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Relationship lending and the role of mutual guarantee institutions for SME access to finance around the COVID-19 pandemic in the Veneto region

Supervisor
Ch. Prof. Caterina Cruciani

Assistant supervisor
Ch. Prof. Elisa Cavezzali

Graduand
Piero Corrocher
Matriculation Number 882998

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Abstract

Due to some characteristics such as information opaqueness and under-collateralization, financial institutions consider lending to small and medium-sized enterprises (SMEs) riskier than lending to large companies. As a consequence, SMEs are more likely to face credit availability issues. This work aims to discuss how small businesses may improve their access to bank financing. On the one hand, it revises some literature about lending technologies available for banks when lending to SMEs (focusing on relationship lending) and about the role of mutual guarantee institutions with respect to SME access to finance. On the other hand, it investigates the coexistence of relationship lending and mutual guarantee institutions by examining the answers of a group of enterprises which are members of "Cofidi Veneziano" to questionnaires concerning their access to finance. The purpose of this study is to be relevant especially with respect to the crisis generated by the COVID-19 pandemic, since for some enterprises answers have been collected both before and after its spread.

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Introduction

In consideration of their great importance with respect to number of total enterprises, contribution to national income and employment and development of business skills and knowledge, small and medium-sized enterprises (SMEs) represent the backbone of the economy. At the same time, due to some peculiar characteristics such as information opaqueness and under-collateralization, they are expected to face more financial constraints than greater enterprises. Thus, since a proper credit availability is necessary to preserve their functioning, as well as to allow their growth, SME access to finance has received great attention among researchers over the last decades. This topic is especially interesting with respect to Italy, where the economic framework relies on SMEs even more than in other countries and where the main financing source is represented by the banking sector.

In order to mitigate financial constraints which typically affect SMEs, several tools have been developed by banks. Among them, it is possible to distinguish transactions-based lending technologies from relationship lending. In particular, the latter one is expected to be the most suitable tool for the opaquest firms. At the same time, also enterprises themselves have developed further solutions. For instance, they have cooperated to form mutual guarantee institutions and thus to overcome the under-collateralization limit.

This study has a dual objective. On the one hand, it is aimed at offering an overview of the literature concerning SME access to bank finance and mutual guarantee institutions. On the other hand, using the answers to two relevant questionnaires submitted by some members of a mutual guarantee institution operating in the Veneto region, it is aimed at testing the actual efficiency of the above-mentioned tools with respect to the latter area, also taking into account the financial crisis due to the COVID-19 pandemic.

To do so, the work is structured as follows.

Chapter 1 represents the core of the theoretical part. After having provided a definition of SME, it highlights the great importance of small firms. Then, it focuses on Italian SMEs, in order to highlight their peculiar characteristics. Section 1.2 ends with the analysis of the major risks and threats related to the spread of COVID-19. Section 1.3 begins with the study of the major constraints to SME access to finance and goes on with the provision of the most relevant solutions implemented by banks when facing these constraints. Thus, Section 1.4 focuses on relationship lending, highlighting its characteristics and associated measures, its effects on SME access to finance and its functioning during periods of crisis. Then, Chapter 2 deals with mutual guarantee institutions. First of all, mutual guarantee schemes are presented under a general perspective, taking Europe and some peculiar cases as reference. Then, the Italian experience is discussed more in depth, in order to highlight the history of Italian mutual guarantee institutions, their current legal framework, their distribution around Italy and their important functions.

Chapter 3 constitutes the empirical part of this work. It reports some empirical results concerning enterprises operating in the Veneto region and participating in a major mutual guarantee institution. In particular, enterprises were asked for information about their access to finance and about their relationship with both their lenders and the mutual guarantee institution. The relevant questionnaires were proposed by a research group composed by prof. Elisa Cavezzali, prof. Caterina Cruciani and prof. Ugo Rigoni in the context of a research undertaken by Fondazione Venezia.

Whereas the first questionnaire was submitted by the entire sample between January and February 2020, a subsample also filled in a second questionnaire between July and August 2020. In other words, the two questionnaires were submitted at the turn of the spread of COVID-19 along Italy. Thus, the answers to these questionnaires allow to study not only the relevance of relationship lending and of mutual guarantee institutions in general, but also their functioning during a period of financial crisis. Moreover, further considerations may arise by taking into account financial statement information, which is available for the majority of the subsample.

Although the sample involved is not large, the two questionnaires have actually allowed to draw some interesting conclusions about the matter, also accounting for the impact of the financial crisis related to the spread of COVID-19. To this regard, relevant conclusions are reported in the respective final concluding section.

1. SMEs and lending technologies available for banks

1.1 Introduction to the chapter

This chapter provides the backdrop to better understand the case study which will be undertaken in the second part of this work. To this purpose, key concepts of this chapter are the one of SME and the one of relationship lending.

In detail, section 1.2 has the objective to provide the reader with a definition of SME, highlighting the great importance of SMEs with respect to the economy and discussing some peculiar characteristics of Italian SMEs. Moreover, also considerations on the current situation due to the spread of COVID-19 and considerations about the implications with respect to SME access to finance are included in the same section.

Subsequently, section 1.3 is about the great relevance of bank financing on the total debt of SMEs and on the important constraints which limit SME access to bank financing. To this regard, also the lending technologies available for banks to overcome these constraints will be presented, highlighting the influence of the environment and of the characteristics of the lending institution on their development.

Finally, section 1.4 specifically refers to the lending technology that is the most relevant for the purpose of this work, i.e., relationship lending. In particular, the discussion is about its main characteristics and effects, also with respect to periods of financial crisis.

1.2 The relevance of SMEs and the importance of their access to finance

1.2.1 A definition of SME

In 2003 the European Commission has indicated the parameters which define small and medium enterprises within the European Union (EU) context. In particular, Article 2 of the Recommendation 2003/361/EC concerning the definition of micro, small and medium-sized enterprises states that "*the category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million*". Conversely, the United States consider as a SME whichever firm that employs less than 500 employees, though in some cases there may be further classifications according to revenue parameters[1]. Most frequently, however, the main feature which characterizes a SME is that it has fewer than 250 employees.

Evidently, there are no parameters which can be suitable everywhere and for every type of business. This is due to the differences existing in the economic frameworks of different areas of the world and in different industries. For what regards Italy, it has adopted the parameters proposed by the EC, defining micro, small and medium-sized enterprises as in *Table 1*.

	Employees	Annual Turnover	Annual Balance Sheet Total
Micro	<10	<€2m	<€2m
Small	<50	<€10m	<€10m
Medium	<250	<€50m	<€43m

Table 1 - SME parameters

1.2.2 The great importance of SMEs

Once that a first definition of SME has been given, the next step is to understand the great importance of the SME sector with respect to the social and economic environment. According to the Annual Report on European SMEs 2018-2019, in 2018 the EU accounted for slightly more than 25 million SMEs, among which about 93% were micro enterprises. This means that there were about 58 SMEs for 1.000 inhabitants on average, representing the 99,8% of the companies operating in the non-financial business sector (NFBS). Anyway, the number of SMEs varies significantly across different Member States. To give an idea, in some countries (e.g., Czech Republic and Slovakia) there were more than 100 SMEs for 1.000 inhabitants, while in others (e.g., Germany and Romania) there were less than 40 (Muller, et al., 2019).

With respect to Italy, the total number of SMEs was equal to about 3.791.000, representing 99,9% of total enterprises. In detail, there were about 3.600.000 microenterprises (94,9%), 172.000 small enterprises (4,5%) and 19.000 medium enterprises (0,5%) (European Commission, 2019).

[1] It may be the case of farms and exporting services sectors. See for example United States International Trade Commission (USITC), "Small and Medium-Sized Enterprises: Overview of Participation in U.S. Exports", 2010, available at https://www.usitc.gov

However, the great interest around SMEs is due not only to the magnitude of the population itself, but also to the main desirable consequences of the development of the SME sector. According to the Organization for Economic Cooperation and Development (OECD)[2], these main consequences are specifically the sustainment and growth of the economy; the generation of employment; and the increase of innovation.

For what regards the first effect, a significant indicator is the contribution of SMEs to the Gross Domestic Product (GDP) of different countries. Considering a sample of 10 developed and 23 developing countries, in 2016 the World Trade Organization (WTO) estimated that the median GDP impact of SMEs is equal to 45%, confirming the result previously obtained by Ayyagari et al. (2007) with a different dataset. In particular, the above-mentioned indicator has resulted to be equal to 55% in developed countries and to 35% in developing countries (Auboin, et al., 2016).

With respect to Europe, in 2018 the value added generated by SMEs rose by 4,1%. This result is really significant, also considering that the number of SMEs increased by only 2,0% in the same year. Overall, SME sector accounted for 56,4% (Muller, et al., 2019) of NFBS value added, while such a share was even greater in Italy, where it reached the value of 66,9% (European Commission, 2019).

Furthermore, the presence of SMEs may be a relevant factor also for the economic growth itself. Indeed, in 2005 Beck et al. found out that "*the size of the SME sector* [is] *positively correlated with GDP per capita growth*", even if no causal relationship was proved.

A second main effect of the development of SMEs is the generation of employment. Indeed, SMEs represent the most important source of employment, accounting for approximately 70% of total jobs on average in the OECD area and up to 45% of total jobs in emerging economies (OECD, 2017). Thus, the contribution of SMEs to employment is even larger than its impact on the economy, probably due to the fact that SMEs have a lower productivity than larger firms on average.

Such results are pretty similar in the EU, where the overall SME share of employment is equal to about two third of NFBS (Muller, et al., 2019). Interestingly, in Italy this share is again above the EU average, reaching a value of 78,1% (European Commission, 2019).

[2] This is what emerges from the reading of some documentation about SMEs which has been produced by the OECD in the last decade. For example, see OECD, "Enhancing the contributions of SMEs in a global and digitalized economy", at *Meeting of the OECD Council at Ministerial Level*, Paris, 7-8 June 2017; or OECD, "Enhancing SME access to diversified financial instruments", Mexico City, February 2018.

Therefore, in this country SME contribution to both value-added and employment is greater than SME contributions in other Member States.
For what regards the first two above-mentioned desirable effects, a further encouraging result can be reported. In particular, Annual Report on European SMEs states that both SME value-added and employment grew in all Member States in 2018.
The last main effect of the development of SMEs is their contribution to innovation. In this case, their contribution is sensibly lower than the one of larger firms. To give an idea, SMEs have produced about 17% of all the patent technology in Europe between 2000 and 2012 (Eurostat, 2014). Therefore, even if it is lower than that of larger firms, their contribution is still relevant.
To this regard, it has to be considered that SMEs may also adopt innovation generated elsewhere, thus contributing to its reinforcement, or directly collaborate with external partners. This is the case of open innovation, which provides that different businesses exchange knowledge and information with other partners in order to increase innovation. Overall, the better access to global markets and knowledge networks is increasing the innovation provided by SMEs (OECD, 2018).

1.2.3 Characteristics of Italian SMEs

Once that the great relevance of SMEs with respect to the social and economic context has been introduced, it could be interesting to focus specifically on the Italian economic framework. Indeed, Italian SMEs present some characteristics which are peculiar with respect to other countries. These characteristics are the "*dwarfism*"[3] and "*familism*"[4] of enterprises and the high cost of ongoing business.
With respect to the "*dwarfism*" of enterprises, it has been already suggested by statistics about national value added and employment that Italy seems to rely more on SMEs than other Member States. However, to better address the above-mentioned feature, consider that Italian SMEs employ just 3,1 people on average, remaining below the EU average of

[3] The term "*dwarfism*" is the translation of the Italian word "*nanismo*", which is used, among others, by Consiglio Nazionale dei Dottori Commercialisti ed Esperti contabili (CNDCEC), "L'equity crowdfunding. Analisi sintetica della normativa e aspetti operativi", *Position papers 08/2016 n. 6*, 2016; and Pagliacci M. G. R., "Il capitale di rischio delle PMI italiane", in *Finanziamenti su misura – News 5*, 2007, p.14.
[4] The term "*familism*" is the translation of the Italian word "*familismo*", which is used, among others, by Ricci M., "Deserto tecnologico e familismo in azienda: alle origini del "grande male italiano"", in *La Repubblica*, 29 giugno 2019, available at https://www.repubblica.it/economia and Ghezzi S., "La familizzazione dell'impresa – Alcune riflessioni sul familismo imprenditoriale in Brianza nella crisi economica attuale", in *EtnoAntropologia vol. 4 n. 1*, 2016.

3,9 (European Commission, 2019). From another perspective, this feature is even more evident if all the enterprises are considered: Italian enterprises employ less than 4[5] people on average, while the European Union average is 5,8 (Conti, 2019).
This is also due to the Italian institutional and political context, which has not helped the dimensional growth of its enterprises. In particular, it should have put in place a more favorable administrative, legal and fiscal environment through laws more orientated to economic development (ODCEC, 2017).
The second main characteristic of Italian enterprises in general is "*familism*". To this regard, first of all Italy is one of the European countries with the highest number of family-run businesses. To give an idea, family-run enterprises accounted for 85% of total enterprises in the country. Moreover, in these enterprises property and management tend to coincide, since usually the management function is committed to members of the family. In detail, 66% of family-run businesses' management is composed entirely by family components. Comparably, in France and in the U.K. this indicator is far lower, accounting for respectively 26% and 10%. (AIDAF, 2017).
Last but not least, the European Commission has appointed as a main policy priority for Italy the reduction of the costs of starting a new business. Indeed, in 2019 it stated that "*the cost of starting a new business in Italy has not changed since 2013 and is still the highest in the EU*". Moreover, "*Italy is* […] *one of the three worst performers in the EU when it comes to the burden of government regulation on business*" (European Commission, 2019). Thus, more measures need to be implemented in order to facilitate the formation of new enterprises and the growth of existing ones.

1.2.4 European SME current situation due to COVID-19 outbreak

At this point, both the relevance of SMEs and the Italian peculiarities with respect to this topic have been described. Now, it is time to move to one of the main concerns when dealing with SMEs, i.e., their access to finance.
Before doing so, however, a premise about the current situation has to be made. Indeed, all the information reported above is referred to a period which is not conditioned to the spread of COVID-19 at all. Thus, it is necessary to bear in mind that such an event has already had (and it will have) significant effects on the economy. To this regard, more

[5] In 2016 this indicator was equal to 3,8 according to Istat, "Annuario Statistico Italiano", 2019, available at https://www.istat.it.

recent information is obtained through the Survey on the Access to Finance of Enterprises in the euro area (SAFE) results. This survey is conducted twice a year and its results not only provide information about the access to finance of enterprises but can also be used to make considerations about the economic development of SMEs across the EU.

The heavy consequences of the restrictions imposed by national governments due to the pandemic can be seen first of all looking at the evolution of Euro area SMEs' turnover. Indeed, in the period between April and September 2019 the net percentage[6] of SMEs that had reported a growth in their turnovers was still positive and encouraging, equaling 20% (21% in the previous period). Then, for the first time since 2014, it became negative, reaching the values of respectively -2% and -46% in the next two semesters. Results are even more impressive in Italy, where such net percentages were equal to -19% and -56% in the same periods.

As a consequence, also profits started to decline. Indeed, during the period between April and September 2020 the net percentage of SMEs that had reported a growth in profits was far negative. Its value, equal to -47%, is the lowest since recordings of this kind and it followed the value of -15% which refers to the previous semester. Another time, results show that Italian SME sector may have suffered even more severely, reaching -56% from -36% (European Union, 2020).

In order to face this situation, the European Commission has recommended a series of measures which Member States could have put in place, in accordance with the Articles 107 and 117 of the Treaty on the Functioning of the European Union (TFUE). In particular, it has done so through its Communication "Temporary Framework for State aid measures to support the economy in the current COVID-19 outbreak" (also known as "Temporary Framework"), firstly adopted on 19 March 2020 and then amended four times. Specifically, the measures provided by Temporary Framework are aid in form of direct grants, repayable advances and tax advantages; aid in the form of guarantees on loans; aid in the form of subsidized interest rates for loans; aid in the form of guarantees and loans channeled through credit institutions or other financial institutions (European Commission, 2020a).

According to the following amendments, among the other objectives, this document aims to "*ease the access to capital and liquidity for undertakings affected by the crisis*" and to

[6] Net percentages are defined as the difference between the percentage of enterprises reporting that a given factor has increased and the percentage of those reporting that it has declined, according to SAFE notes.

"*support micro, small and start-up companies and incentivize private investments*". Overall, the purpose is to "*contribute to the continuity of the economic activity during the COVID-19 outbreak and provide the economy with a strong platform to recover from the crisis*" (European Commission, 2020b).

Of course, it is still too early to assess precisely the impact of COVID-19 either on the economy as a whole or specifically on the SME sector. Moreover, as suggested by SAFE results, countries and their economies may have suffered with different intensities. In other words, it is possible that some countries may have been hit more than others. To this regard, also considering that it seems to rely on SME sector more than other Member States, Italy may be among these countries.

The results of a questionnaire sent by the European Commission to the Member States on 16 September 2020 have suggested that the Temporary Framework actually "*constituted a useful additional instrument to support the economy during the crisis*" (European Commission, 2020b). Also for this reason, the aim of the fourth amendment released on the 13 October 2020 has been to prolong these measures until 30 June 2021.

However, these aids won't last in a long period of time. Indeed, also in view of the Article 107 of the TFUE, aids provided to firms by Member States due to exceptional circumstances may not be compatible with the internal market in the long run[7]. Thus, it is fundamental to start to think about alternative solutions.

It is in this context that access to external finance may become even more relevant for small businesses. Notice that this has always been a hot topic among researchers, precisely because SMEs are considered to be the backbone of the economy.

1.2.5 Concerns about European SME access to finance

In general, external financing represents an important tool for any firm and it may be required throughout all the firm's lifecycle. To this regard, it is curious that actually in the last years the main concerns indicated by European SMEs have been "*finding customers*" and the "*availability of skilled labour*". In detail, in the period between April and September 2020, "*finding customers*" has been indicated by more than 20% as the most important worry among European SMEs, while the "*availability of skilled labour*" by 19%.

[7] To this regard, in the Speech at the State Aid High Level Forum of the Member States of 16 November 2020, the Executive Vice-President of the European Commission Margrethe Vestager has warned Member States about the fact that firms must be careful not to get addicted to State aid.

On the other hand, concerns over the access to finance has been pointed out by just 11% (European Union, 2020).
Nevertheless, with the spread of COVID-19 this issue is becoming more and more alarming. Interestingly, in the decade that has preceded the pandemic, there have been three main phases that identify different firms' perception about their financial conditions in the EU. In detail, the first phase occurred between the financial crisis of 2008 and 2012. During this period, SMEs perceived access to finance as their second main concern. Then, the following phase, which lasted in 2016, was characterized by several unconventional monetary policies, such as the introduction of negative interest rates, that helped to reduce the concerns about SME access to finance. During the last phase, which occurred until 2019, access to finance was consistently outweighed by other concerns. Now, the risk is that the crisis caused by the pandemic may bring it back at the top of the list of concerns among SMEs, as it happened during the previous financial crisis.
It is especially in this situation that bank finance shall represent a resource to withstand the crisis. To this regard, in many sectors cashflows have collapsed due to their forced economic inactivity and this could lead to inefficient bankruptcies. Indeed, as soon as the pandemic is under control, those firms which now are not likely to survive the crisis may start to obtain good results again. Thus, it is in the interest of saving worthy firms that the burden of economic inactivity shall be shared by all the stakeholders, creditors included.
In the next section credit technologies available for banks when lending to SMEs will be presented, trying to show how they can deal with one of the main concerns when talking about SME finance, i.e., the opacity of financial information.

1.3 Different lending technologies available for banks when lending to opaque SMEs

1.3.1 The relevance of bank financing with respect to SMEs

In order to reach its full potential, a SME has to obtain the funds that are necessary to start, sustain and grow its business. For example, consider a company with low financial resources which has additional possible customers but no further productive potential due to the lack of employees. Clearly, the absence of additional funds does not allow such a firm to hire new people and to improve its economic results. Moreover, nowadays it has to be noticed that often the possibility of a business to grow is strictly related to the opportunity of exporting its products or services and of penetrating foreign markets. Thus, since entry costs are higher when exporting to foreign markets than when selling to domestic market, only those firms with sufficient funds may decide to expand by starting to sell abroad (Minetti & Zhu, 2011).

Currently, although alternative financial instruments exist, bank loans still represent the main source of finance for many small businesses. According to the SAFE Analytical Report, in 2020 EU SMEs indicated bank loans as the second most relevant source of external financing, after credit line and overdraft and before leasing. Interestingly, after consistently decreasing during the period between 2014 and 2019, bank loans increased slightly in 2020. In the same year, among those European SMEs which indicated bank loans as relevant for their financing, 35% applied for a bank loan (Kwaak, Cheikh N., Clarke, & Snijders, 2020). With respect to Italy, however, it has to be noticed that it is one of the countries, together with France and Spain, where SMEs used bank loans most often, as shown in *Figure 1*.

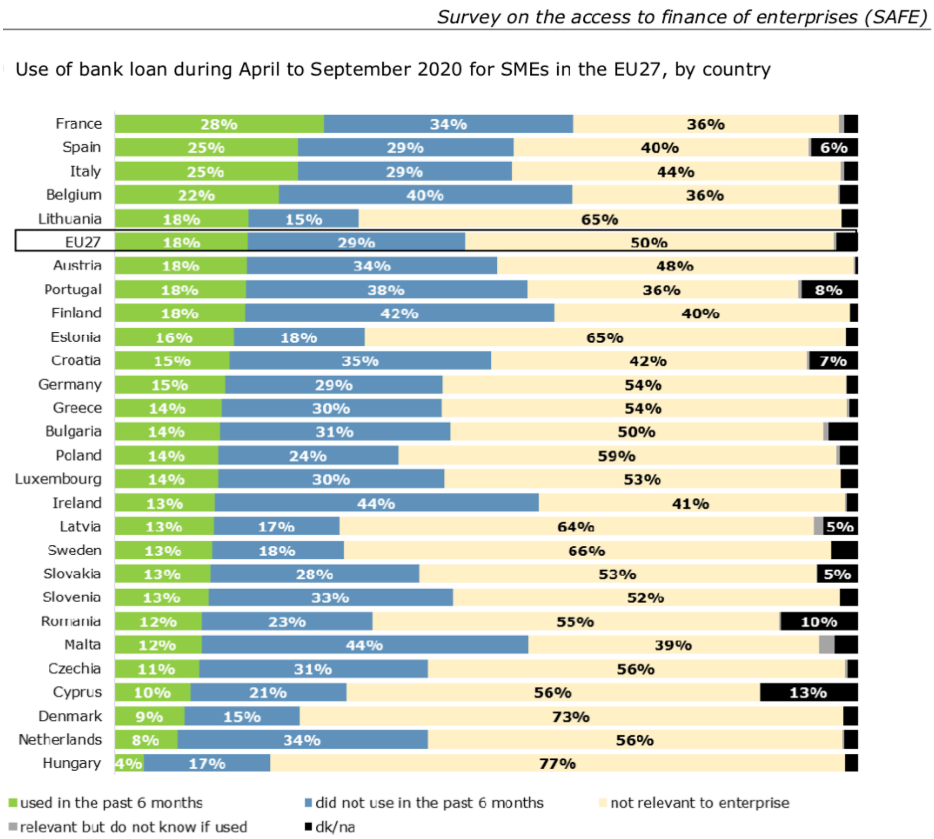

Figure 1 – Source: Kwaak T., Cheikh N., Clarke N., Snijders J., "Survey on the access to finance of enterprise (SAFE) Analytical Report 2020", European Commission, Brussels, November 2020, available at https://ec.europa.eu

1.3.2 Important limits to SME access to finance

In order to strengthen SME access to traditional bank financing, first of all it is desirable to improve statistical information about this field. Indeed, this would allow to better identify if gaps in SME financing exist, what causes these gaps and, hopefully, how to take remedies. To this regard, an important objective of policy makers should be to enable SMEs to receive bank loans on reasonable terms, ensuring a certain level of consumer protection (OECD, 2015b).

According to the OECD, however, "*SMEs are typically at a disadvantage with respect to large firms when accessing finance, owing to opacity, under-collateralization, high transaction costs and lack of financial skills*" (2015b, p. 1). These drawbacks fit in a context characterized by a lack of appropriate forms of finance for SMEs. Of course, financing needs and constraints, as well as available lending technologies, vary a lot across countries due to different legislations and development of lending structures. Anyway, before presenting the main lending technologies available for banks when lending to SMEs, it is relevant to study more in depth the drawbacks pointed out by the OECD.

For what regards the opacity of SME financial markets, notice that usually SMEs are private firms. Thus, unlike public companies, not only they are less subjected to regulations about financial disclosure, but also, they are less likely to be followed by financial advisors and credit scoring agencies (Ackert, Huang, & Ramìrez, 2007). As a consequence, costs related to the collection and proceeding of certain financial information may be avoided especially by smaller firms, whose financial reports usually exist just for tax purpose.

Information opacity is likely to lead to the main agency problems associated to information asymmetry in general, such as adverse selection and moral hazard. In detail, adverse selection refers to the problem of choosing good credit risks ex-ante, with the consistent probability of attracting high-risk borrowers. On the other hand, moral hazard refers to the problem of enforcing effectively the agreed credit contract due to both incomplete contracting and costly monitoring (Ayyagari, Demirgüç-Kunt, & Maksimovic, 2017). For these reasons, lending to opaque firms is considered riskier than lending to transparent ones.

With respect to monitoring practices, it has to be noticed that a bank has to consider both benefits and costs. On the one hand, monitoring allows to detect any issue as soon as possible and thus to take remedies on time. On the other hand, collecting information may be really costly. Thus, it is important for a bank to identify the most efficient way to carry out this duty.

Frequent tools to face financial opacity of SMEs may be credit bureaus, which are typically created by the private sector, and credit registers, which are usually public institutions introduced for bank supervision. Moreover, legislators may produce specific laws to address the problem. For example, at the 37th point of its Resolution of 15 September 2016 on access to finance for SMEs and increasing the diversity of SME funding in a capital market union, the European Parliament has highlighted "*the importance of the transparency, standardization and public availability of SME financing information for banks, investors, supervisors and other stakeholders in order to understand the risk profile and take informed decisions and to reduce financing costs*". Such a document represents just a non-binding act, but it is still relevant since it proves the interest on this matter. To sum up, financial transparency is desirable precisely because it helps to improve the efficiency of credit allocation decisions and loan performances.

With respect to under-collateralization, one of the most important constraints that impede the access to bank finance for SMEs is the lack of suitable collateral. To this regard, "*secured loans are the most common type of loans in the formal financial sector throughout the world*" (Ayyagari, Demirgüç-Kunt, & Maksimovic, 2017, p. 14). Thus, firms which do not have suitable collateral among their assets are not likely to have access to any bank loan or, at least, they are likely to obtain worse condition (for example they may have to agree higher interest rates and/or personal guarantees).

Notice that a firm which does not have any suitable collateral may still own valuable assets. Indeed, often movable assets such as machinery, equipment and receivables represent the majority of a firm's assets. At the same time, some banks may be reluctant to accept movable assets as collateral, especially in developing countries (Calomiris, Larrain, Liberti, & Sturgess, 2015). In other words, there is the need for a certain level of financial development[8], in order to allow firms to use movable assets as collateral and to decrease the associated costs (Ayyagari, Demirgüç-Kunt, & Maksimovic, 2017).

Monitoring procedures become notably interesting also for secured loans. Indeed, on the one hand banks may be less encouraged to monitor the loan since eventually they can sell the pledged assets. On the other hand, they have to monitor at least the pledged assets

[8] A good solution is represented by the introduction of modern collateral registries for movable assets (Love, Martìnez Perìa, & Singh, 2013).

themselves, in order to ensure that they don't lose their original value. Another time, the decision involves a deep analysis of costs and benefits.

A third main constraint with respect to the access to finance of SMEs is that frequently transaction costs[9] associated to bank loans delivered to SMEs are too high. This limit is related to the financial opacity which often characterizes SMEs. In fact, it has to be noticed that "*loans to more informationally opaque firms* [are expected] *to be smaller and have shorter maturities*" (Ackert, Huang, & Ramìrez, 2007, p. 224). One reason for this is that, as anticipated at the beginning of this section, banks consider lending to opaque firms riskier than lending to those transparent ones which can prove their financial stability. To this regard, a first measure which can be implemented by banks in order to limit their exposure to risk is to decrease the amounts they lend to this type of firms (Strahan, 1999). As a consequence, the costs of processing, monitoring and enforcing a small loan may become too large for the bank with respect to the amount of the loan itself. This causes a consistent increase of the break-even interest rate, i.e., the interest rate that has to be applied in order to cover the sustainment of the above-mentioned costs.

Moreover, typically lending to a SME is considered riskier than lending to a large company. Indeed, small businesses are expected to be more subject to economic cycles than large companies, so that small firms are more likely to be affected by economic downturns. As a consequence, interest rates and fees paid by this kind of borrowers are typically higher. To this regard, at the same time it means that banks may have greater margins on small business loans than on other products. Thus, it is also in the interest of the banks themselves that strengthening SME access to finance should be a main goal for policy makers.

Finally, a remark on the lack of financial skills of SME managements must be made. Indeed, in the SME environment it is pretty usual for owners to be also managers of their businesses. Therefore, although they are likely to have a certain level of entrepreneurial skills, managers of SMEs often do not have the necessary financial skills, and they are not sufficiently interested in preparing and understanding financial statements in the perspective of taking decisions about the capital structure of the firm (Akhtar & Liu, 2018). Typically, this is true especially for microenterprises.

[9] Transaction costs are both interests and fees paid by borrowers to lenders.

At this point, the most important limits to SME access to bank financing have been introduced. It has to be noticed that, however, financial opacity represents the most interesting one. Indeed, under-collateralization can be assessed only once that opacity has been faced, while it has been seen how financial opacity affects transaction costs. Therefore, the next step is to discuss how banks deal with SME financial opacity. To this regard, different lending technologies are described in the next subsection.

1.3.3 Small business lending technologies

First of all, it is appropriate to distinguish between transactions-based lending technologies and relationship lending. As it will be clear later, indeed, transactions-based technologies rely on hard information, such as data reported in audited financial statements, while relationship lending relies on soft information. It is important to precise even at this early stage that the choice between transactional technologies and relationship lending depends not only on the characteristics of the borrower, but also on the features of the lender, on the peculiar social and economic context and on the specific national regulation.

For what regards transactions-based lending, literature has already clarified that the latter cannot be treated as a single homogeneous lending technology. Indeed, there are six main transactions-based lending technologies available for credit institutions when lending to SMEs. In particular, they are financial statement lending, small business credit scoring, asset-based lending, factoring, fixed-asset lending, and leasing (Berger & Udell, 2006). Sometimes, these technologies present just slight differences from one to another, as it emerges from their descriptions[10].

The first mentioned lending technology is **financial statement lending**. This technology provides that the bank uses audited financial statements and financial ratios, computed using information reported in these documents, in order to evaluate the ability of the borrower to repay the loan. Of course, financial statement analysis may lead to the detection of assets to be eventually used as collateral, but usually expected future cash flows of the firm is used as the primary source of repayment. In view of what has just been said, this technology may be suitable only for relatively transparent SMEs.

[10] For what regards the brief description of transactions-based lending technologies and of relationship lending, see Berger A. N., Udell G. F., "A more complete conceptual framework for SME finance", in *Journal of Banking and Finance 30*, 2006, pages 2945-2966

The second transactions-based technology is **small business credit scoring**. This technology relies on hard information about the SME and its owner. In particular, personal consumer data are obtained from consumer credit bureaus, while information on the firm is obtained both from commercial credit bureaus and through bank's investigation. Then, this financial information is used to determine a credit score, which measures the likelihood that the borrower defaults or become insolvent. From another point of view, a credit score is a number which represents the likelihood that the applicant will be approved for funding. Thus, this technology is addressed to very opaque firms and usually leads to risky loans of relatively small amount with high interest rates.

While this lending technology was widely used for many years in the consumer credit markets, only in the mid-1990s financial institutions finally started to combine information on the owner with some financial information on its small firm in order to estimate a small business credit score. This delay occurred especially due to the significant heterogeneity among this kind of borrowers, which makes really difficult to make predictions (Berger & Frame, 2005). Moreover, as anticipated, small firms are particularly subjected to economic cycles. Thus, the credit scoring model should allow not only to update for the most recent credit records, but also for any change in the business environment.

However, it still represents an interesting tool when dealing with SMEs. Indeed, a small business loan application may be supported by a small business credit scoring system, in order to save time and efforts of the loan officer and so to make the procedure cheaper and more effective at the same time (Tsaih, Liu, Liu, & Lien, 2004). For example, an online application able to compute credit scores may allow applicants to evaluate by themselves the likelihood of obtaining loans at the target conditions before any meeting with the loan officer.

Asset-based lending is another transactions-based technology which bypasses the opacity problem by focusing on a subset of the SME's assets rather than on the overall financial information. These assets, which usually are liquid assets such as accounts receivable and inventories, are pledged as collateral. To this regard, also under the other above-mentioned lending technologies banks may pledge this kind of assets as collateral. The difference with respect to the previous and to the following transactions-based lending technologies is that the extension of credit primarily depends on the value of the collateral, while in the other cases it is considered only secondarily.

A lending technology which is similar to asset-based lending is **factoring**. Nevertheless, they differ under some aspects. First of all, factoring does not involve inventories, but only account receivables. Moreover, factoring provides that the bank buys the SME's accounts receivable rather than just pledging them as collateral. Another time, however, the lender bypasses the financial opacity of the borrower by relying on the quality of the firm's customers rather than of the firm itself. Overall, this form of funding is increasing in popularity. To give an idea, factoring volume in the EU has registered an increase for ten years in a row, with a year-on-year increase of 8% (FCI, 2019).

For what regards **fixed-asset lending**, it works similarly to asset-based lending. The main difference is that this time the collateral is represented by long-lived assets, such as equipment or real estate. Thus, even if this involves different identifying and monitoring mechanisms, another time opacity problem is addressed by focusing primarily on the value of a specific asset.

Last but not least, **leasing** represents another transactions-based technology, in which a lessor (that is the lender) buys a long-lived asset and then rent it to the lessee (the borrower). The rental contract usually contains an option which allows the lessee to buy the asset at the end of it. As other above-mentioned lending technologies, leasing avoids the opacity problem since the underwriting depends on the value of a determined asset. Interestingly, empirical evidence has shown that leasing activity may have a positive effect on economic growth (Vakhitov & Zamaletdinov, 2015). Moreover, as reported in Subsection 1.2.4, it has been mentioned as the third most relevant source of financing by European SMEs in 2020.

Since both factoring and leasing provide respectively the purchase of accounts receivable (rather than the pledging of them as collateral) and the rent of purchased fixed-assets (rather than the lending of money to buy them), and due to the fact that they can be matched respectively to asset-based lending and fixed-asset lending, some authors do not consider them at the level of the other four above-mentioned transactions-based lending technologies (Ferri, Murro, Peruzzi, & Rotondi, 2019). Nevertheless, they still represent fundamental resources in the financial field, allowing banks to provide capital to SMEs though financial opacity.

Conversely, the other main resource to ensure the access to bank loans for SMEs is represented by **relationship lending**. This technology is discussed more in depth in Section 2.4, but a brief description is already offered in this section.

The most important characteristic that distinguishes relationship lending from transaction-based technologies is that it relies on soft information. This soft qualitative information is obtained through personal interactions over time with the SME involved, its owner and the local community, in order to assess the SME's creditworthiness despite opacity problems. Clearly, the longer is the relationship between the borrower and its bank, the more is the information that the bank may have collected. However, this and other characteristics are deepened later in this work.

At this point, the main lending technologies available for banks when dealing with SMEs have been introduced. It is relevant to precise that the use of one lending technology does not rule out the simultaneous use of another one. To this regard, an interesting contribution is offered by Bartoli et al. (2013). In detail, evidence on Italian SMEs shows how the coexistence of relationship lending with other transactions-based technologies may be beneficial for SMEs by limiting credit constraints.

Now, it is interesting to study how the economic and financial environment influences the development of either transactions-based lending technologies or relationship lending. To this regard, the next two subsections deal with the relevance of respectively the environment and the financial institution's structure.

1.3.4 The relevance of the environment

The development of different lending technologies used by banks when lending to SMEs is not homogeneous all over the world. This may be especially due to different business environments and social contexts. Indeed, as it will emerge in the following paragraphs, there are some macro aspects[11] which need to be considered.

A first important aspect concerns the information environment. Indeed, accounting standards may vary across different countries, determining different levels of financial measures' reliability. For instance, it can be considered that while US public firms generally record and disclose information according to the Generally Accepted

[11] The following macro aspects have been identified by Berger and Udell, op. cit. Subsequently, other authors have focused specifically on one or on a group of them. For example, see Haselmann R., Watchel P., "Institutions and Bank Behavior: Legal Environment, Legal Perception, and the Composition of Bank Lending", in *Journal of Money, Credit and Banking vol. 42 n. 5*, August 2010, pages 965-984; Laeven L., Majnoni G., "Does Judicial Efficiency Lower the Cost of Credit?", *World Bank Policy Research Working Paper 3159*, October 2003; Rodano G., Serrano-Velarde N., Tarantino E., "Bankruptcy law and bank financing", *Bank of Italy Working Paper n. 1013*, June 2015; and Cetorelli N., "Competition among banks: Good or Bad?", in *Federal Reserve Bank of Chicago vol. 25*, February 2001, pages 38-48.

Accounting Principles (GAAP)[12], the EU requires its publicly listed company to adopt the International Financial Reporting Standards (IFRS)[13]. To this regard, although both GAAP and IFRS represent well-developed and reliable accounting procedures, they differ under some significant aspects. This may lead managers to make alternative accounting and disclosing decisions depending on the accounting standards to which their firms are subject[14].

In addition, the information environment is also influenced by the sharing of information (Berger & Udell, 2006). To this regard, suitable examples are credit bureaus and collateral registries. Indeed, as explained in the previous subsection, both consumer and commercial bureaus are needed in order to allow the development of small business credit scoring. On the other hand, the presence of adequate collateral registries may favor the development of other lending technologies such as asset-based lending, factoring and fixed-asset lending.

A second and a third significant aspects concern respectively the legal, judicial and bankruptcy environments and the social context. In particular, a legal, judicial and bankruptcy environment consists of the commercial laws specifying the property rights and the functioning of associated transactions and of those laws which are enforced in the circumstance of commercial disputes and bankruptcy procedures, while the social context consists of social norms, religion and culture.

With respect to the legal environment, it not only influences the credit availability and development, but also the type of borrowers involved. To this regard, it has been found out that the better is the legal system, the greater is the proportion of SME loans. Commercial laws may be alternatively well-defined or ambiguous. Thus, "*the better the legal system, the more willing a bank to accept different assets as collateral and the more willing a bank to lend to information opaque borrowers*" (Haselmann & Watchel, 2010, p. 980).

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[12] GAAP is a set of accounting principles, rules and procedures issued by the Financial Accounting Standards Board (FASB), an international non-profit organization. Its adoption is mandatory for all public companies in the US, as provided by the US Security and Exchange Commission (SEC) in its Financial Reporting Manual.

[13] IFRS is another set of accounting principles, rules and procedures issued by the International Accounting Standards Board (IASB), a group of independent experts which is responsible for the development of publication of these standards. In the EU, public companies must adopt IFRS according to its Regulation 1606/2002/EC on the application of international accounting standards.

[14] To this regard, on one hand IFRS are criticized in that they are so general, and their implementation guidance is so ambiguous, that managers have excessive latitude in taking decision. On the other hand, GAAP are criticized in that they allow managers to violate the spirit of the rules though conforming to the letter to them (Revsine, Collins, Johnson, Mittelstaedt, & Soffer, 2018).

As anticipated, also judicial and bankruptcy procedures are relevant with respect to the development of bank financing. To this regard, empirical results suggest that, together with inflation, judicial efficiency is a main driver of interest rates. More specifically, the improvement of property rights protection and of judicial procedures are expected to low the interest rates and the overall cost of financing (Laeven & Majnoni, 2003). With respect to the bankruptcy procedures, they may be alternatively creditor-friendly or debtor-friendly[15]. To this regard, an empirical study on Italian SMEs suggests that "*bankruptcy reforms that strengthen borrower rights to renegotiate outstanding financial contracts produce an increase in interest payments on bank financing and a reduction in firm investment*", while "*increased creditor rights in liquidation* [...] *lead to a significant reduction in the cost of bank financing and spur firm investment*" (Rodano, Serrano-Velarde, & Tarantino, 2015, p. 26).

For what regards the social environment, instead, influence is relevant especially with respect to both investor protection and borrower's skills to effectively manage credit risk. For example, creditor protection may be influenced by religion and culture. To this regard, it has been found out that in Catholic countries creditors are less protected than in other countries (Stulz & Williamson, 2001). On the debtor side, education represents a really important factor. Indeed, education is expected to provide managers with the ability to manage credit risks, thus contributing to the development of suitable conditions for SMEs when borrowing from banks. Moreover, in general literature and research may help policy makers in producing efficient laws in the financial field (Belas, Smrcka, Gavurova, & Dvorsky, 2018). In addition, social environment may have an impact on the information production. To this regard, social norms, religion and culture is expected to have a greater impact on the production of soft information than of hard information (Berger & Udell, 2006).

About the relevance of the environment, a last remark should be made with respect to the market competition. Theoretically, banks with a high market power are expected to exploit it charging higher interest rates and fees. Nevertheless, perfect competition may be not the best solution. Indeed, if on the one hand market competition is expected to

[15] For instance, in France the most important goals of the bankruptcy system are to preserve firm's continuity and to maintain employment, so that French system is considered debtor friendly. Conversely, in the United Kingdom (UK), the bankruptcy system provides that whenever a firm becomes insolvent, control rights pass to its creditors, so that the UK system is considered creditor friendly (Brealey, Myers, & Allen, 2016).

increase credit availability, on the other hand a greater concentration of market power may increase credit quality (Cetorelli, 2001). Moreover, a recent research suggests that "*competition among banks for funds that will be used in turn to grant loans in different sectors gives a competitive edge to the bank that performs better on average in all sectors, even though they may be less efficient than others in some specific* [ones]*. As a result, the bank with a more suitable technology for a given sector may be driven out of the market by lack of funds and let the other technology spread even in sectors where it is not the most efficient one*" (Ahn, 2016, p. 1133-1134). In addition, other results referring specifically to SMEs from 17 EU countries show that the increase of bank market power at a disaggregate level actually reduces SME cost of debt (Wang, Han, & Huang, 2020).

Thus, when conducting a research on SME access to finance, the specific reference environment cannot be ignored. Indeed, its characteristics may lead to different results when conducting analogous studies in different areas of the world.

After having analyzed the relevance of the market competition among banks as a whole, it could be interesting to study the competitors more in depth. To this purpose, the next subsection discusses some characteristics of the relevant financial institutions, studying if they are expected to give any advantage with respect to a specific lending technology.

1.3.5 The relevance of the financial institution's structure

One may wonder if there are some characteristics which make a certain bank more suitable than others in lending to SMEs. Moreover, one may ask if some characteristics of a bank may favor the development of one lending technologies in particular. To this regard, a bank is expected to exploit its characteristics in order to undertake the most profitable operations. Thus, it is interesting to study those characteristics, if any, which provide a comparative advantage in lending to SME through a particular lending technology.

First of all, it is important to focus on the dimension of the relevant institutions. Indeed, at a theoretical level, large financial institutions are expected to have a comparative advantage in transactions lending, while small institutions are expected to have a comparative advantage in relationship lending (Berger & Udell, 2006). This depends upon the processing of information. In detail, large institutions are likely to be more efficient than smaller ones in processing hard information due to economies of scale, but they may be less efficient in processing soft information. Indeed, processing soft information may require an easy communication within the financial institution and this is more likely to occur in smaller institutions due to the fewer layers of management.

Unfortunately, empirical evidence does not focus specifically on different lending technologies. However, in the past empirical results showed that "*large banks lend primarily to larger firms with good accounting records, while small banks lend to more difficult credits*". In particular, large banks "*have shorter and less exclusive relationships and are not as effective at alleviating credit constraints*" (Berger, Miller, Petersen, Rajan, & Stein, 2002, p. 35). Overall, recent empirical evidence suggests that the propensity of banks to lend to small businesses decreases with their size (Mkhaiber & Werner, 2020).

Combining the dimension with the geographical focus of the bank, a further evaluation could be relevant. Indeed, typically regional banks are smaller than national banks. Moreover, regional banks may be more efficient in collecting and processing information thanks to their geographical closeness to their customers. In view of these considerations, regional banks are expected to have a comparative advantage in relationship lending, while large national banks are expected to have a comparative advantage in transactions-based lending. Overall, some authors suggests that "*higher market share of regional banks or stronger presence of geographically-focused banks are beneficial in relieving SME's short-term constraint*" (Meslier, Sauviat, & Yuan, 2020, p. 14).

Another main aspect of financial institutions concerns their ownership. In particular, the ownership can be relevant at two levels. At a first level, domestic-owned banks can be distinguished from foreign ones. At a second level, privately-owned banks can be distinguished from state-owned ones.

With respect to the first distinction, the debate is controversial. Indeed, on one hand the presence of foreign banks may be desirable because it may increase not only the funds available for loans, but also competition and efficiency. This is expected to be true especially in developing countries (Cull & Martìnez Perìa, 2007), also because, as explained in the previous subsection, in developed countries a certain degree of bank market power may be desirable. To this regard, on the other hand a great presence of foreign banks over a considered territory may have disadvantageous effects. Indeed, some empirical results suggest that a greater percentage of foreign banks may correspond to a lower access to credit for firms. Moreover, it may result in higher collateral requirements (Williams & Brown, 2020).

This may be due to the fact that foreign banks are less likely to lend to very opaque small businesses. Indeed, in developed countries foreign institutions are expected to have a comparative advantage in transactions lending and a disadvantage in relationship lending (Berger & Udell, 2006)[16]. To this regard, a possible explanation could be that, as anticipated, the collection of soft information is favored by geographical closeness, since processing and transmitting it over great distances are expected to be less efficient.

However, the limited data availability which has characterized past research has to be taken into account. Indeed, datasets should consider the significant heterogeneity which may occur among foreign banks. Thus, controversial results may be due to this heterogeneity, which depends on several factors such as country of origin, size, degree of international operations and distance between home and host country (Claessens & van Horen, 2014). Moreover, again empirical studies do not focus on any specific lending technology.

For what regards the second distinction, instead, state-owned banks are expected to have a comparative advantage in transactions lending and a disadvantage in relationship lending. This may be mainly explained by the fact that state-owned financial institutions are typically large (Berger & Udell, 2006). Another time, however, empirical studies do not refer specifically to any lending technology.

In conclusion, when conducting a research, it is fundamental to consider also the characteristics of the banks involved. Indeed, as in the case of the environment, the characteristics discussed above may have a significant impact on the empirical results, which may be conflicting just because of different sample of banks.

At this point, the relevance of both the environment and the bank population should be clearer. Thus, the next step is finally to start to analyze relationship lending more in depth.

1.4 Relationship lending

1.4.1 A premise

As anticipated in the previous section, relationship lending is a lending technology which relies on soft information rather than on hard information. Under this technology, the

[16] This is also confirmed by empirical evidence, which suggests that foreign banks are more likely to use transactions-based technologies (Beck, Demirgüç-Kunt, & Martìnez Perìa, 2011)

bank collects private information about the borrower through multiple interactions over time. The objective of the bank is to better assess the credit risk associated to the borrower, especially when the latter is financial opaque. To this regard, additional information is required whenever it is difficult to make any significant forecast of the borrower's future results and of its liquidation value or to estimate its default probability using just hard information such as financial statements.

Before starting to study this subject more in depth, however, it is necessary to make a premise. In particular, it is relevant to consider that empirical findings about relationship lending have shown both advantages and drawbacks of using this lending technology. Sometimes, anyway, the empirical findings about its development have resulted to be conflicting.

One reason for this may be data limitation. Indeed, often research has focused just on specific types of bank or on specific types of borrower, or both (Hussain, Durand, & Harris, 2020). To this regard, the influence of the bank population has been discussed in the previous section. As anticipated, the main consequence is that what could be true for a certain population may not be so for another. This is relevant specifically when the results of a study aim to be of general interest.

Furthermore, country effects may occur. To this regard, also the influence of the environment has been explained in the previous section. As anticipated, the international analysis should consider not only the consequences of different regulations and national practices, but also those of different social aspects of different areas of the world. Indeed, both the national law and the social context of a country may influence the financial decisions of both banks and firms differently from those of another one. However, country effects may not be that relevant if the study is addressed to a homogeneous area and aims to draw conclusions with respect to it, as in the case of the empirical study which is undertaken in the second part of this work.

Then, the purpose of the following subsections is to discuss relationship lending by studying its main characteristics and by showing the main results produced by the literature, even when they take to conflicting conclusions. A further subsection will provide explanation for these conflicts.

1.4.2 Characteristics of relationship lending and associated measures

Overall, relationship lending is a lending technology which aims to overcome the financial opacity of certain types of firm. As explained in the previous section, dealing with financial opacity may be really usual when dealing with SMEs, especially when opaque microenterprises are considered. Thus, relationship lending may represent a great opportunity to grant SME access to finance.

In order to understand the relevance of the effects associated to relationship lending, however, it is necessary to proceed to its identification. In other words, a deep comprehension of its main determinants and characteristics is required. Consequently, it is fundamental to be able to detect which are the measures for these characteristics.

First of all, it is relevant to briefly discuss the determinants of relationship lending. According to Elsas (2004), there are potentially three determinants of relationship lending. They are borrower characteristics; bank characteristics; and market characteristics and condition.

With respect to the characteristics of the borrower, they refer for instance to its size, to its informational opaqueness, its access to equity market. To this regard, it has already been shown in the previous section how this lending technology is addressed especially to really opaque small businesses, which may not be able to produce relevant hard information. Then, since the access to equity market may represent an alternative to a bank loan, this also should be taken into account. Of course, the above-mentioned characteristics do not represent an exhaustive list of those which may have an influence on the development of relationship lending. Indeed, there still may be further borrowers' characteristics which are unobservable (Banerjee, Gambacorta, & Sette, 2017). Nevertheless, the previous examples may give an idea about the relevance of a firm's features.

For what concerns the bank characteristics, instead, it has already been discussed in Subsection 1.3.5 how small domestic and private-owned financial institutions are expected to be more suitable as relationship lender than other types of bank. However, there may be also other bank characteristics which may be considered, such as for example the bank inclination to risk or its internal policy.

Last but not least, also market characteristics and conditions may have a significant impact on the development of relationship lending. To this regard, it has already been highlighted the influence which may be exerted by the informational environment, the social context, the regulatory framework and the market competition. In particular, relationship lending may be the most suitable solution especially in those environments characterized by a limited reliability and a poor share of information, where a weak regulatory environment may not allow the use of explicit contracts of transactions-based lending (Berger & Udell, 2006). Moreover, it is important to consider the possible impact of the social environment, which may be more significant on the production of soft information rather than on the production of hard information. On the other hand, it is relevant to assess if an increasing market competition may actually obstruct relationship lending providers. Indeed, "*some of the technologies applied to lending to SMEs (other than relationship lending) benefit from the effects of economies of scale and scope*" (de la Torre, Martìnez Perìa, & Schmukler, 2008, p. 10). Thus, in some cases transactions-based technologies may substitute relationship lending, or at least hinder its development.

Moving on to the main measurable characteristics of relationship lending, first of all it may be interesting to focus on the duration of the relationship, since this is strictly related to the amount of information collected by the bank. Indeed, it could take some time for an opaque firm to provide the bank with a sufficient amount of soft information to obtain some benefits (Elsas, 2004).

In any case, the longer is the relationship, the greater is the amount of information that the bank may have accumulated. This is also because a close relationship between a SME and its lender is created through periodical screening and monitoring of the loan. In view of what is above, long-term horizon is actually a precondition for the development of relationship lending (Antonczyk, Breuer, & Salzmann, 2014).

In detail, relationship lending is expected to affect information asymmetry at two levels. On the one hand, as the lender obtains additional soft information about the SME, its owners, its managers and the social context in which it finds itself, the information asymmetry is reduced. This is interesting for example with respect to covenants, since it has been shown that the tightness of the covenants of a loan contract decreases over the duration of the relationship between the bank and the borrower. On the other hand, it increases the information asymmetry between the firm and the other non-relationship lenders (Prilmeier, 2017). As discussed in the next subsection, this may have a detrimental effect.

However, the number of years may not always be the best solution to give a good estimate about the strength of the relationship. Indeed, the marginal accumulation of information declines by duration (Elsas, 2004). This is because, as the time passes and the bank gains more and more data, the amount of information still to be known decreases. Thus, some transformations may be preferable. For instance, a good approximation of the amount of the borrower's information accumulated by the bank may be expressed as the log duration of the relationship[17].

Another important characteristic of relationship lending concerns its intensity. To this regard, there are two main ways to measure it: the number of lenders from which the borrower obtains credit and the share of debt financing from the specific bank to the total amount of bank financing of the firm (Elsas, 2004).

For what regards the number of banks which provide financial instruments to the same borrower, a low number of lenders may mean that the relationship between them and the borrower is strong. This may be because the relationship with just few banks is more focused and exclusive than a relationship with several lenders. Indeed, a small number of lenders has stronger incentives for a close monitoring over time (Preece & Mullineaux, 1996).

On the other hand, a possible drawback of considering the number of banks as a consistent indicator for the intensity of the relationship is that the amount of funds borrowed specifically from these banks is not taken into account. To this regard, exclusivity may not be neither a necessary nor a sufficient condition for relationship lending (Elsas, 2004). Therefore, it may be appropriate to consider also other parameters simultaneously.

In this sense, another valuable indicator is the share of the borrower's total debt financing accounted for by the main relationship lender. Indeed, it may be wrong to consider that a SME's debt is equally distributed among lenders, since "*situations where debt is unequally distributed or even highly concentrated among one or a few lenders* […] *are anything but unusual*" (Cenni, Monferrà, Salotti, Sangiorgi, & Torluccio, 2014, p. 251). Overall, it seems plausible to retain that a high share of debt held by a main bank increases the likelihood of relationship lending (Elsas, 2004).

In addition, the intensity of the relationship may be further investigated by detecting if the borrower has also a banking account with the lender. Indeed, the provision of additional services to a firm allows the bank to obtain more private information about the

[17] This is a solution proposed for example by Banerjee R., Gambacorta L., Sette E., "The real effects of relationship lending", *Bank of Italy Working Paper n. 1133*, September 2017.

borrower (Agarwal, Chomsisengphet, Liu, & Souleles, 2007). For example, the bank may observe the borrower's payment transactions as a valuable source of private information (Elsas, 2002). Thus, another possible variable which may be considered is the percentage of the borrower's savings account balances with the lender to the firm's annual sale[18].

As anticipated in the previous section, another significant characteristic of relationship lending is the geographical proximity to the firm's main bank. Thus, a relevant measure could be represented by the geographical distance between the firm and the bank headquarter. Indeed, it has already been discussed how relationship lending involves the exchange of soft information. Thus, even if the technological progress may allow banks to overcome distance-related limits to lending, not all the borrowers benefit from the technological advancement in the same way. Indeed, in order to transmit valuable data over great distances, it is necessary that creditworthiness can be captured and communicated in quantifiable terms. Conversely, this may not be the case of soft information, which is usually difficult to be quantified and transmitted (Cotugno, Monferrà, & Sampagnaro, 2012). Overall, empirical results about Italy confirms that a "*geographically close relationship improves information gathering*" since "*knowledge between the parties reduces information costs for banks, also fostering access to credit for enterprises*" (Beretta & Del Prete, 2013, p. 22). In particular, Beretta and Del Prete (2013) found out that the reduction in credit share due to bank consolidation is mitigated when banks and firms are geographically close.

At this point, the main determinants and some measurable characteristics of relationship lending have been introduced. There still may be further aspects to be considered that are more difficult to be captured. Nevertheless, the purpose of this subsection was to offer an overview of what usually identifies relationship lending. Consequently, the next subsection studies which are the effects of the development of this lending technology.

1.4.3 The effects of relationship lending

For what concerns the effects associated with the development of relationship lending, there are some consequences which are generally investigated by the literature. Thus, this analysis focuses especially on the expected benefits and drawbacks of this lending technology.

[18] See for example Durguner S., "Do borrower-lender relationships still matter for small business loans?", in *Journal of International Financial Markets, Institutions & Money 50*, 13 September 2017, pages 98-118.

The first two benefits which may be identified are an increase in available credit for opaque firms and a decrease in the costs of bank financing, especially concerning the interest rate applied to the loan. These two benefits are discussed more in depth in the following lines.

With respect to the amount of available credit, a possible benefit of relationship lending is that it might allow opaque firms to get access to a greater amount of financing than other alternative lending sources and technologies. This is expected to be true especially for small businesses, consistently with Petersen and Rajan (1994). In particular, they found that "*the availability of finance from institutions increases as the firm spends more time in a relationship, as it increases ties to a lender by expanding the number of financial services it buys from it, and as it concentrates its borrowing with the lender*" (p. 35). As explained in the previous subsection, these three conditions define three characteristics of relationship lending.

First of all, the increase in credit availability may be due to the fact that a really opaque firm may not have the opportunity to borrow money through any alternative lending technology, unless it is able to produce at least some relevant hard information. However, this may be true even for those firms which may choose among different lending technologies. Indeed, more recent empirical evidence has confirmed that relationship borrowers obtain larger amounts of funds (scaled by the size of the borrower's total assets or by the size of its long-term debt) compared to non-relationship borrowers (Bharath, Dahiya, Saunders, & Srinivasan, 2008).

For what regards the interest rate, instead, the results are pretty conflicting. On the one hand, empirical results on small businesses suggest that small firms with longer relationships with their main banks are expected to pay lower interests (Berger & Udell, 1995). On the other hand, other empirical results show that the interest rate is lower at the beginning of the relationship than as the relationship goes on (Ioannidou & Ongena, 2010). Furthermore, other findings suggest that the influence of banking relationships to the interest rate may not be really significant (Petersen & Rajan, 1994).

From the bank's perspective, when dealing with opaque firms it is fundamental to obtain additional information, in order to distinguish between profitable and bad projects. To this regard, collecting information and processing it take both time and officers' work. Therefore, in relationship lending there may be a relevant amount of costs which are specifically associated to these practices, remarkably because soft information is less likely to be processed by a software and usually needs human skills to be used in a valuable manner (de la Torre, Martìnez Perìa, & Schmukler, 2008). Thus, these costs may be translated in the interest rate.

At the same time, information acquisition may lead banks to a better assessment of the credit risk such that the latter may result to be actually less consistent than the initial hypothesis. Thus, a decrease in the interest rate in longer relationships may be expected. There is further recent evidence which is consistent with this view. In particular, Hussain, Durand and Harris (2020) sustain that "*SMEs face a trade-off: with certain types of financial institutions a longer relationship reduces their risk premiums but increases collateral requirements*" (p. 18).

Thus, a further possible explanation for the decrease in the interest rates may also be that collateral requirements increase. If this was the case, the rise in collateral requirements would represent a possible drawback of the development of the considered lending technology. Conversely, however, many researchers have shown that collateral requirements actually decrease for longer relationships. For example, this view is consistent with Berger and Udell (1995) and Bharat et al. (2008). Thus, if instead this is the case, a third benefit related to relationship lending has been just displayed.

Similarly, as anticipated in the previous subsection, also covenants become less strict as the relationship between borrower and lender goes on. Interestingly, while the tightness of the covenants seems to reduce with the duration of the relationship, the number of covenants seems more related to its intensity (Prilmeier, 2017). Overall, it may represent a fourth significant benefit of the considered technology.

A further desirable effect connected to the long-term orientation of relationship lending is that it is expected to provide an insurance against inefficient liquidation. Indeed, within the relationship the bank obtains additional private information and uses it in order to minimize the probability of an inefficient borrower liquidation. In particular, whenever it detects any financial distress, the bank can readily renegotiate the loan in order to increase the likelihood of containing financial losses. Interestingly, this helps the bank to build a strong reputation among other firms which represent potential clients (Antonczyk, Breuer, & Salzmann, 2014).

The relevance of relationship lending during periods of financial distress will be explored later in this section, when such a technology will be discussed with respect to periods of crisis. For the moment, however, it can be anticipated that the positive aspect of the insurance provided against inefficient liquidations emerges especially during recessions. Overall, it seems to overcome the negative one related to the possibility for the bank to use the additional information in order to hold up its borrowers (Antonczyk, Breuer, & Salzmann, 2014). It is the case of the so-called "*lock-in*" [19] effect (or "*hold-up*"[20] problem), which may represent the most important drawback of the development of relationship lending. Indeed, as it will be clearer in the next lines, it includes most of the other possible drawbacks.

In particular, the "*lock-in*" effect occurs whenever the bank misuses the advantages arising from the knowledge of additional private information about the borrower, exercising a monopolistic power. This would allow the bank to apply unfavorable conditions to the loan and to pursue an extra profit, for example applying a higher interest rate (Matìas & Van Auken, 2015). It is in this sense that this effect would involve also other possible drawbacks. With respect to this negative outcome, another relevant aspect is that if an opaque SME broke the relationship with its main bank, other banks may learn that such a firm does not represent a good investment. This may happen because such interruptions may be due to the fact that either the opaque firm does not provide the required information (and so other banks may retain that the borrower has something to hide) or because the bank cannot offer sufficiently favorable conditions to the firm due to the fact that the additional information provided is not good enough.

As a consequence, in some cases it could be really tough for an opaque firm to change its main financial intermediary, even though it may obtain optimal conditions. Hopefully, however, Antonczyk et al. (2014) suggest that the positive aspect related to the insurance effect is more important that the latter market inefficiency.

Alternatively, a possible solution to the "*hold-up*" problem is proposed by Smith (2006), who sustains that "*bank equity ownership* [in the borrowing firms] *alleviates a hold-up problem between firms and their banks*" (p. 2926). To this regard, it is relevant to notice that this decision involves administrative evaluations which are significantly different from those which are usually related to the decision of borrowing money. Thus, this solution may not represent the most desirable.

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[19] This term is used, among others, by Prilmeier R., "Why do loans contain covenants? Evidence from lending relationships", in *Journal of Financial Economics 123*, 28 December 2016, pages 558-579.

[20] See for example Matias A. P., Van auken H., "The Interdependence between Trade Credit and Bank Lending: Commitment in Intermediary Firm Relationships", in *Journal of Small Business Management 53 vol. 4*, 2015, pages 886-904.

This subsection aimed to offer an overview about the main possible effects which are usually associated to relationship lending by literature. Now it could be interesting to focus on the development of relationship lending during periods of crisis. Indeed, as it emerges in the next subsection, some benefits associated to relationship lending may result even more important during periods of financial crisis.

1.4.4 Relationship lending during periods of crisis

In the last decade, the development of relationship lending has been studied also specifically with respect to periods of crisis. The great interest around this lending technology may be due to the fact that, considering the detrimental effects on the economy generated by the recent financial crisis of 2008, relationship lending may represent a possible solution to smooth negative outcomes such as credit constraints. To this regard, relationship lending may have become a topic of particular interest even more so in the current period. Indeed, as shown in subsections 1.2.4 and 1.2.5, access to finance may come back at the top of the list of SME issues due to the restrictions imposed after the spread of COVID-19, as it was in the years during and just after the financial crisis of 2008. In view of what is above, the purpose of this subsection is to show how relationship lending may represent a useful resource.

To this regard, identifying causal effects of relationship lending on the credit supply may be even more challenging during periods of crisis. For example, during recessions banks may be more willing to lend only to high quality borrowers and the result would be that only these borrowers would develop long relationships with their lenders (Banerjee, Gambacorta, & Sette, 2017). Thus, it is important to take this into account when conducting a research on this matter.

With respect to the the development of relationship lending during periods of financial crisis, a first interesting hypothesis that has been tested concerns the fact that this lending technology may reduce the likelihood of default. To this regard, studying a sample of 43.338 Italian firms during the period between 2008 and 2010, Fiordelisi et al. (2013) found out that "*a higher concentration of lenders and longer banking relationships lower the likelihood of firms to encounter financial distress*" (p. 313). Not surprisingly, this seems to be true especially for smaller firms. Moreover, they found clear evidence that an inverse correlation exists between creditor concentration and the probability of default.

Coherent with these results are those produced by Banerjee et al. (2017). In particular they considered a sample of 20.325 Italian firms during the period between 2003 and 2014 and focused on the interest rate and on the amount of credit in general. Interestingly, their findings suggest that firms that had maintained longer relationships with banks experienced lower interest rates as well as a stronger credit growth. In particular, during the financial crisis those firms which used to pay higher interest rates was rewarded by their bank with a greater insulation to their credit supply.
Even enlarging the scope of the research at a European level, empirical evidence referred to the period between 2007 and 2009 suggests that the use of transactional lending technologies increased the probability of credit rationing during a recession. Conversely, this probability was reduced by the use of soft information. Interestingly, it seems that the best result occurs when the use of soft information is combined with transactions-based lending technologies (Ferri, Murro, Peruzzi, & Rotondi, 2019). To this regard, the possibility to combine different lending technologies has been already specified in the previous section.
At this point, also those benefits which may be emphasized during period of financial crisis have been explained. Considering the great amount of information reported in this chapter, it may be appropriate to sum up the most relevant aspects. To this purpose, a brief summary is presented in the next section, which represents the conclusion of this chapter.

1.5 Conclusion of the chapter

This chapter includes the main theoretical foundations of this thesis. Overall, its aims have been that of highlighting the importance of SMEs by reporting some interesting data and that of showing the relevance of relationship lending as a mean to provide financing to SMEs. To this purpose, some of the main theories and empirical results produced by literature up to now have been reported.
In detail, the second section shows the significant size of SME population and explains how SMEs represent a great resource for the economy. In fact, SMEs account for the 99,9% of total enterprises in Italy. Moreover, they not only contribute to the growth of the real economy, but they are also the main source of employment in the current society and contribute to the development of innovations. In the same section, also the spread of

COVID-19 is taken into account, by showing how it is affecting their results and why it is threatening their access to finance.

Thus, the third section focuses on bank loans as the main source of financing for SMEs. After having discussed the main constraints to SME access to external finance, i.e., financial opacity, under-collateralization, expensiveness of transaction costs and lack of financial skills among SME managers, this section presents the main lending technologies available for banks when lending to SMEs. According to Berger and Udell (2006), these technologies can be distinguished between transactions-based lending technologies, which rely on hard information and among which there are financial statement lending, small business credit scoring, asset-based lending, factoring, fixed-asset lending and leasing, and relationship lending, which relies on soft information. Last but not least, this section also shows how the environment and the characteristics of the lending institution may favor or not the development of a specific lending technology. To this regard, relationship lending may be favored by a weak informational environment (since it is addressed especially to very opaque firms) and is usually chosen by small and domestic private-owned institutions.

Finally, the fourth section specifically refers to relationship lending. To this regard, it explains not only how this lending technology may be detected and measured, but also the benefits expected from its development. In particular, the main aspects which are relevant with respect to relationship lending are the length of the relationship; the number of banks with which the SME has a relationship; the concentration of its credit within a main bank; the presence of any other financial service provided by the bank; and the geographical closeness between the SME and the bank. On the other hand, the main benefits associated to this lending technology are the increase of available credit; the decrease of interest rates; a reduced tightness of the covenants; and an insurance effect against inefficient liquidation. A possible drawback, instead, is the "*lock-in*" effect, which occurs when the bank exerts a monopolistic power to the borrower thanks to the additional private information that it has collected, applying unfavorable conditions to the borrower and preventing it from changing its lender.

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It is almost time to start to deal with the business case of this work. Before to do so, however, other considerations about the development of Italian mutual guarantee institutions need to be done. To this purpose, the next chapter will discuss this form of mutual guarantee consortia.

2. Mutual guarantee consortia and the Italian experience

2.1 Introduction to the chapter

Section 1.3 in the previous chapter has highlighted the main constraints to SME access to finance, addressing possible solutions that banks may adopt when lending to opaque SMEs. Unfortunately, although some lending technologies may succeed in overcoming financial opacity and in containing transaction costs, there may be further SME characteristics which still do not allow SMEs to obtain the necessary external funds. In particular, these characteristics are under-collateralization, lack of financial skills among SME managers and limited credit history (Cusmano, 2013).

Thus, it is necessary to make further technologies available for SMEs, especially for those which, though creditworthy, still face financial constraints due to the above-mentioned characteristics. For instance, a quite widespread solution is the development of mutual guarantee schemes. To this regard, this chapter is aimed at offering an overview about the functioning of mutual guarantee schemes, focusing on mutual guarantee institutions.

In detail, first part of section 2.2 considers the development of credit guarantee schemes under a theoretical perspective, thus highlighting the main features which may characterize them. Then, second part of the same section investigates the current development around Europe, also referring to some interesting experiences.

Lastly, section 2.3 specifically deals with Italian mutual guarantee institutions. First, their history is briefly retraced starting from the appearance of the first SME consortia with guarantee purposes in the Fifties. Then, both current legal framework and geographical distribution along the country of Italian *confidi*[21](s) are considered in order to highlight mutual guarantee institutions' relevance in this area. Last, the final subsection focuses on their current functioning and on their future perspectives.

[21] Italian word for mutual guarantee institution

2.2 Credit guarantee schemes at an international level

2.2.1 Fundamentals of credit guarantee schemes

Before studying the Italian experience in its specifics, it may be interesting to study the development of mutual guarantee consortia at an international level. Indeed, although Italy may represent one of the most interesting cases when studying the importance of mutual guarantees with respect to the financial landscape for SMEs, mutual guarantee schemes have developed worldwide through different frameworks. Thus, an overview of the international experience may help to better understand Italian peculiarities.

In general, mutual guarantee consortia are entities which provide credit protection as external guarantors. They may be considered financial intermediaries in that they act between lenders and borrowers. Overall, they represent a specific type of credit guarantee scheme. To this regard, credit guarantee schemes are intended to address the financing gap, which is particularly relevant for SMEs, by operating at two levels. On the one hand, they help SMEs to overcome under-collateralization by providing a certain guarantee, while on the other they prevent financial institutions from suffering losses which might hurt the functioning of the market.

International experiences with respect to credit guarantee schemes vary significantly across countries, due to differences about ownership and management, funding, legal and regulatory environment and operational characteristics such as the types of services offered and the firm eligibility (Cusmano, 2013).

For what regards the ownership, a credit guarantee scheme may be privately or publicly driven[22]. According to the European Commission (2006), usually mutual guarantee societies are "*collective initiatives of a number of independent businesses or their representative organizations*", while guarantee funds are in general publicly driven. Moreover, there are other guarantee programs which are directly sustained by governments in order to support SME policies.

At the same time, also management functions may be held directly by private members themselves, by governments or by private-sector partners. Nevertheless, the

[22] According to Cusmano (2013), examples of public guarantee schemes are the Canada Small Business Financing Program (CSBF), the Denmark's Vaekstfonden (Growth Fund) and the Japanese Credit Guarantee Corporations (CGCs). On the other hand, examples of private guarantee schemes are he Association Européenne du Cautionnement Mutuel (AECM) and the Asociación Latinoamericana de Entidades de Garantía (ALEGA).

management philosophy is usually pretty similar in any case. First of all, it is important that managers present sufficient professional capacity, so that they can recognize sustainable projects based on realistic business plans. Furthermore, there may be some limits to the commitments that credit guarantee schemes may take, as pointed out by the European Commission. In particular, these limits are related to the maximum value of commitments that they may take; the maximum guarantee which can be delivered to any single borrower; the maximum extent of coverage in percentage of the loan; and the maximum duration of any commitment (European Commission, 2006).

With respect to management procedures, also the World Bank has indicated some relevant guidelines in its report "Principles for Public Credit Guarantee Schemes for SMEs". In particular, Principle n. 6 provides that any credit guarantee scheme "*should have a sound corporate governance structure with an independent and competent board of directors appointed according to clearly defined criteria*", while Principle n. 7 provides that any credit guarantee scheme "*should have a sound internal control framework to safeguard the integrity and efficiency of its governance and operations*" (World Bank, 2016).

Similarly to ownership and management, also funding procedures may involve alternatively private or public sector, or both of them. In the case of mutual guarantee institutions, funds may come from their members themselves (Columba, Gambacorta, & Mistrulli, 2009b). Under the public perspective, instead, funds may come either from local governments or from supra-national agencies, both governmental, such as the European Investment Fund, and non-governmental, especially in countries outside the OECD (Cusmano, 2013).

For what regards the legal and regulatory environment, credit guarantee schemes are part of the financial industry. Thus, they are subject to specific laws, which usually includes minimum capital requirements, solvency ratio and transparency criteria (Cusmano, 2013). To this regard, it is really important that regulators define a sound legal and regulatory framework, in order to provide the institutional foundation of the credit guarantee scheme and to enhance its credibility (World Bank, 2016).

However, credit guarantee schemes may face complex and heterogenous legal frameworks (Vienna Initiative Working Group, 2014). This may occur also because credit guarantee schemes develop through different formats along different areas and therefore, they need a different set of rules. Nevertheless, harmonization may not be a desirable solution[23].

Together with other factors such as the risk assessment procedure used by the guarantee society, the term of the guarantee, its extent of coverage and the associated costs, the legal environment influences the range of products offered by guarantee institutions. For instance, it is possible to distinguish various products: business start-up products, microcredit guarantees, guarantees for growing companies, guarantees for business internationalization, innovation guarantees, guarantees for working capital needs, business transfer guarantees, etc. (European Commission, 2006). To this regard, different products may develop in different countries.

2.2.2 Credit guarantee schemes at a European level

At this point it could be interesting to consider some experiences around Europe. With respect to this analysis, it is relevant to introduce the European Association of Guarantee Institution (also known as "AECM"). According to its official website, it is an international non-profit association founded in 1992 under the Belgian Association Act. It currently has 48 member organizations operating in 31 countries, with the common mission to provide loan guarantees for SMEs which do not have sufficient collateral. Members may be both mutual, private sector credit guarantee schemes and public institutions.

With respect to Western Europe, credit guarantee schemes represent a pillar in financial intermediation. To this regard, in this area credit guarantee schemes are typically publicly owned (even if legally established as private entities), non-profit and active only in their home countries, often managing risks through government and EU counter-guarantees (Chatzouz, Gereben, Lang, & Torfs, 2017).

According to the Statistical Yearbook 2019 produced by the AECM, their members' outstanding guarantees as percentages of the respective country GDPs are the highest in Portugal (1,8%), Italy (1,4%) and France (0,9%). Therefore, their experiences will be analyzed more in depth in the following lines.

For what regards Portugal, a fully integrated guarantee network has been formed along years in order to offer significant benefits such as lower interest rates and more favorable

[23] For instance, the Vienna Initiative Working Group found evidence that most of the credit guarantee schemes along Central, Eastern and South-Eastern Europe think that a uniform regulation in the EU shouldn't be sought, due to the importance of recognizing peculiarities in this field (2014).

conditions in general. Indeed, in this country a mutual guarantee system was launched in 1992 with the aim of ensuring suitable terms for SMEs when borrowing money through the issuance of guarantees. In particular, the system works as follows. First, guarantees are issued by autonomous mutual guarantee institutions, in which the borrower typically holds a stake. Then, the amount is counter-guaranteed by the Mutual Counter-Guarantee Fund managed by the SPGM[24], a pilot society of Banco Português de Fomento (European Commission, 2006).

In France, the mechanism is quite different. To this regard, two institutions may be considered. On the one hand, SIAGI[25] is a company established in 1966 and it is the only multi-bank guarantee company. It provides guarantees to many French banks operating with very small firms and then monitors the risks of the guarantee beneficiary (European Commission, 2006). On the other hand, the Fédération Nationale des SOCAMA[26] is a mutual guarantee institution created in 1968 and guided by trade experts who identify the valuable projects to which the SOCAMA guarantee is granted, thus sharing the financing risk. Overall, both these two systems are really focused on risk monitoring.

For what regards the Italian experience, its mutual guarantee institutions are based on cooperation and mutuality. Also in consideration of the activity volume specified above, these institutions are particularly relevant for the Italian economic framework. However, their development is specifically discussed in the next section.

Furthermore, even if credit guarantee schemes do not seem to be as important as in other European countries, due to its peculiarities it is interesting to consider a credit guarantee scheme established in the Netherlands. In detail, in this country there is a credit guarantee scheme in favor of SMEs which is known as BMKB. What is interesting about this scheme is that it provides that the decision-making process is totally and directly delegated to the involved banks (European Commission, 2006).

In parallel with what has been said about Western Europe, the importance of the role of local credit guarantee schemes is heterogenous also within Central, Eastern and South-Eastern Europe (CESEE). Moreover, as in the case of West European ones, CESEE

[24] See the respective member presentation at the AECM official website, https://aecm.eu/spgm-sociedade-de-investimento/.

[25] See the respective member presentation at the AECM official website, https://aecm.eu/siagi/.

[26] See the respective member presentation at the AECM official website, https://aecm.eu/federation-nationale-des-socama/.

guarantee providers are typically publicly owned[27] and non-profit (Vienna Initiative Working Group, 2014).

Accounting for AECM members only, outstanding guarantees as percentages of their country GDPs are the highest in Turkey (5,1%) and Hungary (2,1%). Curiously, these are the highest values across Europe (AECM, 2020).

Turkish experience is characterized by the presence of an institution such as Kredi Garanti Fonu (KGF) [28]. In particular, KGF, a non-profit company established in 1991, provides guarantees and collateral support to those enterprises which might need it to obtain any loan. Interestingly, among its shareholders there are either a SME organization such as the KOSGEB (which is the Small and Medium Enterprises Development Organization of Turkey) and 29 Turkish banks covering 99% of the total market share.

For what regards Hungary, instead, the most relevant institution is Hitelgarantia Rt.[29], a company which started to operate in 1992. Similarly to some of the above-mentioned institutions, Hitelgarantia Rt. uses its own capital to issue guarantees which back up SME loans. In detail, it does so through special agreements stipulated directly with banks (European Commission, 2006). Moreover, in 2006 it expanded its operations by providing guarantees also in the context of factoring and leasing services.

This subsection did not intend to present all the developments which have occurred around Europe with respect to credit guarantee schemes. Rather, it was aimed at offering an overview of some of the most relevant ones, in order to show the diffusion of credit guarantee schemes as proof of their importance. In synthesis, even if the experiences may differ under some aspects, they all move from the common objective of facilitating SME access to finance. This is true also in Italy, as it emerges in the following section.

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[27] Exceptions are Romania, where public, private and mixed guarantee providers coexist, and Hungary, where all credit guarantee schemes operate as mixed public-private schemes.

[28] See the respective member presentation at the AECM official website, https://aecm.eu/kgf-credit-guarantee-fund/.

[29] See the respective member presentation at the AECM official website, https://aecm.eu/garantiqa-hitelgarancia-zrt/.

2.3 Italian mutual guarantee institutions

2.3.1 A summary of the history of Italian "confidi(s)"

Nowadays, a "*confidi*" may be defined as "*an Italian* [entity] *established to provide collective guarantees for loans granted to their members (generally small or medium-sized enterprises) by banks or by other financial institutions*" (Chessa & Onnis Cugia, 2020, p. 749). However, before studying their current characteristics, it is relevant to see the process which has taken to their development.

In Italy mutual guarantee institutions appeared for the first time in the Fifties. In particular, the first artisan guarantee cooperative was established in Rome in 1957. At that time, there was already a relevant piece of law. Indeed, article 3, par. 2 of law 860/1956 provided that its facilitations were effective also for the issuance of guarantees in credit operations to the members of any consortia of craft enterprises. However, artisan guarantee cooperatives were recognized by law especially with the Industry and Commerce Ministerial Decree of 12 February 1959, whose article 2 provided for the non-profit mutuality of these cooperatives and aimed to facilitate their members' access to short-term bank loans through the issuance of guarantees (Chessa & Onnis Cugia, 2020).

Italian mutual guarantees were born to improve SME access to finance, since already at that time the latter was hindered by typical SME under-collateralization. Thus, the need for a response against financing constraints was even greater during period of crisis. This could be a reason explaining why the development of these institutions improved specifically starting from the Seventies. Indeed, these years were hit by the fuel crisis (Volta & Camanzi, 2010).

At the same time, it is in this period that mutual guarantee institutions were juridically recognized by further two important laws, law n. 374/1976 and n. 377/1976. In particular, law 347 recognized SME consortia, attributing them some special fiscal and credit benefits, while law 377 recognized their mutual guarantee activity by modifying the Italian Civil Code.

Whereas during the first twenty years *confidi* activity had been characterized by a quite low dimension and a local focus, the first regional *confidi* was born in the Eighties. Then, it is in the Nineties that these institutions started to grow significantly, also due to a parallel increase in the use of bank financing. Interestingly, they become greater not only

with respect to their dimensions, but also in number. To this regard, the greatest development occurred in the North-East of Italy and in Tuscany (Parini, 2009).
In view of the increasing interest around mutual guarantee institutions, further not comprehensive acts were proposed in those years. However, it is only in 2003 that the most important regulatory intervention was issued. In particular, this piece of law distinguished major mutual guarantee institutions ("*confidi maggiori*") from minor ones ("*confidi minori*").
Differences between these two categories are discussed in the next subsection, considering that they are still existent in the current framework. Indeed, the distinction has been confirmed even by the last important intervention of the legislator, i.e., the reform of 2010. To this regard, law n. 141/2010 made effective Directive 2008/48/EC on credit agreement on consumers, modifying some articles of the Italian Consolidated Banking Law ("*TUB*" in Italian). Among the latter ones, artt. 112 and 112-*bis* are particularly relevant, as it will be clearer in the next subsection.
Further legislative acts concerning this matter have been issued also in the last decade. However, they did not entail sensible changes in the legal framework. An example is represented by the Economy and Finance Ministerial Decree n. 53/2015. As it will emerge in the next subsection, however, this decree represents just an implementing act.
This analysis was aimed at highlighting how the importance of *confidi*(s) has improved together with the provision of relevant regulation. Thus, before studying how they operatively work, it is now necessary to define their current legal framework and their distribution over Italy. To this purpose, the next two subsections will focus on these two points.

2.3.2 Legal framework of Italian confidi(s)

For what concerns their legal framework, Italian *confidi*(s) may assume different juridical forms. In particular, in its article n. 13, par. 1, law n. 269/2003 specifies that a *confidi* may be a consortium, a cooperative or a consortium company. Thus, these institutions are not characterized by a profit purpose.
At par. 8, the same article also establishes which SMEs may become member of a *confidi*. In detail, *confidi* may be composed by industrial, commercial, service provider, artisan, or agricultural SMEs, as well as by SMEs operating in tourism sector and by professionals.

Given some circumstances[30], however, also bigger companies may be allowed to join a *confidi*.

As anticipated, Italian mutual guarantee institutions are currently divided into two main categories: major *confidi*(s) and minor *confidi*(s). The next lines focus on both these categories, highlighting their respective main features and associated legal consequences.

According to the parameters proposed by article 4 of the Economy and Finance Ministerial Decree n. 53/2015, minor *confidi*(s) are those mutual guarantees whose financial activity is lower than € 150 million (it was € 75 million previously). These *confidi*(s) need to be registered on the list held by the Body defined by art. 112-*bis* of *TUB.* To this regard, minor *confidi*(s) need to put in place new flows of information in order to keep the above-mentioned Body up to date. Indeed, this Body has a supervisory function which gives it the power to eliminate a *confidi* from the list[31]. In turn, the Body is supervised by the Bank of Italy.

With respect to their activity, article 5 of the above-mentioned Ministerial Decree n. 53/2015 needs to be considered. In detail, minor *confidi*(s) exclusively provide mutual guarantees to their members and undertake connected and functional operations. To this regard, any business or financial advice shall be strictly aimed at obtaining the release of a mutual guarantee.

Conversely, *major confidi*(s) are those mutual guarantee institutions whose business activity is greater than € 150 million. According to article 4 of the Ministerial Decree n. 53/2015, these *confidi*(s) needs to be recorded in the register for financial intermediaries as provided by art. 106 of *TUB*. In turn, art. 112 of *TUB* provides that these institutions do not have to be recorded in the list of which at the same article. To this regard, major *confidi*(s) are directly supervised by the Bank of Italy and, in this sense, minor *confidi*(s)' surveillance may be considered softer.

Another consequence of being a financial intermediary is that major *confidi*(s) are requested to adopt adequate organizational, governance, dimensional and patrimonial

[30] According to article 13, par. 9, of law 269/2003, bigger companies need to meet dimensional requirements provided by the EU in the context of the EIB measures in favor of small and medium-sized enterprises, and they cannot, however, constitute more than one sixth of the participants.

[31] According to article 112-*bis*, par. 4, of *TUB*, the Body may eliminate a *confidi* from the list whenever any of the following circumstances occurs: subscription requirements are not met anymore; rules are heavily violated; payments of the contribution provided by par. 2 of this article are missed; the institution is not active for at least one year.

standards. Moreover, public information requirements and direct surveillance are stricter than in the past (Calcagnini, 2018).

For what concerns the activities of major *confidi*(s), art. 112 of *TUB* provides that these institutions principally act as mutual guarantee providers. However, they may not only provide some further services[32] as specified at par. 5 of the latter article, but also provide any other form of financing, notwithstanding the mutual guarantee activity as the prevailing one[33].

In synthesis, the main consequences of being a major or a minor *confidi* concern activities and control. With respect to the first point, the opportunity for major *confidi*(s) to carry on also activities other than that of mutual guarantee may represent the only path for these institutions, as highlighted in subsection 2.3.4. On the other hand, major *confidi*(s) are subject to a stricter surveillance than minor ones since they are directly subject to the supervision of the Bank of Italy as any other financial intermediary, as defined by art. 106 *TUB*.

2.3.3 Distribution of Italian confidi

Overall, in Italy major *confidi*(s) are 34 (11,2% of the total), while minor ones are 264 (88,8%), for a total of 298 (Bolognese & Vescina, 2021). However, major *confidi*(s) are located in only 15 of the 20 Italian regions.

To this regard, the development of Italian mutual guarantee consortia has not been homogeneous along the country. As a consequence, the phenomenon of *confidi*(s) presents different features depending on the considered area.

In particular, "*mutual guarantee institution activity is concentrated in the North* [of Italy] *where the presence of small and medium-sized enterprises is more widespread*", while they "*are less developed in the South and in the Islands, both in terms of number of affiliated firms, average capital of consortia and value of guarantees*" (Columba, Gambacorta, & Mistrulli, 2009b, p. 8). To this regard, Columba, Gambacorta & Mistrulli (2009b) identified three possible reasons for this heterogeneity. The first one is that in the South there is a greater

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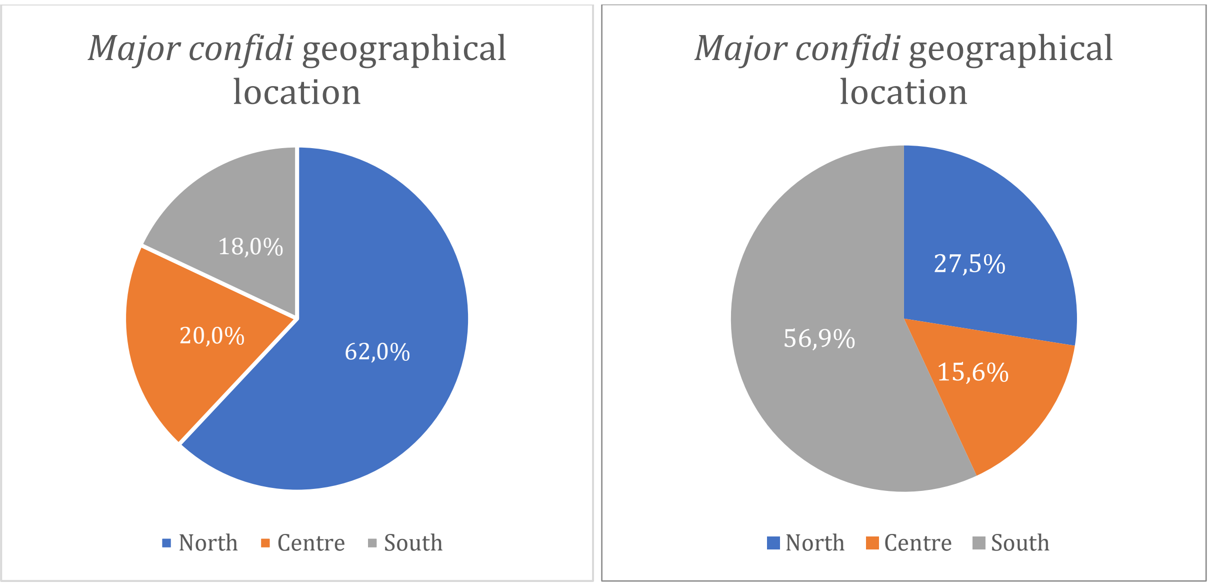
[32] In detail, these services are the provision of guarantees in favor of the governmental financial administration, in order to carry out tax refund to *confidi*'s members; the management of subsidiary public funds according to article 47, par. 2 of *TUB*; the conclusion of contracts with those banks to which public funds of guarantee are assigned according to article 47, par. 3 of *TUB*, in order to manage relations with *confidi*'s members and facilitate the respective use.

[33] Law n. 35/2020 (the so-called "*decreto Rilancio*") has extended the limit for other forms of financing to 49% of the total business activity. Previously this limit was 20%.

availability of public funds than in the North. Thus, public funds may represent an alternative to mutual guarantee institutions. The second one is that the development of mutual guarantee institutions in this region is relatively recent. Thus, some time may be needed in order to reach an adequate level. The third one is that Southern SMEs are characterized by greater opacity than Northern ones, so that they may be less eligible for *confidi*(s) benefits on average.

With specific respect to the dimensional feature of *confidi*(s), Northern institutions are characterized by a sensibly larger number of members than Central and Southern ones[34]. If the distinction between major and minor *confidi*(s) is considered, other data may be relevant. Indeed, 62% of major *confidi*(s) is located in the Northern area, against only 27,5% of the minor ones (Bolognese & Vescina, 2021). Conversely, the share of minor *confidi* in the South more than triple the share of major ones. Complete information is shown in *Graph 1*. According to Calcagnini (2018) this is also an indication that the members of Southern *confidi*(s) may be greater than members of Northern ones on average, since members of minor institutions are more frequently small and medium-sized enterprises than in the case of major ones.



Graph 1 - Bolognese (2021) | I confidi in Italia

Since the analysis in the second part of the work will deal specifically with a major *confidi* operating in the Veneto region, it is relevant to consider the number of major *confidi*(s) in

[34] In detail, members of a Northern *confidi* are three times those of a Southern one on average. This information is even more impressive if the total number of enterprises is considered. Indeed, while 7,6% of the enterprises in the North are members to a *confidi*, this is true for only 1,3% of the enterprise in the Centre and in the South (Federconfidi, 2017).

this region. In detail, there are 6 major *confidi*(s) in Veneto. To this regard, even if there are some regions with a larger overall number of *confidi*(s), Veneto is the one with the greatest presence of major *confidi*(s) (Bolognese & Vescina, 2021).
Once that legal characteristics and distribution of *confidi*(s) have been discussed, it is relevant to focus on their functions. To this regard, the next subsection also offers an overview of how they operate.

2.3.4 Functions of Italian confidi(s)

As anticipated, Italian mutual guarantee institutions were born to improve SME access to finance. Even if some changes have occurred over the last decades, this is still their main scope (Calcagnini, 2018). Nevertheless, they do not just provide the necessary personal and real guarantees to those firms which may be under-collateralized, or which may have a limited credit history. Indeed, they also serve other important functions. First, they partially substitute the bank in the screening and monitoring activities of their members. Second, they often are more indicated to negotiate interest rates and other conditions with banks (Columba, Gambacorta, & Mistrulli, 2009a).
With respect to the core activity of *confidi*(s), which is to provide their members with guarantee to be used as collateral, it works as follows. First of all, a mutual guarantee fund is established and deposited at a bank. This fund is financed by fixed membership fees and by membership commissions proportioned to the loans granted. Then, the guarantee fund is partially used to grant the loan agreed by the bank to the *confidi*'s member whose request has been approved by the mutual guarantee institution. This is expected to improve the likelihood that the *confidi*'s members will obtain the financing that they need. In case of insolvency, the bank notifies the *confidi* that it is going to take an action to recover the loan. At this point, the amount granted is withdrawn from the mutual guarantee fund. Finally, after that the action to recover the loan is completed, the bank eventually reimburses the mutual guarantee institution for the amount which has been successfully recovered (Columba, Gambacorta, & Mistrulli, 2009b).
However, during the last pandemic some interventions have seriously challenged this function of *confidi*(s). In particular, law n. 18/2020 (the so-called "*decreto Cura Italia*") and law n. 35/2020 (the so-called "*decreto Liquidità*") had assigned a marginal role to

confidi(s), moving the interest to the Guarantee Central Fund (GCF)[35] (Dell'Atti & Labini, 2020). Indeed, these laws (especially the latter one) contained measures which allowed enterprises to obtain public guarantees directly from the GCF, without applying to a *confidi*.

It is also true that *confidi*(s) profitability was already struggling before the pandemic. This is evident if core business margins are taken into account. Indeed, not only margins concerning the mutual guarantee activity of *confidi*(s) were already negative for the great majority of major *confidi*(s), but also the absolute value of these negative margins has started to seriously increase since 2016[36] (Bolognese & Vescina, 2021). Thus, it is in this context that the following further functions assume even more relevance.

For what concerns the screening and monitoring function, *confidi*(s) have the opportunity to exploit the close relationship that they have with their members (Schena, 2004). To this regard, guarantee activity itself may be functional to extract information from the involved enterprises (Freixas & Rochet, 2008). On the other hand, the approval of a guarantee request by the mutual guarantee institution may be considered as a certification of creditworthiness by the bank. Of course, the incentive to serve this function reliably depends on the risk taken by the *confidi* itself. In particular, the more risk is faced by the *confidi*, the more reliable is its evaluation. This is because in case of a misleading evaluation, insolvency costs also hit the mutual guarantee consortium (Mistrulli, et al., 2011).

Last but not least, another important function of Italian mutual guarantee institutions is that they may negotiate interest rates and other conditions in a more efficient way than SME managers. In particular, the bargaining position of a *confidi* depends on the pool of its members and on its attractiveness for potential new members. The larger is this pool, the greater is the likelihood that the institution will be able to obtain favorable conditions. Conversely, if enterprises are invited to join a *confidi* by the bank itself, the bargaining power of the mutual guarantee institution is sensibly lower (De Vincentiis, 2016).

[35] The GCF is a facilitation proposed by the Italian Minister for the Economic Development. It was issued by art. 2 of law n. 662/96 and is operating since 2000. Its purpose is to mitigate SME financial constraints by providing public guarantees. See the Italian Minister for the Economic Development official website at https://www.mise.gov.it/index.php/it/incentivi/impresa/fondo-di-garanzia-per-le-pmi

[36] In detail, the Comitato Torino Finanza conducted a study on a sample composed by the 34 major *confidi*(s), finding that 27 of them (79% of the sample) registered a negative margin in the guarantee providing core business. Moreover, if the margins of all these *confidi*(s) are summed, a negative trend is highlighted. In particular, in 2016 the overall margin was equal to € -4,3 millions and it has constantly decreased up to € -14,6 millions in 2019 (Bolognese & Vescina, 2021).

In view of all these important functions, *confidi*(s) mitigate constraints to SME access to finance at two levels. In the strong sense, they allow the access to bank funds to some enterprises which could not obtain any credit otherwise; in the weak sense, they low the costs of financing and make borrowing money more affordable to SMEs.
Furthermore, after the entering into force of law n. 35/2020 (the so-called "*decreto Rilancio*"), major *confidi*(s) are allowed to provide direct financing not only as a residual activity, but up to a limit of 49% of the total activities. This is be beneficial both for *confidi*(s), since they may expand their business, and for SMEs, since the coexistence of several institutions in the market of direct financing is likely to facilitate even the smallest enterprises to have access to finance (Dell'Atti & Labini, 2020).
The opportunity to carry out further activities other than guarantee provision clearly represent a reason why the average increase in *confidi*(s) dimensions is actually desirable. This is true not only in view of the rising importance of the GCF at the expense of the relevance of Italian mutual guarantee consortia, but also considering that major *confidi*(s) are more likely to present a solid capital and an adequate internal organization (Dell'Atti & Labini, 2020). Moreover, according to Calcagnini (2018), the first three advantages concerning the increase in *confidi*(s) dimensions are the greater bargaining power with respect to banks, portfolio diversification, and cost rationalization.

2.4 Conclusion to the chapter

This chapter has discussed the importance of the development of mutual guarantee schemes as a tool for mitigating constraints to SME access to finance. In particular, mutual guarantee schemes functioning is effective especially against constraints such as under-collateralization and limited credit history. On the one hand, those SMEs suffering a lack of collateral may be provided with the needed guarantees. On the other hand, SMEs with limited credit history may benefit from the participation in a mutual guarantee institution since it could be considered by banks as a proof of creditworthiness. Indeed, mutual guarantee institutions may substitute banks in undertaking screening procedures, having also the opportunity to collect soft information about their members by exploiting their close relationship.
Though a considerable diffusion of mutual guarantee schemes along Europe, Italian *confidi*(s) represents one of the most interesting experiences for what concerns mutual

guarantee institutions. Their development, which has been favored also by the Italian peculiar economic framework, already started in the Fifties, but their relatively long history is not the only reason of interest. Indeed, Italian institutions are more significant than other European experiences also with respect to their activity volumes, as specified in subsection 2.2.2.

Remarkably, however, the core activity of guarantee providing may not be sustainable in the long run. This is not only shown by the negative trend highlighted in subsection 2.3.4, but also predictable in view of the increasing importance of the GCF with respect to the considered activity. Thus, it may be necessary that Italian *confidi*(s) start to expand their current businesses, either working as consultants for the enterprises, either exploiting the opportunity to provide them with direct financing (up to a limit of 49%, as provided by law n. 35/2020).

3. Business case

3.1 Introduction to the chapter

3.1.1 Purpose

This chapter constitutes the empirical part of this work. Thus, its main purpose is to test some of the indications given in the previous theoretical part. To this purpose, answers to two original questionnaires have been analyzed.

In particular, questionnaires were submitted to the members of an Italian *confidi*, i.e., Cofidi Veneziano, by a research group composed by prof. Elisa Cavezzali, prof. Caterina Cruciani and prof. Ugo Rigoni, as part of the work undertaken by Fondazione Venezia on the future of finance for the enterprises operating in the North East of Italy. In particular, the first questionnaire was submitted between January and February 2020, while the second one was submitted between July and August 2020. Considering that the restrictions due to the spread of COVID-19 were introduced in March 2020, this means that answers to the second questionnaire are influenced by this overwhelming event.

With respect to the second questionnaire, moreover, also accounting information about some of the enterprises involved have been provided by the mutual guarantee institution. Thus, it has been possible to combine the answers to the questionnaires of these enterprises with their economic and financial results. In the context of the above-mentioned research, this work is the first one which also includes accounting values in its analysis.

In particular, both questionnaires deal with SME access to finance, with the relationship between banks and enterprises, and with the role of mutual guarantee institutions. Thus, they give relevant information about the subject of which at the previous part.

First of all, the investigation concerns the development of relationship lending. Considering that the sample is composed entirely by microenterprises and small firms, most of which are family-run businesses, a certain degree of relationship lending was expected. Therefore, this work aims at studying if the development of relationship lending actually follows the dynamics described in Section 1.4 and provides any benefit to SMEs. At the same time, considering that all the sample enterprises are member to a mutual guarantee institution, this study aims at investigating if relationship lending and mutual guarantee schemes might be considered as alternative solutions to overcome the constraints related to SME access to finance or if they might be considered as complementary tools. To this purpose, thanks to the financial statement information provided by Cofidi Veneziano, it may be possible to assess if eventual financial benefits for the enterprises should be actually attributed to the participation in the latter institution or not. For instance, an encouraging access to finance among the members to a *confidi* may occur either thanks to benefits associated to the participation in a mutual guarantee institution or due to the fact that the *confidi* selects only those enterprises which show positive economic and financial results.

Last but not least, considering the relevance of the second questionnaire with respect to the consequences related to the spread of COVID-19, the analysis is also aimed at studying the contribution of both relationship lending and mutual guarantee institutions in mitigating the impact of financial crisis.

3.1.2 Cofidi Veneziano and its future perspectives

Cofidi Veneziano[37] is a mutual guarantee institution founded in 1959 and operating under the juridical form of cooperative company. Its current name and legal framework are the result of the merger between Cooperativa Artigiana di Garanzia della Provincia di Venezia S.c.r.l. and Artigianfidi Veneto Orientale, occurred in 2002. In particular, Cofidi Veneziano is now a major *confidi* registered to the Financial Intermediaries register, as well as to the Italian Cooperative Companies register. Moreover, it is keeping the Quality Certification UNI EN ISO 9001:2008 for the provision of guarantee, assistance and consultation for credit acquisition. In 2016 it also became the first *confidi* allowed to provide direct financing.

The mutual guarantee institution is currently operating in 5 out of 7 districts of Veneto region. In detail, these districts are Venice, Padua, Treviso, Verona and Vicenza. In order to offer an efficient service, it operates through 14 headquarters and regional offices.

According to its last official financial statements, the total number of members of Cofidi Veneziano at the date of 31st December 2020 was equal to 12.787, with an increase of 829

[37] See the description provided by its official website at https://www.cofidiveneziano.it/cofidi/chi_siamo.php.

members[38] with respect to previous year. In particular, most of the enterprises, i.e., 7.798, accounting for 61,0% of the total, are located in Venice district, while further 2.459 firms, accounting for 19,2%, are located in Vicenza district.
Further information about the composition of the mutual guarantee institution has been provided directly by Cofidi Veneziano through the compilation of a *.docx* file filled in on 20th May 2021. In particular, the *confidi* declared that, if the number of employees is considered as dimensional parameter, its members are mainly microenterprises, as reported in *Table 2*.

Dimension	Number	Share of the total
Microenterprises	11.712	91,59%
Small enterprises	1.014	7,92%
Medium enterprises	59	0,46%
Big enterprises	2	0,02%

Table 2 - Source: Cofidi Veneziano

The above-mentioned file also reported information with respect to the sector in which members to Cofidi Veneziano operate. In detail, the institution declared that it is composed by agricultural firms for 0,99%, by artisan firms for 53,37%, by manufacturing enterprises for 9,08%, by enterprises operating in commercial and distribution activities 20,65%, by firms operating in the tourism field for 7,99%, and by other service providers for the remaining 7,92%.
On the other hand, the number of employees of Cofidi Veneziano has increased from 37 to 38[39] during the last fiscal year.
Looking at its last financial statement information, it emerges that in the same period total assets have increased from €42.939.264 to € 50.668.263, especially due to the increase in the value of its commercial credits. At the same time, liabilities have increased from € 21.026.579 to € 27.164.795, mostly because of the increase in the value of debts. Nevertheless, also equity has increased from € 21.912.685 to € 23.503.468, even if another loss has been registered. In particular, in the fiscal last year Cofidi Veneziano has registered a loss equal to € -32.353 (in 2019 loss reached the value of € -400.795).

[38] In 2020 1.014 enterprises have joined the mutual guarantee institution, while 185 firms have left it.
[39] In detail, 6 employees have been hired, while 5 employees have left their job.

With specific respect to their guarantee providing function, existing guarantees at the end of 2020 were 3.788 reaching the overall value of € 120.702.146. If only 2020 is considered, guarantees for an overall value of 66.993.288 have been provided. Then, considering a longer period, 21.500 guarantees for an overall value of € 763.445.406 have been provided since 2010.
According to the information directly provided by Cofidi Veneziano, the number of enterprises which were benefitting from a guarantee provided by the institution at the end of 2020 is equal to 2.833. Among them, 2.501 firms (88,3% of this subsample) are microenterprises, 304 firms (10,7%) are small enterprises, 26 firms (0,9%) are medium enterprises, and 2 firms (0,1%) are big enterprises.
With respect to the operating sector, 47% of the guarantees is provided to artisan firms, 21% to commercial ones, 16% to industrial firms, 6% to B2B service provider enterprises, 4% to transport firms, 3% to agricultural firms and 2% to enterprises operating in the tourism sector.
Considering what has been discussed in Subsection 2.3.4, it is relevant to report some information about the future perspectives of Cofidi Veneziano. To this purpose, the chief executive officer (CEO) of Cofidi Veneziano, i.e., Mauro Vignadel, was interviewed on the 7th of June 2021[40]. The interview offers some interesting arguments, as discussed in the next lines.
For what concerns the guarantee provision service of Cofidi Veneziano, Mauro Vignadel highlighted that even if the *confidi* increased the release of guarantees in 2020, it is facing a tough situation due to the low profitability associated to this service provision. Moreover, he stressed how introducing the possibility for the enterprises to benefit from a direct guarantee provided by the GCF has penalized *confidi*(s)' business. In particular, he pointed out how in his opinion this is only apparently favorable to small and microenterprises. Indeed, on the one hand it is obtainable for free. On the other hand, however, enterprises have not as much bargaining power as Cofidi Veneziano has. Thus, they may obtain worse economic conditions when they are not assisted by the mutual guarantee institution. At the same time, while a consistent analysis of enterprise creditworthiness is assessed when a mutual guarantee is provided by a *confidi*, this does not happen when a guarantee is directly provided by the GCF.

[40] In detail, the interviewer was Giada Arundine, student at Ca' Foscari University of Venice, who is cooperating in the context of the above-mentioned research. The interview was held through a phone call.

In view of this concerning situation, Mauro Vignadel also outlined some possible solutions to ensure the survival of mutual guarantee institutions. In particular, direct financing provided by the *confidi* has seen a positive response among enterprises, both members and not. Indeed, firms seem to consider desirable to have financing sources other than banks. However, the provision of law n. 35/2020 (the so-called "*Decreto Rilancio*") increasing the limit up to which major *confidi*(s) are allowed to provide direct financing from 20% to 50% has not been implemented yet. On the other hand, Cofidi Veneziano may also serve as an advisory with respect to topical concerns such as *Industry 4.0*, digitalization and sustainability. To this regard, the most important thing is to convince enterprises of the great value of the offered advice.
At this point, the reference mutual guarantee institution has been introduced. Thus, it is time to proceed with the core analysis.

3.2 Pre-COVID19 questionnaire

3.2.1 Questionnaire description

In order to investigate the dynamics involved in SME access to finance and the role of mutual guarantee institutions, a first questionnaire had been distributed to a portion of the total members of Cofidi Veneziano. The questionnaire was submitted on an online platform at the beginning of 2020, between January and February. Thus, results of this questionnaire are not influenced by the spread of COVID-19 and participants voluntarily decided to fill out the survey.
The questionnaire was structured as follows. A first section was aimed at enterprise identification. In particular, questions of this section concern firm's management, its age and its number of employees. A second section was about their past credit experiences. This section specifically addresses issues related to SME access to finance. Then, a third section was aimed at studying the relationship between enterprises and bank environment. In detail, a first main question divides enterprises into two groups; then, the group composed by the ones indicating that they were operating with a prevailing bank had to answer to further questions to better identify the respective relationship. A fourth section dealt with relationship and interactions between enterprises and Cofidi Veneziano. This section mainly serves as investigation of how and why enterprises had

decided to become member of a mutual guarantee institution. Last but not least, a final section included questions about non-banking finance. This section allows to study the development of alternative finance among SMEs.

Remarkably, Cofidi Veneziano not only took care of inviting its members to participate to this research, but also offered them its help in the compilation. To this regard, firms were actually asked if they had received any help in the compilation. It resulted that 44 enterprises out of 125 respondents (35,2%) had been actually helped by Cofidi Veneziano in answering to the questionnaire.

3.2.2 Questionnaire participants and sample characteristics

According to the first extraction of the results, the questionnaire was filled in 141 times. However, in 2 cases enterprises did not accept to participate to the research, while in other 7 cases no question but the one concerning acceptation was completed. Thus, these results have been removed. Furthermore, there is an enterprise (i.d. 26639) which filled in the questionnaire three times, but since in the second and in the third compilation it achieved only 18% of the questionnaire (answering coherently with the first compilation), the further versions have been removed. Last but not least, two enterprises (i.d. 29741 and 40707) just answered to the questions concerning family business, year of foundation and number of employees. Therefore, also these compilations have not been considered.

As a consequence of these adjustments, the relevant sample is composed by 128 enterprises. Among them, there are still few enterprises which did not filled in the questionnaire in its entirety. However, the latter firms did so for a significant part, equal to at least 70%.

Before starting to investigate the development of relationship lending and the role of the mutual guarantee institution, it is appropriate to provide a description of the enterprises involved, in order to better understand the reference environment. To this purpose, some relevant aspects will be presented in the following lines.

The sample enterprises were founded in a period between 1910 and 2020[41]. Considering that the questionnaire was submitted in February 2020, the average and the median age[42]

[41] From now on, these values only consider those enterprises which provided an answer to the specific question.

[42] Age has been computed as the difference between 2020 and the year of foundation.

of the enterprises at that time were respectively 18 and 14 years. This means that at least half of the sample is younger than 15 years old.
Then, it is possible to distinguish between businesses which are family-run and those which are not. In detail, there are 88 family businesses in the sample (about 69%) and, among them, 86 are still managed by a member of the founder family.
To give an idea about the dimension of these enterprises, it is interesting to consider their number of employees as a reference parameter. To this regard, the sample includes 33 enterprises with no employees, 71 employing less than 10 employees and 24 employing between 10 and 50 employees. In other words, there are 104 microenterprises and 24 small enterprises, as defined in Subsection 1.1.1.
Considering what has been discussed in Subsection 1.3.2, it is plausible to assume that all these firms may present those characteristics which are typically associated to SMEs (e.g., information opacity and under-collateralization). As a consequence, even though their membership to a mutual guarantee institution is expected to mitigate financial constraints, a significant development of relationship lending may be needed in order to allow them to have access to bank funds. Therefore, the point is to analyze if mutual guarantee institutions and relationship lending work as alternative tools or as complementary facilitations.

3.2.3 Access to finance

In order to better identify the issue, it is relevant to report some helpful information able to explain to which degree the need for financing of these enterprises is satisfied. Indeed, the questionnaire included several questions about this theme.
First of all, the questionnaire investigated how long it takes to obtain bank overdraft. To this regard, only one enterprise declared that it had not asked for any overdraft in the last five years. Overall, 65,6% of the sample (84 enterprises) declared that it took between one and three months to obtain an overdraft, whereas 25,0% (32 enterprises) declared that it took less than one month. Conversely, only for 11 enterprises (8,6%) it took more than three months.
For what concerns the perceived credit availability, it was asked to which degree the enterprises retained that their financing needs were adequate. Results show that around 64,8% of the sample (83 elements) considered that available credit was adequate at that time. Conversely, 31,3% (40 enterprises) was not sufficiently satisfied. Only 5 enterprises

(3,9%) considered that credit availability was more than adequate. In other words, the great majority (68,7%) of the sample declared that their credit needs were at least sufficiently adequate.

Considering that according to Chapter 1 SMEs are typically underfinanced, this is an encouraging result. More specifically, however, it may already constitute a positive effect partially explained by the participation in a mutual guarantee institution.

Furthermore, another indicator related to the access to finance of these enterprises is represented by possible rejections to credit requests. To this regard, the questionnaire asked if any financing request had been rejected in the last three years. In detail, 68,8% of the sample (88 enterprises) declared that no credit request had been rejected in the last three years. Among the others, 30 enterprises (23,4% of the total, 75,0% of the ones whom credit has been denied) had received just one rejection, while the remaining 10 enterprises (7,8% of the total, 25,0% of the above-mentioned subset) had received more than one.

For what regards the diffusion of alternative finance, the sample shows a poor knowledge about financial technologies other than bank financing. Indeed, 97 enterprises (85,1% of the respondents) declared that they did not know any of the proposed instruments. Only 9,6% of the respondents (11 enterprises) knew about crowdfunding, even if no enterprise made use of it.

3.2.4 Membership to a mutual guarantee institution

As anticipated, the sample represents a subset of Cofidi Veneziano's members. Thus, participants are all members to a mutual guarantee institution. For this reason, before investigating the development of relationship lending, it is relevant to discuss this peculiar feature. To this purpose, some questions should be considered.

First of all, it is relevant to report some information about the expected benefits associated with a mutual guarantee membership. To this regard, some possible benefits were proposed in the questionnaire, which in turn asked to put them in a pecking order. *Table 3* reports both possible benefits and the respective times in which they were put in one of the first three places.

	1st	2nd	3rd
Further credit available thanks to the guarantee	34	17	9

Access to national and regional advantages	2	7	2
Reduction in the time needed to obtain funds	5	9	10
It is necessary to obtain credit	21	13	5
Financial advisory on investment sources and strategies	0	3	2
Lower interest rates and financing costs	23	16	14
Easier access to credit	19	26	18

Table 3 - Survey results

As it can be seen, reasons concerning access to finance are the most popular. More specifically, the opportunity to obtain more credit thanks to the guarantee is the most popular reason for becoming a mutual guarantee institution's member[43]. Interestingly, a consistent portion[44] of the participants even identified their membership to the institution as the only way to obtain any credit. Thus, results suggest that the main role of a mutual guarantee institution is actually related to credit availability.

At the same time, the opportunity to obtain state subsidies and the reduction in the time needed to obtain any funding do not seem to be considered important reasons. Similarly, the advisory function was still not a significant reason to become a member of a mutual guarantee.

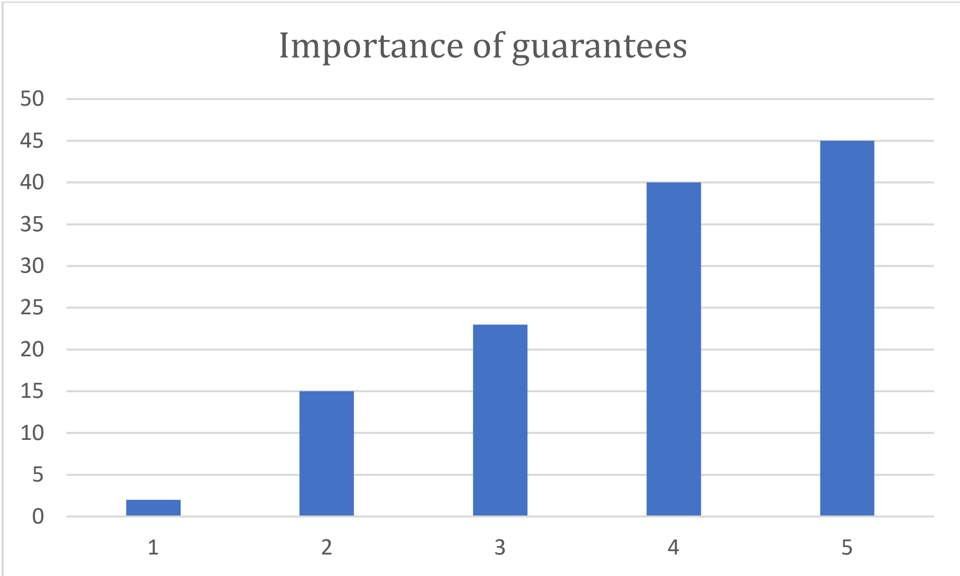
It is now relevant to investigate more in depth the importance attributed to guarantees. To this regard, the questionnaire asked the enterprises to indicate the importance of real and personal guarantees on a scale from one to five. Results suggest that most of the enterprises attributed a high relevance to real and personal guarantees. In particular, 35% of the sample (45 elements) indicated the maximum value of 5, while 31% (40 element) indicated 4. The remaining results are reported in *Graph 2*, which reports absolute frequencies in the y axes, showing that only 2 enterprises indicated the lowest degree of importance. Without considering the 3 enterprises which did not answer to this question, the average degree on a scale from 1 to 5 is 3,86.

At this point, it is the moment to investigate if the mutual guarantee institution actually provided these guarantees. To this regard, the questionnaire asked if there was any loan with a guarantee provided by Cofidi Veneziano. The question was asked only to those

[43] 27,0% of the respondents indicated this reason at the first place. Overall, 47,6% of the sample indicated it at one of the first three places.

[44] 16,7% of the respondents put it at the first place, while 31,0% of the sample put in one of the first three places.

enterprises which declared that they were operating with a prevailing bank. As it will be explained in the next subsection, however, these enterprises constitute a great majority. For this reason, this question can still be relevant at this point of the analysis.



Graph 2 – Own elaboration from survey results

In particular, results shows that 60% of the respondents (67 enterprises) borrowed money from their prevailing bank with a mutual guarantee provided by Cofidi Veneziano, while a further 29% (32 enterprises) had more than one position covered by a mutual guarantee. Conversely, only 13 enterprises (12%) were not taking advantage of any mutual guarantee.

With respect to the type of financing involved, most of the enterprises (86 out of 99) declared that the mutual guarantee was involved in a financing for liquidity purposes. 26 enterprises answered that they were using it also in the context of financing for investment purposes, while only 15 declared that a mutual guarantee was involved in a loan concerning debt restructuring.

In order to better understand how enterprises may enter in touch with a mutual guarantee institution, a final relevant question should be considered. In particular, participants were asked to indicate how they decided to become members of a mutual guarantee institution. Possible alternatives and respective number of preferences are reported in *Table 4*.

Advised by a trade association	Advised by a bank	Advised by a business consultant	Advised by friends or colleagues	Other
20	89	6	3	8

Table 4 - Survey results

In detail, results show that enterprises have been most frequently advised by their bank. This is a pretty interesting result, since it suggests that a mutual guarantee may be requested by the bank itself in order to lend funds.

Once that the context of a mutual guarantee institution has been introduced, it is time to investigate the development of relationship lending.

3.2.5 Relationship lending

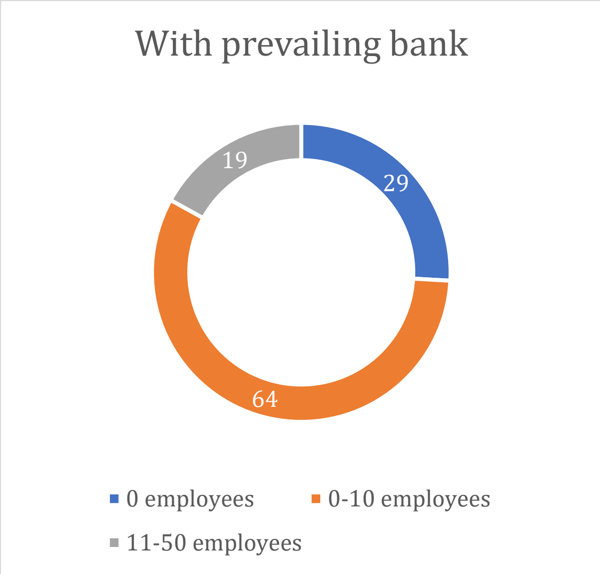
For what concerns the investigation around relationship lending, it is necessary to identify the development of this lending technology through its usual indicators and measures. From the answers to the questionnaire, indeed, it is possible to assess both its duration and its strength[45]. Then, the following subsection looks at its effects.

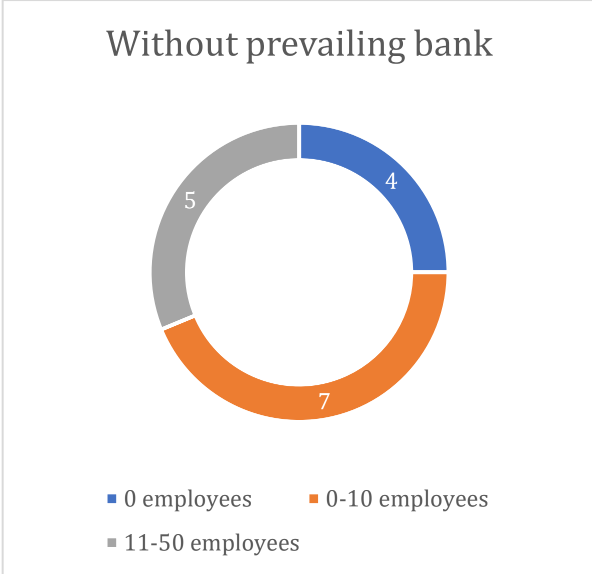
First of all, it is relevant to report how many enterprises declared that they had a prevailing bank. In detail, 112 enterprises (88%) declared they were operating with a prevailing bank, while just 16 of them (12%) answered that they had not a main bank. Among the latter ones, however, 11 enterprises declared that they had had a prevailing bank in the past.

As discussed in Section 1.3, small firms and family businesses usually tend to be more informationally opaque than structured enterprises. To this regard, the share of family businesses is slightly higher in the subset of enterprises operating with a main bank than in the other one (70% against 63%). At the same time, firms of the first subset are smaller on average than the other ones with respect to the number of employees. Specific results are reported in *Graph 3*, which shows how the share of microenterprises is higher in the first subset (83% against 69%).

In view of what was presented in Section 1.4, these results may constitute the basis for the development of relationship lending. Therefore, it is now relevant to study both the duration of the relationship and its strength.

[45] Possible measures of relationship lending have been discussed in Subsection 2.4.2.





Graph 3 - Own elaboration from survey results

For what concerns the relationship length, enterprises were asked to indicate the number of years of relationship with their main bank. Thus, since also the year of foundation was asked, years of relationship can be related to firm's age, so that relationship length may be expressed as a percentage of the enterprise total life. Moreover, this operation has also the benefit to highlight some curious answers. In particular, there are 8 cases in which the indicated number of years of relationship with the prevailing bank is longer than firm's age.

Interestingly, this may not be only due to a compilation error. Indeed, it might happen that the owner of the firm already had a relationship with the prevailing bank of his current firm. Thus, since the development of a relationship between a bank and an opaque firm is likely to involve also personal information about its owner, such answers may still be meaningful. Furthermore, these cases might be due to the fact that the current firm is actually the result of previously existing firms which already had had a relationship with the bank. In view of that, this analysis considers average values both with and without the adjustments that will be specified.

In detail, if no adjustment is taken into account, average and median length[46] of the relationship between the enterprise and its prevailing bank are respectively equal to 12,1 and 10,0. This means that there are more cases in which the relationship length is lower

[46] These measures only refer to those 112 enterprises which declared they were operating with a prevailing bank.

than the average[47]. If the relationship length to firm's life ratio is considered, average and median values are respectively equal to 84,9% and 84,3%. These percentages are pretty close to 100%, meaning that on average the relationship length covers almost the entire life of the enterprise. This would constitute another condition in favor of the development of relationship lending.

As anticipated, however, it may be needed to introduce some adjustments. Indeed, those cases in which the enterprise life is shorter than the indicated relationship length might still be the result of an error in the questionnaire compilation. Thus, a possible solution may be to rule out those values. In particular, if relationship lengths which are greater than enterprise lives are not considered, average and median values decrease respectively to 11,5 and 9,5. On the other hand, average and median relationship length to firm's life ratios drop respectively to 72,1% and 80,9%. Nevertheless, even if these are lower, they are still consistent with a certain development of relationship lending. Indeed, these results still mean that for one half of the sample the relationship length is at least 80% of its entire life.

Once that the duration of the relationship has been discussed, it is time to study its strength. To this regard, the questionnaire provides information mainly at three level.

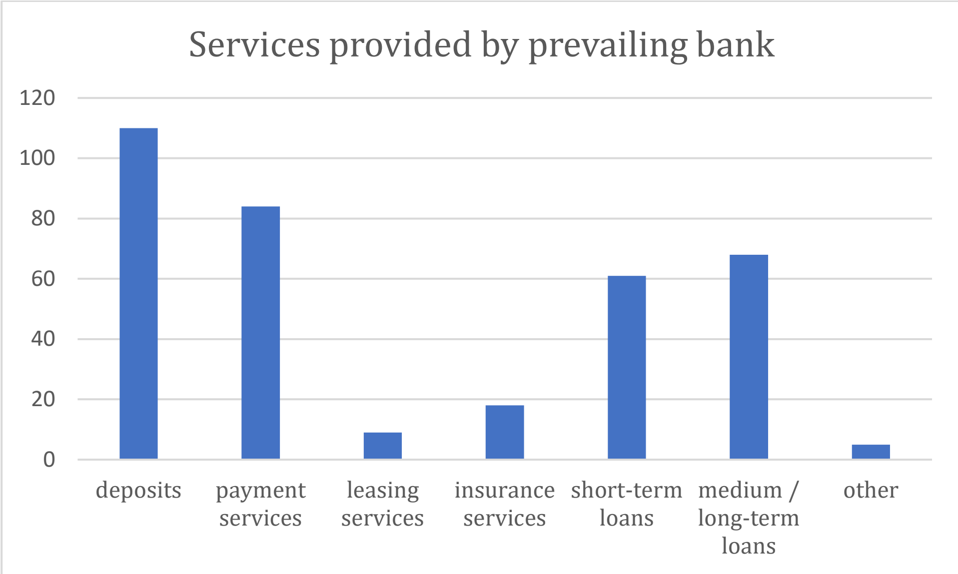
First of all, an indicator of relationship strength may be exclusivity. To this regard, among the 112 enterprises which declared they were operating with a prevailing bank, 62 (55,4% of the respondents) answered they were not operating with any other bank at that time. Conversely, 50 of them (44,6%) indicated they were.

Curiously, on average firms operating exclusively with their main bank are smaller than the others. Indeed, while the first subset is formed by microenterprises for 96,8% (60 enterprises), only 66,0% (33 enterprises) of the second one is represented by microenterprises. A possible explanation for this is that exclusivity (and thus relationship strength) increases with information opacity.

On the other hand, relationship strength may be investigated by looking at how many bank services are provided from the prevailing bank to the enterprise. To this purpose, the questionnaire proposed a list of services, which comprehended: bank deposit, payment services, leasing, factoring, insurance, and both short-term and long-term

[47] In 67 cases the value is lower than the average, while 45 cases are above average. Nevertheless, the majority (59) of this subset has a relationship of at least 10 years of relationship.

financing. Overall answers are reported in *Graph 4*, where absolute frequencies are indicated on the y axes.



Graph 4 - Own elaboration from survey results

In particular, it can be seen that almost every enterprise (110 out of 112, accounting for 98,2% of the respondents) had a deposit with its prevailing bank. In other words, results show that every firm which was borrowing money from its prevailing bank also had a deposit with the same bank. This is consistent with the development of a stronger relationship, since the bank is allowed to get information about the borrower while providing services other than lending.

Last but not least, also the share of funds provided by the bank with respect to the total financing may represent a solid indicator of relationship intensity. The questionnaire provides some interesting information, though a little premise about the dataset is necessary. Indeed, in some cases shares indicated by participants are not coherent with the meaning of prevailing bank, since they are pretty low (like 10 or 20%). Another time, this is not necessarily due to an error in the compilation, since some participants might have taken into account all their funds (thus considering also capital injections by the shareholders and self-financing) instead of bank financing only. This is suggested by the fact that even in the face of a small share attributed to its prevailing bank (or, anyway, less than 100%), sometimes enterprises declared that they were not operating with any other bank. Moreover, the latter information is still relevant since questionnaire answers involve what the enterprise perceives rather than actual data. Thus, some considerations may still stem from these answers.

To this purpose, both the median and the average values have been computed. In detail, they have resulted to be equal respectively to 50,5% and 53,7%, while the standard deviation is equal to 26,3%. In other words, half of the sample has indicated a share below 50,5%. More specifically, however, 67 out of 112 enterprises (59,8% of the respondents) indicated a share of at least one half. Interestingly, among the remaining 45 enterprises, 24 declared they were not operating with any other bank, in confirmation of what has been said above.

Although according to Section 1.4 microenterprises may be expected to develop a stronger relationship with lenders than smaller enterprises, as well as suggested by previous results, this is not confirmed by non-parametrical analysis (Unpaired Wilcoxon test p-value equal to 0,81) when debt share is considered as relationship strength indicator. To this regard, average and median values of the two subsets are pretty close (53,8% and 50,0% among microenterprises, 53,3% and 51,0% among small firms).

In synthesis, along a consistent duration on average, the 112 enterprises which were operating with a prevailing bank also shows relevant indicators of relationship strength on average. Therefore, it might be concluded that there is a notable development of relationship lending even within a sample composed by members of a *confidi*.

From the bank side, it is interesting to study which types of bank represent the relationship lender. To this regard, the indicated prevailing bank has been associated to a precise type of bank. In particular, three main categories have been proposed, so that a bank may be categorized as commercial bank (or transformed popular bank), popular bank or cooperative credit.

Questionnaire results show that 90 of the indicated prevailing banks (80,4%) are commercial banks, 20 (17,9%) are cooperative banks, while only 2 (1,8%) are popular banks. Curiously, even the relationship length is longer for commercial banks than for cooperative ones[48]. Similarly, also the share of total financing is higher on average for commercial banks[49]. On the other hand, there are no significant differences in the distribution for what regards the number of employees, the time needed to obtain an overdraft, the number of credit request rejections and the presence of other banks.

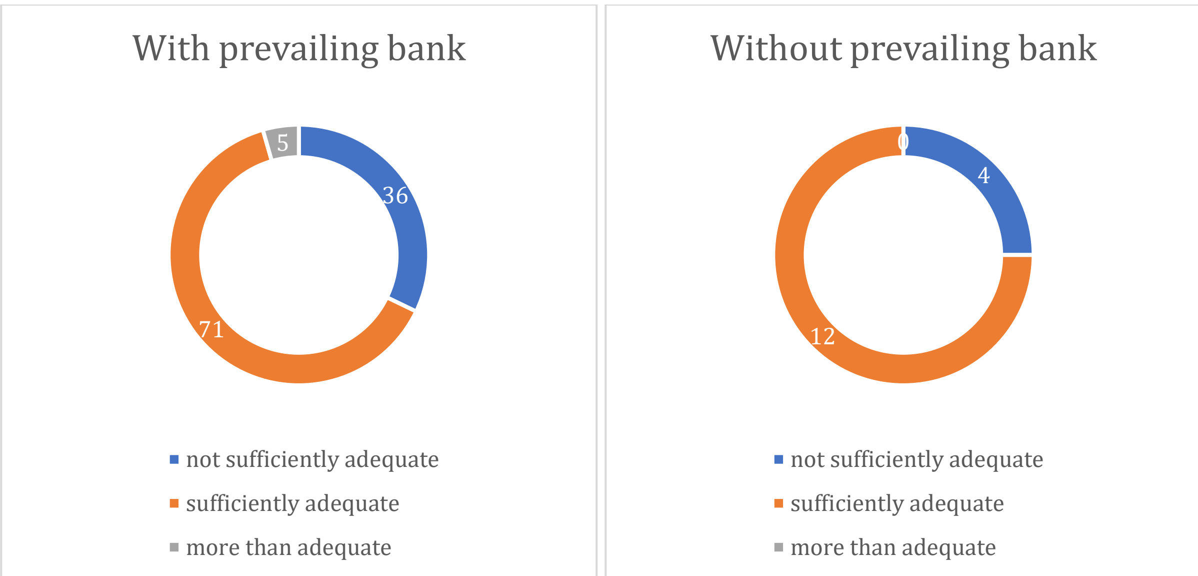
[48] Average and median relationship length values with a commercial bank are respective 13,0, representing 89,5% of firm's life, and 10,5, representing 85,4% of firm's life. Conversely, same values when cooperative banks are considered are respective 9,4, representing 63,1% of firm's life, and 6,0, representing 60,7% of firm's life.

[49] Commercial banks cover 55,3% of the financing needs as prevailing banks on average (median value is equal to 60,0%, while cooperative banks only 44% (median value is equal to 40,0%).

Overall, this is not consistent with the hypothesis that small banks are advantaged in the development of relationship lending. However, such a circumstance may be explained by the peculiar offer of banks along the considered territory. Indeed, among the 83 financial institutions other than the prevailing one indicated by the participants, 56 banks (accounting for 67%) is represented by commercial banks. This suggests that commercial banks constitute the most likely choice when deciding to approach a bank.

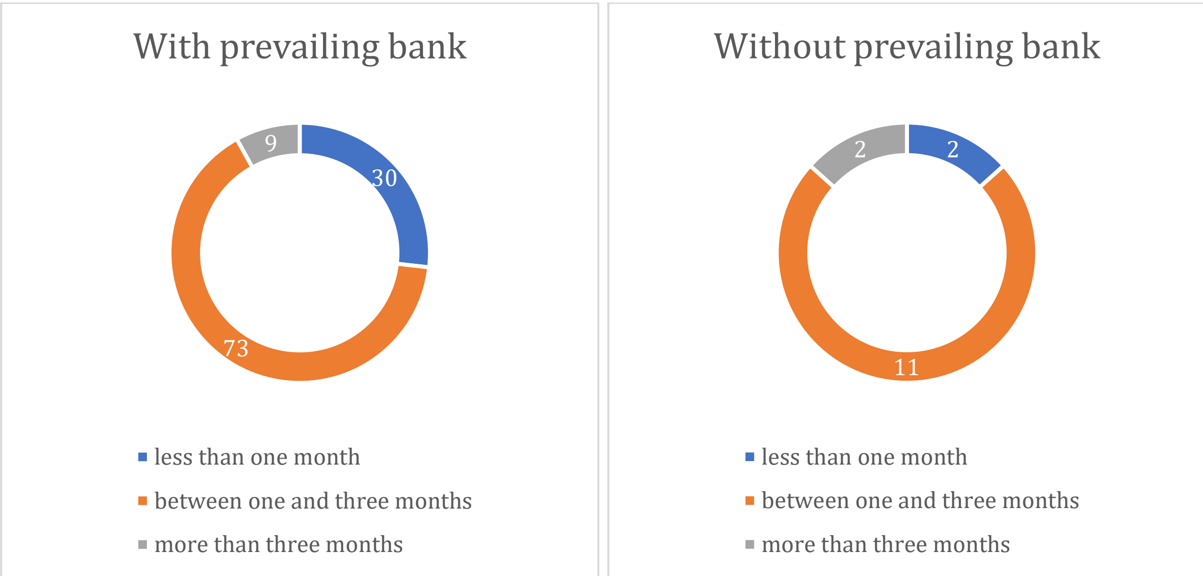
3.2.6 The effects of relationship lending

Once that a considerable development of relationship lending has been detected, it is relevant to verify if relationship lending actually provides some benefits to the borrowers, even within a sample of firms which are members of a mutual guarantee institution. To this purpose, questionnaire results have been studied under several perspectives.
First of all, participants have been divided into two groups depending on whether they were operating with a prevailing bank or not. As anticipated, the first group was formed by 112 enterprises (accounting for 87,5% of the sample), while the second one was composed by 16 enterprises (22,5%). As it will emerge in the following lines, results suggest that those which had a prevailing bank (i.e., the first group) were actually facing less constraints when accessing finance. Indeed, even if the perceived credit adequacy is slightly better among those enterprises which were not operating with a prevailing bank (see *Graph 5*), other indicators suggest that constraints were heavier in the latter case.



Graph 5 - Own elaboration from survey results

On the one hand, rejections of a credit request were more frequent among the second subset. In detail, in the last three years 43,8% of the second subset (7 enterprises) had faced at least one rejection, against the 29,5% of the other (33 enterprises). On the other hand, the time needed to obtain an overdraft was shorter for the first group than for the second one. To this regard, results are reported in *Graph 6*.



Graph 6 - Own elaboration from survey results

As it can be seen, the percentage of enterprises which needed less than one month is higher in the first subset than in the second one[50] (26,8% against 13,3%), while the percentage which needed more than three months is lower (8,0% against 13,3%). This is consistent with the hypothesis that a prevailing bank may offer better economic conditions.

It is then relevant to account for relationship length. To this purpose, those enterprises operating with a prevailing bank have been separated into further two subsets. In particular, those firms with a relationship duration of at least 10 years[51] (first subset) have been separated from the others (second subset). This time, however, there is no evidence that a longer relationship mitigates financial constraints. Conversely, participants with less than 10 years of relationship present slightly better results with respect to the time needed to obtain an overdraft and to any rejection of credit requests.

[50] Percentages of the second subset do not take into account the enterprise which had not requested any overdraft

[51] It represents the median value. However, since only the year of foundation has been asked, it has not been possible to order the enterprise of the same year from with respect to their age. Thus, in this case the resulting subsets are not composed by the same number of enterprises.

In particular, 89,8% of the first subset obtained an overdraft in less than 3 months, against 94,3% of the second one. However no significant difference has been found in the distributions of the two groups[52]. At the same time, 75,5% of the second subset has not received any rejection to a credit request in the last three years, against 66,1% of the first one.

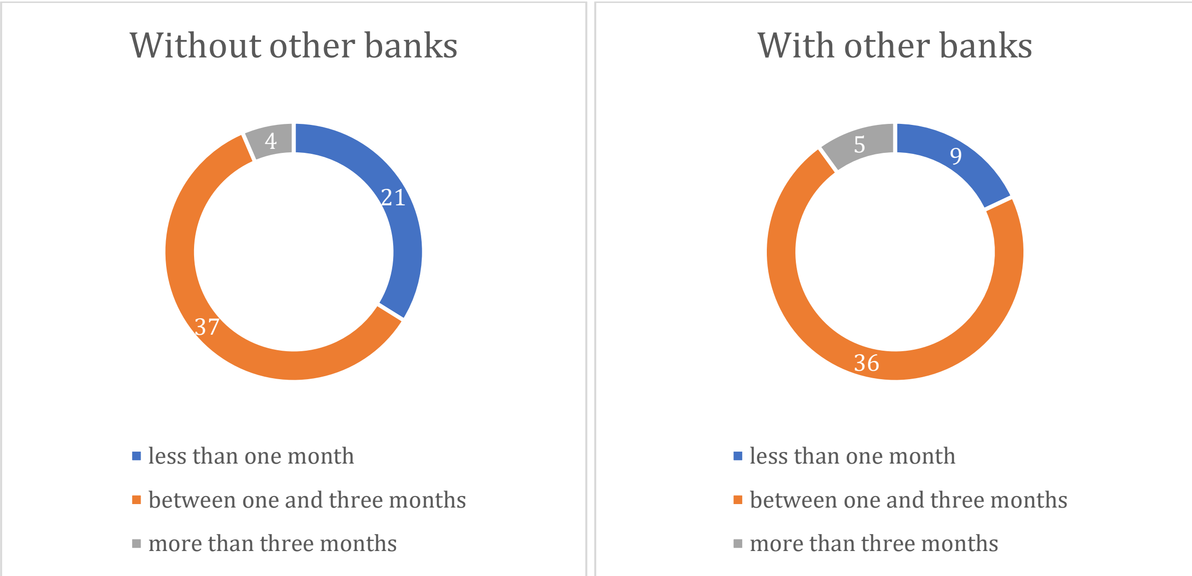
With respect to relationship length, results are not significantly different if the sample is divided considering the median value of the relationship length to firm's life ratio. Also in this case, curiously, results are slightly better for those enterprise with a lower ratio.

Then, it could be interesting to focus on relationship strength. If exclusivity is considered, for instance, results are more consistent with expectations. In order to take it into account, the 112 participants operating with a prevailing bank have been further divided into two subsets: the first group, accounting for 62 enterprises, includes those enterprises not operating with any other bank, while the second one, accounting for the remaining 50, involves those which declared they were operating also with other banks.

In particular, exclusivity seems to further mitigate financial constraints of relationship borrowers. On the one hand, elements of the first group rarely faced a negative response to a credit request in the last three years. To this regard, 91,9% of the first subset declared that in the last three years it had never happened that a credit request was rejected, while for the remaining 8,1% it had happened only once. Conversely, 40,0% of the second subset declared it had happened once and a further 16,0% answered it had happened more than once. On the other hand, the time needed for obtaining an overdraft is also more favorable for the first subset than for the second one. Detailed results are shown in *Graph 7*, which highlights how the percentage of enterprises needing less than one month is higher for the first group (33,9% against 18,0%), while the percentage of firms needing more than three months is lower (6,5% against 10,0%). More specifically, considering that for what concerns the time needed to obtain an overdraft, a lower number is associated to a better condition, non-parametrical tests may be relevant. To this regard, it has been found that enterprises operating exclusively with their main bank actually

[52] Considering that the answer to the question concerning the time needed to obtain an overdraft is associated to a numerical value (the better is the condition, the lower is the number associated to the answer, on a scale from 1 to 3), an Unpaired Two-Samples Wilcoxon Test has been conducted. It has resulted a p-value equal to 0,67. At the same time, no significant results are found neither if the inverse path is followed. In particular, enterprises have been divided into two groups depending on if they received an overdraft in less than one month or not. To this regard, no significant difference in the distributions of the number of years of relationship with their prevailing bank of the two groups has been found (Unpaired Two-Samples Wilcoxon test p-value equal to 0,55).

needed less time to obtain an overdraft on average (one side Unpaired Two-Samples Wilcoxon test p-value equal to 0,03).



Graph 7 - Own elaboration from survey results

Interestingly, if exclusivity is considered, also credit availability perception suggests that relationship lending is beneficial. Indeed, 77,4% of the enterprises operating with just one bank retained that their credit needs were at least sufficiently satisfied, while this is true for only 56,0% of the second subset. Considering that a numerical value is associated also to the answers about credit adequacy (the greater is the number the higher the credit satisfaction), non-parametrical test may still be relevant. To this regard, one side Unpaired Two-Samples Wilcoxon test confirms that for the first group credit satisfaction is significantly higher than for the second one (p-value equal to 0,01).

Nevertheless, results may be influenced by the presence of mutual guarantees. Indeed, while only 6,5% of the enterprises operating exclusively with their main bank declared they were not benefitting of any mutual guarantee, this percentage grows to 18,0% for the other enterprises. This suggests that advantages may be linked to the diffusion of mutual guarantees.

As anticipated, another relevant indicator of relationship strength is represented by the share of funds which are borrowed from the main bank with respect to total financing needs. To this regard, the sample has been further divided into two subsets. This time, the border has been the median value of the shares indicated, which is equal to 50,5%.

Coherently with the results obtained when dividing with respect to exclusivity, it results that participants with a higher share were facing fewer rejections of a credit request than the others, even if in this case differences are less important than in previous cases. As before, two subsets have been defined: the first one comprehends those firms with a share higher than the median value, while the second one involves those with a lower share. It results that while 76,8% of the first group had not received any rejection in the last three years, in the second one it had happened to 64,3% of the enterprises. At the same time, the perceived credit availability is better in the first group than in the second one. Indeed, while in the first group 28,6% of the enterprises retained that their needs were not adequately satisfied, 35,7% of the second subset was of the same idea. However, there is no relevant difference in the time needed for obtaining an overdraft[53].

3.2.7 Conclusions to the first questionnaire

The questionnaire was aimed at investigating the relationship between the enterprises involved and their banks, while studying the role of a major *confidi* such as Cofidi Veneziano. Even if the sample is not very large, it is still possible to draw some conclusions, either consistent or in contrast with the above-mentioned literature.

First of all, since the sample is formed entirely by SMEs and mostly by family businesses, a significant degree of information opacity is plausible. Thus, also a significant degree of relationship lending may be expected. This is actually what emerges from the dataset analysis. Indeed, not only the great majority of the enterprises declared that they were operating with a prevailing bank, but also relationships between them appear sufficiently long and strong on average.

For what regards the effects of relationship lending, in this case there is no evidence that a longer relationship takes any benefit. Conversely, relationship strength may be relevant in allowing the enterprise to obtain some advantageous conditions. This emerges especially when exclusivity is considered as reference parameter.

Interestingly, indicated prevailing banks are commercial banks for a great majority. This is not consistent with the hypothesis that small banks have an advantage in relationship lending. As explained above, however, this might be due to the offer of banks along the considered territory.

Sample enterprises seem to give great importance to guarantees. Thus, for some of them (especially those which are particularly under-collateralized), it could be crucial to be a

[53] Results are actually slightly in favor of the second group, with only 23,2% of the enterprises which needed less than one months, against 30,4% in the first group.

member of a mutual guarantee institution. Indeed, 99 of them declared that they had at least one position with a guarantee provided by Cofidi Veneziano.
Overall, the presence of the latter *confidi* might improve the perception of a sufficient credit availability. On the one hand, the enterprises indicated those related to credit availability as the most important among the reasons for becoming member of a mutual guarantee institution. On the other hand, more than half of the sample declared that financing needs were adequately satisfied. This is not consistent with the expectation that SMEs tend to be underfinanced. However, this may also suggest that both relationship lending and mutual guarantee institutions are actually important tools to overcome SME financial constraints.
In synthesis, for what concerns the coexistence of relationship lending and mutual guarantee schemes, results suggest that these two technologies might be complementary rather than alternative. Indeed, since real and personal guarantees are expected to represent a key factor in the financing process, relationship lending might not be enough in order to handle SME under-collateralization.
To this regard, a significant degree of relationship lending has been detected even among a sample formed by members to a mutual guarantee institution. Moreover, most of the participants declared that their decision to become a member of Cofidi Veneziano was driven by their banks.

3.3 Post-COVID19 questionnaire

3.3.1 Questionnaire description

As anticipated, the second questionnaire was submitted on an online platform between July and August 2020. Thus, answers are influenced by the first effects of the crisis related to the spread of COVID-19. For this reason, it has given the opportunity to study the impact of the crisis on SME access to finance, also considering the presence of a notable degree of relationship lending and the membership to a mutual guarantee institution.
The questionnaire is structured as follows. A first section is aimed at collecting further information about the enterprises involved. More precisely, questions may concern the degree of internationality of the firm, the sector in which they operate and investment preferences. Then, a second section specifically investigates the impact of COVID-19 crisis

on their economic results. On the one hand, enterprises were asked about the impact of the restrictions on their revenues; on the other hand, they were asked about their eligibility for and use of governmental facilitations. A third section is aimed at investigating the relationship between enterprises and their banks, both before and during the pandemic. To this regard, also eventual requests for new financing (both short-term and long-term) or renewals of existing loans with specific respect to the period of crisis have been considered. Finally, a last section comprehends a couple of questions concerning the eventual use of alternative finance.
As for the first questionnaire, Cofidi Veneziano took care of inviting its members to participate. In the second questionnaire, however, there is no question about any eventual help in the compilation provided by the institution.

3.3.2 Questionnaire participants and sample characteristics

Among the ones which had already participated to the questionnaire submitted on February 2020, 38[54] enterprises have also answered to the one submitted between July and August 2020. At that time, first effects of the crisis due to the spread of COVID-19 had already occurred. Thus, this analysis may also find results to test the thesis that both relationship lending and mutual guarantees may help at mitigating constraints to SME access to finance especially during periods of crisis.
As anticipated, also accounting values are available for some enterprise. In particular, accounting information are available for 30 enterprises out of 38[55]. Among the remaining 8 ones, 2 enterprises have not asked any guarantee yet (and thus no accounting information is available), while 6 enterprises may have inserted a wrong identification code (so that is has not been possible to match their questionnaires to any accounting data).
The sample enterprises were founded in a period between 1910 and 2017, with an average and a median age respectively equal to 22,5 and 19,0. These results are similar to those obtained with respect to the overall extraction of the enterprises which answered to the first questionnaire, even if median and average values are slightly greater.

[54] Respondents were actually 39, but enterprise 300148938 only completed 10% of the questionnaire and thus is not considered for the purpose of this analysis.
[55] In 1 case, however, only information from the income statement is available, so that it has not been possible to compute relevant indicators such as ROA and Asset Turnover.

76,3% of this sample (29 enterprises) is represented by family-run business, while the remaining 23,7% is not (9 enterprises). All the family-run businesses are managed by a member of the founder family.

For what concerns the dimension of the sample enterprises, 21 firms (55,3% of the sample) have between 1 and 10 employees, 9 firms (23,7%) have between 11 and 50 employees and 8 enterprises (21,1%) have no employees. Considering the definition provided in Subsection 1.1.1, there are 29 (76,3%) microenterprises and 9 small enterprises (23,7%).

As the overall sample used for the first part of this analysis, also this subset is formed by microenterprises and family-run business for the majority. Thus, considerations about the expected average opaqueness and under-collateralization and about the expected development of relationship lending are still valid.

Further information about the firms involved has been provided by the second questionnaire. In particular, relevant indications concern respectively the sector in which enterprises operate and the degree of internationality.

With respect to the first point, answers mainly give the following information: 9 enterprises (23,7% of the sample) deals with commercial and distribution businesses; 8 firms (21,1%) provide services in general; 5 enterprises (17,2%) are manufacturing businesses; 1 enterprise (2,6%) is an agricultural firm; and 1 enterprise (2,6%) operates in the tourism field. Among the remaining ones, which did not recognize themselves in any of the proposed categories, 3 enterprises (7,9% of the sample) are artisan firms and 3 enterprises (7,9% of the sample) operate in the building sector. To this regard, even if all the sectors mentioned in Subsection 3.1.2 are represented in the sample, distribution is sensibly different if compared to the overall one of the members of Cofidi Veneziano. A comparison between the overall and the sample distributions is reported in *Table 5*. However, conclusions may still be relevant with respect to SMEs in general.

Sector	Overall distribution	Sample distribution
Agricultural	1,0%	2,6%
Artisan	53,4%	7,9%
Manufacturing	9,1%	17,2%
Commercial	20,7%	23,7%
Tourism	8,0%	2,6%

Service	7,9%	21,1%
Other	0,0%	24,9%

Table 5 - Own elaboration of information provided by Cofidi Veneziano and by the second questionnaire

For what concerns the degree of internationality of these enterprises, the second questionnaire asked the enterprises to specify the share of Italian clients and of Italian suppliers with respect to the total. To this regard, indicated percentages suggest that the involved enterprises operate primarily in the Italian market. Indeed, average and median values of the indicated percentages of Italian clients are respectively 91,2% and 100,0%, while average and median values of the indicated percentages of Italian suppliers are respectively 89,3% and 100,0%. In other words, there are only 9 cases (23,7% of the sample) in which at least 20% of either clients or suppliers are not Italian.

At this point, it is time to introduce the accounting information referring to the sample enterprises. In particular, data are available for different periods depending on several factors such as the time in which the first guarantee was required. Therefore, in some cases information covers a period up to 2019, while in some others also information about 2020 is available. There is also one case for which data are available only up to 2018.

Since both questionnaires have been submitted during 2020, and since results in this year may be seriously affected by the consequences of the pandemic, a possible solution to make these data comparable is to consider 2019 as reference year[56]. In view of this adjustment, the data presents the following peculiarities.

The value of total revenues (TRs) goes from a minimum value of € 30.710 to a maximum value of € 4.349.655. average and median values are respectively equal to € 679.916 (with a standard deviation of € 1.013.300) and € 273.926. As predictable, smaller enterprises registered fewer total revenues. Indeed, for microenterprises average and median total revenues are respectively € 326.978 and € 121.421, while for small enterprises they are respectively € 1.650.496 and € 969.014.

Not always these revenues are translated into profit. In particular, in 5 cases out of 30 (16,6%) the final result corresponds to a loss. Taking losses into account, minimum and maximum final results are respectively equal to € -622.023 and € 233.760, while average and median values are respectively equal to € 34.564 (with a standard deviation of € 136.181) and € 51.344. Curiously, in this case median value is greater than the average

[56] For what regards the enterprise for which information is available until 2018, the latter year will be considered.

value. As before, however, greater enterprises obtained better results, since for microenterprises average and median values are respectively equal to € 3.963 and € 25.463, while for small enterprises they are respectively equal to € 118.716 and € 109.932.

To make microenterprises and small enterprises more comparable, however, it may be useful to consider their profit margins (PM). To this regard, for microenterprises average median values are both equal to 15,5%, while for small enterprises they are respectively equal to 10,5% and 9,4%. Therefore, although all the losses occurred to microenterprises, this indicator is in favor of the latter ones.

Information about revenue, profit and profit margin distributions is reported in *Table 6*.

	Overall			Microenterprises			Small enterprises		
	TR	Profit	PM	TR	Profit	PM	TR	Profit	PM
Min	30.710	-622.023	-61,5%	30.710	-622.023	-84,7%	537.911	60.571	1,9%
Max	4.349.655	233.760	84,2%	2.356.091	99.912	710,7%	4.349.655	233.760	19,4%
Median	273.926	51.344	12,5%	121.421	25.463	78,7%	969.014	109.932	9,4%
Average	679.916	34.564	14,1%	326.978	3.963	139,5%	1.650.496	118.716	10,5%
St. Dev.	1.013.300	136.181	27,1%	507.551	144.885	207,0%	1.418.758	53.096	5,7%

Table 6 - Own elaboration of accounting data

For what concerns the value of total assets (TA), minimum and maximum values are respectively equal to € 5.724 and € 2.559.915, while average and median values are respectively equal to € 450.947 (with a standard deviation of € 682.286) and € 98.000. As before, smaller enterprises present smaller volumes of total assets. In detail, for microenterprises average and median values are respectively equal to € 188.522 and € 32.765, while for small enterprises they are respectively equal to € 1.139.814 and € 875.302.

On the liabilities side, minimum and maximum values of total liabilities (TL) are respectively equal to € 5.000 and € 2.219.128, while average and values are respectively equal to € 388.771 (with a standard deviation equal to € 621.178) and € 86.093. Another time, volumes are greater on average when only small enterprises are considered. Indeed, in the latter case average and median values are respectively equal to € 895.238 and € 609.627, while if only microenterprises are considered they are respectively equal to € 195.381 and € 36.125.

With respect to equity (E) volumes, there are 13 out of 29 cases in which equity is negative. In 12 cases this occurs among microenterprises, while in the remaining one it occurs to a small enterprise. Such a circumstance may be due to the fact that some microenterprises are actually individual businesses rather than companies. Thus, they are not subject to the same capital requirements which apply for companies. Moreover, accounting information of microenterprises is expected to be less accurate than accounting information referred to companies.

However, equity distribution among the sample develop as follows. Minimum and maximum values are respectively equal to € -497.429 and € 438.962, while average and median values are respectively equal to € 62.176 (with a standard deviation of € 180.067) and € 4.875. As for the other balance sheet parameters, volumes are greater for small enterprises than for microenterprises. In particular, for small enterprises average and median values are respectively equal to € 244.575 and € 247.555, while for microenterprises they are respectively equal to € 7.309 and € -1.276.

Information about the distribution of balance sheet variables is reported in *Table 7*.

	Overall			Microenterprises			Small enterprises		
	TA	TL	E	TA	TL	E	TA	TL	E
Min	5.724	5.000	-497.429	5.724	5.000	-497.429	119.037	169.847	-50.810
Max	2.559.915	2.219.128	438.962	1.721.699	2.219.128	224.734	2.559.915	2.120.953	438.962
Median	98.000	86.093	4.875	32.765	36.125	-1.276	875.302	609.627	247.555
Average	450.947	388.771	62.176	188.522	195.831	-7.309	1.139.814	895.238	244.575
St. Dev.	682.286	621.178	180.067	407.539	488.104	126.239	799.121	676.693	177.925

Table 7 - Own elaboration of accounting data

At this point, microenterprises and small enterprises may be compared also with respect to other relevant indicators such as their return on asset (ROA) and their asset turnover (AT). To this purpose, the distributions of these indicators are reported in *Table 8*.

	Overall		Microenterprises		Small enterprises	
	ROA	AT	ROA	AT	ROA	AT
Min	-84,7%	55,9%	-84,7%	58,7%	3,2%	55,9%
Max	710,7%	2911,2%	710,7%	2911,2%	111,5%	575,4%
Median	17,6%	245,0%	78,7%	379,0%	11,9%	146,8%
Average	107,5%	488,3%	139,5%	603,4%	23,4%	186,3%
St. Dev.	183,6%	615,3%	207,0%	685,7%	35,9%	163,7%

Table 8 - Own elaboration of accounting data

It is evident that even if both revenues and profits were sensibly lower for microenterprises than for small enterprises, neutral indicators such as ROA and AT are significantly greater for microenterprises. However, this may be especially due to the difference in the asset volumes. Indeed, among microenterprises there are some that present an extremely high ROA, even without obtaining excellent profits.

Thus, more consistent indicators of enterprise creditworthiness may be represented by current ratio (CR) and quick ratio (QR). To this regard, CR and QR of those enterprises for which no value corresponds either to current assets or to current liabilities have not been taken into account. Interestingly, however, these enterprises are all microenterprises. The distributions of the latter indicators are reported in *Table 9*.

	Overall		Microenterprises		Small enterprises	
	CR	QR	CR	QR	CR	QR
Min	0,6	0,4	0,6	0,4	1,2	0,7
Max	2,3	2,3	2,0	1,8	2,3	2,3
Median	1,2	1,1	1,1	0,9	1,3	1,3
Average	1,3	1,1	1,1	0,9	1,6	1,5
St. Dev.	0,4	0,5	0,4	0,4	0,5	0,6

Table 9 - Own elaboration of accounting data

Clearly, if balance sheet indicators are taken into account, small enterprises prove to be sensibly more creditworthy than microenterprises. Indeed, for small firms average and median CR values are respectively equal to 1,6 and 1,3 (against 1,1 and 1,1 for microenterprises), while median and average QR values are respectively equal to 1,5 and 1,3 (against 0,9 and 0,9 for microenterprises).

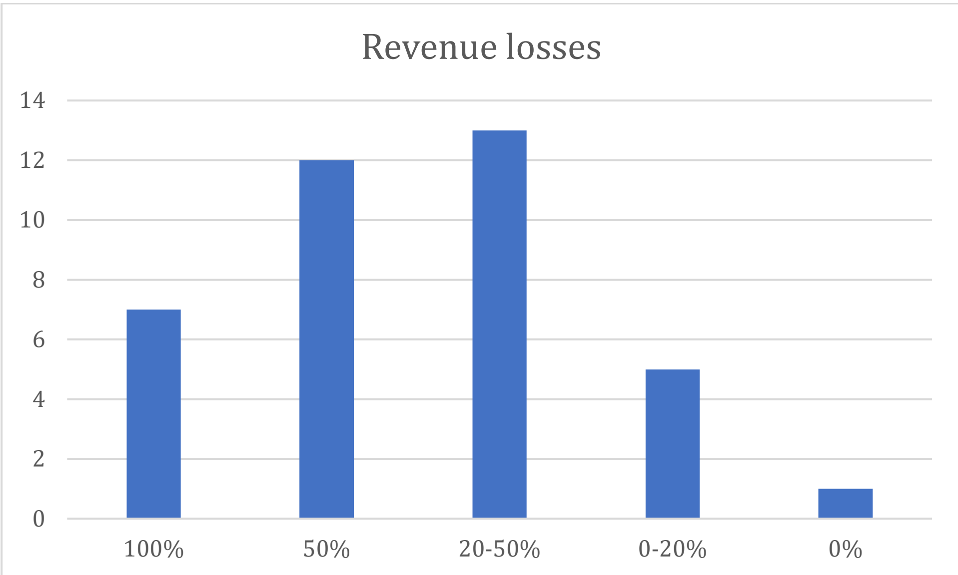
Overall, financial statement results confirm that the sample is mainly composed by microenterprises. Even if this sample may not be representative of the overall members of Cofidi Veneziano, these results still suggest a relevant consideration. Indeed, considering the variability in the distributions of both financial statement values and derived indicators, sample enterprises do not present homogeneous characteristics under the accounting perspective. Thus, it suggests that Cofidi Veneziano does not operate a strict selection of its members on the basis of their economic results. Conversely, also firms with negative parameters may be involved[57]. This constitutes an

[57] To give an idea, among the 4 enterprises which registered a loss in 2019, in the first questionnaire 3 had declared that they were benefitting from a mutual guarantee provided by the *confidi*, while the other one

important information, especially when credit availability perceptions are considered (see next Subsection).
On the other hand, the latter analysis suggests that enterprises which are greater with respect to the number of employees are so even with respect to their financial statement results. However, this is not synonymous of better profitability.

3.3.3 Access to finance during the pandemic

Before investigating their access to finance, it is relevant to highlight the impact of COVID-19 crisis on firms' revenues. To this regard, questionnaire collected the following information. 7 enterprises (18,4% of the sample) declared that their activity completely stopped, and 12 enterprises (31,6%) declared that they lost half of their revenues. Conversely, only 1 enterprise (2,6%) declared that its business went on at usual levels. Results are reported in *Graph 8*, which reports absolute frequencies on the y axes.



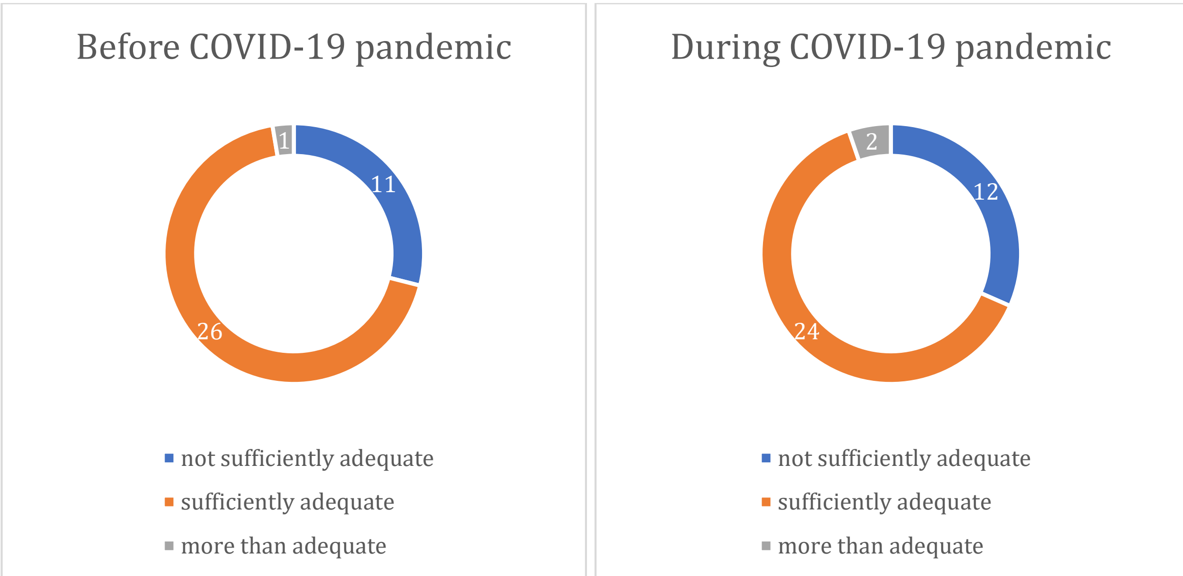
Graph 8 - Survey results

At this point, a first question to be considered is the one about perceived credit adequacy during this period. To this regard, 12 enterprises (31,6% of this second sample) declared that their credit needs were not sufficiently adequate, 24 enterprises (63,2% of the sample) declared that their financing needs were sufficiently adequate, while only 2

was benefitting from more than one mutual guarantee. Thus, firms with negative parameters may not only be member of Cofidi Veneziano, but also participate actively and obtain benefits.

enterprises (5,3% of the sample) declared that their financing needs were more than adequate.

These results are even more interesting if compared with answers to the same question before the pandemic. In detail, 7 enterprises[58] have lowered their perceived credit adequacy, while 6 enterprises[59] have improved it. However, the overall perceived credit adequacy has remained constant, as shown by *Graph 9*. Since a serious worsening may have been expected due to the impact of the crisis, the fact that this answer maintained a stable overall distribution before and during the pandemic suggests that participation in a mutual guarantee institution may help at mitigating the effects of a crisis. Indeed, considering that the analysis of the accounting information did not highlight a notable degree of homogeneity among the firms involved, assessing also some negative economic and financial results, it is not possible to conclude that this positive overall perception of the enterprises about their access to finance is due to a selection operated by Cofidi Veneziano.



Graph 9 – Own elaboration from survey results

In confirmation of this, there is no significant difference in the distribution of PM, ROA, AT or CR[60] between the group composed by enterprises which considers credit availability

[58] In detail, in 6 cases credit has passed from "*adequate*" to "*low adequate*", while in 1 case it has passed from "*more than adequate*" to "*adequate*".

[59] In 4 cases credit has passed from "*low adequate*" to "*adequate*", in 1 case it has passed from "*adequate*" to "*more than adequate*", and in 1 case it has passed from "*low adequate*" to "*more than adequate*".

[60] Average and median ROA values are respectively equal to 143,1% and 12,5% in the first group and 91,4% and 29,7% in the second; average and median AT values are respectively equal to 7,0 and 2,5 in the first group and 3,9 and 2,8 in the second; average and median PM values are respectively equal to 10,0% and

not adequate and the other one[61] (Unpaired Two-Samples Wilcoxon Test p-values respectively equal to 0,59, 1,00, 0,98 and 0,93)[62]. At the same time, neither dividing the enterprises with negative equity from the others has allowed to find any significant difference in the credit availability perceptions[63].

Conversely, if answers to the first questionnaire concerning any rejection to a credit request in the last five years before COVID-19 are considered, results are pretty different. Indeed, dividing enterprises which had received at least one rejection from the others, average and median values of ROA, AT and PM are significantly higher for those which had not received any rejection[64] (one side Unpaired Two-Samples Wilcoxon test p-values respectively equal to 0,07, 0,09 and 0,03). However, also among those enterprises which had not received any rejection there are some which registered negative profitability indicators (4 enterprises out of 24, accounting for 16,7%).

On the other hand, such an overall result about credit availability perceptions may be explained by the fact that even if the consequences of the pandemic may have increased SME need for financing, several facilitations put in place by the government may have sustained this need through the provision of extraordinary credit[65]. As anticipated, it may be interesting to study if this extraordinary credit should be considered as a replace for unavailable ordinary credit or as additional credit. To this purpose, the analysis about ordinary bank credit is considered first.

A comparison like the one concerning credit adequacy can be done also with respect to the time needed to obtain a bank overdraft. In this case, some changes have occurred.

10,3% in the first group and 15,9% and 14,6% in the second; average and median CR values are respectively equal to 1,1 and 1,1 in the first group and 1,2 and 1,1 in the second.

[61] Whenever conducting this kind of analysis involving financial statement information or derived indicators, only enterprises for which the latter ones are available are taken into account.

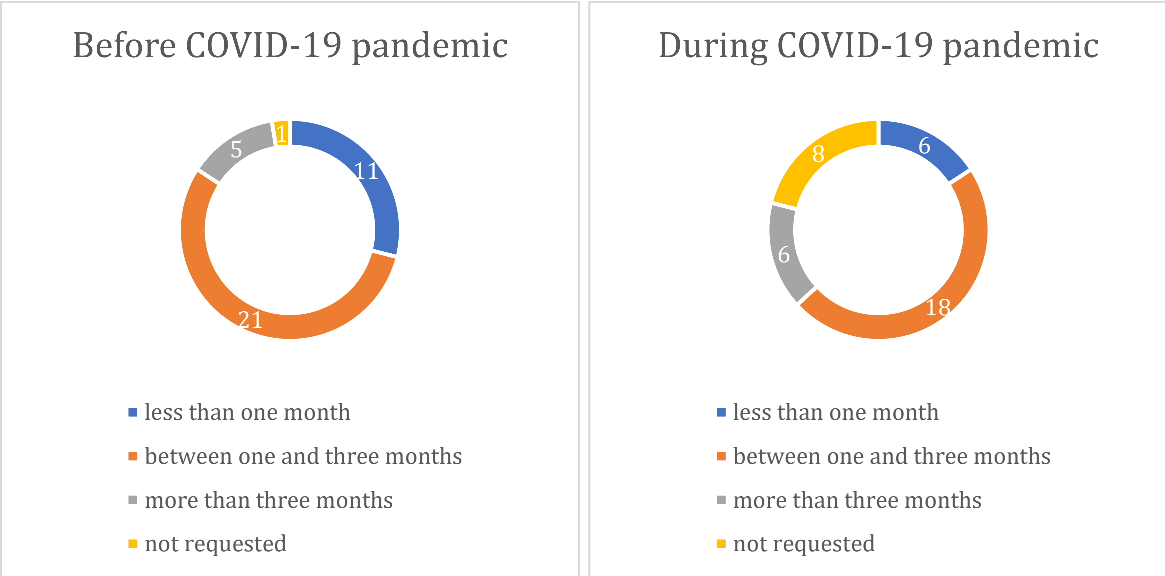
[62] No significant differences are found neither if pre-covid answers are considered.

[63] Since the answer related to credit adequacy can be matched to a number which grows with the increase in the credit satisfaction, it has been possible to study the distribution of these two groups. In particular, Unpaired Two-Samples Wilcoxon Test conducted on the answers of both questionnaires have resulted in two p-values respectively equal to 0,60 and 0,69. Thus, equity values do not seem to significantly influence credit availability perceptions.

[64] Average and median ROA values are respectively equal to 128,5% and 68,2% against 6,5% and 10,7%; average and median AT values are respectively equal to 5,5 and 2,9 against 2,1 and 1,7; average and median PM values are respectively equal to 18,5% and 16,5% against -3,5% and 6,9%.

[65] To this regard, the share of enterprises which indicated that they benefitted from governmental subsidies is just slightly higher among those which declared that credit availability was at least "*adequate*" (16 out of 26 enterprises, accounting for 61,5% of the sample) than among the others (7 firms out of 12, accounting for 58,3%).

Indeed, the number of enterprises which did not ask for any overdraft increases from 1 to 8 during the pandemic. Results are reported in *Graph 10*.



Graph 10 - Own elaboration from survey results

However, if only those enterprises which requested it are considered, it results that conditions were slightly worse during the pandemic. Indeed, before the pandemic 29,7% of the enterprises which requested an overdraft obtained it in less than one month, while this occurred for only 20,0% of them during the pandemic. At the same time, for only 13,5% of these enterprises it took more than three months before the pandemic, against 20,0% during the pandemic. Moreover, among those enterprises which requested an overdraft both before and during the pandemic, 11 enterprises out of 29 (37,9%)[66] declared that the time needed increased, while for only 5 firms (17,2%)[67] the time needed decreased.

It may be interesting to study if the time needed to obtain an overdraft might be influenced by financial statement information of the enterprise. To this regard, two groups have been identified: the first one is composed by those enterprises which indicated it took less than one month, while the second one is composed by those for which it took more than one month. Apparently, average and median values of indicators

[66] In detail, in 5 cases the time needed has passed from "*less than one month*" to "*between one and three months*", in 4 cases it has passed from "*between one and three months*" to "*more than three months*", and in 2 cases it has passed from "*less than one month*" to "*more than three months*".

[67] In 2 cases the time needed has passed from "*more than three months*" to "*between one and three months*", in 2 cases it has passed from "*between one and three months*" to "*less than one month*", and in 1 case it has passed from "*more than three months*" to "*less than one month*".

such as ROA, AT and PM look pretty different from one group to the other[68]. However, such indicators seem not to have a significant influence (Unpaired Two-Samples Wilcoxon Test p-values respectively equal to 0,84, 0,97 and 0,45). Conversely, a significant influence may be attributed to a balance sheet indicator such as CR (one side Unpaired Two-Samples Wilcoxon Test p-value equal to 0,05). To this regard, average and median CR values is higher in the first group than in the second one (1,3 and 1,3 against 1,2 and 1,1). With respect to the actual use of these lines of credit, a relevant change occurred with the spread of the pandemic. On the one hand, enterprises which used any line of credit during the pandemic are sensibly lower than those which did so before. However, since the questionnaire was submitted in July or in August 2020, this may be due to the fact that only a short period of five months is considered since the spread of COVID-19. On the other hand, both the average use and the median use rise considerably during the pandemic. In detail, the average use increases from 61,8% to 74,0%, while the median use increases from 70,0% to 82,5%.

For what concerns the request of bank funds during the pandemic, some further relevant answers may be considered. In particular, enterprises have been asked if they have requested or renewed any bank financing during the pandemic and, in case, to specify bank response and economic conditions compared to those applied previously.

If the enterprise which did not answer to this question is not taken into account, it results that 40,5% of the respondents (15 enterprises) have requested only new bank loans during the pandemic, while 21,6% (8 enterprises) have only renewed an existing one. Moreover, a further 13,5% (5 enterprises)[69] have both requested new loans and renewed existing ones. Thus, the overall share of enterprises which has negotiated a bank loan during the pandemic is equal to 65,6% (28 firms out of 37). Among the others, 16,2% (6 enterprises) explicitly declared that they did not negotiate any loan, and 5,4% (2 enterprises) declared that they only made use of services concerning bank deposit. The remaining firm only suspended a loan repayment.

[68] Average and median ROA values are respectively equal to 41,8% and 89,9% for the first group and to 35,2% and 125,4% for the second one; average and median AT values are respectively equal to 4,1 and 8,2 for the first group and to 2,4 and 4,8 for the second one; average and median PM are respectively equal to -10,8% and 0,4% for the first group and to 14,0% and 16,4% for the second one.

[69] To this regard, one enterprise declared that it had not only renegotiate an existing loan, but also asked for a COVID-19 loan. If the latter is considered as a new loan, the share of the sample that both requested new loans and renegotiate existing ones increases from 13,5% to 16,2%, while the share of enterprises that only renegotiated existing loans decreases from 21,6% to 18,9%.

Among the 28 firms which declared to have requested new loans and/or renegotiate existing ones, 21 enterprises (75,0%) declared that their request was accepted, 2 enterprises (7,1%) declared that it was accepted but for a lower amount, while in only 5 cases (17,9%) it was rejected[70].

Once information about bank ordinary credit has been discussed, it is time to consider non-bank extraordinary credit. To this regard, first of all enterprises have been asked about their confidence on the opportunity to resist the crisis also thanks to governmental facilitations. Overall, 43,2% (16 firms) of the respondents declared that they were faithful in governmental facilitations, while 56,8% (21 firms) of the respondents declared that they did not consider them sufficient.

Nevertheless, the majority of the sample (23 enterprises, accounting 60,5%) declared that it had already asked for any governmental facilitation at that time, while a further 18,4% (7 enterprises) declared that they had not done so yet, but that they intended to do so. Among the remaining enterprises, 6 enterprises (17,8%) declared that they did not intend to ask for any facilitation, while 2 of them (5,2%) declared they did not match the requirements.

The questionnaire also allows to see which kinds of facilitation have been requested by the 23 enterprises in the specific. Of course, any enterprise may have requested more than one facilitation. In detail, 16 (69,6% of the respondents) enterprises declared that they asked for a loan directly backed by the Central Guarantee Fund; 13 enterprises (56,5%) declared that they asked for non-reimbursable subsidies; 8 enterprises (34,8%) declared that they asked for a governmental moratorium (extraordinary with respect to previous rules); 1 enterprise (4,3%) asked for a loan backed by SACE guarantee[71]. Conversely, only 2 enterprises (8,7%) asked for different facilitations.

Questionnaire results suggest not only that most of the enterprises asked for extraordinary credit, but also that their requests had already been accepted for almost all the cases. Indeed, 33 out of 38 requests (86,8% of the requests) had been accepted with the liquidity already provided, while further 3 requests had been accepted even if the liquidity was not available yet.

[70] For what concerns information about the applied economic conditions, see Subsection 4.3.4.

[71] SACE S.p.A. is a company dealing with credit insurance. The possibility to obtain a SACE guarantee has been enlarged by law n. 23/2020 (the so-called "*Decreto Liquidità*") to those enterprises which have already made use of the guarantee provided by the Central Guarantee Fund up to the respective limit.

In order to study if this extraordinary credit constitutes an additional source to ordinary bank credit, it may be interesting to investigate if those enterprises which made use of the above-mentioned subsidies also kept on using their lines of credit. Indeed, these kinds of facilitations are focused on ensuring enterprise continuity during the COVID-19 crisis in the short-term[72] rather than long-term oriented. Thus, it is relevant to investigate their impact on short-term finance rather than on long-term loans.

First of all, the proportion of firms which kept on using their lines of credit during the pandemic is higher among those firms which did not ask for any facilitation rather than among the other ones (57,1% against 43,5%). This may challenge the hypothesis that extraordinary credit constitutes additional credit for SMEs. With respect to the usage intensity, however, apparently firms which asked for subsidies also used their credit lines far more intensively. Indeed, median and average usage values are respectively equal to 87,7% and 92,5% for the latter enterprises, whereas same values are respectively equal to 56,9% and 50,0% for the others. To this regard, also non-parametrical test confirms it (one side Unpaired Two-Samples Wilcoxon p-value equal to 0.02).

3.3.4 The effects of relationship lending during the pandemic

At this point, it may be interesting to study if also relationship lending has the power to mitigate the effects of a crisis. To do so, it is necessary to study the relevant characteristics of this subsample.

With respect to the presence of a prevailing bank, in the second questionnaire only 1 firm declared that it was not operating with a main bank before the pandemic. Curiously, however, in the first questionnaire it declared that it was.

Considering that almost all the enterprises declared that they were operating with a prevailing bank before the pandemic, it is not possible to conduct a further analysis with respect to this question. Nevertheless, enterprises were asked if they were operating with a prevailing bank also specifically referring to the pandemic period. Also in this case, the great majority of the sample declared it was operating with a prevailing bank during the pandemic. In detail, 30 firms (79,8% of the sample) declared that they were operating with a main bank during the spread of COVID-19, while only 8 enterprises (21,1%)

[72] See Subsection 2.2.5.

declared they were not. This is consistent with the expected considerable development of relationship lending among opaque SMEs.
Then, the 30 enterprises which declared that they were operating with a prevailing bank during the pandemic were also asked which kind of loans they had needed in the latter period. It resulted that 16 enterprises out of 28 respondents (57,1%) declared that they had needed for liquidity loans, 3 firms (10,7%) declared that they had needed for investment loans, and 2 firms (7,1%) declared that they had needed for debt restructuring loans. Interestingly, given that it was possible to indicate more than one preference, those enterprise which indicated "*debt restructuring loans*" also indicated "*liquidity loans*". A considerable share of the respondents (10 enterprises, accounting for 35,7%), however, declared that they did not ask for any of the above-mentioned loans. Curiously, one of them asked for a liquidity loan to another bank. To this regard, other two firms which asked for a loan to their prevailing bank also asked to a further bank.
Even those enterprises which declared that they were not operating with a prevailing bank during the pandemic were asked about the kind of loans that they had needed during the latter period. Among them, 6 enterprises (75% of the respondents) declared that they had needed for liquidity loans, 2 firms (25%) declared that they had needed for investment loans, and only 1 enterprise declared that it needed for a debt restructuring loan.
With specific respect to eventual requests for new loans or negotiations for loan renewals, information has been already provided in Subsection 3.3.3. However, no discussion about the applied economic conditions has been provided yet. To this regard, the questionnaire collected the following results.
Among the 20 enterprises which asked for new financing, only those 18 which obtained a positive response were able to answer to the question concerning the applied economic conditions. In detail, 13 enterprises (72,2% of the respondents) declared that they obtained better conditions, 1 enterprise (5,6%) declared it obtained worse conditions, and 4 enterprises (22,2%) declared that economic conditions were similar to the ones obtained previously. Conversely, all the 13 enterprises which negotiated a loan renewal declared that economic conditions were equivalent to the existing ones.
With respect to the banks involved in these requests, 18 enterprises (85,7% of the respondents) declared that they asked to their prevailing bank, while the remaining 3 enterprises (14,3%) did not. Interestingly, the only firm which declared that it obtained

worse conditions is among the latter three. For what regards the other 2 enterprises, 1 obtained a reject to its request, while the other 1 obtained equivalent conditions. Conversely, all the enterprises which declared that they obtained better conditions also declared that they had asked to their prevailing bank. This is consistent with the hypothesis that relationship lending may help in negotiating better conditions.

3.3.5 Conclusion to the second questionnaire

The sample involved in the second questionnaire is still entirely composed by microenterprises and by small enterprises, as well as by family-run businesses for the great majority. From this point of view, it may be considered as similar to the one involved in the first questionnaire. Moreover, although it is not as large as the latter one, it has still allowed to draw some conclusions.

First of all, both participating in a mutual guarantee institution and developing a strong relationship with a prevailing lender might actually help at mitigating the impact of a financial crisis. Indeed, this is confirmed by the fact that during the crisis no sensible changes occurred in the overall share of enterprises which declared that credit availability was not sufficiently adequate with respect to the previous period. To this regard, economic indicators do not seem to significantly influence credit availability perceptions. Conversely, the latter indicators may have led to any rejection to a credit request in the period just before the pandemic, even if there are also enterprises with negative economic indicators which have not received any rejection. At the same time, it is plausible to conclude that extraordinary credit has constituted an additional source of credit rather than a substitutional one. Thus, both participating in a *confidi* and developing relationship lending may actually represent the main factors for the encouraging results concerning the adequacy of credit availability.

With specific respect to the effect of relationship lending, results suggest that a relationship with a prevailing bank might help at negotiating better economic conditions for loans, even during a financial crisis. In particular, answers to the questionnaire shows that only those enterprises operating with a main bank succeeded in obtaining better economic conditions for their loans during the crisis, whereas, among those 3 which were not, 1 firm obtained worse condition and 1 firm did not obtained any financing.

Conclusions

This study had a dual purpose, so that it is composed by two parts. A first theoretical part, comprehending Chapter 1 and Chapter 2, was aimed at offering an overview of the literature concerning SME access to finance, whereas a second empirical part, coinciding with Chapter 3, was aimed at testing some of the literature previously discussed.

In particular, Chapter 1 represents the core of the theoretical part.

First of all, it highlights the importance of SMEs, not only with respect to their diffusion, but also considering their contribution to sustainment and growth of real economy, employment and innovation. In view of these positive effects, it is necessary to provide them with an adequate access to finance. Indeed, typical SME characteristics such as information opacity, under-collateralization and lack of financial skills among SME managers, often translating in high transaction costs, are expected to hinder SME access to finance. This is specifically relevant in Italy, where enterprises tend to be really small, as well as family-run. At the same time, considering the outbreak of the COVID-19 pandemic, access to finance may come back at the top of the list of concerns among SMEs, as it usually occurs during periods of financial crisis.

The chapter continues reporting some possible solutions implemented by banks when lending to opaque SMEs. In particular, these solutions are mainly of two types: transactions-based lending technologies, based on hard information, and relationship lending, based on soft information. According to the literature, the development of these technologies is especially influenced by the financial institution's structure. In detail, large institutions are expected to have a comparative advantage in transactions-based lending technologies, while small banks are expected to have a comparative advantage in relationship lending.

Relationship lending is then specifically addressed in Section 1.4. To this regard, the main conditions for its development are the duration of the relationship and its strength. Indeed, the longer is the relationship, the greater is the amount of information that the bank may have accumulated through its monitoring procedures. At the same time, banks are more encouraged to monitor their clients as the relationship is stronger. In particular, relationship strength may be detected by looking either at exclusivity, and so at the number of lenders involved, or at the share of total debt financed by the bank. Moreover, also the provision of further services is an indicator of relationship strength.

The main effects associated to the development of relationship lending are the increase in credit availability, the decrease in transaction costs, the reduction of covenant tightness and the insurance effect against firm inefficient liquidations. Interestingly, these effects are expected to be even more evident during periods of financial crisis.

Dealing with mutual guarantee institutions, Chapter 2 is functional at addressing the context of the following empirical part.

As a specific type of credit guarantee schemes, mutual guarantee institutions serve an important function in reducing SME financing gap. Indeed, they provide SMEs with mutual guarantees and are especially helpful in mitigating under-collateralization constraints. From the analysis of some European experiences reported in the first part of the chapter, it has been possible to detect some mutual characteristics. In particular, mutual guarantee institutions are typically publicly owned, non-profit and operating only in their home countries.

Among all the European mutual guarantee institutions, however, Italian *confidi*(s) deserve a special consideration, not only because of their longer history, but also in view of their current developments. Operatively speaking, a *confidi* uses a bank deposit funded by its members in order to grant loans. To this regard, also in order to better address the reference environment of the empirical part, Section 2.3 specifically focuses on Italian *confidi*(s), distinguishing between major and minor ones. In particular, major *confidi*(s) are typically located in the North of Italy. Differently from minor ones, they may carry out further activities (such as providing direct financing) and, for this reason, they are subject to a stricter supervision.

In consideration of the increasing importance of the Guarantee Central Fund at their expense, Italian *confidi*(s) may actually need to undertake business activities other than providing guarantees. In detail, they may act as direct financers, as well as business consultants, also exploiting their bargaining power to obtain lower interest rates and better financial conditions for SMEs.

Finally, Chapter 3 reports some empirical results concerning a group of enterprises participating in Cofidi Veneziano, a major *confidi* operating in the Veneto region. In detail, the study considers the answers to two relevant questionnaires proposed by a research group composed by prof. Elisa Cavezzali, prof. Caterina Cruciani and prof. Ugo Rigoni in the context of the research undertaken by Fondazione Venezia. Although the sample involved was not large, the two questionnaires have allowed to draw some interesting conclusions about the matter, also accounting for the impact of the financial crisis related to the spread of COVID-19. Moreover, financial statement information was available for the majority of the enterprises which participated in both questionnaires, allowing to make further considerations about their access to finance.

In particular, a first research core has concerned the development of relationship lending among the sample enterprises. Indeed, these firms present characteristics which are consistent with a considerable degree of information opacity, with respect to both dimensions and management. In detail, both the sample involved in the first questionnaire and the subsample involved in the second one are composed by microenterprises for the majority and by small enterprises for the remaining part. Moreover, the main part of these groups is composed by family-run businesses. Overall, a notable development of relationship lending has been actually found, either with respect to the relationship duration, or considering the relationship strength.

Curiously, results do not suggest that small financial institutions have an advantage in relationship lending. Indeed, most of the indicated prevailing banks are commercial institutions. However, this may be due to the peculiar offer of the territory involved, since also among non-prevailing financial institutions commercial ones are the majority.

Then, also the effects of relationship lending have been considered. To this regard, while relationship length seems not to have a considerable impact on credit conditions, it is plausible to conclude that enterprises may benefit from stronger relationships. This has resulted to be true especially with respect to exclusivity, and even during a period of financial crisis. Indeed, only those enterprises which sent their requests to their prevailing banks have been able to obtain better conditions.

Furthermore, the great majority of the sample thinks that available credit was at least sufficiently adequate. Considering that financial constraints may be expected when dealing with SMEs, this encouraging result may be partially attributed to relationship lending.

At the same time, the latter result should be seen in view of the active participation to a mutual guarantee institution. In particular, the great majority of the sample enterprises declared that they had at least one position backed by a mutual guarantee provided by Cofidi Veneziano. In general, answers to the questionnaire suggest that relationship lending and mutual guarantee schemes might be considered complementary rather than alternative tools. Indeed, most of the firms which declared that they were benefitting from mutual guarantees also declared that they were operating with a prevailing bank. Moreover, the great majority of the enterprises declared that their intention to participate in a mutual guarantee institution came from a direct request of their bank.

With specific respect to the period of crisis due to the spread of COVID-19, further conclusions may be drawn thanks to the answers to the second questionnaire. Indeed, part of the above-mentioned literature retains that both relationship lending and mutual guarantee institutions may represent even more important tools when financial crises occur. To this regard, a notable portion of the second sample declared that it was sensibly hit by the crisis, with considerable drops in the revenues of at least 50% and up to 100%. Thus, since the overall share of enterprises involved in the second questionnaire which consider at least "*adequate*" their available credit has remained stable, it is plausible to retain that both relationship lending and the participation in a mutual guarantee institution may have helped at mitigating the effects of the crisis. Furthermore, results suggest that relationship lending may help at obtaining better financial conditions for loans requested or renewed during a period of economic downturn.

One may object that this positive situation is explained by the fact that the *confidi* only selects those enterprises with positive economic results. Nevertheless, considering the great variability in the distributions of both financial statement values and derived indicators, there is no evidence that such a selection occurs.

A last consideration may be drawn with respect to the introduction of governmental facilitations. Indeed, also subsidies may be responsible for these encouraging results about credit availability perception. In particular, the great majority of the respondents declared that they benefitted from a governmental facilitation, or at least that it was their intention to do so. However, answers to the questionnaire suggest that extraordinary credit constitutes an additional source rather than a substitutional one.

In conclusion, the literature considers that both relationship lending and mutual guarantee institutions represent two important tools from which SMEs may benefit in order to overcome their financial constraints. For what concerns the Veneto region, results of this study confirm this statement, even when a period of financial crisis such as the one which has started with the spread of COVID-19 is considered.

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