at insurance companies, lower guarantee costs (in some cases), Facilitating foreign expansion by provision export guarantees	In many cases one-time relations, indirect relations (with a bank as an intermediary)	Profiled SMEs, NGOs
Key Resources Employees (specialists in various types of projects) Fixed assets (offices) Financial resources (equity)		Channels Own offices, websites, local governments' websites Banks offices (decreased role, banks' webpages In some cases even call centres		
Cost Structure Salaries, depreciation of fixed assets, paid guarantees		Revenue Streams Fees on guarantees and other operations, subsidies		

Source: prepared by the authors.

An important change in the business models of loan and guarantee funds was the transformation of the value proposition. The value proposition was adjusted to the product requirements resulting from the conditions of the Framework Programmes. It affected both the products offered, their conditions as well as target groups. Some tenders required that the loans were to be addressed to unemployed people of a certain age and/or having other specific characteristics. In the opinion of one of the fund managers taking part in the focus group interview, it made the offer of the funds very rigid. He said: “It is difficult for guarantee and loan funds’ managers to find [...] highly profiled customers, for example, the unemployed over 40 years of age who are returning to the labour market after maternity leave”. The loan funds association experts taking part in the focus group concluded that “the offer is to a large extent imposed by the managing institutions, which makes it difficult to react flexibly to the dynamically changing needs of the market” (Waniak-Michalak, Michalak, 2019).

The share of tender guarantees (in terms of the number of guarantees) in the offer of the guarantee funds rapidly increased from 1% to 57% of the number of guarantees between 2014 and 2018 (Figure 24). At the same time, the share of guarantees for bank loans dropped from 72% to 28%, and guarantees for loans granted by loan funds from 15% to 5%. According to experts from the association of guarantee funds, this is a worrying trend – “The instrument of guarantees as bid bonds is beginning to dominate more and more in the portfolio of guarantee fund transactions. On the one hand, this is obviously understandable and justified, but on the other hand, it leads to an erosion of the role of the funds as primarily securing debt financing” (Krajowe Stowarzyszenie Funduszy Poręczeniowych, Rynek..., p. 24).

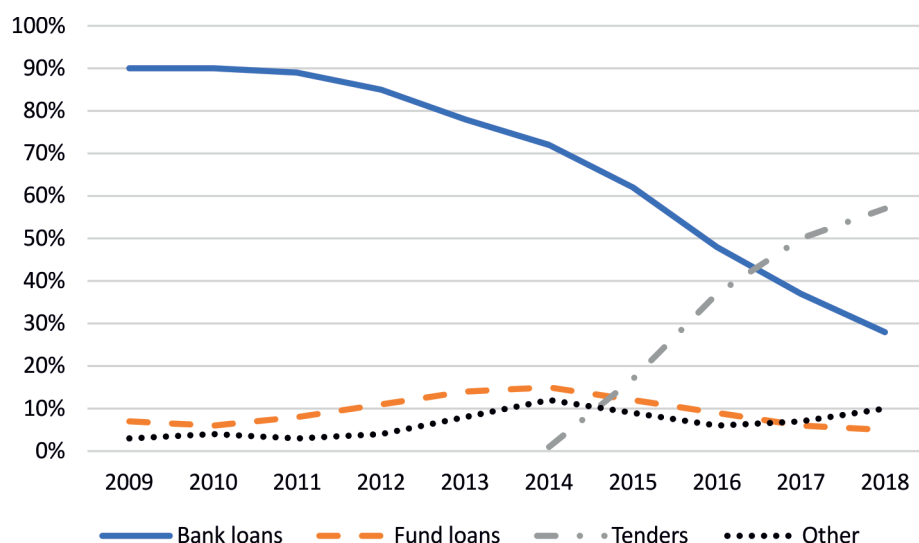


Figure 24. Structure of guarantees per volume of granted guarantees (2009–2018)

Source: prepared by the authors based on the reports of Krajowe Stowarzyszenie Funduszy Poręczeniowych.

In the case of the guarantee funds, the changes in value proposition also had the effect of loosening relations with banks and, as a consequence, entering into closer relations with the target customers, as the guarantees were offered directly by the funds and not through banks. The customer relationships also changed as they became more recurring and long-term – the same SMEs regularly participated in tenders or carried out export orders.

More demanding and challenging access to customers forced the funds to change their key activities, including the intensification of activities aimed at gaining new customers at a relatively low cost. These activities included, amongst others, the setting up of websites or improving the way in which they were functioning and a more substantial presence in social media – creating profiles on Facebook, for example. One of the largest guarantee funds even created a call centre.

Due to the modifications in the range of products offered, the structure of clients of the target companies also changed. For example, companies representing the construction industry became overrepresented, mostly due to the increase in the offer of guarantees of the proper performance of the contract.

As stated before, during the 2014–2020 EU financial perspective, the financing for subsidised loans and/or guarantees has been allocated based on the results of tenders. Tenders are won by the organisation which offers the lowest cost of operations (compensation) and demonstrates experience in loan granting. Not only loan funds but also other entities participate in these tenders. The entities which have revenues from other sources are often able to offer lower compensation than the traditional loan funds. In order to meet the requirement of demonstrating experience in loan granting they set up consortia with small loan and guarantee funds for the purpose of the tender. In subsequent tenders, however, the assistance of a small fund may prove to be no longer required as the entity becomes capable of demonstrating sufficient experience in offering such instruments on its own. The loan and guarantee funds perceive it as unfair competition – the tender procedure significantly extends the implementation period of instruments and ultimately reduces the possible leverage (the multiplier effect).

Another change in the business models of loan and guarantee funds which resulted from the tender requirements was a change in key resources understood as an increase in the number of branches. It was due to the fact that the size of the distribution network was one of the most frequently used criteria when evaluating offers in tenders. Table 11 provides a breakdown of the frequency with which various criteria appeared in tenders.

Table 11. The frequency of the use of Criteria for evaluating offers in tenders in Poland

Number	Criteria	Number of tenders
1	Additional contribution from the applying organisation	63
2	Portfolio construction period	58
3	Territorial coverage of the distribution network	38
4	Reliability and credibility of the assumptions of the methodology for identification and assessment of the Final Recipients and organisation of control of the contract execution	16
5	Number of supported enterprises	11
6	Investment type preference	7
7	Experience of persons delegated to instrument provision	5
8	Period for payment of funds to the Final Recipients	5
9	Additional investments	4
10	Number of loans granted for introduction of innovative (new to the market) products	3
11	Realisation of other efficiency indicators	3
12	Additional experience for the instrument provision	3
14	Preferred loan collateral	2
15	Number of buildings modernised	1
16	Cooperation with research centres	1
17	Number loans offered to start-ups	1

Source: prepared by the authors based on the reports of Polski Związek Funduszy Pożyczkowych.

Loans are provided to strengthen capital and promote business creation and recovery. Businesses are eligible during initial start-up and within the first few years that the business is operating. Using EU structural funds and national sources of funding, start-up and early-stage businesses can access start-up and seed funding of between EUR 15–50 thousand.

The most managing institutions focus on several criteria during the tenders. Loan provision should be quick, covering as large a territory as possible and loan funds (or other institutions) should add as much own funds as possible to the

revolving financial instruments. The last factor is the biggest barrier for many funds to compete for funds allocated through tenders.

It leads to further differentiation of loan and guarantee funds – the capital-strong funds win subsequent tenders, increasing their advantage over smaller entities. At the same time, there has been an evident change in the price policy of bidders. In a relatively short period, the average remuneration of the bidder selected in the proceedings has become higher than that generally offered by the managing institutions.

One of the most recent effects was a further increase in the disproportion between the performance of large and small loan and guarantee funds – as measured by their capital, the number or the value of guarantees granted and the rate of the commitment of the guarantee capital. It has also led to the liquidation of the smallest and least effective funds (i.e. Guarantee Fund in Starachowice, Guarantee Fund in Zelów, Guarantee Fund in Ustrzyki Dolne).

According to the data of the National Association of Guarantee Funds, 40 guarantee funds were operating in Poland at the end of 2018. However, in 2019, 2 further funds withdrew from their activity. The total capitalisation of guarantee funds in Poland in 2018 was PLN 989m (about EUR 234m) which represents a decrease of about 2% in comparison with the previous year and of about 21% in comparison with 2013.

According to the data of the Polish Association of Loan Funds, 80 loan funds were operating in Poland at the end of 2018. The capital of loan funds increased 35 times in comparison with the initial value from the 1990s and reached a value of PLN 2.99bn (approx. EUR 712m). It increased by about 13.4% in comparison with 2017 and by about 27% in comparison with 2013.

However, currently, loan and guarantee funds, due to the necessity to incur part of operating costs from own resources, have started to apply a more market-oriented strategy. Year by year, the share of other guarantees (as tender securities, end-use securities and lease) increased in the portfolio of the guarantee funds. The guarantees for investment and operating loans became less desired by SMEs than other forms of support (See more in Figure 19 and Figure 20).

Chapter IV

Loan and guarantee schemes and funds in chosen European countries

Guarantee and loan schemes for SME were firstly established in big European economies like the UK and Germany. Later they were spread almost all over Europe (and beyond).

The most common differences in guarantee schemes lie in the basic and supplementary fees for the guarantee. However, in the eligibility criteria there are also: the level and organisation of the guarantee, approaches to risk assessment and risk management, the role of the government and the EU, and the distribution of losses between the lender and the guarantor in the case of a default (Ughetto et al., 2017). In some countries, three parties play a role in the scheme: the lender, borrower and a guarantor; however, there are countries where a fourth institution is involved – the delivery agent of the loan guarantee. The delivery agent serves as an intermediary, as it provides guarantees offered by the guarantor. Usually, there is no delivery agent when the guarantor is a separate organisation, i.e. a private or public institution. The situation differs when the capital of the guarantee scheme is kept on a separate government account, and banks (the lenders) take on the role of the delivery agent. In consequence, the problem of non-congruent goals arises: the lender is focused on the profitability of the loan activity. At the same time, the delivery agent wants to maximise the number of guarantees provided (Riding et al., 2007).

In essence, guarantee schemes are organised in two different ways: mutual guarantee schemes or public guarantee programmes. The former is based on the capital paid in by members of the guarantee fund who can then benefit from the guarantees of the fund (Columba et al., 2009). Mutual guarantee funds developed in countries with a long tradition of sectorial organisations, facing economic problems (Camino, Cardone, 1999), such as Austria, Belgium, Denmark, France, Luxembourg, Italy, Portugal, Spain and Switzerland. Other countries created guarantee schemes funded with public money, typically EU funds, including Greece, the Netherlands, the United Kingdom and Poland. Some researchers emphasise that private capital and a private share in the risk decrease the loan losses; however,

others claim that when a decision is left to government employees, less attention may be paid to a fair risk assessment (Beck et al., 2010).

Guarantee and loan schemes for SMEs vary in several aspects. In many countries, financial instruments such as guarantees or loans for SMEs are distributed by banking institutions or government agencies, such as Austria Wirtschaftsservice GmbH (AWS) and Österreichische Hotel und Tourismusbank GmbH (ÖHT) in Austria, Czech Moravian Guarantee and Development Bank, the Czech Export Bank and Export Guarantee and Insurance Corporation in the Czech Republic, Vaekstfonden-Danish Growth Fund in Denmark, Banque Publique d'Investissement (Bpifrance) in France, Hungarian Development Bank – in Hungary ABN Amro, BNG, ING, Rabobank, Caixa Geral de Depósitos S.A. (CGD), Slovak Business Agency in the Slovak Republic. However, the banks do not always want to act as intermediaries in the distribution of subsidised loans to SMEs. The fees for managing the subsidised loan programme are usually relatively low in comparison with the risks incurred and the costs of monitoring the borrowers (Waniak-Michalak, 2019). For example, in the UK, loans to SMEs are co-financed by the government but distributed by private non-profit organisations such as the Black Country Reinvestment. In some countries, such as Italy, France, subsidised loans are a less important instrument to support SME finance than guarantees. In other countries, loans at preferential rates or together with grants are provided to SMEs. However, non-bank loans to SMEs are more expensive than bank loans to the same companies but easier to obtain. The functioning and business models of loan and vary not only from country to country but also between different organisations in the same country. For example, in Poland, the minimum interest rate ranges from 0–7.91% on non-bank SME loans (average minimum interest rate is 2.89%). Factors that influence the costs of loans are prerequisites of the operational programme co-financed from EU funds, national regulations, credit risk assessment, financing sources of the lending organisation (Waniak-Michalak, 2015).

In the majority of countries, the value of guarantees for SMEs increased between 2007 and 2014 irrespective of the different mechanisms used in individual countries (Schich et al., 2016). As previous research showed (Beck et al., 2010), guarantees are perceived by bank managers as the best way to support SMEs, far better than direct grants or subsidies for interest paid. Other researchers, though, blame guarantee schemes for SMEs' dependence on public support and the EU's aid policy (Oh et al., 2009).

We have chosen nine other European countries to illustrate the variety of guarantee schemes within Europe: France, the United Kingdom, Turkey, Austria, Czech Republic, Germany, Hungary, Slovakia, Italy. The choice was based on the availability of information on loan and guarantee programmes/funds in the country.

Various aspects of the organisation of loan and guarantee schemes in these countries are discussed below with references to the Polish system.

1. France

Guarantees

Two main guarantee schemes operate in France: (1) a scheme funded with public money and run by the public investment bank Bpifrance and (2) a mutual guarantee fund created with private resources known as Socama. Recently, Socama has also benefited from EU aid within the Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME) programme. In terms of guarantees, Bpifrance covers between 40% and 70% of the loan, while Socama covers 25% of the loan (up to EUR 37.5 thousand) for acquisitions and 50% of the loan (up to EUR 15 thousand) for start-ups. There are a few other differences between the schemes regarding the type of lender. Under Socama, the loan may only be granted by the Banque Populaire, while Bpifrance may guarantee loans of any financial institution in France. Moreover, Bpifrance does not only provide a guarantee for the expansion of a company but also for other goals: prepayments for international contacts, innovation, acquisitions, start-ups, credit restructuring and agricultural businesses.

Loans

The role of the organisation supervising the support system in France is played by a government organisation, the development bank – Bpifrance – which was set up in 2012. It combines the activities of several organisations: OSEO, CDC Entreprises, FSI and FSI Régions, which functioned earlier. This organisation does not have the status of a commercial bank. It only provides financial services to small and medium enterprises: it grants guarantees, subsidises bank loans, acts as an intermediary in contacts between entrepreneurs and banks in order to obtain required financing for companies on favourable terms. Bpifrance has branches in every region of France, and its offer is tailored to the requirements of entrepreneurs and the conditions of availability of financing in the region. Only banks could provide loans to other entities in France until 2019 when national regulation was altered. This change will influence the French market in the future, and probably more players providing loans will appear on the market. Initially, in 2013, the first French Insurance Code was amended that permitted insurance companies to provide loans to SMEs either directly or through funds for loans supporting the economy.

Two major initiatives supported or recognised by the EU in France are the Réseau Entreprendre and Initiative France. The Réseau Entreprendre supports mainly new enterprises. The start-ups can receive interest-free unsecured loans

of EUR 10–50 thousand. In 2018 the average loan was EUR 29 thousand.¹ Loans are provided to strengthen capital and promote business creation and recovery. Businesses are eligible during initial start-up and within the first few years that the business is operating. Using EU structural funds and national sources of funding, start-up and early-stage businesses can access start-up and seed funding of between EUR 15–50 thousand.

Initiative France² is a network association that finances and supports business start-ups, especially set up by women, service companies and small enterprises. The network uses the unpaid work of business representatives, experts and others. The network which was created in 1985, now includes 217 platforms with 17,325 companies financed in 2018 and more than 45,000 jobs generated in the first year, with nearly 960 employees and 16,600 volunteers mobilised, Initiative France is the leading associative network for financing and supporting the creation/take-over of companies in France.

2. United Kingdom

Guarantees

In the UK, the Small Firm Loan Guarantee (SFLG) programme was launched in 1981 (Cowling et al., 2018). The guarantee covered up to 75% of the loan, and the borrower paid a 2% premium over the commercial bank rate. The SFLG provided, on average, 4,500 guarantees annually. A five-year rule was introduced between 2005 and 2008. During that time, only businesses operating for less than five years on the market with a turnover of less than GBP 5.6m were eligible for a guarantee of up to GBP 250 thousand. After the number of guarantees dropped significantly by 60.5% between 2005 and 2008, the government decided to abolish the five-year rule and raise both the size of company limit (turnover up to GBP 41m) and the size of the guarantee (to GBP 1m) (Cowling et al. 2018). The SFLG was subsequently replaced by the Enterprise Finance Guarantee Scheme (EFGS). Under this scheme, loans are guaranteed by the Department for Business, Innovation and Skills via banks and the decision on the guarantee is made by the lending bank. In 2009 the SFLG was replaced by the Enterprise Finance Guarantee programme (EFGP) implemented through non-bank institutions such as Black Country Re-investment Society, Business Enterprise Fund, Princes Trust, or Let's Do Business

1 See more <https://www.reseau-entreprendre.org/fr/entreprendre/reussir-sa-creation/financement/> (Accessed December 1, 2019).

2 See more <http://www.initiative-france.fr/Decouvrir> (Accessed December 1, 2019).

(South East). The Capital for Enterprise Ltd. managed the programme until 2013. In 2013 the Capital for Enterprise was acquired by the British Business Bank which is now responsible for the EFGP on behalf of the Department for Business, Innovation and Skills.

Entrepreneurs can obtain loans for business establishment, expansion, and covering contribution to subsidised projects. The decision to accept an application for additional loan collateral in the form of a government guarantee is taken by the bank providing loan. The entrepreneur's contribution may not be lower than 25%. All the above organisations offer, apart from loans and grants, advisory services. The programme has provided 21,470 loans between 2009 and 2014 under government guarantees worth GBP 2.192bn and an average loan of GBP 102.1 thousand. The participating bank grants the guarantees, so the SMEs do not apply for the guarantee in a guarantee organisation.

Loans

Currently, in the UK the European Investment Bank provides loans distributed by the Santander Corporate Bank and the Royal Bank of Scotland. Another source of subsidised loans is Start Up Loans (SUL) programme,³ launched in 2012 for young entrepreneurs from England aged 18–30 who run their own businesses for a maximum of 12 or 24 months (in some cases). The programme manager is the organisation called Start Up Loans Company established by the Department of Entrepreneurship, Innovation and Science. The average loan does not exceed GBP 7.5 thousand with a maximum loan of GBP 25 thousand. Loans are granted for a maximum of five years. A wider range of businesses, including those based in Scotland, Wales and Northern Ireland were included in the programme in 2013, and the age limit was lifted. The SUL has supported more than 60 thousand of businesses and lent more than GBP 460m between 2012 and 2019.

3. Turkey

Guarantees

In Turkey, the guarantee scheme is less effective than the schemes in France or the UK, measured by the default rate and the leverage ratio (Tunahan, Dizkirici, 2012). The German Federal Government laid the foundations for a Turkish guarantee

3 See more <https://www.startuploans.co.uk/> (Accessed December 1, 2019).

scheme to curb the influx of Turkish economic migrants to Germany. The Credit Guarantee Fund (CGF) received a grant of one billion TL from the Turkish government in 2008 to reduce the effects of the financial crisis and encourage the fund to grant long-term guarantees. In order to increase the capital of the CGF, banks and leasing institutions were invited to become its shareholders. As a result, the number of shareholders reached 25, with a majority share of the Treasury. CGF offers guarantees of up to 80% of the loan for companies with a turnover of less than USD 14m operating in all sectors and accepts applications from new businesses. Twenty percent of the capital is kept as restricted funds by the bank. The default rate was between 5.6% and 7.2%. For private bank loans the default rate is much lower, which may support the thesis that private capital is a significant factor in effective risk assessment (Beck et al., 2010). Another institution providing guarantees to micro-sized SMEs operating in the trade and craft sectors is the Tradesmen and Craftsmen Credit and Collateral Cooperatives (Esnaf ve Sanatkarlar Kredi ve Kefalet Kooperatifleri – ESKKK). The ESKKK offers 100% collateral for the Treasury-supported state bank Halkbank's loans. It is the example of mutual guarantee fund that is created by 1.5 million tradesmen and craftsmen, shareholders and users of the aid provided by ESKKK (Yağcı, 2018).

Loans

In Turkey, only banks may offer financial services such as deposits and loans. There are several initiatives taken by private and state lenders. Thirteen banking institutions signed the agreement with the government and launched the programme for SMEs in 2019. Companies which have an annual turnover of less than TL 25m (USD 4.6m) can receive a six-month non-refundable loan package with a 1.54% monthly interest rate. Producers and export companies will receive 1 million liras of a loan, and other firms will receive 500,000 liras.⁴ Turkish banks also cooperate with the EBRD and the EIB. The EBRD provided EUR 15m in direct financing to SMEs in Turkey and over EUR 78.6m through partner financial institutions in 2018 alone.

4 See more <http://www.hurriyetdailynews.com/turkish-banks-to-support-smes-with-3-7-billion-loan-package-140427> (Accessed December 1, 2019).

4. Austria

Guarantees

In Austria, guarantees for small and medium-sized enterprises, venture capital and loans are provided by Austria Wirtschaftsservice GmbH (AWS). This institution, supported by the Austrian government, also provides non-financial support to entrepreneurs, organises training and provides advice. AWS guarantees cover up to 80% of credit or loan up to EUR 2m and are granted for a maximum of five years. For persons starting their business activity, the guarantee may not exceed EUR 480 thousand. Capital for guarantee activities comes from the state budget and is supported by counter-guarantees from the EIB.

Another institution is Forschungsförderungsgesellschaft GmbH (FFG) which operates at the regional level to initiate innovation, research and development activities by offering grants, guarantees and consultancy services to entrepreneurs. The organisation provided EUR 532m in support to SMEs in 2012.

Small and medium-sized enterprises are also supported by organisations set up by banks, such as the Österreichische Hotel-und Tourismusbank GmbH (ÖHT) which helps tourism enterprises by offering guarantees. ÖHT guarantees are backed by the government (OECD, 2013b). Österreichische Kontrollbank AG (OeKB) offers financial and advisory assistance to export companies.

Loans

The Österreichische Hotel-und Tourismusbank GmbH (ÖHT), supports tourism enterprises, among others by offering loans and government subsidies, as well as non-financial support. The government covers 2% of the interest on the loan for loans in the range of EUR 1–3m, and for loans in the range of EUR 3–5 million, the grant is divided in half between the central and local governmental levels. In 2012, ÖHT granted loans amounting to EUR 134.5m (OECD, 2013b).

An organisation providing financial loans on preferential conditions is the ERP (European Recovery Programme⁵) Fund established in 1962 with US aid to Austria and offering loans to entrepreneurs using new technologies or implementing research results. The money was located in the Australian Bank. These loans have lower interest rates than bank loans. The ERP Fund has launched a micro-credit programme for entrepreneurs seeking funding of less than EUR 100 thousand. Loans of an annual value of \$356 million from the Austrian ERP Fund are distributed by trust banks. They are both guarantors and payers in favour of the ERP Fund.

5 Later known as the “Marshall Plan”.

5. Czech Republic

Guarantees

The Czech-Moravian Guarantee and Development Bank (Českomoravská záruční a rozvojová banka, a. s. – ČMZRB)⁶ was established by the Czech government to enable the implementation of economic development policies, including the introduction of financial instruments to stimulate entrepreneurship. Entrepreneurs can receive the support of ČMZRB in the form of guarantees or loans. Financial instruments are not granted directly by a bank, but through financial institutions in the country. ČMZRB is the fund manager. The value of guarantees granted by ČMZRB in 2018 amounted to CZK 11.04bn. The organisation was implementing three programmes in 2018:

- (a) GUARANTEE 2015–2023 Programme with a portfolio guarantee for bank loans up to CZK 4m. Small and medium-sized enterprises can receive up to 70% of the loan principal, and social SMEs can get an individual guarantee for bank loans up to as much as 80% of the loan principal, with the maximum guarantee amount of CZK 20m, including a financial contribution of 10% of the guaranteed loan amount drawn for eligible costs up to a maximum of CZK 500 thousand. The GUARANTEE 2015–2023 Programme is co-financed from the European Investment Fund under the COSME programme.
- (b) INOSTART Programme – a guarantee for bank loans for start-up small and medium-sized enterprises implementing innovative projects anywhere in the Czech Republic, for loans up to CZK 15m and up to 60% of the loan principal.
- (c) VADIUM Programme – a guarantee for tender bids for small and medium-sized enterprises in the amounts from CZK 50 thousand CZK 5m.

Before 2013, two other guarantee schemes programmes were offered through ČMZRB: STRAR and ZARUKA. Both programmes were run within Operational Program Enterprises and Innovation (OPEI), which was funded from the European Regional and Development Fund (ERDF) during the programming period 2007–2013. The total amount of public resources used for the programmes was 164 mil. EUR, making 4.4% of the whole amount distributed through the Operational Program Enterprises and Innovation.⁷

6 See more https://www.cmzrb.cz/wp-content/uploads/2019/05/CMZRB_VZ_2018_ENG.pdf?rc (Accessed December 1, 2019).

7 More information on the impact of the programmes in the paper Dvouletý et al. (2019, pp. 1–20).

The Czech Export Bank (CEB) and the Export Guarantee and Insurance Corporation (EGIC) support entrepreneurs through various financial instruments. Both organisations were established by the Czech government to support the export and promotion of Czech products abroad. The CEB offers guarantees to exporters and subcontractors of export companies. It received a recapitalisation of almost CZK 3bn from the state budget in 2010. EGIC⁸ offers guarantees for export contracts, loans, investments and operating activity. The State Treasury holds 100% of shares in both the above-mentioned entities. The value of guarantees given by EGIC with state support amounted to CZK 35.8bn in 2018.

Loans

Entrepreneurs can receive the subsidised loans granted by Czech-Moravian Guarantee and Development Bank through different financial institutions in the country. Various types of subsidised loans were on offer in 2018, but generally they were interest-free. Financial instruments are granted under *de minimis* aid. Within the programme, the Bank cooperated mostly with Česká spořitelna, a.s., Komerční banka, a.s., and Československá obchodní banka, a.s. The value of loans granted in 2018 amounted to CZK 17.26bn. The European Investment Bank, the state budget and the State Fund for Transport Infrastructure provided capital for these loans.

Czech Export Bank (CEB) offers loans with Export Guarantee, and Insurance Corporation guarantee to exporters and subcontractors of export companies.

6. Germany

Guarantees

The guarantees are granted by The Kreditanstalt für Wiederaufbau's ERP (European Reconstruction Programme) under the European Community's Competitiveness and Innovation Framework Programme and supported by the European Fund for Strategic Investments. The guarantee can cover up to 80% of the loan for a period of 5 or 10 years. The loan can reach EUR 100 thousand and be spent on capital expenditure or working capital, but the share of working capital in total expenditures is limited to EUR 30 thousand. The application is submitted in a house bank.

8 See more <https://www.egap.cz/en/identification-data> (Accessed December 1, 2019).

Loans

In Germany, the development banks (Förderbanken), also called promotion banks, play the most important role in improving SMEs access to finance (*Department for business...*, 2016). The most active is the KfW-Group, the German government-owned promotion bank that implements most of the programmes of support for SMEs. SMEs apply for funding in local house banks (i.e. the banks that they have accounts with), not directly in promotion banks. The house banks⁹ guarantee the firm's loan provided by the promotion banks. The loans of up to EUR 25m can be granted for the period up to 20 years and spent on capital expenditure and working capital. The loan interest rate is more favourable than for a conventional bank loan, and it may be fixed for up to 10 years, or even for the entire term.¹⁰

7. Hungary

Guarantees

Guarantees in Hungary are granted by the organisations controlled by the government – Garantiqa Hitelgarancia Ztr. (GHZ) and Agricultural Loan-Guarantee Foundation (ALGF). The GHZ was founded in 1992 by the Hungarian state, the largest domestic commercial banks, savings banks, and business organisations. Since its foundation, it granted almost 400 thousand guarantees in an amount of nearly HUF 5,000bn. The active guarantees of GHZ in 2017 amounted to HUF 650bn with an expected amount of HUF 1,000bn in 2021.¹¹ The guarantees are granted through banks. SMEs receive counter-guarantees for up to 85% of the loan from the government (OECD, 2013). The Agricultural Loan-Guarantee Foundation was created in 1991. It grants guarantees to micro, small and medium-sized enterprises which operate in the agricultural sector or whose activity is related to rural areas.¹² The guarantee can cover up to 80% of the loan. The minimum maturity is 91 days, and the maximum is 25 years. The maximum amount of guarantee is EUR 2.5m.¹³

9 the bank where the SME has a bank account.

10 See more <https://www.kfw.de/inlandsfoerderung/Companies/Founding-and-succession/> (Accessed December 1, 2019).

11 See more <https://www.mfb.hu/en/mfb-group/garantiqa-creditguarantee-co-ltd-s1822> (Accessed December 1, 2019).

12 See more <https://avhga.hu/en/about-the-foundation/> (Accessed December 1, 2019).

13 See more <https://avhga.hu/en/guarantee/> (Accessed December 1, 2019).

Loans

In 2002 the National Association of Entrepreneurs and Employers (Vállalkozók és Munkáltatók Országos Szövetsége) and the Hungarian Chamber of Commerce and Industry (Magyar Kereskedelmi és Iparkamara) implemented the Széchenyi Card Programme. Later, three other programmes were created: the Current Assets and Investment Loan Structures in 2010, and the Széchenyi Intermediate Supplementary Loans as well as the Széchenyi Aid Advancing Credit in 2012. Loans are distributed through nine participating banks, and the state subsidises the interest rates. Entrepreneurs can receive loans of up to HUF 100m (approx. EUR 320 thousand) in 2017 for two years.¹⁴ Apart from the abovementioned institutions, also the Hungarian Development Bank provides own loans and loans from the EIB through commercial banks.

8. Slovakia

Guarantees

Two state-owned banks: the Slovak Guarantee and Development Bank (Slovenská záručná a rozvojová banka, a.s. – SZRB) and the Eximbank (Eximbanka sr.) provide guarantees and loans for SMEs in Slovakia. The guarantees issued by the SZRB reached the level of EUR 87m in 2017.¹⁵ Eximbank helps SMEs running export and import activity.¹⁶ It offers a wide range of financial products: direct loans or guarantees, insurance, counter-guarantees or the combination of them. The guarantees and insurances cover different types of risk, i.e. the risk of non-payment of receivables by the foreign buyers.

14 See more <https://www.eurofound.europa.eu/sr/observatories/emcc/erm/support-instrument/szechenyi-card-programme> (Accessed December 1, 2019).

15 See more <https://www.webnoviny.sk/vofinanciach/slovenska-zarucna-rozvojova-banka-ku-koncu-marca-ziskom-cez-2-mil-eur/> (Accessed December 1, 2019).

16 See more https://www.eximbanka.sk/en/english/products/banking-products/payment-bank-guarantees.html?page_id=183295 (Accessed December 1, 2019).

Loans

The Slovak Guarantee and Development Bank also offers loans to SMEs that receive negative credit decision of the commercial banks due to short business history or insufficient collateral. The SZRB then acts as a complementing bank to support SMEs in need and reduce the capital gap.¹⁷ The SZRB granted loans which amounted to EUR 306m in 2017.

9. Italy

Guarantees

Unlike Germany or the Czech Republic, the responsibility for implementing the policies in Italy rests upon a number of institutions. Guarantee schemes are the instrument more frequently used to support Italian SMEs than direct loans (OECD, 2013).

The Central Guarantee Fund (CGF) is responsible for the implementation of the central government guarantee schemes for SMEs. Within this scheme, guarantees are provided for both for bank loans or non-bank loans. The Central Guarantee Fund also grants the counter-guarantees for CONFIDI (please see below) and other guarantee funds. To apply for a guarantee of the Guarantee Fund, SMEs have to address their own bank or CONFIDI. These organisations submit the application to the Guarantee Fund, which reaches the final decision within one working week.

The second organisation that plays an essential role in issuing guarantees to SMEs is the association CONFIDI acting on the mutuality and cooperation basis. The name of CONFIDI is an acronym for “consorzio di garanzia collettiva dei fidi [collective credit guarantee consortium]”. It grants guarantees to businesses for the medium and long term for investment and working capital loans. The guarantee covers up to 50% of the bank loan. CONFIDI has three regional branches. It is divided into five divisions serving several sectors: industry, the small-scale industry, craftsmanship industry, trade and services.

17 See more <http://www.nefi.eu/our-members/slovakia-szrb/> (Accessed December 1, 2019).

Loans

Cassa Depositi e Prestiti (CDP) is a joint-stock company under public control. The Ministry of Economy and Finance and the Treasury holds 84.07% of shares and a broad group of bank foundations holding 15.93% of shares. It provides loans at reduced interest rates to SMEs through commercial banks and venture capital. The total value of the agreements for venture capital and loans signed by the CDP in 2014 exceeded EUR 6bn. The main source of financing for the CDP's activities is savings of the Italians – postal savings.

10. Comparative analysis of guarantee and loan schemes in Europe

Beck et al. (2010) observed a significant variation in organisational features of credit guarantee schemes across and within countries all around the world. They distinguished three main types of guarantee funds following the criteria of their structure and ownership: Mutual Guarantee Associations (sometimes called Societies), Publicly Operated National Schemes and Corporate Associations. Mutual Guarantee Associations are organisations most often founded in the form of associations of businesses from a given region or industry that grant guarantees to loans issued to their 'members'. Such guarantees are sometimes co-financed by central or regional governments. Mutual Guarantee Associations (or Societies) widely operate in Italy (Columba et al., 2009). Subsidised loan guarantees within Publicly Operated National Schemes are not provided by specially created organisations but are distributed by banks. This form of state aid is widely used in Germany and the Czech Republic (Dvouletý et al., 2019). Corporate Associations are organisations set up and, in most cases, funded and operated by private businesses. Guarantee funds in the form of corporate associations operate in Austria and Poland.

Table 12 below provides an overview of the types of guarantee schemes in the analysed countries.

Table 12. Types of guarantee schemes

Country	Organisation				Distribution	
	Public separate entity	Publicly Operated National Scheme	Private organisations (associations)	Mutual Associations	direct contact with SMEs	indirect contact with SMEs (by other institutions)
Poland	x		x		x	x
France	x			x		x
United Kingdom		x				x
Turkey	x					x
Austria	x		x		x	
Czech Republic	x					x
Germany	x					x
Hungary	x		x			x
Slovakia	x				x	
Italy	x			x	x	x

Source: prepared by the authors.

In Poland, there exists a hybrid model of guarantee schemes. There are (1) Publicly Funded National Schemes (2) and Corporate Associations, but also (3) non-profit organisations (NGOs) are engaged.

In most countries, the public body is responsible for granting guarantees directly or through other financial institutions. In these countries, the guarantees are granted indirectly. However, in two countries, two types of distribution of guarantees can be observed (Italy and Poland). In Germany, the house bank rule excludes the possibility to grant guarantees directly to SMEs.

Table 13 below provides an overview of the types of loan schemes in the analysed countries.

Table 13. Types of loan schemes

Country	Organisation				Distribution	
	Public separate entity	Publicly Operated National Scheme	Private organisations (associations)	Entrepreneurs' associations	direct contact with SMEs	indirect contact with SMEs (by other institutions)
Poland	x		x		x	
France	x		x	x	x	
United Kingdom	x		x			x
Turkey		x			x	
Austria	x		x		x	
Czech Republic	x				x	x
Germany	x					x
Hungary	x	x			x	x
Slovakia	x				x	
Italy	x				x	

Source: prepared by the authors.

In most countries, apart from the institutions offering guarantees or loans, there are also so-called fund managers (state units or banks). Fund manager allocates European funds to granting institutions (banks, loan and guarantee funds). In some countries, the European Investment Bank is a fund manager, while in other countries, regional banks play this role. The transfer of EU funds directly to organisations granting guarantees may occur to be problematic in some cases it occurs to be difficult or even impossible to relocate funds from one fund to another or between instruments, the costs of control or management costs may be perceived as too high. In Poland, the role of the fund manager is carried out by Bank Gospodarstwa Krajowego (BGK). However, BGK acts both as a manager and an organisation providing guarantees through banks (portfolio guarantees). It also grants direct loans. At the same time, there are loan and guarantee funds, independent of the BGK which receive money through BGK or use their own financing or financing from the private sector or local governments. As mentioned in chapter III this leads to a situation where the regional guarantee funds treat the BGK as a competitor. A similar situation exists in Italy, where both private regional

guarantee funds (in the CONFIDI network) and a public sector entity (The Central Guarantee Fund) operate.

In some countries such as Germany, the Czech Republic, the United Kingdom and Hungary, the loans under the support programmes for SMEs are granted by banks. In Hungary, SMEs may apply for the refund of part of the interest on commercial loans, thus eliminating the barrier to finance for SMEs caused by the high cost of capital. Banks can be better financial intermediaries in providing financial instruments to both entrepreneurs and business start-ups due to their greater experience in debt collection. However, in many countries, including Poland, the reluctance of private financial institutions to be under the control of governmental organisations is an obstacle in playing an active role in the distribution of public funds to support SMEs.

Chapter V

Performance of loan and guarantee funds in Poland – an approach to assessment and evaluation

1. Dimensions of performance and research questions

Performance is a broad and multifaceted concept (Kaplan, Norton, 1996; Richard et al., 2009). Traditionally performance of financial institutions is perceived through the lens of the return from invested capital and risk associated with the lending policy (Froot, Stein, 1998). In the case of loan and guarantee funds, which are discussed in this book, the criteria for performance assessment need to go beyond the purely financial performance in order to better reflect the nature and objectives of these institutions.

The first consideration which needs to be taken into account is that the loan and guarantee funds are mostly not-for-profit entities. What is more, they operate using different combinations of private and public financing. In that respect, the performance of these institutions should be evaluated mainly basing on the criteria which relate to the issue of the funds' stability as well as to their ability to ensure the efficient use of public funds and of achieving the designated policy objectives.

Regarding the stability of the funds, it stems from the idea of self-financing of loan and guarantee funds. Stability is negatively affected by the wrongly granted loans and guarantees, lack of money needed to grant new loans and guarantees, inability to cover the costs of functioning as well as high indebtedness. Stability is measured by the percentage of lost loans or guarantees paid, high negative losses, high debt ratios and low level of cash and cash equivalents.

Regarding the efficient use of public funds and contributing to achieving public policy objectives, it needs to be emphasised that the availability of public

guarantees or loans may encourage borrowers to take too high risks. Given that, the responsibility of managers of guarantee or loan funds is to maintain the incentives to monitor projects efficiently and to prevent the borrowers from excessive risk-taking (Anginer et al., 2014). Similarly to the stability of the funds, this dimension of efficiency of these institutions is best assessed with the level of not returned loans or paid guarantees.

Assessment of loan or guarantee funds' performance may also be approached, taking into account such factors as the macroeconomic situation or the operational aspects such as management quality or internal procedures used in these entities. Following this, we argue that the performance also depends on the business models (and their building blocks) of loan and guarantee funds. We follow the results of the research of Weill et al. (2006) and Zott and Amit (2007) that show that differences in the business models impact the performance of organisations using it.

Summarising, the performance of loan and guarantee funds may be evaluated in four dimensions (Vienna Initiative, 2014):

1. **Outreach** – the ability of the fund or scheme to meet the demand for its services. Usually, the measures which are used in this dimension include the number or the value of granted guarantees or loans as well as the value of the funds' capital.
2. **Financial sustainability** – the assessment of the funds' liquidity and their capacity to cover their expenses with revenues. The dependence on public support may be also be measured in this dimension.
3. **Financial additionality** – it is the value of lending that SMEs would not have received without the guarantees or the value of private resources involved in the investments realised as the result of loan or guarantee scheme implementation.
4. **Economic additionality** – it reflects the contribution of loan and guarantee schemes towards economic welfare: increasing the employment, investments, and generating innovations.

The last two dimensions relate to the loan and guarantee funds' capacity to contribute to the achievement of public policy objectives. The measurement of impacts and evaluation of performance may prove extremely difficult in both these dimensions, however. Usually, various different determinants and factors influence the observable outcomes, and it is not always possible to extract the influence of any one of them. Bradshaw (2002) measured the employment in the companies before they used guarantees and after that time. According to his results, the guarantees allowed the companies to receive loans and increase employment (in a number of employees, not full-time equivalents). However, Bradshaw did not consider the cost to implement the guarantee scheme and the sustainability of the employment and differences between salaries of individual employees, positions and type of employment contacts.

As the research conducted by Vienna Initiative Working Group on guarantee schemes reveals, the guarantee funds usually use performance measures which are relevant to the outreach dimension to evaluate their performance. Other performance indicators, corresponding to financial sustainability, economic or financial additionality are used much less frequently and mostly by external evaluators.

The following sub-chapters have been devoted to answering research questions referring to the performance of guarantee and loan funds in Poland:

1. What is the relationship between the level of regional development and the performance of guarantee funds in Poland?
2. How do different elements of business models affect the stability of loan and guarantee funds in Poland?
3. How do different elements of business models affect the default rate of loan and guarantee funds in Poland?

2. Guarantee funds' and loan funds' performance in the context of regional development level

The measurement of the regional development level is typically carried out in the economic and social dimensions, although it is not uncommon to include also an environmental and infrastructural dimension (Mally, 2018) or an institutional capacity dimension (Jovovic et al., 2017). Varying indicators can be used in each of the dimensions, depending – amongst other reasons – on data availability. The first of the analyses presented in this book concentrates on the performance of loan and guarantee funds in the context of regional development. The measurement of the loan and guarantee funds' performance reflects the decisions of entrepreneurs or future entrepreneurs – loan and guarantee funds' performance is measured with their revenues, profits, number and value of loans or guarantees. At the same time, the regional development levels are measured, independently, with three indicators differing in scope and depth:

- The first one – RDI (E) – is based on just one variable which belongs to the **economic** dimension – the value of fixed assets per capita (Mally, 2018). We assume that the value of fixed assets determines the demand of SMEs for guarantees provided by guarantee funds. The RDI (E) indicator was calculated for all (sixteen) regions in Poland between 2013 and 2018.
- The second one – RDI (E-S) – is based on four variables which belong to the **economic** and **social** dimensions. The economic dimension is reflected, as previously, by the value of fixed assets per capita in the region (Ritsila, 2010). The social dimension is also covered by two variables: the registered

unemployment rate (Ziedina, Pelse, 2017) and the average salary (Koisova et al., 2018). The RDI (E-S) indicator was also calculated for all regions in Poland between 2013 and 2018.

- The third one – RDI (E-S-E-I) – is based on seven variables which attempt to reflect all four dimensions of regional development: **economic, social, environmental (infrastructural)** as well as **institutional**. The economic dimension is reflected by the two variables also used for the RDI (E-S) indicator, which were modified to the value of fixed capital *per capita* in the region (Zalewski, 2000). The social dimension was also modified to include the registered unemployment rate and the average monthly disposable income *per capita*. The environmental and infrastructural dimension was reflected by two variables: the share of protected areas in the total area of the region and the saturation with expressways and highways (per 1,000 square kilometres). The institutional capacity dimension was reflected by one variable: the number of public benefit organisations per 1,000 inhabitants. Following the update and modification of some of the variables which were used earlier and the addition of new ones, the RDI (E-S-E-I) indicator was calculated for all regions in Poland between 2013 and 2018 (this stage of the analysis was completed towards the end of 2019) (Michalak et al., 2020).

In order to evaluate the financial results and performance of loan and guarantee funds we used data from financial statements of 31 guarantee funds and 24 loan funds for the period between 2013 and 2018 (i.e. all the funds that submitted their financial statements to the National Registry in Poland for those years). The financial statements were all purchased from the Infoveriti Database.¹

Following data collection, the panel regression analysis was conducted for variables reflecting both financial and non-financial dimensions of loan and guarantee funds' performance and composite regional development indicators. We used the following measures of the performance of loan and guarantee funds in two dimensions (described in the previous sub-chapter):

- (1) **Outreach dimension** –the number (log) or the value of granted guarantees or loans (log),
- (2) **Financial sustainability dimension** –revenues (log), cost/revenues ratio, capital (log).

The results obtained with the use of RDI were compared to the results obtained for the HDI (Human Development Index), that has become one of the most often used indicators to measure and compare country's development, as a robustness check. The Human Development Index, developed by Mahbub ul Haq, Gustav Ranis and Meghnad Desai (Davies and Quinlivan, 2006), was then used by the United Nations Development Programme (UNDP)'s Human Development Report Office to measure and compare country's development. It covers

¹ Web address: <http://www.infoveriti.pl/>

three main dimensions of development: (1) standard of living, (2) education and (3) health and longevity.

The study showed that guarantee funds provide the most guarantees and the highest value of guarantees in underdeveloped regions, which is in line with the assumptions of creating a credit guarantee fund system. However, only the two regional development indicators turned out to be statistically significant: the average value of fixed assets per capita in a given region and RDI (E-S) based on four variables which belong to the **economic** and **social** dimensions. The remaining two indicators, RDI (E-S-E-I) and HDI were not statistically significant.

As the Table 14 presents, the best financial results measured by the level of total revenues were achieved by guarantee funds in less developed regions (according to the all dimensions) which may be a result of higher grants received by the funds and higher commissions and fees from entrepreneurs (resulting from higher credit risk assessment). The previous chapters of the book indicate the allegations relating to the requirement for loan and guarantee funds to support specific groups of recipients (e.g. the unemployed or those implementing specific projects) with public funding. The lack of possibility to adjust the offer to the demand may result in a decrease in the effectiveness of using EU funds.

The loan funds' results, on the other hand, do not depend on the regional levels of development. Qualitative research (content analysis) indicates that loan funds, as opposed to guarantee funds, are more diversified in their business and are active inter-regionally. Often some of these organisations operate in several regions at the same time, provide different financial instruments and are more financially independent (from public support) than guarantee funds. We have also found a correlation between the additional activities of loan funds for enterprises, such as space rental, accounting, consulting, training, business incubator and the level of regional development. In more developed regions where loan funds operate in technology parks and incubators, where loans are not a basic product offered to companies, they can provide fewer financial instruments for the benefit of other services.

The above analysis leads to the conclusion that the European Union and government support may be necessary and expected to maintain the financial stability of guarantee funds. The higher number and value of guarantees in less developed regions do not have to provide higher revenues from primary and financial activities. It can create the demand of guarantee funds for the support of the EU and the government. In the next subchapter, we will try to explain the factors influencing the stability of loan and guarantee funds. One of them will be grants from public sources (including the EU). Determining the impact of grants on the financial and non-financial performance of loan and guarantee funds will help to determine the expected scale of public support for these organisations.

Table 14. Panel regression analysis results in financial and outreach dimensions of loan and guarantee funds' performance for composite regional development indicators as independent variable

		Dependent variables				
		Revenues (log)	Cost ratio	Capital (log)	Value of guarantees/ loans (log)	Number of guarantees/ loans
Independent variables for guarantee funds	RDI (E-S-E-I)	-1,63327 *** (0,531476)	0,581578* (0,331303)	-0,657354 (0,480554)	-0,633795 (0,999434)	-1,27349 (1,02354)
	RDI (E-S)	-2,12548*** (0,445752)	0,603557 (0,501180)	-0,701823** (0,315128)	-1,82038** (0,701822)	-1,73465** (0,638471)
	RDI (E)	-1,54687*** (0,204948)	0,631650 (0,428639)	-0,424466** (0,158895)	-1,38325*** (0,387197)	-1,13304*** (0,399303)
	HDI	7,49934 (4,40395)	-4,71260 (4,51340)	-0,313361 (4,38824)	-6,15953 (5,73185)	-8,50277 (5,20111)
Independent variables for loan funds	RDI (E-S-E-I)	0,746289 (0,698035)	0,243181 (0,249828)	0,506950 (0,666548)	-0,00321134 (0,653165)	1,21774 (0,725612)
	RDI (E-S)	0,236525 (0,372823)	0,0773865 (0,138748)	0,551764 (0,392961)	0,299593 (0,367195)	0,731845 (0,484595)
	RDI (E)	-0,189633 (0,400527)	0,0941310 (0,0983340)	-0,135671 (0,294924)	-0,00876393 (0,378575)	-0,0467384 (0,520444)
	HDI	5,81650 (4,46554)	0,369046 (0,870654)	4,15755 (3,10500)	2,50451 (3,02029)	8,34475** (3,65616)

(+ for positive relation, - for negative relation)

* significance level of 0.1

** significance level of 0.05

*** significance level of 0.01

Source: prepared by the authors.

3. Stability of loan and guarantee funds

Guarantees and loans are financial instruments to support the small and medium enterprises, influence credit allocations and support the SMEs' financial stability in the long term (Schich, Kim, 2011). Approaching the issue of financial stability of institutions providing guarantees and loans, an assumption needs to be made that the institutions created to fulfill macroeconomic goals do not have to be profitable. Investors, in this case, may accept a particular level of losses. However, the maximum

limit for the losses should be defined and controlled. The stability of the loan and guarantee funds translates to their ability to cover losses (represented by guarantees paid or not returned loans) and maintain a capital base necessary to keep the required level of creditability (Vienna Initiative, 2014).

Guarantee funds should be adequately capitalised to create a guarantee portfolio and cover the administrative and other operating costs. Usually operating costs of guarantee funds are higher than fees charged, as the guarantee funds operate as non-profit organisations. In many countries, the fees paid by enterprises do not exceed 2% of the guaranteed loan per year (Deelen, Molenaar, 2004). For some schemes, the fees may be null or do not reflect the risk of the project at all. In some countries, higher coverage (the amount of the loan that is secured with the guarantee) is offered for a project of higher risk (in less developed regions or for companies at an early stage of development). Therefore, additional funding (UE or governmental support) is necessary. However, when the recoveries of the guaranteed portfolio are inadequate, and operating costs are high and unsustainable, the guarantee funds may become no longer viable and too risky partners for banks.

Guarantee and loan funds require substantial investment to form the capital base for future activity. They usually need external aid to cover losses on activity and prevent equity from decline. For guarantees, the net losses on guarantee operations (guarantees paid) must be considered. It is said that guarantees paid in the efficient guarantee funds should be below 2% of the average outstanding guarantee amount per year (Deelen, Molenaar, 2004). If the rate is higher, it may mean that the process of evaluation of clients' financial situation is not appropriate, and the guarantee fund should take actions to improve the results. Otherwise, the guarantee funds may lose their credibility.

The fees charged when issuing guarantees vary depending on the scheme, source of financing of the scheme, level of coverage, time of the guarantee (long or short term), value of the guarantee. In some schemes financed with the EU money, the level of fees is set by the granting institutions, so the guarantee fund cannot adjust the fees to its risk assessment. The fees can not always reflect expected losses, but they should be sufficiently high. If they are not, the additionality of the scheme is not built, because the financial instruments may be attractive for lenders that could get the loan on market conditions (Vienna Initiative, 2014).

There are different reasons outlined in the literature as being responsible for the financial stability of the loan and guarantee funds (Vienna Initiative, 2014). Except for fees, which were mentioned above, the lack or insufficient coordination of guarantee and loan funds operating in one country may cause inefficiency of the entire system and too fierce a competition between various institutions. As for the level of coverage of granted guarantees, it should be between 50% and 70%. Lower coverage may discourage clients from participation in the scheme, while higher coverage may reduce the responsibility of lenders and then increase the losses of the guarantee funds (World Bank, 2013).

The financial stability of the guarantee and loan funds may also be approached as a concept relative to economic rationality – in other words, the ability to achieve the maximum outcomes with a minimum input of resources. Assuming this approach, the objective of these institutions is to minimise the costs of operating activities. According to Cowling and Clay (1995), the loan-guarantee schemes should primarily generate a cost-effective job and wealth generation package and operate at maximum efficiency and effectiveness (Raith et al., 2010).

The effectiveness of organisations providing businesses with financial instruments depends not only on the management of these organisations but also on matching supply and demand for financing. Loans and credit guarantees can be considered as the primary instruments to support enterprises in times or countries where there is a need for external financing. In the opposite situation, assistance from public institutions should include substantive, not financial, support (Ares, 2013).

All publicly funded programmes and initiatives should aim at production and cost-efficiency. While some effects are immediately visible, such as the number or value of loans and guarantees granted, other costs and benefits become apparent in the long term. Cost-effectiveness should be considered as the ultimate result obtained from resources used and should include the costs of preparation, implementation and closure phase.

Generally speaking, there are three dimensions of stability of loan and guarantee schemes which can be distinguished (OECD, 2017):

- **Financial sustainability** – in this dimension we should assess the ability of the programme to cover the costs of its operations and defaults, i.e. guarantees paid or not returned loans to prevent the equity from declining.
- **Financial additionality** – this dimension measures the efficiency with the number or the value of guarantees and loans granted, so with benefits for entrepreneurs.
- **Economic additionality** – the efficiency in this dimension is measured with the economic effects, e.g. to the effects on variables such as employment, turnover, sales and probability of default, which might have been influenced causally by the loan or guarantee.

The research results presented in this book are based on verified performance measures of loan and guarantee funds. We evaluated their efficiency comparing costs with granted financial instruments and their ability to cover the cost with revenues preventing their equity from decreasing. In this way, we estimated their capacity to grant loans and guarantees in the future. To assess the performance of loan and guarantee funds we used data from their financial statements for the years 2015–2018 (in some cases only the data for 2016 and 2017 was available) which are available at the National Registry in Poland. The research was conducted between July 2018 and July 2019.

We formulated two research questions. At first, we want to answer the question *how do different elements of business models* (including the width of the value proposition, the quality of information channels and cooperation with partners or possessed resources) *affect the stability of loan and guarantee funds in Poland?*

In one of the earlier papers (Waniak-Michalak et al., 2018), we concluded that most of the loan and guarantee funds in Poland were liquid, but they suffered from low profitability. The grants were necessary to cover their losses. It means that the activity of these funds may be threatened in case of a limitation of EU financing for the development of loan and guarantee schemes. Moreover, former research results (Waniak-Michalak, 2016) show that such funds in Poland are highly underfinanced – most of them do not have enough resources to function effectively. Receiving the grant by a loan or guarantee fund usually allows to cover a part of administrative expenses, then the profit of the fund may increase, or the loss may be lower. Grants may enable to increase the lending or guarantee activity and in this way raise revenues and profits as a result of the use of effects of scale.

As grants for loan and guarantee funds are an important source of financing we posit, that the value of the UE aid should influence the number of the value of financial instruments granted. Public funds received by loan and guarantee funds may attract other private sources of financing and increase the bank's trust to the instruments granted by guarantee funds. The public funds (i.e. EU grants) may convey a positive signal on the financial situation of the funds and in this way reduce a risk of the private investor (Columba et al., 2010).

Recent research results suggest that loan or guarantee funds use government grants to finance their activity can have a higher risk of default. At the same time, private financing may force managers of these funds to use the money in a more efficient way (Kuo et al., 2011). Also, if private institutions are shareholders of a loan or a guarantee fund, they may help it to achieve better financial performance (revenues and current ratio) as a consequence of support provided by the private shareholder like advisory, promotion of the fund activity, additional inflows of the capital. Share of private investors in the capital of the fund may influence positively the number of loans granted. It may result from the marketing support of the private shareholders for the fund. Very often, clients of the banks that didn't go successfully through the creditworthiness assessment process are sent to the cooperating guarantee fund. The facts encouraged us to consider cooperation with private investors as one of the key business model elements influencing the stability of loan and guarantee funds.

Funds that operate within a technological park have a higher probability of finding borrowers (beneficiaries) among the users of the technological park. Therefore, the revenues should be higher for these funds. In the same way, we can explain the correlation between consulting services and revenues of the loan and guarantee funds. Consulting services provided by the guarantee or a loan fund may be a factor influencing the number of granted financial instruments positively. The loan or guarantee funds may find borrowers among SMEs managers using consulting services. However, a form of a technological park may be an obstacle for granting a high number of loans. We posit that beneficiaries of technological park services desire a different form of financing, which is of higher value than loans and comes from alternative sources like venture capital funds of business angels.

The access of SMEs to information on loans or guarantees (on the website) should influence positively the revenues of the funds and the number of instruments granted.

The number of loans and guarantees granted could be increased with the use of the following tools: a profile on Facebook and a website of the fund. The fee levels for loans and guarantees discourages entrepreneurs from taking big loans, so the fee levels should be positively correlated with the number of loans and guarantees but negatively correlated with their value. Fundusz Mikro, one of the most active loan funds in Poland, is an example of such a situation. It provides mostly small loans with the interest rate for the loans 1.5 times higher than the interest rate in a bank.

The last research question which we tackle is ***how do different elements of business models affect the default rate of loan and guarantee funds in Poland***. Previous studies (Beck et al., 2010) show that the age of a guarantee fund is positively associated with the default rate. We posit that the availability of human resources and sources of financing is important. Guarantee funds using grants may be less stressed to manage the funds effectively. Lack of a sufficient number of employees is often an obstacle to verify applications of SMEs thoroughly. We measure the default rate of guarantee funds as a share of paid guarantees in a number or value of active guarantees. We also decided to include the losses of loan funds in the analysis. We calculate the level of loss of loan funds using data from their financial statements on write-offs of financial assets. We also propose that number of employees and their remuneration may influence the level of paid guarantees significantly and not returned loans. If the funds have an insufficient number of employees, less attention may be paid to assess the creditworthiness of the client and control over the loan or guarantee.

The stability measures of loan and guarantee funds we assessed through the following measures of their activity:

- quick ratio;
- cash ratio;
- cost ratio (cost/revenues);
- cost of financial instruments (cost/number of guarantees or loans).

The following variables were used as representations of various dimensions of business models:

- providing other services and performing other activities apart from loans and guarantees such as consulting services, running a technological park etc. (a binary dummy variable);
- loan or guarantee (a binary dummy variable);
- visibility in Web (number of search findings in the Google search engine);
- assessment of the website of the loan and guarantee fund;
- presence in social media (a binary dummy variable);
- number of types of instruments in the offer;
- type of beneficiary (micro, small or medium-sized enterprises);
- level of coverage;

- size of the fund measured with total assets and revenues;
- number of employees (a categorical variable);
- maximum number of months for a loan or a guarantee agreement;
- maximum level of a loan;
- average bank loan;
- share of private organisations or persons in the capital of loan and guarantee funds (a binary variable);
- received EU grants: (recapitalisation + grants in P&L statement) / total revenues;
- development level of the region where the fund operates.

Cost ratio in the sample of loan and guarantee funds was very diverse. The costs in some funds were several times higher than their revenues. It means that the activity of the funds generated losses, which had to be compensated by other sources of funding, such as European Union funds, government funds, private investments. One of the reasons for such low profitability of loan and guarantee funds between 2015 and 2017 was the slow-down in their activity. It was a result of the completion of programmes under the Financial Framework 2007–2013 and the lack of consideration of new competitions and tenders in the Financial Framework 2014–2020. The loan and guarantee funds which did not participate in the JEREMIE initiative were not able to offer attractive conditions to beneficiaries and thus cover fixed costs with revenues from the granting of financial instruments.

Table 15. Descriptive statistics of stability measures and business models' components (except for dummy variables)

	Variable	N	Min	Max	Mean	Std. Deviation
cost ratio	CR	90	.00	18	1.6	2.2
cost of financial instruments	CFI	85	.00	333.656	52.367	80.468
cash ratio	CSHR	89	.00	6.614	206	735
current ratio	QR	89	.00	6.614	226	741
max value	MV	88	30.000	2.500.000	769.033	551.835
number of months	Nmonth	92	36	126	74.14	23.69
number of products	Nprod	89	1	9	3	1.9
grants received from the EU in a period	grants	92	.00	379.506.312	19.112.064	52.085.706

Source: prepared by the authors.

Table 16. Spearman's significant correlations of stability measures and business models' components (2015–2018)

Stability measures	Business model elements	Other business model (Spearman's correlation)	Size (Spearman's correlation)	Presence in SM (Spearman's correlation)	Grants (t-1) (Pearson's correlation)	Loan/ Guarantee (Spearman's correlation)	Findings in Web (Pearson's correlation)	Number of loans (Pearson's correlation)	Number of guarantees (Pearson's correlation)
cost of FI	Correlation Coefficient	.421***			.343**	-.230**	.257**		
	Sig. (1-tailed)	.000			.024	.027	.016		
Cost Ratio	N	70			43	71	70		
	Correlation Coefficient		-.233**		.309**				
Cash ratio	Sig. (1-tailed)		.023		.021				
	N		74		44				
Quick ratio	Correlation Coefficient	-.353***	-.203**	-.348***		.401***	-.276***	-.246***	.445***
	Sig. (1-tailed)	.001	.043	.002		.000	.010	.043	.001
	N	72	73	70		73	70	50	48
	Correlation Coefficient	-.382***	-.202**	-.380***		.367***	-.282***	-.252**	.419***
	Sig. (1-tailed)	.000	.043	.001		.001	.009	.039	.002
	N	87	73	84		73	70	50	48

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ **Source:** prepared by the authors.

Firstly, we conducted a correlation analysis between the variables determining the level of stability of loan and guarantee funds and the variables describing the adopted business models. Since some other data had ordered categories, we chose Spearman's correlation coefficients for them, which are a measure of the links between ranks.

The analysis shows that loan or guarantee funds which decided to diversify their activity increased operating costs in relation to the number of financial instruments granted. At the same time, their liquidity was falling. Higher demand for cash could result from the necessity to invest in fixed assets (e.g. when starting a technology park or business incubator) or in human resources (when starting an advisory activity). The t-test for a group of funds with diversified activity and the group of other funds confirms the thesis and shows the significant higher share of fixed assets in total assets in loan and guarantee funds that offer different services and instruments.

Negative relation of liquidity measures and the size of the organisation is confirmed by other studies. According to Naseem et al. (2017), the firm size is an important determinant of capital structure as it directly affects the amount of debt that a firm uses in its financing activities. The trade-off theory explains that the positive correlation between the size of an organisation and its debt is due to the belief that large companies have a lower risk of bankruptcy. Then both potential creditors and managers of large organisations are more inclined to use debt capital and thus reduce the company's liquidity. The presence in social media may also be a driving force for the development of the organisation and its lower liquidity.

In order to answer the research question on how do different elements of business models affect the stability measures of loan and guarantee funds in Poland, we followed the results of the correlation analysis with the regression analysis. We used in the regression analysis only these independent variables that were significantly correlated with dependent variables.

To choose the model of regression curve estimation, we first made a data graph. We have established that the variable grants t-1 is not linearly bound to the cost of FI variable and requires transformation. As a result, the relationship between a dependent variable and independent variables is described in the following regression model:

$$CFI_t = \delta + \lambda * O_B_t + \beta * Grants_{t-1}^3 + \alpha * Find_web_t^3 + \mu * L/G_t + \varepsilon_t$$

where: CFI= cost of financial instrument in the period t

δ = constant

O_B = other business (dummy variable)

Grants = grants in the period t-1

L/G – loan or guarantee activity in the period t (categorical variable 1–3)

Find_web – number of search findings in Web in the period t

ε_t – error for cost of financial instrument in a period t

The second model describes the relation of cost ratio and chosen characteristics of business model for guarantee and loan funds.

$$CR_t = \delta + \lambda * Employ_t + \beta * Size_t + \alpha * Grants_{t-1} + \varepsilon_t$$

where: CR = cost ratio in the period t
 δ = constant
 Size = size of the fund (categorical variable 1–3)
 Grants = grants in the period t-1
 ε_t – error for cost of financial instrument in a period t

The third model describes the relation of cash ratio, one of two liquidity measures and the chosen characteristics of business model for guarantee and loan funds.

$$CSHR_t = \delta + \lambda * O_B_t + \mu * L/G_t + \beta * Size_t + \alpha * SM_t + \gamma * Find_web_t + \eta * Nloans_t + \sigma * Nguarant_t + \varepsilon_t$$

where: CSHR = cash ratio in the period t
 δ = constant
 O_B = other business (dummy variable)
 L/G – loan or guarantee activity in the period t (categorical variable 1–3)
 Size = size of the fund (categorical variable 1–3)
 SM – presence in social media (dummy variable)
 Find_web – number of search findings in Web in the period t
 Nloans – number of loans in a year t
 Nguarant – number of guarantees in a year t
 ε_t – error for cost of financial instrument in a period t

The fourth model describes the relation of current ratio, second liquidity measure and the chosen characteristics of business model for guarantee and loan funds.

$$CUR_t = \delta + \lambda * O_B_t + \mu * L/G_t + \beta * Size_t + \alpha * SM_t + \gamma * Find_web_t + \eta * Nloans_t + \sigma * Nguarant_t + \varepsilon_t$$

where: CSHR = cash ratio in the period t
 δ = constant
 O_B = other business (dummy variable)
 L/G – loan or guarantee activity in the period t (categorical variable 1–3)
 Size = size of the fund (categorical variable 1–3)
 SM – presence in social media (dummy variable)
 Find_web – number of search findings in Web in the period t
 Nloans – number of loans in a year t
 Nguarant – number of guarantees in a year t
 ε_t – error for cost of financial instrument in a period t

In order to answer the research question on *how do different elements of business models affect the default rate of loan and guarantee funds in Poland* we used three independent variables: age (in number of years of the funds' activity), number of employees (categorical variable, where 1- the lowest employment, 6 – the highest employment) type of the financial instruments (a dummy variable, where 1 indicates loans, 2 indicates guarantees and 3 indicates both types of instruments) and value of salaries. We also posit, that the default rate depends on chosen variables also in the year when the default rate is calculated. Therefore, we do not lag the independent variables. We constructed the following panel regression model (for data of the years 2015 and 2017):

$$DEF_t = \delta + \lambda * AGE_t + \sigma * \alpha * LEMP_t + \beta * SAL_t + \mu * L/G_t$$

where: DEF – share of paid guarantees in outstanding guarantees (default rate) in a period t

AGE – age of the guarantee fund in number of years of the activity of the fund

LEMP – level of employment (categorical variable): 1 for number of employees 1–5, 2 for number of employees 6–20, 3 number of employees 21–50, 4 number of employees 51–100, 5 number of employees 101–250, 6 number of employees higher than 250

SAL – value of salaries of the guarantee fund in a year t

We also used lagged independent variables because the default rate measured as a share of paid guarantees in a number or value of active guarantees is the consequence of decisions taken in previous years.

We conducted the linear regression analysis for models 1–4, where we used data for the years 2016–2017 and panel regression analysis, where we used data for the years 2015–2017.

The regression analysis of the dependence of the stability measures of loan and guarantee funds in Poland on the adopted business models allowed us to draw the following conclusions. First of all, an extension of the product offer with new services, e.g. business consulting or rent of space, makes the objective of granting financial instruments no longer a priority. The offer of these organisations is becoming increasingly tailored to the needs of entrepreneurs who do not always see the success in increasing their financial resources. As some authors indicate the problem of many SMEs is the lack of knowledge about the management of the company (risk for the bank) or the principles of financing. Moreover, they are aware of the risk associated with using external sources of capital, causing and do not want to use the credit or loan (Pearlman, 2012). Consequently, the extension of the offer of organisations granting loans and guarantees results in an increase of the costs per number of financial instruments granted ratio. This is due to the fact that the inclusion of new services in the offer of the funds leads to an increase in operating costs, which in the absence of a simultaneous increase in the number of loans and guarantees granted, contributes to a negative change of the indicator.

Table 17. Regression analysis

	Model 1 (CFI)	Model 2 (CR)	Model 3 (CSHR)	Model 4 (CUR)	Model 5 (DEF)
(Constant)	55979.24 (38777.68)	1.184 (0.264)	20.729 (0.881)	50.030 (141.849)	-0.115
Grants_t-1^3	2.457E-21 (0.000)	–	–		
Find_web^3	-1.116E-09 (0.000)	–	–		
O_B	81023.73*** (26590.927)	–	-0.338 (0.753)	-0.273 (0.783)	
L/G	-16413.54 (18868.10)		14.004 (50.613)	8.072 (52.613)	0.740** (0.347)
Employ		0.248 (0.23)			-0.289* (0.172)
Size		-0.265 (0.41)	69.761 (53.702)	67.406 (55.824)	
Grants_t-1		6.537E-09** (0.00)			
SM			-39.143 (74.140)	-48.494 (77.069)	
Find_web			-0.002 (0.002)	-0.002 (0.002)	
Nloans			-0.218 (0.210)	-0.231 (0.219)	
Nguarant			0.470** (0.225)	0.452* (0.234)	
SAL _t					9.921E-9 (0.000)
AGE					0.003 (0.004)
Adjusted R-Square	0.224	0.082	0.201	0.179	

Where: Grants_t-1 – received UE grants in t-1 period; Find_web – number of search findings in Web; O_B – other businesses; L/G – loan or guarantee; Employ – level of employment; Size – size of the fund; SM – resence in social media; Nloans – number of loans; Nguarant- number of guarantees, CFI – cost of financial instruments, CR – cost ratio, CSHR – cash ratio, CUR – current ratio.

*** p < 0.01, ** p < 0.05, * p < 0.1

Source: prepared by the authors.

The use of the grant causes an increase in operating costs in the following years of organisations granting guarantees and loans for SMEs. We conclude that the reason for this is the increase in the activity of funds using public resources and, consequently, the increase in the ratio of operating costs and unit revenues. It is particularly the case when the financing received is not recognised as other operating income, but is recognised in the equity.

A larger number of guarantees granted by guarantee funds forces an increase in their liquidity levels to increase collaterals for financial instruments granted. At the same time, we do not observe any impact of the number or value of loans granted on the liquidity ratios – neither the cash ratio nor the current liquidity ratio is affected.

The regression analysis showed that the default rate of loan and guarantee funds depends mainly on the level of employment. More employees allow for more accurate scrutiny of applications, credit analysis and payment control so that the process of possible execution can be initiated as soon as possible. At the same time, we state that the highest losses are generated by funds granting both loans and guarantees. The lowest losses are observed in loan funds, which do not have to apply to the lender for information on the repayment of loans or credits of their clients. At the same time, we cannot confirm the impact of the age of the organisation on its ability to avoid loss of guarantees or loans. Although the correlation between the default rate and the age of the analysed loan and guarantee funds is the same as in the Beck et al. (2010) study, it is not significant.

Conclusions, study limitations and further research

Small and medium-sized enterprises are economic entities that generate the majority of the world's GDP. They account for more than 90% of all enterprises, contribute to increased competition which improves the quality of provided services and sold products and contributes to the betterment of the economy. At the same time, as indicated in this book, they face difficulties in accessing external financing, which creates a capital gap. There are many reasons for this, ranging from a higher risk of bankruptcy to difficulties in assessing creditworthiness. SMEs are attributed to higher business risk and therefore, higher financing costs. The unfavourable credit conditions for micro, small and medium-sized enterprises (mainly small and micro) in comparison with large entities have influenced the decisions of the EU institutions and national public finance entities to set up programmes and initiatives to improve SMEs' access to financial instruments such as loans and loan guarantees.

The organisation of SMEs' support in different countries is adapted to regional needs and the possibilities of applying particular business models. In some countries the mutual credit guarantees have achieved success, in some, the private financial institutions have taken over the task of distributing support for small and medium-sized enterprises, while in others special institutions have been set up to provide loans and guarantees or advice to entrepreneurs. Not all financial instruments are part of the support system for SMEs in every country. In Poland, as in Great Britain, the role of lending institutions has been taken over by both non-profit organisations (e.g. foundations) and entities established by the Government. In other countries, such as France or Italy, the greatest emphasis was put on mutual credit guarantees granted by business associations. However, the most commonly used model is the organisation (control, setting rules and management of financial resources) of support for SMEs by entities established by governments and the distribution of this support by private entities such as banks or other financial institutions.

Loan and guarantee funds began appearing in Poland in the 1990s with the task of eliminating or reducing the capital gap for entities from the SME sector. The

capital gap – which is also referred to as the Macmillan gap – was defined at the beginning of the 20th century by the Committee of Finance and Industry which was responsible for examining the financial system of Great Britain. The European Commission set itself the goal of building mechanisms, structures and organisations that would reduce the barriers for SMEs' access to investment finance, especially innovation.

The capital gap for small and medium enterprises results from the fact that the financial offer is not adjusted to the investment needs of these entities. This is due to the fact that SME financing is associated with a high risk of borrower's bankruptcy, failure of an investment project and high costs of preparing and monitoring a small loan, relative to the costs involved in preparation and monitoring of a large loan. As stated before, the purpose of guarantee and loan funds is to reduce the capital gap for small and medium-sized enterprises, however, as the analysis of the capital gap presented in the book shows, neither their number nor their capital resources allow them to play the leading role in that process. In comparison with other countries, the amount of loans and guarantees granted to micro, small and medium-sized enterprises in Poland is still low. The reason may be the dependence of these funds on the EU support and their considerable fragmentation. However, in recent years an increase in the number of specialists employed in loan funds is visible. Thus, an increase in the share of medium-sized funds in the total number of loan institutions occurs. The importance of regional policy and regional operational programmes in the development of the activities of loan and guarantee funds has also resulted in a significant variation in the level of development of different types of support in different parts of the country. Also, the stability and effectiveness of the loan and guarantee funds are regionally differentiated.

In order to assess the stability of the guarantee and loan funds, the following research questions were raised:

1. What is the relationship between the level of regional development and the performance of guarantee schemes in Poland?
2. How do different elements of business models affect the stability measures of loan and guarantee funds in Poland? In other words – how stable are the loan and guarantee funds? Is it likely that they will become financially independent? What changes and what kind of support from the central government would they need to continue their business in the long term (after the EU funding becomes unavailable)?
3. How do different elements of business models (including the width of value proposition, the quality of information channels and cooperation with partners or possessed resources) affect the default rate of loan and guarantee funds in Poland?

Our analysis led us to the conclusion that guarantee and loan funds are expanding their operations with new services such as business consulting and new

financial instruments such as tender guarantees. This extension makes the core business of the loan and guarantee funds, as determined during the initial phase of their operations, less and less relevant. The offer of these organisations is adapted to the changing needs of small businesses. Therefore, we can observe a higher cost of operating activity in terms of the number of granted instruments and lower liquidity in organisations that have diversified their activities. However, we have not found any evidence of lower liquidity in larger loan and guarantee funds, as indicated by research by other researchers (Naseem et al., 2017).

Grants received by loan and guarantee funds in the previous year had a negative impact on their stability. Grants may limit the range of decisions that fund managers can take. Many decisions concerning interest rates, funding limits and groups of beneficiaries are described in the grant agreements. Therefore, the fund managers cannot create their business models to improve their stability and efficiency but have to meet the conditions of the grant agreement (Mika et al., 2017).

We have noticed that only a number of guarantees play an essential role in creating the stability of guarantee funds by increasing their liquidity. In loan funds, the number of loans proved to be an insignificant factor. We positively assess that expanding the activities of the guarantee funds requires that they increase their capital. In loan funds, a larger number of loans may reduce their liquidity, but not always, especially if the average value of loans decreases at the same time.

In order to keep the loan and guarantee funds stable, especially without the support of the European Union, the level of guarantees and outstanding loans must be as low as possible. Our analysis has shown that the main factor positively influencing the default rate is employment.

According to the report of Polski Związek Funduszy Pożyczkowych, almost half of the loan funds in Poland do not have local offices, and employment in these funds fluctuates. The employment increases when receiving funding under regional operational programmes and decreases after the programme is completed. This state of affairs results in the lower motivation of the employees and detachment from the organisation's objectives, contributing to increased losses and reduced stability of the funds.

Moreover, the research has led to the thesis that public support may be necessary and expected in order to maintain the financial stability of the guarantee funds. The higher number and value of guarantees in less developed regions do not provide higher income from the core and financial activities. They create a need for guarantee funds for EU and government support. At the same time, the number and value of granted guarantees, negatively correlated with the value of fixed assets held by entrepreneurs, indicates an appropriate allocation of public aid by addressing guarantees to entrepreneurs who do not have sufficient collateral for bank loans. Our analysis shows that the evaluation of the results of guarantee programmes in different countries and regions without taking into account other

factors such as regional development or maturity of networks or institutions providing support for SMEs is inappropriate. Direct comparison of guarantee funds operating in different countries can lead to misinterpretations and ultimately to incorrect conclusions and recommendations.

In conclusion, the support scheme for SMEs should be designed on the basis of organisational capacity, the needs of entrepreneurs, available sources of finance as well as taking into account and involving the private sector. In most countries, the banking sector is involved in distributing funds to small and micro-entrepreneurs. It is due to better access to beneficiaries (contact base, number of outlets) and experience in the financial instruments market. Non-profit organisations may have a supportive role, but it is banks or other financial institutions that should deal with financial services to entrepreneurs. The same is true in other countries, such as France, where entrepreneurs using Socama's services are directed to cooperative banks, with which the organisation has an agreement and where they undergo a credit assessment procedure, receive a loan and pay their liabilities.

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Appendix 1. Key information on guarantee funds in Poland (active on the day 1.01.2018)

No.	Name of the fund	Regions	Contact	Types of guarantees	Number of cooperating banks	Other services
1	Podlaski Fundusz Poręczeniowy Sp. z o.o.	4 regions	Starobojarska 15 15-073 Białystok Tel. (85) 740 86 69 e-mail: fundusz@pfrr.pl https://poreczenia.com.pl	Loans (70%) Factoring Letters of credits (70%)	6	–
2	Bielski Fundusz Projektów Kapitałowych Sp. z o.o.	1 region	Cieszyńska 365 43-382 Bielsko-Biała Tel. (33) 497 29 79 e-mail: fundusz@bfpk.pl http://bfpk.pl	Loans (70%) Tendering security	9	loans advisory
3	Bydgoski Fundusz Poręczeń Kredytowych Sp. z o.o.	1 region	Gdańska 32 05-006 Bydgoszcz Tel. (52) 323 11 35 http://www.bfpk.bydgoszcz.pl	Loans (80%)	16	–
4	Działdowska Agencja Rozwoju S.A.	1 region	Jagiełły 15 13-200 Działdowo Tel. (23) 697 06 75 www.darsa.pl	Loans (50–80%) Tendering security (100%) Proper Performance of the Agreement and the Warranty for Defects (100%)	1	training, education, loans

5	Warmińsko-Mazurski Fundusz "Poręczenia Kredytowe" Sp. z o.o.	1 region	Wolności 4 13-200 Działdowo Tel. (23) 697 50 52 e-mail: sekretariat@poreczenia-kredytowe.info www.poreczenia-kredytowe.info	Loans (1–80%) Tendering security (100%) Leasing (1–80%)	17	–
6	Regionalne Towarzystwo Inwestycyjne	1 region	Wojska Polskiego 3 82-440 Dzierzgoń Tel. (55) 276 25 79 www.rti.dzierzgon.com.pl	Loans (70%)	no data	loans
7	Fundusz Poręczeń Kredytowych Powiatu Dzierżoniowskiego Sp. z o.o.	1 small region (1 city and suburbs)	Rynek 36 58-200 Dzierżoniów Tel. (74) 645 04 31 <i>website does not exist in 2020</i>	Loans (75%) Grants	4	–
8	Pomorski Regionalny Fundusz Poręczeń Kredytowych Sp. z o.o.	1 region	Szara 32–33 80-116 Gdańsk Tel. (58) 320 34 05 www.prfpk.pl	Loans (80%) Tendering security (100%) Leasing (80%)	35	–
9	Samorządowy Fundusz Poręczeń Kredytowych Sp. z o.o.	3 cities and suburbs	Rynek 6 63-800 Gostyń Tel. (65) 572 36 33 https://www.fundusz.gostyn.pl	Loans (70%) Tendering security (100%) Leasing (80%)	4	–
10	Grudziądzkie Poręczenia Kredytowe Sp. z o.o.	1 city and suburbs	Sienkiewicza 22 86-300 Grudziądz Tel. (56) 461 23 77 http://gpk.grudziadz.pl	Loans (70%) Tendering security (100%)	14	–
11	Fundusz Poręczeń Kredytowych w Jeleniej Górze Sp. z o.o.	1 region	1 Maja 27, room 208 58-500 Jelenia Góra Tel. (75) 642 02 22 e-mail: rfpkjelenia@karr.pl https://fpkjg.pl	Tendering security (100%) Leasing (80%)	10	–

12	Śląski Regionalny Fundusz Poręczeniowy Sp. z o.o.	1 region	Astrów 10, room 209 40-045 Katowice Tel. (32) 785 85 85 www.rfp.pl	Loans (50%) Leasing (80%) Tendering security (100%)	20	–
13	Świętokrzyski Fundusz Poręczeniowy Sp. z o.o.	1 region	św. Leonarda 1/13 25-311 Kielce Tel. (41) 332 69 06 www.swietokrzyskifp.pl	Loans (80%) Leasing (80%)	28	–
14	Małopolski Regionalny Fundusz Poręczeniowy Sp. z o.o.	1 region	Kordylewskiego 11, room 110 31-542 Kraków Tel. (12) 296 04 00 www.poreczeniowy.pl	Loans (80%) Re-guarantees	23	–
15	Polski Fundusz Gwarancyjny Sp. z o. o.	2 regions	Konrada Wallenroda 4C (III P) 20-607 Lublin, Obłowska 20 22-100 Chełm, Lubelska 2C, room 9 24-100 Puławy, Odrodzenia 7 22-400 Zamość Tel. (81) 531 80 09 www.pfg-poreczenia.pl	Loans (70–80%) Tendering security (100%)	8	–
16	Łomżyński Fundusz Poręczeń Kredytowych Sp. z o.o.	1 region	Piłsudskiego 75 18-400 Łomża Tel. (86) 218 13 89 www.lfpk.eu	Loans (70%)	5	–
17	Nidzicka Fundacja Rozwoju "NIDA"	1 region	Rzemieślnicza 3 13-100 Nidzica Tel. (89) 625 36 51 e-mail: eczerwinka@nida.pl http://przedsiebiorczosc.nida.pl	Loans (80%)	no data	loans, advisory, trainings
18	Opolski Regionalny Fundusz Poręczeń Kredytowych Sp. z o.o.	1 region	Koźłataja 11/28 II floor 45-064 Opole Tel. 774 415 620 Fax 775 554 404 e-mail: biuro@orfpk.opole.pl http://www.orfpk.opole.pl	Loans (70%) Leasing (70%) Tendering security (80%)	10	–

19	Fundusz Poręczeń Kredytowych przy Fundacji Rozwoju Przedsiębiorczości ATUT	1 region	Kościuszki 2 14-100 Ostróda Tel./Fax (89) 646 79 57 e-mail: atut@atut.org.pl http://www.atut.org.pl	Loans (80%)	no data	–
20	Fundusz Poręczeń Kredytowych przy Towarzystwie Rozwoju Gminy Płużnica	1 region	Płużnica 64 Tel. (56) 687 39 09 e-mail: trgp@trgp.org.pl http://www.trgp.org.pl	Loans (60%) Grants	no data	–
21	Fundusz Rozwoju i Promocji Województwa Wielkopolskiego S.A.	1 region	Szyperska 14 61-754 Poznań Tel. (61) 67 10 481; (61) 67 10 482; (61) 67 10 487 Fax: (61) 67 10 610 http://www.fripww.pl	Loans (till 1 mln zł)	10	–
22	Poznański Fundusz Poręczeń Kredytowych Sp. z o.o.	1 region	Aleje Marcinkowskiego 20 61-827 Poznań Tel. (61) 855 64 80 e-mail: biuro@pfpk.pl http://www.pfpk.pl	Loans Leasing Factoring	2	–
23	Puławski Fundusz Poręczeń Kredytowych	1 region	Mościckiego 1 24-110 Puławy Tel. (81) 470 09 30 e-mail: fpcp@fpcp.org.pl http://www.fpcp.org.pl	Loans (80%)	no data	–
24	Podkarpacki Fundusz Poręczeń Kredytowych Sp. z o.o.	1 region	Hetmańska 9 35-045 Rzeszów Tel. (17) 784 49 94; (17) 862 11 66 Fax (17) 784 49 94 e-mail: sekretariat@pfpk.com http://www.pfpk.com	Loans (70%)	34	–
25	Fundusz Poręczeń Kredytowych i Wspierania Finansowego "FUNDSTAR"	1 region	Mickiewicza 1A 27-200 Starachowice Tel. (41) 274 46 90; (41) 274 04 09 e-mail: farr@farr.pl http://www.farr.pl	Loans (80%)	4	–

26	Fundusz Poręczeń Kredytowych w Stargardzie Szczecińskim Sp. z o.o.	1 small region (1 city and suburbs)	Pierwszej Brygady 35, room 303 73-110 Stargard Tel. (91) 578 26 97; (91) 834 52 78	Loans (70%)	7	–
27	Samorządowy Fundusz Poręczeń Kredytowych	1–2 small regions (2 cities and suburbs)	Mickiewicza 8 57-100 Strzelin Tel. (71) 392 07 66; (71) 392 07 66	Loans (70%)	no data	–
28	Fundusz Wspierania Rozwoju Gospodarczego Miasta Szczecina Sp. z o.o.	1 city	Bogusława 7, room LU4 70-440 Szczecin Tel. (91) 488 28 01; (91) 488 28 01 Tel./Fax (91) 488 28 01 e-mail: fundusz@um.szczecin.pl http://www.fundusz.szczecin.pl	Loans (70%)	5	–
29	POLFUND Fundusz Poręczeń Kredytowych S.A.	the whole country	Monte Cassino 32 70-466 Szczecin Tel. (91) 424 31 40; (91) 424 31 30	Loans (80%) Intermediate guarantees Contract performance obligations Tendering security	1	–
30	Zachodniopomorski Regionalny Fundusz Poręczeń Kredytowych Sp. z o.o.	no data	Świętego Ducha 5A/7 70-205 Szczecin Tel. (91) 813 01 10		data cannot be collected. The website does not exist.	
31	Fundusz Poręczeń Kredytowych Tarnowskiej Agencji Rozwoju Regionalnego S.A.	3 cities and suburbs	Szujskiego 66 33-100 Tarnów Tel. (14) 623 55 18; (14) 621 39 55 e-mail: jpapuga@tarr.tarnow.pl	Loans (75%)	5	

32	Kujawsko-Pomorski Fundusz Poręczeń Kredytowych Sp. z o.o.	1 region	Szosa Chełmińska 26 87-100 Toruń Tel. (56) 660 57 60; (56) 660 57 63 Fax (56) 660 57 63 e-mail: kpfpk@kpfpk.pl http://www.fpk.kujawsko-pomorskie.pl	Loans (80%) Tendering security	7	
33	Toruński Fundusz Poręczeń Kredytowych Sp. z o.o.	1 region	Kopernika 27 87-100 Toruń Tel. (56) 654 71 70; (56) 655 08 48 e-mail: fundusz@tfpk.pl http://www.tfpk.pl	Loans Leasing (80%)	no data	–
34	Mazowiecki Fundusz Poręczeń Kredytowych Sp. z o.o.	1 region	Mycielskiego 20 04-379 Warszawa Tel. (22) 840 32 53; (22) 840 32 35 e-mail: biuro@mfpk.com.pl http://www.mfpk.com.pl	Loans (70%) Leasing (70%)	29	–
35	Poręczenia Kredytowe Sp. z o.o.	the whole country	Miedziana 3A, room 22 00-814 Warszawa Tel. (22) 890 98 00; (22) 890 98 03 Fax: (22) 890 98 03 biuro@poreczenia.kredytowe.pl	Loans (70%)	32	–
36	Kujawskie Poręczenia Kredytowe Sp. z o.o.	1 region	Toruńska 148, room B07 87-800 Włocławek Tel. (54) 423 20 16; (54) 423 20 15 Fax (54) 423 20 16 e-mail: poreczenia@pksp.pl http://www.kujawskie.poreczeniakredytowe.pl	Loans (80%) Intermediate guarantees	11	–
37	Dolnośląski Fundusz Gospodarczy Sp. z o.o.	1 region	Stwosza 3 50-148 Wrocław Tel. (71) 343 79 64; (71) 343 79 67 Fax (71) 343 79 67 e-mail: biuro@dfg.pl http://dfg.pl	Loans (70%)	4	–

38	Lubuski Fundusz Poręczeń Kredytowych Sp. z o.o.	1 region	Kupiecka 32 B 65-058 Zielona Góra Tel. (68) 323 96 00; (68) 323 13 52 Fax (68) 323 13 52 e-mail: lfpk@lfpk.pl http://lfpk.pl/	Loans Tendering security (100%) Leasing Intermediate guarantees	23	–
39	Fundusz Poręczeń Kredytowych Sp. z o.o. w Złotoryi	the whole country	Miła 18 59-500 Złotoryja Tel. (76) 878 17 14; (76) 878 17 14 e-mail: fpkzlotoryja@poczta.fm	Loans (80%)	3	–

Appendix 2. Key information on loan funds in Poland (active as of 31.01.2020)

No.	Name of the fund	Contact	Regions	Number of loans' types	Other activities
1	Bieszczadzka Agencja Rozwoju Regionalnego Sp. z o.o.	Rynek 17 38-700 Ustrzyki Dolne Tel. (13) 461 29 98 http://www.barr-ustrzyki.pl	3 subregions	3	financial and information services, trainings, technological park
2	Fundacja Wspomagania Wsi	Bellottiego 1 01-022 Warszawa Tel. (22) 636 25 70 till 75 Fax (22) 636 62 70 http://www.fundacja.wspomaganiawsi.pl	5 regions	1	trainings, virtual office, space rent, project management, advisory, optimisation of processes in the company, start-ups, coworking, events organisation
3	Ostrołęcki Ruch Wspierania Przedsiębiorczości – Fundusz Rozwoju Przedsiębiorczości	Kołobrzeska 15 07-410 Ostrołęka Tel./Fax (29) 769 10 34 http://www.orwp.com.pl	1 region	1	Information, financial services, trainings, investment support
4	Rzeszowska Agencja Rozwoju Regionalnego S.A.	Szopena 51 35-060 Rzeszów Tel. (17) 852 06 00 www.rarr.rzeszow.pl	1 region	2	guarantees, education-training center

5	Fundusz Regionu Wałbrzyskiego	Limanowskiego 15 58-300 Wałbrzych Tel. (74) 66 44 810 Fax (74) 66 44 822 e-mail: biuro@frw.pl http://frw.pl	1 region	4	business incubator
6	Agencja Rozwoju Regionalnego "AGROREG" S.A.	Kłodzka 27 57-402 Nowa Ruda Tel. (74) 872 50 25 http://www.agroreg.com.pl	1 region	3	–
7	Inicjatywa Mikro Sp. z o.o.	al. Krasińskiego 11A 31-111 Kraków Tel. (12) 446 60 50; (12) 421 47 58 Fax (12) 446 60 56 sekretariat@inicjatywamikro.pl www.inicjatywamikro.pl	country	4	guarantees, education-training center
8	Fundacja "Wałbrzych 2000"	Wrocławska 53 58-309 Wałbrzych Tel. (74) 843 45 62 e-mail: biuro@walbrzych2000.pl http://www.walbrzych2000.pl	1 region	3	business incubator, advisory, employment agency, trainings
9	Fundacja Promocji Gospodarczej Regionu Krakowskiego	Mrozowa 20 31-752 Kraków Tel. (12) 642 16 70 www.fpggrk.krakow.pl	no data	1	trainings, advisory
10	Agencja Rozwoju Przedsiębiorczości S.A.	al. Wojska Polskiego 4 44-240 Żory Tel. (32) 435 06 06 www.arpasa.pl	1 city	3	information centre, economic-financial advisory, events, trainings
11	Żyrardowskie Stowarzyszenie Wspierania Przedsiębiorczości	Nowy Świat 8/4 96-300 Żyrardów Tel./Fax (46) 855 48 34 mobile 509 183 500 http://zswp.pl e-mail: specjalista@zswp.pl, fundusz@zswp.pl	2 regions	2	support for unemployed people

12	Fundacja Rozwoju Gminy Zelów	Mickiewicza 4 97-425 Zelów Tel. (44) 634 10 06 e-mail: frgz@frgz.pl http://frgz.pl	1 region	1	grants distribution, intellectual property audit, business events' organization, start-ups
13	Fundusz Pożyczkowy Pomorza	Dyrekcyjna 7 80-852 Gdańsk Tel. (58) 305 22 44; (58) 305 23 25 Fax (58) 741 53 73 e-mail: biuro@rigp.pl http://rigp.pl	1 region	2	–
14	Fundacja Rozwoju Śląska oraz Wspierania Inicjatyw Lokalnych	Słowackiego 10 45-364 Opole Tel. (77) 454 25 97 http://www.fundacja.opole.pl	2 regions	2	financial services, trainings, advisory services for innovation and technology transfer
15	Fundacja Inkubator	Tymienieckiego 22/24 90-349 Łódź Tel. (42) 633 16 55 Fax (42) 633 87 13 www.inkubator.org.pl	<i>no data</i>	2	trainings, advisory, space rent
16	Stowarzyszenie Ostrzeszowskie Centrum Przedsiębiorczości	Przemysłowa 27 63-500 Ostrzeszów Tel. (62) 730 17 31 www.socp.info.pl	1 region	6	equipment rental, bookkeeping services, science and sensory park
17	Stowarzyszenie Bielskie Centrum Przedsiębiorczości	Cieszyńska 367 43-382 Bielsko-Biała Tel. (33) 496 02 00 www.bcp.org.pl	<i>no data</i>	5	grants distribution
18	Fundacja Centrum Innowacji i Przedsiębiorczości	Zwycięstwa 42 75-037 Koszalin Tel. (94) 346 47 06 www.fundacja.koszalin.pl	1 city and 4 subregions	4	trainings
19	Małopolski Instytut Gospodarczy w Rzeszowie	Mickiewicza 1 35-060 Rzeszów Tel. (17) 852 61 55 www.mig.com.pl	1 region	3	business centre, trainings, advisory

20	Polska Fundacja Przedsiębiorczości	Monte Cassino 32 70-466 Szczecin Tel. (91) 312 92 16 www.pfp.com.pl	7 regions	5	guarantees
21	Stowarzyszenie Inicjatyw Społeczno-Gospodarczych	Królowej Jadwigi 28 78-200 Białogard Tel./Fax (94) 311 86 88 http://www.sisg.pl	1 subregion	1	trainings
22	Fundacja Kaliski Inkubator Przedsiębiorczości w Kaliszu	Częstochowska 25 62-800 Kalisz Tel. (62) 764 12 42 www.kip.kalisz.pl	1 region	8	grants, guarantees, trainings, real estate
23	Agencja Rozwoju Lokalnego S.A.	Teatralna 9 41-200 Sosnowiec Tel. (32) 293 36 10 www.arl.org.pl	1 region	3	guarantees, space rent, advisory and trainings
24	Karkonoska Agencja Rozwoju Regionalnego S.A.	1 Maja 27 58-500 Jelenia Góra Tel. (75) 752 32 93 www.karr.pl	<i>no data</i>	3	–
25	Łódzka Agencja Rozwoju Regionalnego S.A.	Tuwima 22/26 90-010 Łódź Tel. (42) 664 37 52 www.larr.lodz.pl	1 region	3	trainings
26	Rudzka Agencja Rozwoju Inwestor Sp. z o.o.	Wolności 6 41-700 Ruda Śląska Tel. (32) 244 21 87 Fax (32) 248 77 86 e-mail: funduszar@op.pl fundusz@rarinwestor.pl	6 regions	1	information and advisory services, trainings, rent services
27	Stowarzyszenie Rozwoju Przedsiębiorczości i Inicjatyw Lokalnych	Piłsudskiego 176 05-091 Ząbki, Poznańska 129/133 05-850 Ożarów Mazowiecki Tel. (22) 771 58 34 e-mail: frp@srp.pl http://www.srp.pl	1 region	4	–
28	Fundacja Wspierania Przedsiębiorczości Regionalnej	Krzywa 5 19-500 Gołdap Tel. (87) 615 19 04 e-mail: fwpr@fwpr.org	1 region	13	trainings

29	Fundacja na rzecz Rozwoju Polskiego Rolnictwa	Gombrowicza 19 01-682 Warszawa Tel. (22) 864 03 90 Fax (22) 864 03 61 e-mail: fdpa@fdpa.org.pl http://fdpa.org.pl	4 regions	10	business incubators
30	Fundacja Rozwoju Regionu Pierzchnica	Szkolna 28 26-015 Pierzchnica Tel. (41) 353 81 67 e-mail: srozkiewicz@frfp.pl http://www.frrp.pl	1 region	1	information and advisory services, trainings, rent services, international cooperation, grants
31	Piotrkowskie Stowarzyszenie Wspierania Przedsiębiorczości	al. 3 Maja 6B 97-300 Piotrków Trybunalski Tel. (44) 649 70 57 Fax (44) 649 70 57 e-mail: piotrswp@poczta.onet.pl http://www.piotrswp.republika.pl	<i>no data</i>	3	information and advisory services, grants
32	Fundacja Rozwoju Regionu Łukta	Mazurska 30 14-105 Łukta Tel. (89) 647 52 50 e-mail: centrum@frrl.org.pl http://www.frrel.org.pl	1 region	9	information and advisory services, trainings, rent services, post-graduation studies, real estates
33	Stowarzyszenie "Samorządowe Centrum Przedsiębiorczości i Rozwoju"	Mickiewicza 175 34-200 Sucha Beskidzka Tel. (33) 874 13 15; (33) 874 11 03 mobile 501 609 564 e-mail: fundusze@centrump-sucha.pl http://www.funduszemalopolska.pl	1 region	1	information and advisory services, trainings
34	Szczeciński Fundusz Pożyczkowy Sp. z o.o.	Księcia Bogusława X 7 70-440 Szczecin Tel. (91) 488 13 49 e-mail: sfp6@o2.pl http://www.fundusz.szczecin.pl	1 region	2	–

35	Stowarzyszenie "Radomskie Centrum Przedsiębiorczości"	Kościuszki 1 26-600 Radom Tel. (48) 360 00 45 Fax/Tel. (48) 360 00 46 e-mail: rcp@radom.net http://srcp.radom.pl	1 subregion	7	information and advisory services, trainings
36	Krajowe Stowarzyszenie Wspierania Przedsiębiorczości	Staszica 2A 26-200 Końskie Tel. (41) 375 14 55; (41) 260 46 21 Fax (41) 375 14 56 e-mail: kswp@kswp.org.pl http://kswp.org.pl	different regions depending on the type of co-financing (i.e. from EU)	1	–
37	Pomorski Fundusz Pożyczkowy Sp. z o.o.	Szara 32–33 80-116 Gdańsk Tel. (58) 302 20 05 Fax (58) 307 51 25 e-mail: biuro@pfp.gda.pl http://www.pfp.gda.pl	1 region	1	high school
38	Wielkopolska Agencja Rozwoju Przedsiębiorczości Sp. z o.o.	Piekary 19 61-823 Poznań Tel. (61) 656 35 00 Fax (61) 656 53 66 e-mail: info@warp.org.pl http://www.warp.org.pl	1 region	1	–
39	Fundacja Rozwoju Regionu Rabka	Orkana 16 B 34-700 Rabka-Zdrój Tel. (18) 26 777 39; 889 875 721, Paderewskiego 6 33-100 Tarnów Tel. (14) 62 103 43 www.frrr.pl	2 regions	4	–
40	Ślęskie Stowarzyszenie Innowacji Gospodarczych i Przedsiębiorczości	Tuwima 22a 76-200 Ślępsk woj. pomorskie Tel. (59) 84 69 120 Fax (59) 84 69 120 e-mail: biuro@inkubator.slupsk.pl http://inkubator.slupsk.pl	country	5	information and advisory services, trainings

41	Nidzicka Fundacja Rozwoju "NIDA"	Rzemieśnicza 3 13-100 Nidzica Tel. (89) 625 36 51 www.nida.pl	1 region	2	information and advisory services, trainings, conferences
42	Polskie Towarzystwo Ekonomiczne Oddział w Bydgoszczy	Poznańska 185 88-100 Inowrocław Tel./Fax (52) 357 56 79 e-mail: owp-frp@pte.bydgoszcz.pl http://www.pte.bydgoszcz.pl	1 region	3	–
43	Podkarpacka Izba Gospodarcza w Krośnie	Tysiąclecia 3 38-400 Krosno Tel./Fax (13) 43 234 47 Tel. (13) 43 695 90 e-mail: pig@pigkrosno.pl http://www.pigkrosno.pl	1 region	4	trainings
44	Ośrodek Promowania i Wspierania Przedsiębiorczości Rolnej	pl. Poniatowskiego 2 27-600 Sandomierz Tel. (15) 833 34 00 mobile 501 837 619 Fax (15) 833 34 60 e-mail: fundacja@opiwpr.org.pl http://opiwpr.org.pl	1 region	5	trainings, rent of space, marketing and book-keeping services
45	Górnośląska Agencja Rozwoju Regionalnego S.A.	Powstańców 17 40-039 Katowice Tel. (32) 72 85 800 Fax (32) 72 85 803 e-mail: oddzial@oddzial.fundusz-silesia.pl http://www.oddzial.fundusz-silesia.pl	1 region	4	information and advisory services, trainings, space rent
46	Kujawsko-Pomorski Fundusz Pożyczkowy Sp. z o.o.	Włocławska 167 87-100 Toruń Tel. (56) 699 54 55; (56) 699 54 56 e-mail: pozyczki@kujawsko-pomorskie.pl http://www.pozyczki.kujawsko-pomorskie.pl	1 region	3	information and advisory services, trainings

47	Agencja Rozwoju Regionalnego ARES S.A. w Suwałkach	Noniewiczza 42A 16-400 Suwałki Tel. (87) 566 61 06; (87) 566 70 35 Fax (87) 566 74 97 e-mail: arrares@ares.suwalki.pl http://www.ares.suwalki.pl	2 regions	2	business incubator
48	Warmińsko-Mazurska Agencja Rozwoju Regionalnego S.A. w Olsztynie	pl. Bema 3 10-516 Olsztyn Tel. (89) 521 12 79 / 89 Fax (89) 521 12 60 e-mail: wmarr@wmarr.olsztyn.pl www.wmarr.olsztyn.pl	1 region	3	information and advisory services
49	Stowarzyszenie "Centrum Rozwoju Ekonomicznego Pasłęka"	Piłsudskiego 11A 14-400 Pasłęk Tel. (55) 248 10 91, 92, 93 Fax (55) 248 10 90 e-mail: screp@screp.pl http://www.screp.pl	2 regions	1	business incubator
50	Fundacja "Przedsiębiorczość"	Mieszka I 13 68-200 Żary Tel. (68) 479 16 00-04 Fax (68) 479 16 01 or 04 e-mail: fp@fundacja.zary.pl http://fpnowa.internetdsl.pl	1 region	3	business and technological incubator
51	Stowarzyszenie Ostrowskie Centrum Wspierania Przedsiębiorczości	Szkolna 24 63-400 Ostrów Wielkopolski Tel./Fax (62) 736 11 60 e-mail: ocwp@ocwp.org.pl www.ocwp.org.pl	2 regions	2	information and advisory services, space rent
52	Fundusz Górnośląski SA	Sokolska 8 40-086 Katowice Tel. (32) 200 84 00; (32) 201 00 12; (32) 201 00 13; (32) 200 84 48 http://www.fundusz-silesia.pl	1 region	3	business incubator, information centre

53	Agencja Rozwoju Regionalnego S.A. w Zielonej Górze	Chopina 14 65-001 Zielona Góra Tel. (68) 329 78 27; (68) 329 78 28 Fax (68) 329 78 35 e-mail: f.pozyczkowy@region.zgora.pl http://www.lfp.region.zgora.pl	1 region	2	–
54	Podlaska Fundacja Rozwoju Regionalnego	Starobojarska 15 15-073 Białystok Tel. (85) 740 86 76; (85) 740 86 83 Fax (85) 740 86 85 e-mail: pozyczki@pfr.pl http://pozyczkowy.com.pl	1 region	3	–
55	Małopolska Agencja Rozwoju Regionalnego SA	Kordylewskiego 11 31-542 Kraków Tel. (12) 617 66 28; (12) 617 66 69 http://www.marr.pl	1 region	3	guarantees,
56	Agencja Rozwoju Regionalnego MARR S.A.	Chopina 18 39-300 Mielec Tel. (17) 788 18 59 Fax (17) 788 32 62 e-mail: marr@marr.com.pl http://www.marr.com.pl	1 region	4	–
57	Działdowska Agencja Rozwoju S.A.	Jagiełły 15 13-200 Działdowo Tel. (23) 697 06 61 e-mail: m.beclawska@darsa.pl	3-4 regions	4	information and advisory services, trainings, seminars, conferences, sector analysis
58	Lubelska Fundacja Rozwoju	Zana 41 20-601 Lublin, Konrada Wallenroda 4c 20-607 Lublin Tel. (81) 528 53 50 or (81) 528 53 51 Fax (81) 528 53 52 e-mail: lfr@lfr.lublin.pl http://www.lfr.lublin.pl	<i>no data</i>	1	information advisory services, grants

59	Sudeckie Stowarzyszenie Inicjatyw Gospodarczych	Długa 33 58-100 Świdnica Tel. (74) 646 29 12 mobile 695 946 414 e-mail: pozyczki@ssig.pl; pozyczki1@ssig.pl http://ssig.pl	1 region	3	financial and information services, trainings, technological park
60	Towarzystwo Rozwoju Powiśla	al. Wojska Polskiego 499 82-200 Malbork Tel. (55) 261 73 27 e-mail: biuro@trpd.pl http://digooarti.nazwa.pl	country	1	trainings, virtual office, space rent, project management, advisory, optimisation of processes in the company, start-ups, coworking, events organisation
61	Leżajskie Stowarzyszenie Rozwoju	Targowa 9 37-300 Leżajsk Tel. (17) 242 79 08; (17) 785 10 38; (17) 785 10 39 Fax (17) 242 79 08 e-mail: lsr@lsr.pl http://www.lsr.pl	no data	1	Information, financial services, trainings, investment support
62	Fundusz Pożyczkowy BARR SA	Kościuszki 65 23-400 Biłgoraj Tel. (84) 686 53 93; 784 346 995 e-mail: pozyczki@barr.org.pl http://www.barr.org.pl	1 region	2	guarantees, education-training center
63	Mazowiecki Regionalny Fundusz Pożyczkowy Sp. z o.o.	Hoża 86, room 209 00-682 Warszawa Tel. (22) 890 04 26 e-mail: pozyczki@mrfp.pl http://mrfp.pl	1 region	4	business incubator
64	Fundacja Puławskie Centrum Przedsiębiorczości	Lubelska 2e 24-100 Puławy Tel. (81) 470 09 01 Fax (81) 470 09 30 e-mail: pozyczki@fpcp.org.pl http://www.fpcp.org.pl	no data	3	–

65	Wojewódzki Fundusz Ochrony Środowiska i Gospodarki Wodnej w Opolu	Krakowska 53 45-018 Opole Tel. (77) 45 45 891 Fax (77) 45 37 611 intern. 119 sekretariat@wfosigw.opole.pl http://www.wfosigw.opole.pl	1 region	4	guarantees, educaion-training center
66	Fundusz Pożyczkowy Województwa Świętokrzyskiego Sp. z o.o.	św. Leonarda 1/14 25-311 Kielce Tel. (41) 360 02 80 Fax (41) 360 02 81 e-mail: sekretariat@fpws.eu	1 region	3	business incubator, advisory, employment agency, trainings

