

10

Small Business Lending

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Introduction

Small business lending is at the core of the theory of financial intermediation. This theory relies on the information asymmetries that arise in screening the quality of potential borrowers. These market imperfections are well explained in the seminal contributions of, inter alia, Ramakrishnan and Thakor (1984), Bhattacharya and Thakor (1993) or Allen and Santomero (1998). Even if the nature and determinants of the related moral hazard and adverse selection problems have been revised in different contributions, they have guided a considerable strand of the financial intermediation literature over the past two decades. Specifically, most theoretical models justify the existence of financial intermediaries based on their ability to lower information production costs. In the standard framework, a borrower needs to raise capital from a number of investors, and lenders act as intermediaries to provide this capital. Given the relative informative opaqueness of small and medium-size enterprises (SMEs), they become a particularly illustrative case of asymmetric information problems. Considering the relevance

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of SMEs in the economic activity and employment of many countries, it is not surprising that many banking studies have paid substantial attention to small business lending over the last 40 years.

Ramakrishnan and Thakor (1984) show that without an intermediating information broker, there would be enormous duplication in information production as each investor attempted to screen each company. This problem becomes even more acute if the number of firms evaluated is particularly large, as is the case with SMEs. In a way, this shortcoming can be solved if specialized intermediaries (banks) certify the firm's economic worth (or the borrower's likelihood of default). Thus, the intermediary is not simply a broker that gathers individual information but an agent that pools information from a large number of applicants to reduce costs and to identify those with greater credit-worthiness. The larger the volume of information pooled, the smaller the cost of screening each borrower. As noted by Udell (2015), this modern banking theory has generated a considerable academic interest in SME finance because "it implicitly pointed out that the best place to look for the effect of asymmetric information on financial contracting is likely to be in the SME sector".

In this chapter we analyse small business lending in Europe from both the theoretical and empirical perspectives. We generally refer to SME lending, as most of the literature specifically looks not only to small but also to medium-sized firms as particularly vulnerable in terms of access to external finance.

There are a limited number of overview papers on SME finance. Notable examples are Beck et al. (2013), Berger and Udell (1998, 2002, 2006) and Udell (2015). They show that multiple characteristics of SME financing have been considered in extant studies, with lending technologies and SME credit channels probably being the most important ones.

SME lending is particularly relevant in Europe. Although the specific figures may vary to some extent depending on the source (as we will show later on), SMEs account for around two-thirds of private employment in Europe (compared, for example, with half in the USA). Additionally, most studies identify a "funding gap" whereby credit demand exceeds supply, and in recent years a particularly large number of studies have shown evidence of this gap in Europe.

SME funding has become a matter of public policy interest as well. In the case of Europe, EU-wide initiatives have been established. Specifically, the European Commission launched the so-called project for a Small Business Act (SBA) in 2011. It aims to improve the approach to entrepreneurship in Europe by simplifying the regulatory and policy environment for SMEs, removing barriers to their development and enhancing access to markets and internationalization. The SBA was under consultation in 2014. As the crisis

has been severe in many European economies, many governments have also launched domestic initiatives to improve the financial conditions of SMEs.¹

The policy interest has also coincided with a growing academic attention in Europe. From a microeconomic analysis point of view, this special consideration is explained by the relative lack of microeconomic data on SMEs in the USA compared to Europe. The lack of data in the US is particularly important for relationship lending variables. Recent studies offer many interesting insights, as they show not only particular features of SME funding in Europe, but also suggest that the dynamics of SME lending may be changing with technology, bank relationships, competition and other related matters.

The chapter comprises three sections following this introduction. The section “A Growing Academic Interest” explains the growing academic interest in SME funding. The section “Recent Evolution of SME Finance in Europe” shows the main descriptive figures for Europe making use of the Survey of Access to Finance of Enterprises (SAFE) jointly provided by the European Commission and the European Central Bank. The section “Small Business Lending Technologies in Europe: A Diagnosis” surveys the role of technology in SME lending and how the taxonomy of funding alternatives for SMEs has been changing over time. It also revises some of the most recent contributions on SME lending in Europe. “Conclusions” draws the chapter to a close.

A Growing Academic Interest

There has been a growing academic interest in SME finance since the mid-1970s. A discipline has been created whereby the knowledge of how to alleviate financial restrictions on small businesses has improved considerably. Both the corporate finance and the banking research have come closer to the real world.

Probably the most complete overview paper on SME lending was Berger and Udell (1998), but the last two decades have also witnessed a large number of contributions. Berger and Udell (2002), for example, revise the conceptual framework of SME finance. In this revised framework, lending technologies are shown to be the key conduit through which government policies and national financial structures affect credit availability. The authors stress the relevance of a “causal chain from policy to financial structures”. In this regard, they try to assess the feasibility and profitability of different lending technologies. They also show that financial structures include the presence

¹ These initiatives go beyond the aims of this chapter but many of them can be checked here: http://ec.europa.eu/growth/smes/business-friendly-environment/performance-review/index_en.htm.

of different financial institution types and the conditions under which they operate. Importantly, they argue that the framework implicit in most of the extant contributions is frequently over-simplified, neglecting key elements of the casual chain. One of the most common simplifications identified is the treatment of transactions technologies as a homogeneous group. This would imply that transaction-based lending is unsuitable for opaque SMEs, while this is not the case in practice.

According to Udell (2015), the growing research interest in small business lending has gone through four stages. The first stage took place during the 1980s and early 1990s, when the financial intermediation theory based on asymmetric information problems was mostly developed. In this theory, informationally opaque borrowers are the central paradigm (e.g. Diamond 1984; Boyd and Prescott 1986). At that time, the corporate finance literature was also acknowledging the relevance of information-related problems for the external funding choices of small firms (e.g. Myers 1984; or Myers and Majluf 1984).

A second stage was mainly developed during the early 1990s and refers to what Udell (2015) labels “the emphasis on contract terms”. These terms include collateral (as in Boot 2000), covenants (as, for example, Berlin and Mester 1992) or loan commitments (as in Avery and Berger 1991).

The third stage refers to the substantial expansion of research on relationship lending during the 1990s, with the seminal contributions of Petersen and Rajan (1994, 1995), and Berger and Udell (1995) as prominent examples.

A fourth and final stage refers to the studies since the beginning of the 2000s and is characterized by more specific microeconomic studies that incorporate complexity in the analysis by looking at a variety of dimensions, such as the role of the institutional framework (which is described later in this chapter), the application of transactions lending to SMEs (de la Torre et al. 2010) or the impact of technology (e.g. Petersen and Rajan 2002).

Some of these distinctive features of small business lending are described in the following sections, with a focus on recent contributions to the European case. Some studies might be missing from the references, but our aim is not to offer a comprehensive survey but rather a guide to the relevance of some work within the European framework.

Recent Evolution of SME Finance in Europe

A simple analysis of some basic statistics on the demography and representativeness of SMEs across European countries (Table 10.1) gives an idea of how relevant those firms are for economic activity and employment. With

very small variation across countries, SMEs represent 99.8 % of firms in the European Union. Differences are larger when the share of total employment is shown.

The average percentage of employment corresponding to SMEs in the EU is 67 %, ranging from 53 % in the United Kingdom or 62.5 % in Germany to over 78 % in Estonia, Latvia or Malta.

Contribution to gross value added (GVA) also varies across countries, ranging from 51.8 % in Poland and 53.8 % in Croatia to over 70 % in countries like Spain or Ireland.

Table 10.1 Representativeness of SMEs across Europe (2012)

Country	Enterprises		Persons employed		GVA (million euro)	
	Total	%SME	Total	%SME	Total	%SME
European Union	22,346,729	99.8	133,767,348	67.0	6,184,826	57.5
Belgium	566,006	99.8	2718,355	70.1	189,086	62.2
Bulgaria	312,608	99.8	1872,997	75.5	18,246	62.3
Czech Republic	1,007,441	99.9	3521,520	69.8	84,142	56.0
Denmark	21,358	99.7	1,602,105	65.0	119,936	62.5
Germany	2,189,737	99.5	26,401,395	62.5	1,385,501	53.3
Estonia	58,408	99.7	393,545	78.1	9,338	74.9
Ireland	146,741		1097,444		88,360	
Greece	726,581	99.9	2,198,986	86.5	54,703	72.8
Spain	2,385,077	99.9	10,923,323	73.9	434,156	63.0
France	2,882,419		15,495,621		890,597	
Croatia	148,573	99.7	1002,905	68.3	19,115	54.8
Italy	3,825,458		14,715,132		646,476	
Cyprus	46,139	99.9	224,915		7,864	
Latvia	91,939	99.8	573,580	78.8	9,269	69.2
Lithuania	141,893	99.8	835,630	76.2	12,155	68.5
Luxembourg	29,265	99.5	242,533	68.3	19,250	70.7
Hungary	528,519		2,430,618		46,497	
Malta	26,796	99.8	119,224	79.3	3,548	74.9
Netherlands	862,697	99.8	5,359,446	66.7	310,022	62.9
Austria	308,411	99.7	2,671,477	68.0	164,976	60.5
Poland	1,519,904	99.8	8,326,839	68.9	171,627	50.1
Portugal	793,235	99.9	2,942,895		66,360	
Romania	425,731	99.6	3,837,868	66.4	48,432	
Slovenia	119,644	99.8	474,479	72.3	17,140	62.8
Slovakia	398,392	99.9	1,417,228	69.7	32,922	60.5
Finland	226,373	99.7	1,457,599	63.0	86,957	69.6
Sweden	661,822	99.8	3,025,006	65.4	210,589	58.5
United Kingdom	1,703,562	99.7	17,784,620	53.0	1,037,293	50.9
Norway	278,899	99.8	1,510,838	67.6	230,661	58.6

Source: Eurostat business statistics

Among the EU-wide efforts to provide homogeneous statistical sources on a number of SME funding dimensions, the main one is the Survey of Access to Finance of Enterprises (SAFE) of the European Commission (EC) and the European Central Bank (ECB).² An investigation by both the ECB and the EC showed that comparable, timely and frequent data do not exist for SMEs in the European Union. To fill this gap, the EC and the ECB decided in 2008 to collaborate on a survey on access to finance of enterprises in the European Union. The survey covers micro, small, medium-sized and large firms and provides evidence on the financing conditions faced by SMEs compared with those of large firms during the past six months.

In addition to a breakdown into firm size classes, SAFE offers evidence across branches of economic activity, Eurozone countries, firm age, financial autonomy of the firms and ownership of the firms. The first wave of the survey was held in June–July 2009. Part of the survey is run by the ECB every six months to assess the latest developments in the financing conditions of firms in the Eurozone. The more comprehensive survey has been run every year since 2013 (previously every two years) in cooperation with the EC.³

SAFE offers data from 2009 to 2014. For the descriptive purposes of this section we will exploit the semi-annual frequency of the database. Importantly, SAFE provides descriptive information not only on financing conditions, but also on how firms perceive these conditions. In the analysis of each indicator, two groups of firms are compared: SMEs and large firms. In this way we can have an idea of how financial conditions differ depending on firm size. A potential limitation of the analysis is that the sample period coincides to a large extent with crisis years. However, the positive side of that restriction is that we can have a better picture of how financing conditions changed for SMEs after the severe credit shock suffered during that period.

Figure 10.1 offers a first look at the magnitude of the SME funding problem. It shows the evolution of the percentage of SMEs that consider access to

² Along with SAFE, there are other recent significant efforts by public institutions to provide data on SMEs in Europe. Particularly relevant is the Business Environment and Enterprise Performance Survey (BEEPS), a joint initiative of the European Bank for Reconstruction and Development (EBRD) and the World Bank Group. BEEPS is a firm-level survey of a representative sample of an economy's private sector whose objective is to gain an understanding of firms' perception of the environment in which they operate. BEEPS covers a broad range of business environment topics including access to finance, corruption, infrastructure, crime, competition and performance measures. It covers approximately 4,100 enterprises in 25 countries of Eastern Europe and Central Asia (including Turkey) to assess the environment for private enterprise and business development. The use of BEEPS seems particularly sensible for analysing SME restrictions in Eastern European countries where SME funding problems have been found to be particularly acute and there are different lending technologies in play.

³ Full details on SAFE can be obtained here:

<https://www.ecb.europa.eu/stats/money/surveys/smc/html/index.en.html>.

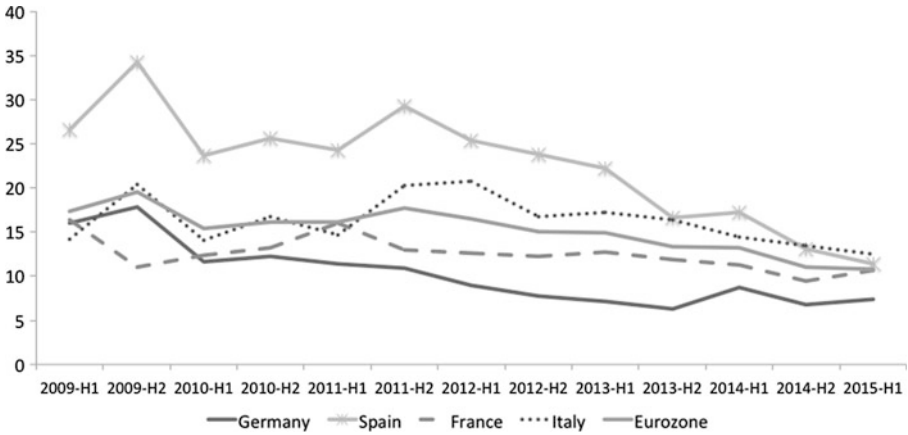


Fig. 10.1 Percentage of SMEs that consider access to funding as their most important problem (Source: European Commission and European Central Bank Survey on the access to finance of SMEs and own elaboration)

funding as among their more important problems. This percentage has gone down as the financial crisis has been progressively left behind. It reached a maximum of 34 % in Spain in 2009, while the average for the Eurozone was highest in 2011 at 18 %. Among the countries considered, the lowest value is observed for Germany, ranging from 16 % in 2009 to 7 % in 2015.

Figure 10.2 compares the reported external financing needs of SMEs and large companies in the EU. The figure summarizes survey responses to the question “For each of the following types of external financing, please indicate if your needs increased, remained unchanged or decreased over the past six months.”

It appears that aggregate demand conditions dominate the external financing needs of European companies. Around 30 % of the EU SMEs considered that their need for bank loans would increase in 2009, while only 25 % of large firms expected a rise in their need for bank loans. Similarly, the number of SMEs stating a decreasing need for bank loans has been slightly below 20 % for SMEs and around 25 % for large firms, being larger in the post-crisis years. In the case of trade credit, however, an increasing percentage of European large firms reported increasing funding needs in 2010 and 2011, when debt markets were relatively closer for large EU companies due to the sovereign debt tensions.

Figure 10.3 looks at the actual availability of external funding (irrespective of the perceived funding needs). It shows the percentage of answers to the question: “For each of the following types of financing, would you say that their availability has improved, remained unchanged or deteriorated for your

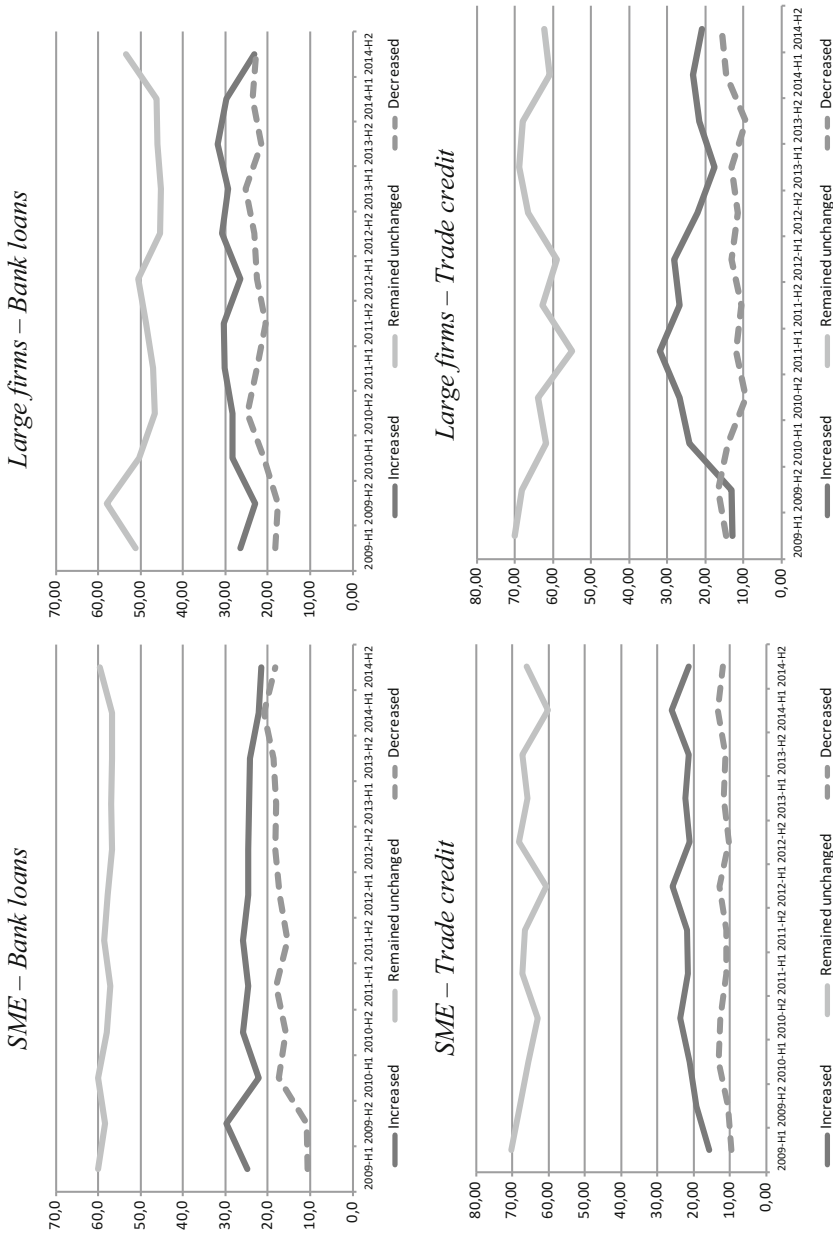


Fig. 10.2 Comparison of reported external financing needs of SMEs vs large companies in the EU (%) (Source: European Commission and European Central Bank Survey on the access to finance of SMEs and own elaboration)

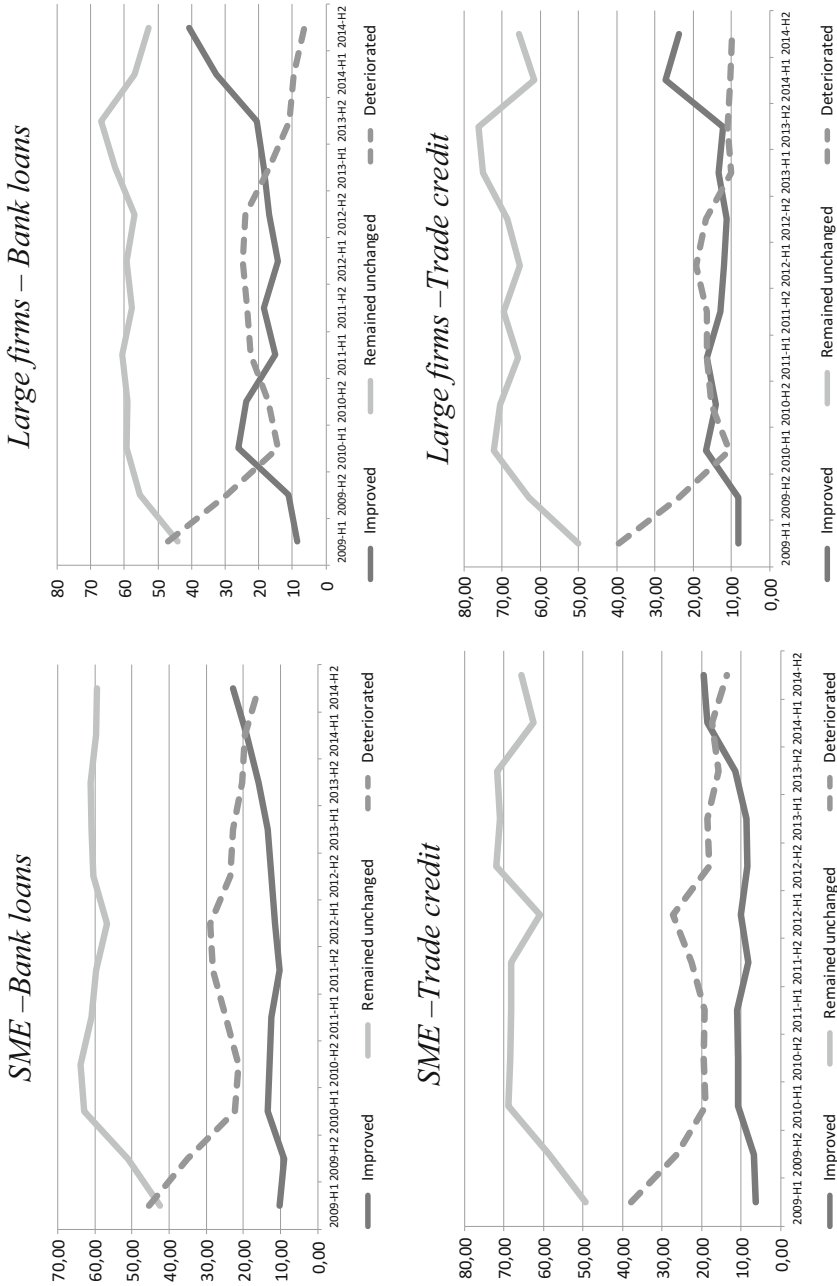


Fig. 10.3 Availability of external funding in the EU (%) (Source: European Commission and European Central Bank Survey on the access to finance of SMEs and own elaboration)

enterprise over the past six months?” The main two instruments considered were “bank loans” and “trade credit”, the breakdown shown in Fig. 10.3. Interestingly, SMEs reported slow growth in the percentage of firms that reported improved availability of bank loans, while availability seems to have increased more quickly for large firms in the post-crisis period. As of 2014, the percentage of SMEs that perceived that the availability of funds deteriorated remained slightly below 20 %, while it was around 8 % for large firms. In the case of trade credit, improvement in accessibility has also been faster for larger firms as the effects of the crisis have faded away.

As dependence on bank loans is particularly relevant for SMEs, Fig. 10.4 explores the reasons for having a bank loan denied at SMEs and large firms. The survey for SMEs was done in 2009, 2011 and 2013, while for large firms it is only available for 2011 and 2013. By 2009, only one-third of EU SMEs reported no obstacles to getting a bank loan approved. This percentage improved to around 40 % in 2013. In the case of large firms, 45 % of companies reported no obstacles to getting a loan in 2011 and 52 % in 2013. The main reason for having a loan denied in the case of SMEs was lack of collateral or of enough collateral quality (for 20–25 % of them) while interest rates were the main reason for around 20 %. Large firms, however, considered interest rates (12–15 %) the main obstacle.

A summary indicator of how funding conditions change in the EU depending on firm size is the so-called financing gap. The external financing gap measures the perceived difference at firm level between the need for external funds across all channels (i.e. bank loans, bank overdrafts, trade credit, equity and debt securities) and the availability of funds. Therefore, the financing gap indicator combines both financing needs and availability from a variety of instruments. For each of the instruments, an indicator of a perceived financing gap change takes the value of 1 (–1) if the need increases/decreases and availability decreases/increases. If enterprises perceive only a one-sided increase/decrease in the financing gap, the variable is assigned a value of 0.5 (–0.5). The composite indicator is the weighted average of the financing gap related to the five instruments. A positive value of the indicator suggests an increasing financing gap. Values are multiplied by 100 to obtain weighted net balances in percentages.

Figure 10.5 depicts the external funding gap in the EU with a breakdown by firm size. While perceptions and availability of funds were at their worst in 2011, the evolution thereafter has differed widely depending on size. The funding gap improved over time but remained positive for micro firms. In 2014, it fell to negative values for SMEs although it was still close to zero. In

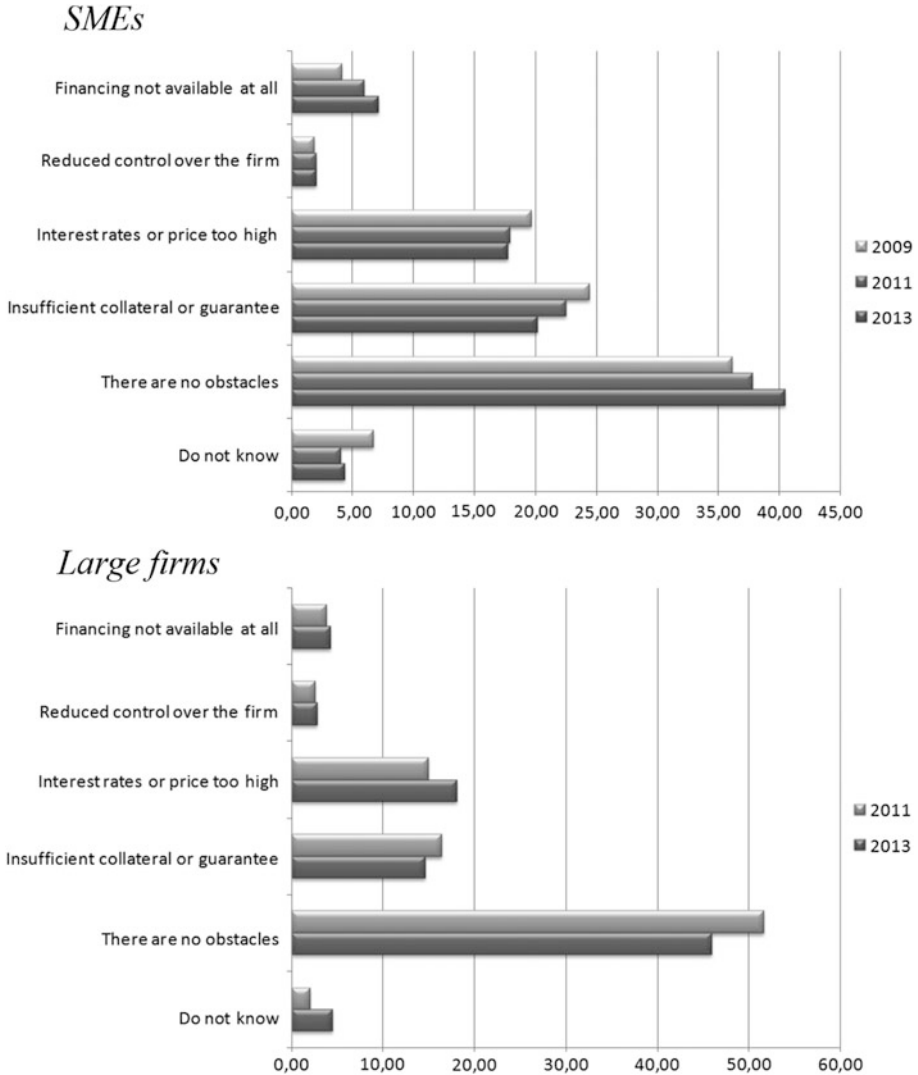


Fig. 10.4 Reasons for having a loan denied (% of answers) (Source: European Commission and European Central Bank Survey on the access to finance of SMEs and own elaboration)

any event, medium-sized and large firms enjoyed a much shorter funding gap (larger negative value in absolute terms).

Part of the reason for a larger funding gap for smaller firms is the application of larger interest rates in their loan contracts, as revealed in Fig. 10.6, where rates applied on credit lines and overdrafts are shown across firm sizes. Rates paid by micro firms in 2014 (the only year available) were double those of large firms.

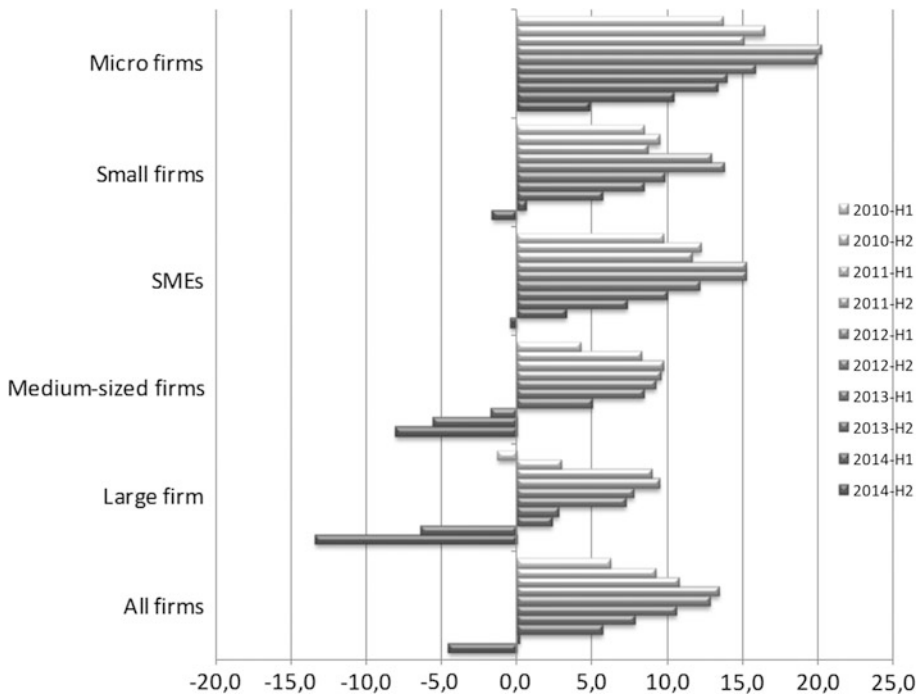


Fig. 10.5 Financing gap perceived by EU firms (*Source: European Commission and European Central Bank Survey on the access to finance of SMEs and own elaboration*)

These figures suggest a persistent disadvantage in access to finance for SMEs in Europe. Although the situation is applicable to most EU SMEs, these conditions may vary across countries. Kaya (2014), for example, shows that SMEs in Germany represent a larger share of small and medium-sized firms relative to micro firms than in other EU countries. This is due, inter alia, to the German SMEs' greater export orientation, and fewer obstacles to corporate growth in other EU partners. This could have made German SMEs more resilient to adverse financial conditions in recent years. In France, the defining characteristic of the SME financing environment has been well-established public support schemes, although this has not prevented SMEs from facing increasing financing constraints in recent years. In Italy—where SMEs represent almost half of the economy's total employment—the overwhelmingly large share of micro enterprises has made access to finance tougher for Italian SMEs in recent years. The case of Spain is similar to that of Italy, as SMEs account for 40 % of employment. As Kaya (2014) emphasizes, Spanish SMEs comprise low-tech manufacturing and less knowledge-intensive services that focus on domestic markets. These features have made them less competitive and particularly vulnerable to changes in domestic demand.

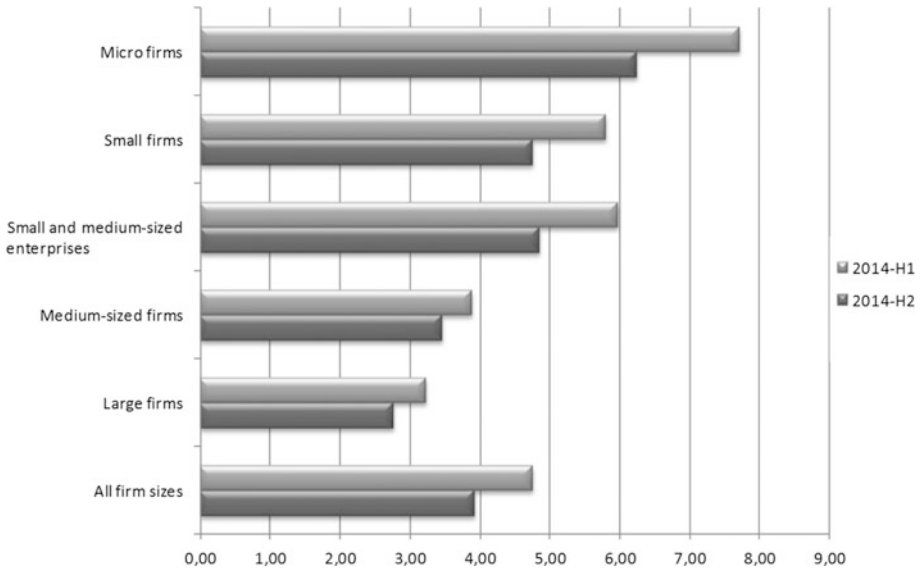


Fig. 10.6 Interest rates applied on credit lines and overdrafts (Source: European Commission and European Central Bank Survey on the access to finance of SMEs and own elaboration)

Small Business Lending Technologies in Europe: A Diagnosis

The Universe of Lending Technologies

The contributions to the field reveal that SME lending is a more diversified and complex topic than it may at first seem. One of the reasons is that there are different information-related dimensions to this type of lending. One of them is the extent to which the information produced by these firms is explicit and easily verifiable. When this is the case, information is labelled as “hard”. Hard information is quantifiable and can be transmitted (e.g. audited financial statements). Conversely, the information is “soft” when it is not easily quantifiable or transmitted within the hierarchy of a financial institution. As shown in Fig. 10.7, this distinction frequently leads to two different sets of lending technologies. A lending technology is a “unique combination of the primary source of information, screening and underwriting policies/procedures, structure of the loan contracts, and monitoring strategies and mechanisms” (Berger and Udell 2006, p. 2948). The main distinction refers to those technologies that are typically based on soft information as “relationship lending” and those based on hard information as “transactions lending”.

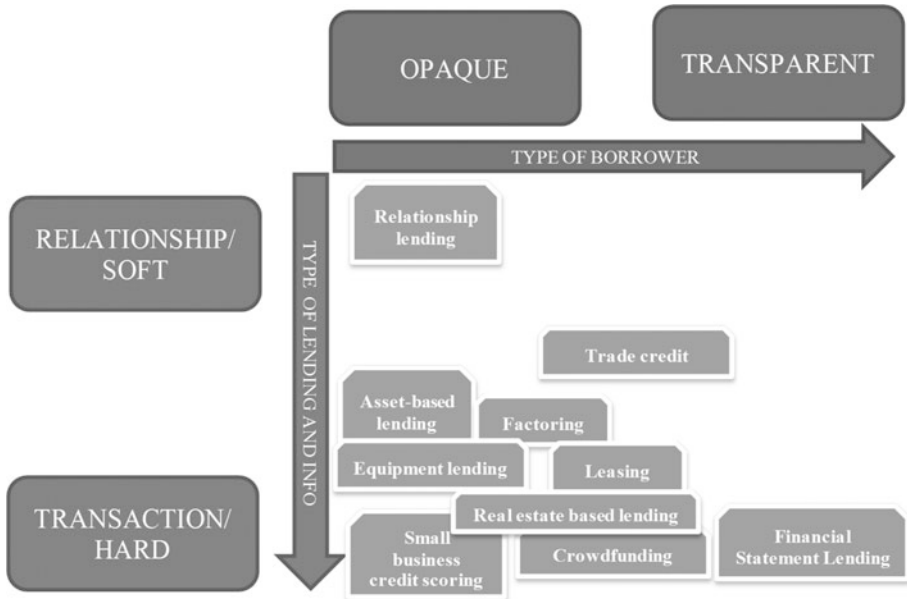


Fig. 10.7 The universe of lending technologies (Source: Udell (2015) and own elaboration)

Another dimension is given by the degree of transparency (vs opaqueness) of the borrower. As also shown in Fig. 10.7, the universe of SME lending technologies can be distributed between these two dimensions. In the top left corner of the diagram, “relationship lending” refers to the collection of soft information about the borrower over time, and this information is used to underwrite and monitor a loan. This technology is frequently used when no other alternative is available, which is frequently the case with SMEs.

There are also some technologies for relatively opaque borrowers that incorporate some kind of asset or audited statement. This makes the information processed a bit “harder” than in relationship lending. This is the case of asset-based lending—when the loan is often discounted or backed by receivables and/or inventory as collateral; equipment-based lending—when the loan is tied to equipment and the payment depends on the value and the amortization of such asset; and real estate lending—when a real estate asset is used as collateral. There are also other similar technologies that can be undertaken by banks or other intermediaries, such as factoring—where the intermediary acts as a “factor” that purchases account receivables from the borrower; or leasing—when the lender acts as a “lessor” and provides financing based on equipment that the lender owns.

Other forms of SME funding are characterized by dealing with transaction-based technologies but different degrees of borrower opacity. A first case is “small business credit scoring”, where the lenders use statistical methods to evaluate relatively small loans for opaque businesses. Another case is crowdfunding, where small businesses/individuals borrow from other individuals through a peer-to-peer (P2P) platform, where each member of the platform provides a small amount of the total loan. The degree of borrower opacity may vary significantly in crowdfunding.

“Financial statement lending” is shown at the bottom right corner of Fig. 10.7, as the borrower is characterized as transparent and the information is transaction-based. This technology involves a set of accounting statements whose quality has been verified/certified by reputable auditors.

A particular case among SME lending technologies is “trade credit”, which is depicted at the centre of the figure. This is credit extended by vendors to purchase raw materials and it is shown as “accounts payable” on the borrower’s balance sheet and as “accounts receivable” on the lender’s balance sheet. It incorporates some relevant features such as a maximum maturity and a limited discount period. As we will show later on in this chapter, the information properties of trade credit and its relationship (as a complement or a substitute) to bank loans have been explored recently by academics, with some mixed findings.

The array of technologies shown in Fig. 10.7 is frequently available in the USA and, to a lesser extent, in other countries like Japan. However, the variety of funding sources is frequently more limited across European countries. It is important to note that the financial crisis that started in 2007 has also had an impact on the way these technologies are considered. In particular, the realization that diversification of funding sources helps alleviate financial tensions at times of crisis has elevated the importance of alternative funding instruments. However, there seems to be substantial confusion over what “alternative” really means. Traditionally, “alternative” described the funding of firms and individuals beyond banks and standard debt and equity markets. In the current business environment, there are more restrictive definitions that just refer to financial activities that are developed through entirely new channels, such as business-to-business (B2B) online lending or P2P crowdfunding.

Alternative finance may grow significantly in the future. Allen et al. (2012) suggest that financing from non-market, non-bank external sources will likely become as important as bank funding globally. Moreover, alternative finance appears to be the dominant source of funds for firms in fast-growing economies. However, it seems that the current role of alternative sources of SME funding has been overstated.

In European countries such as Spain, Italy or Germany banks have been allowed to offer a wider range of services under what is called a “universal banking model”. Therefore, rather than dis-intermediation, many European banks enjoyed a “reoriented intermediation”. Some 20 years later, the European SMEs still depend to a significant extent on bank funding. Analysts and policy makers have traditionally advocated for a wider array of funding sources for households and firms, in particular in private equity and debt markets.

Considering this emphasis by private and public sources on the growing importance of alternative financing channels, it could be argued that banks will have a diminishing role in the economy in the near future. However, this is not necessarily true. Alternative financing may emerge as a complement rather than a substitute for bank lending. The anecdotal evidence suggests that banks have been finding new ways of building lending relationships with firms and also that the same banks have developed technologies such as factoring, leasing and other forms of financing that are not frequently attributed to them.

As shown in Fig. 10.8, the crisis may have introduced some disruption in SME lending. As many countries on both sides of the Atlantic have been affected by a significant increase in private debt (with large firms being hit especially hard), lending based on hard information (most typical of large firms) is expected to lose some ground in favour of relationship lending. Trade credit may grow as well, as many small firms will still find it hard to access bank financing. Other technologies such as leasing or factoring also seem to have been negatively affected by the crisis—although the post-crisis evolution may differ across countries. As for “alternative finance”, it is growing but the current volume is still too low to think of it as a solid substitute for more

TECHNOLOGY	PRE-CRISIS	POST-CRISIS	CHANGES IN TAXONOMY
Lending based on hard information	↑	↓	BASIC SME EXTERNAL FUNDING DEPENDENCE
Relationship lending	↑	↑	
Trade credit	↓	↑	TRADITIONAL EXTERNAL FUNDING ALTERNATIVES
Other (mixed) technologies	↑	↓	NEW EXTERNAL FUNDING ALTERNATIVES
Alternative finance	=	↑	

Fig. 10.8 Disruption in SME lending technologies (Source: own elaboration)

conventional funding sources. Wardrop et al. (2015) provide an estimate of the new alternative finance channels. The highest values (by far) are shown in the UK (2.3 billion euros), followed by France (154 million euros), Germany (140 million euros), Sweden (107 millions euros) and the Netherlands (78 million euros).

Relationship Lending and Other Technologies: European Evidence

Relationship lending is perhaps the most widely studied topic within small business lending. A relatively early literature review can be found in Elyasiani and Goldberg (2004). They note that most studies show that relationships increase funds availability and reduce loan rates. They argue, however, that the evidence on the direction and magnitude of the length of relationships is mixed and that multiple relationships (getting funding from various lenders) reduce the value of any single borrower–lender relationship. They also suggest that small banks can maintain the advantages of relationship banking in spite of technological changes.

In a recent and empirically exhaustive contribution, Kysucky and Norden (2015) use hand-collected information from 101 studies in the United States, Europe, Asia and Latin America from 1970–2010. They find that strong relationships are generally beneficial for borrowers but that lending outcomes differ across various relationships' dimensions. Long-lasting, exclusive and synergy-creating bank relationships are associated with higher credit volume and lower loan rates. They find, however, that these benefits are more likely to occur in the USA (rather than Europe) and in countries where bank competition is high. They also suggest that the benefits are not related to the importance of SMEs in an economy. Overall, these empirical findings suggest that a higher prevalence of relationship lending does not necessarily come with higher benefits for borrowers.

Other recent studies for Europe suggest that relations are fundamental, although the way they are settled is changing. This is the case of Presbitero et al. (2014). They use detailed data on loan applications and decisions for a large sample of manufacturing firms in Italy during the recent financial crisis. Their findings suggest the credit crunch was more acute in provinces with a large share of branches owned by distantly managed banks. Surprisingly, they do not find evidence that economically weaker firms (such as SMEs) suffered more during the crisis. What they suggest is that financially healthier firms were affected more in functionally distant credit markets than in markets populated by less distant banks.

The impact of lending relationships is also changing as other sources of funding are evolving in Europe. For example, Berger and Schaeck (2011) investigate the nexus of the use of venture capital and bank lending relationships using SME finance information from Italy, Germany and the UK. They find that entrepreneurial firms substitute venture capital for multiple banking relationships. They suggest that this finding is indicative of venture capital being used to avoid rent-extracting behaviour by the firm's main bank. Hence, venture capital funds are used if bank funding is deemed not appropriate, and firms do seem to be aware of which type of financing is more appropriate for them.

When other sources of small business funding are considered along with relationship banking, trade credit is particularly relevant. Uchida et al. (2013) underscore that given its ubiquitous nature, it is not surprising that trade credit has garnered considerable attention in the academic literature. They underscore that some theories reveal that trade creditors (either product sellers or suppliers) have a special ability to provide credit to debtors (either buyers or customers) that is different from what financial institutions have. The authors believe strong transactional relationships explain this special ability and connection between trade creditors and debtors. They test the hypothesis that trade creditors are relationship lenders using SME data from Japan and find that the validity of the relationship-lending hypothesis depends on the relative bargaining power between the buyer and seller.

A look at recent contributions suggests the role of trade credit may have changed during the financial crisis both in the USA and in Europe. Garcia-Appendini and Montoriol-Garriga (2013) suggest that in the USA, stronger larger firms extended more trade credit and weaker smaller firms received more trade credit. Carbo-Valverde et al. (2015b) explore the real effects of trade credit as compared to bank loans during the crisis in Spain. They find that (bank lending) unconstrained firms depend more on bank financing to fund capital expenditure while (bank lending) constrained firms depend more on trade credit. More precisely, for unconstrained firms, bank funding predicts capital expenditure (but not trade credit) and for constrained firms, trade credit predicts capital expenditure (but not bank loans). They also find that the magnitude of these effects increased during the credit crunch.

There is also recent evidence for Italy comparing relationship-based technologies with more transaction-based ones, as in Bartoli et al. (2013). They find that banks lend to SMEs by using both relationship and transactions technologies, independently of the size and proximity of borrowers. Their findings also indicate that the use of soft information decreases the probability of firms being credit rationed.

With a broader and deeper focus, other recent contributions such as Bolton et al. (2013) and Beck et al. (2014) explain how different lending techniques co-vary with firms' financing constraints in good and bad times. The evidence suggests that relationship lenders incur higher costs and therefore charge higher lending rates than transaction-based lenders in normal times. However, the information gains that relationship lenders gather over time make them more suitable as lenders during bad times.

Other recent evidence for Europe points at other interesting dimensions of SME lending. In particular, it shows that trust in SME managers is a fundamental and frequently forgotten dimension of relationship lending by banks. Moro and Fink (2013) explore data on corporate cultural information from six German banks and three Italian banks and find that SMEs that enjoy a high level of trust among loan managers obtain more credit and are less credit constrained.

There is also evidence that banks may have changed their attitudes towards relationship banking with the crisis in Europe. Puri et al. (2011), for example, employ loan application data at German savings banks in the period 2006–2008. They investigate whether savings banks that are exposed to shocks from Landesbanken (whom they own) stemming from the USA behave differently than non-exposed savings banks, that is, those who own Landesbanken without exposure to the US financial crisis. They find evidence consistent with a supply side effect, as affected banks reject substantially more loan applications than do non-affected banks. Furthermore, bank relationships mitigate supply side effects, as firms with longer relationships are less likely to be rejected even when their bank is exposed to a financial shock. Carbo-Valverde et al. (2015a) find evidence for Spain that banks that are more involved in securitization activities relax SME credit constraints in normal periods. They also find that while a relationship with a firm's main bank that covered bonds reduces credit rationing during crisis periods, the issuance of asset-backed securities by a firm's main bank aggravates these firms' credit rationing in crisis periods.

Institutional Features and Market Structure: European Evidence

In a Handbook on European Banking, institutional features are essential, including market structure, regulation, and their quality. A survey and some evidence on the impact of institutional features at the international level is provided in La Porta et al. (2002) and Beck et al. (2005, 2006). Beck et al. (2005)

examine the impact of financing conditions on firm growth. Using a unique firm-level survey database covering more than 50 countries, they analyse the effects of financial, legal and corruption problems on firms' growth rates, paying particular attention to SMEs. They find that whether these factors constrain growth depends on firm size. In particular—as may be expected—they suggest that the smallest firms are consistently the most constrained and that institutional quality is positively and significantly related to the availability of funding. They also find that financial and institutional development weakens the constraining effects of financial, legal and corruption obstacles.

In the European case, one of the most studied institutional features has been the role of publicly owned versus privately owned banks. The case of Germany has been a particularly relevant one in this context.

The baseline reference here is the work of La Porta et al. (2002) who argue that public ownership of banks is associated with lower gross domestic product (GDP) growth. However, this finding seems to be far from conclusive in the European case. Körner and Schnabel (2011) also employ an international sample and empirically show that this relationship does not hold for all countries but depends on a country's initial conditions, with particular influence from economic development and political institutions. They suggest public ownership is harmful only if a country has low financial development and low institutional quality.

Altunbas et al. (2001) explore the case of Germany and find that public savings banks are more cost and profit efficient than German private commercial banks. Similarly, Behr et al. (2010) suggest German savings banks reduce corporate financial constraints and the volatility of economic activity. These results are consistent with a differential effect of public ownership in developed and developing countries.

Behr et al. (2013) study whether financial constraints of private firms depend on bank lending behaviour. They look at specific factors such as the scale, scope and timing of loans. Using a sample of German SMEs, they show that an increase in relative borrowing from local state-owned banks significantly reduces firms' financial constraints, while there is no such effect for privately owned banks. They also show that improved credit availability and private information production are the main channels that explain that finding. It also suggests that the lending behaviour of local state-owned banks in Germany can be sustainable because it is less cyclical and does not lead to either more risk-taking or under-performance.

As in any other industry, market structure—including competition—has also been found to have a significant impact on small business lending, with some interesting findings for Europe in recent times that we explore in this section.

The potential impact of financial market structure on access to external finance and economic growth has garnered considerable interest recently among researchers as well as policy makers (e.g. Rajan and Zingales 1998; Boot and Thakor 2000). A particularly interesting dimension of financial market structure is the competitiveness of the banking industry. The traditional market power view has been that less competitive banking markets are associated with less credit availability and a higher price for credit. However, an alternative view has emerged over the past decade that argues that the impact of competition on credit may be related to the level of asymmetric information in the market (Dell’Ariccia and Marquez 2006). This is particularly relevant in the context of SMEs because they are more vulnerable to information problems. Notably, Petersen and Rajan (1994, 2002) suggest that a larger bank concentration may imply better financing conditions for SMEs and concentration enables more relationship banking.

However, the extent to which the “market power hypothesis” dominates over the “information hypothesis” (or the opposite) is an open question that depends on specific market conditions. Carbo-Valverde et al. (2009) find that the market power hypothesis seems to be in play in Spain when bank contestability, demand elasticity and information production are considered. This suggests that researchers and policy makers need to be very careful in drawing strong conclusions about market power and credit availability based on analyses that rely exclusively on concentration as a measure of market power without introducing other necessary controls to disentangle, *inter alia*, the market power effects and the information production effects.

Another important structural feature is the relationship between bank size and bank involvement in SME financing. The standard view during the 1990s was that small banks with local or regional ties are more able to build lending relationships than their larger counterparts. However, some recent studies are challenging this view. De la Torre et al. (2010) find that the “conventional wisdom” that large and foreign banks generally are not interested in serving SMEs is far from accurate. Using bank-level information from various countries, they show banks perceive SMEs as a core and strategic business and seem well positioned to expand their links with SMEs. They find that intensification of bank involvement with SMEs in various emerging markets is neither led by small or niche banks nor highly dependent on relationship lending.

Again, the organizational structure emerges as fundamental to explain banks’ involvement in SME lending beyond their size. Canales and Nanda (2012) study the case of Mexico and find that the organizational structure of banks impacts small business lending. They find that decentralized banks—where branch managers have greater autonomy over lending decisions—give

larger loans to small firms and those with “soft information”. However, decentralized banks are also more responsive to their own competitive environment. They are more likely to expand credit when faced with competition but also to cherry pick customers and restrict credit when they have market power. This evidence also seems to be in line with Uchida et al. (2012) for Japan, as they show that loan officers play a critical role in relationship lending by producing soft information about SMEs. They find that loan officers at small banks produce more soft information than at large banks, but large banks appear to have the equivalent potential to underwrite relationship loans.

Conclusions

Small businesses are particularly vulnerable to external funding conditions. They usually exhibit a substantial dependence on bank loans. In this chapter, we surveyed some of the main funding sources of SMEs, how the taxonomy of the instruments is changing in recent years and a number of particular features of the European case.

SMEs account for two-thirds of private employment in Europe as compared to half in the USA. Several academic and policy studies have identified a “funding gap” problem in the EU—where credit demand exceeds supply—that may have been exacerbated during the crisis years.

In this chapter we analysed the most common technologies for SME funding and the evolution of small business lending in Europe. The variety and availability of funding sources have been limited in Europe and this has motivated policy makers to advocate for a wider array of funding sources for these firms. Although the emergence of new alternative financing channels may represent an opportunity, these instruments will still have a partial impact for some time. These limitations have led governments to launch support initiatives for SMEs at both domestic and EU levels. On this front, the European Commission released the so-called project for a Small Business Act (SBA) in 2011. The SBA aims to improve small business entrepreneurship in Europe by simplifying the regulatory and policy environment and enhancing access to markets and internationalization.

We have also shown that there has been a growing academic interest in SME financing in Europe, with topics such as relationship lending, and institutional factors such as competition and the relationship between bank size and SME funding, being particularly relevant. As for the recent evolution of SME funding in Europe, the homogeneous information provided by the

Survey on Access to Finance of Enterprises (SAFE) suggests that EU SMEs remain significantly dependent on bank loans. It also indicates an expanding role for trade credit in SME financing during and after the crisis. Additionally, although the funding gap has significantly shortened since the crisis, it still remains larger for smaller firms compared to their larger counterparts. Loan terms are also found to be persistently and significantly different, with large firms paying half the loan rates faced by micro firms.

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