Department for Business Innovation & Skills

RESEARCH

Prepared by:

Acknowledgements

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Glossary

ALMI Företagspartner	Almi is the Swedish state owned parent company of a group with business operations in 16 regional subsidiaries and equity activities in Almi Invest AB.
Alternative finance	Financing from non-bank financial institutions, including person-to-person lending and crowd lending.
Angel financing	Financing provided by an 'Angel Investor', an investor who provides financial backing for small start-ups or entrepreneurs.
Barriers to entry	Barriers to entry are costs or obstacles which limit entry in a market.
Basel I	A set of international banking regulations put forth by the Basel Committee on Banking Supervision (BSBS), which set out the minimum capital requirements of financial institutions with the goal of minimizing credit risk.
Basel II	An international business standard that requires financial institutions to maintain enough cash reserves to cover risks incurred by operations. The Basel accords are a series of recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision.
Basel III	A set of reform measures developed by the Basel Committee on Banking Supervision aiming at improving the banking sector's resilience to economic and financial shocks, improve transparency and governance
British Business Bank (BBB)	A development bank wholly owned by HM Government which aims to help make finance markets work better for small and medium sized businesses in the UK.
Basel Committee on Banking Supervision (BSBS)	An international forum for cooperation on banking supervision. It is a global standard-setter for banks prudential regulation and aims at enhancing financial stability.
Business Current Account (BCA)	An account held by a business with a bank or building society, from which money may be withdrawn without notice.
Business Expansion Scheme (BES)	An investment vehicle established in 1983, designed to encourage private investors to provide venture capital for unquoted companies. BES was phased out in 1993 in favour of Enterprise Investment Schemes.
Cassa Depositi e Prestiti	A financial joint stock company, largely owned by the Italian government. It supports Italian public investment, exports and private companies.
Central Guarantee Fund (CGF)	Fund owned by the Italian Ministry of Economic Development and managed by Mediocredito Centrale S.p.A. (MCC). It facilitates SME access to credit by providing public guarantees and counter guarantees.
Competition and Markets Authority (CMA)	The CMA is a non-ministerial department of the UK government, which promotes competition, regulates mergers and protects consumers in the UK.
Collateral	An asset pledged as security for repayment of a loan, to be forfeited in the event of a default.
Community Development Financial Institutions Fund (CDFI)	The CDFI was established in 1994 as an agency of the US Treasury. Its role is to promote economic revitalisation and community development through the investment in and assistance to community development financial institutions.

Cooperative Bank	A financial entity owned by its customers, providing them with banking services such as loans and deposit accounts.
Deregulation	The process of removing or reducing state regulations.
European Central Bank (ECB)	The central bank responsible for the monetary system of the Eurozone. It is also the core of the European System of Central Banks, which includes all EU countries.
Economic Agglomeration Area	Known in Germany as Raumordnungsregionen, these are regions of spatial interdependence based on socio-economic indicators, such as commuter streams.
Economies of Scale	Economies of scale are decreases in per unit cost that occur when businesses increase their scale of production.
Economies of Scope	Economies of scope are decreases in per unit cost that occur when businesses broaden the variety of their products.
EIS - Enterprise Investment Scheme	A UK government scheme offering a range of tax reliefs to investors who purchase new shares in smaller higher-risk trading companies.
Equity	The value of the securities representing an ownership interest in a company.
Financial Conduct Authority (FCA)	A UK financial regulator.
Federal Deposit Insurance Corporation (FDIC)	The Federal Deposit Insurance Corporation is an independent agency created by the US Congress to maintain stability and public confidence in the nation's financial system.
Fixed Costs	The element of business costs that are independent of scale.
Fondo Italiano d'Investimento	A joint venture company, owned by the Italian government and major Italian private banks, which provides financial support for small and medium-sized enterprises.
Gross Domestic Product (GDP)	The total value added generated within a country's borders in a specific time period. GDP is usually calculated on an annual basis.
Global Financial Crisis (GFC)	The financial crisis of 2007–2008.
Hausbank Relationship	The relationship between the bank and the business in which the bank is likely to give priority to one bank which runs the core of their banking business. Term originally specific to the German banking system.
Hausbankenprinzip	The 'house bank principle' - The principle implies that a firm applies for a government backed loan not via the promotion bank (e.g. the public development bank such as KfW) but via its local housebank that can be a savings, co-operative or commercial bank. The Hausbank is liable for the firm's loan provided by the promotion bank. This feature is specific to the German banking system.
Herfindahl-Hirschman Index(HHI)	A measure of market concentration in a given industry calculated as the sum of squares of market shares. It ranges from 0 (numerous very small firms) to 10,000 (monopoly).
International Monetary Fund (IMF)	A Washington-based international financial organization which seeks to foster economic stability by providing financing and policy advice to its members.
Informational Asymmetry	A situation in which one party in a transaction is better informed about something than another. This can happen, for example, in lending transactions, where the borrower might know more about its own credit

	risk profile than the lender.
Invoice Finance	Also known as Invoice discounting is a form of short-term finance often used to improve a company's working capital and cash flow position. Invoice discounting allows a business to draw money against its sales invoices before the customer has actually paid.
Initial Public Offering (IPO)	The first sale of a company's shares to the public, leading to a stock market listing, known as a flotation in the UK. This is done by listing the shares on a stock exchange of the company's choosing such as the London Stock Exchange.
KfW	A German government owned development banking group, which funds environmental protection, international development and German SMEs.
Landesbanken	Local government owned savings German banks which are large regional central institutions.
Hire Purchase	An instalment payments contract in which the good remains the property of the seller until the last payment is made.
Limited Liability	A partnership or company in which investor's financial liability is capped, generally up to the value of their investment.
Microenterprises	A small business that employs a small number of employees. A microenterprise will usually operate with fewer than 10 people and is started with a small amount of capital. Most microenterprises specialise in providing goods or services for their local areas.
Metropolitan Statistical Areas (MSA)	In the United States, a metropolitan statistical area (MSA) is a geographic entity defined by an urban core and adjacent spatially dependent counties.
Mutual Banks	A mutual savings bank is a financial institution organized without stock, chartered by a central or regional government. It is owned by its depositors, to which all net profits are redistributed
The Organization for Economic Cooperation and Development (OECD)	A forum where the governments of 34 democracies with market economies work with each other, as well as with more than 70 non-member economies to promote economic growth, prosperity, and sustainable development.
Oligopoly	A theoretical model of imperfect competition characterised by a small number of large firms and the existence of high barriers to entry.
Overdraft	A deficit in a bank account caused by drawing more money than the account holds
Private Equity	A source of investment capital from high net worth individuals and institutions for the purpose of investing and acquiring equity ownership in companies.
Regional Principle	Principle according to which certain savings banks and cooperative cannot operate branches outside their region. Originally specific to the German banking system.
The US Small Business Administration (SBA)	A United States government agency which runs a loan guarantee program directed as American SMEs and entrepreneurs.
Small Business (US)	In the United States, the standard definition of a small business is set out by the U.S. Small Business Administration (SBA). In general, they are businesses with no more than 500 employees, for most manufacturing and mining industries, and less than $7.5 million in average annual receipts for many nonmanufacturing industries. A full categorisation can be found at:

https://www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf

Small and Medium-sized Enterprises (SME)	A category of business capturing a relatively low level of scale, typically in terms of turnover or employment. Precise definitions may vary slightly across different bodies and jurisdictions. For example: European Commission definition: a business or company that has fewer than 250 employees and has either (a) annual turnover not exceeding €50 million (approximately £40 million) or (b) an annual balance-sheet total not exceeding €43 million (approximately £34 million); and of whose capital or voting rights, 25 per cent or more is not owned by one enterprise, or jointly by several enterprises, that fall outside this definition of an SME. This threshold may be exceeded in the following two cases: (a) if the enterprise is held by public investment corporations, venture capital companies or institutional investors provided no control is exercised either individually or jointly, or (b) if the capital is spread in such a way that it is not possible to determine by whom it is held and if the enterprise declares that it can legitimately presume that it is not owned as to 25% or more by one enterprise, or jointly by several enterprises, falling outside the definitions of an SME. BIS Business Population Estimates definition: a business with 0 to 49 employees, a medium-sized business is one with 50 to 249 employees, and a large business is one with 250 or more employees. Small and medium-sized enterprises (SMEs) are defined as businesses with 0-249 employees. BDRC Continental SME Finance Monitor definition: a business with no more than 249 employees (excluding the survey respondent).
Sparkassen	Publicly owned savings bank which are smaller regional savings banks.
Supernormal profits	Profits that are strictly above the minimum level of profit necessary to keep a firm in business.
Term Loan	A term loan is a type a loan that is repaid in a fixed number of equal instalment over a set period of time, usually between one to ten years.
Venture Capital Trusts (VCT)	A form of publicly traded private equity, specific to UK tax law, comparable to business development companies in the United States. VCTs are listed companies, which invest in other companies which are not themselves listed.
Venture Capital	Capital invested in a project in which there is a substantial element of risk, typically a new or expanding business.

Executive Summary

Background

In recent years increasing attention has been paid to the way banks service the financing requirements of small and medium sized enterprises (SMEs), with particular focus paid to the contraction in credit available for lending and the pricing of loans that are issued.[1]

In November 2014 the CMA announced its decision to open a market investigation into personal current accounts and SME banking in the UK and in October 2015 it published its preliminary findings.[2] This decision to investigate the market followed a joint study with the FCA which identified a number of concerns in relation to SME banking, including:

- A high level of concentration in the market: The study found that 85% of business current accounts and almost 90% of business loans are provided by four providers.[3]

- Significant barriers to entry: Local branch networks appear to remain important to SMEs and as switching rates are low, it can be costly for new entrants to increase their market share. Given the regulatory requirements placed on banks, there appear to be significant barriers to entry. The CMA/FCA suggests that the fact that only one bank has entered the market in recent years is evidence of these barriers.

- Low levels of customer satisfaction among SMEs: The study found that few SMEs trust their bank to act in their best interests or to support their business and most would be unwilling to recommend their bank to a friend. Despite this, annual BCA switching rates are estimated at 4%.

This report contributes to the policy debate by considering the performance of the UK market for SME bank lending relative to a set of international peers. While the CMA investigation covers SME banking services more broadly, the focus of this report is specifically on SME bank lending.

The report compares the financing needs of SMEs in a selection of countries (Germany, Italy and the USA) and investigates the extent to which the banking market and policy support in those countries adequately provide for SMEs' needs. In doing this, the report aims to provide insights on the relative magnitude of any issues present in the UK, the potential success stories and the lessons that can be learned.

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[1] Research into this area includes the 2011 Vickers Review, the 2013 report from the Parliamentary Commission on Banking Standards and the 2014 Market Study undertaken by the CMA and FCA.

[2] https://assets.digital.cabinet-office.gov.uk/media/5627b571e5274a1329000003/Banking_summary_of_PFs.pdf

[3] 2015 CMA market study shows 2014 concentration figures are estimated to be 80-85% of business current accounts and 85% of outstanding loans are accounted for by the four largest banks.

Approach

The report comprises broadly of three parts:

- An analysis of the UK market and the historical development of banking arrangements (Sections 2-3): The study presents an economic analysis of the market for SME bank lending in the UK, summarising the existing evidence on the market structure and the outcomes it delivers for SMEs. This is complemented by a summary of the historical context to the UK SME bank lending market, including regulatory and policy milestones and major consolidation waves over the last 50 years.

- A cross country analysis (Sections 4-7): The study investigates how the UK SME bank lending market compares internationally, using in depth studies on Germany, Italy and the USA. It uses publicly available evidence to consider the role of SMEs in the economy, the characteristics of the SME bank lending market, including the availability and pricing of bank loans, and the policy interventions that have been made in the market for SME lending. The report draws out the main differences in market conditions between the comparator countries and the UK, highlighting potential lessons for the UK and examples of success that emerge from the analysis.

- The potential for further investigation (Section 8): The final part of the report considers the feasibility of a potential study on the relationship between competition and lending. It considers what work has already been done in this area elsewhere and the extent to which the options for further UK analysis might be constrained by data availability.

Findings

The main findings are as follows:

The UK market

- The UK SME banking sector is concentrated in a 4-firm oligopoly. Since 1970, the market has been dominated by four banking groups and in 2014 these groups accounted for a combined share of 80% of SME loans.[4] Furthermore there appear to be barriers to entry and expansion - while there are numerous examples of entry into the market beyond the large full-service providers (for example, many large supermarket retailers offer financial services), there has been relatively little erosion of the market share of the largest four banks.

- The UK banking market has become increasingly concentrated since a wave of mergers and consolidation in the late 1960s and early 1970s, accelerated by legislative changes in the mid-to-late 1980s which led to the decline of Building Societies as a significant component of the overall banking market.

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[4] CMA, 2014: 'Banking services to small and medium sized enterprises'

- SMEs are, in the main, relatively unsophisticated in terms of their financial accounting and expertise, and this encourages a preference for basic banking and lending requirements. There is a clear pecking order (or financing hierarchy) in terms of financing cash-flow and new investments with internal sources preferred to core bank debt products (overdrafts and term loans), which are preferred to other debt sources, with only a small minority willing to seek out external equity.

- The SME-lending market in the UK can be largely characterised as transactional, and SME bank lending (loans and overdrafts) access to collateral is an important determinant of finance decisions.

Cross-country comparison

SME features

- When drawing conclusions from the cross-country analysis, it is important to consider how differences in SME profiles may impact market outcomes. Firm characteristics such as size (e.g. turnover, number of employees) and age are likely to be key factors that determine the challenges an SME faces when seeking finance. Germany has the most similar SME profile to the UK, while Italy, with its high proportion of microenterprises, has the least similar profile to the UK.

- In general, UK SMEs face similar financing issues to German SMEs. Both groups are relatively well-funded and few report access to finance as their most pressing concern.

- The general preference for bank finance among UK SMEs also appears to be typical of SMEs in the comparator countries.

- However, the take-up of alternatives to bank finance appears to be higher in the UK. Recent research suggests the UK is a leading market for alternative lending facilitated by online platforms in Europe, with the value of these transactions, including peer to peer and crowd lending, totalling €2.3 billion in 2014, compared to €140 million in Germany and €8.2 million in Italy.

The market for SME bank lending

- Standard measures of market concentration, such as the Herfindahl–Hirschman Index (HHI)[5] and 5-firm market shares, suggest that the UK banking market is relatively concentrated by international standards.

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[5] The HHI is a measure of market concentration calculated by summing the squares of the market shares (in % values). It has a minimum value of 0 and a maximum value of 10,000 (the latter would occur if a single firm had 100% of the market).

- However these simple measures do not capture a number of important market dynamics. For example, while Germany has lower aggregate concentration rates, savings banks are authorised to operate in their local area only. Consequently the effective range of choices facing a given SME is much more comparable to the UK than the aggregate measures might suggest.

- Despite the market being relatively concentrated, survey evidence suggests that SME loan availability is relatively high in the UK and UK SMEs are less likely to be dissuaded from applying for credit than SMEs in Germany and Italy.

- While limited availability of data on SME loan pricing makes cross-country comparisons difficult,[6] loans appear to be relatively inexpensive by international standards. For example, in December 2014, the mean nominal interest rate on SME loans was estimated to be 3.42% in the UK, while ECB estimates of interest rates on small loans[7] with terms of up to 5 years for Germany and Italy were 3.67% and 5.97% respectively, and OECD estimates for the USA were between 3.2% and 3.7%.[8]

Additional features for consideration

- In addition to the above market/outcome differences, the cross-country review identified a series of factors that may warrant further evaluation to assist policy development.

- For example, UK SMEs are more likely to utilise trade credit than SMEs in many other European markets. From a policy perspective it may be beneficial to explore the reasons for this and any unintended consequences – for example whether an increased reliance on trade credit has any negative impact on the bargaining position SMEs face on input costs - or positive impacts on their ability to expand as a result of increased cash-flow.

- Similarly, there are notable differences in other respects such as the number of loan applications and the utilisation of equity finance. Again the rationale for these differences are unclear but they may have some implications for future policy development.

- The available evidence suggests there are also significant differences in the number of bank relationships held by SMEs across the markets. For example, in the US, 43%

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[6] For example, while the Bank of England reports estimates of interest rates on SME loans by small and medium sized firms separately, the ECB and OECD report interest rates according to the size of the loan.

[7] "Small business loans" are business loans of up to €1 million for Germany and Italy, or up to $1 million for the USA.

[8] Bank of England base rate: 0.5%, European Central Bank base rate: 0.05%, Federal Reserve base rate: 0.25%.

of SMEs have a relationship with one bank only, whereas in Italy, the majority of SMEs have relationships with more than seven banks.

Policy intervention

- The UK currently has lower direct public involvement in the SME lending market than the other countries considered in this study. Since the privatisation of the ICFC in 1987, UK public involvement in the area of SME finance has been characterised largely by a process of engagement with the private sector. Equally, public involvement in SME equity markets has either focused on providing tax incentives to private investors or adopted a hybrid approach where the government co-invests with private Venture Capitalists.

- Comparison with other markets has identified some potential opportunities for the UK to extend its interventions to enhance SME finance. For example, in Sweden, ALMI Företagspartner combines a loan programme with its wide ranging advisory support services (in the UK, these two forms of SME support have, in the main, been separated; the exception being Start-up Loans that combine loans to new businesses with mentoring). Similarly, in Germany the scale of direct market intervention is greater than that of the British Business Bank (BBB). This reflects the different roles of the KfW and the BBB: whereas the KfW takes a direct role in the market as a major supplier of business finance, the BBB targets specific gaps and works with delivery partners to address them.

- However, these opportunities need to be seen in the context of a market that is arguably delivering at least at par with the other countries examined. Similarly, the UK is in many ways a policy leader in this area, especially with regard to equity support. For example, the Australian Innovation Investment Fund used the UK as a template in its design.

Conclusions and implications of the research

This study has found that the market for SME lending in the UK is, and has been for an extended period, oligopolistic in nature. In the context of a market with a limited number of providers, high barriers to entry and evidence that SMEs are finance constrained, a number of concerns have been raised about whether market outcomes for SMEs could be improved through increased competition.

This study seeks to inform that debate by analysing cross-country differences in SME outcomes. It finds that while some UK SMEs may face significant finance constraints, they do not appear to fare significantly worse than in the other markets examined.

Nevertheless, there are potential lessons that may be drawn from those markets as to how policy interventions could promote finance access to SMEs. These include direct supply-side interventions (building on the German model) and more explicit coordination of policy to enhance SMEs' financial awareness and ability to access existing sources of finance.

Assessing the feasibility of a study on the impact of competition on SME lending

The report also includes a feasibility study on the potential to investigate the impact of competition in the SME lending market on SME lending outcomes. The feasibility study sets out a number of options that could be taken to conduct such an investigation, though these options will be closely linked to data availability. The findings of this study are:

- There is a developed literature on the how the market structure and nature of competition in the SME lending market may impact lending outcomes, both theoretical and empirical. The debate is largely focused around competing hypotheses: the structure performance hypothesis and the information hypothesis and the empirical evidence is generally mixed.

- Conducting a study of the sort outlined here is likely to require significant data input. However, the precise data requirements will depend on the specific questions that the study is intended to address. For example, how should the market be defined, what measure(s) of competition should be considered and what are the outcome variables of interest? Depending on the answers to these questions, there are a number of potential data sources that could be used. The study identifies potential sources and assesses some of the advantages and challenges of using them as the basis of the analysis.

- The study also identifies a number of quantitative methodologies that could be used, considers their suitability to the study and assesses the extent to which they are compatible with the identified data availability.

- Finally the study concludes with a broad summary on the feasibility of such an investigation. Depending on the specific goal of the proposed study, the main conclusion is that no single empirical approach is likely to provide a sufficiently detailed analysis of the question and that a broader study, which is capable of capturing key aspects of the overall bank-SME relationship and how it has evolved over time, could be more appropriate.

1 Introduction

Governments across the world have been increasing their scrutiny of the behaviours of large, multinational banks and seeking to tighten the regulatory frameworks in which they operate in the light of the Global Financial Crisis (GFC).[9] In parallel, increasing attention has been paid to the way banks service the financing requirements of smaller firms and, in particular, the contraction in credit available for lending and the pricing of loans that are issued.

The financing requirements of SMEs is a particularly pertinent issue in the UK, where 99.9% of UK private sector businesses are SMEs that employ 0-249 people, and these enterprises account for almost half of private sector turnover. However, despite the role that SMEs play in UK economic growth, many SMEs face challenges accessing bank finance. The majority of SMEs whose bank loan applications are rejected are either unable to access other sources of bank finance or simply do not try and apply to these alternatives.[10] The British Business Bank reported that 71% of small firms approach only one provider of finance.

Against this background, the market for SME bank lending in the UK has come under increasing scrutiny from UK regulators and competition authorities. Research into this area includes the 2011 Vickers Review, the 2013 report from the Parliamentary Commission on Banking Standards and the 2014 Market Study undertaken by the CMA and FCA. The CMA/FCA Market Study identified a number of concerns, on the basis of which the CMA has opened a market investigation into whether any features of the market distort competition:

- A high level of concentration in the market, with 85% of business current accounts and almost 90% of business loans being provided by the top four providers.

- Significant barriers to entry, given that local branch networks remain of importance to SMEs. This is evidenced by the fact that only one full-service retail bank has entered the market in recent years (though there has been entry by a number of limited service providers).

- Impediments to searching and switching for customers due to the importance of the link between personal and business current accounts for many customers, the complexity of pricing for loans and business current accounts, and a perception among SMEs that there is little difference among providers.

Given these concerns, it is crucial to develop a better understanding of the nature of competition in this market, the impact that this has on SMEs, and potential policy

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[9] The term used to describe the financial crisis of 2007–2008.

[10] Bank of England, 2014

interventions that could support competition in this market, with the aim of increasing levels of lending to viable SMEs.

This study contributes to the discussion through a cross-country comparison of conditions in the market for SME bank lending. Three countries have been selected because of their different market structures:

- Germany;

- Italy; and

- The USA.

By considering the market conditions in these countries and comparing them to the UK, the study seeks to provide a broad international context to the question of how the UK market is functioning for SMEs and to identify whether there are any lessons that can be drawn from the experience of other markets.

1.1 Defining SMEs

While the understanding of the term SME is broadly similar across different markets, the precise definition that is commonly used may differ. As the data presented in this report come from a range of sources, including UK government statistics, European Commission databases and BDRC Continental SME Finance Monitor, the extent to which they are comparable depends on the approaches that are used to categorise SMEs by the authorities responsible for those data sets.[11] In the USA, the categorisation of businesses tends to differ more substantially from the UK definition than the rest of the EU. In the USA the relevant categorisation is "small businesses", which are roughly defined as businesses with no more than 500 employees, for most manufacturing and mining industries, and under $7.5 million in average annual receipts for many nonmanufacturing industries.[12] Where data is presented in this report, the relevant source is identified.

1.2 Structure of report

The structure of the report is as follows:

- Section 2 reviews the existing literature on the UK market, analysing the current structure of the market for SME bank lending and what the outcomes are for SMEs seeking finance. This section also provides an analysis of the competitive structure of the UK markets.

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[11] The difference between the European Commission definition and the BIS Business Population Estimates is outlined in the Glossary.

[12] There are some exceptions to this definition. Further guidance can be found on the SBA website.

- Section 3 provides a historical context to the current market structure, examining the major market events of the past 50 years and considering the evolution of the market to its current form.

- Sections 4-7 present the analysis of the different countries and compares how the UK market for SME bank lending performs relative to the comparator countries. As well as highlighting success stories, it also identifies where the UK can learn from the other markets.

- Section 8 considers the feasibility of more detailed future study looking into the impact of competition on bank lending.

- Section 9-11 comprises the appendices. This section provides supplemental analysis to Sections 4-7 as well as policy and regulatory timelines in the countries of focus in this report.

2 SME bank lending in the UK

2.1 Market analysis

This section provides an economic analysis of the competitive structure of the UK SME lending market and the potential impact on SMEs in the UK. It begins by outlining the main theoretical models that economists use to characterise markets, with the aim of establishing a framework for the analysis in this report. Guided by this framework, this section then considers the relevant empirical evidence from the market for SME lending in the UK and draws conclusions as to which model of competition is the most appropriate characterisation. Finally, this section considers the potential implications of the competitive structure for SMEs that are seeking finance, given the peculiar features that are inherent to the market for SME lending.

2.2 Economic models of competition

The economic literature identifies several different theoretical models for the analysis of markets. These models differ according to the number of firms in the market, the extent and severity of barriers to entry, the characteristics of the good or service, and the nature of competition between market players. Broadly, the theoretical models can be categorised into one of the following groups:

- **Perfect competition**: This is the most extreme model of competition. In perfectly competitive markets, a number of stylised assumptions are made. In particular, there are an infinite number of identical small firms selling a homogenous product[13] to an infinite number of customers. Individual firms have no ability to influence the market price and customers know the price that each firm charges. There are no barriers to entry or exit, so if there is any supernormal profit in the market, new firms will enter the market and compete the profit away.[14] As a result the market price is kept at the point such that no firm is able to make any supernormal profit in the long term.

- **Monopolistic competition**: This is a model of imperfect competition that is in many ways close to perfect competition. As with perfect competition there are many firms, and barriers to entry and exit are low. However, under monopolistic competition firms are able to differentiate their products from those of their competitors. As such firms have some ability to set their own prices (that is, they have a degree of market power). However, because there is freedom of entry, if firms make any significant profits, then more firms will be encouraged to enter the market, competing away supernormal profits in the long term.

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[13] A homogenous product is one that cannot be distinguished from competing products from different suppliers. It should have the same physical characteristics and quality as similar products in the market and hence one can be easily substituted for another.

[14] Supernormal profit is the profit earned above what is considered the normal level of profit required by firms to operate.

- **Oligopoly**: An oligopoly is an imperfectly competitive market characterised by a small number of large firms and the existence of high barriers to entry. A key feature of an oligopoly is "interdependence" between the firms in the market - that is, the actions of one firm can have a material impact on the others in the market. This encourages firms to compete on things other than price, such as quality, often resulting in products that are highly differentiated.

  In oligopolistic settings it is common to assume that firms have a degree of pricing power and may be able to sustain supernormal profits over the long term as a result of the high barriers to entry. However, the relevance of this general result varies by market.

- **Monopoly**: In a monopoly, there is one firm that serves the entire market. Barriers to entry are high. This prevents other firms from entering and allows the monopolist the freedom to set prices that generate long term supernormal profits.

Table 1 summarises the key characteristics of these market models, separating out the most important defining features (number of firms, barriers to entry) from the common characteristics of the models.

Table 1: Summary of the characteristics of different market models

	Perfect competition	**Monopolistic competition**	**Oligopoly**	**Monopoly**
Number of firms	Large	Many	Few	One
Barriers to entry	None	None	High	High
Common characteristics of market structure				
Product differentiation	Homogeneous	Differentiated	Differentiated	Single provider
Market power	Price taker	Some price setting ability	Some price setting ability	Price setter

In practice, a market structure may not always fit perfectly into one of these models and there may be elements of one model that combine with another.[15] However, these models provide useful frameworks against which to analyse the competitive dynamics and market outcomes of a given market.

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[15] For example, a market may combine few firms (as in an oligopoly) with very low barriers to entry (as in monopolistic competition). This can happen if the competition in the market is intense, profits are driven down and there is limited incentive for other firms to enter.

The next section considers the characteristics of the SME lending market according to the key criteria in Table 1 and assesses which model is most appropriate.

2.3 The empirical evidence on the UK market for bank lending to SMEs

2.3.1 Number of firms

In the UK, there are an estimated 362 credit institutions as of November 2015.[16] However, not all of these institutions lend to SMEs and many of those that do, have very small market shares.[17]

As has been the case for some time, the market for SME lending is currently dominated by four banking groups. Recent findings from the CMA indicate that these four groups account for approximately 80% of the value of SME loans in the UK, while the HHI is estimated to be about 1800.[18] By standard measures this indicates a high degree of market concentration.[19]

Figure 1: Volume shares of business loans in England and Wales, year ended Q1 2013
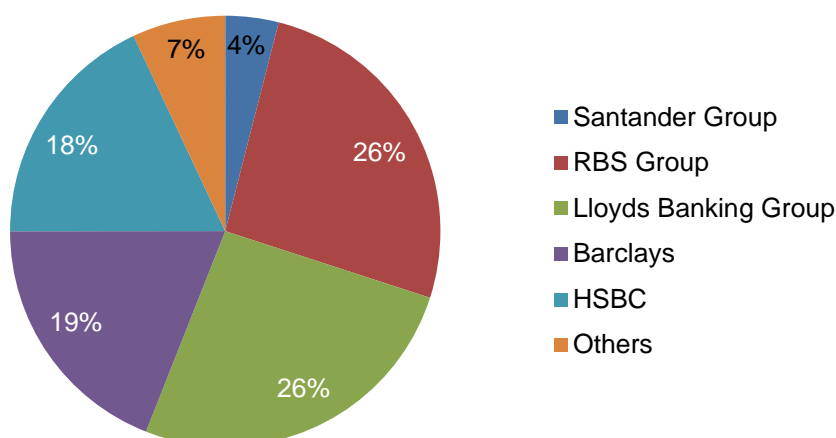
Source: Charterhouse release (Q1 2013), presented in CMA/FCA (2014)

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[16] ECB statistical data warehouse.

[17] Formal data on the number of institutions that lend to SMEs is not available, but one industry expert consulted for this study estimated there are a between 30 and 35.

[18] CMA, 2015. "Retail banking market investigation, Provisional findings report," p158.

[19] For example, the US Department of Justice and Federal Trade Commission consider a post-merger HHI above 1800 to be reflective of a highly concentrated market.

2.3.2   Barriers to entry

In its initial market study, the CMA and FCA identified significant barriers to entry in the market for SME lending. In particular:

- Despite recent growth in online banking, survey evidence suggests that almost 70% of SMEs find it important that their bank has a local branch.[20] The costs involved with setting up and maintaining a branch network represent a barrier to potential market entrants and to those seeking to expand their market share.

- Large banks can have significant marketing advantages. This creates great awareness of their own products and limits the alternative lending options from smaller providers.

- Lenders face a number of regulatory requirements, including obtaining authorisation from the appropriate regulatory authority, meeting capital and liquidity requirements, and abiding by consumer protection rules.

- Banks hold far more information on existing customers, in particular, current account customers. This gives them a competitive advantage and creates information barriers to entry according to the CMA.

- The CMA/FCA found that:

    o SMEs typically apply for loans from their main bank and do little 'shopping around'; and

    o Switching between business current accounts (BCAs) is relatively limited for SMEs.

The combination of these factors implies that it can be costly for new entrants to attract new customers. These costs represent a barrier to potential entrants, especially given the economies of scale associated with lending. This is reflected in the fact that only one full-service retail bank has entered the market in recent years.

However, there is evidence that barriers to entry may vary at the product level. This is reflected in the entry of various finance providers in recent years. For example:

- Credit cards: Between 1990 and 2010 the credit card market expanded significantly as new providers entered the market, including non-bank mono-line companies. There were 34 new entrants between 2000 and 2010 according to the Independence Communion on Banking.[21]

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[20] CMA, FCA, 2014. "Banking services to small and medium sized enterprises"

[21] FCA (2014)

- Leasing and Purchase Hire: The British Business Bank has found reasonable levels of entry in this market across different types of provider.[22] In the UK, more than three quarters of medium sized businesses that had used leasing or hire purchase say they sourced it from a non-bank.[23]

2.3.3 Product differentiation

A finding of the CMA/FCA study was that SMEs perceive little differentiation between providers of banking services in the UK and the study suggested this may be reflected in the low rates of BCA switching. BCAs also appear to be relatively closely linked to bank loans. The focus of that analysis was on BCAs rather than on bank loans, however, and it remains unclear whether SMEs perceive there to be more product differentiation in credit products specifically.

Moreover, the focus of the CMA research was largely on non-price factors. Lending to UK SMEs is also characterised by differences in the price structure which also create important aspects of product differentiation.

Research from the British Business Bank suggests in the asset finance market, non-price factors may be more relevant for smaller SMEs. These non-price factors, including competing on services or specialisation, can be seen in the form of lenders providing ancillary services (e.g. maintenance of assets) or direct assistance with applications of finance. Higher-risk SMEs tend to be less price sensitive due to their limited options and hence non-price competition factors become more important.

Loans to UK SMEs are commonly offered with bespoke interest rates negotiated according to the SMEs' individual circumstances and objectives, and with a series of accompanying charges. This is discussed in more detail in the next part of this section.

Table 2: Proportion of SMEs attempting to negotiate on at least one of their BCA, loan or overdraft charges or interest in the previous year

SME annual turnover	Proportion that attempted negotiation	Success rate
Less than £100,000	9%	69%
£100,000 - £1m	20%	70%
More than £1m	39%	75%

Source: YouGov 2013 SME Banking Survey

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[22] British Business Bank, 2014, "Small Business Finance Markets".

[23] British Business Bank, 2014, "Small Business Finance Markets".

2.3.4   Market Power

Economists typically assess the level of market power by considering the extent to which firms can set the price of the good above marginal cost. In a perfectly competitive market, firms have no market power while a monopolist has significant market power.

The relatively high market concentration and the low rate of switching that are present in the SME lending market would ordinarily suggest a high level of market power. However, as will be explained in the section below, the particular informational asymmetries in the market for SME lending makes the relationship more complex.

A full analysis of the extent to which UK lenders have market power is beyond the scope of this report. However, the British Business Bank reports that prices decreased by 2-3% in response to the lower cost of borrowing and greater availability of cheaper funding through the Bank of England Funding for Lending Scheme, suggesting the market power that banks have may be lower than would be expected for such a concentrated market.[24]

2.3.5   Conclusion on market structure

The analysis presented above, in particular the high level of concentration and the high barriers to entry, suggests that overall, the structure of the SME lending market in the UK can best be described as a four-firm oligopoly. There are additional features in relation to SMEs that re-enforce this general market structure. For example, the limited capital and complex risk profile of many SMEs acts as a further barrier to entry and may also limit switching between banks. On the other hand, evidence suggests that there may be lower product differentiation than is typically observed in an oligopoly. The critical issue that follows from this is what that market structure means for competition, pricing and availability of loans. This issue is discussed in subsequent sections of the report.

2.4   Analysis of the competitive structure of the UK market for SME lending

The preceding analysis described the key defining features of an oligopoly market structure. However, oligopolies can produce a wide range of different market outcomes (such as volumes of lending, prices, customer satisfaction), depending on the nature of competition between the firms. This part of the report presents the theoretical and empirical evidence on the link between the market structure and the nature of competition in the market for SME lending in the UK.

2.4.1   Theoretical context

Economic theory identifies competing effects of bank concentration (resulting from the oligopolistic nature of the market) on the nature of competition in the market:

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[24] British Business Bank. "Small Business Finance Markets 2014"
http://british-business-bank.co.uk/wp-content/uploads/2014/12/BBB_Small-Business-Finance-Markets-2014_Online_Interactive.pdf

- *Structure–performance hypothesis*: This hypothesis, based on standard economic theory, predicts that market power results in a lower supply at a higher cost, which may in turn slow the growth of SMEs.

- *Information-based hypothesis:* In this hypothesis, banking markets rely on information to function efficiently, to analyse lending risk for example. There are often asymmetries of information between the lender and the borrower, as the lender has less information on the prospect of future default than the prospective borrower. These considerations underpin theories that predict a much more complex relationship between market concentration and competitive pressure.

These hypotheses are expanded on below.

Structure-performance hypothesis

Standard economic theory suggests that any deviation from perfect competition results in less access by borrowers to loans and at a higher cost (*structure–conduct-performance hypothesis).* This view implies that regulatory impediments to competition and monopolistic power create an environment in which a few powerful banks reduce competition with negative implications for efficiency. From this perspective, high concentration can be a useful signal of an uncompetitive and hence less efficient market.

However, this view is not universally accepted as there is a parallel set of theoretical analysis (*the efficient-structure hypothesis)* that argues more efficient banks have lower costs and are therefore able to obtain a greater market share.[25] From this perspective, competitive environments may produce concentrated and efficient banking systems.

Information-based hypothesis

The information-based hypothesis about banking competition leads to a very different, and more complex, analysis of the nature of competition between banks. This body of research recognises the presence of information asymmetries between lender and borrower and analyses how this may lead to inefficiencies in market outcomes. This includes:

- Adverse selection: Borrowers with higher probabilities of default may be more likely to seek credit. If banks cannot adequately distinguish between high-risk and low-risk borrowers, this behaviour can lead to inefficiently high default rates and restrictions on the supply of credit.

- Moral hazard and hold-up problems: It may be excessively costly, if at all possible, for banks to recover unpaid debts from some defaulting borrowers. This can lead to a range of problems where borrowers engage in unnecessary risky behaviour because the consequences of that behaviour are in effect born by the bank. Information asymmetry can make it hard for banks to monitor and address such behaviour.

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[25] Demsetz, 1973; Pelzman, 1977.

These factors imply much more complex relationships between market concentration and market competition. Some research predicts that higher concentrations imply lower pricing and improved loan access. For example:

- Petersen and Rajan (1995) show that banks with market power have more incentive to establish long-term relationships with young borrowers since they can share in future surpluses.

- Marquez (2002) shows that borrower-specific information becomes more disperse in more competitive banking markets. Since banks will have better information on SMEs that, for example, deposit with them, higher market shares implies that each bank is able to assess the risk of a smaller number of SMEs more efficiently. The result is that in less concentrated markets, borrower screening is less efficient and may result in higher interest rates.

An alternative set of theoretical work considers the interaction between information asymmetries and competitive pressure. Cetorelli and Peretto (2000), for example, show that there are offsetting effects of bank concentration. While bank concentration reduces the total amount of loanable funds, it increases the incentives to screen borrowers and thus the efficiency of lending. This finding implies that oligopoly may lead to better market outcomes relative to monopoly or perfect competition.

Similarly Dinc (2000) finds that there is an inverted U-shaped relation between the amount of relationship lending and the number of banks, with an intermediate number of banks able to sustain the maximum amount of relationship lending.

However, concentration may not be the main driver of reducing information asymmetries. Higher market share and less competition allow an individual bank to have long-term relationships which have the potential to increase lending. Though, historic empirical evidence on this is not clear cut, and technology developments offer alternative routes to overcoming the information hypothesis.Overall, theoretical models of bank competition do not lead to conclusive results over the relationship between concentration and market outcomes for SMEs. Nevertheless they do provide a range of findings that help to empirically examine the SME bank lending market. In particular, they suggest that higher concentration is not necessarily detrimental to SMEs and may even lead to lower loan prices. The literature also suggests that the overall result will depend on the following factors:

- Bank cost structures: Do larger banks have much lower cost-bases? What is the relationship between the impact of concentration and scale on pricing?

- Information asymmetry: Does the concentrated market structure act to reduce information asymmetry?

- Demand side pressure: Are borrowers actively engaged in the market and able to compare prices between providers? Do they have alternative sources of finance provision?

The next part of this section seeks to address these issues with evidence from the UK SME lending market.

2.4.2   Empirical evidence

While the focus of this research is on SME lending markets, a multi-product analysis is critical to determining whether bank *competition is overall yielding positive or negative results for SMEs*.

Bank cost structures:

There is some evidence that larger UK banks are likely to be more cost efficient and benefit from economies of scale. Economies of scale are the cost advantages that a business can exploit by expanding their scale of production. A result of having a minimum efficient level of scale is that it makes it harder for new entrants to enter the market. In particular, the CMA has recently found that a combination of the cost of branch network and increasing regulatory requirements are both increasing the economies of scale available.[26] Bank of England calculations shows as a bank increases in size from less than £100 billion to over £2 trillion economies of scale continue to increase.[27]

In addition larger banks are likely to benefit from economies of scale and scope in raising capital. Economies of scope are efficiencies brought about by variety rather than volume. Large banks may offer a variety of services achieving economies of scope.

In markets characterised by significant asymmetries of information and high search and switching costs, market power may enable firms to better discriminate amongst customers and to cross-subsidise different banking products, thereby reducing the costs of finance.

The CMA/FCA study finds that there are a number of features of consumer behaviour which make it difficult for a smaller and newer banks to grow to a sufficient scale to effectively challenge incumbent banks. These are:

- Low rates of switching;

- A preference for many SMEs to use a single bank which is likely to meet all of their relevant banking needs; and

- Limited SME awareness of alternative providers.

Larger banks may, however suffer from some diseconomies of scale, particularly in relation to legacy IT infrastructure that is costly to maintain and difficult to replace.[28]

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[26] CMA and FCA market study, 2014.

[27] Bank of England, 2012

[28] CMA and FCA market study, 2014, p.89

The critical question is how these cost differences manifest themselves in loan pricing and availability.

There is an evolving body of international empirical evidence that suggests that larger banks charge a higher interest rate premium for what are apparently homogenous loans.[29] Furthermore, the literature finds that this result cannot be explained away by differential marginal costs. Similarly, Demirguc-Kunt et al (2004) find that bank size exerted a negative effect on interest rate margins, but bank concentration exerted a positive effect. Importantly, the concentration effect dominated the bank size effect.

However, the debate is not straightforward. For example, empirical evidence has shown that large banks tend to have lower net interest margins than small banks.[30] This is consistent with models that emphasize the positive role of size arising from scale efficiency.

Recent research from the CMA found that on average, smaller banks are marginally less expensive than the larger banks and there was not a single case where the larger banks were less expensive than the smaller ones. However, the difference is marginal and interest rates are not the only factor used when deciding where to attain finance.

Information asymmetry:

Many SMEs that take use external finance are small – around a third of SMEs using external finance have no employees.[31] The limited size of these businesses is consistent with them having a relatively limited track record and limited access to collateral to secure the loan. Indeed 45% of the SME population as a whole were rated as worse than average risk in Q2 2015.[32]

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[29] For example, Cole, Goldberg and White, 2004; Berger, Miller, Rajan, Stein and Petersen, 2005; Haynes, Ou, Berney, 1999; Bai, Shen, Xu, 2009.

[30] In an empirical study using data for 1,400 banks spread across 72 countries Demirguc-Kunt et al (2003) found a negative and significant correlation between bank size and net interest margins.

[31] BDRC Continental SME Finance Monitor.

[32] BDRC Continental SME Finance Monitor. The "worse than average risk rating" is based on BDRC analysis of ratings supplied by Dun & Bradstreet and Experian. They use a range of business information to predict the likelihood of business failure and their ratings have been combined to a common 4 point scale from minimal to worse than average risk. In Q2 2015, 31% of SMEs were rated "average risk" while 24% were rated minimal or low risk.

Figure 2: SME population rated as worse than average risk, Q4 2014
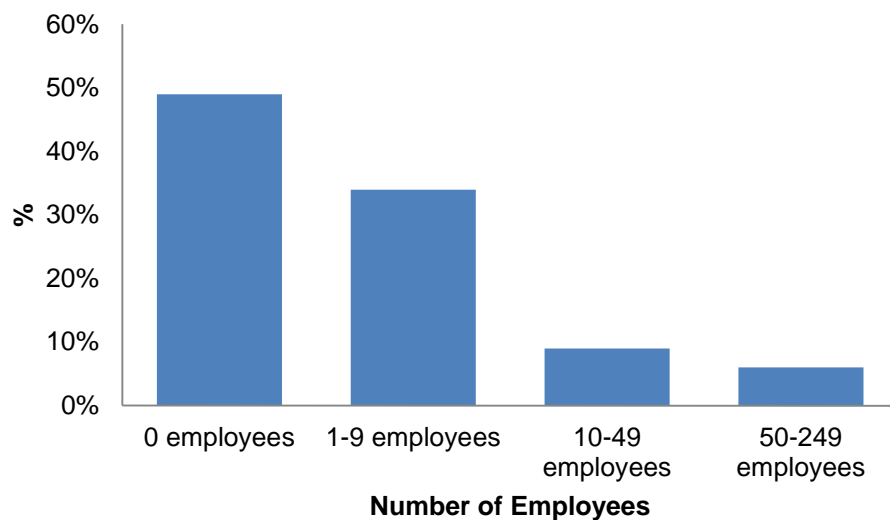
Source: BDRC

Historically, smaller SMEs are disproportionately likely to be refused access to finance, as Figure 3 and Figure 4 illustrate.

Figure 3: Outcomes of SME loan applications, Q3 2013 – Q4 2014
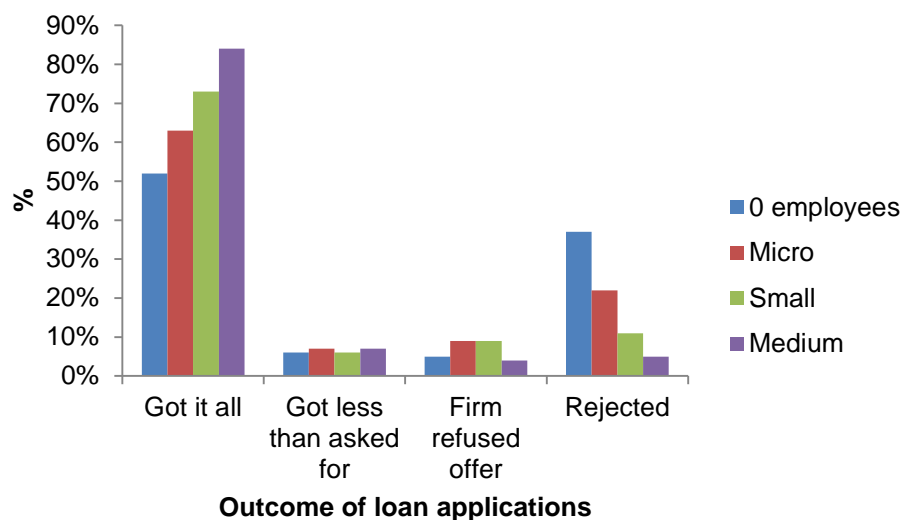
Source: BDRC

Figure 4: Outcomes of SME overdraft applications, Q3 2013 – Q4 2014
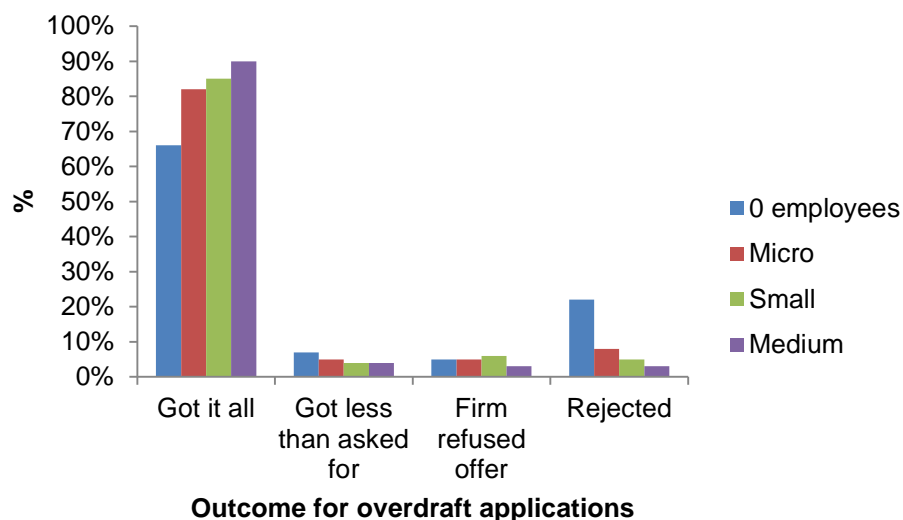
Source: BDRC

The impact of this risk profile and information asymmetry has been consistently identified in loan pricing, through a small firm premium (defined as the interest rate margin over and above the bank base rate) of between 1.5% and 6% in the UK.[33] In a 72 country study, Demirguc-Kunt, Laeven and Levine (2004) found that interest rate margins averaged 3.61% over the sample, with a range was from 1.75% in Switzerland to 11.61% in Ghana.

More recent market evidence from the UK continues to support this finding. For example, the interest rate on SME overdrafts of less than £10,000 was 5%, falling to 2.9% for overdrafts in excess of £100,000. While this data is not segmented by firm size, it seems reasonable to assume that smaller loans were disproportionally utilised by smaller SMEs. Although firm size itself does not determine the size or simple acceptable of a loan application, the characteristics that generally come with a firm's size do play an important role in bank lending.

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[33] Cowling and Sugden, 1995; Bank of England, 2011.

Table 3: Fixed Rate (overdraft) by facility granted – successfully sought new/renewed overdraft Q3 13-Q4 14

Interest rate	Total	<£10k	£10-25k	£25-100k	£100k+
<3%	43%	40%	51%	42%	60%
3.01-6%	40%	36%	46%	52%	38%
6.01-8%	7%	10%	2%	4%	1%
8%+	9%	14%	1%	2%	2%
Average fixed rate	4.3%	5%	3.2%	3.3%	2.9%
Median fixed rate	4.0%	4.2%	3.0%	3.1%	1.9%

Source: BDRC

Demand-side pressure

The financial sophistication and behaviour of SMEs is also an important determinant of competitive market dynamics. Factors to consider here include:

- The degree of active involvement by SMEs in selecting lenders and negotiating terms;
- Transparency in the market and the ability of SMEs to adequately compare competing offers; and
- Access to alternative sources of finance.

As the CMA has previously identified, there is a high degree of inertia in SME lending – 70% of SMEs seeking loans approached only one provider and 60% of SMEs spent less than one hour researching potential lenders.[34]

This inertia is compounded by a perceived lack of transparency in the market. Repeated studies have found evidence of difficulty for SMEs in comparing the terms of bank finance due to a combination of secondary charges, bespoke interest rate agreements and other customisation of the products.

Recent CMA research found that, for a sample of banks, 30%-100% of loans were granted with bespoke rates. Similarly, while fees are typically less than 2% of loan value, they can vary considerably as the sector analysis demonstrates.

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[34] CMA (2014). "Banking services to small and medium-sized enterprises", p. 12.

Table 4: Type 1 Overdraft fees successfully sought new/renewed overdraft Q3 13-Q4 14

	Agric	Mfg	Constr	Whle Retail	Hotel Rest	Trans	Prop/Bus	Health S Work	Other Comm
No fee Paid	23%	15%	14%	19%	5%	31%	14%	34%	16%
Average fee paid	£604	£500	£229	£282	£427	£296	£544	£158	£345
Equivalent of 2% or less paid	74%	82%	71%	55%	64%	74%	59%	92%	67%

Source: BDRC[35]

The CMA noted that 'the complexity of loan pricing arrangements, while sometimes being of benefit to SMEs through bespoke offerings, therefore means that there are significant search costs associated with obtaining multiple quotations for loan products; an SME wishing to make such comparisons would be required to engage in detailed conversations with various providers.'[36]

In relation to alternative finance sources, the evidence is somewhat mixed. Recent CMA research has raised concerns over awareness by SMEs - only 25% of SMEs were aware of peer-to-peer lending for example, while less than a third were aware of invoice finance or factoring (the sale of an invoice to a third party company for a fee, in exchange for immediate payment).[37]

Similarly, smaller SMEs are considerably less likely to have access to alternative types of finance. In particular, trade finance – 59% of the smallest SMEs do not use trade credit at all, compared to 26% of those with more than 10 employees.[38]

While these challenges are clearly important, it should also be recognised that access to alternative sources of finance is relatively good in the UK. 80% of SMEs who apply for leasing/vehicle hire/hire purchase agreements are successful, as are 60% of SMEs applying for invoice finance.[39] While the market for newer types of finance such as peer-to-

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[35] Data is not controlling for other factors, such as firm age or size.

[36] CMA (2014), 'Banking services to small and medium-sized enterprises', p. 119.

[37] CMA (2014), 'Banking services to small and medium-sized enterprises', p. 12 and 112.

[38] BDRC (2014), p. 71.

[39] PDRC (2014), p. 68.

peer remains comparatively small, it is growing rapidly and is arguably better developed in the UK than the rest of Europe.[40]

2.4.3   Summary of findings

The overall structure of the SME lending market in the UK can currently best be described as a four-firm oligopoly characterised by a high level of concentration and high barriers to entry. This market structure has implications for competition, pricing and availability of loans.

The relationship between market concentration and outcomes for SMEs seeking finance is complex. The Structure-Performance hypothesis suggests that market concentration may limit competitive pressure; while the Information Hypothesis suggests it may improve informational issues inherent to the market. Evidence on the overall impact is inconclusive.

The empirical evidence from both the UK and international experience is equally mixed.

As noted, higher concentration can weaken the incentive to compete. In this respect, the UK market is characterised both by high concentration and by a high degree of demand-side inertia by SMEs.

Both from an empirical and theoretical perspective, there are reasons to consider that high levels of concentration in the UK market is helping to deliver economies of scale. Economic theory suggests this may also help overcome structural problems such as information asymmetry between borrowers and lenders, though it is not clear from the available data whether this is the case.

However, concentration may not be the main driver of reducing information asymmetries. Higher market share and less competition allow an individual bank to have long-term relationships which have the potential to increase lending. Though, historic empirical evidence on this is not clear cut, and technology developments offer alternative routes to overcoming the information hypothesis.

Taken together, these factors raise legitimate questions over whether the UK market is delivering efficient levels of competition between the banks.

Subsequent sections of this report attempt to provide further insight into these issues, firstly by considering the historical context around the UK banking market and secondly by comparing SME market outcomes in the UK against those in selected countries.

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[40] EY (2015), 'Moving mainstream'.

3 Historical context of the UK bank lending market

This section considers the history of the UK bank lending market and how it has influenced and resulted in the market we see today. Looking at the growth in the UK banking sector, the evolution and effects of market regulation, changes in the market concentration and as a result a change in the volume of bank assets, it will provide context to the findings of the previous section. It also provides some additional contextual information relating more specifically to the evolution of SME lending and bank relationships.

3.1 Developments in the UK bank lending market

The basic financial services offered by banks- payment services (deposit and current accounts and services associated with money transmission), intermediation between savers and borrowers (the pooling of deposits and the provision of loans), and risk insurance (protection against liquidity shocks and risk diversification) are qualitatively the same today as those provided in previous centuries. However, the banking system which provides these services to consumers and businesses has changed significantly over the last half century.

In 1959, the Radcliffe Committee found that the 16 largest UK clearing banks held 85% of total UK banking assets, which represented around 30% of UK GDP. Lending, until the first wave of banking consolidation in the late 1960s, was low risk and accounted for 30% of bank assets which is extremely low by current standards. Current accounts then paid no interest and accounted for 60% of customer deposits (Davies, Richardson, Katinaite and Manning, 2010). This predominance of non-interest bearing current accounts at the time gave banks the opportunity to pool these funds and loan them out at low rates to borrowers.

In parallel, the building society sector played a more prominent role with mortgage assets representing around one-third of bank assets. However, the decline of the (mutualised) building societies role in the UK financial landscape during the 1990s has been a key feature in re-shaping the nature of the UK lending market. Key legislative changes occurred in 1986 with the UK Building Societies Act which led to the demutualisation[41] wave in the 1990s as restrictions on investment portfolios were removed and demutualisation explicitly permitted. Between 1995 and 2000, conversions occurred in seven of the largest ten Building Societies. The legislative support for consolidation of activities in the UK banking sector via demutualisation was enhanced by the 1997 Butterfill Act which gave Building Societies greater powers to merge. As a result, by the end of the century, the value of building societies' assets declined by over 50% (a decline worth

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[41] Demutualisation refers to the transfer of ownership of a company away from exclusive ownership by its members and customers to private shareholders. A key feature of mutual ownership was that the company was created solely to provide specific services at the lowest price (greatest benefit) to its members.

approximately 15% of GDP) as a number of major building societies converted to bank status.[42]

Figure 5: Consolidation in the UK banking sector, 1960-2010[43]
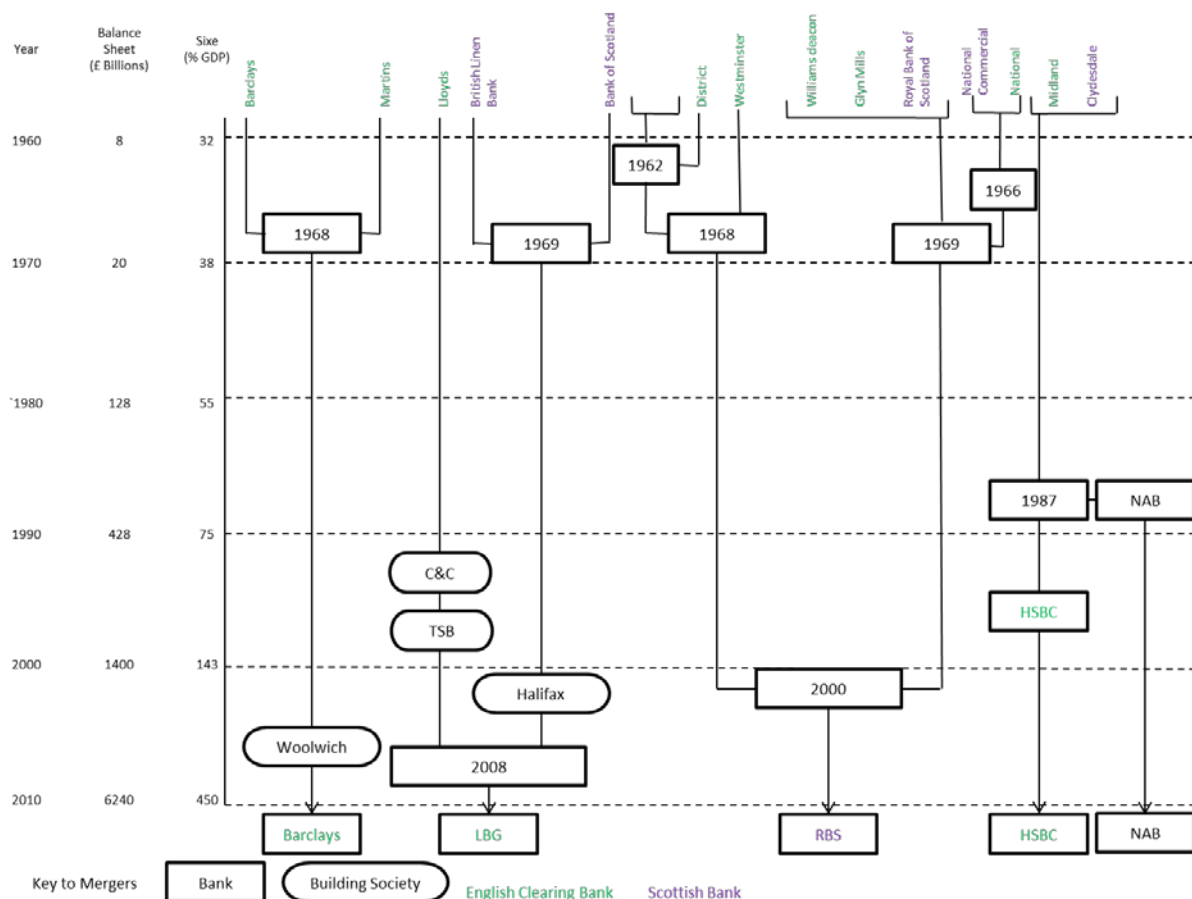
Source: Based on Bank of England Quarterly Bulletin Q4 2010. "Evolution of the UK banking system." As it stands today, in excess of 300 banks and building societies are licensed to accept deposits in the UK. But a large proportion of these financial institutions are very small players in the UK market and the provision of retail banking services is highly concentrated. Even amongst the relatively large institutions it is noteworthy that of the sixteen clearing banks operating in 1960, fifteen are now owned by the four big banking groups: RBS, Barclays, HSBC and Lloyds Banking Group. Recent estimates suggest that these four banks account for approximately 80% of the SME lending market.[44]

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[42] Bank of England Quarterly Bulletin Q4 2010. "Evolution of the UK banking system."

[43] LBG stands for Lloyds Banking Group, RBS stands for Royal Bank of Scotland.

[44] Charterhouse release (Q1 2013), presented in CMA/FCA (2014)

3.2   Growth of the banking sector

As the largest banks have evolved into 'universal' banks, they have become less reliant on interest (lending) income, as their ability to generate income from non-lending services and products has increased. Today non-interest income represents more than 60% of banks' earnings compared to only 5% in 1980.[45]

The implication of the increase in non-interest income for lending to SMEs is not entirely clear. On the one hand, the wider activity of banks allows it to gather more information that may help address the challenges in the SME market and banks may be incentivised to pursue loss-leading lending strategies to sell non-lending related products (Lepetit et al. 2008). These factors would improve the availability of finance for SMEs. On the other hand, the importance of non-interest income may reduce banks' interest in SME lending and reduce their willingness to take on the credit risk in this segment (e.g. see Abedifar et al, 2015)

Comparing UK to the US banking sector, in 1960, banking sector assets were around 40% and 60% of GDP respectively. However, this changed significantly and 2010 data shows the banking sector assets in the UK exceeded 550% of GDP compared to approximately 95% in the USA.[46]

For SMEs, the absolute size of UK banks, the international and multi-market scale of their operations, and their increasing derivation of profit and income from non-lending sources means that the core lending products and basic banking services that SMEs demand are far less prominent and relevant to modern banks compared to the traditional banking model of the 1970s. This is reflected in the increasing use of information technology in general banking, and in supporting banks in their lending decisions and the relative 'distance' in the typical bank-SME relationship.

3.3   Evolution of banking sector regulation

There are clear theoretical rationales for the evolution of UK banking's market structure, including economies of scale and scope arising from lower unit costs as service provision expands, from the provision of a mix of banking services, and significant technological innovations. On the latter, Barker (2007) found that (a) smaller banks have found it difficult to keep pace with technological change, and, (b) that large banks who have invested heavily in IT have gained market share. Yet analysis of 50 studies of economies of scale in banking (Amel et al, 2004) estimated that the average Minimum Efficient Scale (MES)[47] was low at around £10bn of assets. Further analysis by Haldane (2010) implied that

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[45] Bank of England Quarterly Bulletin Q4 2010. "Evolution of the UK banking system."

[46] Bank of England Quarterly Bulletin Q4 2010. "Evolution of the UK banking system."

[47] MES refers to the point on the firms average cost curve where they can effectively compete with other firms in the market and not suffer from a significant cost disadvantage at that output level.

average costs may even rise (diseconomies of scale) after a relatively small output region where average costs are constant.

However, the general pattern of reduced regulatory restriction has allowed banks to diversify into new areas and cross-sell new products. In addition, it has led to greater competition for consumer savings and lower average margins on retail banking activities. This was overlaid by developments at an international level, and the banking industry of European Union (EU) countries has been significantly deregulated through a process which began in the early 1990s. Under the old regime, cross-border expansions were heavily constrained, whereas after deregulation, banks from EU countries have been allowed to branch freely into other EU countries. Concurrently to the process of deregulation, European banking industries have also experienced a significant process of consolidation, mirroring trends in the UK (Cetorelli, 2004).

On the legislative side, there were important developments at an international level which focused on regulation and regulatory capital requirements, reporting and supervision. This was enshrined in the Basel Accord of 1988, (Basel I) and in further Basel Accords (Basel II, 2004, and Basel III, 2011). Basel I focused mainly on credit risk and the appropriate risk-weighting of assets. Bank assets were classified in five risk weighting categories reflecting differences in the credit risk (for example, cash and Treasury Bills carry a risk weight of 0%, whereas corporate debt carry a risk weight of 100%). Based on these weightings, banks with an international presence are required to hold capital equal to 8% of their risk-weighted assets (RWA). Basel II was introduced to create an international standard for banking regulators with the aim of limiting the potential for regulation to become a tool for countries to compete for internationally active banks. In contrast, Basel III focuses mainly on the risk of bank runs and requires banks to hold reserves for different forms of bank deposits and other borrowings.

In terms of what the Basel Accords mean for SMEs and SME banking, the general objective to remove inherent risk and instability in the banking sector is aimed at reducing the substantial temporal variation we observe in bank willingness to supply loans (alongside the equally large variability in SME demand for loans as banking crises feed through into full blown recessions). In this sense, if Basel Acords are successful in strengthening the overall market stability, then this should benefit SMEs seeking loans. But a potential downside is that the overall pool of funds available for lending might diminish as banks face stricter conditions in relation to how much they can lend based on deposits taken.

3.4   Concentration of the UK bank lender sector

Figure 6 shows that the 5-bank concentration declined between 1998 and 1999, between 2000 and 2003, and then again between 2004 and 2009, before rising from 2009 onwards. On the cost side of banks, the period from 2002 to 2004 exhibited a steep decline, after which thought the trend was downward, it was within a relative stable range of 50% and 60%. The period after the GFC was characterised by an upward shift in banks cost-to-income ratios possibly reflecting a range of factors including (a) banks loss provisions and write downs, and (b) increased regulatory costs. However, this has not been confirmed by the data.

Figure 6: UK bank concentration and cost-income ratios, 1998-2011
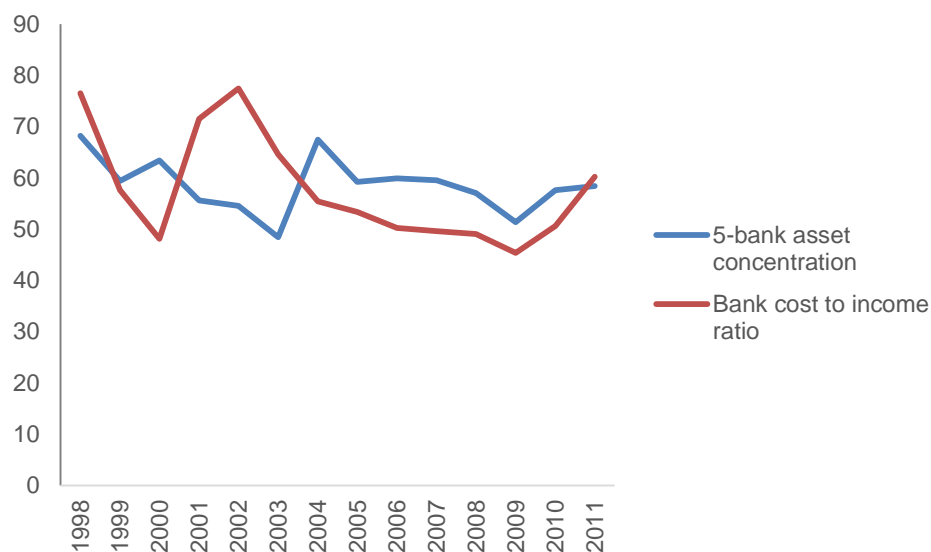
Source: World Bank, GFDD

3.5 Summary

The UK banking market has become increasingly concentrated since a wave of mergers and consolidation in the late 1960s and early 1970s. This trend was accelerated by legislative changes in the mid-to-late 1980s, which largely led to the decline of Building Societies as a significant independent sector and component of the overall banking market. Today, four large banking groups account for the majority of the market, and this influence carries over into the SME lending market. In parallel with this increasing concentration in the banking sector, there has been a large expansion in credit available to personal consumers and businesses, despite a decline in the liquid cash reserves held by the banking sector in terms of their total assets. The GFC, with its roots in the global banking system, has encouraged banking regulators, at a national and supra-national level, to introduce new Basel Accords and legislation that goes some way to reversing the effects of the de-regulation in banking and banking services over the last 45 years, although the evidence on whether more concentrated banking sectors are associated with greater or lower financial stability is still being contested. The potential unintended consequences which relate to capital adequacy and compliance costs may include (a) a reduction in the pool of funds for lending to SMEs, and, (b) a rise in the cost of lending.

The banking and finance sector in the UK is unique in a global sense in terms of its scale in relation to the size of the economy. Fifty years ago, the UK and US banking sectors assets were comparable as a proportion of GDP in their respective countries. Assets held by US banks now represent around 95% of US GDP, while the total assets held by UK banks now account for approximately 5.5 times UK GDP.

For SMEs, the change in absolute size of UK banks means that the core lending products and basic banking services that SMEs demand are far less prominent and relevant to modern banks compared to the traditional banking model of the 1970s. This is reflected in

the increasing use of information technology in general banking and in supporting banks in their lending decisions and the relative 'distance' in the typical bank-SME relationship.

4 Review of SME Bank Lending in Germany

4.1　The role of SMEs in the German economy

Defined by the European Commission, an SME is a business or company that has fewer than 250 employees and has either (a) annual turnover not exceeding €50 million or (b) an annual balance-sheet total not exceeding €43 million[48].

Over 99 percent of German enterprises are SMEs. In absolute figures this means more than 3.6 million companies, providing more than 60% of all jobs in Germany. While this is in line with the EU as a whole, the average SME in Germany is slightly larger than in most other EU member state. In particular, there are relatively fewer microenterprises and relatively more small and medium sized firms. German SMEs are also generally more oriented towards exports than their European peers (European Commission, 2014).

Figure 7: The contribution of SMEs to the German economy in 2013

Share of number of enterprises

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[48] Full definition - SMEs according to their staff headcount or annual balance sheet total. A medium-sized enterprise is defined as an enterprise which employs fewer than 250 persons and whose annual turnover does not exceed EUR 50 million or whose annual balance-sheet total does not exceed EUR 43 million. A small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million. A microenterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million (European Commission, 2015).

Share of employment
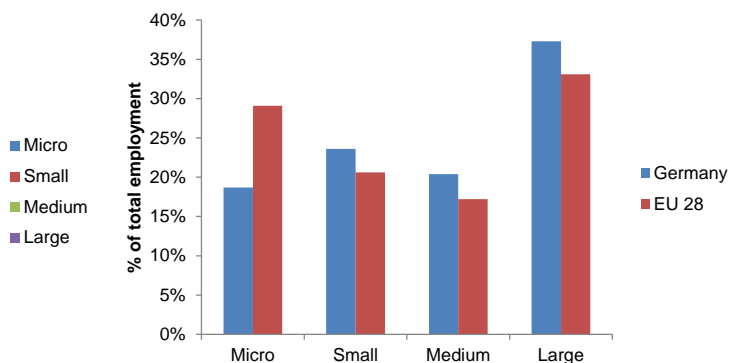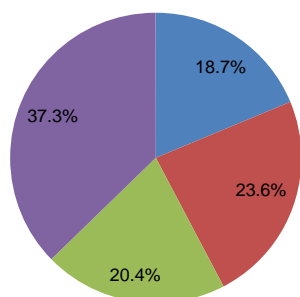
Share of value added[49]
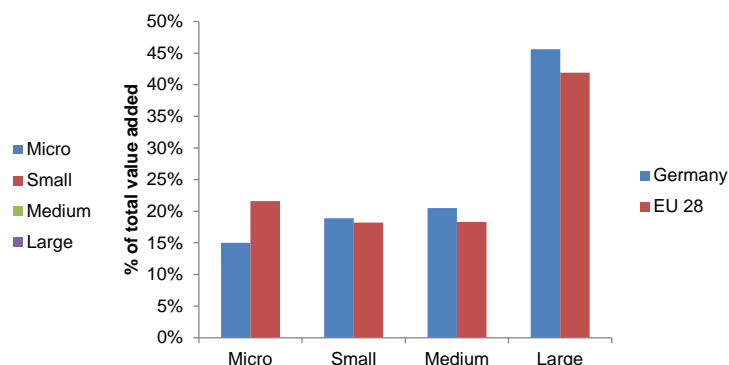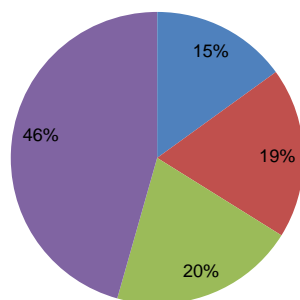
Source: European Commission report based on data from the Structural Business Statistics database (Eurostat)[50]

The age profile of German SMEs is slightly younger than UK SMEs. 79% are less than two years old (71% in the UK) while 9% are at least five years old (12% in the UK). The turnover profile of German SMEs is similar to the UK. For example, in both countries an estimated 36% of SMEs have a turnover of less than €1 million (although in the UK, a higher proportion of SMEs are at the lower end of this band). However, there appear to be larger SMEs in Germany – 24% of German SMEs have a turnover of more than €10 million while in the UK the figure is 19%.

[49] In business, the difference between the sale price and the production cost of a product is the unit profit. In economics, the sum of the unit profit, the unit depreciation cost, and the unit labour cost is the unit value added. Summing value added per unit over all units sold is total value added.

[50] European Commission (2014). Annual Report on European SMEs 2013/2014 – A Partial and Fragile Recovery.

Figure 8: Age and Turnover profile of German SMEs
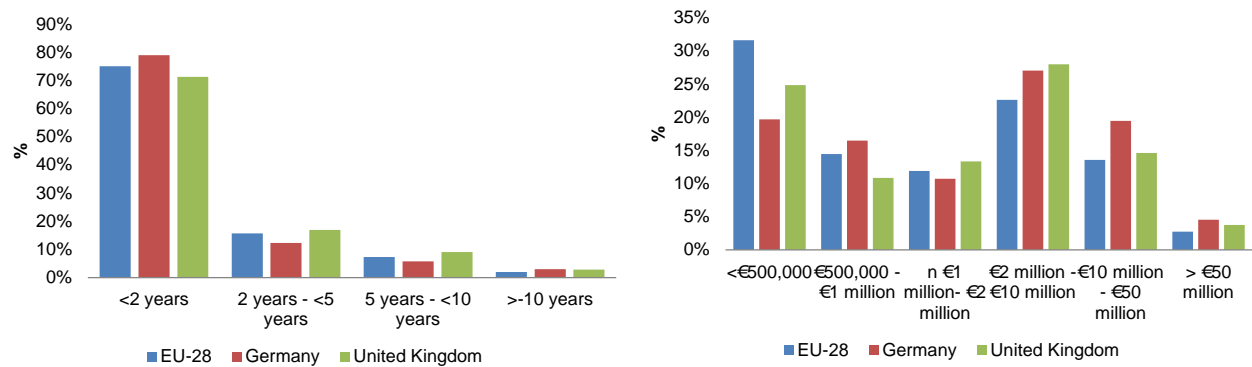
German SMEs are predominantly service oriented, as Figure 9 shows.

Figure 9: Sectoral composition of SMEs in Germany, 2014
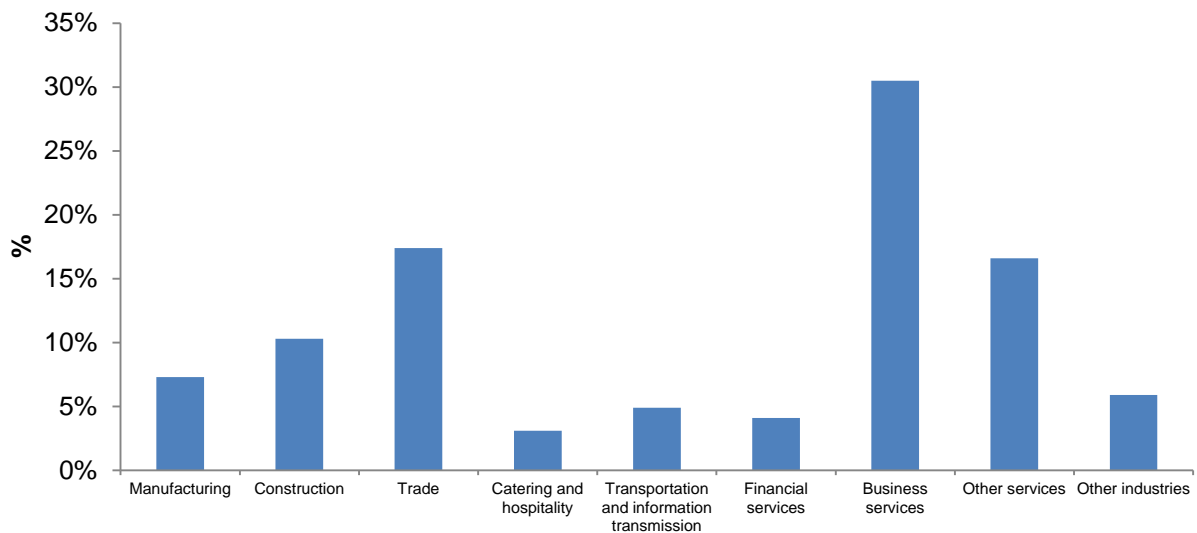
This sectoral distribution is similar to the distribution in the UK. The one noticeable exception is that SMEs appear to be less involved in construction in Germany than SMEs in the UK.

Figure 10: Sectoral composition of SMEs in the UK, 2014
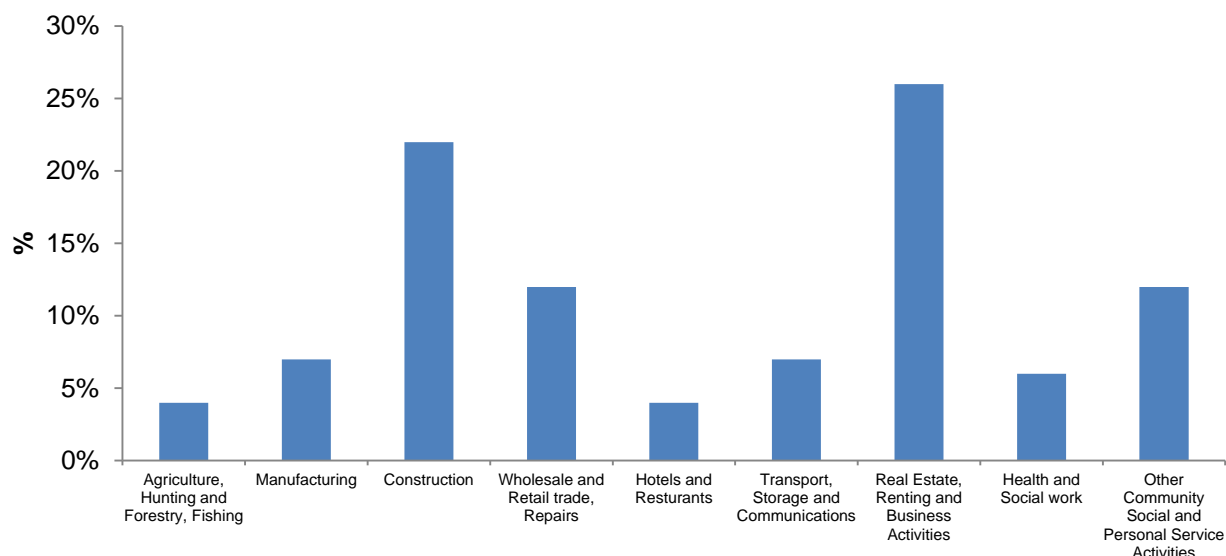
Source: BDRC Continental SME Finance Monitor

Unlike most other European SMEs, the German SME population expanded through the financial crisis: the number of SMEs increased by 16% between 2008 and 2013, while employment in SMEs and the value added they generated increased by 19%. By comparison, in the UK, the total number of SMEs decreased between 2008 and 2011. Growth has been particularly strong in the construction sector, where value added increased by a total of 26% over the same period.

4.2   Access to finance

German SMEs are generally well funded and appear to face relatively few problems accessing finance. Compared to European peers, they have lower leverage, a higher net interest cover and lower dependency on external financing[51]. Only 9% of German SMEs reported access to finance as their most pressing problem in the 2014 SAFE survey, while the availability of sufficient internal funds was cited as a reason for not applying for a bank loan by proportionally more SMEs in Germany than in the rest of Europe.[52]

As in the rest of Europe, bank finance is an important source of finance for SMEs. However, there is relatively less emphasis on trade credit and more use of leasing and hire-purchase.

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[51] German SMEs: Investing in the sweet-spot of corporate Germany, 2013

[52] European Commission's SME's Access to Finance survey

Figure 11: Proportion of SMEs in Germany that used different sources of finance in the last 6 months of 2013
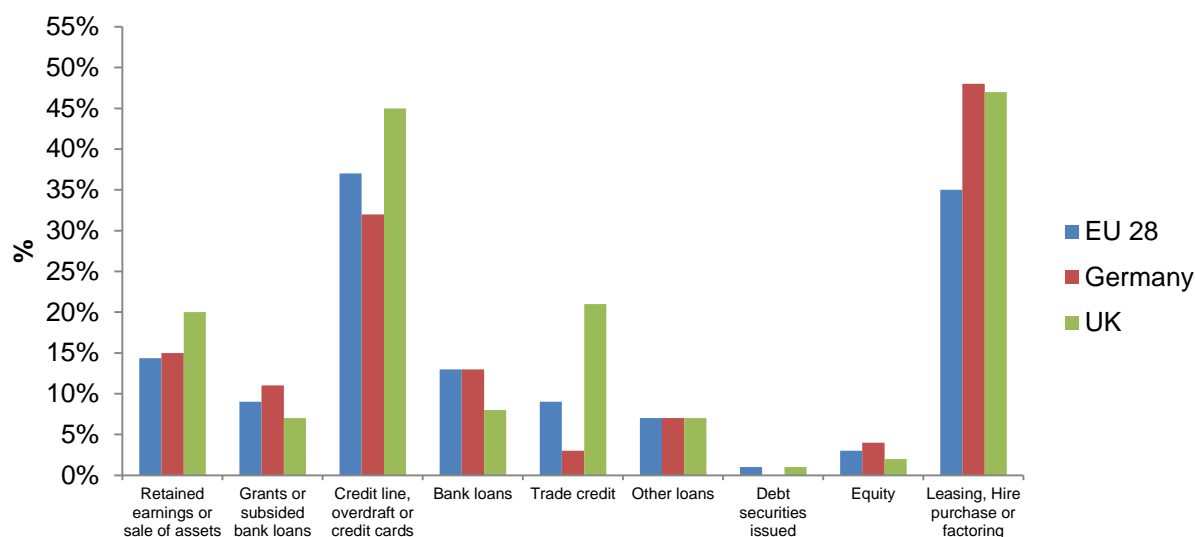
Source: European Commission SME's Access to Finance survey

Private equity (PE) activity is relatively low in Germany. Total PE investment as a percentage of GDP is only 0.5%, compared to 0.79% in the UK. [53]

Venture capital (VC) financing in Germany is increasing, but VC investments per deal are still 11 times smaller than in Silicon Valley[54] and EC research suggests Germany lags behind the EU average for VC investments.[55]

Promotion banks play an important role in compensating for the shortfall of VC and PE. They provide for example, various programmes for start-ups and smaller innovative firms (see section on government policies). VC investments are often preceded by Angel financing and followed by an IPO. However, traditional bank loans often play a crucial role in the financing of the initial steps of a start-up.[56]

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[53] Deutsche Bank, 2013: "Making a difference: Making a difference: German SMEs and their financing environment"; British Business Bank, 2015

[54] Deutsche Bank, 2013: "Making a difference: Making a difference: German SMEs and their financing environment"

[55] European Commission, 2014

[56] Deutsche Bank, 2013: "Making a difference: German SMEs and their financing environment"

Among the major EU economies, Germany has the third-largest online alternative finance market overall with EUR 140m, but it is still far behind the UK.

4.3 SME bank lending

4.3.1 Historical context

Since the 19th century, the decentralised German banking system has been structured by regulation around three separate pillars, with cross-pillar mergers forbidden.

Figure 12: Organisation of the German banking system

Commercial banks	Public banks	Co-operative banks
• Owned by private investors	• Owned by municipalities	• Owned by depositors
• Main customers: corporate and institutional clients, SMEs, households	• Main customers: SMEs and households	• Main customers: SMEs and households
• Geographical scope: national and international	• Geographic scope: "Regional principle"	• Geographical scope: "Regional principle"
• Deposit protection: deposit insurance	• Deposit protection: Institutional guarantee	• Deposit protection: Institutional guarantee

- **Commercial banks**: Commercial banks are organised under private law and are mostly privately owned companies such as limited liability companies or corporations. They are the primary global players in the market with international scope, like the Deutsche Bank AG. Commercial banks serve retail clients, but their strongest focus is on institutional and international banking.

- **Public banks**: Public banks are savings and promotion banks, but savings banks constitute the majority of public banks. The publicly-owned savings banks are either large regional central institutions ("Landesbanken") or smaller regional savings banks ("Sparkassen"). Savings banks follow the "regional principle", i.e. they are only authorised to operate branches within their region. Savings banks work as commercial banks in a decentralised structure and their business model focuses on retail banking services to SMEs and households. Some larger savings banks engage in wholesale banking with the responsible Landesbank acting as clearing house. Savings banks have an institutional guarantee for deposit protection (i.e. a system of joint liability) and have come therefore relatively unharmed through the financial crisis. In 2010, savings banks' assets accounted for 13% of total assets of the banking industry in Germany and for 22% of total depository institutions (IMF, 2011).

- **Co-operative banks**: Like savings banks, the pillar of co-operative banks is a two-tiered system. Local co-operatives are the smallest banks in Germany and mutually

owned by member-depositors. They focus on SME and household lending, but also provide investment and other products that are structured by the central co-operatives. Following the regional principle, they are only allowed to operate within their own region. In 2010, co-operative banks' assets accounted for 8% of total assets of the banking industry in Germany (IMF, 2011).

Figure 13 describes the key market events in the banking sector in Germany since 1960.

Figure 13: Key market events in Germany 1960-2008

EU - regulatory framework

1977: First Banking Directive
- First step toward liberalisation of the banking market by applying the principle of non-discrimination against businesses from other MS

1989: Second Banking Directive
- Provides for minimal capital requirements for retail banks
- Creates the European Passport that enables banks to operate across the EU without having to seek approval of national regulators

1992: Maastricht Treaty
- The Maastricht Treaty enshrines the Economic and Monetary Union (EMU)
- The decision to form EMU had already been taken in 1991

1999: Introduction of the euro
- The euro is launched on 1 January 1999 and creates a common capital market.
- Since 1 January 2002 the euro circulates in physical form.

National regulatory framework

1961: Banking Act (KWG)
- Assigns the responsibility for bank supervision to a federal authority
- Previous to 1961, states are responsible of bank supervision

1976: 1st KWG Amendment
- Tightens exposure rules

1983/1985: 2nd /3rd KWG amendment
- Limits large exposure limits
- Incorporates the First Banking Directive into German law

1993: 4th KWG amendment
- Incorporates the Second Banking Directive into German law

1995/1998: 5th/6th KWG amendment
- Implements further EU Directives on large exposures, consolidation and capital adequacy

2002: Abolishment of state guarantees
- After an investigation by the EC, the German government is forced to replace the Anstaltslast and to abolish the Gewährträgerhaftung by 2005

1960   1970   1980   1990   2000   2008

Market trends/ events

1990: German reunification
- Stimulated loans demand and equity markets

1990s: Merger wave
- The number of credit institutions declined by about 35 percent between 1997 and 2003
- The vast majority of mergers occurred among savings and co-operative banks
- The merger wave has been driven by the process of European financial integration and in prospect of a single currency creating a common capital market

2008: Financial crisis
- German banks were directly affected through their exposure to structured credit products originated in the US

50

Unlike the UK and other EU countries, Germany has not undergone a large-scale deregulation process. Savings banks have not been privatised and now almost half of German banking business is carried out by public banks.

4.3.2 Market structure

The German banking market is currently made up of a large number of small players. In 2014 the Bundesbank reported there were a total of 1,807 credit institutions, the majority of which are co-operative banks. The influence of the public sector is significant – approximately one in four banks are savings banks or Landesbanken, which are publicly owned.

Figure 14: The number of German credit institutions by type

Other
4%

Commercial
banks
15%

Co-operative
banks
58%

Savings banks &
Landesbanken
23%

A total of **1,807** credit institutions
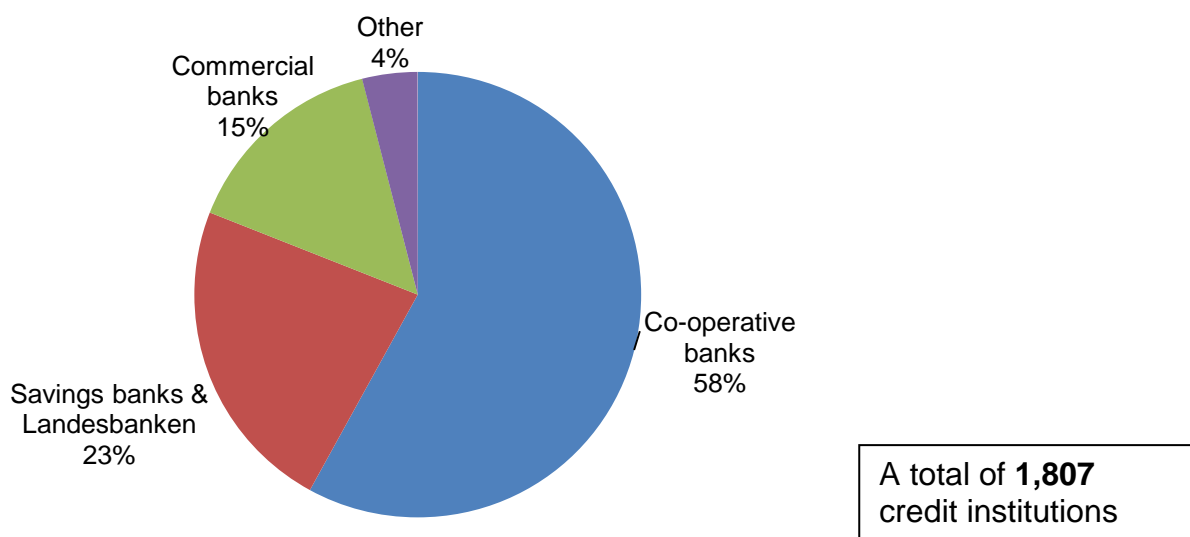
Source: Deutsche Bundesbank

While the number of credit institutions in Germany is high, this is less than half the number it was in 1993. This consolidation has been driven mainly by intra-pillar mergers, such as the Commerzbank-Dresdner Bank merger in 2009. However banks have, on average, grown in this period, with aggregate bank assets growing in value from EUR 3,177 billion in 1993 to EUR 7,554 billion in 2012.

Reflecting the high number of credit institutions in Germany, standard measures of overall market concentration are lower in Germany than elsewhere, as Figure 15 illustrates.

Figure 15: Market concentration in Germany

Percentage of 5 largest CIs in total assets

HHI for CIs
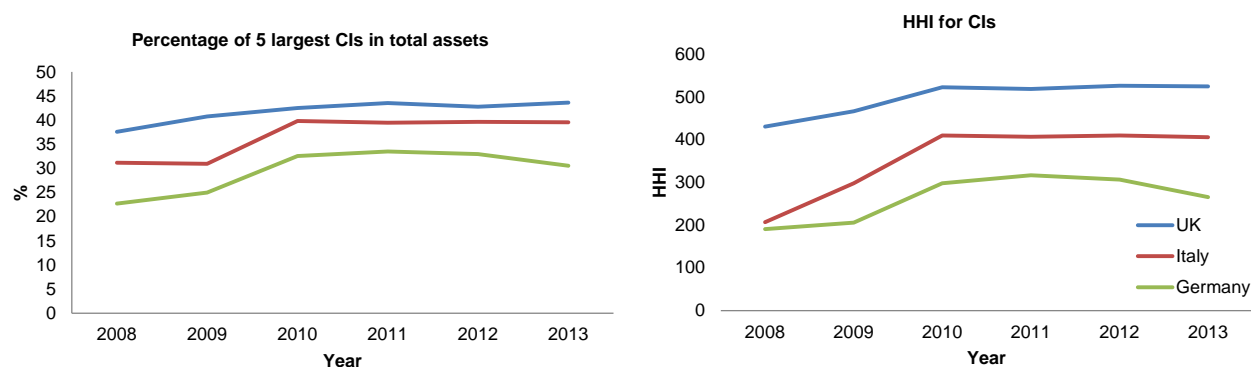
Source: ECB Statistical Data Warehouse, Structural Financial Indicators

Given the decentralised structure of the German banking market and rules governing how banks can compete, it may not be appropriate to define the market by national borders but at the regional or "economic agglomeration area" level instead.[57]

When the market is analysed at the regional level then concentration levels are significantly higher. For example, the mean market share over the period 1993-2012 across all types of banks is 0.04 percent at Federal level, 0.65 percent at state level, and 3.93 percent at economic agglomeration area level[58]. Moreover, large commercial banks and regional savings banks account for significant shares of the market. Overall, Kötter (2013) finds that different concentration measures suggest higher market concentration in north-eastern regions compared to south-western regions and that this may reflect the regional dispersion of economic activity and population in Germany.

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[57] In Germany, economic agglomeration areas, or Raumordnungsregionen, are regions of spatial interdependence based on socio-economic indicators, such as commuter streams. The definition comes from the Federal Office for Building and Regional Planning.

[58] Kötter (2013) estimates concentration/ competition at the level of economic agglomeration areas ("Raumordnungsregionen" ROR). RORs are defined by the "Bundesamt für Bauwesen und Raumordnung". They represent regions of spatial interdependence based on socio-economic indicators, such as commuter streams. Banks are allocated to regional based on the location of their headquarter reported to the prudential supervisor.

4.3.3   Serving the needs of SMEs

The availability of bank finance to SMEs

Survey data from the European Commission suggests that SME loan application rates in Germany are slightly higher than in the UK but below the EU average. In the last 6 months of 2014, 26% of German SMEs applied for a loan, compared with 18% in the UK and 28% in the EU.

The survey suggests that, in the main, those German SMEs that choose not apply for loans do not want them. 79% of SMEs that did not apply for a loan reported that they do not need that sort of financing, whereas much fewer reported collateral issues (4%), high prices (5%) or the unavailability of loans (3%) as the reason for not applying.

Figure 16: Reasons why bank loans are not relevant to German SMEs
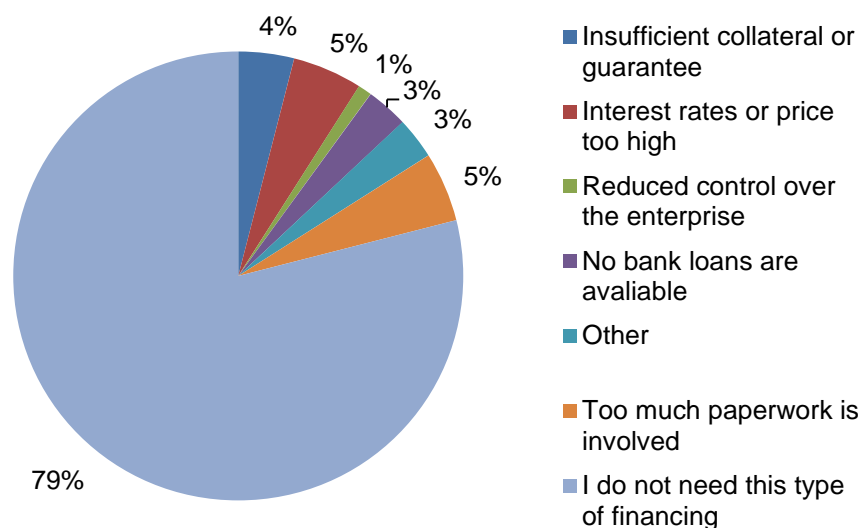
Source: SAFE, ECB/ EC 2015

For those SMEs that do apply for loans, the likelihood of getting one is relatively high. 75% of bank loan applications made by German SMEs in the final 6 months of 2014 were accepted under the conditions sought by the SME, whereas only 10% of applications were outright rejected.

Figure 17: SME loan applications in Germany

Applications for bank loans (%)

Applications rejected (%)

Applied and got everything (%)

Applied and got a limited part of it (%)
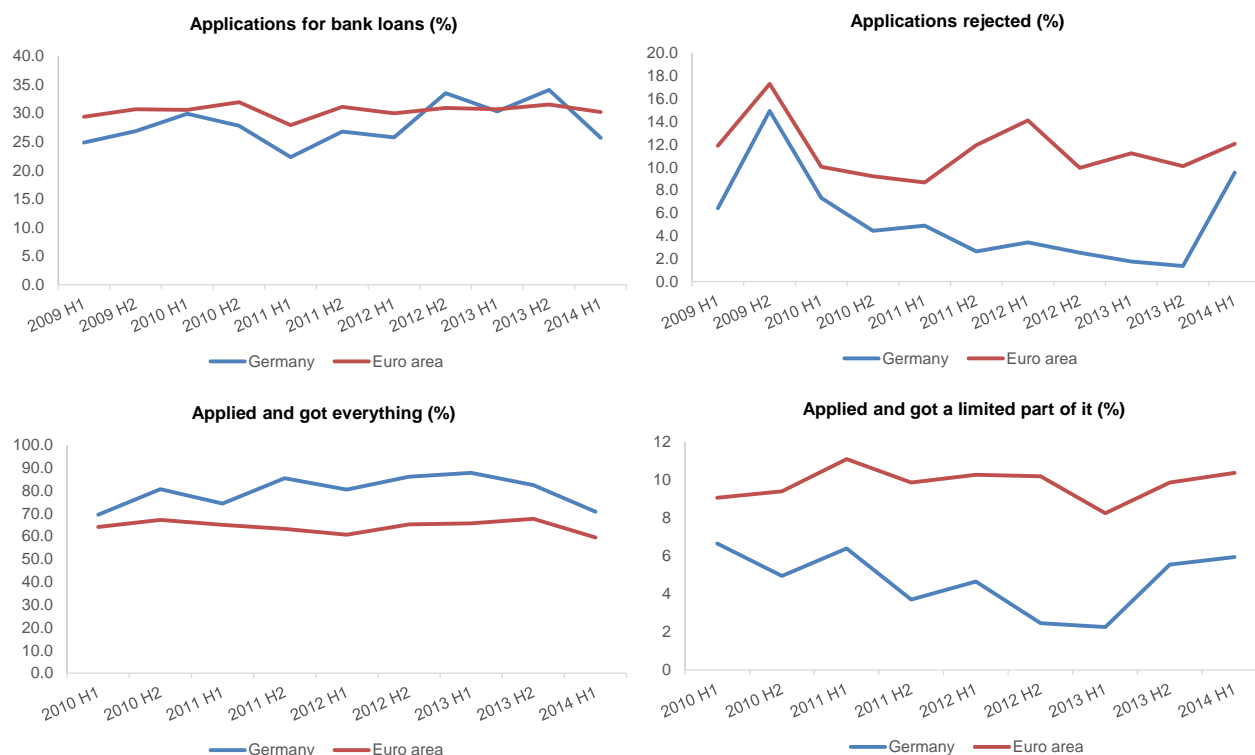
Source: SAFE, ECB/ EC 2015

Looking at applications for credit lines, bank overdrafts and credit card overdrafts in Germany, we see a similar story. Only 22% of SMEs applied for at least one of the three forms of credit in 2014, compared to 32% in the EU. However the UK has a similar figure of 21%.

In Germany, the success rate of applications for this form of credit, although relatively high, is lower than that of loans. 67% of SMEs that applied got everything and a further 11% got most of it (see Figure 18). UK SMEs have experienced similar success rates with 70% and 9%, respectively.

Figure 18: Outcome of applications for credit lines, bank overdrafts or credit cards overdrafts in the UK, Germany and Italy 2014
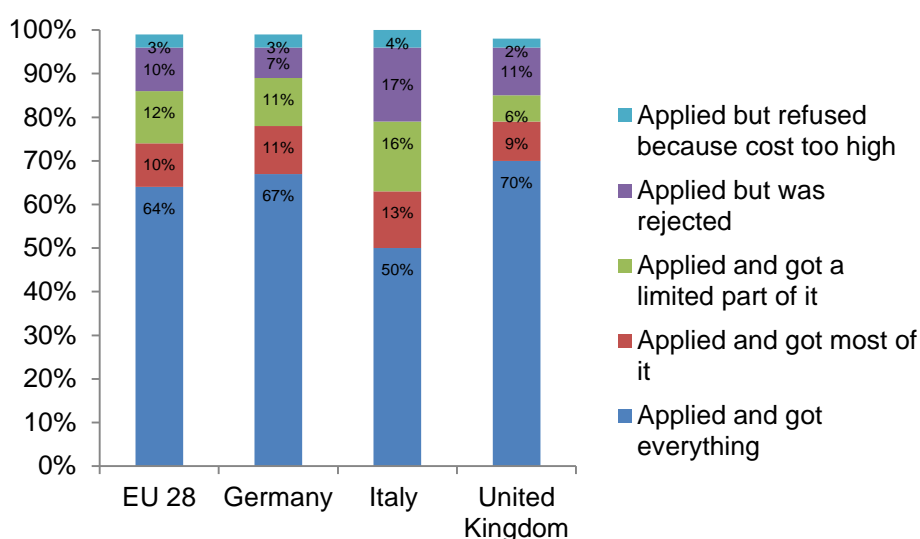
Source: ECB 2014, Survey on the access to finance of enterprises

In addition, the size of loans that German SMEs take out is generally larger than SMEs in the rest of Europe, as Figure 19 illustrates. According to these finding, around 1 in 5 SME loans in Germany are for more than EUR 1 million. This is consistent with the size distribution of SMEs in Germany relative to the rest of Europe, with German SMEs being on average larger (see Figure 7).

Figure 19: The distribution of SME loan size in Germany and the EU-28
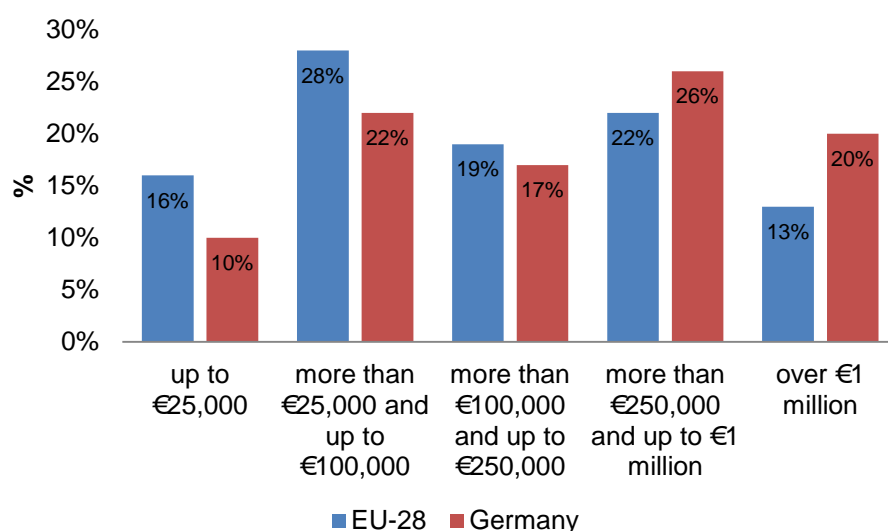
Source: ECB SAFE survey. Data based on size of loans taken in final 6 months of 2014.

These findings suggest that the availability of loans for SMEs in Germany is relatively high. To understand how this translates into aggregate market outcomes, it is instructive to consider the evolution of the stock of SME loans.

The central bank in Germany does not record the value of loans extended specifically to SMEs. However, the ECB does provide information on small loans, which are defined as loans of less than EUR 1 million. As noted by the OECD, in the absence of better data, this can be used as a proxy for SME loans. However, there are some weaknesses with this approximation as this can exclude a large proportion of SME loans, while at the same time it may include loans to large firms.

The stock of small business loans in Germany was EUR 137 billion in December 2014. This is equivalent to approximately 5% of GDP and approximately 15% of the total loan stock. Since 2003, the stock of small business loans in Germany, both as a proportion of all business loans and as a proportion of GDP has declined, as Figure 20 illustrates.

Figure 20: The stock of business loans as a proportion of GDP in Germany
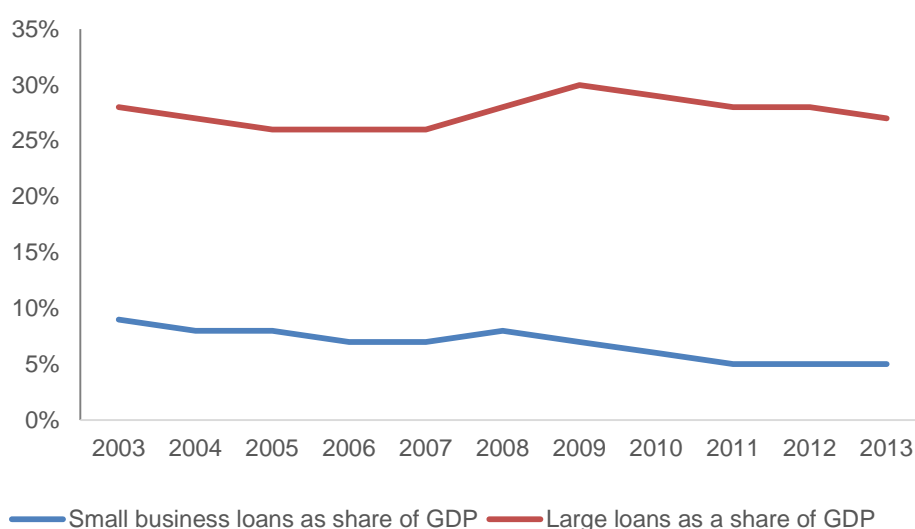
Source: ECB
Note: Small business loans are business loans of less than EUR 1million. Large business loans are business loans of more than EUR 1million.

The cost of loans for SMEs

The cost of small business loans has fallen in recent years in line with decreases in the ECB base rate. In 2014, the average interest rate on small business loans was 2.97%. Compared to large loans, there appears to be a premium on the interest rate charged on small business loans with short tenors. However, when the tenor is longer the margin tends to be smaller.

Figure 21: Interest rates on business loans in Germany, 2007-2014 (1 and 5 year loan terms)
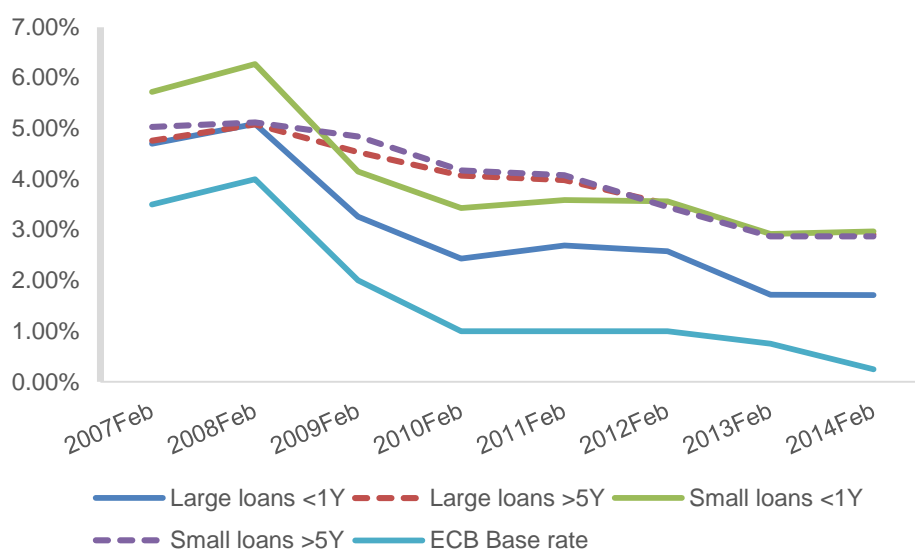
Source: ECB

SME relationships with banks

Survey evidence suggests that German SMEs are generally happy with their banks. Only 5.1% of the surveyed German SMEs said interest rates or prices are too high, which is below the euro area average of 10.8%. Similarly, 69% reported feeling confident about talking with banks and obtaining desired results.[59]

While the data on the extent to which SMEs switch between banks is limited, qualitative research suggests switching is not particularly high in the German market. Known as the "Hausbank" relationship, German SMEs have traditionally given priority to one bank which runs the core of their banking business. Banks give priority to their "Hausbank" customers, the relationship is long-term, stable and regarded as a partnership.[60]

During the 1980s, however, an increasing number of SMEs enlisted a second bank for the main business. According to Quack and Hildebrandt (1995), this trend towards a "double Hausbank" is the result of more sophisticated financial management in German SMEs and increasing competition in the banking sector.

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[59] ECB SAFE survey

[60] Sigrid Quack and Swen Hildebrandt, 1995: "Hausbank or Fournisseur? Bank Services for Small and Medium Sized Enterprises in Germany and France"

4.4 Government intervention

German public promotion banks play an important role in improving access to finance to SMEs. The KfW-Group, the German government-owned promotion bank, is the key provider of publicly backed finance for SMEs and implements most of the programmes aiming at providing finance to SMEs. The Federal Ministry of Economic Affairs and Energy (BMWi) also co-operates with the KfW-Group.

A key feature of the German system is the so-called "Hausbankenprinzip" (the house bank principle). The principle implies that a firm applies for a government backed loan not via the promotion bank (i.e. KfW) but via its local housebank that can be a savings, co-operative or commercial bank. The Hausbank is liable for the firm's loan provided by the promotion bank. In other words, even when a SME obtains a government backed or direct government loan, it is the local "Hausbank" that guarantees the loan.

Some main programmes providing loans to SMEs (BMWi, 2015):

- **High-Tech Gründerfonds (High-Tech Seed Fund):** The fund finances high-tech enterprises in their seed phase and is funded by a public-private partnership. The seed finance aims at enabling technology start-ups to take their R&D plans through to the preparation of a prototype, a "proof of concept" or to market launch. The fund also provides additional assistance in the form of access to coaching and network contacts. The total volume of the fund amount to EUR 573.5 million. The term of the loan agreement is 7 years and no collateral is required.

- **ERP[61]-Gründerkredit Universell (ERP Start-up Loan – Universal):** The scheme provides start-ups and SMEs younger than three years with loans at favourable interest rates. It covers investments both in Germany and abroad which require medium- or long-term financing and which are expected to produce a sustainable economic benefit. The scheme supports the new creation or takeover of an enterprise, the acquisition of a financial interest in an enterprise, part-time businesses if the plan is to achieve full-time operation in the medium term and the consolidation of a young enterprise in the first three years of its existence. The total amount committed has been EUR 694 million in 2011 and EUR 2.1 billion in 2012. The loans have a fixed favourable interest rates for up to 10 years and the maximum loan is up to EUR 10 million per project. Collateral is required according to standard banking practices.

- **ERP regional development programme:** The scheme serves the long-term financing of investments in German regional aid areas at a favourable interest rate (both Eastern and Western states). The annual amount of the planned budget has been EUR 410 million in 2010. The scheme provides standard bank loans with collateral up to 20 years with favourable interest rates and is targeted to SMEs for at least three years on the market.

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[61] European Recovery Programme

- ***KfW-Unternehmerkredit – Fremdkapital (KfW Entrepreneur Loan – Debt Capital):*** The scheme provides firms older than three years with loans at favourable interest rates for investments in Germany and abroad, which require medium- or long-term financing. The total amount committed has been EUR 6,338 million in 2011 and EUR 7,811 in 2012. The scheme is not only targeted at SMEs, but SMEs are subject to more favourable interest rates.

- ***ERP-Kapital für Gründung (ERP Capital for Start-ups):*** This scheme provides long-term subordinated loans that are intended to strengthen the equity base and pave the way for the acquisition of additional debt capital (shows how important equity is for German SMEs). The total amount committed has been EUR 168 million in 2011 and EUR 138 million in 2012.

In addition to those programmes directly providing loans to SMEs, the Federal Ministry of Economic Affairs and Energy provides consulting services to founders of new businesses to facilitate them to find the appropriate funding scheme, and to help them overcome financings problems (The BMWi Förderberatung).

5 Review of SME Bank Lending in Italy

5.1 The role of SMEs in the Italian economy

As with Germany, an SME, defined by the European Commission, is a business or company that has fewer than 250 employees and has either (a) annual turnover not exceeding €50 million or (b) an annual balance-sheet total not exceeding €43 million.[62]

SMEs account for over 3.7 million companies (or 95%)[63], and in particular microenterprises, make up the vast majority of companies in Italy. SMEs generate 80% of employment and almost 70% of value added in Italy, with much of this accounted for by micro-enterprises.

Figure 22: The contribution of SMEs to the Italian economy in 2013

Share of number of enterprises

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[62] Full definition - SMEs according to their staff headcount or annual balance sheet total. A medium-sized enterprise is defined as an enterprise which employs fewer than 250 persons and whose annual turnover does not exceed EUR 50 million or whose annual balance-sheet total does not exceed EUR 43 million. A small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million. A microenterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million (European Commission, 2015).

[63] Enterprise and Industry 2014 SME Fact Sheet, 2014

Share of employment
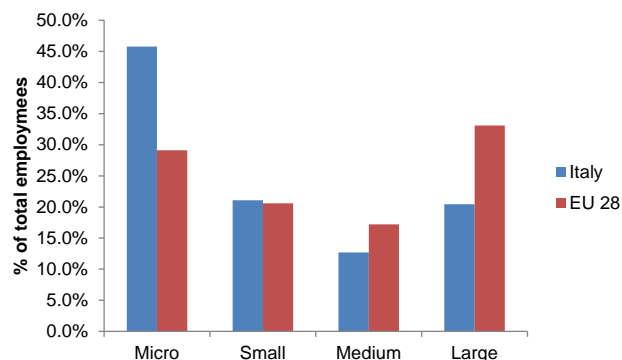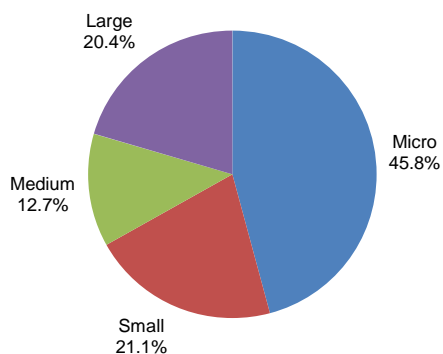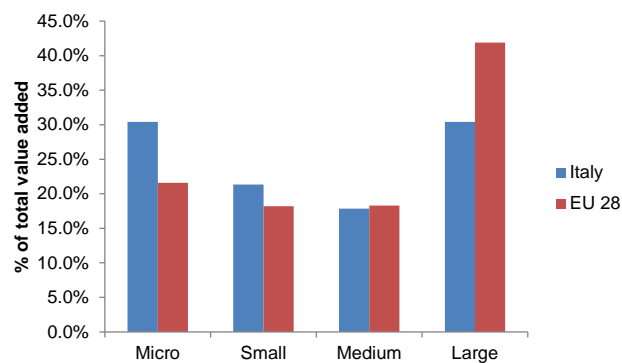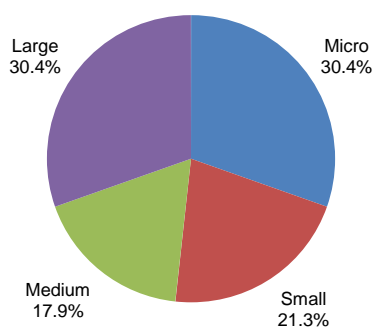
Share of value added

Source: European Commission report based on data from the Structural Business Statistics database (Eurostat)[64]

SMEs are also on average younger than the European and UK average and have a lower turnover. 79% of Italian SMEs are less than 2 years old (71% in the UK) and 37% have a turnover of less than €500,000 a year (25% in the UK).

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[64] European Commission (2014). Annual Report on European SMEs 2013/2014 – A Partial and Fragile Recovery.

Figure 23: The age and turnover profile of SMEs in Italy
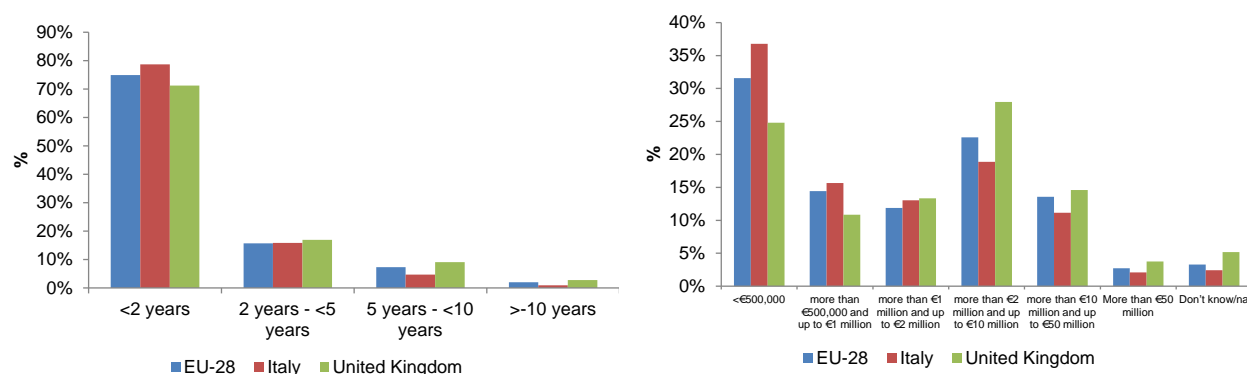
Source: ECB SAFE

According to the European Commission, Italian SMEs were particularly badly impacted by the recent financial crisis (European Commission, 2014). According to industry research, the overwhelmingly large share of microenterprises seems to make it harder for the Italian economy to withstand macro-shocks and to adjust to changes in access to finance (Deutsche Bank Research, 2014).

5.2   Access to finance

Recent survey evidence suggests that external funding is the second most challenging problem for SMEs in Italy: in 2014, 14% of SMEs surveyed in SAFE indicate that access to finance as their most pressing problem. This figure, although similar to the UK with 12% remains noticeably higher than Germany with only 9% of SMEs having external funding as their most challenging problem. This may in part reflect the relatively large share of microenterprises, which are likely to find it particularly difficult to access different types of finance.

Figure 24 describes the proportion of Italian SMEs using different sources of finance. It indicates that bank finance is even more important to SMEs in Italy than in the rest of Europe. In the ECB SAFE survey, 16% of Italian SMEs reported applying for or using a loan in the past 6 months, compared to 8% of British SMEs. In addition, 25% have also stated their needs have increased for bank loans, compared to only 17% in both Germany and UK.

Figure 24: Proportion of SMEs in Italy that used different sources of finance in the 6 months between April and September, 2014
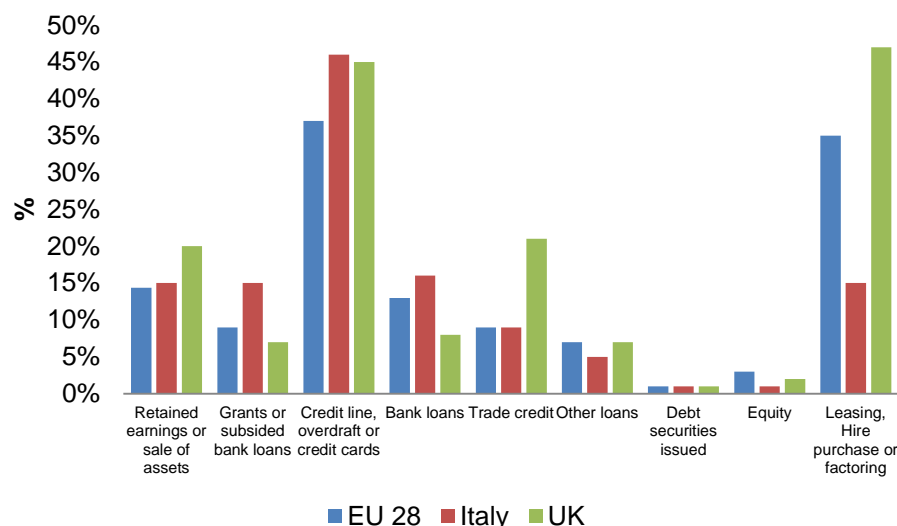
Source: ECB 2014, Survey on the access to finance of enterprises

The take-up of alternative finance is generally low in Italy. It is estimated that in 2014 the total value of alternative finance transactions in Italy was EUR 8.2 million, whereas in the UK it was EUR 2,337 million.[65]

5.3   SME bank lending

5.3.1   Historical context

Traditionally, the Italian banking system comprised privately-owned, unregulated banks. However, a series of crises in the 1920s and 1930s led to the introduction of regulation which, although it brought financial stability, restricted competition.[66] Credit institutions were limited to serving a particular geographical area: a restriction that remained in place for half a century. Competitive restrictions were loosened in 1977 under the EU's First Banking Directive, which stipulated that banks must be able to offer their services across borders within the EU Member States on terms equivalent to those offered domestically. This effectively widened the relevant market, inviting competition in all EU Member States from foreign banks.

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[65] Ernst & Young and University of Cambridge, 2015.

[66] Gigliobianco, A. (2009), "Innovation and regulation in the wake of financial crises in Italy (1880s-1930s)"

The EU's Second Banking Directive, introduced in 1989, relaxed regulation such that banks regulated in their home country were free to operate EU-wide, therefore reducing entry barriers to foreign markets. Following its introduction, the Italian government privatised community-owned banks through the introduction of the Amato Law (1990), the Dini Law (1994), and finally the Ciampi Law (1998). Legislative Degree 481/1992 allowed banks to become universal banks and lifted restrictions on their activities; further restrictions were lifted in 1993, replacing those introduced in the 1930s. Together, these reforms left the Italian banking sector open to consolidation, with the number of commercial banks falling by almost a quarter during the 1990s. Formalisation of the Economic and Monetary Union (EMU) in 1992 through the Maastricht Treaty further widened the scope for Italian institutions, among those of other EU countries, to compete abroad. The result of this wave of deregulation and cross-border agreements was a more open and competitive banking sector.

Figure 25: Key market events in Italy 1930-2008

EU - regulatory framework

National regulatory framework

1977: First Banking Directive
- First step toward liberalisation of the banking market by applying the principle of non-discrimination against businesses from other MS

1989: Second Banking Directive
- Provides for minimal capital requirements for retail banks
- Creates the European Passport that enables banks to operate across the EU without having to seek approval of national regulators

1992: Maastricht Treaty
- The Maastricht Treaty enshrines the Economic and Monetary Union (EMU) The decision to form EMU had already been taken in 1991

1990s: Privatisation of savings banks
1990: Amato Law
1994: Dini Law
1998: Ciampi Law

1990s: Regulatory reform
1992: Legislative Decree
1993: New Banking law replacing that of 1936

1936: Banking Law

1930   1990   2000   2010

1990s: Merger wave
- The number of commercial banks dropped from 1,100 to 841 between 1990 and 2000

2008: Financial crisis

Tight regulatory framework
- Each credit institutions was assigned a geographical area of competence
- Mandatory specialisation
- No universal banks

Deregulation
- Reform of banks' ownership structure: privatisation of savings banks
- Reform of regulatory framework: Introduction of universal banks, implementation of EU Directives on financial integration

65

5.3.2 Market structure

In Italy there are three types of domestic banks:

- Limited liability banks;

- Co-operative banks; and

- Mutual banks.

Despite differences in ownership structure, limited liability banks and co-operative banks in Italy play a similar role in the market as profit-seeking institutions. Mutual banks, on the other hand, are subject to specific regulations and pursue mutual ends. They are very small and are typically organised around regional federations. Typical customers of a mutual bank are small businesses and households.[67]

At the end of 2012, there were 706 credit institutions with total assets worth approximately 220% of GDP.[68] Over half of these banks are mutual banks, however due to their relatively small size, they only account for a combined total of 6.3% of banking sector total assets. The majority of the banking sector, by share of assets, is accounted for by limited company banks.

Figure 26: Split of banks and assets by licence type
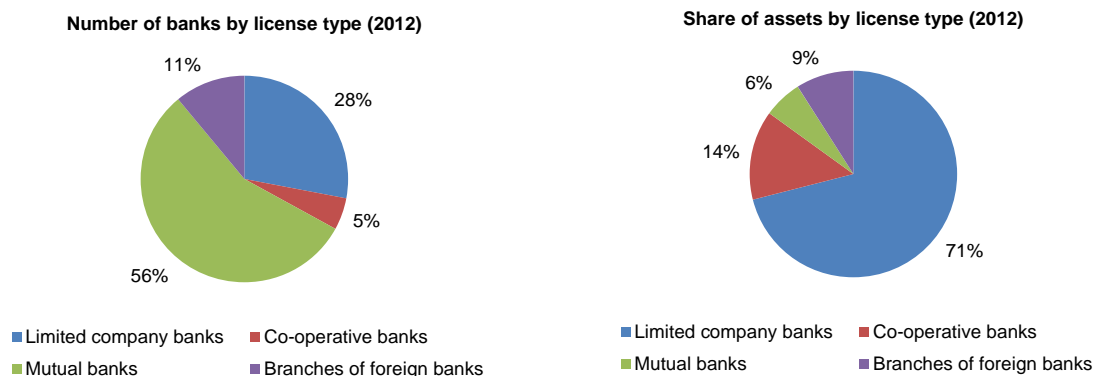
Source: Bank of Italy, reported in IMF (2013)

The sector has become slightly more concentrated over the past decade, following a major restructuring in the early 1990s involving the divestment of state holdings.

Nonetheless, there are still many small co-operative and regional banks operating under different local economic environments (IMF, 2013).

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[67] Banca Intesa, 2004. "The Italian banking sector: an overview."

[68] IMF, 2013. "Italy: Financial system stability assessment."

Standard national level measures of market concentration are lower than in the UK but higher than in Germany, as Figure 27 illustrates.

Figure 27: Market concentration in Italy
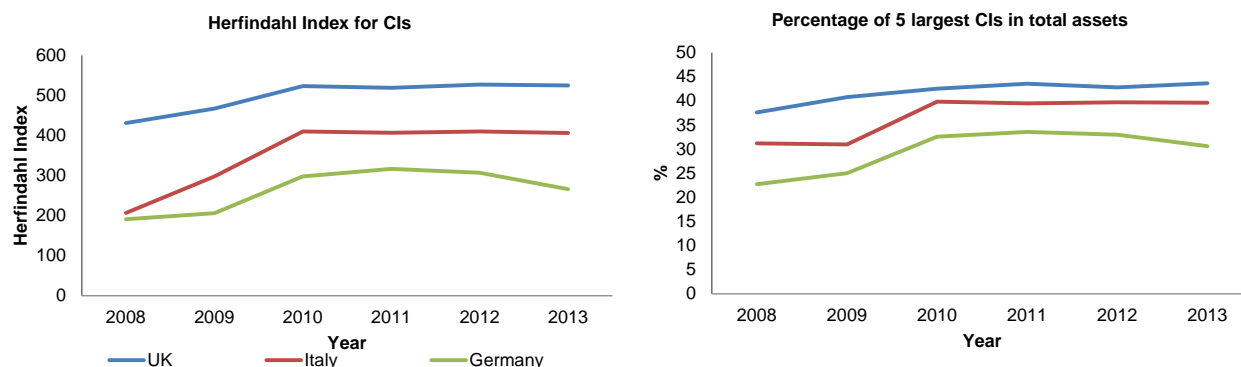
Source: ECB Statistical Data Warehouse, Structural Financial Indicators

5.3.3 Serving the needs of SMEs

The availability of bank finance to SMEs

Survey data from the European Commission suggests that SME loan application rates are significantly higher in Italy than in the UK and than the EU average. In the last 6 months of 2014, 35% of Italian SMEs applied for a loan, compared with 18% in the UK and 28% in the EU.

SME bank loan applications have relatively high rejection rate and proportionally fewer SMEs in Italy get everything they applied for. Only 54% of bank loan applications made by Italian SMEs in the final 6 months of 2014 were accepted under the conditions sought by the SME, while 19% of applications were outright rejected.

Figure 28: SME loan applications in Italy

Applications for bank loans (%)

Applications rejected (%)

Applied and got everything (%)

Applied and got a limited part of it (%)
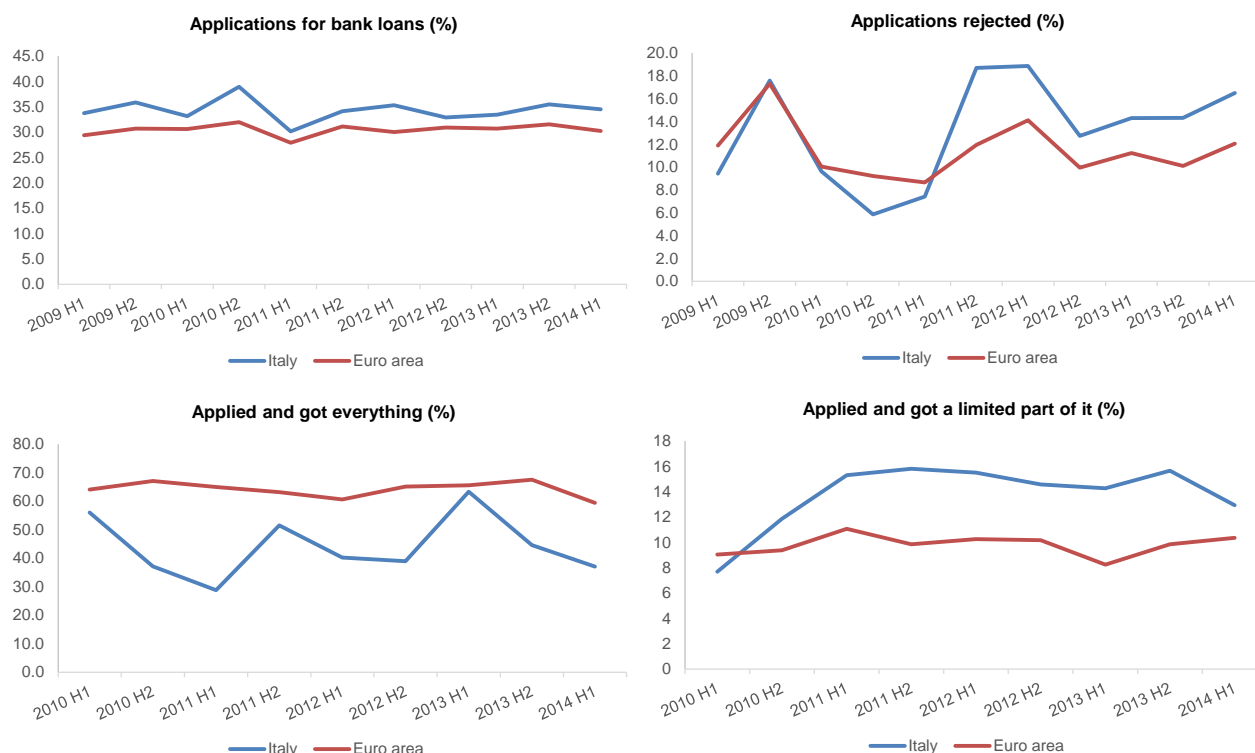
Source: ECB SAFE

Looking at applications for credit lines, bank overdrafts and credit card overdrafts in Italy, figures are even higher. 42% of SMEs applied for at least one of the three forms of credit in 2014, compared to 32% in the EU and a mere 21% in the UK.

In Italy, the success rate of applications for this form of credit, is however significantly lower than the rest of EU. Only 50% of SMEs that applied got everything and a further 13% got most of it. The EU average and UK SMEs have experienced far more success. The EU average in 2014 was 64% and 10%, and UK rates were 70% and 9%, respectively.

68

Figure 29: Outcome of applications for credit lines, bank overdrafts or credit cards overdrafts in the UK, Germany and Italy 2014
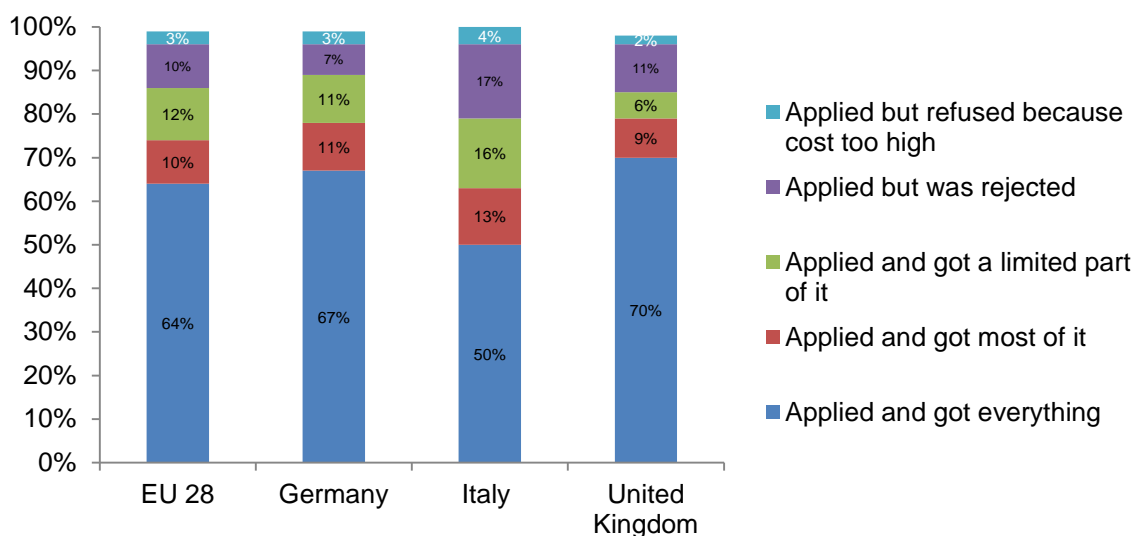
Source: ECB 2014, Survey on the access to finance of enterprises

The size of loans that Italian SMEs take out is typically smaller than SMEs in the rest of Europe, as Figure 30 illustrates. According to these findings, approximately half of SME loans are for less than EUR 100,000 while only 6% of SME loans in Italy are for more than EUR 1 million. This is in line with the size distribution of SMEs in Italy, which is dominated by microenterprises.

Figure 30: The distribution of SME loan size in Italy and the EU-28
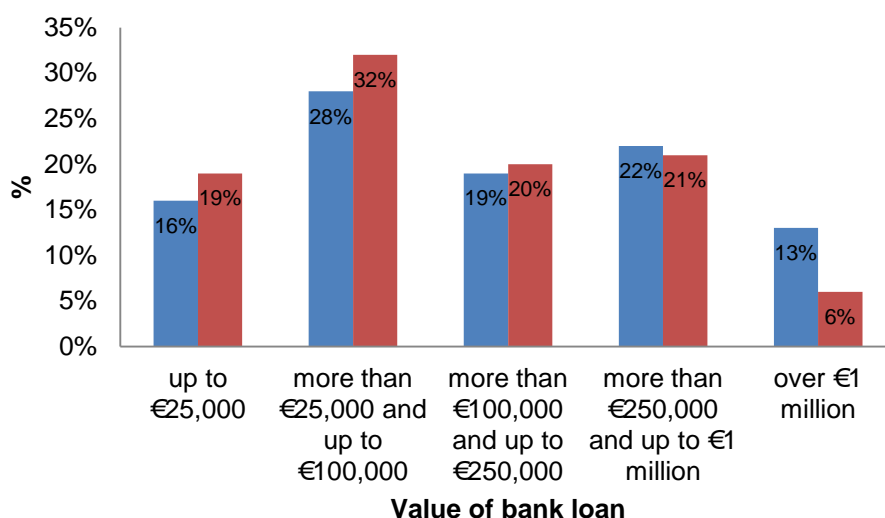
Source: ECB 2014, Survey on the access to finance of enterprises

The lower value of SME bank loans in Italy means that the stock of small business loans is likely to be a better proxy for the stock of SME bank loans. As a proportion of GDP, the

stock of small business loans is significantly higher in Italy than it is in Germany, at around 20%.

Figure 31: Stock of business loans as a proportion of GDP in Italy
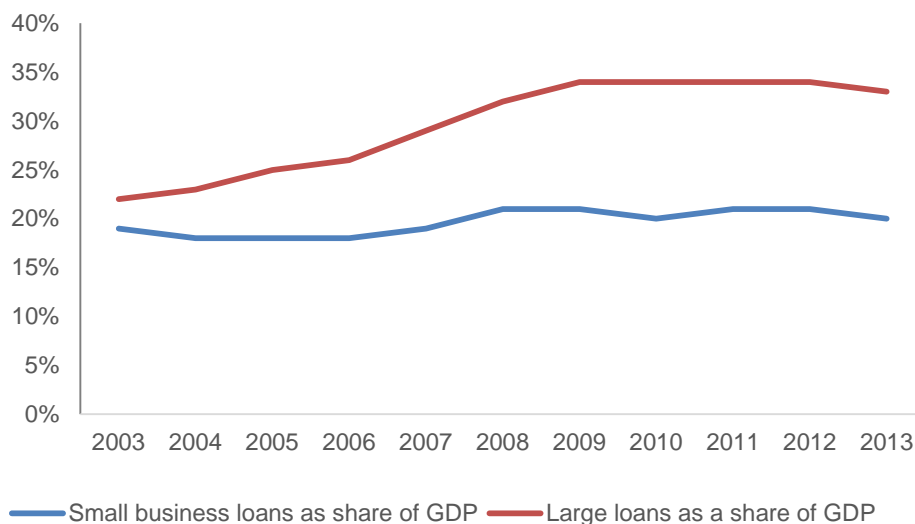
Source: ECB
Note: Small business loans are business loans of less than EUR 1million. Large business loans are business loans of more than EUR 1million.

The cost of loans for SMEs

The cost of small business loans has fallen in recent years in line with decreases in the ECB base rate. In 2014, the average interest rate on small business loans was between 5% and 6%.

Figure 32: Interest rates on business loans in Italy, 2007-2014 (1 and 5 year loan terms)
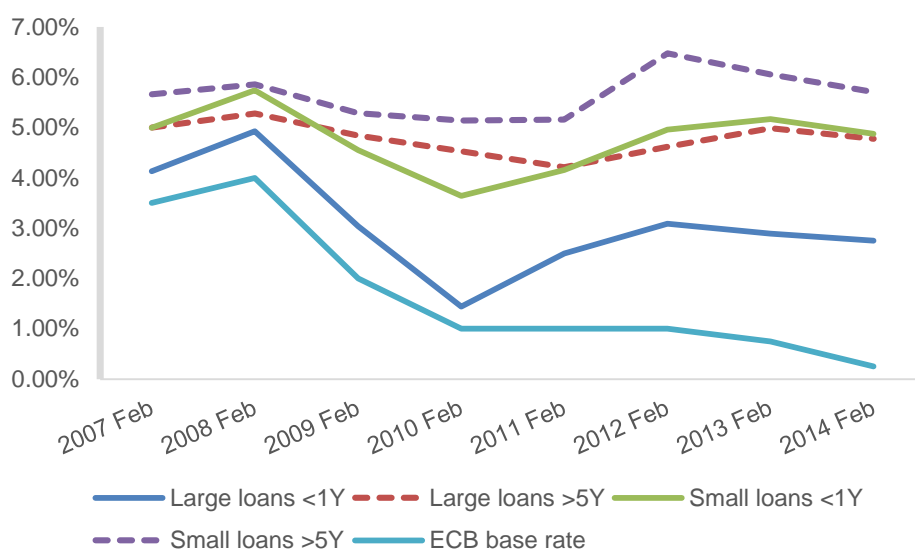
Source: ECB

Data from the SAFE survey suggests the distribution of interest charges on loans to Italian SMEs is not evenly distributed - the mean interest rate on commitment loans is 5.1% while the median rate is 3.7%. This could arise if there is a long tail of loans being accepted with a relatively high interest charge.

SME relationships with banks

Relationship lending is the core model of lending adopted by many Italian banks. A survey conducted by the Bank of Italy in 2007 found that many medium and large banks use "soft" information, such as qualitative information on the firm's governance in their credit scoring models.[69]

At the same time, one of the distinguishing features of the Italian banking market is multiple-bank lending. The median number of banks with which an SME has a relationship was 7 in 2003. While there appears to be a positive relationship between size of firm and number of bank relationships, even very small firms appear to have a high number of bank relationships, as Figure 33 illustrates.

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[69] Albareto et al. (2008).

Figure 33: The number of banking relationships by firm size in Italy
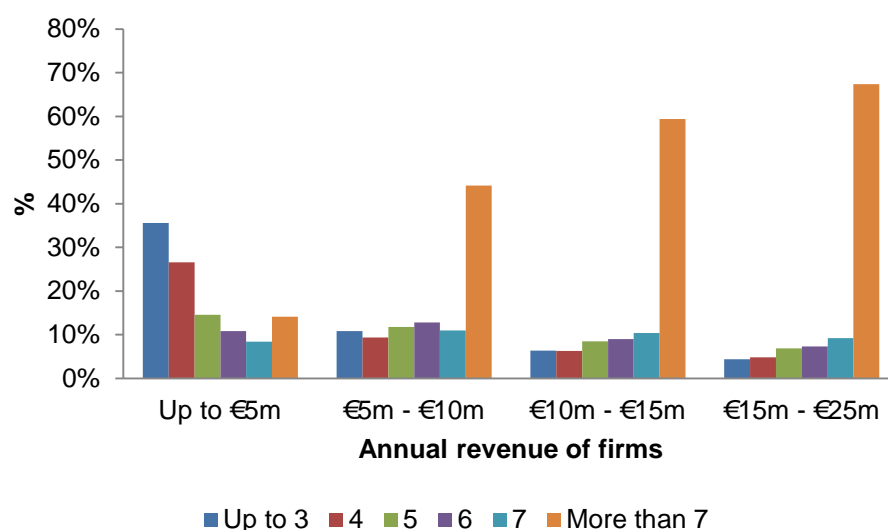
Source: Credit Register and UBI Datawarehouse Corporate, reported in Vulpes (2005)

While this appears to be very high compared to other EU countries, we can draw some conclusions from it. A number of academic studies have linked the existence of multiple-bank lending relationships in Italy to the governance structure, informational transparency and limited protection for third party creditors. For example, Carletti et al (2004) finds that the greater is the cost to banks of monitoring the riskiness of their customers, the higher is the degree of multiple lending.[70] This can be likened to a diversification tactic by banks.

Italian SMEs also appear to have relatively high collateral requirements. Zecchini and Ventura (2009) report that 83% of bank loans to small enterprises are backed by guarantees, typically in the form of a real asset pledge.[71] This can again be linked to the informational asymmetry that is likely to be more pronounced in the SME market in Italy, given the high proportion of microenterprises.

5.4   Government intervention

The Italian government has undertaken several of initiatives in recent years to facilitate SME access to credit and support their liquidity needs. Unlike Germany or the US the responsibility for implementing the policies is in the hands of a number of institutions:

- The Central Guarantee Fund (CGF) is managed by **Mediocredito Centrale** S.p.A. (MCC), which operates by following the directives of the **Ministry of Economic Development.** The CGF facilitates SME access to credit by providing public guarantees and counter guarantees. Operational for more than a decade, the CGF

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[70] Carletti, Cerasi and Daltung, 2004. "Multiple-bank lending: diversification and free-riding in monitoring."

[71] Zecchini and Ventura, 2009. "The impact of public guarantees on credit to SMEs." Small Bus Econ.

was the chief instrument easing SME credit constraints during the crisis. Between 2009 and 2012 it provided more than EUR 16 billion in guarantees for EUR 31 billion in direct loans.

- The state-owned **Cassa Depositi e Prestiti (CdP)** takes the leading role in coordinating a variety of public initiatives to finance and promote the economic development of Italian SMEs. CdP and the Italian Banking Association jointly set up in January 2012, the Nuovo Plafond PMI Investimenti programme which aims at facilitating SMEs' access to bank credit by channelling funds at favourable conditions through participating commercial banks. The CdP supplies the banking system with earmarked funds from postal savings at reduced interest rates to support SMEs. After the exhaustion of the first EUR 8 billion allocation, which benefited 53,000 firms, in 2012 CdP made available a further EUR 10 billion, of which just under EUR 2 billion had been absorbed by the banking system through April 2013.

- In order to support SMEs' equity financing, in 2010, the Italian government established the investment fund **Fondo Italiano d'Investimento** (S.p.A) together with a **number of sponsoring banks and trade associations**.

Data from the OECD (2014) suggest that Italian SMEs increasingly obtain government guaranteed loans instead of obtaining direct government loans. While government guaranteed loans to SMEs (<250 employees) by the CGF has increased by 257% between 2007 and 2012, direct loans granted to SMEs by the Italian government decreased by 29%.

6 Review of SME Bank Lending in the USA

6.1 Practical considerations for the analysis of the US market

At the start of this section it is important to note that the US is different from the UK, Germany and Italy in many ways that are relevant to the analysis in this study. In particular:

- The standard definition of SMEs that is in widespread use in Europe is not commonly adopted in the US. A more usual definition is "small business", which is defined as any firm with 500 or fewer employees (US Census Bureau of Labor Statistics and the Small Business Administration, SBA).[72]

- Other standard SME measures relating to firm size, activity, and finance experience that are recorded by European institutions such as the ECB, are not always recorded with the same methodology or with the same consistency in the US as they are in Europe. Moreover, where they are recorded, they are often recorded at the state level and not the national level and there exist differences between states.

- The size and diversity of the country are such that the firm mix and the issues faced by SMEs in one state may be very different from those in another state. As a result, on many issues it is not advisable to draw conclusions about the US as a whole.

Because of these features, there are a number of areas of analysis in which the data availability is not sufficient to draw conclusions. Moreover, where there is data, the comparability of the US market with the UK is more limited than it is for Germany or Italy.

While there is nothing that can be done about what data is recorded, the study seeks to mitigate against some of these comparability issues by investigating particular issues at a state level and drawing out any differences in market conditions across the states. The state-level view is taken for New York, California, Texas and Florida. As well as being a

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[72] The Small Business Administration (SBA) has two different approaches for defining small firms. The first approach is to define any firm with less than 500 employees as "small." This practice was first established by the Small Business Act of 1953. However, the same Act required the SBA to establish a size standard that "should vary to account for differences among industries." Second, the Act called on the SBA to "assist small businesses as a means of encouraging and strengthening their competitiveness in the economy." These two considerations are the basis for the SBA current methodology for establishing small business size standards. Broadly, any firm with 500 or fewer employees classifies as a small business, but that depends on the industry (e.g. in manufacturing the maximum number of employees may range from 500 to 1500, depending on the type of product manufactured).

diverse selection, these states have the highest levels of small business employment in the US.[73]

6.2   The role of SMEs in the US economy

According to the SBA definition, small businesses accounted for 99.7% of all firms in 2010. In absolute terms this accounts for around 30 million businesses in the US, employing just under half of the private sectors' employees, paying about 43% of the total private sector payroll, generating about 64% of net new private sector jobs, and creating about 46% of the private-sector output (OECD, 2014). The most important sectors for small business employment are services and construction (SBA, 2015).

Figure 34: US employment by size of firm, 2013
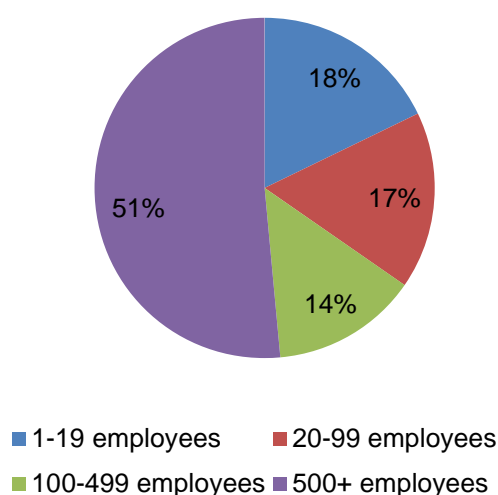
Source: SBA Profiles 2014-2015

6.3   Access to finance

Access to finance appears to be an issue for many small businesses in the US, but the degree to which it is a problem appears to vary by state. A 2012 study by the National Federation of Independent Businesses found that more small businesses identified the inability to obtain credit as a problem than the number that said they had no finance problems. However, this ranked behind unpredictability of business conditions and slow or poor sales as a finance problem.

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[73] In 2012, California had around 6.5 million, Texas 4.3 million, New York 3.9 million, and Florida 3.0 million small business employees (SBA, 2015).

Figure 35: Barriers to growth – share of respondents identifying their most important finance problem
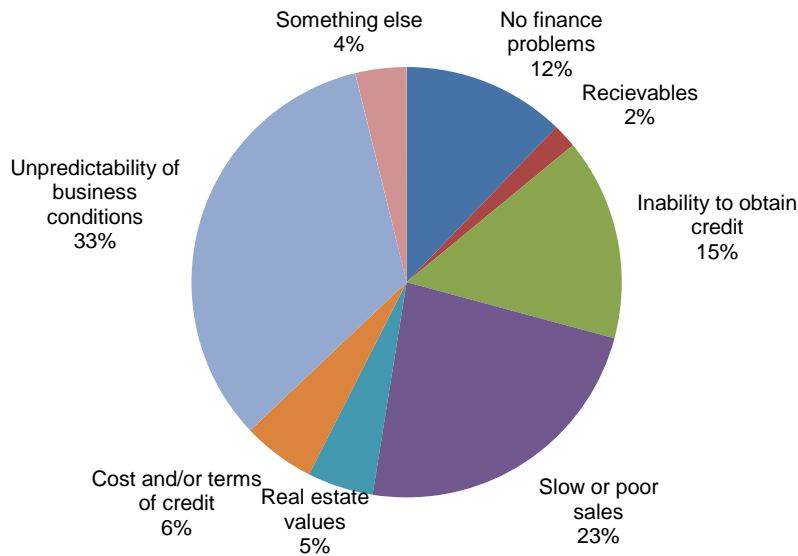
Source: NFIB, 2012; Percentage of total number of small businesses surveyed; "What is the most important finance problem facing your business today?"

As in the UK, Germany and Italy, bank finance appears to be the most important source of finance for small businesses in the US. In the NFIB survey, 85% of small businesses reported that their primary financial institution is a bank and over half of small businesses said they would go to a bank for a loan, rather than a finance company, credit union or any other provider. The survey also suggests that:

- Small businesses are more likely to use multiple banks than in the UK – 55% of small businesses report using more than one bank; and

- Local banks play an important role in small business lending.

Figure 36: Small Business Banking Relationships

Most small businesses use one financial institution

- None 3%
- Three or more 22%
- Two 32%
- One 43%

Most small businesses go to banks when applying for a loan

(Bank ~57%, Finance company, such as GE Credit ~26%, Other ~9%, Credit union ~2%)

Most small businesses rely on banks as primary financial institution

- No primary institution (~1%)
- Savings and loan (~1%)
- Other (~5%)
- Credit union (~7%)
- Bank (~86%)

(Regional bank ~41%, Local bank ~57%)
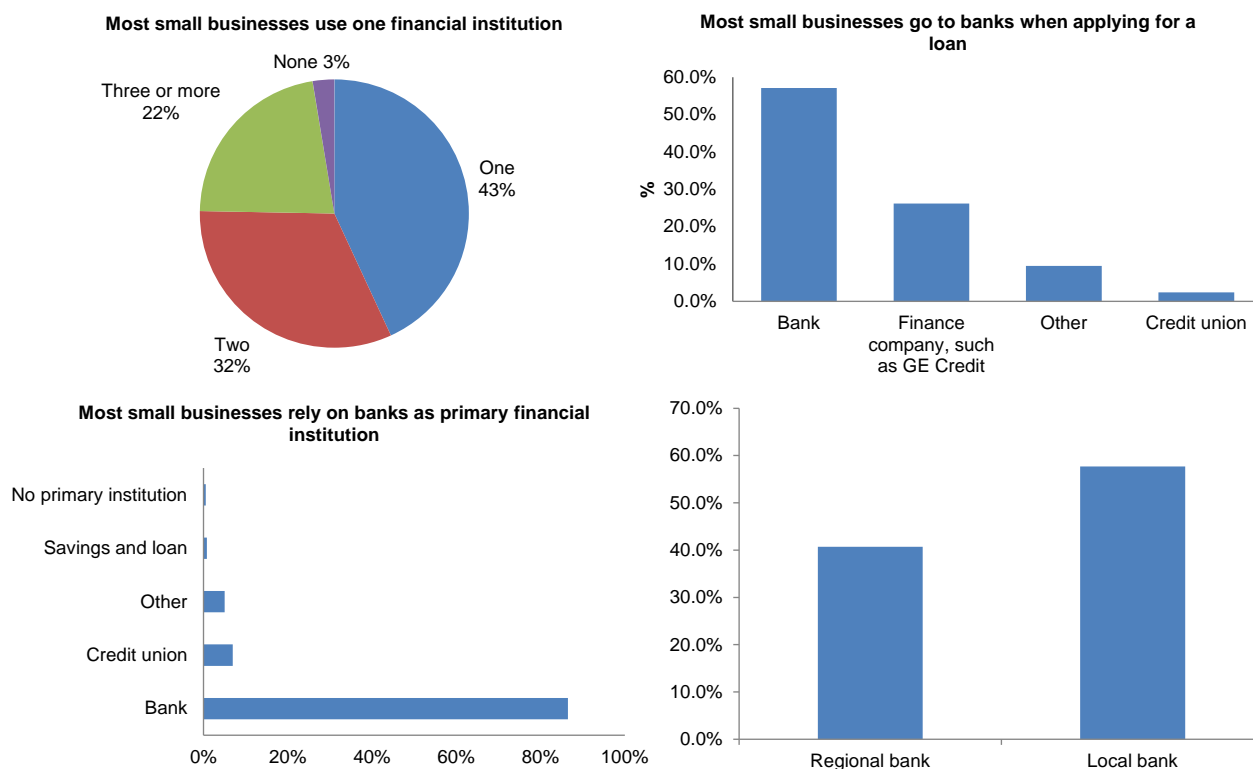
Source: NFIB, 2012; Percentage of total number of small businesses surveyed

Table 5: SME access to finance challenges in the US

State	Scale of the challenge
California	The Small Business California Survey (Q3 2014) finds that access to capital is a high priority for about a quarter of small businesses. However, several other issues, such as energy costs, the rising cost of health and finding the appropriate skills for the business rank as bigger concerns for Californian small businesses
New York	In 2013, the New York Federal Reserve surveyed 812 small businesses in New York, New Jersey, and Connecticut. It found access to capital to be the most important growth challenge.
Texas	The results of the Texas Small Business Needs Assessment Poll by the Federal Reserve Bank of Dallas suggests that while access to capital is one of the biggest growth challenges for small businesses, finding the right workers and complying with government regulation are more pressing concerns.
Florida	The Florida Small Business Index Survey (2014) found that 22% of surveyed businesses cite access to capital as the biggest issue they are facing.

Source: California Bank & Trust, Small Business California, Federal Reserve Bank of New York, Federal Reserve Bank of Dallas, Florida Chamber Small Business Council.

6.4   SME bank lending

6.4.1   Historic context

The US banking market has undergone a number of significant changes over recent decades. Between the 1930s and the 1990s there was a relatively high degree of regulation in the sector and banks could not act as universal banks or open branches across different states. However, in the 1990s a trend toward deregulation reintroduced both interstate and universal banking. After 2008, the financial crisis led to a re-introduction of some regulatory requirements, such as the separation between commercial and investment banking.

At the same time there has been a major consolidation of the banking market in the USA. Between 1984 and 2010 the number of commercial banks and savings institutions fell from 14,495 to 6,532 as hundreds of banks failed and many more were absorbed through unassisted mergers. The number of banks fell by 12% between 2006 and 2010 alone.[74]

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[74] Wheelock, 2012. "Banking industry consolidation and market structure: Impact of the financial crisis and recession."

Figure 37: Key market events in the US, 1929-2010

1927: McFadden-Pepper Act

1933: Glass-Steagall Banking Act

1934: Securities and Exchange Act

1935: Banking Act

High regulatory requirements
No interstate banking
No universal banking

1929: Great Crash

2010: Volcker Rule

Re-introduction of regulatory requirements
Separation of commercial and investment banking

1990s: Consolidation wave

1930

1990

2008

Low regulatory requirements
Widespread operation of universal banks

Deregulation
Re-introduction of interstate and universal banking

1999: Gramm-Leach Bliley Act

1994: Riegle-Neal Interstate Banking Act

2008: Financial crisis

6.4.2 Structure of the bank sector in the USA

As of December 2014 there are 6,509 FDIC[75] insured banks in the USA. The US banking market has a bifurcated structure: it comprises a small number of very large banks and a large number of community banks, which typically have an asset size of less than $1 billion and operate at a local level. At the end of 2010, 4 banks accounted for 45% of total banking assets in the USA, while 6,524 community banks (94% of all banking institutions) accounted for just 15%.

Figure 38: Share of assets by bank category, year-end 2010
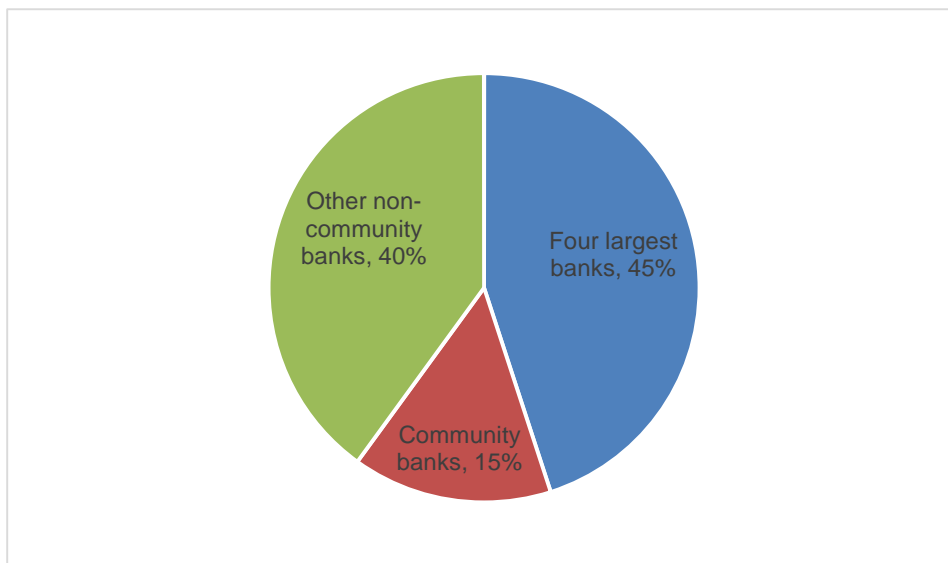
Source: FDIC research (2012)

Community banks typically focus on traditional banking activities, conducting lending and deposit-taking in relatively limited geographic areas. They are mainly relationship lenders and rely on specialised knowledge gained through long-term business relationships. As noted by the FDIC, this approach can be especially helpful for SMEs, which may struggle with the more formal requirements of the larger banks that operate on a transactional basis.[76]

Banking with community banks presents two key advantages for SMEs:

- Loan officers at community banks often base their lending decision on a variety of factors in reviewing applications for small business loans, whereas large banks typically rely on credit scoring models, which some SMEs may not perform well on.

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[75] Federal Deposit Insurance Corporation

[76] FDIC, 2012. "FDIC Community Banking Study."

- As lending often requires a close, long-term relationship with the borrower, lending to a small business with little credit history or collateral may be deemed too costly for large banks. However, this relationship is a standard part of community banks' business model.

Local/community banks have a key strength in their ability to lend to growing businesses. In the US, acceptance rates from community banks were as high as 90% compared to only 50% of other banks. This suggests a strong difference in the ability for community banks to support growing businesses compared to transactional banks.

On the other hand, community banks do not enjoy the economies of scale enjoyed by large banks. Hence lending to relatively transparent small businesses may be commercially more attractive for larger banks (Berger, 2004).

The importance of community banks in SME lending is reflected in the share of small business loans across the bank categories. In 2002 community banks accounted for just 12.8% of all commercial and industrial loans, but 32.5% of those under $1 million.[77] Furthermore, although community banks account for a small share of total banking activity in the US, they play an important role in some communities, especially in rural areas. In 2002, approximately 58% of bank branches in rural areas belonged to community banks and community banks accounted for approximately two thirds of all farm business loans in the US.[78]

As interstate banking was prohibited until 1997, banking markets in the USA developed around states and regions. Wheelock (2012) presents evidence on market concentration for 366 metropolitan statistical areas (MSAs) and non-MSA rural counties for the years 1999, 2006 and 2010. This evidence suggests that in metropolitan areas, the banking market is not as concentrated as the UK, but that in rural areas there it is significantly more concentrated. However, despite the increased consolidation in the US banking market, there has not been a significant decline in HHIs between 1999 and 2010.

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[77] Federal Reserve Bank of Kansas, 2003. "The role of community banks in the US Economy."

[78] Federal Reserve Bank of Kansas, 2003. "The role of community banks in the US Economy."

Figure 39: HHIs in the retail banking market in the USA 1999-2010

Source: Wheelock (2012). HHIs based on shares of deposits.

6.4.3　Lending to SMEs

The availability of bank loans to SMEs

Compared to European countries, data on the results of small business bank applications in the US is relatively limited. However, the data that is available indicates that loan applications are accepted substantially less often in the US than in the UK, Germany or the rest of the EU, especially for new loan applications.

A 2012 survey of SMEs[79] by the NFIB found that around a third of SMEs that applied for new loans in 2011 had their application rejected, while only 34% received what they applied for. For renewals and extensions of existing loans, the rejection rate was significantly lower, at 16%, while 59% of applications were fully approved. While SMEs have more success with renewals than new applications, rejection rates are still significantly higher than in the UK and Germany. Start-up loans have seen acceptance rates of around 38% according to the Joint Small Business Credit Survey report, 2014.

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[79] This study used a nationally representative survey of businesses with up to 250 employees and hence is comparable with the definition of SME used in Europe.

Figure 40: Small business loan applications in the US (2012)

New lines of credit

Extending or renewing an existing line of credit

- Obtained with satisfactory
- Obtained but with an unsatisfactory limit or terms
- Didn't take because the limit or terms were unacceptable
- Were not able to obtain line
- Don't know/Refuse

- Extended or renewed with a satisfactory limit and terms
- Extended or renewed with an unsatisfactory limit and terms
- Don't take because the limit or terms were unacceptable
- Were not able to extend or renew
- Don't know/Refuse

Source: NFIB, 2012; Percentage of total number of small businesses surveyed

In another survey of small businesses who applied for funding on an online lending platform, the proportion of loan applications that were accepted was less than one in four for applications made to large banks. While the acceptance rate of small banks in this survey was substantially higher at almost 50%, it is still very low compared to European averages. The sample on which these results are based may not be representative of all small businesses, as businesses with less than two years of history and an average credit score below 680 are excluded from the survey.[80]

Figure 41: Approval rate of loan applications in the US by credit institution, February 2015
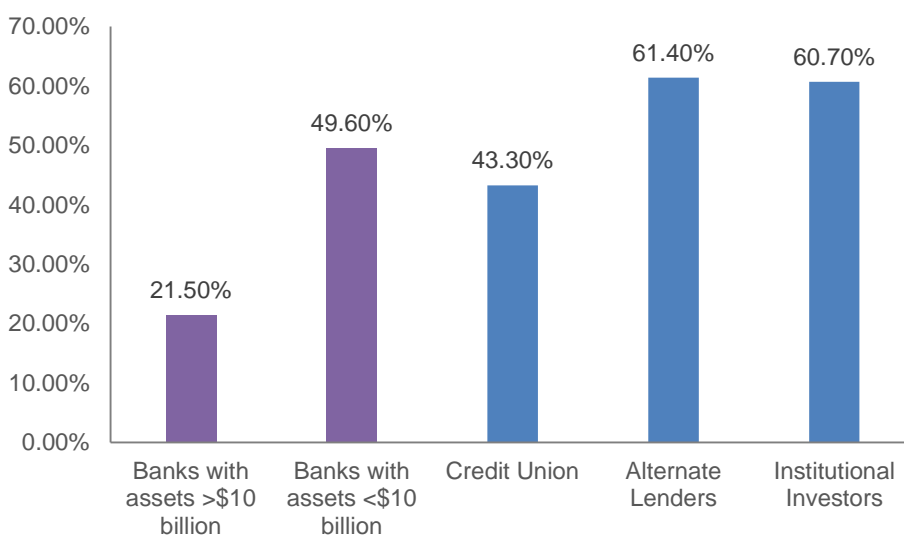
Source: Biz2Credit Small Business Lending Index

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[80] Biz2Credit Small Business Lending Index

Table 6: Top reasons why SMEs in the US are not granted bank credit

State	Top 3 reasons
New York	Insufficient collateral, the young age of the firm and a low credit ("FICO") score.
Texas	Low credit scores, an uneven cash flow and the young age of the business.

Source: California Bank & Trust, Small Business California, Federal Reserve Bank of New York, Federal Reserve Bank of Dallas, Florida Chamber Small Business Council.

As well as a high rejection rate, many US SMEs report being put off applying for loans in the first place.

Similarly, around a third of businesses reported that they did not apply for a loan because of the fear of not being successful.

The cost of bank loans

As in Germany and Italy, data on loan pricing is published according to the size of the loan rather than the size of the company receiving the loan. However, the cost of loans for SMEs can be approximated using the SBA and the OECD (2014) definition of small business loans (business loans up to $1 million). Figure 42 describes the interest rates on small business loans between 2007 and 2014. It shows that since 2009, the average interest rate on small business loans has been relatively stable at between 3.2% and 3.7%.

While the same caveats apply in relation to how well small business loans approximate SME loans, it appears that despite lower acceptance rates in the USA, small business loans are relatively inexpensive in the USA.

Figure 42: US Loan Interest Rates, 2007-2014
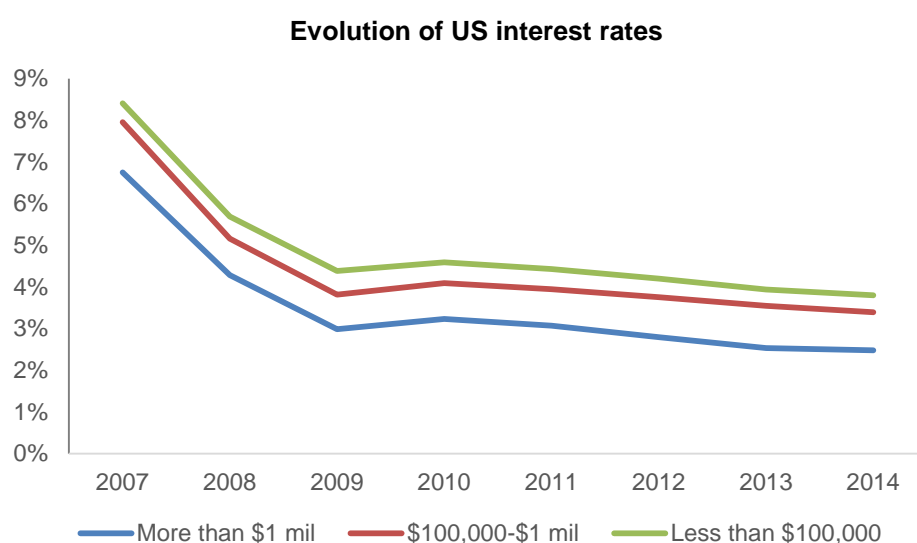
Source: Board of Governors of the Federal Reserve System, Survey of Terms of Business Lending – E.2.

6.5 Government intervention

In the US, the institution that leads government intervention in the SME lending market is the Small Business Association (SBA). The SBA was created as a government agency in 1953 by President Eisenhower with the signing of the Small Business Act. It has at least one office in each US State. The SBA's activities can be grouped into capital, contracts and counselling. Their activities are described in Table 7.

Table 7: Summary of SBA activities

	Capital	Contracts	Counselling
Description	The SBA does not provide grants or direct loans with the exception of Disaster Relief Loans. Instead, SBA loans are made though banks, credit unions and other lenders who partners with the SBA. The SBA guarantees against default certain portions of business loans made by banks and other lenders that conform to its guidelines	The SBA helps lead the federal government's efforts to deliver 23 percent of prime federal contracts to small businesses.	The SBA provides grants to support counselling partners. The counselling services provide services to over 1 million entrepreneurs and small business owners annually.
Main schemes/ programmes	7 (a) Loan Guarantee Program: Makes capital available to small businesses through banks and non-bank lending institutions. The largest of these is the 7(a) Loan Program which provides guarantees for working capital loans up to USD 5 million to new and existing small businesses.		

In addition to the SBA, the US Treasury Department has a number of initiatives designed to help small businesses grow:

- State Small Business Credit Initiative (SSBCI): This supports state programmes that, in turn, use the funds to support private sector loans and investments to small businesses that are creditworthy but are not able to access the capital they need to expand and create jobs.

- Small Business Lending Fund (SBLF): This provides capital to qualified community banks and community development loan funds to encourage these institutions and Main Street businesses to work together to promote economic growth and create new

jobs. Through the SBLF programme, the Treasury invested over $4 billion in 332 institutions, structured to incentivise increased small business lending. This was established by the Small Business Jobs Act of 2010[81].

- Office of small and disadvantaged business utilisation: assists, counsels, and advises small businesses of all types (e.g. women or veteran owned) on procedures for contracting with Treasury.

- The Community Development Financial Institutions Fund (see below)

6.5.1   Community Development Financial Institutions Fund (CDFI)

The CDFI was established in 1994 as an agency of the US Treasury. Its role is to promote economic revitalisation and community development through the investment in and assistance to community development financial institutions.

There are approximately 60 community development finance institutions in the US. They are private financial institutions that deliver finance to help low-income and disadvantaged individuals and community businesses. The different types of institutions are:

- Community Development Banks: these are for-profit corporations with community representation on their boards of directors. They have relationship-based business models, and loans are often provided to small business owners in communities that are often overlooked by larger, mainstream banks.

- Community Development Credit Unions: these focus on providing affordable credit and retail financial services to low-income people. They are non-profit financial co-operatives owned by their members. Deposits are insured by NCUA.

- Community Development Loan Funds: these provide financing services to businesses, organisations, and individuals in low-income communities. They tend to be non-profit.

- Community Development VC Funds: provide equity and debt-with-equity features for small businesses in distressed communities. They can be either for-profit or non-profit.

The CDFI programmes that are relevant to SMEs are:

- Bank Enterprise Award Program: this programme provides financial incentives to expand investments in CDFIs and to increase lending, investment, and service activities within economically distressed communities. It provides monetary awards for increasing community development activities.

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[81] The Small Business Jobs Act of 2010 has been passed by the 111th US Congress on September 27, 2010. It authorises the creation of the SBLP.

- CDFI Bond Guarantee Program: this was enacted through the Small Business Jobs Act of 2010. It directs the Treasury to guarantee the full amount of notes or bonds issued to support CDFIs that make investments for eligible community or economic development purposes.

6.5.2   Federal government interventions after 2008/09

After the GFC, the federal government conducted a number major interventions. The bulk of these were in the form of additional incentives to financial institutions, structural changes to its programmes, and assistance in the secondary markets for SBA guaranteed loans. For example, the SBA:

- Used additional funding received from Congress to temporarily increase its guarantees from around 75% to 90%;

- Temporarily reduced or eliminated the fees it charges financial institutions participating in its loan guarantee programmes; and

- Increased its loan limits.

Finally, the Treasury announced that it would purchase $15 billion of SBA loans on the secondary market. Through this programme, the government promised to be a buyer of last resort for these recent loans.

7 Cross-country analysis

This section compares the SME lending market in the UK with the markets in Germany, Italy and the USA, using the findings of the individual country reviews in Section 4, 5 and 6. The aim is to assess whether and how the UK market differs from the international comparators, what elements of the UK market are potentially beneficial to SMEs and what lessons can be learned about improving outcomes for SMEs in the UK.

The section begins by identifying the key market outcomes and summarising the evidence on how they differ in the comparator countries. It then considers the extent to which cross-country differences in market outcomes can be explained by differences in the characteristics of the markets, including market structure and historical policy interventions. The section finishes by drawing lessons for the UK, highlighting potential areas of success and identifying any policy insights gained from the comparator countries. This analysis is supported by Appendix 1 where a more detailed analysis is drawn out.

7.1   Outcomes of the SME bank lending market

There are several outcomes of the SME bank lending market that impact the prosperity of SMEs.[82] Broadly these outcomes can be categorised into the following groups:

- The amount of finance obtained, relative to what is required;

- The costs and conditions associated with the finance that is obtained (including the charges); and

- The extent of any additional services that are associated with the loan.

Within these broad categories, there a number of relevant factors to consider. For example, there are different reasons why an SME may not be able to obtain the finance it would like; it may apply and be rejected, or it may be discouraged from applying in the first place, either because they did not believed they would be successful or because they were told by the bank that they would not receive a loan. Both are relevant outcomes of the market.

To support a full analysis of the outcomes of the market for bank lending to SMEs, it is helpful to consider the whole customer journey, starting with the basic financing needs of an SME, through to the decision to apply for finance and the result of an application. Figure 43 describes the customer journeys that SMEs can take.

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[82] There is a developed literature looking at the relevant outcomes of the SME lending market, including Fairlie and Robb (2007); Levenson and Willard (2000); Shen (2002); Cowling, Liu and Ledger (2012).

Figure 43: Customer journey for SMEs seeking bank finance
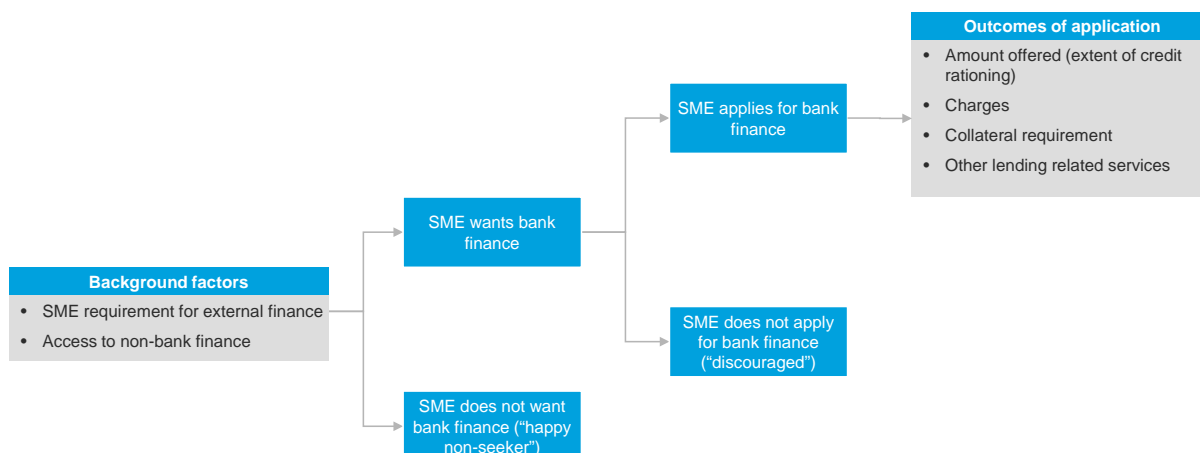
This model journey provides a framework within which to analyse the market outcomes. Relevant data therefore include:

- The amount of external finance that SMEs require;

- The availability of substitutes to bank finance that are relevant for the SME's specific financing needs;

- The extent to which SMEs put off from applying for bank finance, either through active discouragement by the bank, or because they believe they will not get the financing they seek;

- The success rate of bank finance applications, the terms on which successful applications are granted credit and the quality of lending-related customer services.

Evidence of how these factors differ between the comparator markets is presented below.

7.2   Evidence on cross-country differences in market outcomes

The evidence of the market outcomes is reported below, and a discussion of the potential drivers of these outcomes follows in Section 7.3.

7.2.1   The amount of finance obtained relative to what is sought

An assessment of the level of bank finance that is obtained relative to what is sought can be broken down into two components:

- Establishing the level of bank finance that is demanded; and

- Establishing the level of bank finance that is supplied.

Finance demanded

Survey evidence suggests that for SMEs that seek out finance, the "pecking order" approach identified for the UK in Section 2 also appears to be reflected in the comparator countries: SMEs have a preference for debt over equity finance and bank debt over other forms of debt. As Figure 44 shows, few SMEs in the UK, Germany or Italy find either equity capital or debt securities relevant, while bank loans, credit lines, overdrafts or credit cards are relevant to most.

Figure 44: Sources of finance for SMEs in the UK, Germany and Italy
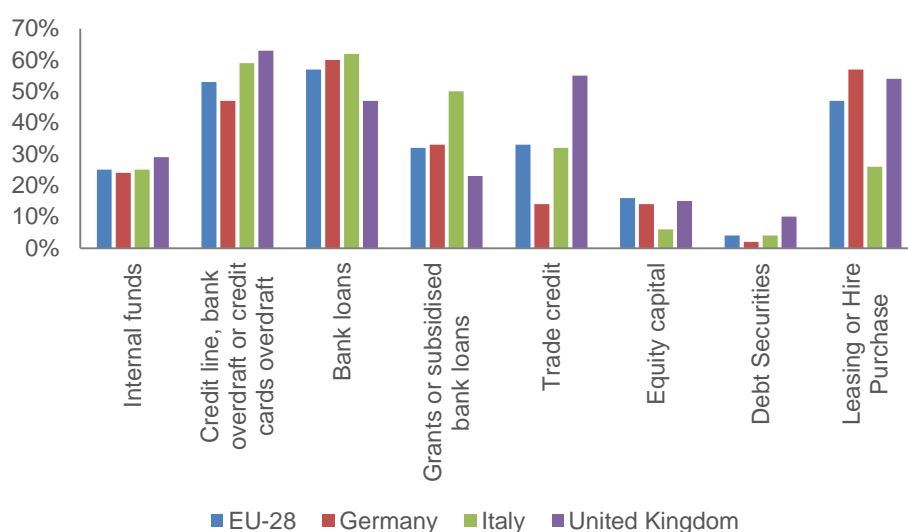
Source: European Commission/ ECB, 2014: Survey on the access to finance of enterprises (SAFE)

In the USA, the primary sources of funding among SMEs are internal or family borrowing. But as in Europe, external finance is dominated by bank finance.

Figure 45: Sources of finance for SMEs in the US
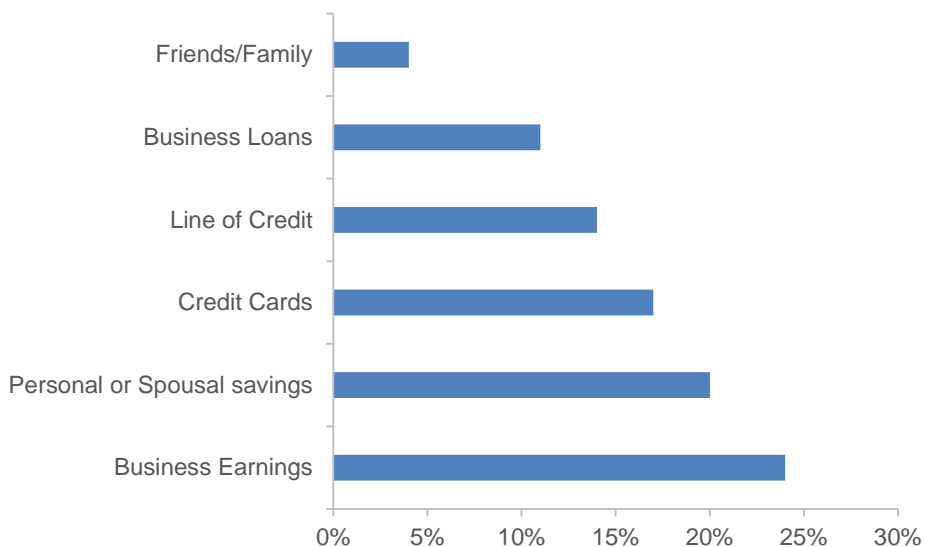
Source: FRBNY Small Business Credit Survey, May 2013

While there is some variation in the use of different forms of bank finance across the European comparator countries, the survey evidence suggests that for firms looking to grow their business, bank loans are an especially important source of funding.

Figure 46: Sources of finance used for realising growth ambitions

Types of external finance used to realise growth ambitions
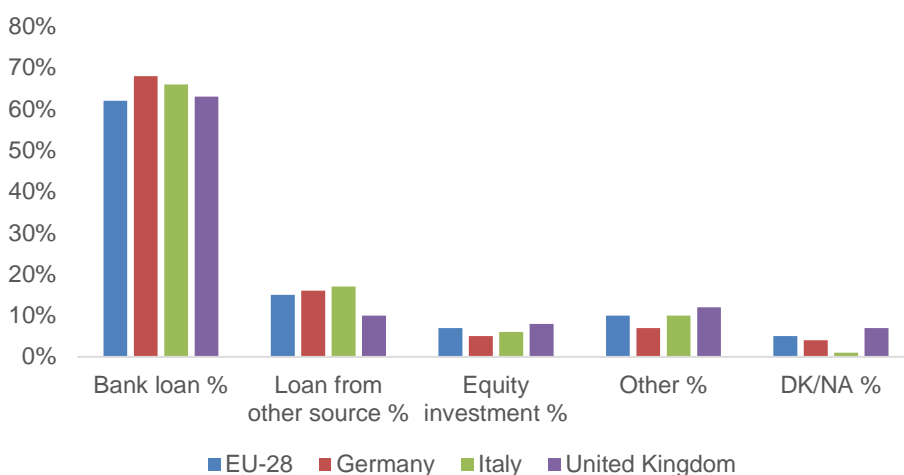
Source: European Commission/ ECB, 2014: Survey on the access to finance of enterprises (SAFE)

Although bank finance is the most important source for SMEs in each of the comparator countries, there are differences in the use of alternatives. In particular, UK SMEs appear to use alternatives more than their German and Italian counterparts. For example, while the use of debt securities among UK SMEs is relatively low, it is even lower in Germany and Italy. Furthermore, the rapidly expanding market for alternative forms of lending, such as peer to peer lending, is significantly more established in the UK than in either Germany or

Italy. Recent research found that between 2013 and 2014 the market for alternative lending grew by 144% in Europe and that this was driven to a significant extent by growth in the UK, which accounted for 74% of the market in 2014.[83] In 2014 alone the UK alternative finance market provided over £1 billion of finance to 7,000 SMEs. This significantly exceeds the estimated €385 Million worth of financing to approximately 10,000 SMEs in other European countries over the period 2012-2014. Trade credit[84] also appears to be significantly higher in the UK than in Germany and the rest of the EU.

Across the group of European countries , the proportion of SMEs that applied for a loan in the last 6 months of 2014 is the lowest in the UK (18%) and the highest in Italy (35%). It is important to be aware that surveys do not fully measure demand (as set out above, there may be 'discouraged' customers which do not apply for a loan even though they would like one) and hence analysis on it is limited.

Figure 47: Loan application rates in the UK, Germany and Italy*
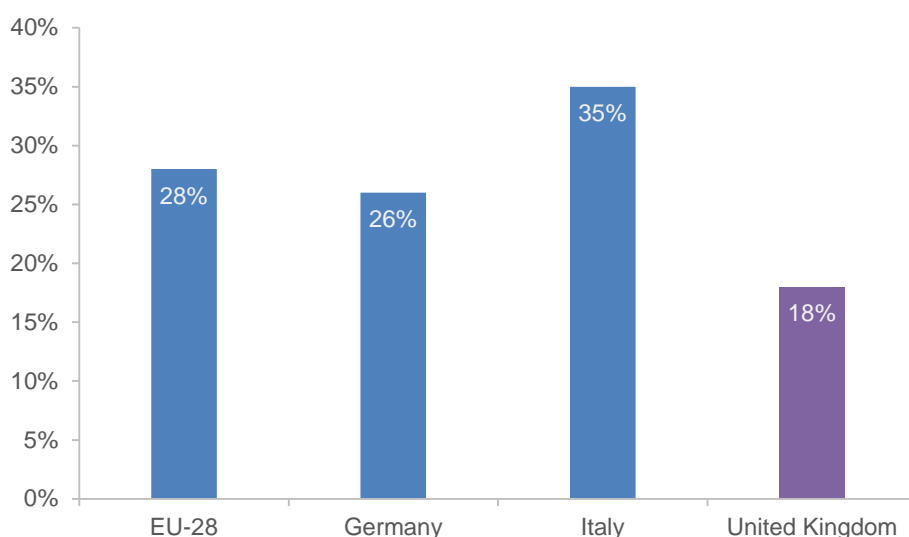
Source: ECB SAFE
*Proportion of SMEs that applied for a loan in the last 6 months of 2014

The pattern in application rates is very similar for alternative types of bank finance, as Figure 48 illustrates.

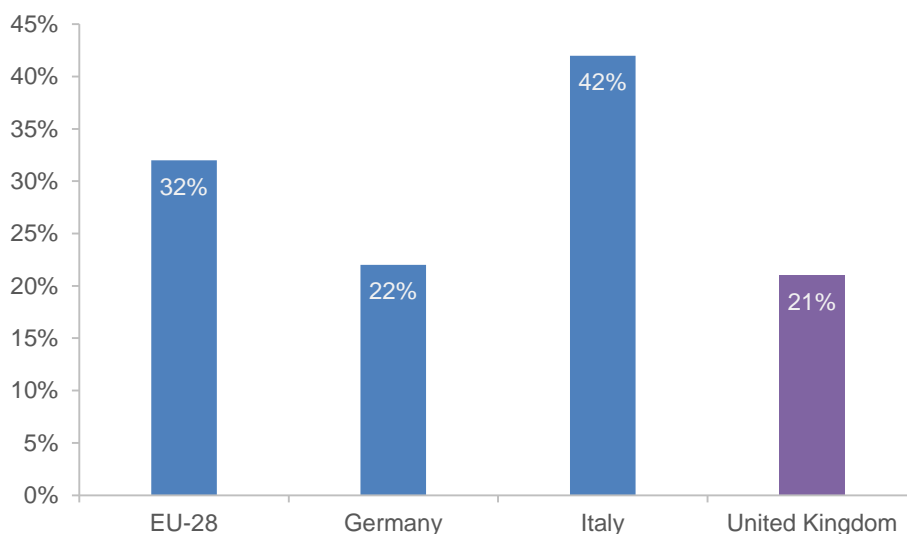[83] Ernst & Young and University of Cambridge, 2015.

[84] Trade credit is the credit extended to a business by suppliers by allowing them to buy now and pay later.

Figure 48: Application rates for Credit line, bank overdraft or credit cards overdraft

Source: ECB SAFE 2014
*Proportion of SMEs that applied for finance in the last 6 months of 2014

In the USA, the rate of application appears to be slightly lower. The National Federation of Independent Business (NFIB) reports that 25% of SMEs applied for a new line of credit, while 16% applied for a bank loan in 2013.

When analysing the demand for bank finance, it is important to differentiate between the financing that SMEs want and the financing that SMEs actually apply for. Application rates may not capture the true demand for bank finance if SMEs are put off applying because they do not believe they will have their loan application accepted with terms they find acceptable. Application rates can also be distorted by long processes and misperception of the price of finance. Recent survey evidence suggests that the number of customers put off from applying in the UK and Germany is low with almost 80% of SMEs that did not apply for a loan reporting that they did not need it. This compares with only 58% in Italy, where the most important reason for not applying was high interest rates.[85] In the USA, the proportion of SMEs that did not apply for credit that did not want it is approximately 80%.[86]

Finance supplied

Survey evidence suggests that the success rates of loan applications in the UK are relatively high, with the majority of UK SMEs that apply for loans being offered all of what they apply for. The profile of bank responses is similar to that in Germany, where around three quarters of applications are fully accepted and only 10% are rejected outright.

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[85] ECB SAFE

[86] NFIB 2012

However, in Italy the responses are very different. Only 54% of SME bank applications in Italy are fully accepted while almost 1 in 5 are rejected outright. Differences in the age and size profiles of SMEs relative to the UK and Germany provide important context to these results as they imply different risk exposure for potential lenders, but with the data that is available it is impossible to say how much of the difference they explain.

Figure 49: Outcome of loan applications in the UK, Germany and Italy 2014
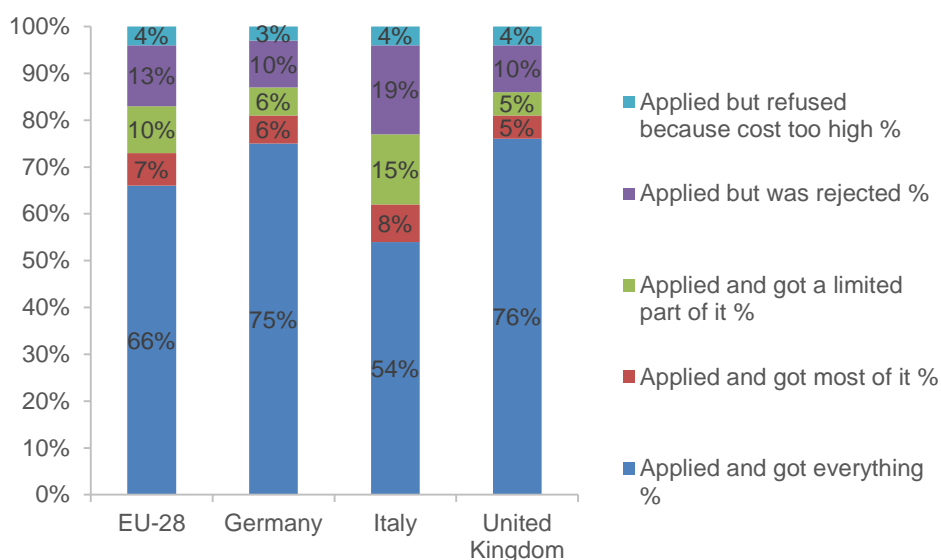
Source: ECB SAFE 2014

The success rates of applications for other types of bank finance appear to be slightly lower, but the overall pattern is similar – applications from UK and German SMEs are accepted the majority of the time, whereas rejection rates in Italy are significantly higher.

Figure 50: Outcome of applications for credit lines, bank overdrafts or credit cards overdrafts in the UK, Germany and Italy 2014
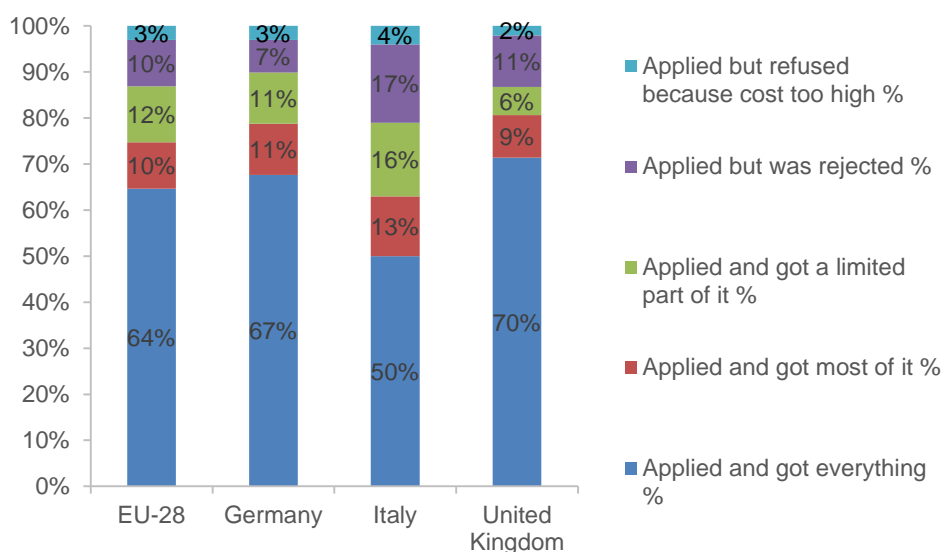
Source: ECB SAFE 2014

Survey evidence from the USA suggests that applications for bank finance from small businesses have a significantly higher rejection rate than even Italy. The NFIB found that in 2011, 16% of loan renewals were rejected, rising to approximately a third for new applications.

7.2.2 Conditions associated with bank lending

Lending charges

The most significant cost incurred by SMEs taking credit is the interest rate. There are also often arrangement fees, but they are typically small in comparison to the cost of interest.[87]

Limitations on data availability impact the comparability between interest rates on SME bank loans across the markets because:

- The types of loan on which the charges are reported are not consistent across each market. For example, in the UK the Bank of England reports the interest charges on loans to SMEs and separates by small and medium sized businesses, in addition to reporting price of loans of less than £1 million. In contrast, the ECB and OECD report interest rates by loan size (up to EUR 1 million for European firms and up to USD 1 million for US firms). While the latter is sometimes used as a proxy for SME loans, the extent to which it is an accurate proxy depends on the value of loans that SMEs in these countries take out. In Italy, only 6% of SME bank loans are greater than EUR 1 million, but in Germany approximately 1 in 5 SME loans are over EUR 1 million.

- The interest rates that are reported are point estimates (typically means). These estimates incorporate the mix of SMEs within the country, which differs by comparator. As interest charges may differ between different subgroups of SMEs (by age, size etc.) this is likely to impact the comparability of these figures. In Italy, for example, there are a large number of microenterprises, so the average interest rate is likely to be heavily weighted towards rates charged to microenterprises.

Accepting these data limitations, the available evidence suggests that interest charges on SME bank loans in the UK are of similar order to the countries studied in the report, with the exception of Italy (see Table 8). Although representing only a high level view of the market, this result is interesting in itself because it suggests that the differences between the markets may be reflected primarily in other outcomes, such as rejection rates and collateral requirements. Establishing whether this is the case, or the potential reasons for such a pattern, are beyond the scope of this study, however.

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[87] To give an example, suppose a small firm takes out a term loan for £100,000 over 5 years at an interest rate of 5%. Then over the course of the 5 year loan term the firm would pay £15,000 in interest. Arrangement fees vary across banks, but a typical charge would be in the region of £2,500. The arrangement fee is also typically added on to the total loan, allowing the SME to pay it over the term of the loan

Table 8: Evidence on interest charges on bank finance

Country	Product	Mean interest rate	Base Rate
UK	Loans to small SMEs*	4.40%	
	Loans to medium SMEs*	3.22%	
	Loans to all SMEs*	3.42%	0.5%
	SME Overdraft**	5.3%	
Germany	1-5 year small business loan***	3.67%	
	5 year small business loan***	2.87%	0.05%
	SME Overdraft**	6.6%	
Italy	1-5 year small business loan***	5.97%	
	5 year small business loan***	5.71%	0.05%
	SME Overdraft**	6.3%	
USA	Loans up to $100,000****	3.7%	
	Loans between $100,000 and $1 million****	3.3%	0.25%

Sources: *Bank of England Trends in Lending (Nov 2014) **ECB SAFE 2014; ***ECB (loans up to EUR 1 million); ****OECD (loans up to USD 1 million)

Collateral

Banks often ask SMEs to post collateral as part of the conditions of the loan. This is done to reduce the cost incurred by the bank in case of a default, but also to better align the firm's interests with those of the bank.

The existing evidence on collateral requirements is incomplete and estimates vary by source. However, the data does suggest that the proportion of loans with collateral requirements are relatively low by international standards in the UK (see Table 9). Data on the amount of collateral required is not available, however.

Table 9: Collateral requirements for SME bank finance

Country	Product	Proportion of loans requiring collateral
UK	SME loans*	44%
	SME overdrafts*	36%
Italy	SME loans **	54.9%
	SME loans***	83%
USA	Loans up to $100,000****	90.5%
	Loans between $100,000 and $1 million****	81.2%

Sources: *BDRC (2014); **OECD (2014); *** Zecchini and Ventura (2009); ****Federal Reserve Board (2014). Note: Data was not found for Germany. Data for Italy varies across sources

7.2.3 Additional lending related services

In addition to the finance that is provided and the requirements on which lenders condition the finance, SMEs also value the broader services that lenders provide. These services can be categorised into:

- Transactional services: These include the availability of online and mobile services, the speed with which applications are processed; and

- Relationship services: These include the accessibility of informed bank employees and general customer service.

Evidence from the CMA/FCA suggests that while UK lenders perform well with transactional services, UK SMEs are generally dissatisfied with the relationship management services. The market study cited concerns among SMEs that banks offer less personal services than in the past and that banks are less engaged with their needs.

There are limited data available to establish whether the relationship lending model leads to greater customer satisfaction and the interpretation of such data would be challenging. The subjective nature of satisfaction metrics means there are limits on how meaningful cross-country comparisons of satisfaction levels can be, especially given that SMEs in different countries have different reference points on which to base their expectations of customer service. Moreover, establishing the precise role of relationship banking is difficult. For example, in countries that have a relationship banking model, SMEs can have several relationships with banks (e.g. Italy). Thus, finding data on the quality of relationships is difficult. Evidence from SAFE suggests that, despite these considerations, UK SMEs are relatively confident about talking about financing with banks and obtaining desired results.

Figure 51: Proportion of SMEs reporting confidence talking about financing with banks and obtaining desired results
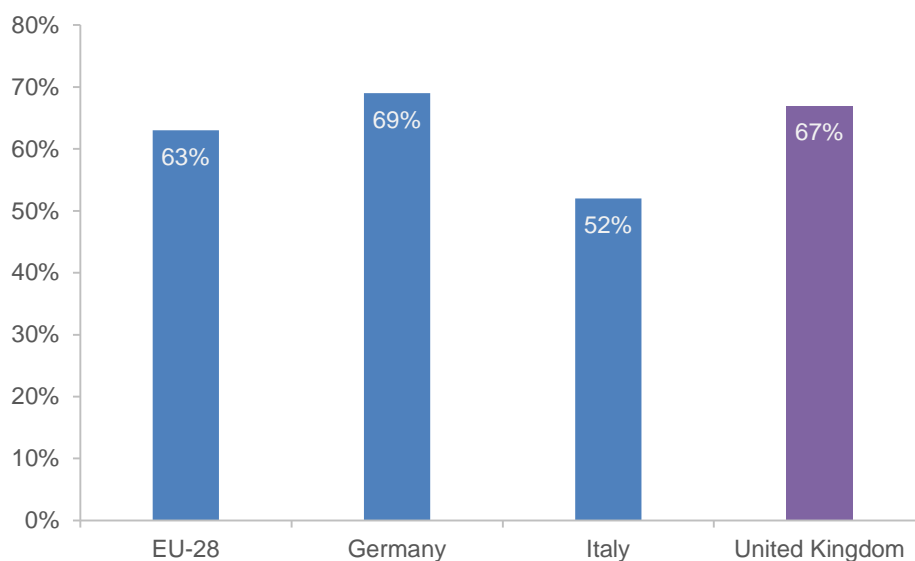
Source: European Commission' ECB, 2014: Survey on the access to finance of enterprises (SAFE)

7.2.4 The impact of market outcomes on SMEs

Many SMEs do not want any form of external finance and it is important to put the impact of these differences in context. However, for the SMEs that do need external finance, the differences in market outcomes presented above can have real implications.

Application success rates

Survey evidence from Europe and the USA suggests that difficulties accessing finance represents a significant challenge for many SMEs. Out of the European countries, this issue is most significant in Italy and least of a problem in Germany (Figure 52). This reflects the differences in application success rates reported previously.

Figure 52: The most pressing problems facing SMEs in the UK, Germany and Italy[88]
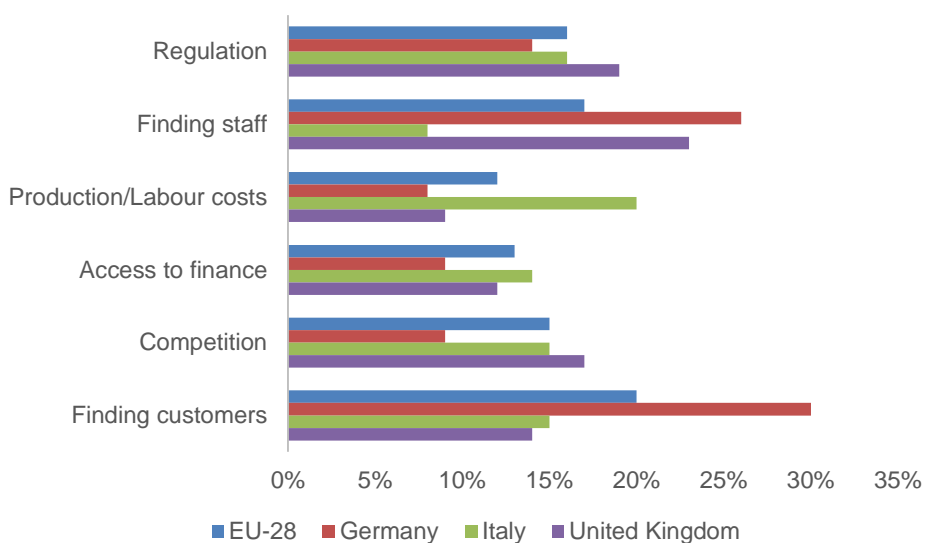
Source: European Commission' ECB, 2014: Survey on the access to finance of enterprises (SAFE)

Similarly in line with the high bank finance rejection rate in the USA, 15% of SMEs report an inability to obtain credit as the most important finance problem facing their business.[89] Moreover only 34.2% of SMEs report being able to get the credit it wanted in the previous 12 months.

Survey evidence suggests that bank loans are by far the most important source of funding for firms looking to grow their business.[90] As a consequence, an inability to access bank loans is likely to impact SMEs with growth plans particularly badly.

Lending charges

The observation that interest charges do not differ significantly across the UK, Germany and the US suggests that differences between the markets may not materially impact SMEs' financing costs. The implication is that differences in markets potentially manifest in variations in other market outcomes, such as credit rationing, which is consistent with the literature on how information asymmetry affects market outcomes.

Collateral

Differences in collateral requirements across the markets may also lead to significant impacts on SMEs. In some cases, the amount of collateral required from less risky

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[88] This is a single response to what is the most pressing problem facing SMEs.

[89] NFIB 2012

[90] ECB SAFE

borrowers may well exceed their asset endowment. Thus a proportion of relatively low risk, borrowers may become credit rationed due to the collateral requirements.

For those SMEs that are able to provide collateral, this requirement still represents a cost, as it reduces the firm's operational flexibility. It also increases the financial risk that the business faces because the collateral is likely to be worth more to the SME than the lender, and so a default would be particularly costly for the SME.

This study does not evaluate evidence on differences in the value of collateral required (due to a lack of data availability), but it does find that the incidence of collateral requirement is higher in Italy and the USA than in the UK. All else equal, the lower collateral requirement levels in the UK are likely to reduce the costs faced by successful finance applicants in the UK than in the other markets considered in the study.

7.2.5　Summary

The preceding analysis presented the apparent differences in observed market outcomes across the comparator countries and considered what these differences may mean in practice for SMEs. In particular it showed that:

Applications for finance

- Bank finance is the most relevant source of external finance for SMEs in each of the comparator countries, especially for SMEs seeking to grow their business.[91]

- The application rate for bank finance is lower in the UK than in Germany or Italy and in line with the USA. Most SMEs that do not apply for bank finance do not want it and discouragement rates are lower in the UK than in the comparator countries.

Results of applications

- For SMEs that do apply for bank finance, the overall evidence suggests that:

  o **Success rates**: The proportion of SMEs that obtain the finance they seek in the UK is similar to what it is in Germany and substantially higher than in Italy and the USA.

  o **Lending charges**: The charges that SMEs incur for taking credit are comparable to Germany and the USA and lower than in Italy.

  o **Collateral requirements**: The proportion of SME bank loans that have a collateral requirement is lower in the UK than in Italy or the USA.

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[91] 'Short-term bank finance (credit line/bank overdraft/credit card), followed by long-term bank loans, trade credit and leasing are the most often used by micro and small firms' – European Central Bank, 2015: 'Survey on the access to finance of enterprises in the euro area'

- There is limited comparable evidence on differences in SME satisfaction with broader lending-related services provided by banks. However, survey evidence suggests that UK SMEs are relatively confident about talking about financing with banks and obtaining desired results.

Impacts on SMEs

- Survey evidence suggests that an inability to access finance is one of the key challenges that SMEs face, particularly in markets in which bank loan rejection rates are relatively high, such as Italy.

- For UK SMEs that are able to access finance, the cost of borrowing is similar to that in Germany and the USA, while the additional costs associated with posting collateral is potentially lower.

7.3 Interpreting the evidence on market outcomes

This part of the report considers some of the underlying economic drivers for the differences observed. It considers the extent to which these observations can inform an analysis of the market and examines the potential reasons for the observed differences in market outcomes.

7.3.1 Impact of data limitations

Before considering the underlying drivers of market outcomes, it is important to recognise what level of cross-country analysis is practical. Key factors determining this are the limitations on the availability of existing data and its comparability with available data in the other countries.

While the data available to analyse market outcomes in the UK is fairly detailed, the analysis in this report highlights relative weaknesses in the data availability of other markets. Furthermore, where data is available, comparability is often limited by non-standardised measures.

For example, in the UK the BDRC SME Finance Monitor studies provide a rich source of survey data, including various segmentations. In contrast, the key source of survey evidence in Italy and Germany is the ECB SAFE survey. While this provides useful summary data on various financing issues faced by SMEs, the survey does not go as far as BDRC and the publicly available results do not allow a segmented analysis of the sort presented in the BDRC.

Overall, the existing level of publicly available data provides a good basis on which to draw high level conclusions on the relative performance of the different markets for SME lending. However, differences in reported measures, definitions and degrees of data segmentation across the countries means that in many areas it will not be possible to perform a detailed analysis to identify the causes of any differences that are observed.

7.3.2 Key market differences and link with observed market outcomes

This analysis in this report presents a discussion of each of the countries covered and provides a comparative analysis of some of the critical market structure differences. It identifies a number of factors that may explain the comparatively high acceptance rate of UK SME loan applications, as well as the relatively low levels of interest rates and collateral requirements.

It also identifies some market structures that may contribute to the financing constraints that SMEs evidently face. Each of these issues is discussed in turn.

Market factors contributing to positive outcomes in the UK

As noted, the UK SMEs have comparatively high acceptance rates of loans and relatively low rates of discouraged applications. In addition, they benefit from comparatively affordable financing costs (in terms of interest charges and collateral requirements).

While it is important to be cautious about drawing strong conclusions on the reasons for this, there are some structural differences between the markets that are likely to contribute to the observed outcomes:

- **SME profile:** UK SMEs are typically larger and/or older than Germany and Italy (comparisons with the USA are complicated by data differences). Other things being equal, it should be expected that this would lower the risk profile of the SMEs and contribute to wider access to loans along with lower interest rates and collateral requirements for UK SMEs.

- **Nature of competition:** The UK SME banking sector is more transactional than in the other countries examined, particularly Italy. This should promote affordable access to SME finance by reducing the operating costs of UK banks. However there are also potential downsides of this structure, as discussed below.

- **Availability of alternative finance sources:** UK SMEs are able and willing to use a wider range of financing options. In particular, 21% of UK SMEs are able to access trade credit as a form of finance, compared to 3% in Germany, 9% in Italy and the EU average of 9%. This is partly driven by payment practises in these countries. For example, Germany has a more prominent on-time payment culture than the UK. Similarly, 38% of UK SMEs use Leasing and Hire Purchase, compared to only 11% in Italy and the EU average of 29%. However German SMEs also have a strong preference towards Leasing and Hire purchase with 44% using it in the last 6 months.

Market factors that may contribute to credit limitations in the UK.

Again, recognising the complex relationship between market structure and outcomes, there are nevertheless a number of factors that could be raising the cost of and limiting access to SME bank lending. These include:

- **Market concentration:** The UK market is markedly more concentrated than the other countries studied and there is a clear risk that increased competition may result in reduced competitive pressure.

  This topic is currently the subject of a market enquiry by the CMA and it is beyond the scope of this report to take a view on competition in the UK bank sector.

  Nevertheless, it should be emphasised that the relationship between concentration and competition in the bank sector is complex. The Structure-Performance hypothesis suggests that market concentration may limit competitive pressure; while the Information Hypothesis suggests it may improve informational issues inherent to the market. Evidence on the overall impact is inconclusive.

  It should also be emphasised that simple comparisons of concentration can be deceptive. For example while Germany appears to have a much less concentrated market than the UK, the German market is organised on a regional basis. As such, the range of banks in a local area accessible to a given SME is much more comparable with the UK than aggregate market measures would suggest.

- **Transactional nature:** While a more transactional banking service can be expected to deliver significant cost efficiencies, it may also limit the understanding that banks have of the individual circumstances of particular SMEs. This highlights a key trade-off between the advantages of the different models for SMEs. Relationship lending has the potential to address some of the informational asymmetries that transactional lending may not and hence lead to better market outcomes for SMEs that face challenges in demonstrating their credit-worthiness. However, as relationship banking can be a more costly model, these advantages should be balanced against the higher costs (both in terms of charges and time) that are likely to be passed on to SMEs.

  The empirical evidence on the balance of these two effects is somewhat mixed. While older empirical research broadly points towards net benefits to SMEs from relationship banking, more recent research is broadly neutral on the relative benefits of the two models. Section 5 contains a discussion of the overall literature on the topic.

- **Direct government intervention:** Differences in public sector intervention impact the extent of competitive pressure on the main commercial banks. In the UK, the level of public sector intervention has been lower than in the comparator countries. For example, in Germany the public sector plays a prominent role as a direct and indirect player in the market for SME finance. A large proportion of banks are state owned and are not as profit focused as privately owned banks might be, while the KfW provides a material level of support in the market. In the USA the SBA provides a competitive constraint on commercial banks. However, in the UK, where the public

sector is less active in the market, the competitive pressure from the public sector is likely to be less direct.[92]

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[92] Although the government plays a smaller role as a direct competitor in the market, it plays an indirect role in applying competitive pressure through various competition reviews and referrals.

Case study: SME policy intervention in Sweden

Sweden, unlike the UK has a policy approach that spans many government departments, and the dominant funding body is the Ministry of Finance. SME policy in Sweden is funded largely through the tax system and, at the policy level, annual expenditure on financing policy interventions totals SEK 42.4bn (£3.26bn). Furthermore, spending on general SME policy exceeds spending specifically on policy related to businesses in the start-up phase, and broad policy interventions dominate micro level interventions. One particular unique feature of Swedish SME policy is the absence of both a loan guarantee scheme and tax credits for research and development, which are long-standing features of the UK policy offer. Rather, finance-based policy has favoured direct public loan and equity programmes, including micro financing.

Almi Företagspartner, a non-profit offering assistance to SMEs in Sweden, is one of the Government's primary policy tools at an operating level.[93] Almi's tasks include promoting the development of competitive small and medium-sized businesses as well as stimulating new enterprise with the aim of creating growth and encouraging innovation in the Swedish business sector. Its advisory and financing activities span the whole business lifecycle, from initial concept to profitable business and its clients' needs therefore depend on their stage in the process. As such, its activities are organised into three distinct business areas: Innovation, New Enterprises, and Established Businesses. Across each of these areas, two principal services are offered: financing, and business development. Almi is unique in its offering of both funding and advisory services, which aims to bring more innovative concepts to market successfully, to launch and develop more viable businesses, and to increase its clients' competitiveness and profitability.

Almi's function as a lender to SMEs is to take larger risks than commercial lenders, with decisions heavily weighting the viability of an idea and the company's potential to develop it. To account for the higher level of risk borne by Almi, and also to avoid distorting competition in the SME funding market, loans are offered at above-market rates. The loans, which are provided in partnership with other lenders, are offered industrywide to SMEs with fewer than 250 employees ('Business Loans') and also to companies requiring lower levels of funding struggling to obtain capital ('Micro Loans'). In addition to these relatively standard forms of funding, Almi assists in the provision of specialist financial products for innovation projects.

Market factors that require further investigation

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[93] Almi Företagspartner is the parent company of 21 subsidiaries, each of which is 51 per cent owned by the parent company. Other owners include county councils, regional authorities and municipal cooperative bodies. The boards of the subsidiary companies comprise politicians, local business representatives and organisations with links to the business sector; its operational activities are run by the regional companies.

In addition to these points, there are a number of market factors that have potentially interesting policy implications, but where further research is required.

These include:

- **Variations in equity usage**: German SMEs are relatively similar to UK SMEs, but use considerably less private equity. This may be driven by cultural differences between the countries and the fact that the German financial system is more bank-based than market-based. However, it may also be reflective of improved credit access for some groups in Germany relative to the UK, given SMEs broad preference for debt finance over equity finance.

- **Variations in trade credit:** Conversely, UK SMEs are disproportionately likely to utilise trade credit. From a policy perspective, it would be helpful to understand the extent to which this reflects constraints in the availability of other types of finance in the UK as compared to cultural difference, or structural differences such as differences in sector mixes amongst borrowers. It may also be useful to consider the extent to which trade credit usage may have secondary implications on the ability of SMEs to expand and succeed economically.

- **Variations in loan application rates**: Italian SMEs are considerably more likely than UK SMEs to apply (and be rejected) for finance. The high rejection rate is likely to be driven by the demographic profile of Italian SMEs, which tend to be smaller and younger. Nevertheless the high application rate may be worthy of further policy evaluation to understand if there are differences in the ease of application and to see if lessons could be adopted for the UK market.

- **Multibanking relationships:** Despite adopting a transactional model of banking, UK SMEs have a smaller number of relationships with banks than the other countries examined. This result is somewhat counterintuitive[94] and may therefore warrant further investigation, though the potential policy implications are unclear.

7.4   Summary of findings

This review of SME access to finance in the UK highlights the challenges that SMEs have in accessing debt finance.

However when comparing this position to Germany, Italy and the USA, SMEs in the UK appear to have comparatively good finance access. For example, UK SMEs have access to a more diverse set of finance providers than in the other markets and, when applying to banks, are less likely to be refused credit.

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[94] Relationship banking involves frequent and multiple interactions between the SME and the bank. Intuitively it can only be practical for an SME to have a small number of relationships of this sort. On the other hand, under transactional banking the weak relationship ties might suggest SMEs would find it easier to have multiple bank relationships.

These conclusions come with an important caveat that direct cross-country comparisons using high-level data are complicated by differences in the size and financial standing of SMEs as well as structural and regulatory differences in the banking markets.

Nevertheless the overall evidence suggests that:

- There are significant differences in the structure of the SME lending markets across the markets examined. The UK market is more centralised and can be described as more of a transactional model of lending than the comparator countries.

- While some UK SMEs are constrained in their ability to access debt finance, the position for UK SMEs does not appear markedly worse than in the other countries examined.

7.4.1 Policy lessons for the UK

Given the findings of the previous section, it appears that out of the three comparator countries, it is Germany that has the most potential to provide lessons for the UK. This is because:

- German SMEs are the most comparable to UK SMEs in terms of age and size.

- The outcomes of the German market for lending to SMEs appear to be better for SMEs than the markets in Italy and the USA. Arguably they are better than in the UK, at least on some measures.

For largely historical reasons, German SME policy is designed to

- promote innovation and growth in established industry clusters; and

- raise the general economic performance of under-performing localities within a region.

Importantly, a holistic view is taken by the SME policy, which integrates strategies and interventions designed to accommodate both goals simultaneously.

Another feature of the German market, which is largely historic, is that direct grant funding is a major component of public intervention in credit markets. In the UK, public intervention is less direct, typically involving engagement with private sector financial institutions to channel capital to SMEs. While the UK has introduced parallels with the former element of the German model through the creation of the British Business Bank, which, among other issues, addresses the market failure arising from the inherent asymmetric information issue in SME lending markets, there may be benefits to additional scale to support greater intervention in this way.

Importantly, while the British Business Bank enables direct public support for SME financing, in contrast to the German example, the funding decisions are made by downstream private-sector providers. There is some evidence from Denmark which

suggests this approach in the UK is substantially less costly (per pound lent) than direct state-operated schemes.

Other policy lessons

While Germany appears to be the best source of insight for lessons that may be applied to the UK, there are also lessons that can be learned from the US in terms of policy innovation. For example, the SBA has a significant on-line presence and has high levels of engagement with the SME community.

Online applications in the US also appear to be significantly higher than that of the rest of the countries in this report. More development and awareness of online applications for UK offers potential for UK SMEs to access a wider market.

One specific example relates to investment readiness for SMEs preparing a loan application. The diagram below illustrates the approach that the SBA have taken here.[95]

Figure 53: SBA approach to assisting SMEs with financing issues[96]
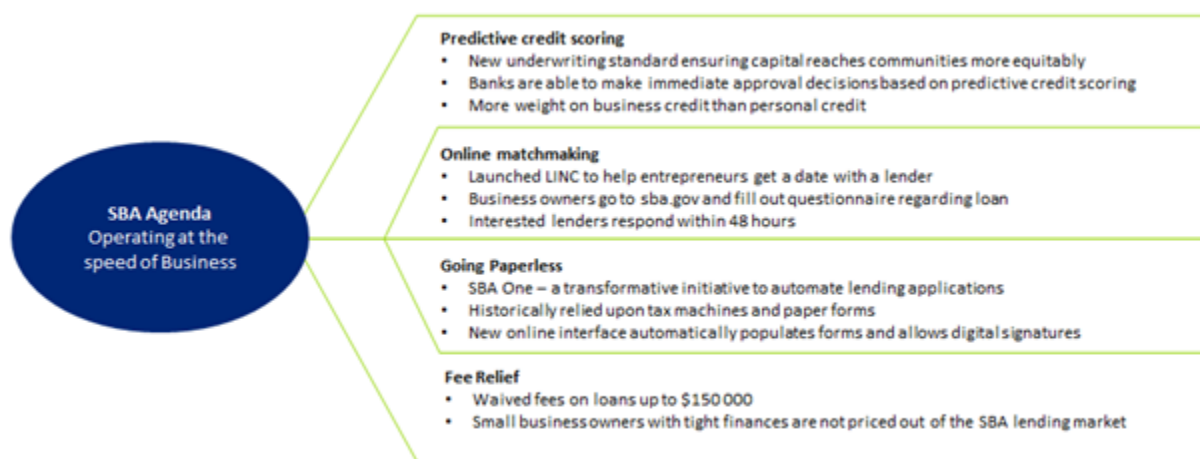
Here the SBA approach facilitates SMEs at every step in the process from preparing a funding application, to conducting basic due diligence, to advertising a loan offer to a wide portfolio of registered financial institutions. Of particular note is the use of the on-line match-making service which is fundamentally based on the P2P lending platform model.[97] There is potential in the UK to have a similar approach to financing SMEs and offer an

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[95] https://www.sba.gov/blogs/sba-modernization-unlocking-commercial-capital

[96] LINC stands for "Leveraging Information and Network to Access Capital". It is platform for matching entrepreneurs in the USA with SBA lenders.

[97] P2P is an abbreviation of "peer-to-peer". P2P lending is a form of lending in which one peer lends to another without going through a traditional financial intermediary, such as a bank.

extra alternative to traditional finance methods through large banks. An additional policy step, which has been seen in Sweden, would be to offer support and development to SMEs through their softer skills, allowing for development of understanding of finance and management of these companies. To date, there have been separate polices on the finance gap and management, and softer skills gap for SMEs in the UK. Work to bring these together so they complement each other offers potential for increasing acceptance rates and availability of finance, although further research would be required to assess the quantitative net impact from such coordination.

8 Feasibility study on the impact of competition on SME bank lending

8.1 Research aims

This section considers the feasibility of future research that assesses the impact of competition in the market for SME lending on SME lending outcomes that is available to SMEs. It begins by reviewing the existing research literature and the data that could be used as part of the study. It then outlines potential methodological approaches and assesses the extent to which the existing data availability would support each approach. The section ends with some conclusions about the potential findings that a study could produce.

8.2 Existing literature

As discussed in Section 2, there is a complex relationship between competition and outcomes in the market for SME lending as a result of the informational asymmetries that are inherent to the particular market. The theoretical work in the area identifies two competing mechanisms:

- The structure-performance hypothesis: This suggests that increased market power results in restricted loan supply and higher lending rates, thereby intensifying financing constraints.

- The information hypothesis: This suggests that in the presence of market power banks establish a relationship with firms, which reduces the information asymmetry between them and the SMEs, the risk and therefore the interest rate charged for lending funds.

Much of the empirical literature has focussed on the relationship between market concentration, rather than competition per se, and market outcomes. Here, the empirical literature on the topic does not identify which effect dominates. For example, there is evidence that larger banks charge more for homogeneous loans, supporting the market power hypothesis,[98] but there is also evidence suggesting that higher bank concentration can be associated with greater access to finance.[99]

Other work suggests that different features of a concentrated market may impact outcomes differently. For example, Demirguc-Kunt et al (2004) find that bank size has a negative effect on interest rate margins, while bank concentration has a positive effect.

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[98] Cole, Goldberg and White (2004); Berger, Miller, Rajan, Stein and Petersen (2005); Haynes, Ou, Berney, (1999); Bai, Shen, Xu (2009).

[99] Petersen and Rajan, (1995); Fischer (2000).

Adams and Amel[100] (2005) find that greater bank concentration (measured by the HHI) amplifies monetary policy transmission, and therefore has a positive impact on small business lending.

There is also some evidence on the impact of competition that uses other characterisations of competition. For example, Ryan et al. (2014) measures bank market power using the Lerner Index, which captures the extent to which banks can maintain a price level above their own marginal costs. In this study, increased market power appears to result in increased financing constraints for SMEs, with outcomes depending on firm size. Similarly Fungacova et al.[101] (2013) uses the Lerner Index to examine how bank competition influences the bank lending channel in the Eurozone. The study uses a sample from 12 Eurozone countries over the period 2002-2010 (bank-level balance sheet and income statement yearly data from BankScope) and analyses the reaction of loan supply to monetary policy actions depending on the degree of bank competition. It finds that enhanced competition strengthens the transmission of monetary policy through the bank lending channel.

8.3   Data requirements of the study

The preceding review highlights a number of general issues for consideration, which fundamentally shape the exact data requirements for the study:

- **How should the relevant market be defined?**: As discussed earlier in the report, the way the market is defined will affect the measure of market concentration. The market definition is therefore a key consideration. The Treasury Review in 2000 used a spatial definition defined by a survey of SMEs based on oligopolistic conjectural variation theory.[102] In essence, SMEs were questioned about their willingness to travel (in distance and time) for specified levels of price cut (e.g. a 10% reduction in the cost of a loan). This information was then used to define the relevant geographical market. A key question for any empirical investigation would be what is the relevant spatial measure to define the SME-bank market? Since 2002, however, competition authorities have defined the relevant market as the UK in this context. This reflects the universal branch coverage of the big-4 UK banks, and the centralised decision-making of banks.

  It will also be important to consider the extent to which the study will address the wider competition for SME financing. In the UK, Building Societies, although substantially diminished in scale and importance, still provide an alternative to high

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[100] Adams, Amel, 2005: "The effects of local banking market structure on the bank-lending channel of monetary policy", Working Paper 2005-16, Board of Governors of the Fed

[101] Fungacova, Solanko, Weill, 2013: "Does bank competition influence the lending channel in the Eurozone?"

[102] This refers to how firms operating in an oligopoly make conjectures about how their competitors would react in response to changes to their price or production levels.

street banks for some SME financing products and accounts, although their market share of SME lending is relatively small. Equally, should any investigation also consider alternative debt providers (e.g. factoring, leasing, asset financing)?

- **What is meant by competition?** Competition is a broad concept and it will be important to identify what its meaning should be for the study. Often competition is interpreted as market concentration. Typical measures of concentration include HHIs and n-firm market shares. More recently, the Boone Indicator has been adopted in empirical work on concentration. This indicator is based on the relationship between performance, in terms of profits, and efficiency, measured as marginal costs. However, as discussed previously in this report, concentration and competition are not equivalent. Other considerations are the extent of barriers to entry and the ability of providers to raise prices above marginal cost, but these measures are typically more difficult to quantify.

- **What is the impact variable of interest?**: As highlighted in this report, there are several indicators that can be used to measure the availability of loans. A simple measure is the rate of application acceptance or, alternatively, the value of new loans that are approved. However, in determining the ease of access to finance it is important to consider the cost of the loans and the extent to which loan acceptances come with collateral requirements.

The extent of data requirements will depend on the answers to the above questions. However, any analysis of bank concentration and SME lending that is based on secondary data will be limited in terms of its depth and ability to identify banks and banking concentration at the spatial (market) level. Without the availability of bank data, establishing market concentration at a level relevant to SMEs (i.e. the local spatial market) would be severely hampered and the research focus would be narrowed to a more aggregated level using individual bank identifiers and their implied UK market (or concentration) shares.

Obtaining data from the banks is clearly a challenging issue. However, to fully address these questions, and to perform a detailed analysis of the issues, a minimum data requirement would involve obtaining data on:

- Product level pricing and characteristics;

- Spatial cost and profitability data at the branch level; and

- SME data on accounts, borrowing, use of other bank products and services and switching.

On the other hand, there is a relatively rich source of data on SMEs from a variety of surveys. Table presents the primary sources of SME survey data currently available that could be used in a study.

Table 10: SME survey data

Data set	Structure and Focus
SME Finance Monitor	Firm level data. Cross-sectional. Quarterly. Financing demand across products, supply terms and conditions. Bank identifier (excluded in public version). 5000 SMEs per wave.
Annual Survey of Small Business (and barometer)	Firm level data. Cross-sectional. Quarterly barometer and bi-annual main survey. Financing demand and supply across products. Limited supply terms and conditions. No bank identifier. 500 SMEs per wave barometer and 5-10,000 SMEs main survey.
SAFE EU	Firm level data. Cross-sectional. Annual. Financing demand across products, supply terms and conditions. No bank identifier. 1,000 SMEs per wave. Full EU coverage.

Despite the relative richness of SME survey data, there are some practical considerations that warrant thought. In general, the UK has numerous, detailed, and high quality, surveys of SMEs. In this respect, there is a lot of information on SME financing arrangements and there is the potential to use these data sets as a key component in any empirical investigation. In addition, the SME Journey Towards Raising Finance Surveys (2 waves of 1,000 SMEs in 2012 and 2014) provide good background and potential for corroboratory evidence on how and why SMEs seek out the types of finance they do and their level of financial sophistication, as does the Charterhouse Business Banking Survey for 2015. However, even when survey respondents are asked to identify (name) their bank, this is often not made available to researchers in the data sets (e.g. SME Finance Monitor). This could present a significant problem.

Furthermore, the majority of the UK SME data sets are cross-sectional, although often repeated at regular intervals (e.g. Annual Small Business Survey, Survey of SME Finances etc.), and with retrospective time related questions. Whilst pseudo-panels[103] can be created for research purposes, this does impose empirical limitations on the type of questions that can be asked of the data and the implications that can be drawn from the findings. This is where the UK lags behind the more detailed linked, panel data-sets available to SME researchers in, for example, Sweden and Denmark.

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[103] Pseudo panels use consistent and repeated cross-sectional surveys to build up a time-series aggregated data set which allows exploration of how key variables change over time. Examples include the US Current Population Survey and the UK Family Expenditure Survey.

8.4 Quantitative methodology

There are broadly six types of methodologies that have been used in the empirical literature to assess the impact of bank competition on SME lending. These are:

1. Discrete choice models;

2. Switching - price models;

3. Lending access - competition models;

4. Loan price – competition models;

5. Credit rationing tests; and

6. Bank switching models.

These models are explained below:

8.4.1 Discrete choice models

A discrete choice approach involves modelling demand for banking services given a number of attributes associated with each bank, such as price, accessibility, and the services offered. A nested logit model, which allows correlated preferences to be correlated across banking products, can be used on the demand side to model the impact of each attribute on a bank's market share, allowing the modeller to draw inferences as to the characteristics influencing the choice of bank by an SME.[104] Inherent in this approach is an assumption that customers have only one banking provider, which may not be the case. On the supply side, banks are modelled as choosing the characteristics of their products, for example loan rates and savings rates, based on their own cost factors, such as operating expenses and the costs of maintaining their assets. SMEs' median elasticity with respect to banking costs can then be derived from this estimation, since time varying models allow for a calculation of how much the customer's utility must change in order for them to switch banks.

8.4.2 Switching - price models

A switching model based on loan pricing examines loan price discrimination by large banks and assesses the impact of competition by smaller banks.[105] The model assumes an economy in which two types of banks and two types of firms ('large' and 'small' for each) exist, whereby large banks discriminate against smaller firms due to economies of scale. A discrimination coefficient, which estimates the degree to which smaller firms are discriminated against, is estimated, and it is additionally assumed that lending occurs both between large banks and large firms and between small banks and small firms at non-discriminatory rates. This model can be tested with data at the individual loan level, which

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[104] Dick (2000)

[105] See Borjas and Bronars (1989); Ramachandran and Rauh (2012).

provides details of the terms on which lending occurred between various banks and firms, with a variable identifying banks using a switching model estimator. There are two estimation steps: first, banks are sorted between large and small banks; secondly, the determinants of the discriminatory interest rate margin are identified and quantified.

8.4.3　Lending access - competition models

Competition models of lending access are designed to test for the impacts on access to finance of bank competition for firms of different sizes.[106] Firms are grouped into a size category represented by a dummy variable indicating whether the number of people employed by a firm is within a particular range (e.g. 50-249 employees, 250+ employees). Such a model would produce an estimated coefficient of the impact of bank concentration on access to finance for each firm size. This coefficient can be interpreted as follows: a negative coefficient could support the structure-performance hypothesis and a positive (or insignificant) coefficient could support the information-based hypothesis. The significance of differences in coefficients across firm sizes can then be tested.

8.4.4　Loan price – competition models

Loan price – competition models estimate the impact of bank concentration on the price of loans and therefore their affordability and accessibility. As with the access-competition models, they can be used to measure the differences in the impacts of competition across different sizes of firms and therefore whether SMEs are disproportionately affected by a lack of competition. Banks' net interest margins,[107] which measure both operational efficiency and level of effective competition in the banking market, are the dependent variable. Net interest margins are modelled as a function of bank concentration and other bank- and market-specific characteristics, as well as variables to control for differences across time and, where necessary, countries or regions, in the state of the macroeconomy.[108] The control variables should include bank size, the proportion of income earned from fees, banks' individual market shares, some measure of regulatory policies in a market, leverage, and the standard deviation of each bank's return on assets, in addition to any other characteristics that might influence interest margins, such as the proportion of lending to businesses versus individuals and the location of its branches.

8.4.5　Credit rationing tests

Credit rationing stickiness tests, such as those adopted by Berger and Udell (1992) and Cowling (2010), are used to measure the speed of adjustment of bank loan rates to changes in the underlying base rates. In these tests, the dependent variable is the bank

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[106] See Beck et al (2005)

[107] Measured as interest income less income expense, as a proportion of the bank's interest-bearing assets. This is therefore a measure of the difference between the rates charged to borrowers and the rates paid to savers that is comparable across various sizes of banks.

[108] See Demirguc-Kunt et al (2003)

margin, as measured in the loan price competition tests, and the independent variables include the nominal and real base rates; their squared terms (to control for non-linearities in the term structure of interest rates); loan contract variables; and variables to control for differences in macroeconomic conditions.

The relative stickiness (i.e. slowness of adjustment) of bank loan rates across loan types, as measured by the loan contract variables, is then an indicator of the level of competitiveness in the provision of finance to SMEs versus other firms. Another set of credit rationing tests, 'proportions tests', involve the estimation of relative loan stickiness across loan contract bundles using a probit model of the probabilities of a loan contract having a particular characteristic, for example commitment, collateralised, and floating rate loans. A test can then be conducted to examine how the proportions of loans of each type could be expected to change given a change in the base rate.

8.4.6 Bank switching models

Finally, bank switching models assess the determinants of firms' choices to switch banks when seeking additional funding. The literature comprises a mixture of arguments, including:

- Borrowing from a single bank is advantageous as it minimises monitoring costs.[109]

- Borrowing from a single bank is preferred since it minimises the complexity of negotiations if the firm encounters financial difficulties.[110]

- Borrowing from a single bank may be harmful to the firm as its incumbent bank will build up an information monopoly on the firm if the information it gathers is not easily transferable. As the firm will have to pay a 'lemons' premium[111] if it seeks to borrow from a new bank, the incumbent bank is able to charge higher interest rates to the firm once a relationship has been established.

Farina and Santos (2000) propose an estimation of the likelihood of a firm beginning to seek funding from multiple banks and how this varies with the age of its relationship with its incumbent bank. The effects resulting from increases in the number of banking relationships held by firms can then be measured by regressing the likelihood of a firm seeking additional borrowing against variables related to the firm itself, its initial banking provider, characteristics of the relationship between the firm and its incumbent banking provider, and the banking market. It is possible, then, to identify whether the firms negatively impacted by single bank lending are those of poor quality (therefore less

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[109] Diamond (1984).

[110] Bulow and Shoven (1978)

[111] That is, the new bank providing funding to the firm will charge a higher interest rate to compensate for the assumed risk incremental to that which can be observed, as the bank is suspicious about the firm not borrowing from its incumbent banking provider.

creditworthy) or those with the greatest potential for growth (i.e. SMEs). The model also allows for an analysis of the effects of market competition on firms' ability to establish and develop new banking relationships due to lock-in effects generated by the characteristics of the market, including information asymmetry.

8.4.7   The feasibility of these models

Having identified six alternative approaches to assessing the impact of bank competition on aspects of lending and wider access to capital issues, this section questions whether the data currently available in the UK is appropriate for conducting these different strands of analyses. This assessment is presented in the table below.

Table 11: Assessing the impact of bank competition on access to capital

	SME Finance Monitor	SME Finances Survey	ASBS (and barometer)	ECB SAFE
Discrete choice models		✓		
Switching - price models	✓	✓		
Lending access - competition models	✓	✓	✓	✓
Loan price – competition models	✓	✓		✓
Credit rationing tests	✓	✓		
Bank switching models	✓	✓		

8.5   Summary and recommendations

The analysis in this section highlights the key data and methodological considerations of a potential study. What emerges from this analysis is that the ability to access bank level data at a spatial level impacts the feasibility of a detailed and comprehensive study. In particular, this data would be critical to calculating meaningful measures of concentration, costs and prices at the relevant market level. While there are clear challenges to obtaining such data, this would facilitate the most granular and micro level investigation linking bank branches to SMEs directly. However, established datasets would permit an investigation linking the individual SME to their bank per se, but not at the branch level. This was achieved in the 2000 enquiry in the UK.

If obtained, this data could be used in conjunction with (bank derived) SME accounts data or consolidated within existing secondary SME data sets. The potential outputs would include;

- An identification of the market concentration – availability of finance relationship;

- An identification of the market concentration – cost of finance relationship;

- An identification of the market concentration – collateral requirement relationship;

- An identification of the market concentration – product substitution effect;

- An identification of the market concentration – customer 'lock-in' effects and the extent to which current accounts and lending are linked at the firm and bank level; and

- An identification of the market concentration – cost of switching relationship.

It is unlikely that any single approach to empirically measuring and testing the market concentration – SME bank relationship would provide the breadth and clarity required to informing competition authorities about the true nature of the market. As such it would be appropriate to perform a broader study capable of capturing key aspects of the overall bank-SME relationship and how it has evolved over time. Even in the presence of an oligopolistic banking market, the interpretation of its effects and impacts on SMEs has not been clear cut and conducting a broader investigation would help identify and evaluate which of these nuanced interpretations best reflects the true nature of the multi-faceted relationship between SMEs and their banks.

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9 Appendix 1: Interpreting the evidence on market outcomes

The main body of the report presented the apparent differences in observed market outcomes across the comparator countries and considered what these differences may mean in practice for SMEs. This appendix investigates these observations in more detail. It considers the extent to which these observations can inform an analysis of the market and examines the potential reasons for the observed differences in market outcomes.

9.1   Limitations on the analysis

Before considering the underlying drivers of market outcomes, it is important to recognise what level of cross-country analysis is practical. Key factors determining this are the limitations on the availability of existing data and its comparability with available data in the other countries.

While the data available to analyse market outcomes in the UK is fairly detailed, the analysis in this report highlights relative weaknesses in the data availability of other markets. Furthermore, where data is available, comparability is often limited by non-standardised measures.

For example:

- In the UK the BDRC SME Finance Monitor studies provide a rich source of survey data, including various segmentations. Furthermore the Bank of England reports SME-specific breakdowns for interest rates and loan volumes.

- Data availability for Germany and Italy is slightly weaker than for the UK. The key source of survey evidence is the ECB SAFE survey. It provides useful summary data on various financing issues faced by SMEs in each of the European comparator countries allowing direct comparison. However, the survey does not go as far as BDRC and the publicly available results do not allow a segmented analysis of the sort presented in the BDRC. Furthermore, the ECB does not report data on loan volumes or prices for SMEs specifically, but for different sizes of loans. While small loans can provide a proxy for SME loans, this approximation is imperfect.

- The availability and comparability of data in the USA is the most problematic of the comparator countries. A fundamental issue, which limits the comparability of much data, is that the standard definition for SMEs is not widely adopted in the USA. Instead of considering firms with up to 250 employees, official sources use the term "small business" to mean any firm with 500 or fewer employees (US Census Bureau of Labor Statistics and the Small Business Administration, SBA).[112] In addition, the

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[112] The Small Business Administration (SBA) has two different approaches for defining small firms. The first approach is to define any firm with less than 500 employees as "small." This practice was first established

quality of SME surveys is weaker in the USA. NFIB provides the best source of survey information, but it does not go into the same depth as the BDRC survey and the sample size is much smaller.

Overall, the existing level of publicly available data provides a good basis on which to draw high level conclusions on the relative performance of the different markets for SME lending. However, differences in reported measures, definitions and degrees of data segmentation across the countries means that in many areas it will not be possible to perform a detailed analysis to identify the causes of any differences that are observed.

9.2   Differences in SME characteristics

A key consideration in the cross-country analysis is the similarity of SME profiles in the different countries. Of particular interest are size and age, as these are factors that typically affect both SMEs' demand for finance and the credit risk that lenders perceive the SME to carry. Differences in market outcomes for SMEs across the countries should therefore be placed in the context of differences in SME profiles – countries that have proportionally more small and less-established SMEs may have higher barriers to finance for SMEs than countries that have more large and well-established SMEs.

9.2.1   Evidence on SME profiles

The analysis presented in this report suggests that UK SMEs are relatively large and more established than the European average. Compared to the other countries considered in the report, the UK is most similar to Germany. However the SME profile in the UK appears to contrast with that of Italy, which is dominated by young and small SMEs.

- In the UK and Germany around a third of SMEs have more than 50 employees and a significant proportion have a turnover of more than €10 million (19% in the UK and 24% in Germany). In Italy an estimated 58% of enterprises have fewer than 10 employees while over half have a turnover of less than €1 million.

- While a large majority of UK SMEs are less than two years old, they are in general older than SMEs in Germany and Italy. 13% of UK SMEs have been established for at least 5 years, while the same is true for only 9% of German SMEs and 6% of Italian SMEs.

As discussed above, small businesses in the USA are defined as firms with fewer than 500 employees. While data on small businesses is often segmented by size, the categories do

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by the Small Business Act of 1953. However, the same Act required the SBA to establish a size standard that "should vary to account for differences among industries." Second, the Act called on the SBA to "assist small businesses as a means of encouraging and strengthening their competitiveness in the economy." These two considerations are the basis for the SBA current methodology for establishing small business size standards. Broadly, any firm with 500 or fewer employees classifies as a small business, but that depends on the industry (e.g. in manufacturing the maximum number of employees may range from 500 to 1500, depending on the type of product manufactured).

not overlap with standard European categories. For example, around a third of small businesses in the USA have between 100 and 500 employees. This makes it difficult to draw direct comparisons between SME market outcomes in the USA with outcomes in the European markets.

9.2.2 Impact of age and firm size on SME demand for finance

Economic theory suggests that younger and smaller firms are more likely to require outside financing because their internal resources (owners wealth, retained profits and cash-flows) are less likely to be able to fully finance new investment and growth opportunities. The requirement for outside financing may be further exacerbated in periods of low demand when cash flows tighten and profits decline. In the UK and Germany, SMEs are relatively large and hence are more likely to be able to draw on internal funding, especially for cash-flow management. In contrast, given their size profile, Italian SMEs are more likely to have a relatively large external financing requirement.

9.2.3 Impact of age and firm size on the supply of finance to SMEs

Firm age and size are common risk indicators used by financial institutions to evaluate small business finance applications.[113] When a firm is small and young, there is less evidence available to a lender that the firm will be able to make repayments, whereas firms that are larger and longer established are more likely to be able to demonstrate their credit-worthiness.[114] This leads to an informational asymmetry in the lending market, whereby SMEs know more than banks about their own ability to make repayments. This impacts the offers that banks make SMEs in a number of ways:

- Credit rationing: Banks may withhold credit, even where the would-be borrower is willing to pay higher interest rates.[115] They do this because by raising the interest rate, they may impact the mix of customers and the customers' behaviour so as to worsen the quality of the loans.

- Higher charges: Interest rates are generally higher the greater the perceived credit risk. This is because lenders need to be compensated for the possibility that the borrower might default. Thus, where there is a higher perceived credit risk amongst SMEs, all else equal one would expect the interest rate to be higher.

- Increased collateral requirement: There is evidence that, for a given loan size, the likelihood that an SME is asked for collateral decreases with the age of the firm.[116]

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[113] Cowling and Liu (2012)

[114] Berger and Udell (1998); Cassar (2004).

[115] For example, Jaffee and Russell (1976); Stiglitz and Weiss (1981).

[116] Akhavein et al.(2004).

In addition to the higher perceived credit risk, lending to SMEs involves transaction costs, which are also typically higher for younger and smaller businesses because of the due diligence costs.[117]

As a result, a standard finding of the academic literature on SME lending is that smaller and younger firms are less likely to be able to access external finance and more likely to be charged higher loan rates and to provide collateral when they do.[118] Given that Italian SMEs are generally smaller than SMEs elsewhere, this may partially explain the high rejection rate and high average interest rates in Italy.

9.3   The broad SME financing landscape

Interpreting the outcomes of the SME lending market also requires consideration of the broader SME financing environment, as this provides the context for the competitive conditions of the bank lending market. This includes both the needs and preferences for financing of SMEs and the availability of alternatives to bank finance.

Survey evidence suggests that for SMEs that seek out finance, the "pecking order" approach identified for the UK in Section 2 also appears to be reflected in the comparator countries: SMEs have a preference for debt over equity finance and bank debt over other forms of debt. As Figure 54 shows, few SMEs in the UK, Germany or Italy find either equity capital or debt securities relevant, while bank loans, credit lines, overdrafts or credit cards are relevant to most.

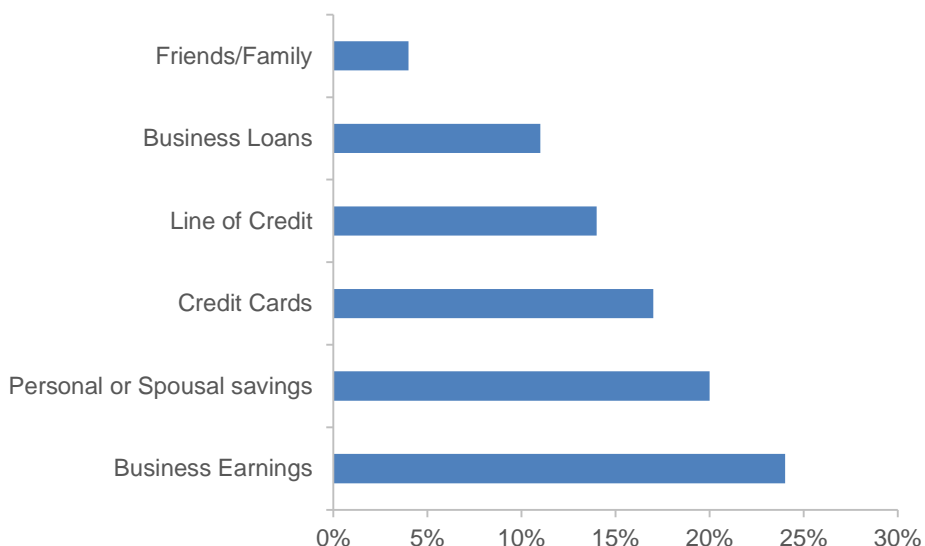**Figure 54: Sources of finance for SMEs in the UK, Germany and Italy**

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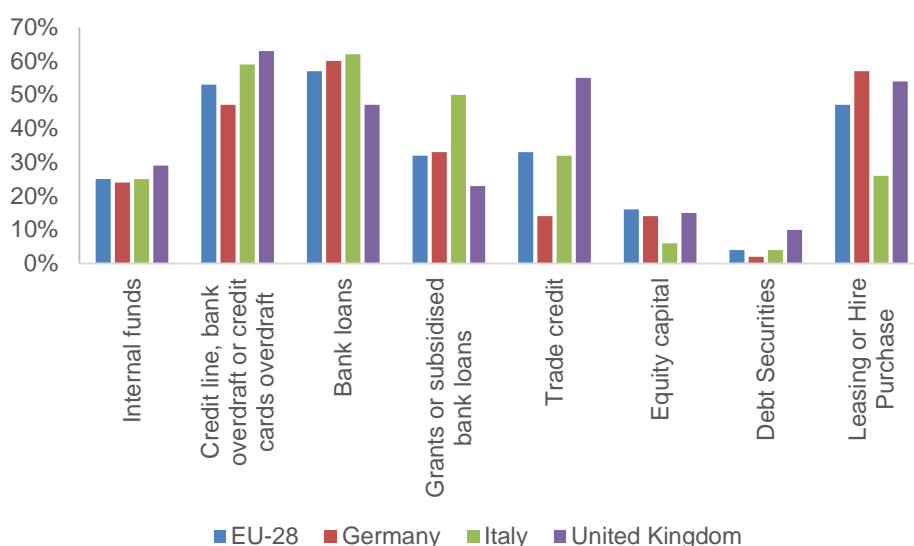
[117] Titman and Wessels (1988); Wald (1999).

[118] Cassar (2004); Cosh and Hughes (1994); Scherr et al. (1993); Van Caneghem and Van Campenhout (2012)

In the USA, the primary sources of funding among SMEs are internal or family borrowing. But as in Europe, external finance is dominated by bank finance.
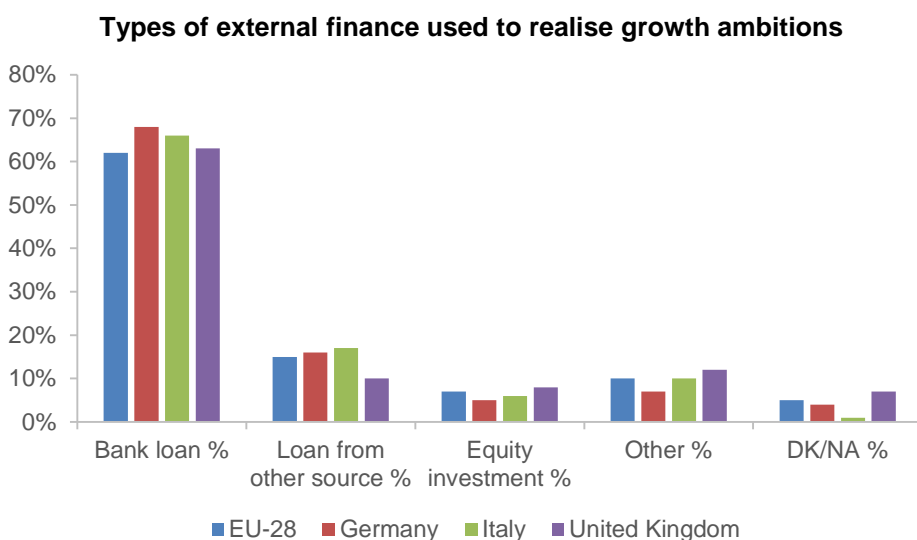
Figure 55: Sources of finance for SMEs in the US

While there is some variation in the use of different forms of bank finance across the European comparator countries, the survey evidence suggests that for firms looking to grow their business, bank loans are an especially important source of funding.

Figure 56: Sources of finance used for realising growth ambitions

Types of external finance used to realise growth ambitions

Although bank finance is the most important source for SMEs in each of the comparator countries, there are differences in the availability of alternatives. In particular, UK SMEs appear to use alternatives more than their German and Italian counterparts. For example, while the use of debt securities among UK SMEs is low, it is much lower in Germany and Italy. Furthermore, the rapidly expanding market for alternative forms of lending, such as peer to peer lending, is significantly more established in the UK than in either Germany or Italy.

Trade credit also appears to be significantly higher in the UK than in Germany and the rest of the EU. This is surprising as German and UK SMEs have similar SME populations.

It is also informative to consider the level of multibanking relationships across the countries. Most UK SMEs have a relationship with 1 bank, while US SMEs have a relationship with 1.84 banks on average, however in Italy this figure is a surprising 7. As UK banks tend to be more transactional banking compared to the rest of the countries studied, it is surprising that this figure is not higher. Empirically comparing to Italy were relationship banking seems more apparent, building a good relationship with multiple banks appears more difficult.

9.3.1 Banking market structure

There are significant differences in the market structure and regulatory set-up across the comparator countries and these are likely to play a key role in determining the market outcomes.

For example:

- The UK lending market is relatively centralised, and dominated by four large banking groups. Banks typically operate under a transactional model, which allows lenders to make systematic and speedy decisions on lending proposals. The link between current accounts and lending is key. Banks use both, account management and lending proposal information (business plan) to determine their willingness to lend to SMEs and this is facilitated by their significant investments in IT, particularly in data processing.

- The German banking market is organised in three groups: Commercial banks; Public banks (savings banks and promotion banks); and Co-operative banks. Savings banks, which account for approximately 22% of the market, follow the "regional principle", meaning they are only authorised to operate branches within their region. They operate like commercial banks in a decentralised structure and their business model focuses on retail banking services to SMEs and households. Co-operatives also focus on SME and household lending, and similarly are only allowed to operate within their own region.

- In Italy the lending market is dominated by six banking groups, although across the 93 local markets, smaller banks often have large shares of the market. SME banking is often dominated by relationship lending. There has traditionally been a significant presence of state owned banks and a political will to encourage local savings and loan banks. However, in 1994, the state began a process of privatisation of its

banking assets and this occurred in parallel with a major M&A wave in the decade to 2002.

- The US lending market has a bifurcated structure, combining a few very large banks with a large number of small community banks. Community banks play an important role in SME lending, especially in rural areas, where their broad approach to reviewing loan applications and lower reliance on formal scoring methods, helps to alleviate the issues posed by asymmetric information. This is reflected in the lower SME loan rejection rate among community banks, but overall rejection rates appear to be high in the USA.

9.3.2   Market concentration

The differences in the market structures outlined above imply that typical measures of market concentration should be interpreted with caution. In particular, as the UK lending market is more centralised than the markets in the comparator countries, one would expect standard measures of market concentration, which define the market at the national level, to be higher in the UK. This is reflected in Figure 57, which shows the 5-bank asset ratio across the comparator countries.

Figure 57: 5-bank asset ratios in the comparator countries
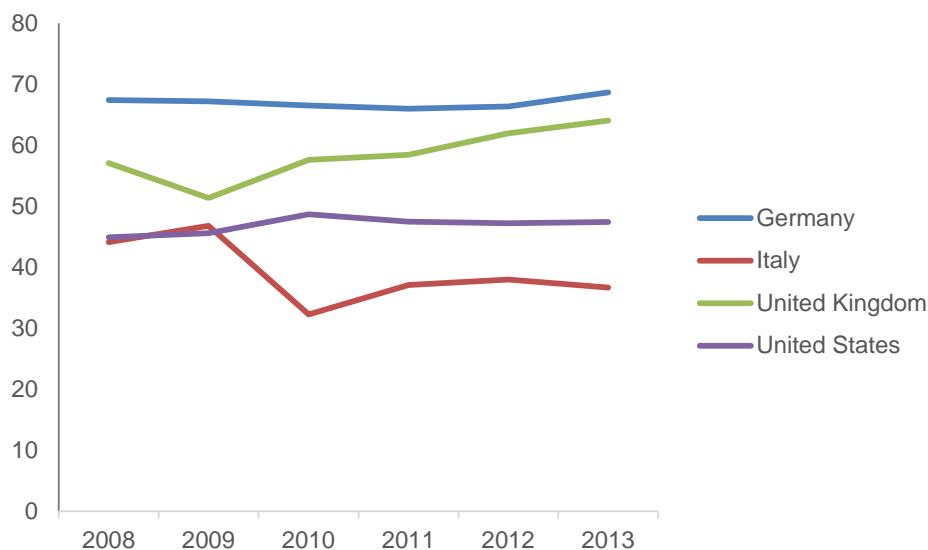
Source: Calculations based on Federal Reserve Statistical Release 2015

To understand the range of choices available to SMEs, it may be appropriate to consider the relevant market, which in the comparator countries should be defined at a more local level than in the UK. Evidence from both Germany and the USA suggests that, when the

market is defined at the regional or metropolitan level, the market is significantly more concentrated.[119]

Nevertheless, evidence on the extent of multi-banking relationships indicates that there may be more choice in the comparator countries than in the UK. While most SMEs in the UK have a relationship with just one bank, in the US the average is 1.84,[120] in Italy it is 7[121] and in Germany there is evidence that SMEs tend to diversify their business relationships to banks, but at the same time maintain a small core of close long term main bank relationships.[122]

Overall it appears that the UK has a relatively concentrated market for SME lending. However, the extent to which this explains differences in market outcomes remains unclear. As explained in Section 2, market concentration can have competing effects on market outcomes and the evidence on the overall impact is inconclusive.

9.3.3　Models of bank lending

The main body of this report highlights key differences in the models of bank lending between the comparator countries.

The typical model of lending in the UK bank sector can be described as "transactional lending". In this model banks rely on "hard data" and automated scoring systems to make their lending decisions.

In contrast, Germany, Italy and the USA can be characterised as having relationship lending models. Relationship lending is a model of lending in which financial service providers obtain firm-specific information through multiple interactions with the SME.[123] This information can be broad and hard to capture in formal scoring models. In relationship lending, banks and customers develop reputation and increase commitment through repeated transactions across different services. This often allows the low-cost renegotiation of debt contracts for SMEs that they would otherwise struggle to demonstrate.[124] Relationship lending is the core model of many lenders in the comparator

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[119] Kötter (2013), Wheelock (2012).

[120] NFIB (2012) – this average is for credit institutions in the US

[121] Albareto et al. (2008).

[122] Hainz & Wiegand, (2013)

[123] Boot (2000)

[124] Lehmann and Neuberger (2001).

countries, such as community banks in the USA, local savings banks in Germany and a number of banks in Italy.[125]

By reducing the informational asymmetries associated with SME lending, relationship lending can help to improve some market outcomes for SMEs.

For example, there is some evidence that firms with closer firm-bank relationships find it easier to access long-term loans.[126] There is also evidence that relationship lending reduces the requirement for collateral by improving the quality of information held by the lender.[127] Lehmann and Neuberger (2001) consider the interaction activity between bank managers and the SMEs and find that greater interaction is associated with a lower collateral requirement. Similarly, Berlin and Mester (1998), find that in local and more concentrated markets the collateral requirement is lower as lenders have better information about borrowers.

In addition, relationship lending typically gives SMEs greater access to bank managers and relationship services. This is reflected in the availability of local branches, which SMEs appear to value. While there are other factors that determine the number of branches, out of the countries considered in this report, the UK has the second lowest number of bank branches per population, while Italy has the highest, as Figure 58 shows.

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[125] A survey conducted by the Bank of Italy in 2007 found that many medium and large banks use "soft" information, such as qualitative information on the firm's governance, in their credit scoring models (Albareto et al., 2008).

[126] Hernandez-Canovas and Koeter-Kant (2008)

[127] Harhoff and Körting (1998).

Figure 58: Number of branches per 100,000 population, 2008-2013
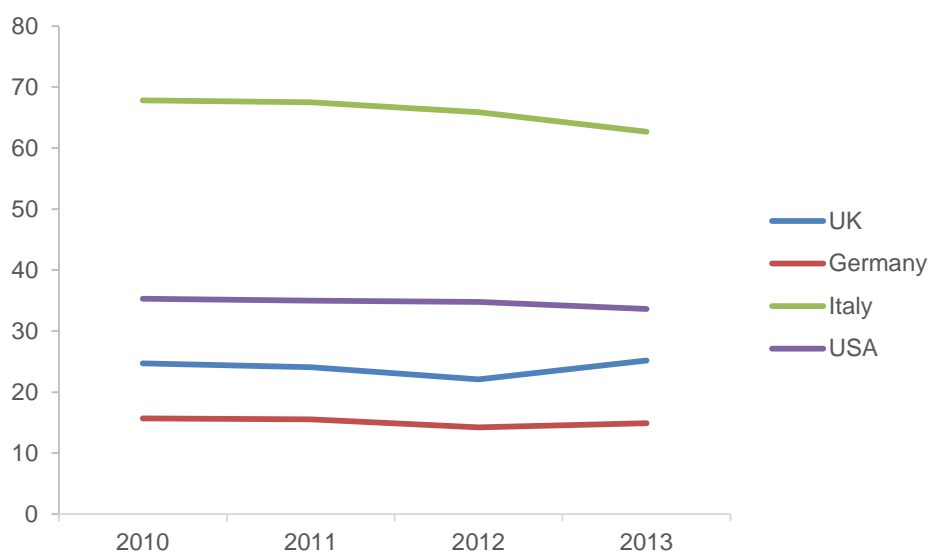
On the other hand, the lower costs that the large banks achieve through their economies of scale and use of automated credit scoring make transaction-based lending generally more cost-effective.[128] Furthermore, as it does not require having a local officer to manage the relationships, the transactional model may make it easier for large and non-local banks to compete.[129] Taken together, these considerations suggest that transactional lending can lead to lower finance charges for SMEs.

While the impact of the lending model on market outcomes is complex, it might be expected that under a transactional model of lending there would be more credit rationing, higher collateral requirements and less emphasis on relationship lending services, while charges on bank finance might be lower.

However, the evidence on market outcomes in this study does not necessarily support this hypothesis. SMEs in the UK that are able to access bank finance and collateral requirements are relatively low. This may reflect the fact that SMEs in the UK are relatively large and so, compared to other countries, proportionally fewer are unable to provide sufficient formal evidence of their credit-worthiness.

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[128] Berger and Udell (2006)

[129] Beck et al. (2011)

10 Appendix 2: Policy and regulatory time-lines (up to 2010)

Germany

1948-1961: Decentralised banking supervision

Banking supervision in Germany rested in the hands of the Federal States which exercised the respective functions together with their State Central Banks.

1961: Banking Act (KWG)

The responsibility for supervising banks was assigned to the Federal Banking Supervisory Office (Bundesanstalt für Kreditwesen), an independent supervisory federal authority reporting to the Federal Minister of Economics. The KWG has been amended several times mainly incorporating EU Directives into German national law but also as reactions to failures of the regulatory framework or to account for new risks arising from liberalisation of the market.

1976: First KWG amendment

The amendment tightened large exposure rules and introduced rules that tied foreign exchange positions and positions in precious metals to capital.

1977: EU First Banking Directive

The directive applied the principle of non-discrimination against businesses from other Member States to the banking sector – i.e. a bank from one Member State that wished to operate in another Member State had to be able to do so on equal terms to domestic banks. The liberalisation of the market lead to more competitive pressure for domestic banks from abroad.

1983: 2nd KWG amendment

After the near failure of Bankhaus Schröder, Münchmeyer and Hengst who had suffered large losses from lending to a single large borrower, large exposure limits were reduced from 75 to 50 percent of capital.

1985: 3rd KWG amendment

The amendment incorporated the First EU Banking Directive into German Law and aimed at the prevention of credit pyramids which banks build up with the help of their subsidiaries.

1989: EU Second Banking Directive

The second directive provides for minimal capital requirements for all retail banks and set out the procedure under which home country regulators would control branches of an institution in another Member State. The Directive created the "European Passport", which listed those services that could be carried on in another Member State once an institution had been approved by its home country regulator. This enabled banks to operate across the EU without having to seek the approval of regulators in each country and was therefore a major step in opening up competition in the banking sector.

1993: 4th KWG amendment

The amendment implemented the EU Second Banking Directive into German law and introduced inter alia solvency requirements, harmonisation of bank supervision via the principle of home country supervision and the single bank license which permitted banks with a license in a Member State of the EU (former EEA) to do business anywhere in the EU (former EEA) ("European Passport").

1995/1998: 5th/6th KWG amendments

Implemented the Second EU Consolidation Directive, the EU Large Exposure Directive, the EU Investment Services Directive, the EU Capital Adequacy Directive and the so-called Post-BCCI Directive.

1990: German reunification

Reunification stimulated loan demand for much of the nineties and the booming equity markets in combination with the rise of the internet economy propped up the banks' fee business.

1992: The Maastricht Treaty enshrines the Economic and Monetary Union (EMU)

The decision to form an EMU was taken by the European Council in 1991, and was later enshrined by the Treaty on European Union. EMU brought a coordination of economic policy-making between Member States and of fiscal policies, an independent monetary policy run by the ECB and the single currency and the Euro area.

1990s: Merger wave in the German banking market

The number of credit institutions declined by approximately 35 percent between 1997 and 2003, by far the largest reduction in Europe during this time period (Kötter, 2004). The vast majority of mergers occurred among savings and co-operative banks. The merger wave has been driven by the process of economic and monetary unification initiated with the implementation of the Single Market Act in 1992 and in prospect of a single currency creating a common capital market. The substantial decline in the number of credit institutions was a global phenomenon, however, it has been the most remarkable in Germany.

1999: Introduction of a common currency

The euro was launched on 1 January 1999 and became the new official currency of 11 Member States. Since 1 January 2002, the euro has been circulating in physical form.

2008: The financial crisis

Banks were directly affected through their substantial exposure to structured credit products originated in the US. Though German banks rely less on borrowing in financial markets , some institutions indirectly suffered from the collapse of Lehman Brothers as they could not roll over their wholesale funding (e.g. the Hypo Real Estate had to be rescued by the government in September 2008) (Hüfner, 2013)

Italy

1936 – 1990s: Tight regulatory framework

The 1936 banking law imposed rigid limits on the ability of credit institutions. Each credit institution was assigned a geographical area of competence based on its presence in 1936 and its ability to grow was restricted to this area. This regulatory framework did not change substantially until the end of the 1980s. The law made specialisation mandatory and distinguished between commercial banks and special credit institutions. There were no universal banks. Main objective of the regulatory framework was to foster local development and ensure financial stability. Mergers between public banks were not allowed, and for savings banks there were strict authorisation procedures for such mergers.

1977: EU First Banking Directive

The directive applied the principle of non-discrimination against businesses from other Member States to the banking sector – i.e. a bank from one Member State that wished to operate in another Member State had to be able to do so on equal terms to domestic banks. The liberalisation of the market lead to more competitive pressure for domestic banks from abroad.

1989: EU Second Banking Directive

The second directive provides for minimal capital requirements for all retail banks and set out the procedure under which home country regulators would control branches of an institution in another Member State. The Directive created the "European Passport", which listed those services that could be carried on in another Member State once an institution had been approved by its home country regulator. This enabled banks to operate across the EU without having to seek the approval of regulators in each country and was therefore a major step in opening up competition in the banking sector. It also enabled banks to operate as universal banks and hence encouraged financial conglomerates.

1990s: Deregulation related to 1) ownership structure and 2) regulatory framework

The need to reform was driven by the EU Directives, the growing need to operate in an international environment and to achieve greater efficiency and performance, and the financial crisis of the early 1990s.

1)   Reform of banks' ownership structure – privatisation of savings banks

The Italian government decided in the early 1990s to privatise the community-owned banks (savings banks owned by the province or region) and transform them into joint stock companies.

1990: Amato law

The Amato law introduced the joint-stock company as the basic organisational entity in the banking system and was an important step towards the privatisation of the system. It provided for transforming savings banks into joint-stock companies (societa per azioni, S.p.A.). The banks' capital was transferred to publicly owned foundations, which maintained the public mandate of savings banks. The law was only the first step towards privatisation of publicly owned banks because the control of the spin-off joint-stock companies initially remained in the hands of the publicly owned banking foundations.

1994: Dini law

The law repealed the obligation for the foundations to keep control of their joint-stock companies and introduced substantial tax advantages for those foundations willing to dispose of their banking shares within four years of the implementation of the law. The law officially kicked off the privatisation of the Italian banking system, and coincided with the launch of the largest state-owned banks, such as Credito Italiano, Instituto Mobiliare Italiano, and Banca Commerciale Italiana.

1998: Ciampi law

The law fixed a four-year time limit within which the foundations were to sell off the controlling interests they still held in banking companies. Results of these three reforms: decline in the share of banking assets in the hands of public entities and foundations from 68 percent in 1992 to 9 percent in 2003. One prominent example is the privatisation of Credito Italiano in 1993, now part of UniCredit Group. In the same year, the legal structure of savings banks was changed, they were transformed from mutual organisations into standard corporations, facilitating mergers and acquisitions (Guisi et al., 2007).

2)   Reform of the regulatory framework

1992: Legislative Decree 481/1992

The decree ceded banks the right to become universal banks, allowed them to raise funds in any form and to undertake any of the activities indicated in the Second Banking Directive such as factoring, leasing, medium-and-long-term credit, and merchant banking. Implemented the Second Banking Directives into Italian national law.

1993: New consolidated law on banking replacing that of 1936

The new banking law incorporated the EU Banking Directives. It removed most restrictions introduced in 1930s, such as the separation between short-and long-term lending and allowed universal banks. In the 1990s, large universal banking groups were established in Italy, as various restrictions on business activities were abolished.

1990s: Consolidation wave

Following European financial integration (notably due to the two Banking Directives), the prospect of a common currency and the deregulation process (privatisation allowed mergers and acquisitions amongst savings banks and the new 1993 banking law allowed large universal banks) the number of commercial banks dropped from 1,100 to 841 (a 24% decrease) between 1990-2000 (Coccorese, 2002).

USA

Before the 1920s: Universal banking

The US financial system was characterised by the widespread operation of universal banks.

1927: McFadden-Pepper Act

Prohibited larger banks from opening branches across different states. A US bank could open a branch abroad more easily than in other states within the US.

1929: Great Crash

1933: Glass-Steagall Banking Act and Securities Act

The Act limited financial institutions to operations in segmented markets, defined in terms of financial products traded in them, subject to direct governmental or indirect regulation. The possibility of universal banks was eliminated.

1934: Securities and Exchange Act

1935: Banking Act

1930s-1980s: Highly regulated industry with limited entry

The US banking sector was highly regulated until the 1980s. Banks were prohibited from expanding across state borders (Chava *et al*., 2012). Furthermore, banking laws prohibited interstate banking, and they limited branching activity, restrictions that favoured the existence of many small local banks.

1978: International Banking Act

Gave the Federal Reserve Board (and not the states as before) regulatory authority over the domestic operations of foreign banks and significantly equalised regulatory treatment

of foreign and domestic firms. Before 1978, the US had accorded foreign banks the same national treatment as domestic banks. US laws allowed well-managed and well-capitalised foreign banks to conduct a wide range of bank and nonbank activities. As a result, foreign banks grew rapidly in the 1970s (Tarullo, 2012).

1989-1995: Savings and loans crisis

The failure of 1,043 out of the 3,234 savings and loan associations in the US.

1990s: Deregulation leading to the re-emergence of interstate and universal banking

1994: Riegle-Neal Interstate Banking and Branching Efficiency Act

Already in the 1970s and 1980s, most US states passed laws removing intra- and inter-state restrictions. The Riegle-Neal Interstate Banking and Branching Efficiency Act then overturned the 1927 McFadden-Pepper Act which prohibited interstate banking. Interstate banking was now authorised.

1999: Gramm-Leach Bliley Act

Abolishes the Glass-Steagall Act and led to the re-emergence of the universal banking model by eliminating any functional barriers between commercial and investment bank activities.

Late1980s - 1990s: Consolidation process

The number of commercial banks in the US has fallen by more than 50 percent between 1984 and 2008. Over the same period, the average size of US banks increased five-fold in terms of inflation-adjusted total assets. The consolidation and the accompanying large increase in average bank size have prompted concerns about the effects of consolidation and increasing bank size on market competition (Wheelock and Wilson, 2009).

2010: The Volcker Rule is endorsed, included in the Dodd-Franck Act

The Volcker Rule separates the investment arms which are believed to have posed vulnerabilities to the system from the commercial arm that oversee the traditional banking activities of loan creation from deposits which support economic growth. The mechanism of operation of the Volcker rule is similar in principle to the Securities Act of 1933 and the Glass-Steagall Act which separated commercial banking activities from investment banking (Taruollo, 2012).

11 Appendix 3: Relationship and transactional models of banking

It is a widely held view, although empirically contentious, that SMEs benefit in terms of access to credit and lower cost of credit, from having a close and frequent relationship with their bank, particularly when this generates soft information that could improve the quality of lending decision-making (Berger, Goulding and Rice, 2013). It is not often articulated that having more qualitative information to support decision-making might also increase rejection of funding proposals or the price of loans through a quality effect or through an increase in information-based bank costs. However, it logically follows that the best 'types' of bank to deliver these obvious benefits to SMEs are smaller banks rooted in local communities (i.e. where this softer information is generated).

So how do banks relate to SMEs? And do smaller, local banks behave differently to larger, national and foreign banks? And does this impact on the outcomes of their lending behaviours? The literature has largely focused on two types of lending, transactional and relationship, and these types of lending are related to the nature of the technologies and information used (Berger and Udell, 2006). Transactional lending essentially focuses on 'hard' information (e.g. quantitative) such as company accounts, collateral (secured lending), bank account history etc. This is sometimes referred to as 'arms-length' financing (Beck, Demirguc-Kunt and Martinez Peria, 2008). In contrast, relational lending (not to be confused with length of banking relationship) places 'soft' qualitative information at the heart of the lending decision and this can only be garnered through personal, and frequent, interaction with the bank (or more specifically a bank account manager). It follows that large, national banks have a relative advantage in transactional lending and smaller, local banks a relative advantage in relational lending (De la Torre, 2010). This would imply that the smallest, youngest, and most informationally opaque businesses would gain from interacting with small, local banks which are better placed to capture their softer information more efficiently and incorporate this into their lending decisions. This can occur as smaller banks have a flatter managerial structure which obviates the difficulties of processing and codifying soft information (Berger and Udell, 2002). Internet banking (I-banking) by definition would be an extreme version of transactional lending.

At the country level, the UK is often characterised by greater use of transactional lending and Germany by relational lending, both features which are consistent with the specific market structures and historical evolution of their banking systems (Beck et al, 2008; Elsas, 2005). But these broad characterisations of the two banking systems do not hold up perfectly to closer scrutiny. For example, Quack and Hildebrandt (1995), in their detailed review of German Hausbanks, found three important features of the lending decision. Firstly, that Hausbanks use a large amount of hard data when evaluating lending proposals, including a detailed assessment of historic and current cash-flows, scrutiny of business accounts, a detailed review of the investment proposal, an individual assessment (including academic qualifications) of the owners, and a written repayment plan. Secondly, all the savings banks collectively operate an up-to-date database of hundreds of thousands of company balance sheets which they draw upon in lending to assess not only the firm proposing the loan but the relevant industry benchmarks. Thirdly, they operate a

'four eyes' lending policy where the relationship manager <u>and</u> the credit department must jointly sign off each loan.

This evidence is broadly consistent with wider evidence on banking in 45 countries conducted by the World Bank (International Finance Corporation) and reported by Beck et al (2008) which found that;

- Most banks have separate departments to manage their relationships with SMEs
- Sales of non-lending products to SMEs is done at the branch level
- Loan approval, risk management, and non-performing loan recovery functions tend to be more centralised
- Typically the banks decision is based on 3 types of information (in order of importance); (1) a financial assessment, (2) credit history with bank, and (3) owner characteristics and loan purpose
- Only 18% of banks did not use credit scoring

This is also consistent with European evidence (Ferri, Murro and Rotondi, 2014) which found that, on average, European SME banking markets were characterised by a mix of types of lending, with 47% of lending conducted on a transactional basis, 27% on a relational basis and 29% using soft information. Further analysis of the existence of credit rationing to SMEs in the 2009 crisis found that transactional lending was more associated with weak (quantity) rationing and banks that used soft information and operated on a general relational lending basis had a slightly lower incidence of strong rationing. More recent UK empirical work found that I-banking (pure transactional lending) had no effect on either SMEs demand for loans or banks willingness to supply them compared to more traditional high street banking (Cowling, Liu and Minniti, 2015).

But the conclusions of the Beck et al (2008) study are insightful in this essentially empirical debate. They state that, "the conventional wisdom that relationship lending by small and niche banks is at the heart of SME finance is misguided" and, further, that, "overall the evidence suggests that the lending environment is more important than firm size or bank ownership type in shaping bank financing to SMEs", although firms are less credit constrained on average in more concentrated markets. These findings are supported by a wider array of empirical evidence which suggests that larger banks were able to increase their lending to younger and smaller businesses because they used credit scoring technologies (Frame, Padhi and Woosley, 2004; Berger, Frame and Miller, 2005) and could process loan applications efficiently and at low cost. This finds further support from Canales and Nanda (2011) who found that large banks with decentralised decision-making lend more to small businesses. Further, Berger and Black (2011) find that small banks do in fact use hard information alongside relationship lending.

To summarise, the more recent empirical evidence has questioned whether or not the idealised characterisation of relational lending holds up to scrutiny in terms of delivering more positive outcomes for SMEs in terms of access to and price of loans. For one, bank-SME lending markets, regardless of the size and market structure of the banks within them, typically conduct their SME lending using a mix of transactional and relational lending methods. And the relative advantage of large banks in transactional lending and small banks in relational lending appears not to hold true as large banks do both and appear quite efficient at lending to younger, smaller and informationally opaque firms. It

may be that people are confusing the benefits of building a long-term relationship with a single bank (years with that bank) with relational banking (making a lending decision based on hard quantitative information). Many SMEs have very long relationships with their banks (the UK average is around 15 years) but their banks may operate on a transactional lending basis and vice-versa.