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European Small Business Finance Outlook

December 2019

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Executive summary¹

This European Small Business Finance Outlook (ESBFO) provides an overview of the main markets relevant to EIF, i.e. equity and debt products (guarantees, securitisation, leasing, private debt funds) for SMEs, as well as microfinance². It is an update of the June 2019 ESBFO edition.

We start by discussing the general market environment, then look at the main aspects of equity finance and the markets for SME debt products. Before we conclude, we briefly highlight some important aspects of microfinance and Fintech in Europe.

Economic outlook and SME business environment:

- Global economic growth continued to slow down significantly during the second half of 2019.
- The European economy is expected to suffer from the economic slowdown, with 2020 growth now forecasted at 1.4% by the European Commission, a 0.2 percentage point downward revision from earlier estimates.
- Uncertainty with respect to the ongoing Brexit negotiations and the international trade tension between China and the US are weighing on private investment.
- In August 2019, the ECB's composite borrowing cost indicator for Euro area corporate lending reached a new record low of 1.52%, undercutting the earlier record of May 2018 by 4 basis points.
- The deleveraging process that lasted for nearly a decade seems to have structurally reversed now, as Euro area outstanding loans have been increasing continuously for over two years.
- The reversal of the Euro area's economic cycle has a disproportionately large impact on the credit supply of SMEs, as evidenced by the evolution in small loans' new business volume.
- An analysis of the ECB's bank lending survey brought to light that the European economy might be on the verge of a reversal of the credit cycle, with many banks reporting a decrease in SME loan demand.
- The share of European SMEs that considers access to finance to be a highly important problem has increased slightly, to 27 percent, during the first semester of 2019.
- Insufficient public support for external financing markets, which has been a concern for several semesters, continues to worry European SMEs.

Private equity:

- Over the past 20 years, the European PE activity exhibited booms and busts. The most famous peak periods were observed in 2000 and 2006. However, both booms were

¹ This paper benefited from comments and inputs by many EIF colleagues, for which we are very grateful; we would like to express particular thanks to Julien Brault, Andrea Crisanti, Giovanni Inglisa, Kristian Pal, Elitsa Pavlova, Simone Signore, We would also like to thank colleagues from AECM, AFME, ECB, EMN, Euler Hermes, GEM, the Invest Europe research team, the UEAPME (now SMEunited) study unit for their support. All errors are of the authors.

² We are using the term "equity finance" to combine semantically the areas of Venture Capital and Private Equity. However, if we refer here to equity activities, we mainly consider those of EIF's investment focus, which excludes Leveraged Buyouts (LBOs) and Public Equity. The term SME Securitisation (SMEsec) comprises transactions backed by SME loans, leases, etc. The reader is also referred to the respective market glossaries in Annex 1 and Annex 2 in Kraemer-Eis et al. (2018c).

followed by significant downturns, i.e. the “dotcom crisis” in the early noughties and the financial and economic crisis from 2007 onwards. The severe crash of the European PE activity in 2008-2009 was followed by a rebound and PE investments reached a new record level in 2018.

- In 2018, the PE investments in portfolio companies based in Europe increased by 7% to EUR 80.6bn. This development was mainly driven by a surge in investments in the buyout segment (+10% to EUR 58.8bn) of the PE market, but a modest increase was also recorded for growth capital (+0.4% to EUR 11.9bn). Venture capital (VC) investments, which are of particular importance for the financing of young innovative companies with high growth potential, jumped by 13% to EUR 8.2bn. Results from the *EIF VC Survey* indicate an ongoing high market activity. Business Angel investments provided additional equity capital for ventures.
- In the first semester of 2019, PE investments amounted to 39.2bn. This constitutes the highest value ever recorded for the first six months of a calendar year since 2007. VC investments also surged strongly, particularly driven by investments in later stage ventures.
- Total amounts raised by PE funds in Europe increased by 1% to EUR 97.3bn in 2018. At the same time, VC fundraising increased by 11% to EUR 11.4bn, which constitutes the third record year in a row. During and after the crisis, the European VC ecosystem benefitted substantially from market-stabilising public intervention. Since 2012, a normalisation set in, although public support still plays an important role for further market development.
- In the first half of 2019, the strong upward trend in PE fundraising seems to have come to a halt, while fundraising in the VC market segment increased further.
- In 2018, the exit market for PE-backed enterprises suffered a sharp setback, which followed several remarkably strong years. The decrease in the total PE divestment amount (–28% to EUR 31.9bn) was mainly due to substantially lower activity in the buyout (–34% to EUR 22.4bn) segment of the market, but also divestments in the venture (– 5% to EUR 2.0bn) and growth (–15% to EUR 5.8bn) capital segments decreased. In the first six months of 2019, PE divestments further declined.
- According to the *EIF VC Survey 2019*, European fund managers stated the exit environment, fundraising, high investee company valuations and the number of high quality entrepreneurs to be the biggest challenges in the VC business.
- In the lower-mid and mezzanine markets, the EIF has observed a stabilisation during the first half of 2019, following the upward trend in the 2015-2018 period.

SME Guarantees:

- Credit guarantees “remain the most wide-spread instrument in use across countries” to ease SMEs’ access to finance (OECD, 2018) and are particularly relevant “in those countries where a network of local or sectoral guarantee institutions is well established” (OECD, 2013).
- AECM statistics show that Turkey, Italy and France are the top three countries in terms of both the volume and the number of outstanding SME guarantees.
- Relative to GDP, Turkey, Hungary, Portugal and Italy have the largest markets.
- In the first semester of 2019, despite a significant heterogeneity across countries, AECM members report on average a decrease in outstanding guarantees in portfolio. However, this trend is largely driven by a significant decrease in the guarantee activity of one Turkish AECM member.

- Indeed, following an unprecedented increase in its guarantee activity during 2017, the guarantee activity in Turkey is now much lower than before, but it still represents the highest share of total AECM outstanding guarantees.
- In the first semester of 2019, the growth in newly-granted guarantees was particularly strong in Ireland, Turkey, Czechia and Finland. By contrast, new guarantee activity decreased the most in Bosnia-Herzegovina, Lithuania, Romania and Greece.

SME Leasing:

- Leasing is an important additional instrument to facilitate access to short- and medium-term financing for SMEs, ranked second after traditional bank-related products.
- During the first semester of 2019, Euro area SMEs state that the availability of leasing or hire-purchase has improved the most compared to other external financing sources, but SMEs still signal an increased need for it.
- Leasing is mainly used for investments in property, plant or equipment.
- Estonia, Finland and Germany are the countries with the highest proportion of SMEs using leasing, contrary to countries in the south of Europe.
- Leasing as a financing source is more prevalent among industrial and construction firms.
- The use of leasing grows with firm size.

SME securitisation:

- Overall, the SMESec market in Europe is underdeveloped and still suffering from after-effects of the crisis, but improving. Strengthening this market is an effective way to facilitate the flow of funds to the real economy, without creating distortion.
- In terms of new issuances the SMESec market was so far weak in 2019. The visible issued volume of SME deals³ in HY1/2019 was only EUR 2.5bn (compared to EUR 5.6bn in HY1/2018 and EUR 29.5bn in 2019 overall), representing 2.7% of the overall securitisation issuance in Europe. In HY1/2019 activity was only registered in Italy and the UK. The retention rate remains high.
- Despite the financial and sovereign crisis, the European securitisation market has performed well, with the SME segment showing low default rates. Although the economic framework conditions worsened, SMESec market performance has been stable in the recent past.
- Many support measures are aiming at a market revival, amongst which are important regulatory adjustments. The new regulation - a key element of the Capital Markets Union - introduces significant changes to the market's framework, including the important step of a signalling approach via simple, transparent and standardised STS-labelled securitisations - which receive preferential regulatory treatment. The new securitisation regulation applies since 01.01.2019, some key elements of the new framework still need to be defined, which might be a reason for weak market activity.
- The new framework poses challenges to market participants but has the potential to significantly support the revival of the market in Europe. However, such revival depends not only on the regulatory framework, but also on the market conditions. A move towards

³ As explained in the text, there is a significant part of this market that is not visible in the statistics (e.g. unrated bilateral transactions).

normalisation of monetary policy would be necessary to increase the appetite for funded transactions.

- Continued pressure on banks to manage capital efficiently drives demand for synthetic transactions. In this context EBA published its discussion paper “Draft Report on STS framework for Synthetic Securitisation”, after a public consultation until 25.11.2019.

Private debt funds

- Private debt funds have gained importance as an alternative asset class for investors and a new financing source for SMEs and mid-caps.
- The most developed and largest private debt market was the US, while Europe was the region with the second largest share in global fundraising in 2018.
- Europe is frequently stated to be the most important target region of private debt investors. The number of European debt fund managers has grown considerably.

Microfinance and inclusive finance:

- Microenterprises and social enterprises are important contributors to employment and social value, especially in countries with high unemployment rates.
- European microenterprises in 2018 recorded by far the strongest growth, both in value added and employment, compared to other enterprise size classes.
- According to the data from the latest ECB SAFE survey, microenterprises have perceived a slight decrease in the external financing gap indicator. However, the share of enterprises which see access to finance as their most important problem has increased and remained higher among microenterprises than among their larger peers.
- Microenterprises, in general, use less bank loans than their larger peers, as they are more likely to be rejected if they decide to apply for a bank loan. Often they choose not to apply for a bank loan due to fear of rejection, insufficient collateral, high interest rates and excessive paper work.
- Customers, as they get rejected by or discouraged from banks, often apply for a microcredit from Microfinance institutions (MFI). MFIs do not always charge lower interest rates than banks, but they are less demanding in terms of collateral and guarantee requirements.
- Digitalisation of microfinance operations is efficient for both lenders and borrowers, yet suppliers are only partially digitalised and poor customers often have no access to digital payments.
- Microenterprises, especially from disadvantaged groups, face greater barriers to secure finance when scaling up their businesses. In addition to difficulties accessing finance, they face other barriers including lack of growth motivations, lack of entrepreneurship skills and smaller entrepreneurship networks.
- Access to finance is crucial not only for existing microenterprises, but also for those who are eager to create a business in order to escape poverty or unemployment and contribute to job creation. In addition to financial support, unemployed people are often in need of acquiring the necessary skills for success through coaching and mentoring.

- MFIs, especially non-bank MFIs, face challenges in securing funding to support growth. They also are in need of additional investment in technologies in order to stay competitive with Fintechs.

Fintechs:

- The surge in global Fintech investments has come to a halt in recent quarters. During the first half of 2019, a substantial drop in Fintech PE deals effectively reversed global Fintech investment volumes back to 2017 levels.
- Going against the global trend, investment volumes on the European Fintech VC market rose sharply during the first quarters of 2019. This expansion brought about a significant scale increase, as the average VC deal size approximately doubled.

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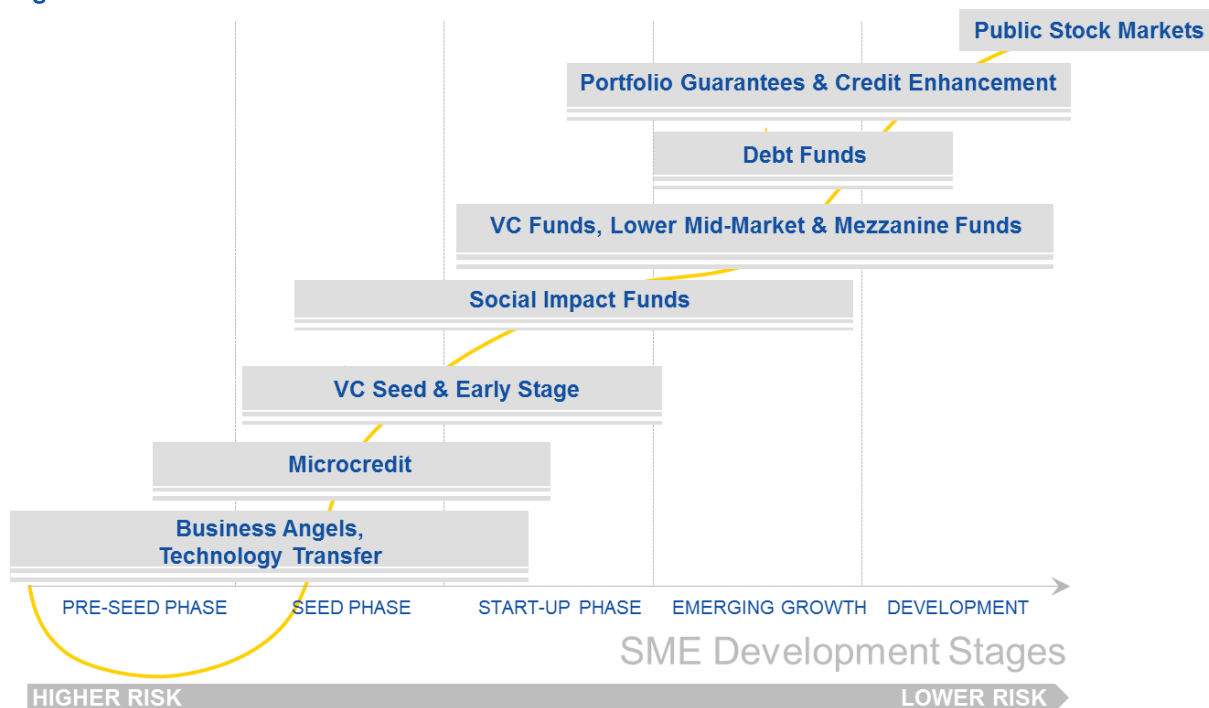
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1 Introduction

The European Investment Fund (EIF) is the European Investment Bank (EIB) Group’s specialist provider of risk financing for entrepreneurship and innovation across Europe, delivering the full spectrum of financing solutions through financial intermediaries (i.e. equity instruments, guarantee, credit enhancement and private debt instruments, as well as microfinance). Figure 1 illustrates the range of EIF’s activities:

Figure 1: EIF tool kit for SMEs



Source: EIF

The EIF focuses on the whole range of small and medium-sized enterprises (SMEs), starting from the pre-seed, seed-, and start-up-phase (technology transfer, business angel financing, microfinance, early stage VC) to the growth and development segment (formal VC funds, mezzanine funds, portfolio guarantees/credit enhancement).

Public support to SMEs is crucial given their importance for the European economy. SMEs are defined by the European Commission⁴ as firms having no more than 250 employees. In addition, they are required to have an annual turnover below EUR 50m, or a balance sheet total less than EUR 43m (see Table 1).

⁴ Commission Recommendation 2003/361/CE of 6 May 2003.

Table 1: EU definition of SMEs

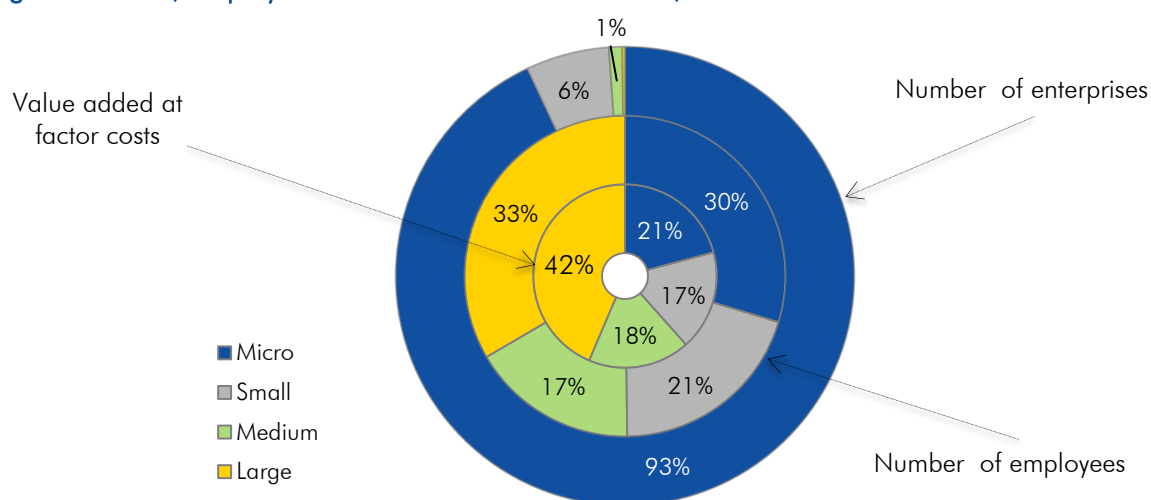
	Employees	Turnover	Balance sheet total
Micro	<10	≤ EUR 2m	≤ EUR 2m
Small	<50	≤ EUR 10m	≤ EUR 10m
Medium-sized	<250	≤ EUR 50m	≤ EUR 43m

Note: In the context of defining enterprise categories, often the category of mid-caps is mentioned in between SMEs and corporates. We define mid-caps as enterprises with a minimum of 250 and a maximum of 2,999 employees; there is also the sub-category of small mid-caps, with a maximum of 500 employees.

Source: European Commission (2019a)

SMEs contribute significantly to European job creation and economic growth (Figure 2). In 2018, 25 million SMEs in the European Union made up 99.8% of all non-financial enterprises, employed around 97.7 million people (66.6% of total employment) and generated 56.4% of total added value (EUR 4,357bn).

Figure 2: SMEs, employment and value added in the EU, 2018



Source: Authors, based on European Commission (2019a)

The European Small Business Finance Outlook (ESBFO) provides an overview of the main SME financing markets relevant to EIF, i.e. equity and debt products (guarantees, securitisation, leasing, private debt funds, microfinance and Fintech).² The present edition is an update of the ESBFO June 2019 (Kraemer-Eis et al., 2019).

We start by discussing the general market environment, then look at the main aspects of equity finance and the markets for SME debt products. Finally, we briefly highlight important aspects of microfinance in Europe, as well as of the emerging Fintech area.

2 Economic outlook

Global economic growth continues to slow down significantly during the second half of 2019 (IMF, 2019b). Forecasts for the entire year were revised downwards again and global economic growth is now expected to materialise at 3%, a near one percentage point reduction compared to earlier estimates and the slowest pace since the global financial crisis. The IMF identifies rising trade tensions as the most important factor driving the global synchronised downturn. In addition, a number of structural issues are likely to be contributing to the current economic slowdown, such as lower productivity growth and aging demographics in advanced economies. Moreover, several downside risk factors potentially threaten a near future growth pick-up, most notably financial climate risks. Box 1 (page 4) discusses in greater detail how climate change poses a potential threat to global financial stability.

Table 2: European Commission autumn 2019 forecast for the EU

<i>(Real annual percentage change, unless otherwise stated)</i>				<i>Autumn 2020 estimates</i>		
	2016	2017	2018	2019	2020	2021
GDP	2.0	2.6	2.0	1.4	1.4	1.4
Private consumption	2.5	2.1	1.6	1.4	1.5	1.5
Public consumption	1.8	1.2	1.2	1.8	1.7	1.4
Gross fixed capital formation	3.3	3.4	2.5	3.8	1.8	1.7
Employment	1.3	1.5	1.4	1.0	0.5	0.4
Unemployment rate (a)	8.6	7.6	6.8	6.3	6.2	6.2
Inflation (b)	0.2	1.7	1.9	1.5	1.5	1.7
Government budget balance (actual, % GDP)	-2.4	-1.6	-0.7	-0.9	-1.1	-1.2
Gross government debt (% GDP)	85.3	83.6	81.9	80.6	79.4	78.4
	Contribution to change in GDP					
Private and Public Consumption	1.8	1.4	1.1	1.2	1.1	1.1
Investment and Inventories	1.1	0.7	0.7	0.5	0.4	0.4
Net exports	-0.3	0.4	0.1	-0.3	-0.2	-0.1

(a) Percentage of the labour force.

(b) Harmonised index of consumer prices (HICP), annual percentage change.

Source: *European Commission (2019b)*

The European economy is also expected to suffer from the economic slowdown, with 2020 growth now forecasted at 1.4%, a 0.2 percentage point downward revision from earlier estimates (European Commission, 2019b). Full year forecasts for 2019 remain constant at a modest 1.4%. Lower growth prospects are mainly driven by a recession in European manufacturing. Unemployment, typically a lagging economic indicator, is expected to remain low for the foreseeable future. At 6.2%, the unemployment rate in the EU has now dipped below its pre-crisis level. This is partially driven by the rising share of part-time work, which is also causing wage growth to be sluggish. Another likely driver of sluggish wage growth is the declining rate of labour productivity growth during the post-crisis era (European Commission, 2019).

European inflation continues to fall short of the 2% target rate during 2019 and the following years, after having peaked at 1.9% in 2018, further increasing the likelihood of a prolonged period of

negative interest rates. EU investment is expected to peak at 3.8% in 2019 but to fall back significantly to just 1.8% in 2020.

Finally, reduced growth prospects are putting an upward pressure on national governments' budget deficits, as they are expected to rise above the 1% (of GDP) level again by 2020, which could explain why public consumption, as a share of GDP, is expected to decrease in 2020. The excess of nominal GDP growth relative to very low implicit interest rates on outstanding public debt implies gross government debts (as a share of GDP) continue to decline, however (European Commission, 2019b).

A number of downside risks are also threatening future growth prospects of the EU. Uncertainty with respect to international trade tension between China and the US are weighing on private investment. In addition, there is a significant risk that the current recession in European manufacturing will spill over to the service sector, further dragging down economic growth and job creation (European Commission, 2019). How the outcome of the UK general election on 12 December will impact the Brexit conditions remains to be seen, but it can be expected that the conservative party's absolute majority will help push the Brexit deal through parliament, possibly ending three years of ongoing uncertainty.

As a positive trend, aspects of sustainability are significantly gaining importance, not only in public discussions but also regarding their comprehensive consideration (see e.g. the "European Green Deal" – a roadmap for making EU's economy sustainable, incl. the objective to achieve a climate-neutral EU by 2050)⁵ and also concerning the consideration in (SME-) financing. Hence we start covering such aspects throughout the ESBFO (see, e.g. Box 1).

Box 1: Climate change, financial risk and policy responses in Europe

In its latest emission gap report (UN, 2019), the UN warns that greenhouse gas (GHG) emissions have continued to rise throughout 2018, with no immediate trend reversal in sight. Fossil CO₂ emissions from energy use and industry, the dominant driver of GHG emissions, grew by two percent, reaching a record high of 37.5 GtCO₂. By 2030, emissions would need to be reduced by a minimum of 25 percent in order for temperature increases to be limited to two degrees.

With the increasing threat of irreversible global warming comes a growing awareness that the consequences of climate change pose a significant risk to global financial stability. One can distinguish between physical climate risks on the one hand, and transition risk on the other. Physical risks such as floods and droughts stem from the direct consequences of rising temperatures, whereas transitional climate risk occurs when actors in the traditional economy are forced to adapt their business model to meet with the requirement of lower, or zero, carbon emissions standards.

⁵ See, e.g., https://ec.europa.eu/commission/presscorner/detail/en/ip_19_6691

Box 1 continued:

Both types of risk could have a severe impact on the global economy in general and the financial sector in particular. Extreme weather events will pose challenges to insurance companies, as their portfolios are adversely affected by a surge in damage claims. Lenders will be faced with a rise in non-performing loans from corporations that are operational in industries with a large carbon footprint, most obviously companies in the fossil fuel sector. But also sectors with ties to the fossil fuel industry are likely to run into financial problems, in particular through transitional risk. The automotive industry, for example, is currently facing a climate driven revolution, where a shift away from traditional combustion technology is forcing players to implement structural changes to their business models and production methods, in a bid to remain competitive.

Physical and transition risk pose systemic risk to the banking sector. This holds particularly true in Europe, where some of the largest financial players have substantial underwriting exposure to the fossil fuel economy, while others are still struggling to cope with the ongoing consequences of the 2007 financial crisis. Moreover, full compliance with the Basel III regulations will require European banks to increase their capital by nearly 25% (EBA, 2019), further limiting their ability to fund the European corporate climate transition. As it stands, accurately assessing and quantifying financial climate risk of banks' lending activities is a daunting task. A report by the Financial Stability Board brought to light that none of the 26 largest financial institutes provided full disclosure of the climate-related risks stemming from their financial activities, and only five of them provided partial information (ECB, 2019c).

Companies are also coming under increased scrutiny to release data regarding their environmental impact. It is becoming common for investors and rating agencies to pressure corporations into disclosing such information. Recently, a group of investors, overseeing nearly EUR 10tr, launched a campaign demanding that more than 700 large companies disclose detailed information about their environmental impact, through the online disclosure platform CDP. Rating agencies have begun considering climate-related ESG factors in their rating decisions, like Moody's, which downgraded the triple-A rating of Exxon Mobile, recognising the enormous challenges integrated oil companies face in transitioning their business models. In addition, EU policy makers have launched initiatives to enhance information availability on the environmental impact of economic activity, by proposing a common EU classification system to determine whether an economic activity is environmentally sustainable.⁶

⁶ This resulted from a technical expert group (TEG) that has been set up by the EC in 2018 in order to assist in developing 1) an EU classification system (EU taxonomy) to determine whether an economic activity is environmentally sustainable, 2) an EU Green Bond Standard, 3) methodologies for EU climate benchmarks and disclosure benchmarks, and 4) guidance to improve corporate disclosure of climate related information. In December, the TEG published a first round of proposed activities that contribute significantly to climate change mitigation activities and their technical screening criteria, together with a call for feedback on the proposed criteria. The TEG has also engaged with over 150 additional experts to develop technical screening criteria for the second round of climate change mitigation and adaptation activities. On 18.06.2019, the TEG published a report on EU Taxonomy, which takes on board the feedback received. The report is accompanied by a short user guide, which provides a quick overview of what the taxonomy is, what it is not, and how to use it in practice, and by a summary of the technical report. On 05.12.2019 co-legislators reached a common understanding on the taxonomy for green economic activities. As per the time of writing this report the deal is subject to approval by the European Parliament and the Council. For more information, see: https://ec.europa.eu/info/publications/sustainable-finance-taxonomy_en

Box 1 continued:

In an effort to contain the threat of climate risk to global financial stability, governments and institutions have vowed to step up their commitments in combatting climate change. In the Paris Climate accord, signed in 2016, 196 countries committed to pursue efforts to limit the increase in global temperatures to 1.5 degrees, albeit non-bindingly. The EIB Group recently also stepped up its efforts in its fight against climate change by announcing a moratorium on investment in the fossil fuel industry by 2021, a landmark decision in the Group's 60 years existence. In addition, the EU budget supports EU climate objective through most existing budget programmes.

Within the ECB, voices advocating active involvement are also getting increasingly louder. In a recent statement, Christine Lagarde, the current president of the ECB, stated the desire to take into account climate related risks in their current economic models, which would effectively turn climate change into a determining factor for monetary policy decisions. Lagarde's plan was met with criticism, mainly based on two arguments. First, opponents voiced concerns regarding the ECB's political neutrality, arguing that the ECB's direct involvement in environmental investments would constitute a breach of the political neutrality principle. A second concern relates to the risk of inflation creation. Countering both arguments, scholars recently proposed to replace the maturing bonds of its previous EUR 2.6tr buy-back program with bonds issued to finance environmental projects. The EIB Group could be mandated by European authorities to issue such environmental bonds. These would subsequently be bought by the ECB, to replace its maturing government and corporate bonds. This would effectively eliminate the risk of inflation creation, while avoiding the ECB's direct involvement in investment decisions (De Grauwe, 2019).

A comprehensive package of policy measures combatting financial climate risk should necessarily include measures explicitly targeting European SMEs. This is important for two reasons. First, small businesses are least likely to possess the capacity to bear the sizeable costs associated with the climate transition. In addition, they are most likely to fall victim to a potential credit crunch that could result from deterioration of banks' existing loan portfolios resulting from an overexposure to the fossil fuel economy. Second, SMEs will undoubtedly play a crucial role in proposing climate solutions. For example, supporting innovative Cleantech ventures can propel the development of novel technologies and bring down the costs associated with climate transition, effectively reducing climate-related financial risks. Given their importance to the EU economy, and their potential role in the fight against climate change, it will be crucial to design appropriate supra-national support programmes that financially support SMEs in their transition efforts, for example, through targeted financial instruments.

The global economic slowdown also weighed down the EU-wide SME United Business Climate Index (Figure 4), which summarises the sentiment of European SMEs vis-à-vis a number of economic indicators. European SMEs became significantly more pessimistic about the general business climate, particularly so in the North/Center EU countries⁷, and to a lesser extent in the South/Vulnerable⁸ European economies and the Brexit-sensitive⁹ countries. For the latter region, the economic climate is expected to deteriorate strongly during the second semester of 2019, reflecting the ongoing

⁷ Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Romania, Slovakia, Sweden and UK.

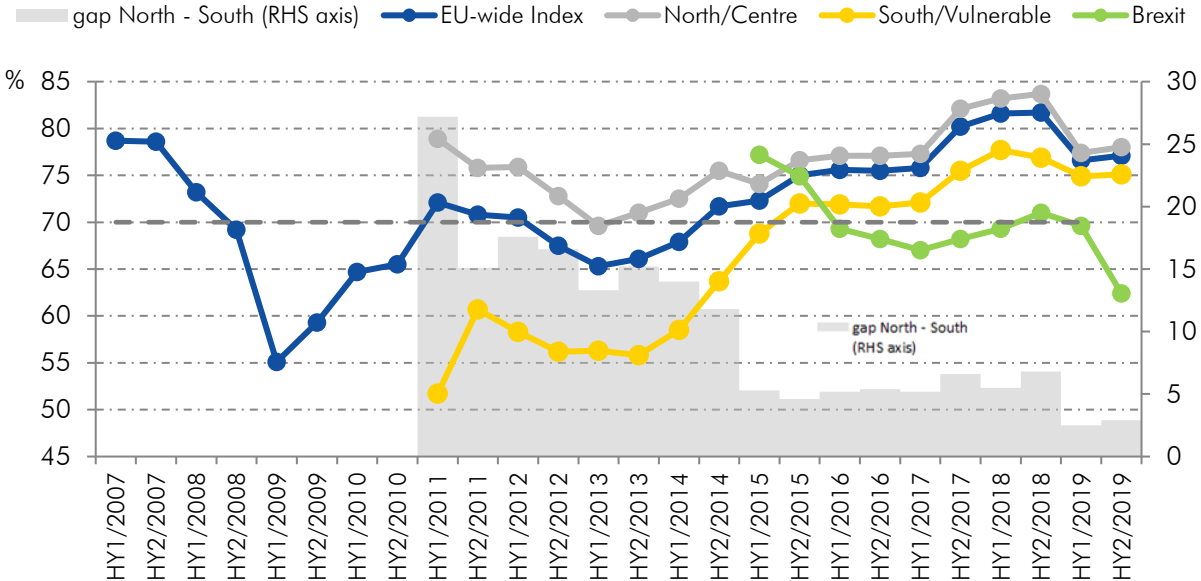
⁸ Croatia, Cyprus, Greece, Ireland, Italy, Malta, Portugal, Slovenia and Spain.

⁹ The Brexit region comprised those countries which are believed to be most exposed to the negative effects of the Brexit, namely, the UK, Ireland, Denmark and Belgium.

uncertainty related to the Brexit negotiations. In the other regions, on the contrary, SMEs are expecting conditions to improve slightly.

This reduced sense of optimism among EU SMEs is rooted in several factors. Figure 4 illustrates SMEs’ perception¹⁰ on a series of economic indicators contained in the Barometer, such as the overall economic situation, turnover, employment, prices, investments and orders. SMEs’ stagnating sentiment seems to have been caused mainly by a negative perception of the general economic environment, reflecting SMEs’ concern about the ongoing geo-political tensions and their impact on the international trade relationships.

Figure 3: The SME United Business Climate Index

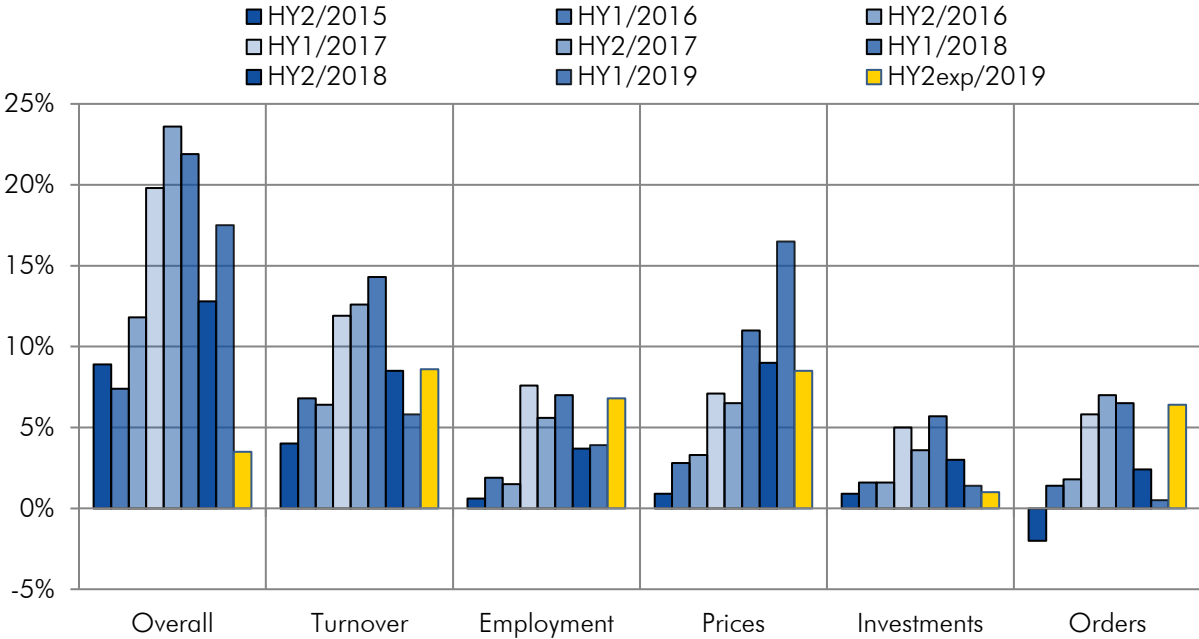


Source: Authors, based on SME United Study Unit (2019)

The slowdown in the economic recovery has impacted the evolution of European insolvencies. While in 2017 bankruptcies were declining across Europe (Kraemer-Eis et al., 2019), the overall picture for 2018 (Figure 5, page 8) was rather mixed (Euler Hermes, 2019). In Western Europe as a whole, insolvencies started to rise again after five consecutive years of decline, at a moderate rate of 0.4%, although this rate is expected to have risen slightly in 2019 and to rise throughout 2020. Insolvency growth remains elevated in the UK, possibly reflecting reduced consumer demand resulting from the ongoing political uncertainty regarding the Brexit negotiations. In Central and Eastern Europe, the economic slowdown is expected to be reflected in the insolvency number of 2019.¹¹ Forecasts for 2020 appear to predict a continuation of 2019 trends.

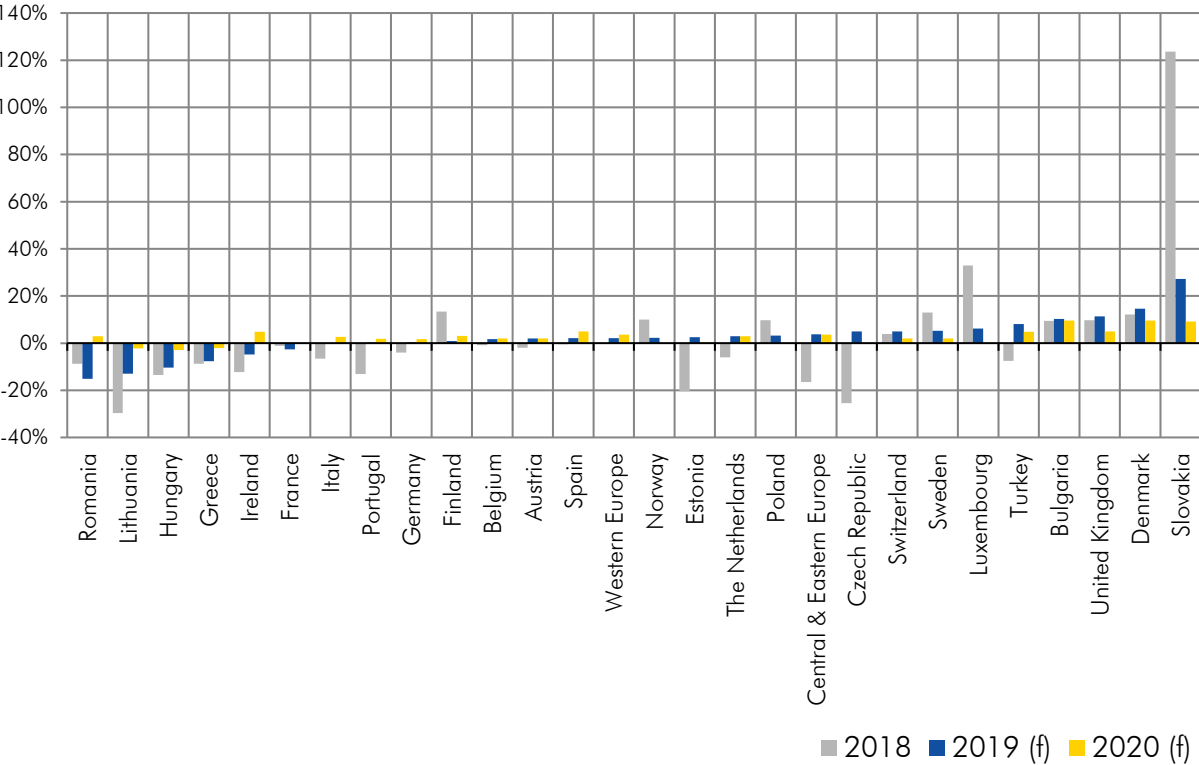
¹⁰ Figure 4 plots the net responses, which are calculated as the share of positive minus negative responses.
¹¹ Although this is in part driven by administrative factors, for example in Lithuania, where insolvencies dropped sharply after a normalisation following an administrative alteration in the procedure that governs the collection of insolvency statistics. For Slovakia, the strong 2018 increase was driven by administrative changes in insolvency legislation or data collection.

Figure 4: Main results of the EU craft and SME barometer HY2/2018



Source: Authors, based on SME Study Unit (2019)

Figure 5: Rate of change in insolvencies, 2018-2019-2020*



* 2019 and 2020 values are forecasted

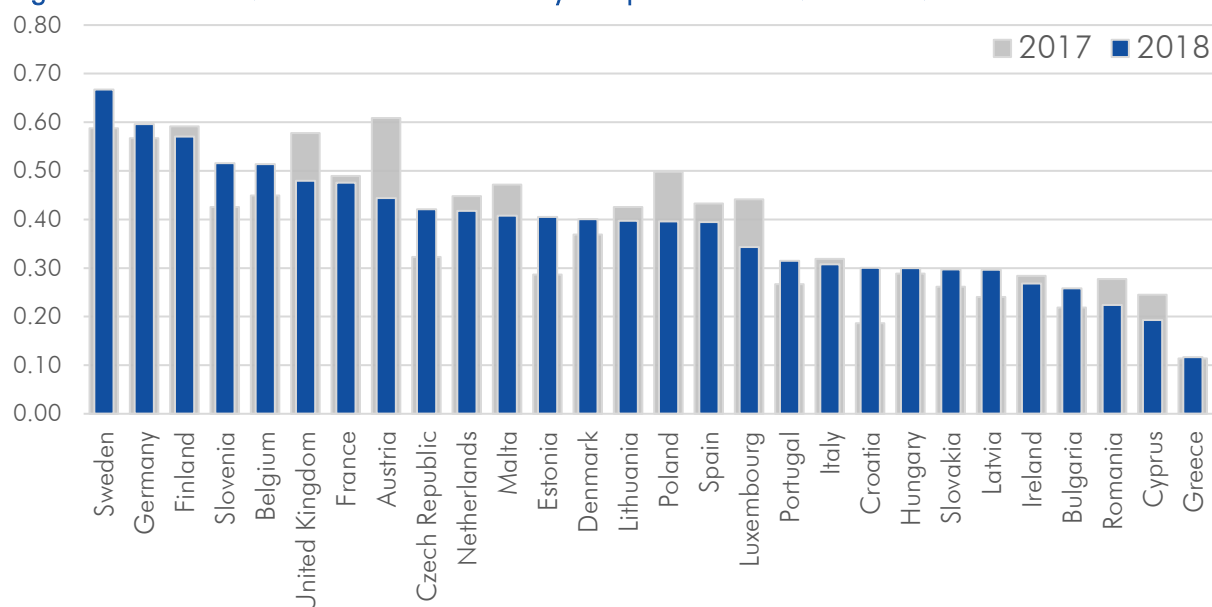
Source: Euler Hermes (2019)

3 SME business environment

3.1 The EIF SME Access to Finance Index (ESAF)

The discussion of the SME business environment is introduced by the EIF SME Access to Finance (ESAF) Index. The ESAF Index is a (backward looking) composite indicator that summarises the state of SME financing for the EU28 countries. Box 2 provides an overview of the ESAF's building blocks. The aggregate ESAF results (based on latest available data, i.e. 2018) are presented in Figure 6. The ESAF is now led by Sweden, with Germany and Finland completing the top 3. Greece lags the ESAF ranking for the sixth consecutive year in a row, preceded by Cyprus and Romania. For an elaboration on these results, and more background information on the most important evolutions between 2017 and 2018, readers are referred to Torfs (2019).

Figure 6: The EIF SME Finance Index: country comparison and evolution over time



Source: Torfs (2019)

Box 2: The four ESAF subindicators

Loans:

- Percentage of SMEs using bank loans in last 6 months
- Percentage of SMEs using grants or subsidised bank loans in last 6 months
- Percentage of SMEs not applying for a bank loan because of possible rejection in last 6 months
- Interest rate for loans under EUR 250k (floating rate with IRF up to 1 year)
- Interest rate spread (under EUR 250k vs over EUR 1m for floating rate with IRF up to 1 year)

Equity:

- Venture Capital Investments / GDP
- Value of IPO market / GDP
- Percentage of SMEs using equity capital in last 6 months

Box 2 continued:

Credit and Leasing:

- Percentage of SMEs using bank overdraft, credit line or credit card overdraft in last 6 months
- Percentage of SMEs not applying for the above because of fear of possible rejection in last six months
- Percentage of SMEs using leasing or hire-purchase in the last 6 months
- Median interest rate charged to SMEs for credit line or bank overdraft application in last 6 months

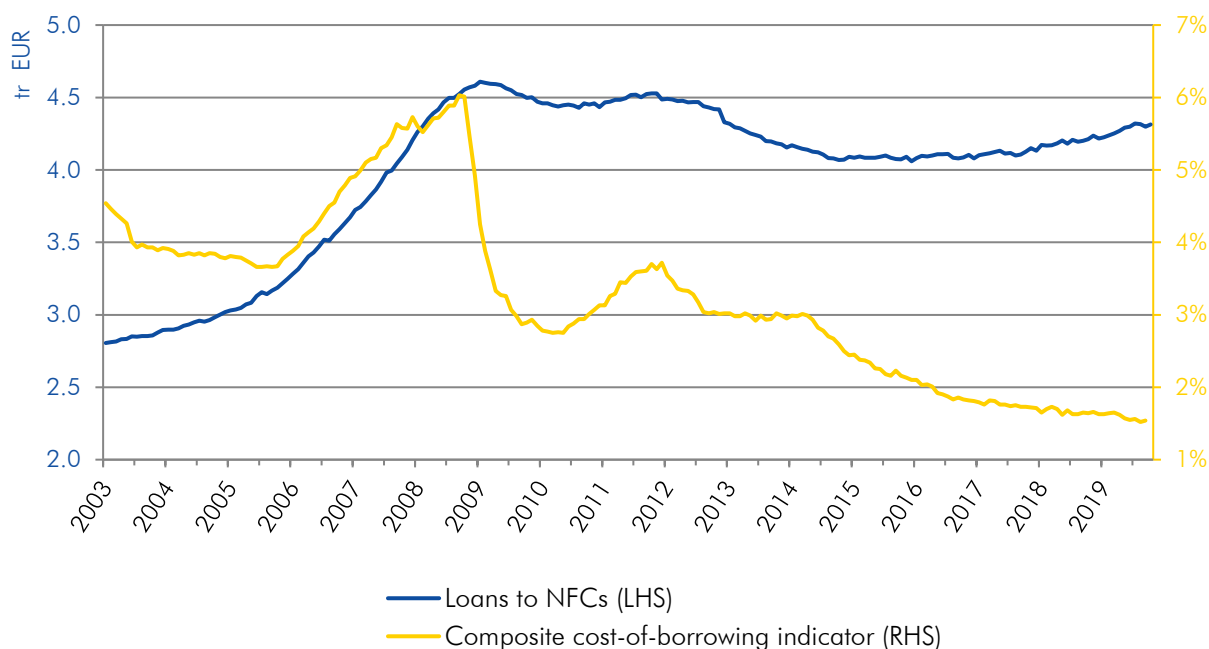
Macro Factors:

- Gap between actual and potential GDP
- Bank non-performing loans to total gross loans
- Percentage of SMEs "feeling that there are no financing obstacles"

3.2 Loan volumes and borrowing costs

Borrowing costs for NFCs remain historically low: In August 2019, the ECB's composite borrowing cost indicator¹² reached a record low of 1.52%, undercutting the earlier record reached in May 2018 by 4 basis points (Figure 7). Rates are expected to remain low throughout the coming months, following the ECB's recent monetary policy announcement that interest rates will be kept at their current low levels for the foreseeable future.

Figure 7: Outstanding loans and composite cost-of-borrowing indicator for non-financial corporations in the Euro area



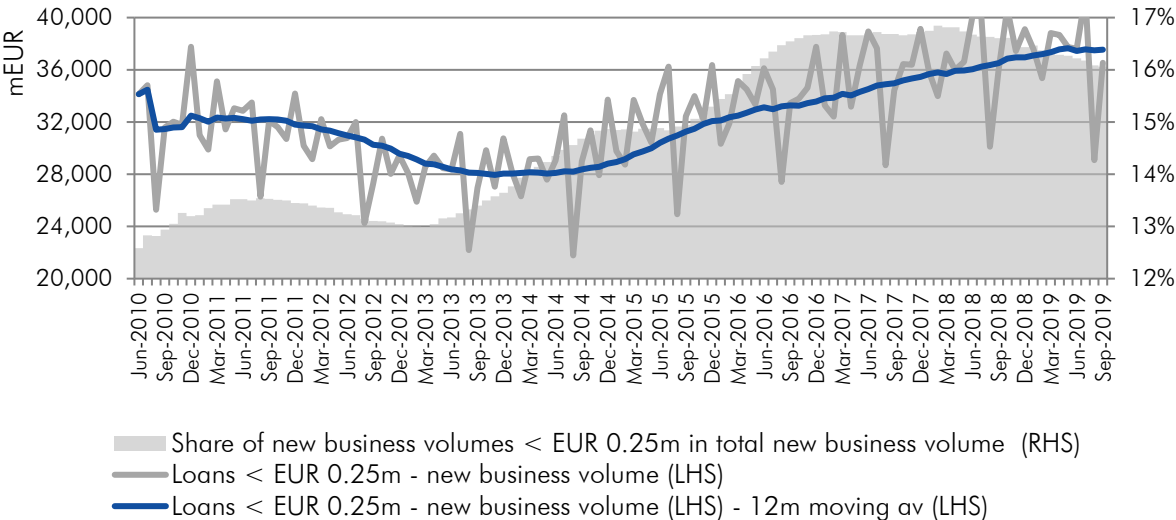
Source: Authors, based on ECB Data Warehouse

¹² The composite borrowing indicator is a volume weighted average of borrowing cost of loans from different maturities. For an elaborate description of the methodology, see ECB (2013). It was constructed "to assess the effectiveness of the monetary policy pass-through across the Euro area countries".

The low rate environment has led total outstanding loans to NFCs to rise further by 1% between October and April 2019, an increase of about 6.28% since the bottom of late 2015. The deleveraging process that lasted for nearly a decade seems to have been structurally reversed now, as outstanding loans have been increasing continuously for over two years.

The SME lending market^{13,14} plateaued during the second and third quarter of 2019, hovering around EUR 37.5bn¹⁵ (Figure 8). Following the crisis, SME lending initially contracted, after which it picked up pace early 2014 and has been on the rise ever since. The graph also depicts the share of small loans in total lending, to illustrate how the SME specific segment diverged from the overall lending market. During the pre-2014 contraction, the share of small loans in total volumes also dropped. This implies that the credit contraction caused by the financial crisis was more intensely felt by SMEs. However, during the recovery thereafter, the share of small loans in total lending increased significantly, stabilising at about 17% by the end of 2017. Recently, the share of small loans started to decline again. This decline continued during the second and third quarter of 2019, dropping 0.3 percentage points to 16% in September. The current slump in the Euro area’s credit cycle seems to disproportionately impact SMEs.

Figure 8: Small loans to NFCs (< EUR 0.25m), new business volumes in the Euro area (12 months backward moving averages)



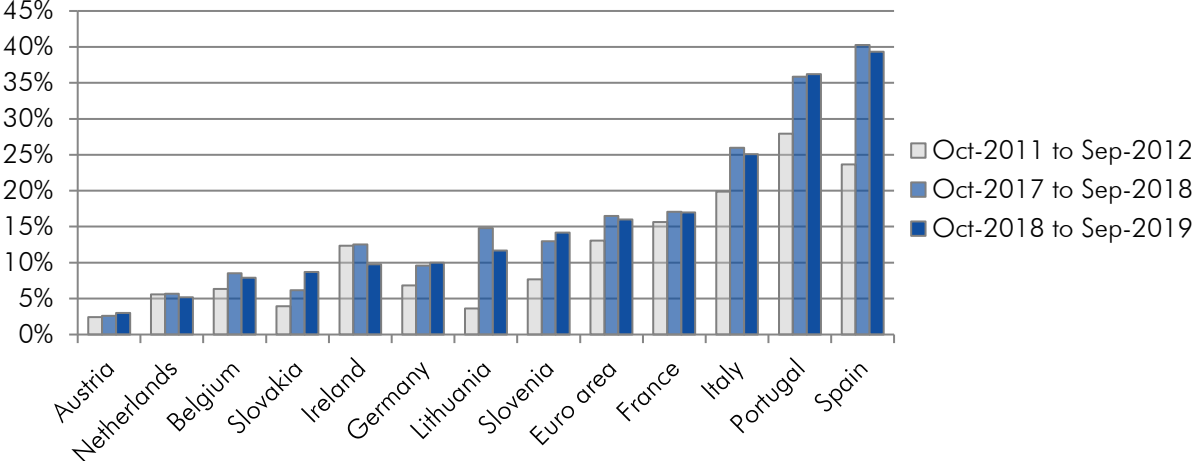
Source: Authors, based on ECB Data Warehouse

The Euro area share of small loans hides a significant amount of country-level heterogeneity (Figure 9). Small loans are relatively more important in the credit market of vulnerable countries. In Spain and Portugal, for example, small loans make up 40% and 35%, respectively, of new loans granted to NFCs. For September 2019, both shares stayed roughly constant compared to the same month in 2018. Also in Italy this share is relatively high at 25%. In Austria, the Netherlands, Slovakia, Belgium and Germany, the proportion of small loans in total new business volume is much smaller

¹³ Huerga et al. (2012) show that small loans are a good proxy for the SME lending market.
¹⁴ To better reflect lending conditions to SMEs specifically, rather than small loans in general, the data excludes interest rates on revolving loans and overdraft, since these instruments are used independently of firm size.
¹⁵ Calculated as a 12 month backwards moving average to abstract from the strong monthly fluctuations typically found in lending new business volumes.

and does not exceed 10%. The relative importance of small lending decreased most in Lithuania, where it fell by another 4 percentage points, a trend that was also observed in the previous edition of the ESBFO (Kraemer-Eis et al., 2019). For the remaining countries, no large year on year movements in the share of small business lending are observed.

Figure 9: Small loans (< EUR 0.25m) as a share of total NFC lending (NBV), by country*

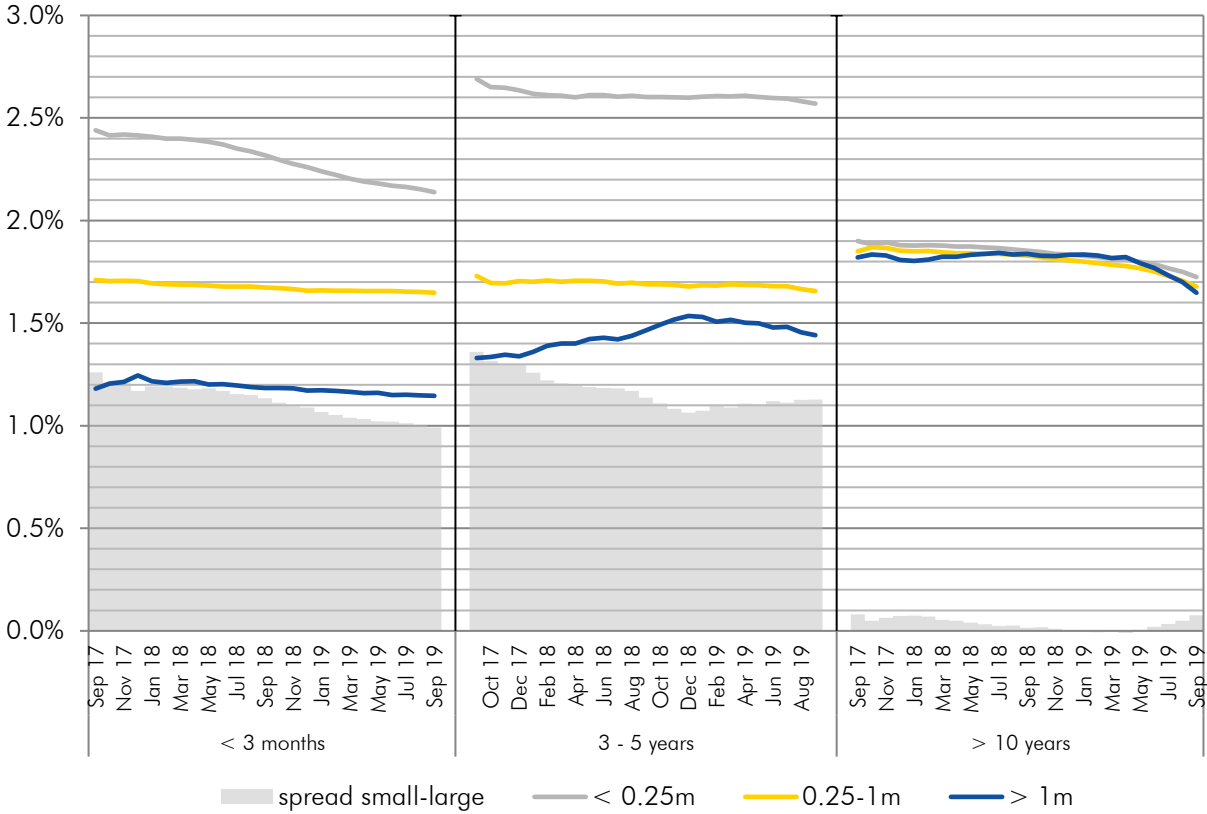


* NBV: New business volume, 12 months backward moving average.
 Source: Authors, based on ECB Data Warehouse

Borrowing costs are an important driver of loan demand. Figure 10 illustrates the evolution of borrowing costs for three different loan size categories: small loans (<EUR 0.25m), medium-sized loans (EUR 0.25m – EUR 1m) and large loans (>EUR 1m). Interest rate data are further subdivided according to loan maturity, where interest rates on loans with a maturity less than three months serve as a proxy for short term lending, 3 to 5 years for medium term lending and 10 years and more for long term lending. The latter maturity segment arguably is the most relevant proxy for the cost of durable investments, both for SMEs and for larger firms. Figure 10 also depicts the interest rate size spread for the different maturity classes, defined as the excess interest rate charged on loans smaller than EUR 0.25m compared to loans with a value exceeding EUR 1m. A high size-spread indicates a disadvantaged competitive position for small firms vis-à-vis larger borrowers. The data show that the aggregate costs of borrowing discussed earlier in this chapter conceals divergent interest rate evolutions on most market segments.

During the six months leading up to September 2019, short term interest rates (the left panel of Figure 10) continued to decline consistently, for all size classes. The pace of decline has been markedly faster for long term loans, compared to other maturity classes. This indicates declining costs for long term investment projects, which should lead to higher gross fixed capital formation in the medium run. The drop in the price of long term investment lending was slightly higher for large firms, leading to size spread to increase slightly. The rate of decline in the cost of short term credit was highest for small loans. Since SMEs are more reliant on short-term credit, this improves their competitive position vis-à-vis larger firms.

Figure 10: Interest rates by loan size and maturity, and the interest rate size spread¹⁶



*The graph depicts the 12 month backward moving average floating interest rates charged by banks on loans to NFCs (new business volumes, other than revolving loans and overdraft).
 Source: Authors, based on ECB Data Warehouse

Figure 11 illustrates the heterogeneity that exists for borrowing costs for small loans within the EU.¹⁷ SMEs face the most favourable lending conditions in Belgium, Luxembourg and France, while the most expensive lending environment is found in Ireland, Greece and Estonia. Compared to other Euro area SMEs, Irish SMEs also face the largest competitive disadvantage vis-à-vis large firms, as evidenced by the Irish size spread.

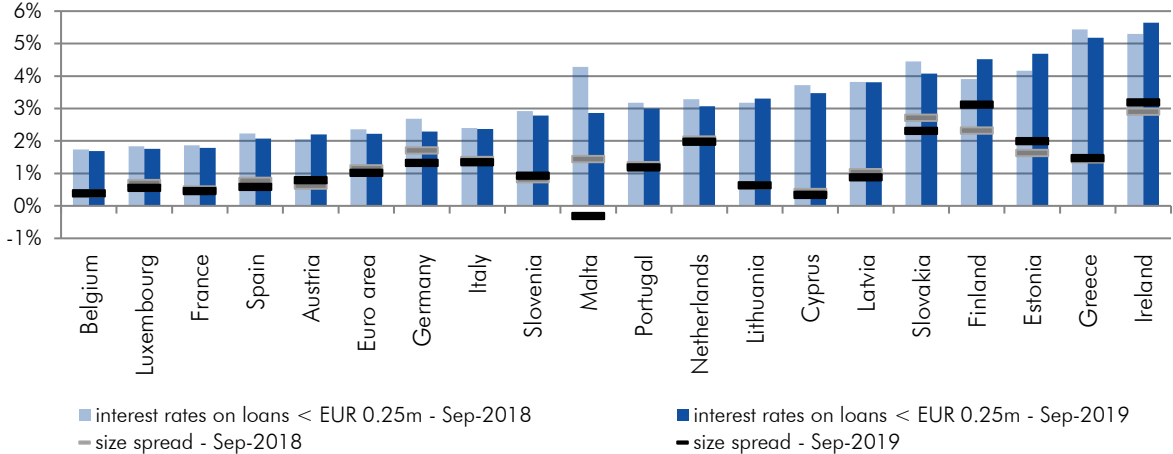
¹⁶ A general finding, arising from Figure 10 is the fact that, regardless of maturity, small loans are burdened with higher interest rates, a phenomenon referred to as the size-spread hereafter. This is somewhat surprising, as traditional finance theory suggests that, ceteris paribus, the risk of default increases with loan size (Stiglitz, 1972). A number of factors could explain why the inverse relationship between loan size and interest rate breaks down for bank lending to NFCs. First, in the presence of fixed screening costs, small loans will carry a higher interest rate. Second, smaller lenders could possess different characteristics (Moore and Craigwell, 2003), or use the borrowed funds for different financing purposes, such as funding working capital, instead of long term investment projects. The fact that the size spread is particularly high for short term loans provides some support for this argument. Third, it is possible that banks possess a higher degree of power in the small loan market segment, putting an upward pressure on the price of small loans. Figure 10 also exposes an anomaly in the maturity spread of small loans. As a general rule, liquidity decreases with loan maturity. Long term loans would therefore be expected to carry higher interest rates. This reasoning indeed holds true for medium-sized and large loans. For small loans however, short term lending is actually more expensive. This can be interpreted as evidence for the presence of a fixed lending costs element related to screening.

¹⁷ In this context, see Wagenvoort et al. (2011) who show that the European market integration for small loans, in particular with a short rate fixation, has not yet been achieved, explaining the non-uniformity of bank lending rates on small loans across Europe.

Over the 12 months leading up to September 2019, the interest rate on small loans¹⁸ increased in a handful of countries: Ireland, Estonia, Finland, Lithuania and Austria (Figure 11). A similar evolution was documented for the six preceding months in the previous version of the ESBFO (Kraemer-Eis et al., 2019). Also the size spread rose in these five countries, in particular in Finland and Estonia. For Estonia, this marks the sixth consecutive semester of interest rate increases in the SME lending segment (see Kraemer-Eis et al., 2017a, 2017b, 2018a, 2018b, 2019).

For Spain, on the contrary, SME borrowing costs continue to decrease. Once more, this decrease was specific to the small lending segment. Especially in light of our earlier finding on the importance of small loans in total Spanish new business volume, this is a favourable evolution that could have a significant positive impact on the Spanish credit market, as low borrowing costs stimulate SME investments and spur economic growth. Also in Italy, another economy with a pronounced importance of small scale lending, borrowing costs on small loans evolved favourably, with declining interest rates and a drop in the size spread.

Figure 11: Euro area country-level interest rates on small loans and the loan size spread*



* The spread is calculated as the percentage point difference between loans exceeding EUR 1m and loans smaller than EUR 0.25m. Twelve month backward moving averages were used to eliminate the influence of monthly outliers as well as seasonal influences and focus on the underlying trend. Countries or data points for which no sufficient data was available are omitted.

Source: Authors, based on ECB Data Warehouse

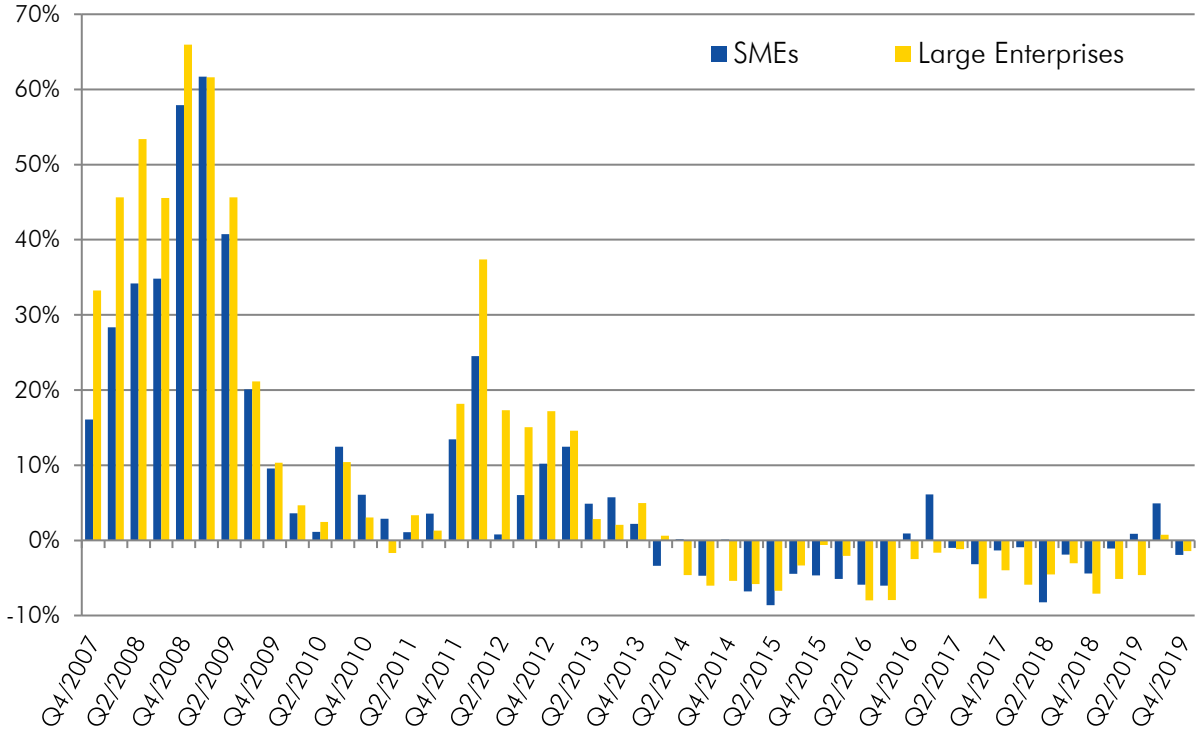
While some might argue that cross-country heterogeneity in interest rates on small loans could be explained by differences in the risk-profile of local SMEs, a recent study found that such factors were not strong predictors of small loan interest rates (Caroll and McCann, 2016). Controlling for individual risk factors, the authors conclude that national interest rate differences for SME lending are associated with a country’s institutional characteristics, such as the recoverability of collateral and lack of competition in the banking sector. This latter explanatory factor was found to be of particular relevance for explaining the interest rate size-spread documented in Figure 10 and Figure 11. Large firms have greater bargaining power, which leads to lower interest rates on larger loans and hence, a lower size spread (Berger and Udell, 2006; see also Affinito and Farabullini, 2009).

¹⁸ As measured by a 12-month backward looking moving average, to eliminate the influence of erratic monthly fluctuations.

3.3 SME financing from a supply perspective

This section follows the perspective of the banks to provide an overview of the current state of the SME lending market, using the quarterly ECB’s latest Bank Lending Survey (ECB, 2019b). Among other things, banks are asked about the credit standards they uphold towards corporate borrowers. Figure 12 plots their quarterly net change¹⁹ and illustrates how banks’ credit standards applied to NFC lending has changed since the beginning of the financial crisis.²⁰ A positive value indicates tightening credit standards, whereas a negative value points to an easing. For the first time since 2014, large firms faced tightening credit standards during Q3/2019, while credit standards for SMEs stayed roughly constant. During the final quarter of 2019, credit standard improved slightly for firms belonging to either size class.

Figure 12: Net changes in credit standards applied to the approval of loans or credit lines to enterprises (Euro area, SMEs versus large enterprises)



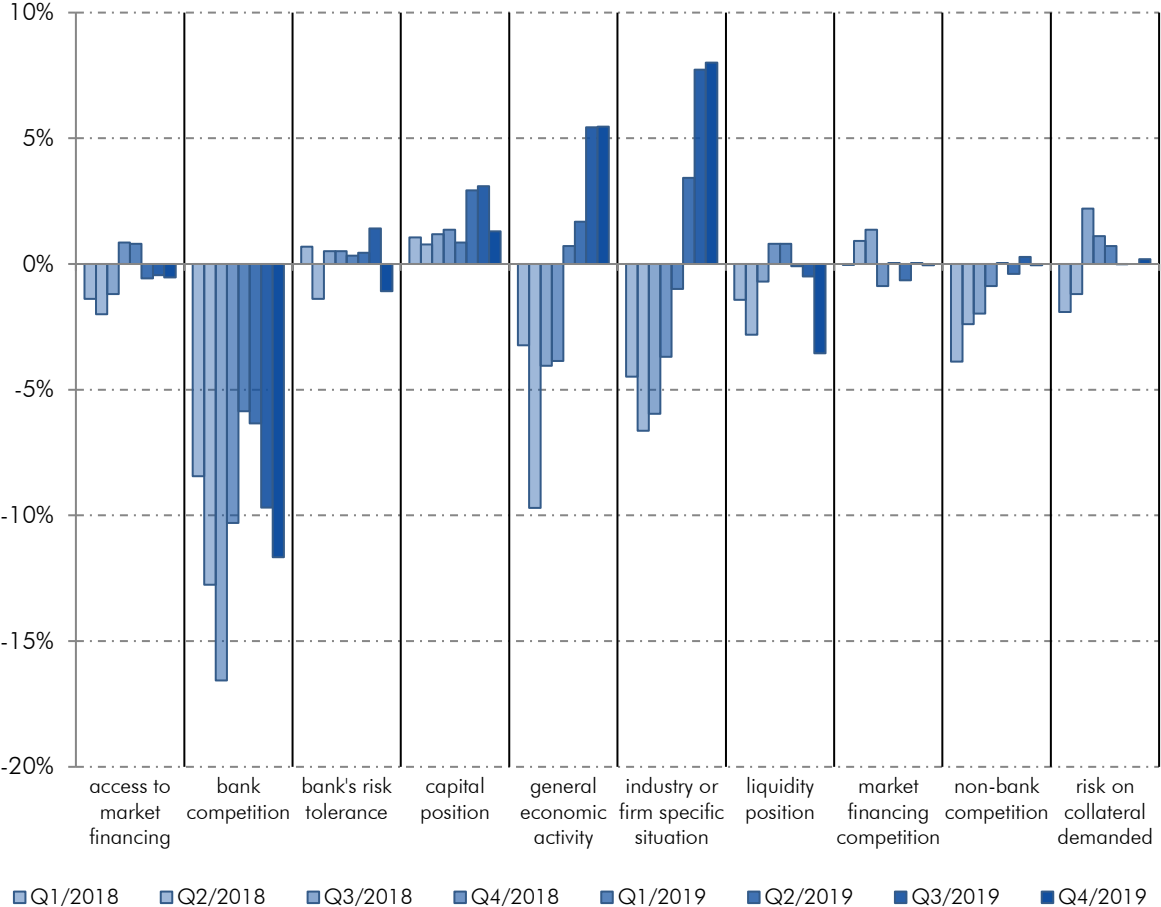
Source: Authors, based on ECB Bank Lending Survey (ECB, 2019b)

Figure 13 reveals that during the second semester of 2019, increased bank competition was a driving factor for easing credit standards to SMEs, whereas concerns about both the general economic environment as well as the industry or firm specific situation drove banks to tighten credit standards.

¹⁹ The net change is the difference between the percentages of banks responding “tightened considerably” and “tightened somewhat”, and the percentages of banks responding “eased somewhat” and “eased considerably”, for loans to firms from different size classes.

²⁰ Banks are asked the following question: “Over the past three months how have your banks’ credit standards as applied to the approval of loans or credit lines to enterprises changed?”

Figure 13: Factors contributing to changes in credit standards to SMEs*



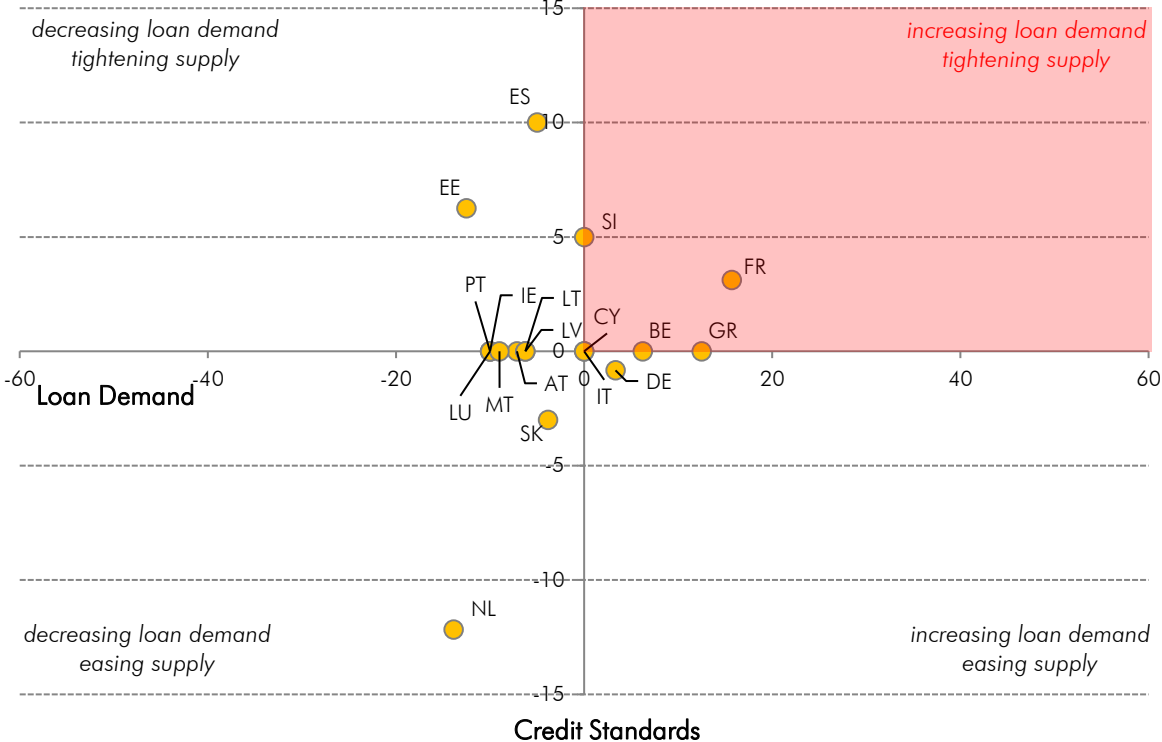
* Banks are asked the following question: "Over the past three months, how have the following factors affected your bank's credit standards as applied to the approval of loans or credit lines to enterprises?". The graph reports net percentages, the difference between the percentage of banks reporting that a given factor contributed to a tightening of credit standards and the percentage reporting that it contributed to an easing.

Source: Authors, based on ECB Bank Lending Survey (ECB, 2019b)

We conclude this section with a discussing of the supply side perspective on the evolution of the SME lending gap during the first semester of 2019. We do this by combining the answers of two BLS survey questions in the quadrant-plot illustrated in Figure 14. The first question asks banks to what extent they have tightened SME credit standards. These answers are mapped on the Y-axis. The values represent the net percentage of banks that tightened credit standards in a given country: a positive value implies tighter credit conditions. The second question asks banks whether they have experienced an increase or decrease in the demand for bank loans. These answers are mapped on the X-axis. A positive value implies higher loan demand.

The north-western quadrant represents a situation that is consistent with a period of economic contraction. Any point inside this quadrant implies decreased loan demand accompanied by tightening credit conditions. Consistent with our earlier discussion on the general market environment, in a number of countries, banks reported to have experienced a decrease in loan demand. For Spain and Estonia, this decrease went hand in hand with tightening supply, indicating a reversal of those countries' credit cycle.

Figure 14: The SME lending gap from a supply perspective (HY2/2019)²¹



Source: Authors, based on ECB Bank Lending Survey (ECB, 2019b)

At the opposite side of the diagram, the south-eastern quadrant represents a situation of economic expansion, where loan demand increases and credit conditions loosen. Only German banks reported an expansionary credit cycle during the second semester of 2019.

Since the BLS does not provide quantitative information, predictions on the direction in which the SME credit gap evolved are impossible for countries in the south-eastern and north-western quadrants, as it depends on the relative magnitude of both forces. However, for SMEs operating in countries situated in the South-Western and North-Eastern quadrants, or on the bordering axes, it is possible to infer predictions on the direction in which the financing gap is evolving.

The south-western quadrant, for example, represents a situation where decreased (or constant) loan demand goes hand in hand with loosening (or constant) credit supply, which implies a shrinking financing gap. This was the case for Dutch and to a lesser extent Slovak banks. Banks in Portugal, Luxembourg, Ireland, Malta, Lithuania, Latvia and Austria reported a decline in SMEs’ demand for loans, at constant credit standards, also indicating a shrinking supply gap.

²¹ For all countries but Slovakia, France, Malta and the Netherlands, the ECB’s diffusion index (or DINX) measure was used. The DINX is calculated as the standard net percentage, but differs from it because more weight is given to banks that responded to have ‘considerably’ tightened credit standard (vis-à-vis those who responded to have ‘somewhat’ tightened credit standards). For Slovakia, France, Malta and the Netherlands, the ECB published only the *weighted* DINX (BDINX), where responses are weighted based on the size of respondents’ balance sheets. Since the BLS is a quarterly survey, the two most recent quarters for which data was available are averaged.

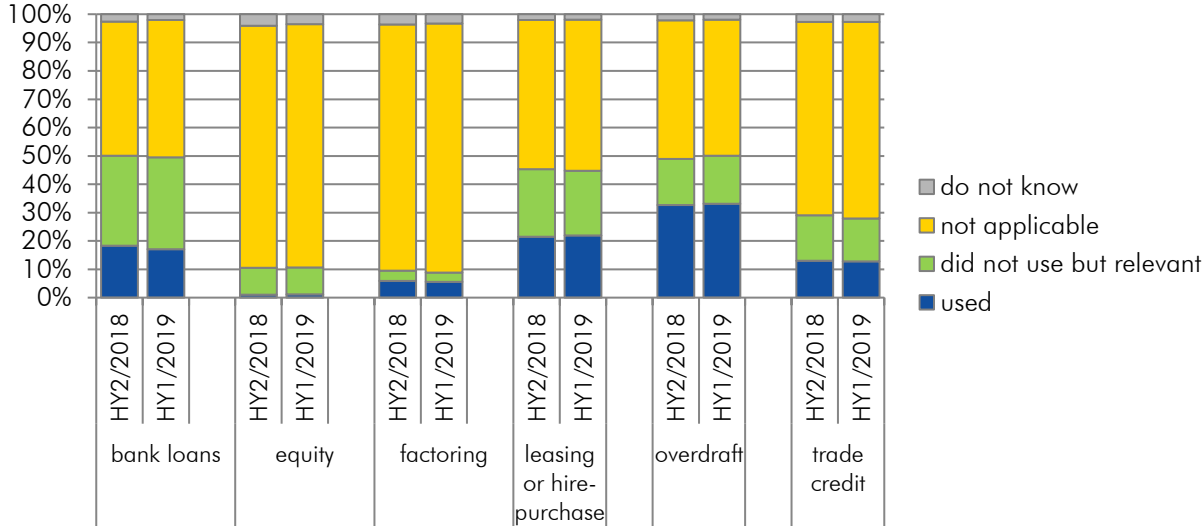
In Greece and Belgium on the other hand, banks reported an increase in SMEs’ loan demand, at constant credit standards, and thus an increase in the credit gap. French banks experienced the strongest increase in the demand for SME lending. It is the only country for which such increase occurred against a background of tightening credit standards, implying an unambiguous and pronounced increase in the loan supply gap.

3.4 SME financing from a demand perspective

This section turns to the demand side of the SME financing market and reports on the most important results of the latest Survey on Access to Finance of Enterprises (SAFE). The SAFE is a semi-annual survey that provides an overview of the state of SMEs’ access to finance in Europe.

Figure 15 illustrates the relative importance of different SME financing instruments (Figure 15). Bank products (loans and overdraft) are by far the most popular financing instruments, followed by leasing and hire-purchase. Equity and factoring make up just a small fraction of overall SMEs’ external financing needs. Unfortunately, the SAFE survey does not include alternative financing instruments, such as crowdfunding, even though they have gained popularity in SMEs’ financing mix over the past years (see chapter 7 for a discussion on the growing importance of Fintechs and crowdfunding in the European SME financing landscape). In general, the financing composition of SMEs does not vary strongly over time, although we did observe a minor increase in the use of overdraft, as well as a minor decrease in the use of bank loans during the first semester of 2019. At 17.1%, the use of bank loans has not been lower since the beginning of measurement during the second semester of 2014, when it was still at 21.1%.

Figure 15: Sources of external financing of Euro area SMEs

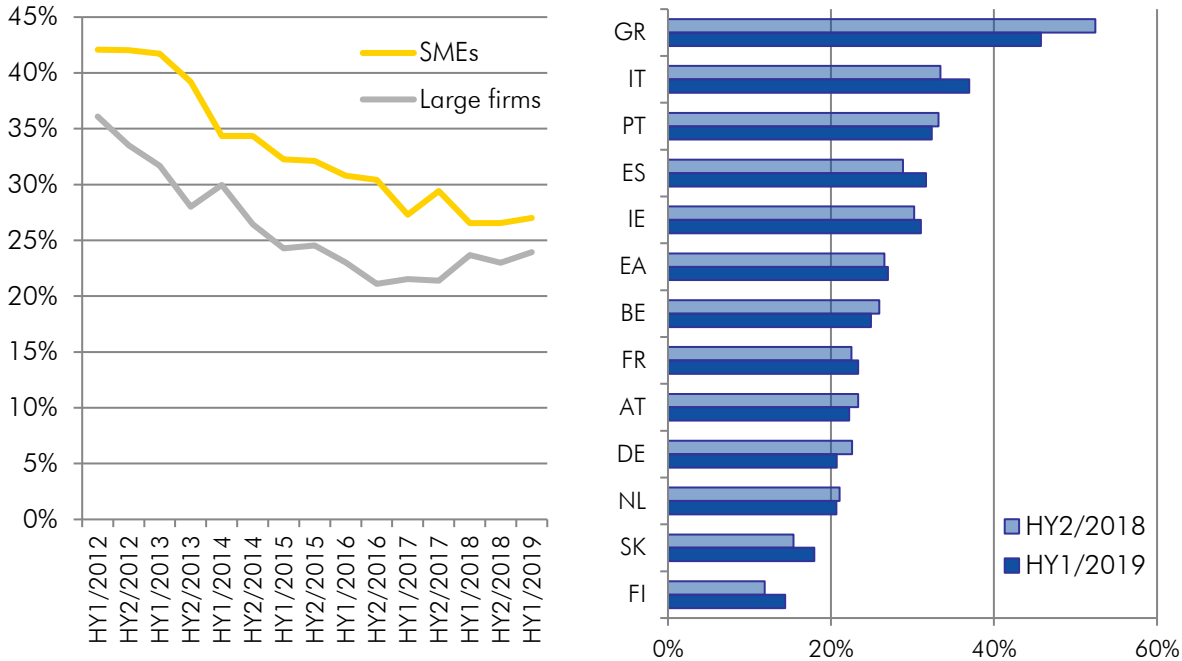


Source: Authors, based on ECB SAFE (ECB, 2019a)

Over one in four SMEs still report severe difficulties in accessing finance (Figure 16, left panel). This points to significant structural credit market failures, which prevent SMEs’ financing demands from being met. The share of Euro area SMEs that considers access to finance to be a highly important

problem²² has increased slightly, to 27 percent, during the first semester of 2019. Interestingly, the share of large firms reporting severe issues in accessing finance has been on the rise since late 2017. Although still below the SME segment, the two series have been converging lately.

Figure 16: Percentage of Euro area SMEs ranking access to finance as a highly important issue



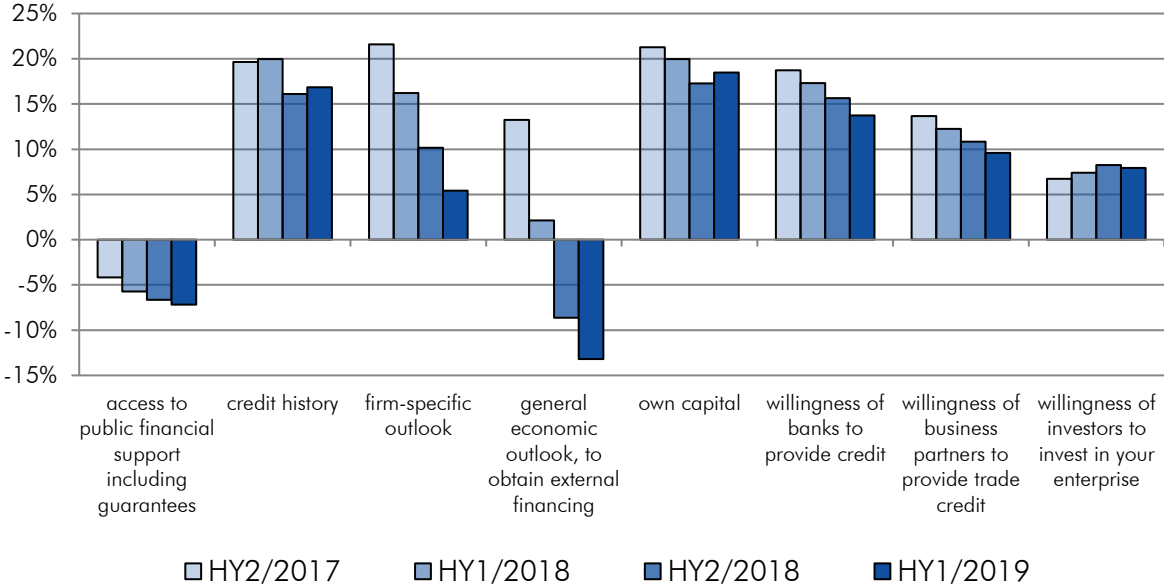
Source: Authors, based on ECB SAFE (ECB, 2019a)

The right panel of Figure 16 shows that the share of SMEs reporting severe issues in accessing finance varies significantly from country to country. In Greece, 45% of SMEs experienced significant problems in finding suitable finance solutions, a 7 percentage point improvement compared to HY2/2018. While still the worst performer in the Euro area, this represents a marked improvement compared to the beginning of measurement in 2013, when nearly 7 in 10 Greek SMEs reported severe issues in accessing finance. In Italy and Spain on the other hand, SME access to finance issues have increased during the first semester of 2019. Finland still leads the ranking, with just 14% of its SMEs experiencing notable difficulties in accessing finance, a minor increase compared to one semester earlier.

The SAFE survey also asks SMEs which factors they believe are driving the availability of external financing. During the first semester of 2019, SMEs’ pessimism about the general economic environment rose further (Figure 17). Insufficient public support for external financing markets, which has been a concern for several semesters, continues to worry European SMEs. All other factors considered were believed to have positively impacted the availability of external finance, although the level of optimism surrounding these other factors has decreased since HY2/2018.

²² Rating it 7 or higher on a scale of 10 for the survey item Q0b, pressingness of problems that the firm is facing.

Figure 17: Factors driving the availability of external financing to Euro area SMEs



Source: Authors, based on ECB SAFE (ECB, 2019a)

4 Private equity

Private Equity (PE)/Venture Capital (VC)²³ is an essential source for start-up, young, and high growth companies to create value, often through innovation. External equity is not to be seen as a substitute for traditional, mainly bank-centred, SME financing instruments. Rather, it serves a specific and restricted group of SMEs and mid-caps (including startups), which, nevertheless, significantly contribute to the innovativeness, productivity and development of the overall economy.

However, there are impediments to the development of a vibrant European PE/VC market and the “[p]resence and accessibility of alternative funding avenues is underdeveloped for SMEs, e.g. venture capital & angel investing” (AFME and BCG, 2015; AFME, 2017). The justification for public intervention in the area of SME financing in general, and external equity financing in particular, is rooted in a number of factors, such as the presence of information asymmetries in the relationship between financier and recipient, the presence of fixed costs of investment and the existence of positive externalities originating from SMEs’ innovation activities.²⁴ In the PE/VC market, the long investment cycles can also deter private investors, especially in early stage financing, while public agents can be considered as more “patient” investors.

Against this background, it is one of EIF’s aims to play a crucial role in establishing a sustainable VC ecosystem in Europe. We provide an overview of the European PE/VC market activity and prospects in this chapter.

4.1 Investment activity

4.1.1 Private equity funds

Over the past 20 years, the European private equity (PE) activity exhibited booms and busts. The most famous peak periods were observed in 2000 and 2006, when the total amounts raised by PE funds located in Europe reached EUR 48bn and EUR 112bn, respectively, according to the statistics of Invest Europe (see Figure 18; Box 3 provides more information on the Invest Europe data).

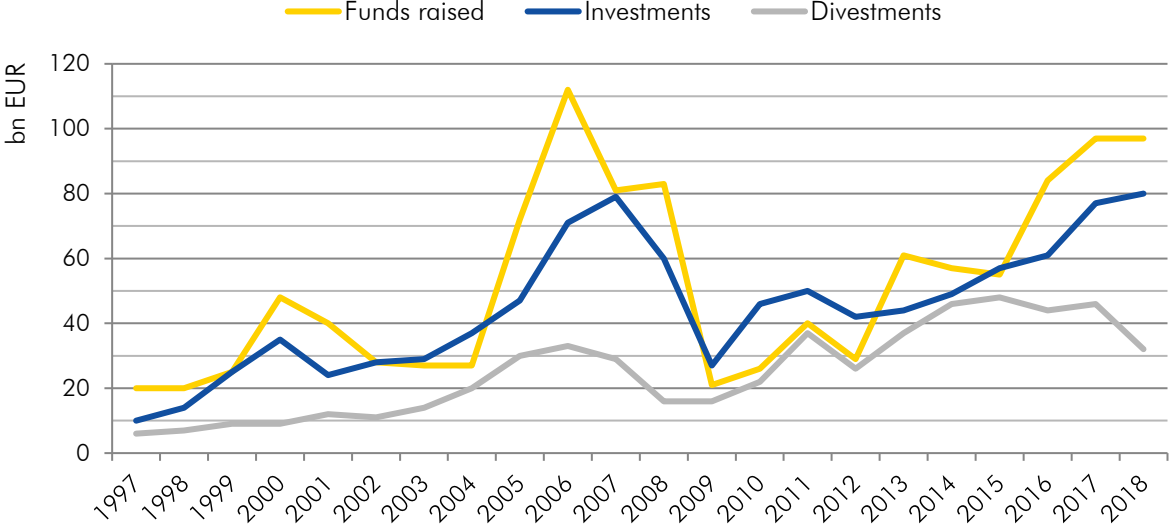
In the same years, the overall PE investment levels were at EUR 35bn and EUR 71bn (and even increased further to 79bn in 2007). However, both booms were followed by significant downturns, i.e. the “dotcom crisis” in the early noughties and the financial and economic crisis from 2007 onwards. The severe crash of the European PE activity in 2008-2009 was followed by a rebound, and PE investments reached a new record level in 2018.

In 2018, PE investments increased considerably. PE funds located in Europe (statistics based on the “industry approach”; see Figure 18)²⁵ invested EUR 80.3bn, an increase by 5% compared to the previous year. At the same time, investments by PE funds from all over the world (including Europe) in portfolio companies based in Europe (“market approach”) increased by 7% to EUR 80.6bn (see Figure 19). The number of European companies financed increased by 7% to 7,816.

²³ In this chapter, we follow the Invest Europe approach that includes venture capital as a subcategory of private equity.

²⁴ See Section 5.1.1 for an overview of the rationale for public intervention in SME financing.

Figure 18: Fundraising, investment and divestment amounts by PE firms located in Europe²⁵



Source: Authors, based on data from Invest Europe

Box 3: Introductory information on Invest Europe data

In this chapter, numbers, diagrams and statements are largely built on statistics from Invest Europe, the association representing Europe’s private equity, venture capital and infrastructure sectors, as well as their investors. We would like to thank our colleagues from the Invest Europe research team for their support.

Invest Europe monitors direct private equity investment funds that primarily focus on investments in Europe. The funds included in the statistics are PE funds making direct PE investments, mezzanine funds, co-investment funds and rescue/turnaround funds. Please note that Invest Europe PE statistics do not include infrastructure funds, real estate funds, private debt funds, distressed debt funds, primary funds-of-funds, secondary funds-of-funds and PE/VC-type activities that are not conducted by PE funds. Also not included are activities of business angels and hedge funds as well as corporate acquisitions outside of dedicated corporate venture programmes.

Invest Europe statistics can differ from the numbers reported by other data providers for the reason just mentioned and others, like differences in methodology, definitions and interpretations of the PE fund and investment stages and geographical definitions (e.g. of “Europe”).²⁶

With data on more than 1,400 European PE firms, the Invest Europe statistics released in 2019 cover 89% of the EUR 688bn in capital under management in Europe. Data since 2007 was restated and complemented with additional information.

See Invest Europe (2019a) and Invest Europe (2019b) for more details.

²⁵ In this diagram, investment and divestment data are based on the “industry approach” (or “office approach”), i.e. by PE firms located in Europe, in contrast to the “market approach”, which is based on the location of the portfolio companies.

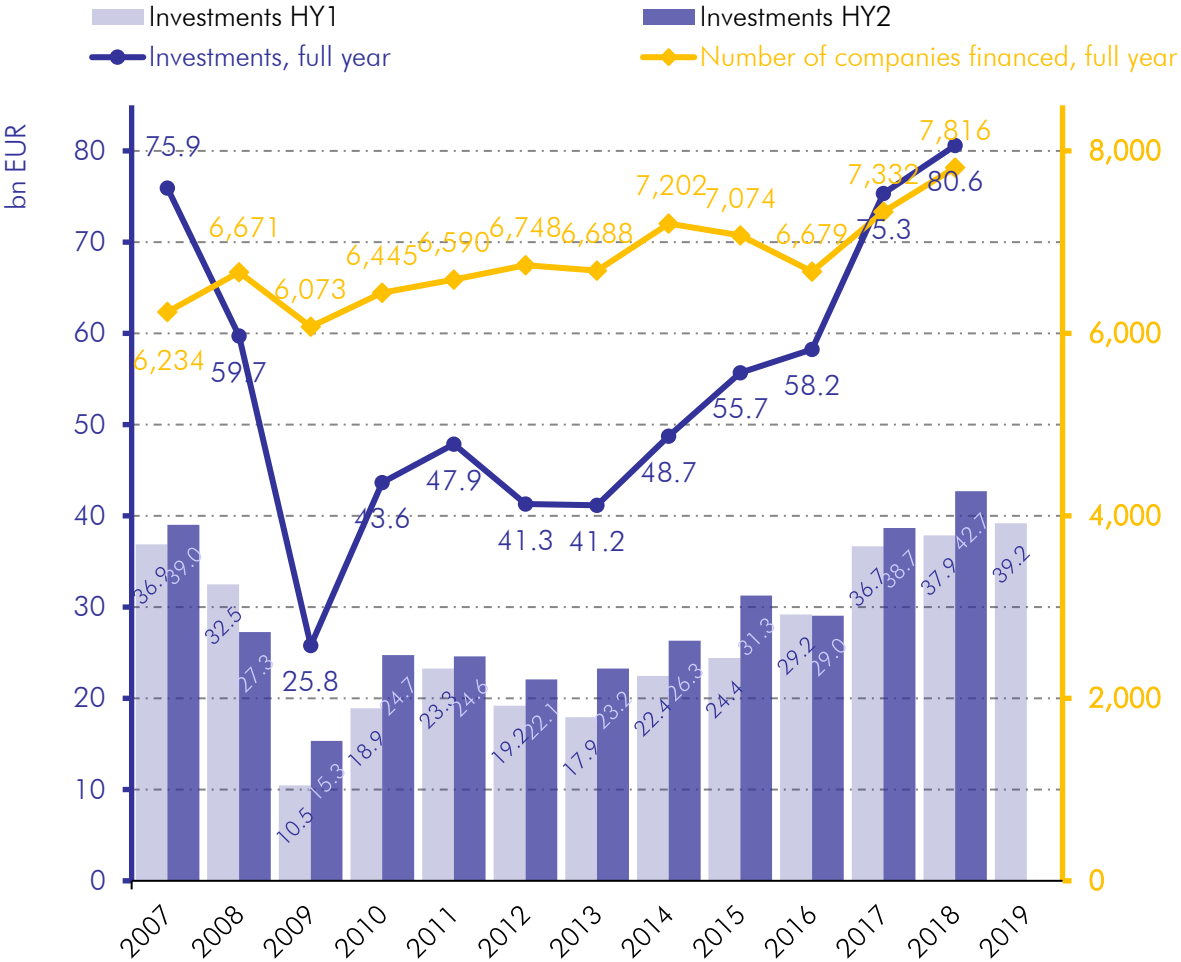
²⁶ Data on the PE and VC market is scarce and sometimes inconsistent with one another when comparing different data bases. This is mainly due to a lack of data disclosure and different data collecting and compiling approaches. Therefore, it is “difficult to paint in definitive terms the level of investment activity and fund performance”, as stated by Kaplan and Lerner (2016). However, the authors also highlight that “the quality of information available has increased in recent years and can be expected to continue to do so going forward”.

In the first half year 2019, PE investments amounted to EUR 39.2bn. This constitutes the highest value ever recorded for the first six months of a calendar year since 2007. At the same time, PE funds financed 3,564 European portfolio companies.

A differentiation by stage focus (Box 4 provides an overview of the Invest Europe investment stage definitions) reveals that investment strongly leaped in the largest part of the PE market, i.e. the buyout segment (by 10% to EUR 58.8bn), in 2018. A modest increase was also recorded for growth capital (+0.4% to EUR 11.9bn), while the smaller segments of replacement capital (-39% to EUR 1.4bn) and rescue/turnaround capital (-63% to EUR 0.3bn) decreased (see Figure 20).

Preliminary figures for the first half-year of 2019 show that investments at the growth stage and replacement capital investments were the main drivers of the increase in PE investments during that period, while buyout investments recorded a setback.

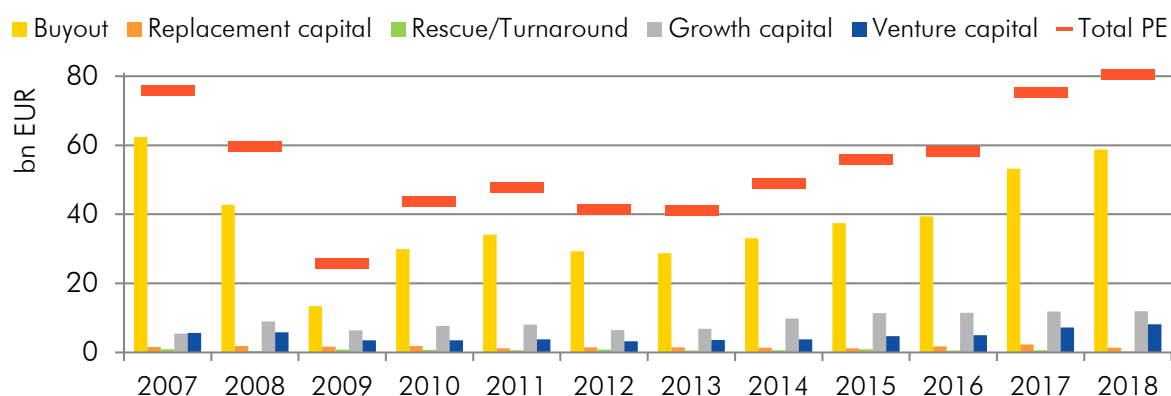
Figure 19: PE investment in European portfolio companies



Note: Investment activity by PE firms in portfolio companies based in Europe (“market approach”). All investment figures are equity value, i.e. excluding leverage.

Source: Authors, based on data from Invest Europe

Figure 20: PE investments in European portfolio companies by stage focus



Source: Authors, based on data from Invest Europe

Box 4: Invest Europe definition of investment stages for private equity

Venture Capital

- **Seed:** Funding provided before the investee company has started mass production/distribution with the aim to complete research, product definition or product design, also including market tests and creating prototypes. This funding will not be used to start mass production/distribution.
- **Start-up:** Funding provided to companies once the product or service is fully developed, to start mass production/distribution and to cover initial marketing. Companies may be in the process of being set up or may have been in business for a shorter time, but have not sold their product commercially yet. The destination of the capital would be mostly to cover capital expenditures and initial working capital. This stage contains also the investments reported as **“Other early stage”** which represents funding provided to companies that have initiated commercial manufacturing but require further funds to cover additional capital expenditures and working capital before they reach the break-even point. They will not be generating a profit yet.
- **Later-stage financing:** Financing provided for an operating company, which may or may not be profitable. Late stage venture tends to be financing into companies already backed by VCs. Typically in C or D rounds.

Growth

A type of private equity investment (often a minority investment) in relatively mature companies that are looking for primary capital to expand and improve operations or enter new markets to accelerate the growth of the business.

Buyout

Financing provided to acquire a company. It may use a significant amount of borrowed capital to meet the cost of acquisition. Typically by purchasing majority or controlling stakes.

Rescue / Turnaround

Financing made available to an existing business, which has experienced financial distress, with a view to re-establish prosperity.

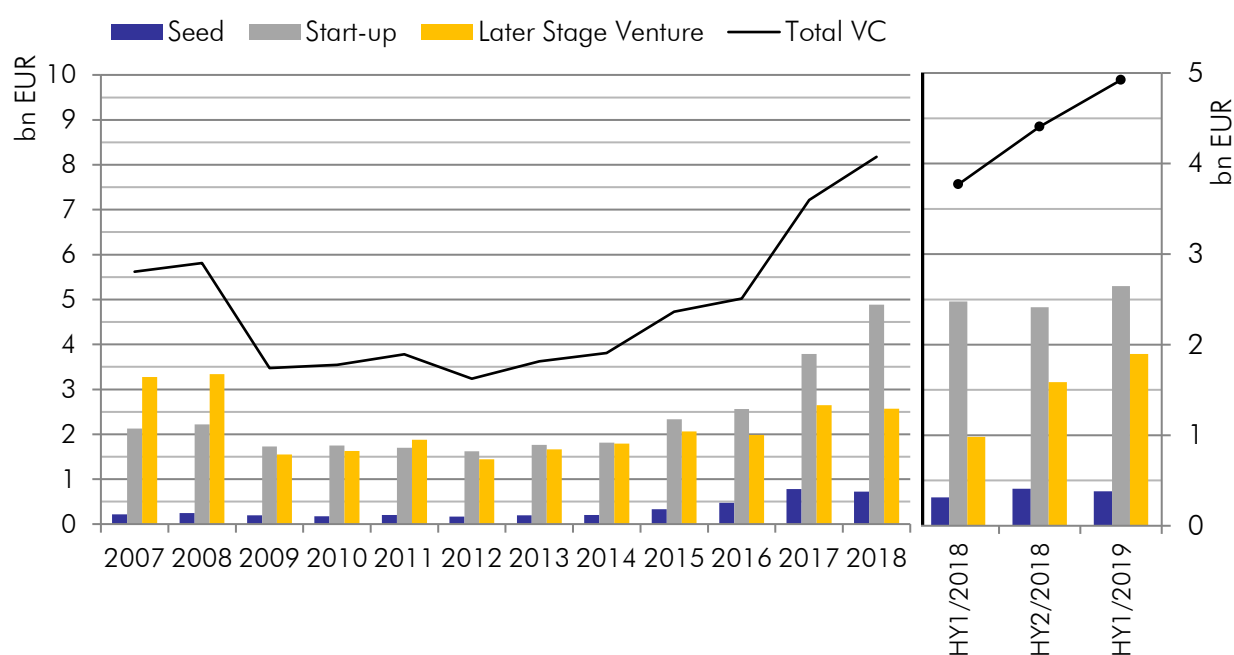
Replacement capital

Minority stake purchase from another private equity investment organisation or from another shareholder or shareholders.

Sources: Invest Europe (2019a) and Invest Europe (2019b)

Venture Capital (VC) investments jumped by 13% to EUR 8.2bn in 2018. In terms of number of companies financed, the VC segment accounted for the majority of PE investments (4,437 out of 7,816). Within the VC market segment, investments into start-up stage enterprises surged by 29% to EUR 4.9bn (see Figure 21), while seed (-7% to EUR 0.7bn) and later stage venture investments (-3% to EUR 2.6bn) decreased; see Box 5 for a discussion of investments at the technology transfer stage. Before the crisis, later stage venture was the driver of VC investment, but since 2009, investments at the start-up stage have been higher, on average, than later stage VC investments.²⁷ Preliminary figures for the first half-year of 2019 show a particularly strong increase for investments at the later stage.

Figure 21: VC investment amounts by stage focus



Source: Authors, based on data from Invest Europe

Box 5: Financing technology transfer

Technology transfer (TT) is the process of transforming the results of research and development into marketable products and services. It can take place through a number of means, in particular through the collaboration between research organisations and industry, the licensing of intellectual property rights, the creation of start-up businesses or university spin-out companies.

Although TT investments in Europe are in the radar of some investors, academic research is generally considered to be 'too new' or 'too high-risk' to be transferred out of the research laboratory and financed by the traditional investors. New discoveries and technologies may fail to realise their potential unless they become attractive to industry or downstream investors.

²⁷ Please note that the investment activities of Business Angels are not included in the Invest Europe statistics, see Box 4. As business angel financing is important for the financing of SMEs and innovation, we present more information in Section 4.1.2.

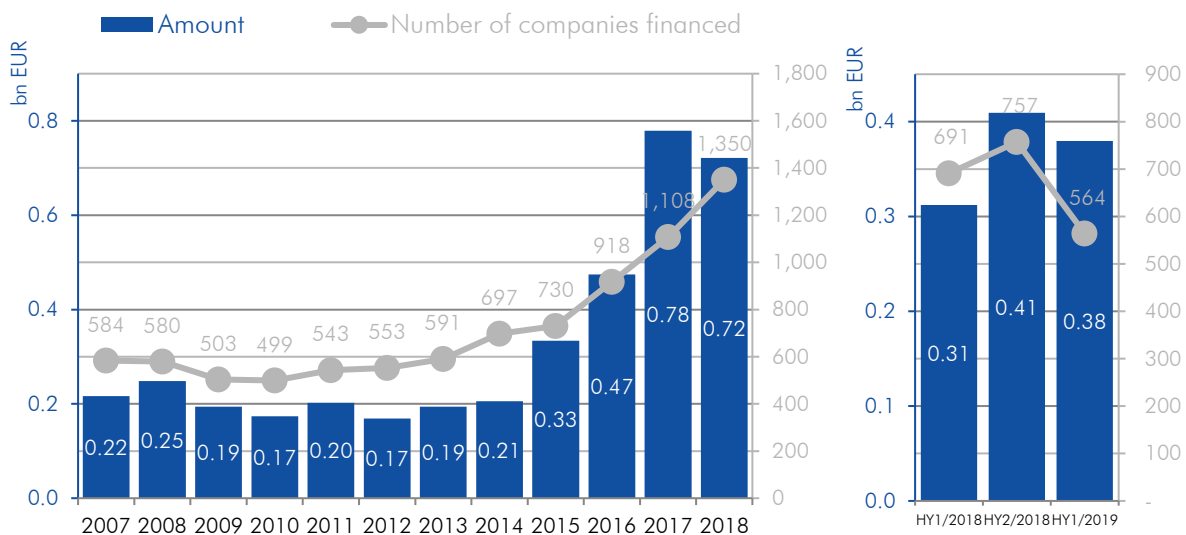
Box 5 continued:

Equity investments in TT activities can contribute to reduce early-stage (pre-seed, seed and post-seed) funding gaps and sustain viable TT structures while generating financial returns for investors over time (EIF, 2016). Moreover, they contribute to ensure a strong and continuous deal flow in the venture capital market (EIF, 2017). In the field of TT and the commercialisation of research results, the EIF has undertaken a particular market development effort also in geographies with an emerging VC ecosystem, and EIF’s investments in TT funds encourage private investors to look at the asset class. In 2018, the EIF encouraged the flow of research and innovation into the European marketplace by supporting seven TT transactions with a total commitment of EUR 155m (EIF, 2019).

Overall, annual seed stage VC investments²⁸ in European enterprises have more than quadrupled since 2012 and reached a record level of EUR 779m in 2017, according to Invest Europe data. In 2018, seed investments declined by 7% to 721m, while the number of 1,350 ventures financed constitutes a new record high (see Figure B4.1). Preliminary figures for the first six months of 2019 still show remarkably strong investments at the seed stage (EUR 380m, +22% compared to the first semester of 2018). The half-yearly investment levels reached since 2017 have all been higher than ever recorded before in the Invest Europe statistics, in terms of both amounts and number of companies financed.

In the context of a cooperation with the University of Trier, EIF contributed to a research project on incubator business models in Europe; an overview is provided in a previous ESBFO issue (see Kraemer-Eis, Lang, Torfs, and Gvetadze, 2015b).

Figure B4.1: Seed stage VC investments in European companies²⁸



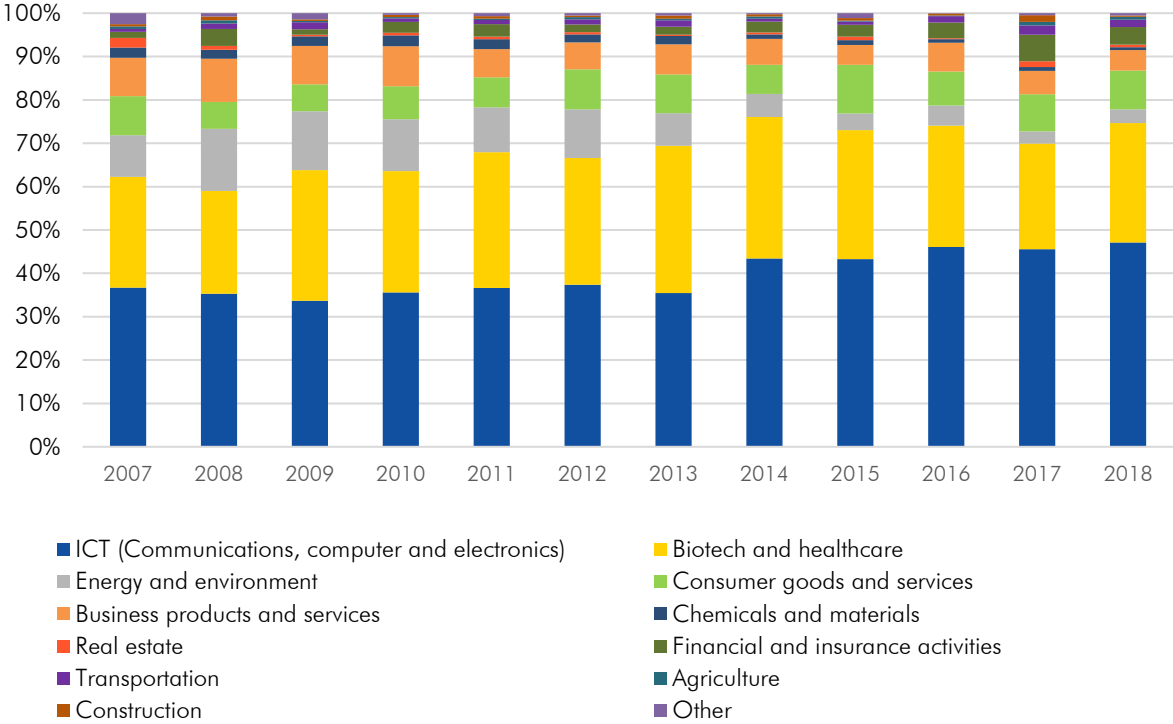
Source: Authors, based on data from Invest Europe

²⁸ In the Invest Europe statistics, seed stage VC transactions are defined as “[f]unding provided before the investee company has started mass production/distribution with the aim to complete research, product definition or product design, also including market tests and creating prototypes. This funding will not be used to start mass production/distribution.” The seed stage goes beyond TT, but it is the earliest investment stage for which data is provided in Invest Europe statistics. See, for example, Dealroom.co (2018) for a different approach, which results in higher amounts reported for seed stage investment.

Developments in venture investment by sector are shown in Figure 22. The relative importance of sectors has a certain stability over time: ICT (communications, computer and electronics) and biotech & healthcare have remained by far the most relevant industries for venture investment in Europe since 2007. Over the past decade, the share of ICT in total VC investment activity even increased, from 34% in 2009 to 47% in 2018. In contrast, the share of investments in the energy and environment sector decreased from 14% in 2008 to 3% on average in the past two years.²⁹ Moreover, the developments in the ICT sector had a substantial impact on structural changes in the VC market. Chapter 4.5.2 provides a more detailed elaboration.

Furthermore, according to Invest Europe, market participants have observed a notable amount of growth stage investments as follow-on investments in venture-backed companies that are not registered in VC investment statistics (but in growth stage statistics). In 2018, about 18% of growth stage investments were received by venture-backed companies (Invest Europe, 2019a). Against the background of the scale up issue in Europe (see, inter alia, chapter 4.5) this is a positive sign. However, further flagship initiatives to support risk capital – covering various investment stages and sectors – will be necessary (AFME, 2017). This will also support the creation and growth of innovative enterprises in Europe; Signore and Torfs (2017) and Signore (2020) provide more insight into the value of innovation for EIF-backed start-ups (see also Kraemer-Eis, Botsari, Gvetadze, Lang and Torfs, 2017, for an overview).

Figure 22: Venture investment in Europe by sector focus, 2007-2018



Source: Authors, based on data from Invest Europe

²⁹ This development might be due to a re-positioning of traditional Cleantech VCs, who have stopped investing in capital-intensive companies to focus on digital solutions for energy and environment. This new strand of investments is then typically classified under ICT.

Corporate venture capital

Corporate venture capital (CVC) has gained importance in recent years. CVC can serve both an investing corporation's financial and strategic goals, e.g. to enhance its innovative capacity or to tap into new markets. CVC can take various forms. The most common practice is that a corporate invests through a VC fund, but the number of dedicated CVC units, accelerators and other CVC manifestations has also increased over the past years (see Mawson et al., 2017). In particular large companies in innovation-intensive industries are active in this field, most prominently in the US (Brigl et al., 2016; Andonov, 2017). For example, companies like Google invest in start-ups in the fields of life science, healthcare, artificial intelligence, robotics, transportation, cybersecurity, and agriculture (Saunders-Calvert, 2017). The relatively low cost of capital has driven more corporates to become part of the game in the last years (Mankins et al., 2017). In 2018, global CVC investments reached a record high of 2,740 deals, amounting to USD 53.0bn or EUR 44.9bn (CBInsights, 2019).³⁰ Google Ventures was the organisation that was most active overall in CVC in 2018, while CapitalG (Google Capital) invested in the most unicorns. The share of CVC deals among all VC deals increased from 16% in 2013 to 23% in 2018.

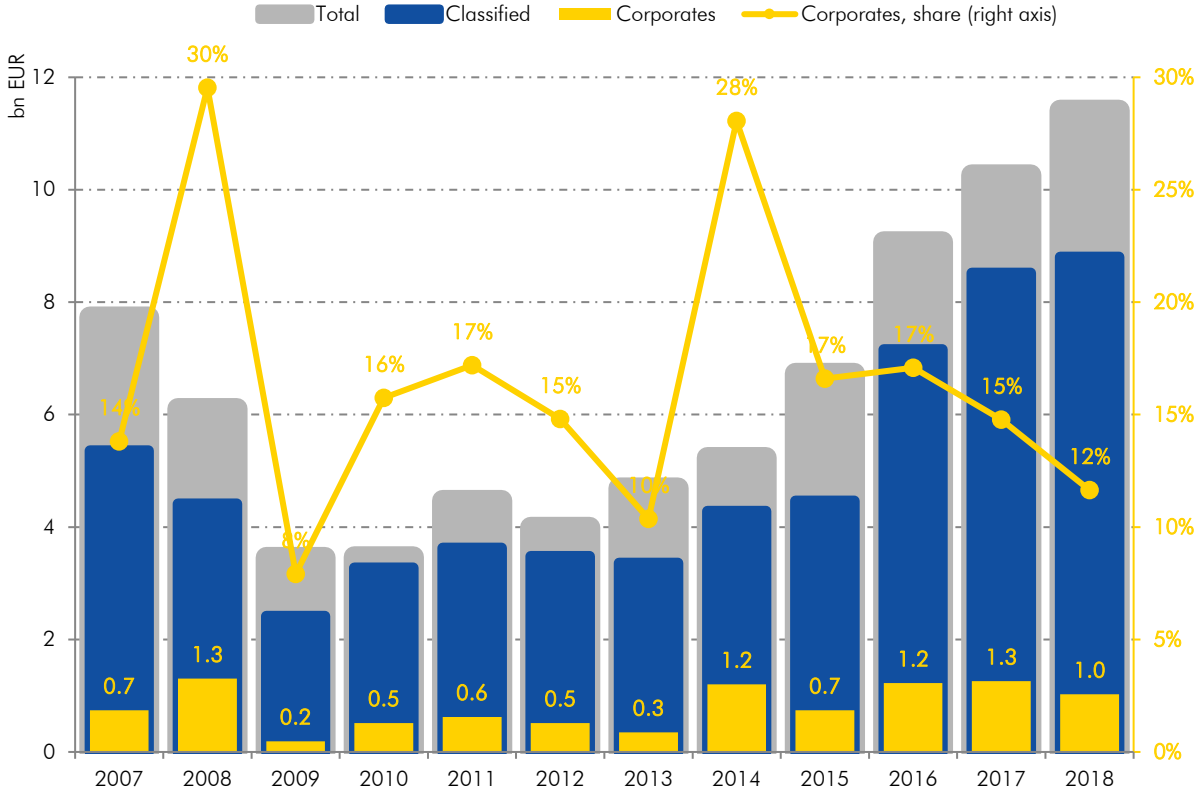
North America continues to attract most CVC investments, but its share in the number of global CVC deals went down from 64% in 2013 to 41% in 2018 (CBInsights, 2019). At the same time, the share of Asian companies went up from 19% in 2013 to 38% in 2018. The share of European companies among all CVC deals worldwide was comparatively stable over that period and at 17% in 2018. Since 2013, the total annual CVC investment value went up from EUR 1.0bn (160 deals) to EUR 4.7bn (468 deals) in Europe. Among those deals, 26% went to companies in the UK, followed by Germany (19%) and France (12%).

Corporates are also an important investor group in European VC funds. While they accounted for 3% of the total PE fundraising amounts in Europe in 2018, according to Invest Europe data, their share is much higher in VC funds. In 2018, corporates contributed EUR 1.0bn to VC funds in Europe, which represented 9% of total VC fundraising (EUR 11.4bn) or 12% of the total classified fundraising amounts (EUR 8.8bn) in 2018 (see Figure 23). Corporate investors' share in European VC fundraising decreased in 2017 and 2018. However, corporates were among the most frequently mentioned LP types for which GP respondents to a recent Atomico survey perceived increased appetite for investment in European VC (Atomico, 2019).

One of the segments not covered under the Invest Europe PE activity statistics are corporate acquisitions outside of dedicated corporate venture programmes. Since 2015, the number of corporate VC investments directly off the balance sheet is higher than investments by CVC funds. In 2018, off balance sheet CVC investments comprised 3,820 deals, compared to 2,177 deals backed by CVC funds only and 563 deals backed by both off balance sheet CVC investments and CVC funds (CBInsights, 2019).

³⁰ CBInsights CVC statistics only cover investments by CVC funds, which are defined as separately demarcated corporate investment vehicles. Corporates making strategic investments directly are not included (CB Insights, 2019).

Figure 23: VC fundraising amounts and corporate investors³¹



Source: Authors, based on data from Invest Europe

Despite a stronger focus on contributing to the corporate’s strategic goals instead of pursuing purely financial objectives, CVC investors also hold shares in European unicorns (Madhvani et al., 2017). CVC investment could indeed even more assist European companies with high growth potential in becoming global leaders. However, we know that “Europe’s corporations are not benefiting from the success of European scale-ups” (Mawson et al., 2017). Despite a strong increase over the past years, there are still fewer EU corporations active in CVC than in the US and Asia. Roughly half of the deals of European CVC investors are made in Europe, while the “home bias” is much stronger in the US, where the number of domestic deals account for approximately three quarters of all investments (Mawson et al., 2017). Moreover, European tech companies are often acquired by non-EU buyers. Based on an analysis of 3,600 EIF-supported seed and start-up VC investments from 1996 to 2015, Prencipe (2017) finds that about 50% of the performing EIF-backed European investees were acquired by non-European corporations, particularly from the US. This “raises the issue of whether the missing scale-up phenomenon in Europe could be linked to the lack of serial tech buyers, that is, incumbents in highly innovative and competitive sectors” (Prencipe, 2017). However, there are differences by sector; while US buyers are more technology-focused and mostly active in the ICT space, European buyers seem generally more specialised in Life Sciences.

³¹ Incremental amounts raised during year (in contrast to final closings only). “Total” represents classified and unclassified fundraising amounts. “Corporate, share” represents the percentage of corporate investors’ contributions to classified VC fundraising amounts. In the Invest Europe PE/VC fundraising statistics, the investor type “corporate investor” is defined as “corporations manufacturing products or delivering non-financial services” (Invest Europe, 2019).

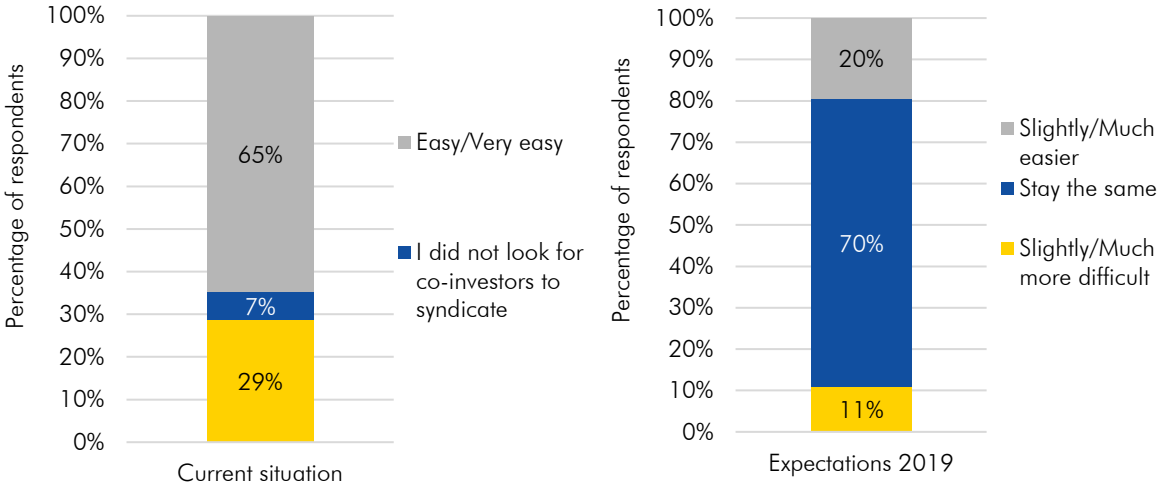
Co-investment

Co-investment can be a useful feature of the PE/VC market by strengthening investment capacities. The availability of stable providers of co-investment capacity can be a benefit for VC fund managers when addressing potential investment opportunities. On a global level, the proportion of LPs that co-invest with GPs has risen considerably, i.e. from 26% in 2006 to 69% in 2019, according to a recent Coller Capital LP survey (Coller Capital, 2017; Coller Capital, 2019b).³² LPs also spend more time on co-investment activities than they did 5 years ago (Coller Capital, 2019a).

In the *EIF VC Survey 2019*, “finding co-investors to syndicate” was perceived relatively easy and not expected to change soon by the majority of European VC GPs (see Figure 24). However, 29% of the fund managers reported difficulties in finding co-investors. Compared to the previous survey wave, the easiness to find co-investors improved. In the *EIF VC Survey 2018*, 56% of the respondents perceived finding co-investors as easy/very easy and 39% as (very) difficult (see Kraemer-Eis et al., 2018a).

A more detailed analysis of the responses reveals significant variations across regions and industries. VC managers in France (76%) and the DACH region (74%) report greater easiness in finding co-investors to syndicate, as opposed to almost 4 in 10 VC managers in the South who found it rather difficult. Similarly, VC managers investing in Clean Technologies (48%) and Manufacturing (46%) report the greatest difficulties in finding co-investors, while the corresponding figures for ICT and Life Sciences are only 25% and 31%, respectively; (see Botsari, Crisanti and Lang, 2019, for details of the *EIF VC Survey 2019*).

Figure 24: Easiness to find co-investors to syndicate, current situation and expectations



Note: Diagrams show the aggregated results for the *EIF VC Survey 2019* questions “How easy/difficult is it currently to find co-investors to syndicate?” (left-hand side) and “Over the next 12 months, how do you expect finding co-investors to syndicate to become?” (right-hand side).

Source: *EIF VC Survey 2019; Botsari, Crisanti and Lang (2019)*

³² The Coller Capital PE Barometer is based on a survey of (in the latest wave) 113 investors in PE funds, i.e. Limited Partners (LPs). These LPs are based in North America, Europe and the Asia Pacific region (including the Middle East) and form a representative sample of the LP population worldwide. Source: Coller Capital (2019b)

4.1.2 Business angels

As already mentioned, the Invest Europe activity data cover fundraising, investment and divestment from PE and VC firms in Europe. It does not cover segments outside the definition that Invest Europe applies for the collection of its activity statistics, e.g. business angels' activities although it has gained importance in recent years as a financing source for early-stage start-ups.

Business Angels (BAs) represent an important class of private equity investors, primarily consisting of high net-worth individuals, usually with entrepreneurial or managerial experience. BAs tend to invest their own money, either individually or in formal or informal syndicates, in businesses which are not publicly traded, commonly in exchange for convertible debt or ownership equity (see for a general description of BA financing, Kraemer-Eis and Schillo, 2011; OECD, 2011; BAND, 2016; and OECD, 2019a).

In a recent European Commission survey among European BAs, the large majority of respondents were male (89%) and the average age was 55 years (European Commission, 2017b). In Central and Eastern Europe (CEE), BAs tend to be younger (average age of 43 years) and the share of female BAs is larger. The average period of respondents' investment experience as a BA was 7.5 years, with large differences by country. Ninety-eight percent hold at least a bachelor's degree (or equivalent) and the vast majority (87%) have experience in senior management.

BAs differ from VC funds, which primarily invest third parties' resources (e.g. institutional investors'). Angel-financed companies are typically in earlier stages of their development (Kraemer-Eis and Schillo, 2011). BAs' transaction costs are relatively low, which allows them to invest on a smaller scale. They are geographically more dispersed than VCs and often invest in local markets. Moreover, BAs tend to be very 'hands-on' investors, providing also additional value-adding support beyond financing (e.g. mentoring, business advice and access to networks), hence they can play a central role in the start-up ecosystem, in particular for innovative firms (OECD, 2016). Moreover, entrepreneurial investors not only form the nucleus of the BA ecosystem, but possibly also the VC ecosystem at a later point in time, i.e. there is a potential to catalyse new institutional players even in relatively underdeveloped VC markets. According to the *EIF BA Survey 2019*, 30% of the responding BAs would consider becoming a VC fund manager in the next five years. Supporting BAs can therefore also foster the development of the European VC ecosystem (Kraemer-Eis, Botsari, Brault and Lang, 2019).

Several studies found that BAs have a positive impact on the growth of the firms they invest in, their performance and survival (Lerner et al., 2015; OECD, 2016). The success of the investees seems to be strongly based on the support beyond financing that BAs provide (Kerr et al., 2011). There is evidence that BAs are relatively resilient to changing market cycles (OECD, 2016), and angel investments in early-stage high-growth companies tended to increase during and after the financial and economic crisis of the previous decade, as VC funds migrated to less risky investments (Kraemer-Eis, Lang and Gvetadze, 2013).

An increasing majority of BAs co-invest with other early stage investors in order to diversify risks (OECD, 2016) and/or to improve their skillset and experience (Capizzi, 2015). Sourcing channels like crowdfunding platforms are also used by BAs as tools to find investment opportunities, thereby

allowing them to make investments in a wider geographical area (OECD, 2016). However, this seems to be more popular among younger and less experienced BAs, while most of the more experienced BAs supported under the European Angels Fund (EAF) do neither invest nor plan to invest in companies found through crowdfunding platforms (Kraemer-Eis, Botsari, Brault and Lang, 2019).³³

There are difficulties in measuring the size of the business angel community, the main ones being identification and definition. BAs often stay anonymous and the details of their investments are rarely disclosed. Besides, there are “virgin” angels that have never actually invested but increase the number of BAs in the statistics. Others may have occasionally acted as angels but are no longer looking for investment opportunities. Still others may invest as entrepreneurs but do not consider themselves as being part of the “BA scene”. The so called “invisible market” makes a precise estimation of the angel market difficult. Some studies estimate that the invisible part of the market is up to seven times greater than the visible part (CSES, 2012), while others even estimate a multiplier of around ten (see, e.g., EBAN, 2014, and EBAN, 2019). Such difficulties must be borne in mind when describing the market.

Currently there are no robust and consistent statistics available on the BA market in Europe; published data can only be used as indication or very rough estimate (see also OECD, 2018). For the visible market segment, data is collected by angel associations from angel groups and networks. Ad-hoc surveys, including from the EIF, contribute to increase the available level of information on BAs in Europe (see European Commission, 2017b). In the following, we use such statistics keeping in mind its shortcomings (see, for example, the related EBAN disclaimer that we show in Box 6). Information on angel investing in different European countries can also be found in BAE (2015).

Box 6: Introductory information on EBAN data

Due to its nature, the early stage investment market and especially the BA segment is difficult to quantify. An important part of the total investments is informal and not publicly reported. The estimate of the percentage of the invisible market is based on a study commissioned by the European Commission to CSES about the BA market in Europe. In some countries, the deals done through the ‘visible market’ (BANs, Federations) are not published, so in some cases the estimates may not correspond to the exact amounts invested by BAs. However, EBAN matched information from different sources, to validate the estimates for each particular market in order to have a higher degree of confidence on the data that is published.

Knowing the underlying limitations, the main objective of the EBAN statistics is to provide a better understanding of the European early stage market, even if the figures are not representative of the entire European market. The latest EBAN statistics compendium comprises information collected through direct surveys from BA networks, national federations and other early stage investors. Additional data were collected from different sources, namely Dealroom, Zephyr, Crunchbase, market reports, EC and national publications, press articles and research papers, as well as other early-stage actors in Europe.

Source: EBAN (2019)

³³ The European Angels Fund (EAF) is an initiative that is advised by the EIF and provides equity to BAs for the financing of innovative companies in the form of co-investments (i.e. 1:1 matching of BA funding by EAF without deal-by-deal approval). See www.eif.org/eaf for more information.

At a European level, the European Business Angel Network (EBAN) reported an increase in BA investment by 2%, compared to the year before, to a record amount of EUR 7.45bn in 2018 (EBAN, 2019). However, this number is based on the assumption that the visible market, for which EBAN reports investments of EUR 745m, represents 10% of the whole market.³⁴ The estimated number of investments decreased by 6% to 37.2k, which is reported to be an indication of the effect of increased BA co-investment funds and syndication among BAs (EBAN, 2019). The number of BAs is estimated at 345k, which represents an increase by 2% compared to 2017. The number of BA networks (BANs) in Europe was at 482 in 2018. From 2003 to 2012 the number of BANs had grown at an average rate of 17%, but began to level off in 2013. Since 2013, the number has remained stable, growing only by 3% from 2013 till 2018, which demonstrates a certain consolidation in the market as networks became more formalised and financially sustainable (EBAN, 2019).

Most of the BA investment activity within the EU is happening in the UK, Germany, Spain, France and Finland. When comparing BA investment amounts to GDP, the picture looks different, with Monaco, Estonia and Finland being on top of the ranking. In 2018, 41% of BA investments targeted companies outside their home country (EBAN, 2019). A considerable share of BAs stated that they would invest abroad if legal and fiscal legislations facilitated such activities (European Commission, 2017b). In some countries BA co-investment funds, tax break or grant schemes do not support or even allow investment abroad (EBAN, 2018; EBAN, 2019).

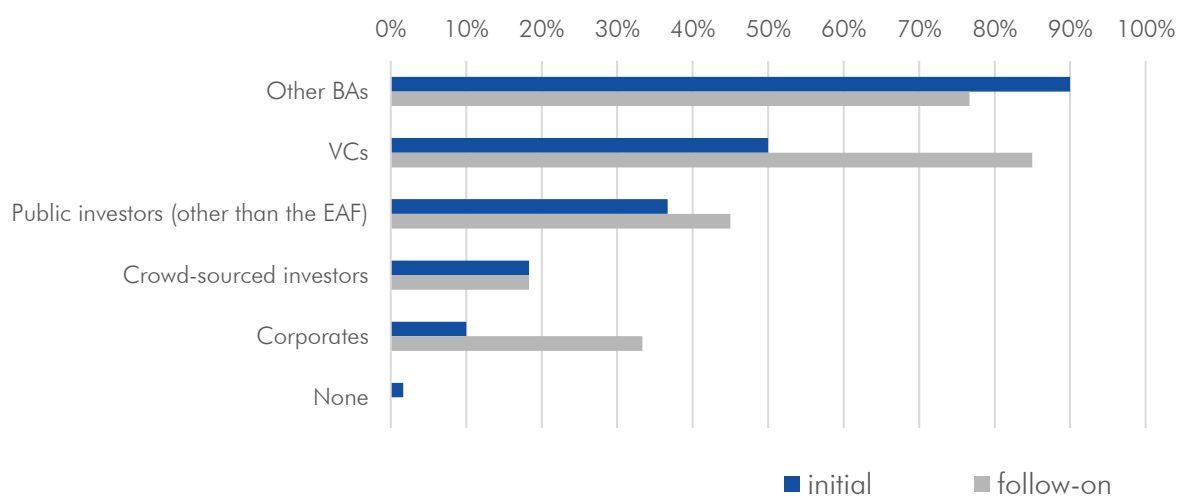
In 2018, investments per individual European angel and funding round varied between EUR 10k and EUR 500k with its average decreasing by 5%, compared to the year before, to EUR 24.1k (EBAN, 2019).³⁵ The average total amount invested per company increased by 10% to EUR 201k. This is broadly in line with the results of other studies (e.g., CSES, 2012), which estimated that BAs provided on average around EUR 100k to EUR 200k per deal. In the US, investment per deal is much higher, i.e. at USD 350k (EBAN, 2019).

ICT and other technological sectors continued to be by far the most attractive target sector for BA deals (European Commission, 2017b; Kraemer-Eis, Botsari, Brault and Lang, 2019). Within the Tech sector, FinTech and Enterprise Software receive most investments (EBAN, 2019). However, 26% of respondents indicated that they have no specific sector focus, but mainly look at the team, the idea/team, the product or the market as their predominant investment criteria (EBAN, 2019). The sector focus of BAs also contributes to the formation of specific investor communities/networks (EBAN, 2018). With regard to the investee companies' development stages, pre-seed (36%) and seed (62%, multiple responses possible) investments are most popular, while 40% of BAs also goes beyond these stages (EBAN, 2019).

³⁴ The assumption that visible BA investments constitute a share of 10% of the whole (visible plus invisible) BA market is based on CSES (2012) and was also used in EBAN statistics for previous years. The visible market encompasses activity undertaken by investors gathered in BA networks and having a direct relation with EBAN or reporting through a federation. It also comprises networks from which access to information is limited but its existence and activity is known by other players of the industry; additionally, databases reporting start-up investments are used (EBAN, 2019).

³⁵ However, results can differ depending on the sample of BAs considered in different studies. For example, in a recent survey jointly presented by EBAN and BAE, the median investment has been reported to be at EUR 10.7k (EBAN and BAE, 2019; the survey was conducted in 11 European countries; 90 BAs responded to the survey).

Figure 25: Types of co-investors in BA investment rounds



Note: The diagrams show the aggregated results for the EIF BA Survey 2019 question “What types of co-investors do you have in your BA investment rounds? Please specify separately for initial and follow-on rounds.”.

Source: *EIF BA Survey 2019*; Kraemer-Eis, Botsari, Brault and Lang (2019)

While co-investments with other BAs are still the most common deal form, the relevance of investments alongside early-stage funds has increased (EBAN, 2018; EBAN, 2019; European Commission, 2017b). Co-investment activities between angels and public investors also increased, e.g. through the European Angels Fund (EAF)³³ (EBAN, 2019). According to the *EIF BA Survey 2019*, the co-investor types differ depending on whether it concerns initial or follow-on investment rounds (see Figure 25). In initial rounds, 90% of the respondents have other BAs as co-investors and 50% team up with VCs. In follow-on rounds, 85% of the respondents have VCs as co-investors and 77% invest alongside other BAs. Public investors (other than EAF) are more prominent in follow-on rounds (being co-investors for 45% of the respondents) than in initial rounds (37%). See Box 7 for more information about the EIF BA Survey.

Box 7: The EIF Business Angels Survey (EIF BA Survey)³⁶

As mentioned above, the availability of data describing the European BA market is scarce. In order to improve the market information about BAs in Europe, the EIF launched a new *EIF Business Angels Survey (EIF BA Survey)* in 2019. The EIF BA Survey is a survey among BAs who benefited from the European Angels Fund (EAF), i.e. the results do not claim to represent the whole BA market and might represent a group of BAs that is different from those represented in the EBAN and EC studies. It is inspired, inter alia, by the successful introduction of the *EIF VC Survey* in 2018 (see https://www.eif.org/news_centre/research/index.htm for the *EIF VC Survey* results of several waves). The first EIF BA Survey was conducted between 28 March and 10 May 2019 and comprised questions addressing the topics socio-economic characteristics of the BA, general characteristics of the BAs’ activities, the added value of the EIF activities under the European Angels Fund (EAF), market sentiment, public support for BA investing, and Environmental / Social / Governance (ESG) considerations (see Box 11 for a summary of ESG-related results of the EIF BA Survey and the EIF VC Survey).

³⁶ This text box was written by J. Brault. EIF Research & Market Analysis.

Box 7 continued:

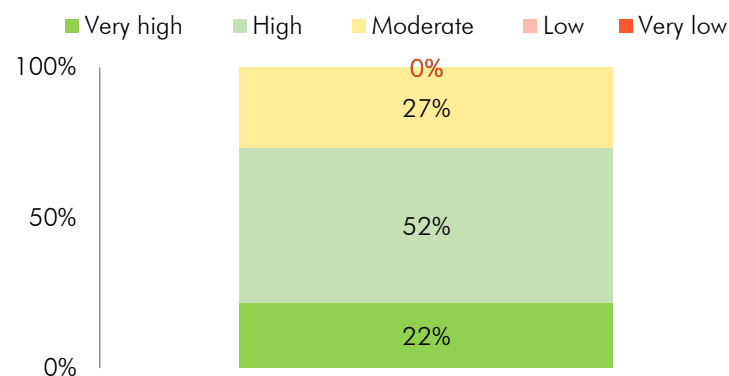
The *EIF BA Survey 2019* results allowed to draw a portrait of the typical EIF-supported BA investors. Highly qualified individuals in the prime of their lives, they have hands-on experience in venture capital and a long history of BA investing. BAs also have a high degree of informal collaboration in terms of co-investing. Focusing mostly on seed and early stages, ICT and Services, they are investing in the technologies of tomorrow, from Artificial Intelligence to Digital Health.

The current business environment for BAs is perceived positively, and the situation is here to stay. Investments picked up in the last 12 months, and portfolios as well as exit opportunities are expected to further improve in the year ahead. Moreover, the survey showed that a non-negligible percentage of BAs would develop into VC fund managers in the future, suggesting that supporting BAs can also foster the development of the European VC ecosystem.

According to the respondents, recruiting high-quality professionals and securing financing are the biggest challenges of BA-supported companies. Access to external finance for investee companies was evaluated positively by fewer than half of the respondents. Apart from financial support, the public sector is mainly requested to provide support for scaling up start-ups into bigger firms and to contribute to improved exit options. The presence of VC funds for follow-on investment rounds is considered one of the most underdeveloped elements of the ecosystem helpful for BA investing.

The BAs were also asked about their perception of the added value of EIF's activities under the EAF. According to the respondents, most BAs increased their investments thanks to the EAF and, at the same time, did not reduce their personal exposure to BA investment. The EAF enables BAs to increase both their reputation among investees and their network. Three quarters of the responding BAs perceive the EAF's overall added value to be high or very high, and the vast majority of all respondents would work again with the EAF. The EAF procedures are reported to be appropriate, transparent and clear by most of the respondents.

Figure B5.1: Overall EAF added value



Sources: EIF Business Angels Survey 2019; Kraemer-Eis, Botsari, Brault, and Lang (2019)

For more information please see the EIF Working Paper 2019/60, "EIF Business Angels Survey 2019 - Market sentiment, public intervention and EIF's value added", which is available here: https://www.eif.org/news_centre/research/index.htm

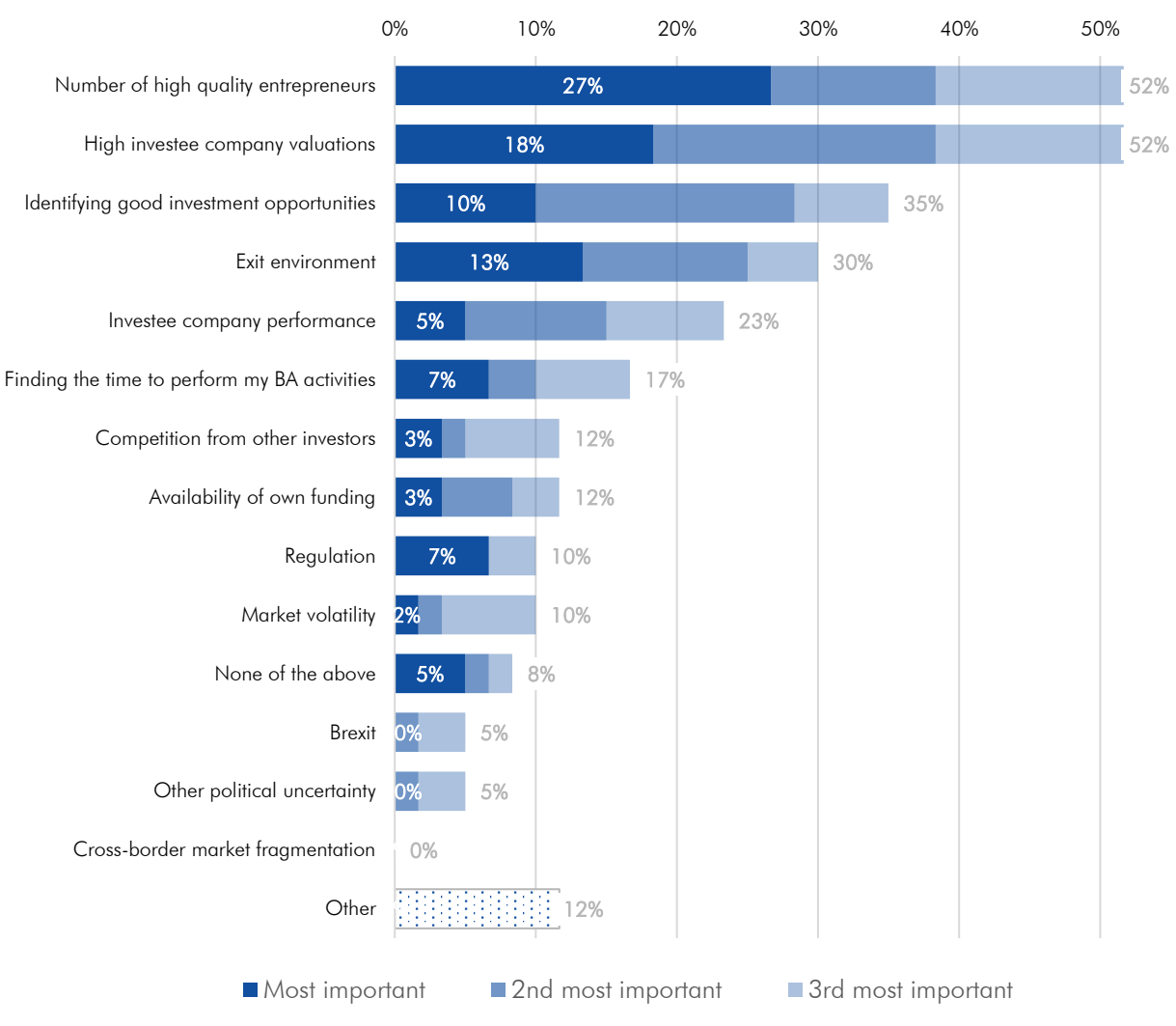
Despite the opaqueness of this market, the available evidence indicates that business angels are of high economic importance for the financing of innovative early-stage companies. Moreover, BAs' behaviour did not move in the same direction like bank lending or venture capital supply during the crisis (OECD, 2017a). Government support of this market segment can therefore help to improve

the availability of financing sources for young high-growth companies (Mason and Harrison, 2013). However, policy measures have to be well targeted to the specific nature of BA investors. For example, based on the assumption that the supply of BA capital depends on investors who have already been successful entrepreneurs, Hellmann and Thiele (2017) identify a rationale for funding policies (a tax credit in their model) that allow entrepreneurs to retain a larger ownership fraction and create more entrepreneurial wealth in order to increase the future supply of capital and to create a long-term impact on entrepreneurial activity.

Findings by Hellmann, Schure and Vo (2015) also suggest that public support for start-up financing should go beyond an exclusive support of formal venture capital, because additional policy measures for angel investors “would reach a different set of entrepreneurial companies that develop outside of the reach of venture capitalists”. Hence, “the central role of BAs is increasingly recognised by policy makers [...], and initiatives to support angel activities have expanded in recent years as part of a broader shift towards policies that aim to make equity-type instruments more widely available for start-ups and SMEs” (OECD, 2016). According to the OECD (2016), public-private co-investment schemes are able to catalyse the private market, “but only if the existing angel market is sufficiently well developed, so that a sufficient number of investor-ready deals can be financed and the government does not have to be overly engaged in matching supply and demand for early-stage equity”.

However, despite initiatives for more policy support and better framework conditions, including under the CMU action plan (see Box 18 and Kraemer-Eis and Lang, 2017), the market is still underdeveloped. It is estimated that US BAs “invest in twice as many US companies as their EU counterparts in EU businesses” and “the size of US angels-backed transactions is approximately 1.7 times higher than EU transactions” (AFME, 2017). A recent overview of barriers to BA financing in Europe and recommendations how these could be mitigated are provided in AFME (2017). However, European angel activity is likely to increase with more successful exits observed in Europe; key actors of successfully exited companies can be expected to turn into future business angels and provide their expertise to start-ups. The recent *EIF BA Survey* shows, inter alia, the biggest challenges for BA activities in Europe (see Box 7 for more information on the *EIF BA Survey*). The number of high quality entrepreneurs was stated by 52% of the BA respondents as one of the three most important challenges (including 27% of the respondents highlighting it as being the first most important challenge), followed by high investee company valuations, identifying good investment opportunities and the exit environment (see Figure 35 and Kraemer-Eis, Botsari, Brault and Lang, 2019). In a nutshell, the *EIF BA Survey* results show that macro-level challenges, which affect a BA’s activities only indirectly (e.g. regulation, market volatility, political uncertainty), rank relatively low. In contrast, micro-level challenges that are directly related to a BA’s business (e.g. valuations, investment opportunities) are mentioned much more prominently, reflecting the current market situation in/towards the end of a boom phase within the economic cycle.

Figure 26: Biggest challenges in BA activity



Note: Diagram shows the results for the EIF BA Survey 2019 question “Select up to three of the biggest challenges you currently see in your BA activity.”

Sources: EIF BA Survey 2019; Kraemer-Eis, Botsari, Brault and Lang (2019)

4.2 Fundraising activity

In 2018, total funds raised by PE firms located in Europe further increased by 1%, compared to the year before, to EUR 97.3bn, which constitutes the highest value since 2006 (see Figure 27 and Figure 18). The increase was mainly driven by a doubling in the amounts raised by generalist funds (EUR 10.6bn). Growth capital funds (+5% to EUR 7.8bn) and mezzanine funds (+2% to EUR 1.0bn) also increased their total fundraising volumes. At the same time, buyout funds, which represent the largest part of the PE market, raised less capital (–8% to EUR 66.5bn).³⁷

³⁷ Box 8 provides an overview of the Invest Europe fund stage focus definitions.

In the first six months of 2019, PE fundraising amounted to EUR 37bn. Half-yearly fundraising figures declined for the second time in a row, which might signal that the strong upward trend in PE fundraising of the previous years has come to a halt.

Box 8: Invest Europe's definitions of fund stage focus

Buyout fund: Funds acquiring companies by purchasing majority or controlling stakes, financing the transaction through a mix of equity and debt.

Generalist fund: Funds investing in all stages of private equity.

Growth fund: Funds that make private equity investments (often minority investments) in relatively mature companies that are looking for primary capital to expand and improve operations or enter new markets to accelerate the growth of the business.

Mezzanine fund: Funds using a hybrid of debt and equity financing, comprising of equity-based options (such as warrants) and lower-priority (subordinated) debt.

Venture Capital

- **Early-stage fund:** Venture capital funds focused on investing in companies in the early stages of their lives.
- **Later-stage fund:** Venture capital funds providing capital for an operating company which may or may not be profitable. Typically in C or D rounds.
- **Venture fund (all stages / dual focus):** Venture capital funds focused on both early and later stage investments.

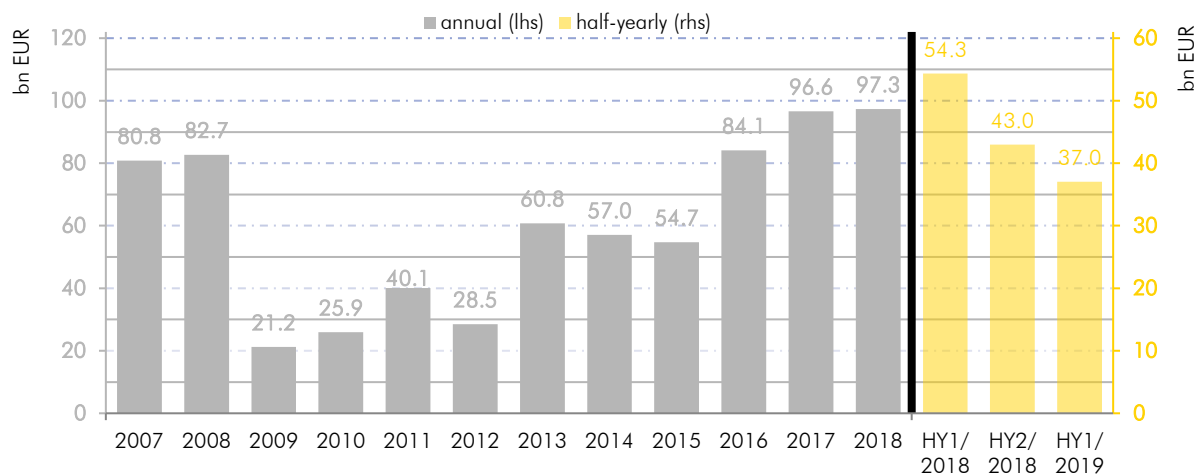
Source: Invest Europe (2019b)

In the venture capital segment, fundraising increased by 11% to EUR 11.4bn (see Figure 28). This constitutes the third record year in a row for European VC fundraising.³⁸ Since 2013, the total annual amounts raised increased by 19% p.a., on average, according to the Invest Europe statistics. While funds with a focus on the early stage (+67% to EUR 4.2bn) and later stage venture funds (+170% to EUR 1.9bn) raised considerably higher total volumes, venture funds with a focus on all stages (-25% to EUR 5.3bn) recorded a decrease in 2018. At the same time, final closings (total venture, amounts raised since inception) reached a new record high (EUR 8.6bn).

In contrast to overall PE, fundraising in the VC market segment increased further in the first six months of 2019 and reached new all-time highs. Incremental amounts raised during the half-year were at EUR 6.8bn. At the same time, final VC fund closing amounts were reported to be at EUR 5.2bn, raised by a record number of 56 VC funds, according to the preliminary Invest Europe statistics.

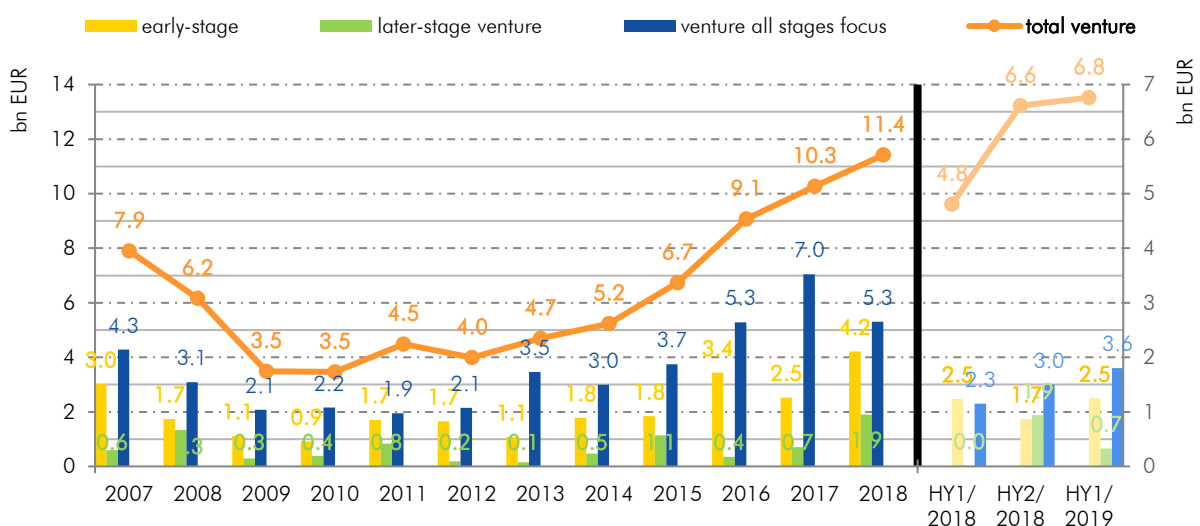
³⁸ Invest Europe started publishing fundraising by fund stage focus in 2007.

Figure 27: Private equity fundraising*



*Note: incremental amounts raised during period.
Source: Authors, based on data from Invest Europe

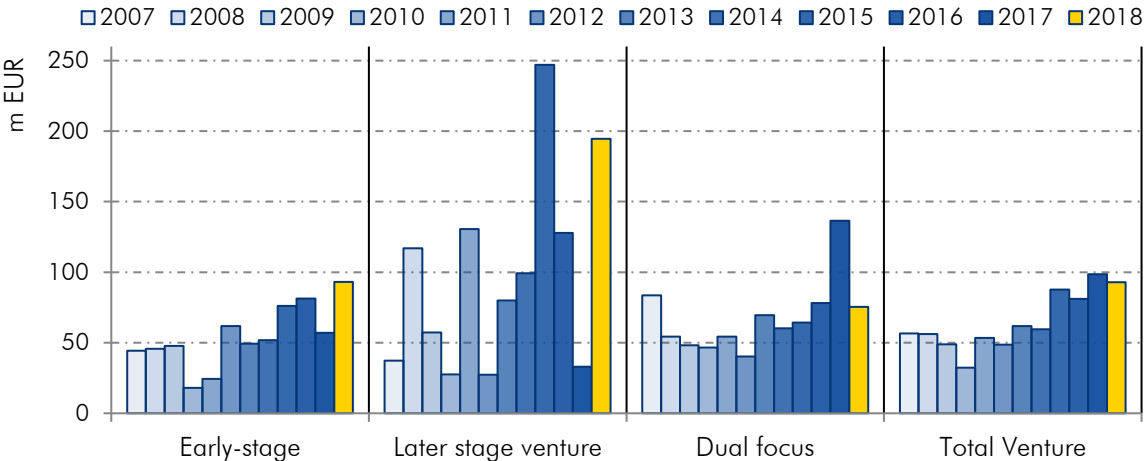
Figure 28: Amounts raised by VC funds located in Europe*



*Note: incremental amounts raised during period.
Source: Authors, based on data from Invest Europe

In 2018, the average VC fund size slightly decreased by 6% to EUR 93m (see Figure 29). This amount still constitutes the second highest value ever registered in the Invest Europe statistics since 2007 and is only exceeded by the record high reached in 2017 (EUR 99m). While the average sizes of funds focussing either on the early stage (+63% to EUR 93m) or on later stage venture (+489% to EUR 195m) increased substantially, those funds with a focus on all stages showed a decline (-45% to EUR 76m). The number of final fund closings increased to 93 in 2018 (61 in 2017). Final closings of funds with a primary focus on the early stage as well as venture funds with a focus on all stages increased, while the number of funds with a focus on later stage venture that were finally closed remained unchanged. In the first six months of 2019, the average overall VC fund size stabilised at EUR 93m.

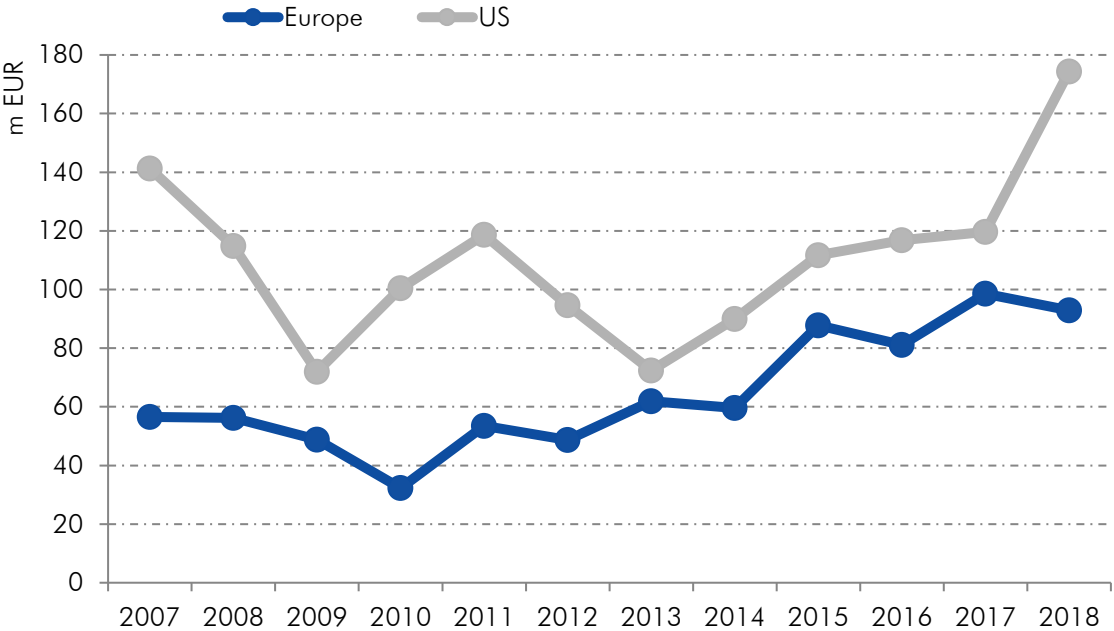
Figure 29: Average VC fund size³⁹ (at final closing; cumulative amounts raised since inception)



Source: Authors, based on data from Invest Europe

Given some evidence in previous studies, which indicated that small fund size was one of the reasons for poor European VC performance at the time before the study was written (Kelly, 2011), the high level of average VC fund sizes might mean positive news. However, the average venture fund size in the US is still larger (see Figure 30), which might be driven by a group of VC funds in the U.S. that are considerably bigger than their peers in the set of “large funds” in Europe.

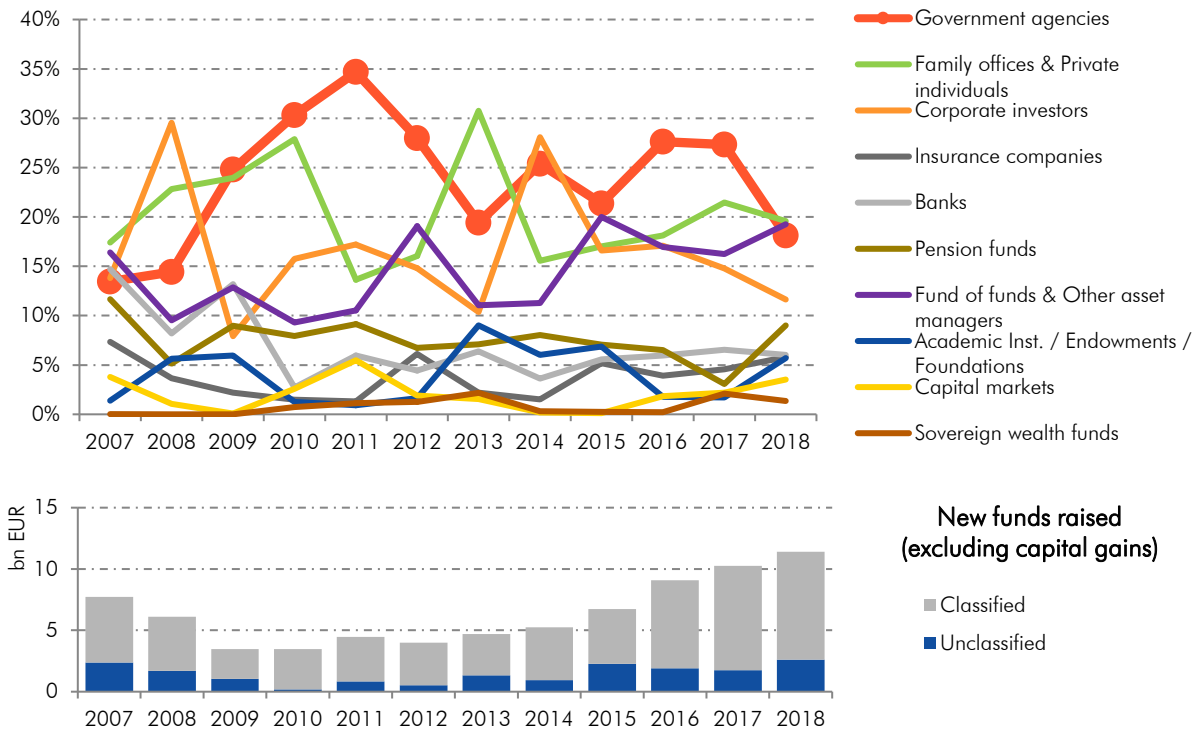
Figure 30: Average VC fund sizes in Europe and the USA



Source: Authors, based on data from Invest Europe and NVCA

³⁹ The results for 2018 are based on 93 final VC fund closings (44 funds with an early-stage focus, 7 funds with a later stage focus and 42 venture funds with a focus on all stages).

Figure 31: Investor base: Share of government agencies in VC fundraising⁴⁰



Source: Authors, based on data from Invest Europe

EIF’s internal analysis suggests that larger funds are often managed by teams that previously had smaller funds that performed well. Thus, the size could be a consequence rather than a cause. Larger fund size would be a sign of more successful GPs and more careful due diligence by LPs, which may indicate that achieving a larger fund size is associated with a certain market validation. Helping promising teams in demonstrating their investment skills and getting market validation in a smaller first time fund (as long as the fund size is not inefficiently small) is consequently a way to help with the next fundraising of such manager, and hence the VC ecosystem.

The European VC ecosystem benefitted substantially from market-stabilising public intervention during and after the crisis, when investors exhibited a cautious sentiment for risk capital. Since 2012, a normalisation has set in, although public support still plays an important role for further market development. These changes are visible in the variations of the investor base during the past years (see Figure 31). According to Invest Europe figures, the share of government agencies’ contribution to VC fundraising increased from 13% in 2007 to 35% in 2011, before it came down again in the subsequent years. However, even if a very high importance of government agencies is unsatisfying for the long term, it is noteworthy that government agencies have played their role and supported the market in a counter-cyclical way, in particular in the times of an economic and financial crisis when total VC fundraising levels more than halved. This led almost “naturally” to an increased share of government agency fund investors. Moreover, the contributions of public investors to VC funds increased not only in relative but also in absolute terms, i.e. from an average EUR 0.7bn p.a. in

⁴⁰ Percentage of incremental amounts raised during year (in contrast to final closings only). Note: Excludes capital gains. Unclassified sources of funds have been extrapolated.

2007-2009 to, on average, EUR 1.3bn in the years thereafter. In 2018, the total volume contributed by government agencies to VC fundraising amounted to EUR 1.6bn, which constitutes a decrease by 31% compared to the year before. The share of government agencies' contribution to VC fundraising decreased from 27% in 2017 to 18% in 2018. Preliminary figures for the first semester of 2019 point to an increase of that share. It remains to be seen, however, if the numbers will be confirmed in later issues of the Invest Europe statistics, i.e. when the yet unclassified fund investors will be more properly identified.

Theoretical evidence and EIF's own research suggests that public VC support is relatively well targeted and achieves positive effects in Europe. In a study of investment patterns of different VC investor types, Bertoni, Colombo and Quas (2015) find that governmental VC (GVC) investors in Europe specialise in investments that do not attract private investors due to high information asymmetries and high failure risk, i.e. in particular in young, small seed-stage companies, and in certain sectors such as biotechnology and pharmaceuticals, in which time to market are long and new product development is very costly. This indicates that "in Europe, GVC has filled the entrepreneurial financing gap left by private VC investors".

In order to put EIF's activity in context, some calculations can be taken into account that were performed by Kraemer-Eis, Signore and Prencipe (2016), which shed more light on the impact of EIF on the VC ecosystem. The authors estimate that the VC investment activity backed by EIF represented 41% of total VC investments in Europe in 2014 (29% in 2007). The share directly attributable to EIF amounts to 10% (5% in 2007), which shows the significant leverage that characterises EIF-backed investments. With regard to fundraising, the authors estimate that volumes backed by EIF in 2014 amount to 45% of the overall volumes collected by European VC investors (36% in 2007), against a share directly attributable to EIF totalling 12% (5% in 2007).⁴¹ Given the increase of EIF's VC activities, more recent EIF estimates point to a higher share of VC fundraising attributable to the EIF (e.g. in the range of 19% (+) in 2017).

Moreover, EIF is supporting a relatively high number of first-time teams and many VC funds in which EIF invested successfully managed to close at their full target size. It is also important to see that many of the more established VC funds, pillars of Europe's VC market today, would not be there without having been kick-started by EIF. This clearly indicates EIF's catalytic role for European VC, rather than a crowding-out effect. This view was confirmed in the *EIF VC Survey*, which showed a high added-value of EIF's activities and a generally positive perception of public support in the European VC market (Kraemer-Eis, Botsari, Gvetadze, and Lang, 2018a). An Unquote Intelligence (2014) survey among General Partners (GPs) and Limited Partners (LPs) found that "the overriding benefit of [public funding bodies'] (PFB) money is the crucial role it plays in attracting other investors". Moreover, "[h]aving PFB money in a fund does not deter other LPs from committing".

Box 9 summarises results from the recent EIF VC Survey 2019 that show the share of female partners in VC firms by different categories and potential implications for fundraising.

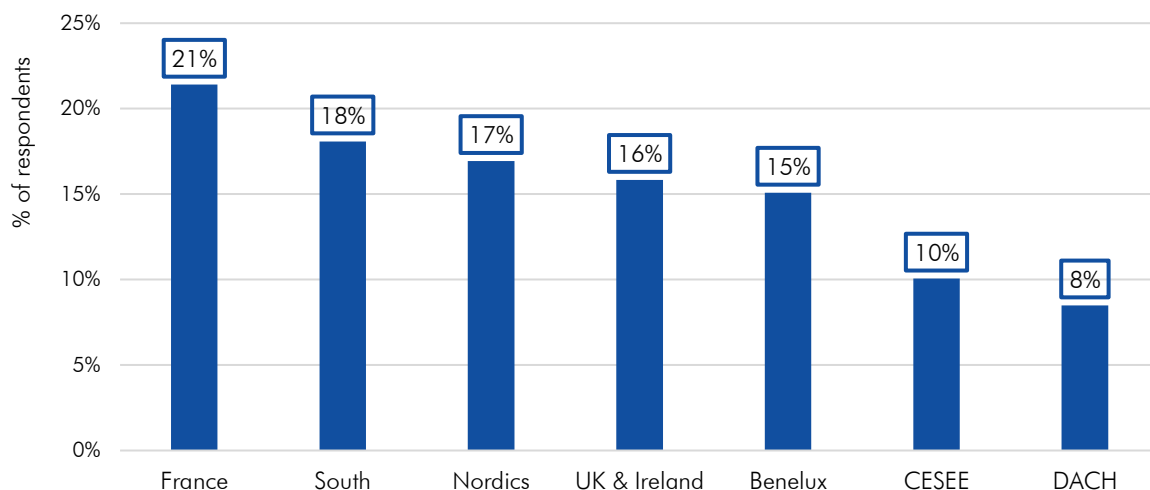
⁴¹ A summary of the Kraemer-Eis, Signore and Prencipe (2016) study is provided in a previous ESBFO edition (Kraemer-Eis, Lang, Torfs and Gvetadze, 2016a).

Box 9: Women in VC

Even though the *EIF VC Survey*⁴² did not have an explicit gender focus, bringing together different questions enables to derive some interesting insights regarding women in VC.

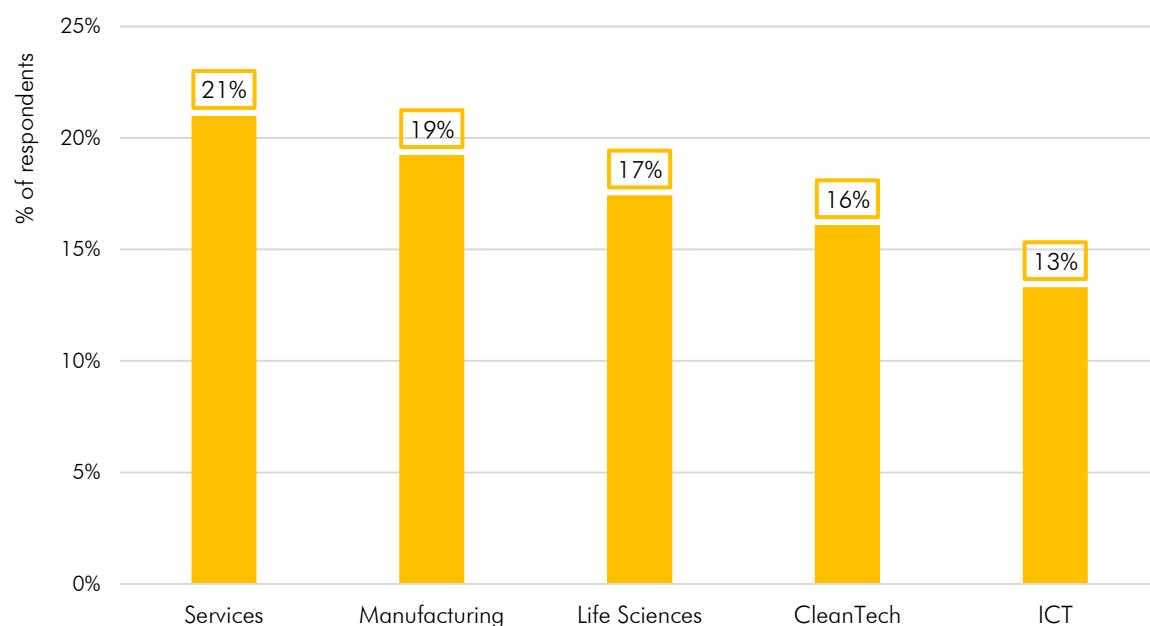
On average, female partners represent 15% of all partners in the VC firms that participated in the survey, with 6 in 10 surveyed GPs reporting no female partners at all in their respective VC firm. However, significant variations do exist across firms. For example, GPs in France and in the South report the highest percentages of female partners in their VC firms, contrary to GPs in CESEE countries and DACH.

Figure B9.1: Percentage of female partners by VC firm headquarter location



GPs investing mainly in Services and in Manufacturing also report the highest percentages of female partners, as opposed to GPs investing mainly in ICT.

Figure B9.2: Percentage of female partners by VC firm industry focus

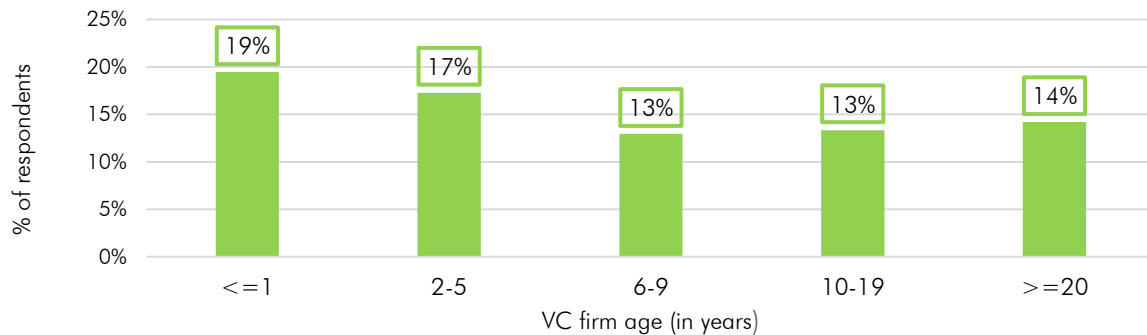


⁴² The EIF VC Survey 2019 results for fund managers' market sentiment and policy recommendations are published in Botsari, Crisanti and Lang (2019). The results summarised in Box 8 will be part of a forthcoming EIF Working Paper.

Box 9 continued:

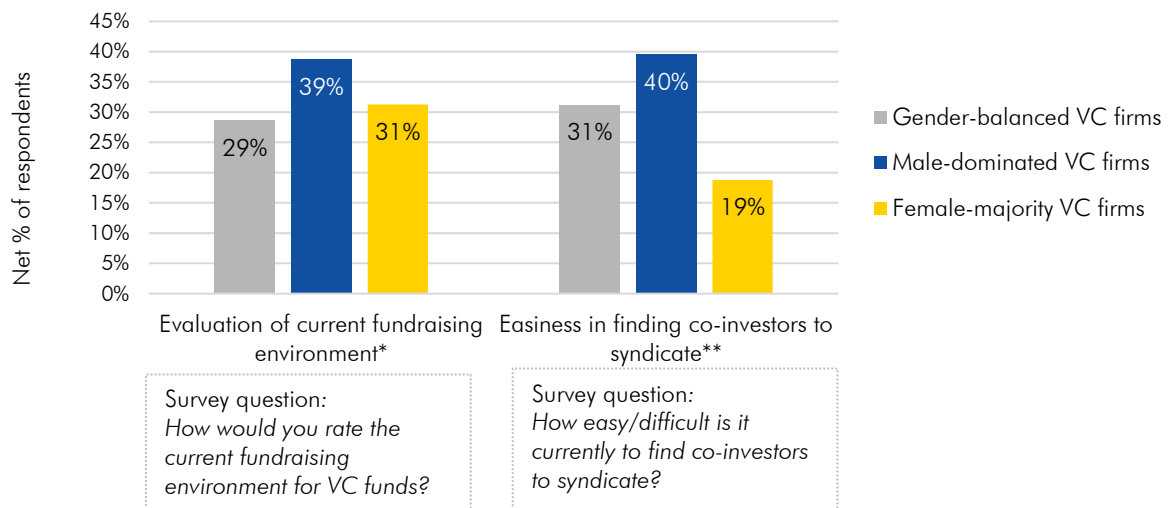
Finally, according to the survey results, female presence in senior management appears to be more prevalent among younger VC firms.

Figure B9.3: Percentage of female partners by VC firm age



Splitting the sample on the basis of gender diversity at the partner level reveals that 65% of the GPs come from male-dominated VC firms, 31% from gender-balanced VC firms and only 4% from female-majority VC firms.⁴³ Further analyses show that for GPs in male-dominated VC firms, it is relatively easier to fundraise and to find co-investors to syndicate, compared to GPs in gender-balanced VC firms or female-majority VC firms. In this respect, GPs in female-majority VC firms indeed indicate fundraising as *the* most important challenge faced in their VC business. The aforementioned findings seem to reflect the anecdotal evidence of gender bias in VC funding.

Figure B2.4: Market sentiment by gender diversity in VC firm



* The response options for this question were on a 5-point Likert scale: "Very bad", "Bad", "Average", "Good", "Very good". The net percentage of respondents reflects the percentage of respondents rating the current fundraising environment as "good/very good" minus the percentage of respondents rating the current fundraising environment as "bad/very bad".

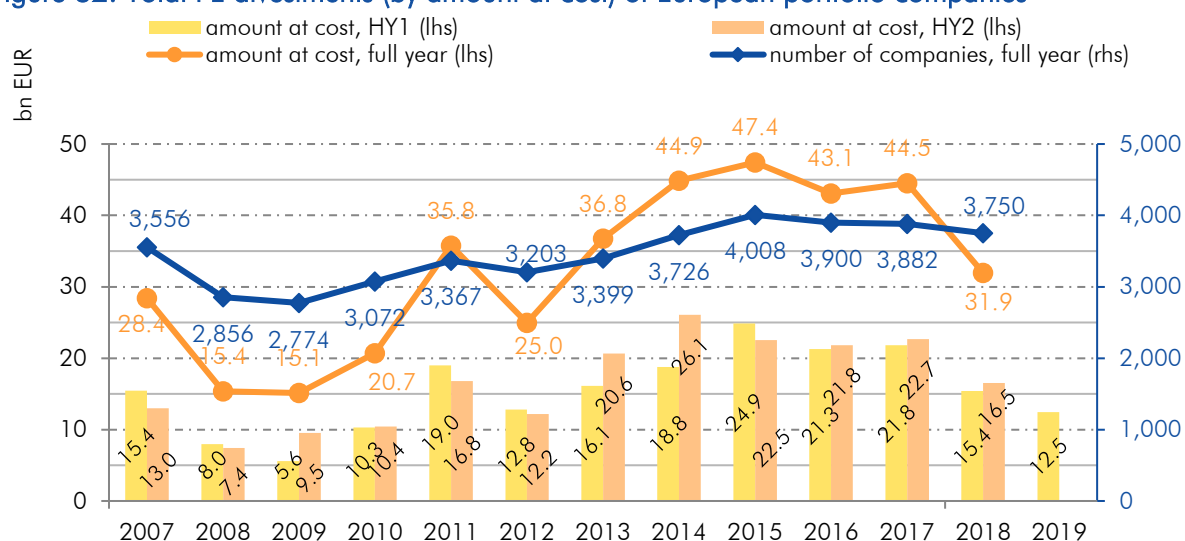
** The response options for this question were on a 5-point Likert scale: "Very difficult", "Difficult", "I did not look for co-investors", "Easy", "Very easy". The net percentage of respondents reflects the percentage of respondents who perceive finding co-investors to syndicate to be "easy/very easy" minus the percentage of respondents who perceive finding co-investors to syndicate to be "difficult/very difficult".

⁴³ The percentage of female partners is less than 20% in male-dominated VC firms; between 20% and 50% in gender-balanced VC firms; and greater than 50% in female-majority VC firms. The results presented above are robust and qualitatively similar to alternative thresholds regarding the percentage of female participation in senior management.

4.3 Divestment activity

In 2018, the exit market suffered a sharp setback, which followed on several remarkably strong years. From 2013 to 2015, total PE divestments of European portfolio companies had risen to the largest amounts ever reached in the Invest Europe statistics (see Figure 18), before levelling off in 2016 and 2017. In 2018, the total PE divestment value decreased strongly by 28% to EUR 31.9bn, the lowest level since 2012 (see Figure 32).⁴⁴ The number of companies divested decreased by 3% to 3,750 in 2018. In the first six months of 2019, PE divestments further declined, according to preliminary Invest Europe data. As for VC, part of the explanation might be the recent rise of later stage funding, which gives successful companies more options for staying private longer than before, in parallel with companies in other ecosystems of the world (Wauters, 2019).

Figure 32: Total PE divestments (by amount at cost) of European portfolio companies



Source: Authors, based on data from Invest Europe

The decrease in the total divestment amount in 2018 was mainly due to substantially lower activity in the buyout (–34% to EUR 22.4bn) segment of the market, but also divestments in the venture (–5% to EUR 2.0bn) and growth (–15% to EUR 5.8bn) capital segments decreased.⁴⁵

The relative importance of write-offs is still at very low levels. As regards overall PE, the percentage of write-offs over total divestment amounts decreased strongly between 2010 and 2016. Following a small increase in 2017, the share of write-offs declined again in 2018, to the second lowest level since 2007 (see Figure 33). Trade sales and sales to another PE house together account for almost two thirds of the total PE divestment amounts. The share of public offerings decreased since 2016 and came to the deepest level since ten years in 2018.⁴⁶ In the VC market, the relative importance

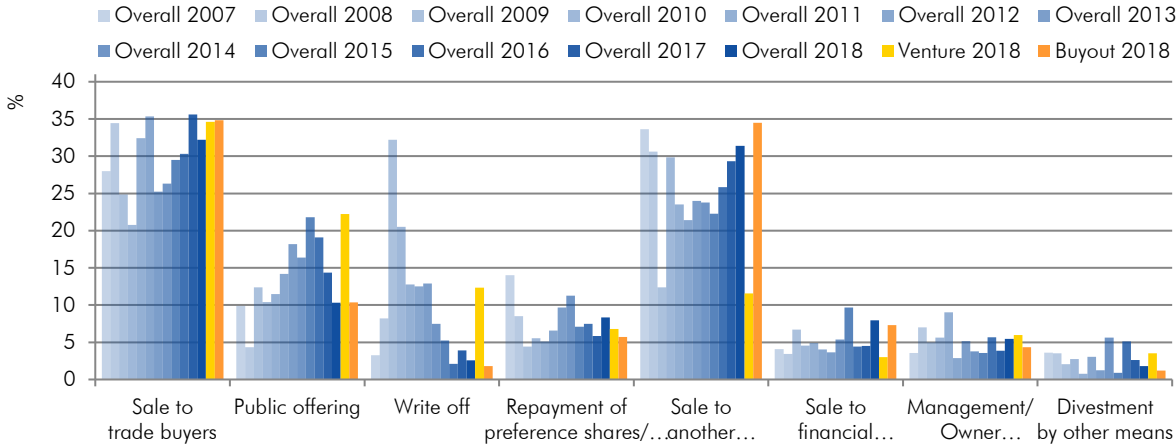
⁴⁴ Invest Europe statistics show divestment amounts at cost, i.e. the total amount divested is shown as the total amount that had been previously invested, not including any profit on the investment.

⁴⁵ The numbers for venture, growth and buyout capital divestments do not sum up to total PE divestments, as total PE divestments also include the rescue/turnaround and replacement capital market segments.

⁴⁶ In the Invest Europe data, the category “Public Offerings” includes first divestment following flotation (IPO) and sale of quoted equity post flotation.

of write-offs was at a record low level in 2018, while a record high was reported for the share of public offerings over total venture exits.

Figure 33: Divestment routes (amount divested at cost; percentage of total)⁴⁷



Source: Authors, based on data from Invest Europe

Box 10: Invest Europe definition of exit routes

Management/ Owner buy-back: The buyer of the company is its management team.

Public offering:

- First divestment following flotation (IPO): The sale or distribution of a private company’s shares to the public for the first time by listing the company on the stock exchange.
- Sale of quoted equity post flotation: It includes sale of quoted shares only if connected to a former private equity investment, e.g. sale of quoted shares after a lock-up period.

Repayment of preference shares / loans or mezzanine: If the private equity firm provided loans or bought preference shares in the company at the time of investment, then their repayment according to the amortisation schedule represents a decrease of the financial claim of the firm into the company, and hence a divestment.

Sale to another private equity firm: The buyer of the portfolio company is a private equity firm.

Sale to financial institution: A financial institution is an entity that provides financial services for its clients:

- Depository institutions: deposit-taking institutions that accept and manage deposits and make loans, including banks, building societies, credit unions, trust companies, and mortgage loan companies.
- Contractual institutions: Insurance companies and pension funds.
- Investment institutions other than direct private equity firms.

Trade sale: The sale of a company's shares to industrial investors.

Write-off: The value of the investment is eliminated and the return to investors is zero or negative.

* Recapitalisations are not considered in the divestment statistics.

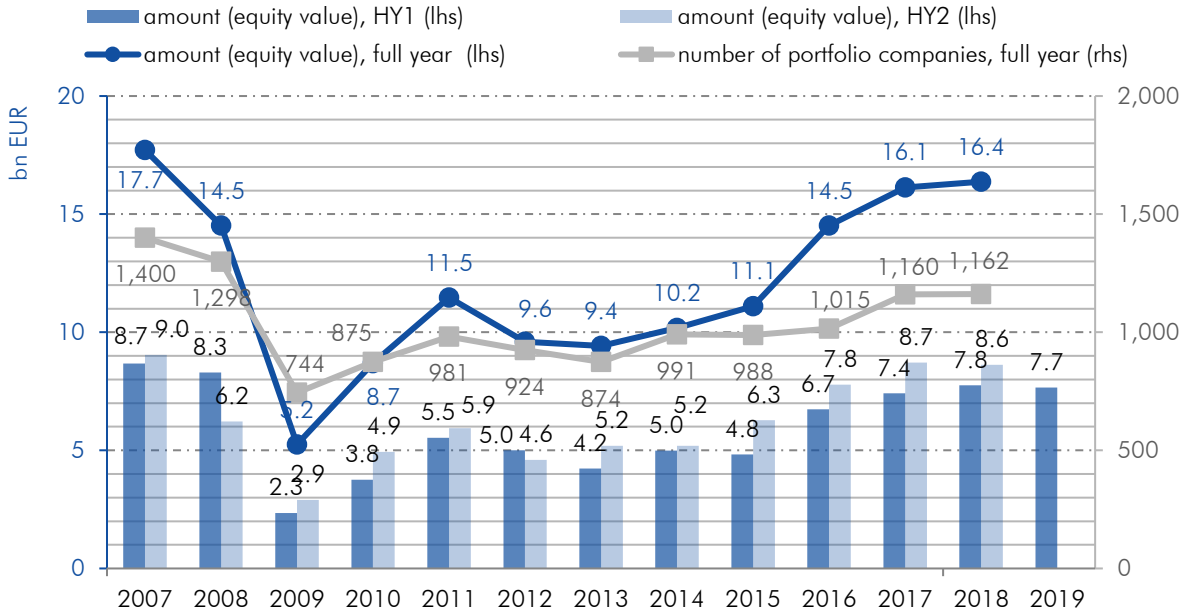
Sources: Invest Europe (2019a), Invest Europe (2019b)

⁴⁷ “Overall” figures are not the weighted average of the “buyout” and “venture” figures, as they also include the growth, rescue/turnaround and replacement capital market segments.

4.4 PE lower mid-market and mezzanine finance: An important market segment

Following EIF’s definition (see EIF, 2019), the PE lower mid-market (LMM) covers fund strategies targeting equity and mezzanine investments at growth and buyout stages and with a particular focus on SMEs.⁴⁸ In the current market context, a full range of equity products combined or not with a debt component continue to prove successful, particularly for shareholding reorganisation, organic and external growth, restructuring or expansion.

Figure 34: Small and lower mid-market buyout equity investments in European portfolio companies



* In the Invest Europe statistics, buyout investment sizes below EUR 15m are defined as small buyout investments. Buyout investment sizes between EUR 15m and EUR 50m are classified as lower mid-market.
 Source: Authors, based on data from Invest Europe

In the first half of 2019, the EIF has observed a stabilisation of the lower-mid and mezzanine markets following the upward trend in the 2015-2018 period: while the relatively high levels of confidence in the business climate and the availability of a diverse set of investors to allocate liquidity to the private equity market still exist, the fundraising, the investment activity and the exit amounts have remained relatively stable when compared to the same period of 2018. Record distributions from private equity funds in recent years led to high levels of investor satisfaction, with much of the capital returned to investors still being redeployed in private equity. In addition, the perspective of interest rates remaining low in the Euro area for a longer period than initially anticipated, together with a backdrop of still relatively supportive European macroeconomic data, led to a supportive fundraising environment where managers with a sound track record are able to complete the fundraising of funds in a relatively short timeframe. Nevertheless, first time teams continue to face difficulties in fundraising.

The benign environment in terms of fundraising for the past few years led to relatively large amounts of dry powder being available to private equity fund managers, which is reflected by the gentle

⁴⁸ Chapter 5.4 provides information about private debt funds. A part of that market segment also covers mezzanine finance.

upward trend of small and lower mid-market buyout investments in European portfolio companies. Investment amounts (equity value) increased slightly by 2% to EUR 16.4m in 2018 (see Figure 34). In the first six months of 2019, investments stabilised, compared to the first semester of 2018, at EUR 7.7bn.

As mentioned in other parts of chapter 4.1, the PE market in general and the mid-market in particular continue to be prone to the risk of high valuations and potential overheating, which is caused by the still ample liquidity in the markets that increases demand for promising companies. In this environment, the mid-market Argos Index, which measures every quarter changes in the valuations of private mid-market companies in the Euro area in which a majority stake has been acquired during the last six months has remained remarkably stable at a historically high level in the first three quarters of 2019 (Epsilon Research, 2019). However, some experienced managers are still able to invest in less visible mid-market opportunities and to provide added value in order to have companies become more attractive and sustainable.

Besides, EIF insight suggests that LMM fund managers tend to exit quicker their investments than previously, perhaps in light of more exit opportunities (increased ratio of early exits and decreased average holding period of investment above cost), which are due to a more “liquid” environment across the industry. Another hypothesis could be that market expectations by fund managers would justify shorter term strategy to benefit from potential overvaluation.

4.5 Prospects

4.5.1 Current situation, risks and market actors’ concerns

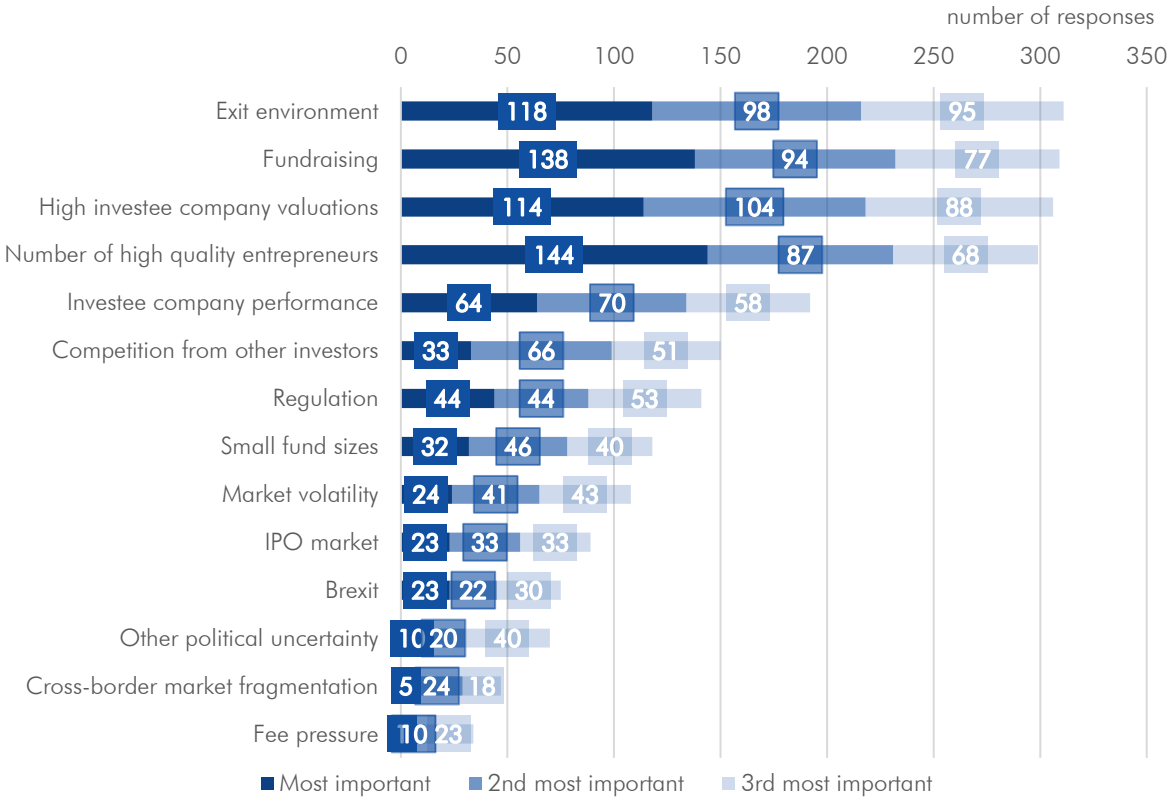
Following the severe crisis of European private equity and venture capital markets in the years 2008-2009 and beyond, a remarkable upturn has been observed in the recent past. In 2018, PE and VC investment and fundraising figures considerably exceeded the levels reached before the crisis. Divestments, which had also recovered from the crisis, suffered a setback in 2018. Preliminary figures for the first six months of 2019 signal that the upturn in PE fundraising and investment activity might have come to a halt this year, while the activity data for the VC market segment were still strong.

It remains still unclear if a sustainable longer-term positive trend over several economic cycles will become prevalent in the European PE and, particularly, VC market, and if Europe will be able to catch-up with its global peers. While in many cases an improvement in activity has indeed been driven by fundamental economic value, part of the upside performance may also be due to higher demand caused by the still ample liquidity in the markets. It is therefore important to support those companies in their continued growth that have well-developing economic fundamentals, and to also help, through the support of financial intermediaries, additional and complementary businesses to maintain and strengthen the backbone of the European VC market, i.e. a strong and continued supply of new innovative companies. The VC ecosystem is developing, including the emergence of more and more successful incubators and accelerators. Should these trends continue, the potential returns of early-stage companies would have significantly positive impacts on the performance of VC investing. According to Cambridge Associates data, the most widely cited VC performance benchmark, European VC performance is either on par or significantly outperforming performance indices for both US VC and European PE on a one- three- and five-year horizon (Atomico, 2019).

Moreover, Europe is perceived as a global leader in several areas, in particular in its commitment to sustainability and the environment and transport infrastructure, according to an international investment decision makers' survey (Invest Europe, 2018). Compared to the previous survey wave, the perceived attractiveness of Europe as an investment destination has even increased, primarily due to increased innovation and returns on investment. Moreover, European founders are considered to be able to compete equally on the global technology stage, in particular by respondents from outside Europe, according to a recent Atomico tech community survey (Atomico, 2019).

The recent favourable developments in the PE/VC market might, however, become contested by risks related to the economic, monetary and political environment. According to the most recent Preqin worldwide survey among institutional investors, performed in June 2019, asset valuations were (again) perceived as the biggest challenge that investors into PE are facing (Preqin, 2019a). Warning voices of possible overheating have been uttered since some time, because of the still relatively expansive monetary policy stance that has led to ample global liquidity and durably low interest rates. In the Preqin survey, only 6% (compared to 21% half a year earlier) of the interviewed institutional investors perceived the global equity markets still to be in their recovery/expansion phase and, hence, see further upside potential. However, the large majority of the investors (74%, compared to 61% in the preceding semester) believe that the equity markets have peaked already (Preqin, 2019a).

Figure 35: Biggest challenges in VC business



* Diagram shows the results for the EIF VC Survey 2019 question "Select up to three of the biggest challenges you currently see in venture capital business."

Sources: EIF VC Survey 2019; Botsari, Crisanti and Lang (2019)

In the *EIF VC Survey 2019*, European fund managers stated the exit environment, fundraising, high investee company valuations and the number of high quality entrepreneurs to be the biggest challenges in the VC business; see Figure 35. The high ranking of investee company valuations, which was only the sixth important challenge a year before, together with the fact that competition from other investors also gained significantly in importance (ranked 6th, up five places compared to 2018), point to an increasingly competitive environment in the European VC market. According to the *EIF VC Survey 2019*, this is particularly the case for GPs mainly investing in ICT, CleanTech and Services as well as for later/growth stage investors. (See Botsari, Crisanti and Lang, 2019, for the *EIF VC Survey 2019* results and Kraemer-Eis, Botsari, Gvetadze, and Lang, 2018a, for the *EIF VC Survey 2018* results.)

Moreover, despite the record level of VC investments, a recent Atomico survey reports that more founders believe, on average, that it has become harder to raise venture capital in Europe. This is the first time that this has been the case over the five years that this question has been asked in the survey (Atomico, 2019).

4.5.2 Structural challenges affecting European PE and VC

The PE and VC markets are challenged by economic developments of the last years that resulted in significant structural changes in the global and European economic landscape. The digitalisation of the economy has led to a differentiation of market segments. On the one hand, companies in research-intensive sectors continue to follow more traditional growth models with capital-intensive development stages at the beginning of their life. On the other hand, companies in the digital space are able to start their activities with very limited resources but are exposed to unprecedented needs for funding in globalisation of their business models. As a result, depending on the sector and the business models of the companies, time-spans from start-up to global leader have shortened considerably and require companies to scale quickly to overcome the risk of seeing their business model being out-dated before they capture a significant market share. In Europe, too few start-ups survive beyond the critical phase of 2-3 years. Compared to the US, a much larger share of firms remains static and fewer companies manage to grow into large firms (European Commission, 2016; Bravo-Biosca, 2011).

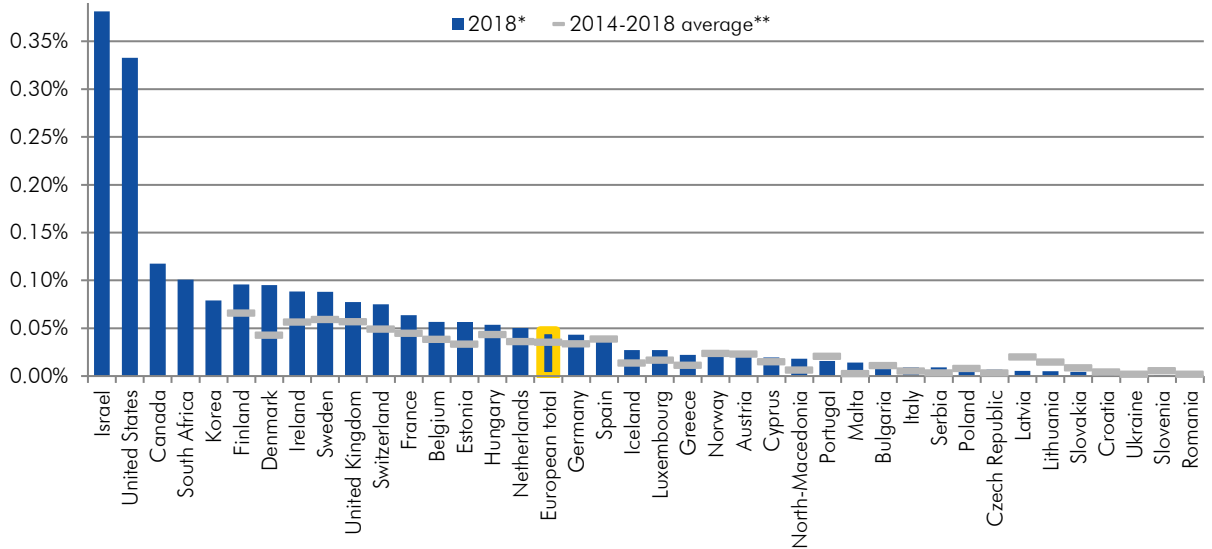
On a global level, the VC market has adapted to the new diversity of its target sectors. This has led to a bifurcation of the market between relatively small funds aiming at scouting emerging business models and a new class of giant VC funds that expanded globally from the US, providing large scale capital to businesses in their worldwide market expansion. In the large scale technology growth capital market, Europe has still too few established players. This is particularly important, as a small number of giant deals has had an increasing impact on the investment level in recent years (Atomico, 2019).

In the shadow of companies driving or directly affected by the “digital revolution”, SMEs and mid-caps in traditional industries are reshaping their strategies for competing in a rapidly changing economic environment and are in need of flexible funding instruments with growth equity, mezzanine debt and tailored long-term senior to classical debt features. EIF market insight shows that growth-stage companies are experiencing a serious lack of growth (follow-on) funding in order to accelerate

their international expansion and to strengthen their position against global competitors (see also McGrath, 2017, for a related overview).

A comparison of PE/VC statistics confirms that the gap between the VC markets in the US and in Europe is particularly high at the later stage (AFME, 2017; Echikson 2017). In the growth capital segment, the amounts invested in the US exceed those in Europe by 3 times. These differences are also reflected by substantial distinctions in fund and deal sizes: while at the start-up stage there is relatively little difference in terms of fund size (US vs Europe), US companies are funded by significantly larger funds at the scale-up stage. Furthermore, the average VC-backed US company typically receives higher amounts than its EU counterpart (details are provided in AFME, 2017, and Kraemer-Eis and Lang, 2017). Duruflé, Hellmann and Wilson (2017) identify the main elements of a strategy to help Europe catch up to the US in terms of scale-up funding: creation of larger venture funds and a venture debt market⁴⁹, reinvigoration of tech IPOs, improved markets for secondary shares and avoiding to sell companies too early.

Figure 36: VC investments by country of portfolio company, percentage of GDP, 2018*



* 2018, or latest available year.
 ** 2014-2018 average, if available.
 Source: Invest Europe, OECD (2018)⁵⁰

The geographical fragmentation of the European VC market

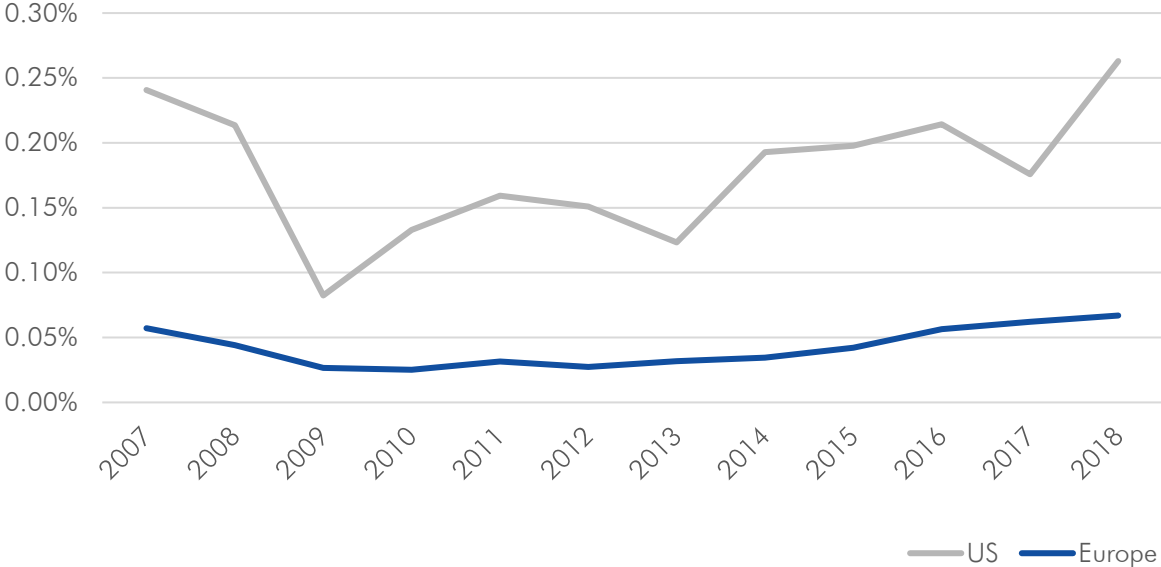
The European VC market has remained fragmented. Whilst the traditional core markets in Europe (e.g., the UK and Scandinavia) still have a relatively high market activity after the crisis and others have recently caught up (e.g., Spain), other countries continue to struggle with the size of their domestic VC market which is in no relation to their share in the aggregate GDP of the EU (e.g. Italy);

⁴⁹ See Kraemer-Eis, Botsari, Gvetadze, Lang, and Torfs (2018a) for a brief summary of venture debt developments in Europe; chapter 4.1 includes an overview of corporate venture capital, which can also be a tool to improve the financing for scale-ups.
⁵⁰ Source for “Europe”: Invest Europe. “Europe” as covered by Invest Europe (i.e. EU minus Cyprus and Malta, but plus Norway, Switzerland, Ukraine, and those Balkan countries that are not part of the EU). See OECD (2017c) for an overview of the international comparability of VC data.

Figure 36 provides an overview of VC investments as a share of GDP for European and selected OECD countries as well as a European average. Sizable differences in the development of the VC markets prevail and several markets not only suffer from subcritical size but from an institutional investor base that is not sufficiently ready to invest in this asset class (see Kraemer-Eis, Botsari, Gvetadze, and Lang, 2018a).

However, when looking into the geographic dispersion of European VC activity in more detail, the picture becomes more complex. It seems that VC investors tend to target tech “hubs” rather than certain regions, based on the expertise developed in those hubs. A start-up’s location is likely to have a major influence on the amount of venture capital that the enterprise receives as well as the number of funding rounds it goes through (Nepelski et al., 2016, who provide a detailed overview of European VC-backed start-up hotspots). EIF research has shown that European hubs, and in particular those backed by EIF investments, act as the beating heart of a complex network of national and international investments. This claim is supported by data on investment amounts originated by hubs: 23% of these remains in the hub, 40% reaches out to other in-country locations and the remaining 37% travels beyond the national frontier (Kraemer-Eis, Signore and Prencipe, 2016). Since higher cross-border investments can be interpreted as the signal of a deeper integration of the European VC market, EIF may hold a vantage point in fostering the consolidation of a Europe-wide VC ecosystem. In addition, cross-border VC investments have been facilitated to a certain extent by EU-wide overarching rules and regulations. However, there is still much disintegration in terms of company structure, legal system, regulation, taxations etc. Another reason for improved cross border investments is that the main hubs have attracted talents from different countries who retain links to their home countries and in turn attract additional human capital and/or companies to the various hubs. This provides insight for more cross border activities and fosters an international VC ecosystem for investment.

Figure 37: VC fundraising Europe and US, percentage of GDP, 2007-2018



Source: Invest Europe

In the US, VC investments increased from USD 83bn in 2017 to USD 131bn in 2018, according to NVCA/PitchBook data (source: Invest Europe). However, the comparison of VC investment data between Europe and the US or other countries outside Europe is not straightforward for several reasons (see OECD, 2017b, for an overview). For example, the understanding of what constitutes a venture deal differs between the data providers for the different geographies. Moreover, data for the US often does not separate out what share of capital is invested by formal VC/PE funds, which leads to US investment figures being higher than the related fundraising. See Figure 37 for a comparison of VC fundraising as a share of GDP in Europe and the US from 2007 to 2018. Although VC fundraising is, on average, lower than VC investment in the US, its level is still substantially higher than in Europe and confirms the diagnosis of a comparatively small European VC market.

More recently, a new structural challenge that affects, inter alia, European PE and VC fund managers, is the development towards investments that satisfy certain environmental, social, and governance (ESG) criteria. The *EIF VC Survey 2019* and *The EIF Business Angels Survey 2019* both addressed this topic. The survey results related to ESG aspects are summarised in Box 11.

Box 11: ESG considerations in VC fund managers' and Business Angels' investment decisions: evidence from two pan-European surveys

For EIF, the consideration of ESG (Environmental, Social and Governance) criteria is highly relevant and therefore, as an intermediated business model is applied, it is as well important to generate knowledge about business partners' perception and use of such criteria. The following summary of a new EIF Working Paper is based on two surveys: *The EIF VC Survey 2019* and *the EIF Business Angels Survey 2019*.⁵¹

As ESG principles are increasingly attracting the attention of investors and regulators alike, both surveys looked into whether VC General Partners (GPs) and Business Angels (BAs) incorporate ESG considerations into their investment decisions, their motivation for doing so, as well as the particular ESG strategies pursued. The evidence from the two surveys suggests that ESG investing indeed powers into the mainstream for early-stage equity investors, as 7 in 10 venture capitalists (VCs) and 6 in 10 BAs incorporate ESG into their investment decision process.

For the majority of the VC fund managers, the consideration of ESG at due diligence is done on an exclusionary basis, i.e. by eliminating from the investment universe firms that fail to meet selected ESG criteria ('negative screening'). On the other hand, a significant share of the VCs explicitly target firms that satisfy a specific minimum of ESG criteria ('positive screening'). Despite this, ESG strategies that entail either a greater involvement on the part of the GPs (e.g., 'direct engagement' with and provision of ESG expertise to investee companies in order to improve their ESG performance) or a more formalised approach to ESG incorporation (e.g., an ESG 'factor' integrated into valuation) are much less frequently adopted. In the case of Business Angels, 'positive screening' and 'impact investing' (i.e. seeking to generate a positive social and/or environmental impact alongside a financial return) feature much more prominently.

⁵¹ The EIF VC Survey 2019 results related to fund managers' market sentiment and policy recommendations are published in Botsari, Crisanti and Lang (2019). The EIF BA Survey 2019 results that show BAs' market sentiment and their opinion on Box 6 ESBFO issue. ESG-related results from the EIF VC Survey 2019 and the EIF BA Survey 2019 will be published in the EIF Working Paper series early 2020.

Box 11 continued:

The difference in the relative importance of ESG strategies between VCs and BAs can be traced back to the reasons motivating ESG investing. Both for VC fund managers and for Business Angels, a sense of ethical responsibility and the desire to encourage change towards responsible business practices at investee companies appear to be key drivers of this investment behaviour. However, for Business Angels, the will to 'do good' is relatively more important than for the VCs, for which external factors such as the positive reputational signal associated with ESG investing and the growing pressure from Limited Partners are also powerful determinants of the fund managers' attitude towards ESG.

Looking at the European VC landscape, ESG investing is particularly prominent in the Nordics, in the UK & Ireland and in France, while GPs in DACH and the CESEE region report considering ESG to a lesser extent. The investment stage focus is a significant determinant of ESG consideration too. The more matured the investment stage (seed vs. early vs. growth) the higher the degree of ESG integration, with growth-stage investors also exhibiting the most 'active' forms of ESG engagement. The EIF VC Survey findings also point to a positive correlation between ESG considerations and VC firm-size as well as between ESG considerations and female participation in senior management.

Another interesting finding from the two surveys is that the results are not driven by Millennial investors alone. On the contrary, both surveys show that ESG considerations are rooted across all age ranges. Looking into the human capital in VC and BA investing can also provide insights into the drivers of ESG integration. For example, the level and field of education as well as prior relevant experience can affect individuals' perceptions of risk and return as well as the way they perceive and respond to risks and opportunities.

In the case of VC fund managers, for example, MBA graduates are relatively less likely to integrate ESG considerations into their investment decision process and the least likely to engage in impact investing. At the same time, VCs with a science background in education are relatively more likely to integrate ESG as part of their investment policy and to acknowledge the importance of ESG for investment performance and risk management in particular. Former entrepreneurs or VCs that have prior work experience in start-ups are also more likely to consider ESG.

It is important to note that, according to both VCs and BAs who already incorporate ESG into their investment process, ESG investing does not need to come at the expense of financial returns. On average and across all ESG strategies considered, only 1 in 10 respondents believes that ESG considerations can have a negative effect on investment returns relative to a risk-adjusted market benchmark. Interestingly enough, among those respondents who do not yet consider ESG, the notion that integrating ESG criteria into the investment strategy is detrimental for returns also ranks very low.

So what lies ahead for ESG investing? The vast majority of all respondents agree that the importance of ESG will further rise in the near future, particularly in the direction of more 'active management' and engagement with portfolio companies on ESG issues as well as with regard to explicitly factoring ESG into the valuation of investment opportunities. While the surveys' findings are promising, a formalised ESG implementation might still have a long way to go.

In the VC space, 1 in 2 fund managers state that there is an explicit ESG policy already in place in their respective firms. However, half of the surveyed VCs report not having a member in their investment team dedicated to dealing with ESG issues, while almost 40% report a lack of formal monitoring of the performance of their portfolio companies in terms of ESG metrics. It is therefore not surprising that limited resources and expertise on ESG issues as well as difficulties in quantifying ESG information are cited by VCs and BAs alike among the top reasons that deter them from using ESG information when making investment decisions.

Box 11 continued:

Having surpassed the mis-conception of a trade-off between ESG investing and returns, greater emphasis should now be placed at 'educating' investors on how to identify material ESG-related risks and opportunities. Coming to a consensus on a methodology about how to measure ESG impact would facilitate the development of ESG-related KPIs and would constitute a major step forward.

4.5.3 Policy intervention in European PE and VC: Findings from recent studies

Some of the challenges described in the preceding two chapters continue to weigh on the access to funding in the European VC market. This supports a view that public backing is needed in order to strengthen the market, which is particularly true for new funds that typically receive less private investment. We had outlined recent OECD findings on policy measures taken by governments to support seed and early-stage financing in previous issues of the ESBFO.

Besides the additional funding volumes, public investors' participation in a PE/VC fund can also have a positive signalling effect on private investors, e.g. due to perceived strong due diligence requirements and an assumed higher stability of public LPs' commitment to a fund (see, for example, Kraemer-Eis, Botsari, Gvetadze, and Lang, 2018b).⁵² These advantages seem to outweigh the potential disadvantages of public investors' participation, like a supposed negative impact on speed and responsiveness or imposed restrictions in the investment strategy of the fund (which can be due to thorough and audit-proof due diligence processes, which are a necessary precondition for the above-mentioned signalling effect). Moreover, Bertoni, D'Adda and Grilli (2016) show that in "thin" VC markets with low supply, which might be a good characterisation for many continental European markets, governmental VCs can raise competition among investee companies by increasing the deal flow and thereby elevate expected profits of independent VCs⁵³ with purely financial investment objectives. This may attract additional investors and trigger "the virtuous cycle of VC market development".

For public policy intervention in the VC market, the relationship between private VC activities and governmental support is important. This was analysed in several empirical studies: according to Colombo, Cumming and Vismara (2014), the design of a public VC investment scheme is relevant for their impact. Governmental VC schemes seem to have been more successful when they acted alongside private investors, which would favour a governmental fund-of-funds set-up over direct public investments. Indeed, the focus of support instruments "has shifted from government equity funds investing directly to more indirect models such as co-investments funds and fund-of-funds" in OECD countries (Wilson, 2015b). Moreover, Brander, Du and Hellmann (2014), in a continuation of their 2010-study, find that enterprises funded by both governmental VC and private VC obtain more investment than enterprises funded purely by private VCs, and much more than those funded purely by governmental support.

⁵² A summary of Kraemer-Eis, Botsari, Gvetadze, and Lang (2018b) is provided in Kraemer-Eis, Botsari, Gvetadze, Lang and Torfs (2018b).

⁵³ Independent VC fund managers act as general partner in a limited partnership in which the fund investors invest as limited partners. This is the most common legal structure for VC funds in Europe.

There is also a positive association between mixed governmental/private funding and successful exits, as measured by initial public offerings and acquisitions, attributable largely to the additional investment.⁵⁴ Dubovik and Steegmans (2017) find evidence that public sponsoring of privately managed VC funds creates better exit performance than public management of VC funds. Cumming, Grilli and Murtinu (2017) show a higher likelihood of a positive exit for companies backed by independent and governmental VCs together than for companies that are backed by one of the two investor groups only, based on the underlying sample. Moreover, Bertoni and Tykiová (2012) conclude “that syndicates between private and governmental venture capital investors, in which the private investor takes the lead, are the most efficient form in terms of innovation production”. However, as said earlier, public policy in the area of venture capital should go beyond an exclusive support of VC funds (see Hellmann, Schure and Vo, 2015) and aim to attract equity financing to Europe from other sources, such as angel investors and crowdfunding (see Wilson, 2015a; see also Aubrey et al., 2015, for related policy recommendations to support growth firms). EIF and Invest Europe have recently published an analysis of the financial and economic developments of EU-based start-ups backed by VC. Box 12 provides a summary the study.

Box 12: The VC Factor: Data driven insights about VC-backed start-ups in Europe – A joint EIF and Invest Europe report⁵⁵

European venture capital (VC) investments are reaching a new all-time high and the VC industry is thriving, but what has happened to invested companies after the financing rounds?

The VC Factor is a new research report attempting to answer this question. It is the first large-scale study of EU-based start-ups backed by VC. Thanks to the joint effort of the EIF and Invest Europe, the report strives to provide a representative picture of the EU start-up ecosystem, studying almost 9,000 European firms invested in 2007-15 and analysing their characteristics as well as their post-investment performance.

The report finds that companies operating in the Nordics are the most innovative with respect to both their patenting activity and intangible assets. It also concludes that early-stage companies are more innovative than their later-stage peers and that the former grow faster in terms of revenue and total assets. The high variation across growth patterns, however, means that there is no “typical” EU start-up, calling for more advanced methods to evaluate the progress of start-ups.

The VC Factor employs cluster analysis to evaluate and group VC-backed firms according to their four-year growth rates in five financial indicators - revenue, staff numbers, assets, intangibles and costs. The results show that the 93% of start-ups, which did not default by their fourth year, can be sorted in five distinct profiles. From least to most performing, we find laggards (3%), commoners (56%), all-rounders (19%), visionaries (7%) and superstars (8%).

⁵⁴ Dubovik and Steegmans (2017) provide a brief overview.

⁵⁵ This text box was written by A. Crisanti and E. Pavlova.

Box 12 continued:

What growth trajectories are associated with these profiles? After four years, laggard companies' financial performance drops to levels lower than those they initially started with. Commoner start-ups follow a mild-growth path, especially in revenue (20%) and costs (11%). The all-rounders record great performance across the board, with growth rates ranging from 39% for intangibles to 141% for revenue. Visionaries progress soundly in all indicators but intangibles is where their growth skyrockets, with an impressive 534%. Superstars not only grow remarkably in turnover (358%), but also record the highest growth rates in all indicators but intangibles, where visionaries keep their lead.

The report also investigates the role of VC in the growth of companies it finances. The authors construct a comparable group of firms (the so-called counterfactual group), which could have received VC financing, but did not. By classifying counterfactual start-ups according to the clustering model stemming from the analysis of VC-backed growth, the same five profiles emerge. However, in the absence of VC, there would be more than three times the number of laggards. This already provides some evidence for the merits of VC financing in uplifting some start-ups to more promising growth trajectories.

The study further looks at the differences between VC and non-VC-backed start-ups in terms of their financial growth rates. VC-backed profiles, apart from laggards, grew considerably more than their non-VC counterparts, in every financial measure. In the visionary and superstar clusters, VC-backed start-ups beat their counterparts in intangibles growth by an impressive 331 percentage point (pp) and 190 pp respectively. This further proves that VC's role in the development of start-ups is substantial.

Finally, the analysis uses the group of comparable non-VC-backed firms to construct a "what if" scenario, revealing where VC-backed start-ups would have ended up had they not received the investment. Almost half of high growth start-ups (all-rounders, visionaries and superstars) would have either fallen into a much less successful profile or defaulted without VC. In a nutshell: when an entrepreneurial idea has a high potential for success, the "VC factor" expands opportunities for growth and enables excelling start-ups to unleash their full potential.

Source : Crisanti, A., Krantz, J., and Pavlova, E. (2019)

4.5.4 Policy intervention in European PE and VC: A practical approach

Europe therefore needs an integrated portfolio of funding instruments to support the various segments of its start-up⁵⁶, SME and mid-cap landscape, to unleash the full potential of EU companies' competitiveness and their contribution to Europe's economic growth and innovation. Instruments should be complementary to existing initiatives in terms of sector, stage or geographic focus. However, the dynamics of recent economic developments, e.g. in the area of the digital economy, has made the segmentation between early stage and late stage VC somewhat redundant. Policy instruments that create artificial boundaries of businesses' development stages could be prohibitive to an efficient VC market. Moreover, the EU's VC markets show different degrees of maturity and so require different policy instruments. In less developed markets, instruments may need to work strongly together with the actors of the informal VC markets (BAs, Incubators, TT Centres) and be complemented by flexible co-investment products to grow the domestic VC market. However,

⁵⁶ In order to shed some more light on the relationship between VC and start-ups, Brinckmann (2015) and Raves (2017) analysed, in cooperation with EIF RMA, the effect of entrepreneurs' profiles on the performance of VC-backed start-ups. We presented key parts of the paper in a previous ESBFO issue (see Kraemer-Eis, Lang, Torfs and Gvetadze, 2015).

when it comes to companies with global ambitions, instruments investing in future industry leaders compete for investors who seek exposure to the best companies on a global scale, not with respect to a given geography. Therefore, giving flexibility to the geographic boundaries of policy instruments is not only key in retaining EU-based businesses in Europe but may attract non-EU based businesses to relocate to Europe. Based on these considerations, it appears vital to offer an array of instruments adapted to diverse market conditions in the various geographies of the EU. However, large-scale venture initiatives need to include support that helps to grow businesses to larger scale in order to make an impact on the EU's competitiveness. The provision of more growth capital could help alleviate the challenges that later-stage VC firms face when it comes to follow-on financing, particularly in the absence of established, liquid public markets. Creating larger funds will also enable VCs to accompany investee companies for longer periods, minimising the risk that portfolio companies are taken public too early, without having reached a sustainable size that would facilitate a valuation reflecting their true potential. Initiatives aimed at supporting VC firms even in the post-IPO process and at encouraging sophisticated, large crossover investors could contribute to a vibrant VC ecosystem in Europe, enabling European VCs to compete alongside giant, internationally-expanded VC funds.

Measures aiming at regulatory simplification, harmonisation and promoting cross-border investment are steps in the right direction, as intensive policy action is needed to overcome the fragmentation of the European VC market (Bertoni, Colombo and Quas, 2015; see also chapter 4.5.2; Kraemer-Eis and Lang (2017) provide an overview of related measures under the Capital Markets Union).

Europe needs a seamless funding infrastructure to support the full corporate financing escalator, an EU equity flagship initiative to ensure a sizeable mass of home-grown risk capital finance with a long-term perspective. The issue is not only about the availability of funding; it is about the type of funding. The "growth stage trap" is very different in nature from the "early stage gap" and requires new tools and means to address it (see Kraemer-Eis and Lang, 2017). Public backing of the European VC market should aim at crowding-in private investors and catalysing private sector investments in order to support the development of an integrated European VC market, originated by venture capitalists and other market-oriented professionals, such as business angels (BAs).

In times of scarcity of private capital, the temptation grows to construct policy instruments that substitute the private sector. In fact, there is a need to use public sector resources primarily to mobilise private sector capital, as clearly demonstrated by the leverage factor built in the Investment Plan for Europe and other instruments implemented by the EIF. One way to attract private investors to the VC market is a fund-of-funds approach or having government and private investors co-invest in VC funds (Acevedo et al., 2016). This approach is also pursued by the EIF. As a reference catalytic investor in European venture, growth capital and private debt funds, EIF is providing financing solutions to boost entrepreneurship and innovation, acting as a cornerstone around whom private market players invest, taking comfort from EIF's thorough diligence and investment and ongoing monitoring processes. In the coming years, EIF will continue to act as a cornerstone investor across the spectrum from technology transfer through venture capital to the lower mid-market and mezzanine financing. EIF's activity in the equity sphere also includes the launch and extension of new initiatives. This will all contribute, inter alia, to the EC's initiatives "Start-up and Scale-up Initiative", which stated access

to finance to be one of the biggest barriers to scaling-up businesses (see European Commission, 2016).

5 SME debt products

5.1 SME guarantees

5.1.1 Market failure and policy response

Information asymmetries in the credit market: the rationale for public sector involvement

As highlighted in earlier chapters, access to finance is an important issue for SMEs. SMEs face financing constraints as financial institutions are usually reluctant to extend uncollateralised credit to SMEs, even at high interest rates, in part because of the high costs of obtaining and assessing adequate information on the true credit quality of small, typically young companies. Many of these firms do not have the necessary amount and type of assets that could serve as collateral for the loan. As a result, many SMEs with economically viable projects cannot obtain the necessary financing from the regular system of financial intermediation.

This phenomenon is often referred to as the SME financing gap: an insufficient supply of external financing to SMEs (OECD, 2006), the existence of which is driven by a market failure typical for the credit market: information asymmetries.⁵⁷ Information asymmetries can lead to credit rationing through either an *adverse selection* of low quality borrowers (Akerlof, 1970) or *moral hazard* problems. Adverse selection occurs when banks cannot differentiate between good and bad projects, and therefore cannot charge each a different interest rate to reflect inherent differences in risk. Higher interest rates will discourage businesses with the least risky projects to take out loans. If good borrowers self-select out of the market, this in turn implies that, for any given interest rate, inherently riskier projects will be over-represented in the loan application pool (Jaffee and Russell, 1976; Stiglitz and Weiss, 1981). Moral hazard problems occur when limited liability in the event of default provides borrowers with an incentive to take up excessive risk.⁵⁸ This means that in the presence of asymmetric information, banks are reluctant to use higher interest rates, because it reduces equilibrium profits. As a consequence, their rational response is to keep the supply of credit below demand, rather than to increase the interest rate charged on loans.

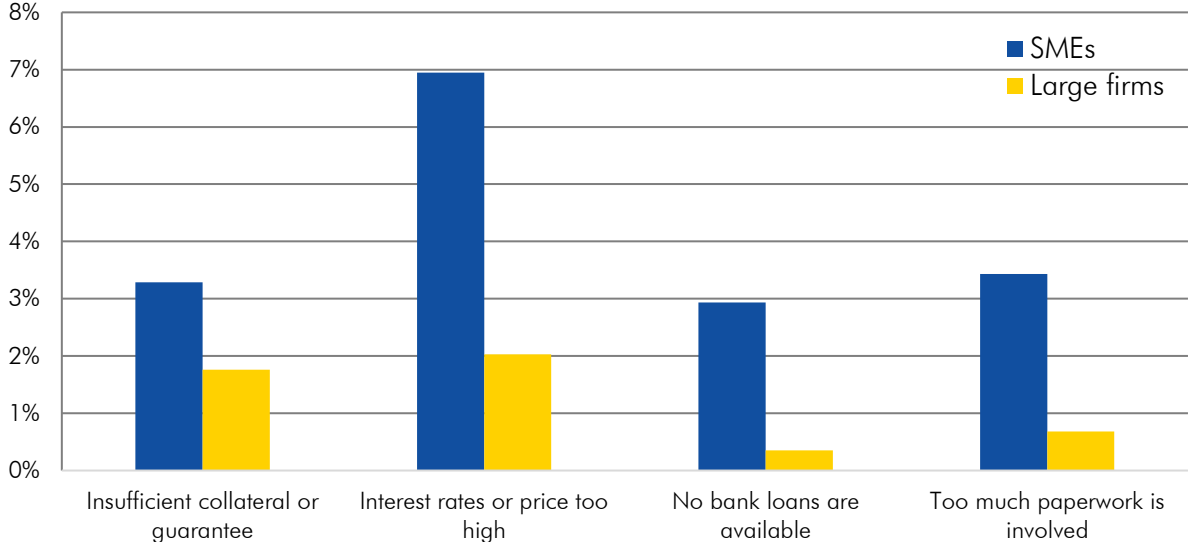
Credit rationing is particularly prevalent in the market for lending to SMEs, for two reasons. The first reason relates to their lack of collateral: the availability of collateral provides a way for borrowers to directly eliminate the asymmetric information problem. Pledging collateral in a loan-agreement enables firms to bindingly signal their true credit worthiness. However, firms do not always possess the required collateral, especially SMEs. The credit rationing result is therefore particularly relevant for this segment of firms, where failure to meet lenders' collateral requirements aggravates access to finance problems. In addition, the use of collateral comes with a number of drawbacks. The collateral may be worth more to the borrower than to the financial institution providing the loan, while the use of collateral increases the cost of borrowing, as it generally involves legal and other administrative procedures. The ECB Survey on the Access to Finance of Enterprises (ECB, 2019a) confirms the argument that the insufficient availability of collateral and guarantees continues to be an important reason why SMEs consider bank loans not relevant for them (see section 3.4 and Figure 38). The

⁵⁷ See OECD (2018) for an overview of market failures in SME lending and mitigation techniques.

⁵⁸ Both the adverse selection as well as the moral hazard argument crucially hinge on the insight that higher interest rates reduce the borrower's stake in the project underlying the loan (Tirole, 2006), which is an illustration of the typical principal-agent problem (Arrow, 1985).

second reason SMEs are more affected by credit rationing than larger companies relates to the fact that credit market information asymmetries are more pronounced for small firms and that the cost of monitoring them is higher. Large firms are required to adhere to corporate norms, legal standards, formal reporting requirements etc., whereas business decision-making processes, transparency rules, dividing lines between company and personal assets are less defined for SMEs. SMEs are often young organisations, so that credit history and operational track records are, by construction, shorter compared to their larger counterparts. Market failures in the bank-lending market therefore imply that many SMEs with economically viable projects will not be able to obtain the necessary financing from the regular system of financial intermediation.

Figure 38: Reasons why bank loans are not a relevant financing source for Euro area SMEs (HY1/2019)



Source: Authors, based on ECB SAFE (ECB, 2019a)

Prior research has highlighted several factors that could contribute to a worsening of the SME financing gap. For example, a number of studies have put forward the conclusion that credit constraint issues are further deepened by increasing market concentration in the banking sector.⁵⁹ Given the strong consolidation in the European banking sector (Uhde and Heimeshoff, 2009; ECB, 2016), these observations are particularly relevant for SMEs in Europe. Furthermore, a drop in real estate prices (as was the case a few years ago) could also negatively impact the credit availability to SMEs, who often use property assets as collateral (OECD, 2012).

Information asymmetries exist to a lesser degree if a strong relationship between lender and borrower has been established. Hence, unsurprisingly, most SMEs have a close relationship with one (sometimes two) “house bank(s)” (EBF, 2015). A close relationship with a lender makes the borrower well aware of what information needs to be provided, including the amount of collateral required (support in this regard is also given by third parties like chambers of industry and commerce or chambers of skilled crafts and by guarantee societies with specific knowledge of the local SME

⁵⁹ In this respect, Ryan et al. (2014) show how bank market power is associated with an increase in financing constraints, leading to lower levels of SME investment levels. This conclusion is confirmed by Chong et al. (2013) who show that lowering market concentration in the banking sector indeed alleviates financing constraints.

market). In addition, it enables the lender to know well not only the hard but also the soft facts of the borrower. Thus, through due diligence/lenders' examination (screening) and by a firm's ability to signal its credit worthiness (incl. an institutional assessment or rating by an independent agency and the provision of collateral), information asymmetries can be reduced. However, this means that new or young firms with a lack of collateral and, by definition, without a track record, are the ones with the greatest degree of difficulty in accessing debt capital. Adding to this argument, innovation and digitisation increase the number of intangible projects to be financed. Therefore, the aforementioned financing obstacles can also negatively affect productivity in the economy.

Given the strategic importance of SMEs as drivers of economic growth and innovation, it is of crucial importance to address the consequences of credit market failures in order to exploit the externalities from entrepreneurial dynamism (Honohan, 2010).

Using CGSs to alleviate the supply shortage

Credit Guarantee Schemes (CGSs) "are used widely across economies as important tools to ease financial constraints for SMEs and start-ups" (OECD, 2013), in order to alleviate the consequences of market failures in SME financing. This is because guarantee mechanisms, "whereby should the borrower default the guarantor compensates a pre-defined share of the outstanding loan" (OECD, 2015), reduce the risk of lenders and favour the provision of financing to viable businesses that are constrained in their access to finance.

Credit guarantee programs expanded substantially in the years 2007-2011, as governments responded to the financial crisis. Carefully designed guarantee schemes have positive macroeconomic effects, meaning that the costs for the tax payers due to default payments are outweighed by the positive stimulating effects of guarantees on the economy (e.g., fiscal income generated by the supported projects, positive impact on social benefits programs due to created or maintained jobs). Therefore, CGSs "remain the most wide-spread instrument in use across countries" to ease SMEs' access to finance (OECD, 2018). Moreover, guarantees are "increasingly targeting young and innovative firms in an effort to boost employment and value added" (OECD, 2016). While CGSs do not alleviate information asymmetries directly, and hence do not address the root of the market failure,⁶⁰ they can increase the incentives of lenders to supply credit to SMEs by providing a substitute for collateral, and if designed correctly, increase overall welfare. Some studies have investigated the welfare effects of CGS policies and documented the superiority of CGSs compared to other instruments to alleviate welfare losses associated with credit market failures.

Arping et al. (2010) examine the conditions under which CGSs are socially preferred over government co-funding, using a moral hazard model in the spirit of Holmstrom and Tirole (1997). They conclude that provided entrepreneurs are not substituting public for private collateral, a welfare-maximising strategy prefers CGSs over government co-funding of investment projects. Government involvement in the establishment and funding of CGSs can also be motivated by resolving

⁶⁰ This would only be the case to the extent that CGSs have a comparative advantage in screening activities vis-à-vis traditional credit institutions. The way in which CGSs function in reality indicates this is likely not the case: in practice the credit appraisal of the borrower is still executed by the lender and CGSs often guarantee full portfolios of loans and therefore do not maintain a personal relationship with the borrower. However, certain guarantee schemes can form a real expertise for specific types of projects, when they are requested by banks to participate in a large number of such projects in order to analyse and identify the projects that can be financed (such as SIAGI in France for the transfer of operations of small firms).

coordination failure between private-sector entities, which prevents them from pooling their resources. Anginer et al. (2014) argue that when lenders are risk averse, efficient provision of guarantees may not occur on a private-sector basis due to collective action problems, i.e. although the stakeholders are all aware of the problem, the lack of action comes from the misalignment of the private interests with those of the society. They also stress that the incentives for collective action are even weaker in economies with less developed financial systems. The state, on the contrary, is able to resolve the collective action frictions that get in the way of risk spreading. However, to achieve this objective, the state has to maintain the incentives for lenders to monitor projects efficiently, and to deter the borrower from excessive risk-taking. This can be done by pricing guarantees in a way that ensures the expected losses are covered by the fees charged, and promotes the risk being shared with the private sector.

In addition, CGSs hold other advantages. First, the final lending decision stays with a market-based, private-sector entity – the bank –, which has the expertise and the necessary technology to evaluate credit applications and projects. This is likely to ensure a more efficient selection among borrowers than if the task is done by a public agency, since – given that the guarantee is partial – it leaves part of the risk with the privately operating lender. Second, compared to direct lending programs, CGSs have much lower initial cash flow needs, and as such, have a leverage component. As a consequence, they can also be used when fiscal constraints are tight.⁶¹ Third, supranational CGSs can contribute to an efficient geographic distribution of credit. Results from a recent EIB and EIF survey on European CGSs (see Chatzouz et al., 2017; a summary is provided in Kraemer-Eis, Lang, Torfs and Gvetadze, 2016b) highlight that all but one existing CGSs choose to operate within the national borders of the country they are headquartered in. This can be explained by the existence of cross-border information frictions related to national legal frameworks that govern the functioning of CGSs, and obvious practical difficulties to assess risks in different cultural, linguistic and business contexts. Supranational CGSs can therefore contribute to an efficient cross-border allocation of credit.

Schich et al. (2017) give an overview of evaluations of CGSs for SMEs. This study, which is based on a literature review and an OECD/EC survey, concludes that not all CGSs are properly evaluated. In case such assessments are performed at all, they are often focused on financial and not on economic additionality. A toolkit for impact evaluation of public CGSs for SMEs was developed by the World Bank Group and First Initiative (2018).⁶²

The EIF plays an important role in alleviating problems experienced by SMEs in accessing finance. Through a wide range of financial intermediaries, such as banks, leasing companies, guarantee funds, mutual guarantee institutions, promotional banks and other financial intermediaries, the EIF effectively provides both financing to SMEs and guarantees for SME financing. Apart from EIF guarantees for securitised SME financing instruments (see Chapter 5), the EIF offers

⁶¹ However, the small initial cash outlay of credit guarantee schemes also has disadvantages. Honohan (2010) notes that, as a large number of borrowers can be reached with only relatively small initial costs in the short-run, political incentives exist for the public sector to supply guarantees generously, while concealing the true long-term fiscal costs of a program behind the uncertainty around the expected long-term losses on the guarantee portfolio. This can result in unexpected fiscal costs further down the road.

⁶² EIF provided input to the project. A short summary of this methodological approach is provided in Kraemer-Eis, Botsari, Gvetadze, Lang and Torfs (2017).

guarantees/counter-guarantees for portfolios of microcredits, SME loans or leases.⁶³ In doing so, the EIF manages and implements several mandates on behalf of the European Commission, but also of national and regional Managing Authorities.

A number of recent studies have investigated the impact of some of the EU guarantee programmes on the beneficiary firms. Based on an analysis of the MAP (Multi-Annual Programme for enterprises and entrepreneurship) EU SME Guarantee Facility and focusing on Central, Eastern and South Eastern Europe (CESEE) countries, Asdrubali and Signore (2015) find significant positive effects of this EU guarantee program on the beneficiary firms. By breaking down the sample by country, signature year, size and age classes, the authors find that micro and young SMEs have benefited the most from MAP-guaranteed loans in terms of economic additionality. More recently, Bertoni et al. (2019) contribute to this body of research by focusing on the population of SMEs located in Italy, Benelux and the Nordics and benefiting from the guaranteed loans provided under the CIP (Competitiveness and Innovation framework Programme) and MAP programmes. They find that, after receiving a guaranteed loan, beneficiaries grew more rapidly than comparable non-beneficiaries in terms of assets, sales and employment (similar results are also reported by Bertoni et al. (2018) in their analysis of French SMEs). Brault and Signore (2019) review past research from the EIF Working Paper Series and produce the first pan-European assessment of EU credit guarantees to SMEs. This meta-analysis covers over 360,000 loans guaranteed by the SMEG facility under MAP and CIP from 2002 to 2016. The results show that guaranteed loans provided by the EIF under the CIP and MAP programmes effectively boosted firm growth and increased survival chances of beneficiaries.

5.1.2 Market size and activity during the first semester of 2019

Market information concerning CGSs in Europe is gathered by AECM, the European Association of Guarantee Institutions.⁶⁴ In the following, based on data from the latest AECM Scoreboard,⁶⁵ we provide information about the use of guarantees in countries with at least one AECM member to show the state and development of this important market segment.

According to the OECD (2013), guarantees are particularly relevant “in those countries where a network of local or sectoral guarantee institutions is well established”. Key figures based on *outstanding guarantees* on SME loan portfolios (as at 30 June 2019) are presented in Table 3.

In terms of total *volumes* of guarantee activities,⁶⁶ the core countries are Turkey (EUR 35.4bn), Italy (EUR 25.1bn), France (EUR 21.6bn), Germany (EUR 5.6bn) and Spain (EUR 4.2bn). Turkey and Italy

⁶³ See for more information the EIF website www.eif.org.

⁶⁴ We thank our colleagues from AECM for their support. AECM currently has 48 members in 23 EU Member States plus Azerbaijan, Bosnia and Herzegovina, Kosovo, Russia, Serbia and Turkey. In the AECM member countries, the AECM members cover all or almost all SME guarantee activity. Some AECM members are national associations or networks and thus have their own member organisations. AECM has purely private, mutual, public, and public-private mixed members; 36 out of its 48 members are NPBIs. *Source*: AECM.

⁶⁵ See “AECM Scoreboard H1 2019: Figures of the European Guarantee Sector providing a half-yearly trend indication on the evolution of the guarantee activity in Europe”.

⁶⁶ In the first semester of 2019, AECM introduced for the first time a clearer definition of the outstanding guarantee volume and asked its members to indicate whether the latter includes guarantees until the moment of the calling of the guarantee or until the moment of the disbursement of the guarantee. However, given that a common understanding on this matter could not be reached, the data presented in subsequent tables do not take into account this differentiation in the definition of outstanding guarantee volume.

also have the highest total number of outstanding guarantees (1,212,828 and 926,916 respectively), followed by France (686,146).

The total number of supported SMEs in the portfolios of the AECM members amounts to 2.8m, one third of which are located in Italy.

The highest average size of outstanding guarantee in portfolio was documented in Austria (EUR 193.2k), followed by Croatia (EUR 180.3k), Latvia (EUR 165.0k) and Germany (EUR 130.0k). Italy and France, despite exhibiting two of the highest volumes of outstanding guarantees in portfolio, have relatively small average sizes of guarantees (EUR 27.1k and EUR 31.5k, respectively), reflecting the presence of large populations of SMEs borrowing small loans in their portfolios.

In the first semester of 2019, the guarantee activity of AECM members has, on average, decreased both compared to the previous semester (-2.0% relative to HY2/2018) as well as compared to the same semester a year ago (-6.5% relative to HY1/2018). It needs to be noted however that this trend is largely due to a significant decrease in the guarantee activity of one Turkish AECM member which holds the highest share (approximately 30%) of total AECM outstanding guarantees.⁶⁷ In fact, excluding the statistics of this AECM member, outstanding guarantee volumes in HY1/2019 exhibit an increase of 1.6% (instead of the decrease of -2.0%) compared to the previous semester (HY2/2018) and a similar increase of 2.0% (instead of the decrease of -6.5%) compared to the previous year (HY1/2018).

Relative to the previous semester (HY2/2018), the outstanding guarantee value decreased the most in Ireland (-9.7%), Romania (-8.3%), Turkey (-7.1%) and Greece (also -7.1%). By contrast, the highest growth rates were recorded in Croatia (+19.1%), Latvia (+14.6%), Czechia (+10.2%), Poland and Serbia (+8.7% each). According to AECM, most members mentioned market demand as the main driver of the positive or negative growth they registered, followed by business conditions and, to a much lesser extent, by government policies or internal, organisation or programmatic changes.

As shown in Figure 39, Turkey leads the ranking in terms of the relative importance of guarantees compared to the value of economic activity (5.42% of GDP). The top three is completed by Hungary (2.27%) and Portugal (1.80%).

As can be seen in Table 4, the total new guarantee activity in the first semester of 2019 constitutes 20.3% of the total volume of outstanding guarantees for the same period. Newly-granted guarantees in the first semester of 2019 amount to EUR 22.7bn, with one Turkish AECM member accounting for more than one third of this total. Hence, while the new guarantee volume of this member is much lower than before, it still represents an important share of the total new guarantee activity.

⁶⁷ The Turkish AECM member in question experienced an unprecedented increase in its guarantee activity during 2017 due to the implementation of a Portfolio Guarantee System (PGS) in Treasury backed bank loan guarantees. However, since 2018, its reported volumes have been decreasing, mainly due to the depreciation of the Turkish lira towards the Euro.

Table 3: Outstanding guarantees and number of supported SMEs in portfolio, AECM members by country

Country	Outstanding guarantees HY1/2019				% change in Volume	
	Volume [k EUR]	Number	Implied average guarantee size [k EUR]	Number of total SMEs supported	HY1/2019 vs. HY2/2018	HY1/2019 vs. HY1/2018
Austria	1,185,353	6,136	193.2	4,599	7.9%	19.9%
Belgium	1,017,393	(1)	n/a	9,365	0.3%	2.8%
Bosnia-Herzegovina	4,878	63	77.4	38	-6.6%	-14.9%
Bulgaria	251,412	5,230	48.1	5,078	0.0%	8.1%
Croatia	266,839	1,480	180.3	1,400	19.1%	30.8%
Czechia	850,834	12,529	67.9	9,244	10.2%	12.6%
Estonia	105,446	1,175	89.7	795	-3.8%	-9.9%
Finland	1,276,698	13,039	97.9	9,775	3.1%	2.3%
France	21,619,374	686,146	31.5	605,612	-3.1%	-8.4%
Germany	5,567,000	42,829	130.0	35,232	0.7%	-0.1%
Greece	957,548	94,909	10.1	(1)	-7.1%	725.5%
Hungary	3,033,508	60,919	49.8	50,013	4.5%	15.8%
Ireland	78,500	1,490	52.7	1,472	-9.7%	n/a
Italy	25,106,742	926,916	27.1	921,492	1.3%	4.6%
Latvia	178,082	1,079	165.0	807	14.6%	24.6%
Lithuania	236,883	2,690	88.1	2,051	1.2%	0.3%
Luxembourg	217,022	2,296	94.5	552	-3.7%	1.2%
Netherlands	1,890,357	16,414	115.2	16,074	1.7%	1.6%
Poland	3,249,792	85,991	37.8	85,991	8.7%	2.4%
Portugal	3,670,015	98,354	37.3	56,065	4.0%	6.2%
Romania	425,008	3,944	107.8	2,729	-8.3%	-29.8%
Serbia	5,815	419	13.9	398	8.7%	5.6%
Slovenia	289,938	2,681	108.1	2,650	-3.2%	1.4%
Spain	4,230,460	75,116	56.3	132,717	1.9%	2.9%
Turkey	35,365,678	1,212,828	29.2	809,051	-7.1%	-19.8%
UK	646,727	9,116	70.9	8,138	-4.1%	-7.9%
Total	111,727,302	3,363,789	33.2	2,771,338	-2.0%	-6.5%

* The statistics do not include the business figures of one Romanian and one Hungarian AECM member that only have a Counter Guarantee activity.

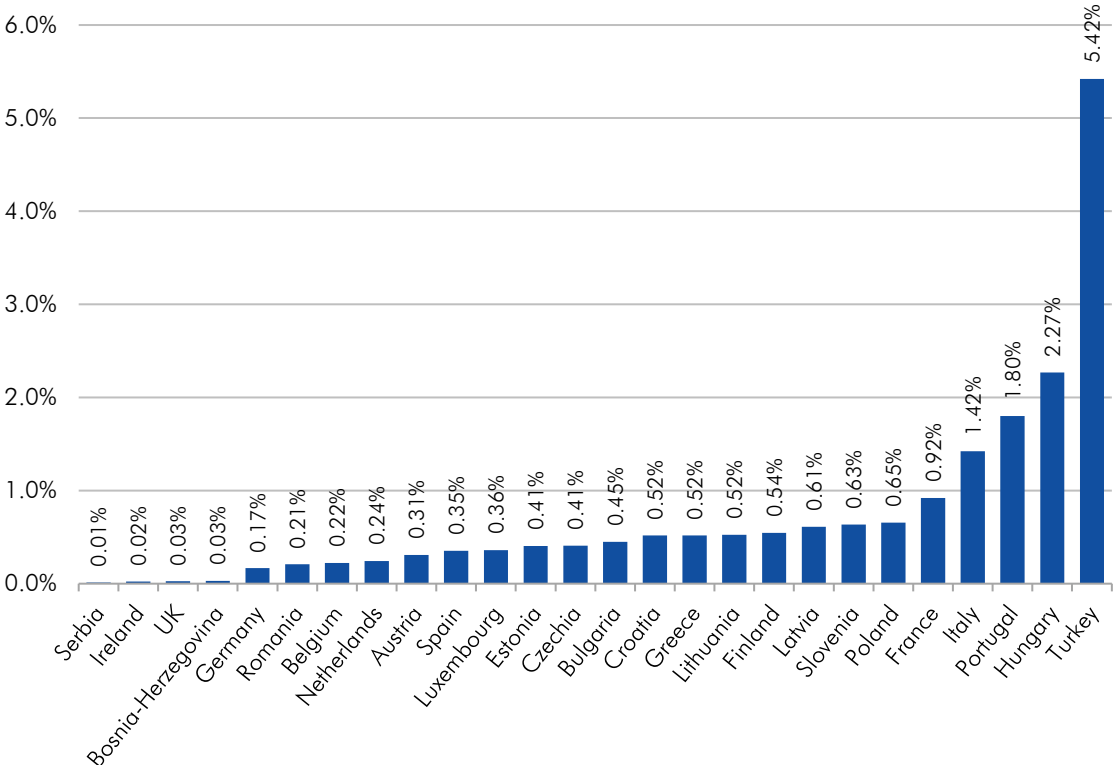
* In the case of Spain, the total number of supported SMEs is reported to be higher than the number of guarantees. This is due to different reporting approaches (e.g., the number of SMEs refers to a member count, instead of the actual beneficiaries of guarantees in that particular year).

* The fact that some AECM member organisations may include former 'inactive' SME beneficiaries in their portfolio even though the guarantee scheme already reached its maturity could distort the total number of supported SMEs. Therefore, for the purpose of computing the implied average guarantee size, the 'Total Number of Guarantees Outstanding' rather than the 'Total Number of SMEs Supported' is taken into consideration.

(1) The number of outstanding guarantees (supported SMEs) is only stated for countries in which all AECM members that reported the volumes of outstanding guarantees also reported the numbers of outstanding guarantees (supported SMEs).

Source: Authors, based on data from AECM

Figure 39: Volumes of outstanding guarantees in portfolio scaled by GDP*



*At 31 December 2018 or latest available data.
 Sources: Authors, based on data from AECM and Eurostat

At first glance, new guarantee activity by AECM members shows a considerable increase of 38.2% in the first semester of 2019 compared to the previous semester (HY2/2018). However, this is largely driven by the aforementioned Turkish AECM member which more than doubled its new guarantee volume. As a result, when the statistics of this member are excluded from the aggregate figures, new guarantee volumes in the first semester of 2019 actually show a more moderate, but still significant, increase of 15.9% compared to the previous semester.

At the same time, significant variation in the growth rates of new guarantee activity is documented across countries. For example, apart from Turkey (which experienced an increase in new guarantee activity by 110.9% vis-à-vis HY2/2018), new granted guarantees also increased strongly in Ireland (+121.6%), Czechia (+55.4%) and Finland (+31.7%). On the contrary, new guarantees in the first semester of 2019 decreased significantly in Bosnia-Herzegovina (-100%), Lithuania (-23.3%), Romania (-20.2%) and Greece (-19.6%).

Table 4: Newly granted guarantees, AECM members by country

Country	New guarantee volumes [k EUR]			Percentage of outstanding
	HY1/2019	HY1/2019 vs. HY2/2018	HY1/2019 vs. HY1/2018	
Austria	198,821	23.5%	8.4%	16.8%
Belgium	218,199	3.0%	(2)	21.4%
Bosnia-Herzegovina	0	-100.0%	-100.0%	0.0%
Bulgaria	67,681	-0.2%	8.5%	26.9%
Croatia	53,063	30.9%	149.9%	19.9%
Czechia	291,767	55.4%	22.2%	34.3%
Estonia	34,193	-2.6%	-12.2%	32.4%
Finland	411,417	31.7%	4.2%	32.2%
France	2,922,219	7.8%	-17.7%	13.5%
Germany	516,286	-9.2%	-1.9%	9.3%
Greece	225,793	-19.6%	(2)	23.6%
Hungary	1,228,078	0.4%	-1.3%	40.5%
Ireland	22,680	121.6%	447.2%	28.9%
Italy	2,696,200	2.9%	-7.2%	10.7%
Latvia	36,553	21.7%	57.5%	20.5%
Lithuania	45,481	-23.3%	3.8%	19.2%
Luxembourg	27,329	-13.9%	-25.5%	12.6%
Netherlands	276,521	0.0%	-10.5%	14.6%
Poland	1,685,021	28.1%	22.0%	51.9%
Portugal	715,054	10.2%	30.2%	19.5%
Romania	57,542	-20.2%	-68.4%	13.5%
Serbia	1,523	4.5%	155.2%	26.2%
Slovenia	43,179	10.8%	18.3%	14.9%
Spain	697,489	12.8%	5.1%	16.5%
Turkey	10,159,042	110.9%	-17.4%	28.7%
UK	104,596	-7.0%	-5.5%	16.2%
Total	22,735,728	38.2%	-8.3%	20.3%

* The statistics do not include the business figures of one Romanian and one Hungarian AECM member that only have a Counter Guarantee activity.

(1) The share of new volumes out of total outstanding volumes is only stated for countries in which all AECM members that reported outstanding volumes also reported new volumes.

(2) The percentage change in newly granted volumes vis-à-vis a previous semester is only stated for countries in which all AECM members consistently reported the relevant statistics for both periods.

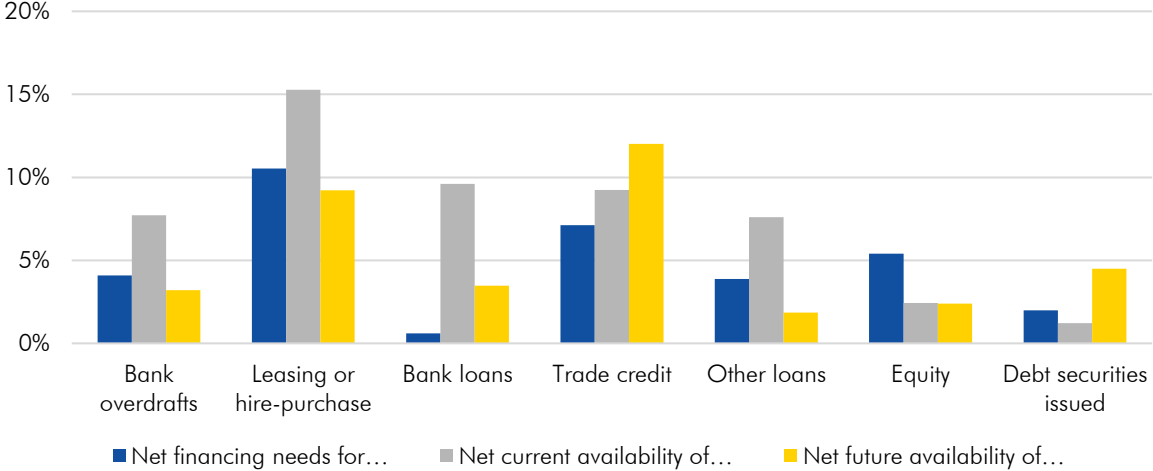
Source: Authors, based on data from AECM

5.2 Leasing: an integral part of the financing tool set for SMEs

An important element of SME finance is not directly provided by banks through traditional loans but rather by leasing or factoring companies. Indeed, leasing is an additional instrument to facilitate access to short- and medium-term financing for SMEs, thereby also mitigating market weaknesses in SME lending.

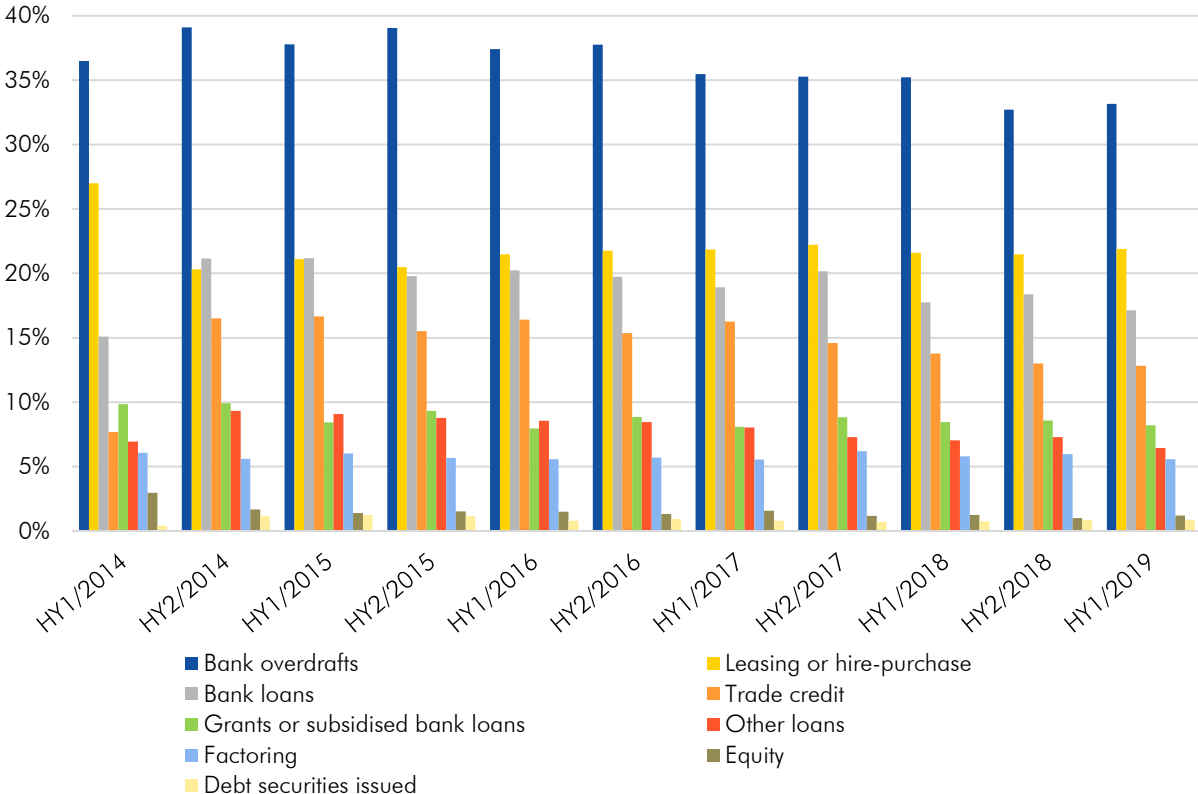
Based on the ECB SAFE surveys for the Euro area over the last six years, while bank-related products (bank overdrafts and bank loans) have traditionally remained the most widely used sources of external SME financing, leasing or hire-purchase ranks second, with approximately 1 in 5 Euro area SMEs stating that they have indeed used leasing or hire-purchase over the six months preceding the survey (see Figure 40).

According to the latest ECB SAFE survey wave (April 2019 – September 2019), Euro area SMEs state that the current availability of leasing or hire-purchase has improved (net balance) the most over the past six months compared to other external financing sources (see Figure 41: Financing needs and availability of financing sources for Euro area SMEs (HY1/2019))



). Survey respondents expect that the availability of leasing will further improve over the next six months. Despite this positive evolution, the same ECB SAFE survey wave revealed that leasing is the financing source with the highest proportion (net balance) of SMEs signalling an increased need for it.

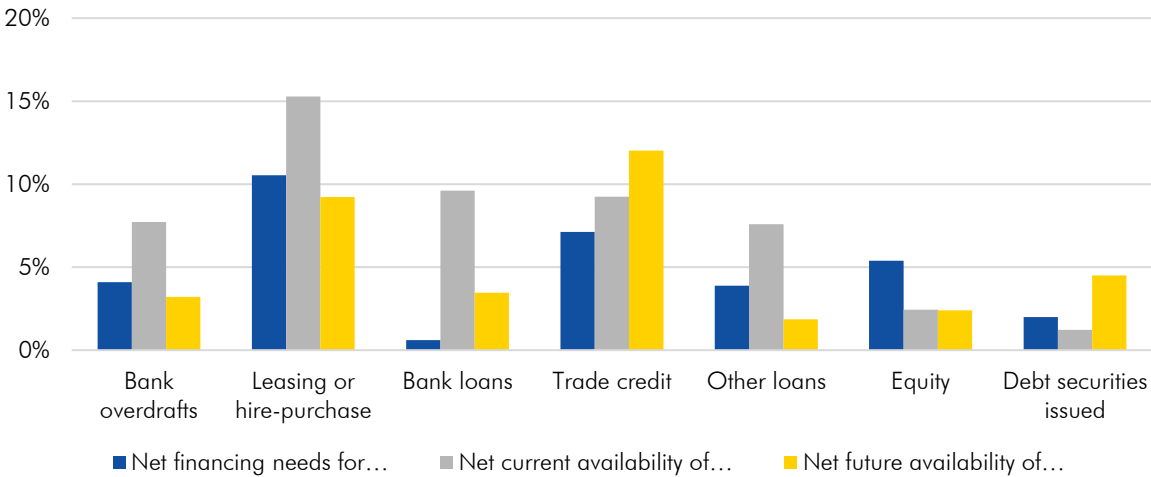
Figure 40: Use of external sources of financing by Euro area SMEs



* percentage of respondents (weighted results) stating that they have used the respective financing source over the past six months.

Source: Authors, based on ECB SAFE (ECB, 2019a)

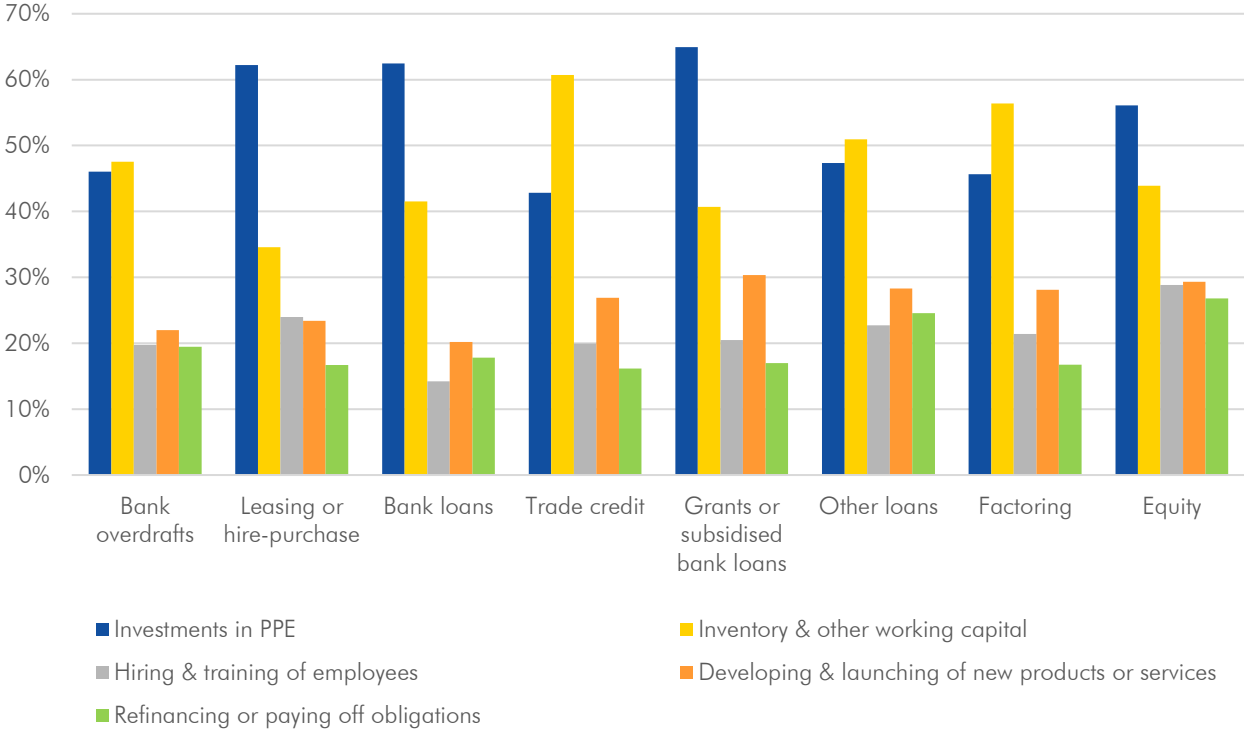
Figure 41: Financing needs and availability of financing sources for Euro area SMEs (HY1/2019)



* "Net financing needs" reflects the percentage of respondents stating that their needs for the respective financing source have increased over the past six months minus the percentage of those stating a decrease; "Net current (future) availability" reflects the percentage of respondents stating (expecting) an improvement in the availability of the respective financing source over the past (next) six months minus the percentage of those stating (expecting) a deterioration; all percentages reflect weighted results and have been calculated on the basis of the number of respondents who consider the respective financing source to be relevant for their enterprise.

Source: Authors, based on ECB SAFE (ECB, 2019a)

Figure 42: Purpose of financing by source of financing used, Euro area SMEs (HY1/2019)



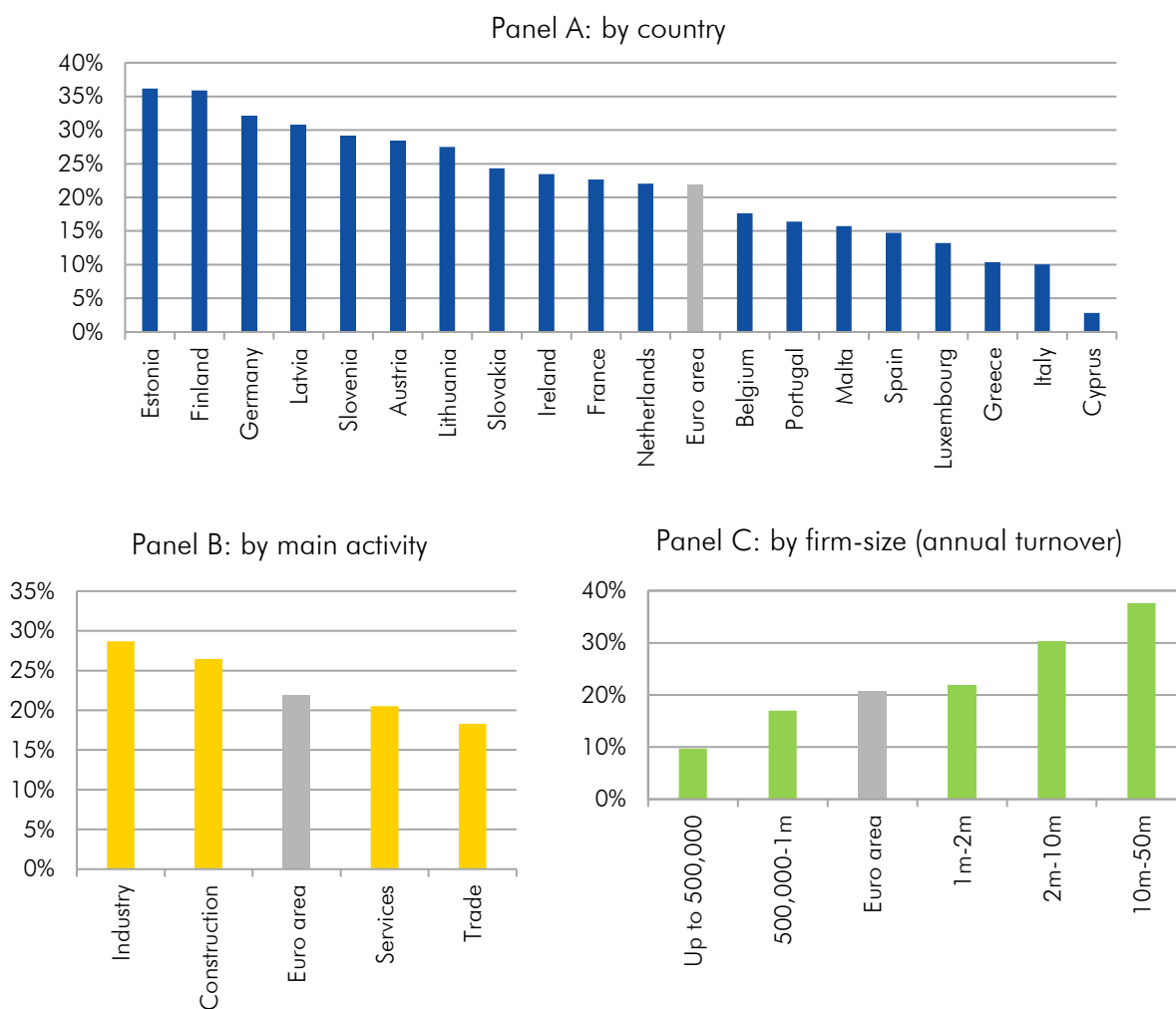
* percentage of respondents (weighted results) stating that they have used the respective financing source for the various investment purposes over the past six months.

Source: Authors, based on ECB SAFE (ECB, 2019a)

Looking at the purpose for which financing is used by Euro area SMEs (see Figure 42), leasing is mainly used for investments in property, plant or equipment. Moreover, the percentage of SMEs who use leasing for fixed-asset investments is the second highest (together with bank loans) among SMEs who use other sources of financing for the same type of investment. Leasing is also the second (following equity) most commonly used financing source for the hiring and training of employees.

There is a wide heterogeneity in the use of leasing, across countries, industries and firm-sizes. A country-by-country analysis (see Figure 43, Panel A) reveals that Estonia, Finland and Germany are the countries with the highest proportion of SMEs using leasing or hire-purchase, while SMEs in the south of Europe use leasing less frequently. Compared across industries (see Figure 43, Panel B), leasing as a financing source is more prevalent among industrial and construction firms, contrary to Euro area SMEs that state “trade” as their main activity. Finally, the use of leasing or hire-purchase grows with firm-size (measured by annual turnover), see Figure 43, Panel C.

Figure 43: Use of leasing or hire-purchase by Euro area SMEs – across countries, industries and firm-sizes (HY1/2019)



* percentage of respondents (weighted results) stating that they have used leasing or hire-purchase over the past six months; "Industry" includes manufacturing, mining & electricity, gas and water supply.
 Source: Authors, based on ECB SAFE (ECB, 2019a)

5.3 SME Securitisation⁶⁸

European SMEs rely heavily on bank lending. Figure 44 provides an indication of the different levels of bank reliance for various countries.⁶⁹ The ratio is moving towards more capital market action. Cour-Thimann and Winkler (2013) state that external financing of the non-financial corporate sector (financing other than retained earnings) in the Euro area is dominated by bank financing; however, as the authors point out, this split refers to the stock; in terms of flows the figures fluctuate significantly,

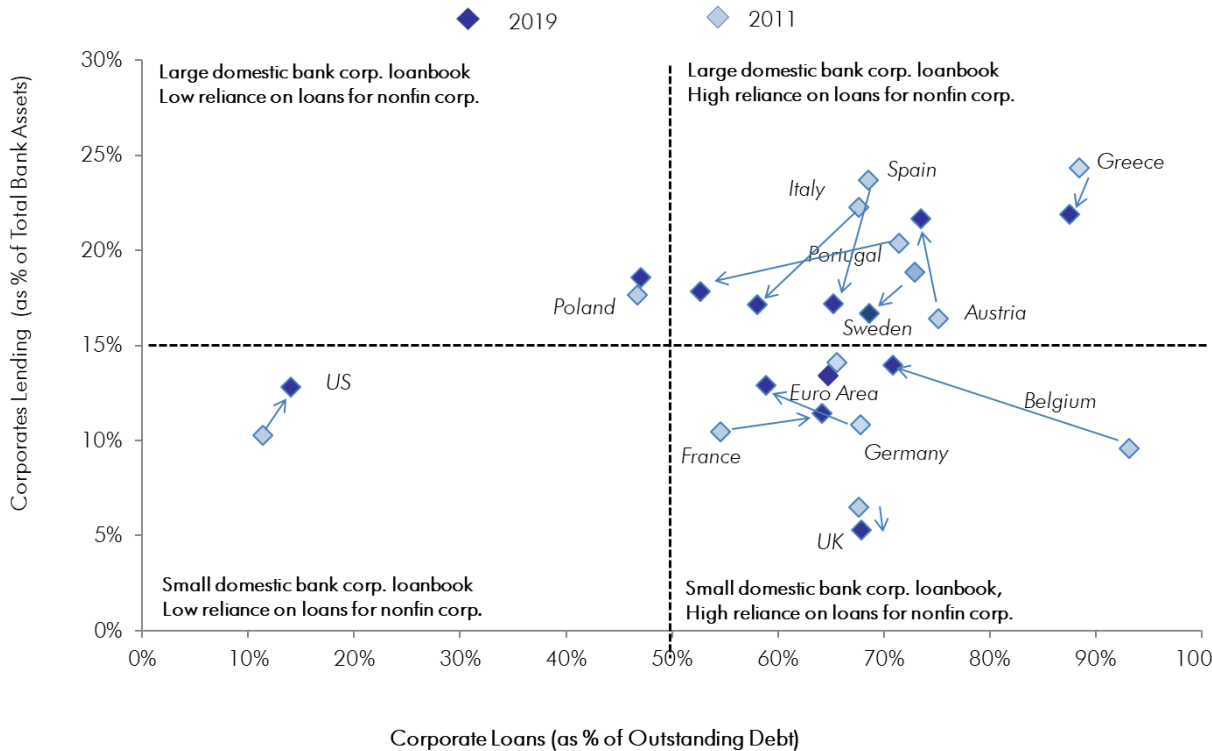
⁶⁸ The term SME Securitisation (SMESec) comprises transactions backed by SME loans, leases, etc. It is important not only to look at banks/lending when analysing SMESec, but equally at leasing companies, which form part of the securitisation market. In particular, securitisation can help smaller originators to make use of the capital market (Moody's, 2017). For more information on the importance of leasing for SME finance, see Kraemer-Eis and Lang (2012 and 2014).

⁶⁹ The figure is related to non-financial corporations, not only SMEs.

in particular as the corporate sector can to some extent substitute bank lending with other sources of finance.

For SMEs, this possibility exists only to a very limited extent. The EC’s Capital Markets Union initiative and its foreseen retooling are trying to diversify the financing options for SMEs. Capital market funding in the Euro area is increasing since the crisis (see Figure 45, debt securities issued by corporations and also quoted shares issued increased). However, this is primarily possible for large corporations and less so for SMEs.

Figure 44: Reliance on bank financing by non-financial corporations (in percent)

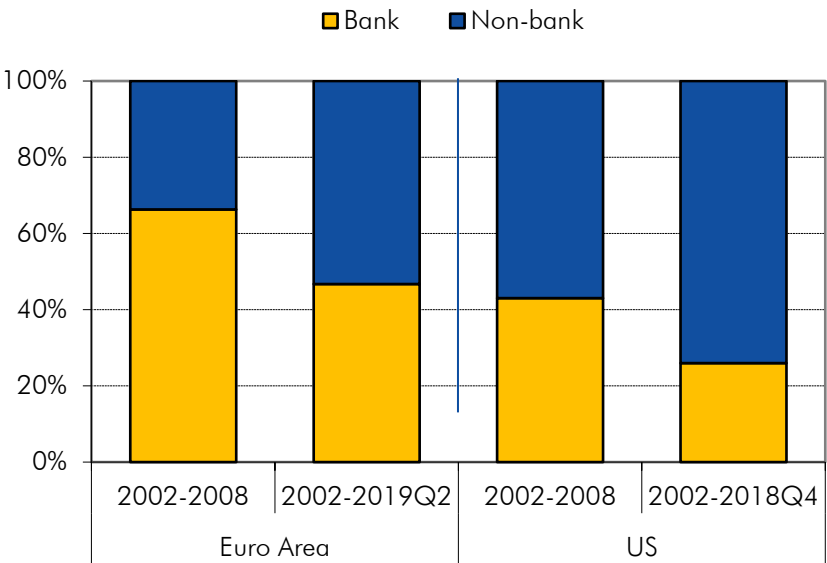


Source: Authors, based on IMF (2012) and updated information (latest available information)

Given that SMEs have only limited direct access to the capital markets, a functioning securitisation market can transform illiquid loans to SMEs into an asset class with adequate market liquidity and can provide an indirect access to capital markets for SMEs.

Securitisation can strengthen the capacity of banks to supply new loans. It can mitigate credit supply frictions and has the potential of having positive real effects on investment, sales, and employment (Berg et al., 2015). A well-functioning securitisation market can be a promising tool to enhance funding options for SMEs (Lagarde, 2019). Kaya and Masetti (2018) analyse the impact of securitisation on access to finance to SMEs in the Euro area, based on firm-level survey data on SME financing conditions. They find that an increase in securitisation issuance reduces the probability of SMEs facing credit constraints and decreases the cost of bank financing for non-constrained firms.

Figure 45: Funding of non-financial corporations in the Euro area and the United States (shares in accumulated debt transactions)



Source: Authors, based on Cour-Thimann and Winkler (2013), with updated data (latest available data)

It is sometimes stated that securitisation might lead to higher risk taking by banks (or lower lending standards). This is neither confirmed by performance data, nor by research. Kara et al. (2015) analysed data from the euro-denominated syndicated loan market. They found out that, in the run up to the financial crisis, banks relying on securitisation did not lower their lending standards more than other institutions. Albertazzi et al. (2017) used credit register data for loans to Italian SMEs and tested for the presence of asymmetric information in the securitisation market by looking at the correlation between securitisation and default probability. They found that, despite the presence of asymmetric information, securitisation did not lead to lax credit standards, but rather that the quality of securitised loans is better than the one of non-securitised loans, i.e. a positive selection effect takes place.

As we are stating since many years: securitisation per se is not good or bad - it is a toolbox, an instrument, a technique. As such it is value-free but its aggressive, opaque, and overly complex use by some market participants has negative consequences for both, issuers and investors. Negative repercussions are however also created by an overly simplified discussion where everything related to structured finance is lumped together and sometimes dismissed or branded as "toxic". The instrument is neither "toxic" nor is the underlying asset (in the case of SMESec: SME loans/leases) "toxic waste".

On the contrary - loans to SMEs are a key driver for the functioning of the economy and, properly applied, the securitisation technique is a replicable tool that can enhance access to finance for SMEs. By using this instrument in developed capital markets, the public sector support for SMEs (e.g. guaranteeing mezzanine tranches) can create multiplier effects - and hence it is an efficient use of public resources, which is especially important against the background of scarce financial resources for public support and a high public debt burden in many key countries: "[...] strengthening SME

securitisation may be one of the most effective ways to facilitate the flow of funds to the real economy, while not creating too much distortion" (Kaya, 2014).

The ECB is also interested in securitisation, including SMESec, for three main reasons (Mersch, 2017): Firstly, the ABS (Asset Backed Securities) market acts as one of the transmission channels of the ECB monetary policy (facilitating the provision of credit to the real economy). Secondly, ABS form an important part of the collateral framework in the Eurosystem, and thirdly, this technique can transfer risk away from the banking sector, which may support monetary policy.

The reputation of the SME securitisation market segment is continuously improving and a de-stigmatisation is happening. However, as we will see later, SMESec placed with investors currently represents only a very small portion of the total issuance and there is for the time being only a very limited primary market.

5.3.1 SMESec market activity⁷⁰

The European securitisation market has grown steadily from the beginning of the previous decade until the outbreak of the crisis. However, it is much smaller than its US peer (see Figure 46). During the crisis, issuance remained initially at high levels in Europe, but these volumes were almost exclusively driven by the eligibility of ABS as collateral for ECB liquidity operations;⁷¹ then the overall market activity decreased to the 2003/2004 levels.

Securitisation is a technique that needs significant know-how and sophisticated actors on the supply and demand side. However, in line with the shrinking activity volumes, the number of active securitisation professionals (e.g. employees at investors, issuers, agents, etc.) is also declining.

Issuance

European securitisation issuance in 2019 started slowly and was so far significantly lower than 2018. The overall market activity in HY1/2019 (EUR 93bn) was 26% lower compared to HY1/2018 (EUR 127bn), also until the end of Q3 the same gap remained (Q1-Q3/18: EUR 181bn; Q1-Q3/19: 134bn; -26%; see also Figure 46). The delay in approval by EU public authorities of key elements of the new securitisation framework⁷² is seen as one driving factor behind this reduction (AFME, 2019b).

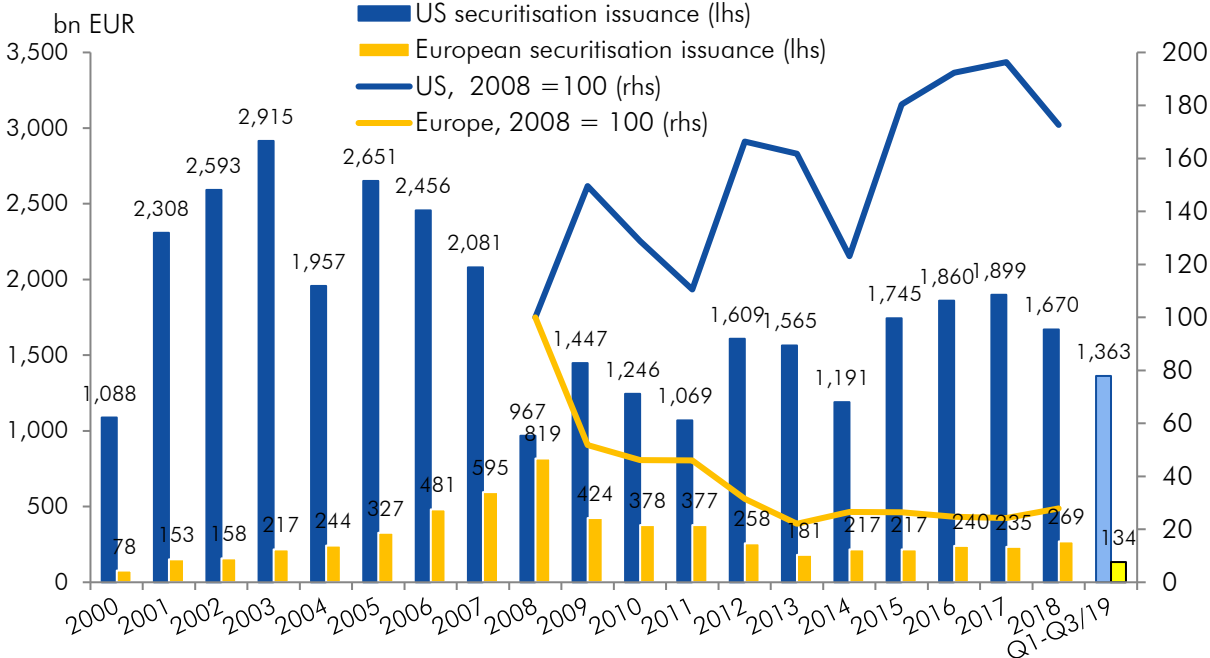
In HY1/2019, the most active markets in terms of *overall securitisation issuance* were the UK (market share 22% (EUR 20.6bn out of a total of EUR 93.1bn) and France (21.7%), followed by Italy (10%) and the Netherlands (8%).

⁷⁰ If not flagged otherwise, the data source is AFME, the Association for Financial Markets in Europe (i.e. AFME, 2019a and b).

⁷¹ The ECB's asset repurchase or "repo" facility allows (among other assets) Asset Backed Securities to be used as collateral for funding.

⁷² More information on the new securitisation framework can be found below.

Figure 46: Securitisation issuance Europe versus US (annual issuance 2000 – 2018, bn EUR)

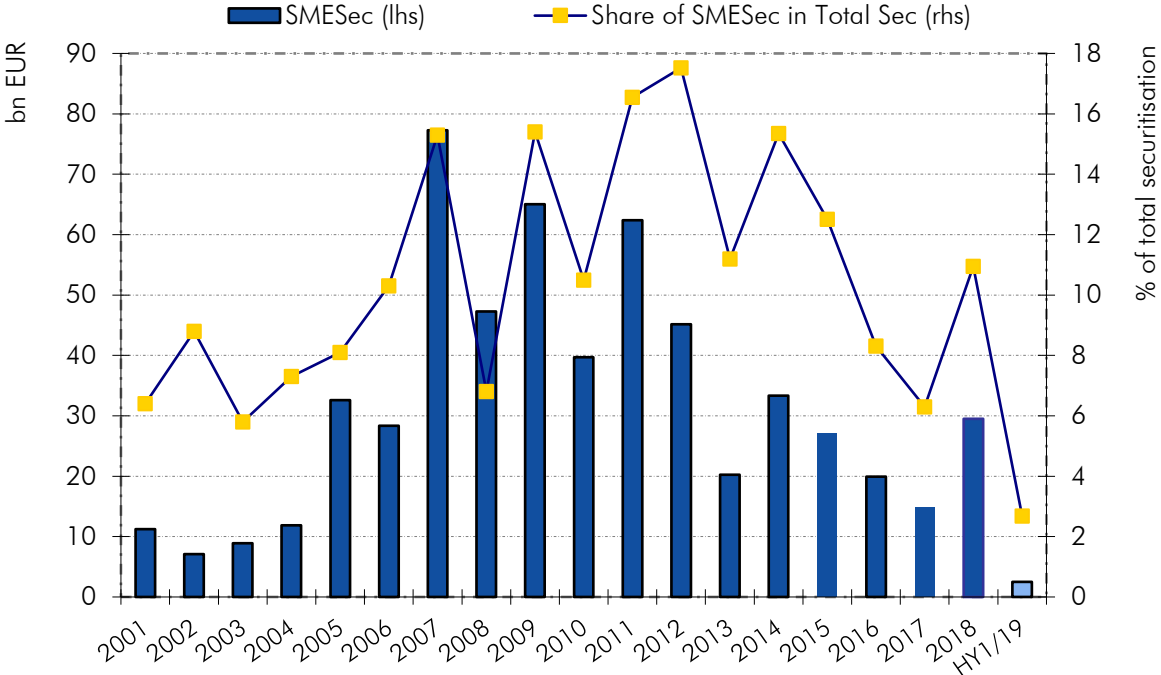


Source: Authors, based on data from AFME

SMESec issuance is still suffering from the after-effects of the crisis. The overall issued (and visible) volume of SME deals in HY1/2019 was only EUR 2.5bn (see also Figure 47). The market share of SMESec in overall securitisation issuance rose (with some volatility) from 6% in 2001 to 18% (of total yearly issuance) in 2012, the highest value ever registered in Europe. This, however, was due to the base effect, as the overall activity went down (while SMESec activity decreased slightly less). From 2014 to 2017 the share of SME issuance in the overall activity went down from 15% to 6.3%, based on shrinking SMESec volumes.⁷³ In 2018, SMESec volumes, as well as their share in the overall activity (11%), increased again. With the low origination volume in 2019 so far, its share went down to only 2.7%.

⁷³ Driven by the negative market sentiment, but also by shrinking SME stocks in the financial intermediaries’ loan books. Moreover, during the crisis, the large volumes of synthetic SMESec transactions, that were evidenced pre-2007 on SME portfolios dominated primarily by German SMEs on the back of KfW’s PROMISE program, virtually disappeared. Rating downgrades, based on revised rating agency criteria (i.e. counterparty and country ceiling criteria, without grandfathering), on downgrades of counterparties involved in the transactions, and on negative credit trends, contributed to the overall negative market sentiment.

Figure 47: SMESec issuance in Europe (volume and share of total securitisation, bn EUR and %)



Source: Authors, based on data from AFME and own calculations

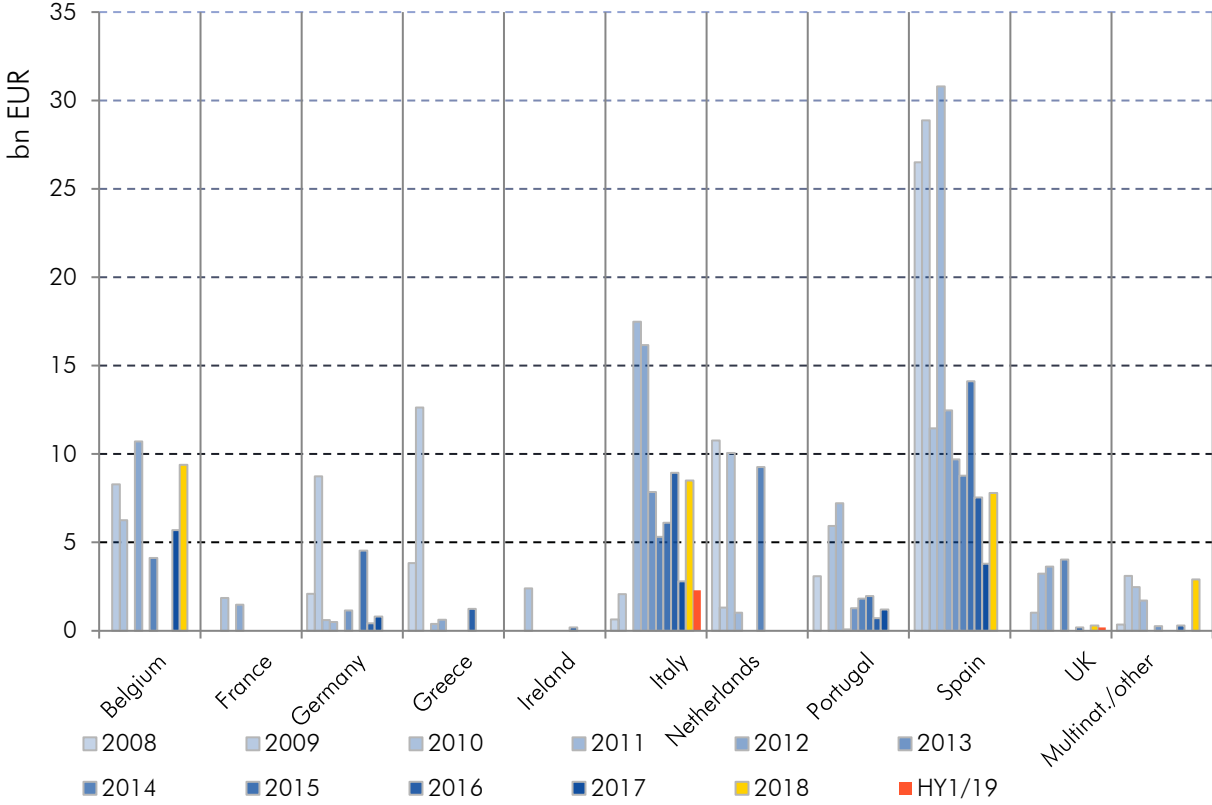
However, it is important to note that the AFME data used here, classifies only *lending*-based transactions in the SME basket. Most leasing-based transactions, classified in AFME’s data under ABS Leases in the overall ABS basket, are de-facto SME transactions. Moreover, in the securitisation market, there are often (synthetic) transactions on a private/bilateral or club basis that are not visible in the official statistics. Over the recent years there was a significant rise in number and volume of synthetic SME transactions, driven by risk transfer, asset liability management aspects, and regulatory capital considerations (see EBA (2019b) for an analysis of the synthetic market). These transactions do not appear in the statistics. Therefore, the numbers, shown here, are an underestimation of the real market size and can be seen as a lower bound.⁷⁴

Typical originators of SMESec are large banks or banking groups – some of them are active as originators in several countries, but also mid-sized banks. Moreover, in particular in the field of leasing, non-bank asset finance providers are active as originators. Current market activity is dominated by repeat originators (Moody’s, 2018).

In terms of countries, SMESec issuance in HY1/2019 occurred only in Italy (EUR 2.3bn) and the UK. See Figure 48 for an overview of the SMESec issuance by country over time.

⁷⁴ As example: based on discussions with market participants, BoA/ML estimated that the volume of such transactions (mainly based on large diversified SME portfolios and trade receivables) might well have been in the area of EUR 60bn accumulated over the years 2015 and 2016, with at least similar values in the year thereafter (BoA/ML, 2016/2017). Deutsche Bank estimates even higher volumes and assumes a total new issuance volume of synthetic balance sheet transactions of EUR 94bn alone for 2016 (Kaya, 2017).

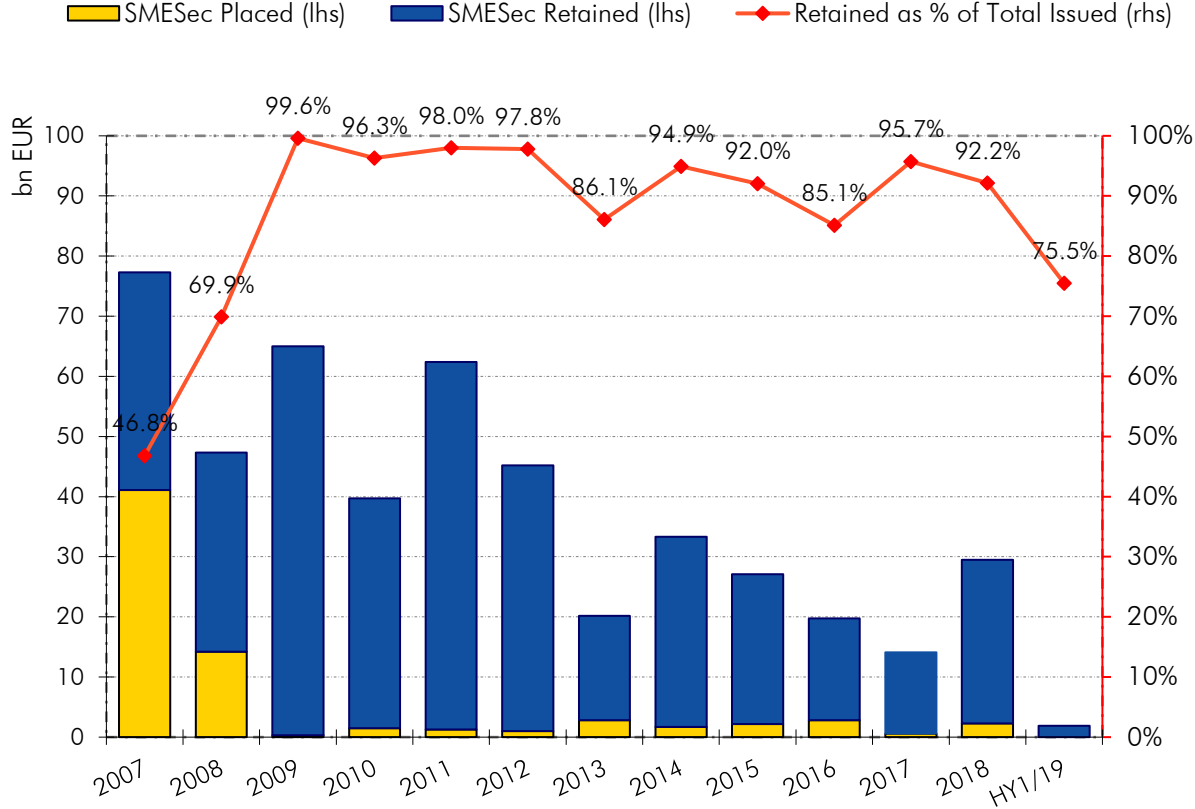
Figure 48: European SMESec issuance (by country, in bn EUR)



Source: Authors, based on data from AFME

As already mentioned, it is important to note that only a very small fraction of the issuance has been placed with investors – the investor base has not yet recovered (see Figure 49). The values for 2019 are based on very small volumes and can therefore not be interpreted as improvement. The nature of the SMESec market changed from a developing market (pre-crisis, with most transactions placed in the primary market) to a purely retained/ECB repo-driven market during the crisis (with almost no placement on the primary market). This shift led to liquidity drying up and originators accepting higher all-in costs as, in addition to the credit enhancement, the repos envisage considerable haircuts to the face value of the notes.

Figure 49: European SMESec by retention (bn EUR and %)



Source: Authors, based on data from AFME

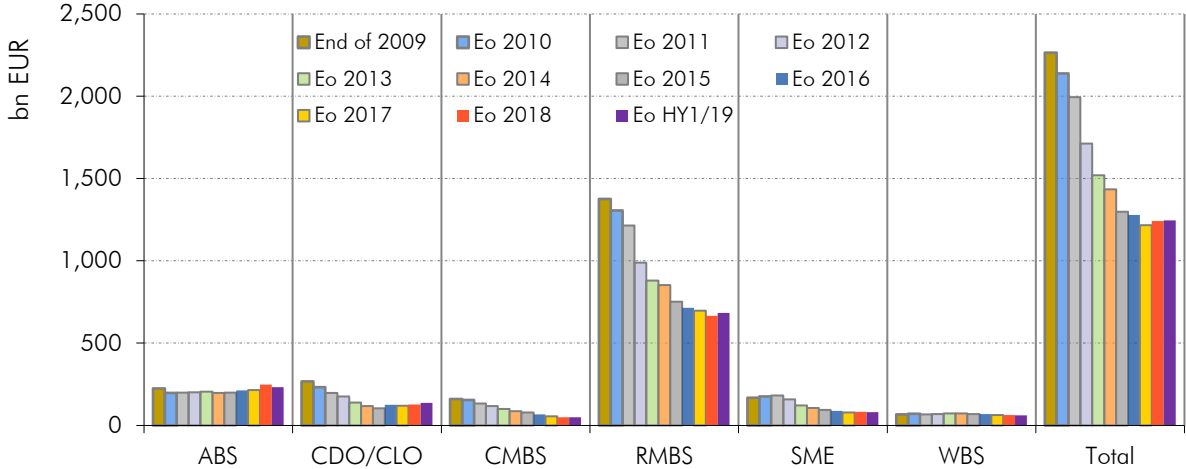
Outstanding

Due to low new activity levels, the volume of total outstanding securitisation transactions (see Figure 50) is on a downward trend (negative net supply). RMBS continues to be the most dominant securitisation type (by collateral). The overall decrease of volume in total outstanding securitisation transactions since the end of 2009 (until end of 2018) is 45%. However, from end of 2018 to end of HY1/2019 there was a stabilisation (EUR 1,242 vs. EUR 1,246).

During the same period, the volume of outstanding SMESec transactions decreased by 52%, from EUR 168bn to EUR 80.3bn (end of HY1/2019). The volume of outstanding SME transactions is stabilising since end of 2017, however on a low level.

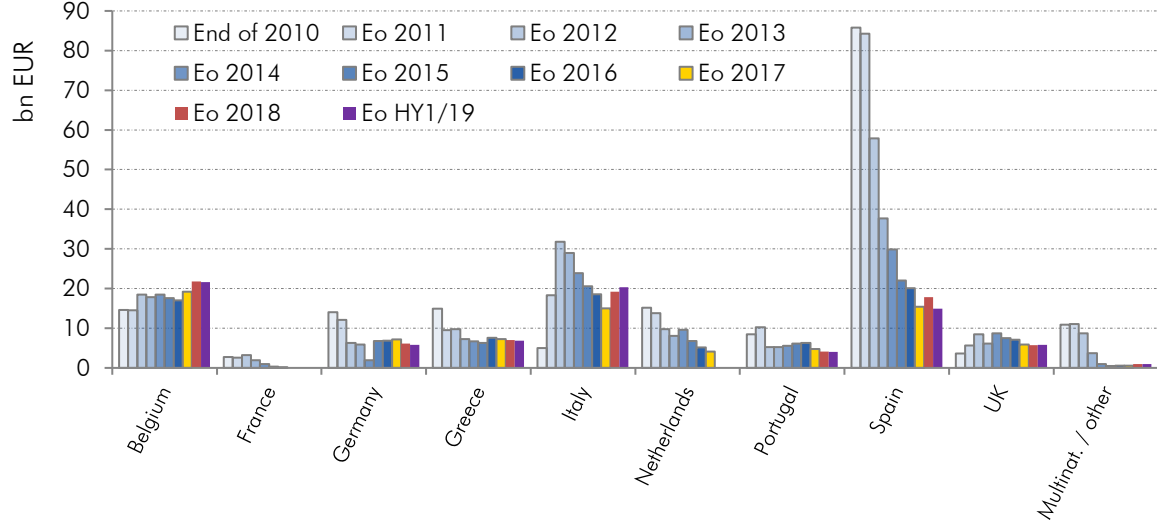
Breaking down SMESec volumes per end of HY1/2019 by country shows that the main three countries together represent 71% in terms of outstanding: Belgium (EUR 21.6bn/27%), Italy (EUR 20.3bn, 25%), and Spain (EUR 14.9bn, 19%), see Figure 51. These countries are followed by Greece (9%), Germany (7%), UK (7%), and Portugal (5%).

Figure 50: European outstanding securitisation transactions by collateral (bn EUR)



Source: Authors, based on data from AFME

Figure 51: European SMESec outstanding volume by country (bn EUR)



Source: Authors, based on data from AFME

SMESec performance trends

The performance of SMESec transactions depends on a number of parameters, including the structure of a transaction, SME credit risk (including recover rates), portfolio structure (e.g. rating distribution, obligor concentration, industry concentration, etc.) and also macroeconomic parameters. Despite the financial and sovereign crisis and the prolonged negative economic cycle, the European securitisation market in general has performed relatively well with comparatively low default rates (for true sale and public synthetic⁷⁵ balance sheet transactions).⁷⁶

⁷⁵ The current - post-crisis - synthetic market, which is mainly private, lacks data availability and transparency (Moody's, 2019b). For a detailed analysis of the synthetic market see EBA (2019).
⁷⁶ With some exceptions, i.e. the non-granular hybrid transactions (German Mezzanine CDOs). For more details see Kraemer-Eis, Passaris, and Tappi (2013).

Also after the crisis, the positive SMESec performance is continuing, as confirmed by latest market data (see e.g. Moody's, 2019b, e). Despite worsening economic framework conditions - inter alia driven by political event risk - the performance remains stable.

The low losses are not only due to the typically high granularity, diversification and seasoning of these transactions, but also to the structural features (such as large credit enhancement) that helped counterbalance the negative effects of the deteriorating European economy (i.e. increased SME default rates). This leads to the effect that the performance of most senior SMESec tranches in Europe have been on par with prime RMBS, although typically prime residential mortgage loans tend to perform better than SME loans in the same country (Moody's, 2018).

SMESec market activity in Europe started towards the end of the 1990s. At the time, this segment was relatively unknown to investors and rating agencies (based on the novelty of the applied tools, as well as on the heterogeneity of SMEs/SME loans), and the securitisation technique was also new to most of the originators with many banks not in a position to securitise SME loans (a typical hurdle is the IT infrastructure that has to be able to adequately support the securitisation transactions).

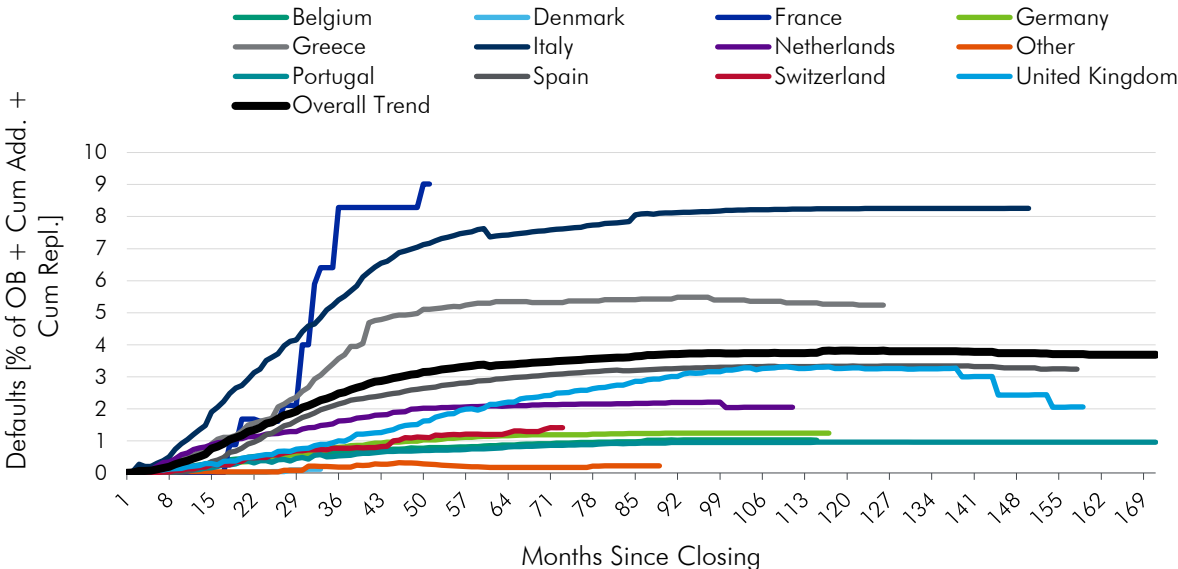
On the one hand, before the crisis started, SMESec volumes were small compared to the overall securitisation market – and the market had not had much time to develop. On the other hand, the limited track record was one of the reasons for the relatively conservative SMESec structures which can partially explain the good SMESec performance in Europe compared to other segments of the European securitisation market and to the US.⁷⁷ Figure 52 and Figure 53 show the cumulative credit events or defaults on original balance by country and by vintage of the SME transactions in the EMEA region rated by Moody's).

The rating transition data shows that the downgrade pressure for SME transactions persists across all tranche levels. The example below (Table 5, page 82) shows the rating migration of SME Collateralised Loan Obligation (CLO) transactions (rated by Fitch, migration since transaction closing). For example, of all the tranches, currently tracked by Fitch and initially rated AAA, 36% (by number⁷⁸) have paid in full (pif), 45% are still AAA, 9% moved down to AA etc.

⁷⁷ FitchRatings (2019a) expects the total losses on EMEA structured finance transactions, rated by Fitch and issued during the period 2000 to 2018 (volume EUR 3.5tr), to amount to only 0.5% (even down from the 0.6% estimate 2 years before). In post-crisis vintages there have been no realised losses so far. Losses in the SME segment are low as well and mainly caused by German SME loans, originated through an "originate-to-distribute" business model, or by Spanish SME loans (Fitch, 2019b). Also other rating agencies report strong structured finance performances for Europe, see e.g. S&P (2019a) where the SME transactions are included in structured credit segment or Moody's (2019a, b). As explained in more detail in our previous working papers, during the crisis, the SMESec market has been hit by a wave of downgrades due to weaker (crisis-driven) performance effects in the underlying portfolios, as well as rating methodology changes. Typically, AAA tranches show strong rating stability, but during the crisis AA and even AAA tranches migrated downward. This was mostly driven by downgrades of the respective country/sovereign ratings, and the limitation by the country ceilings, or by downgrades of (not replaced) counterparties (whose rating is in turn affected by the respective sovereign ratings).

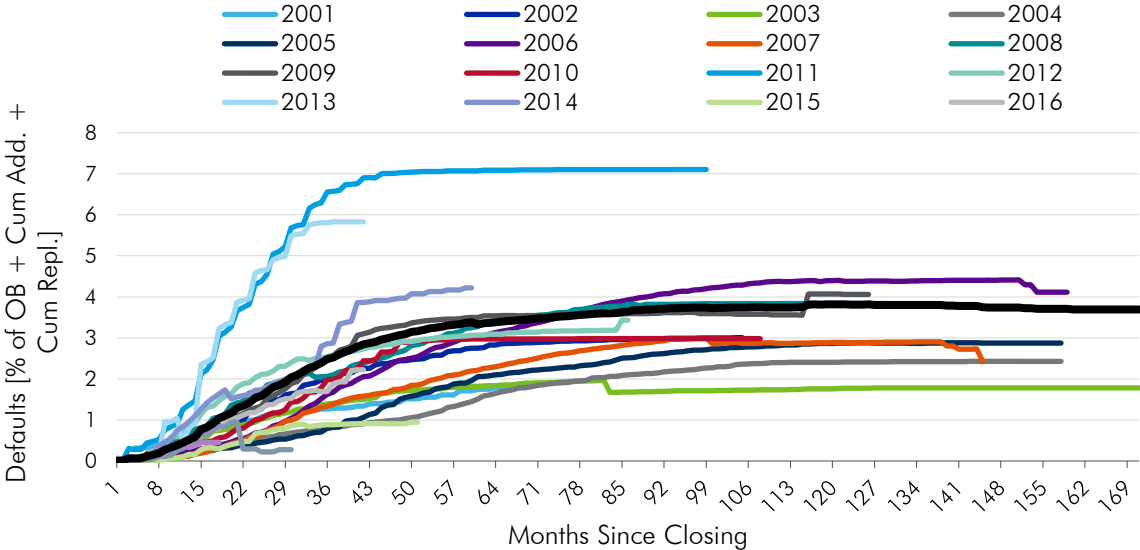
⁷⁸ Relative to the number of tranches in a given initial rating category.

Figure 52: SME loan and lease ABS - Cumulative credit events or defaults on original balance (seasoning by country)⁷⁹



Source: Moody's (2019c)

Figure 53: SME loan and lease ABS - Cumulative credit events or defaults on original balance (seasoning by vintage)⁸⁰



Source: Moody's (2019c)

⁷⁹ Terminated transactions are included in the index calculation; hence, here “cumulative” curves can also show a drop. Moody’s believes that this information must be included for an accurate representation of trends over time. Additionally, Moody’s notes show that vintage seasoning charts might move unexpectedly for the last few data points, because transactions start at different points in time within a vintage, and, hence, some transactions may be more seasoned than others. The index includes only the transactions rated by Moody’s. The chart differs from indices published by Moody’s prior to March 2016 due to the inclusion in the denominator of Additions and Replenishments.

⁸⁰ The chart differs from indices published by Moody’s prior to March 2016 due to the inclusion in the denominator of Additions and Replenishments.

Table 5: Fitch European SMEs rating transition matrix (May 2019)⁸¹

% of tranches		Current rating									
		PIF	AAAsf	AAsf	Asf	BBBsf	BBsf	Bsf	CCCsf	CCsf	Csf
Initial Ratings	AAAsf	36%	45%	9%	9%	0%	0%	0%	0%	0%	0%
	AAsf	31%	0%	62%	8%	0%	0%	0%	0%	0%	0%
	Asf	13%	13%	0%	75%	0%	0%	0%	0%	0%	0%
	BBBsf	0%	0%	11%	11%	67%	0%	11%	0%	0%	0%
	BBsf	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%
	Bsf	0%	0%	0%	17%	17%	0%	67%	0%	0%	0%
	CCCsf	0%	0%	0%	0%	0%	0%	0%	75%	25%	0%
	CCsf	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%
	Csf	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Source: FitchRatings (2019a)

5.3.2 SMESec prospects

Regulatory adjustments

In general, a well-functioning securitisation market can be essential in helping financial intermediaries broaden their funding base, achieve capital relief and ultimately, increase their SME financing. However, the SMESec market in Europe is still underdeveloped although SMESec have many advantages for banks, for investors, and – most importantly - for the SMEs (see for a detailed discussion Kraemer-Eis, Schaber, and Tappi (2010), Wehinger and Nassr (2015), Aiyar et al. (2015), or the joint statement of eight leading trade associations: AFME et al. (2016)).

A real recovery and development of the primary securitisation markets could play a role in ensuring sufficient credit supply for SMEs. Moreover, in addition to the direct effects of the SMESec markets, there are indirect benefits to SMEs from the development of other securitisation segments that free up space on bank balance sheets to allow for further SME lending (AFME et al., 2016). However, this will only be to the benefit of SMEs if the freed-up capital / fresh liquidity is going to be used to finance the real economy (i.e. for new SME lending).

As described, even many years after the start of the financial crisis, the European SMESec has still not recovered. Several indirect support measures are aiming at a market revival, amongst which are important regulatory adjustments (see Box 13 for a summary of important steps and consultations).⁸² The new securitisation regulation entered into force on 17.01.2018 and is applicable for securitisation transactions since 01.01.2019 in all Member States; some grandfathering provisions are valid. The envisaged signalling approach via simple, transparent, and standardised (STS)-

⁸¹ The addition of sf indicates a rating for structured finance transactions.

⁸² Another example: in November 2014, the ECB started its Asset Backed Purchase Programme (ABSPP). The overall objective was to enhance the transmission of the monetary policy, support the provision of credit to the Euro area economy and, as a result, to provide further monetary policy accommodation. The ECB's support of the ABS market in general, and the SMESec market in particular, was a positive step. However, the programme has not achieved significant volumes, moreover, as it was based on publicly placed transactions, there was almost no direct impact on the SME segment of the market. On 14.06.2018 the ECB announced to reduce the asset purchases from October 2018 onwards, and then to stop the ABSPP by the end of 2018.

labelled⁸³ securitisations (incl. SMESec) - which receive preferential regulatory treatment – is an important step and forms a building block of the Capital Markets Union (CMU).⁸⁴

These regulations do not only cover European issuers and investors. Any securitisation anywhere in the world must meet the general requirements of the regulation (e.g. related to due diligence, transparency, risk retention) for securitisation to be investible by EU institutional investors or by non-EU based investors, acting on behalf of EU institutional investors. For such a compliant securitisation to qualify as STS, it must satisfy a number of additional criteria and its originator, sponsor and Securitisation Special Purpose Entity (SSPE) must be established in the EU (see for more details BoA/Merrill Lynch, 2018). Hence, future activity volumes - for securitisation in general, but in particular for STS transactions - will be dependent on the market players' ability to meet the new requirements.

Interpreting the effects of the new regulations, it has to be borne in mind that the new risk weights for STS result in increased capital requirements for IRB banks compared to the past. Moreover, another perspective regarding STS - mentioned by some market participants - is that it can even circumvent a proper securitisation market recovery if "everything but STS" is still seen as being toxic. It remains to be seen if the new regime is going to be a success, but it has potential to significantly support the revival of the market in Europe.⁸⁵

Implementation has started from January 2019 onwards. To obtain STS status, a transaction has to meet a set of multiple regulatory criteria. The transition from current market practise to the new regime poses many types of challenges (legal, structural, informational, IT) to market participants, i.e. issuers and investors (PCS, 2018a and b). In March 2019 the first STS compliant transaction came to the market (AFME, 2019b); according to Raebel (2019b) until end of Q3/2019 there were already 61 registered STS transactions; only one of them was a pure SMESec transaction.

⁸³ We use here STS as term – in the discussion, also other terminologies were and are used in the same context, e.g. HQS (high quality securitisation) or STC (simple, transparent and comparable) securitisation, used by BCBS-IOSCO, or SST (simple, standard and transparent) securitisation, used by the European Banking Authority. The STS acronym will prevail in European regulation.

⁸⁴ For more information on the relation between CMU and SME financing see Kraemer-Eis and Lang (2017).

⁸⁵ In the context of the CMU action plan, the European Commission indicated in 2017 the intention to analyse the case for introducing European Secured Notes (ESNs) as new funding instrument (European Commission, 2017a). ESNs are defined as "dual recourse financial instruments on an issuer's balance sheet applying the basic structural characteristics of covered bonds to two non-traditional cover pool assets – SME bank loans and infrastructure bank loans" (EBA, 2018b). De facto, the idea is to combine elements of covered bonds and securitisation and, hence, to establish an instrument in between these two techniques. In October 2017, the European Commission sent to the EBA a call for advice as regards ESNs. On 24.07.2018, EBA published its report on the ESNs (EBA, 2018b) in which the authority explains that "SME ESNs, similar to covered bonds, could be structured as a dual recourse instrument. Due to the high-risk profile of SME exposures, the EBA suggests a more restrictive framework, especially with respect to the coverage, the liquidity and the disclosure requirements and suggests strict eligibility criteria at both loan and pool level and a minimum level of over-collateralisation of at least 30%. In terms of capital requirement, it is advised that no preferential treatment (i.e. similar to covered bonds) is granted. However, a differentiated risk-weight treatment compared to unsecured notes could be considered subject to certain considerations." It still remains to be seen if such ESNs are going to be introduced and if so, the success will also depend on the ability of structurers to make the product economically viable for issuers (Scope, 2018). Moreover, the EBA also underlined that capital (rather than funding) is on top of the banks' priorities, therefore setting up a framework for a new secured funding instrument (when mortgage covered bonds are already widely used) might reveal unneeded. ESNs have not been considered in the legislative package introducing a pan-European covered bond framework, as recently adopted by the European Parliament. Instead, the EC has been asked to assess the case for introducing ESNs until two years after the introduction of the harmonised covered bond laws, most likely 2022 (S&P, 2019b and Raebel, 2019a).

Box 13: New regulation regime for securitisation – main aspects for SMESec⁸⁶

The EC proposed a framework and started a legislative process; important milestones can be summarised as follows (non-exhaustive collection):

- On 08.12.2016, the ECON Committee of the European Parliament voted on its compromise text for the draft STS securitisation legislation. This text was an amended version of the original European Commission text and was then brought together with the Council text agreed last December. The securitisation package, which includes STS and a revised regulatory framework for capital charges for credit institutions and investment firms originating, sponsoring or investing in securitisation products (CRR amendments) subsequently entered into a reconciliation process involving the European Commission, the European Council, and the European Parliament – the “Trilogue negotiation”.

The Trilogue negotiation started in January 2017 under the Maltese Presidency of the EU Council. On 30.05.2017, the presidency of the Council of the EU reached an agreement with European Parliament representatives on the “securitisation package”, comprising STS and a revised capital charges framework for credit institutions and investment firms originating, sponsoring or investing in securitisation products (CRR amendments).

The agreement covers two regulations: The first one brings together rules that apply to all securitisations, including STS, which are currently scattered amongst different legal acts. It aims at ensuring “consistency and convergence across sectors (such as banking, asset management and insurance), and streamlines and simplifies existing rules” (Council of the EU 2017a). In addition, it establishes a general and cross-sector regime to define and set rules related to STS securitisation. It is important to highlight that the STS concept does not refer to the quality of the underlying assets involved, but to the process by which the securitisation is structured (Council of the EU 2017a).

The other part of the agreement amends regulation 575/2013 (Capital Requirements Regulation, “CRR”) on bank capital requirements. It sets out capital requirements for positions in securitisation, which aims at providing for “a more risk-sensitive regulatory treatment for STS securitisations” (Council of the EU 2017a). One of the main political issues resolved relates to the risk retention requirement.

The May 30th Trilogue agreement that followed intensive negotiations between the three parties introduced a number of changes in the securitisation regulation, amongst which:

⁸⁶ An area that still has to be calibrated is the Solvency II capital rules. High charges on securitisations are preventing insurance companies from providing long-term investment capital to the securitisation markets. This has a negative impact on the potential revival of the investor base.

Box 13 continued:

- A reversion on the hierarchy of approaches to measuring capital requirements. The new Art. 254 of the CRR will provide the option for financial intermediaries to apply the three-tier hierarchy of approaches in the following order: SEC-IRBA, SEC-SA, SEC-ERBA⁸⁷. There are however circumstances whereby the institutions will be able to keep on using the existing hierarchy order (i.e. SEC-ERBA ahead of SEC-SA), should that be more advantageous for them. Amongst the various consequences of this change, it is noteworthy pointing out the fact that non-IRB banks, by being allowed to use a formula-based approach (the SEC-SA), may be in a position to use synthetic securitisation for regulatory capital relief purposes.
- Risk retention will remain set at 5%, even though EBA/ESMA will need to provide an RTS (Regulatory Technical Standard) addressing further details of the technical implementation. The requirement will ensure that securitised products are not created solely for the purpose of distribution to investors.
- Particular emphasis has been given to securitisation transactions that would have an impact on the real economy and more specifically on the European SMEs. Agreed language under the amendments in the CRR allow synthetic securitisation transactions for SME portfolios under certain conditions, to benefit from the lower capital charges that are reserved for STS deals.

Other elements of the agreement include the creation of a data repository system for securitisation transactions, which will increase market transparency, and a light-touch authorisation process for third parties that assist in verifying compliance with STS securitisation requirements. The aim of the latter is to prevent conflicts of interest. The text makes clear that, even when a third party is involved in the STS certification process, liability for compliance with the rules remains completely with originators, sponsors, original lenders and securitisation special purpose entities (Council of the EU 2017a).

On 26th October 2017, the European Parliament voted in favour of the STS- and the CRR-regulation. The European Council adopted the securitisation rules on the 20th November (Council of the EU, 2017b). All in all, the regime brings out important features of the future STS securitisation market segment. The fog around the future regulation design is lifting – which is good in order to reduce uncertainty. We note that the requirements of the STS regulation consist of a “light” set of high quality criteria, which in turn translates in a marginal (rather than substantial) reduction in the risk-weights.

Since end of 2017, a wave of public consultations happened (i.e. EBA, ESMA, EC) on key parts of the securitisation reform, including:

- EBA significant risk transfer consultation.
- EBA draft RTS on risk retention for securitisation transactions⁸⁸.
- EBA draft RTS on the homogeneity of underlying exposures in securitisation.
- ESMA draft RTS third-party firms providing STS verification services.
- ESMA draft RTS and ITS (Implementing Technical Standard) on disclosure requirements, operational standards, and access conditions.

⁸⁷ SEC-IRBA and SEC-SA are approaches based on formulae whose inputs refer to the underlying portfolio. SEC-ERBA is an approach predetermined, rating-dependent, risk-weights. See for an explanation of the different approaches under Basel III: Kraemer-Eis, Passaris, Tappi, and Inglis (2015).

⁸⁸ In the context of risk retention it is important to mention that there might be a divergence of European and US rules as a liberalisation of risk retention regulations might happen in the US (Integer Advisors, 2018).

Box 13 continued:

- ESMA draft RTS/ITS technical standards on content and format of STS notification.
- European Commission, consultation on the draft Delegation Act on the LCR.
- EBA consultation on STS criteria interpretation (a key consultation to which EIF has participated, as outlined above, in an attempt to ensure that verifying the suitability of a transaction to the STS framework will be as straightforward as possible).
- EBA's guidelines on STS criteria were finalised in December 2018.
- Regarding the RTS on disclosures, ESMA published a revised proposal on 31.01.2019.
- On 28.05.2019 the EC formally adopted the RTS on homogeneity (to be scrutinised by the European Parliament and Council, some of the key technical standards are still pending).
- On 24.09.2019 EBA published its discussion paper "Draft Report on STS framework for Synthetic Securitisation" with a public consultation until 25.11.2019. Background is a mandate assigned to EBA in the Securitisation Regulation (EU) 2017/2402 which requires EBA - in close cooperation with ESMA and EIOPA - to develop a report on the feasibility of a framework for simple, transparent and standardised (STS) synthetic securitisation, limited to balance sheet securitisation (EBA, 2019b).⁸⁹
- On 16.10.2019 the Commission brought out the draft data RTS which sets out the data disclosure requirements that will apply to all European securitisations and which is laid before the European Parliament and Council for three months. Once this period has expired without objection, the RTS is published in the Official Journal, twenty days after publication it becomes law. Entry into force might be February 2020 (PCS, 2019a and b).

Source: Authors.

Innovations and EIF involvement⁹⁰

As mentioned above, from the perspective of direct public support, strengthening the SME securitisation market can be an effective way to facilitate the flow of funds to the real economy, while not creating too much distortion. Integrated EU capital markets (and their need for transparency and standardisation) and the relative complexity of securitisation techniques require considerable know-how and show the necessity for specialised institutions. As an established and respected player in the European market, EIF, also in close cooperation with the EIB, plays an important role via market presence, reputation building, and signalling.⁹¹

The involvement of EIF in the ABS market in the past few years has led to several important elements:

⁸⁹ Within the context of the regulatory debates, EIF responded to the STS consultation. Discussion amongst market players can be anticipated on the content of the report, in particular with respect to preclusion of the use of excess spread and the implementation of termination upon beneficiary's bankruptcy.

⁹⁰ For more information on the use of securitisation at EIF watch: <https://youtu.be/liDM-KPjScE>. The widely recognised role of EIF in the synthetic market, led to the securitisation division of EIF winning the award as "best SRT investor". The respective pitch to the competition can be found here: https://www.eif.org/news_centre/publications/eif-submission-to-the-sci-capital-relief-trades-awards-2019.htm

⁹¹ EIF's involvement in the SME securitisation market is twofold: 1) guaranteeing tranches of ABS transactions issued by banks in order to obtain funding, and 2) by guaranteeing tranches of synthetic securitisations which allow banks to release regulatory capital. In 2018 EIF invested EUR 2.4bn of securitisation transactions (predominantly synthetic), compared to EUR 1.4bn in 2017.

- For each euro invested by EIF a multiple of that amount has been generated as new SME lending for the real economy.
- Revitalisation of a stagnant and stigmatised ABS market following the financial crisis of 2007-2008.
- Increase of the sophistication of the financial market whereby more complex structures nowadays are widely considered and used by EU banks. For instance, in 2017 EIF signed the first synthetic trade with a standardised bank within the new regulatory regime.
- Market appetite has been especially strong with respect to synthetic securitisation. EIF has provided guarantees to Italian, Austrian, German, French and Spanish financial intermediaries, allowing them to partially release regulatory capital absorbed by the securitised portfolios. These transactions have leveraged on EIF's expertise on guarantees and on the EIB resources provided by the European Fund for Strategic Investments (EFSI).
- Development of new markets such as Poland, Czechia and Scandinavia where EIF has engaged widely with the banking community to establish the foundations of a securitisation market.⁹²
- EIF participated already in two STS transactions: the largest securitisation in Poland, issued by PKO Leasing, and Santander Consumer Spain Auto 2019-1, a cash securitisation with placement of the full capital stack.
- In Italy, EIF is implementing securitisation transactions under the SME Initiative, a programme aimed at guaranteeing existing portfolios of SME loans, in exchange for the financial intermediary's commitment to lend to SMEs at a discounted interest rate.⁹³ A total of five intermediaries participated in 2017 (UBI Banca, Unicredito, Intesa Sanpaolo, Banca Popolare di Bari and BCP Torre del Greco), and EIF expects to receive a top-up of more than EUR 200m of funds by year end, which will be used to cover first and second losses in further securitisation transactions under the programme.
- On the funding front, mezzanine transactions have dominated the scene, with EIF providing guarantees on mezzanine tranches purchased by institutional investors. In general, EIF sees slightly increasing interest by private investors in the senior parts of funding transactions that come to the market, and therefore looks more at mezzanine transactions in order to support the market revival.⁹⁴
- EIF is actively pursuing transactions that will feature a "climate action" element, i.e. operations that will stimulate lending to SMEs that need financing for projects that go in the direction of fostering the efficiency of the usage of resources and reduce pollution (see also Box 14).

More stringent capital demands on banks and pressures to manage capital more efficiently will drive the growth of the synthetic transactions in Europe. On the funded ABS side, the market development

⁹² For example: Carrying out a synthetic securitisation in a country with a less developed securitisation market in a non-Euro currency helps to build market confidence in the implementation of synthetic securitisation across the whole of the EU. In Poland, the EIF executed guarantees on senior and mezzanine tranches for three new banks: Alior Bank, WBK, Santander Consumer. In the Czech Republic, we signed a synthetic with Ceska.

⁹³ For more information on the SME Initiative Italy: http://www.eif.org/what_we_do/guarantees/sme_initiative/smei_italy/index.htm.

⁹⁴ EIF's ambition is to incentivise private investors and not to crowd them out.

will depend on the overall monetary policy of the ECB and related quantitative tapering. A move towards normalisation of monetary policy - which is currently not within the range of vision - would increase the appetite for funded transactions.⁹⁵

Box 14: Securitisation and “sustainability”

Driven in particular by investors’ demand but also by risk aspects the perspective of “sustainability” is gaining importance in securitisation - and in structured finance in general. This can relate to transactions that are specifically designed to support sustainable development or - more widely - to the analysis and consideration of sustainability aspects in the context of “normal” operations.

An example for the first case are “green securitisations”, securitisations that are designed as a means of green financing. They exist in different forms; often, three types are distinguished (James & Parker, 2019): Green collateral securitisation (the issuer issues bonds backed by portfolios of “green” assets), green proceeds securitisation (the proceeds of bonds are ring-fenced for investment in green projects), and green capital securitisation (originator uses freed-up capital or leverage from capital relief to invest in green securitisation). Type two and three are of broader nature and the transactions can be backed by non-green assets.

In this context, and in line with increasing demand for “green” investment opportunities, AFME proposed recently principles for developing a green securitisation market in Europe (AFME, 2019c). In the discussion paper AFME highlights key voluntary principles that policymakers and market participants should support to help promote green securitisations. The new securitisation framework (see above), along with the Green Bond Principles⁹⁶, set the context for the green securitisation principles.

A wider perspective is given by the consideration of ESG (environment, social, governance) criteria. In an ESG CLO, for example, the CLO manager avoids assets from borrowers that are not in line with set ESG criteria (Moeglich, 2019). More generally - and this is the second case mentioned above - an ESG assessment can form part of a broader analysis. Fitchratings, for example, recently introduced ESG relevance scores for structured finance and covered bonds to augment market transparency as well as to satisfy investor demand for more thorough and robust reporting on how ESG affects credit risk (FitchRatings, 2019c, d).

These aspects are going to further increase in importance for originators, issuers, and investors, starting already with the lending process: the EBA draft guidelines on loan origination and monitoring, issued in June 2019, request that “institutions should include environmental, social and governance (ESG) factors as well as risks and opportunities related to ESG in their risk management policies, credit risk policies and procedures. Institutions should adopt a holistic approach, and incorporate ESG considerations in their credit risk policies and procedures” (EBA, 2019a).

5.4 Private debt fund

Private debt funds have gained importance as an alternative asset class for investors and a new financing source for SMEs and mid-caps since the global financial crisis, following tightened regulation on commercial banks and durably low interest rates. Similar to private equity (PE), “specialised loan funds” or private debt funds operate through an alternative investment fund manager, which originates SME lending opportunities pursued through a fund and managed similarly to a PE operation, except that it provides funding in the form of debt, rather than equity.

⁹⁵ “Put bluntly, so long as financial actors can obtain free money from their central bank there will remain little incentive to access more expensive funding sources such as securitisation” (Bell, 2017).

⁹⁶ <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

These managers, or “alternative lenders”, are a diverse and expanding group that includes established and emerging asset managers, subsidiaries of larger financial institutions, and even, more recently, marketplace or crowdfunding platforms.

Private debt has similarities and differences with bank financing. Commercial banks tend to operate on the low risk (low yield) end of the spectrum, while alternative lenders cover the entire spectrum. Typically set-up as closed-ended investment vehicles, private debt providers are better placed to deal with liquidity risks than banks, due to the latter’s exposure to withdrawals of bank deposits in difficult market conditions. Private debt also deals better with funding risks, through the imposition of long-term funding commitments for investors or “lock-up periods” which restrict redemption of invested funds. However, firms tend to blend these two sources of finance to close their financing gaps, indicating that banks can utilise alternative lenders to meet customers’ financing needs, still remaining focused on less capital-intensive products and services, which is an added source of revenue, as well as to retain the primary customer relationship.

The private debt market which originally arose as an appendage of the PE market is now a stand-alone market section. The alternative lenders range from larger asset managers diversifying into alternative debt to smaller funds set up by ex-investment professionals (Deloitte, 2019b). Several years after the start of the private debt raise, the market segmented into three main alternative asset classes: (i) “Senior Credit” or “Direct Lending” funds specialising in senior loans, bonds, leasing and/or unitranche financing, (ii) Mezzanine funds and (iii) Venture Debt funds.⁹⁷ Some already well established managers are also raising different funds offering products with different level of seniority (i.e., senior loans, subordinated debt, etc.). Another product segmentation which appears more and more visible in the private debt market is the one between (i) managers targeting sponsored transactions (i.e. financing of a transaction involving a PE backer) and (ii) managers targeting sponsor-less transactions (i.e. financing of a transaction without PE sponsor).

A large part of the private debt market still remains “sponsored”, which means that it is the leverage component of a PE operation containing both equity (provided by a PE fund) and debt (provided, among others, by a private debt provider). Nevertheless, the share of the European sponsor-less activity over total transactions stood at almost 20%, on average, since 2017 (Deloitte, 2019a). While historically non-sponsored deals were mainly observed in the UK, their importance has also increased in other European markets (GCA Altium, 2019). Adopting a sponsor-less investment approach could create a competitive advantage especially for those smaller-sized funds targeting SMEs. This market segment has also started to attract more and more institutional investors (Natoli and Battazzi, 2019).

In the last ten years, the global private debt industry approximately quadrupled in size. Between 2008 and 2018, the aggregate private debt capital, raised by the top 100 private debt fund managers around the world, amounted to USD 626bn (Preqin, 2018). Around one-third of this market consisted of “dry powder” (unused capital commitments), meaning that substantial funds for new investments are at hand. In the first three quarters of 2019, global private debt fundraising bounced

⁹⁷ Some years ago, the OECD stated that mezzanine finance “has not received as much public attention as venture capital or specialised exchanges for SMEs, but it holds potential to respond to [...] critical problems in SME finance” (OECD, 2014).

back to EUR 75.5bn, compared to EUR 90.8bn during the first three quarters of 2018 (Preqin, 2019c).

The most developed and largest single market is the US, accounting for 62% of fundraising volumes in 2018, while Europe was the region with the second largest share (33%) in global fundraising. However, Europe was the most frequently stated target region in a recent Preqin survey of active private debt investors (Preqin, 2019c). Moreover, the number of European debt fund managers grew from 209 in 2008 to 407 in 2018 (Creditreform Rating, 2019).

According to a recent survey, approximately half of the global committed private debt is allocated to SMEs and mid-market borrowers, with expectations for a further increase, in particular by European private credit managers (ACC, 2018; ACC, 2019). Smaller private credit managers allocate, on average, a higher share to SMEs/mid-market (ACC, 2018). Within Europe, the largest market is the UK, but substantial activity is also observed in France and Germany; some growth has recently also been observed in Italy and Spain, although the activity remains relatively sparse. The growth of this market segment has greater significance for the supply of capital to SMEs in Europe than in the US, where several channels for alternative debt are already operating. For similar reasons, Italy and Spain can be seen as markets with better than average prospects for expansion.

In Europe, the EIF aims at enhancing the access to finance of SMEs, inter alia through debt funds. See Kraemer-Eis (2014), Box 2 in Kraemer-Eis, Lang, Torfs and Gvetadze (2016a), Natoli and Battazzi (2019) as well as the EIF website, for more information on this topic.

6 Microfinance

6.1 Microfinance and social inclusion

6.1.1 What is Microfinance?

Microfinance is traditionally defined as the provision of basic financial services to low-income people who lack access to banking and related services⁹⁸. However, more and more often, the definition is used in a wider sense, also to include financial services to existing microenterprises and self-employed (EMN, 2012; EMN, 2017).

The main achievement of microfinance is to reach unbanked⁹⁹ clients, however in some European countries bankability is no longer a stressing issue. Therefore, introducing the concept of Inclusive Finance in Europe became a logical continuation of Microfinance. Inclusive finance complements Microfinance and means not only directly providing finance to vulnerable groups but providing financial and non-financial products to enterprises who employ or serve those vulnerable groups.

Inclusive Finance is the range of financial and non-financial products and services provided to unemployed people or clients from other vulnerable groups who are facing difficulties in accessing the conventional banking services, due to their socioeconomic status, and more broadly to social enterprises who provide work-integration opportunities or services to groups deemed vulnerable from a socioeconomic standpoint. Inclusive finance promotes entrepreneurship and social inclusion, by providing support to micro-enterprises and social enterprises (see Box 15 for an elaboration on some definitions).

In Europe, microfinance consists mainly of small loans (less than EUR 25,000) tailored to microenterprises and people who aspire to be self-employed but face difficulties in accessing the traditional banking system, while inclusive finance serves also social enterprises and provide loans up to EUR 500,000 (more on social enterprises, see Torfs and Lupoli, 2017). There are many overlaps between the target groups of microfinance and inclusive finance, therefore, both groups are combined in this chapter.

The microfinance market in Europe is highly fragmented and diverse, with no common business model (see for example, Kraemer-Eis and Conforti (2009) and Bruhn-Leon, Eriksson and Kraemer-Eis (2012)). Part of this fragmentation has geographical roots, as the role of microfinance is seen very differently across Europe. In Western Europe, microfinance is considered to be a social policy tool, as it serves businesses that are not commercially attractive for the mainstream financing providers, but nevertheless are able to create social value. On the other hand, in Eastern Europe, microfinance is seen more as a business activity which targets viable microenterprises that are financially excluded because the traditional credit market remains underdeveloped (for a discussion on the principles driving credit rationing, see chapter 5.1.1).

⁹⁸ CGAP Definition, Consultative Group to Assist the Poor.

⁹⁹ In the context of Microfinance unbanked people are considered those who have limited access to financial services: people who do not have an account with a financial institution due to insufficient funds, cost, distance and lack of necessary documentation.

Box 15: Microfinance and inclusive finance

A **microenterprise**: an enterprise with fewer than 10 employees and a turnover below EUR 2m (as defined in the Commission Recommendation 2003/361/EC of 6 May 2003, as amended).

A **social enterprise**: an operator in the social economy whose main objective is to have a social impact rather than make a profit for its owners or shareholders, while operating in a market-driven environment (as defined by European Commission, 2011).

A **microfinance institution (MFI)**: an organisation/financial intermediary that provides microfinance services. There is a wide spectrum of different MFI business models in Europe.

Microcredit in general is defined by the European Commission as a loan or lease under EUR 25,000 to support the development of self-employment and microenterprises. It has a double impact: (1) an economic impact, as it allows the creation of income generating activities, and (2) a social impact, as it contributes to the financial inclusion and, thus, to the social inclusion of individuals.

Microenterprise lending: micro-lending to existing enterprises. Organisations that implement the lending model of microenterprise lending tend to focus on the upper end market of microfinance, providing loans to bankable or nearly bankable microenterprises that have difficulties accessing loans up to 25,000 EUR from commercial banks due to risk aversion or lacking liabilities. The average volume of the provided loans is markedly higher than in the model of social inclusion lending, meant to support the start or stabilisation of microenterprises with a growth perspective. The loan sizes go up to EUR 25,000 (or even higher in some cases).

Social inclusion lending: lending to self-employed individuals that are excluded from banking services, due to their socioeconomic status of being socially excluded or (long term) unemployed and/or belonging to financially excluded population groups like ethnic minorities or young people. The average loan sizes are relatively low, meant to support basic income creating activities.

6.1.2 A support tool for necessity-driven business creation

Mapping target groups for microfinance and inclusive finance is a challenging task. To grasp the magnitude of the market, we look at some important indicators related to unemployment, poverty and social exclusion, entrepreneurial motivation and intentions. These indicators are particularly important to analyse the market for potential entrepreneurs, as a combination of poor labour market prospects and poverty drives people to start new businesses.

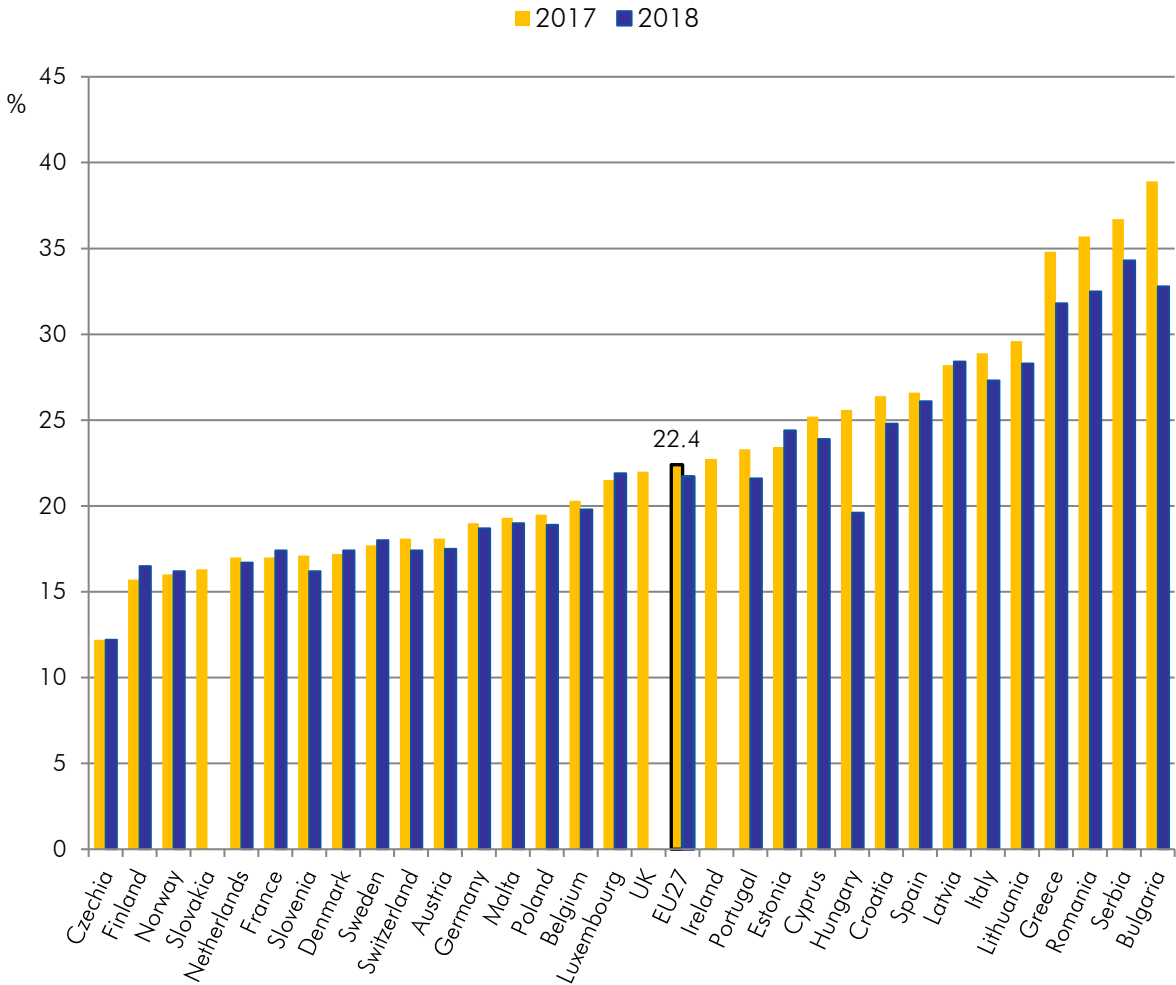
In the context of the Europe 2020 social inclusion targets, Eurostat publishes the “people at risk of poverty or social exclusion” indicator, depicted in Figure 54. The indicator corresponds to the sum of individuals who are at risk of poverty, are severely materially deprived, or are living in households with very low work intensity.¹⁰⁰ In 2018, nearly one fourth of EU27 citizens were at risk of poverty and social exclusion, with the highest rates recorded in some Eastern European countries (Bulgaria, Romania). The geographical fragmentation in poverty risk becomes clear when considering the

¹⁰⁰ Individuals are only counted once, even if they are present in several sub-indicators. At risk-of-poverty are persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income (after social transfers). Material deprivation covers indicators relating to economic strain and durables. Severely materially-deprived persons have living conditions severely constrained by a lack of resources. People living in households with very low work intensity are those aged 0-59, living in households where the adults (aged 18-59) worked less than 20% of their total work potential during the past year. For more information please see: http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=t2020_50.

mostly Nordic and Western European countries on the other side of the spectrum (Finland, Netherlands, Denmark).

Europe 2020 aims at ‘lifting at least 20 million people out of the risk of poverty or social exclusion’ by 2020 compared to the year 2008¹⁰¹. From 2018’s estimations, no more than 8 million managed to escape the risk of poverty and social inclusion since 2008 (see Figure 55). So, achieving the target in just two years seems almost impossible. Some countries managed to reach their national targets and therefore progressed on their ways to more equality. The most distinct improvements were made by Poland, Romania, and Bulgaria, mainly due to falls in material deprivation. On the other hand Italy, Greece and Spain regressed compared to 2008.

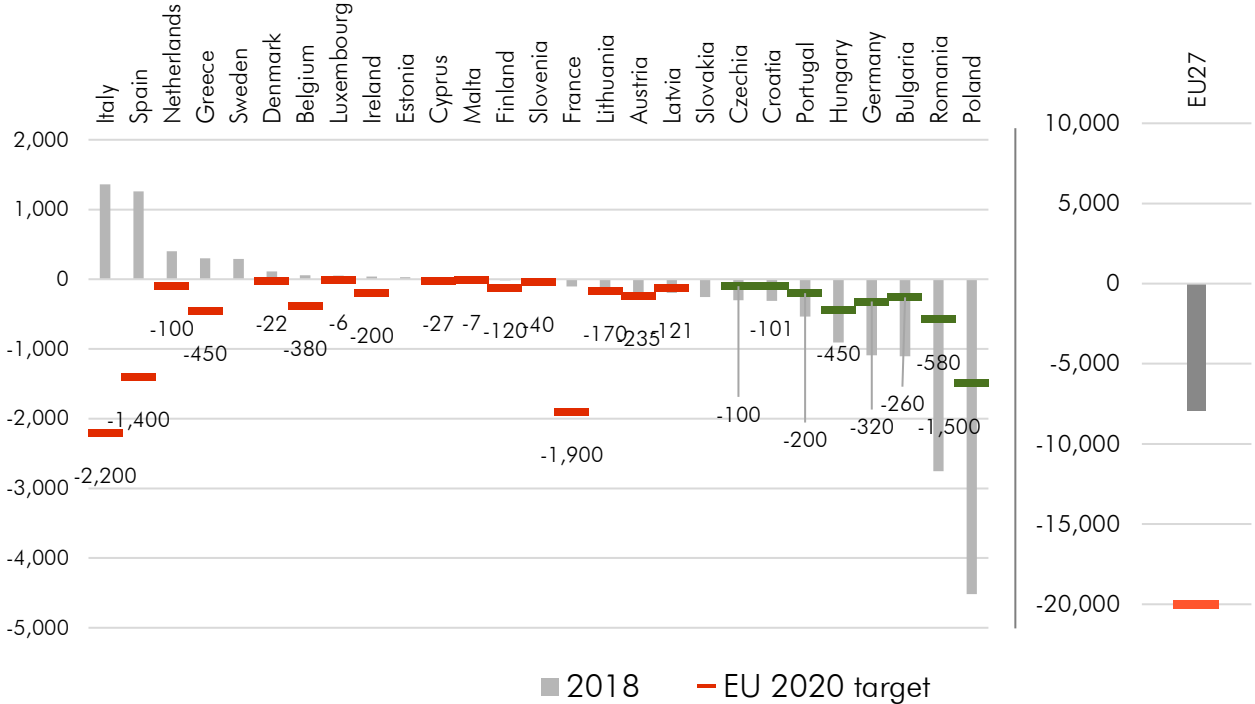
Figure 54: People at risk of poverty or social exclusion (percentage of total population)



Source: Authors, based on latest available data from Eurostat

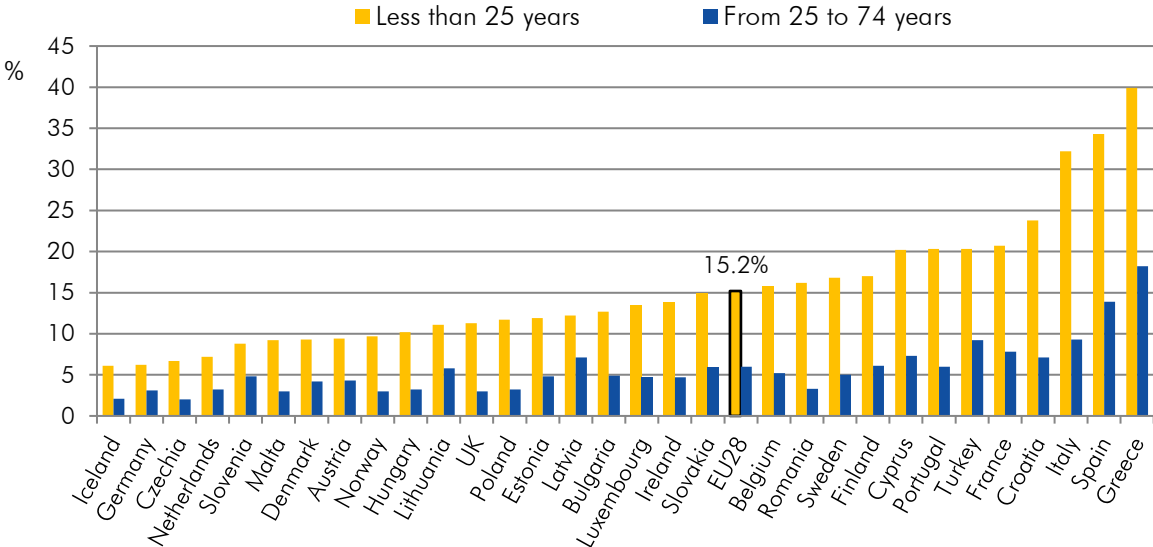
¹⁰¹ Furthermore, the indicator is part of the impact indicators of the Strategic plan 2016-2020, referring to the 10 Commission priorities, and included as main indicator in the Social Scoreboard for the European Pillar of Social Rights. It can be considered similar to the global SDG indicator 1.2.2 "Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions".

Figure 55: People at risk of poverty or social exclusion (cumulative difference from 2008, in thousands)



Note: For Ireland and Slovakia, figures relate to 2017
 Source: Authors, based on latest available data from Eurostat

Figure 56: Unemployment rate by age groups, 2018

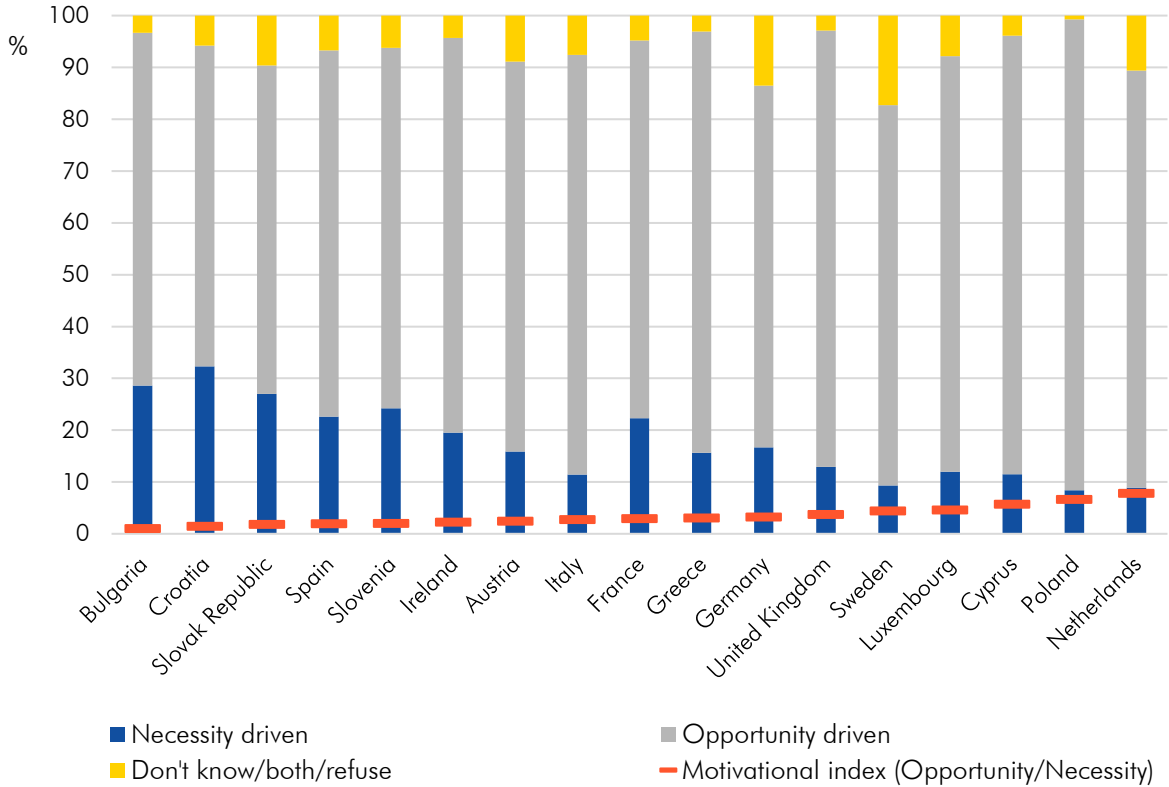


Source: Authors, based on data from Eurostat

Unemployment also remains high in European countries, in particular youth unemployment. Figure 56 plots the unemployment rate for a number of European countries. While unemployment in Europe in general has recently been declining, large country-level variation exists.

People at risk of poverty and unemployed people are a potentially important group of business creators (see Box 17), since a decision to start a business often arises out of necessity especially in low-income countries. Indeed, the Global Entrepreneurship Monitor (GEM) reports that entrepreneurs often start businesses out of necessity (see Figure 57).

Figure 57: Drivers of early-stage entrepreneurship, 2018¹⁰²



Source: GEM (2019)

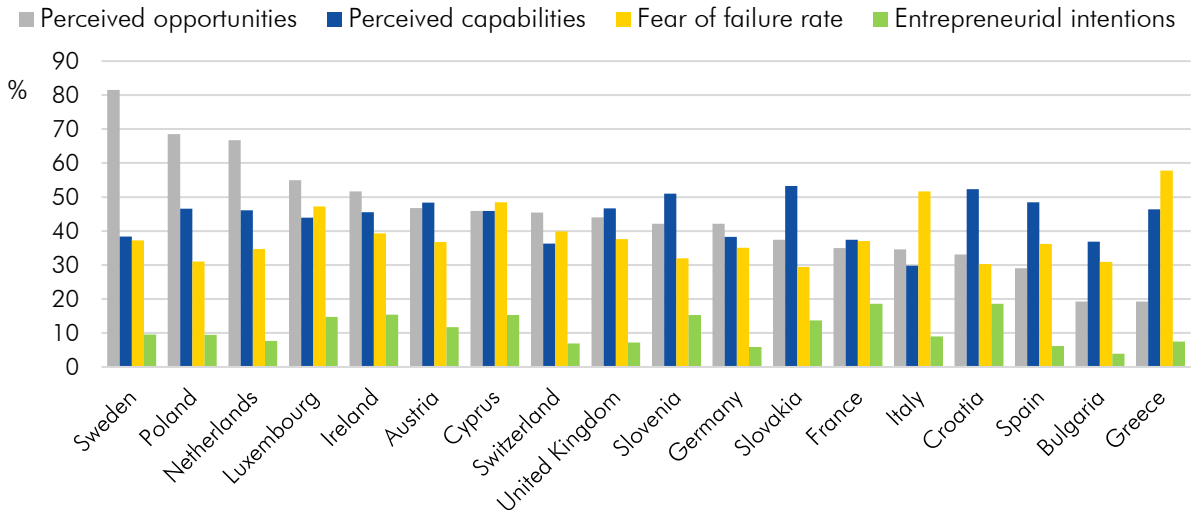
According to the GEM survey, the adult population in Europe sees good opportunities to start a firm locally, especially in high-income countries such as Sweden, the Netherlands, and Luxembourg, while the worst opportunities were seen in Greece, Bulgaria and Spain (see Figure 58). Unexpectedly, people do not seize on the business opportunities they perceive around them. A high percentage of the population perceives good opportunities to start a business, but indicates that fear of failure would prevent them from doing so.

The intention to start a business seems to be unrelated to perceived opportunities, but related to perceived capabilities. In the high-income countries, mentioned above, not as many believe they have the required entrepreneurial skills and knowledge (perceived capabilities). The Slovak, Croatian and Slovenian populations were most confident about their own entrepreneurial skills, while the least

¹⁰² Total [early-stage] Entrepreneurial Activity (TEA) – Percentage of the 18-64 population who are either a nascent entrepreneur or owner-manager of a new business. Necessity-Driven Entrepreneurial Activity – Percentage of those involved in TEA who are involved in entrepreneurship because they had no better options for work. Opportunity-driven Entrepreneurial Activity-Percentage of those involved in TEA who claim to be driven by opportunity as opposed to finding no other option for work.

confident population was found in Italy. French people perceive neither good opportunities nor do they believe to have capabilities, yet their intention to start a business within three years is among the highest. On the other hand, Greeks, despite their strong believes in their own capabilities, do not perceive good opportunities in their country, which perhaps discourages them to start a business. In Greece, the motivation index is low, meaning that business creation was mainly necessity driven (see Figure 58).

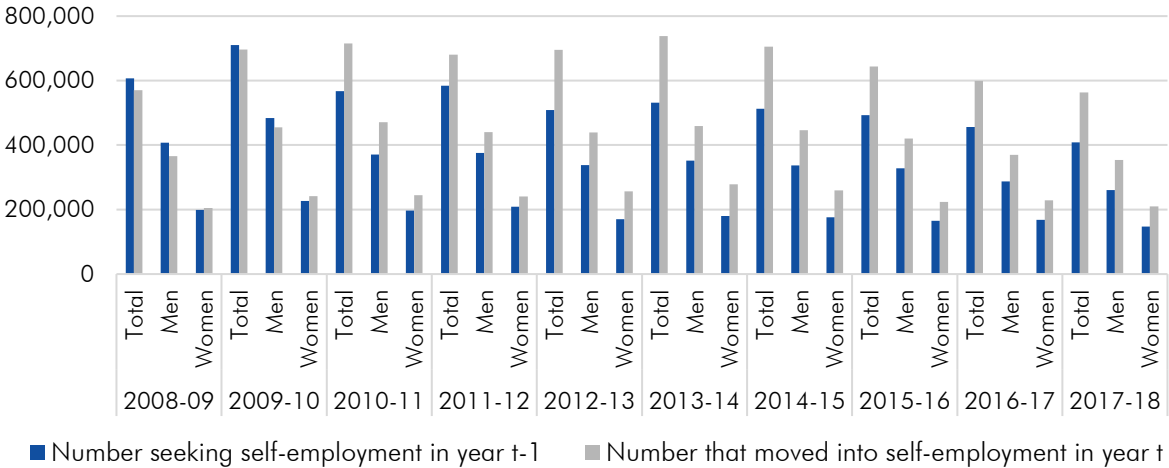
Figure 58: Entrepreneurial intentions, % of population, 2018



Source: GEM (2019)

Figure 59 also reveals the high level of discouragement and “fear of failure” existing among unemployed people to become self-employed. Of the unemployed people (16.9 million) in the EU in 2018, about 400,000 (2.4%), reported that they wanted to become self-employed to end their unemployment. However, in 2018, about 563,600 (2,5%) self-employed people in the EU were unemployed before, which is higher than people wanting to become self-employed. These facts may suggest that certain unemployed people (about 10%) were initially discouraged, but then identified a business opportunity and decided to pursue it (OECD, 2019b).

Figure 59: Transition from unemployment to self-employment



Source: OECD (2019b)

Unemployment is one of the main challenges in Europe. Especially devastating is unemployment among young people, for whom time spent in unemployment increases the risk to be socially excluded and decreases not only current but also lifetime earnings. For many of them, self-employment can be a solution to end their unemployment – and microfinance can be a tool to support such business creation. The recent social impact reporting under the EaSI Facility (see Box 16), managed by the EIF, shows that for 15.7% of natural persons benefitting from loans under the Facility, a move out of a situation of unemployment or inactivity was facilitated through establishment of a start-up business.

Box 16: Social impact reporting under the EaSI

This overview aims at highlighting the socioeconomic profile of Final Beneficiaries receiving loans under the EaSI facility. The EaSI (European Commission's Programme for Employment and Social Innovation) offers guarantee instruments to microenterprises and social enterprises.

Microfinance window: This information is made available through the participating intermediaries, which provide data on a voluntary basis at the date of contract signature to EIF as part of the social impact reporting exercise. The dataset covers contributions by 57 Intermediaries, which so far have financed more than 45,000 final beneficiaries under the Facility.

Figure B16.1 below provides a summary of non-financial information at final beneficiary level of the Facility. These figures indicate that 15.7% of final recipients which received support under the Facility were either unemployed or inactive at the time they received their loan. These aggregate figures suggest that at Facility level, considerable outreach to females was achieved.

A total of 41% of final recipients across the Facility has reported themselves as migrant, out of which 12% were from non-EU countries. These figures suggest minimal impact at Facility level with respect to outreach to these particular at-risk social groups.

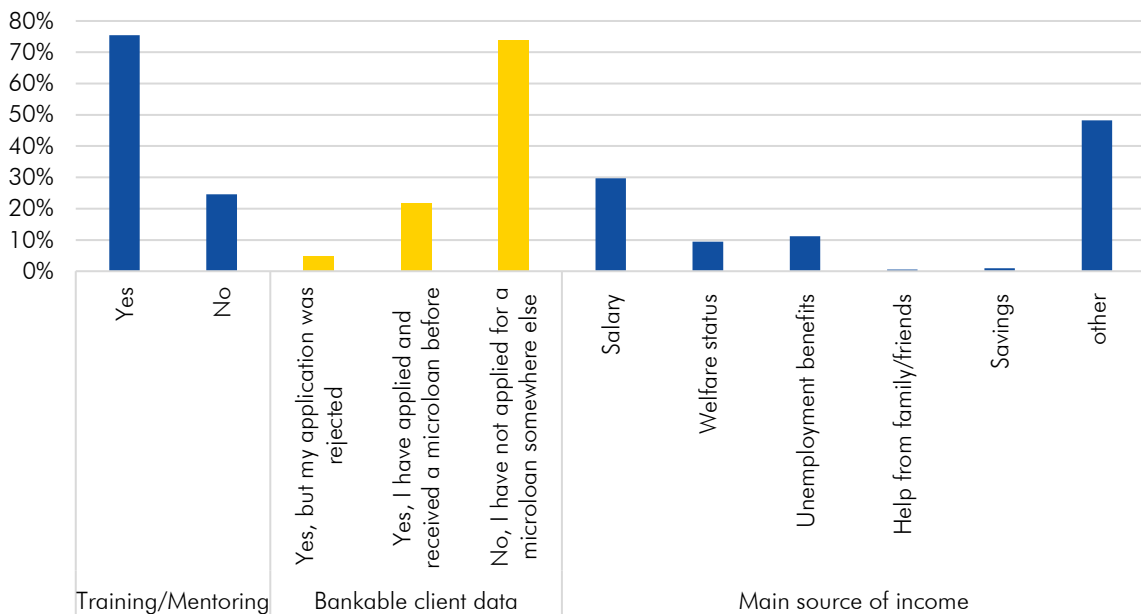
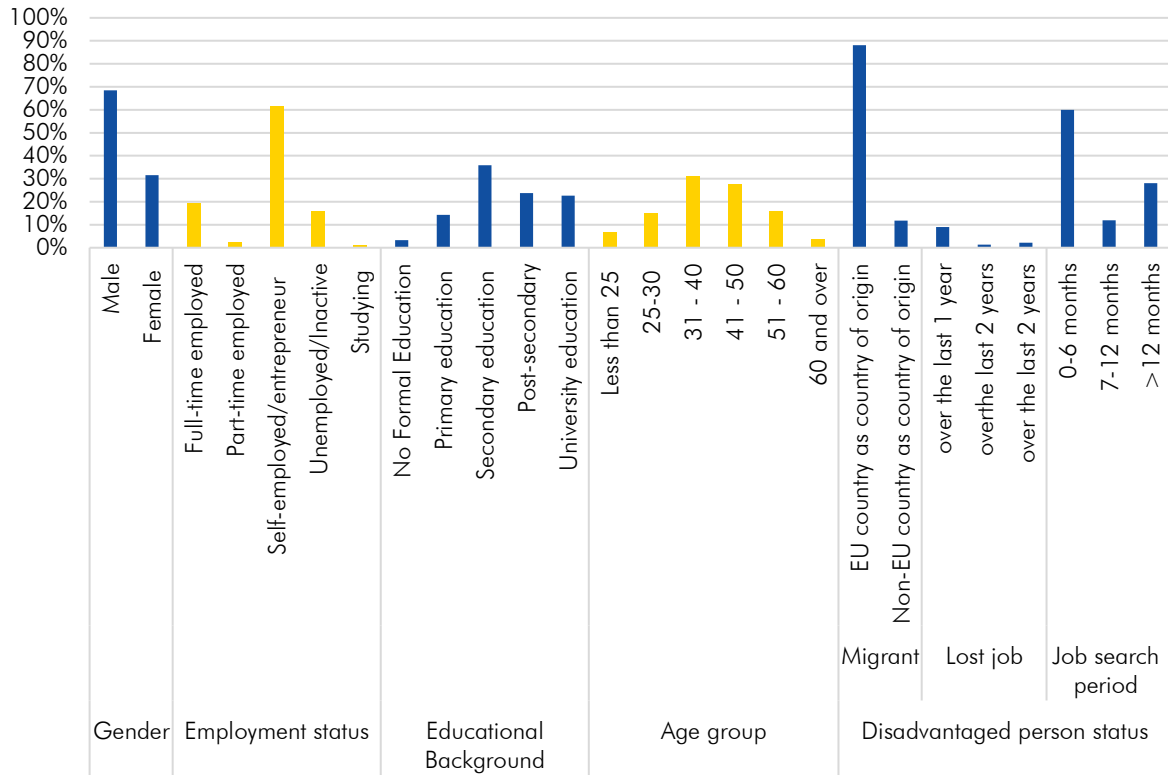
Regarding their profiles as entrepreneurs, the figure below indicates that most of them have not applied for a microloan before. More 75% of final recipient were offered mentoring or training for their microloan.

Social Entrepreneurship window: This information is made available through the participating intermediaries, which provide data on a voluntary basis at the date of contract signature to EIF. The dataset covers contributions by 20 Intermediaries, which so far have financed more than 800 social enterprises under the Facility.

According to the data collected, most frequently social enterprises mentioned "Production and distribution of healthy and affordable food" as their main activity (see figure B16.2, page 99). "Assistance to enable disadvantaged workers to enter the labour market" comes second in the list of activities. "Activities to improve the quality of the environment" is the third most frequent activity reported by Social enterprises. The latter activity is especially important given the increased need for more climate and environmental actions (see also Box 1).

Box 16 continued:

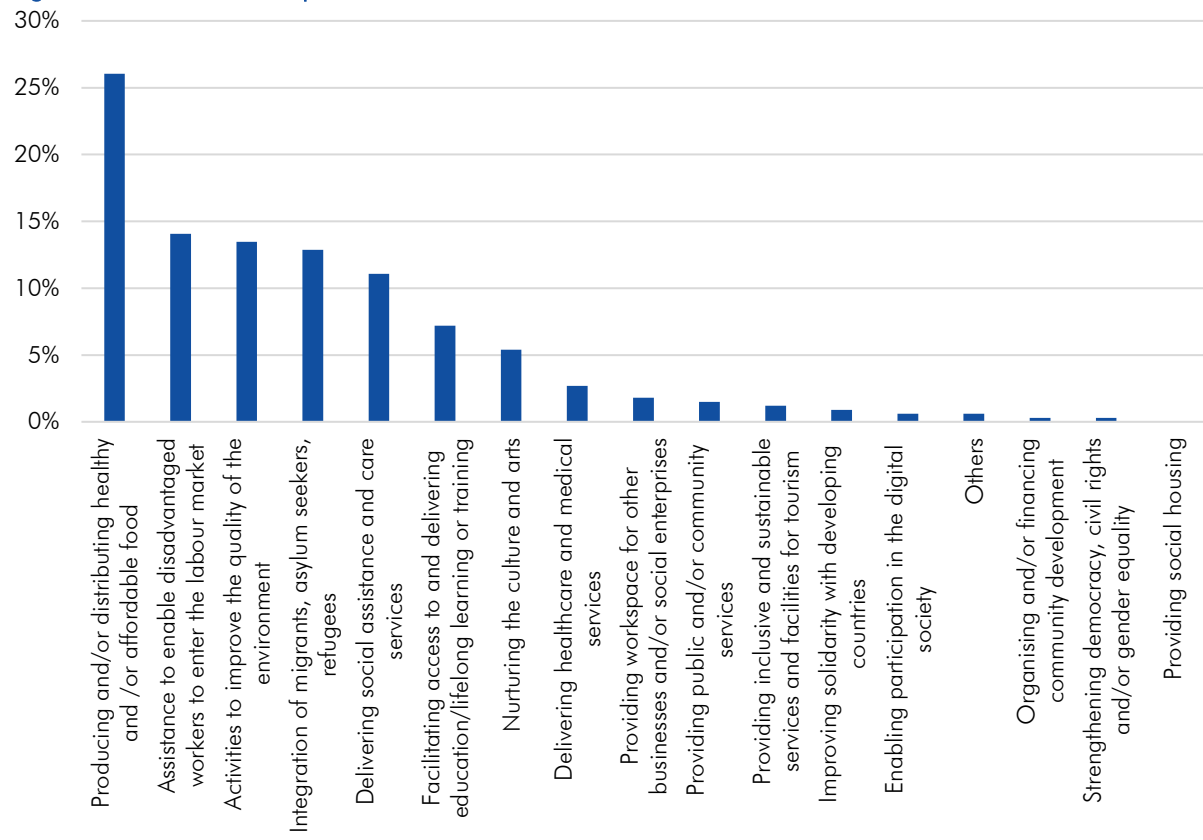
Figure B16.1: Details of Final Recipients at the date of contract signature



Questions for the lower figure: “Has the final recipient been offered training/mentoring for the EaSI microloan?”, “Did the final recipient apply for microfinance before EaSI?”, “What is the final recipient’s main source of income?”.

Box 16 continued:

Figure B16.2: Social enterprise activities



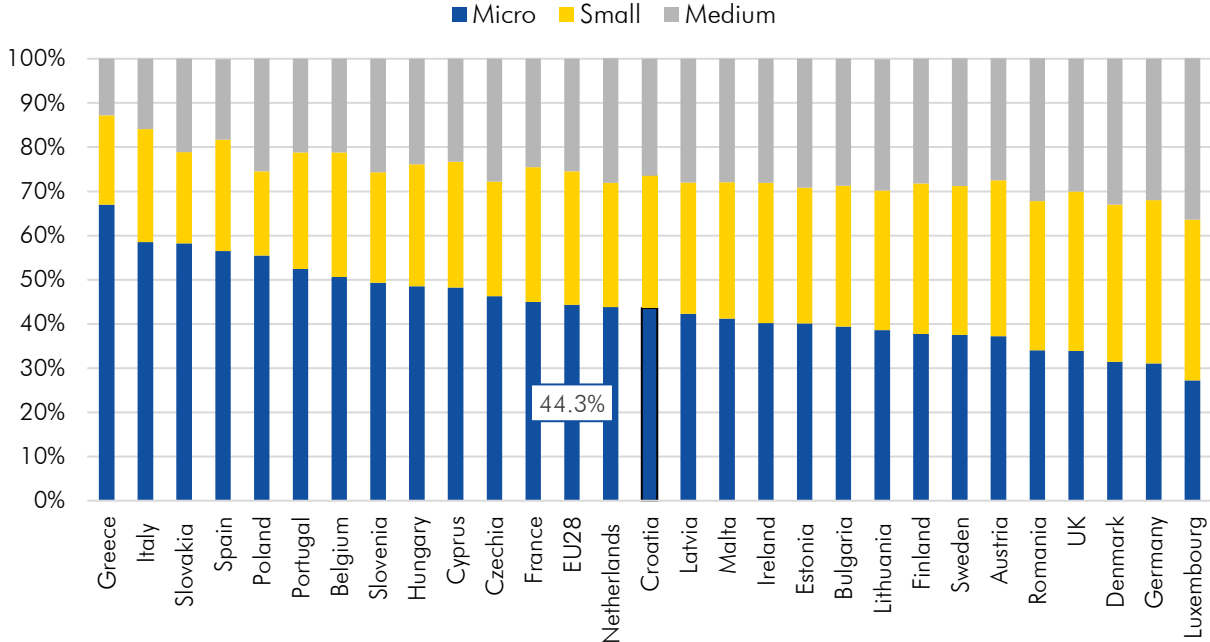
Source : EIF

6.2 The demand for microfinance: microenterprises and their finance decisions

Microenterprises, making up 93% of all European businesses, are important contributors to employment as they account for 30% of total employment (European Commission, 2019). Micro-businesses seem to be relatively more important in countries with elevated unemployment levels. In Italy, Slovakia, Spain, Poland and Portugal employment by microenterprises accounts for more than half of total SME employment and in Greece this amounts to almost 70% (Figure 60).

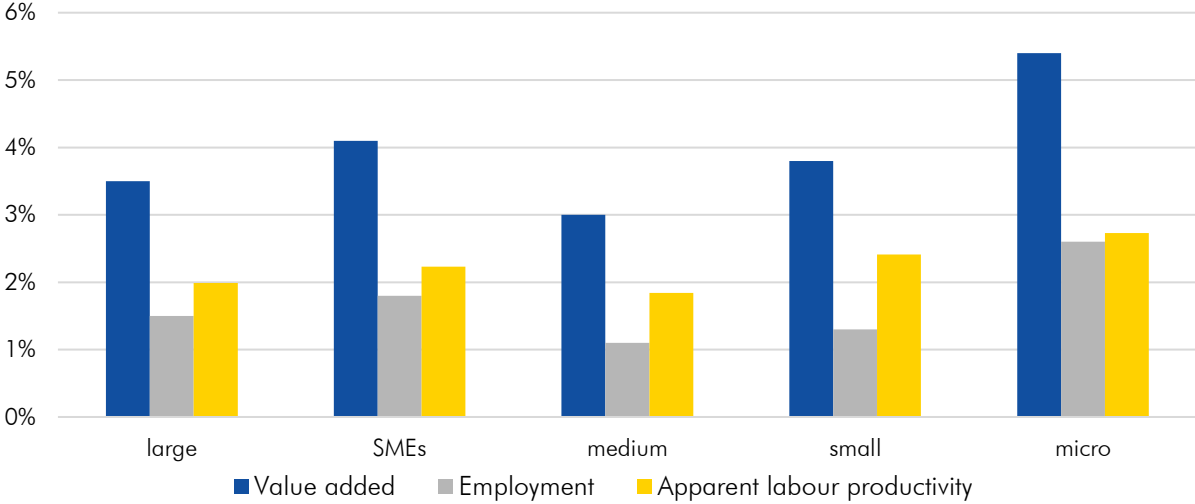
In 2018, SMEs made a much stronger contribution to the growth, both, in value added and employment. This performance was entirely due to microenterprises. Moreover, SME value added and employment grew in all EU member states in 2018 for the first time in years. Again, microenterprises were the main drivers behind this recovery. Apparent labour productivity, defined as value added (in current prices) divided by employment, has also increased for microenterprises, faster than for other enterprise size classes (see Figure 61).

Figure 60: Relative employment share by microenterprises compared to other size classes (2017)



Source: European Commission (2018)

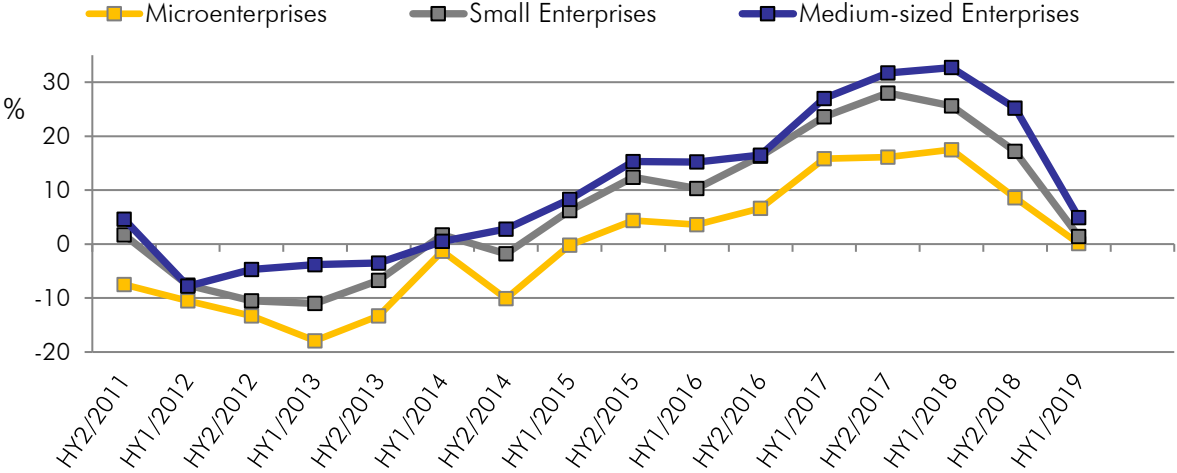
Figure 61: Value added, employment and apparent labour productivity growth in 2018 (by enterprise size class)



Source: European Commission (2019)

While microenterprises are an important element in the European economic fabric, they generally face more challenging conditions compared to their larger counterparts. This is evidenced by Figure 62, which illustrates microenterprises’ perception about the current economic climate and compares it to larger firms’ perception. For the second half of 2019, microenterprises are on balance expecting a negative change (from 13.2% to 3.2%) in their overall situation, thereby being more pessimistic than their larger counterparts are. Furthermore, the SMEUnited survey reveals that microenterprises expect their investment climate to worsen (SMEUnited, 2019).

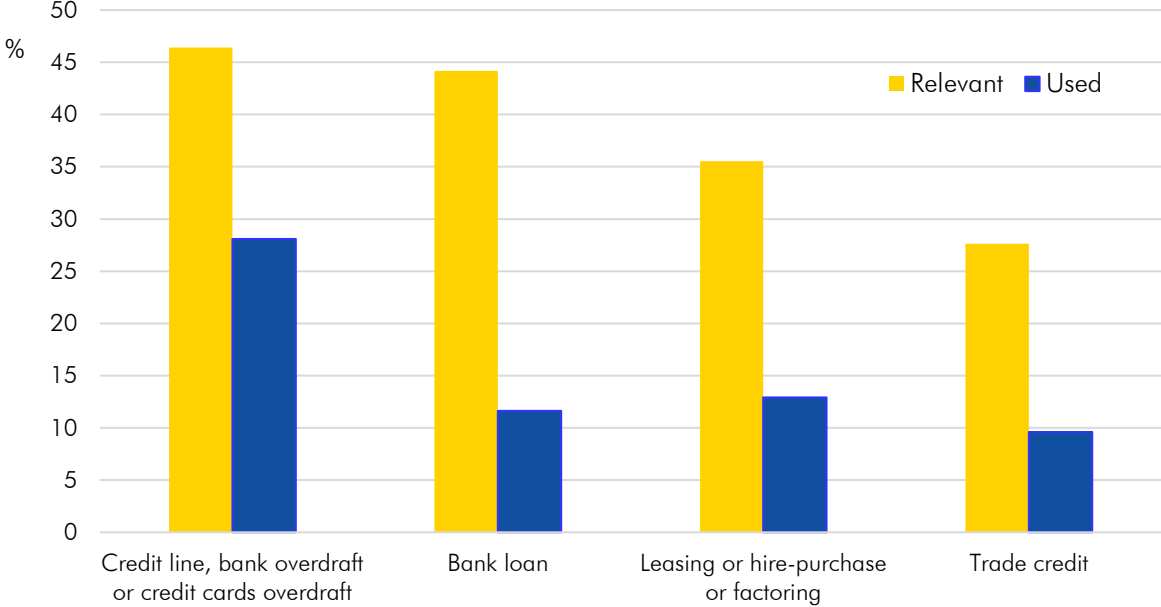
Figure 62: Overall situation of European microenterprises compared to other size classes



Note: The figure plots net responses, which are calculated as the share of positive minus negative responses.
 Source: SMEUnited (2019)

Microenterprises use less external financing instruments than their larger peers, presumably due to difficulties in accessing finance (Figure 63). For example, bank loans are used by 18.9% of small companies and 25.3% of medium companies, while only 11.6% of microenterprises used bank loans. Interestingly, almost half of the microenterprises indicated that bank loans are relevant sources of financing, far exceeding the rate at which they use it.

Figure 63: Relevance and use of different financing sources for microenterprises (HY1/2019)

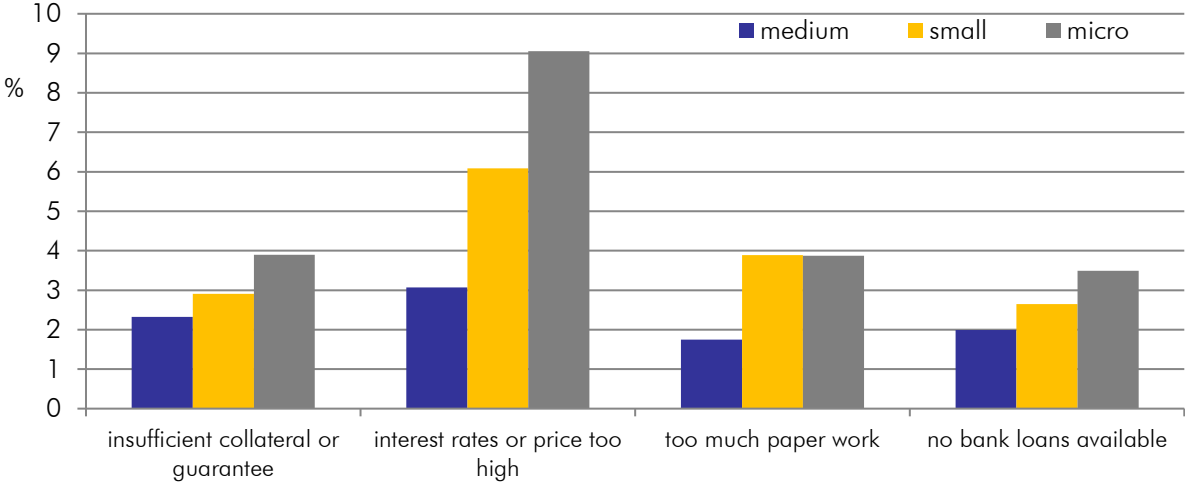


Source: Authors, based on ECB SAFE (2019a) data

The same survey states that the bank loan rejection rate is still the highest for microenterprises (10.8%), compared to 5.8% for small firms and 3.1% for medium-sized firms (Figure 64). Consequently, the share of microenterprises that did not apply for a loan due to fear of rejection (discouraged borrowers) remains high at 5.7%. Fifty-four percent of the SMEs (54% for

microenterprises) did not use bank loans because it was not a relevant source of financing. Among them, proportionally more microenterprises indicated that “interest rates or price [are] too high” or there is “insufficient collateral” involved.

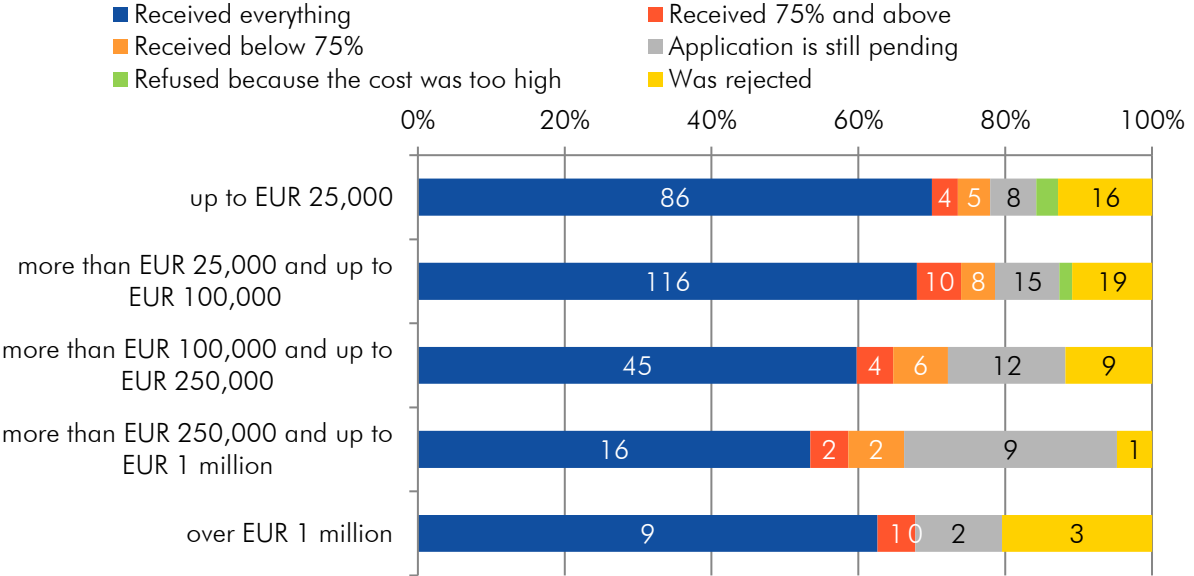
Figure 64: Reasons for bank loans being not relevant (by enterprise size class), HY1/2019



Source: Authors, based on ECB SAFE (2019a) data

Unsurprisingly, microenterprises tend to apply for smaller loans more often than for bigger loans. This implies that microenterprises with high funding needs face persistent barriers to growth (see Figure 65). Barriers for scaling up businesses are especially prominent for those from disadvantaged groups, as in addition to difficulties accessing finance, they face other barriers including lack of growth motivations, lack of entrepreneurship skills and smaller entrepreneurship networks (OECD, 2019b).

Figure 65: Application status of bank loans requested by microenterprises (by loan size), HY1/2019



Note: the figure is based on responses from 423 European microenterprises who applied for bank loans in the past six month. The numbers inside the bars refer to the number of respondents per category
 Source: Authors, based on ECB SAFE (2019a) data

As discussed above, microenterprises do not frequently use bank loans due to insufficient collateral, high interest rates and excessive paper work. Rejected or discouraged customers often turn to an alternative solution: microcredit from Microfinance institutions (MFI). MFIs do not always charge lower interest rates than banks, but they are less demanding in terms of collateral and guarantee requirement. Clients find MFIs more personal, tailor-made and simple; MFIs “know their customers”¹⁰³.

6.3 The supply of microfinance: the diversity of European MFIs

European microfinance providers are very diverse across Europe. In addition to commercial banks that target microenterprises as part of their general SME lending activity, the spectrum of European microcredit developers includes many profit-oriented and non-profit associations: banks (both private and state-owned), non-bank financial institutions (NBFIs), microfinance associations, credit unions, cooperatives, government bodies, religious institutions and Non-Governmental Organisations (NGOs).

The above mentioned spectrum of European microcredit providers is very much shaped by the existence or absence of regulatory environments. In the majority of countries, a comprehensive legislative framework regulating the microfinance sector is absent. For example, Belgium, Bulgaria, Finland, Hungary, Belgium, Bulgaria, Finland, Hungary, Ireland, Luxembourg, Spain, Sweden, the Netherlands and the UK have not adopted any explicit legislation on microcredit. However, in these countries existing legislation also applies to microcredit operations. Non-bank MFIs can disburse loans, as long as they do not take deposits. In Austria, Germany and Greece a regulatory framework for microcredit activities also does not exist, but contrary to the group of countries where existing legislation is applicable also to microcredit institutions, non-bank MFIs are highly restricted or even prevented from operating in the market.

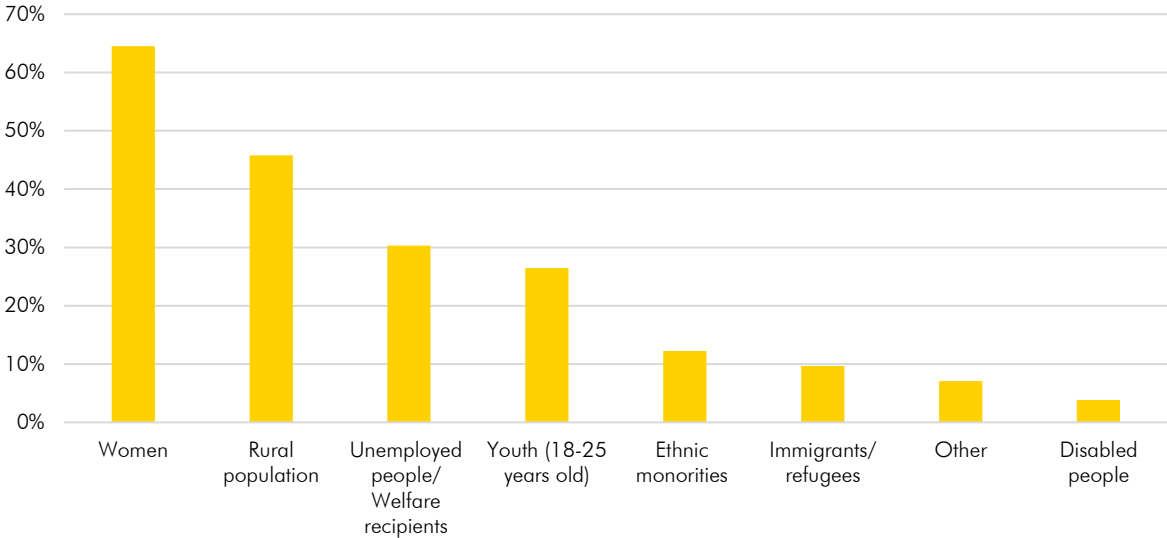
On the other hand, France, Italy, Romania, and Portugal all have in place a legislative framework designed specifically for microcredit operations. Even though the legislation allows, Portugal currently has no non-bank MFIs, presumably due to the high minimum capital requirement set for microcredit financial companies (Ruesta and Benaglio, 2020).

The focus of MFIs’ activities tends to differ from East to West. Most MFIs in Eastern Europe are mainly focused on micro-lending. In contrast, Western European MFIs provide a more diversified set of financial products, not only to microenterprises but to bigger enterprises as well (EMN-MFC, 2018). Moreover, the majority of Eastern European MFIs’ (76%) primary mission is to increase access to financial services, while Western European MFIs (54%) consider job creation, poverty reduction and development of start-up enterprises as their primary goals (EMN-MFC, 2018).

Figure 66 below outlines the strategy MFIs to target specific socially and financially excluded groups. Not surprisingly, women are the most often targeted group, followed by rural and unemployed people.

¹⁰³ Source: based on interim results from an ongoing research project on “Measuring Microfinance Impact in the EU”.

Figure 66: Share of MFIs serving that specific target group, 2017

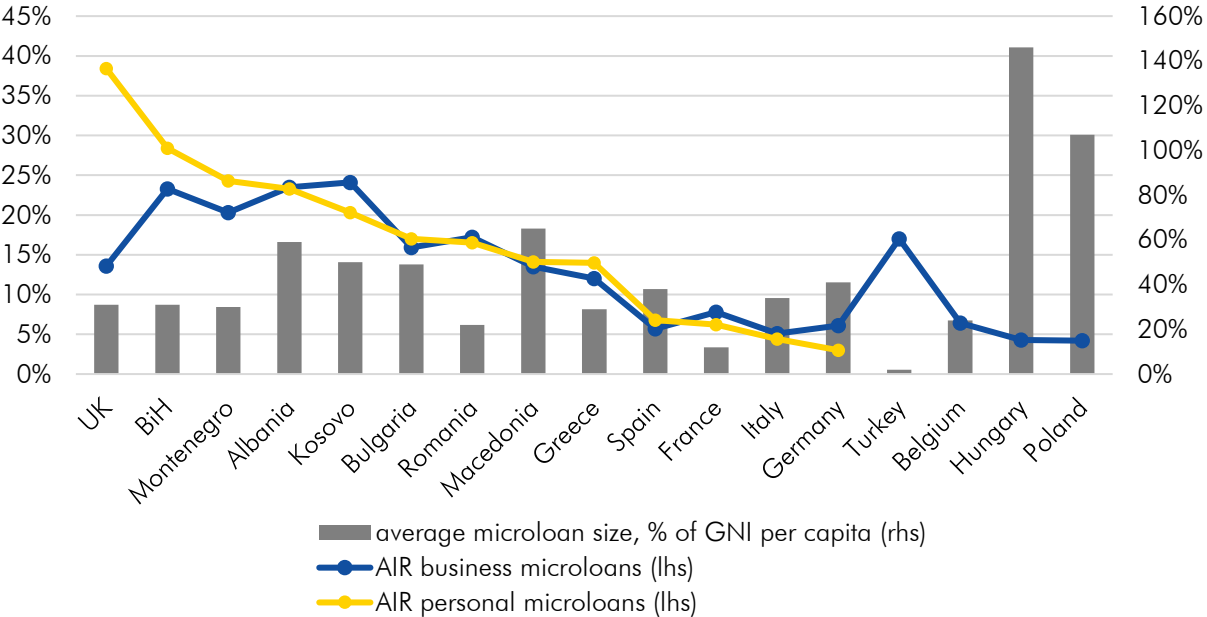


Source: EMN-MFC (2018)

The European microfinance market is growing. The latest EMN market survey data show that, in 2017, more than 993k microenterprises and start-ups received support by the surveyed organisations, an increase of 8% compared to 2016. Over the same period, total microloan portfolio outstanding increased by 16% and reached EUR 3.1 bn reported from 136 MFIs (EMN-MFC, 2018).

The interest rates, charged on microloans for business purposes, differ strongly between countries (see Figure 67). The average interest rate among the surveyed microfinance providers amounted to 10.7% in 2015, but ranged from 4% in Poland and Hungary, to as high as 16% in Bulgaria and 17% in Romania, and even higher in non-EU Balkan states (EMN-MFC, 2018).

Figure 67: Average annual interest rate (AIR) and average loan size by country, 2017



Source: EMN-MFC (2018)

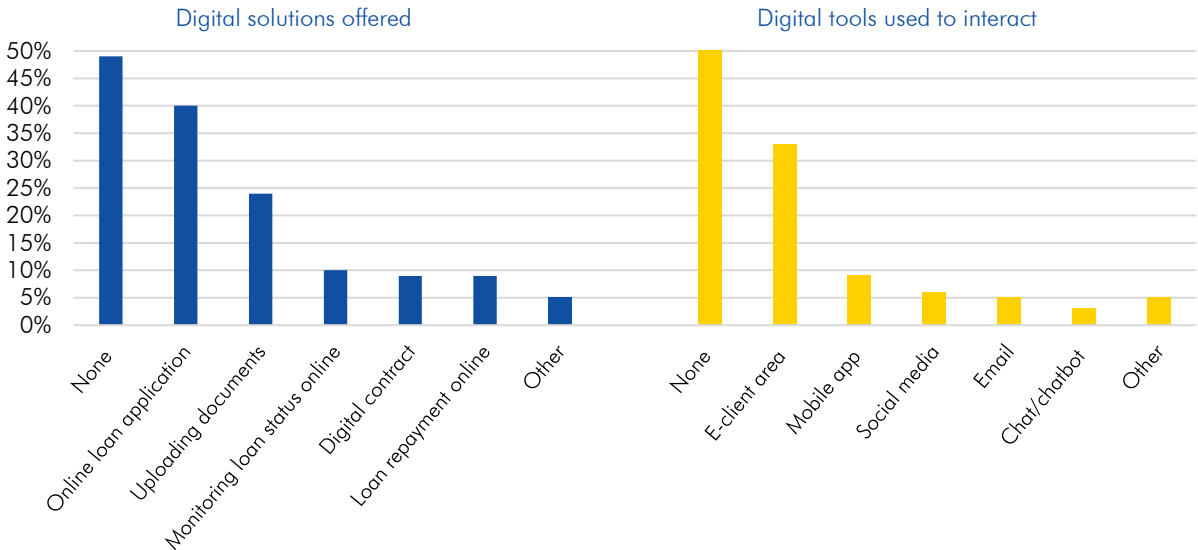
The differences in average interest rates are in general related to differences in the legal framework, MFI business models, pricing policies, refinancing cost, cost structure and the subsidy levels. Microloans are often offered with a special focus on social inclusion. Higher interest rates (“high” compared to “standard” lending business) for microloans typically reflect the non-subsidised, cost-covering business models (often MFIs in the central-eastern part of the EU). The lower interest rates reflect higher prevalence of social microfinance, corporate social responsibility initiatives and MFIs with subsidised, partly grant-dependent business models (often in the western part of the EU), (Zetsche & Dewi, 2018). Typically, for-profit institutions charge higher interest rates (cost coverage) and grant larger loans (economies of scale). In fact, the microloan business model, if operated on sustainable terms in the long run, inherently requires relatively high interest rates (Bruhn-Leon, Eriksson, and Kraemer-Eis, 2012).

Interest rates also depend on other loan conditions including loan durations and loan sizes. The average duration of business microloans is 45 months with the average interest rate 10.9%, while for personal microloans, it is 31 months and 17.6%. The average loan size for business loan is almost three times higher than that of personal microloans (EUR 8,913 versus EUR 3,098).

The majority of MFIs also provides non-financial services (e.g. coaching, mentoring, and consulting) in addition to financial products and services. Almost all of them deliver non-financial products and services through one-on-one support in person (92%) (see also Box 16). Only a few MFIs reported to deliver non-financial services online to their clients.

In general, European MFIs are only partially digitalised. According to the survey, almost half of responding MFIs do not offer any digital solution to their clients and more than half of them do not use any digital tools to interact with their clients. “Online loan application” is the most common solution offered to clients and E-client area on the MFIs’ websites is most common way to interact with them. Only a few of them are using more advance technologies for communication such as chats or chatbots (see Figure 68).

Figure 68: Digital solutions offered to clients and digital tools used to interact with clients (% MFIs)

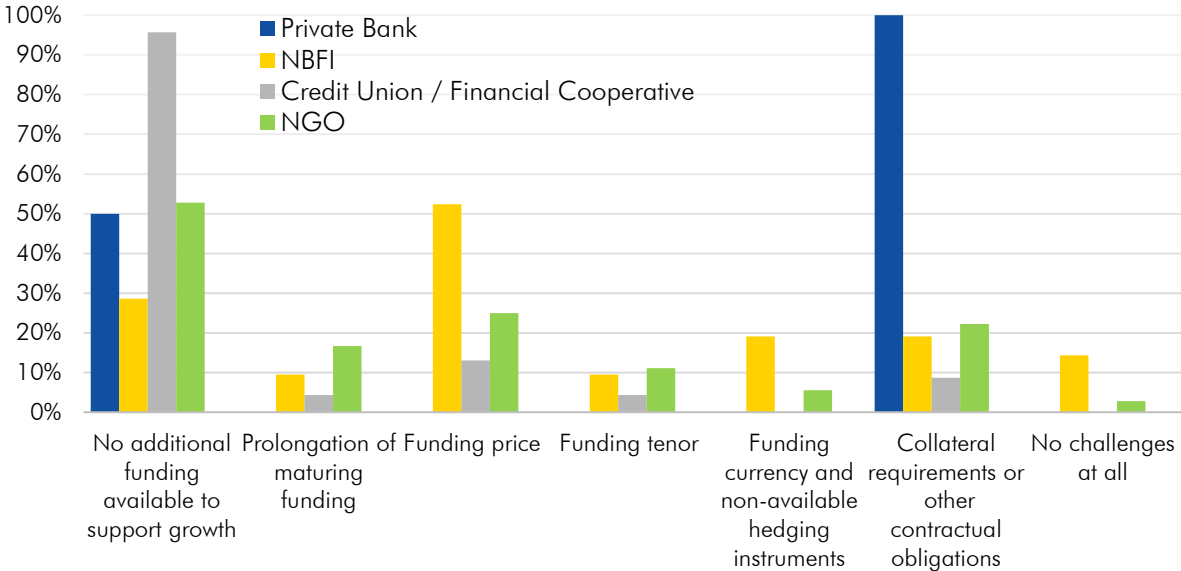


Source: EMN-MFC (2018)

According to the surveyed MFIs, digitalisation brings efficiency of operations, as it mainly helps to reduce time related to communication with their clients, loan application and loan monitoring. Because high fixed costs are one of the biggest issues in small business lending, and often one of the drivers of high interest rates, digitalisation also helps to reduce operating costs; moreover, it increases outreach. Even though, European MFIs are only partially digitalised, they are ready to adopt more technology in their operations in order to increase their customer outreach, increase the efficiency of their operations and stay competitive (MFC, 2017;EMN-MFC, 2018).

European MFIs mainly use debt financing, which is poised to remain much needed in the future: additional funding needed per MFI is over EUR 15m, mainly (78%) in the form of debts. The biggest challenge for MFIs is to find additional support for their growth. In addition, funding price and collateral requirement are pressing problems for MFIs (see Figure 69). MFIs need to meet the increasing demand for microfinance (EMN-MFC, 2018).

Figure 69: Challenges faced by MFIs, 2017



Source: EMN-MFC (2018)

6.4 The challenges for microenterprises to access to finance

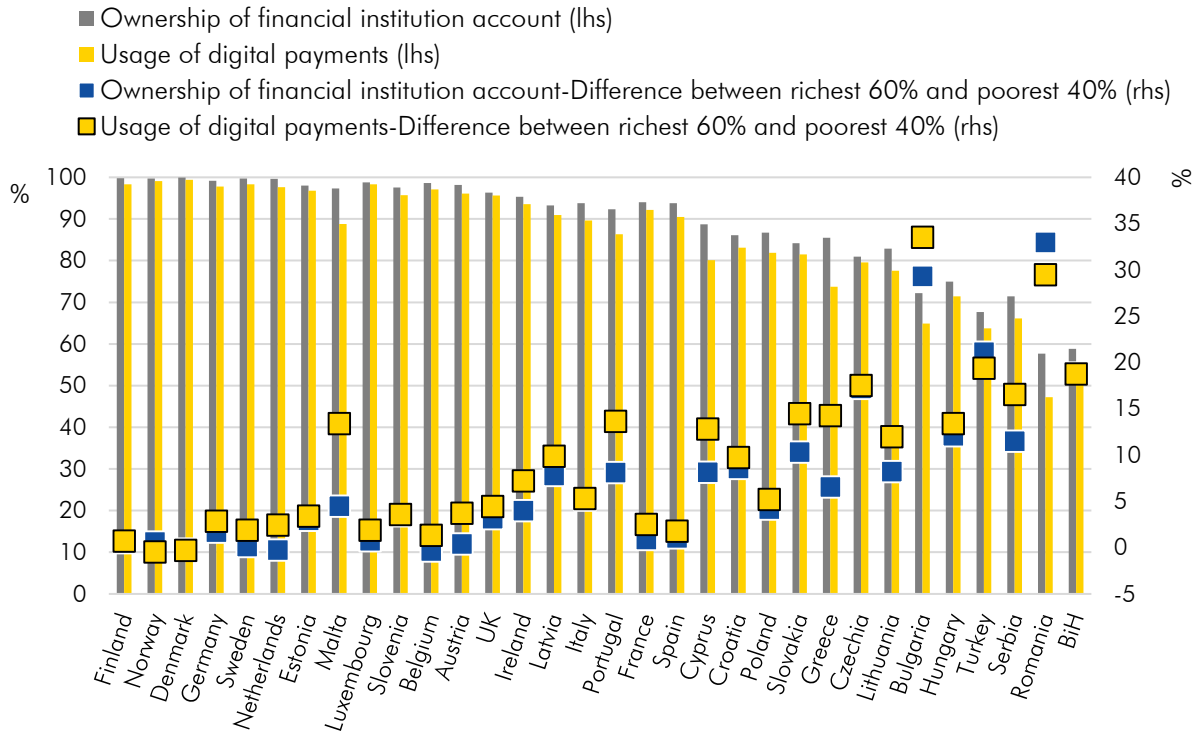
The challenges for microenterprises to access external financing are even greater than for other (bigger) types of SMEs. Almost by construction, these are young firms without prior track record or formal reporting obligations. In addition, necessity-driven entrepreneurs, again by definition, are highly unlikely to meet the required collateral requirements often demanded by traditional finance market players (OECD/ European Commission, 2014). This implies that credit rationing becomes particularly relevant for this sub segment of the market.¹⁰⁴ This section discusses some indicators that illustrate how access to finance often is restricted for vulnerable labour market segments and microenterprises.

¹⁰⁴ For a full discussion on the mechanisms underlying finance market failures and credit rationing, see Section 5.1.1.

At its most basic level, financial inclusion starts by having access to a simple bank account. The Global Findex, the financial inclusion survey¹⁰⁵, illustrates how financial inclusiveness varies strongly between countries and social groups (see Figure 70). In countries like Finland, Norway, and Denmark, 100% of the respondents reported having accounts in financial institutions, regardless of the social group they belong to. This contrasts with countries like Romania, Bulgaria and Hungary, which on average do not only have lower levels of financial inclusion, but also higher within-country social disparities. The highest gap in account penetration between rich and poor was observed in Romania (32%) and in Bulgaria (29%). For a more elaborated analysis on financial and social inclusion, see Box 17.

A very similar pattern is observed for the use of digital accounts. For the poorest part of the population, digital payments seem equally inaccessible as financial accounts, mainly in countries with high unemployment. The most common reason why unbanked adults have no account was having too little money to use an account. Half of Hungarian unbanked adults lack trust in financial institutions. In Greece, almost two thirds of unbanked adults do not have an account because a family member already has one. Cost, distance and lack of necessary documentation are also reasons for being unbanked.

Figure 70: Ownership of financial institution account and use of digital payments, 2017



Source: Global Findex Database

¹⁰⁵ The Global Financial Inclusion (Global Findex) database, launched by the World Bank in 2011, provides comparable indicators showing how people around the world save, borrow, make payments, and manage risk. The indicators in the 2014 Global Financial Inclusion (Global Findex) database are drawn from survey data covering almost 150,000 people in 144 economies - representing more than 97 percent of the world's population.

Box 17: Financial and Social Inclusion, and Financial Sector Development in the EU28

This box presents some interim results of the project “Measuring Microfinance Impact in the EU: Policy Recommendations for Financial and Social Inclusion” (funded by the EIB Institute). The data have been elaborated by D.Federico, R.Grazioli, M.A.Milioli, A.Notte, and L.Poletti; Final results are foreseen to be published early 2020.

The project looks at the current state of financial and social inclusion and financial sector development in EU member countries. More precisely, one of the objectives is to find out whether financial and social exclusion can coexist in the same countries, taking into account the development of the financial sector.

Methodologically, the research collects and analyses data extrapolated from different sources in the period 2016-2017. The methodology exploits a Principal Component Analysis (ACP) and a Cluster Analysis. ACP outlines relationships between the different dimensions of the phenomena (formal financial inclusion, social inclusion and development of financial sector); Cluster Analysis classifies a set of units into groups with the characteristics of internal cohesion (the units in the same cluster must be similar to each other) and external separation (the clusters must be as distinct as possible).

Initially, four principal components are identified and then, the scores of those components are used to obtain a classification of the EU28 countries.

The first component was identified as "Formal Financial Inclusion" and it is linked to usage of financial accounts (debit cards, credit card, savings, and internet), as well as source of income (financial institutions, family and friends).

The second component was described as "Social Inclusion" as it is linked to the following indicators: people at risk of poverty or social exclusion, people at risk of poverty after social transfers, severely materially deprived people.

The third component was summarized as “Mainstream Financial Activity” and is linked to the indicators that denote the total amount of all types of outstanding loans of resident nonfinancial corporations (public and private) and households with commercial banks.

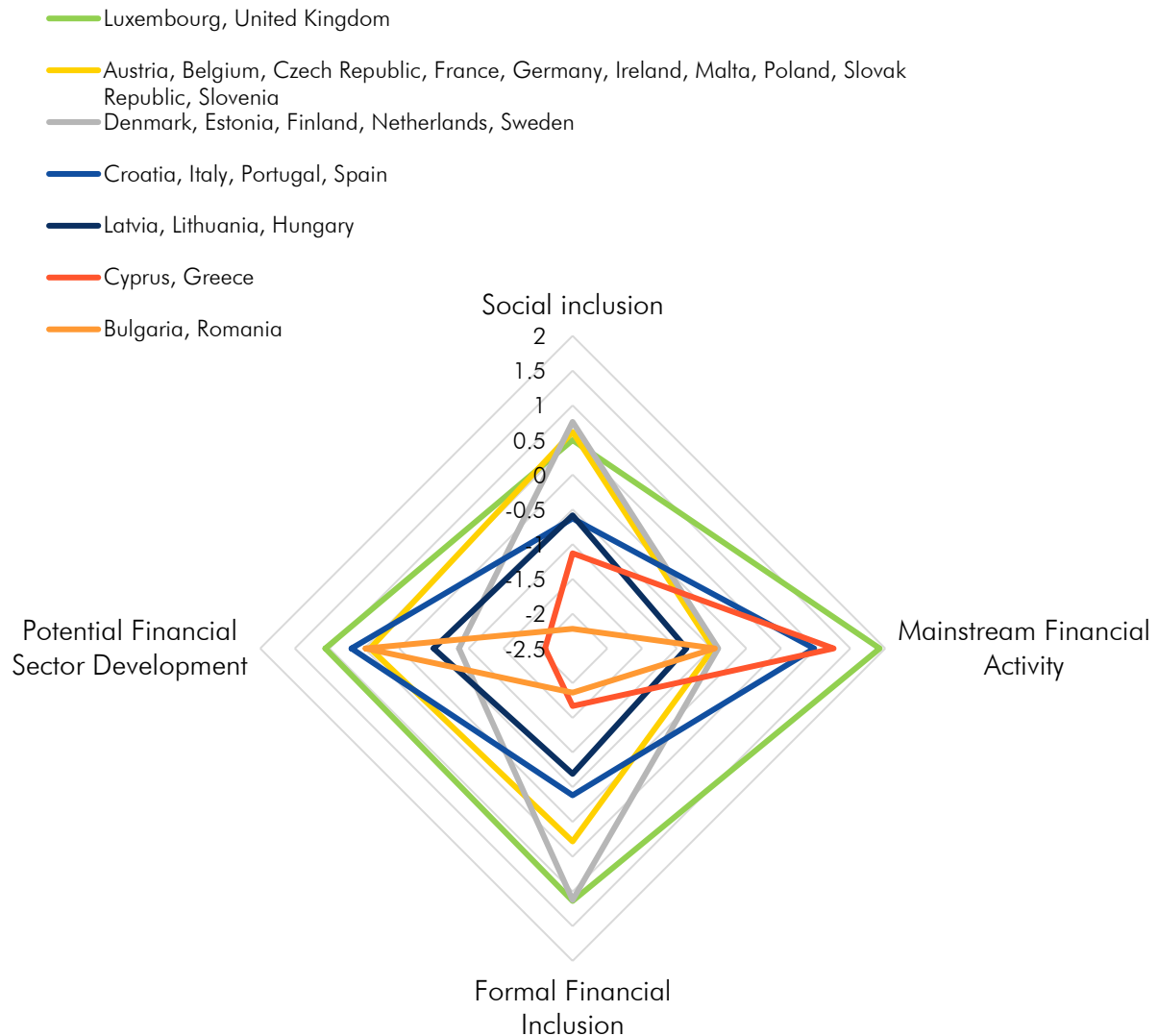
Finally, the fourth component was identified as "Potential Financial Sector Development" and is linked to intermediation degree and to the number of Institutions and ATMs of commercial banks per 100,000 adults.

A cluster consisting of Luxembourg and United Kingdom leads the identified clusters as “*High Financial Development Regions*”. Its countries have the highest degree of formal financial inclusion, the highest degree of Mainstream Financial Activity and the highest degree of Potential Financial Sector Development. Especially, the usage of credit cards is the highest: the intra-group average of the percentage of people who report using of credit cards is 67% against a general average of 36%.

The cluster “*Financial Inclusion and Limited Social Exclusion Regions*” consists of 10 Countries: Austria, Belgium, Czech Republic, France, Germany, Ireland, Malta, Poland, Slovak Republic, Slovenia). High Formal Financial Inclusion characterise the countries in this cluster. This cluster is different from the previous one by its sluggish Mainstream Financial Activity, however it also has a potential for Financial Sector Development.

Box 17 continued:

Figure B17.1: Financial and Social Inclusion by clusters



The cluster “Financial and Social Inclusion Regions” includes Denmark, Estonia, Finland, Netherlands and Sweden. The countries have the highest degree of Social Inclusion. This cluster has a similar (low) degree of Mainstream Financial Activity to the previous cluster; however, Potential Financial Sector Development is much lower.

The forth cluster “Limited Financial and Social Inclusion Regions with Financial Development Potential” consists of four Countries: Croatia, Italy, Portugal, Spain. The countries in this cluster show limited formal financial and social inclusion. However, these countries register a high potential for Financial Sector Development.

Box 17 continued:

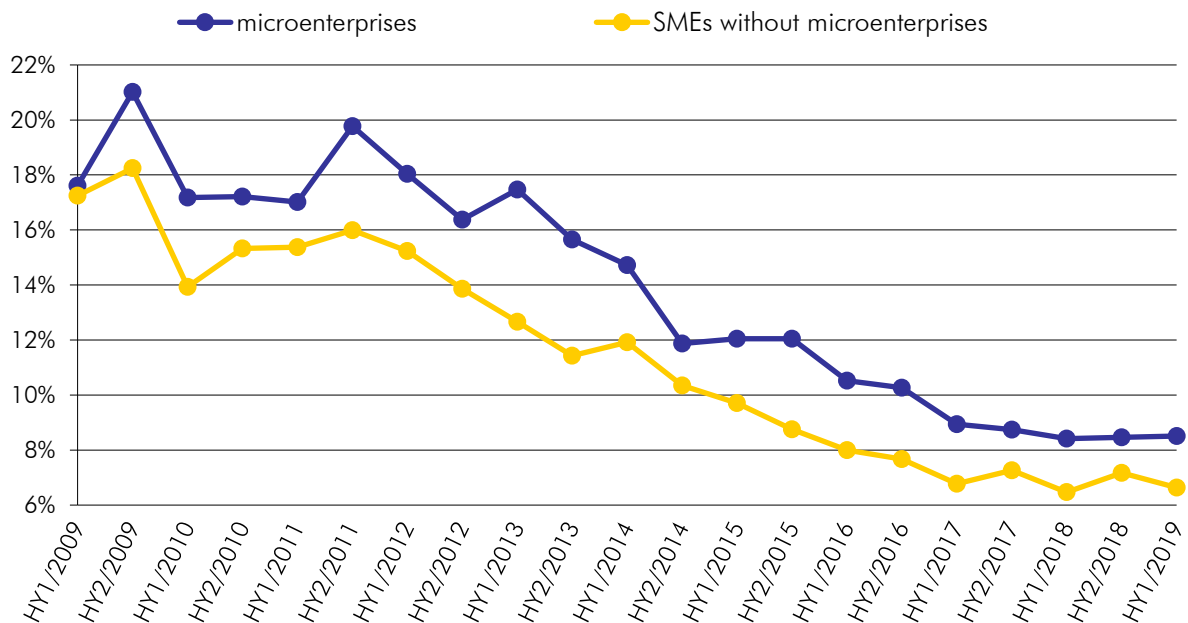
Cyprus and Greece belong to the cluster “Financial and Social Exclusion Regions with Low Financial Development Potential”. Countries in this cluster have the lowest Potential Financial Sector Development. In these countries, the percentage of people who source emergency funds from family or friends is equal to 49% (against a general average of 26%). The group has a high share of people at risk of poverty or social exclusion (the percentage of total population) with a value of 32% (against a general average of 24%) and of material deprivation with a value of 18% (against a general average of 9%).

The cluster “Low Financial Development Regions” consists of Latvia, Lithuania and Hungary. The countries in this cluster have the lowest mainstream Financial Activity and limited Formal Financial inclusion.

Finally, the cluster “Financial and Social Exclusion Regions” consists of Bulgaria and Romania. The cluster score the lowest in both, formal financial inclusion and social inclusion. It is characterised by a high use of emergency funds from family or friends (52% against a general average of 26%) and borrowing from family or friends (22% against a general average of 14%), and it also confirms the difficulty of the access to traditional finance.

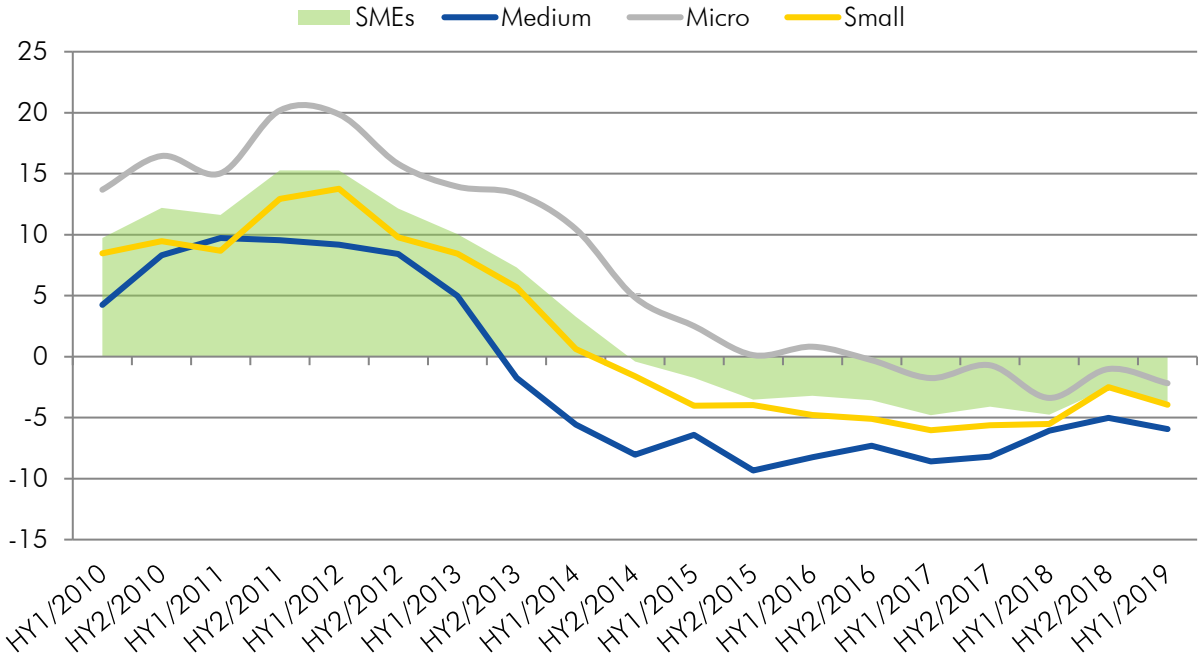
The ECB SAFE survey in the Euro area (ECB, 2019a) provides additional insights in the financing situation of European microenterprises. According to the latest SAFE survey, the share of microenterprises which see “access to finance” as their most important problem slightly increased and still exceeds the share of bigger SMEs facing the same problem (Figure 71).

Figure 71: Share of enterprises reporting access to finance as their most important problem



Source: Authors, based on data from ECB (2019a), Statistical Data Warehouse

Figure 72: Perceived change in the external financing gap* (by firm size)



*The financing gap indicator combines both financing needs and availability of bank loans, credit lines, trade credit, and equity and debt securities at firm level. A positive value of the indicator suggests an increasing financing gap. Values are multiplied by 100 to obtain weighted net balances in percentages. A negative financing gap indicates that the increase in the need for external financing is smaller than the improvement in the access to external financing.
 Source: Authors, based on ECB SAFE (2019a), Statistical Data Warehouse

Figure 72 shows how microenterprises report changes in their perceived financing gap and compares this to other SME size classes. Also here it becomes apparent that microenterprises believe they operate in a more challenging environment than larger SMEs, as they are consistently less positive about their financing situation.

6.5 Microfinance prospects

Microenterprises in general, and workers from vulnerable labour market segments that cherish entrepreneurial ambitions, are still burdened by significant difficulties in accessing financial resources from traditional credit channels. Currently, both microenterprises and microfinance providers in Europe face challenges discussed below.

Affordable finance: For lenders, especially for microenterprises, not only accessibility of finance is important, but also its affordability. As we have seen in the previous chapter, microenterprises often do not consider applying for a bank loan, as they find interest rates too high. Lending rate ceilings are often discussed as potential solution. However, such ceilings would have to be chosen very cautiously. In fact, introducing interest rate caps can harm the poorest: disadvantaged groups, such as long term unemployed, or workers with a migrant background are perceived as risky borrowers and lenders charge these borrowers higher interest rates. If the interest rate restrictions are too tight, those lenders are less willing and perhaps even obliged to eliminate those most deprived from their target portfolio (Zetzsche & Dewi, 2018). Alternatively, one should think about ways for MFIs to reduce their fixed costs related to lending activities, perhaps via digitalisation.

Scale-ups: Microenterprises with scale-up potential are important for job creation. However, barriers for scaling up businesses are especially prominent for those from disadvantaged groups. In addition to difficulties accessing finance, they face other barriers including lack of growth motivations, lack of entrepreneurship skills and smaller entrepreneurship networks.

Digitalisation: Digitalisation helps to reduce time related to communication with the borrowers, loan processing and monitoring. Digitalisation also increases outreach: borrowers, mainly in remote areas with limited access to physical branches, may find it more efficient and time saving accessing their accounts digitally. Digital solutions can also elevate the burden of “too much paper work” discussed in the previous chapter. MFIs are aware of the benefits of digitalisation but they lack the financial resources to bring technology to their organisations (MFC, 2017). On the other hand, one success factor in small business lending is the direct contact between lenders and borrowers (“know your customer”). Digitalisation should not be used to eliminate such relationships, but to make them more efficient.

Skills: In addition to financial support, unemployed people or clients from other vulnerable groups are often in need of acquiring the necessary skills for success through coaching and mentoring. Technical assistance is crucial for entrepreneurs to succeed and decrease the risk of default. Nevertheless, the technical assistance provided during the loan term is often limited¹⁰⁶. In addition to financial products and services, many European MFIs also provide non-financial services (EMN-MFC, 2018). As non-financial services are often cost-free for clients, it becomes a burden for MFIs without public support. That explains why state-owned banks, credit unions and NGOs provide non-financial services more often than NBFIs or private banks.

MFI funding needs: Non-bank MFIs are competing with traditional banks and new entrants, Fintechs. They need to scale up, offer more diversified products and introduce digital technologies to their operations. MFIs, especially non-bank MFIs, face challenges in securing funding to support growth. They are also in need of additional investment in technologies in order to stay competitive with Fintechs. If MFIs do not catch up with Fintechs, they may end up serving not only unbanked but also undigitalised clients, who typically are the poorest. Moreover, adverse selection might leave MFIs with the riskiest ones, as Fintechs are more equipped with their screening tools to select the most successful projects.

Given the current difficult conditions, support on a European level has become of central importance – via funding, guarantees and technical assistance to a broad range of financial intermediaries, from small non-bank financial institutions to banks well-established in the microfinance or social enterprise finance market– in order to build a full spectrum of the European inclusive finance sector. The EIF currently supports microfinance and social entrepreneurship under The European Commission’s Programme for Employment and Social Innovation (EaSI). EaSI offers the following three instruments: (i) the EaSI Guarantee Instrument to increase access to finance for microenterprises, social enterprises and vulnerable groups, (ii) the EaSI Capacity Building Investments Window to help build up the market via investments (e.g. scaling up or developing IT infrastructure (e.g. mobile banking), recruitment and training of staff, strengthening operational and institutional capabilities or seed financing support of newly created intermediaries with a strong social focus) and (iii) the EaSI Funded

¹⁰⁶ Based on interim results from an ongoing research project on “Measuring Microfinance Impact in the EU”.

Instrument launched in the fourth quarter of 2019. Through the investment fund, EIF provides senior and subordinated loans to financial intermediaries for on-lending to micro-borrowers and social enterprises.

By the end of 2019 EIF had signed some 130 EaSI guarantee agreements covering 30 countries (including Albania, Montenegro, North Macedonia, Serbia and Turkey outside of EU28). Around 40% of the EaSI guarantee agreements are with non-banks. Over time these guarantee agreements will mobilise more than EUR 3bn of new financing to micro-borrowers and social enterprises. EIF had also signed 9 EaSI Capacity Building investments (one indirect equity transaction, one direct equity transaction and seven subordinated loans).

7 Fintechs

7.1 What are Fintechs?

The Basel Committee on Banking Supervision defines Fintech as *“Technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services”*. Innovations in financial technology occur in a variety of financial subsectors or business processes, such as the payments/transactions industry (distributed ledger technology), insurance (Insurtech), corporate lending (peer-to-peer platforms, robo-advisors), compliance mechanisms (Regtech), to name but a few. The term Fintechs can also refer to *companies*, often SMEs, which pursue a business model of innovation with the aim of disrupting traditional financial service mechanisms.

Technological innovations are becoming an integral part of the SME financing landscape. Fintech market actors potentially could play an important role in enhancing access to finance for SMEs, as their innovations are often thought to reduce the pronounced asymmetric information problem in small business lending, for example, through technological advances in information processing. They develop innovations with the ability to revolutionise financial business processes, such as payment or data-processing technologies, and allow SMEs to compete on equal footing with larger players in the financial sector. They also serve as direct financing source for SMEs across the entire growth spectrum, through CrowdFunding (CF) platforms that offer a variety of debt and equity financing.

Fintechs are not a stand-alone phenomenon. Their impact is felt across the entire spectrum of SME financing markets, most notably through crowdfunding. Established financiers, such as microfinance institutions, business angels and venture capitalists have recognised the power of the crowd and have all been observed to co-invest with retail investors through the use of CF platforms. Also mainstream banks are entering the Fintech space, using marketplace lenders as distribution channels and acting as counterparts in SMESec transactions.

Recent years also saw the emergence of Fintech giants, established technological market players (“Bigtech”) such as Amazon and Paypal, who are dominantly positioning themselves in the financial service industry. Through their existing business models, Bigtech companies have a significant information advantage vis-à-vis traditional credit institutes (Frost et al., 2019). Some examples are Amazon (e.g. Amazon Pay, Amazon Cash), Paypal (recently launched an SME lending initiative), Google, eBay, and Apple, for the US; examples from China are Alibaba (Ant Financial), Baidu or Tencent.

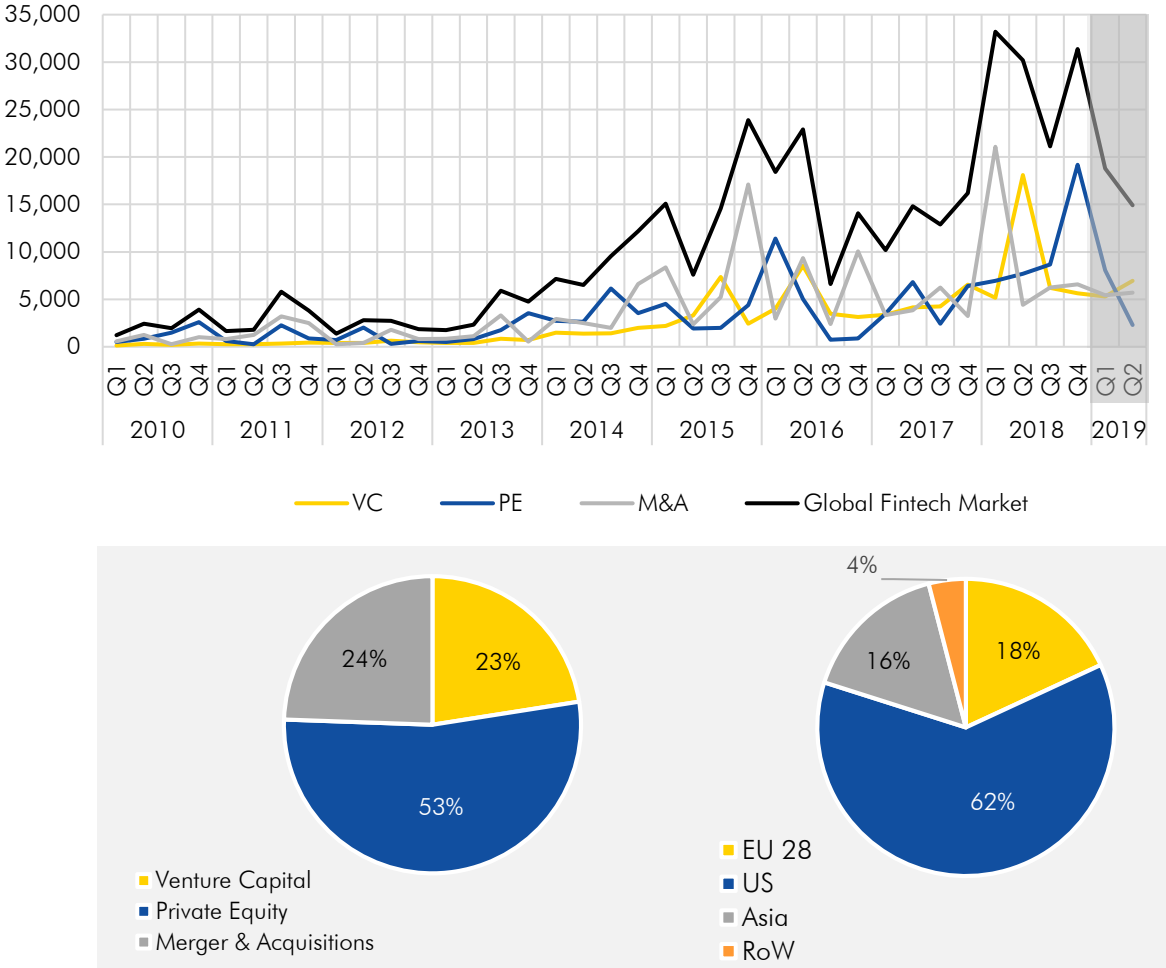
Unlike smaller Fintechs, these giants can compete with incumbents at a larger scale, combining big data with technology, and posing a new disruptive threat in an ever-changing financial market environment. Their entry into financial services can lead to efficiencies gains and improved financial inclusion. A recent BIS study (Frost et al., 2019) report the share of Bigtech in total global Fintech credit recently increased dramatically, from less than 5% in 2016 to over 30% in 2017, although this increase is driven mainly by evolutions in Asia.

7.2 Investments in Fintechs

7.2.1 Global Fintech investments

The surge in global Fintech investments has come to a halt in recent quarters. During the first half of 2019, a substantial drop in Fintech PE deals effectively reversed global Fintech investment volumes back to 2017 Q4 levels (Figure 73).

Figure 73: The evolution of global Fintech investments (VC/PE/MA) and its distribution over deal types and global regions during Q3-Q4/2018 (mEUR)



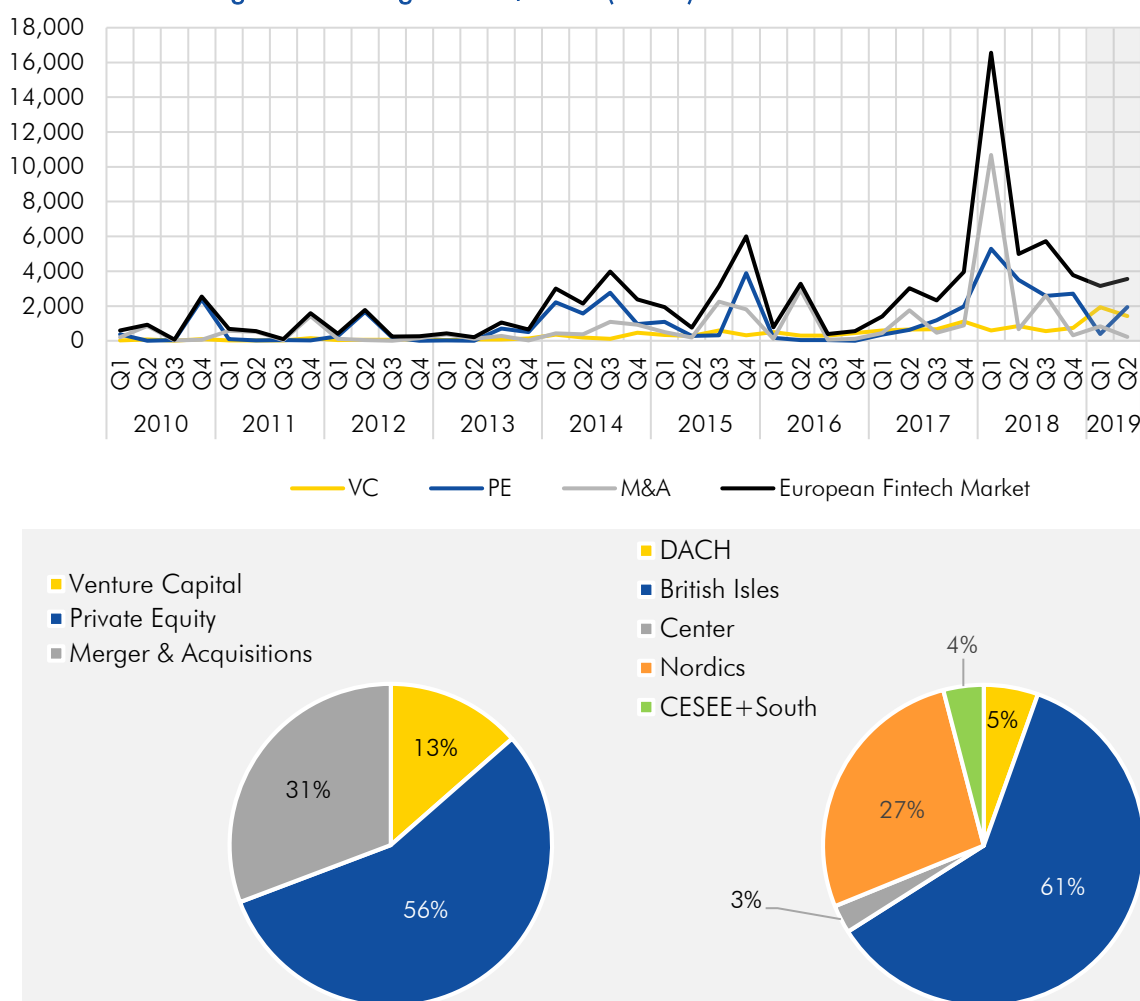
Source: Authors' calculations based on PitchBook data.

PE accounted for more than half of the total investment amount during the second half of 2019 (Figure 73, bottom left panel). Fintech investments mainly flowed to the US market, and the EU received just 18% of total investment volume (Figure 73, bottom right panel). After the overwhelming growth in 2018, cross-border investments in the M&A sphere normalized to historical averages of the years prior, reflecting the more geopolitically volatile environment in 2019 (KPMG, 2019). A higher volume of European PE deals drove a slight increase of the overall Fintech Market following the stagnating second half of 2018.

7.2.2 European Fintech investments

Total investment volume in European Fintech companies remained roughly constant during the first semester of 2019. Fintech firms based on one of the British Isles¹⁰⁷ received the lion share (61%) of new investments, further consolidating the British dominance in the sector. The Nordic countries still constitute the most fertile ground for Fintech development in continental Europe,¹⁰⁸ accounting for 27% of EU investment volume. The DACH region, historically accounting for 11% of investment volume since 2010, only attracted 5% of investments and the Center region only 3%. Fintech investment activities in the most vulnerable European economies (CESEE + South¹⁰⁹) were also relatively limited (4%).

Figure 74: The evolution of EU Fintech investments (VC/PE/MA) and its distribution over deal types and sub-regions¹¹⁰ during Q1-Q2/2019 (mEUR)



Source: Authors' calculations based on PitchBook data.

¹⁰⁷ 54% of total investment volume since 2010, not shown in the figures.

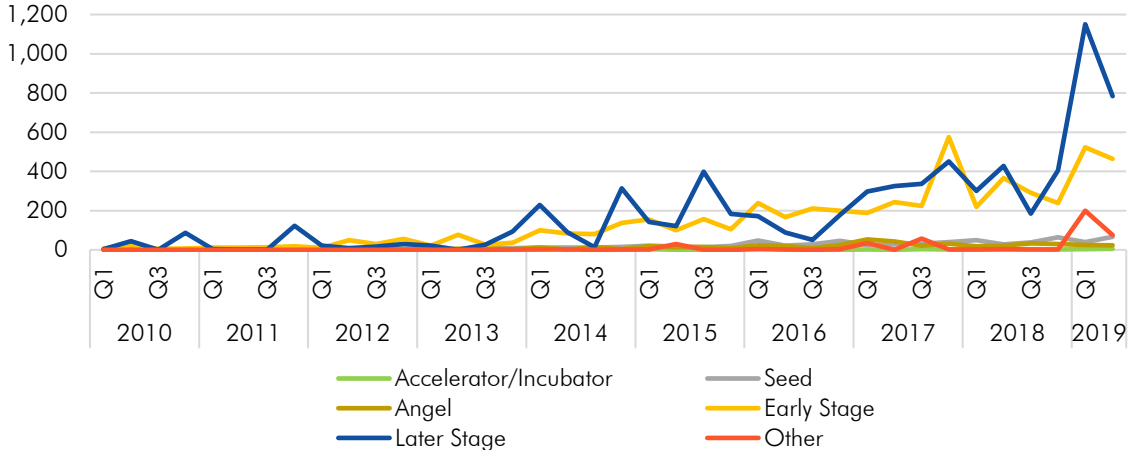
¹⁰⁸ Historically the second most important investment hub for Fintech deals, accounting for 15% of total investment volume since 2010.

¹⁰⁹ The CESEE + South region account for 8% of overall investment volume since 2010.

¹¹⁰ DACH: DE, AT; British Isles: IE, UK; Center: BE, FR, LU, NL; Nordics: DK, FI, NO, SE; CESEE: BG, CY, CZ, EE, HR, HU, LT, LV, PL, RO, SI, SK; South: GR, ES, IT, MT, PT.

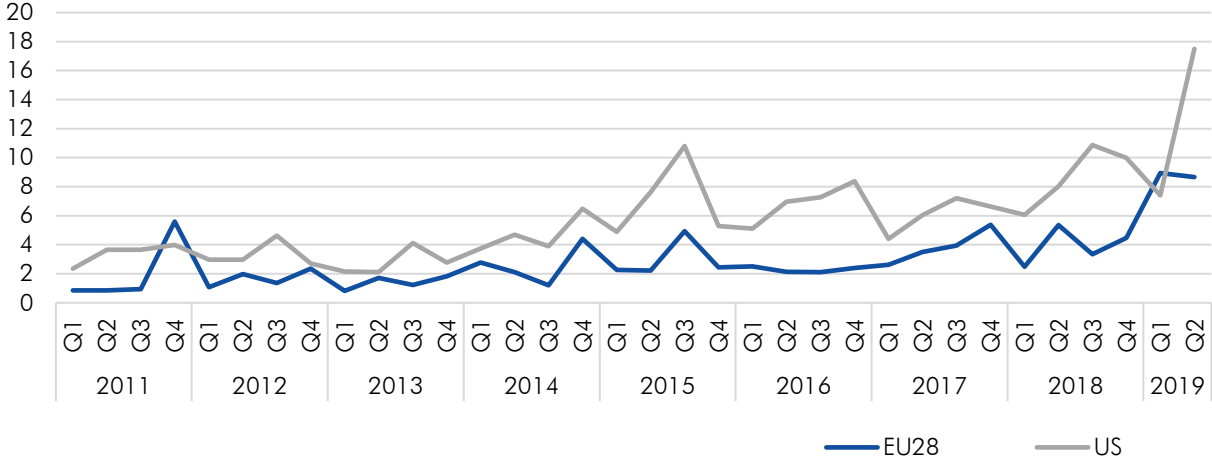
Going against the global trend, investment volumes on the European Fintech VC market rose sharply during the first quarters of 2019 (Figure 75), driven mainly by evolutions in the early and late stage segments. This expansion was accompanied by a significant scale increase, as the average VC deal doubled in size between Q4/2018 and Q1/2019, matching the scale increase observed on the US market during the preceding periods (Figure 74). However, European average deal size remained constant during the second quarter of 2019, while the US VC market continued to scale up.

Figure 75: VC investments by subtypes¹¹¹ for the EU28 (mEUR)



Source: Authors’ calculations based on PitchBook data.

Figure 76: Average VC deal size (mEUR)



Source: Authors’ calculations based on PitchBook data¹¹²

¹¹¹ The ‘Other’ category comprises corporate investments, equity for services and grants.
¹¹² The statistics presented in this chapter are derived from the data platform PitchBook, which identifies Fintech as “technology that uses the internet, blockchain, software and algorithms to offer or facilitate financial services traditionally offered by banks (loans, payments, investments and wealth management). Fintech also includes software that automates financial processes or addresses core business needs of financial firms.” The PitchBook data platform collects information on deals in the VC, PE and M&A market. All statistics presented below refer to investments and geographical data refer to the location of the investees. Fintech investment data on the most recent quarters are subject to change, as they are continuously updated by the PitchBook platform to include the latest information that becomes available, and hence should be interpreted with some caution as they likely present an under bound of the true numbers.

7.2.3 Fintechs as a source of SME financing: The European CF market¹¹³

Within the Fintech ecosystem, Crowdfunding (CF) platforms are of particular interest to SMEs. CF is defined as the practice of raising funds from a large number of individuals, generally through the use of an online platform. The CF sector has grown increasingly popular in recent years. For 2017¹¹⁴, the Cambridge Centre for Alternative Finance reported a global funding volume of EUR 370bn, an increase by 42 percent compared to 2016. While these are still impressive growth numbers, the pace of growth in the CF market has decelerated considerably, which might indicate the sector is converging towards a mature state.

Between 2012 and 2017, European market growth was consistently outpaced by both the United States as well as China, which has led to a decreasing European market share in global funded volumes from 8.6% in 2013 to 2.8% in 2017 (down 2.9% from 2016). Within Europe, the UK still accounts for the majority of funded volumes (68% in 2017, down from 73% in 2016), but the importance of other European markets is growing. For example, German funded volume rose sharply by 85% to EUR 595m, making it the second largest market after France (EUR 661m), where the growth rate was more in line with the European average (48%) and the Nordics (EUR 449m).

Evolution of business focused CF activity

While the most prolific CF campaigns have been either donation- or reward-based, more recently the CF landscape saw the emergence of platform types focussing on more traditional SME funding channels that provide debt and equity to businesses through P2P business lending, invoice trading and equity-based CF. Figure 77 depicts the evolution of business-focused transaction volumes on CF platforms across Europe (excluding the UK).

In 2017, a total of 24,107 business raised EUR 1.66bn on CF platforms that were operational in continental Europe. After two years of exponential 3-digit growth figures, total business transaction volume sourced on CF platform grew by 47% between 2016 and 2017, halving the growth rate that materialised one year earlier. While still significant, this means that also the CF segment of business financing is showing signs of maturity after a fierce start a few years earlier. Interestingly, the rate of growth in number of supported businesses actually accelerated in between 2016 and 2017. This implies a reduction in scale at the level of the individual SME, as the average raised amount decreased by 13% to about EUR 70,000.

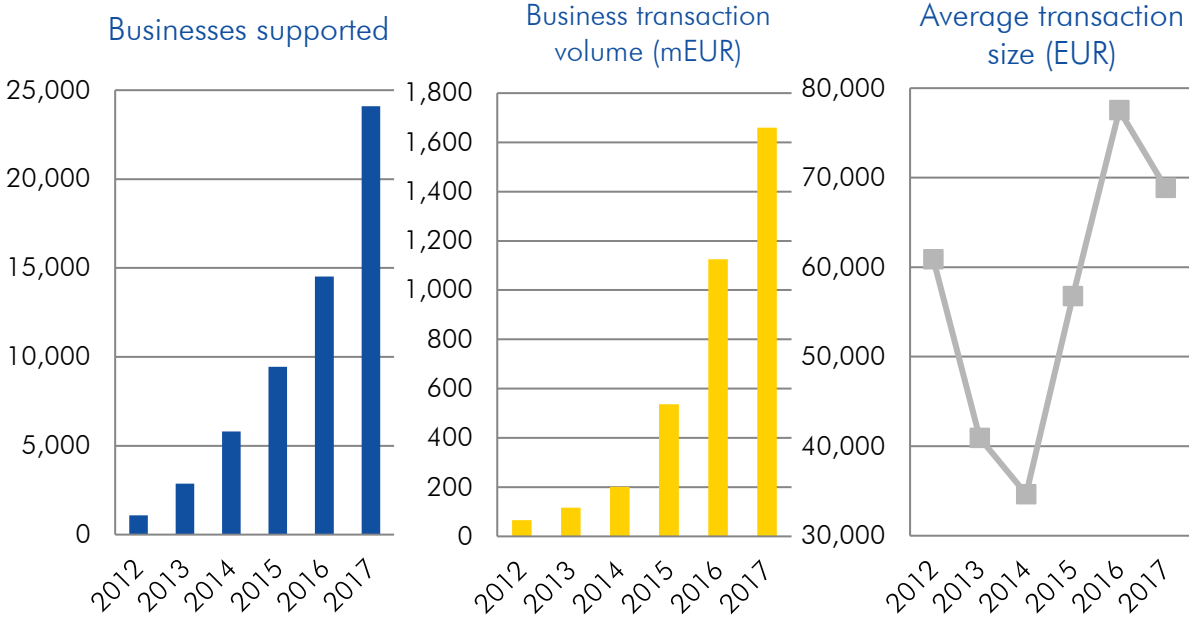
In 2017, the total volume raised on debt-based¹¹⁵ crowdfunding platforms grew by 68% and exceeded the EUR 1bn barrier for the first time (Figure 78), thereby further increasing its dominance on the business CF market. The market share of debt-based platforms now covers just shy of 80% of the total business related transaction volume. Equity-based CF grew at a more modest rate of 12%.

¹¹³ This section uses data derived from the annual European Alternative Finance Benchmarking Report, produced by the Cambridge Centre for Alternative Finance (CCAF, 2019), which details the results of an annual survey among 269 CF platforms that reported operations across Europe (excl. UK).

¹¹⁴ Most recent data available at the time of writing.

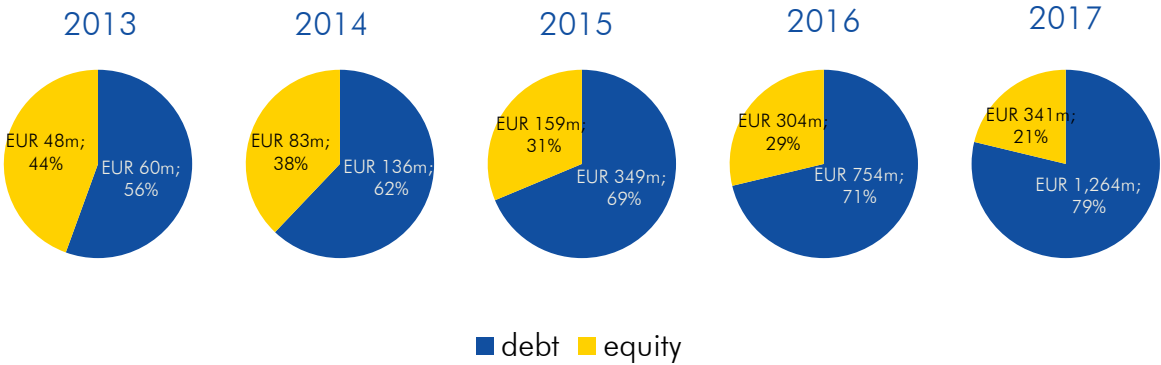
¹¹⁵ P2P Business Lending, Balance Sheet Business lending, Invoice Trading, Minibonds, and applicable volumes from P2P Consumer Lending, P2P Property Lending, Balance Sheet Consumer Lending and Debt-based Securities.

Figure 77: The evolution of business-related transaction volume¹¹⁶ on the crowdfunding market from all platform types in Europe (excl. UK) and the number of fundraising SMEs.



Source: Cambridge Centre for Alternative Finance (2019)

Figure 78: Business financing on equity¹¹⁷ and debt-based crowdfunding platforms: transaction volumes raised on equity vs debt-based models (mEUR)



Source: Cambridge Centre for Alternative Finance (2019)

¹¹⁶ Business-related transaction volumes are the aggregate of P2P business lending, balance-sheet business lending, invoice trading, equity-based CF, debt-based securities, profit-sharing CF and mini-bonds, alongside business-related volumes of P2P Consumer and Property Lending, Consumer and Property Balance Sheet lending, Real Estate CF, Donation-based CF and the reward-based CF models (CCAF, 2019).

¹¹⁷ Equity-based Crowdfunding, Profit Sharing and relevant parts of real-estate CF.

Activity on CF models most relevant to businesses¹¹⁸

Invoice trading overtook P2P business lending as most prominent platform model with a total investment volume exceeding EUR 500m, more than doubling the amount raised one year earlier. While both segments account for the vast majority of debt-based CF growth, a variety of smaller alternative debt-based model (balance sheet lending, debt based securities and minibonds) confirmed their growth potential in 2017 and secured their spot in the business CF landscape (Figure 79). The only debt platform that did not manage to report positive growth figures was reward-based CF, a further indication the business-related CF market is converging towards a more mature state. Interestingly, after four consecutive years of growth, the total volume raised on traditional equity-based CF platforms decreased by 4%.¹¹⁹

Average deal size decreased on most platforms. Also in 2017, they were highest for real estate CF (EUR 388,608, down from EUR 453,536), followed by equity CF (EUR 214,690, down from EUR 302,621). Expectedly, average deal sizes are significantly smaller on debt-based platforms, such as P2P Business Lending (EUR 66,455, down from EUR 111,633).

Institutionalisation

Two-thousand seventeen was the year of the retail investor, as institutional investors significantly decreased their involvement in the CF market, across all platform types (Figure 80). A total of EUR 452m originated from institutional investors, around 13% of total alternative finance volume. Per 2017, rates of institutionalisation were highest for invoice trading, where almost 46% of funding volume came from institutional investors, a significant drop vis-à-vis 2016. Institutional involvement dropped to nearly zero in the P2P property lending market and declined to negligible proportions on the equity-based platforms (6%). The decline in institutional involvement is a potential explanatory factor in the observed drop in average deal sizes.

There are large geographical difference in institutional involvement. In the leading markets, institutionalisation rates of alternative finance models are insignificant and account for just 6% of funding in France and 5% in Germany. In contrast, CF platforms in Italy (45%), Ireland (43%) and the Nordics (21%) source a much higher share of funds from institutional investors.

The institutionalisation of the CF sector is seen by some as a drift away from the essence of the CF concept. However, institutional involvement could contribute to the stability and continuity of the CF sector. Institutional investors, often seen as 'the smart money', can serve as a signal for quality, thereby attracting other investors and increasing a project's chances to get fully funded (Lin et al., 2015). On the other hand, if institutional investors are better (and faster) at "picking winners", they could crowd out retail investors from quality projects, leaving the crowd only with the lemons. The evidence whether institutional investor portfolios outperform the crowd is mixed. While some studies have shown that institutional portfolios do not consistently outperform those of retail investors (Lin et

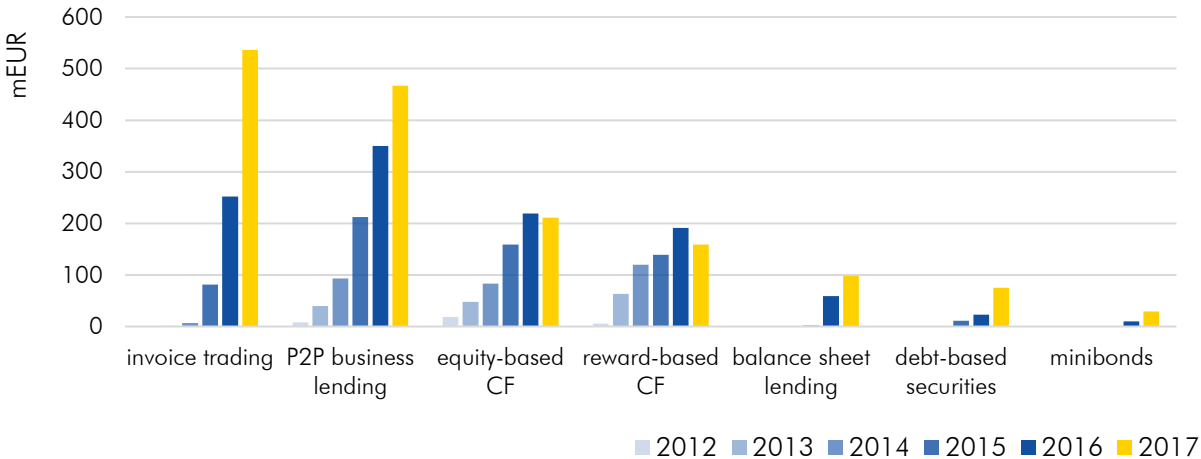
¹¹⁸ While some of the models listed in Figure 79 are inherently business focused, others cater to both consumers and business. Unfortunately the statistics available do not allow to distinguish between business and consumer focused funding volumes at the level of the platform type. Hence, the statistics presented in Figure 78 and Figure 79 diverge.

¹¹⁹ As shown in Figure 78, in the aggregate, funding volume on equity platforms grew nevertheless, which was driven by growth on the business-related real estate CF market. The volume raised on profit-sharing platforms also decreased (from EUR 8m to 2m).

al., 2015), others come to the opposite conclusion. Mohammadi and Shafi (2017) showed that institutions significantly outperformed the crowd. This performance gap grew larger for risky and small loans, implying that the general crowd seems to lack the investment expertise that institutions bring to the table.

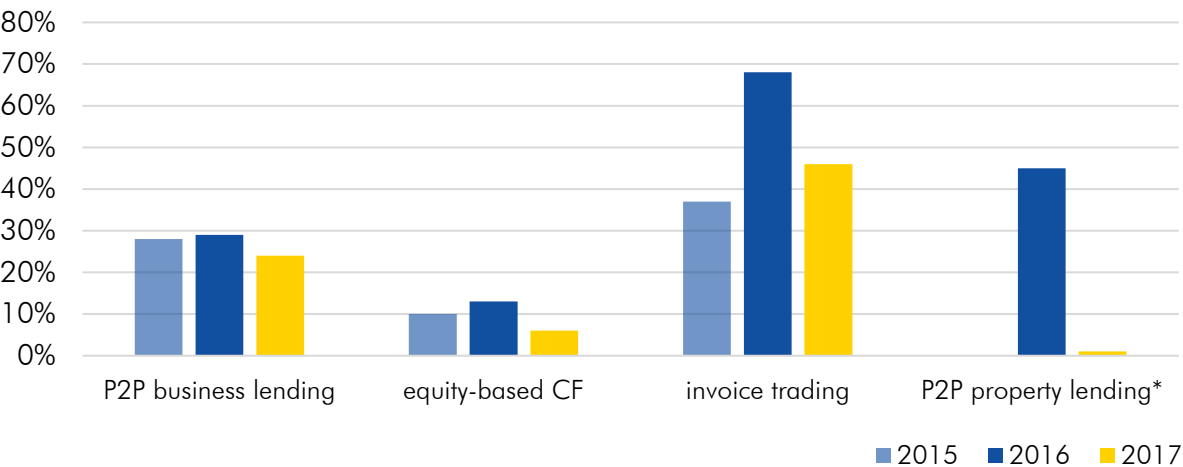
Other collaborative mechanisms between traditional finance institutions and CF platforms can take the form of referral agreements, where banks refer SMEs who are not eligible to receive credit through traditional means to selected platforms. This practice is most common among platform type focussing on business finance, such as balance sheet business lending, where 86% of platforms reported to have such an arrangement in place (CCAF, 2019), P2P business lending (34%) or invoice trading (23%). Also 35% of equity based CF models had referral agreements, but with VC funds or Business Angels.

Figure 79: The evolution of funding volumes on selected CF platform models (mEUR)



Source: Cambridge Centre for Alternative Finance (2019)

Figure 80: The percentage of institutional investments per CF platform type



* There was no P2P property lending in 2015, as opposed to institutionalisation rates being zero
 Source: Cambridge Centre for Alternative Finance (2019)

On-boarding and successful funding

For a project to be successfully funded, it generally needs to pass two important hurdles: first, before it gets published by a platform, the platform generally requires projects to meet certain criteria (the process of 'on-boarding'). Once published, evidently, the project needs to attract sufficient funding for the campaign to be considered successful. The on-boarding rates are lowest for P2P business lending, where just 17% of all fundraisers is accepted on the platform (up from 12% in 2016). The subsequent successful funding rate is accordingly relatively high, with 83% of issuers successfully reaching the desired funding levels. Also debt-based securities platforms had relatively low on-boarding rates (12%) which also in this case translated into a high successful funding rate (95%). On-boarding rates for invoice trading are much higher as they rose from 28 to 61% in 2017 (due to a high proportion of repeat borrowers). This did not negatively impact funding rates, which also rose strongly from 65 to 88%. The general increase in funding rates could partly be explained by the decline in scale on most CF platforms, as documented above.

Internationalisation

Internationalisation rates increased significantly between 2016 and 2017. The proportion of CF platforms that focussed exclusively on the domestic market, for funding inflows or investment outflows, decreased strongly. On the inflow side, just 1 in 10 platforms relied solely on national funders, compared to 1 in 4 in 2016. Nearly 70% of platforms sourced at least 10% of total inflows from funders abroad. Considering investment outflows, CF platforms still mostly focus on the domestic market: per 2017, 4 in 10 platforms invested only in domestic beneficiaries (down from 5 in 10 in 2016). While the remaining 60% of platforms did report some international investment activity, for the majority the share of international investments remains relatively limited and does not exceed 10% of total investment volume.

The increasing internationalisation in the CF sector increases the economic viability of commercial CF platforms, as it allows them to attain a critical mass beyond what is achievable when operating on a domestic scale. This comes at the benefit of SMEs in smaller Member States specifically, as it contributes to the formation of the European CMU and boosts future growth prospects of the European CF sector in general. Remaining hurdles to internationalisation are predominantly rooted in legislative issues, as differences in national legislation can drive platforms' decisions to focus solely on the domestic market (Zetzsche and Preiner, 2018). A unified European regulatory framework could therefore further stimulate growth in the sector (Chervyakov and Rochol, 2019). The European Commission has recently announced a new regulatory framework for the operation of CF platforms, which aims to harmonise the minimum requirements on these platforms across the EU. A common set of prudential, information and transparency requirements should ensure a high level of investor protection and promote the provision of cross-border CF operations (European Commission, 2019 June 23).

7.3 Fintechs: the end of the financial system as we know it?

Fintechs are often regarded as a disruptive force which poses a threat to incumbent market players, but in reality, Fintechs often serve markets that are not served by traditional market participants. Take CF, for example, which is often touted as a substitute to traditional external finance markets (D'Ambrosio and Gianfrate, 2016). In reality, however, CF tends to complement existing financing

sources. This holds true both at the investor level as at the aggregate level. At the investor level, equity CF fills funding gaps at the lower end of the market (Walthoff-Borm et al., 2018) and is often used side-by-side with angel funding, where the funding of the crowd complements the investment savviness of angel investors (Hornuf and Schwienbacher, 2016). A recent study found that the participation of qualified investors such as VCs or BAs in a funding round on CF platforms is positively correlated with companies' long term survival prospects (Signori and Vismara, 2017). Hence, participation of experienced investors can serve as a quality signal to attract the crowd at large. The observation that Fintech complements the traditional finance market is supported by the fact that, following the financial crisis, Fintech investment flourished primarily in markets without a major financial centre (Cumming and Schwienbacher, 2018). Especially the combination of a growing economy and an underdeveloped, uncompetitive banking system proves to be a fertile ground for the emergence of a vibrant Fintech ecosystem (Claessens et al., 2018).

The impact of Fintech innovations on value creation in the traditional financial sector depends on the underlying technology. By investigating the effect of patent filings on financial companies' stock value, Chen et al. (2019) show that the emergence of innovations using Blockchain, Robo-advising and Internet-of-Things technologies in general positively impact the overall market value of listed financial sector companies. Hence, these technologies are believed to increase incumbent players' efficiency, or reinforce existing network effects, thereby improving their competitive position in the market. However, not all Fintech categories bring about positive value. Emerging technologies in the field of Data Analytics, for example, tend to destroy aggregate financial stock market value, implying that such technologies are believed to erode the profit generating potential of large incumbent financial players, "by opening the door to new business models, new entrants and increased competition" (Chen et al., 2019).

7.4 Fintechs: going forward

Fintechs are becoming a market force to be reckoned with. Their presence puts substantial pressure on incumbent market players to react, either by scaling up investments in in-house technological innovations or buying/merging with emerging Fintechs before they become a threatening competitive force. These developments have the potential to positively impact SME financing as the portfolio of financing sources enlarges and the cost of financing decreases. Preliminary figures seem to indicate that the exponential growth in Fintech investments has come to a halt for now, but future updates will confirm whether this indicates a trend reversal, or that the slowdown is only temporary.

While Fintech innovations undoubtedly open a window of opportunity, they also bring about a number of significant challenges. The current reversal of the economic cycle, for example, will prove to be an important test for the stability of the marketplace lending platforms, who have since their emergence mostly operated in relatively favourable economic conditions. The issues associated with the turning of the credit cycle, however, could partly be mitigated by the recent professionalisation of the sector (Moody's, 2019).

Others have raised concerns that the growing Fintech ecosystem poses new risks to the global financial system, stressing the need for regulators to modernise legal frameworks to address issues concerning financial stability, cybersecurity, money-laundering and terrorism financing (IMF, 2019a). Non-harmonised national regulations can bring about consumer protection issues, as digital

technology allows for newly formed financial institutes to rapidly expand their activities beyond the borders of the jurisdiction under which they are regulated. This is where international financial organisations can and should play an important role, acting as standard-setting bodies and bringing together national regulators.

Particular concerns are raised about the entry of Bigtech into the financial sector. These large international players could pose new threats to financial stability, data protection, and competition. In this context, it is important that regulators ensure a level playing field between incumbent firms, Bigtech, and Fintech start-ups (BIS, 2019a).¹²⁰

¹²⁰ For more details concerning big techs in finance, see BIS (2019).

8 Concluding remarks

The financing outlook of European SMEs has been roughly stable since the publication of the latest ESBFO in June 2019. However, since then, the outlook for the European economy has worsened and risks are tilted to the downside. For example, uncertainty about how global trade disputes will evolve continues to weigh on investors' sentiment. On the bright side, it can be expected that the conservative party's absolute majority will help push the Brexit deal through parliament, possibly ending three years of ongoing uncertainty.

In addition, developments in financial market conditions have been geographically unbalanced and several countries are stuck in a low growth trap. For example, new credit flows to SMEs do not improve in many countries (OECD, 2019a). Reasons can be both demand- and supply-side driven. In several countries, there is a high degree of uncertainty as regards the economic development – with a negative impact on investment behaviour.

The SME financing market also remains prone to structural failures. On the demand side, according to the OECD (2019a), more SMEs rely on self-financing for their growth: survey data suggests that a significant portion of SMEs do not apply for bank loans because they have access to sufficient internal funds. Another explanation could be that they - as a lesson from the crisis – are more risk adverse and exchange stronger growth, based on higher indebtedness, by slower growth with lower leverage.

On the supply side, low interest rates cause pressure on banks' profitability, and this is turning from a temporary, cyclical issue to a long term structural issue – therefore, further lowering the interest rates is unlikely to have stimulating effect on SME lending. Borio and Gambacorta (2017) analysed the effectiveness of monetary policy on bank lending in a low interest rate environment. Their empirical research suggests that monetary policy is less effective in stimulating bank lending growth when interest rates reach a very low level.

Digitalisation plays an increasingly important role in SME financing, as evidenced by the growing importance of new financing instruments (e.g. equity crowdfunding, peer-to-peer lending). Policies to support these developments, in particular through the adoption of appropriate regulatory frameworks, are gaining ground (OECD, 2019a).

A significant proportion of European SMEs still experience barriers in access to finance. This proportion varies strongly from country to country. In general, microenterprises, start-ups, young SMEs, and highly innovative firms continue to endure finance problems.

For EIF, it is a key priority to help establish a well-functioning, liquid *equity market* that attracts a wide range of private sector investors. In doing so, EIF aims at leveraging its market assistance and seizing market opportunities in all areas of the equity eco-system which are relevant to the sustainable development of the industry. In the coming years, EIF will continue to act as a cornerstone investor across the spectrum of Technology Transfer through venture capital to the Lower Mid-Market and mezzanine financing. This also includes the launch and extension of new/pilot initiatives. EIF's actions and efforts are perfectly in line with one of the proposed priorities of the Next CMU High-Level Group, namely to massively develop European equity markets.

Box 18: Re-tooling the CMU – Recommendation to massively develop equity markets

The important CMU project is not yet finished and the “Next CMU High-Level Group” (the Group) presented an initial thematic approach to the informal ECOFIN on the 13th September 2019 (Helsinki). The Group proposes a priority shift from the first phase of the CMU that focused on revitalising EU’s capital market ecosystem to a new phase that gives priority to responses to citizens’ needs and to the investment in the real, digital, and sustainable EU economy – in line with the priorities of the new European Commission (people, sustainability and digitalization).

Within the current geopolitical, social and economic context, the Group invites political leaders to focus on two major objectives:

1. Adopting and promoting a capital market that offers saving products to serve citizens’ needs and that allocates capital to value creating investments in the real, innovating and sustainable economy.
2. Building/strengthening an integrated, competitive, deep and liquid European Capital Market, to maintain the EU as one of the top 2 financial centres of the world.

The Group has reached the conclusion that strong and determined political action on an EU and national level should focus on four capital market components, where significant progress can be achieved:

1. Generate more long-term savings and investment opportunities
2. Massively develop equity markets
3. Increase financial flow fluidity between EU financial market places
4. Develop debt, credit and forex financing tools in a manner that increases the international funding currency role of the Euro.

In relation to the second proposed priority, to develop massively the equity markets in Europe, the Group recommends to:

1. Accelerate the development of EU VC and PE markets (i.e. increase the availability of funding for VC investments and develop larger late-stage VC funds above EUR 1 bn; accelerate private investments by directing public funding towards VC and PE funds, and local fund of funds targeting midsize institutional investors; increase transparency and reduce fragmentation with the European VC markets; work on tax obstacles; boost ELTIF, EuVECA and EuSEF to develop pan European “UCITS like” vehicles for private assets).
2. Significantly simplify access to the public markets for SMEs and Mid-Caps (i.e. definition of a new category of experienced High Net Worth investors; revision of the SME definition adopted under MiFID to qualify in relation to SME Growth Markets; enable intermediaries and financial analysts to continue to produce research on SMEs and Mid-Caps; channel EU funds to the IPO phase through private and/or public funding; simpler process for launching SME Growth Markets; simplify market abuse and prospectus applicable rules; encourage SMEs and Mid-Caps to list on regulated markets).
3. Strengthen incentives for institutional investors to hold more equity (i.e. reduce disincentives to institutional investors to hold equity (adaption of the Solvency 2 framework and accounting rules).

Box 18 continued:

4. Facilitate cross-border investments and access to the EU pool of liquidity (i.e. open language regimes to a wider use of English; central information points; easing to exercise shareholder rights cross border; reduce differences in the setup of account structures and securities holding regimes).

5. Further build EU's equity market ecosystem (i.e. EU's regulatory framework should favour its capital markets ecosystem).

For more details see: Next CMU High-Level Group (2019).

At the informal ECOFIN in September, ministers discussed the EU's priorities in the field of the CMU for the next institutional cycle. Based on the fruitful discussion at the meeting and a shared desire to continue works on CMU, at October's ECOFIN, the Commission decided to launch the High-Level Forum on Capital Markets Union. The High-Level Forum started its work on November 26 and is divided into three subgroups:

- Subgroup on Ecosystem for capital raising, with special focus on SMEs;
- Subgroup on Retail investor participation and diversification of investor base;
- Subgroup on Pan-European market architecture.

The October 2019 ECOFIN decided to prepare the Council Conclusions on the CMU. At the time of finalising this report these Conclusions were not yet finalised. However, it can be assumed that the topic of ensuring access to finance for European enterprises, in particular for SMEs and including the stimulation of equity markets to reduce the existing debt bias in the EU, will be set as a priority.

In the areas of *credit guarantees* and *securitisations*, EIF cooperates with a wide range of financial intermediaries. They include: banks, leasing companies, guarantee funds, mutual guarantee institutions, promotional banks, and other financial institutions that provide financing or financing guarantees to SMEs, such as debt funds. Given that SMEs have no direct access to the capital markets, banks are typically the most important source of external SME finance. Hence, funding limitations of banks have direct impact on SME lending capacity. For loans to SMEs, a standardised, transparent and quality-controlled securitisation market could transform these illiquid loans into an asset class with adequate market liquidity.

Microfinance is an important contribution to overcoming the effects of the crisis, and in particular to supporting inclusive growth. EIF provides funding, guarantees and technical assistance to a broad range of financial intermediaries, from small non-bank financial institutions to well-established microfinance banks to make microfinance a fully-fledged segment of the European financial sector. Moreover, EIF intends to sustain its support of microcredit, social investments, and participation in the increasing number of social finance institutions that are being established in Europe.

Fintechs are becoming an integral part of the SME financing landscape. They are drivers of new business models, new financing channels, and not least they are often successful start-ups and SMEs themselves. Established market players have various ways to react to the Fintech challenge, i.e. they can imitate (e.g., through the introduction of dedicated own platforms), they can go for cooperation/partnerships (e.g., through joint ventures, common platforms), or they can go the M&A

route and integrate such companies. New blending solutions are emerging, in particular in the fields of crowdfunding (both, lending and equity) – examples are combinations of microfinance and crowd lending, business angel/venture capital financing and crowd investing, or banks using marketplace lenders as distribution channels. Fintech market players can potentially play an important role in enhancing access to finance for SMEs, as counterparts in SMESec transactions, and as well as final beneficiaries/investee companies. Moreover, Fintechs might help to reduce the pronounced asymmetric information problem in small business lending, through technological advances in information processing, such as the increasing ability to handle and process ‘big data’, which mitigates the problem of high fixed costs for (small) loans.

Given their growing importance in the financing landscape, EIF is stepping up its involvement in Fintech transactions by investing in, or providing guarantees to, Fintech entities. The developments on the Fintech market and EIF’s related involvement and support are perfectly in line with the CMU’s goal to diversify the financing possibilities for SMEs. In this context EIF observes that Fintechs are often faced with limitations in relation to their cross-border business as they are often prevented from carrying out lending activities as a result of local law licensing requirements. As part of the Capital Markets Union, allowing Fintechs to operate seamlessly within the EU by creating a pass-porting and licensing framework would go a long way towards creating a pan-European Fintech market.¹²¹

There is now the positive trend that sustainability considerations are more and more playing a role in financing. There are still many issues to be solved, in particular with regard to definitions and the availability of data. In this regard, many initiatives are underway - for example the European Commission’s EU taxonomy for sustainable activities (also linked to the CMU), or the Principles for Responsible Investments initiative. We showed throughout this document examples for areas of *SME financing* where aspects of sustainability are gaining importance. In addition to the already more “traditional” coverage of impact investing and social inclusion financing/microfinancing, we elaborated for example on the financial risks associated with the transition to a carbon-neutral economy, the use of ESG criteria in the investment decision processes of venture capital funds and business angels, referred to the use of such criteria in the lending decisions of banks, or to the rating process for securitisation transactions. Moreover, we briefly presented the concept of green securitisation. These topics address pressing societal challenges and they are very high on EIF’s agenda. Naturally, the gradual incorporation of sustainability considerations into EIF’s decision making is underway in order to support smart, sustainable, and inclusive growth.

¹²¹ A detailed overview regarding the CMU and how it can support SME financing is provided in Kraemer-Eis and Lang (2017). A critical assessment of the current state of the CMU can be found in Lannoo and Thomadakis (2019).

References

- ACC (2019). Financing the economy. The future of private credit. 20 November 2019.
- Acevedo, M.F., Adey, M., Bruno, C., del Bufalo, G., Gazaniol, A., Lo, V., Metzger, G., Perez, B.N., van der Schans, D., and Thornary, B. (2016). France, Germany, Italy, Spain and the United Kingdom – Building Momentum in Venture Capital across Europe. Published by Bpifrance, CDP, ICO, British Business Bank, KfW.
- AECM Scoreboard H1 2019: Figures of the European Guarantee Sector providing a half-yearly trend indication on the evolution of the guarantee activity in Europe. AECM Publishing, Brussels.
- Affinito, M., & Farabullini, F. (2009). Does the law of one price hold in euro-area retail banking? An empirical analysis of interest rate differentials across the monetary union. *International Journal of Central Banking*, 5(1), pp. 5-37.
- AFME (2017). The Shortage of Risk Capital for Europe's High Growth Businesses. Published by AFME in conjunction with Accountancy Europe, BAE, BusinessEurope, Deutsche Börse Group, eban, European Investment Fund, Euronext, European Crowdfunding Network, FESE, Invest Europe, London Stock Exchange Group, Nasdaq.
- AFME (2019a). Securitisation data report. European Structured Finance. Q2:2019.
- AFME (2019b). Data snapshot. AFME Securitisation. Q2:2019.
- AFME (2019c). Position Paper. Principles for developing a green securitisation market in Europe. September 2019.
- AFME (2019d). Data snapshot. AFME Securitisation. Q3:2019.
- AFME and BCG (2015). Bridging the growth gap - investor views on European and US capital markets and how they drive investment and economic growth.
- AFME, EBF, eurofinas, Leaseurope, DSA, efama, ICMA, Pensions Europe (2016). The importance of securitisation for jobs and growth in Europe. October 2016.
- Aiyar, S., Al-Eyd, A., Barkbu, B., and Jobst, A. (2015). Revitalizing Securitization for Small and Medium-Sized Enterprises in Europe. IMF Staff Discussion Note SDN/15/07. May 2015.
- Akerlof, G. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics*, 84 (3), 488–500.
- Albertazzi, U., Bottero, M., Gambacorta, L., and Ongena, S. (2017). Asymmetric information and the securitisation of SME loans. BIS Working Paper No. 601.
- Andonov, K. (2017). Deal numbers rebound in May. In Global Corporate Venturing: The GCV Symposium 2017. June 2017.
- Anginer, D., De la Torre, A. and Ize, A. (2014). Risk-bearing by the state: When is it good public policy? *Journal of Financial Stability*, 10, 76–86.
- Arping, S., Lóránth, G. and Morrison, A. (2010). Public initiatives to support entrepreneurs: Credit guarantees versus co-funding. *Journal of Financial Stability*, 6, 26–35.
- Arrow, K. (1985). Informational structure of the firm. *The American Economic Review*, 75 (2), 303–307.
- Asdrubali, P. and Signore, S. (2015). The Economic Impact of EU Guarantees on Credit to SMEs. Evidence from CESEE countries. European Commission's European Economy Discussion Paper 002 and EIF Working Paper 2015/29. July 2015.
https://www.eif.org/news_centre/publications/EIF_Working_Paper_2015_29.htm
- Atomico (2019). The State of European Tech : The most comprehensive data-driven analysis of European technology. In Partnership with Slush & Orrick. November 2019.
- Aubrey, T., Thillaye, R., and Reed, A. (2015). Supporting investors and growth firms: A bottom-up approach to a Capital Markets Union. Policy Network. 9 June 2015.

- BAE (2015). The European business angels market – an approximation.
- BAND (2016). BANDquartal: How to explore the landscape of Angel Investing in Europe. Issue 1/2016.
- Berg, T., Streitz, D., and Wedow, M. (2015). Real Effects of Securitization. BAFFI CAREFIN Centre Research Paper No. 2015-14.
- Berger, A. N., & Udell, G. F. (2006). A more complete conceptual framework for SME finance. *Journal of Banking & Finance*, 30(11), pp. 2945-2966.
- Bertoni, F. and Colombo, M. G. and Quas, A. (2018). The effects of EU-funded guarantee instruments on the performance of Small and Medium Enterprises: Evidence from France. EIF Working Paper 2018/52, EIF Research & Market Analysis. November 2018.
http://www.eif.org/news_centre/publications/EIF_Working_Paper_2019_52.htm
- Bertoni, F. and Tykvová, T. (2012). Which form of venture capital is most supportive of innovation? ZEW Discussion Papers. No. 12-018.
- Bertoni, F. Brault, J. and Colombo, M. G. and Quas, A. and (2019). Econometric study on the impact of EU loan guarantee financial instruments on growth and jobs of SMEs. EIF Working Paper 2019/54, EIF Research & Market Analysis. February 2019.
http://www.eif.org/news_centre/publications/EIF_Working_Paper_2019_54.htm
- Bertoni, F., Colombo, M.G., and Quas, A. (2015). The patterns of venture capital investment in Europe. *Small Business Economics*, 45(3), pp. 543-560.
- Bertoni, F., D’Adda, D., and Grilli, L. (2016). Cherry-picking or frog-kissing? A theoretical analysis of how investors select entrepreneurial ventures in thin venture capital markets. *Small Business Economics*, 46(3), pp. 391-405.
- BIS (2019a). Innovation in finance, finance for innovation. EIB Annual Economic Conference, Luxembourg, 27 November 2019.
- BIS (2019b). Big Tech in Finance: Opportunities and Risks. BIS Annual Economic Report. June 2019.
- BoA/ML (2016). European SF 2016-2017: On the threshold of a watershed year. Bank of America/Merrill Lynch, 30.11.2016.
- BoA/ML (2017). European SF weekly: A market on mute? Bank of America/Merrill Lynch, 17.11.2017.
- BoA/ML (2018). European SF weekly: Smooth disruption? Bank of America/Merrill Lynch, 05.10.2018.
- Borjas G.J., (1995), "The economic benefits from immigration", *Journal of Economic Perspectives*, 9 (2), 3-22.
- Borjas G.J., (1999), "Heaven’s door: immigration policy and the American economy", Princeton University Press.
- Borjas G.J., (2017), "The Earnings of Undocumented Immigrants", NBER Working Paper No. 23236.
- Botsari, A., Crisanti, A., and Lang, F. (2019). EIF VC Survey 2019 – Fund managers’ market sentiment and policy recommendations. EIF Working Paper 2019/59. EIF Research & Market Analysis. 17.09.2019.
- Brander, J.A., Du, Q., and Hellmann, T. (2014). The effects of government-sponsored venture capital: international evidence. *Review of Finance* (2014). 17.03.2014.
- Brault, J., and Signore, S. (2019). The real effects of EU loan guarantee schemes for SMEs: A pan-European assessment. EIF Working Paper 2019/56, EIF Research & Market Analysis. June 2019.
http://www.eif.org/news_centre/publications/EIF_Working_Paper_2019_56.htm
- Bravo-Biosca, A. (2011). A look at business growth and contraction in Europe. Nesta Working paper 11/02. December 2011.
- Brigl, M., Hong, M., Roos, A., Schmiegl, F., and Wu, X. (2016). Corporate Venturing Shifts Gears: How the Largest Companies Apply a Broad Set of Tools to Speed Innovation. The Boston Consulting Group. April 2016.

- Brinckmann, P. (2015). Influence of the entrepreneur's profile on the start-up's performance. Master Thesis. Delivered at the University of Trier. 15.10.2015. Mimeo.
- Bruhn-Leon, B., Eriksson, P.-E., and Kraemer-Eis, H. (2012). Progress for microfinance in Europe. EIF Research & Market Analysis. Working Paper 2012/013. January 2012.
http://www.eif.org/news_centre/research/index.htm
- Cambridge Center for Alternative Finance (2019). Shifting Paradigms. The 4th European alternative finance industry report, Cambridge Centre for Alternative finance.
- Capizzi, V. (2015). The Returns of Business Angels' Investments and Their Major Determinants. In *Venture Capital: An International Journal of Entrepreneurial Finance*. 17(4), 2015.
- Carroll, J., & McCann, F. (2016). Understanding SME interest rate variation across Europe. *Quarterly Bulletin Articles*, pp. 60-76.
- CBInsights (2019). The 2018 Global CVC Report.
- Chatzouz, M., Gereben, A., Lang, F. and Torfs, W. (2017). Credit Guarantee Schemes for SME lending in Western Europe. EIB Working Paper 2017/02 and EIF Working Paper 2017/42.
https://www.eif.org/news_centre/publications/EIF_Working_Paper_2017_42.htm
- Chen, M. A., Wu, Q., & Yang, B. (2019). How Valuable Is FinTech Innovation?. *The Review of Financial Studies*, 32(5), 2062-2106.
- Chervyakov, D. and Rocholl, J. (2019). How to make crowdfunding work in Europe. Holland Fintech - Policy contribution.
- Chong, T. T. L., Lu, L., and Ongena, S. (2013). Does banking competition alleviate or worsen credit constraints faced by small-and medium-sized enterprises? Evidence from China. *Journal of Banking & Finance*, 37(9), 3412–3424.
- Claessens, S., Frost, J., Turner, G., & Zhu, F. (2018). Fintech credit markets around the world: size, drivers and policy issues. *BIS Quarterly Review* September.
- Coller Capital (2017). Global Private Equity Barometer. Winter 2017-18. December 2017.
- Coller Capital (2019a). Global Private Equity Barometer. Summer 2019. 30 May 2019.
- Coller Capital (2019b). Global Private Equity Barometer. Winter 2019-20. 28 November 2019.
- Colombo, M.G., Cumming, D.J., and Vismara, S. (2014). Governmental Venture Capital for Innovative Young Firms. *The Journal of Technology Transfer*, 41(1), pp. 10–24.
- Council of the EU (2017a). Capital markets union: agreement reached on securitisation. Press release 314/17. 30.05.2017.
- Council of the EU (2017b). Capital markets union: Council adopts securitisation rules. Press release. 20.11.2017.
- Cour-Thimann, P. and Winkler, B. (2013). The ECB's non-standard monetary policy measures. The role of institutional factors and financial structure. *ECB Working Paper Series*. No 1528. April 2013.
- Creditreform Rating (2019). Debt Funds in Europe – Stuck Between Ultra-loose Monetary Policy and the Cyclical Downturn. *Financial Research*, September 2019.
- Crisanti, A., Krantz, J., and Pavlova, E. (2019). The VC factor: Data driven insights about VC-backed start-ups in Europe. Joint EIF – Invest Europe study. 5 December 2019.
- CSES (2012). Evaluation of EU Member States' Business Angel Markets and Policies. Final Report. October 2012.
- Cumming, D. J., & Schwienbacher, A. (2018). Fintech venture capital. *Corporate Governance: An International Review*, 26(5), pp. 374-389.

- Cumming, D.J., Grilli, L. and Murtinu, S. (2017). Governmental and independent venture capital investments in Europe: A firm-level performance analysis. June 30, 2014. *Journal of Corporate Finance*, 42, pp. 439-459.
- D'Ambrosio, M., & Gianfrate, G. (2016). Crowdfunding and Venture Capital: Substitutes or Complements?. *The Journal of Private Equity*, 20(1), pp. 7-20.
- De Grauwe, P. (2019). Green money without inflation. *Social Europe*.
- de Lange, T. (2018). Welcoming talent? A comparative study of immigrant entrepreneurs' entry policies in France, Germany and the Netherlands. *Comparative Migration Studies*.
<https://doi.org/10.1186/s40878-018-0092-4>
- Dealroom.co (2018). The Journey to Series A in Europe: Fundraising benchmarks for founders of early-stage companies. Part 1. In partnership with Atomico and LocalGlobe. 6 November 2018.
- Deloitte (2019a). Direct Lenders deployment keeps pace with exponential fundraising. *Deloitte Alternative Lender Deal Tracker Autumn 2019*.
- Deloitte (2019b). Direct Lenders on a path to disruption with gorilla deals. *Deloitte Alternative Lender Deal Tracker Spring 2019*.
- Dubovik, A., and Steegmans, J. (2017). The Performance of Publicly Managed Venture Capital Funds. CPB Discussion Paper No. 355.
- Durufflé, G., Hellmann, T. and Wilson, K. (2017). From Start-up to Scale-up: Examining Public Policies for the Financing of High-Growth Ventures. Prepared for the CEPR/Assonime Programme on "Restarting European Long Term Investment Finance". Date Written: 01.09.2016. Saïd Business School WP 2017-05.
- EBA (2018a). Draft guidelines on the STS criteria for non-ABCP consultations. 20.04.2018.
- EBA (2018b). EBA report on the European secured notes (ESNs). 24.07.2018.
- EBA (2018c). The EBA 2019 Work Programme. 23.10.2018.
- EBA (2019, 2 July) EBA Basel assessment sees impact driven by large banks. EBA Press Release.
- EBA (2019a). Draft guidelines on loan origination and monitoring. Consultation paper. EBA/CP/2019/04. 19.06.2019.
- EBA (2019b). Draft Report on STS Framework for Synthetic Securitisation under Art. 45 of Regulation (EU) 2017/2402. Discussion paper. 24.09.2019.
- EBAN (2014). *Statistics Compendium*.
- EBAN (2018). *EBAN Statistics Compendium 2017. European Early Stage Market Statistics*. July 2018.
- EBAN (2019). *EBAN Statistics Compendium 2018. European Early Stage Market Statistics*. November 2019.
- EBAN and BAE (2019). *The European angel barometer*. Brussels, 26 November.
- EBF (2015). *Financial dialogue. Fostering financial knowledge among European SMEs*.
- ECB (2013). *Cost-of-borrowing indicators. Methodological note*.
- ECB (2016). *Report on financial structures*. October 2016.
- ECB (2019c). *Implications of the transition to a low-carbon economy for the euro area financial system*. Speech by Luis de Guindos, Brussels, 21 November 2019.
- ECB (2019a). *Survey on the access to finance of enterprises in the Euro Area*. April 2019 to September 2019. November 2019.
- ECB (2019b). *Survey on the access to finance of enterprises in the Euro Area*. April to September 2019. November 2019.
- ECB (2019b). *The Euro Area bank lending survey. Fourth Quarter 2019*. October 2019.

Echikson, W. (2017). Step aside Silicon Valley, there is a new tech hub in town. World Economic Forum, published in collaboration with Project Syndicate. 19.4.2017.

EIF (2016). Annual Report 2015. Supporting smart, sustainable and inclusive economic growth for SMEs. 02.05.2016.

EIF (2017). Annual Report 2016. Supporting smart, sustainable and inclusive growth for SMEs. 25.04.2017.

EIF (2019). Annual Report 2018. 09.04.2019.

EMN (2012). Bendig, M., Unterberg, M., and Sarpong, B. (2012). Overview of the Microcredit Sector in the European Union 2010-2011. European Microfinance Network (EMN). 27.12.2012.

EMN (2017). Assessing the European market potential of business microcredit and the associated funding needs of non-bank MFIs. February 2017.

EMN (2018). Assessing the European market potential of business microcredit and the associated funding needs of non-bank MFIs. February 2018.

EMN-MFC (2016). Microfinance in Europe: A Survey of EMN-MFC Members. Report 2014-2015. 2016.

EMN-MFC (2018). Microfinance in Europe: Survey Report 2016-2017. December 2018.

Epsilon Research (2019). Argos Index mid-market. Q3 2019. 20 November 2019.

Euler Hermes (2019). Macroeconomic, Country Risk and Global Sector Outlook. Economic Outlook. October, 2019.

European Commission (2011). Social Business Initiative, COM/2011/0682.

European Commission (2016). Europe's next leaders: the Start-up and Scale-up Initiative. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. COM(2016) 22.11.2016.

European Commission (2017a). Mid-term review of the capital markets union action plan. 08.03.2017.

European Commission (2017b). Understanding the Nature and Impact of the business angels in funding Research and Innovation. A study funded by the European Commission. Final Report. December 2017.

European Commission (2018). Annual Report on European SMEs 2017/2018 – SMEs growing beyond borders. November 2018.

European Commission (2019). Annual Report on European SMEs 2018/2019 – Research & Development and Innovation by SMEs. November 2019.

European Commission (2019, 23 June). Capital markets union: Council sets its position on easier access to crowdfunding platforms. European Commission Press Release.

European Commission (2019a). Annual Report on European SMEs 2018/2019 – Research & Development and Innovation by SMEs. November 2019.

European Commission (2019b). Autumn 2019 Economic Forecast. A challenging road ahead. Economic and Financial Affairs. Institutional Paper 115.

European Economic and Social Committee, EESC (2017), "Assessment of the effectiveness of the EU SME policies 2007-2015".

FitchRatings (2019a). Structured Finance Losses: EMEA 2000 – 2018 Issuance. Special Report. 13.05.2019.

FitchRatings (2019b). SME CLO Compare. October 2019.

FitchRatings (2019c). What investors want to know: structured finance and covered bond ESG relevance scores. Marketing the intersection of credit risk and ESG risk. Special report. Sustainable finance. 15.10.2019.

- FitchRatings (2019d). Introducing relevance scores for structured finance and covered bonds. Special Report. Structured finance and covered bonds. 15.10.2019.
- Frost, J., Gambacorta, L., Huang, Y., Shin, H. S., & Zbinden, P. (2019). BigTech and the changing structure of financial intermediation. BIS Working Paper
- GCA Altium (2019). MidCapMonitor Q3 2019.
- GEM (2019). 2018/2019 Global Report. Global entrepreneurship monitor.
- Hellmann, T., and Thiele, V. (2017). Fostering Entrepreneurship: Promoting Founding or Funding? Saïd Business School Research Papers RP 2017-04. Available at SSRN: Hellmann, Thomas F. and Thiele, Veikko, Fostering Entrepreneurship: Promoting Founding or Funding? January 2017.
- Hellmann, T., Schure, P., and Vo, D. (2015). Angels and Venture Capitalists: Substitutes or Complements? February 2015.
- Holmstrom, B. and Tirole, J. (1997). Financial intermediation, loanable funds and the real sector. *The Quarterly Journal of Economics*, 112 (3), 663–691.
- Honohan, P. (2010). Partial credit guarantees: Principles and practice. *Journal of Financial Stability*, 6, 1–9.
- Hornuf, L., & Schvienbacher, A. (2016). Crowdfunding: angel investing for the masses? *Handbook of research on business angels*, pp. 381-396.
- Huerga, J., Puigvert, J. and Rodriguez C., (2012). Enhancements on ECB MFI interest rate statistics. In: OECD – The statistics newsletter. Issue No. 55. March 2012
- IMF (2019a). *Fintech, the experience so far*. IMF Fintech Policy Paper
- IMF (2019b). World Economic Outlook, October 2019: Global manufacturing downturn, rising trade barriers.
- Integer Advisors (2018). Securitisation Regulation – More by way of prescriptions. 20.02.2018.
- Invest Europe (2019a). 2018 European Private Equity Activity. Statistics on Fundraising, Investments & Divestments. Presentation as of 29.04.2019. Published 3 May 2019.
- Invest Europe (2019b). H1 2019 European Private Equity Activity. Statistics on Fundraising, Investments & Divestments. Presentation as of 23.10.2019. Published 23 October 2019.
- Jaffee, D. and Russell, T. (1976). Imperfect information, uncertainty, and credit rationing. *The Quarterly Journal of Economics*, 90 (4), 651–666.
- James, K. and Parker, I. (2019). New growth in the green securitisation market. Simmons & Simmons. January 2019.
- Kaplan, S.N., and Lerner, J. (2016). Venture Capital Data: Opportunities and Challenges. NBER Working Paper 22500. August 2016. Published in Haltiwanger, J., Hurst, E., Miranda, J., and Schoar, A. (eds.), *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*. 2017.
- Kara, A., Marques-Ibanez, D., and Ongena, S. (2015). Securitization lending standards: evidence from the European wholesale loan market. *International Finance Discussion Papers* 1141. August 2015.
- Kaya, O (2017). Synthetic securitisation. Making a silent comeback. Deutsche Bank Research. 21.02.2017.
- Kaya, O. (2014). SME financing in the Euro Area. New solutions to an old problem. EU Monitor – Global Financial Markets. Deutsche Bank Research. 14.10.2014.
- Kaya, O. and Masetti, O. (2018). Small- and medium-sized enterprise financing and securitisation: firm level evidence from the euro area. In *Economic inquiry*, June 2018.
- Kelly, R. (2011). The performance and prospects of European Venture Capital. EIF Working Paper 2011/009. May 2011. http://www.eif.org/news_centre/research/index.htm

Kerr W.R., Lerner, J., and Schoar, A. (2011). The Consequences of Entrepreneurial Finance: Evidence from Angel Financings. *Review of Financial Studies*. vol.27(1), pp. 20-55.

KPMG (2019). The pulse of fintech - H2 2018, Global report on fintech investment trends in H2'18. February 2019. KPMG Report.

Kraemer-Eis, H. (2014). Institutional non-bank lending and the role of Debt Funds. With contributions from F. Battazzi, R. Charrier, M. Natoli, M. Squilloni. EIF Working Paper 2014/25. October 2014. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H. and Conforti, A. (2009). Microfinance in Europe. A market overview. EIF Working Paper 2009/001. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H. and Lang, F. (2012). The importance of leasing for SME finance. EIF Working Paper 2012/15. August 2012. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H. and Lang, F. (2014). The importance of leasing for SME financing. In *World Leasing Yearbook 2014*. Euromoney. January 2014. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H. and Lang, F. (2017). Access to funds: How could CMU support SME financing? In Kotz, H.-H., and Schäfer, D. (2017). *EU Capital Markets Union – alluring opportunity or blind alley?* DIW Vierteljahrshefte zur Wirtschaftsforschung (Quarterly Journal of Economic Research). October 2017.

Kraemer-Eis, H. and Schillo, M. (2011). Business Angels in Germany - EIF's initiative to support the non-institutional financing market. EIF Working Paper 2011/011. November 2011. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H., Botsari, A., Brault, J., and Lang, F. (2019). EIF Business Angels Survey 2019 - Market sentiment, public intervention and EIF's value added. EIF Working Paper 2019/60. EIF Research & Market Analysis. 20 November 2019. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H., Botsari, A., Gvetadze, S., and Lang, F. (2018a). EIF VC Survey 2018: Fund managers' market sentiment and views on public intervention. EIF Working Paper 2018/48. April 2018. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H., Botsari, A., Gvetadze, S., and Lang, F. (2018b). EIF VC Survey 2018: Fund managers' perception of EIF's value added. EIF Working Paper 2018/51. September 2018. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H., Botsari, A., Gvetadze, S., Lang, F., and Torfs, W. (2019). European Small Business Finance Outlook: June 2019. EIF Working Paper 2017/56. EIF Research & Market Analysis. June 2019. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H., Botsari, A., Gvetadze, S., Lang, F., and Torfs, W. (2018a). European Small Business Finance Outlook: June 2018. EIF Working Paper 2017/50. EIF Research & Market Analysis. June 2018. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H., Botsari, A., Gvetadze, S., Lang, F., and Torfs, W. (2018b). European Small Business Finance Outlook: December 2018. EIF Working Paper 2017/53. EIF Research & Market Analysis. December 2018. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H., Botsari, A., Gvetadze, S., Lang, F., and Torfs, W. (2017a). European Small Business Finance Outlook: June 2017. EIF Working Paper 2017/43. EIF Research & Market Analysis. June 2017. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H., Botsari, A., Gvetadze, S., Lang, F., and Torfs, W. (2017b). European Small Business Finance Outlook: December 2017. EIF Working Paper 2017/46. EIF Research & Market Analysis. December 2017. http://www.eif.org/news_centre/research/index.htm

Kraemer-Eis, H., Botsari, A., Gvetadze, S., Lang, F., and Torfs, W. (2018a). European Small Business Finance Outlook: June 2018. EIF Working Paper 2018/50. EIF Research & Market Analysis. July 2018. http://www.eif.org/news_centre/research/index.htm

- Kraemer-Eis, H., Botsari, A., Gvetadze, S., Lang, F., and Torfs, W. (2018b). European Small Business Finance Outlook: December 2018. EIF Working Paper 2018/53. EIF Research & Market Analysis. December 2018. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Gvetadze, S., Lang, F., and Torfs, W. (2016a). European Small Business Finance Outlook: June 2016. EIF Working Paper 2016/35. EIF Research & Market Analysis. June 2016. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Gvetadze, S., Lang, F., and Torfs, W. (2016b). European Small Business Finance Outlook: December 2016. EIF Working Paper 2016/37. EIF Research & Market Analysis. December 2016. https://www.eif.org/news_centre/publications/EIF_Working_Paper_2016_37.htm
- Kraemer-Eis, H., Lang, F., and Gvetadze, S. (2013). Bottlenecks in SME financing. In Kolev, A., Tanayama, T., and Wagenvoort, R. (ec. eds.) (2013). Investment and Investment Finance in Europe. EIB Economics Department, pp. 277ff. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Lang, F., Torfs, W., and Gvetadze, S. (2015). European Small Business Finance Outlook. EIF Working Paper 2015/32. EIF Research & Market Analysis. December 2015. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Passaris, G., and Tappi, A. (2013). SME loan securitisation 2.0 – Market assessment and policy options. EIF Working Paper 2013/019. October 2013. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Passaris, G., Tappi, A., and Inglisa, G. (2015). SME Securitisation – at a crossroads? EIF Working Paper 2013/031. December 2015. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Schaber, M., and Tappi, A. (2010). SME loan securitisation. An important tool to support European SME lending. EIF Working Paper 2010/007. October 2010. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Signore, S., and Prencipe, D. (2016). The European venture capital landscape: an EIF perspective. Volume I: The impact of EIF on the VC ecosystem. EIF Working Paper 2016/34. June 2016. http://www.eif.org/news_centre/research/index.htm
- Lagarde, C. (2019). The Euro Area: creating a stronger economic ecosystem. SUERF Policy Note. Issue No 63, April 2019.
- Lerner, J., Schoar, A., Sokolinski, S., and Wilson, K. (2015). The Globalisation of Angel Investment. Bruegel Working Paper 2015/09. August 2015.
- Lin, M., Sias, R., & Wei, Z. (2015). Institutional Investors in Online Crowdfunding. Working Paper.
- Madhvani, M., Casartelli, A., Maerz, M., and Indekeu, M. (2017). European Unicorns 2016: Survival of the fittest. GP Bullhound Research. June 2016.
- Mankins, M., Harris, K., and Harding, D. (2017). Strategy in the Age of Superabundant Capital. Harvard Business Review. March-April 2017 Issue.
- Mason, C.M. and Harrison, R.T. (2013). Business angel investment activity in the financial crisis: UK evidence and policy implications. July 2013.
- Mawson, J., Prats, J., and Stevens, W. (2017). The Case for Scaling Corporate Venture Investment in Tech in Europe. Findings & Insights by Global Corporate Venturing, IESE Business School (Universidad de Navarra), TechTour. 26 April 2017.
- McGrath, C. (2017). European tech companies need money to scale up, not just start up. Financial Times Special Report “The Connected Business”. 3.5.2017.
- Mersch, Yves (2017). Securitisation revisited. Keynote speech at the Euro Finance Week, 16.11.2017.
- MFC (2017). Justyna Pytkowska, Piotr Korynski. Digitalizing Microfinance in Europe. MFC Research Paper. December 2017.
- Moeglich, A.-K. (2019). ABS & Structured Credits. Halbjahresrückblick H1/2019. DZ Bank. 26.08.2019.

Mohammadi, A., & Shafi, K. (2017). How Wise Are Crowd? A Comparative Study of Crowd and Institutions in Peer-to-Business Online Lending Markets (No. 450). Royal Institute of Technology, CESIS-Centre of Excellence for Science and Innovation Studies.

Moody's (2017). Securitisation is a relevant source of funding for the European economy. Sector in-depth, Securitisation – Europe. 25.09.2017.

Moody's (2018). SME & Mid-Cap Focus. May 2018.

Moore, W., & Craigwell, R. (2003). The relationship between commercial banks' interest rates and loan sizes: evidence from a small open economy. *Applied Financial Economics*, 13(4), pp. 257-266.

Natoli, M., and Battazzi, F. (2019). Breathing life into 'sponsor-less' transactions. Expert Commentary. In: *Private Debt Investor: Future of Private Debt*. November 2019.

Nepelski, D., Piroli, G., and De Prato, G. (2016). European Start-up Hotspots: An Analysis based on VC-backed Companies. Joint Research Centre, JRC Scientific and Policy Report. EUR 28021 EN. doi:10.2791/39207.

OECD (2006). The SME financing gap. Vol. 1. Theory and evidence.

OECD (2011). Financing high-growth firms. The role of angel investors. December 2011.

OECD (2012). Financing SMEs and entrepreneurs. An OECD Scoreboard 2012, OECD Publishing, Paris.

OECD (2013). SME and entrepreneurship financing: The role of Credit Guarantee Schemes and Mutual Guarantee Societies in supporting finance for small and medium-sized enterprises. Final report. CFE/SME(2012)1/FINAL. Unclassified. 30.01.2013.

OECD (2014). Financing SMEs and Entrepreneurs 2014. An OECD Scoreboard. September 2014.

OECD (2015). New approaches to SME and entrepreneurship financing: Broadening the range of instruments.

OECD (2016). Financing SMEs and Entrepreneurs 2016. An OECD Scoreboard. April 2016.

OECD (2017a). Financing SMEs and Entrepreneurs 2017. An OECD Scoreboard. April 2017.

OECD (2017b). International comparability of venture capital data. In *Entrepreneurship at a Glance 2017*, OECD Publishing, Paris.

OECD (2017c). *International Migration Outlook 2017*.

OECD (2018). Financing SMEs and entrepreneurs 2018. An OECD Scoreboard, OECD Publishing, Paris.

OECD (2019a). Financing SMEs and Entrepreneurs 2019. An OECD Scoreboard. OECD Publishing, Paris.

OECD (2019b). *The Missing Entrepreneurs 2019: Policies for inclusive entrepreneurship*. 2019

OECD (2020). Financing SMEs and Entrepreneurs 2020. An OECD Scoreboard. OECD Publishing, Paris. Forthcoming.

OECD/The European Commission (2014). *The Missing Entrepreneurs: Policies for inclusive entrepreneurship in Europe*. 2014.

Prencipe, D. (2017). Liquidity events and returns of EIF-backed VC investments. The European venture capital landscape: an EIF perspective. Volume III. EIF Working Paper 2017/41. April 2017. http://www.eif.org/news_centre/research/index.htm

Preqin (2018). *Private Debt Spotlight*. September 2018.

Preqin (2019a). *Preqin Investor Update: Alternative Assets H2 2019*.

Preqin (2019c). *Preqin Quarterly Update: Private Debt Q3 2019*.

- Raves, P. (2017). "Influence of entrepreneurs' human and social capital on the performance of start-ups in Ireland and United Kingdom" Master Thesis. Delivered at the University of Trier. 21.11.2017. Mimeo.
- Ruesta, C., & Benaglio, N. "Microcredit regulation in Europe: An overview". Forthcoming. January 2020
- Ryan, R., O'Toole, C. and McCann, F. (2014). Does bank market power affect SME financing constraints? *Journal of Banking & Finance*, 49, 495–505.
- Saunders-Calvert, L. (2017). Global Venture Capital.
- Schich, S., Cariboni, J., Naszodi, A., Maccaferri, S. (2017). Evaluating publicly supported Credit Guarantee Programmes for SMEs: Literature review and synthesis of responses to an OECD/EC survey. OECD Financial Market Trends.
- Signore (2020). The Private Value of Patents for Government-supported Start-Ups: The Case of the European Investment Fund. In: Moritz, A., Block, J.H., Golla, S., and Werner, A. (eds.) (2020): Contemporary Developments in Entrepreneurial Finance, FGF Studies in Small Business and Entrepreneurship. Cham (Springer). https://doi.org/10.1007/978-3-030-17612-9_7. First online 23 August 2019.
- Signore, S. and Torfs, W. (2017). The value of innovation for EIF-backed startups. The European venture capital landscape: an EIF perspective. Volume IV. EIF Working Paper 2017/45. December 2017. http://www.eif.org/news_centre/research/index.htm
- Signori, A., & Vismara, S. (2018). Does success bring success? The post-offering lives of equity-crowdfunded firms. *Journal of Corporate Finance*, 50, pp. 575-591.
- SME United Study Unit (2019). The EU Craft and SME Barometer 2019/H1. March 2019.
- Stiglitz, J. and Weiss, A. (1981). Credit rationing in markets with imperfect information. *The American Economic Review*, 71 (3), 393–410.
- Stiglitz, J. E. (1972). Some aspects of the pure theory of corporate finance: bankruptcies and take-overs. *The Bell Journal of Economics and Management Science*, pp. 458-482.
- Tirole, J. (2006). The theory of corporate finance. Princeton University Press.
- Torfs, W. (2019). EIF SME Access to Finance Index – June 2019 update. EIF Working Paper 2018/49. EIF Research & Market Analysis. June 2019. http://www.eif.org/news_centre/research/index.htm
- Torfs, W. (2019). EIF SME Access to Finance Index – June 2019 update. EIF Working Paper 2018/58. EIF Research & Market Analysis. July 2018. http://www.eif.org/news_centre/research/index.htm
- Torfs, W., Lupoli, M. (2017). Guaranteeing Social Enterprises– The EaSI way. Working Paper 2017/39. F
- Uhde, A. and Heimeshoff, U. (2009). Consolidation in banking and financial stability in Europe: Empirical evidence. *Journal of Banking & Finance*, 33 (7), 1299–1311.
- UNEP (2019) Emissions Gap Report 2019. UN environment program, 26 November 2019.
- Unquote Intelligence (2014). The Role of Public Funding Bodies in European Venture Capital. Q2 2014.
- Wagenvoort, R. J., Ebner, A., & Borys, M. M. (2011). A factor analysis approach to measuring European loan and bond market integration. *Journal of Banking & Finance*, 35(4), pp. 1011-1025.
- Walthoff-Borm, X., Schwienbacher, A., & Vanacker, T. (2018). Equity crowdfunding: First resort or last resort? *Journal of Business Venturing*. 44(4), pp. 513-533.
- Wauters, R. (2019). Blooming Late: The rise of late-stage funding for European technology scale-ups. Stripe and tech.eu. November 2019.
- WEF (2018). *World Competitiveness Report*. Insight report.
- Wilson, K. (2015a). How to unleash the financing of high growth firms in Europe: 10 recommendations for catalysing growth. Bruegel blog. 27 May 2015.

Wilson, K. (2015b). Policy Lessons from Financing Innovative Firms. OECD Science, Technology and Industry Policy Papers, No. 24. OECD Publishing, Paris. 24 June 2015.

World Bank (2018). Toolkit for impact evaluation of public Credit Guarantee Schemes for SMEs. World Bank Group, Washington, D.C.

Zetsche, D. A., & Dewi, T. R. (2018). The Paradoxical Case Against Interest Rate Caps for Microfinance – And: How FinTech and RegTech Resolve the Dilemma. Ssrn, (December).
<https://doi.org/10.2139/ssrn.3159202>

Zetsche, D., & Preiner, C. (2018). Cross-Border Crowdfunding: Towards a Single Crowdlending and Crowdfunding Market for Europe. *European Business Organization Law Review*, 19(2), 217-251.

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