Estimating the Financing Gap of Small and Medium-Sized Enterprises

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Abstract

Using a novel methodology, we estimate the gap between supply and demand financing of small and medium-sized enterprise (SME) financing in several European countries. We find the largest loan gap spreads are in Poland and the Netherlands. Specifically, our results show the upper boundary of the loan gap is the lowest in Romania and the highest in the Netherlands. Moreover, the lowest lower boundary of the equity gap is in the Netherlands, while the highest lower boundary is in Romania. Overall, our results suggest that there is a significant difference between the estimated demand and supply of equity, which is on average 3% of GDP.

Keywords: Small and Medium Enterprises, Bank Finance, Equity Gap, Financial Constraints, Access to Finance

JEL Codes: G21, G28, G3, O16

Introduction

Small and medium-sized enterprises (SMEs) with fewer than 250 employees are im portant players in all sectors of the economy. In Europe, there are more than 21 million companies in the SME sector, with almost 90 million individuals employed. While SMEs contribute significantly to total job creation, they constitute a small proportion of employers. Yet the percentage of employed persons working for SMEs in Europe lies between 60% and 70%.

The SME sector is, thus, significant for both economic growth and employment, which implies that when the SME sector is negatively affected, economic growth and employment suffer. Relative to larger firms in the economy, the SME sector is extremely sensitive to external market shocks: severe economic conditions or changes in economic regulations. Some of the main causes of higher sensitivity are risks associated with small-scale businesses, lack of experience, low productivity, a primary focus on local markets, and the naturally high rate of bankruptcies. Moreover, a direct consequence of higher sensitivity to external market shocks is limited access to short- and long-term financing. However, the data show that, in the presence of increasing unemployment in the period between 2008 and 2013, the share of employees in the SME sector increased relative to other sectors in the economy in five European countries: France, Germany, the Netherlands, Poland and Romania (Research Countries) (Annex 3). This observation implies that SME sector employment is more resilient to external shocks in the economy, further emphasizing the urgency to fulfill the SME sector's demand for access to free cash flow and credit. The SME sector's contributions to job creation, innovation, economic growth, and employment resilience in the presence of external shocks are all important reasons for further investigating the financing constraints affecting the sector.

SMEs are particularly dependent on credit and cash flow, but they confront numerous obstacles to borrowing funds because they are small, less diversified, and have weaker financial structures. Indications that SMEs are financially constrained are: payment delays on receivables; declining liquidity; and an increase in SME insolvencies and bankruptcies. Besides the market signals that make SME sector firms unfavorable borrowers, firms find it difficult to provide high-quality collateral at all times or to insure transparency with respect to their creditworthiness (Ayadi and Gadi, 2013).

In recent years, policymakers and researchers have increasingly begun to explore the differences in SME lending across countries and bank ownership types (IFC, 2010). While the literature has devoted considerable attention on the impact of the differences in institutional and organizational structures and the pricing of bank financing to SMEs, researchers have rarely focused on the differences between the supply and demand of financing to SMEs to determine whether a financing gap exists in debt and equity markets (OECD, 2015). This suggests that there is little evidence on the size of the financing gap in the debt and equity markets. Our study is the first pan-European study of its kind to estimate the differences between supply and demand of SME financing in order to quantify the financing gap in five European countries.

In this paper, we rely on the methods of the European Investment Bank (EIB) (2013) study, but expand it in several dimensions. First, we estimate supply and demand using different sources of data in order to provide a full overview of the currently available data on SME financing supply. Second, we apply different methods in order to estimate the financing demand. These different methods help us to avoid the sample selection issue that the EIB study suffers from. Specifically, the EIB study estimates the average loan demanded by observing only a sample of the loans that were obtained. We then correct for this issue and include different sizes of obtained versus requested loans. In addition, we calculate the loan demand of those firms that applied but were rejected for a loan. Finally, our study focuses on a different set of European countries.

In order to provide context to our analysis, we compare the estimates across the five countries with the SME loan and financing gap in the US. While not approaching pre-crisis levels, we find that the credit conditions for US SMEs are better than for EU SMEs. Moreover, the EU and the US have similar institutions and market structures, which makes policy recommendations easier to benchmark. To estimate the SME loan and equity gap in the US, we rely on publicly available data and published studies.

We find that the US loan gap ranges from 1.12% to 2.25% of GDP. The largest loan gap spreads are in Poland and the Netherlands. The upper boundary of the loan gap is the lowest in Romania and the highest in the Netherlands. Regarding the equity gap, we find that the US gap ranges from 0.96% to 1.52% of GDP. The lowest lower boundary of the equity gap is in the Netherlands, while the highest lower boundary is in Romania. The estimated equity gaps suggest that there is a significant difference between the estimated demand and supply of equity, which is, on average, 3% of GDP. We further find that SME equity gap in the Research Countries is significantly higher than in the US. The importance of equity should be highlighted, as well-capitalized SMEs are able to mobilize further debt. Filling the equity gap is thus more efficient than filling the loan gap. The total estimated SME financing gap in the US ranges from 2.30% to 3.78% of GDP. Our main result is that the total estimated financing gaps of the Research Countries in Europe are three to five times larger than that of the US.

This study carries important policy implications. We find evidence that the financing gap for SMEs in Europe is substantial. In identifying the size of the gaps in our Research Countries, our results suggest that there are several ways that governments can contribute towards improving the flow of debt and equity to SMEs. For example, recent

work has pointed to the provision of more knowledge about alternative forms of financing, improved loan support and guarantees, and the promotion of non-bank financing channels. Finally, our results suggest that the Capital Markets Union can play an important role in the provision of equity (better disclosure and listing rules) and debt (introduction of private placement markets).

The remainder of the paper is organized as follows. Section 2 provides evidence on the characteristics of the banking and capital markets in each of the Research Countries and on the role of SME financing in each country. Section 3 provides a description of the methodology and results of the estimates of the equity and loan finance gaps in each of the five countries. Section 4 concludes.

Small-Medium Enterprises and Capital Markets in the Research Countries

In this section, we briefly describe relevant SME-specific information within the Research Countries, such as characteristics, contribution, financing structure and access to financing. We also review the status of debt and equity markets in these countries. For reasons of space, a full discussion and most of the details and tables for this section can be found in Appendices 1 and 2. Appendix 1 provides the full section on small-medium enterprises and their contribution to the economy, while Appendix 2 presents the analysis of the status of capital markets in the Research Countries. In this section, we provide the highlights of these two Appendices.

Small-Medium Enterprises: their contribution and financing structure

The European Commission has sought to standardize the definition of the various sizes of enterprises in order to facilitate comparisons across countries. According to the Commission's definition, an enterprise is micro if it employs fewer than ten people, and either its annual turnover or its annual balance sheet is less than EUR 2 mil. Small enterprises are defined as companies with ten to 49 employees, having an annual turnover and balance sheet between EUR 2 and 10 mil. Finally, medium-sized enterprises have fewer than 250 employees, annual turnover less than EUR 50 mil, and balance sheets of less than EUR 43 mil.

Mirco SMEs form the largest group of companies in the European Union (World Bank, 2015). Table 2.1 reports the number of micro and SMEs across the Research Countries over the period of 2008 to 2014. For example, as Table 2.1 shows, there were 2,569,972 SMEs in France, 2,254,315 in Germany, 797,978 in the Netherlands, 1,464,234 in Poland and 433,858 in Romania in 2014. In the period 2008–2014, France had a 12.2% increase in the number of SMEs up to the year 2012, and a small decrease afterward. In Germany, there was stable growth in the number of SMEs over the same seven years, with an average annual growth rate of 3.19%. There was a strong similarity in the growth patterns of the Netherlands and France, with a spike in 2012 and a subsequent decline afterwards. Poland had a huge negative shock in 2008–2009, with a 7.15% decrease in the number of SMEs. Not surprisingly, there was positive growth during the period 2009–2011 and for the following years, until 2014, when it again started to suffer from a slow decline.

Table 2.1. Total number of micro-, small- and medium sized enterprises

	2008	2009	2010	2011	2012	2013	2014
France	2 329 961	2 188 690	2 509 347	2 562 952	2 614 121	2 598 023	2 569 972
Germany	1 866 817	2 018 855	2 053 601	2 137 578	2 184 908	2 201 144	2 254 315
Netherlands	576 286	616 241	776 315	802 377	813 316	802 087	797 978
Poland	1 531 059	1 421 561	1 457 207	1 499 812	1 494 494	1 474 953	1 464 234
Romania	504 581	489 646	442 241	404 338	410 210	426 295	433 858

SMEs can be found in most sectors within the European economy. In terms of a breakdown by sector, the largest share of SMEs is found in wholesale/retail trade, construction, technical sectors and manufacturing. There is some variation across the countries of our analysis. Appendix 3 provides those details, as well as an analysis of the most important trends by sector in each of the Research Countries.

According to recent research, the SME sector will contribute significantly to the recovery of the EU economy after the crisis. SMEs can improve growth through job creation, investments in innovation, and development of new sectors of the economy. If we compare SMEs in the three high-income economies of our Research Countries (i.e, France, Germany and The Netherlands). we observe a similar trend showing that these firms are large contributors to the economy and, thus, to the post-crisis recovery. Specifically, SMEs represent 99.81% of the total number of firms, employ 62.82% of the total work force, and contribute 58.52% of the total added value of selected industries in the French economy. Small enterprises account for the highest growth in the number of SMEs (2.16%). Meanwhile, SMEs in Germany represent 99.53% of the total number of firms, employ 63% of the total work force, and contribute 54.88% of the total added value of selected industries in the German economy. The highest

rates of growth found, among SMEs in all sectors, was in the number of small enterprises (4.42%). The contribution of SMEs to German employment increased from 60.38% to 63% over the period 2008–2014. In the Netherlands, SMEs represent 99.83% of the total number of firms, employ 67.51% of the total work force, and contribute 61.92% of the total added value of selected industries in the Dutch economy. The biggest growth among SMEs was seen in micro enterprises (6.21%), while small enterprises had a negative growth rate (-2.12%). Moreover, the impact of SMEs increased Dutch employment from 65.36% to 67.51% over the period 2008–2014.

The data for Poland and Romania are very similar to those of France, Germany and the Netherlands, with the exception of the contribution to total value added, which tends to be ten to 15 percentage points lower. In Poland, SMEs represent 99.8% of the total number of firms, employ 69% of the total work force, and contribute 50.17% of the total added value of selected industries in the Polish economy. The only growing segment among SMEs was small enterprises (0.28%), while micro and medium-sized enterprises had a negative growth rate (-0.77% and -1.11%, respectively). In Romania, SMEs represent 99.68% of the total number of firms, employ 67.23% of the total work force, and contribute 49.94% of the total added value of selected industries in the Romanian economy. Among SMEs, small enterprises were the only growth sector (0.26%), while micro and medium-sized enterprises had a negative growth rate (-2.75% and - 3.88%, respectively). The contribution of SMEs to Romanian employment increased from 65.82% to 67.23% over the 2008–20eriod.

In general, these data confirm that SMEs are important drivers of economic growth and add significant value to their respective economies. When external shocks occur (economic crises or change in regulations), the SME sector is negatively affected by constrained access to short- and long-term financing. The numbers confirm earlier literature suggesting that the most important factor in the performance of the SME sector is access to financing. In order to document the financing options for SMEs, we will compare alternative sources of debt and equity available throughout the capital markets of the Research Countries.

Debt Markets

Bank loans and lines of credit remain the main source of external financing for SMEs. The bank-lending channel was weakened during the financial crisis, as evidenced by banks' reduced lending capacity and the increase in interest rates on new loans. The higher sensitivity to external shocks led to changes in the supply of short- and long-term financing to SME borrowers. Table 2.2 captures the differences in the number of credit institutions from 2008 to 2013. More specifically, a comparison with the Netherlands and Germany shows that France saw a decline but proved stable, in contrast to the other two countries of our analysis.

Table 2.2. Total number of commercial banks by country

	2008	2009	2010	2011	2012	2013
France	310	302	290	281	278	280
Germany	273	278	280	284	273	277
Netherlands	302	295	290	287	260	253
Poland	71	70	70	67	69	69
Romania	31	30	31	31	30	29

Table 2.2 shows a very big disparity in the number of commercial banks in Poland and Romania compared to the other three countries. France, Germany and the Netherlands have close to the same number of licensed banks – fewer than 300 – whereas Poland has 69 licensed banks and Romania only 29. The number of banks decreased over the 2009–2013 period, from 310 to 280 in France and from 302 to 253 in the Netherlands. There are also striking differences across the Research Countries in terms of total banking sector assets. While total assets contracted significantly in France, Germany and Netherlands, there was also an increase in Poland due to a monetary stimulus and significant depreciation of the currency (Piatkowski, 2015). Note that the total assets remained unchanged in Romania.

Overall, banking sector performance improved in France, Germany and the Netherlands but declined in Poland and Romania. In particular, the share of non-performing loans worsened in France and Romania but stayed constant in Germany, the Netherlands and Poland. Bank financing by deposits increased in Germany and Netherlands, while staying unchanged in France, Poland and Romania. The relatively small SME exposure to bank loans in Romania and Poland may be explained by the major presence of foreign banking groups.

Equity Capital Markets

Systematic access to equity financing is available from private equity funds, venture capitalists and stock markets. Recent research suggests that equity financing should be an effective alternative to the traditional SME bank financing. In fact, the capital market platforms, where SMEs are listed, typically carry lower information require-

ments and have lower fixed listing costs. But for the time being, it seems that only medium-sized firms are fit for this type of financing. The analysis of the trends after the financial crisis show an increased demand for financing coupled with a stagnation of stock markets and a significant drop in the supply of private equity and venture capital in the Research Countries and Europe in general (Grover and Souminen, 2014; OECD, 2013).
The numbers show that European private equity (PE) investment financing of SMEs is very small compared to that in the United States. If we look at the breakdown of investments by size of portfolio company (Table 2.3), we can spot some notable features: while, on average, the total pool of investments is increasing – as is the number of employees in the portfolio company – some groups do not fall within this rule. For example, companies with 200-249 employees are suffering from severe underinvestment, while companies with 1000-4000 employees have the largest pool of PE investments. The most popular PE sectors are life sciences, consumer goods and retail, business, and industrial products, while the least popular are real estate, agriculture and construction. In terms of industry investment trends, we observe a decrease of interest in construction, retail, communications, computers and consumer electronics from 2011 to 2013.

Table 2.3. Total Private equity investments by size of portfolio company, EUR mil

# of employees	2008	2009	2010	2011	2012	2013
0 - 19	1 788,68	1 271,34	1 761,96	1 545,01	1 753,25	1 473,34
20 - 99	5 038,68	4 225,05	4 717,14	4 426,17	4 039,39	3 874,64
100 - 199	4 594,98	1 925,23	2 702,78	4 568,37	3 516,63	3 356,81
200 - 249	1 634,37	673,06	1 759,62	1 541,51	1 430,95	1 066,24
250 - 499	4 232,78	2 074,48	4 014,85	4 684,69	4 489,48	4 095,15
500 - 999	6 519,74	3 699,92	3 976,37	7 422,04	6 046,67	6 056,95
1,000 - 4,999	17 969,22	7 167,48	15 220,34	12 279,57	10 687,99	11 674,89
5,000 +	11 587,28	3 271,85	7 765,42	8 402,79	4 787,93	4 128,19
Total	53 365,73	24 308,41	41 918,47	44 870,15	36 752,29	35 726,21

Table 2.4. Total amount issued by IPO, USD mill

	2008	2009	2010	2011	2012	2013	2014
France	50,6	1 215,5	380,7	223,1	304,9	1 533,8	4 426,7
Germany	1 062,8	94,1	1 000,0	1 415,0	1 753,9	3 191,8	3 663,7
Netherlands	2 170,3	1 495,4	148,2	-	1 063,7	333,3	5 439,0
Poland	1 186,0	2 154,7	2 846,7	2 369,9	888,9	1 466,0	268,0
Romania	22,0	-	-	-	-	193,0	606,1

Private equity is more widely spread in France, Germany and the Netherlands, while in Poland and Romania, there are only 37 PE firms in total, according to EVCA data. Germany and France have 260 and 270 PE houses, respectively, but in France, the generalist firms dominate (in other words, they have a broad area of investment activity), while in Germany, more than 50% of firms are VCs. The Netherlands has a relatively equal number of VCs, buyout and generalist firms, and Romania has one firm of each type.

If we focus on venture capital (VC), the downward trend after the crisis mimics that of PE. The most attractive sectors for venture capital firms are life sciences, communications, computers, and consumer electronics (see Figure 1.1). Other relatively important industries for VCs are energy and environment, consumer good and retail services, business, and industrial services. For the period 2011–2013, some industries, such as energy and environment, communications, and financial services, experienced a significant decline in investments from venture capitalists.

Figure 1.1. Venture investment in Europe by sector, EUR mil

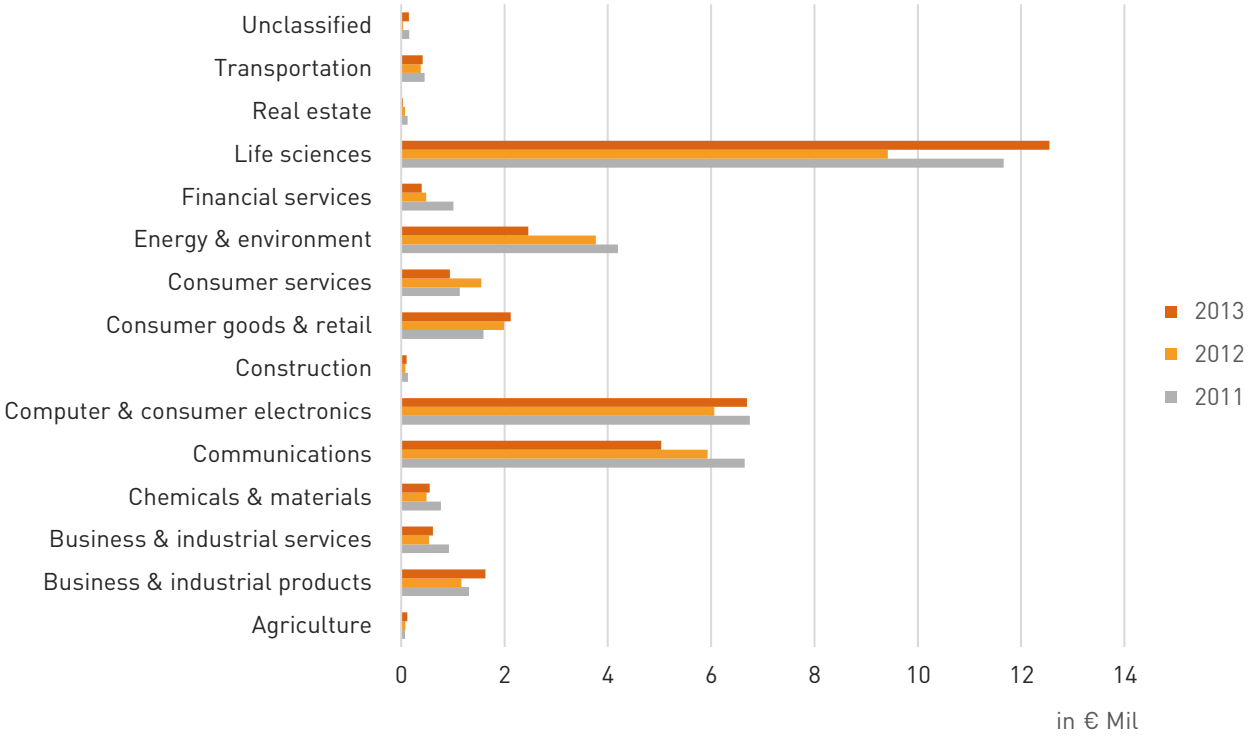
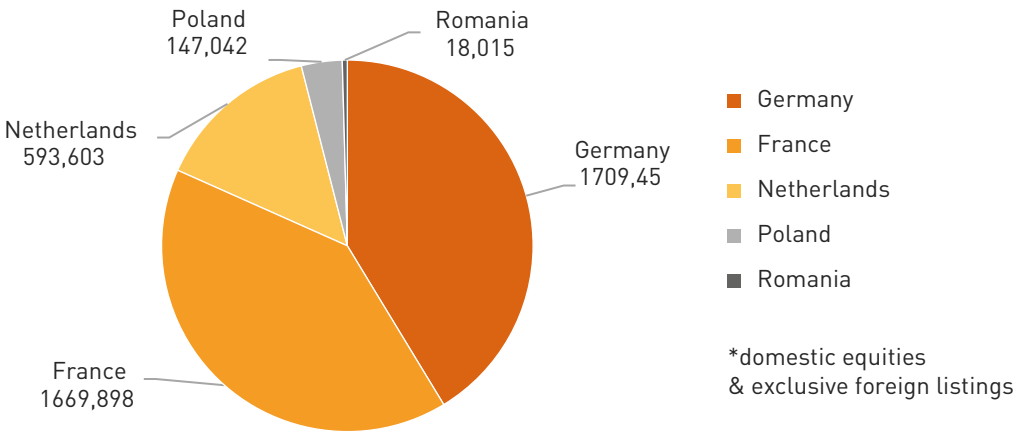


Figure 1.2. Market capitalization of listed companies, USD bil



For European venture industries, companies with 0–99 employees (88% in 2013) account for the biggest share of capital invested. More than 90% of VCs' investees are small and medium-sized enterprises, and that share increased after the crisis. Thus, one of the most important sources of financing of SMEs are venture capital funds. In 2008, French total venture peaked, with over EUR 1 bil invested. However, since then, total venture has been fluctuating between EUR 600 and EUR 700 mil and is currently over EUR 700 mil.

Seed investments make up to 1.5% of total venture capital invested, which is a slight decrease relative to 2011, when it was 2.37%. In Germany, there was a significant decline in later- stage venture investments, from 64.7% in 2008 to 54.4% in 2013. Similarly, there has been a shift of focus from later-stage financing to start-up financing. In 2008, German total venture peaked, with over EUR 1 bil invested. However, since then, total venture has fluctuated between EUR 500 and EUR 700 mil and is currently over EUR 700 mil.

There is a long literature showing that stock markets in Continental Europe are not very deep. The financial crisis has done nothing to improve this situation. For the most part, the Research Countries exemplify this situation, with the possible exception of The Netherlands. Table 2.4 shows the total amount issued via IPOs. As the table shows, the amount raised through stock markets is very small, and IPOs are not common. Figure 1.2 summarizes the situation of stock markets, plotting the market capitalization of listed companies in each of the five countries in our study. The figure illustrates the very large differences between Poland and Romania on the one hand, and the remaining three countries on the other.

In this section (and Appendices 1 and 2), we have set out the importance of SMEs in the economy and have mapped out the potential sources of capital market financing in each of the Research Countries. The data suggest that banks' lending capacity shrank after the financial crisis, possibly due to higher risk aversion at a time when economic growth had slowed. In addition, equity financing, especially for the SME sector, declined in this period. In light of these findings, it seems that the SME sector faces increasingly limited access to financing as it competes with larger firms for a shrinking pool of resources. In the next section, we seek to provide an estimate of the size of this problem by quantifying the financing gap for SMEs in the Research Countries.

Measuring the Financing Gap

We start our empirical analysis by quantifying the financing gap in the Research Countries. We first propose a methodology that quantifies the financing gap as the difference between the demand and supply of SME loans and available equity, estimated through various methods. We explain the methodology used to estimate the supply of SME financing in the Research Countries, the demand for it, and the gap between these figures. Next, in order to provide a contextual interpretation of the financing gap estimates, we use the United States as a benchmark country. Finally, we discuss possible causes of the financing gap.

One of the motivations for estimating the supply and demand of credit and the SME financing gap is to provide information to policymakers in creating a more flexible and efficient regulatory environment. Also, these estimates may assist investors to develop new technologies and financial products to help meet excess demand for financing.

It is within this context, we have seen efforts by, for example the OECE (2014, 2015), to analyze the loan and equity supply trends and the effectiveness of diverse financial instruments to bridge the financing gap. The first empirical studies on the topic focused on the financing gap in emerging markets, examining the mismatch between potential supply and demand (IFC, 2013). More recently, attention has shifted to researchers estimating the financing gap in European countries based on publicly available data. These studies seek to measure the supply and demand of credit and the factors preventing companies from acquiring adequate external financing (EIB, 2014).

The United States as a benchmark

We present a set of measures of the financing gap in the United States, where data are more readily available for carrying out estimations. To get a better sense of the financing options, Table 3.1 reports SME loan and equity supply in the United States for 2013. We use the OECD data in order to provide an estimate of SME loan supply (OECD, 2013). In 2013, SMEs obtained loans over EUR 440 bil (USD 585 bil), or with 3.43% of the US GDP. For Europe, the majority of SMEs obtain external finance through the banking sector. The absolute measure of the EU total loan supply (EUR 1.4 tn) is higher by EUR 0.9 tn than the total US loan supply (EUR 0.5tn), despite similar levels of GDP (around EUR 17 bil). This result is a consequence of the historically larger role of banks in Europe than in the US (AFME, 2013). By contrast, US SMEs have a larger financing pool coming from equity funding and other sources, which, together, make for a larger pool of SME financing. Table 3.1 provides two estimates of the US equity supply for SMEs in 2013: 0.18% (over EUR 29 bil) and 0.24% of GDP (over EUR 40 bil). We used two sources to reference these estimates: PWC Money Tree Report 2013 and OECD (2015) estimates.

In order to estimate the US SME financing demand, we multiply three variables: percentage of SMEs needing a loan (equity); average loan (equity) demanded; and number of SMEs (see Table 3.2). For the variable percentage of SMEs needing a loan (equity), we use three different sources. The first source simply takes its estimated figure from the study by Firozmand, Haxel, Jung, and Suominen (2015). The second source provides an estimate of the variable by including findings from the study by Mils and McCarthy (2014). Finally, the third source uses the survey figures from the Federal Reserve Bank of New York, Atlanta, Cleveland and Philadelphia (2014). While we were unable to find a reference for the share of SMEs needing equity in the current literature, we assume that financing need is a good proxy for both need for loans and need for equity.1

Next, we focus on the variable average loan demanded (USD mil) which is also based on three different sources. First, "source 1" is based on information provided in the study by Souminen and Grover (2014). Table 3.2 shows intervals of three different loan sizes and the approximate weights of the firms that applied for those loans. Therefore, we calculate our estimate by taking the mid value of the interval and multiplying it with provided weights. Second, "source 2" uses the same estimated average loan size as in "Source 1." Third, "source 3" uses the average loan demanded from the Federal Reserve Bank Report (New York, Atlanta, Cleveland and Philadelphia, 2014)2.

The variable average equity demanded (USD mil) is referenced from different sources. In Sources 1 and 2, the variable is from the study by Souminen and Grover (2014). In Source 3, the average equity demanded is from Firoozmand et al. (2015, Table 3.2). The variable number of SMEs serves to approximate the demand for loans and equity at the national level. This variable is derived from OECD 2015 data (Table 3.2).

[1] In the case of EU countries, we were able to distinguish these two variables.

[2] In all mentioned studies, the bank loans observed are less than USD 1 mil.

Table 3.1. The US SME supply of loans and equity in 2013

SME Loan Supply	Source #1 FRED/AFME	Source #2 OECD	Definition and sources
A. SME loan supply			
SME Loan Supply ($ mil)	585 347		Def: Loan balances held at financial institutions, loans to non-financial firms, loans up to USD 1 million. Source: OECD, Financing SMEs and Entrepreneurs, 2015.
SME Loan Supply (€ mil)	0		
SME Loan Supply as % of GDP	3,43%		
B. Total outstanding loans			Def: Commercial And Industrial Loans, All Commercial Banks, Millions of Dollars, Annual, Not Seasonally Adjusted. Source: US Federal Reserve Economic Data, 2015.
Total outstanding loans ($ mil)	1 631 053	2 635 435	
Total outstanding loans (€ mil)	0	0	
Total outstanding loans as % of GDP	9,55%	15,43%	Def: Loan balances held at financial institutions, loans to "Commercial Real Estate", "Commercial and Industrial Loans", and "Commercial real estate loans not secured by real estate"). Source: OECD, Financing SMEs and Entrepreneurs, 2015.
C. % of SME outstanding loans to total outstanding loans	35,89%	22,21%	Def: A result of division of (A) by (B).
SME Equity Supply			
A. SME equity supply			
SME Equity Supply ($ mil)	29 964	40 534	Def: Total sum of Seed, Early, Expansion and Later Stage investments by VC funds. Source: PwC MoneyTree Report, 2014.
SME Equity Supply (€ mil)	0	0	
SME Equity Supply as % of GDP	0,18%	0,24%	Def: SME Equity is a sum of Seed, Early Stage and Later Stage investments by Venture Capital firms. Source: OECD, 2015.
B. Total venture capital issued			
Total venture capital issued ($ mil)	488 000	156 500	Def: AFME estimate of US PE & VC outstanding investments. Source: AFME, Bridging the Growth Gap 2015.
Total venture capital issued (€ mil)	0	0	
Total venture capital issued as % of GDP	2,86%	0,92%	Def: VC capital under management (2014). Source: NVCA, 2015.
C. % of SME issued equity to venture funds	8,31%	25,90%	Def: A result of division of (A) by (B).
Total SME Financing Supply			
Total SME fin. Supply			
Total SME fin. Supply ($ mil)	615 311	625 881	Def: The total sum of SME loan supply and SME equity supply.
Total SME fin. Supply (€ mil)	0	0	Note: averge exchange rate for 2013 is 1 USD = 0.752955 EUR.
Total SME fin. Supply as % of GDP	3,60%	3,66%	Def: Share of Total SME fin. Supply in GDP.
GDP (in $ mil)	**17 078 000**		**Source: US Federal Reserve Economic Data, 2015**

Source: US Federal Reserve Economic Data, 2015

Table 3.2. The US SME demand for loans and equity in 2013

				Source #1	Source #2	Source #3	Definition and sources
SME Loan Demand							
A. % of SME needing a loan							
	Micro					31,00%	Def: % of SMEs needing a loan - Source 1: Fig 2 from "State of SMEs financing in the United States" (Firoozmand, Sh., Haxel,Ph., Jung, E., and Suominen, K., 2015) Source 2: Fig.9 from the study "State of Small Business Lending" (Mils, McCarty, 2014; pg.20). Note (1). Def. 3: % of SMEs applied for the product (loan). Source 3: Joint Small Business Credit Survey Report, Federal Reserve Banks of New York, Atlanta, Cleveland and Philadelphia, 2014
	Small			35,00%	43,75%	42,00%	
	Medium					26,00%	
		Applied and Obtained a Loan	Mid point in interval ($ mil)				
	Micro	<100k	0,08	80,00%			Def: Average loan demanded ($ mil) - Source (1) In order to estimate the average loan demanded we use an indication of the weights of each of the loan category in total demand. Fig. 5 from the study "2014 Summary - State of the SME financing in the United States" (Souminen, K., Grover, A., 2014)
	Small	100-250k	0,18	10,00%			
	Medium	250-1mil	0,75	10,00%			
B. Average loan demanded ($ mil)							
	Micro					-	Def: average loan demanded by micro, small and medium sized enteprises is calculated as weighted average of respondents (SMEs), which have applied for a loan up to 100'th USD, from $100'th to $250'th, from $250'th to $500'th, from $500'th to $1M and from $1M to $4M. Source: Joint Small Business Credit Survey Report, Federal Reserve Banks of New York, Atlanta, Cleveland and Philadelphia, 2014
	Small			0,15		-	
	Medium					-	
C. Number of SMEs				14 544 533			
	Micro			13 645 795			Def: Number of SMEs - OECD 2015 report. We exclude number of Medium SMEs in the US, due to the different firm classification standards in the US. The US SMEs include firms that have up to 500 employees (EU 250).
	Small			817 109			
	Medium			81 629			
D. SME Equity Demand=A*B*C ($ mil)							
Total SME loan demand ($ mil)				**776 314**	**970 393**	-	
Total SME loan demand (€ mil)				-	-	-	Def: Total SME loan demanded - variable derived as a sum of loans demanded in D. SME loan demanded as % of GDP is equal to the Total SME loan demand divided by GDP ($ mil). Note: averge exchange rate for 2013 is 1 USD = 0.752955 EUR
SME loan demand as % of GDP				**4,55%**	**5,68%**	**5,00%**	

Table 3.3. The US SME gap of loan and equity in 2013

	Source #1	Source #2	Source #3	Definition and sources
SME Equity Demand				
A. % of SME needing equity				
Micro				
Small	35,00%	43,75%		Def: % of SMEs needing equity - is the approximated variable as in case of loan demand. The demand for finanincg is taken as a general indicator of share of firms needing financing regardless of the type. For sources please check the variable % of SMEs needing a loan
Medium				
B. Average equity demanded ($ mil)		Report "3.5mil average seed deal in 2013"		
Micro				
Small	3,50		3,7	Def: Average equity demanded - variable from differnt literature. Source #1: "A, the average Seed deal up until Q3 in 2013 was $3.5 million" from study "2014 Summary - State of the SME financing in the United States" (Souminen, K., Grover, A.. 2014, pg.21). Source #3: "Early stage deals received $15.8 billion and later-stage deals $12 billion, with deal sizes averaging $7.3 million and $14.3 million, respectively. Average seed stage deal was $3.7 million, much larger than a typical angel investment raise." ("State of SME Finance in the United States in 2015", pg. 27)
Medium			7,3	
C. Number of SMEs				
Micro				
Small	136 364			
Medium	21 740			
D. SME Equity Demand=A*B*C ($ mil)				
Micro				
Small	167 046	208 807	220 739	
Medium	26 632	33 289	69 432	
Total SME equity demand ($ mil)	193 677	242 097	290 171	
Total SME equity demand (€ mil)	-	-	-	Def: Total SME equity demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP ($ mil). Note: averge exchange rate for 2013 is 1 USD = 0.752955 EUR
SME equity demand as % of GDP	**1,13%**	**1,42%**	**1,70%**	
Total SME Financing Demand				
Total SME fin. demand ($ mil)	**969 992**	**1 164 070**	**1 047 144**	
Total SME fin. demand (€ mil)	-	-	-	Note: averge exchange rate for 2013 is 1 USD = 0.752955 EUR
% of SME fin. demand as % of GDP	**5,68%**	**6,82%**	**6,13%**	
GDP ($ mil)	**17 078 000**			Source: US Federal Reserve Economic Data, 2015

Notes: (1) As explained in the Mills and McCarthy (2014) - we add to the exisiting estimated demand for loans an approximation of the updated demand for loans, based on a survey of loan officers, who answered the question, "Apart from normal seasonal variation, how has demand for C&I loans changed over the past three months? (Please consider only funds actually disbursed as opposed to requests for new or increased lines of credit)." The question is asking for a very narrow interpretation of increases in demand as it is difficult to fully understand small business demand for credit without also including requests for new or increased lines of credit." (Mills and McCarthy, 2014)

Table 3.1 shows that the 2013 US SME loan supply equaled 3.43% of GDP, while the equity supply was within the range of 0.18% to 0.24% of GDP. Using different sources and calculation methods, we find the 2013 US SME loan demand was quantified within the range of 4.55% to 5.68% of GDP. Table 3.2 also shows that by applying similar methods to estimate the 2013 US SME equity demand, the range of 1.13% to 1.70% of GDP.

Finally, Table 3.3 shows the estimates of the 2013 US SME loan gap to be within the range of 1.12% to 2.25% of GDP.3 Moving to the second column in Table 3.3, we show that the estimates of the equity gap lie within the range of 0.96% to 1.52% of GDP. Based on the last column of Table 3.3, we conclude that the total 2013 US SME financing gap is within the range of 2.01% to 3.78% of GDP.

Methodology for Measuring the Financing Gap in European Countries

In this section, we present a method for estimating the supply and demand of SME financing, including the 2013 EIB study that assessed the financing needs of the SME sector in five Eastern Partnership countries (Ukraine, Armenia, Azerbaijan, Georgia, and Moldova). The EIB study consists of data from statistical offices and through surveys, which greatly helped in assessing the financing demand.4 We rely on the methods used in the 2013 EIB study, but expand the methodology along several dimensions. First, we estimate supply and demand using different sources of data in order to insure a full overview of the currently available data on SME financing supply. Second, we apply different methods in order to estimate the financing demand. We believe these different methods help us to avoid the sample selection issue that affected the EIB study. Specifically, the EIB study estimated the average loan demanded by observing only a sample of the loans that were obtained. By doing so, we correct for this issue and include different sizes of obtained versus requested loans. Third, we estimate the loan demand of those firms that applied for but were rejected for a loan. Finally, as explained earlier, our study focuses on a different set of countries: the Research Countries of France, Germany, the Netherlands, Poland and Romania.

Supply Estimation

The first step of the methodology is to assess the supply side of loans and equity. Figure 3.1 shows the estimation method used to derive the SME supply of loans/equity. The EIB study suffered from a lack of data on total SME outstanding loans in the economy. As such, they used a survey of several large banks to obtain variable A (% of SME outstanding loans to total outstanding loans (equity)) and applied that share to the information on total outstanding loans. , we collect data on SME outstanding loans, which we use to directly approximate the supply of loans at the country level. Therefore, we do not have to use the share of those loans in a smaller sample and apply it to the national-level numbers. Nonetheless, we do find it important to estimate variable A in the economy since it provides a valuable insight into the share of SME loans (equity) in total loans.

In order to estimate the SME supply of equity, we use data from the European Venture Capital Association (EVCA). Moreover, we use the numbers on total equity issued per country, but only equity issued for seed, start-up, and later-stage investment – excluding buyouts.45 In addition, we assume that the SME equity supply comes from venture capital (VC) that is focused on smaller-scale projects.

Demand Estimation

In this section we focus on the methodology to estimate the total SME demand for loans (equity) by firm size. For this purpose, we use information on the total number of firms in the economy clustered by size; average loan (equity) size demanded, clustered by firm size; and share of firms needing a loan (equity), clustered by firm size. At this point, one thing seems clear: the demand for equity is not the same as demand for bank loans. For example, firms that issue equity tend to give up partial control. In addition, the demand for equity can be a sequential outcome after obtaining a loan and firms can demand equity after all other debt channels have failed.

To estimate demand, we extract data from the European Commission's database on the total number of firms by size in a given year. To classify firms into micro, small and medium, we then used the European Commission definition, which is based on the number of employees. Finally, we used the definition that micro firms are those with fewer than nine employees; small firms have from ten to 49 employees; and medium firms have between 50 and 249 employees.

The variable average loan size (equity) demanded by firm size and the percentage of firms needing a loan/equity by firm size are based on data from the SAFE ECB Survey (2013),5 made available for this study. In order to estimate the average loan size demanded by firm size, we used the following question from the SAFE ECB Survey (2013): "What is the size of the last bank loan that your enterprise . . . obtained or renegotiated in the past 6 months? (if applied and obtained) . . . [or] attempted to obtain in the past 6 months? (if applied and was rejected)"

[3] In the US, the financing demand is relatively small. This could be the outcome of two factors. First, the share of SMEs in the US economy is not as high in Europe. Second, the average loan demanded is referenced from reports which included only loans that were less than 1 million USD.

[4] The supply of equity does not include private/business angel investments in SMEs.

[5] SAFE Survey (2013). Appendix 3 Tables D1 and D2 illustrate the distribution of observation weights. Table D2 shows weights used in the ECB SAFE survey sampling, which assigned weights based on the relevance in the economy (more details can be found here). Table D1 shows the weights of the firms in the sample by size. In order to unify the sampling weights, we always clustered our samples by firm size as the whole sample. In this way both types of weights are equal.

Figure 3.1. Estimation Methodology for Loans and Equity Supply

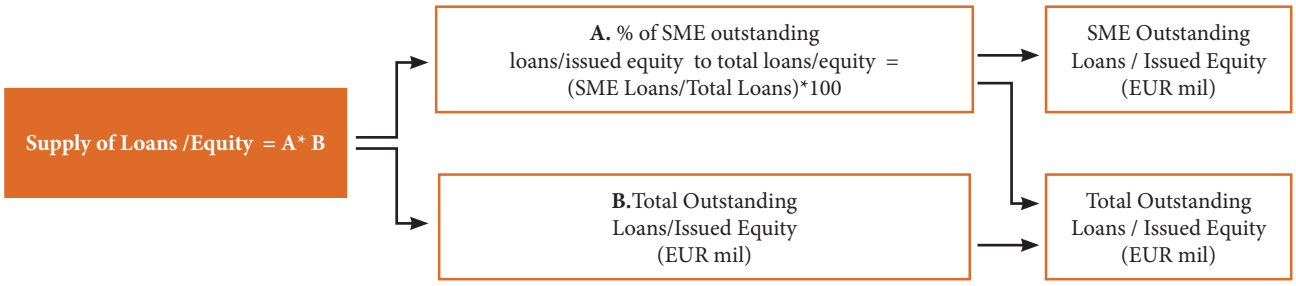
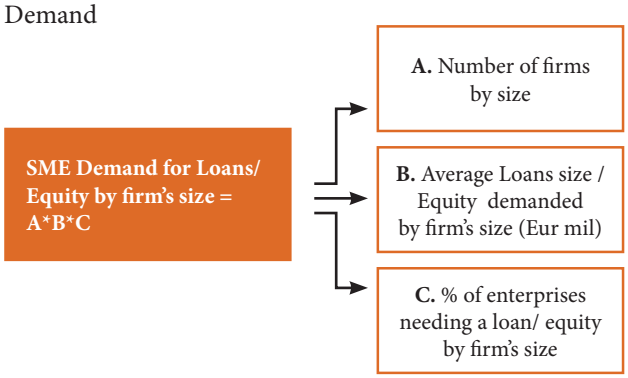


Figure 3.2. Estimation Methodology for Loan/Equity Demand



The class of firms if applied and obtained represents those firms that applied for and obtained a loan. Focusing on the answer to this question allows us to distinguish between firms that obtained 100%, those that obtained between 75% and 99%, and those that obtained between 1% and 74% of a loan for which they applied. We use this diversification to estimate the average loan demanded and to correct for the bias that emerges when observing only obtained loans (discussed later in this paper).

We note that the class of firms that applied and were rejected for a loan comprises firms that applied for and did not obtain a loan.6 This class of firms is referred to as "attempted." We use this classification in one of the methods to assess the demand for loans. We use this approach to address the sample selection issue mentioned earlier. For each of the demand tables (see below), we show three different methods to estimate the loan demand and two different sources to estimate the equity demand.

Our SME loan demand estimations are listed in the first part of the table. In Method #1, we estimate the variable average loan demanded (mil EUR) using the average loan obtained from the ECB SAFE Survey (2013). This is the average loan that firms obtained after applying for one and being accepted for it by a bank. However, this estimate suffers from the sample selection bias since it shows only the average loan for firms that acquired a loan and does not distinguish between loans requested and those obtained.

In Method #2, the variable average loan demanded (mil EUR) is estimated by calculating different sizes of average loans requested and weighted with respect to their shares in total loans obtained. We first estimate the average loan demanded by firms that applied for one and received 100% of their requested amount; next, the average loan increased by 12% for firms that applied for a loan and received more than 75% of what they demanded; and, finally, the average loan increased by 50% for firms that applied but received less than 74% of the requested amount.7

Turning to Method #3, the variable average loan requested (mil EUR) is estimated by calculating the average loans obtained (including desired shares) and the average loans attempted (rejected).8 Then, the average loans from those two categories are weighted by relative shares in the total number of firms that applied for loans. Consequently, by applying this weighting scheme, we are able to account for the demand for loans that were ultimately rejected.

The second set of demand tables (Tables 3.5, 3.8, 3.11, 3.13 and 3.15) show the total SME equity demanded, using two different sources of data. For the first source, we use European Venture Capital Association (EVCA) data to estimate the variable average equity demanded (mil EUR). For each country in our study, we use EVCA data on seed, start-up, and later-stage investments to calculate the average equity capital issued.9

For the second source for the variable average equity issued (mil EUR), we use the estimated average of loans obtained (Method #1), based on the ECB data. The justification for using the average loan requested, as a proxy for the average equity demanded, is the assumption that this variable signals the size, not the type, of the financing need. Additionally, the need for the specific type of financing is identified in the variable percentage of SMEs needing equity.10

[6] For more questions about the exact formatting of the questions and answers, please check the SAFE ECB Survey 2013 Questionnaire (2013).

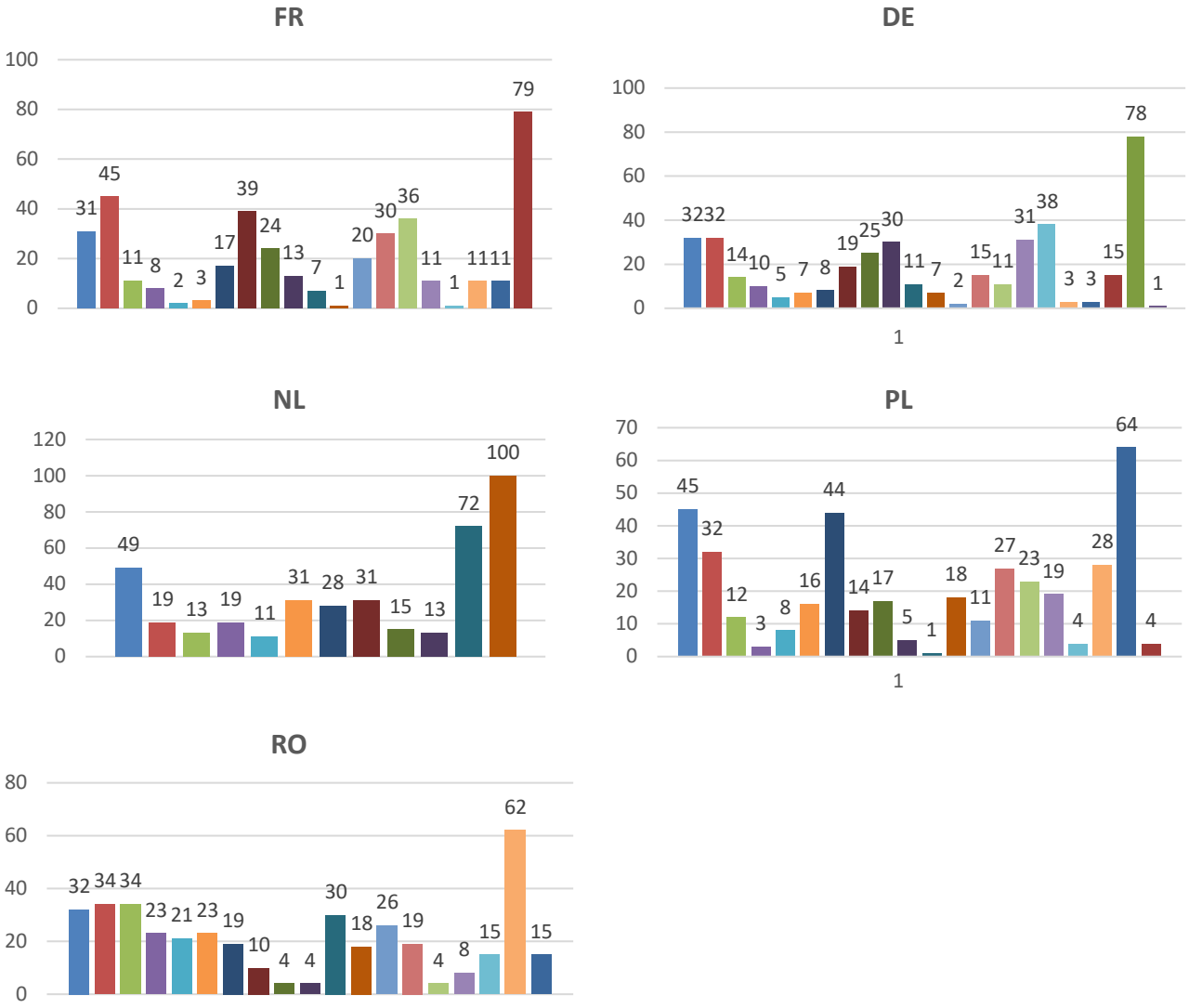
[7] Appendix 3 (Tables D3, D4, D5, D6 and D7) provide detailed tables on the calculations of loans for each category.

[8] We are aware that the rejected loan applications do carry high risks. By including the rejected loans, we wanted to estimate the correct upper limit of total demand for loans.

[9] Details can be found in section 3.

[10] With this variable we were able to address the issue that some industries are more likely to attempt acquiring equity financing than others.

Figure 3.3. Distribution of firms by loan size obtained



Finally, the last set of demand tables (Tables3.5, 3.8, 3.11, 3.13 and 3.15) show the total estimated SME financing demand using three different methods for loan demand and two different data sources for equity demand.

Figures 3.3 and 3.4 show the distribution of firms' answers to questions regarding the average loan size requested and obtained.11 Since an answer to this specific question is an ordered variable, to estimate the real numbers, we have to make some approximations. Specifically, to calculate the average loan demanded (both obtained and attempted) per firm size and within each country, we use the mid-point of the categories and weight them by the share of respondents in each firm class size.12

The variable "% of firms needing a loan/equity by firm size" is derived from the SAFE ECB Survey question: "Are the following sources of financing relevant to your firm? That is, have you used them in the past or considered using them in the future? . . . bank loan (excluding subsidized bank loans, overdrafts and credit lines) [and] . . . equity capital."

Figure 3.5 shows the share of firms for which bank loans are relevant. The highest shares of those firms are in France, followed by Germany, Poland, the Netherlands and Romania. In Germany, the Netherlands and Romania, the majority of micro firms actually do not find bank loans essential for their businesses. In Romania, more than half of the small firms find bank loans irrelevant. The answer "don't know" (DK) seems to be the most frequent in Poland relative to the other countries. This indicates that surveyed firms in Poland were unable to assess the relevance of bank loans to their businesses.

[11] Figure 3.3

[12] In a few instances we see larger proportions of firms attempting to secure a loan size of EUR 1M. This is a consequence of the small number of firms being surveyed in that category.

Figure 3.4. Distribution of firms by loan size attempted

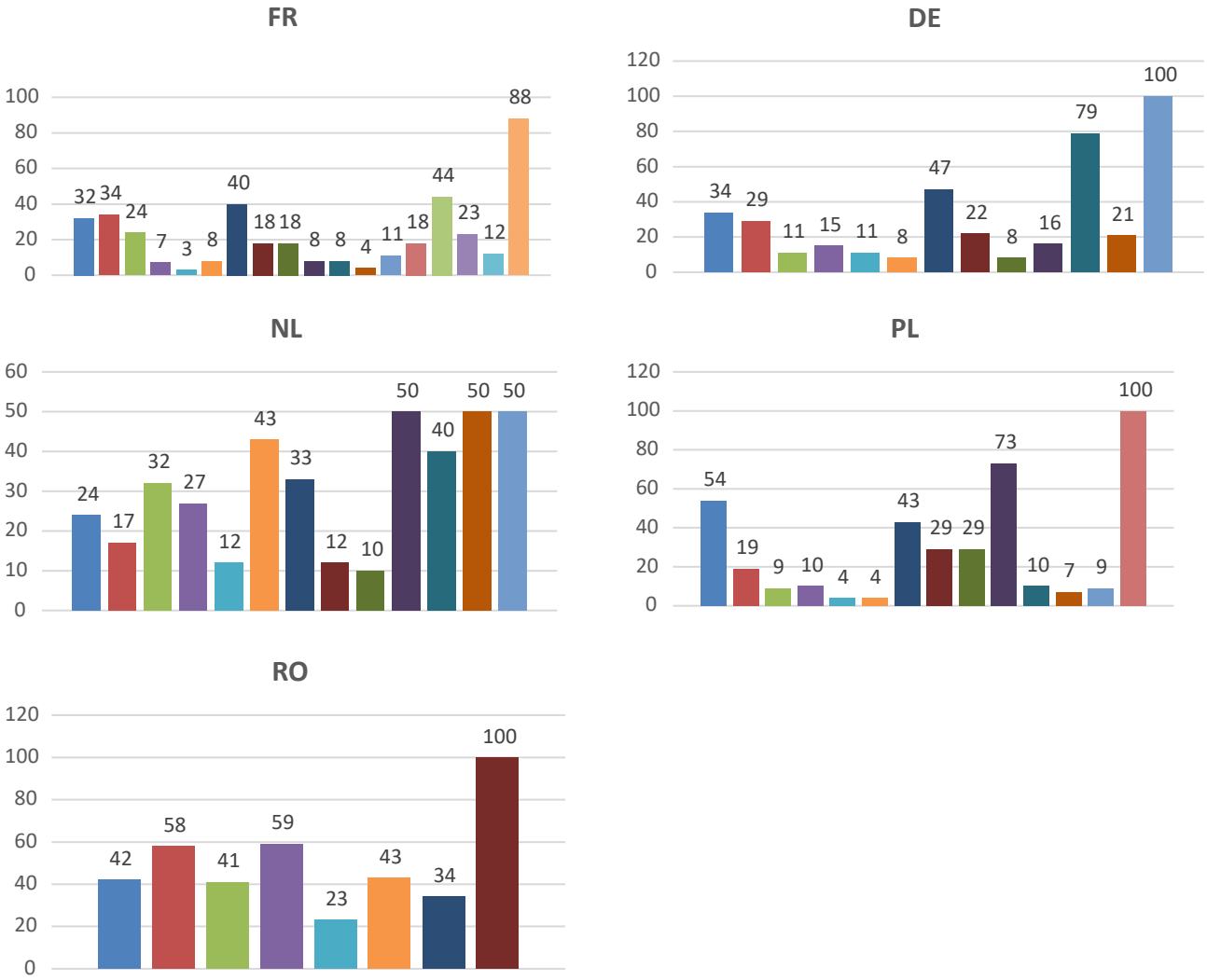
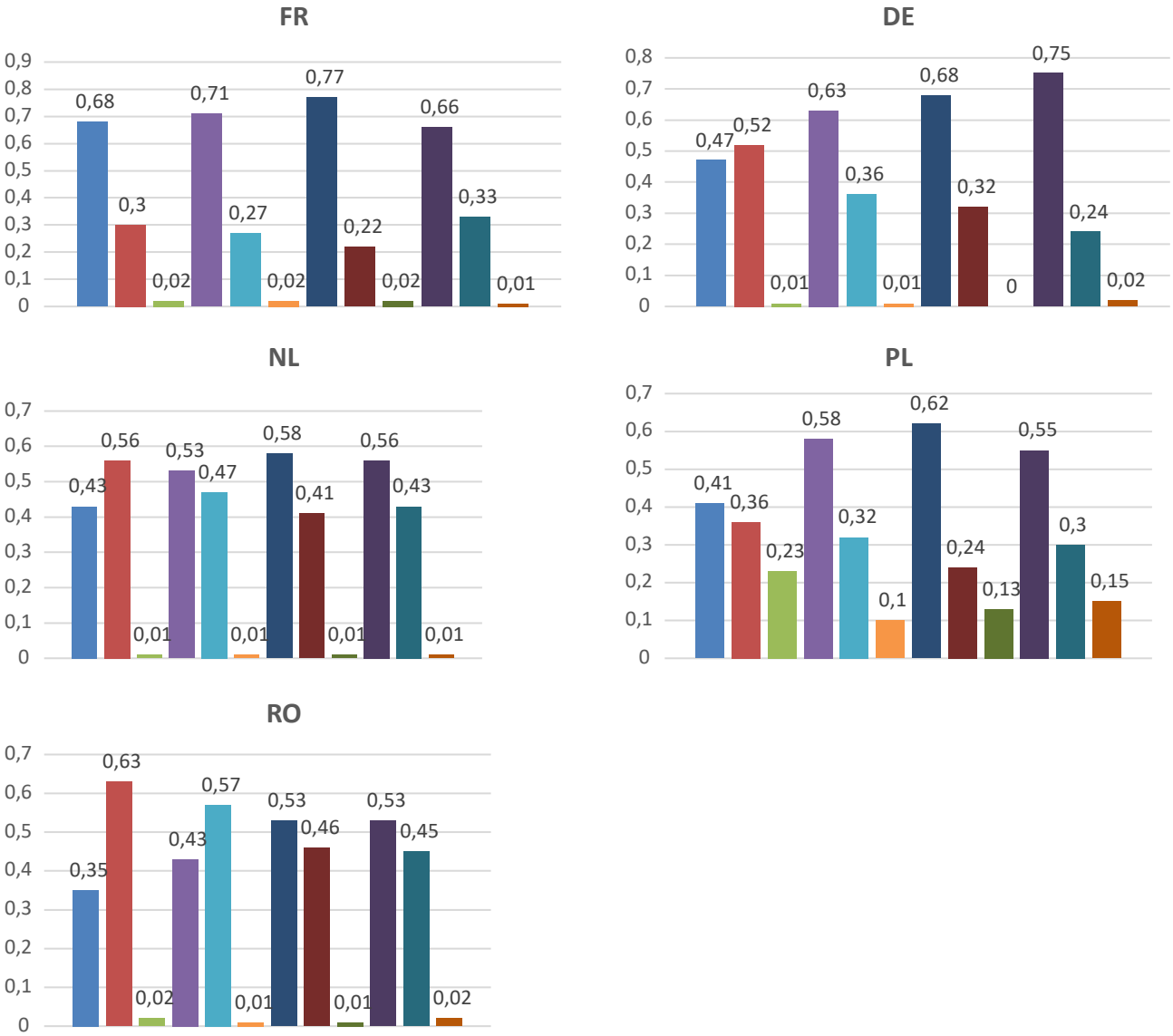


Figure 3.5. Distribution of firms by relevance of a bank loan



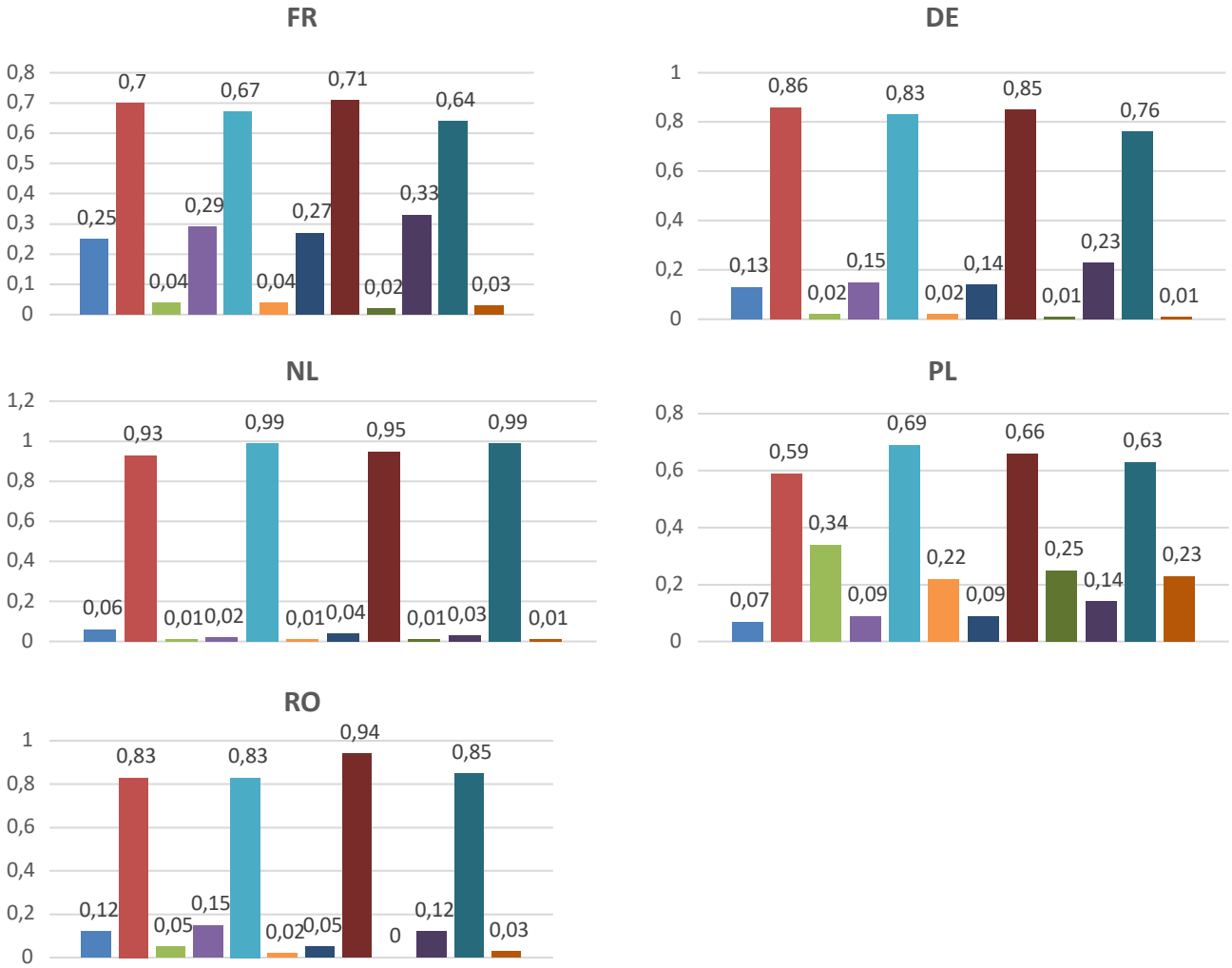
The results reported in Figure 3.6, show that French firms have the highest frequency of assessing a need for equity. Germany is the second-highest share of firms needing equity, followed by Poland and then Romania.13 The majority of firms in all five countries find equity capital irrelevant. The Netherlands ranks the highest shares of those types of firms, followed by Romania, Germany, France and, finally Poland. More specifically, the highest frequency of firms could not determine the extent to which equity is relevant in Poland.

Finally, in order to estimate the SME financing gap, we use the difference between the SME financing supply and demand. Because we use different methods to estimate demand, we provide several gap estimations. In this way, we are able to provide a range rather than an exact number.14

[13] Figure 3.5 shows the latest data for all Research Countries. Due to the issue with estimates for the Netherlands explained in the further text (estimation of demand) we used an earlier survey. The reasons and detailed descriptions are discussed in Section 3.6. The Netherlands demand table estimates correspond with the data in Figure 3.5 and can be seen in Table D10 (Appendix 3).

[14] In Annex 3, Table D12 and D13, we provide detailed names and sources of the variables.

Figure 3.6. Distribution of firms by relevance of equity capital



The Financing Gap in France

In this section, we report the results of our estimation of the SME financing gap in France. Our findings are reported in Tables 3.4 through 3.6.

Supply

Let's start by considering the external financing gap of SMEs in France, In France, banks are the primary financing source for SMEs. The share of total assets held by domestic versus foreign credit institutions is changing in favor of domestic (Annex 3).

A primary factor that prior researchers have examined in regard to the access to finance is the tightening of credit standards (Avouyi-Dovi et al 2013). In a tight credit market, many SMEs are likely to experience concerns related to firm growth than those companies less financially constrained. Over the period 2008-2014, assets of small and medium-sized credit institutions declined, while for large credit institutions, they increased. In 2008, large institutions' assets were EUR 6,101 bil. By 2014, they had increased to EUR 6,154 bil (Annex 3). Furthermore, the supply of loans by private equity also provides evidence regarding the level of economic activity in the SME sector. Relative to the banking sector, private equity funds are small in volume. In 2012, private equity investments generated 0.28% of GDP (KPMG Private Equity Report, 2012). Relative to the five countries in our study, France has the highest number (270) of private equity funds headquartered in France. The evidence shows that private equity funds have EUR 82.3 bil under management (Annex 3).

Overall, the SME loan supply in France is EUR 217,257 mil, or 10.28% of GDP, while the SME supply of equity is EUR 680 mil, or 0.03% of GDP (Table 3.4).

Demand

The empirical evidence on the demand side is limited to the results of the SAFE survey and methods used to assess the average loans obtained. SME financing demand is

defined as the sum of the total demand of all SMEs in the economy. Data collected by the European Commission show that there are over 2.4 mil registered SMEs in France in 2013. This implies that there are 37 SMEs per 1,000 people, which is a marginal decline from 2012.15

It is noteworthy that the number of SMEs increased by 2% between 2008 and 2013. Moreover, the different firm-size classes had similar growth (2%), except for medium-sized firms (50-249 employees), which grew by 1% (Appendix 3 Table B.1). The results confirm the substantial contribution of SMEs to the French economy. Similar to Germany, the French SME sector employs 63% of the total work force, and this share has been constant over the period from 2008 to 2013. During this period, there was, in total, a 2% increase of persons employed in the SME sector and there were no significant differences between the classes of firms (Appendix 3 Table B.1).

The added value of the SME sector at factor cost has also been constant over time, at 59%.16 In the period from 2008 to 2013, there was a 2% total increase in the number of persons employed in the SME sector, and there were no significant differences between different firm classes.

To examine this further, Table 3.5 compares three different estimates of SME financing demand in France for 2013. In particular, column one shows variable names; the second column uses Method #1 to assess the SME demand; and the third column shows the results of the Method #2 demand estimation. The fourth and sixth columns also show the difference between demand estimates by Methods #1 and #2 and Methods #1 and #3, respectively. Finally, the fifth column shows the results of the demand estimation by Method #3.

The bottom part of Table 3.5 shows the results for the total SME demand estimates calculated using three different methods for loan demand and two different sources of equity demand. Our results show that, using these different methods and sources, the total SME financing demand in France for 2013 was between 15.91% and 18.53% of GDP.

Next, in order to estimate loan demand, we multiply the percentage of SMEs needing a loan by the average loan requested (mil EUR) and the number of SMEs. The first two variables are from the ECB SAFE Survey. Details of the exact survey questions are provided in the demand table (Table 3.5). The third variable, the number of SMEs, presents the total number of SMEs in France for 2013 (European Commission data).

In the first part of the table, variable A shows that the share of French SMEs needing a loan increases as the size of the firm increases. However, this difference in demand is quite small, ranging from 3% to 7%. Hence, the share of French SMEs in need of a bank loan is higher than in any other country in this study. As expected, around 70% of all micro and small firms indicated that a bank loan is important and relevant to their businesses.

Finally, to check the loan demand, we compare our three methods based on the survey-based data and data sourced from the EVCA database. In Method #1, the average loan requested (mil EUR), is equal to the average loan obtained and ranges from EUR 0.15 mil for micro to EUR 0.58 mil for medium firms. When multiplied by the share of firms needing a loan (A) and by the number of firms by size (C), we obtain the estimate of the total SME loan demand in France in 2013: EUR 288,486 mil, or 13.65% of GDP.

In Method #2, we add an additional 12% and 50% to average loans obtained, depending on the size of the obtained versus the desired loan. We estimate that, in this case, the average loan requested was in the range of EUR 0.16 mil for micro firms and EUR 0.69 mil for medium firms. We use the same multiplication of variables, A, B, and C, to estimate that the SME loan demand was over EUR 308 bil, or 14.59% of GDP. Note that the difference between obtained versus desired loans (demand estimated using Method #1 and Method #2) is over EUR 19 bil, or 1% of GDP. The results in this section suggest that French banks provide SMEs with less financing than is requested.

Note that we expand the sample of firms used in Method #3 to estimate the average loan request by adding firms that applied for but were rejected for a loan. We estimate the average rejected loan applied for by firm size and weight it by the relative share of the total number of firms that applied. First, we find that the highest share of rejected loans was among micro firms (slightly above 30%) and the lowest share among medium firms (below 12%). This result is not surprising, as explained above in Section 2. Using Method #3, we estimate that the SME loan demand in France for 2013 was over EUR 326 bil, or 15.44% of GDP. The difference between the demands estimated by using Method#1 and by Method #3 is over EUR 37 bil. These results show that, in line with our expectations, French banks are undersupplying loans at a rate of 1.79% of GDP.

In the second half of Table 4.5, we report the steps and variables used in the equity demand estimation in France in 2013. As for the firms needing equity (A), the share is similar across different firm sizes, at the approximate level of 26%. As in the case of loan demand, the share of firms needing equity is highest in France of the five countries in this study.

Moreover, using the EVCA data, we estimate that the total demand for equity was EUR 65,408 mil, or 3.09% of GDP. To estimate the average equity needed, we use

[15] In 2013, France's population was 66.3 million (World Bank 2015).

[16] "Value added at factor cost is the gross income from operating activities after adjusting for operating subsidies and indirect taxes. It can be calculated from turnover, plus capitalised production, plus other operating income, plus or minus the changes in stocks, minus the purchase of goods and services, minus other taxes on products which are linked to turnover but not deductible, minus the duties and taxes linked to production." (OECD 2015).

the EVCA data and the average equity issued at the level of EUR 1.44 mil. As in the previous estimation cases, we multiply variables A, B and C to estimate the total equity demanded. We exclude the number of micro firms in this step since the average financing need of this class of firms was unlikely to be over EUR 1 mil. Overall, we estimate, using the ECB data or average obtained loans as a proxy for equity demanded, the total demand for equity to be at the level of 5.12% of GDP (EUR 108,262 mil).

Financing Gap

To investigate the financing gap, we again use three different estimates of the loan gap, depending on the demand estimates used (Table 3.6). The results illustrate that the loan gap ranges from 3.37% to 5.16% of GDP. Estimates in column 3 suggests an equity gap which ranges from 3.06% to 5.09% of GDP. Importantly, the estimated loan and equity gap in France appears to be similar to that found in the other four countries in this study. Nevertheless, the data indicate the financing gap in the US is between 2.30% and 3.79% of GDP, much larger than that in France. This result further confirms that form investments, French investors are likely to find fewer funding opportunities among SMEs.

The Financing Gap in Germany

In this section, we report the results of the estimation of the SME financing gap in Germany. Our findings are reported in Tables 3.7 through 3.9.

Supply

We can see similar trends in the external source of financing for SMEs in Germany and France. Indeed, the German banking sector changed marginally due to the decline in credit institutions from 1750 in 2009 to 1,647 in 2013 (Appendix 3, Table C2). Furthermore, private equity funds are small in volume relative to the banking sector. In 2012, private equity investments generated 0.26% of GDP. For 2013, there are 260 private equity funds headquartered in Germany. In Table 3.11, we also present the total of EUR 33.5 bil under management by private equity funds, including generalist, buyout, and venture capital firms. Consequently, the results indicate that total venture capital demanded (issued) declined between 2008 to 2013, which represents a drop from over EUR 1 bil in 2008 to EUR 700 mil in 2013 (Appendix 3, Table C2).

In Table 3.7 we report the supply of SME loans and equity in Germany for 2013. Column 1 of Table 3.7 also presents variable names, two different sources used to assess the total supply of financing (columns 2 and 3); and definitions and sources of variables identified in the first column (column 4).

The estimation results show that the total SME loan and equity supply in Germany for 2013 was EUR 282,703 mil or 10.06% of GDP. In fact, the largest share of the supply came from the SME loan supply, at 10.04% of GDP, and the remaining part was equity supply, or 0.03% of GDP.

SME loan supply was EUR 282,000 mil, representing SME outstanding loans in 2013. We use two data sources to reference total outstanding loans: the European Central Bank (ECB) and the International Monetary Fund (IMF). We find no significant differences between the numbers that the two sources provided.17 The findings confirm that German SMEs rely heavily on bank loans. The results reported in Table 3.7 shows that the share of outstanding SME loans among total outstanding loans was 35%. In contrast, we estimated that the supply of equity was EUR 703 mil, or 0.03% of GDP (EVCA 2013).

Demand

In this section, we look at SME financing demand, which is defined as the sum of demands of all SMEs in the economy. According to the 2013 European Commission data, there are over 2.2 mil registered SMEs in Germany, or 27 SMEs per 1,000 people. To analyze demand, it is worth noting that there are a larger number of SMEs relative to micro firms due to faster growth and fewer financing obstacles.

As above, we present three different estimates of SME financing demand in Germany for 2013. In Table 3.8, the first column shows variable names; the second uses Method #1 to assess the SME demand; and the third shows the results of Method #2's demand estimation. The fourth and sixth columns show the difference between demand estimates by Methods #1 and #2, and between Methods #1 and #3, respectively. The fifth column shows the results of demand estimation by Method #3, and the seventh column presents definitions and sources of the variables.

The bottom part of Table 3.8 reports the results or the total SME demand estimates calculated using the three different methods for loan demand and the two different sources for equity demand. Hence, by using these different methods and sources, we find that the total SME financing demand in Germany for 2013 was between 14.83% and 19.28% of GDP.

To estimate the loan demand, we multiply the percentage of SMEs needing a loan by the average loan requested (mil EUR) and the number of SMEs. The first two variables were acquired from the ECB SAFE Survey (2013). Details of the exact survey questions are provided in the demand table (Table 3.5). The third variable, the number of SMEs, presents the total number of SMEs in Germany in 2013 (European Commission data).

[17] In 2013, the share of total outstanding loans to Germany GDP was approximately 39%.

Table 3.4. SME financing supply in France, 2013

SME Loan Supply	Source #1 ECB data	Source #2 IMF data	Definition and sources
A. SME loan supply			
SME Loan Supply (€ mil)	217 257		Def: Total drawn and undrawn credit (credits mobilisés et mobilisables) for SMEs (both independent and belonging to a group), comprised of short-term, medium-term, long-term, finance leases and securitised loans. A bank must inform the Banque de France Central credit register whenever one of its branch offices has granted more than EUR 25 000 to a firm (total outstanding loan). Source: OECD, 2015.
SME Loan Supply as % of GDP	10,28%		
B. Total outstanding loans			Def: The value of all domestic loans by non-financial corporations in all currencies combined at the end of the year. Source: ECB, 2015.
Total outstanding loans (€ mil)	812 854	837 341	Def: Total outstanding loans represents all types of outstanding loans to non-financial corporations (household-related loans are excluded) by commercial banks, credit unions, financial cooperatives, other financial intermediaries and deposit takers. Source: IMF, 2015.
Total outstanding loans as % of GDP	38,46%	39,62%	
C. % of SME outstanding loans to total outstanding loans	26,73%	25,95%	Def: A result of division of (A) by (B).
SME Equity Supply	**EVCA data**		
A. SME equity supply			
SME Equity Supply (€ mil)	680		Def: SME Equity is a sum of Seed, Startup, and Later Stage investments, excluding Buyouts. Source: EVCA, 2015.
SME Equity Supply as % of GDP	0,03%		
B. Total venture capital issued			
Total venture capital issued (€ mil)	8 079		Def: Total Equity is a total value of capital under management of Venture Funds in France. Source: EVCA, 2015.
Total venture capital issued as % of GDP	0,38%		
C. % of SME issued equity to venture funds	8,41%		Def: A result of division of (A) by (B).
Total SME Financing Supply			
Total SME fin. Supply			Def: The total sum of SME loan supply and SME equity supply. Def: Share of Total SME fin. Supply in GDP.
Total SME fin. Supply (€ mil)	217 937		
Total SME fin. Supply as % of GDP	10,31%		
GDP (in € mil)	**2 113 687**		**Source: Eurostat, 2015.**

Table 3.4. SME financing supply in France, 2013 (continued)

		Method #1	Method #2			Excess Demand #1	Method #3		Excess Demand #2	Definition and sources
SME Loan Demand										
A. % of SME needing a loan										
	Micro	68,21%				68,21%			68,21%	Def: % of SMEs needing a loan - is a share of firms that answered 'Yes' to the SAFE ECB Survey question regarding the neediness for bank of bank loans [equity] in doing business , details in note (1). Source: SAFE ECB (April - Sept, 2014), 2015.
	Small	71,41%				71,41%			71,41%	
	Medium	76,62%				76,62%			76,62%	
		Applied and Obtained a Loan	Applied and Obtained a Loan				Applied and Obtained (with excess demand)	Applied and Got Rejected for a Loan		Def: Average loan demanded (€ mil) is a variable derived from the SAFE ECB Survey (April-Sept, 2014), details in the note (3). In Method #2 in order to derive the excess demand for those firms that applied and did not ge the full loan demanded, we firstly derive the obtained loan weighted average (explained in note (3)) and add additional 12% and 50% of that obtained loan respectively. Table with the full details of mid points and weights is in Appendix Table.... In Method #3 we calculate weights using firms that applied and obtained a loan and firms that applied and got rejected. Average loans for both categories in Method#3 were calculated as explained in note (3). Source: SAFE ECB, 2015.
			100% of a loan	more than 75% (12% excess demand)	up to 75% (50% excess demand)					
Weights within groups for Method#1, Method#2	Micro		81,39%	8,88%	9,73%		69,66%	30,34%		
	Small		91,01%	3,96%	5,03%		78,46%	21,54%		
	Medium		90,73%	7,45%	1,82%		88,90%	11,10%		
B. Average loan demanded (€ mil)						Weighted average loan demanded			Weighted average loan demanded	Def: Weighted average loan-in Methods #2 and #3 we use within group shares, shares of firms by different loan size obtained, share of firms which obtained and were rejected for a loan, respectively. Average loan demanded (€ mil) - variable derived from the SAFE ECB Survey, details in note (3). In Method #2 we derive excess demand, by adding additional 12% and 50% of a the average loan in corresponding groups (Appendix ??, Table??). Similarly, In Method #3 we calculate weights of firms that applied and obtained a loan, and got rejected (Appendix ??, Table??). Average loans for both categories in Method#3 were calculated as explained in note (3). Source: SAFE ECB, 2015.
	Micro	0,15	0,16	0,10	0,22	0,16		0,16	0,19	0,17	
	Small	0,32	0,32	0,56	0,19	0,33		0,33	0,40	0,34	
	Medium	0,58	0,59	2,10	0,32	0,69		0,69	0,88	0,71	
C. Number of SMEs										
	Micro	2 439 919		2 439 919					2 439 919	Def: Number of SMEs - is variable counting absolute number of firms classified as SMEs in France in 2013. For exact definition of firm's class size check Appendix 2. Source: European Central Bank, 2015.
	Small	136 364		136 364					136 364	
	Medium	21 740		21 740					21 740	
D. SME Loan Demand=A*B*C (€ mil)										
	Micro	247 545				264 948	Diff. between Method #1 and Method #2		281 061	Diff. between Method #1 and Method #3	Def: SME Loan Demanded is the variable derived as a product of variables A, B, and C in this table.
	Small	31 265				31 806			33 403	
	Medium	9 676				11 544			11 887	
Total SME loan demand (€ mil)		**288 486**				**308 298**	**(19 811)**		**326 350**	**(37 864)**	Def: Total SME loan demanded - variable derived as a sum of loans demanded in D. SME loan demanded as % of GDP is equal to the Total SME loan demand divided by GDP (€ mil).
SME loan demand as % of GDP		**13,65%**				**14,59%**	**0,94%**		**15,44%**	**1,79%**	

Table 3.5. SME financing demand in France, 2013

SME Equity Demand						
A. % of SME needing equity						
Micro	25,39%	25,39%				Def: % of SMEs needing equity is a variable derived from the SAFE ECB Survey (April - Sept, 2014), details in note (1). Source: SAFE ECB, 2015.
Small	28,97%	28,97%				
Medium	27,23%	27,23%				
B. Average equity demanded (€ mil)	EVCA data	ECB data				
Micro	1,44	0,15				Def: To derive the variable Average equity demanded - we use two sources. First is European Venture Capital Association data (details in note (4)). As a second method we use the average obtained loans as proxy for demand for equity. We decide to use loans as proxy for equity demanded in order to capture possible variation between demand according to the firm size. Source: EVCA (2015); SAFE ECB (2015).
Small		0,32				
Medium		0,58				
C. Number of SMEs						
Micro	2 439 919	2 439 919				Def: Number of SMEs - is a variable counting absolute number of firms classified as SMEs in France in 2013. For exact definition of firm's class size check Appendix 2. Source: European Central Bank, 2015.
Small	136 364	136 364				
Medium	21 740	21 740				
D. SME Equity Demand=A*B*C (€ mil)						
Micro		92 140				Def: SME Equity Demanded is the variable derived as a product of variables A, B, and C in this table. In the case of using EVCA data to estimate the equity demand we don't make classification of that demand by firm size. Therefore, we use an average of variable A. (% of SMEs needing equity). In case of France that is 27%. In addition, we take the number of small firms as a proxy for potential firms needing equity.
Small	56 884	12 684				
Medium	8 523	3 438				
Total SME equity demand (€ mil)	**65 408**	**108 262**				Def: Total SME equity demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
SME equity demand as % of GDP	**3,09%**	**5,12%**				
Total SME Financing Demand	**Method #1**	**Method #2**	**Excess Demand #1**	**Method #3**	**Excess Demand #2**	Def: Excess Demand #1, #2 are differences between estimated fin demand using Method#1 and Method#2, #3.
	*** When Equity demanded is estimated using EVCA data**					
Total SME fin. demand (€ mil)	353 894	373 705	(19 811)	391 758	(37 864)	
% of SME fin. demand as % of GDP	16,74%	17,68%	0,94%	18,53%	1,79%	
Total SME Financing Demand	* When Equity demanded is estimated using ECB data					Def: Total SME financing demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
Total SME fin. demand (€ mil)	**396 748**	**416 560**	**(19 811)**	**434 613**	**(37 864)**	
% of SME fin. Demand as % of GDP	**18,77%**	**19,71%**	**0,94%**	**20,56%**	**1,79%**	
GDP (€ mil)	2 113 687	2 113 687		2 113 687		Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015.

Notes: (1) The variable represents share of firms that answered "yes" to the SAFE ECB Survey question: "Are the [bank loan, or equity] relevant to your firm, that is, have you used it in the past or considered them in the future?" ; (2) In Method #2 we classify firms that applied and obtained a loan by the size of the loan obtained. To do that we use the question from the SAFE ECB Survey: "If you applied and tried to negotiate for a bank loan over the past 6 months, did you: receive everything; Received most of it (between 75% and 99%0; Only received a limited part of it (between 1% and 74%); Refused because the cost was too high; Was rejected; or Application still pending". In Method #2 we only use the subcategory of first three answers as the full sample ("100% of a loan"; "more than 75% (12% excess demand)"; "up to 74% (50% excess demand)"). Then, we use those weights to weight the response to question from note (1). In Method#3 we use all 6 answers (as the full sample) and group them into two categories (obtained and rejected) accordingly we weight the answers; (3) The variable represents weighted average of the 4 possible answers to the question: "What is the size of the last bank loan that your enterprise obtained or renegotiated in the past 6 months?" Answer to this question is a category variable: (up to € 25K; between € 25K - 100K; between € 100K-250K; more than 250K-1mil; over € 1mil (here upper limit is assumed at € 4 mil)). Next, in order to derive the weighted average of loan demanded we weighted the mid point of these categories with the share of firms that chose that category. The complete tables of weights and category mid points is provided in the Appendix Table... (4) We use European Venture Capital Association (EVCA) to derive average equity demanded. The derived number represents an average of invested venture capital per investment, within a country, in a given year. Venture Capital investments include: Seed, Start-up, Later-stage investments. More details are in Appendix, Table..

Table 3.6. SME financing gap in France, 2013

	Loans			Equity		Total			Definition and Sources
SME Loan Supply									
SME Loan Supply (€ mil)				217 257				217 937	
SME Loan Supply as % of GDP				10,28%				10,31%	
SME Equity Supply									
SME Equity Supply (€ mil)				680					
SME Equity Supply as % of GDP				0,03%					
	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Demand						* Equity Demand using EVCA data			
SME Loan Demand (€ mil)	288 486	308 298	326 350			353 894	373 705	391 758	Def: Total SME financing demanded - variable derived as a sum of equity and loan demanded. The calculation and methods are explained in detail in SME Financing Demand Estimate, 2013. Data used is from ECB SAFE Survey and ECB Country Statistic (2015). SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
SME Loan Demand as % of GDP	13,65%	14,59%	15,44%			16,74%	17,68%	18,53%	
SME Equity Demand				EVCA data	ECB data	* Equity Demand using ECB data			
SME Equity Demand (€ mil)				65 408	108 262	396 748	416 560	434 613	
SME Equity Demand as % of GDP				3,09%	5,12%	18,77%	19,71%	20,56%	
	Loan Gap			**Equity Gap**		**Total Fin Gap**			
	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Gap						* Equity Demand sing EVCA data			
Total SME fin. Gap (€ mil)	71 229	91 041	109 093			135 957	155 769	173 821	Def: SME Financing Gap - is derived variable as a difference between estimated SME fin Supply and SME fin Demand for a given year within a given country. Financing Demand is estimated using three different methods, please check note (1). For details, please check the SME Financing Demand Estimate table.
SME fin. Gap as % of GDP	3,37%	4,31%	5,16%			6,43%	7,37%	8,22%	
SME Equity Gap				EVCA data	ECB data	* Equity Demand using ECB data			
Total SME fin. Gap (€ mil)				64 728	107 583	178 812	198 623	216 676	
SME fin. Gap as % of GDP				3,06%	5,09%	8,46%	9,40%	10,25%	
GDP (€ mil)		**2 113 687**		**2 113 687**			**2 113 687**		Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015.

Table 3.7. SME financing supply in Germany, 2013 **Table 3.8.** SME financing demand in Germany, 2013

SME Loan Supply	Source #1 ECB data	Source #2 IMF data	Definition and sources
A. SME loan supply			
SME Loan Supply (€ mil)	282 000		Def: Due to data limitations, in order to calculate German SME loans outstanding, the share of SME loans in total business loans from 2011 was used. Source: DB Research, 2014.
SME Loan Supply as % of GDP	10,04%		
B. Total outstanding loans			
Total outstanding loans (€ mil)	796 544	810 084	Def: The value of all domestic loans by non-financial corporations in all currencies combined at the end of the year. Source: ECB, 2015.
Total outstanding loans as % of GDP	28,35%	28,83%	Def: Total outstanding loans represents all types of outstanding loans to non-financial corporations (household-related loans are excluded) by commercial banks, credit unions, financial cooperatives, other financial intermediaries and deposit takers. Source: IMF, 2015.
C. % of SME outstanding loans to total outstanding loans	35,40%	34,81%	Def: A result of division of (A) by (B).
SME Equity Supply	**EVCA data**		
A. SME equity supply			
SME Equity Supply (€ mil)	703		Def: SME Equity is a sum of Seed, Startup, and Later Stage investments, excluding Buyouts. Source: EVCA, 2015.
SME Equity Supply as % of GDP	0,03%		
B. Total venture capital issued			
Total venture capital issued (€ mil)	9 630		Def: Total Equity is a total value of capital under management of Venture Funds in Germany. Source: EVCA, 2015.
Total venture capital issued as % of GDP	0,34%		
C. % of SME issued equity to venture funds	7,30%		Def: A result of division of (A) by (B).
Total SME Financing Supply			
Total SME fin. Supply			
Total SME fin. Supply (€ mil)	282 703		Def: The total sum of SME loan supply and SME equity supply.
Total SME fin. Supply as % of GDP	10,06%		Def: Share of Total SME fin. Supply in GDP.
GDP (in € mil)	2 809 480		Source: Eurostat, 2015.

Notes: (1) The variable represents share of firms that answered "yes" to the SAFE ECB Survey question: "Are the [bank loan, or equity] relevant to your firm, that is, have you used it in the past or considered them in the future?" ; (2) In Method #2 we classify firms that applied and obtained a loan by the size of the loan obtained. To do that we use the question from the SAFE ECB Survey: "If you applied and tried to negotate for a bank loan over the past 6 months, did you: receive everything; Received most of it (between 75% and 99%0; Only received a limited part of it (between 1% and 74%); Refused because the cost was too high; Was rejected; or Application still pending". In Method #2 we only use the subcategory of first three answers as the full sample ("100% of a loan"; "more than 75% (12% excess demand)"; "up to 74% (50% excess demand)"). Then, we use those weights to weight the response to question from note (1). In Method#3 we use all 6 answers (as the full sample) and group them into two categories (obtained and rejected) accordinlgy we weight the answers; (3) The variable represents weighted average of the 4 possible answers to the question: "What is the size of the last bank loand that your enterprise obtained or renegotiated in the past 6 months?" Answer to this question is a category variable: (up to € 25K; between € 25K - 100K; between € 100K-250K; more than 250K-1mil; over € 1mil (here upper limit is assumed at € 4 mil)). Next, in order to derive the weighted average of loan demanded we weighted the mid point of these categories with the share of firms that chose that category. The complete tables of weights and category mid points is provided in the Appendix Table... (4) We use European Venture Capital Association (EVCA) to derive average equity demanded. The derived number represents an average of invested venture captial per investment, within a country, in a given year. Venture Capital investments include: Seed, Start-up, Later-stage investments. More details are in Appendix, Table..

Table 3.8. SME financing demand in Germany, 2013

		Method #1	Method #2			Excess Demand #1	Method #3		Excess Demand #2	Definition and sources
SME Loan Demand										
A. % of SME needing a loan										
	Micro	47,16%				47,16%			47,16%	Def: % of SMEs needing a loan - is a share of firms that answered 'Yes' to the SAFE ECB Survey question regarding the neediness for bank of bank loans [equity] in doing business , details in note (1). Source: SAFE ECB (April - Sept, 2014), 2015.
	Small	63,36%				63,36%			63,36%	
	Medium	68,24%				68,24%			68,24%	
		Applied and Obtained a Loan	Applied and Obtained a Loan				Applied and Obtained (with excess demand)	Applied and Got Rejected for a Loan		Def: Average loan demanded (€ mil) is a variable derived from the SAFE ECB Survey (April-Sept, 2014), details in the note (3). In Method #2 in order to derive the excess demand for those firms that applied and did not ge the full loan demanded, we firstly derive the obtained loan weighted average (explained in note (3)) and add additional 12% and 50% of that obtained laon respectively. Table with the full details of mid points and weights is in Appendix Table.... In Method #3 we calculate weights using firms that applied and obtained a loan and firms that applied and got rejected. Average loans for both categories in Method#3 were calculated as explained in note (3). Source: SAFE ECB, 2015.
			100% of a loan	more than 75% (12% excess demand)	up to 75% (50% excess demand)					
Weights within groups for Method#1, Method#2	Micro		76,66%	13,95%	9,39%		69,32%	30,68%		
	Small		83,52%	8,57%	7,91%		77,72%	22,28%		
	Medium		91,32%	2,87%	5,81%		95,51%	4,49%		
						Weighted average loan demanded			Weighted average loan demanded	
B. Average loan demanded (€ mil)										Def: Weighted average loan-in Methods #2 and #3 we use within group shares, shares of firms by different loan size obtained, share of firms which obtained and were rejected for a loan, respectivly. Average loan demanded (€ mil) - variable derived from the SAFE ECB Survey, details in note (3). In Method #2 we derive excess demand, by adding additional 12% and 50% of a the average loan in corresponding groups (Appendix ??, Table??). Similarlly, In Method #3 we calculate weights of firms that applied and obtained a loan, and got rejected (Appendix ??, Table??). Average loans for both categories in Method#3 were calculated as explained in note (3). Source: SAFE ECB, 2015.
	Micro	0,25	0,25	0,27	1,18	0,34		0,34	0,15	0,28	
	Small	0,48	0,55	0,47	0,57	0,54		0,54	0,51	0,54	
	Medium	1,05	1,21	1,01	1,14	1,20		1,20	0,63	1,18	
C. Number of SMEs										
	Micro	1 809 029				1 809 029			1 809 029	Def: Number of SMEs - is variable counting absolute number of firms classified as SMEs in France in 2013. For exact definition of firm's class size check Appendix 2. Source: European Central Bank, 2015.
	Small	336 111				336 111			336 111	
	Medium	56 004				56 004			56 004	
D. SME Loan Demand=A*B*C (€ mil)										
	Micro	215 479				289 930	Difference between Method #1 and Method #2		240 044	Difference between Method #1 and Method #3 Def: SME Loan Demanded is the variable derived as a product of variables A, B, and C in this table.
	Small	102 079				115 809			114 319	
	Medium	40 249				45 929			44 939	
Total SME loan demand (€ mil)		**357 807**				**451 667**	**(93 860)**		**399 302**	**(41 495)** Def: Total SME loan demanded - variable derived as a sum of loans demanded in D. SME loan demanded as % of GDP is equal to the Total SME loan demand divided by GDP (€ mil).
SME loan demand as % of GDP		**12,74%**				**16,08%**	**3,34%**		**14,21%**	**1,48%**

Table 3.8. SME financing demand in Germany, 2013 (continued)

SME Equity Demand						
A. % of SME needing equity						
Micro	12,56%	12,56%				Def: % of SMEs needing equity is a variable derived from the SAFE ECB Survey (April - Sept, 2014), details in note (1). Source: SAFE ECB, 2015.
Small	15,25%	15,25%				
Medium	13,67%	13,67%				
B. Average equity demanded (€ mil)	EVCA data	ECB data				
Micro	1,00	0,25				Def: To derive the variable Average equity demanded - we use two sources. First is European Vencture Capital Association data (details in note (4)). As a second method we use the average obtained loans as proxy for demand for equity. We decide to use loans as proxy for equity demanded in order to capture possible variation between demand according to the firm size. Source: EVCA (2015); SAFE ECB (2015).
Small		0,48				
Medium		1,05				
C. Number of SMEs						
Micro	1 809 029	1 809 029				Def: Number of SMEs - is a variable counting absolute number of firms classified as SMEs in France in 2013. For exact definition of firm's class size check Appendix 2. Source: European Central Bank, 2015.
Small	336 111	336 111				
Medium	56 004	56 004				
D. SME Equity Demand=A*B*C (€ mil)						
Micro		57 383				Def: SME Equity Demanded is the variable derived as a product of variables A, B, and C in this table. In the case of using EVCA data to estimate the equity demand we don't make classification of that demand by firm size. Therefore, we use an average of variable A. (% of SMEs needing equity). In case of France that is 27%. In addition, we take the number of small firms as a proxy for potential firms needing equity.
Small	51 245	24 563				
Medium	7 655	8 062				
Total SME equity demand (€ mil)	**58 899**	**90 008**				Def: Total SME equity demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
SME equity demand as % of GDP	**2,10%**	**3,20%**				
Total SME Financing Demand	**Method #1**	**Method #2**	**Excess Demand #1**	**Method #3**	**Excess Demand #2**	Def: Excess Demand #1, #2 are as a difference between estimated fin demand using Method#1 and Method#2, #3.
	*** When Equity demanded is estimated using EVCA data**					
Total SME fin. demand (€ mil)	416 707	510 566	(93 860)	458 202	(41 495)	Def: Total SME financing demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
% of SME fin. demand as % of GDP	14,83%	18,17%	3,34%	16,31%	1,48%	
Total SME Financing Demand	* When Equity demanded is estimated using ECB data					
Total SME fin. demand (€ mil)	447 815	541 675	(93 860)	489 310	(41 495)	
% of SME fin. Demand as % of GDP	15,94%	19,28%	3,34%	17,42%	1,48%	
GDP (€ mil)	2 809 480	2 809 480		2 809 480		Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015.

Table 3.9. SME financing gap in Germany, 2013

	Loans			Equity		Total			Definition and Sources
SME Loan Supply									
SME Loan Supply (€ mil)	282 000					282 703			Def: Total SME fin. supply - variable derived as a sum of loan and equity supplied. Details are provided in the SME Financing Supply Estimate table . SEM fin. Supply as % of GDP - is equal to the Total SME equity demand divided by GDP (€ mil).
SME Loan Supply as % of GDP	10,04%					10,06%			
SME Equity Supply									
SME Equity Supply (€ mil)				703					
SME Equity Supply as % of GDP				0,03%					
	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Demand						* Equity Demand using EVCA data			
SME Loan Demand (€ mil)	357 807	451 667	399 302			416 707	510 566	458 202	Def: Total SME financing demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
SME Loan Demand as % of GDP	16,93%	21,37%	18,89%			14,83%	18,17%	16,31%	
SME Equity Demand				EVCA data	ECB data	* Equity Demand using ECB data			
SME Equity Demand (€ mil)				58 899	90 008	447 815	541 675	489 310	
SME Equity Demand as % of GDP				2,10%	3,20%	15,94%	19,28%	17,42%	
	Loan Gap			**Equity Gap**		**Total Fin Gap**			
	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Gap						* Equity Demand sing EVCA data			Def: SME Financing Gap - is derived variable as a difference between estimated SME fin Supply and SME fin Demand for a given year within a given country. All variables needed to estimate the gap are calculated and explained in detail in Supply and Demand tables on previous pages.
Total SME fin. Gap (€ mil)	75 807	169 667	117 302			134 004	227 864	175 499	
SME fin. Gap as % of GDP	2,70%	6,04%	4,18%			4,77%	8,11%	6,25%	
SME Equity Gap				EVCA data	ECB data	* Equity Demand using ECB data			
Total SME fin. Gap (€ mil)				58 197	89 305	165 112	258 972	206 607	
SME fin. Gap as % of GDP				2,07%	3,18%	5,88%	9,22%	7,35%	Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015.
GDP (€ mil)	**2 809 480**			**2 809 480**			**2 809 480**		

The results are summarized in the first part of the table, variable A. In terms of importance, they confirm that the share of German SMEs needing a loan increased as the size of the firm increased. The results show that the difference in loan demand was over 20%, favoring medium-sized firms. Less than half of German micro firms indicated that loans were needed and important for their businesses, as opposed to three quarters of German medium-sized firms.

Recall from our earlier estimations that we use three methods to estimate average loan demand. In Method #1, the average loan requested (mil EUR), is equal to the average loan obtained and ranges from EUR 0.25 mil for micro to EUR 1.05 mil for medium firms. The average size of loans obtained in Germany is the highest among the countries in this study. This implies that, on average, German firms receive more financing than the rest of the firms in this study. When multiplied by the share of firms needing a loan (A) and by the number of firms by size (C), we obtain the estimate of the total SME loan demand in Germany: EUR 357,807 mil, or 13.65% of GDP.

There are similarities between the two methods. However, the findings suggest that there exists one difference. In Method #2, we add an additional 12% and 50% to the average loan obtained, depending on the size of the obtained versus the desired loan. We estimate that, in this case, the average loan requested was in the range of EUR 0.34 mil for micro firms and EUR 1.2 mil for medium firms. Using the same multiplication of variables A, B, and C, we estimate that the SME loan demand was over EUR 450 bil, or 16.08% of GDP. We also find the difference between obtained versus desired loans (demand estimated using Method #1 and Method #2) to be over EUR 90 bil, or 3.34% of GDP. This result implies that the German banks are providing SMEs with less financing than demanded.

Finally, in Method #3, we expand the sample of firms used to estimate the average loan requested by adding firms that applied but were rejected for a loan. We estimate the average rejected loan by firm size and weight it by the relative share in the total number of firms that applied. First, we find that the highest share of rejected loans was among micro firms (slightly above 30%) and the lowest share among medium firms (below 5%). At the same time, German rejection rates were at the lowest in the sample of countries in this study. Using Method #3, we estimate that the SME loan demand in Germany for 2013 was over EUR 399 bil, or 14.21% of GDP. The difference between the demand estimated using Method #1 and Method #3 is over EUR 41 bil. The finding shows an undersupplying loans at a rate of 1.48% of GDP. Table 3.8 also shows that the demand estimated, using Method #2, is larger than that found with Method #3, even though Method #3 includes firms that applied and were rejected. This difference is a result of the lower average loan size requested by firms that were rejected, and when the sampling weights are applied, it results in a lower overall average loan.

In the second half of Table 3.8, it is apparent that the share of firms needing equity (A) was similar across different firm sizes. Additionally, we estimate that, using the EVCA data, the total demand for equity was close to EUR 59 bil, or 2.10% of GDP. To estimate the average equity needed, we use the EVCA data and average equity issued at the level of EUR 1.00 mil. As in our earlier estimates, we multiply variables A, B and C to estimate the total equity demanded. We decided to exclude the number of micro firms in this step since the average financing need of this class of firms was unlikely to reach over one mil Euros.

Overall, the evidence shows that, using the ECB data or average obtained loans as a proxy for equity demanded, the total demand for equity at the level of 3.20% of GDP (over EUR 90 bil).

Financing Gap

In this section, we move the analysis to consider the difference between the loan and the equity supply and demand. We begin by summarizing the results of Table 3.9. As noted above, the first column of the table shows the variable names; the second column shows the loan gap; the third column shows the equity gap; the fourth column combines the two and shows the total estimated gap, while the fifth column provides definitions and sources.

In terms of importance, the second column in Table 3.9 shows three different estimates of the loan gap, depending on the demand estimates used. The loan gap ranges from 2.70% to 6.04% of GDP. The third column shows two estimates of the equity gap, which is in the range of 2.07% to 3.18% of GDP.

The results suggest that the estimated loan and equity gap in Germany are similar to the gaps in the other four countries in this study. While the evidence from the US shows an equity gap is in the range of 0.96% to 1.52% of GDP, it is apparent that the gap is almost double in Germany. Moreover, the findings are also in line with the case of France. Overall, the difference between SME equity supply and demand is almost tenfold, implying the need for more equity investment in the SME sector.

The Financing Gap in The Netherlands

Our discussion so far has focused on the loan and equity financing gaps for French and German SMEs. In this section, we estimate the SME financing gap in the Netherlands. Our results are reported in Tables 3.10 through 3.12.

Supply

As in the case of France, the structure of the banking sector has been mainly stable from 2008 to 2013. In contrast, there is ample evidence that the total size of the Dutch banking sector is decreasing (DNB, 2015). At the same time, assets of small and medium-sized credit institutions are increasing relative to large credit institutions. For example, assets of small Dutch credit institutions increased from just over EUR 2 bil in 2008 to more than EUR 18 bil in 2013. Indeed, the total assets of large domestic credit institutions declined marginally. Thus, while the increase in assets of small credit institutions would seem to be an improvement, the growth of bank assets was not sufficient

to compensate for this drop, resulting in an overall decrease in credit institution assets (Appendix 3, Table C3).

Furthermore, Dutch SMEs have limited access to private equity financing. In particular, private equity funds are small in volume relative to the banking sector. Currently, there are in total 125 private equity firms headquartered in the Netherlands. Together the generalist, buyout, and venture capital firms manage over EUR 18 bil (Table 3.11). As in the case of Germany, private equity investments generated 0.26% of GDP.

Table 3.10 reports the supply of SME loans and equity in the Netherlands for 2013. We estimate that the total SME loan and equity supply in the Netherlands for 2013 was EUR 123,318 mil or 19.18% of GDP. The largest share of the supply came from the SME loans (19.15% of GDP), and the remaining part was from equity funding (0.03% of GDP), which is similar to the estimates for France and Germany

The SME loan supply represented EUR 123,318 mil of outstanding SME loans in 2013. We include two data sources to reference the total outstanding loans: the European Central Bank (ECB) and the International Monetary Fund (IMF). A comparison finds no significant difference between the numbers provided by the two sources. Overall, the results indicate the share of outstanding SME loans to total outstanding loans was 38% (Table 3.10)

Demand

The SME financing demand--the sum of the demands of all SMEs in the economy—is important for increasing the options for business investment. According to the 2013 European Commission data, there were over 802,000 registered SMEs in the Netherlands, or 47 SMEs per 1,000 people, which is the highest number of SMEs per 1,000 people among the five countries in this study.

The Dutch Central Bank (2014) reports that many SMEs have been unsuccessful in gaining access to credit from local bank. Table 3.11 shows the three different estimates of SME financing demand in Netherlands for 2013. The table also includes the first variable names (column 1), the Method #1 to assess SME demand (column 2) and the results of Method #2 demand estimation (column 3). In addition, the table also reports the difference between demand estimates by Methods #1 and #2 (column 4) and Methods #1 and 3 (column 6). In column 5, we show the results of the demand estimate by Method #3.

The bottom part of Table 3.11 shows the results of total SME demand estimates calculated using the three different methods for loan demand and two different sources for equity demand. We find that the total SME financing demand in the Netherlands was between 25.89% and 40.83% of GDP.18

In order to estimate the loan demand, we multiplied % of SMEs needing a loan by the average loan demanded (mil EUR) and the number of SMEs. The first two variables were acquired from the ECB SAFE Survey (2013). The details of exact survey questions are provided within the demand table (Table 3.11). The third variable, number of SMEs, presents the total number of SMEs in the Netherlands for 2013 (European Commission data).

In the first part of the table, variable A shows that the share of the Dutch SMEs needing a loan is associated with an increase in firm size. Importantly, the difference in loan demand is over 15% in favor of medium firms: half of Dutch micro firms say that loans are needed and important for their businesses, relative to 65.16% of medium firms.

Again, we use three methods to estimate the average loan demanded. In Method #1, the average loan demanded (mil EUR) is equal to the average loan obtained and ranges from EUR 0.44 mil for micro to EUR 1.61 mil for medium firms. The average loan size obtained is higher than for micro or medium firms in the other Research Countries. This implies that Dutch firms on average receive more financing than the rest of the firms in this study. Thus, when multiplied by the share of firms needing a loan (A) and by the number of firms by size (C), we obtained the estimate of the total SME loan demand: EUR 210,383 mil, or 32.73% of GDP.

In the case of Method #2, we add additional 12% and 50% to the average loan obtained, depending on the size of the obtained versus desired loan. We estimated that in this case, average loan demanded was in the range of EUR 0.49 mil for micro firms and EUR 1.85 mil for medium firms. Using the same multiplication of variables A, B, and C, we estimated that the SME loan demand was EUR 228,172 mil, or 35.49% of GDP. We also found the difference between obtained versus desired loans (demand estimated using Method #1 and Method #2) to be EUR 17,789, or 2.77% of GDP. The key implication is that the Dutch banks are providing SMEs with less financing than is demanded.

Finally, in Method #3, we expanded the firm sample by adding firms that applied for but were rejected for a loan, in order to better estimate the average loan demanded. We estimated the average rejected loan demanded per firm size category and weighed it by the relative share among the total number of firms that applied. First, we found that the highest share of rejected loans was for the micro firms (slightly above 53.68%) and the lowest share for medium firms (under 14.76%).

Using Method #3, we estimated that the SME loan demand in the Netherlands for 2013 was EUR 161,753 mil, or 25.16% of GDP. Table 3.11 also shows that the demand as estimated using Method #1 and Method #2 was larger than demand estimated using Method #3, even though Method #3 included firms that applied and were rejected. This difference is a result of the average loan size demanded by firms was rejected. Column five shows that in each firm size category the average loan demanded was lower

[18] In the case of the Netherlands, we used the SAFE ECB Survey—wave 1 (for all other Research Countries we used wave 2). The difference between wave 1 and wave 2 is that they were conducted in different periods but in the same year. More specifically, we found that the share of Dutch mirco SMEs that applied for and were rejected from a loan was close to 70%, which is significantly larger than in earlier surveys (Appendix 3). In addition, we found that the relative distribution of firm sizes was more uniformly distributed in wave 1. The demand and gap estimates are available in Appendix 3, Tables D10 and D11.

than the amount of the loans obtained, and those lower loans were weighed against the loans acquired – which in turn produced lower total average loans. However, this also suggests that only higher loan demands received funding. We double checked this finding in the history data and found similar evidence (Appendix 3, Table D8).

In the second half of Table 3.11, we describe the steps and variables used in the equity demand estimation in the Netherlands for 2013. Note that the share of firms needing equity (A) ranges from 8.16% of small firms to 14.45% of medium firms. Using the EVCA data, we estimated that the total demand for equity was EUR 4,680 mil, or 0.73% of GDP. As in the previous cases, we multiplied variables A, B and C to estimate the total equity demanded. We decided to exclude the number of micro firms in this step, since the average financing needing of this class of firms was unlikely to exceed EUR 0.97 mil. Therefore, by using the ECB data or average obtained loans as a proxy for equity demanded, we estimated the total demand for equity to be 5.34% of GDP (EUR 34,323 mil).

Financing Gap

This section provides evidence on the SME financing gap in the Netherlands for 2013 (Table 3.12). Once again, we report the variable names (column 1), loan gap (column 2), equity gap (column 3), total estimated gap (column 4) and the definitions and sources (column 5). In addition, we consider three different estimates of the loan gap, depending on the demand sources and methods used (column 2). The results indicate that the loan gap ranges from 6.01% to 16.34% of GDP. The lower boundary of the loan gap is the highest in the group of Research Countries. In column 3, we present two estimates of the equity gap, which is in the range of 0.7% to 5.31% of GDP. Overall, our results indicate that the Netherlands' equity gap is the lowest of the Research Countries.

The Financing Gap in Poland

In this section, we report the results of estimation of the SME financing gap in Poland. Our findings are reported in Tables 3.13 through 3.15.

Supply

In Poland, the largest assets are held by foreign-controlled subsidiaries and branches. While foreign bank presence may enhance the development of the financial system, SMEs tend to avoid arranging loans in foreign currencies. While large domestic credit institutions are mostly non-existent, the assets of small and medium-sized credit institutions are growing. For example, in 2008, assets of medium-sized credit institutions were close to EUR 65 bil, while in 2013 they grew to over EUR 104 bil (Appendix 3, Table C4).

As we've seen in the other Research Countries, private equity funds are small in volume relative to the banking sector. In 2012, private equity investments generated 0.13% of GDP. Indeed, there are a total of 34 private equity funds headquartered in Poland. The results indicate that generalist, buyout and venture capital firms manage over EUR 6 bil (Table 3.11).

Table 3.13 includes the supply of SME loans and equity in Poland for 2013. Throughout the analysis, we provide variable names, the two different sources used to assess total supply of financing, and the definitions and sources of variables (Columns 1-4).

We estimated that the total SME loan and equity supply in Poland was EUR 36,416 mil, or 9.19% of GDP, which was the lowest level of SME loan supply among the five countries in this study. In addition, the largest share of the supply comes from SME loans, while the equity supply in Poland is marginal at a level of 0.004% of GDP (EUR 16 mil).

As in earlier estimates, we also used two data sources to reference the total outstanding loans, we found no significant difference between the numbers the two sources provided.19 Table 3.13 confirms that the share of outstanding SME loans to total outstanding loans was about 58%.

Demand

In this section, we provide evidence on the SME demand for financing. According to the 2013 European Commission data, there were over 1.4 mil registered SMEs in Poland, or 38 SMEs per 1,000 people. It is noteworthy that Poland has a higher proportion of micro SMEs than in the EU overall. Earlier studies show that micro firms are more financially constrained than larger firms and similarly may fail to find external finance. If, as the literature suggests, micro and small business face barriers to arrange loan finance, we expect that there is only limited or weak demand for borrowed funds.

We start by considering three different estimates of SME financing demand in Poland for 2013 (Table 3.14). The first column includes variable names, the second uses Method #1 to assess the SME demand, the third column shows the results of Method #2 demand estimation. The fourth and the sixth columns show the difference between demand estimates by Methods #1 and #2 and Methods #1 and 3, respectively. The fifth column shows the results of demand estimation by Method #3, and finally the seventh column stands for definitions and sources of the variables.

The bottom part of the Table 3.14 shows the results for the total SME demand estimates calculated using the three different methods for loan demand, and two different sources for equity demand. Using these different methods and sources, we found that the total SME financing demand in Poland for 2013 was between 14.64% and 27.41% of GDP.

In order to estimate the loan demand, we multiplied % of SMEs needing a loan by average loan demanded (mil EUR) and the number of SMEs. The first two variables were acquired from the ECB SAFE Survey (2013). Details of the exact survey questions are provided within the demand table (Table 3.14). The third variable, number of SMEs, presents the total number of SMEs in Poland for 2013 (European Commission data).

[19] In 2013, the share of total outstanding loans to Polish GDP was approximately 16%.

Table 3.10. SME financing supply in the Netherlands, 2013

	Loans			Equity		Total			Definition and Sources
SME Loan Supply									
SME Loan Supply (€ mil)		123 125					123 318		Def: Total SME fin. supply - variable derived as a sum of loan and equity supplied. Details are provided in the SME Financing Supply Estimate table . SEM fin. Supply as % of GDP - is equal to the Total SME equity demand divided by GDP (€ mil).
SME Loan Supply as % of GDP		19,15%					19,18%		
SME Equity Supply									
SME Equity Supply (€ mil)				193					
SME Equity Supply as % of GDP				0,03%					
	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Demand						* Equity Demand using EVCA data			
SME Loan Demand (€ mil)	204 121	298 498	97 094			205 481	299 859	98 454	Def: Total SME financing demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
SME Loan Demand as % of GDP	31,75%	46,43%	15,10%			31,96%	46,65%	15,32%	
SME Equity Demand				EVCA data	ECB data	* Equity Demand using ECB data			
SME Equity Demand (€ mil)				1 361	25 617	229 737	324 114	122 710	
SME Equity Demand as % of GDP				0,21%	3,98%	35,74%	50,42%	19,09%	
	Loan Gap			**Equity Gap**		**Total Fin Gap**			
	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Gap						* Equity Demand sing EVCA data			Def: SME Financing Gap - is derived variable as a difference between estimated SME fin Supply and SME fin Demand for a given year within a given country. All variables needed to estimate the gap are calculated and explained in detail in Supply and Demand tables on previous pages.
Total SME fin. Gap (€ mil)	80 996	175 373	(26 031)			82 163	176 541	(24 864)	
SME fin. Gap as % of GDP	12,60%	27,28%	-4,05%			12,78%	27,46%	-3,87%	
SME Equity Gap				EVCA data	ECB data	* Equity Demand using ECB data			
Total SME fin. Gap (€ mil)				1 168	25 424	106 419	200 796	(608)	
SME fin. Gap as % of GDP				0,18%	3,95%	16,55%	31,24%	-0,09%	Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015.
GDP (€ mil)		**642 851**		**642 851**			**642 851**		

Table 3.11. SME financing demand in the Netherlands, 2013

	Method #1	Method #2			Excess Demand #1		Method #3		Excess Demand #2	Definition and sources
SME Loan Demand										
A. % of SME needing a loan										
Micro	43,39%				43,39%				43,39%	Def: % of SMEs needing a loan - is a share of firms that answered 'Yes' to the SAFE ECB Survey question regarding the neediness for bank of bank loans [equity] in doing business , details in note (1). Source: SAFE ECB (April - Sept, 2014), 2015.
Small	52,69%				52,69%				52,69%	
Medium	58,20%				58,20%				58,20%	
		Applied and Obtained a Loan					Applied and Obtained (with excess demand)	Applied and Got Rejected for a Loan		Def: Average loan demanded (€ mil) is a variable derived from the SAFE ECB Survey (April-Sept, 2014), details in the note (3). In Method #2 in order to derive the excess demand for those firms that applied and did not ge the full loan demanded, we firstly derive the obtained loan weighted average (explained in note (3)) and add additional 12% and 50% of that obtained laon respectively. Table with the full details of mid points and weights is in Appendix Table.... In Method #3 we calculate weights using firms that applied and obtained a loan and firms that applied and got rejected. Average loans for both categories in Method#3 were calculated as explained in note (3). Source: SAFE ECB, 2015.
		Applied and Obtained a Loan	100% of a loan	more than 75% (12% excess demand)	up to 75% (50% excess demand)					
Weights within groups for Method#1, Method#2	Micro		48,56%	0,00%	51,44%		30,47%	69,53%		
	Small		75,78%	8,95%	15,27%		44,45%	55,55%		
	Medium		71,27%	5,97%	22,75%		62,17%	37,83%		
B. Average loan demanded (€ mil)					Weighted average loan demanded				Weighted average loan demanded	Def: Weighted average loan-in Methods #2 and #3 we use within group shares, shares of firms by different loan size obtained, share of firms which obtained and were rejected for a loan, respectivly. Average loan demanded (€ mil) - variable derived from the SAFE ECB Survey, details in note (3). In Method #2 we derive excess demand, by adding additional 12% and 50% of a the average loan in corresponding groups (Appendix ??, Table??). Similarlly, In Method #3 we calculate weights of firms that applied and obtained a loan, and got rejected (Appendix ??, Table??). Average loans for both categories in Method#3 were calculated as explained in note (3). Source: SAFE ECB, 2015.
Micro	0,58	0,01	-	1,67	0,87		1,14	0,24	0,24	
Small	0,26	0,20	0,70	0,26	0,25		0,30	0,59	0,59	
Medium	1,91	2,15	0,20	2,39	2,09		1,91	1,32	1,32	
C. Number of SMEs										
Micro	752 444				752 444				752 444	Def: Number of SMEs - is variable counting absolute number of firms classified as SMEs in France in 2013. For exact definition of firm's class size check Appendix 2. Source: European Central Bank, 2015.
Small	41 339				41 339				41 339	
Medium	8 304				8 304				8 304	
D. SME Loan Demand=A*B*C (€ mil)										
Micro	189 253				282 929	Difference between Method #1 and Method #2			77 784	Difference between Method #1 and Method #3
Small	5 654				5 473				12 937	Def: SME Loan Demanded is the variable derived as a product of variables A, B, and C in this table.
Medium	9 213				10 096				6 373	
Total SME loan demand (€ mil)	**204 121**				**298 498**	**(94 377)**			**97 094**	**107 027** Def: Total SME loan demanded - variable derived as a sum of loans demanded in D. SME loan demanded as % of GDP is equal to the Total SME loan demand divided by GDP (€ mil).
SME loan demand as % of GDP	**31,75%**				**46,43%**	**14,68%**			**15,10%**	**16,65%**

Table 3.11. SME financing demand in the Netherlands, 2013 (continued)

SME Equity Demand						
A. % of SME needing equity						
Micro	5,72%	5,72%				Def: % of SMEs needing equity is a variable derived from the SAFE ECB Survey (April - Sept, 2014), details in note (1). Source: SAFE ECB, 2015.
Small	2,50%	2,50%				
Medium	4,44%	4,44%				
B. Average equity demanded (€ mil)	EVCA data	ECB data				
Micro	0,97	0,57				Def: To derive the variable Average equity demanded - we use two sources. First is European Vencture Capital Association data (details in note (4)). As a second method we use the average obtained loans as proxy for demand for equity. We decide to use loans as proxy for equity demanded in order to capture possible variation between demand according to the firm size. Source: EVCA (2015); SAFE ECB (2015).
Small		0,25				
Medium		1,89				
C. Number of SMEs						
Micro	752 444	752 444				Def: Number of SMEs - is a variable counting absolute number of firms classified as SMEs in France in 2013. For exact definition of firm's class size check Appendix 2. Source: European Central Bank, 2015.
Small	41 339	41 339				
Medium	8 304	8 304				
D. SME Equity Demand=A*B*C (€ mil)						
Micro		24 664				Def: SME Equity Demanded is the variable derived as a product of variables A, B, and C in this table. In the case of using EVCA data to estimate the equity demand we don't make classification of that demand by firm size. Therefore, we use an average of variable A. (% of SMEs needing equity). In case of France that is 27%. In addition, we take the number of small firms as a proxy for potential firms needing equity.
Small	1 003	257				
Medium	358	696				
Total SME equity demand (€ mil)	**1 361**	**25 617**				Def: Total SME equity demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
SME equity demand as % of GDP	**0,21%**	**3,98%**				
	Method #1	Method #2	Excess Demand #1	Method #3	Excess Demand #2	Def: Excess Demand #1, #2 are as a difference between estimated fin demand using Method#1 and Method#2, #3.
Total SME Financing Demand	* When Equity demanded is estimated using EVCA data					
Total SME fin. demand (€ mil)	**205 481**	**299 859**	**(94 377)**	**98 454**	-	Def: Total SME financing demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
% of SME fin. demand as % of GDP	**31,96%**	**46,65%**	**14,68%**	**15,32%**		
Total SME Financing Demand	* When Equity demanded is estimated using ECB data					
Total SME fin. demand (€ mil)	**229 737**	**324 114**	**(94 377)**	**122 710**	-	
% of SME fin. Demand as % of GDP	**35,74%**	**50,42%**	**14,68%**	**19,09%**		
GDP (€ mil)	642 851	642 851		642 851		Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015.

Notes: (1) The variable represents share of firms that answered "yes" to the SAFE ECB Survey question: "Are the [bank loan, or equity] relevant to your firm, that is, have you used it in the past or considered them in the future?" ; (2) In Method #2 we classify firms that applied and obtained a loan by the size of the loan obtained. To do that we use the question from the SAFE ECB Survey: "If you applied and tried to negotate for a bank loan over the past 6 months, did you: receive everything; Received most of it (between 75% and 99%0; Only received a limited part of it (between 1% and 74%); Refused because the cost was too high; Was rejected; or Application still pending". In Method #2 we only use the subcategory of first three answers as the full sample ("100% of a loan"; "more than 75% (12% excess demand)"; "up to 74% (50% excess demand)"). Then, we use those weights to weight the response to question from note (1). In Method#3 we use all 6 answers (as the full sample) and group them into two categories (obtained and rejected) accordinlgy we weight the answers; (3) The variable represents weighted average of the 4 possible answers to the question: "What is the size of the last bank loand that your enterprise obtained or renegotiated in the past 6 months?" Answer to this question is a category variable: (up to € 25K; between € 25K - 100K; between € 100K-250K; more than 250K-1mil; over € 1mil (here upper limit is assumed at € 4 mil)). Next, in order to derive the weighted average of loan demanded we weighted the mid point of these categories with the share of firms that chose that category. The complete tables of weights and category mid points is provided in the Appendix Table... (4) We use European Venture Capital Association (EVCA) to derive average equity demanded. The derived number represents an average of invested venture captial per investment, within a country, in a given year. Venture Capital investments include: Seed, Start-up, Later-stage investments. More details are in Appendix, Table..

Table 3.12. SME financing gap in the Netherlands, 2013

	Loans			Equity		Total			Definition and Sources
SME Loan Supply									
SME Loan Supply (€ mil)		123 125					123 318		Def: Total SME fin. supply - variable derived as a sum of loan and equity supplied. Details are provided in the SME Financing Supply Estimate table . SEM fin. Supply as % of GDP - is equal to the Total SME equity demand divided by GDP (€ mil).
SME Loan Supply as % of GDP		19,15%					19,18%		
SME Equity Supply									
SME Equity Supply (€ mil)				193					
SME Equity Supply as % of GDP				0,03%					
	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Demand						* Equity Demand using EVCA data			
SME Loan Demand (€ mil)	204 121	298 498	97 094			205 481	299 859	98 454	
SME Loan Demand as % of GDP	31,75%	46,43%	15,10%			31,96%	46,65%	15,32%	
SME Equity Demand				EVCA data	ECB data	* Equity Demand using ECB data			Def: Total SME financing demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
SME Equity Demand (€ mil)				1 361	25 617	229 737	324 114	122 710	
SME Equity Demand as % of GDP				0,21%	3,98%	35,74%	50,42%	19,09%	
	Loan Gap			**Equity Gap**		**Total Fin Gap**			
	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Gap						* Equity Demand sing EVCA data			
Total SME fin. Gap (€ mil)	**80 996**	**175 373**	**(26 031)**			**82 163**	**176 541**	**(24 864)**	Def: SME Financing Gap - is derived variable as a difference between estimated SME fin Supply and SME fin Demand for a given year within a given country. All variables needed to estimate the gap are calculated and explained in detail in Supply and Demand tables on previous pages.
SME fin. Gap as % of GDP	**12,60%**	**27,28%**	**-4,05%**			**12,78%**	**27,46%**	**-3,87%**	
SME Equity Gap				EVCA data	ECB data	* Equity Demand using ECB data			
Total SME fin. Gap (€ mil)				**1 168**	**25 424**	**106 419**	**200 796**	**(608)**	
SME fin. Gap as % of GDP				**0,18%**	**3,95%**	**16,55%**	**31,24%**	**-0,09%**	
GDP (€ mil)		642 851		642 851			642 851		Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015.

Table 3.13. SME financing supply in Poland, 2013

SME Loan Supply	Source #1 ECB data	Source #2 IMF data	Definition and sources
A. SME loan supply			
SME Loan Supply (€ mil)	36 400		Def: Total SME loans in all currencies (as a part of total proposed loans to enterprises), denominated in the national currency and converted to EUR with average ECB exchange rate for the year 2013. Source: CSO of Poland, Monitoring of Banks, 2013; ECB, 2015; own calculations.
SME Loan Supply as % of GDP	9,19%		
B. Total outstanding loans			Def: The value of all domestic loans by non-financial corporations in all currencies combined at the end of the year. Source: ECB, 2015. Def: Total outstanding loans represents all types of outstanding loans to non-financial corporations (household-related loans are excluded) by commercial banks, credit unions, financial cooperatives, other financial intermediaries and deposit takers. Source: IMF, 2015.
Total outstanding loans (€ mil)	62 360	63 423	
Total outstanding loans as % of GDP	15,74%	16,01%	
C. % of SME outstanding loans to total outstanding loans	58,37%	57,39%	Def: A result of division of (A) by (B).
SME Equity Supply	**EVCA data**		
A. SME equity supply			
SME Equity Supply (€ mil)	16		Def: SME Equity is a sum of Seed, Startup, and Later Stage investments, excluding Buyouts. Source: EVCA, 2015.
SME Equity Supply as % of GDP	0,004%		
B. Total venture capital issued			
Total venture capital issued (€ mil)	547		Def: Total Equity is a total value of capital under management of Venture Funds in Poland. Source: EVCA, 2015.
Total venture capital issued as % of GDP	0,14%		
C. % of SME issued equity to venture funds	2,86%		Def: A result of division of (A) by (B).
Total SME Financing Supply			
Total SME fin. Supply			
Total SME fin. Supply (€ mil)	**36 416**		Def: The total sum of SME loan supply and SME equity supply.
Total SME fin. Supply as % of GDP	**9,19%**		Def: Share of Total SME fin. Supply in GDP.
GDP (in € mil)	396 112		Source: Eurostat, 2015.

Table 3.14. SME financing demand in Poland, 2013

		Method #1	Method #2			Excess Demand #1	Method #3		Excess Demand #2	Definition and sources
SME Loan Demand										
A. % of SME needing a loan										
	Micro	40,86%			40,86%			40,86%		Def: % of SMEs needing a loan - is a share of firms that answered 'Yes' to the SAFE ECB Survey question regarding the neediness for bank of bank loans [equity] in doing business , details in note (1). Source: SAFE ECB (April - Sept, 2014), 2015.
	Small	57,56%			57,56%			57,56%		
	Medium	62,33%			62,33%			62,33%		
		Applied and Obtained a Loan	Applied and Obtained a Loan				Applied and Obtained (with excess demand)	Applied and Got Rejected for a Loan		Def: Average loan demanded (€ mil) is a variable derived from the SAFE ECB Survey (April-Sept, 2014), details in the note (3). In Method #2 in order to derive the excess demand for those firms that applied and did not ge the full loan demanded, we firstly derive the obtained loan weighted average (explained in note (3)) and add additional 12% and 50% of that obtained laon respectively. Table with the full details of mid points and weights is in Appendix Table.... In Method #3 we calculate weights using firms that applied and obtained a loan and firms that applied and got rejected. Average loans for both categories in Method#3 were calculated as explained in note (3). Source: SAFE ECB, 2015.
			100% of a loan	more than 75% (12% excess demand)	up to 75% (50% excess demand)					
Weights within groups for Method#1, Method#2	Micro		80,14%	9,68%	9,68%		63,19%	36,81%		
	Small		89,23%	7,44%	3,33%		71,63%	28,37%		
	Medium		88,28%	6,61%	5,11%		88,42%	11,58%		
					Weighted average loan demanded				Weighted average loan demanded	
B. Average loan demanded (€ mil)										Def: Weighted average loan-in Methods #2 and #3 we use within group shares, shares of firms by different loan size obtained, share of firms which obtained and were rejected for a loan, respectivly. Average loan demanded (€ mil) - variable derived from the SAFE ECB Survey, details in note (3). In Method #2 we derive excess demand, by adding additional 12% and 50% of a the average loan in corresponding groups (Appendix ??, Table??). Similarlly, In Method #3 we calculate weights of firms that applied and obtained a loan, and got rejected (Appendix ??, Table??). Average loans for both categories in Method#3 were calculated as explained in note (3). Source: SAFE ECB, 2015.
	Micro	0,07	0,09	0,04	0,12	0,08	0,08	0,19	0,12	
	Small	0,28	0,30	0,20	0,09	0,28	0,28	0,92	0,46	
	Medium	0,95	1,01	0,76	1,51	1,02	1,02	0,42	0,95	
C. Number of SMEs										
	Micro	1 407 427			1 407 427			1 407 427		Def: Number of SMEs - is variable counting absolute number of firms classified as SMEs in France in 2013. For exact definition of firm's class size check Appendix 2. Source: European Central Bank, 2015.
	Small	52 676			52 676			52 676		
	Medium	14 850			14 850			14 850		
D. SME Loan Demand=A*B*C (€ mil)										
	Micro	39 066			48 452	Difference between Method #1 and Method #2		71 853	Difference between Method #1 and Method #3	Def: SME Loan Demanded is the variable derived as a product of variables A, B, and C in this table.
	Small	8 352			8 603			14 067		
	Medium	8 817			9 464			8 814		
Total SME loan demand (€ mil)		**56 234**			**66 518**	**(10 284)**		**94 733**	**(38 499)**	Def: Total SME loan demanded - variable derived as a sum of loans demanded in D. SME loan demanded as % of GDP is equal to the Total SME loan demand divided by GDP (€ mil).
SME loan demand as % of GDP		**14,20%**			**16,79%**	**2,60%**		**23,92%**	**9,72%**	

Table 3.14. SME financing demand in Poland, 2013

SME Equity Demand						
A. % of SME needing equity						
Micro	6,76%	6,76%				Def: % of SMEs needing equity is a variable derived from the SAFE ECB Survey (April - Sept, 2014), details in note (1). Source: SAFE ECB, 2015.
Small	8,67%	8,67%				
Medium	8,75%	8,75%				
B. Average equity demanded (€ mil)	EVCA data	ECB data				Def: To derive the variable Average equity demanded - we use two sources. First is European Vencture Capital Association data (details in note (4)). As a second method we use the average obtained loans as proxy for demand for equity. We decide to use loans as proxy for equity demanded in order to capture possible variation between demand according to the firm size. Source: EVCA (2015); SAFE ECB (2015).
Micro	0,30	0,07				
Small		0,28				
Medium		0,95				
C. Number of SMEs						
Micro	1 407 427	1 407 427				Def: Number of SMEs - is a variable counting absolute number of firms classified as SMEs in France in 2013. For exact definition of firm's class size check Appendix 2. Source: European Central Bank, 2015.
Small	52 676	52 676				
Medium	14 850	14 850				
D. SME Equity Demand=A*B*C (€ mil)						
Micro		6 465				Def: SME Equity Demanded is the variable derived as a product of variables A, B, and C in this table. In the case of using EVCA data to estimate the equity demand we don't make classification of that demand by firm size. Therefore, we use an average of variable A. (% of SMEs needing equity). In case of France that is 27%. In addition, we take the number of small firms as a proxy for potential firms needing equity.
Small	1 370	1 258				
Medium	390	1 237				
Total SME equity demand (€ mil)	**1 760**	**8 961**				Def: Total SME equity demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
SME equity demand as % of GDP	**0,44%**	**2,26%**				
	Method #1	Method #2	Excess Demand #1	Method #3	Excess Demand #2	Def: Excess Demand #1, #2 are as a difference between estimated fin demand using Method#1 and Method#2, #3.
Total SME Financing Demand	* When Equity demanded is estimated using EVCA data					
Total SME fin. demand (€ mil)	57 995	68 278	(10 284)	96 493	(38 499)	Def: Total SME financing demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
% of SME fin. demand as % of GDP	14,64%	17,24%	2,60%	24,36%	9,72%	
Total SME Financing Demand	* When Equity demanded is estimated using ECB data					
Total SME fin. demand (€ mil)	65 195	75 479	(10 284)	103 694	(38 499)	
% of SME fin. Demand as % of GDP	16,46%	19,05%	2,60%	26,18%	9,72%	Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015.
GDP (€ mil)	396 112	396 112		396 112		

Notes: (1) The variable represents share of firms that answered "yes" to the SAFE ECB Survey question: "Are the [bank loan, or equity] relevant to your firm, that is, have you used it in the past or considered them in the future?" ; (2) In Method #2 we classify firms that applied and obtained a loan by the size of the loan obtained. To do that we use the question from the SAFE ECB Survey: "If you applied and tried to negotate for a bank loan over the past 6 months, did you: receive everything; Received most of it (between 75% and 99%0; Only received a limited part of it (between 1% and 74%); Refused because the cost was too high; Was rejected; or Application still pending". In Method #2 we only use the subcategory of first three answers as the full sample ("100% of a loan"; "more than 75% (12% excess demand)"; "up to 74% (50% excess demand)"). Then, we use those weights to weight the response to question from note (1). In Method#3 we use all 6 answers (as the full sample) and group them into two categories (obtained and rejected) accordinlgy we weight the answers; (3) The variable represents weighted average of the 4 possible answers to the question: "What is the size of the last bank loand that your enterprise obtained or renegotiated in the past 6 months?" Answer to this question is a category variable: (up to € 25K; between € 25K - 100K; between € 100K-250K; more than 250K-1mil; over € 1mil (here upper limit is assumed at € 4 mil)). Next, in order to derive the weighted average of loan demanded we weighted the mid point of these categories with the share of firms that chose that category. The complete tables of weights and category mid points is provided in the Appendix Table... (4) We use European Venture Capital Association (EVCA) to derive average equity demanded. The derived number represents an average of invested venture captial per investment, within a country, in a given year. Venture Capital investments include: Seed, Start-up, Later-stage investments. More details are in Appendix, Table..

Regarding firm-specific control variables, in Table 3.14, we find that the share of Polish SMEs needing a loan increases as the size of the firm increases. In line with expectations, we find that the difference in loan demand is over 20% in favor of medium firms.

The first half of Table 3.14 provides different estimations of SME loan demand. Method #1, average loan demanded (mil EUR), is equal to the average loan obtained and ranges from EUR 0.07 mil for micro to EUR 0.95 mil for medium firms. When multiplied by the share of firms needing a loan (A) and with the number of firms by size (C), we obtained the estimate of the total SME loan demand in Poland: EUR 56,234 mil, or 14.20% of GDP.

In Method #2, we added an additional 12% and 50% to average loan obtained, depending on the size of the obtained versus desired loan. We estimated that, in this case, the average loan demanded was in the range of 0.08 mil EUR for micro firms and 1.02 mil EUR for medium firms. Using the same multiplication of variables A, B, and C, we estimated that the SME loan demand was over 66 bil EUR, or 16.79% of GDP. We also found the difference between loans obtained and those desired (demand estimated using Method #1 and Method #2) was over EUR 10 bil, or 2.60% of GDP. This result implies that the Polish banks are providing SMEs with less financing than demanded.

In Method #3, we expanded the sample of firms by adding firms that applied for but were rejected for a loan, in order to better estimate the average loan demanded. We estimated the average rejected loan demanded by firm size and weighed it by the relative share in the total number of firms that applied. First, we found the highest share of rejected loans to be among the micro firms (close to 37%) and the lowest share among the medium firms (below 12%). Polish rejection rates are similar to French or German rejection rates. Using Method #3 we estimated that the SME loan demand in Poland for 2013 was over 94 bil EUR, or 23.92% of GDP. The difference between the demands estimated using Method #1 and Method #3 was over EUR 38 bil. In sum, the result implies that the Polish banks are undersupplying loans at a rate of 9.72% of GDP. This result is mainly driven by the significant amount of rejected loans among micro and small firms (EUR 0.19 mil and 0.92 mil).

The second half of Table 3.14 reports the steps and variables used in the equity demand estimation in Poland for 2013. The share of firms needing equity (A) was similar across different firm sizes, ranging between 6.76% and 8.75% of firms.

Using the EVCA data, we estimated that the total demand for equity was close to EUR 2 bil, or 0.44% of GDP. To estimate the average equity needed we used the EVCA data and average equity issued at the level of EUR 0.30 mil. As in the previous estimation cases, we multiplied variables A, B and C to estimate the total equity demanded. We decided to exclude the number of micro firms in this step, because the average financing need for this class of firms was unlikely to exceed one mil Euros.

Thus, using the ECB data or average obtained loans as a proxy for equity demanded, we estimated the total demand for equity to be 2.26% of GDP (8.96 bil EUR).

Financing Gap

Table 3.15 shows that the SME financing gap measures the difference between the loan and the equity supply and demand. The first column of the table includes the variable names, the second column shows the loan gap, the third column shows the equity gap, the fourth column combines the two and shows the total estimated gap, while the fifth column provides definitions and sources.

The second column shows three different estimates of the loan gap, depending on the demand estimates used. The loan gap ranges from 5.01% to 14.73% of GDP. The third column shows two estimates of the equity gap, which is in the range of 0.44% to 2.26% of GDP.

As expected, the estimated loan and equity gap in Poland is similar to the gaps seen in the other four countries in this study. As in the case of France, the supply and demand of SME equity in Poland versus that in US is almost tenfold. This result implies that Polish investors find fewer opportunities among SMEs to contribute to increases in productivity and innovation.

The Financing Gap in Romania

In this section, we report the results of estimation of the SME financing gap in Romania. Our findings are reported in Tables 4.16 through 4.18.

Supply

In line with recent developments in Germany and Poland, the Romanian banking system decreased marginally between 2008 to 2013. As in Poland, the largest assets are held by foreign-controlled subsidiaries and branches. Moreover, the assets of these credit institutions grew during this period o EUR 73 bil. At the same time, large domestic credit institutions are non-existent, while assets of small and medium-sized credit institutions are decreasing. For example, assets of medium-sized credit institutions were over EUR 9 bil in 2008, whereas by 2013 they had dropped to EUR 6 bil (Appendix C, Table C5).

Prior research indicates that private equity has played a limited role in funding loans for SMEs. To understand the practice in more detail, it should be noted that private equity funds are marginal in volume relative to the banking sector. In fact, private equity investments generated only 0.02% of GDP in 2012. Moreover, there are a total of 3 private equity funds headquartered in Romania. The findings suggest that private equity remains marginal, with the generalist, buyout and venture capital firms managing about EUR 190 mil (Table 3.11).

To gain further insights on the financing gap, Table 3.16 shows the supply of SME loans and equity in 2013. The first column of the table provides variable names, the second and third columns show two different sources used to assess total supply of financing, and finally the fourth column provides definitions and sources of variables identified in the first column.

Table 3.15. SME financing gap in Poland, 2013

	Loans			Equity		Total			Definition and Sources
SME Loan Supply									
SME Loan Supply (€ mil)		36 400					36 400		Def: Total SME fin. supply - variable derived as a sum of loan and equity supplied. Details are provided in the SME Financing Supply Estimate table . SEM fin. Supply as % of GDP - is equal to the Total SME equity demand divided by GDP (€ mil).
SME Loan Supply as % of GDP		9,19%					9,19%		
SME Equity Supply									
SME Equity Supply (€ mil)				16					
SME Equity Supply as % of GDP				0,00%					
	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Demand						* Equity Demand using EVCA data			
SME Loan Demand (€ mil)	56 234	66 518	94 733			57 995	68 278	96 493	Def: Total SME financing demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
SME Loan Demand as % of GDP	14,20%	16,79%	23,92%			14,64%	17,24%	24,36%	
SME Equity Demand				EVCA data	ECB data	* Equity Demand using ECB data			
SME Equity Demand (€ mil)				1 760	8 961	65 195	75 479	103 694	
SME Equity Demand as % of GDP				0,44%	2,26%	16,46%	19,05%	26,18%	
Loan Gap				**Equity Gap**		**Total Fin Gap**			
	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Gap						* Equity Demand sing EVCA data			
Total SME fin. Gap (€ mil)	19 834	30 118	58 333			21 595	31 878	60 093	Def: SME Financing Gap - is derived variable as a difference between estimated SME fin Supply and SME fin Demand for a given year within a given country. All variables needed to estimate the gap are calculated and explained in detail in Supply and Demand tables on previous pages.
SME fin. Gap as % of GDP	5,01%	7,60%	14,73%			5,45%	8,05%	15,17%	
SME Equity Gap				EVCA data	ECB data	* Equity Demand using ECB data			
Total SME fin. Gap (€ mil)				1 744	8 945	28 795	39 079	67 294	
SME fin. Gap as % of GDP				0,44%	2,26%	7,27%	9,87%	16,99%	
GDP (€ mil)		396 112		396 112			396 112		Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015.

Table 3.16. SME financing supply in Romania, 2013

SME Loan Supply	Source #1 ECB data	Source #2 IMF data	Definition and sources
A. SME loan supply			
SME Loan Supply (€ mil)		19 129	Def: Loans granted by banks to SMEs in national currency (data refer to exposures higher than 20,000 lei) and converted to EUR with average ECB exchange rate for the year 2013. The data was provided by National Bank of Romania. Source: Ministry of Public Finance of Romania, Central Credit Register, 2015.
SME Loan Supply as % of GDP		13,26%	
B. Total outstanding loans			Def: The value of all domestic loans by non-financial corporations in all currencies combined at the end of the year. Source: ECB, 2015.
Total outstanding loans (€ mil)	25 133	29 783	Def: Total outstanding loans represents all types of outstanding loans to non-financial corporations (household-related loans are excluded) by commercial banks, credit unions, financial cooperatives, other financial intermediaries and deposit takers. Source: IMF, 2015.
Total outstanding loans as % of GDP	17,42%	20,64%	
C. % of SME outstanding loans to total outstanding loans	76,11%	64,23%	Def: A result of division of (A) by (B).
SME Equity Supply		**EVCA data**	
A. SME equity supply			
SME Equity Supply (€ mil)		3	Def: SME Equity is a sum of Seed, Startup, and Later Stage investments, excluding Buyouts. Source: EVCA, 2015.
SME Equity Supply as % of GDP		0,002%	
B. Total venture capital issued			
Total venture capital issued (€ mil)		11	Def: Total Equity is a total value of capital under management of Venture Funds in Romania. Source: EVCA, 2015.
Total venture capital issued as % of GDP		0,01%	
C. % of SME issued equity to venture funds		27,09%	Def: A result of division of (A) by (B).
Total SME Financing Supply			
Total SME fin. Supply			
Total SME fin. Supply (€ mil)		19 132	Def: The total sum of SME loan supply and SME equity supply.
Total SME fin. Supply as % of GDP		13,26%	Def: Share of Total SME fin. Supply in GDP.
GDP (in € mil)		144 282	Source: Eurostat, 2015.

Table 3.17. SME financing demand in Romania, 2013

		Method #1	Method #2			Excess Demand #1		Method #3		Excess Demand #2	Definition and sources
SME Loan Demand											
A. % of SME needing a loan											
	Micro	34,80%			34,80%				34,80%		Def: % of SMEs needing a loan - is a share of firms that answered 'Yes' to the SAFE ECB Survey question regarding the neediness for bank of bank loans [equity] in doing business , details in note (1). Source: SAFE ECB (April - Sept, 2014), 2015.
	Small	42,87%			42,87%				42,87%		
	Medium	52,68%			52,68%				52,68%		
			Applied and Obtained a Loan								Def: Average loan demanded (€ mil) is a variable derived from the SAFE ECB Survey (April-Sept, 2014), details in the note (3). In Method #2 in order to derive the excess demand for those firms that applied and did not ge the full loan demanded, we firstly derive the obtained loan weighted average (explained in note (3)) and add additional 12% and 50% of that obtained laon respectively. Table with the full details of mid points and weights is in Appendix Table.... In Method #3 we calculate weights using firms that applied and obtained a loan and firms that applied and got rejected. Average loans for both categories in Method#3 were calculated as explained in note (3). Source: SAFE ECB, 2015.
		Applied and Obtained a Loan	100% of a loan	more than 75% (12% excess demand)	up to 75% (50% excess demand)			Applied and Obtained (with excess demand)	Applied and Got Rejected for a Loan		
Weights within groups for Method#1, Method#2	Micro		68,50%	15,75%	15,75%			56,27%	43,73%		
	Small		55,00%	17,56%	27,44%			81,90%	18,10%		
	Medium		89,51%	3,36%	7,13%			75,46%	24,54%		
						Weighted average loan demanded				Weighted average loan demanded	Def: Weighted average loan-in Methods #2 and #3 we use within group shares, shares of firms by different loan size obtained, share of firms which obtained and were rejected for a loan, respectivly. Average loan demanded (€ mil) - variable derived from the SAFE ECB Survey, details in note (3). In Method #2 we derive excess demand, by adding additional 12% and 50% of a the average loan in corresponding groups (Appendix ??, Table??). Similarlly, In Method #3 we calculate weights of firms that applied and obtained a loan, and got rejected (Appendix ??, Table??). Average loans for both categories in Method#3 were calculated as explained in note (3). Source: SAFE ECB, 2015.
B. Average loan demanded (€ mil)											
	Micro	0,09	0,08	0,20	0,02	0,09		0,09	0,04	0,07	
	Small	0,44	0,39	0,10	1,14	0,54		0,54	0,11	0,47	
	Medium	0,70	0,78	0,07	0,18	0,71		0,71	1,11	0,81	
C. Number of SMEs											
	Micro	373 944			373 944				373 944		Def: Number of SMEs - is variable counting absolute number of firms classified as SMEs in France in 2013. For exact definition of firm's class size check Appendix 2. Source: European Central Bank, 2015.
	Small	44 682			44 682				44 682		
	Medium	7 669			7 669				7 669		
D. SME Loan Demand=A*B*C (€ mil)											
	Micro	11 077			11 630	Difference between Method #1 and Method #2			8 898	Difference between Method #1 and Method #3	Def: SME Loan Demanded is the variable derived as a product of variables A, B, and C in this table.
	Small	8 429			10 421				8 909		
	Medium	2 846			2 878				3 273		
Total SME loan demand (€ mil)		**22 352**			**24 928**	**(2 577)**			**21 080**	**1 272**	Def: Total SME loan demanded - variable derived as a sum of loans demanded in D. SME loan demanded as % of GDP is equal to the Total SME loan demand divided by GDP (€ mil).
SME loan demand as % of GDP		**15,49%**			**17,28%**	**1,79%**			**14,61%**	**0,88%**	

Table 3.17. SME financing demand in Romania, 2013 (continued)

SME Equity Demand						
A. % of SME needing equity						
Micro	12,05%		12,05%			Def: % of SMEs needing equity is a variable derived from the SAFE ECB Survey (April - Sept, 2014), details in note (1). Source: SAFE ECB, 2015.
Small	14,57%		14,57%			
Medium	5,10%		5,10%			
B. Average equity demanded (€ mil)	EVCA data	ECB data				Def: To derive the variable Average equity demanded - we use two sources. First is European Vencture Capital Association data (details in note (4)). As a second method we use the average obtained loans as proxy for demand for equity. We decide to use loans as proxy for equity demanded in order to capture possible variation between demand according to the firm size. Source: EVCA (2015); SAFE ECB (2015).
Micro	2,73		0,09			
Small			0,44			
Medium			0,70			
C. Number of SMEs						
Micro	373 944		373 944			Def: Number of SMEs - is a variable counting absolute number of firms classified as SMEs in France in 2013. For exact definition of firm's class size check Appendix 2. Source: European Central Bank, 2015.
Small	44 682		44 682			
Medium	7 669		7 669			
D. SME Equity Demand=A*B*C (€ mil)						
Micro			3 834			Def: SME Equity Demanded is the variable derived as a product of variables A, B, and C in this table. In the case of using EVCA data to estimate the equity demand we don't make classification of that demand by firm size. Therefore, we use an average of variable A. (% of SMEs needing equity). In case of France that is 27%. In addition, we take the number of small firms as a proxy for potential firms needing equity.
Small	17 770		2 864			
Medium	1 068		276			
Total SME equity demand (€ mil)	**18 839**		**6 974**			Def: Total SME equity demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
SME equity demand as % of GDP	**13,06%**		**4,83%**			
	Method #1		Method #2	Excess Demand #1	Method #3	Excess Demand #2	Def: Excess Demand #1, #2 are as a difference between estimated fin demand using Method#1 and Method#2, #3.
Total SME Financing Demand	* When Equity demanded is estimated using EVCA data						
Total SME fin. demand (€ mil)	41 190		43 767	(2 577)	39 918	-	Def: Total SME financing demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil).
% of SME fin. demand as % of GDP	28,55%		30,33%	1,79%	27,67%		
Total SME Financing Demand	* When Equity demanded is estimated using ECB data						
Total SME fin. demand (€ mil)	29 326		31 902	(2 577)	28 054	-	
% of SME fin. Demand as % of GDP	20,33%		22,11%	1,79%	19,44%		Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015.
GDP (€ mil)	144 282		144 282		144 282		

Notes: (1) The variable represents share of firms that answered "yes" to the SAFE ECB Survey question: "Are the [bank loan, or equity] relevant to your firm, that is, have you used it in the past or considered them in the future?" ; (2) In Method #2 we classify firms that applied and obtained a loan by the size of the loan obtained. To do that we use the question from the SAFE ECB Survey: "If you applied and tried to negotate for a bank loan over the past 6 months, did you: receive everything; Received most of it (between 75% and 99%0; Only received a limited part of it (between 1% and 74%); Refused because the cost was too high; Was rejected; or Application still pending". In Method #2 we only use the subcategory of first three answers as the full sample ("100% of a loan"; "more than 75% (12% excess demand)"; "up to 74% (50% excess demand)"). Then, we use those weights to weight the response to question from note (1). In Method#3 we use all 6 answers (as the full sample) and group them into two categories (obtained and rejected) accordinlgy we weight the answers; (3) The variable represents weighted average of the 4 possible answers to the question: "What is the size of the last bank loand that your enterprise obtained or renegotiated in the past 6 months?" Answer to this question is a category variable: (up to € 25K; between € 25K - 100K; between € 100K-250K; more than 250K-1mil; over € 1mil (here upper limit is assumed at € 4 mil)). Next, in order to derive the weighted average of loan demanded we weighted the mid point of these categories with the share of firms that chose that category. The complete tables of weights and category mid points is provided in the Appendix Table... (4) We use European Venture Capital Association (EVCA) to derive average equity demanded. The derived number represents an average of invested venture captial per investment, within a country, in a given year. Venture Capital investments include: Seed, Start-up, Later-stage investments. More details are in Appendix, Table..

Table 3.18. SME financing gap in Romania, 2013

	Loans	Equity	Total	Definition and Sources
SME Loan Supply				
SME Loan Supply (€ mil)	19 129		19 132	Def: Total SME fin. supply - variable derived as a sum of loan and equity supplied. Details are provided in the SME Financing Supply Estimate table . SEM fin. Supply as % of GDP - is equal to the Total SME equity demand divided by GDP (€ mil).
SME Loan Supply as % of GDP	13,26%		13,26%	
SME Equity Supply				
SME Equity Supply (€ mil)		3		
SME Equity Supply as % of GDP		0,00%		

	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Demand						* Equity Demand using EVCA data			
SME Loan Demand (€ mil)	22 352	24 928	21 080			41 190	43 767	39 918	Def: Total SME financing demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil). We used average issued equity capital to SMEs in order to the Equity Demand in Romania (for details check the Demand estimation section). However, in Romania we have very few data points to claim that 2.73 € mil is an average. Therefore, we recommend to take this estimated demand as the utmost upper bound of equity demand in Romania.
SME Loan Demand as % of GDP	15,49%	17,28%	14,61%			28,55%	30,33%	27,67%	
SME Equity Demand				EVCA data	ECB data	* Equity Demand using ECB data			
SME Equity Demand (€ mil)				18 839	6 974	29 326	31 902	28 054	
SME Equity Demand as % of GDP				13,06%	4,83%	20,33%	22,11%	19,44%	

	Loan Gap			Equity Gap		Total Fin Gap			
	Method#1	Method#2	Method#3			Method #1	Method#2	Method#3	
SME Loan Gap						* Equity Demand sing EVCA data			Def: SME Financing Gap - is derived variable as a difference between estimated SME fin Supply and SME fin Demand for a given year within a given country. All variables needed to estimate the gap are calculated and explained in detail in Supply and Demand tables on previous pages.
Total SME fin. Gap (€ mil)	3 222	5 799	1 950			22 058	24 635	20 786	
SME fin. Gap as % of GDP	2,23%	4,02%	1,35%			15,29%	17,07%	14,41%	
SME Equity Gap				EVCA data	ECB data	* Equity Demand using ECB data			
Total SME fin. Gap (€ mil)				18 836	6 971	10 193	12 770	8 922	
SME fin. Gap as % of GDP				13,05%	4,83%	7,06%	8,85%	6,18%	Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015.
GDP (€ mil)		144 282		144 282			144 282		

With respect to the available supply, we estimated that the total SME loan and equity supply was EUR 19,132 mil, or 13.26% of GDP, which is the highest relative share of financing supply among the five countries in this study. The largest share of the supply comes from SME loans, while the equity supply in Romania is marginal at the level of 0.002% of GDP (EUR 3 mil).

As with other estimates, we used two data sources to reference the total outstanding loans: the European Central Bank (ECB) and the International Monetary Fund (IMF). We found no significant difference between the numbers provided by the two sources. In 2013, the share of outstanding SME loans to total outstanding loans was between 65% and 76%, this being the highest relative share among the five countries in this study (Table 3.16).

Demand

So far, we have estimated the loan and equity supply. The focus here is to estimate SME financing demand, which is defined as the sum of all SME demand is in the economy. According to the 2013 European Commission data, there were over 426,000 registered SMEs in Romania, or 21 SMEs per 1,000 people.

Table 3.17 shows three different estimates of SME financing demand. The first column includes variable names; the second column uses Method #1 to assess the SME demand; the third column shows the results of the Method #2 demand estimation; the fourth and sixth columns show the difference between demand estimates by Method #1 and #2 and Method #1 and #3, respectively; the fifth column shows the results of the demand estimation using Method #3; and the seventh column presents definitions and sources of the variables.

The bottom part of Table 3.17 shows the results for the total SME demand estimates calculated using the three different methods for loan demand and the two sources for equity demand. Overall, using these different methods and sources, we find that the total SME financing demand in Romania for 2013 was between 20.33% and 30.33% of GDP.

In order to estimate the loan demand, we multiply the percentage of SMEs needing a loan by the average loan requested (mil EUR) and the number of SMEs.78 The first two variables were acquired from the ECB SAFE Survey (2013). Details of the exact survey questions are provided within the demand table (Table 3.17). The third variable, the number of SMEs, presents the total number of SMEs in Romania for 2013 (European Commission data).

In the first part of the table, variable A shows that the share of Romanian SMEs needing a loan increases as the size of the firm increases. The difference in loan demand is below 20%, favoring medium-sized firms.

With Method #1, the average loan requested (mil EUR) is equal to the average loan obtained and ranges from EUR 0.09 mil for micro to EUR 0.70 mil for medium firms. The estimate of the total SME loan demand of EUR 22,352 mil, or 15.49% of GDP is derived by multiplying the share of firms needing a loan (A) and by the number of firms by size (C).

Method #2 introduced an additional 12% and 50% to the average loan obtained, depending on the size of the obtained versus the desired loan. We estimate that, in this case, the average loan requested was in the range of EUR 0.09 mil for micro firms and EUR 0.71 mil for medium firms. Using the same multiplication of variables A, B, and C, we estimate that the SME loan demand was over EUR 24 bil, or 17.28% of GDP. We also find the difference between obtained versus desired loans (demand estimated using Method #1 and Method #2) to be over EUR 2.5 bil, or 1.79% of GDP. This result implies that the Romanian banks were providing SMEs with less financing than is requested.

To estimate the average loan requested, we expand the sample of firms in Method #3 by including those that applied for but were rejected for a loan. We estimate the average rejected loan requested by firm size and weight it by the relative share of all firms that applied. First, we find that the highest share of rejected loans was among the micro firms (more than 43%), and the lowest share was among the small firms (under 19%). Surprisingly, Table 3.17 shows that medium-sized firms had a higher rejection rate than small firms had. Using Method #3, we estimate that the SME loan demand in Romania for 2013 was over EUR 21 bil, or 14.61% of GDP. The difference between the demands estimated using Method #1 and Method #3 is EUR 1,272 mil. This result implies that the Romanian banks were undersupplying loans at a rate of 0.88% of GDP. As in Germany, the average loan rejected is smaller than the average loan obtained or desired. Therefore, the demand for loans estimated using Methods #1 and #2 is larger than the demand estimated using Method #3.

The second half of Table 3.17 shows the steps and variables used in the equity demand estimation for Romania for 2013. The share of firms needing equity (A) is much larger for micro (12.05%) and small firms (14.57%) than it is for medium ones (5.10%).

Using the EVCA data, we estimate that the total demand for equity was close to EUR 18 bil, or 13.06% of GDP. However, this result is based on a high average equity demanded, estimated using EVCA data: the average equity issued in 2013 was EUR 2.93 mil. This, however, is not an average but, rather, the amount of the only issued equity in 2013 recorded by EVCA. We lower this estimation to EUR 2.73 mil by taking the average of all equity issued in Romania between 2008 to 2013. However, this approach does not solve the problem of the artificially inflated demand for equity since there are just a few cases of equity issued in Romania during this period.

We find, using the ECB data or average obtained loans as a proxy for equity, the total demand for equity at 4.83% of GDP (EUR 6,974 mil).

Financing Gap

Table 3.18 shows the SME financing gap in Romania for 2013 as a difference between the loan and the equity supply and demand. The first column of the table shows the variable names; the second column shows the loan gap;

the third column shows the equity gap; the fourth column combines the two and shows the total estimated gap; and the fifth column provides definitions and sources.

The second column shows three different estimates of the loan gap, depending on the demand estimates used. The loan gap ranges from 1.35% to 4.02% of GDP. The third column shows two estimates of the equity gap, which is approximately 4.83% of GDP.

The estimated loan and equity gaps in Romania are similar to the gaps seen in the other four countries in this study. As in France, the difference between supply and demand for SME equity is almost tenfold that of the US. This result implies that Romanian investors find fewer opportunities among SMEs.

Confidence in Financiers and SMEs' Financing Preferences across the Research Countries

In this section, we extend our analysis of calculating the financial gap in each country by examining firms' attitudes towards different financiers and their approach vis-à-vis financial venues to cover their needs. These data give us a glimpse about what firms think about available financing and, ultimately, the significant financial gap they face.

Figures 3.7 and 3.8 show the distribution of firms by confidence level when talking to banks or venture capital funds. Figure 3.7 indicates that confidence increases with firm size, and this result is robust across all countries. We also observe that in Germany, France and the Netherlands, more than half of firms, regardless of size, feel confident talking with banks. Looking at Poland and Romania, this is not the case, especially for micro and small firms. This could be interpreted as a result of higher bank sector competition in France, Germany and the Netherlands relative to that in Poland and Romania.

Figure 3.7 shows that Poland has the largest difference between micro and medium firms by confidence, with the share of confident firms at 43% and 69%, respectively. This implies that Polish banks have a strong preference for medium-sized firms due to the lower risks associated with better signaling from the firms themselves regarding potential business risks. Furthermore, Fig 3.7 shows that Romania stands out as the only country in which the share of micro firms that have no confidence is higher than the share that have confidence.

Figure 3.8 shows the distribution of firms by confidence level when the firms talk to venture capital firms (VCs). For all the five countries, the majority of firms do not talk at all with VCs. This analysis confirms previous results that VCs may need to become more accessible to SMEs, especially in light of evidence that SMEs' demand for equity is much greater than their confidence level.

Focusing on the micro and small firms that talk with VCs, the majority have no confidence or believe that they will not obtain the desired results when talking to investors. Similarly, this holds for medium-sized companies—except in the Netherlands and Romania, where the share of medium firms that have confidence is larger than the share of those that do not.

According to the European Commission, there is a significant increase in SMEs that expect to grow (increasing from 47% in 2009 to 61% in 2014). A consequence of high growth expectations is the expectation for financing, which serves to facilitate that growth. Figure 3.9 shows the distribution of firms by their growth expectations. Micro SMEs in Poland and Romania are the most optimistic firms, with a growth expectation of more than 20%. Growth expectation below 20% seems to be most common among SMEs, except for those in France. In France, most of the micro and small firms expect to remain stagnate after the weak recovery after the financial crisis. At the same time, France has the highest share of firms that expect to downsize in the near future.

Once we identify the firms that expect to grow after 2013 and beyond, we analyze the preferred means of external growth financing and the expected size of that financing. We also analyze the major obstacles to firms that choose loans and equity as their preferred means of growth financing. Figure 3.10 shows that, for the most firms in our study, the preferred means of external growth financing is bank loans. This is particularly the case for firms in France and Germany, where almost three quarters of firms of all sizes prefer bank loans. In the Netherlands, Poland and Romania, the preference for bank loans is not as prevalent. In addition, Figure 3.10 shows that, in those cases, the alternatives to bank loans are 'other loan' or 'other' forms of financing, not equity. This result suggests that bank loans and equity are not perceived as supplements in the SME demand equation. Figure 3.10 also shows that the share of firms that prefer equity as a way of financing is similarly distributed across different countries and firm size, ranging from 3% to 10% of firms. This result contrasts with the demand findings analyzed earlier; there, the survey showed that the share of firms needing equity is much larger than the share of firms needing equity specifically to finance growth. These observations need further analysis, but at this point, we can hypothesize that the understanding how equity can serve SMEs needs more institutional support for providing information. Figure 3.10 shows the distribution of external financing size across firms and countries. The figure shows that, in line with our expectations, larger firms demand more financing.

Figure 3.12 shows that only the majority of German firms think that there are no obstacles to acquiring bank loans to finance growth. In France and the Netherlands, the majority of firms – but not as many firms as in Germany – also perceive a lack of obstacles. Polish and Romanian firms, on the other hand, find many obstacles to financing growth with a bank loan.

Figure 3.12 documents that the most frequent obstacle to German and French SMEs is insufficient collateral, while for Polish and Romanian SMEs, it is paperwork. The second most frequent obstacle indicated by Polish and Romanian SMEs is a high interest rate, which is a signal of local bank protection in the presence of higher market risks.

Figure 3.7. Distribution of firms by confidence when talking with banks about financing

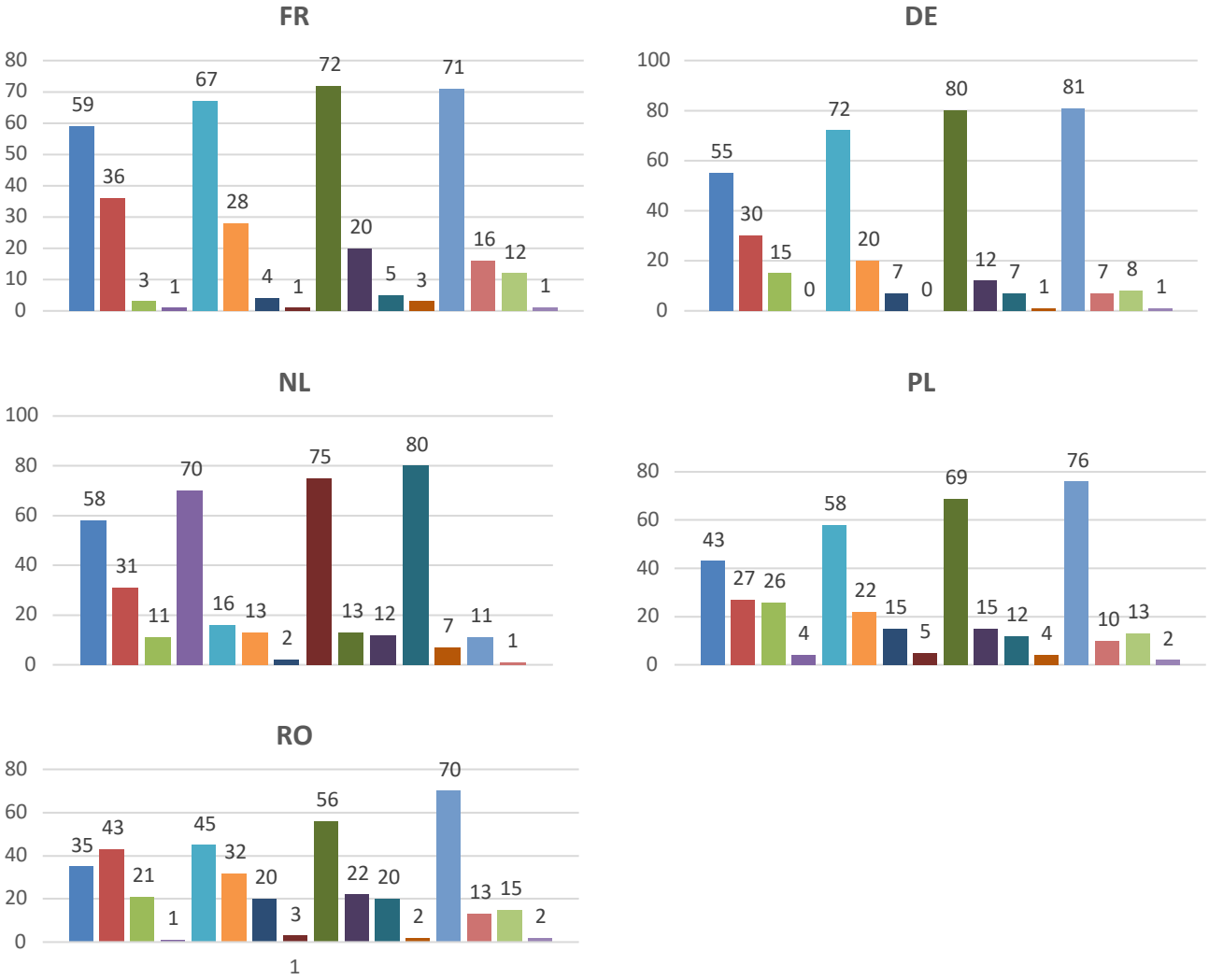


Figure 3.8. Distribution of firms by confidence when talking with VCs about financing

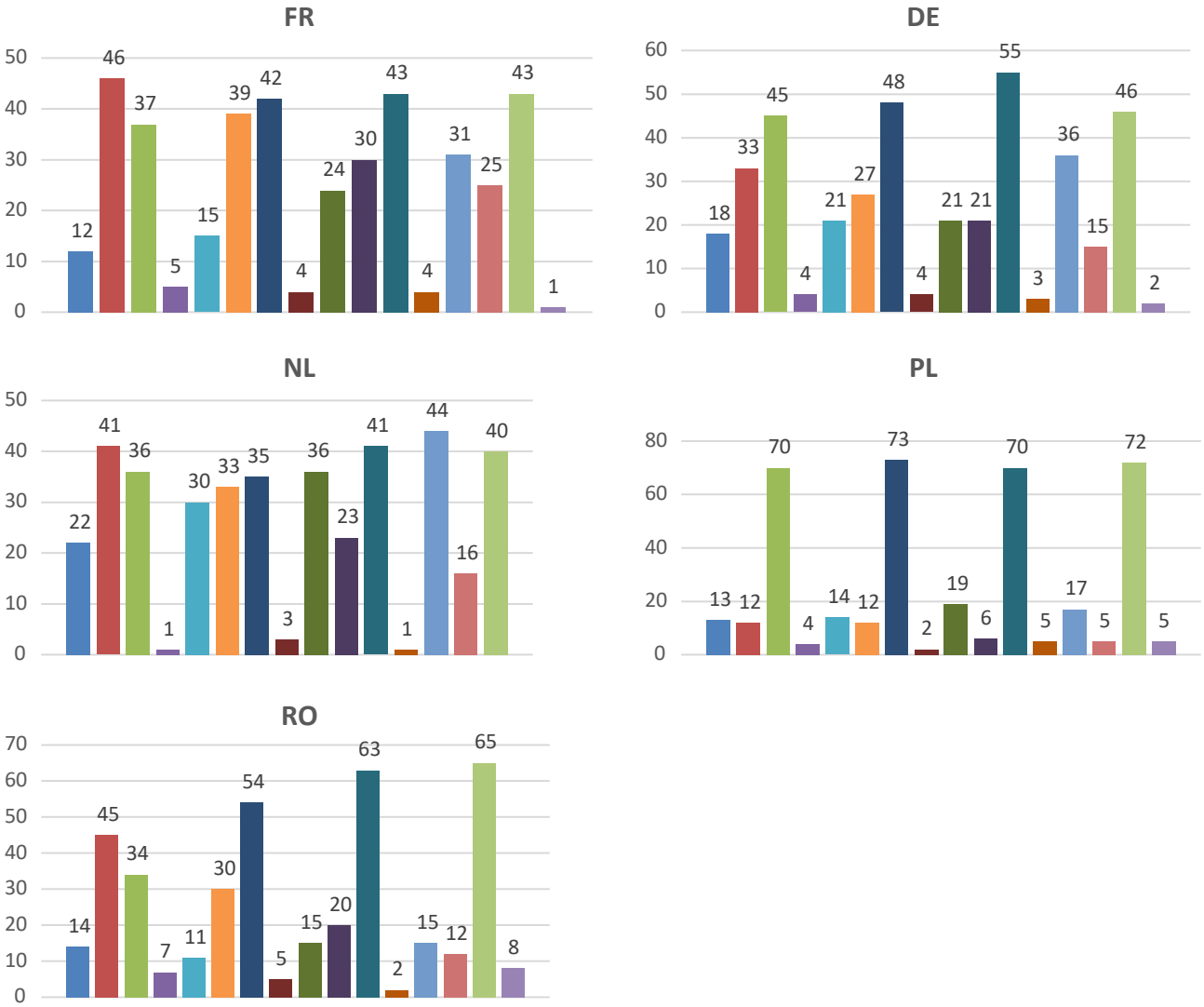


Figure 3.9. Distribution of firms by expectation of growth in the next 2-3 years

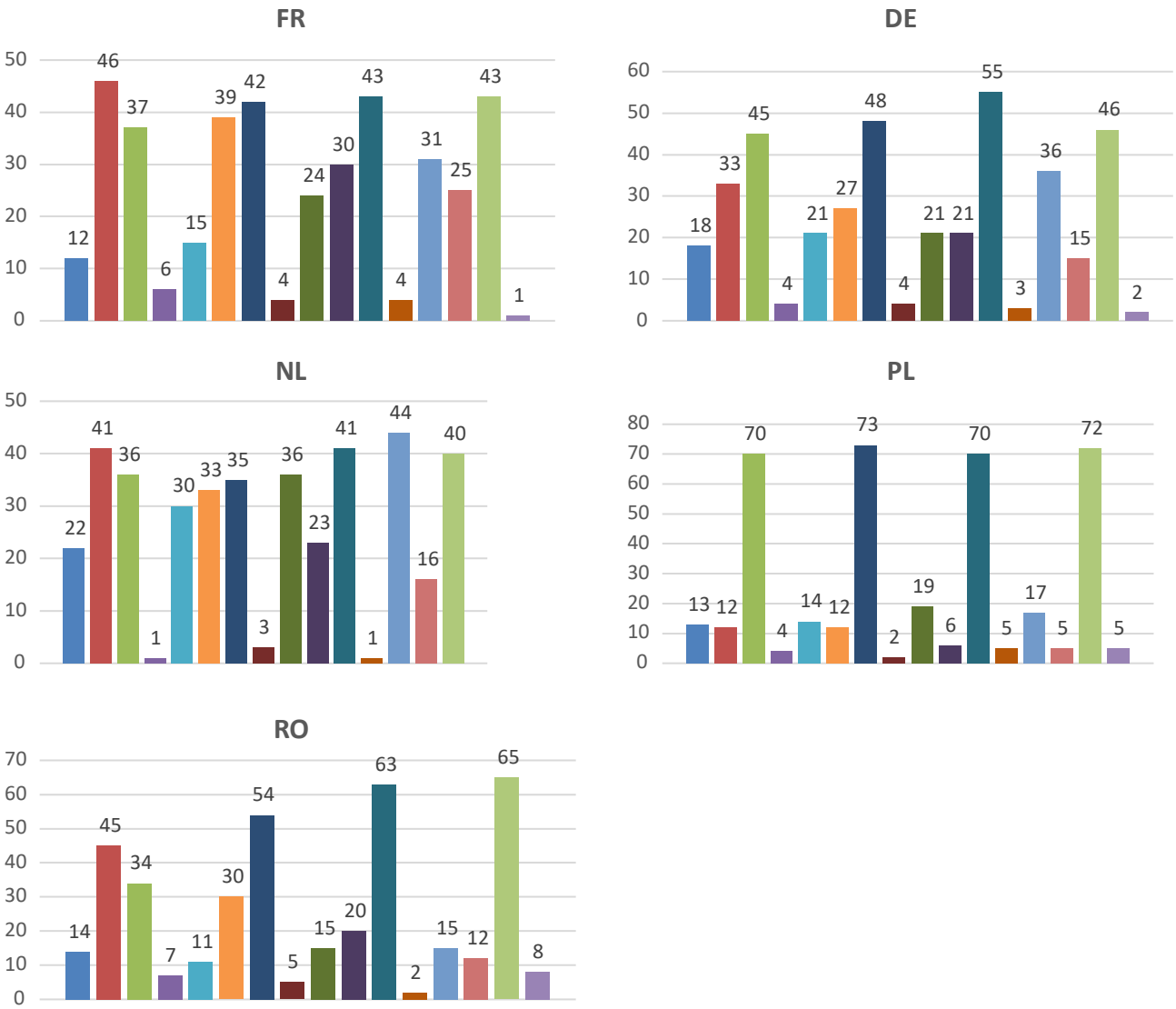


Figure 3.10. Distribution of firms by the preferred external growth financing

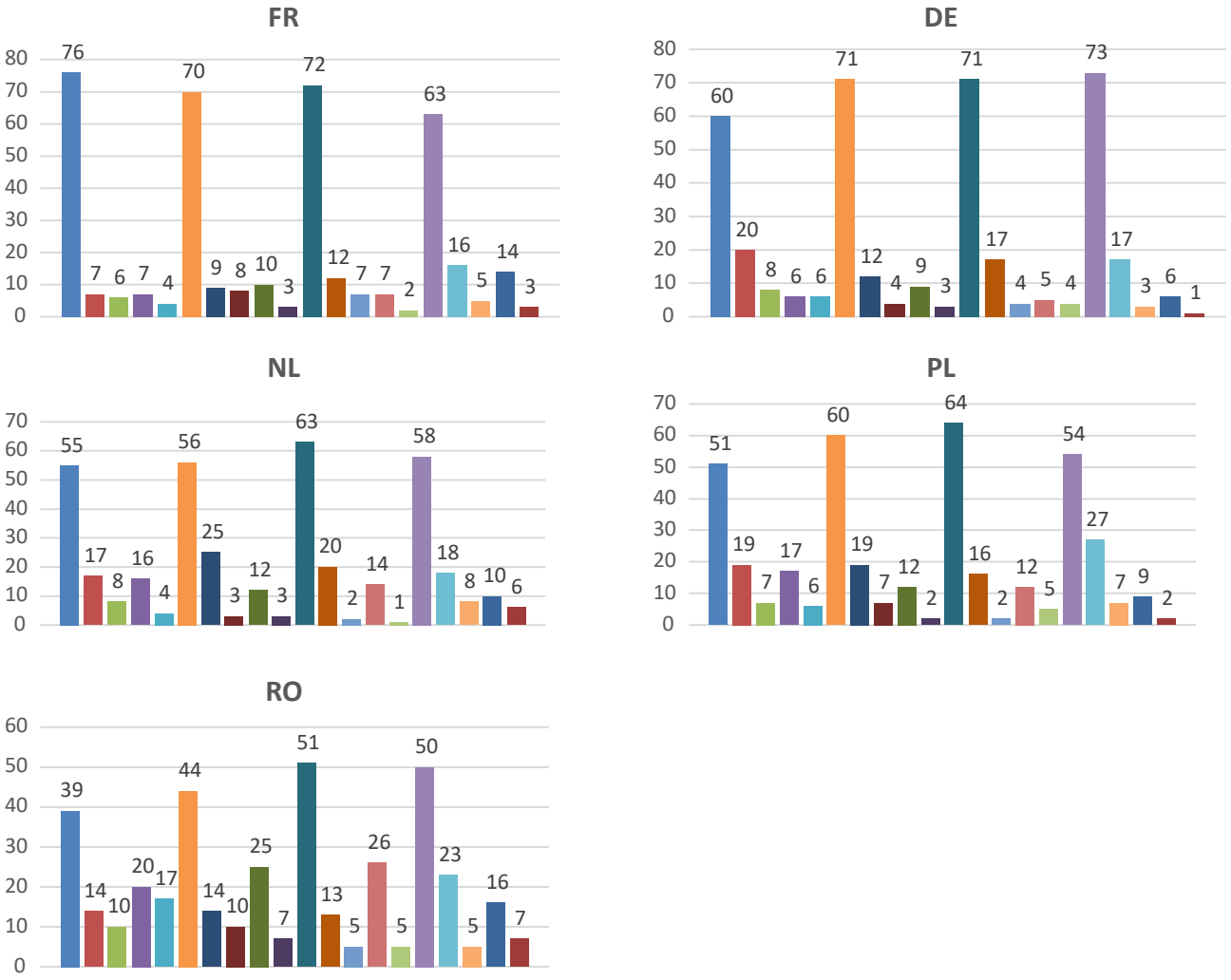


Figure 3.11. Distribution of firms by the amount of external financing needed to finance growth **Figure 3.12.** Distribution of firms by opinion on limiting factors when demanding loans as external type of growth financing

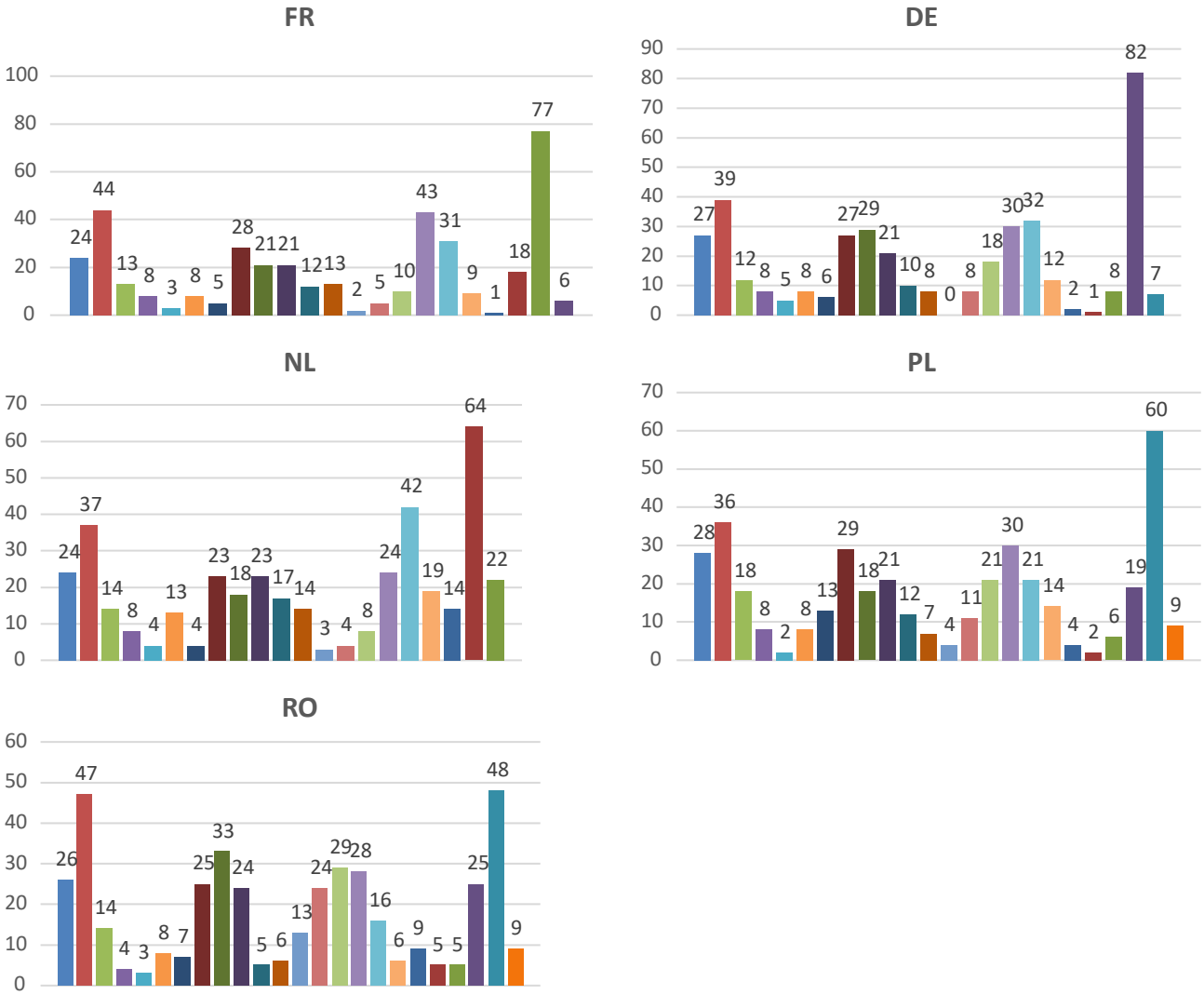
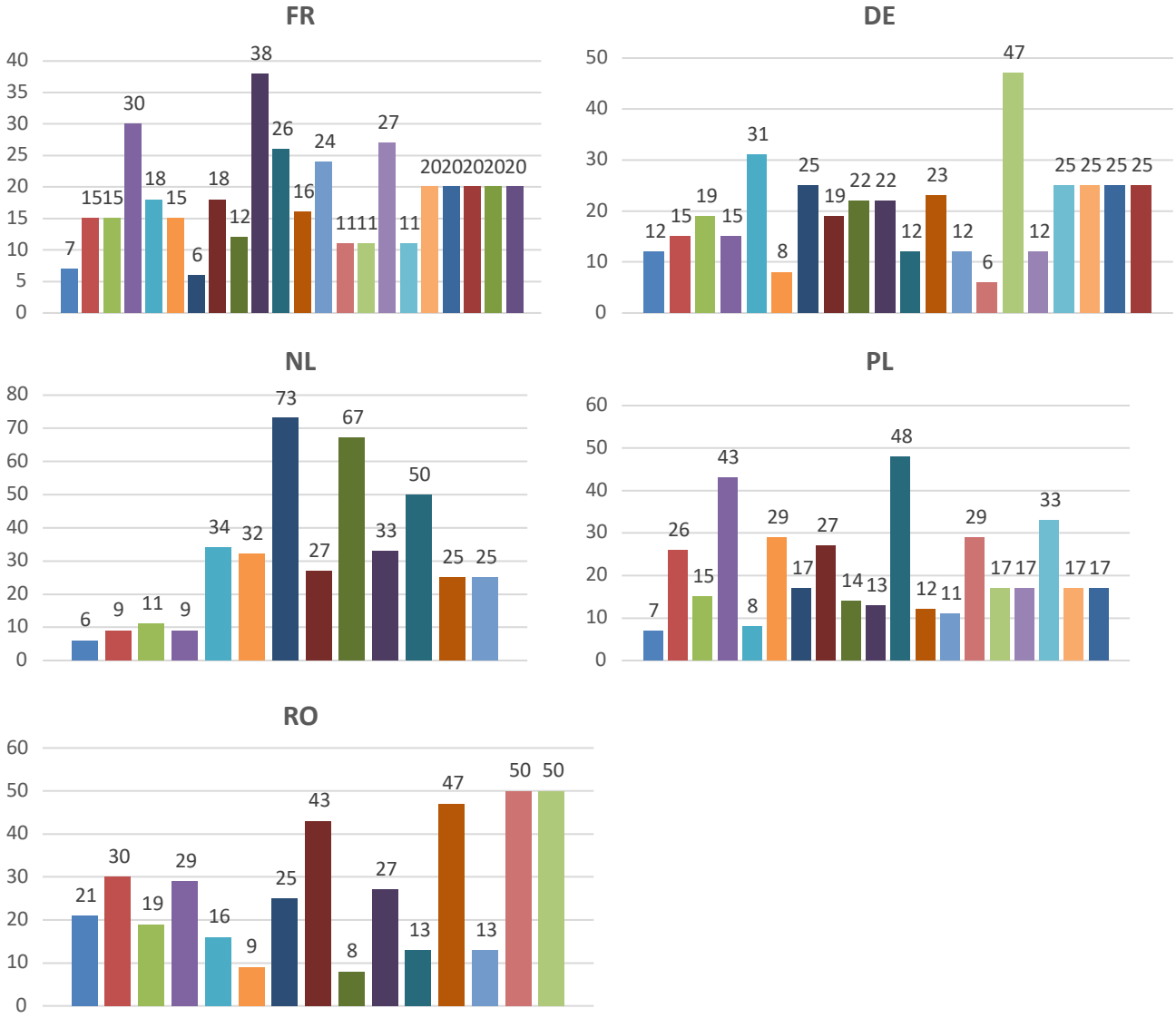


Figure 3.13. Distribution of firms by opinion on limiting factors when demanding equity as external type of growth financing



Finally, Figure 3.13 shows the distribution of firms by limiting factor when demanding equity. One result that applies to all countries and all firm sizes is the opinion that there is actually no equity financing available for SMEs.

Conclusions

In this paper, we investigate the financing of SMEs in Europe. We use publicly available data on outstanding loans and issued equity, as well as data collected through surveys, to estimate the gap between demand and supply of financing in five European countries. We also estimate the SME loan and equity gap in the US and compare these estimates with those we obtain for our European Research Countries. In line with our predictions, the results indicate financing gaps in the Research Countries that are three to five times larger than those in the US. These numbers are substantial considering that our total estimated SME financing gap for the U.S. ranges from 2.30%% to 3.78% of GDP.

Very few academic studies estimate the demand and supply of financing among European countries and the US. Based on different data sources, our study provides a comprehensive overview of the currently available data on SME financing supply. An important feature of our study is that we apply three different methods to estimate the demand for loans. Prior research estimates the average loan demand by observing only the sample size of loans that are obtained (EIB, 2013). Specifically, we include different sizes of obtained versus desired loans. Finally, we estimate the loan demand of firms that applied for but were rejected for a loan.

By providing an estimate of the sizable credit gap faced by SMEs, our paper complements the existing literature that seeks to identify the impact of measures designed to induce banks to extend more credit to SMEs. Additionally, our estimation of the large equity faced by SMEs suggests that we also need to explore how to induce market participants to provide equity capital to SMEs. This is particular-

ly important in the context of our results showing a very low level of incentives for SMEs in our Research countries to obtain equity financing. There is a potentially devastating effect of a decrease in equity capital for young and innovative firms that play an important role in innovation and development. In order for SMEs to enhance their own growth, they need equity capital financing.

Capital markets in some parts of Europe, including most of the Research Countries in this study, continue to lag behind other developed countries, such as the United States. There is a concern that capital markets in these countries are not yet a real source of financing and have failed to sustain business growth. The reasons for this lack of development of financial markets are outside the scope of this paper. Several hypotheses could explain this situation. First, there is an important relationship between macroeconomic and political stability and the development of a country's financial markets. For Romania and Poland, the past experience of economic and political instability may help explain the extent of underperformance, given the level of macroeconomic fundamentals. While economic openness is a relevant and pervasive obstacle to capital market development, effective public policy must go beyond simply identifying ad hoc macroeconomic factors to capital market development. Second, the development of capital markets has been shown to depend on the level of investor protection and the efficiency of legal enforcement (La Porta et al., 1997, 1998, 2008 and 2014). Low levels of creditor and shareholder protection are supplemented by legal enforcement problems in some of the Research Countries. There is a clear need to improve courts and other conflict resolution mechanisms and legal procedures to improve the financial environment for banks and other financial intermediaries. Appendix 5 discusses the legal and institutional factors affecting the proper functioning of well-developed debt and equity markets. Third, there is a concern that even countries with strong capital markets face serious challenges to reducing the financial gap, as robust financial systems often develop a higher dependence on external financing.

Our study reinforces the evidence found by policy makers and researchers on the need to establish a Capital Markets Union in Europe (EC, 2015). However, given the worldwide evidence on the impact of investor protection on the development on capital markets (La Porta et al. 1997,1998, 2008 and 2014), this Union should be based on a race to the top, and not to the bottom, of protection levels, particularly after the departure of the U.K. from the European Union. Overall, our findings contribute to the debate on improving access to finance for SMEs by providing knowledge about alternative forms of funding and enhancing access to long-term financing, such as venture capital and equity markets.

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Appendix 1

Table 2.1. GDP Composition by Sector (2014)

	France	Germany	Netherlands	Poland	Romania
Agriculture	1,7%	0,9%	2,8%	3,7%	12,4%
Industry	19,4%	30,8%	22,3%	32,0%	35,6%
Services	78,9%	68,4%	74,8%	64,3%	52,0%

Source: Central Intelligence Agency

2. Financial Overview

2.1 Overview

This section provides background information. First, we provide macro-economic information on the Research Countries (Section 2.2), such as GDP growth rates, expectation of growth, the largest economic sectors, etc. This section is followed by SME-specific information within the Research Countries, such as characteristics, contribution, financing structure and access to financing. Further, we look more specifically at the innovation trends in the Research Countries and those of SMEs. This chapter then provides a conclusion.

2.2 Macroeconomic Environment

According to the Dutch Central Bank's report *SME Financing in the Euro Area* (2014), SMEs in the EU market represent more than 99.9% of all European firms. In addition, they generate over 58% of gross added value. SMEs also play a crucial role in employment. In 2014, the EU SME sector accounted for 67% of all corporate sector employment.[1]

From 2010 to 2013, France's GDP growth declined from 2% to 0.29%. In terms of purchasing power parity, GDP per capita was then – and is currently – one of the lowest among Western European countries. France's unemployment rate increased between 2008 and 2013, reaching 10.4%. This level of unemployment was marginally lower than the average EU unemployment in 2013.[2] (Appendix 3, Table A1).

Table 2.1 shows that France's largest economic sector is services, accounting for 78.9% of GDP. France's current account balance is negative (as are Romania's and Poland's): in 2013, this figure was -1.43% of GDP. In that year, trade in France generated over 58% of GDP. However, this share had been marginally declining since 2011 (Appendix 3, Table A1).

Similar to France, Germany's GDP growth rate consistently declined, from 4.09% in 2010 to 0.11% in 2013. In terms of purchasing power parity, Germany's GDP per capita is among the highest in the EU area.[3] Higher GDP per capita implies that households have more disposable income, which then drives demand for SMEs' products and services. Germany's unemployment rate dropped from 7.7% in 2010 to slightly over 5% in 2013. Among the five countries in our sample, only Germany's unemployment rate has declined in the last few years (Appendix 3, Table A2).

As in France, Germany's largest economic sector is services, which makes up to 68.4% of GDP (Table 2.1). The country's current account balance is among the highest in the EU. In 2010, Germany had over 70% of GDP created by trade, while in 2013, the share was over 85% (Appendix 3, Table A2).

Unlike Germany's or France's, the Dutch economy contracted in 2012 and 2013, having had a negative GDP growth rate. In 2011, the GDP growth rate was 1.66%, while in 2013, it was -0.73%. This trend has recovered since the first quarter of 2014.[4] Among the five countries in our study, the Netherlands has the highest GDP per capita and is in the top 5% within the EU. However, its unemployment rate almost doubled from 2009 to 2013, reaching 6.7% (Appendix 3, Table A2).

The largest sector in Netherlands is services. This sector made up 74.8% of GDP in 2013. Starting in 2008, the account balance doubled in five years, reaching over 10.2% of GDP in 2013. Trade in the Netherlands generated over 155% of GDP in 2013. Over the past few years, there has been a steady increase of trade in GDP. This implies that the sum of exports and imports are greater than the value of GDP (Appendix 3, Table A3).

Poland has a positive GDP growth rate, but the growth speed declined over time. In 2011, Poland's growth rate over the previous five years was the highest (4.8%), while in 2013, its growth was 1.67%. Among the five EU countries in our study, Poland has a lower than average GDP per capita (EUR 24,000 in 2013).[5]

[1] Deutsche Bank Report: *SME Financing in the Euro Area* (2014). Last viewed: May 9th 2019.

[2] European Commission Unemployment Statistics for 2013 [link] Last viewed: May 9 , 2019.

[3] Appendix 3, Table A2.

[4] *Netherlands Statistics*, last viewed May 9, 2019 [link].

[5] European Commission GDP per capita, consumption per capita and price level indices for 2013 [link]. Last viewed: May 9, 2019.

Table 2.2. Definitions of SMEs by the European Commission

Enterprise category	Number of employees		Annual turnover		Annual balance sheet total
Micro	< 10		≤ €2million		≤ €2million
Small	< 50	and	≤ €10 million	or	≤ €10 million
Medium-sized	< 250		≤ €50 million		≤ €43 million

Source: EC

Table 2.3. Total number of micro-, small- and medium-sized enterprises

	2008	2009	2010	2011	2012	2013	2014
France	2 329 961	2 188 690	2 509 347	2 562 952	2 614 121	2 598 023	2 569 972
Germany	1 866 817	2 018 855	2 053 601	2 137 578	2 184 908	2 201 144	2 254 315
Netherlands	576 286	616 241	776 315	802 377	813 316	802 087	797 978
Poland	1 531 059	1 421 561	1 457 207	1 499 812	1 494 494	1 474 953	1 464 234
Romania	504 581	489 646	442 241	404 338	410 210	426 295	433 858

Source: SBA Fact Sheet

Similar to the other countries in the study (with the exception of Germany), Poland's unemployment rate constantly increased, having reached more than 10% in 2013 (Appendix 3, Table A4).

Table 2.1 shows that Poland's largest economic sector is services, accounting for 64.3% of the country's GDP. Poland's current account is negative but rose from -5.04% in 2010 to -1.35% in 2013. At the same time, trade generates over 90% of GDP. The role of trade in the Polish economy is increasing, and its respective share grew by 12% from 2009 to 2013 (Annex Table A.4).

In 2013, Romania's GDP growth rate was 3.5%, making it the leader in growth among the five countries in this report. The growth rate trend is volatile, however; in 2012, growth was small, at 0.35%, but jumped in 2013 to an impressive 3.5%. Among the five countries in our study, Romania has the lowest GDP per capita (EUR 7.15). The GDP per capita is also lower than the EU average. Romania's unemployment rate has recently been relatively stable, remaining at around 7% (Annex Table A.5).

As in all other Research Countries, Romania's largest economic sector is services, with a contribution of 52% of GDP. Romania's account balance improved from -4% in 2008 to -1% of GDP in 2013. Over the past three years, the role of trade in the Romanian economy has been relatively stable, at around 85% of GDP (Annex Table A.5).

2.3 Small-Medium Enterprises

2.3.1. Characteristics

According to the European Commission's definition, an enterprise is defined as *micro* if it employees fewer than ten people and either its annual turnover or its annual balance sheet is less than EUR 2 mil. *Small* enterprises are defined as companies with ten to 49 employees and having an annual turnover and balance sheet between EUR 2 and 10 mil. *Medium-sized* enterprises have fewer than 250 employees; their annual turnover is less than EUR 50 mil; and their balance sheets are less than EUR 43 mil.

According to European Commission data, in 2014, there were 2,569,972 SMEs in France, 2,254,315 in Germany, 797,978 in the Netherlands, 1,464,234 in Poland and 433,858 in Romania. Between 2008 and 2014, France had a 12.2% increase in the number of SMEs up to the year 2012, and a small decrease afterward. In Germany, there was stable growth in the number of SMEs over the same seven years, with an average annual growth rate of 3.19%. The Netherlands had the same growth pattern as France, with a spike in 2012 and a subsequent decrease. Poland had a huge negative shock in 2008–2009, with a 7.15% decrease in the number of SMEs. Thereafter, it had a positive growth from 2009–2011 and for the following years until 2014, when it again started to suffer from a slow decrease.

The construction, trade and technical sectors represent the largest shares of SMEs in France (19.05%, 26.29% and 15.85%, respectively). Manufacturing is also one of the common industries among small (20.35%) and medium-sized (33.2%) enterprises. The electricity, gas, steam and air conditioning supply industry shows outstanding growth in the number of SMEs from 2008 to 2014 (368.36%), whereas SMEs in mining and quarrying decreased by 11.52% in the same period.

The largest share of SMEs in Germany is represented by the wholesale/retail trade and technical sectors (27.41% and 17.81%, respectively). Manufacturing is also one of

the common industries among small (17.52%) and medium-sized (26.27%) enterprises. In comparison with other countries in this study, the real estate industry seems very unusual: there is a significant domination of micro enterprises over those classified as small and medium-sized (10.6% as compared to 1.08% and 1%, respectively). Trade and accommodation/food services show the biggest growth in number of SMEs from 2008 to 2014 (36.7% and 31.99%, respectively).

The construction, wholesale/retail trade and technical sectors account for the biggest shares of SMEs in the Netherlands (15.8%, 24.65% and 26.85%, respectively). Manufacturing is also one of the common industries among small (13.59%) and medium-sized (22%) enterprises. The information and communications industry shows the biggest growth (100.82%) in the number of SMEs between 2008 and 2014. The largest share of SMEs in Poland is represented by the manufacturing, construction, wholesale/retail trade and technical sectors (11.85%, 14.89%, 34.11% and 14.42%, respectively). Manufacturing is also one of the common industries among small (28.09%) and medium-sized (40.94%) enterprises. In comparison with other countries in this study, the transportation and storage industry seems very unusual: there is a substantial domination of micro enterprises over those classified as small and medium-sized (9.93% as compared to 5.71% and 5.48%). The electricity, gas, steam and air conditioning supply industry shows the most significant growth in the number of SMEs from 2008 to 2014 (62.36%), whereas accommodation/food services decreased by 24.5% during the same period.

The manufacturing, wholesale/retail trade and scientific/technical sectors account for the biggest share of SMEs in Romania (12.02%, 39.03% and 12.96%, respectively). The electricity, gas, steam and air conditioning supply industry shows the biggest growth in the number of SMEs from 2008 to 2014 (159.87%), whereas the construction industry shows a 27.86% decrease for the same period.

2.3.2. Contribution

According to the Dutch Bank's report on SME financing in the Euro area (2014), SMEs will significantly contribute to the recovery of the EU economy after the crisis. The authors argue that SMEs contribute to the decrease in unemployment and spur job creation, investments in innovation and development.

In France, SMEs represent 99.81% of the total number of firms; employ 62.82% of the total work force; and contribute 58.52% of the total added value of selected industries in the French economy (see Annex, Table B1). The biggest growth among SMEs was in the number of small enterprises (2.16%).

In Germany, SMEs represent 99.53% of the total number of firms; employ 63% of the total work force; and contribute 54.88% of the total added value of selected industries in the German economy (see Annex, Table B2). The biggest growth among SMEs was in the number of small enterprises (4.42%). The contribution of SMEs to Germany was an increase in employment from 60.38% to 63% over the period 2008–2014.

In the Netherlands, SMEs represent 99.83% of the total number of firms; employ 67.51% of the total work force; and contribute 61.92% of the total added value of selected industries in the Dutch economy (see Appendix 3, Table B3). The biggest growth among SMEs was seen in micro enterprises (6.21%), while small enterprises had a negative growth rate (-2.12%). The contribution of SMEs to Dutch employment was an increase from 65.36% to 67.51% over the period 2008–2014.

In Poland, SMEs represent 99.8% of the total number of firms; employ 69% of the total work force; and contribute 50.17% of the total added value of selected industries in the Polish economy (see Annex, Table B4). The only growing segment among SMEs was small enterprises (0.28%), while micro and medium-sized enterprises had a negative growth rate (-0.77% and -1.11%, respectively).

In Romania, SMEs represent 99.68% of the total number of firms; employ 67.23% of the total work force; and contribute 49.94% of the total added value of selected industries in the Romanian economy (see Appendix 3, Table B5). The only growing segment among SMEs was small enterprises (0.26%), while micro and medium-sized enterprises had a negative growth rate (-2.75% and -3.88%, respectively). The contribution of SMEs to Romanian employment was an increase from 65.82% to 67.23% over the 2008–2014 period.

2.3.3. Financing structure

Table 2.4 shows that debt instruments (such as bank loans, overdrafts and leasing/hire-purchases) are more relevant than equity for the Euro area SMEs. The most relevant instrument is the bank loan.

Table 2.4. Financing structure of Euro area SMEs (2014)

Financing instrument	Relevant	Not applicable to the firm	Do not know
Bank loan	61,50%	37,49%	1,01%
Bank overdraft	52,77%	46,17%	1,06%
Leasing or hire-purchase	45,36%	53,51%	1,13%
Subsidised loan	34,92%	63,30%	1,78%
Equity	15,49%	82,26%	2,25%

Source: ECB SAFE report

2.5 Conclusion

The analysis in this section leads to the conclusion that SMEs in the Research Countries are important drivers of economic growth and add significant value to their respective economies. External shocks (economic crises or changes in regulations) negatively affect the SME sector by constraining their access to short- and long-term financing. As the previous literature shows, the most important factor in the performance of the SME sector is access to financing. Therefore, we need to analyze and understand the capital markets of the Research Countries in more detail (Appendix 2).

Appendix 2

Table 3.1. Total number of commercial banks by country

	2008	2009	2010	2011	2012	2013
France	310	302	290	281	278	280
Germany	273	278	280	284	273	277
Netherlands	302	295	290	287	260	253
Poland	71	70	70	67	69	69
Romania	31	30	31	31	30	29

Source: IMF Financial Access Survey (FAS)

3. Capital Markets

3.1 Overview

From 2008 to 2013, the number of credit institutions in France gradually declined. In 2008, there were 22 banking group, and in 2013, there were 18. A declining number of credit institutions is a characteristic of most subgroups, with the exception of domestic credit institutions, which have recently been recovering to 2008 levels (16) (Appendix 3, Table C1).

The number of credit institutions in Germany has been steadily declining. For example, in 2008, there were 50 banking groups in Germany, and in 2013, there were 35. Similarly, as in the case of France, the declining number of credit institutions is characteristic of all credit institution subgroups (banking groups, stand-alone credit institutions, and domestic and foreign-controlled credit branches) (Appendix 3, Table C2).

The number of credit institutions in the Netherlands is stable. For example, in 2008, there were four banking groups in the Netherlands, and in 2013, there were five. All other classes of credit institutions show very little fluctuation (stand-alone credit institutions, domestic or foreign controlled subsidiaries and branches) (Appendix 3, Table C3).

Similarly to Poland, for period between 2008 and 2013, the number of credit institutions was been stable. In 2008, there were 645 stand-alone credit institutions, and in 2013, there were 634 (Appendix 3, Table C4).

The number of credit institutions in Romania is stable, as in the Netherlands and Poland. Nevertheless, the banking sector is still underdeveloped relative to that of other countries in this study. For example, in 2008 there were only 32 stand-alone credit institutions (Poland had 645), and in 2013, there were 27. All other classes of credit institutions show very little fluctuation (banking groups, domestic or foreign controlled subsidiaries and branches) (Appendix 3, Table C5).

3.2 Debt Capital Markets

3.2.1. Banking Sector

France has 18 credit institutions, all of which are banking groups. The total assets of all credit institutions are EUR 6.2 tn, 5.5% of which belong to foreign subsidiaries/branches. France has the highest concentration of large enterprises among banks by asset value; close to 98% of total banking assets belong to large corporations. The average return on equity in the French banking industry reached 6% in 2013, an increase of nearly 1.5% over 2009 levels. Likewise, overall return on assets increased from 0.23% to 0.33%, while the total share of equity in total assets has increased. The total share of loans and advances accounts for 57.2% of the balance sheet (300% of GDP), while total deposits are around 50% (Appendix 3, Table C1).

The share of non-performing loans in France is relatively higher than in Germany. In addition, it increased from 3.11% in 2008 to 4.64% in 2013. Every successful banking sector is supported by the successful enforcement of problem loan resolution. The funding of balance sheets is equally distributed between deposits and other resources. In 2013, the share of deposits in total bank assets was 50%. As in the case of Germany, this share has increased over the past few years, though at a slower rate (Appendix 3, Table C1).

As a leading banking country, Germany has 1682 credit institutions, 35 of which are banking groups and 76 of which are foreign-controlled subsidiaries and branches. Total assets of all operating credit institutions amount to EUR 6.7 tn, or 240% of GDP. Germany has the biggest deposit base in nominal values among the countries in the study, at almost EUR 4 tn, but it decreased by 16% over the period 2009–2013. From 2008 to 2013, banking sector performance improved, and its profitability has been stable at around a 0.6% return on assets since 2010. Return on equity followed a similar trend, recovering in 2009 from a negative to a positive 1.88%, and to 1.26% in 2013. The share of non-performing loans is relatively low and stable, ranging from 1.89% in 2008 to 1.81% in 2013, with a slight increase in 2011 (Appendix 3, Table C2).

German banks' balance sheets are funded mainly by deposits. Currently, deposits make up 59% of total bank assets, an increase from 48% in 2013. This significant increase in deposits feeds the drop in spending by German consumers (Appendix 3, Table C2).

The Dutch banking sector includes 91 organizations, five of which are banking groups and 62 of which are foreign-controlled subsidiaries and branches. Total assets of all domestic credit institutions equal 350% of GDP; 28%

of this is foreign-owned, which, in sum, is the biggest value among the Research Countries. Total loans and advances make up 73.7% of total assets (as in the case of Poland), this being the highest share among the Research Countries. From 2008 to 2013, banking sector performance improved from a -0.37% return on assets in 2008 to 0.24% in 2013. Return on equity followed a similar trend, jumping from -12.12% in 2008 to 5.0% in 2013 (Appendix 3, Table C3).

Of the five countries in this study, the share of non-performing loans is the lowest in the Netherlands, ranging from 1.87% in 2008 to 2.73% in 2013. The funding of balance sheets is equally distributed among deposits and other resources. In 2013, the share of deposits in total bank assets was close to 57%. As in the case of France, the share has increased over the past four years, though at a slower rate (Appendix 3, Table C3).

Poland has 637 credit institutions, but only 583 of them are domestic. A very common feature of Poland and Romania is that foreign credit institutions or their subsidiaries/ branches dominate on the market in terms of asset value.[6] In 2008, total assets of all credit institutions were over EUR 254 bil, while in 2013, total assets increased to EUR 343 bil (Appendix 3, Table C4). From 2008 to 2013, the sector performance was relatively stable, with a slight decline in return on assets from 1.32% in 2008 to 1.12% in 2013. Return on equity followed a similar trend, dropping from 14.14% in 2008 to 9.97% in 2013. The share of non-performing loans recently improved and currently stands at 5.9%. Distribution of balance sheets has been relatively stable over the past five years. In 2013, the share of deposits in total bank assets was close to 68.25% (Appendix 3, Table C4).

The Romanian banking sector has 37 credit institutions, ten of which are banking groups. Thirty-one credit institutions are foreign and dominate the market in terms of assets (50.76% of GDP as compared to 5.62% by domestic ones). Romanian banks have the biggest deposit base among the countries studied (84.12% of total assets). In 2008, total assets of all credit institutions amounted to over EUR 81 bil, remaining at the same level in 2013 (Appendix 3, Table C5).

From 2008 to 2013, the banking sector's performance gradually worsened, with a drop in return on assets from 1.72% in 2008 to 0.08% in 2013. The return on equity followed a similar trend, dropping from 18.9% in 2008 to 0.01% in 2013, after a negative return in 2012. The share of non-performing loans dramatically increased, from 1.47% in 2008 to 17.87% in 2013. In 2013, the share of deposits in total bank assets was close to 84.12%, and there were no major fluctuations between 2008 and 2013.

France, Germany and the Netherlands have close to the same number of licensed banks – fewer than 300 – whereas Poland has 69 licensed banks and Romania only 29. The number of banks decreased over 2009–2013, from 310 to 280 in France and from 302 to 253 in the Netherlands. Total assets in the banking sector dramatically declined in France, Germany and the Netherlands (especially in Germany), increased in Poland, and remained constant in Romania. Banking sector performance improved in France, Germany and the Netherlands, while it decreased in Poland and Romania. The share of non-performing loans worsened in France and Romania but stayed constant in Germany, the Netherlands and Poland. Bank financing by deposits increased in Germany and the Netherlands, while staying unchanged in France, Poland and Romania. The banking sector in Romania and Poland is dominated by foreign banking groups, which might be more risk-averse towards local market risks and, therefore, impose higher interest rates, especially for SMEs.

3.3.2. Non-Banking Sector

Guarantees

France is the leading country in terms of the absolute amount of outstanding guarantees, while Romania has the highest ratio of guarantees to GDP. The Netherlands, Poland and Romania have relatively the same level of issued guarantees (around EUR 2 bil), while Germany has three times more, but they constitute the smallest percentage of GDP (0.2%).

Securitization

According to Figure[3.2, the overall securitization trend shows the decline over last seven years. After the crisis, securitization issuance significantly dropped – especially in Germany, where it dropped from USD 151 bil in 2008 to USD 25 bil the following year. The Netherlands is one of the leading countries in this (after the UK), with USD 340 bil of outstanding securitization, but the peak was in 2010, when it had USD 433 bil; thus, we see a negative trend that began that year, with new issuances decreasing in the following years, dropping even below (post-) crisis levels. On the other hand, in France, we see the opposite situation: in the post-crisis period, its outstanding amounts gradually increased, and rapidly so in 2014.

3.3 Equity Capital Markets

According to the study "Towards Better Capital Markets Solution for SME Financing" (2014), the most effective alternative to the traditional SME bank financing is equity financing. The platforms where SME's shares are listed carry lower information requirements and have lower fixed listing costs. For the time being, only medium-sized firms are fit for this type of financing.[7]

However, besides the recognized demand for alternative sources of financing on the one hand, and the increased demand for financing on the other, the Research Countries' markets have experienced a significant drop in the supply of venture capital in recent years (Figure 3.3).[8]

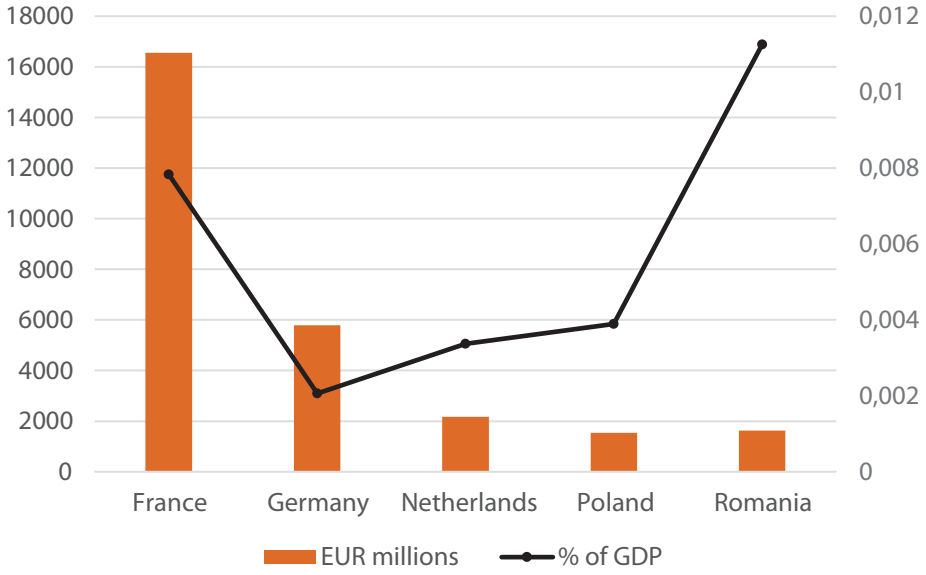
Figure 3.1. Total volume of outstanding guarantees by

[6] Thomas White International: Emerging Markets Spotlight [link] Last viewed: May, 9, 2019.

[7] Oliver Wyman (2014). Last viewed:, `May 9, 2019. [link]

[8] Grover and Souminen (2014); OECD (2013). The figure above clearly shows that in the countries in our study, the equity supply in 2012 dropped relative to that of 2007.

country in 2013 (EUR mil and % of GDP)



Source: AECM

Figure 3.2. European Outstanding Securitization, USD mil

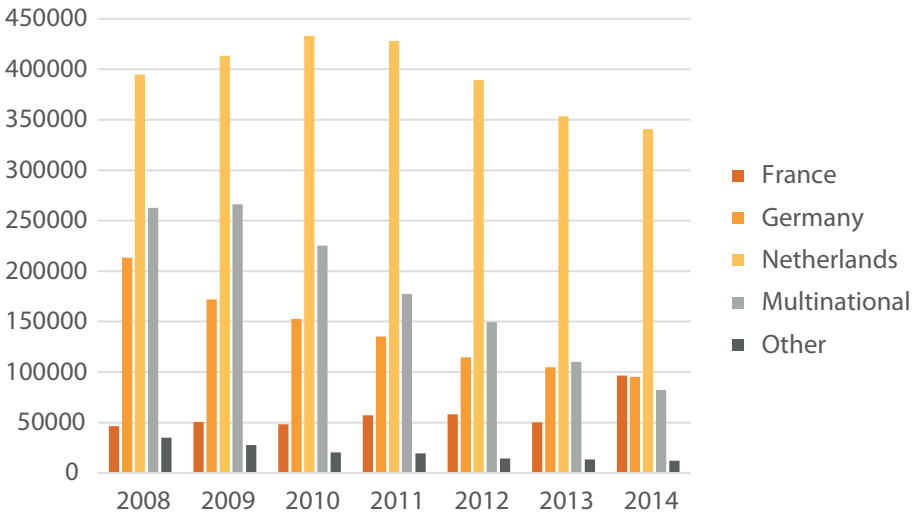
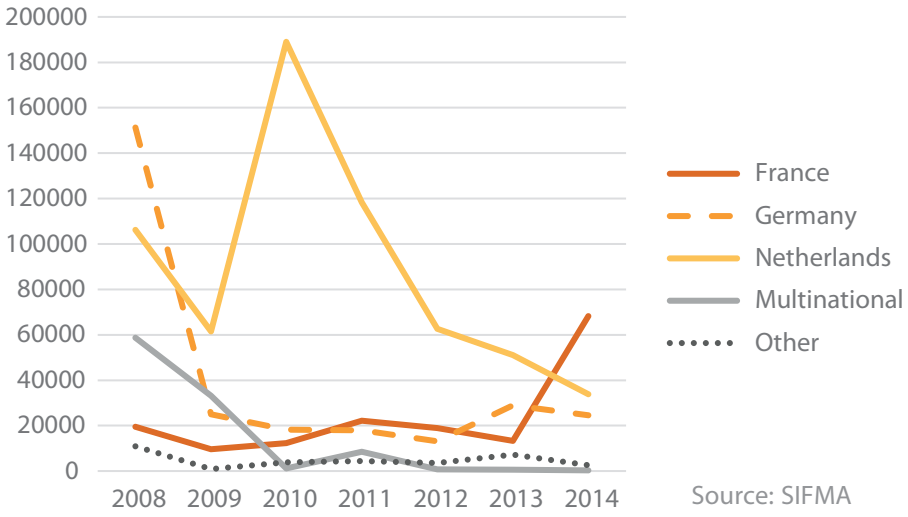


Figure 3.3. European Securitization Issuance, USD mil

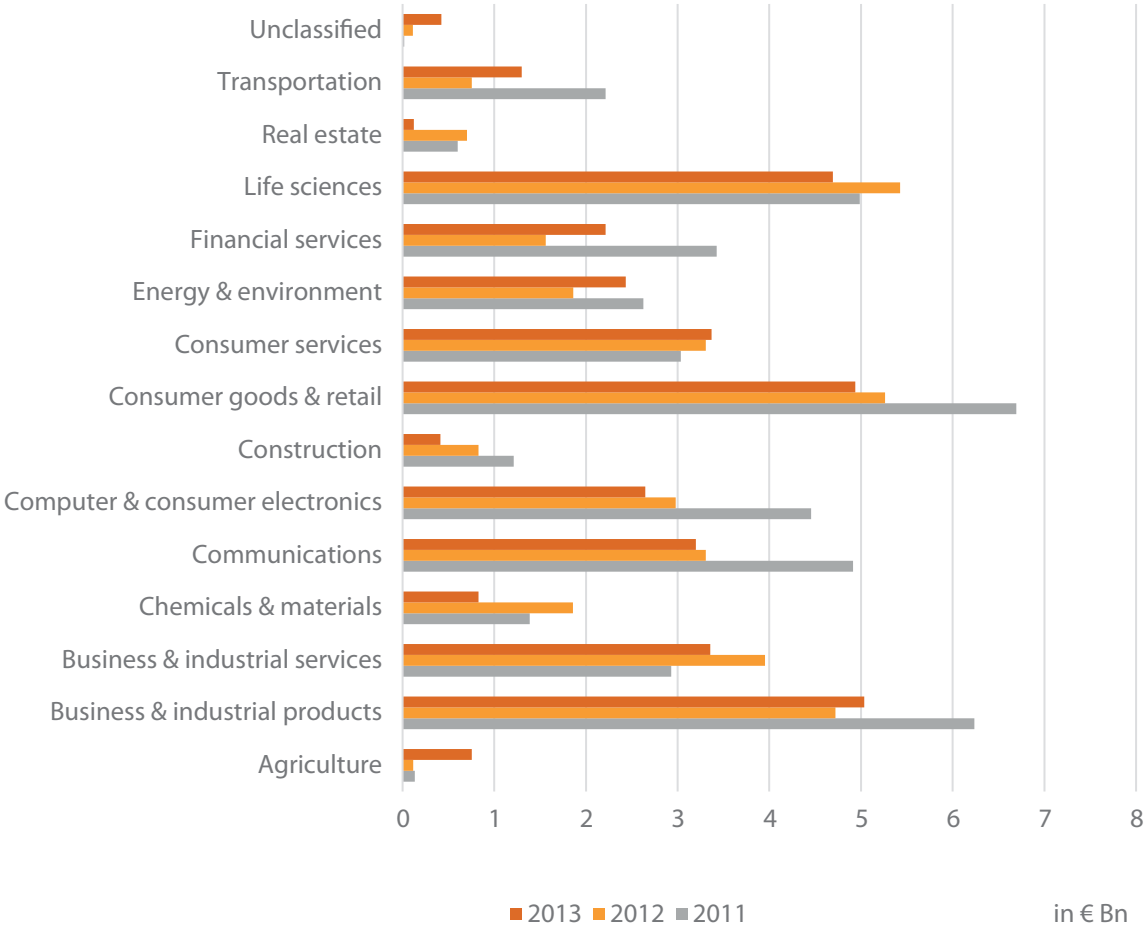


Source: SIFMA

Figure 3.4. Trends in Venture Capital Investments 2007-2012

Source: Grover and Souminen, 2014.

Figure 3.5. Private equity investments in Europe by sector, EUR bil



Source: EVCA

Table 3.2. Total Private equity investments by size of the portfolio company, EUR mil

# of employees	2008	2009	2010	2011	2012	2013
0 - 19	1 788,68	1 271,34	1 761,96	1 545,01	1 753,25	1 473,34
20 - 99	5 038,68	4 225,05	4 717,14	4 426,17	4 039,39	3 874,64
100 - 199	4 594,98	1 925,23	2 702,78	4 568,37	3 516,63	3 356,81
200 - 249	1 634,37	673,06	1 759,62	1 541,51	1 430,95	1 066,24
250 - 499	4 232,78	2 074,48	4 014,85	4 684,69	4 489,48	4 095,15
500 - 999	6 519,74	3 699,92	3 976,37	7 422,04	6 046,67	6 056,95
1,000 - 4,999	17 969,22	7 167,48	15 220,34	12 279,57	10 687,99	11 674,89
5,000 +	11 587,28	3 271,85	7 765,42	8 402,79	4 787,93	4 128,19
Total	53 365,73	24 308,41	41 918,47	44 870,15	36 752,29	35 726,21

Source: EVCA

Table 3.3. Number of private equity firms (by type) headquartered in the following countries (2013)

Country	Venture capital firms	Buyout firms	Generalist firms	Total number of private equity firms
France	71	87	112	270
Germany	136	75	49	260
Netherlands	45	42	38	125
Poland	17	13	4	34
Romania	1	1	1	3
Average Europe	32	26	19	77
Total Europe	793	651	473	1 917

Source: EVCA

Table 3.4. Capital under management by institution type (2013), EUR mil

Country	Venture capital firms	Buyout firms	Generalist firms	Total number of private equity firms
France	8 079	39 528	34 722	82 329
Germany	9 630	18 743	7 150	35 524
Netherlands	1 859	11 646	4 622	18 127
Poland	547	3 763	296	4 605
Romania	11	-	179	190
Average Europe	2 275	15 359	4 184	21 818
Total Europe	56 873	383 981	104 588	545 442

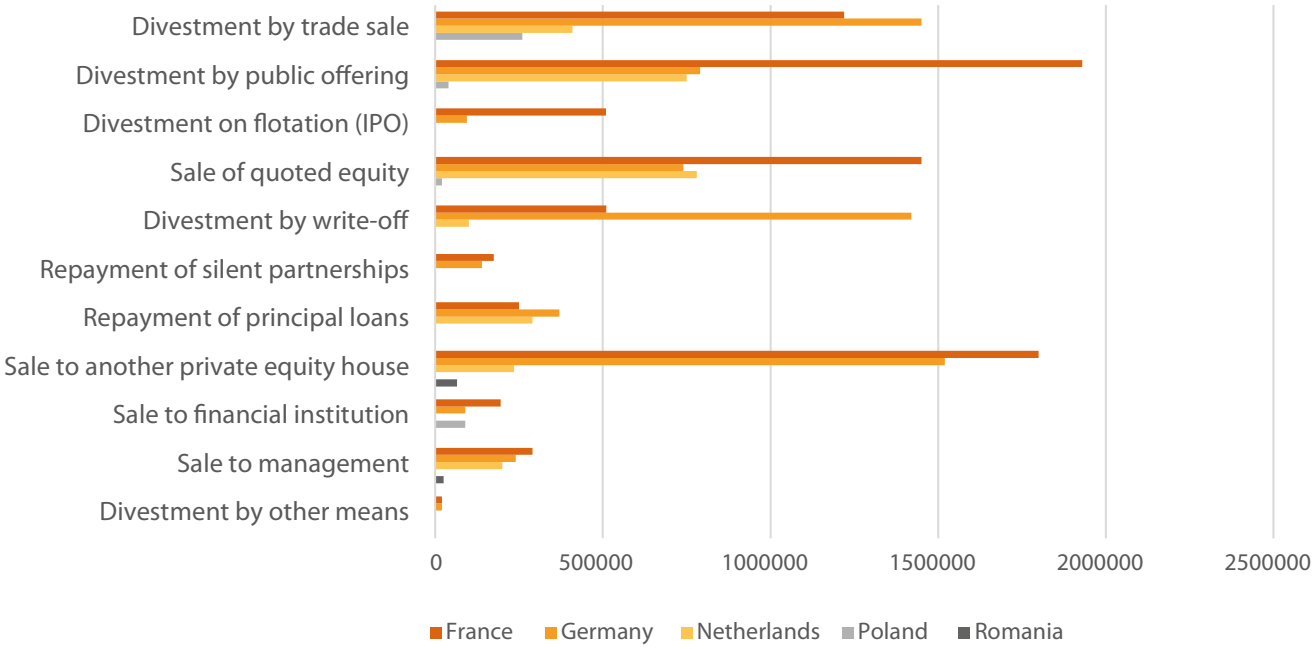
Source: EVCA

Table 3.5. Average assets under management (AUM) per firm type (2013), EUR mil

	Venture capital firms	Buyout firms	Generalist firms
France	113,79	454,34	310,02
Germany	70,81	249,91	145,93
Netherlands	41,30	277,28	121,64
Poland	32,15	289,43	74,02
Romania	11,00	-	179,00
Average Europe	71,72	589,83	221,12

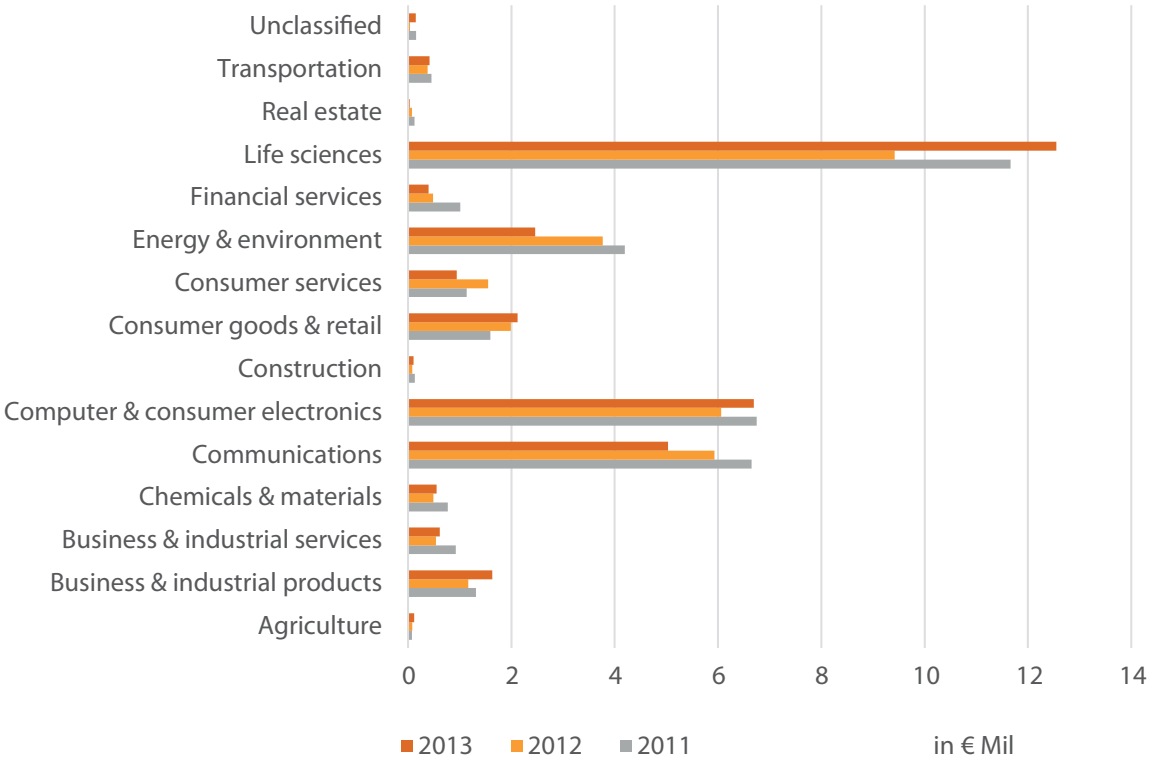
Source: EVCA

Figure 3.6. Divestments in 2013 by type, EUR th



Source: EVCA

Figure 3.7. Venture investments in Europe by sector, EUR mil



Source: EVCA

Table 3.6 – Total outstanding investments by country of the fund management team, EUR mil

	2008	2009	2010	2011	2012	2013
France	8 551,10	3 456,84	5 958,53	9 264,06	5 247,33	5 943,94
Germany	7 115,10	2 618,58	4 825,68	4 439,42	5 315,33	5 908,43
Netherlands	1 763,20	805,42	1 326,49	2 101,13	1 362,16	988,83
Poland	727,33	482,18	504,43	692,16	540,59	351,52
Romania	122,58	82,86	80,34	48,07	24,28	48,45
European average	2 185,59	1 001,97	1 732,74	1 881,75	1 507,77	1 508,86
European total	54 639,75	25 049,32	43 318,53	47 043,79	37 694,13	37 721,58

Source: EVCA

Table 3.7. New funds raised by country of the fund management team, EUR mil

	2008	2009	2010	2011	2012	2013
France	8 954,13	2 551,93	4 467,96	6 026,23	3 778,70	7 933,36
Germany	2 560,73	1 190,79	1 216,57	3 302,99	1 974,29	1 144,00
Netherlands	1 912,66	1 067,84	1 221,72	2 262,03	1 268,90	767,99
Poland	760,46	145,35	114,76	442,59	485,56	261,25
Romania	-	-	83,30	-	14,00	1,10
European average	3 219,00	756,54	871,89	1 664,14	983,18	2 144,30
European total	80 474,92	18 913,55	21 797,15	41 603,53	24 579,51	53 607,52

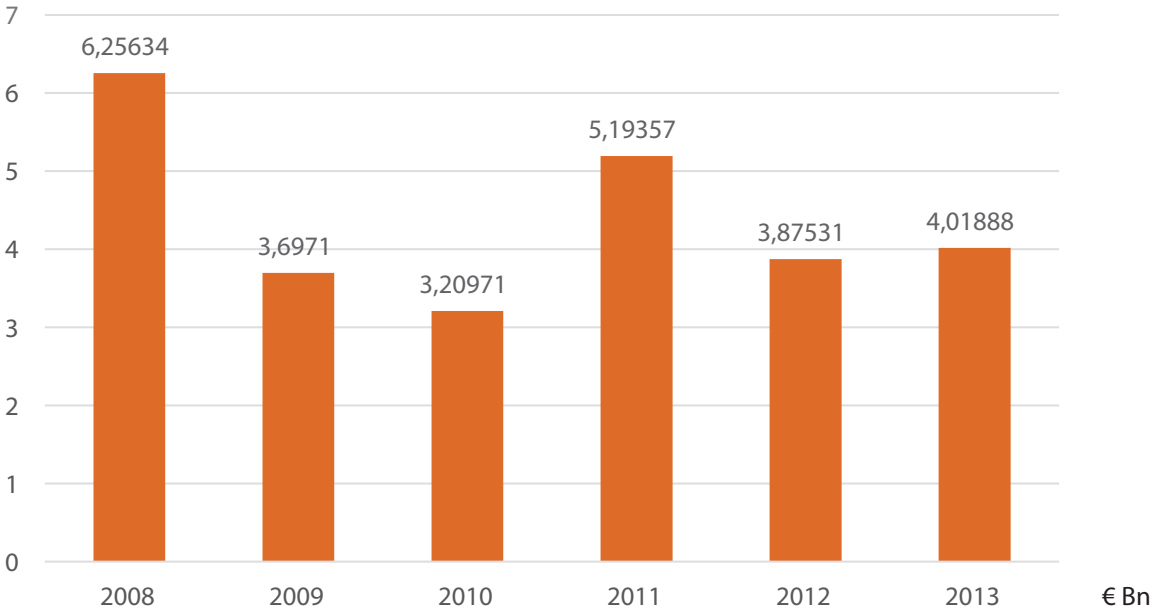
Source: EVCA

Table 3.8. Total Venture Capital investments by size of the portfolio company, EUR mil

# of employees	2008	2009	2010	2011	2012	2013
0 - 19	1 654,46	1 119,02	1 224,57	1 316,54	1 299,25	1 235,36
20 - 99	2 807,32	1 836,47	1 699,54	1 670,45	1 452,51	1 747,38
100 - 199	939,07	354,78	470,05	516,67	353,86	256,20
200 - 249	269,93	162,23	36,84	31,02	6,05	69,06
250 - 499	357,82	178,86	189,87	111,45	28,52	63,95
500 - 999	196,12	110,43	30,83	48,95	21,10	8,47
1,000 - 4,999	74,66	61,21	9,69	0,14	45,54	1,78
5,000 +	9,55	-	-	-	-	-
Total	6 308,94	3 823,00	3 661,37	3 695,23	3 206,84	3 382,20

Source: EVCA

Figure 3.8. Funds raised by European VC firms, EUR mil



Source: EVCA

3.3.1. Private Equity

European private equity investment activity is very diverse: the most popular sectors, where private equity (PE) firms prefer to invest, are life sciences, consumer goods & retail, business and industrial products, while the least popular are real estate, agriculture and construction (see Figure 3.4). In terms of industry investment trends, we can see a decrease of interest in construction, retail, communications and computer & consumer electronics from 2011 to 2013.

If we take a look at the breakdown of investments by size of portfolio company (Table 3.2), we can spot some notable features: while, on average, the total pool of investments is increasing – as is the number of employees in the portfolio company – some groups do not fall within this rule. For example, companies with 200-249 employees are suffering from severe underinvestment, while companies with 1000-4000 employees have the largest pool of PE investments.

Private equity is widely represented in France, Germany and the Netherlands, while in Poland and Romania, there are only 37 PE firms in total, according to EVCA data (see Table 3.2). Germany and France have 260 and 270 PE houses, respectively. In France, however, the generalist firms dominate (in other words, they have a broad area of investment activity), while in Germany, more than 50% of firms are VCs. The Netherlands has a relatively equal number of VCs, buyout and generalist firms, and in Romania, there is one firm of each type.

France not only dominates in terms of number of PE houses, but also by the aggregate capital under management of all PE houses – EUR 82.3 bil – while the four other countries in this study have a combined total of EUR 58.4 bil. If we look only at venture capital firms, German firms prevail – with EUR 9.6 bil of capital under management. French VCs also have a significant EUR 8 bil, while the Netherlands has EUR 1.9 bil, this being slightly less than the European average of EUR 2.3 bil (see Table 3.4). For the buyout industry, we see the same pattern: France and Germany are leading (but France has twice the capital under management), while the Netherlands also has a lower total of Assets Under Management (AUM) than the European average. If we look at the average AUM of PE firms in every country, we see that French firms are more concentrated, with (at least) two times more capital under management than the other countries in this study. At the same time, we can highlight that buyout firms have, on average, more capital under management per firm than VCs and generalists (see Table 3.5).

In 2013, France's total private equity investments constituted 17% of total European private equity investments, while Germany's made up 16% of the European total. There is a constant difference between funds raised and invested by private equity firms. In 2013, Germany's new funds raised totaled EUR 1.4 bil. The Netherlands' private equity sector investments made up 2.6% of total European private equity investments. There were 125 private equity funds headquartered in the Netherlands – more than the European average. In 2013, Poland's private equity investments equaled 0.93% of total European private equity investments. Thirty-four private equity funds are headquartered in Poland, which is close to 2% of all European private equity funds. Romania's private equity sector investments made up 0.13% of total European investments. Similar to the other countries, Poland saw its total venture peak in 2009, at close to EUR 42 mil invested. However, since then, total venture has dropped and was at around EUR 3 mil in 2013.

According to Figure 3.6, the most common types of divestment among the countries of study are: sale on the secondary market (to another PE house), trade sale, public offering, and sale of quoted equity (after lock-up period).

3.2.2. Venture Capital

According to the EVCA data presented in Figure 3.7, the most attractive sectors for venture capital firms are life sciences, communications, computers and consumer electronics. Other relatively important industries for VCs are energy and environment, consumer good and retail services, and business and industrial services. For the period 2011–2013, some industries,such as energy and environment, communications and financial services, experienced a significant decline in investments from venture capitalists.

For European venture industries, the biggest share of capital invested accounts for companies with 0–99 employees (88% in 2013; see Table 3.8). More than 90% of VCs' investees are small and medium-sized enterprises, and that share has increased over the past seven years. Thus, venture capital funds are one of the most important sources of financing of SMEs.

In 2008, French total venture peaked, with over EUR 1 bil invested. However, since then, total venture has been fluctuating between EUR 600 and EUR 700 mil, currently being over EUR 700 mil (Table 3.9).

Currently, seed investments make up to 1.5% of total venture capital invested, which is a slight decrease from 2011, when it was 2.37%. In Germany, there was a significant decline in later- stage venture investments from 64.7% in 2008 to 54.4% in 2013. Similarly, there has been a shift of focus from later stage financing to start-up financing (Table 3.11).

In 2008, German total venture peaked, with over EUR 1 bil invested. However, since then, total venture has fluctuated between EUR 500 and EUR 700 mil, currently being over 700 mil (Table 3.11).

At this point, we cannot determine the trend in the number of private equity funds in Europe because EVCA has no available data from before 2013. In 2013, there were 260 private equity funds headquartered in Germany, the second-largest in our study after France. Currently, seed investments make up 6% of total venture capital invested. This is an improvement relative to the last five years, when it was around 5%.

There was a significant decline in later-stage venture investments, from 55% in 2008 to 38% in 2013. The decline in later-stage venture is a consequence of a shift in investor focus towards start-ups (from 36% in 2008 to 55% in 2013) and, probably growth, limitations of later-stage firms (Table 3.11).

Similar to Germany and France, in 2009, Dutch total venture peaked at over EUR 300 mil invested. However, since then, total venture has steadily dropped, being close to EUR 200 mil in 2013 (Table 3.11).

Currently, seed investments make up to 3.51% of total venture capital invested. As in France and Germany, there was a significant decline in later-stage venture investments from 50.42% in 2008 to 32.59% in 2013. There is also a shift of focus from later-stage financing to start-up financing (Table 3.11).

In Poland, similar to the case of Germany, France, and the Netherlands, total venture in 2009 peaked to over EUR 50 mil invested. However, total venture steadily dropped to over EUR 15 mil in 2013 (Table 3.9).

Currently, seed investments make up to 9.97% of total venture capital invested in Poland, being the highest relative share among the five countries. Like France, Germany, and the Netherlands, Poland saw a significant decline in later-stage venture investments, from 70.75% in 2008 to 58.39% in 2013. Similarly, there has been a shift in focus from later stage financing to start-up financing and, in Poland, also seed investments (Table 3.11).

Currently, Romanian seed investments are non-existent; likewise, there are no investments in start-ups. The entire private equity market is focused on later-stage venture investments (Table 3.11).

Table 3.9. Total Venture investments, EUR mil

	2008	2009	2010	2011	2012	2013
France	1 092,06	843,60	751,45	631,64	566,42	679,53
Germany	1 094,02	658,96	729,00	717,40	567,34	702,59
Netherlands	300,40	170,54	146,83	170,40	180,87	193,58
Poland	50,44	1,15	3,31	26,46	9,08	15,63
Romania	41,99	4,17	5,09	4,00	3,06	2,98
Europe - average	252,36	152,92	146,45	147,81	128,27	135,29
Europe - median	91,99	75,89	55,13	69,15	78,63	65,05

Source: EVCA

Table 3.10 – Average venture investments per company, EUR mil

	2008	2009	2010	2011	2012	2013
France	1,88	1,71	1,50	1,43	1,48	1,44
Germany	0,90	0,62	0,66	0,69	0,64	1,00
Netherlands	1,94	1,05	0,83	1,09	1,10	0,97
Poland	1,00	0,19	0,33	0,81	0,32	0,30
Romania	9,68	1,04	2,54	4,00	3,06	2,98

Source: EVCA

Table 3.11 – Average VC investment per company by stage, EUR th

	2008	2009	2010	2011	2012	2013
Seed Capital						
France	1 000,87	1 568,77	699,90	554,90	913,06	623,63
Germany	469,63	366,94	236,31	252,25	214,90	253,96
Netherlands	317,05	1 207,08	536,26	375,17	373,56	523,39
Poland	382,72	-	-	161,00	247,24	67,78
Romania	-	-	-	-	-	-
Startup						
France	2 073,30	1 413,02	1 684,17	1 569,57	1 625,29	1 594,83
Germany	1 005,77	829,63	896,56	963,03	743,33	878,62
Netherlands	2 171,54	932,14	914,79	1 019,66	752,50	922,95
Poland	527,31	259,01	226,58	891,46	207,44	247,28
Romania	1 086,11	1 042,44	1 904,32	-	-	-
Later Stage						
France	2 563,79	2 142,37	2 112,35	2 161,63	1 916,26	2 088,85
Germany	1 230,19	675,16	845,74	854,08	959,38	1 863,28
Netherlands	3 320,21	1 007,50	1 034,41	1 873,62	2 159,21	1 467,34
Poland	2 099,24	126,74	424,04	1 389,18	494,34	570,45
Romania	-	-	3 184,84	4 000,00	3 055,00	2 984,00

Source: EVCA

3.2.3. Alternative Financing

Table 3.12. Total volume of Alternative Finance Transactions in 2014, EUR mil

Country	Amount
UK	2 337
France	154
Germany	140
Netherlands	78
Poland	4
Romania	-

Source: The European Alternative Finance Benchmarking Report, 2015

Table 3.13. European business angel investments

Year	Amount Invested, € millions	No. of Business Angels
2008	194	297
2009	247	334
2010	153	396
2011	427	410
2012	509	460
2013	554	468

Source: EBAN European Angel Investment Overview 2012, EBAN Statistics Compendium 2014

Table 3.14. Business angel investments (2013)

Country	Amount Invested, € millions	No. of Business Angels	Amount Invested, % of GDP
France	41,1	4 320	0,0020%
Germany	35,1	1 510	0,0013%
Netherlands	9,8	810	0,0016%
Poland	6,6	160	0,0017%

Source: EBAN European Angel Investment Overview 2012, EBAN Statistics Compendium 2014

In recent years, especially after the financial crisis of 2008/09, the SME sector turned to alternative channels for financing. Alternative finance platforms range from equity-based crowd funding to peer-to-peer (P2P) lending, reward-based crowd funding and debt-based securities. Development and growth of alternative channels is a strong signal of excess demand for financing. Supply of financing by banks and other credit institutions seems to be too restrictive and regulated, directing excess demand to alternative sources of financing.

According to the latest study by the University of Cambridge and the consultancy Ernst & Young Ltd (2015), the French alternative financing sector grew by EUR 253 mil in the past two years. This implies that the alternative finance market size grew by 167%. The current distribution of funds favors reward-based funding (36%), while equity-based is at 20%. The highest growth per platform was for P2P consumer lending. According to the study, in January 2014, France had 70 crowd-funding platforms, with increases of at least four new platforms each month. In addition, the study revealed that the majority of French think that regulations addressing the alternative financing sector are supportive.

According to the above-mentioned study, the German alternative financing sector grew by 144% in the last year alone. Between 2012 and 2014, alternative financing channels accumulated EUR 236 mil. These funds are available to the German SME sector, which is expected to increase its demand in the next few years. 2010 was characterized mainly by the significant increase in reward-based platforms, while in 2011, the highest growth (174%) was recorded by equity-based crowd funding directed towards start-ups and seed financing. According to the study, 58% of surveyed German users of crowd-funding platforms think that the restrictions and regulations are restrictive and excessive.

The Netherlands is among the top five European countries in terms of the development of the alternative financing sector.[9] Between 2012 and 2014, the Netherlands accumulated EUR 155 mil. At the same time, the Netherlands has the highest number of alternative financing platforms per capita. There are more than 100 registered platforms, with an associated rapid growth of credit unions and stock exchanges for the SME sector. Reward-based crowd funding saw the highest growth in last two years (211%). However, this is still at a low level of accumulated funds (EUR 4.4 mil).

The growth in Poland's alternative financing sector is among the lowest in Europe. The total financing accumulation is now at EUR 4 mil, which equals a per capita level of EUR 0.1. Relative to the UK, which has the highest growth and accumulation of alternative financing funds in Europe (EUR 36 per capita), Poland is still underdeveloped.

Investments by so-called "business angels" (informal investors) in Europe is progressively increasing, having risen from EUR 153 mil in 2010 to EUR 554 mil in 2013 (Table 3.13). Considering the total number of business angels in France, Germany, the Netherlands and Poland alone (6800 BAs), there is a huge potential for further development.

3.2.4. Stock Exchanges

France has one stock exchange, Euronext Paris, which recently acquired the corporation MATIF (Marché à Terme International de France).[10] In 2013, the market capitalization of Euronext Paris was EUR 1,670 mil.[11]

Euronext Paris, a public company, is the largest listing venue in continental Europe. It has raised EUR 104 bil and is the leading cash trading venue and the second-largest listing derivate trading venue in continental Europe. Total market capitalization of French domestic companies was EUR 1.7 bil in 2013 (see Figure 3.9).

Germany has a total of 11 stock exchanges, of which the Frankfurt stock exchange is the largest. Other stock exchanges play significant roles in European trading: Eurex Exchange, RMX Risk Management Exchange and others in the Börse group, etc. The largest stock exchange had a market capitalization of EUR 1,762 bil in 2014.[12] In January 2014, Deutsche Börse had 717 companies listed, with EOB value trading equaling EUR 108,718 mil.

Euronext Amsterdam is the Netherlands-based stock exchange, as a part of the larger Euronext (Amsterdam, Brussels and Paris).[13]

[9] University of Cambridge and consultancy Ernst & Young Ltd, The European Alternative Finance Benchmarking Report, 2015.

[10] https://www.euronext.com/

[11] http://sdw.ecb.europa.eu/ In June 2014, Euronext detached itself from ICE and from NYSE through an IPO. ICE sold the last of its shares in Euronext, completing its exit from the business, in December 2014. NYSE and Euronext are now separate businesses.

[12] http://www.boerse-frankfurt.de/en/start

[13] http://www.aex.nl/

Figure 3.9. Market capitalization of listed companies* in 2013, EUR bil

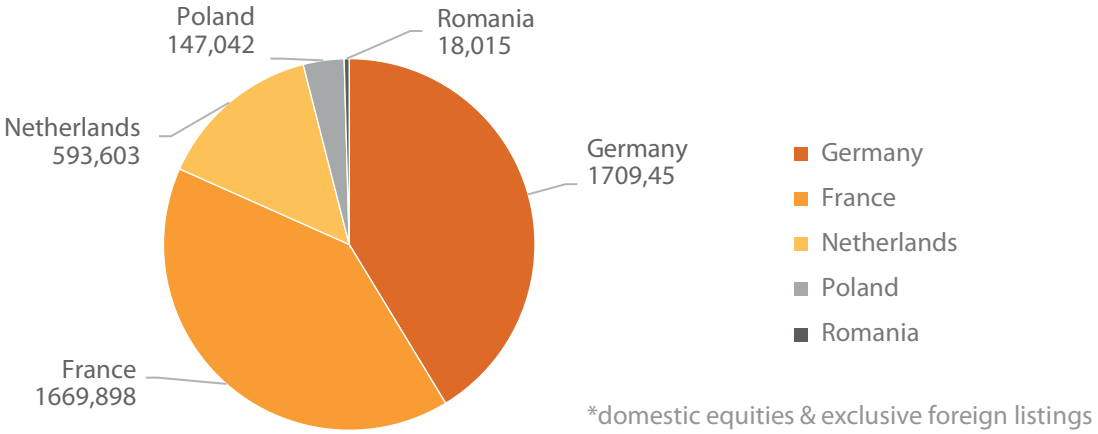


Table 3.15. Market capitalization of listed companies, USD bil

Country Name	2008	2009	2010	2011	2012
France	1 492	1 972	1 926	1 569	1 823
Germany	1 108	1 298	1 430	1 184	1 486
Netherlands	388	543	661	595	651
Poland	90	135	190	138	178
Romania	20	30	32	21	16

Source: World Development Indicators

Table 3.16. Market capitalization of listed companies, % of GDP

Country Name	2008	2009	2010	2011	2012
France	51,04	73,21	72,78	54,80	67,86
Germany	29,57	38,02	41,90	31,57	42,07
Netherlands	41,65	63,23	79,05	66,54	79,09
Poland	17,02	30,99	39,91	26,36	35,82
Romania	9,75	18,45	19,65	11,61	9,40

Source: World Development Indicators

Table 3.17. Number of IPOs by country

	2008	2009	2010	2011	2012	2013	2014
France	5	1	4	13	13	11	22
Germany	5	3	11	11	7	6	10
Netherlands	1	1	2	-	1	1	8
Poland	7	2	3	4	6	12	6
Romania	1	-	-	-	-	1	2

Source: Thomson One

Table 3.18. Total amount issued by IPO, USD mil

	2008	2009	2010	2011	2012	2013	2014
France	50,6	1 215,5	380,7	223,1	304,9	1 533,8	4 426,7
Germany	1 062,8	94,1	1 000,0	1 415,0	1 753,9	3 191,8	3 663,7
Netherlands	2 170,3	1 495,4	148,2	-	1 063,7	333,3	5 439,0
Poland	1 186,0	2 154,7	2 846,7	2 369,9	888,9	1 466,0	268,0
Romania	22,0	-	-	-	-	193,0	606,1

Source: Thomson One

In 2013, its market capitalization was EUR 593,603 mil.[14] In January 2014, the Euronext stock exchange (including Amsterdam, Brussels and Paris) had a total of 1,060 listed companies and an EOB value trading of EUR 130,158 mil.

Poland has three stock exchanges, of which the Warsaw Stock Exchange is the largest.[15] In 2013, the Warsaw Stock Exchange was the leader in the central European region in terms of the capitalization of listed companies, the value of shares and derivatives turnover.[16]

Romania has four stock exchanges, three of which are commodity exchanges. The largest is the Bucharest Stock Exchange.[17]In January 2015, its capitalization was EUR 30 bil, with a total of 83 listed companies. In 2013, the main Bucharest Stock Exchange Trading Index (BET index) increased to 26.1%, placing the market in the top 15 stock exchange markets globally.[18]

With respect to IPO activity, French companies have the highest number of stock market launches (initial public offerings, or IPOs). In 2014, France held 22 IPOs, twice as many as in the preceding year. At the same time, in Germany, only ten companies went IPO, but average proceedings from German offerings are higher. In general, 2014 was very successful for French, German and Dutch companies: they held 40 IPOs, with total proceedings reaching nearly USD 13.5 bil (see Tables 3.17 and 3.18).

The year 2013 was very successful for Polish companies: 12 went IPO, but the average amounts issued were lower than in 2011-2013. Romanian public offering activity is very low: in the past five years, Romanian companies have had only 3 IPOs, totaling USD 799 mil.

3.4 Conclusion

Section 3 has provided extensive capital market descriptions for each of the Research Countries. This section has also illustrated that banks' lending capacity shrank during the period 2008 to 2013, due to the higher risk aversion at a time when economic growth slowed. In addition, section 3 has also shown that equity financing, especially for the SME sector, declined in this period. In light of these findings, we conclude that the SME sector is facing limited access to financing, as a consequence of having to compete with other institutions in the market for a shrinking pool of financial resources. In the next section, we quantify the size of the financing gap as a difference between the demand and supply of SME loans and available equity.

[14] http://sdw.ecb.europa.eu/

[15] http://www.world-stock-exchanges.net/europe.html

[16] http://www.gpw.pl/o_spolce_en

[17] http://www.world-stock-exchanges.net/europe.html

[18] BESPOKE Investment Group. Last viewed: May 9,2019.

Appendix 3

Annex A: Macroeconomic Indicators

Table A1. France: Macroeconomic Indicators

	2009	2010	2011	2012	2013
GDP nominal (tn EUR)	1,94	2,00	2,06	2,09	2,11
GDP nominal (tn USD)	2,69	2,65	2,86	2,69	2,81
GDP per capita, nominal (th EUR)	29,97	30,73	31,51	31,84	32,01
GDP per capita, nominal (th USD)	41,63	40,71	43,81	40,91	42,50
GDP per capita, PPP (th USD)	34,94	35,87	37,31	37,11	37,87
GDP growth (annual %)	-2,94	1,97	2,08	0,33	0,29
GDP deflator (annual %)	107,38	108,54	109,56	110,88	111,76
Inflation, consumer prices (annual %)	0,09	1,53	2,12	1,96	0,86
Unemployment, total (% of total labor force)	9,10	9,30	9,20	9,90	10,40
Current account balance (% of GDP)	-1,32	-1,27	-1,72	-1,54	-1,43
Trade (% of GDP)	49,57	53,97	58,17	58,14	58,05
Foreign direct investment, net inflows (% of GDP)	1,00	1,47	1,43	1,15	0,23
Foreign direct investment, net outflows (% of GDP)	4,05	2,62	2,20	1,82	-0,01
Total reserves (bn USD)	131,79	165,85	168,49	184,52	145,16
Net capital account (bn USD)	0,46	0,06	0,01	0,71	2,40
Central government debt, total (% of GDP)	82,69	86,46	90,60	100,85	-
Domestic credit provided by financial sector (% of GDP)	125,25	128,64	129,40	132,54	130,75
Domestic credit to private sector (% of GDP)	108,48	110,68	112,64	112,70	111,35
Domestic credit to private sector by banks (% of GDP)	108,45	110,65	112,60	112,69	111,34

Source: World Development Indicators

Table A2. Germany: Macroeconomic Indicators

	2009	2010	2011	2012	2013
GDP nominal (tn EUR)	2,46	2,58	2,70	2,75	2,81
GDP nominal (tn USD)	3,41	3,41	3,75	3,53	3,73
GDP per capita, nominal (th EUR)	30,00	31,50	33,00	34,19	34,85
GDP per capita, nominal (th USD)	41,67	41,72	45,87	43,93	46,27
GDP per capita, PPP (th USD)	37,21	39,56	42,38	43,17	44,47
GDP growth (annual %)	-5,64	4,09	3,59	0,38	0,11
GDP deflator (annual %)	104,69	105,47	106,67	108,27	110,50
Inflation, consumer prices (annual %)	0,31	1,10	2,08	2,01	1,50
Unemployment, total (% of total labor force)	7,70	7,10	5,90	5,40	5,30
Current account balance (% of GDP)	5,91	5,73	6,05	7,14	6,86
Trade (% of GDP)	70,76	79,41	84,78	85,97	85,32
Foreign direct investment, net inflows (% of GDP)	1,66	2,52	2,37	1,43	1,37
Foreign direct investment, net outflows (% of GDP)	2,92	4,30	2,90	3,28	2,17
Total reserves (bn USD)	179,04	215,98	234,10	248,86	198,54
Net capital account (bn USD)	-2,60	1,62	2,31	1,63	2,65
Central government debt, total (% of GDP)	46,04	53,74	53,32	55,18	-
Domestic credit provided by financial sector (% of GDP)	128,64	126,88	119,91	118,83	113,52
Domestic credit to private sector (% of GDP)	109,62	103,61	100,38	98,02	93,13
Domestic credit to private sector by banks (% of GDP)	109,62	103,61	100,38	98,02	93,12

Source: World Development Indicators

Table A3. The Netherlands: Macroeconomic Indicators

	2009	2010	2011	2012	2013
GDP nominal (tn EUR)	0,62	0,63	0,64	0,64	0,64
GDP nominal (tn USD)	0,86	0,84	0,89	0,82	0,85
GDP per capita, nominal (th EUR)	37,36	38,01	38,51	38,24	38,26
GDP per capita, nominal (th USD)	51,91	50,34	53,54	49,13	50,79
GDP per capita, PPP (th USD)	44,58	44,75	46,31	45,41	46,30
GDP growth (annual %)	-3,30	1,07	1,66	-1,59	-0,73
GDP deflator (annual %)	106,98	108,22	108,38	109,73	110,91
Inflation, consumer prices (annual %)	1,19	1,28	2,34	2,45	2,50
Unemployment, total (% of total labor force)	3,40	4,50	4,40	5,30	6,70
Current account balance (% of GDP)	4,85	6,91	8,44	8,94	10,20
Trade (% of GDP)	120,32	135,55	146,17	154,98	155,55
Foreign direct investment, net inflows (% of GDP)	3,99	-0,92	2,40	0,58	3,76
Foreign direct investment, net outflows (% of GDP)	3,30	8,29	4,49	-0,63	4,90
Total reserves (bn USD)	39,28	46,15	50,41	54,82	46,31
Net capital account (bn USD)	-0,28	-4,22	-1,38	-12,62	-0,50
Central government debt, total (% of GDP)	53,94	57,66	61,79	67,89	-
Domestic credit provided by financial sector (% of GDP)	207,20	197,79	197,91	201,70	193,01
Domestic credit to private sector (% of GDP)	198,75	185,85	185,72	186,88	177,99
Domestic credit to private sector by banks (% of GDP)	198,75	185,84	185,65	186,80	177,90

Source: World Development Indicators

Table A4. Poland: Macroeconomic Indicators

	2009	2010	2011	2012	2013
GDP nominal (tn EUR)	0,31	0,36	0,38	0,39	0,40
GDP nominal (tn USD)	0,44	0,48	0,52	0,50	0,53
GDP per capita, nominal (th EUR)	8,24	9,43	9,79	10,02	10,28
GDP per capita, nominal (th USD)	11,44	12,48	13,61	12,88	13,65
GDP per capita, PPP (th USD)	19,22	20,68	22,11	22,62	23,65
GDP growth (annual %)	2,63	3,70	4,76	1,76	1,67
GDP deflator (annual %)	113,88	115,90	119,58	122,23	123,65
Inflation, consumer prices (annual %)	3,83	2,71	4,26	3,56	1,03
Unemployment, total (% of total labor force)	8,20	9,60	9,60	10,10	10,40
Current account balance (% of GDP)	-3,93	-5,04	-4,91	-3,68	-1,35
Trade (% of GDP)	75,91	82,76	88,03	90,31	90,33
Foreign direct investment, net inflows (% of GDP)	3,30	3,58	3,31	1,35	-0,87
Foreign direct investment, net outflows (% of GDP)	1,36	2,14	0,94	0,28	-0,82
Total reserves (bn USD)	79,52	93,47	97,71	108,90	106,22
Net capital account (bn USD)	7,04	8,62	10,02	10,96	11,97
Central government debt, total (% of GDP)	-	-	-	-	-
Domestic credit provided by financial sector (% of GDP)	60,63	62,61	64,98	63,00	65,77
Domestic credit to private sector (% of GDP)	49,75	51,16	53,92	53,09	53,93
Domestic credit to private sector by banks (% of GDP)	49,75	51,16	53,91	53,09	53,93

Source: World Development Indicators

Table A5. Romania: Macroeconomic Indicators

	2009	2010	2011	2012	2013
GDP nominal (tn EUR)	0,12	0,12	0,13	0,13	0,14
GDP nominal (tn USD)	0,16	0,16	0,18	0,17	0,19
GDP per capita, nominal (th EUR)	5,81	6,15	6,52	6,57	7,15
GDP per capita, nominal (th USD)	8,07	8,14	9,06	8,44	9,50
GDP per capita, PPP (th USD)	15,53	16,25	17,36	18,12	18,99
GDP growth (annual %)	-6,80	-0,94	2,31	0,35	3,50
GDP deflator (annual %)	401,14	423,17	439,70	462,38	479,90
Inflation, consumer prices (annual %)	5,59	6,09	5,79	3,33	3,99
Unemployment, total (% of total labor force)	6,90	7,30	7,40	7,00	7,30
Current account balance (% of GDP)	-4,23	-4,40	-4,56	-4,42	-0,94
Trade (% of GDP)	67,24	76,57	85,40	85,15	84,53
Foreign direct investment, net inflows (% of GDP)	3,00	1,94	1,40	1,55	2,17
Foreign direct investment, net outflows (% of GDP)	0,00	0,15	-	-0,14	-0,03
Total reserves (bn USD)	44,38	48,05	48,04	46,71	48,83
Net capital account (bn USD)	0,93	0,34	0,99	2,46	4,30
Central government debt, total (% of GDP)	-	-	-	-	-
Domestic credit provided by financial sector (% of GDP)	51,63	53,84	54,12	54,27	51,97
Domestic credit to private sector (% of GDP)	46,15	45,26	44,50	44,97	41,42
Domestic credit to private sector by banks (% of GDP)	39,21	39,51	39,49	38,02	34,20

Source: World Development Indicators

Annex B: SME statistics

Table B1 – French SME statistics: breakdown by number of enterprises, number of persons employed and value-added

Number of enterprises

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	2 187 173	2 044 743	2 368 047	2 417 700	2 460 145	2 439 919	2 408 614	1,62%
Small	122 613	123 924	121 159	124 815	132 583	136 364	139 392	2,16%
Medium	20 175	20 023	20 141	20 437	21 393	21 740	21 966	1,43%
Large	4 261	4 341	4 336	4 487	4 734	4 843	4 926	2,45%
Total	2 334 222	2 193 031	2 513 679	2 567 430	2 618 853	2 602 865	2 574 901	1,65%
% of SMEs in Total	99,82%	99,80%	99,83%	99,83%	99,82%	99,81%	99,81%	
All SMEs	2 329 961	2 188 690	2 509 347	2 562 952	2 614 121	2 598 023	2 569 972	1,65%

Source: SBA Fact Sheet

Number of persons employed

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	3 723 958	4 175 293	4 384 016	4 541 823	4 468 370	4 374 942	4 273 518	2,32%
Small	2 499 119	2 792 051	2 878 538	2 858 216	2 898 501	2 915 947	2 916 123	2,61%
Medium	2 066 341	2 280 633	2 340 538	2 299 785	2 306 624	2 295 614	2 273 748	1,61%
Large	4 842 835	5 424 771	5 605 200	5 613 139	5 648 395	5 641 783	5 601 283	2,45%
Total	13 132 253	14 672 751	15 208 234	15 312 855	15 321 888	15 228 285	15 064 673	2,31%
% employed in SMEs sector	63,12%	63,03%	63,14%	63,34%	63,14%	62,95%	62,82%	
All SMEs	8 289 418	9 247 977	9 603 092	9 699 824	9 673 495	9 586 503	9 463 389	2,23%

Source: SBA Fact Sheet

Value-added at factor costs, € billions

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	228 924	195 644	228 230	242 350	248 883	252 906	254 207	1,76%
Small	154 690	144 186	146 629	147 800	147 795	148 178	151 820	-0,31%
Medium	132 158	130 336	130 519	133 101	133 092	133 281	135 275	0,39%
Large	348 724	341 772	366 383	371 163	372 973	376 560	383 662	1,60%
Total	864 495	811 938	871 787	894 443	902 742	910 922	924 964	1,13%
% of value-added in SMEs sector	59,66%	57,91%	57,97%	58,50%	58,68%	58,66%	58,52%	
All SMEs	515 771	470 166	505 378	523 252	529 770	534 365	541 302	0,81%

Source: SBA Fact Sheet

Table B2. German SME statistics: breakdown by number of enterprises, number of persons employed and value-added

Number of enterprises

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	1 554 811	1 679 215	1 696 035	1 755 473	1 794 942	1 809 029	1 851 759	2,96%
Small	266 011	287 667	304 727	326 989	334 057	336 111	344 785	4,42%
Medium	45 995	51 973	52 839	55 116	55 909	56 004	57 771	3,87%
Large	9 727	9 504	9 704	10 532	10 600	10 608	10 717	1,63%
Total	1 876 543	2 028 357	2 063 308	2 148 110	2 195 505	2 211 752	2 265 035	3,19%
% of SMEs in Total	99,48%	99,53%	99,53%	99,51%	99,52%	99,52%	99,53%	
All SMEs	1 866 817	2 018 855	2 053 601	2 137 578	2 184 908	2 201 144	2 254 315	3,19%

Source: SBA Fact Sheet

Number of persons employed

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	4 361 041	4 664 101	4 772 966	4 849 711	4 936 597	4 974 919	5 085 885	2,60%
Small	5 054 682	5 562 350	5 790 918	6 141 506	6 249 399	6 300 111	6 456 561	4,16%
Medium	4 596 565	5 013 423	5 116 121	5 364 286	5 421 232	5 445 644	5 604 904	3,36%
Large	9 193 936	9 060 552	9 214 342	9 847 317	9 899 155	9 941 295	10 068 893	1,53%
Total	23 206 226	24 300 428	24 894 343	26 202 819	26 506 379	26 661 970	27 216 240	2,69%
% employed in SMEs sector	60,38%	62,71%	62,99%	62,42%	62,65%	62,71%	63,00%	
All SMEs	14 012 288	15 239 874	15 680 005	16 355 503	16 607 228	16 720 674	17 147 350	3,42%
Source: SBA Fact Sheet								
% of value-added in SMEs sector	52,36%	55,14%	52,98%	53,78%	54,04%	54,42%	54,88%	
All SMEs	665 524	675 573	687 294	743 580	766 196	792 406	831 694	3,78%

Source: SBA Fact Sheet

Table B3. Dutch SME statistics: breakdown by number of enterprises, number of persons employed and value-added

Number of enterprises

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	521 911	557 490	727 802	751 875	762 436	752 444	748 977	6,21%
Small	46 409	49 561	40 109	42 092	42 365	41 339	40 806	-2,12%
Medium	7 966	9 190	8 404	8 410	8 515	8 304	8 195	0,47%
Large	1 476	1 566	1 554	1 496	1 498	1 435	1 394	-0,95%
Total	577 762	617 807	777 869	803 873	814 814	803 524	799 372	5,56%
% of SMEs in Total	99,74%	99,75%	99,80%	99,81%	99,82%	99,82%	99,83%	
All SMEs	576 286	616 241	776 315	802 377	813 316	802 087	797 978	5,57%

Source: SBA Fact Sheet

Number of persons employed

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	1 388 522	1 341 110	1 519 099	1 507 162	1 508 916	1 506 629	1 510 479	1,41%
Small	1 197 697	1 157 080	1 050 140	1 068 770	1 063 392	1 051 731	1 046 811	-2,22%
Medium	1 060 263	1 022 696	992 900	1 010 503	1 012 328	1 003 497	1 002 794	-0,92%
Large	1 932 395	1 858 442	1 742 081	1 770 521	1 762 140	1 730 210	1 713 452	-1,98%
Total	5 578 878	5 379 329	5 304 219	5 356 957	5 346 775	5 292 067	5 273 540	-0,93%
% employed in SMEs sector	65,36%	65,45%	67,16%	66,95%	67,04%	67,31%	67,51%	
All SMEs	3 646 482	3 520 886	3 562 139	3 586 435	3 584 636	3 561 857	3 560 084	-0,40%

Source: SBA Fact Sheet

Value-added at factor costs, € billions

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	61 433	56 345	63 642	64 171	61 486	60 538	61 854	0,11%
Small	61 979	54 740	55 550	59 159	57 655	57 947	58 621	-0,92%
Medium	65 871	70 256	67 920	72 012	70 809	70 494	72 015	1,50%
Large	107 736	106 673	113 478	115 415	116 484	117 653	118 400	1,59%
Total	297 019	288 014	300 590	310 757	306 435	306 633	310 890	0,76%
% of value-added in SMEs sector	63,73%	62,96%	62,25%	62,86%	61,99%	61,63%	61,92%	
All SMEs	189 284	181 341	187 112	195 342	189 950	188 979	192 490	0,28%

Source: SBA Fact Sheet

Table B4. Polish SME statistics: breakdown by number of enterprises, number of persons employed and value-added

Number of enterprises

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	1 464 089	1 358 017	1 392 002	1 431 525	1 426 780	1 407 427	1 397 391	-0,77%
Small	51 403	47 985	49 758	53 021	52 698	52 676	52 284	0,28%
Medium	15 567	15 559	15 447	15 266	15 016	14 850	14 559	-1,11%
Large	3 134	3 078	3 083	3 009	2 957	2 940	2 862	-1,50%
Total	1 534 193	1 424 639	1 460 290	1 502 821	1 497 449	1 477 896	1 467 097	-0,74%
% of SMEs in Total	99,80%	99,78%	99,79%	99,80%	99,80%	99,80%	99,80%	
All SMEs	1 531 059	1 421 561	1 457 207	1 499 812	1 494 494	1 474 953	1 464 234	-0,74%

Source: SBA Fact Sheet

Number of persons employed

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	3 214 347	3 048 935	2 998 170	3 058 650	3 046 658	3 007 504	2 991 299	-1,19%
Small	1 122 407	1 086 725	1 090 171	1 122 123	1 118 579	1 121 510	1 121 608	-0,01%
Medium	1 629 887	1 621 901	1 607 878	1 577 418	1 559 044	1 550 098	1 536 157	-0,98%
Large	2 701 274	2 617 432	2 644 285	2 593 557	2 567 118	2 570 479	2 537 915	-1,03%
Total	8 667 915	8 374 993	8 340 504	8 351 748	8 291 397	8 249 589	8 186 980	-0,95%
% employed in SMEs sector	68,84%	68,75%	68,30%	68,95%	69,04%	68,84%	69,00%	
All SMEs	5 966 641	5 757 561	5 696 219	5 758 191	5 724 281	5 679 112	5 649 064	-0,91%

Source: SBA Fact Sheet

Value-added at factor costs, € billions

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	31 289	24 207	26 293	29 142	28 497	27 676	28 864	-1,34%
Small	25 442	19 272	21 850	23 888	25 763	27 067	28 270	1,77%
Medium	40 349	32 858	35 712	37 088	38 545	39 292	40 757	0,17%
Large	87 336	72 490	82 064	86 920	91 653	94 156	97 209	1,80%
Total	184 416	148 826	165 920	177 038	184 460	188 193	195 100	0,94%
% of value-added in SMEs sector	52,64%	51,29%	50,54%	50,90%	50,31%	49,97%	50,17%	
All SMEs	97 079	76 336	83 856	90 119	92 805	94 035	97 891	0,14%

Source: SBA Fact Sheet

Table B5. Romanian SME statistics: breakdown by number of enterprises, number of persons employed and value-added

Number of enterprises

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	450 396	439 351	394 660	353 057	358 943	373 944	380 975	-2,75%
Small	44 679	42 130	39 957	43 133	43 501	44 682	45 387	0,26%
Medium	9 506	8 165	7 624	8 148	7 766	7 669	7 496	-3,88%
Large	1 824	1 552	1 495	1 540	1 459	1 455	1 406	-4,25%
Total	506 405	491 198	443 736	405 878	411 670	427 749	435 262	-2,49%
% of SMEs in Total	99,64%	99,68%	99,66%	99,62%	99,65%	99,66%	99,68%	
All SMEs	504 581	489 646	442 241	404 338	410 210	426 295	433 858	-2,49%

Source: SBA Fact Sheet

Number of persons employed

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	1 027 442	966 217	879 419	850 618	872 249	931 091	962 767	-1,08%
Small	907 298	826 836	788 098	850 058	870 714	929 499	968 792	1,10%
Medium	970 225	833 068	776 301	829 318	813 958	848 216	855 924	-2,07%
Large	1 508 798	1 326 260	1 259 481	1 281 509	1 266 321	1 349 456	1 358 963	-1,73%
Total	4 413 763	3 952 381	3 703 299	3 811 503	3 823 240	4 058 264	4 146 444	-1,04%
% employed in SMEs sector	65,82%	66,44%	65,99%	66,38%	66,88%	66,75%	67,23%	
All SMEs	2 904 965	2 626 121	2 443 818	2 529 994	2 556 921	2 708 806	2 787 483	-0,69%

Source: SBA Fact Sheet

Value-added at factor costs, € billions

Size class	2008	2009	2010	2011	2012	2013	2014	CAGR
Micro	8 495	6 439	6 521	6 193	6 470	6 987	7 513	-2,03%
Small	10 264	7 917	7 442	7 679	7 969	8 519	9 199	-1,81%
Medium	12 188	9 241	9 144	9 900	9 895	10 328	10 810	-1,98%
Large	27 897	20 838	23 313	24 483	24 665	26 492	27 583	-0,19%
Total	58 844	44 435	46 419	48 255	49 002	52 321	55 104	-1,09%
% of value-added in SMEs sector	52,59%	53,10%	49,78%	49,26%	49,66%	49,38%	49,94%	
All SMEs	30 947	23 597	23 107	23 772	24 334	25 834	27 521	-1,94%

Source: SBA Fact Sheet

Table B6. SME distribution by sector

	France	2008	2009	2010	2011	2012	2013	2014
B:	Mining and quarrying	2 049	1 836	1 809	1 781	1 825	1 833	1 813
C:	Manufacturing	210 005	205 450	210 664	205 468	211 813	209 083	206 732
D:	Electricity, gas, steam and air condition supply	3 846	6 497	14 316	16 657	18 135	18 216	18 013
E:	Water supply; sewerage, waste management and remediation activities	10 464	6 557	12 119	11 575	12 807	12 861	12 718
F:	Construction	437 502	403 565	456 427	463 814	501 388	495 038	489 693
G:	Wholesale and retail trade; repair of motor vehicles and motorcycle	629 801	594 165	654 936	681 972	685 524	683 022	675 686
H:	Transportation and storage	89 748	85 454	87 734	92 888	93 369	93 030	92 031
I:	Accommodation/ food services	229 140	219 148	239 495	245 795	247 075	246 174	243 529
J:	Information and communication	86 857	80 058	108 354	108 271	109 425	109 442	108 267
L:	Real estate activities	159 699	146 032	149 628	153 658	153 086	151 749	150 119
M:	Professional, scientific and technical activities	328 867	305 131	408 182	414 243	413 247	411 750	407 327
N:	Administrative and support services	141 983	134 797	165 683	166 830	166 427	165 825	164 044

Source: SBA Fact Sheet

	Germany	2008	2009	2010	2011	2012	2013	2014
B:	Mining and quarrying	1 696	1 638	1 811	1 744	1 734	1 715	1 647
C:	Manufacturing	191 269	175 878	205 417	203 738	204 010	204 813	204 070
D:	Electricity, gas, steam and air condition supply	1 427	1 504	1 558	1 604	1 604	1 587	1 575
E:	Water supply; sewerage, waste management and remediation activities	4 479	4 487	4 496	4 772	4 772	4 722	4 798
F:	Construction	236 511	240 540	238 713	242 893	255 431	257 373	265 131
G:	Wholesale and retail trade; repair of motor vehicles and motorcycle	451 995	575 405	564 878	579 942	587 502	588 284	617 871
H:	Transportation and storage	89 021	86 785	86 823	88 932	90 650	90 771	91 951
I:	Accommodation/ food services	172 843	217 057	215 821	221 868	226 154	226 455	228 139
J:	Information and communication	83 625	83 183	85 558	92 362	95 488	96 938	97 799
L:	Real estate activities	184 452	172 583	174 453	196 773	199 346	201 667	200 598
M:	Professional, scientific and technical activities	332 960	337 307	347 485	372 001	385 872	392 274	401 471
N:	Administrative and support services	116 539	122 488	126 588	130 949	132 345	134 545	139 265

Source: SBA Fact Sheet

	Netherlands	2008	2009	2010	2011	2012	2013	2014
B:	Mining and quarrying	312	311	305	306	318	317	329
C:	Manufacturing	43 034	45 187	50 361	50 717	52 977	52 389	51 692
D:	Electricity, gas, steam and air condition supply	541	673	661	687	746	746	768
E:	Water supply; sewerage, waste management and remediation activities	1 199	1 250	1 131	1 147	1 197	1 196	1 206
F:	Construction	99 811	112 067	127 553	128 068	134 466	128 388	126 098
G:	Wholesale and retail trade; repair of motor vehicles and motorcycle	159 523	163 875	193 097	195 712	196 099	195 434	196 678
H:	Transportation and storage	25 186	26 019	29 769	30 107	30 082	29 981	29 933
I:	Accommodation/ food services	36 056	38 513	44 319	44 557	45 344	45 189	45 837
J:	Information and communication	28 645	31 642	52 865	56 923	57 863	57 440	57 525
L:	Real estate activities	19 190	19 626	29 890	30 555	29 174	28 245	27 714
M:	Professional, scientific and technical activities	129 398	140 866	201 569	216 211	218 164	216 276	214 245
N:	Administrative and support services	33 391	36 212	44 795	47 387	46 886	46 486	45 953

Source: SBA Fact Sheet

	Poland	2008	2009	2010	2011	2012	2013	2014
B:	Mining and quarrying	1 349	1 503	1 745	1 977	1 911	1 977	1 976
C:	Manufacturing	188 032	174 225	174 842	177 623	173 231	175 659	173 567
D:	Electricity, gas, steam and air condition supply	1 703	1 992	1 973	2 436	2 662	2 757	2 765
E:	Water supply; sewerage, waste management and remediation activities	5 302	5 886	5 699	6 241	6 724	6 957	7 176
F:	Construction	237 931	226 193	232 830	239 048	233 561	221 945	218 090
G:	Wholesale and retail trade; repair of motor vehicles and motorcycle	579 115	506 827	524 412	525 337	516 188	510 826	499 408
H:	Transportation and storage	148 546	131 766	138 442	145 744	145 046	143 538	142 502
I:	Accommodation/ food services	63 185	57 677	49 962	47 833	49 410	48 897	47 705
J:	Information and communication	48 534	51 611	55 212	59 845	63 161	65 614	67 486
L:	Real estate activities	30 751	34 851	36 099	40 249	40 039	36 405	36 665
M:	Professional, scientific and technical activities	184 930	181 941	185 874	200 269	208 232	206 501	211 071
N:	Administrative and support services	41 681	47 089	50 117	53 210	54 329	53 877	55 823

Source: SBA Fact Sheet

	Romania	2008	2009	2010	2011	2012	2013	2014
B:	Mining and quarrying	1 061	1 215	1 150	1 091	1 079	1 214	1 195
C:	Manufacturing	56 402	53 908	48 211	44 321	45 194	50 827	52 129
D:	Electricity, gas, steam and air condition supply	451	556	835	874	997	1 127	1 172
E:	Water supply; sewerage, waste management and remediation activities	2 295	2 289	2 392	2 560	2 842	3 202	3 475
F:	Construction	59 194	59 990	49 221	43 377	44 322	43 862	42 702
G:	Wholesale and retail trade; repair of motor vehicles and motorcycle	213 944	197 439	181 753	164 951	166 126	168 655	169 324
H:	Transportation and storage	34 382	34 967	32 678	31 616	32 217	32 709	33 579
I:	Accommodation/ food services	23 631	26 151	24 379	22 186	22 943	23 293	24 475
J:	Information and communication	19 990	19 588	17 625	16 260	16 668	17 496	18 073
L:	Real estate activities	14 760	15 101	13 579	12 295	12 139	12 540	12 751
M:	Professional, scientific and technical activities	59 132	60 369	54 311	49 499	49 701	54 000	56 239
N:	Administrative and support services	19 339	18 073	16 107	15 308	15 982	17 370	18 744

Source: SBA Fact Sheet

Table B7. Number of MSMEs by industry and size as of 2014, % of total SMEs

	Germany	Micro	Small	Medium	All SMEs
B:	Mining and quarrying	0,05%	0,19%	0,16%	0,07%
C:	Manufacturing	6,94%	17,52%	26,27%	9,05%
D:	Electricity, gas, steam and air condition supply	0,04%	0,14%	0,69%	0,07%
E:	Water supply; sewerage, waste management and remediation activities	0,12%	0,57%	1,11%	0,21%
F:	Construction	11,65%	13,34%	5,91%	11,76%
G:	Wholesale and retail trade; repair of motor vehicles and motorcycle	27,20%	28,65%	26,63%	27,41%
H:	Transportation and storage	3,57%	6,26%	7,41%	4,08%
I:	Accommodation/ food services	9,45%	14,21%	7,18%	10,12%
J:	Information and communication	4,59%	3,00%	4,39%	4,34%
L:	Real estate activities	10,60%	1,08%	1,00%	8,90%
M:	Professional, scientific and technical activities	19,68%	9,73%	6,13%	17,81%
N:	Administrative and support services	6,12%	5,32%	13,12%	6,18%

Source: SBA Fact Sheet

	France	Micro	Small	Medium	All SMEs
B:	Mining and quarrying	0,05%	0,38%	0,37%	0,07%
C:	Manufacturing	7,10%	20,35%	33,20%	8,04%
D:	Electricity, gas, steam and air condition supply	0,73%	0,27%	0,31%	0,70%
E:	Water supply; sewerage, waste management and remediation activities	0,45%	1,15%	1,76%	0,49%
F:	Construction	18,82%	24,43%	11,19%	19,05%

G:	Wholesale and retail trade; repair of motor vehicles and motorcycle	26,70%	20,10%	20,57%	26,29%
H:	Transportation and storage	3,44%	5,36%	8,24%	3,58%
I:	Accommodation/ food services	9,63%	7,86%	2,47%	9,48%
J:	Information and communication	4,23%	3,79%	5,10%	4,21%
L:	Real estate activities	6,14%	1,28%	1,89%	5,84%
M:	Professional, scientific and technical activities	16,31%	9,23%	7,50%	15,85%
N:	Administrative and support services	6,41%	5,80%	7,40%	6,38%

Source: SBA Fact Sheet

	Netherlands	Micro	Small	Medium	All SMEs
B:	Mining and quarrying	0,04%	0,10%	0,33%	0,04%
C:	Manufacturing	5,92%	13,59%	22,00%	6,48%
D:	Electricity, gas, steam and air condition supply	0,09%	0,08%	0,37%	0,10%
E:	Water supply; sewerage, waste management and remediation activities	0,12%	0,48%	1,11%	0,15%
F:	Construction	16,02%	12,77%	11,43%	15,80%
G:	Wholesale and retail trade; repair of motor vehicles and motorcycle	24,32%	30,73%	24,05%	24,65%
H:	Transportation and storage	3,53%	6,74%	8,98%	3,75%
I:	Accommodation/ food services	5,62%	8,44%	3,31%	5,74%
J:	Information and communication	7,35%	5,03%	5,32%	7,21%
L:	Real estate activities	3,62%	1,21%	1,70%	3,47%
M:	Professional, scientific and technical activities	27,83%	12,42%	8,59%	26,85%
N:	Administrative and support services	5,54%	8,40%	12,81%	5,76%

Source: SBA Fact Sheet

	Poland	Micro	Small	Medium	All SMEs
B:	Mining and quarrying	0,12%	0,38%	0,63%	0,13%
C:	Manufacturing	10,94%	28,09%	40,94%	11,85%
D:	Electricity, gas, steam and air condition supply	0,17%	0,44%	1,35%	0,19%
E:	Water supply; sewerage, waste management and remediation activities	0,42%	1,63%	3,39%	0,49%
F:	Construction	14,96%	14,44%	10,63%	14,89%
G:	Wholesale and retail trade; repair of motor vehicles and motorcycle	34,35%	31,10%	21,76%	34,11%
H:	Transportation and storage	9,93%	5,71%	5,48%	9,73%
I:	Accommodation/ food services	3,24%	4,03%	1,96%	3,26%
J:	Information and communication	4,70%	2,74%	2,87%	4,61%
L:	Real estate activities	2,48%	2,96%	2,87%	2,50%
M:	Professional, scientific and technical activities	14,86%	5,51%	3,55%	14,42%
N:	Administrative and support services	3,84%	2,97%	4,55%	3,81%

Source: SBA Fact Sheet

	Romania	Micro	Small	Medium	All SMEs
B:	Mining and quarrying	0,25%	0,49%	0,49%	0,28%
C:	Manufacturing	10,34%	22,48%	34,04%	12,02%
D:	Electricity, gas, steam and air condition supply	0,26%	0,27%	0,57%	0,27%
E:	Water supply; sewerage, waste management and remediation activities	0,71%	1,29%	2,23%	0,80%
F:	Construction	8,92%	17,00%	13,50%	9,84%
G:	Wholesale and retail trade; repair of motor vehicles and motorcycle	40,43%	30,40%	19,94%	39,03%
H:	Transportation and storage	7,91%	6,54%	6,50%	7,74%
I:	Accommodation/ food services	5,45%	7,49%	4,03%	5,64%
J:	Information and communication	4,32%	2,91%	3,67%	4,17%
L:	Real estate activities	3,16%	1,39%	0,89%	2,94%
M:	Professional, scientific and technical activities	14,06%	5,14%	4,51%	12,96%
N:	Administrative and support services	4,18%	4,60%	9,62%	4,32%

Source: SBA Fact Sheet

Annex C: Financial Sector Indicators

Table C1. France: consolidated banking data

Number of credit institutions	2009	2010	2011	2012	2013
Stand-alone credit institutions	-	-	-	-	-
Banking groups	18	17	17	17	18
Credit institutions	18	17	17	17	18
Domestic credit institutions	15	14	14	14	16
Foreign-controlled subsidiaries and branches	3	3	3	3	2
Total assets of credit institutions in the sample (% of GDP)					
Domestic credit institutions	314,66	308,87	313,28	314,84	291,16
of which:					
Large	301,65	295,95	299,85	301,93	285,85
Medium-sized	12,82	12,70	13,37	12,84	5,27
Small	0,19	0,22	0,06	0,07	0,05
Foreign-controlled subsidiaries and branches	11,08	10,62	10,83	10,85	8,93
Selected balance sheet indicators (% of GDP)					
Total assets	325,74	319,49	324,10	325,69	300,09
Total loans and advances	178,07	180,22	176,14	173,70	171,68
Total deposits	156,85	154,13	152,22	150,95	149,82
Total liabilities	310,02	303,57	308,73	309,52	283,48
Total equity	15,72	15,92	15,37	16,17	16,61
Selected balance sheet indicators (% of the total assets)					
Total loans and advances	54,67	56,41	54,35	53,33	57,21
Total deposits	48,15	48,24	46,97	46,35	49,92
Total equity	4,83	4,98	4,74	4,97	5,53
Profitability and efficiency					
Return on equity (%)	4,68	8,35	5,59	3,42	6,00
Return on assets (%)	0,23	0,42	0,27	0,17	0,33
Capital adequacy:					
Overall solvency ratio	12,24	12,56	12,23	13,99	15,01
Tier 1 ratio	10,12	10,76	10,94	13,33	13,16
Capital buffer (%)	4,24	4,56	4,23	5,99	7,01
Total capital requirements (€ bn)	182,01	184,33	189,80	164,16	167,08
Source: Eurostat					

Table C2. Germany: consolidated banking data

Number of credit institutions	2009	2010	2011	2012	2013
Stand-alone credit institutions	1 750	1 709	1 700	1 675	1 647
Banking groups	50	40	37	34	35
Credit institutions	1 800	1 749	1 737	1 709	1 682
Domestic credit institutions	1 709	1 666	1 655	1 629	1 606
Foreign-controlled subsidiaries and branches	91	83	82	80	76
Total assets of credit institutions in the sample (% of GDP)					
Domestic credit institutions of which:	316,17	291,80	280,72	263,91	229,83
Large	205,83	173,99	162,21	149,22	116,68
Medium-sized	85,45	89,86	91,38	87,09	86,74
Small	24,89	27,95	27,13	27,60	26,41
Foreign-controlled subsidiaries and branches	35,05	14,72	15,51	11,24	9,91
Selected balance sheet indicators (% of GDP)					
Total assets	351,21	306,53	296,23	275,15	239,74
Total loans and advances	186,10	157,67	175,22	134,35	127,25
Total deposits	193,29	164,78	159,52	150,75	142,36
Total liabilities	338,00	294,64	284,71	263,45	227,91
Total equity	13,21	11,88	11,53	11,70	11,83
Selected balance sheet indicators (% of the total assets)					
Total loans and advances	52,99	51,44	59,15	48,83	53,08
Total deposits	55,04	53,76	53,85	54,79	59,38
Total equity	3,76	3,88	3,89	4,25	4,93
Profitability and efficiency					
Return on equity (%)	(2,17)	1,88	2,17	1,11	1,26
Return on assets (%)	(0,08)	0,07	0,08	0,05	0,06
Capital adequacy:					
Overall solvency ratio	14,27	15,28	15,78	17,39	18,67
Tier 1 ratio	10,63	11,41	11,72	13,80	15,19
Capital buffer (%)	6,27	7,28	7,78	9,39	10,67
Total capital requirements (€ bn)	238,74	206,81	206,24	195,09	185,38
Source: Eurostat					

Table C3. Netherlands: consolidated banking data

Number of credit institutions	2009	2010	2011	2012	2013
Stand-alone credit institutions	89	84	87	84	86
Banking groups	4	5	5	5	5
Credit institutions	93	89	92	89	91
Domestic credit institutions	30	28	29	27	29
Foreign-controlled subsidiaries and branches	63	61	63	62	62
Total assets of credit institutions in the sample (% of GDP)					
Domestic credit institutions of which:	409,57	374,33	391,01	376,90	350,30
Large	347,87	311,26	324,04	309,43	285,25
Medium-sized	61,34	62,61	66,52	66,98	62,23
Small	0,36	0,46	0,45	0,49	2,82
Foreign-controlled subsidiaries and branches	19,17	55,31	49,50	42,66	28,21
Selected balance sheet indicators (% of GDP)					
Total assets	428,74	429,64	440,51	419,56	378,51
Total loans and advances	300,72	306,34	298,43	289,63	278,89
Total deposits	231,60	239,00	238,41	224,89	215,02
Total liabilities	410,22	411,12	422,31	400,74	360,29
Total equity	18,52	18,53	18,20	18,83	18,22
Selected balance sheet indicators (% of the total assets)					
Total loans and advances	70,14	71,30	67,75	69,03	73,68
Total deposits	54,02	55,63	54,12	53,60	56,81
Total equity	4,32	4,31	4,13	4,49	4,81
Profitability and efficiency					
Return on equity (%)	(0,30)	7,47	6,05	4,12	5,00
Return on assets (%)	(0,01)	0,33	0,25	0,18	0,24
Capital adequacy:					
Overall solvency ratio	14,96	14,11	13,74	14,49	15,27
Tier 1 ratio	12,48	11,84	11,83	12,30	12,86
Capital buffer (%)	6,96	6,11	5,74	6,49	7,27
Total capital requirements (€ bn)	73,78	79,19	81,11	77,34	72,55
Source: Eurostat					

Table C4. Poland: consolidated banking data

Number of credit institutions	2009	2010	2011	2012	2013
Stand-alone credit institutions	641	638	638	638	634
Banking groups	1	4	2	2	3
Credit institutions	642	642	640	640	637
Domestic credit institutions	586	585	588	585	583
Foreign-controlled subsidiaries and branches	56	57	52	55	54
Total assets of credit institutions in the sample (% of GDP)					
Domestic credit institutions of which:	26,51	27,62	28,52	33,04	33,56
Large	-	-	-	-	-
Medium-sized	20,63	21,56	22,95	26,35	26,30
Small	5,87	6,06	5,57	6,68	7,27
Foreign-controlled subsidiaries and branches	57,27	55,75	50,28	53,74	53,18
Selected balance sheet indicators (% of GDP)					
Total assets	83,78	83,37	78,80	86,77	86,74
Total loans and advances	58,95	57,73	56,56	61,05	60,79
Total deposits	57,56	57,38	54,16	58,80	59,20
Total liabilities	74,76	75,02	70,84	77,23	77,15
Total equity	9,02	8,35	7,96	9,55	9,60
Selected balance sheet indicators (% of the total assets)					
Total loans and advances	70,36	69,24	71,78	70,35	70,07
Total deposits	68,70	68,83	68,73	67,76	68,25
Total equity	10,77	10,02	10,10	11,00	11,06
Profitability and efficiency					
Return on equity (%)	7,02	9,98	12,03	10,76	9,97
Return on assets (%)	0,75	1,00	1,24	1,20	1,12
Capital adequacy:					
Overall solvency ratio	13,46	14,01	13,29	14,87	15,57
Tier 1 ratio	12,10	12,59	11,88	13,14	13,96
Capital buffer (%)	5,46	6,01	5,29	6,87	7,57
Total capital requirements (€ bn)	13,79	15,22	15,77	17,74	17,74
Source: Eurostat					

Table C5. Romania: consolidated banking data

Number of credit institutions	2009	2010	2011	2012	2013
Stand-alone credit institutions	30	30	28	27	27
Banking groups	9	9	10	10	10
Credit institutions	39	39	38	37	37
Domestic credit institutions	7	7	7	6	6
Foreign-controlled subsidiaries and branches	32	32	31	31	31
Total assets of credit institutions in the sample (% of GDP)					
Domestic credit institutions of which:	9,60	9,48	10,50	6,32	5,62
Large	-	-	-	-	-
Medium-sized	7,94	7,99	8,83	4,54	4,16
Small	1,66	1,48	1,68	1,79	1,47
Foreign-controlled subsidiaries and branches	57,07	55,19	52,35	55,66	50,76
Selected balance sheet indicators (% of GDP)					
Total assets	66,68	64,66	62,85	61,99	56,38
Total loans and advances	44,44	41,40	39,54	37,37	32,76
Total deposits	53,38	50,64	49,08	48,94	46,31
Total liabilities	60,60	58,26	56,55	55,60	50,55
Total equity	6,07	6,41	6,30	6,39	5,84
Selected balance sheet indicators (% of the total assets)					
Total loans and advances	66,64	64,02	62,92	60,29	58,11
Total deposits	80,05	78,30	78,10	80,98	84,12
Total equity	9,11	9,91	10,02	10,31	10,35
Profitability and efficiency					
Return on equity (%)	6,33	2,58	0,23	(7,15)	0,01
Return on assets (%)	0,56	0,30	0,11	(0,64)	0,08
Capital adequacy:					
Overall solvency ratio	15,76	16,66	16,81	17,24	18,79
Tier 1 ratio	12,91	14,07	14,22	14,80	15,77
Capital buffer (%)	7,76	8,66	8,81	9,24	10,79
Total capital requirements (€ bn)	3,94	4,04	4,09	3,77	3,46
Source: Eurostat					

Annex D: SME Supply & Demand

Table D1. Sampling Weights per Firm Size

Table D2. Sampling Weights per Firm Size

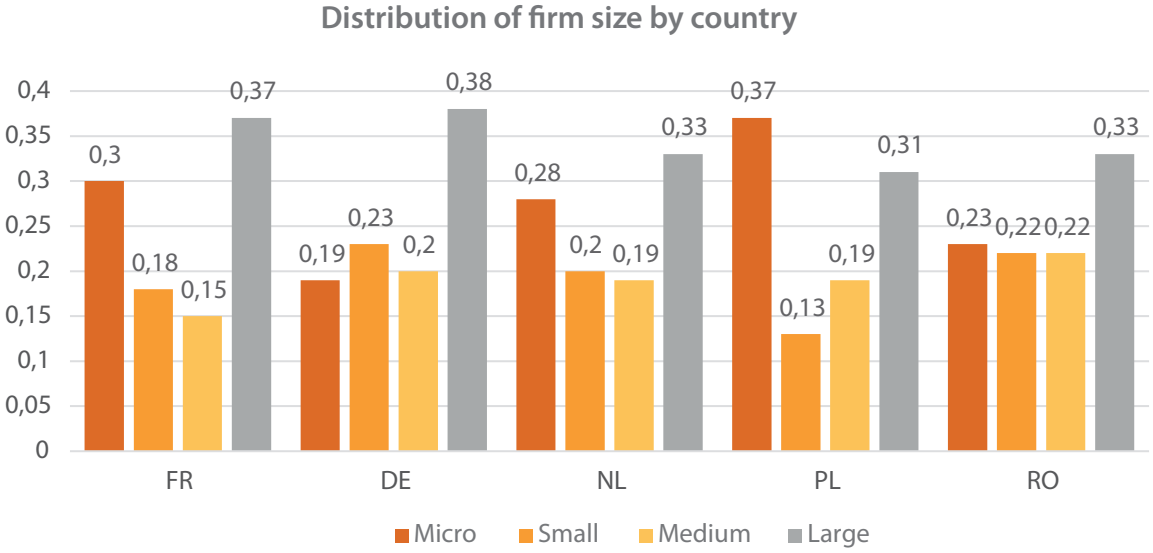


Table D3. Loan size categories (attempted)

Country	% of respondents	<25K	25K - 100K	100K - 250K	250K - 1000K	1000K - 4000K	Average Loan Size attempted in 000 Euros	Average Loan Size attempted in mil Euros	Weighted Average Loan Attempted in EUR mil
		12	62,5	175	625	2500			
France									
	Micro	32%	34%	24%	7%	3%	191	0,19	0,19
	Small	8%	40%	18%	18%	8%	370	0,37	0,40
	Medium	4%	11%	18%	44%	23%	879	0,88	0,88
Germany									
	Micro	34%	29%	11%	15%		133	0,13	0,15
	Small	8%	47%	22%	8%	16%	512	0,51	0,51
	Medium	0%	0%	0%	79%		494	0,49	0,63
Netherlands (wave 1)									
	Micro	24%	17%	32%	27%	0%	238	0,24	0,24
	Small	0%	12%	43%	33%	12%	594	0,59	0,59
	Medium	0%	10%	0%	50%	40%	1 319	1,32	1,32
Poland									
	Micro	54%	19%	9%	10%	4%	186	0,19	0,19
	Small	0%	43%	0%	29%	29%	919	0,92	0,92
	Medium	0%	0%	73%	10%	7%	378	0,38	0,42

Country	% of respond-ents	<25K 12	25K - 100K 62,5	100K - 250K 175	250K - 1000K 625	1000K - 4000K 2500	Average Loan Size attempted in 000 Euros	Average Loan Size attempted in mil Euros	Weighted Average Loan Attempted in EUR mil
Romania									
	Micro	42%	58%	0%	0%	0%	41	0,04	0,04
	Small	41%	0%	59%	0%	0%	108	0,11	0,11
	Medium	23%	0%	0%	43%	34%	1 111	1,11	1,11
UK									
	Micro	88%	12%	0%	0%	0%	18	0,02	0,02
	Small	29%	10%	40%	0%	21%	596	0,60	0,60
	Medium	0%	0%	0%	35%	65%	1 850	1,85	1,85
Netherlands (wave 2)									
	Micro	27%	0%	50%	23%	0%	235	0,24	0,24
	Small	0%	45%	12%	42%	0%	315	0,32	0,32
	Medium	0%	0%	0%	100%	0%	625	0,63	0,63

Table D4. Loan size categories (obtained)

Country	% of respond-ents	<25K 12	25K - 100K 62,5	100K - 250K 175	250K - 1000K 625	1000K - 4000K 2500	Average Loan Size obtained in 000 Euros	Average Loan Size obtained in mil Euros	Weighted Average Loan Attempted in EUR mil
France									
	Micro	31%	45%	11%	8%	2%	144	0,14	0,15
	Small	17%	39%	24%	13%	7%	321	0,32	0,32
	Medium	1%	20%	30%	36%	11%	574	0,57	0,58
Germany									
	Micro	35%	34%	15%	11%	5%	250	0,25	0,25
	Small	8%	21%	27%	33%	11%	549	0,55	0,55
	Medium	2%	16%	11%	32%	39%	1 212	1,21	1,21
Netherlands (wave 1)									
	Micro	49%	19%	0%	13%	19%	580	0,58	0,58
	Small	11%	31%	28%	31%	0%	260	0,26	0,26
	Medium	0%	0%	15%	13%	72%	1 906	1,91	1,91
Poland									
	Micro	45%	32%	12%	3%	0%	62	0,06	0,07
	Small	16%	44%	14%	17%	4%	263	0,26	0,28
	Medium	1%	18%	11%	27%	23%	776	0,78	0,95

Country	% of respond-ents	<25K 12	25K - 100K 62,5	100K - 250K 175	250K - 1000K 625	1000K - 4000K 2500	Average Loan Size obtained in 000 Euros	Average Loan Size obtained in mil Euros	Weighted Average Loan Attempted in EUR mil
Romania									
	Micro	32%	34%	34%	0%	0%	85	0,09	0,09
	Small	23%	21%	23%	19%	10%	422	0,42	0,44
	Medium	4%	30%	18%	26%	19%	673	0,67	0,70
UK									
	Micro	33%	39%	11%	0%	17%	481	0,48	0,48
	Small	17%	27%	12%	24%	20%	684	0,68	0,68
	Medium	0%	6%	20%	26%	48%	1 411	1,41	1,41
Netherlands (wave 2)									
	Micro	9%	15%	44%	24%	8%	441	0,44	0,44
	Small	0%	9%	13%	27%	51%	1 468	1,47	1,47
	Medium	0%	10%	0%	35%	55%	1 610	1,61	1,61

Table D5. Loan Size Categories (obtained) – All 100%

Country		Loan Size Categories (obtained) -- ALL 100%					Weighted Average Loan Size obtained in mil Euros
	% of respondents	<25K	25K - 100K	100K - 250K	250K - 1000K	1000K - 4000K	
		12	62,5	175	625	2500	
France							
	Micro	31%	44%	12%	8%	2%	0,16
	Small	19%	37%	23%	14%	7%	0,32
	Medium	2%	19%	29%	38%	11%	0,59
Germany							
	Micro	38%	34%	15%	9%	4%	0,20
	Small	7%	21%	31%	28%	13%	0,57
	Medium	2%	13%	13%	32%	41%	1,25
Netherlands (wave 1)							
	Micro	100%	0%	0%	0%	0%	0,01
	Small	15%	40%	25%	20%	0%	0,20
	Medium	0%	0%	0%	19%	81%	2,15
Poland							
	Micro	47%	39%	10%	4%	0%	0,07
	Small	19%	43%	13%	20%	5%	0,30
	Medium	2%	22%	13%	34%	29%	0,97

Country		Loan Size Categories (obtained) -- ALL 100%					Weighted Average Loan Size obtained in mil Euros
	% of respondents	<25K	25K - 100K	100K - 250K	250K - 1000K	1000K - 4000K	
		12	62,5	175	625	2500	
Romania							
	Micro	23%	50%	27%	0%	0%	0,08
	Small	19%	40%	19%	10%	10%	0,39
	Medium	4%	27%	17%	30%	22%	0,78
UK							
	Micro	34%	34%	13%	5%	14%	0,42
	Small	13%	29%	16%	22%	20%	0,68
	Medium	0%	6%	21%	24%	49%	1,43
Netherlands (wave 2)							
	Micro	13%	23%	26%	25%	13%	0,53
	Small	0%	10%	7%	29%	54%	1,56
	Medium	0%	19%	0%	30%	52%	1,49

Table D6. Loan Size Categories (obtained), more than 75% (excess 12%)

Country	% of respondents	Loan Size Categories (obtained) -- MORE THAN 75% (EXCESS 12%) <25K	25K - 100K	100K - 250K	250K - 1000K	1000K - 4000K	Weighted Average Loan Size obtained in mil Euros	Excess Demand (+12%), in mil Euros
		12	62,5	175	625	2500		
France								
	Micro	57%	33%	0%	10%	0%	0,09	0,1
	Small	0%	82%	0%	0%	18%	0,50	0,56
	Medium	0%	0%	0%	34%	66%	1,87	2,1
Germany								
	Micro	0%	54%	18%	28%	0%	0,24	0,27
	Small	0%	36%	0%	64%	0%	0,42	0,47
	Medium	0%	66%	0%	0%	34%	0,90	1,01
Netherlands (wave 1)								
	Micro	0%	0%	0%	0%	0%	-	-
	Small	0%	0%	0%	100%	0%	0,63	0,7
	Medium	0%	0%	100%	0%	0%	0,18	0,2
Poland								
	Micro	56%	44%	0%	0%	0%	0,03	0.04
	Small	0%	0%	100%	0%	0%	0,18	0,2
	Medium	0%	23%	39%	19%	19%	0,68	0,76

Country	% of respondents	Loan Size Categories (obtained) -- MORE THAN 75% (EXCESS 12%) <25K	25K - 100K	100K - 250K	250K - 1000K	1000K - 4000K	Weighted Average Loan Size obtained in mil Euros	Excess Demand (+12%), in mil Euros
		12	62,5	175	625	2500		
Romania								
	Micro	0%	0%	100%	0%	0%	0,18	0,2
	Small	52%	0%	48%	0%	0%	0,09	0,1
	Medium	0%	100%	0%	0%	0%	0,06	0,07
UK								
	Micro	0%	0%	0%	0%	100%	2,50	2,8
	Small	0%	0%	0%	60%	40%	1,38	1,55
	Medium	0%	0%	0%	100%	0%	0,63	0,7
Netherlands (wave 2)								
	Micro	0%	0%	100%	0%	0%	0,18	0,2
	Small	0%	0%	0%	0%	0%	-	-
	Medium	0%	0%	0%	66%	34%	1,27	1,42

Table D7. Loan Size Categories (obtained), less than 75% (excess 50%)

Country	Loan Size Categories (obtained) -- LESS THAN 75% (EXCESS 50%)							
	% of respondents	<25K	25K - 100K	100K - 250K	250K - 1000K	1000K - 4000K	Weighted Average Loan Size obtained in mil Euros	Excess Demand (+50%), in mil Euros
		12	62,5	175	625	2500		
France								
	Micro	8%	61%	18%	13%	0%	0,15	0,22
	Small	0%	43%	57%	0%	0%	0,13	0,19
	Medium	0%	32%	52%	16%	0%	0,21	0,32
Germany								
	Micro	69%	0%	0%	0%	31%	0,79	1,18
	Small	40%	0%	0%	60%	0%	0,38	0,57
	Medium	0%	32%	0%	51%	17%	0,76	1,14
Netherlands (wave 1)								
	Micro	0%	37%	0%	25%	37%	1,12	1,67
	Small	0%	0%	100%	0%	0%	0,18	0,26
	Medium	0%	0%	39%	0%	61%	1,6	2,39
Poland								
	Micro	56%	0%	44%	0%	0%	0,08	0,12
	Small	0%	100%	0%	0%	0%	0,06	0,09
	Medium	0%	20%	0%	29%	20%	1,01	1,51

Country		Loan Size Categories (obtained) -- LESS THAN 75% (EXCESS 50%)						
	% of respondents	<25K	25K - 100K	100K - 250K	250K - 1000K	1000K - 4000K	Weighted Average Loan Size obtained in mil Euros	Excess Demand (+50%), in mil Euros
		12	62,5	175	625	2500		
Romania								
	Micro	100%	0%	0%	0%	0%	0,01	0,02
	Small	17%	0%	17%	50%	17%	0,76	1,14
	Medium	0%	47%	53%	0%	0%	0,12	0,18
UK								
	Micro	0%	100%	0%	0%	0%	0,06	0,09
	Small	60%	40%	0%	0%	0%	0,03	0,05
	Medium	0%	0%	0%	0%	0%	-	-
Netherlands (wave 2)								
	Micro	0%	0%	69%	31%	0%	0,32	0,47
	Small	0%	0%	100%	0%	0%	0,18	0,26
	Medium	0%	0%	0%	0%	100%	2,5	3,75

Table D8. Share of Dutch SMEs over surveys in 2013 and 2012

Share of SMEs by loan size		Applied and Obtaines a Loan									Applied and Obtained or Rejected					
		100% of a loan			more than 75% (12% excess demand)			up to 75% (50% excess demand)			Applied and Obtained			Applied and Got Rejected for a loan		
		2013s2	2013s1	2012	2013s2	2013s1	2012	2013s2	2013s1	2012	2013s2	2013s1	2012	2013s2	2013s1	2012
Weights within groups for Method #1, Method #2	Micro	48,56%	69,50%	45,20%	0,00%	7,28%	18,27%	51,44%	23,18%	36,53%	30,47%	46,32%	41,79%	69,53%	53,68%	58,21%
	Small	75,78%	86,30%	76,95%	8,95%	7,85%	7,68%	15,27%	5,87%	15,36%	44,45%	47,28%	71,67%	55,55%	52,73%	28,33%
	Medium	71,27%	56,90%	56,01%	5,97%	26,36%	29,12%	22,75%	16,79%	14,87%	62,17%	85,24%	92,04%	37,83%	14,76%	7,96%

Note: Def: Average loan demanded (EUR mil) is a variable derived from the SAFE ECB Survey (April-Sept, 2014), details in the note (3). In Method #2 in order to derive the excess demand for those firms that applied and did not get the ful loan demanded, we firstly derive the obtained loan weighted average (explained in note (3)) and add additional 12% and 50% of that obtained loan respectively. In Method #3 we calculate weights using firms that applied and obtained a loan and firms that applied and gor rejected. Average loans for both categories in Method #3 we calculated as explained in note (3). Source: SAFE ECB, 2015.

Table D9. Netherlands SME Financing Demand Survey responses for 2013 and 2012

SME Loan Demand, % of SME needing a loan	2013s2	2013s1	2012
Micro	43,39%	49,57%	53,33%
Small	52,69%	61,45%	61,21%
Medium	58,20%	65,16%	71,57%
SME Equity Demand, % of SME needing equity			
Micro	5,72%	8,16%	4,55%
Small	2,50%	8,77%	8,11%
Medium	4,44%	14,45%	13,15%

Def % of SMEs needing a loan - is a share of fimms that answered 'Yes' to the SAFE ECB Survey question regarding the neediness for bank of bark loans [equity] in doing business. However, in suverys 2013s1 and 2012 this queston has different wording. Tuming to the financing structure of your fim, to finance normal day-to-day business iperations or more speciic projects or investments, you can use internal funds and external financing. For each of the following sources of finarcing [bank loan or equity], could you please say whether you used them during the past 6 months, did not use them but have experience with them, or did not use them because this source of financing has never been relevant to your firm? Used in the past 6 morths; - Did not use in the past 6 months, but have experience with this source of financing; - Did not use as this source of financing has never been relevant to my fim [INSTRUMENT IS NOT APPLICABLE TO MY FIRM]. The sum of weights of first two answers were taken as "yes".

Souce: SAFE ECB, 2015

Table D10. SME loan and equity demand estimate in the Netherlands, second half of year 2013

		Method #1		Method #2		Excess Demand #1		Method #3	Excess Demand #2	Definition and sources
SME Loan Demand										
A. % of SME needing a loan										
Micro		43,39%			43,39%			43,39%		Def: % of SMEs needing a loan - is a share of firms that answered 'Yes' to the SAFE ECB Survey question regarding the neediness for bank of bank loans [equity] in doing business , details in note (1).Source: SAFE ECB (April - Sept, 2014), 2015.
Small		52,69%			52,69%			52,69%		
Medium		58,20%			58,20%			58,20%		
		Applied and Obtained a Loan	Applied and Obtained a Loan				Applied and Obtained (with excess demand)	Applied and Got Rejected for a Loan		Def: Average loan demanded (€ mil) is a variable derived from the SAFE ECB Survey (April-Sept, 2014), details in the note (3). In Method #2 in order to derive the excess demand for those firms that applied and did not ge the full loan demanded, we firstly derive the obtained loan weighted average (explained in note (3)) and add additional 12% and 50% of that obtained laon respectively. Table with the full details of mid points and weights is in Appendix Table.... In Method #3 we calculate weights using firms that applied and obtained a loan and firms that applied and got rejected. Average loans for both categories in Method#3 were calculated as explained in note (3).Source: SAFE ECB, 2015.
			100% of a loan	more than 75% (12% excess demand)	up to 75% (50% excess demand)					
Weights within groups for Method#1, Method#2	Micro		48,56%	0,00%	51,44%		30,47%	69,53%		
	Small		75,78%	8,95%	15,27%		44,45%	55,55%		
	Medium		71,27%	5,97%	22,75%		62,17%	37,83%		
B. Average loan demanded (€ mil)					Weighted average loan demanded				Weighted average loan demanded	Def: Weighted average loan-in Methods #2 and #3 we use within group shares, shares of firms by different loan size obtained, share of firms which obtained and were rejected for a loan, respectivly. Average loan demanded (€ mil) - variable derived from the SAFE ECB Survey, details in note (3). In Method #2 we derive excess demand, by adding additional 12% and 50% of a the average loan in corresponding groups (Appendix ??, Table??).Similarlly, In Method #3 we calculate weights of firms that applied and obtained a loan, and got rejected (Appendix ??, Table??). Average loans for both categories in Method#3 were calculated as explained in note (3). Source: SAFE ECB, 2015.
	Micro	0,58	0,01	-	1,67	0,87		1,14	0,24	0,24	
	Small	0,26	0,20	0,70	0,26	0,25		0,30	0,59	0,59	
	Medium	1,91	2,15	0,20	2,39	2,09		1,91	1,32	1,32	
C. Number of SMEs										
	Micro	752 444							752 444		
	Small	41 339							41 339		
	Medium	8 304							8 304		
D. SME Loan Demand=A*B*C (€ mil)										
	Micro	189 253			282 929	Difference between Method #1 and Method #2		77 784	Difference between Method #1 and Method #3	Def: SME Loan Demanded is the variable derived as a product of variables A, B, and C in this table.
	Small	5 654			5 473			12 937		
	Medium	9 213			10 096			6 373		
Total SME loan demand (€ mil)		**204 121**			**298 498**	**(94 377)**		**97 094**	**107 027**	Def:Total SME loan demanded - variable derived as a sum of loans demanded in D. SME loan demanded as % of GDPis equal to the Total SME loan demand divided by GDP (€ mil).
SME loan demand as % of GDP		**31,75%**			**46,43%**	**14,68%**		**15,10%**	**16,65%**	
SME Equity Demand										
A. % of SME needing equity										
	Micro	5,72%		5,72%						Def: % of SMEs needing equity is a variable derived from the SAFE ECB Survey (April - Sept, 2014), details in note (1). Source: SAFE ECB, 2015.
	Small	2,50%		2,50%						
	Medium	4,44%		4,44%						

	Method #1	Method #2	Excess Demand #1	Method #3	Excess Demand #2	Definition and sources
B. Average equity demanded (€ mil)	EVCA data	ECB data				Def: To derive the variable Average equity demanded - we use two sources. First is European Vencture Capital Association data (details in note (4)). As a second method we use the average obtained loans as proxy for demand for equity. We decide to use loans as proxy for equity demanded in order to capture possible variation between demand according to the firm size. Source: EVCA (2015); SAFE ECB (2015).
Micro		0,57				
Small	0,97	0,25				
Medium		1,89				
C. Number of SMEs						
Micro	752 444	752 444				Def: Number of SMEs - is a variable counting absolute number of firms classified as SMEs in France in 2013. For exact definition of firm's class size check Appendix 2.Source: European Central Bank, 2015.
Small	41 339	41 339				
Medium	8 304	8 304				
D. SME Equity Demand=A*B*C (€ mil)						Def: SME Equity Demanded is the variable derived as a product of variables A, B, and C in this table. In the case of using EVCA data to estimate the equity demand we don't make classification of that demand by firm size. Therefore, we use an average of variable A. (% of SMEs needing equity). In case of France that is 27%. In addition, we take the number of small firms as a proxy for potential firms needing equity.
Micro		24 664				
Small	1 003	257				
Medium	358	696				
Total SME equity demand (€ mil)	1 361	25 617				Def:Total SME equity demanded - variable derived as a sum of equity demanded in D. SME equity demanded as % of GDPis equal to the Total SME equity demand divided by GDP (€ mil).
SME equity demand as % of GDP	0,21%	3,98%				
	Method #1	Method #2	Excess Demand#1	Method #3	Excess Demand#2	Def: Excess Demand#1, #2 are as a difference between estimated fin demand using Method#1 and Method#2, #3
Total SME Financing Demand	*When Equity demanded is estimated using EVCA data					
Total SME fin.demand (€ mil)	205,481	299,859	(94,377)	98,454	-	Def: Total SME financing demanded - variable derrived as a sum of equity demanded in D. SME equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil)
% of SME fin. demand as % of GDP	31,96%	46,65%	14,68%	15,32%		
Total SME Financing Demand	*When Equity demanded is estimated using ECB data					
Total SME fin.demand (€ mil)	229,737	324,114	(94,377)	122,71	-	
% of SME fin. demand as % of GDP	35,74%	50,42%	14,68%	19,09%		
GDP (€ mil)	642,851	642,851		642,851		Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015

Notes: (1) The variable represents share of firms that answered "yes" to the SAFE ECB Survey question: "Are the [bank loan, or equity] relevant to your firm, that is, have you used it in the past or considered them in the future?"; (2) In Method #2 we classify firms that applied and obtained a loan by the size of the loan obtained. To do that we use the question from the SAFE ECB Survey: "If you applied and tried to negotate for a bank loan over the past 6 months, did you: receive everything; received most of it (between 75% and 99%); only received a limited part of it (between 1% and 74%); refused because the cost was too high; was rejected; or application still pending". In Method #2 we only use the subcategory of first three answers as the full sample ("100% of a loan"; "more than 75% (12% excess demand)";"up to 74% (50% excess demand)"). Then, we use those weights to weight the response to questions from note (1). In Method #3 we use all 6 answers (as the full sample) and group them into two categories (obtained and rejected) accordingly we weight the answers; (3) The variable represents weighted average of the 4 possible answers to the question: "What is the size of the last bank load that your enterprise obtained or renegotiated in the past 6 months?" Answer to this question is a category variable: (up to €25K; betwen €25K - 100K; between €100K - 250K; more than €250K - 1 mil;over €1 mil (here upper limit is assumed at €4 mil)). Next, in order to derive the weighted average of loan demanded we weighted the mid point of these categories with the share of firms that chose that category. The complete tables of weights and category mid points is provided in the Appendix table. (4) We use European Venture Capital Association (EVCA) to derive average equity demanded. The derived number represents an average of invested venture capital per investment, within a country, in a given year. Venture Capital investments include: Seed, Start-Up, Later-stage investments. More details are in Appendix.

Table D11 –SME loan and equity gap estimate in the Netherlands, second half of year 2013

	Loans			Equity		Total			Definition and Sources
SME Loan Supply									
SME Loan Supply (€ mil)		123,125					123,318		Def. Total SME fin. Supply - variable derived as a sum of loan and equity supplied. Details are provided in the SME Financing Supply Estimate table. SEM fin. Supply as % of GDP - is equal to the Total SME equity demand divided by GDP (€ mil)
SME Loan Supply as % of GDP		19,15%					19,18%		
SME Equity Supply									
SME Equity Supply (€ mil)				193					
SME Equity Supply as % of GDP				0,03%					
	Method#1	*Method#2*	*Method#3*			Method#1	Method#2	Method#3	
SME Loan Demand						*Equity Demand using EVCA data			
SME Loan Demand (€ mil)	204,121	298,498	97,094			205,481	299,859	98,454	Def. Total SME financing demanded - variable derived as a sum of equitydemanded in D. SEM equity demanded as % of GDP is equal to the Total SME equity demand divided by GDP (€ mil)
SME Loan Demand as % of GDP	31,75%	46,43%	15,10%			31,96%	46,65%	15,32%	
SME Equity Demand				*EVCA data*	*ECB data*	**Equity Demand using ECB data*			
SME Equity Demand (€ mil)				1,361	25,617	229,737	324,114	122,71	
SME Equity Demand as % of GDP				0,21%	3,98%	35,74%	50,42%	19,09%	
	Loan Gap			Equity Gap		Total Fin Gap			
	Method#1	Method#2	Method#3			Method#1	Method#2	Method#3	
SME Loan Gap						*Equity Demand using EVCA data			
Total SME fin. Gap (€ mil)	80,996	175,373	(26,031)			82,163	176,541	(24,864)	Def: SME Financing Gap - is derives variable as a difference between estimated SME fin Supply and SME fin Demand for a given year within a given country. All variables needed to estimate the gap are calculated and explaines in detail in Supply and Demand tables on previous pages.
SME fin. Gap as % of GDP	12,60%	27,28%	-4,05%			12,78%	27,46%	-3,87%	
SME Equity Gap				*EVCA data*	*ECB data*	**Equity Demand using ECB data*			
Total SME fin. Gap (€ mil)				1,168	25,424	106,419	200,796	(608)	
SME fin. Gap as % of GDP				0,18%	3,95%	16,55%	31,24%	-0,09%	
GDP (€ mil)		642,851		642,851			642,851		Def: GDP (Gross Domestic Product) in current € in millions. Source: ECB, 2015

Table D12. Variables description for supply analysis

Name	Source	Description
GDP	Eurostat	Gross Domestic Product at current (market) prices
Total loans	ECB, Statistical Data Warehouse	The vaue of all domestic loans by non-financial corporations in all currencies combined at the end of the year
	IMF, International Financial Statistics	Total outstanding loans represents all types of outstanding loans to non-financial corporations (household-related loans are excluded) by commercial banks, credit unions, financial cooperatives, other financial intermediaries and deposit takers
Total Equity	EVCA (2014)	Total Equity is a total value of capital under management of Venture Funds in selected countries
SME loans supply		
France	Financing SMEs and Entrepreneurs, An OECD Scoreboard (2015)	Total drawn and undrawn credit (credits mobilisés et mobilisables) for SMES (both independent and belonging to a group), comprised of short-term, medium-term, long-term, finance leases and securitised loans. A bank must inform the Banque de France Central credit register whenever one of its branch offices has granted more than EUR 25 000 to a firm (total outstanding loan)
Germany	Deutsche Bank Research, SME financing in the euro area: New solutions to an old problem (2014)	Due to data limitations, in order to calculate German SME loans outstanding, the share of SME loans in total business loans from 2011 was used
Netherlands	De Nederlandsche Bank, GfK Survey on lending and current accounts for SMES (2014)	In order to approximate SME loan supply for the Netherlands, the SME credit support provided by three largest banks was adjustted by the market share of these banks on the loan market
Poland	CSO of Poland, Monitoring of Banks (2013)	Total SME loans in all currencies (as a part of total proposed loans to enterprises), denominated in the national currency and converted to EUR with average ECB exchange rate for the year 2013
Romania	Ministry of Public Finance of Romania, Central Credit Register (2015)	Loans granted by banks to SMEs in national currency (data refer to exposures higher than20,000 lei) and converted to EUR with average ECB exchange rate for the year 2013. The data was provided by National Bank of Romania.
SME equity supply		
SME Equity	EVCA (2014)	SME Equity is a sum of Seed, Startup, and Later Stage investments (Buyouts are not included)

Table D13. Variables description for demand analysis

Name	Source	Description
Number of micro-, small- and medum-sized enterprises	EC, SBA, Fact Sheet, DIW Econ (2014)	Total number of entreprises by size class according to the EU classification.
SME loan demand		
Average Loan Size Demanded	ECB (2015)	The value of average loan size demanded was received from ECB's Survey on the Access to Finance (SAFE) research dataset by processing the data respective to the question Q8a: "What is the size of the last bank loan that your enterprise obtained/renegotiated/attempted to obtain in the past 6 months?" with the following answers: up to €25,000 more than €25,000 and up to €100,000 more than €100,000 and up to €250,000 more than €250,000 and up to €1 million over El million DK/NA
% of Enterprises needing a loan	ECB (2015)	The value of % enterprises needing a loan was received from ECB's Survey on the Access to Finance (SAFE) research dataset by processing the data respective to the question Q4d: "Bank loan (excluding subsidised bank loans, overdrafts and credit lines) - Are the following sources of financing relevant to your firm, that is, have you used them in the past or considered using them in the future?" with the following answers: yes, this source is relevant to my enerprise no, this source is not relevant to my enerprise DK/NA
SME equity demand		
Average Equity Size Demanded	EVCA (2014	The value of average equity size demanded is estmated as the average VC's investment per company
Average Equity Size Demanded	ECB(2015)	The value of average equity size demanded was received from ECB's Survey on fhe Access to Finance (SAFE) research dataset by processing the data respective to fhe question Q8a: "What is the size of the last bank loan that your enterprise obtained/renegotiated/attempted to obtain in the past 6 morths?". Here we are makang an assumpton that enterprises' needs for capital are not dependent on the kind of capital (debt or equity)
% of Enterprises Equity capital	ECB(2015)	The value of % enterprises needing equity capital was received from ECB's Survey on the Access to Finance (SAFE) research dataset by processing the data respective to the question Q4j: "Equity capital - Are the following sources of firancing relevant to your firm,that is, have you used them in the past or considered using them in the future?" with the following answers: yes, this source is relevant to my enterprise no, this source is not relevant to my enterprise DK/NA

Appendix 4

5. Fundamental Creditor & Shareholder Protection

5.1 Overview

The recent financial crisis revealed corporate governance flaws in banks and financial institutions across Europe. As such, European countries have started to implement a range of governance reforms to better prepare for risks and enhance firm performance. While the introduction of reforms is widespread, they are not always easy to implement uniformly across nations. Furthermore, complying with regulation may be detrimental to stimulating the growth of SMEs. There are significant differences across countries in terms of their economic situations and how governments choose to regulate economic activities. La Porta et al. (1998) provide evidence of the variation across countries, explaining how firms' financial performance is affected.[19] In poorly regulated countries, companies are at a disadvantage in raising capital. However, companies might be expected to work harder to attract external capital by offering better corporate governance.

Capital markets in some parts of Europe continue to lag behind the rest of the world. In these regions, there has been little dynamism in the rest of the financial markets. Previous chapters expressed some concern that capital markets in these countries are not yet a real source of financing and have failed to sustain business growth. Several hypotheses could explain this situation. First, there is an important relationship between macroeconomic and political stability and the development of a country's financial markets.[20] The past economic and political instability in Romania and Poland may help explain the extent of underperformance in those countries, given the level of macroeconomic fundamentals. While [the lack of?] economic openness is a relevant and pervasive obstacle to capital market development, effective public policy must go beyond simply identifying ad hoc macroeconomic factors of capital market development. Second, capital markets in areas without high-quality investor protection rights, measured by the quality of legal rules, may well be underdeveloped in terms of financial market development. The problem stems from the need to also improve courts and other conflict- resolution mechanisms and legal procedures to improve the financial environment for banks and other financial intermediaries.

The third factor is the concern that even the strongest capital markets face serious challenges and may not be sufficiently developed. On this, Rajan and Zingales (1998a) show that companies in countries with robust financial systems often develop a higher dependence on external financing. In order to provide a strong foundation for financial market development, this chapter will discuss the legal and institutional factors for the proper functioning of well-developed debt and equity markets. An argument that we find quite compelling is that, in order for SMEs to enhance their own growth, there is a need for equity capital financing. Higher levels of equity financing have the potential to increase external growth, leading to increases in the business and management skills of SMEs and improving their corporate governance and financial skills.

This section discusses the most important conditions for the proper functioning of debt and equity capital markets.

5.2 Debt Capital Markets

As noted above, an effective legal and regulatory framework promotes access to external financing while reinforcing financial stability. One of the insights of a well-developed debt market is that creditor rights are relatively strong, and credit information can be expected to reduce asymmetrical information. Recent research on debt markets lends insight into the effect of creditors' rights on SMEs' access to different forms of lending.

5.2.1. Creditor Rights

Creditors' rights, embedded in domestic bankruptcy and reorganization laws, are crucial for creditors to participate in the loan market. As such, obtaining credit facilities depends on the environment, which includes the powers of creditors and the information that they have on the debtor. The first condition refers to forcing repayment, having collateral or gaining control.[21] The second condition refers to the presence of asymmetric information and legal uncertainties on the side of the lender.[22] Credit can be extended if the asymmetric information is reduced by increasing the probability of loan repayment by, for example, providing collateral.[23]

It is impossible to overestimate the importance of creditors' rights. In a strong legal framework, creditors find it easier to secure their rights, obtain greater liquidation valuations for their firms and obtain credit at lower rates of interest. From a trend perspective, Table 5.1, Panel B shows there have been very few changes implemented in the Research Countries. To be sure, some governments, such as Romania's, have implemented a series of creditor rights reforms. In most cases, implementing new legislation creates additional protection for creditors. However, the World Bank recently observed that in the case of the Romanian Civil Code, there are a number of updates and changes that will benefit debtors and negatively impact creditors; these include invalidation of material,

[19] La Porta et al. (1998).

[20] La Porta et al. (1997 and 1998).

[21] Townsend (1979); Aghion and Bolton (1992); Hart and Moore (1994, 1998).

[22] Jaffee and Russell (1976); Stiglitz and Weiss (1981).

[23] See Steijvers and Voordeckers (2009) for a recent survey of empirical studies on the use of collateral to mitigate credit rationing.

an adverse change provision, and enhanced powers to negotiate an agreement on the basis of simple economic grounds. Turning to the other Research Countries, the creditor rights regimes in Germany and the Netherlands are among the most stringent. In contrast, France remains one of the weakest creditor rights regimes.

Typically, countries provide combinations of different legal procedures. Indeed, some countries depend on more than one procedure. In this context, La Porta et al. (1998) establish a creditor rights index that consists of the sum of the reorganization and liquidation procedures. The index is the sum of the following variables: 1) automatic stay on the assets[24]; 2) the right to collateral in reorganization[25]; 3) filing for reorganization without creditor consent[26]; and 4) management stays pending the resolution of the reorganization procedure. Djankov et al. (2007) update the score of the index. They investigate the determinants of private credit and find that creditor protection is correlated with higher ratios of private credit, where the legal origin is an important determinant.[27] Overall, the creditor rights index indicates that legal and institutional arrangements may affect the size of a country's debt market and the probability that a firm will receive credit.

5.2.2. Enforcement rights of creditors

In this section, we extend our earlier discussion to the enforcement of creditor rights. Creditor rights are complex because creditors can exercise them in different ways. Moreover, there are many different kinds of creditors with different sets of interests. For instance, when a company faces severe financial distress resulting in a default, senior secured creditors will cash out by selling the collateral, whereas junior unsecured creditors will continue to favor the company as a going concern in the hope that the firm will become profitable again.

As indicated above, this section will assess creditor rights from the perspective of senior secured creditors when the firm is defaulting. In this context, there are three enforcement procedures: reorganization, liquidation and foreclosure. These procedures vary across countries. For example, in some countries, it is more difficult for secured creditors to cash out the collateral. Such creditors can still attempt to liquidate their collateral through their voting rights in the context of reorganization. Some debt enforcement instruments require the involvement of courts, particularly in the case of multiple creditors.[28] There is also an extensive debate over which procedure is the more socially desirable: reorganization or liquidation (Aghion, Hart, and Moore 1992). Djankov et al. (2008) measure the efficiency of debt enforcement mechanisms across 129 countries, including the Research Countries.[29] They use the following measures to predict the development of the debt market: 1) time to payment; 2) cost; 3) efficiency; 4) recovery; and 5) specialized courts.

Table 5.2 presents the range of commonly used debt enforcement procedures in the respective jurisdictions. Three countries—France, Romania and the US—use the reorganization procedure. While France is similar to the US in terms of duration, its procedure is slightly more costly, much less efficient and less successful than recovery efforts in the US. The Romanian procedure, in contrast, has the lowest efficiency and recovery score among the Research Countries. In contrast, the liquidation procedure in the Netherlands is the cheapest and has the highest efficiency and recovery scores. Poland has the least effective liquidation procedure among the Research Countries.

5.3 Equity Capital Markets

While the level of shareholder protection in Europe has improved over the last decade, lower levels of shareholder protection nevertheless persist in some countries. In fact, not only do lower levels of shareholder protection and transparency make the investment decision-making process more expensive, but they may also make it harder to detect fraud and other governance problems. As a result, there is a relationship between the level of protection and the level of participation by investors within the financial markets (La Porta et al., 1996)[30]. They show, for example, that countries with a common law background have the highest level of protection. In contrast, French civil law countries have the lowest level of protection, which may explain the differences in the availability of external capital financing.

[24] This rule prevents secured creditors from cashing out the collateral and protects managers and unsecured creditors against these secured creditors, which leads to avoiding automatic liquidation.

[25] Secured creditors are paid after the government and employees.

[26] This is similar to the US's Chapter 11, which offers management enormous power by delaying creditors in gaining possession of collateral.

[27] Djankov, McLiesh and Shleifer, "Private Credit in 129 Countries," 2007.

[28] Foreclosure procedures do not require courts to be involved.

[29] "Debt Enforcement Around the World," by Djankov et al., Journal of Political Economy, Dec 2008.

[30] La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert W. Vishny (1998). "Law and Finance." Journal of Political Economy, 106(6): 1113–55.

Table 5.1. Panel A. Creditor Rights

Country	No automatic stay on assets	Secured creditors first paid	Restrictions for going into reorganization	Management does not stay in reorganization	Creditor rights
UK	1	1	1	1	4
US	0	1	0	0	1
France	0	0	0	0	0
Netherlands	1	1	1	0	3
Romania	0	1	1	0	3
Germany	-	-	-	-	-
Poland	-	-	-	-	-
World Average	0,49	0,81	0,55	0,45	2,3

Source: La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny. 1998, "Law and Finance." Journal of Political Economy, 106 (6): 1113-5.

Table 5.1. Panel B. Creditor Rights

Country	No automatic stay on assets	Secured creditors first paid	Restrictions for going into reorganization	Management does not stay in reorganization	Creditor rights
UK	1	1	1	1	4
US	0	1	0	0	1
France	0	0	0	0	0
Netherlands	1	1	1	0	3
Romania	0	1	1	0	3
Germany	-	1	-	-	1
Poland	-	1	1	1	3
World Average	n/a	n/a	n/a	n/a	1,8

Source:First Column: Djankov, McLiesh, and Shleifier Private Credit in 129 Countries, 2007. Note: In 1985 the U.K. added the right in the fourth column and Romania added in 2003 the right in the first column. n/a means not availablle

Table 5.2. Most Commonly Used Debt Enforcement Procedure

Country	Procedure	Time to payment	Cost	Efficiency	Recovery	Specialized Court
UK	Foreclosure	1,00	0,06	92,30	92,30	0
US	Reorganization	2.00	0,07	85,80	85,80	1
France	Reorganization	1,90	0,09	54,10	46,60	0
Germany	Liquidation	1,20	0,08	57,00	57,00	1

Country	Procedure	Time to payment	Cost	Efficiency	Recovery	Specialized Court
Netherlands	Liquidation	1,70	0,01	94,90	94,90	1
Poland	Liquidation	2,00	0,22	67,70	46,90	1
Romania	Reorganization	4,60	0,09	11,00	7,90	1
World average						0,26
	Foreclosure	2,28	0,11	52,44	46,70	
	Liquidation	2,70	0,16	50,16	45,90	
	Reorganization	2,84	0,13	52,93	46,50	

Source: *Debt Enforcement Around the World, by Djankov et al., Journal of Political Economy, Dec 2008.*

Table 5.3 Panel A. Shareholder Rights

Country	Vote by mail	Shares not blocked before meeting	Cumulative voting	Oppressed minority	Pre-emptive rights	Capital to call meeting	Anti-Director Index
UK	1	1	0	1	1	0,1	5
US	1	1	1	1	0	0,1	5
France	1	0	0	0	1	0,1	3
Netherlands	0	0	0	0	1	0,1	2
Romania	-	-	-	-	-	-	-
Germany	0	0	0	0	0	0,05	1
Poland	-	-	-	-	-	-	-
World average	0,18	0,71	0,27	0,53	0,53	0,11	3

Source: La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny. 1998, "Law and Finance." Journal of Political Economy, 106 (6): 1113-55.

Table 5.3 Panel B. Shareholder Rights

Country	Vote by mail	Shares not deposited	Cumulative voting	Oppressed minority	Pre-emptive rights	Capital to call meeting	Revised Anti-Director Index
UK	1	1	0	1	1	0,1	5
US	1	1	0	1	0	-	3
France	1	0	0	0,5	1	0,05	3,5
Netherlands	0	0	0	0,5	1	0,1	2,5
Romania	0	1	1	1	1	0,1	5
Germany	1	0	0	0,5	1	0,05	3,5
Poland	0	0	0	0	1	0,1	2
World average	0,35	0,63	0,25	0,49	0,76	0,1	3,29

Source: Simeon Djankov, Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, 2008, "The law and economics of self-dealing." Journal of Financial Economics 88 (2008) 430-465

Table 5.4 – Regulation of Securities Markets

Country	Disclosure Requirements	Liability Standard	Public Enforcement
UK	0,83	0,66	0,68
US	1,00	1.00	0,90
France	0,75	0.22	0,77
Netherlands	0,50	0,89	0,47
Romania	-	-	-
Germany	0,42	0,00	0,22
Poland	-	-	-
World average	0,60	0,47	0,52

Source: La Porta, R., Lopez-de-Silanes, F. and Shleiffer,A. (2006), What Works in Securities Laws? The Journal of Finance, 61:1- 32.

Table 5.5. Anti-self-Dealing-Index

Country	Ex-ante private control of self-dealing	Ex-post private control of self-dealing	Anti-self-dealing Index
UK	1,00	0,90	0,95
US	0,33	0,98	0,65
France	0,08	0,68	0,38
Netherlands	0,06	0,35	0,20
Romania	0,33	0,55	0,44
Germany	0,14	0,43	0,28
Poland	0,25	0,33	0,29
World average	0,36	0,52	0,44

Source: Simeon Djankov, Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleiffer, 2008, "The law and economics of self-dealing." Journal of Financial Economics 88 (2008) 430-465

Table 5.6. Enforcement of Laws

Country	Efficiency of judical system	Rule of law	Corruption	Accounting standarts	Court Fourmalism Index 1950	Court Fourmalism Index
UK	10	8,57	9,12	78	3,24	2,58
US	10	10	8,63	71	2,32	2,62
Germany	9	9,23	8,93	62	3,39	3,51
France	8	8,98	9,05	69	1,5	3,23
Netherlands	10	10	10	64	3,61	3,07
Poland	-	-	7,36	-	-	4,15
Romania	-	-	4,93	-	-	4,42
World average	7,67	6,85	6,24	60,93	3,47	3,53

Source: The First, second and fourth column are from: La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert W.Vishny. 1998. "Law and Finance." Journal of Political Economy, 106(6): 1113-55. The third and last column ae from: Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer., 2003. "Courts." Quarterly Journal of Economics, 118(2): 453-517. The fifth column is from: Balas, Aron, Rafael LaPorta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2009. "The Divergence of Legal Procedures." American Economic Journal: Economic Policy 1 (2): 138-162.

5.3.2. Shareholder Rights

La Porta et al. (1996) examine the legal rules concerning shareholder protection, showing that there are numerous differences in company law across countries.[31] Note that the laws in different countries are typically not written from scratch, but are transplanted – voluntarily or coincidentally – from a few legal families or traditions. In general, there are two traditions: common law and civil law. Countries with a common law background have the highest and French civil law the lowest shareholder protection. The scores of German civil law countries lie between common law and French civil law. In terms of categorization, some of the Research Countries have different legal origins, which may partially account for the differences in equity markets.

Table 5.3, Panels A and B depict the differences in shareholder rights.[32] The evidence shows that, although there have been very few changes across the Research Countries, we do observe some changes. For example, Germany, which has a bank-based financial structure, has taken initiatives to provide shareholders with more rights. Across both Panel A and Panel B, we see that the UK is uniformly ranked the highest, with Germany and France being second highest, while Poland has the lowest index score. Overall, the differences in shareholder rights suggest that most countries provide a relatively strong shareholder-friendly environment.

5.3.3. Securities Law

Securities laws aim to regulate the behavior of participants in financial markets. La Porta et al. (2006) show that abuse by market participants can be mitigated by empowering financial supervisors and/or by providing a higher level of disclosure and enforcement standards. The main securities law addresses the "promoter's problem," which refers to issuers selling bad securities to outside investors.[33] La Porta et al. (2006) look at the legal provisions governing IPOs and suggest that disclosure and liability standards matter because they facilitate private contracting rather than pubic enforcement. Based on the idea that legal origin is a strong predictor of investor protection, we first examine the effect of securities market laws in the context of our Research Countries.

Table 5.4 shows that there is significant variation among the Research Countries, reflecting the financial market and property rights orientation of these countries.[34] The first two columns provide the scores relative to the compulsory disclosures of potential conflicts of interest around the IPO and the liability standards against issuers and directors, distributors, and accountants involved in the offering. The last column provides scores of the regulator or financial supervisor's powers. For definitions, see Appendix E.

Another important indicator of shareholder rights is the anti-self-dealing index developed by Djankov et al. (2008).[35] This index is a good measure for explaining the variety of stock market activities. Table 5.5 presents scores on the regulation of self-dealing.

Table 5.5 indicates significant variation among the countries between ex-ante and ex-post enforcement of self-dealing. The first column shows the ex-ante mechanisms against self-dealing, which measure the approval and mandatory disclosure requirements before the transaction is closed. The index includes the independent review of transactions. Again, given the bank-financing orientation of most of the Research Countries, this is reflected in the scores in Table 5.5. The ex-post private control of self-dealing refers to the situation of disclosures after the transaction is closed. In this context, shareholders may have proof of wrongdoing and could seek compensation.

5.4 Enforcement of Laws

The enforcement of these rights is a requirement for the development of a well-functioning stock market. A weak enforcement environment will ultimately limit the extent to which laws can be effective. Table 5.6 provides several proxies for the quality of law enforcement in the Research Countries, the UK and the US. We use the following measures: efficiency of the judicial system, rule of law, corruption, risk of expropriation, and risk of contract repudiation The first two of these proxies relate to the law enforcement mechanism, while the others provide an indication of the government's attitude towards business. In addition, Table 5.6 also provides a measure of the efficiency of the legal system, which is an index of restrictions and/or complexities of dispute resolutions by courts. The importance of accounting measures lies within the explanation that they provide transparency in terms of management performance.

Governments play a central role in ensuring a speedy, predictable and effective enforcement environment for securities. In general, the Research Countries are slightly different from the UK and the US. For example, Poland and Romania have very high corruption standards and little effective reporting on the quality of their judicial system or accounting standards. Moreover, low account-

[31] La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert W. Vishny (1998). "Law and Finance." Journal of Political Economy, 106(6): 1113–55.

[32] For an explanation, see La Porta et al. (1998).

33 (Mahoney (1995)

34 The La Porta et al. (2006) sample includes the 49 countries with the largest stock market capitalization in 1993 (the La Porta et al. (1998) original sample), as does La Porta et al. (1997 and 1998).

35 Simeon Djankov, Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer (2008). "The Law and Economics of Self-Dealing." *Journal of Financial Economics*, vol. 88 (2008), pp. 430–465.

ing standards in some of the other core countries may also lead to government action to mitigate the impact of inaccurate reporting and any other abuses. An investor in Romania or Poland would seem to be poorly protected by both the laws and the system that enforces them. The opposite can be said for an investor in the US and the UK.

5.5 Capital Markets

5.5.1. Stock Markets

There are several measures of external equity financing and stock market development (see La Porta et al. (2006) and Djankov et al. (2006)). Table 5.7 summarizes the scores of three measures of equity finance: 1) the ratio of equity finance to GDP[36]; 2) the number of domestic firms listed on the stock exchange of each country, relative to its population; and 3) the value of IPOs of shares as a fraction of the economy.

There is very little IPO activity in the Research Countries compared to the UK and the US. To be sure, this is largely unsurprising because the bank-financing-oriented approach of most Research Countries is better suited to low-risk investment in capital-intensive companies than to supporting higher-risk companies, such as innovative start-ups. Indeed, except for the Netherlands, there is a very low stock market capitalization to GDP ratio in the rest of the Research Countries. Notably, we observed that Romania has the highest score of listed firms per million, although it has the smallest market capitalization to GDP ratio. As expected, all of the Research Countries have a much bigger ownership concentration on the stock market than either the US or the UK, which is consistent with the absence of new listings.

5.5.2. Alternative Markets

As previously mentioned, the development of an ecosystem is needed to promote the development of an effective IPO market in Europe. One solution to bridge the gap in equity funding is the emergence of alternative markets. Alternative markets are designed to provide the correct balance of disclosure and governance standards that are convenient for SMEs to register shares for the purpose of going public. To this end, there are a number of exchange-regulated markets (including AIM in the UK, Alternext in France and the Netherlands, NewConnect in Warsaw, Rasdaq in Romania and Deutsche Börse in Germany) that could be play a crucial function by helping smaller and growing companies raise the capital they need for expansion. Generally, these initiatives attempt to overcome some of the listing and compliance barriers, so that SMEs and other firms can access a new pool of investors. Current research suggests that the AIM's very low entry standards has made it possible for the listing of younger and foreign firms to access a new network of investors and an IPO underwriter. On the other hand, while the Deutsche Börse has far stricter standards, it recently introduced Venture Network, a new online platform that matches investors with startups. Given the concern about avoiding the excesses of the New Market in the 1990s, investors can expect that the new opportunities to make direct investments in innovative companies will balance their governance concerns with the exploitation of new opportunities.

While there is little empirical research on the enabling environments of the new exchanges, empirical research has examined how disclosure requirements reduce information asymmetries and remain highly important for investors (Djankov et al., 2008; La Porta et al., 2006).[37]

If we focus on the UK and the US, regulators typically require extensive disclosures and approval of the transaction by shareholders. In contrast, Germany, France and the Netherlands typically have fewer disclosure requirements and entrust the approval of self-dealing transactions to the board (see Table 5.8).

Listing and being listed are also very costly and include various fees and expenses (exchange fees; underwriting and non-underwriting costs; annual retainer for sponsors, estimated by ECSIP at approx. EUR 50K; brokerage services; independent research providers (sometimes); and exchange listing fees). Costs are, to a large extent, one of the most important determinants of the longer-term trend of firms going public on a stock market. In this regard, consider the estimates put together by the Federation of European Securities Exchanges, which require:[38]

I. 10% to 15% of the amount raised from an initial offering of less than EUR 6 mil;

II. 6% to 10% from less than EUR 50 mil;

III. 5% to 8% from between EUR 50 mil and EUR 100 mil; and

IV. 3% to 7.5% from more than EUR 100 mil.

Table 5.7. Market Outcomes

[36] To compute a rough proxy of truly "external" equity finance, we first needed a measure of ownership concentration. We multiplied the total market value of common stock of all publicly traded firms by the average fraction of the equity not held by the largest three investors (i.e., the complement of the ownership variable just described). We scaled the total market value of common stock by the fraction of equity held by minority shareholders to avoid overestimating the availability of external financing. For example, when 90 percent of a firm's equity is held by insiders, looking at the market capitalization of the whole firm gives a tenfold overestimate of how much has actually been raised externally. Therefore, an alternative measure is the ratio of "external" (outside of the control group) equity finance to GNP in each country. The results presented below hold for this corrected ratio as well.

[37] Simeon Djankov, Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer (2008). "The Law and Economics of Self-Dealing." Journal of Financial Economics, vol. 88, pp. 430–465; La Porta, R., Lopez-de-Silanes, F. and Shleiffer, A. (2006). "What Works in Securities Laws?" The Journal of Finance, vol. 61, pp. 1–32.

38 European IPO Task Force, "Rebuilding IPOs in Europe: Creating Jobs and Growth in European Capital Markets", 23 March 2015. Link: http://www.evca.eu/media/370031/IPO_Task_Force_Report.pdf

Country	Stock market capitalization to GDP	Block premium	Listed firms per million population	IPOs to GDP	Ownership concentration
UK	157,7	0	33,13	11,27	0,19
US	142,14	0,02	22,83	5,47	0,2
France	89,49	0,01	13,73	2,31	0,34
Netherlands	131,74	0,03	12,34	2,63	0,39
Romania	5,46	-	23,33	-	-
Germany	54,69	0,11	10,55	2,78	0,48
Poland	16,69	0,12	5,71	-	-
World average	59,39	27,73	2,97	0,11	0,47

Source: Simeon Djankov, Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleiffer, 2008, "The law and economics of self-dealing." Journal of Financial Economics 88 (2008) 430-465

Table 5.8. Disclosure Requirements

Country	Disclosure in Prospectus	Ex-ante disclosure	Ex-post disclosure
UK	0,83	1	1
US	1	0,67	1
France	0,75	0,17	0,8
Germany	0,42	0,28	0,4
Netherlands	0,5	0,11	0,6
Poland	0	0,5	0,2
Romania	0	0,67	0,6
World average	0,56	0,48	0,67

Source: First Column: La Porta, R., Lopez-de-Silanes, F. and Shleiffer, A. (2006), What Works in Securities Laws? The Journal of Finance, 61:1 - 32; The second and third column: Simeon Djankov, Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleiffer, 2008, "The law and economics of self-dealing." Journal of Financial Economics 88 (2008) 430-465

Table 5.9. Tax

Country	Statutory Corporate Tax Rate	1st Year Effective Tax Rate	5-Year Effective Tax Rate	Time to comply with taxes (in hours)
UK	30	18,61	21,44	105
US	45,2	18,19	31,99	325
France	35,43	14,06	14,42	128
Germany	37,07	23,5	23,6	105
Netherlands	34,5	25,62	25,62	250
Poland	19	11,54	12,47	175
Romania	25	15,17	15,35	188

Source: The Effect of Corporate Taxes on Investment and Entrepreneurship, by Djankov et al. (2010), American Economic Journal: Macroeconomics, July 2010.

5.6 Tax

Can governments create a more desirable tax regime for SMEs? What is the impact of taxes on SMEs? The previous literature shows that the effect of taxes on "mid-size domestic" firms is substantial (Djankov et al., 2010). For example, SMEs face higher tax-compliance costs relative to larger firms. Table 5.9 also shows that the effective corporate tax rate has a largely adverse impact on investments.[39] This result supports the view that higher effective corporate income taxes lead to a higher level of dependence on debt than on equity finance.

To be sure, there is substantial variation between the statutory corporate and the effective tax rates. Consider the Research Countries. At the one extreme, Poland has the lowest tax rate. At the other extreme sit Germany, the Netherlands, France and the UK, which have much higher statutory corporate tax rates. Interestingly, compared to these countries, France has the lowest effective tax rate. Nevertheless, there is little variation across the Research Countries between the first-year and fifth-year effective tax rates. With respect to the time to comply with taxes, the US has the highest score, followed by the Netherlands, Germany and the UK, which need the least time compared to all the other countries.

5.7 Conclusion

In this section, we surveyed the variation in the legal rules and the enabling environment of debt and equity in the Research Countries. In this context, we pointed out that financing the needs of SMEs requires measures that mitigate information asymmetries while increasing transparency and disclosure to improve the supply of credit. Indeed, despite the new patterns of financing to support bank credit, the growth in loans and equity also depends on promoting the enforcement and protection of fundamental rights. Additionally, phasing in a new regulatory framework that supports the listings of SMEs and innovative firms is a matter of urgency to help boost the investment potential of entrepreneurs and support the further growth of the financial market.

[39] "The Effect of Corporate Taxes on Investment and Entrepreneurship", by Djankov et al. (2010), *American Economic Journal: Macroeconomics*, July 2010.

Appendix 5

Appendix

Variable	Description	Sources
Legal Origin	Identifies the legal origin of the Company Law or Commercial Code of each country. Equals 1 if the origin is English Common Law; 2 if the origin is the French Commercial Code; and 3 if the origin is the German Commercial Code.	La Porta et al. (1998), collected from Foreign Law Encyclopedia of Commercial Laws of the World.
Proxy by mail allowed	Equals one if the Company Law or Commercial Code allows shareholders to mail their proxy vote to the firm, and zero otherwise.	La Porta et al. (1998)
Vote by mail	Equals one if the law explicitly mandates or sets as a default rule that: (a) proxy solicitations paid by the company include a proxy form allowingshareholders to vote on the items on the agenda; (b) a proxy form to vote on the items on the agendaaccompanies notice to the meeting; or (c) shareholders vote by mail on the items on the agenda (i.e. postal ballot), and zero otherwise.	Djankov et al. (2006)
Shares not blocked	Equals one if the Company Law or Commercial Code does not allow firms to require that shareholders deposit their shares prior to a General Shareholders Meeting, thus preventing them from selling those shares for a number of days, and zero otherwise.	La Porta et al.(1998)
Shares not deposited	Equals 1 if the law neither requires nor explicitly permits companies to require shareholders to deposit with the company or another firm any of theirshares prior to a general shareholders meeting.	Djankov et al. (2006)
Cumulative voting or proportional representation	Equals one if the Company Law or Commercial Code allows shareholders to cast all of their votes for one candidate standing for election to the board of directors (cumulative voting) or if the Company Law or Commercial Code allows a mechanism of proportional representation in the board by which minority interests may name a proportional number of directors to the board, and zero otherwise.	La Porta et al. (1998) Djankov et al. (2006)
Capital to call a Meeting	It is the minimum percentage of ownership of share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting. It ranges from one to 33 percent.	La Porta et al. (1998) Djankov et. al. (2006)
Preemptive rights	Equals one when the Company Law or Commercial Code grants shareholders the first opportunity to buy new issues of stock, and this right can be waived only by a shareholders' vote, and zero otherwise.	La Porta et al. (1998) Djankov et al. (2006)

Variable	Description	Sources
Oppressed minorities	Equals one if the Company Law or Commercial Code grants minority shareholders either a judicial venue to challenge the decisions of management or the assembly; or the right to step out of the company by requiring the company to purchase their shares when they object to certain fundamental changes, such as mergers, assets dispositions and changes in the articles of incorporation. The variable equals zero otherwise. Minority shareholders are defined as those shareholders who own a 10 percent share of capital or less.	La Porta et al. (1998) Djankov et al. (2006)
Anti directors rights index	An index aggregating the shareholder rights which, we label "anti-director rights." The index is formed by adding 1 when: (a) the country allows shareholders to mail their proxy vote to the firm; (b) shareholders are not required to deposit their shares prior to the General Shareholders' Meeting; (c) cumulative voting or proportional representation of minorities in the board of directors is allowed; (d) an oppressed minorities mechanism is in place; (e) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting is less than or equal to 10 percent (the sample median); or (f) shareholders have preemptive rights that can be waived only by a shareholders' vote. The index ranges from 0 to 6.	La Porta et al. (1998) Djankov et al.(2006)
Disclosure requirements index	The index of disclosure equals the arithmetic mean of: (a) Prospect; (b) Compensation; (c) Shareholders; (d) Inside ownership; (e) Contracts Irregular; and (f) Transactions.	La Porta et al. (2006)
Liability standards index	The index of liability standards equals the arithmetic mean of: (a) Liability standard for the issuer and its directors; (b) Liability standard for distributors; and (c) Liability standard for accountants.	La Porta et al. (2006)
Public enforcement index	The index of public enforcement equals the arithmetic mean of: (a) Supervisor characteristics index; (b) Rulemaking power index; (c) Investigative powers index; (d) Orders index; and (e) Criminal index.	La Porta et al. (2006)
Ex-ante private control of self dealing	Index of ex-ante control of self-dealing transactions. Average of approval bydisinterested shareholders and ex-ante disclosure.	Djankov et al. (2006)
Ex-post private control of self dealing	Index of ex-post control over self-dealing transactions. Average of disclosure in periodic filings and ease of proving wrongdoing. Ranges from zero to one.	Djankov et al. (2006)
Anti self dealing index	Average of ex-ante and ex-post private control of self-dealing.	Djankov et al. (2006)
Public enforcement of self dealing	Index of public enforcement. Ranges from 0 to 1. One quarter point when each of the following sanction is available: (a) fines for the approving body; (b) jail sentences for the approving body; (c) fines for Mr. James; and (d) jail sentence for Mr. James.	Djankov et al. (2006)

Variable	Description	Sources
Efficiency of judicial system	Assessment of the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms," produced by the country-risk rating agency Business International Corporation. It "may be taken to represent investors' assessments of conditions in the country in question." Average between 1980-1983. Scale from 0 to 10, with lower scores indicating lower efficiency levels.	La Porta et al.(1998)
Rule of law	Assessment of the law-and-order tradition in the country produced by the country-risk rating agency International Country Risk (ICR). Average of the months of April and October of the monthly index between 1982 and 1995. Scale from 0 to 10, with lower scores for a weaker law-and-order tradition.(We changed the scale from its original range going from 0 to 6).	La Porta et al. (1998)
Corruption	ICR's assessment of the corruption in government. Lower scores indicate that "high government officials are likely to demand special payments" and "illegal payments are generally expected throughout lower levels of government" in the form of "bribes connected with import and export licenses, exchange controls, tax assessment, policy protection, or loans." Average of the months of April and October of the monthly index between 1982 and 1995. Scale from 0 to 10, with lower scores for higher levels of corruption. (We changed the scale from its original range going from 0 to 6).	La Porta et al.(1998)
Accounting standards	Index created by examining and rating companies' 1990 annual reports on their inclusion or omission of 90 items. These items fall into seven categories (general information, income statements, balance sheets, funds flow statement, accounting standards, stock data, and special items). A minimum of three companies in each country were studied. The companies represent a cross-section of various industry groups in which industrial companies accounted for 70 percent, while financial companies represented the remaining 30 percent.	La Porta et al.(1998)
Court formalism to collect a bounced check	The index measures substantive and procedural statutory intervention in judicial cases at lower-level civil trial courts and is formed by adding up the following indices: (i) professionals vs. laymen; (ii) written vs. oral elements; (iii) legal justification; (iv) statutory regulation of evidence; (v) control of superior review; (vi) engagement formalities; and (vii) independent procedural actions. The index ranges from 0 to 7, with 7 meaning a higher level of control or intervention in the judicial process.	Djankov et al. (2003)
Stock market capitalization to GDP	Ratio of the market capitalization (also known as market value, which is the share price times the number of shares outstanding) of listed domestic companies (the domestically incorporated companies listed on the country's stock exchanges at the end of the year) divided by the GDP (in mil).	La Porta et al.(1998) for Table II.6 and World Bank (2005) for figure III.1.
Listed firms per mil pop.	Ratio of the listed domestic companies, which are the domestically incorporated companies listed on the country's stock exchanges at the end of the year (this indicator does not include investment companies, mutual funds, or other collective investment vehicles), to its population (in mil).	La Porta et al. (1998) for Table II.6 and World Bank (2005) for figure III.2

Variable	Description	Sources
IPO's to GDP	Average of the ratio of the equity issued by newly listed firms in a given country (in th) to its gross domestic product (in mil) over the period 1996-2000.	La Porta et al. (2006)
Block premium	The block premia are computed by taking the difference between the price per share paid for the control block and the exchange price two days after the announcement of the control transaction; dividing by the exchange price; and multiplying by the ratio of the proportion of cash flow rights represented in the controlling block." We use the country's sample media.	La Porta et al. (2006), taken from Dyck and Zingales (2004)
Ownership concentration	Average percentage of common shares not owned by the top three shareholders in the ten largest non-financial, privately owned domestic firms in a given country. A firm is consideredprivately owned if the State is not a known shareholder in it.	La Porta et al. (1999) and Hartland- Peel (1996) for Kenya; Bloomberg and various annual reports for Ecuador, Jordan, and Uruguay.
Trading volume to GDP	Total trading volume divided by the country's GDP (expressed in 2001 USUSD) 'of a certain country in a given year.	World Bank (2005)
Price to book value of equity	Quotient between the market value of equity and the book value of equity	Standard & Poor's (2005)
External Cap / GNP	The ratio of the stock market capitalization held by minorities to GNP for 1999. The stock market capitalization held by minorities is computed as the product of the aggregate stock market capitalization and the average percentage of common shares not owned by the top three shareholders in the ten largest non-financial, privately owned domestic firms in a given country. A firm is considered privately owned if the State is not a known shareholder in it.	Moody's International, CIFAR, EXTEL, WorldScope, 20-Fs, Price Waterhouse and various country sources.
Domestic Firms / Pop	Ratio of the number of domestic firms listed in a given country to its population (in mil) in 1999.	Emerging Market Factbook and World Development Report 1999.
IPOs / Pop	Ratio of the number of initial public offerings of equity in a given country to its population (in mil) for the period 1999.	Lopez-de-Silanes (2003)
GDP Growth	Average annual percent growth of per capita gross domestic product for the period 1960-1998.	World Development Report 2001
Log GNP	Logarithm of the Gross National Product in 1999.	World Development Report 2001.