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EIF Research & Market Analysis

Working Paper 2018/53

European Small Business Finance Outlook

December 2018

Helmut Kraemer-Eis
Antonia Botsari
Salome Gvetadze
Frank Lang
Wouter Torfs

Helmut Kraemer-Eis *heads EIF's Research & Market Analysis division.*

Contact: h.kraemer-eis@eif.org
Tel.: +352 248581 394

Antonia Botsari is Research Officer in *EIF's Research & Market Analysis division.*

Contact: a.botsari@eif.org
Tel.: +352 248581 546

Salome Gvetadze *is Research Officer in EIF's Research & Market Analysis division.*

Contact: s.gvetadze@eif.org
Tel.: +352 248581 360

Frank Lang *is Senior Manager in EIF's Research & Market Analysis division.*

Contact: f.lang@eif.org
Tel.: +352 248581 278

Wouter Torfs *is Research Officer in EIF's Research & Market Analysis division.*

Contact: w.torfs@eif.org
Tel.: +352 248581 752

Editor:
Helmut Kraemer-Eis,
Head of EIF's Research & Market Analysis, Chief Economist

Contact:
European Investment Fund
37B, avenue J.F. Kennedy, L-2968 Luxembourg
Tel.: +352 248581 394
http://www.eif.org/news_centre/research/index.htm
Luxembourg, December 2018

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Executive summary[1]

This European Small Business Finance Outlook (ESBFO) provides an overview of the main markets relevant to EIF (equity, guarantees, securitisation, microfinance)[2]. It is an update of the June 2018 ESBFO edition.

We start by discussing the general market environment, then look at the main aspects of equity finance and guarantees/SME Securitisation (SMESec). Finally, before we conclude, we briefly highlight some important aspects of microfinance and Fintech in Europe.

Economic outlook and SME business environment:

- Over the past six months, the European economy has continued on a steady path towards recovery.
- Growing uncertainty, related to the ongoing Brexit negotiations and a looming trade war between the global economic powers, poses a significant threat to a continued expansion.
- While SMEs were in general quite positive about the overall business climate, they are growing increasingly worried about their near-term economic prospects.
- The low interest rate environment has finally led to a rise in the corporate leveraging, as outstanding loans to NFCs in the Euro area again increased by 2% year-on-year.
- SMEs' borrowing costs continue to vary greatly within Europe, with Greek, Irish and Slovakian SMEs operating in the most expensive lending environment. In Spain, the interest rate charged on small loans continued to decline.
- While banks have eased their credit standards, they grew more cautious about the future, possibly indicating a pending reversal in their accommodating lending policies.
- While on average, the external financing market improved for Euro area SMEs, 1 in 4 still report severe difficulties in accessing external finance sources. For Greece, this number rises to nearly 1 in 2.
- SMEs continue to report a lack of public support to external financing markets.

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 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 partial rebound, although the recovery has shown some setbacks. Fundraising and investment seem to be on their ways to pre-crisis

[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 Alicia Boudeau, Julien Brault, Remi Charrier, Jeoffray Cosson, Stephanie Descoubés, Per-Erik Eriksson, Oscar Farres, Daniela Francovicchio, Giovanni Inglisa, Simone Signore, Matteo Squilloni, Arnaud Vanbellingen, Virginie Varga, Johannes Virkkunen and Thierry Wolff. 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).

levels. The VC activity levels were far below their pre-crisis highs for long time, but some of the remaining gaps have been filled by business angels.

- In 2017, PE investments in portfolio companies based in Europe increased by 29% (compared to the previous year) to EUR 71.7bn. Almost all market segments contributed to this surge. Venture capital (VC) investments, which are of particular importance for the financing of young innovative companies with high growth potential, jumped by 34% to EUR 6.4bn.
- Results from the *EIF VC Survey* have indicated an ongoing high market activity. According to preliminary Invest Europe data, PE investments amounted to EUR 30.5bn (market approach) in the first half-year of 2018. Venture and growth capital investments have remained remarkably strong.
- Total amounts raised by PE funds in Europe increased considerably by 12% to EUR 91.9bn in 2017, while VC fundraising decreased by 7% to EUR 7.7bn. This followed, however, the record year 2016, when the total VC fundraising amount had reached the highest level ever recorded in the Invest Europe statistics. Government agencies have continued to support the market recovery in order to incentivise additional deal flow and attract further private investment.
- In the first half-year of 2018, PE fundraising amounted to EUR 45.6bn, according to preliminary Invest Europe data. VC fundraising amounted to EUR 3.1bn (incremental amounts raised during year) and EUR 2.3bn (final closings) respectively, with a strong increase reported for funds with an early-stage focus.
- The exit markets have shown remarkable strength over the past years. The increase in the total divestment amount in 2017 (+7% to EUR 42.7bn) was mainly due to higher activity in the buyout (+21% to EUR 32.6bn) segment of the market. In contrast, divestments in the venture (–7% to EUR 2.1bn) and growth (–5% to EUR 5.7bn) capital segments decreased. In the first half-year of 2018, PE divestments amounted to EUR 12.1bn, according to preliminary Invest Europe data.
- According to the *EIF VC Survey*, European fund managers stated the exit environment and fundraising to be the biggest challenges in the VC business. The survey respondents stated that the provision of more public resources could help in order to crowd in large private institutional investors. Among the surveyed fund managers, 85% considered the overall value added of EIF to be "high" or "very high".

SME guarantees:

- Credit guarantees "remain the most wide-spread instrument in use across countries" to ease SMEs' access to finance (OECD, 2018b), 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, Italy and Portugal have the largest markets.
- In the first semester of 2018, despite a significant heterogeneity across countries, AECM members report on average a considerable increase in outstanding guarantees in portfolio and in new guarantee issuance in particular. The latter is largely driven by the new guarantee volumes of four new (as of June 2018) AECM members.

- While, following a peak in the first semester of 2017, the new guarantee activity in Turkey is now much lower than before, it still represents an important share of the total AECM new guarantee activity.
- In the first semester of 2018, the growth in newly-granted guarantees was particularly strong in Luxembourg, Bosnia-Herzegovina and Czechia. By contrast, new guarantee activity decreased the most in Greece, Ireland and Slovenia.

SME securitisation:

- Overall, the SMESec market in Europe is underdeveloped and strengthening this market can be an effective way to facilitate the flow of funds to the real economy, while not creating too much distortion.
- In terms of new issuances the SMESec market is still relatively weak. The visible issued volume of SME deals[3] in HY1/2018 was only EUR 5.2bn, representing 4% of the overall securitisation issuance in Europe. Most of the activity was "multinational" (56%). In addition, some activity happened in Spain and Italy. The retention rate remained very high (96.3% in HY1/2018).
- Despite the financial and sovereign crisis, the European securitisation market has performed relatively well, with the SME segment showing low default rates. Currently, the outlook can be considered to be stable. Downside potential stems mainly from political event risk that might lead to further economic deterioration.
- 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 entered into force on 17.01.2018 and will apply from 01.01.2019.
- The new framework will pose 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. Continued pressure on banks to manage capital efficiently drives demand for synthetic transactions. A move towards normalisation of monetary policy would increase the appetite for funded transactions.

Microfinance and inclusive finance:

- Microenterprises and social enterprises are important contributors to employment and social value, especially in countries with high unemployment rates.
- According to the data from the latest ECB SAFE survey, microenterprises have perceived a decrease in the external financing gap indicator. However, the share of enterprises which see access to finance as their most important problem 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

[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).

apply for a bank loan due to fear of rejection, but also because of 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. MFIs offer their clients more personal, tailor-made and simple products; MFIs "know their customers".
- Digitalisation of microfinance operations is efficient for both lenders and borrowers, but yet suppliers are only partially digitalised and poor customers often have no access to digital payments.
- 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:

- In the past year, investment volumes in the global Fintech market have been subject to large fluctuations.
- The sharp decrease in global Fintech investment volumes between Q1/2018 and Q3/2018 occurred despite relative strength on the US market, while European and Asian investment declined significantly.
- The dominant position of the US and the EU on the global Fintech market has been under threat in recent years. Their combined market share has dropped from 90% over the 2010-2012 period to 70% over 2016 to 2018, mostly driven by an expanding Asian market at the expense of the EU.
- The European Fintech VC ecosystem differs structurally from the other global markets, and is mainly driven by Late Stage VC investment, although this does not translate to higher average investment sizes.
- The European VC Fintech market experienced an exceptionally strong year in 2017, with record volumes in the final quarter for both the Late Stage (EUR 507m) and Early Stage (EUR 369m) segments. Preliminary data for the year 2018 indicate a possible market set back.

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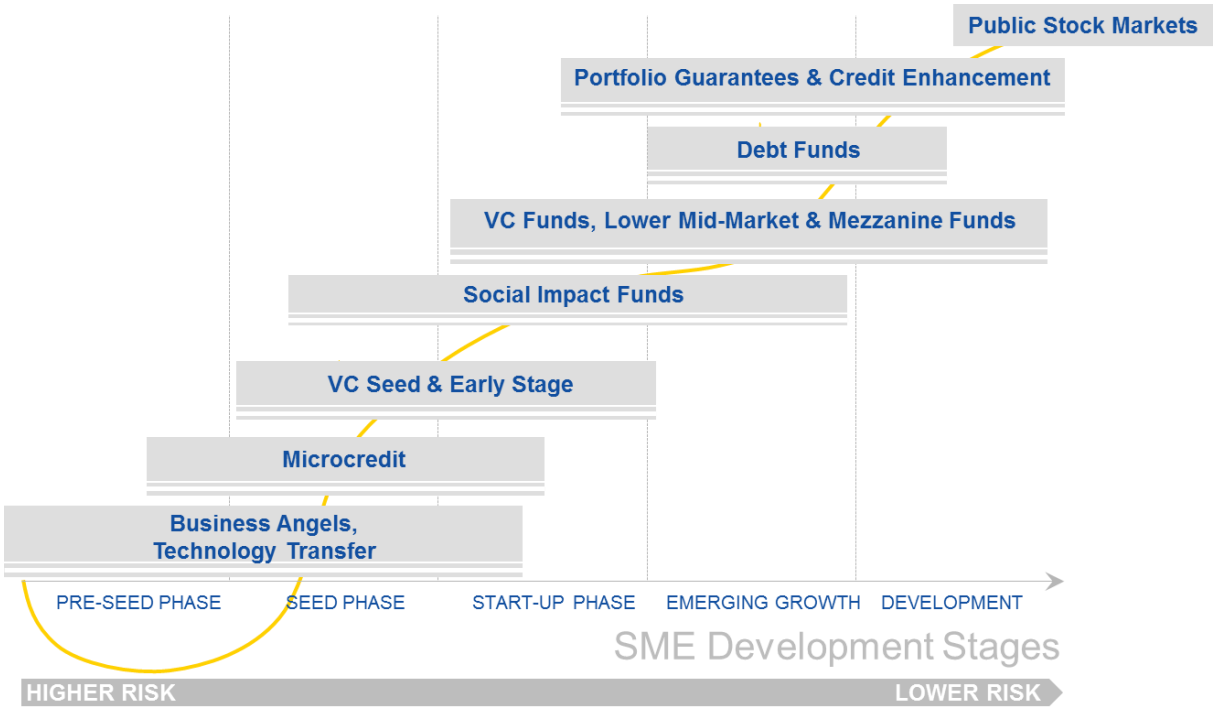
1 Introduction

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 and credit enhancement 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 Commission[4] 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.

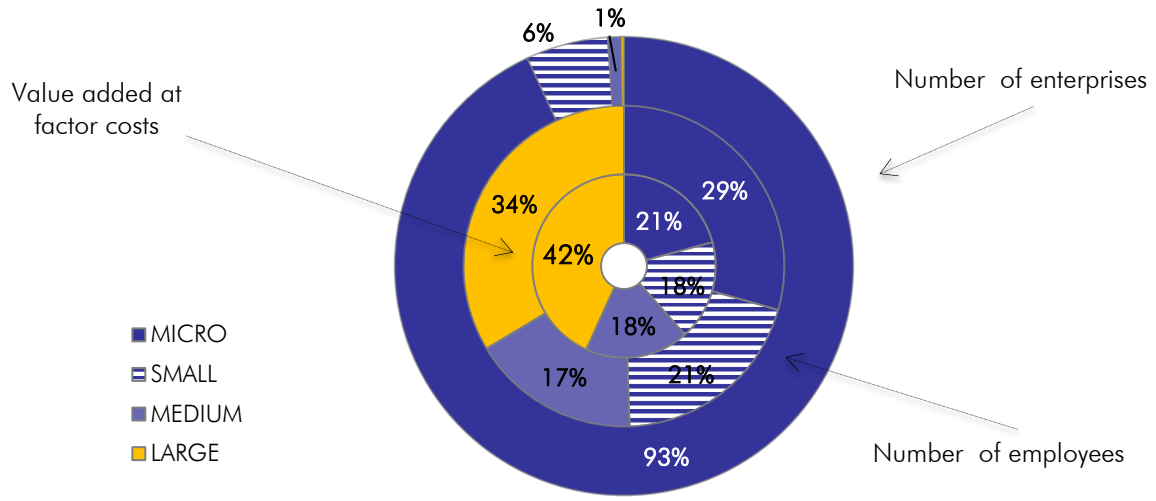
Table 1: EU definition of SMEs

	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 (2018a)

SMEs contribute significantly to European job creation and economic growth (Figure 2). In 2017, 24.5 million SMEs in the European Union made up 99.8% of all non-financial enterprises, employed around 95 million people (66.6% of total employment) and generated 56.8% of total added value (EUR 4,161bn).

Figure 2: SMEs, employment and value added in the EU, 2017



Source: Authors, based on European Commission (2018a)

The European Small Business Finance Outlook (ESBFO) provides an overview of the main SME financing markets relevant to EIF (equity, guarantees, securitisation, microfinance and Fintech)[2]. The present edition is an update of the ESBFO June 2018.

We start by discussing the general market environment, then look at the main aspects of equity finance and SME guarantees, specifically the SME Securitisation (SMESec) markets. Finally, we briefly highlight important aspects of microfinance in Europe, as well as of the emerging Fintech area.

2 Economic Outlook

Over the past six months, the global economy has continued on a steady path towards recovery. According to the IMF (2018) global growth for 2017 materialised at 3.7%. Projections for 2018 and 2019 remained constant at 3.7%. Regardless this cautious optimism on future global growth prospects, the IMF warns economic expansion has become less geographically balanced as some of the larger national economies might have already reached their peak. The European Commission (2018b) is less optimistic about the future: even though the EU's economic growth for 2017 materialised at 2.4% and all EU member states are expected to grow further over the forecast horizon, the Commission also warns growth has peaked. A number of interrelated downside risks cloud the outlook for the European economy. First, the outlook for global trade weakens, as rising tensions on the international political scene have the potential to escalate the looming trade war between the global economic powers. Second, expansionary fiscal policy in the US could lead to a faster than anticipated tightening of US monetary policy, which could have adverse effects on the US economy, and consequently affect overseas demand. Third, the EU also faces some internal struggles. Disruptive sovereign-bank loops could endanger the recovery in some high-debt countries, such as Italy, while the disorderly Brexit negotiations potentially threaten future trade relationship between the EU27 and the UK. Consequently, expectations for 2018 and 2019 were revised downwards, by 0.2 and 0.1 percentage points, respectively.

Table 2: European Commission Autumn 2018 forecast for the EU

(Real annual percentage change, unless otherwise stated)				*Autumn 2018 estimates*		
	2015	2016	2017	2018	2019	2020
GDP	2.3	2.0	2.4	2.1	1.9	1.8
Private consumption	2.1	1.4	1.9	1.8	1.9	1.7
Public consumption	1.4	1.7	1.0	1.2	1.5	1.3
Gross fixed capital formation	4.8	3.1	3.1	3.2	2.9	2.8
Employment	1.0	1.2	1.6	1.2	08	0.7
Unemployment rate (a)	10.2	9.4	7.6	6.9	6.6	6.3
Inflation (b)	0.0	0.3	1.7	2.0	2.0	1.8
Government balance (actual, % GDP)	-2.4	-1.6	-1.0	-0.7	-0.8	-0.7
Gross government debt (% GDP)	86.5	84.8	83.2	81.4	79.5	77.6
	Contribution to change in GDP					
Private and Public Consumption	1.5	1.6	1.3	1.2	1.3	1.2
Investment and Inventories	1.0	0.7	0.5	0.6	0.6	0.6
Net exports	-0.2	-0.3	0.6	0.2	0.0	0.0

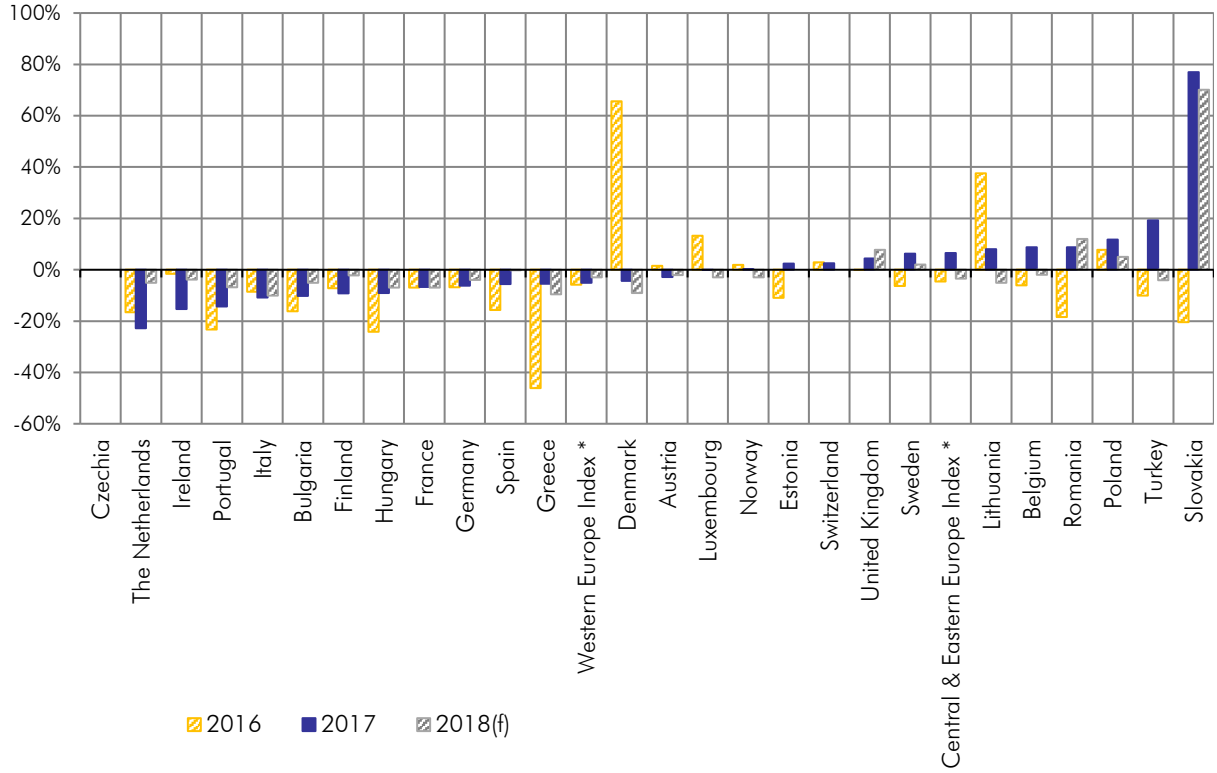
(a) Percentage of the labour force.
(b) Harmonised index of consumer prices (HICP), annual percentage change.
Source: European Commission (2018b)

For 2017, investment (3.1% of GDP) fell short of last semester forecasts (3.4%), but is expected to remain robust in the years to come. Robust investment combined with increases in both private and public consumption have led to upward pressures in the price level and resulted in an inflation rate of 1.7%. Even though the Commission expects inflation to reach the magical 2% threshold by 2018

and beyond, increased political uncertainty in some of Europe's major economies might delay a reversal of the monetary policy regime and push backwards the heavily anticipated ECB rate hike.

The EU's healthy economic performance had a positive effect on the government budget balance, which for the EU as a whole is expected to drop below the 1% deficit threshold in 2018. Favourable economic conditions meant these continued deficits did not lead to a rise in gross government debt relative to GDP, which has continued its steady decline in 2017 and is forecast to decline further in the years ahead.

Figure 3: Rate of change in insolvencies, 2016-2017-2018(f)*

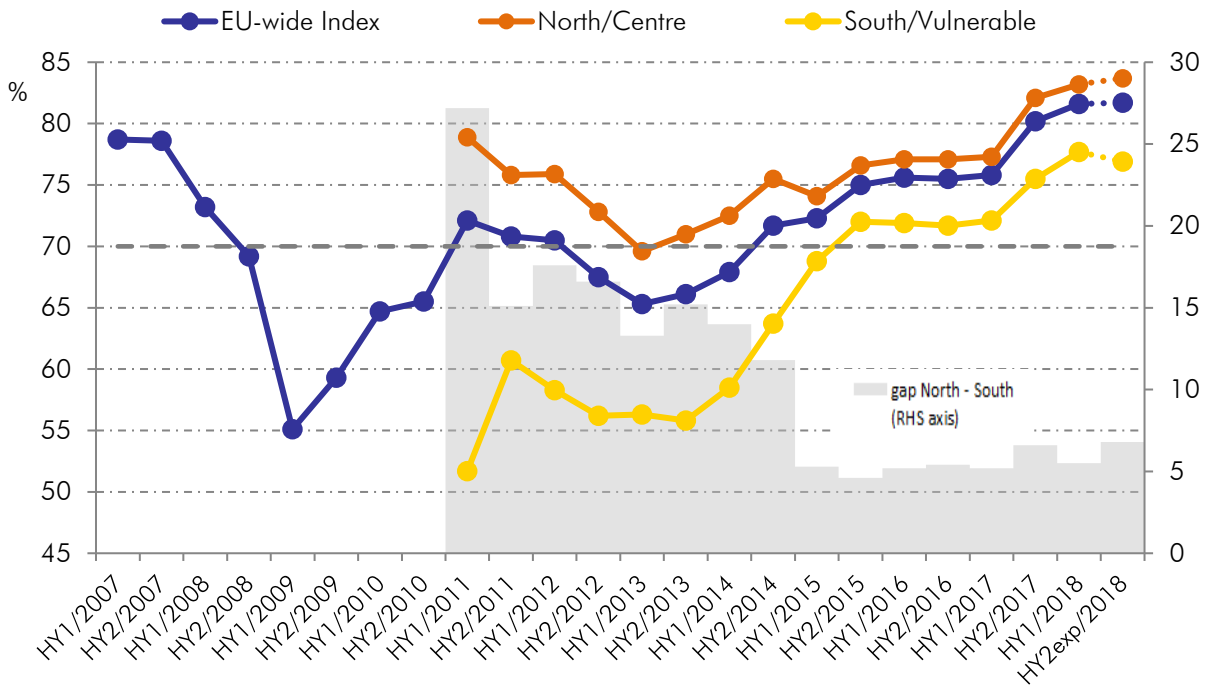


* 2018 are forecasted values.
Source: Euler Hermes (2018)

The economic recovery led to a decline in European insolvencies (Figure 3): per 2017, insolvencies have decreased or stagnated in most, but not all European countries (Euler Hermes, 2018). In particular, Central and Eastern European insolvencies rose.[5] In Western Europe as a whole, insolvencies decreased slightly, but Sweden and Belgium experienced a small increase.

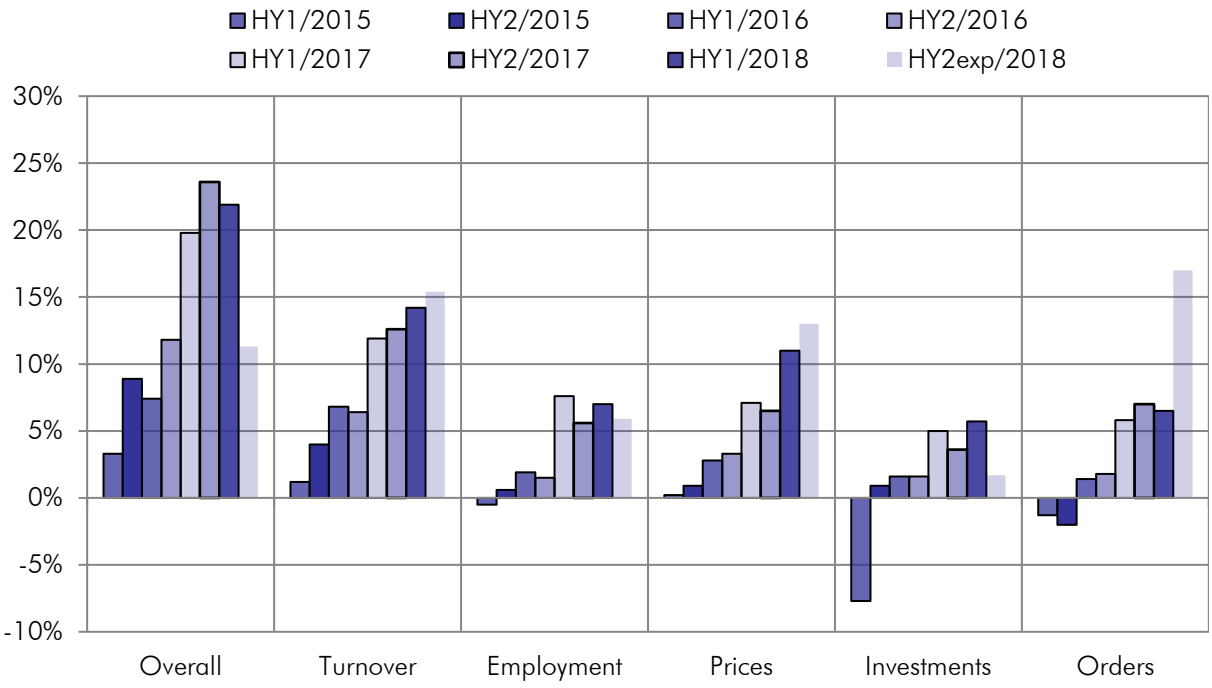
[5] The large increase in Slovakia was rooted in an administrative factor.

Figure 4: The SME Business Climate Index



Source: Authors, based on UEAPME Study Unit (2018)

Figure 5: Main results of the EU craft and SME barometer HY2/2018



Source: Authors, based on UEAPME Study Unit (2018)

Also SMEs were optimistic about the general European business climate over the first half of 2018. The EU-wide SME Business Climate Index (Figure 4) further increased, rising further above its pre-crisis level, where the North/Centre[6] to South/Vulnerable[7] divide declined. Looking ahead, SMEs in the South/Vulnerable regions are sceptical about the momentum of the recovery, which contrasts the positive forecasts for HY2/2018 of SMEs active in the North/Centre region of Europe.

Figure 5 illustrates SMEs' perception[8] on a series of economic indicators contained in UEAPME's Barometer[9], such as the overall economic situation, turnover, employment, prices, investments and orders. The year 2018 started positive across all factors considered, and SMEs were particularly optimistic about their turnover figures. The second half of 2018 is expected to bring much of the same, although investment levels are expected to fall back slightly, an evolution possibly linked to the increasing degree of political uncertainty currently lingering in the European and international political scene.

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[6] Austria, Belgium, Bulgaria, Czechia, Denmark, Estonia, Finland, France, Germany, Hungary, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Romania, Slovakia, Sweden and UK.

[7] Croatia, Cyprus, Greece, Ireland, Italy, Malta, Portugal, Slovenia and Spain.

[8] Figure 5 plots the net responses, which are calculated as the share of positive minus negative responses.

[9] UEAPME has been renamed to SMEunited in November 2018.

3 SME business environment

3.1 The EIF SME Access to Finance Index (ESAF)

The EIF SME Access to Finance Index is a composite indicator that summarises the state of SME financing for the EU28 countries. It was first introduced in the ESBFO edition of June 2016 (Kraemer-Eis et al., 2016a) and gets updated on an annual basis. The index contains four subindices, three of which are related to different financing instruments (loans; equity; credit and leasing), while the fourth covers the general macro-economic environment (see Box 1). The methodology underlying the construction of the index is detailed in Gvetadze et al. (2018a). The results of the most recent update are presented in Figure 6 (yellow dots). For an elaboration of the 2017 update, and some background information on the most important evolutions between 2016 and 2017, readers are referred to Torfs (2018).

Box 1: 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
- Venture capital availability index
- Value of IPO market / GDP
- Percentage of SMEs using equity capital in last 6 months

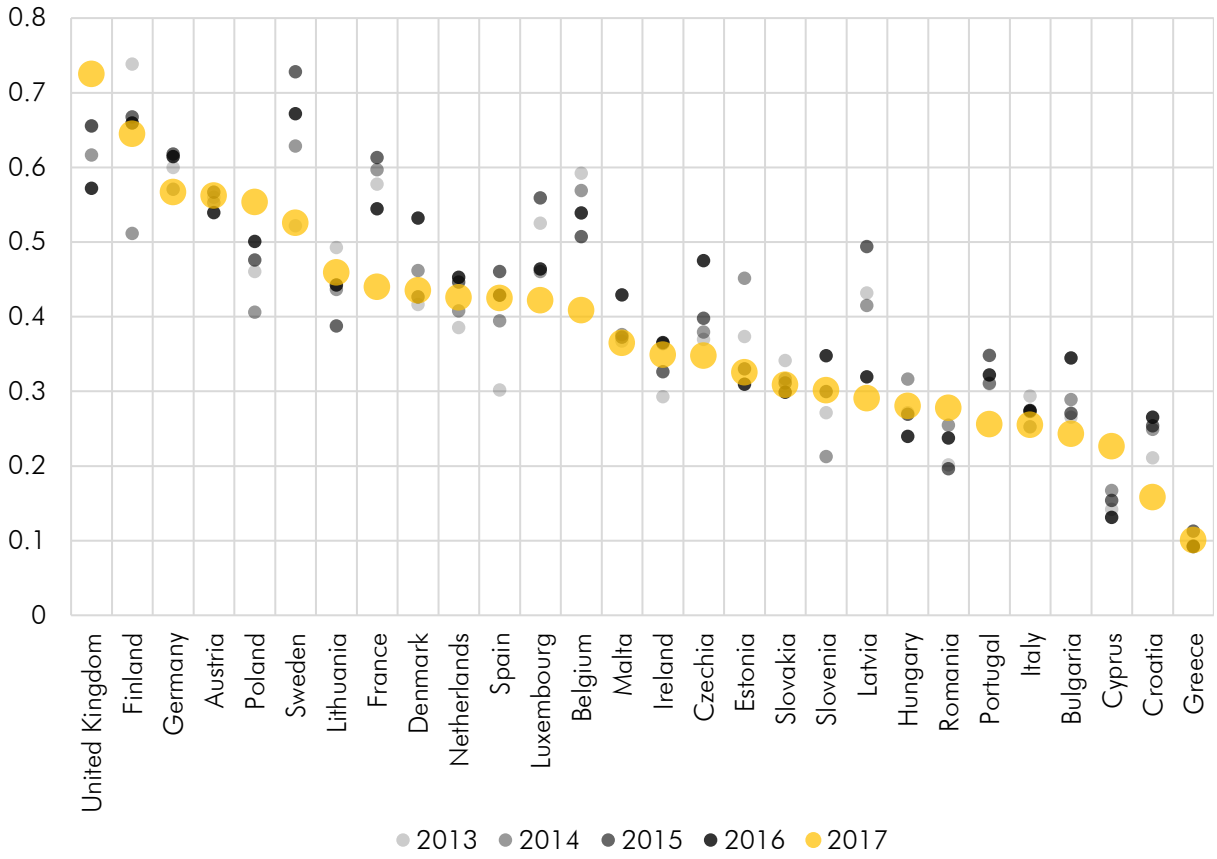
Credit and Leasing:

- 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 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
- Strength of legal rights index
- Depth of credit information index
- Availability of financial services index
- Bank non-performing loans to total gross loans
- Percentage of SMEs "feeling that there are no financing obstacles"

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



Source: Torfs (2018)

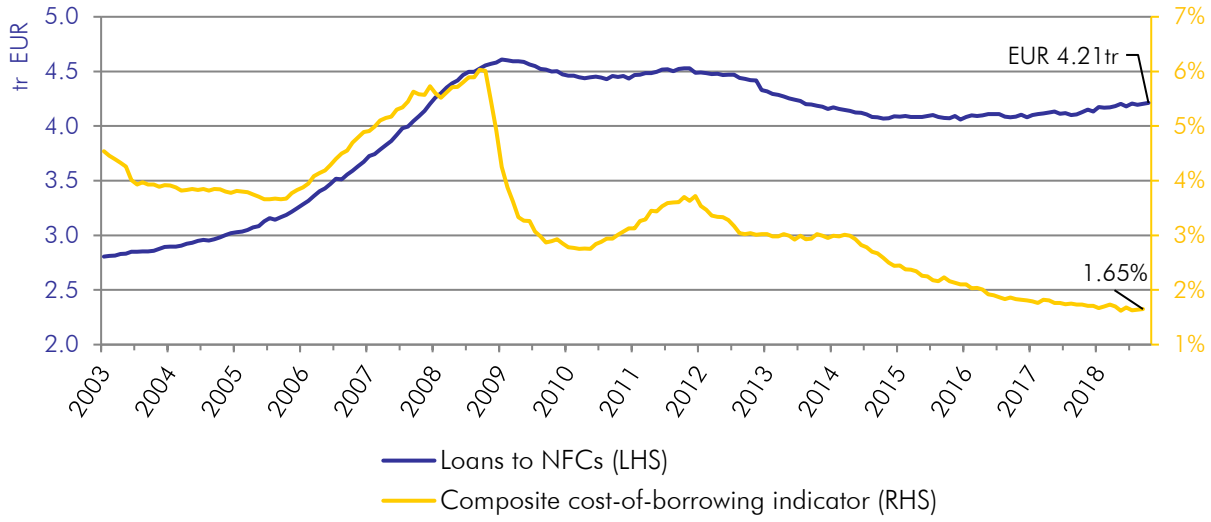
3.2 Loan volumes and borrowing costs

Borrowing costs for NFCs remain historically low: In May 2018, the ECB's composite borrowing cost indicator[10] reached a new record low of 1.62%, a modest decline of 0.5 basis points compared to the record of January earlier that year (Figure 7). Borrowing costs have since then increased slightly, hovering just above their lowest point for the past months. The declining trend that started in 2012 has definitely come to a halt and corporate borrowing costs appeared to have bottomed out. This is in accordance with the ECB's monetary policy decisions: interest rates (deposit facility) were set to -0.4% in March 2016 and have been constant ever since.

This low interest rate environment has finally led to a rise in corporate leveraging, as outstanding loans to NFCs in the Euro area again increased by 2% year-on-year, standing at EUR 4.21tr in October 2018. This represents an increase of about 4% since outstanding loans bottomed at the end of 2015.

[10] 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".

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

The SME lending market has further expanded throughout the first three quarters of 2018, totalling EUR 37bn in September 2018.[11] To illustrate how lending evolved for SMEs specifically, Figure 8 uses data on loans smaller than EUR 0.25m,[12] starting June 2010 until September 2018.[13] New business volumes of small loans first contracted, after which they picked up pace early 2014 and have been on the rise ever since. The graph also depicts the share of small loans in total lending. During the contraction of small business lending prior to 2014, the share of small loans in total volumes dipped, implying that the contraction was more intense in the segment of small loans. However, during the recovery thereafter, the share of small loans in total new business volumes increased significantly, levelling off at about 17% by the end of 2017 and hovering around that level ever since. This points to a faster recovery in the SME lending segment, after it had been hit hardest by the credit crunch earlier.

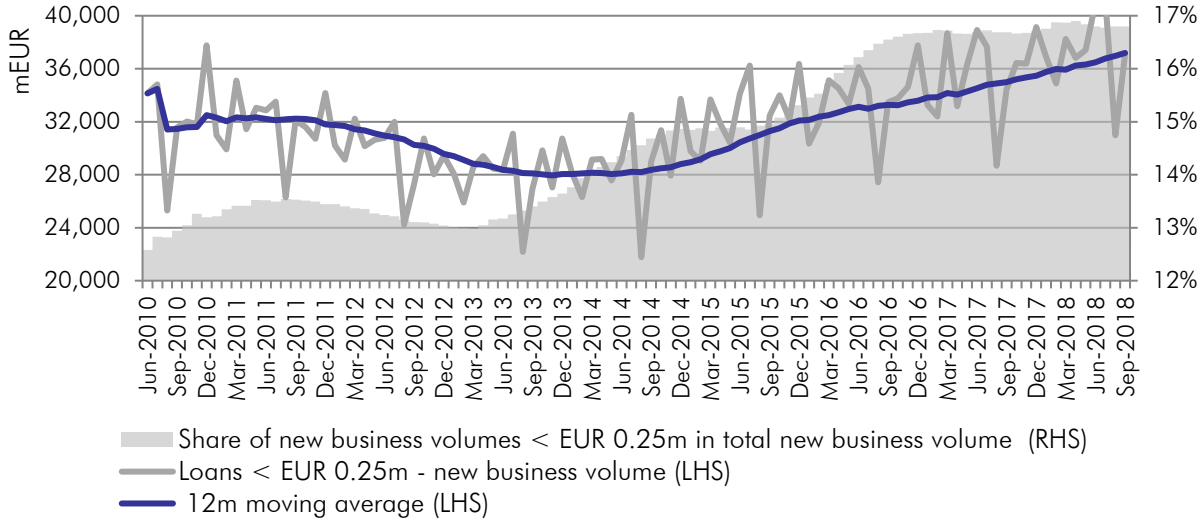
While the SME lending market in the Euro area is indisputably on a path to recovery, the Euro aggregate hides a significant amount of country-level heterogeneity. This is confirmed by Figure 9, which shows the share of small loans in total new business volumes has been on the rise on most Eurozone country. In September 2018 small loans made up anywhere between 2.8% (Austria) and 43% (Spain) of total new business volumes. Small lending appears to be relative more important in the most vulnerable economies, with the highest shares recorded in Spain, Portugal and Italy. In Lithuania, the small loan share dropped significantly compared to one year earlier, from 20% to 10%. In most other countries, it stayed roughly constant.

[11] Calculated as a 12 month backwards moving average to abstract from the strong monthly fluctuations typically found in lending new business volumes.

[12] Huerga et al. (2012) show that small loans are a good proxy for the SME lending market.

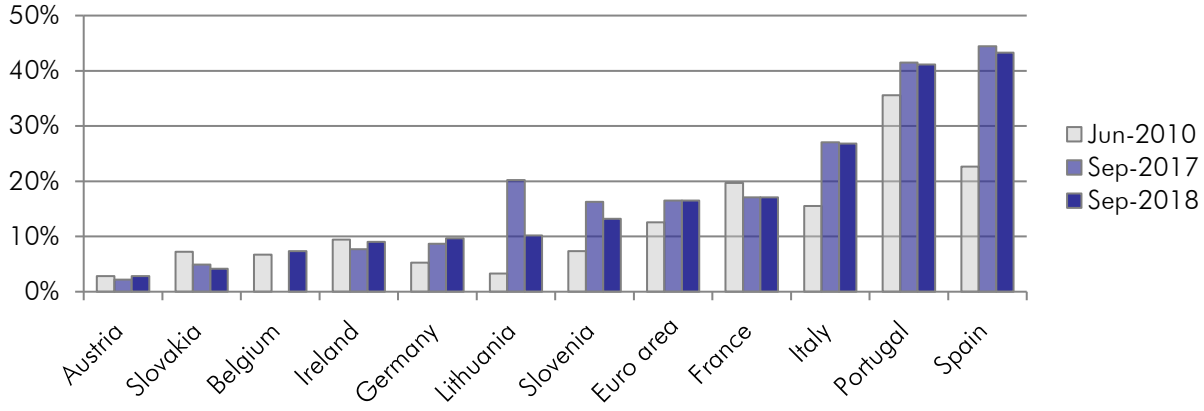
[13] To better reflect lending conditions to SMEs specifically, rather than small loans in general, the data excludes interest rates on revolving loans and overdraft, since these instruments are used independently of firm size.

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



Source: Authors, based on ECB Data Warehouse

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

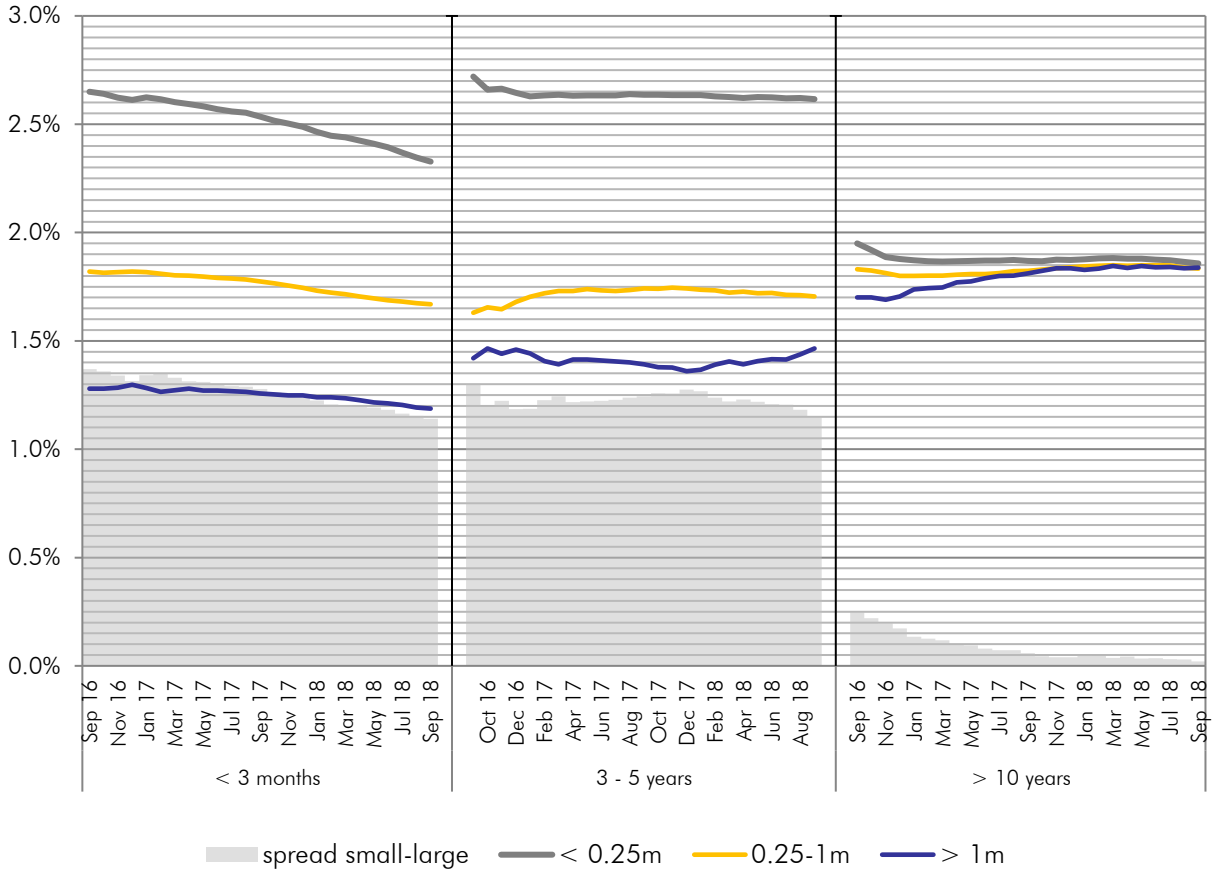


*NBV: Net book value.

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 years to 5 years for medium term lending and 10 years and more for long term lending. The latter maturity segment arguably is most relevant for durable investments, both for SMEs as 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 discussion on the aggregate costs of borrowing earlier in this chapter conceals divergent interest rate evolutions for the different market segments.

Figure 10: Interest rates by loan size and maturity, and the interest rate size spread[14]



*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

During the six months leading up to September 2018, short term interest rates (the left panel of Figure 10) have declined consistently during the six months leading up to September 2018, short term interest rates (the left panel of Figure 10) have declined consistently over all size classes. While the pace of decline has been markedly faster for small loans, the size spread is much higher compared to the long-term lending market. Since SMEs are relatively more reliant on short-term credit, this deteriorates their competitive position vis-à-vis larger firms.

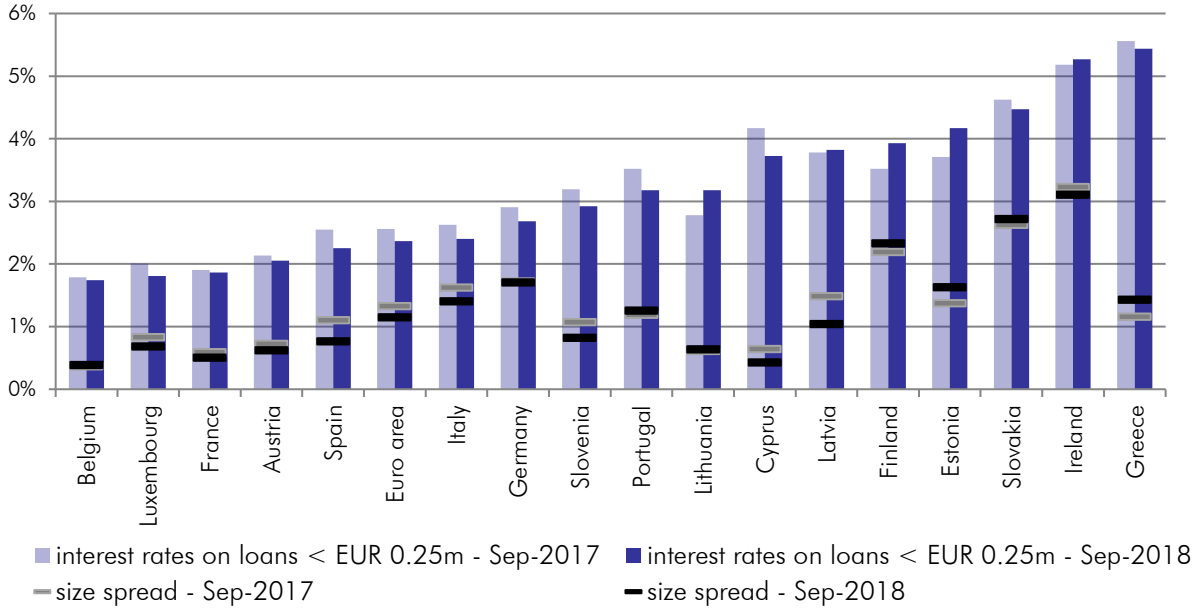
[14] A general finding, arising from Figure 10 is the fact that, regardless of maturity, small loans are burdened with higher interest rates, a phenomenon referred to as the size-spread hereafter. This is somewhat surprising, as traditional finance theory suggests that, ceteris paribus, the risk of default 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.

In the medium-term maturity segment (3 – 5 years), we do not observe a general declining trend over all size classes. Over the second and third quarter of 2018, borrowing cost for small and medium-size loans stayed roughly constant. Interestingly, interest rates on large loans (>EUR 1m) increased significantly in 2018, in accordance with the evolution on the long term lending market (>10 years), where interest rates for large loans started to increase already in HY2/2017.

In the long term maturity segment (>10 years), small loans have become marginally cheaper during the third quarter of 2018, while interest rates on medium and large loans remained constant. This led to complete interest rate convergence, with the size spread dropping to almost zero in September 2018. This has led to a level playing field regarding the costs of durable investments for SMEs and large firms. Arguably, this should soon be reflected in a reduction of the existing investment gap between these two groups of firms (see Kraemer-Eis et al., 2018c).

Aggregate borrowing costs enfold a significant amount of country-level heterogeneity (Figure 11).[15] SMEs face the most favourable conditions in Belgium, Luxembourg and France, while the most expensive lending environment is found in Slovakia, Ireland and Greece. SMEs in Finland, Slovakia and Ireland operate at a significant competitive disadvantage compared to larger firms, recording the highest size spread of all Euro area countries.

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 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

[15] 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.

During the 12 months leading up to September 2018, the interest rate on small loans[16] actually increased in a handful of countries: Lithuania, Latvia, Finland, Estonia and Ireland, against the European trend (Figure 11). For Estonia, this is the fourth consecutive semester of interest rate increases in the SME lending segment (see Kraemer-Eis et al., 2017a, 2017, 2018c). In Latvia, however, the rise in SME borrowing costs went hand in hand with a significant decrease in the size spread, which actually indicates a relative improvement in SME specific market conditions. For some countries, a reverse evolution took place. In Greece, for example, the SME interest rate decreased, while the size spread increased, indicating a deterioration in SME-specific lending conditions.

For Spain, we see a continuation of the positive evolution of the past semesters, as SME borrowing costs continue to decrease. This decrease is not secular in nature, but specific to the small loans 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 should have a significant positive impact on the Spanish economy, as SME investments materialise and spur economic growth. Also in Italy, another economy with a pronounced importance of small scale lending, borrowing costs to SMEs are evolving favourably.

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 institutional characteristics of the country, 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).

3.3 SME financing from a supply perspective

This section provides an overview of the current state of the SME lending market from the perspective of the banks, using the ECB's latest Bank Lending Survey (ECB, 2018a). This survey is conducted quarterly and asks banks about the credit standards they uphold towards corporate borrowers. Figure 12 plots the quarterly net change[17] in credit standards and illustrates how banks' credit standards applied to NFC lending has changed since the beginning of the financial crisis.[18] A positive value indicates tightening credit standards, whereas a negative value points to an easing. Figure 12 shows that credit standards continued to ease for the seventh consecutive quarter during the third and fourth quarter of 2018. Credit standards eased more for large firms than for SMEs, although the difference between the two size groups was negligible.

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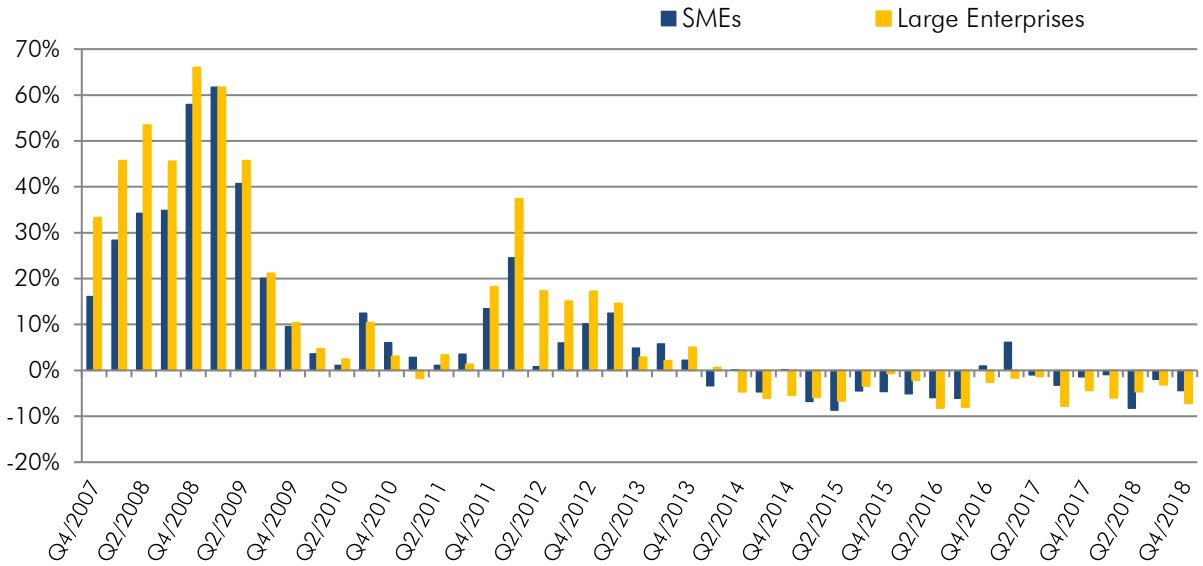
[16] As measured by a 12-month backward looking moving average, to eliminate the influence of erratic monthly fluctuations.

[17] 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.

[18] 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?"

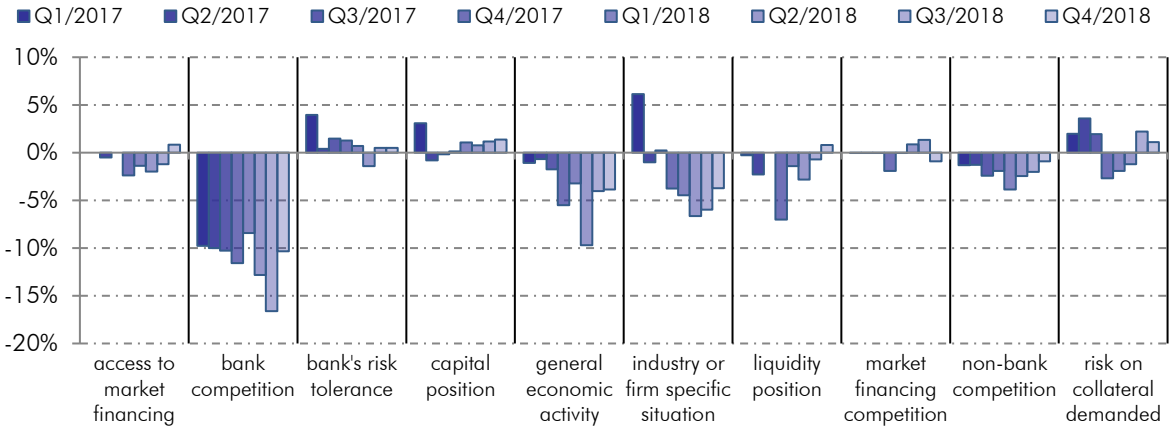
Figure 13 reveals that several factors actually induced banks to be more cautious with their loan approval procedures, even though overall credit standards eased. Increased risk on collateral underlying a loan or banks' capital position, for example, contributed to a tightening of credit standards. While banks were generally positive about the economic outlook, or industry specific risk factors, they also reported a decreased tolerance for risk. Competitive forces in the sector remain an important driving factor for the credit supply to NFCs.

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



Source: Authors, based on ECB Bank Lending Survey (ECB, 2018a)

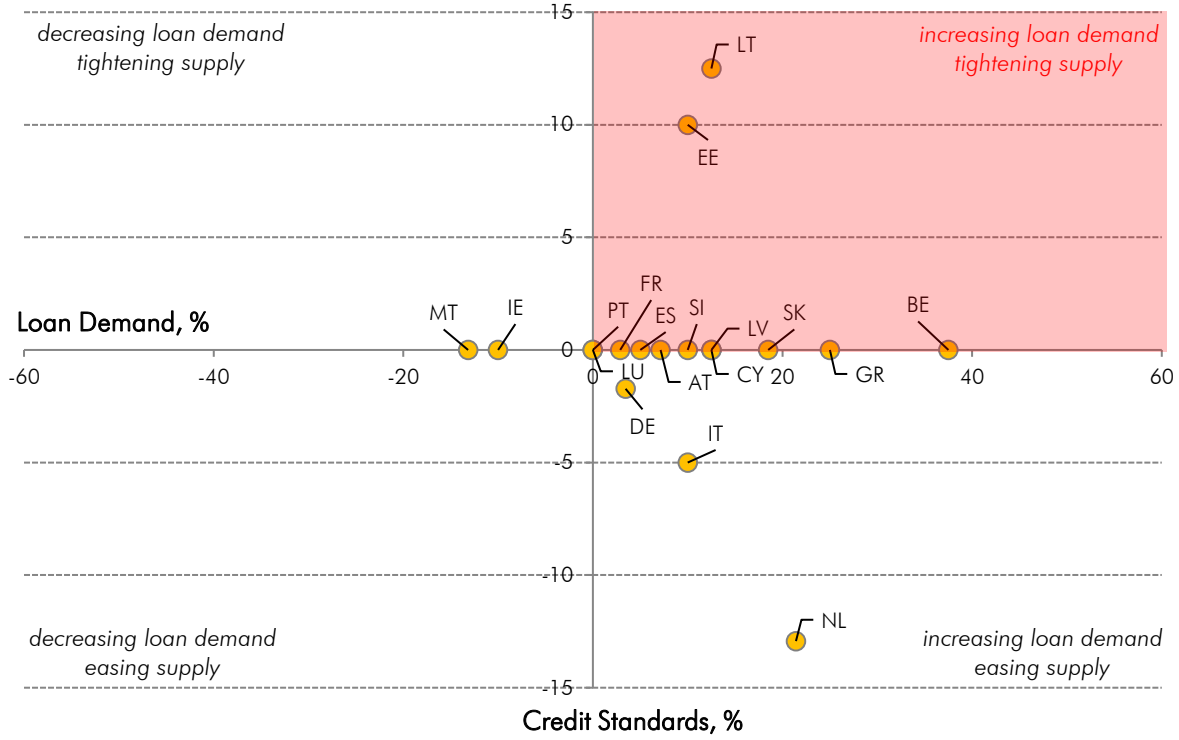
Figure 13: Factors contributing to changes in credit standards to SMEs*



* 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 percentage, 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, 2018a)

Figure 14: The SME financing gap from a supply perspective (Q4/2018)[19]



Source: Authors, based on ECB Bank Lending Survey (ECB, 2018a)

We conclude the supply side section by illustrating how the SME financing gap has evolved over the final quarter of 2018, according to banks. 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[20] 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 increased or decreased 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, where decreased loan demand is accompanied by tightening credit conditions. No countries were projected in this quadrant, consistent with the general economic recovery taking place in Europe at the moment (see Chapter 2).

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. Dutch, German and Italian

[19] 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.

[20] The net percentage is calculated using the diffusion index weighting system (ECB, 2018a). The diffusion index refers to the weighted difference between the share of banks reporting an increase in loan demand (score of 1for lenders answering "considerably" and score of 0.5 for lenders answering "somewhat") and the share of banks reporting a decline."

banks are currently experiencing a period of expansion, although the German credit loosening and loan demand increase are relatively modest. Since the BLS does not provide quantitative information, predictions on the direction in which the supply gap evolved are impossible for countries in the South-Eastern quadrant, 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.

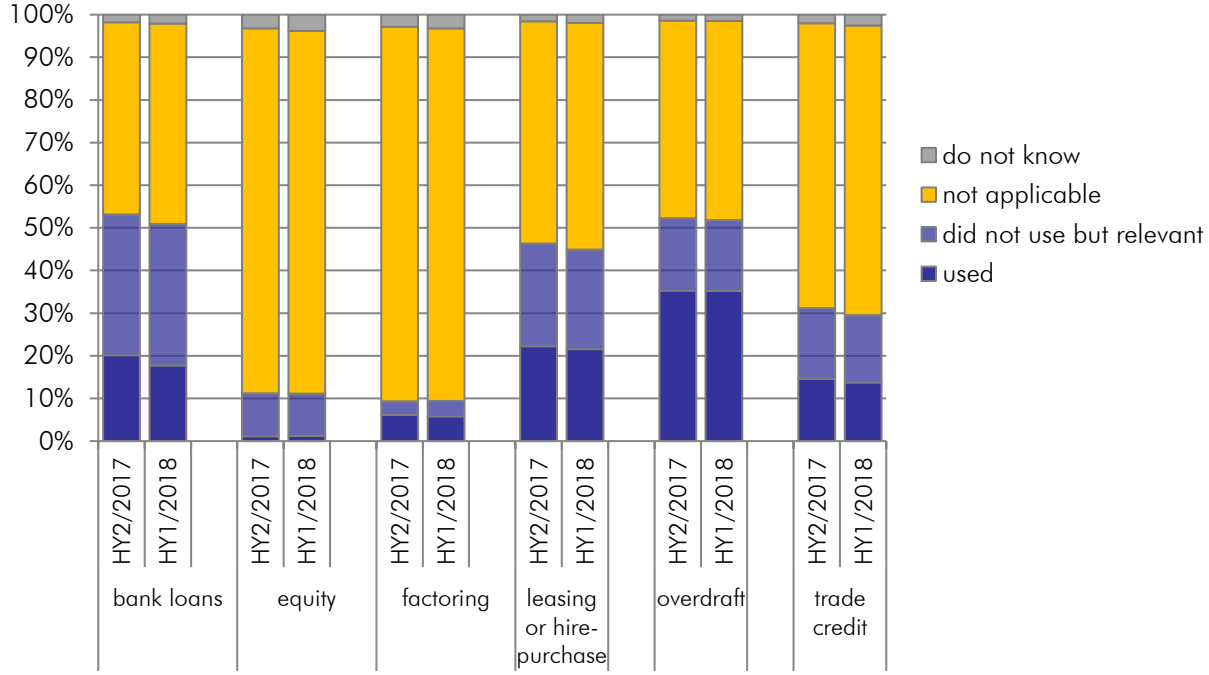
The South-Western quadrant, for example, represents a situation where decreased (or constant) loan demand goes hand in hand with loosening (or constant) credit supply, which implies a shrinking financing gap. On the northern edge of this quadrant we find Ireland and Malta, where banks reported a minor decrease in loan demand at constant credit standards. This implies that we can say with certainty that Irish and Maltese banks perceived the SME financing gap to be shrinking.

As was the case in the previous edition of the ESBFO (Kraemer-Eis et al., 2018c), a lot of countries find themselves somewhere on the border between the North-Eastern and South-Eastern quadrant, where modest to strong increases in loan demand are combined with unchanged credit standards and therefore an increase in the SME financing gap. This increase was most pronounced for Belgian and Greek SMEs, where loan demand was reported to have grown at a considerable pace.

3.4 SME financing from a demand perspective

This section turns to the demand side of the lending 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: Sources of external financing of Euro area SMEs



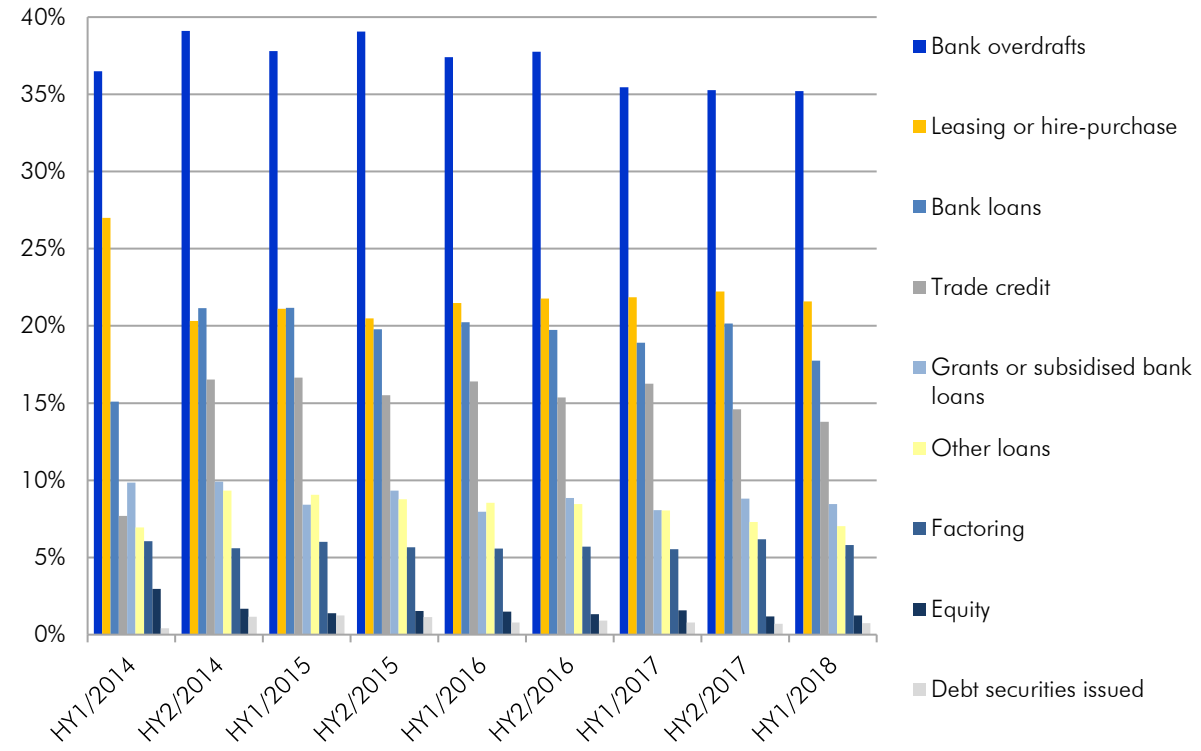
Source: Authors, based on ECB SAFE (ECB, 2018b)

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 (see Box 2 for more details). 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). The financing composition of SMEs does not vary strongly over semesters, although we did observe a minor decrease in the use of bank loans, as well as trade credit, from the second semester of 2017 to the first of 2018.

Box 2: SME leasing in Europe (Euro area)

Based on the ECB SAFE surveys for the Euro area over the last five 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 B2.1).

Figure B2.1: Use of external sources of financing by Euro area SMEs



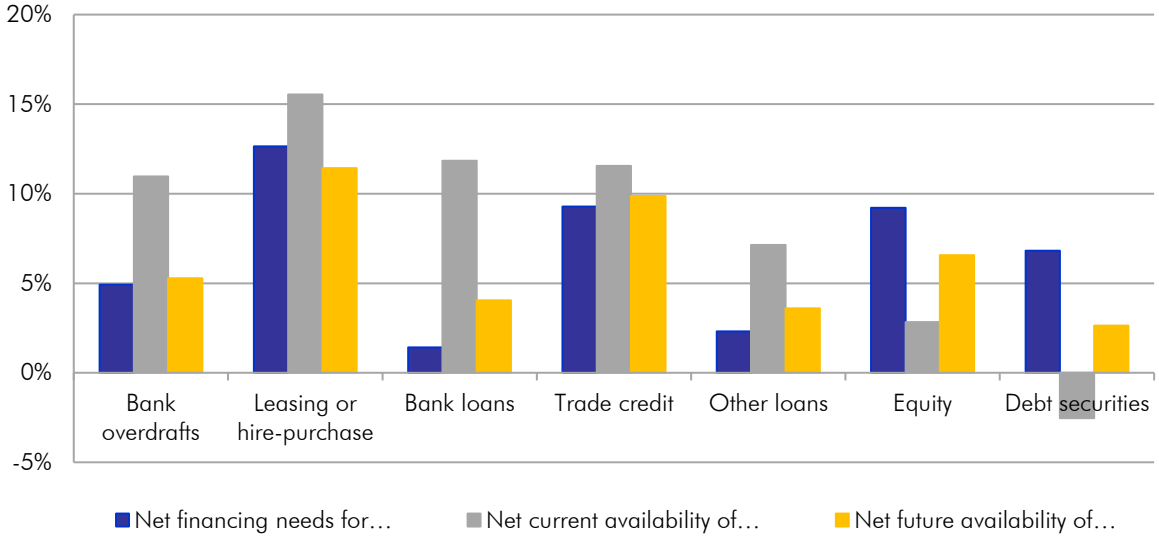
*Note: percentage of respondents (weighted results) stating that they have used the respective financing source over the past six months.

Source: Authors, based on ECB SAFE (ECB, 2018b)

According to the latest ECB SAFE survey wave (April 2018 – September 2018), 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 B2.2). Survey respondents expect that the availability of leasing will further improve over the next six months, more than all other external financing sources. 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.

Box 2 continued:

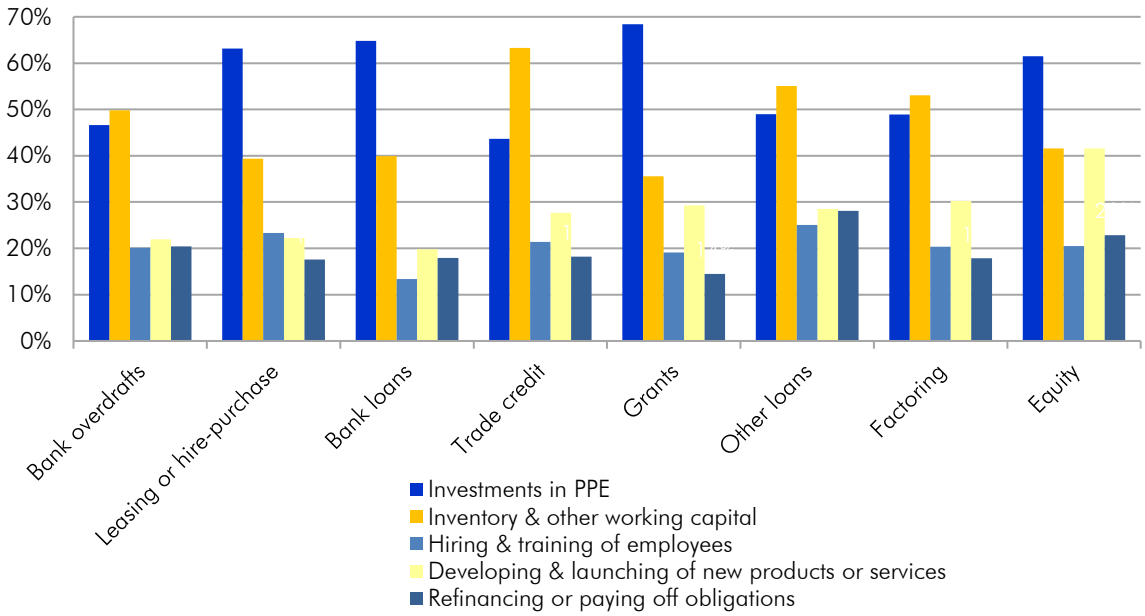
Figure B2.2: Financing needs and availability of financing sources for Euro area SMEs (HY1/2018)



*Notes: "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, 2018b)

Figure B2.3: Purpose of financing by source of financing used, Euro area SMEs (HY1/2018)



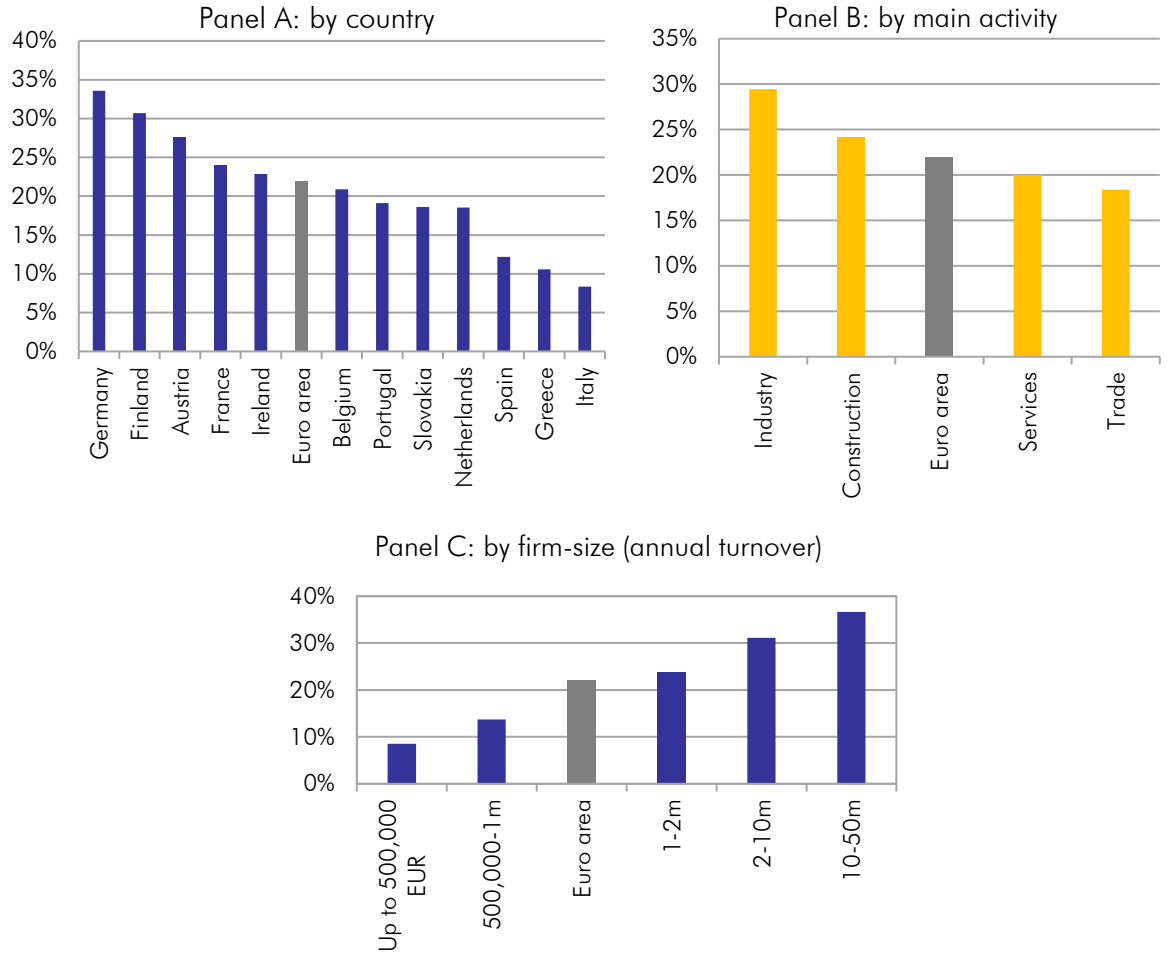
*Note: percentage of respondents (weighted results) stating that they have used the respective financing source for the various investment purposes over the past six months.

Source: Authors, based on ECB SAFE (ECB, 2018b)

Box 2 continued:

Looking at the purpose for which financing is used by Euro area SMEs (see Figure B2.3), leasing is mainly used for investments in property, plant or equipment (PPE). Moreover, the percentage of SMEs who use leasing for fixed-asset investments is the third highest (following grants and bank loans) among SMEs who use other sources of financing for the same type of investment. The same largely applies to the use of leasing for the hiring and training of employees.

Figure B2.4: Use of leasing or hire-purchase by Euro area SMEs – across countries, industries and firm-sizes (HY1/2018)



*Notes: percentage of respondents (weighted results) stating that they have used leasing or hire-purchase over the past six months; "Industry" includes manufacturing, mining and electricity, gas and water supply.

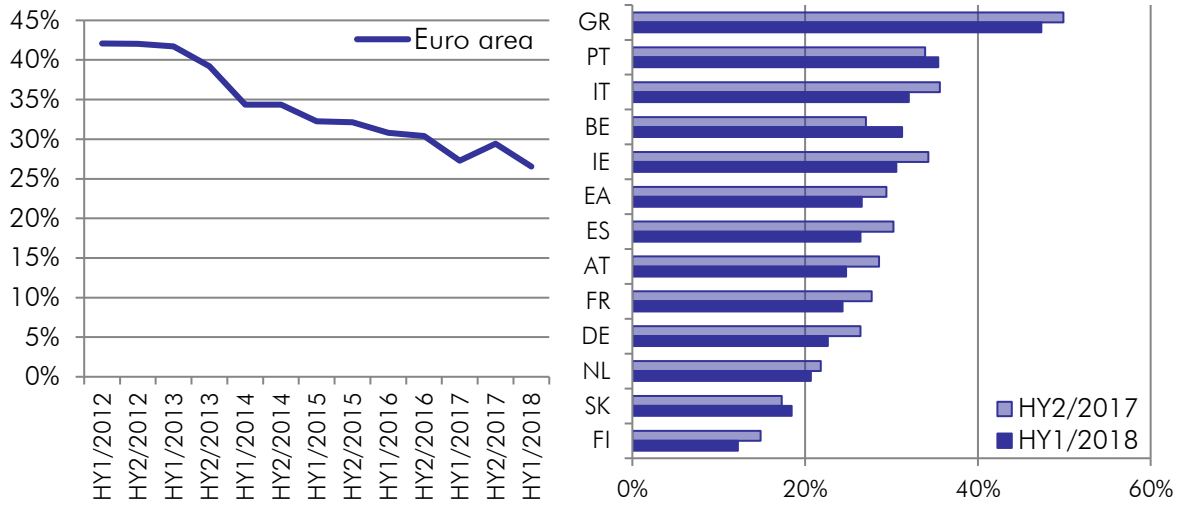
Source: Authors, based on ECB SAFE (ECB, 2018b)

There is wide heterogeneity in the use of leasing, across countries, industries and firm-sizes. A country-by-country analysis (see Figure B2.4, Panel A) reveals that Germany, Finland and Austria 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 B2.4, Panel B), leasing as a financing source is more prevalent among industrial 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 B2.4, Panel C.

From the SAFE survey, we are able to construct a demand-side perspective on how SMEs perceive their external financing situation. During the first semester of 2018, the share of Euro area SMEs that considers access to finance to be a highly important problem[21] has decreased by about three percentage points to 26.5%, declining to its lowest value since the beginning of measurements (Figure 16, left panel). While SMEs are more optimistic about their financing options compared to 2012, it is worth noting that despite of the positive economic conditions 1 in 4 SMEs still report severe difficulties in accessing finance. This points to significant structure failures on their external financing markets.

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, 50% of SMEs reported to have significant issues accessing finance, a minor improvement compared to one semester earlier. In Finland, this is only 12%, down from 15% one semester earlier. Access to finance issues appeared to have improved in most Euro area member states. Only Portuguese, Slovakian and Belgian SMEs reported increased difficulties. For the latter two countries, this is consistent with the conclusions from the supply side analysis in section 3.3.

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



Source: Authors, based on ECB SAFE (ECB, 2018b)

Figure 17 demonstrates an external finance gap indicator, this time constructed from a demand perspective, constructed using SAFE data. It is based on perceived changes in the need for and availability of external financing. The gap is depicted for both SMEs and large firms. A negative value of the indicator implies a shrinking financing gap. The intuition is similar to the supply side gap-diagram illustrated in Figure 14. Figure 17 shows how during the first semester of 2018, firms from all size classes reported a shrinking financing gap for the 8th consecutive semester. Remarkably, for the first time since the start of the SAFE survey in 2010, SMEs are reporting a more favourable evolution of the financing gap compared to large firms, turning the size spread negative. This is consistent with some of the evidence presented in section 3.2, where the upward trend in the share

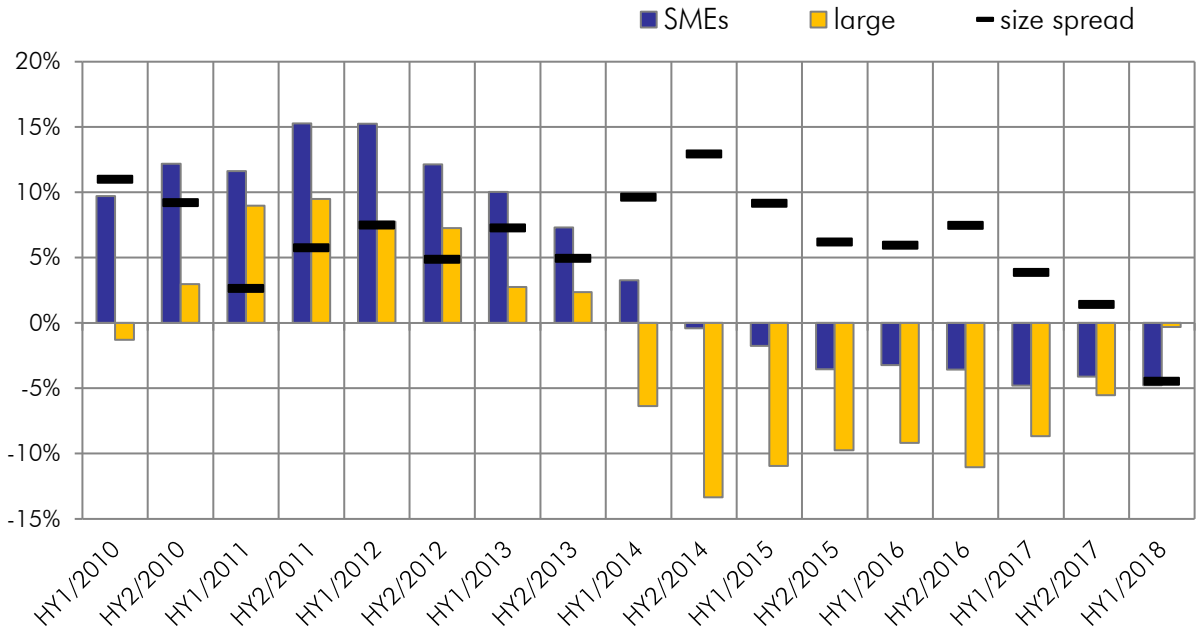
[21] Rating it 7 or higher on a scale of 10 for the survey item Q0b, pressingness of problems that the firm is facing.

of small loans in total loans indicated a relatively faster recovery of the SME lending segment, for example.

In all but two countries, SMEs perceived an improvement in their access to finance (Figure 18.) French SMEs reported the financing gap constant. Only in Greece SMEs experienced continued financing issues, although the pace at which the gap increased declined significantly compared to last semester, indicating some improvement in the Greek financing market.

The SAFE survey also asks SMEs which factors they believe to be driving the availability of external financing. During the first semester of 2018, all factors but one were believed to contribute positively to the availability of external finance (Figure 19). Consistent with earlier periods, SMEs complained about a lack of public support to external financing markets, such as government supported guarantee schemes. While the overall sentiment was positive, there was one noticeable change compared to last semester. SMEs are remarkably less positive about the general economic outlook and their future prospects to obtain external financing.

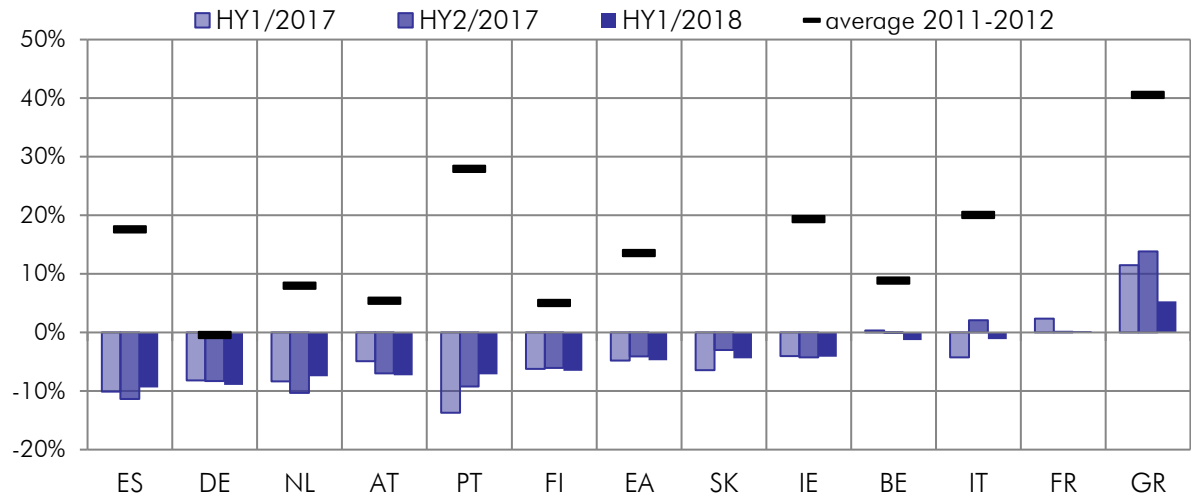
Figure 17: Perceived change in the external financing gap by SMEs and large firms*



* For each of the five financing instruments (bank loans, trade credit, equity, debt securities, bank overdraft), an indicator change in a perceived financing gap takes the value of 1 (-1) if the need increases (decreases) and availability decreases (increases). If firms perceive only a one-sided increase (decrease) in the financing gap, the variable is assigned a value of 0.5 (-0.5). The composite indicator illustrating the perception of firms' financing gap is the weighted average of the financing gap related to the five instruments. A positive value of the indicator suggests an increasing financing gap. Values are multiplied by 100 to obtain weighted net balances in percentages. The size spread depicts the percentage point difference (in absolute terms) between the perceived financing gap as reported by SMEs and the gap reported by large firms.

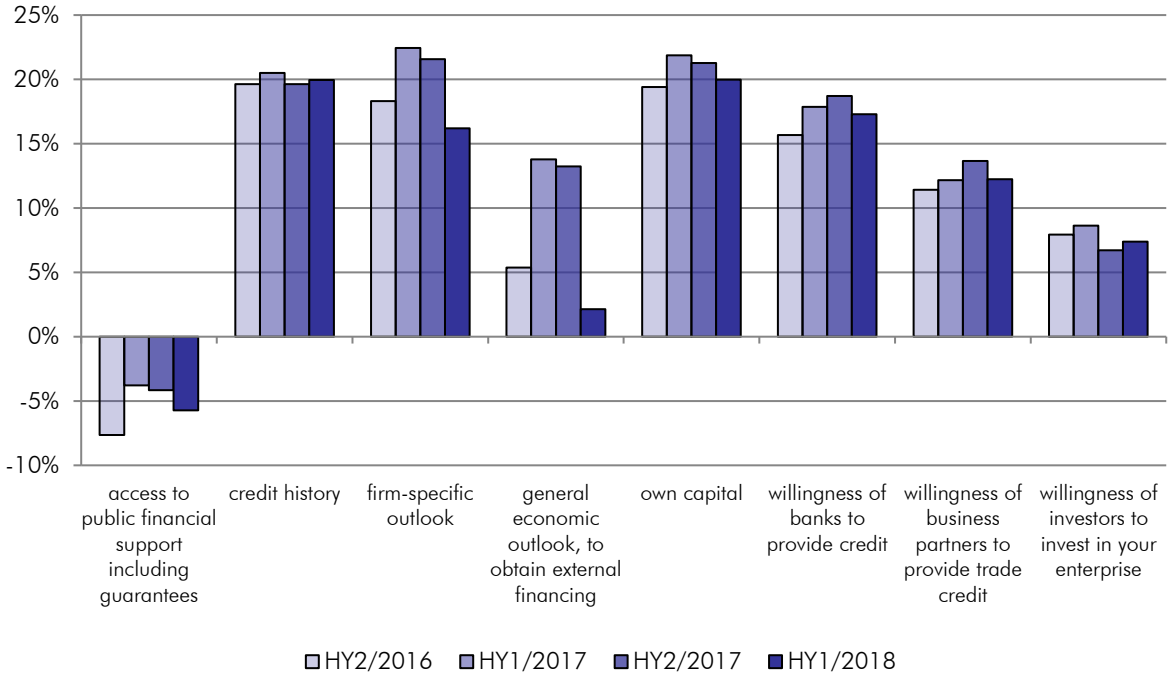
Source: Authors, based on ECB SAFE (ECB, 2018b)

Figure 18: Perceived change in the external financing gap by SMEs at the country-level*



*The marker denotes the average level of the index throughout the four semesters of 2011 and 2012, the period in the aftermath of the crisis in which SMEs reported the highest values of the perceived change in the financing gap.
Source: Authors, based on ECB SAFE (ECB, 2018b)

Figure 19: Factors driving the availability of external financing to Euro area SMEs



Source: ECB SAFE (ECB, 2018b)

In conclusion, the European economy is heating up and is well on its way to full recovery. Lending volumes continue to rise and European corporations have reversed the deleveraging trend. At the same time, some dark clouds are showing up on the horizon. Inflation rates are on the rise and have been flirting with the ECB's 2% target, which could indicate a possible reversal of the accommodating monetary policy measures that have been driving investment over the past years. In addition, continued political uncertainty, both at the national level and the international level, creates a difficult investment environment and poses a threat to Europe's economic growth prospects.

4 Private equity

Private Equity (PE)/Venture Capital (VC)[22] 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). 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.[23] 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 20; 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 78bn 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 partial rebound, although the recovery has shown some setbacks. Fundraising and investment seem to be on their ways to pre-crisis levels.

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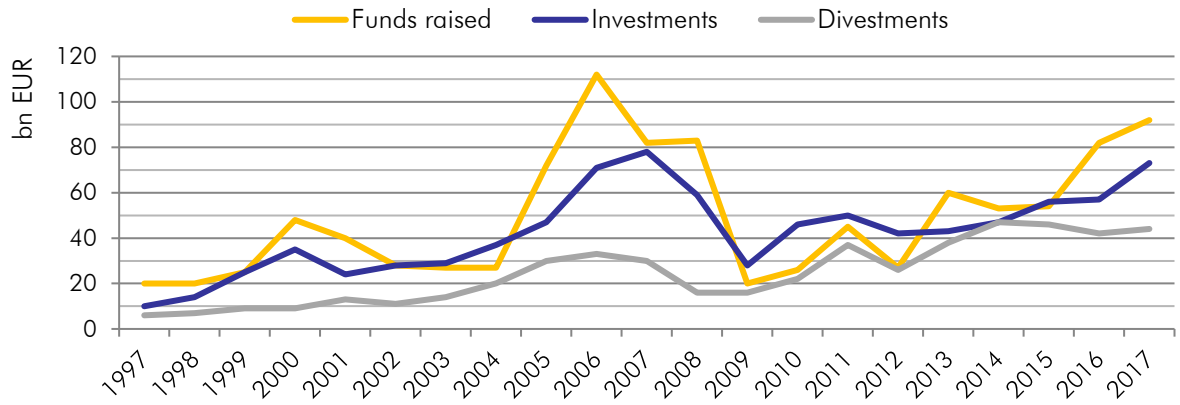
[22] In this chapter, we follow the Invest Europe approach that includes venture capital as a subcategory of private equity.
[23] See chapter 5.1.1, Market failure and policy response, for an overview of the rationale for public intervention in SME financing.

Figure 20: Fundraising, investment and divestment amounts by PE firms located in Europe[24]



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 (formerly EVCA, the European Private Equity & Venture Capital Association), and we would like to thank our colleagues from the Invest Europe research team for their support.

Please note that Invest Europe private equity (PE) statistics do not include infrastructure funds, real estate 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").[25]

In 2017, Invest Europe released its statistics for the first time based on a new database. All data since 2007 was restated and complemented with additional information. With data on more than 1,250 European PE firms, the latest statistics cover 89% of the EUR 640bn in capital under management in Europe.

See, for more details, Invest Europe (2017 and 2018a) and the Invest Europe website (www.investeurope.eu).

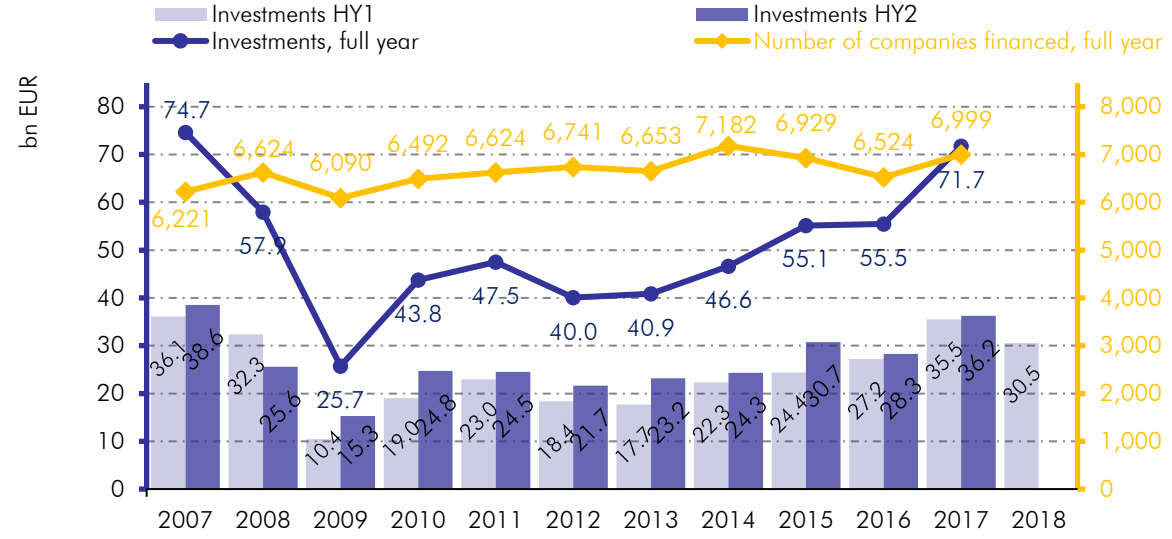
In 2017, the PE investments surged strongly. PE funds located in Europe (statistics based on the "industry approach"; see Figure 20)[24] invested EUR 73.5bn, an increase by 29% compared to the previous year. At the same time, investments by PE funds from all over the world (including Europe) in portfolio companies based in Europe ("market approach") increased by 29% to EUR 71.7bn (see Figure 21). The number of European companies financed increased by 7% to 6,999. In the first half

[24] 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.
[25] 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".

year of 2018, PE investments amounted to EUR 30.5bn (market approach), according to preliminary Invest Europe data.

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 EUR 13.7bn or 37% to EUR 51.2bn), in 2017. Considerable increases were also recorded for replacement (+28% to EUR 2.2bn) and growth capital (+6% to EUR 11.5bn), while the smaller segment of rescue/turnaround capital showed a decrease by 37% to EUR 0.4bn (see Figure 22). Preliminary figures for the first half-year of 2018 show that venture and growth capital investments have remained remarkably strong.

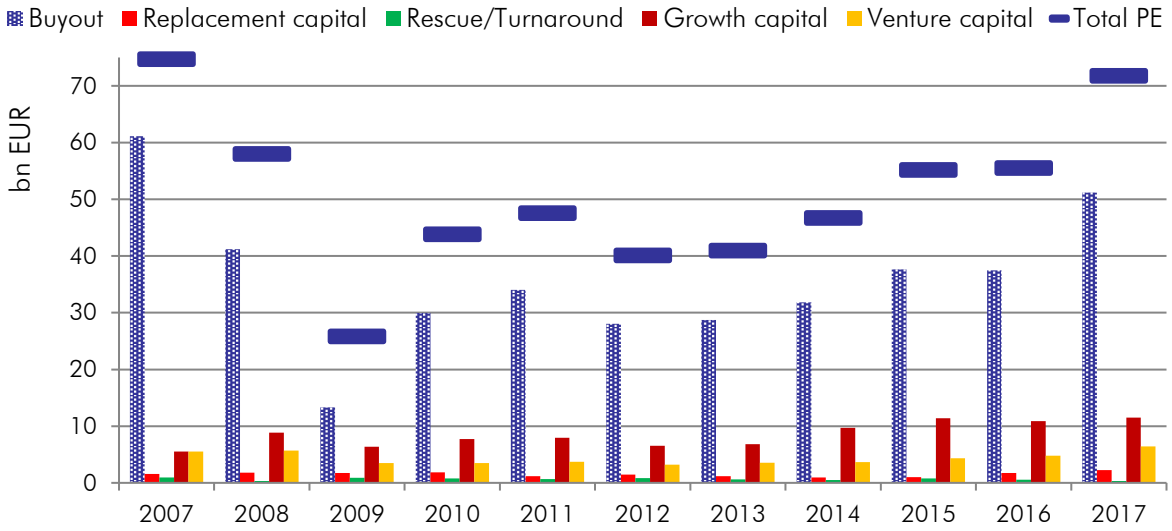
Figure 21: PE investment in European portfolio companies



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 22: 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

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.

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.

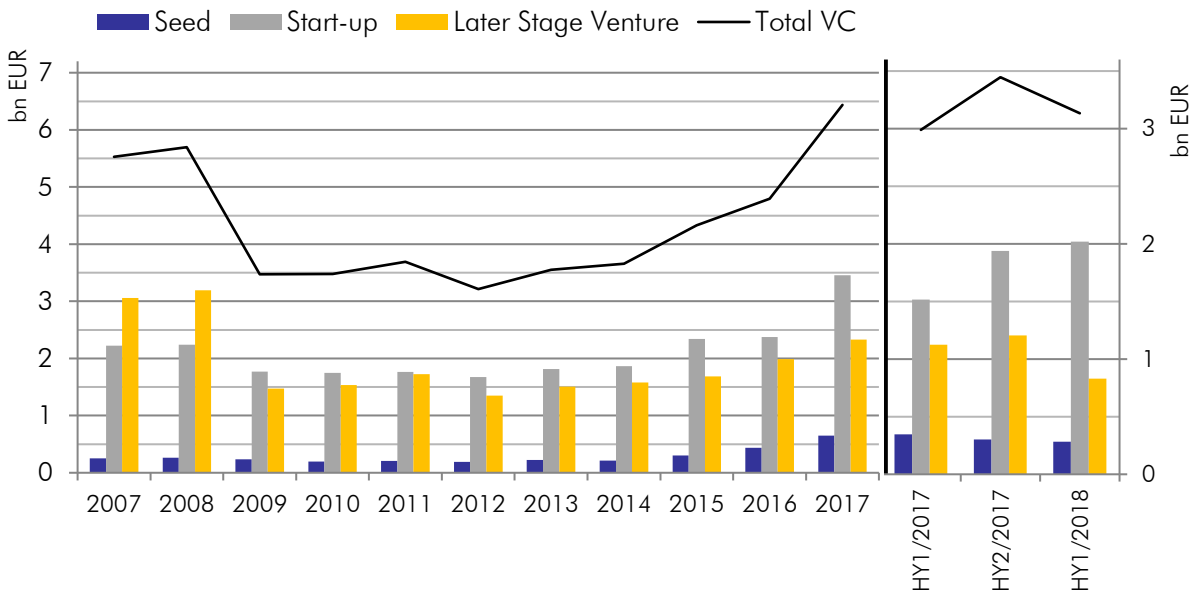
Buyout: Financing provided to acquire a company. It may use a significant amount of borrowed capital to meet the cost of acquisition. Typically by purchasing majority or controlling stakes.

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.

Source: Invest Europe (2018a, 2018b)

Figure 23: VC investment amounts by stage focus



Source: Authors, based on data from Invest Europe

Venture Capital (VC) investments jumped by 34% to EUR 6.4bn in 2017. In terms of number of companies financed, the VC segment accounted for the majority of PE investments (3,756 out of

6,999). Within the VC market segment, investments rose for all enterprise development stages in 2017 (see Figure 23), i.e. seed (+49% to EUR 0.6bn), start-up (+46% to EUR 3.5bn) and later stage venture (+17% to EUR 2.3bn); 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 than later stage VC investments.[26] Preliminary figures for the first half-year of 2018 show again a particularly strong increase for investments at the start-up stage.

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.

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 2017, the EIF encouraged the flow of research and innovation into the European marketplace by supporting nine TT transactions with a total commitment of EUR 221m (EIF, 2018).

Overall, annual seed stage VC investments[27] in European enterprises have tripled since 2014 and reached a record level of EUR 649m in 2017, thereby supporting 1,081 companies, according to Invest Europe data. In the first half-year of 2018, seed investments were at EUR 284m, according to preliminary figures.

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

Source: EIF

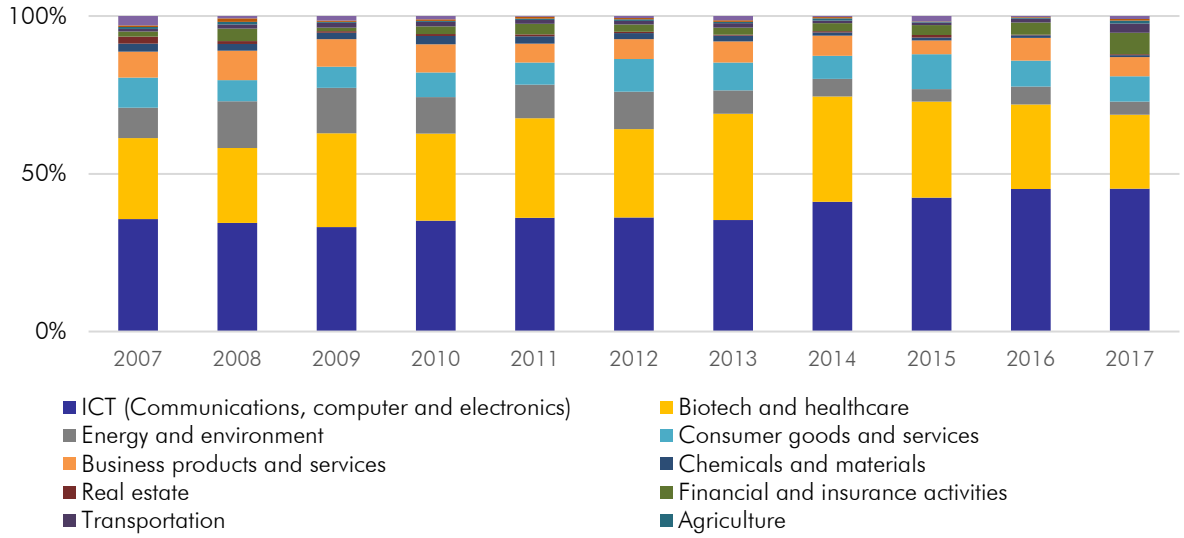
Developments in venture investment by sector are shown in Figure 24. The relative importance of sectors has a certain stability over time: ICT (communications, computer and electronics) and biotech

[26] 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.

[27] 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.

& healthcare have remained by far the most relevant industries for venture investment in Europe since 2007. Over the most recent four years, the share of ICT in total VC investment activity even increased, from levels between 33% and 36% in the 2007 to 2013 period to 41% in 2014 and 45% in 2017. In contrast, the share of investments in the energy and environment sector decreased from 15% in 2008 to 5% on average in the past four years.[28] 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.

Figure 24: Venture investment in Europe by sector focus, 2007-2017



Source: Authors, based on data from Invest Europe

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 2017, about 13.9% of the EUR 11.5bn in growth stage investments was received by venture-backed companies, according to Invest Europe. 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) provide more insight into the value of innovation for EIF-backed start-ups (see also Kraemer-Eis et al., 2017, for an overview).

Corporate venture capital

One of the segments not covered under the Invest Europe PE activity statistics are corporate acquisitions outside of dedicated corporate venture programmes. However, corporate venture capital (CVC), which typically can serve both an investing corporation's financial and strategic goals (e.g. to enhance its innovative capacity or to tap into new markets), has gained importance in recent years.

[28] This development might be due to a re-positiong 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 are then typically classified under ICT.

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 2017, global CVC investments reached a record high of 1,791 deals, amounting to USD 26.5bn or EUR 23.5bn (CBInsights, 2018).[29] The share of CVC deals among all VC deals increased from 16% in 2013 to 20% in 2017. The percentage of deals to European companies among all CVC deals worldwide went up from 14% in 2013 to 20% in 2017.

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.

Co-investment

In order to strengthen investment capacities, co-investment can be a promising feature of the PE/VC market. On a global level, the proportion of LPs that co-invest with GPs has risen considerably over the last decade (Coller Capital 2017) and most investors expect this phenomenon "to remain a fixed feature of the PE landscape" (Coller Capital, 2015). In addition, a large majority of LPs reported "that their co-investments have outperformed their overall PE portfolios in recent years" (Coller Capital, 2016a).

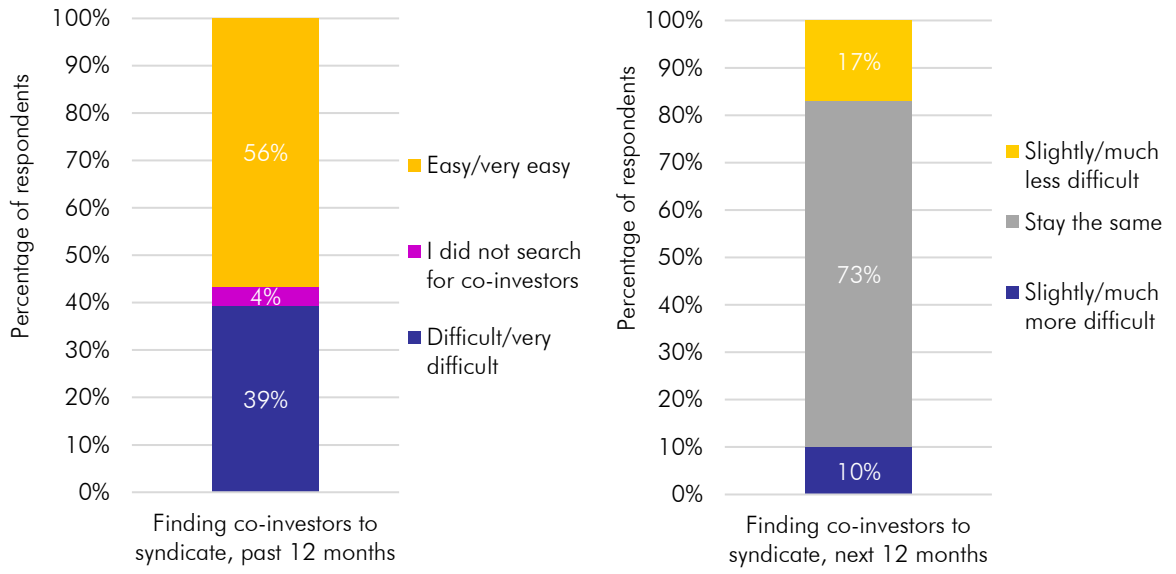
In an EIF survey among VC fund managers in Germany, two thirds of the participants saw a benefit in the availability of stable providers of co-investment capacity when addressing potential investment

[29] CBInsights CVC statistics only cover investments by specific, separately demarcated CVC arms (i.e., CVC funds), but not direct strategic investments by corporates. Based on a broader CVC definition, "Global Corporate Venturing", a media publication and data provider for the CVC industry, reported that a total amount of USD 83bn was invested by 965 corporate investors in 1,961 CVC deals worldwide in 2016, which would account for two thirds of global venture capital investments, (Mawson et al., 2017). For the same year, CBInsights reports 1,501 deals, amounting to USD 26.5bn.

opportunities (source: EIF). This is even more relevant, as the large majority of LPs seems to believe "that the LP community lacks the necessary investment skills, experience and processes to make successful co-investments" (Coller Capital, 2015). Time constraints, a limited understanding of co-investment performance drivers, and the inability to recruit staff with the requisite skills were cited as "the main challenges preventing LPs from making successful co-investments".

However, the markets have started to develop and investors believe that the economics of co-investing will further change, e.g. by the occurrence of more co-investment opportunities coming with fees and carried interest in the future (Coller Capital, 2016b). In the *EIF VC Survey*, "finding co-investors to syndicate" was indeed perceived relatively easy and not expected to change soon by the majority of European VC GPs (see Figure 25; see Box 6 for an overview of the *EIF VC Survey* results). However, there was also two fifths of the fund managers who reported difficulties in finding co-investors (Kraemer-Eis et al., 2018a). A more detailed analysis of the responses reveals significant variations across regions and industries. VC managers in France (74%) and the Nordics (67%) report greater easiness in finding co-investors to syndicate, as opposed to almost half of the VC managers in the UK & Ireland who found it rather difficult. Similarly, VC managers investing in Clean Technologies (67%) and Services (63%) also report the greatest difficulties in finding co-investors, while the corresponding figures for ICT and Manufacturing are only 35% and 33%, respectively.

Figure 25: Easiness to find co-investors to syndicate, past and next 12 months



Note: Diagrams show the aggregated results for the *EIF VC Survey* questions "How easy was it for you to find co-investors to syndicate over the last 12 months?" (left-hand side) and "Over the next 12 months, how difficult do you think it will be to find co-investors to syndicate compared to the current situation?" (right-hand side).
Source: Kraemer-Eis et al. (2018a)

Secondary market

Secondary sales support a PE funds' portfolio management. After a slight decrease in 2016, the secondary market volume reached a historical record in 2017, led by strong dry powder and less market volatility compared to the year before. Moreover, the market environment in 2016 had led

some buyers to postpone secondary deals, which may have been closed in 2017. Despite the record volume in 2017, dry powder is still at very high levels. Together with expected strong fundraising, high prices and deal volume, the market conditions are likely to remain positive for secondary sales. According to Preqin (2018d), more secondary market sellers from Europe are expected to be active than from any other world region in the next 1-2 years.

Box 6: The EIF VC Survey – Fund managers' perception of EIF's Value Added

The EIF VC Survey is a survey among venture capital general partner (GP)/management companies headquartered in the EU-28 and some additional countries (mainly Norway, Switzerland and Turkey). The surveyed population includes companies in which EIF invested as well as companies in which EIF has not invested.

The first survey wave was conducted in November/December 2017. The questionnaire covered three areas: (i) the VC market sentiment, (ii) market weaknesses and public intervention, (iii) the value added, products and processes of the EIF. The results of the first two parts are provided in Kraemer-Eis et al. (2018a) and summarised in the previous ESBFO issue. The results of the third part are presented in Kraemer-Eis et al. (2018b), which was published in September. That study provides detailed insights into the fund managers' perception of the value added of the EIF, including its impact on the funds' investor base, the fundraising process, the fund structure and the VC market altogether. Moreover, the study gives a detailed overview of the fund managers' assessment of the EIF's products and procedures, including a comparison with other limited partners (LPs). In the following, we summarise the content of that paper:

EIF's value added

Investor base and fundraising process

- VC fund managers evaluate very positively the EIF's impact on the fundraising process and in particular the vital role of the EIF in reaching both viable and target fund sizes.

- The EIF's value added to fundraising is strongly positive across all regions, but even more so in the South and in the Nordics. Given the evidence in the first EIF VC Survey Working Paper that small fund sizes is a significant challenge faced by VC funds in the South, the findings indicate that the EIF's impact is greatest where it is needed the most.

- At the same time, the findings call for continuous support to CESEE countries, given that although the EIF partnership contributed to reaching viable and target fund sizes, these countries still rank behind counterparts in all other regions.

- Indeed, based on the geographical distribution of respondents, a higher proportion of funds receiving support from the EIF for the first time as well as a higher proportion of first-time teams are documented in CESEE and South countries.

- Surveyed fund managers also rate very highly the quality signal of the EIF and its role as a stable, long-term investor.

- They find however that the EIF partnership was less vital for connecting to a broader range of investor categories (such as insurance companies and family offices) or for attracting new categories of LPs that had not previously invested in European VC.

Box 6 continued:

Fund and market

- Building upon the previously presented positive effect of the EIF on the fundraising process, additional results further indicate that VC managers agree on average that due to the EIF's commitment they were able to become a sustainable investment firm through several fund generations.

- Moreover, surveyed VC managers indicated that the EIF partnership indeed helped their firms to raise a fund focusing on enterprises in a development stage underserved by the VC market.

- Fund managers in CESEE and South countries particularly value the EIF's contribution in their ability to target underserved geographical segments, as opposed to funds in DACH and France, suggesting once again that the less developed the VC ecosystem in a region, the stronger the impact of the EIF's support.

- Surveyed fund managers also evaluate positively the EIF's contribution in their ability to target underserved industry segments.

Fund structure

- Surveyed fund managers agree on average that the EIF's commitment had a positive impact on their fund's structure, especially on improving governance and procedures of their fund, on implementing best-market-practice terms and conditions, and on improving investor protection clauses.

- The EIF's involvement did not, on average, contribute to an improvement of the funds' investment team composition and quality, except for first-time teams and funds that received EIF support for the first time.

- Looking at regional variations, VC managers in the South consistently rate the EIF's value added to the fund structure much more highly than the overall sample average, while the exact opposite holds true for VC managers in the UK and Ireland (yet in these countries too, respondents perceive the EIF's value added to the fund structure to be positive across almost all subcategories examined).

Overall effect

- Eighty-five per cent of all surveyed fund managers consider the overall value added of the EIF to be "high" or "very high".

- Fund managers particularly indicate that due to the EIF's investment in their fund they were able to increase both the number of European SMEs in which they invested as well as the amount invested per SME, a promising evidence that VC funds increase the number and level of investments in European SMEs in response to public support.

- The EIF's catalytic role for European VC is also reflected in the fact that VC managers evaluate very positively the EIF's help for future fundraisings, while they acknowledge that without the EIF's support the fund would have not been launched.

- Fund managers call for greater networking opportunities through conferences, workshops and training events that would facilitate the sharing of experience and best practice. They find the EIF's research helpful and suggest that the EIF should continue sharing its VC "market intelligence" in order to further raise awareness and help attract more LPs into the asset class.

Box 6 continued:

- Ninety-one per cent of all surveyed fund managers state that they would work again with the EIF.

- Ninety per cent of all surveyed fund managers indicate that that they would apply or at least consider applying for EIF funding even if they would have enough capital from private investors. They point to the fact that the EIF is considered a long-term, reliable investor bringing stability to the investor base; and that the EIF's investment is considered a "quality stamp", carrying a very positive reputational signal for the fund and helping attract other LPs.

EIF's perceived impact on the VC market

- Fund managers perceive very positively the role of the EIF in reducing the financing gap for companies in the market, in helping VC firms overcome insufficient private sector involvement and in encouraging other LPs in the market to invest in VC funds. Even more positive evaluations for these elements come from the EIF-supported funds.

- EIF-supported funds particularly value the role of the EIF in helping to bring first-time teams into the market.

- In all respondent groups, fund managers state, on average, that the EIF's presence in their market helps to crowd-in private investors.

- Funds in South and CESEE countries in particular rate even more highly the presence of the EIF in their market and the EIF's contribution in filling the financing gap for companies, in attracting other VC investors and in bringing first-time teams to the market.

EIF's products and procedures

- Fund managers find the EIF's products well-structured and reflecting current market needs. They indicate that all products were transparent to them before applying for funding.

- Fund managers rate highly the transparent nature of the EIF's communication and application process, particularly the communication of the EIF's decision regarding the outcome, whether positive or negative, of their application.

- Surveyed fund managers evaluate positively the due diligence procedures applied by the EIF to assess their proposal.

- The EIF's procedures are perceived similar to, if not better than, those of other LPs, with the exception of the length of the EIF's decision process and of the time required to prepare the application materials. Those VC managers who indicated that they would not apply for EIF funding if they would have enough capital from private investors stated that the main reason is the length (but also the complexity and restrictiveness) of the application/decision process.

EIF's comments and further use of the findings

The insights gained from the EIF VC Survey 2018 are intended to feed into the internal consultations and to directly contribute to a steady improvement of the EIF's products and processes in line with market needs.

The market feedback is overall very positive. As regards suggestions for improvements and as outlined in more detail in the paper, the EIF is taking these views very seriously into consideration.

Box 6 continued:

For example, as regards the EIF's value added to the investor base and fundraising process, measures to attract new categories of LPs are already underway, e.g. the recently launched AMUF (Asset Management Umbrella Fund) initiative.

The finding concerning the fund structure and the fact that the EIF's involvement did not, on average, contribute to an improvement of the funds' investment team composition is in line with the EIF's approach not to actively interfere in these aspects but rather to suggest improvements only where it is considered necessary, i.e. typically in the case of first-time teams and relatively underdeveloped markets.

In relation to the EIF's overall effect, a large majority of respondents stated that they would consider applying for EIF funding even if they would have enough capital from private investors. While the EIF understands the importance of a stable investor base in the context of the VC industry's cyclical nature, EIF's sensitivity to fundraising dynamics in the private sector is essential in order to avoid crowding-out effects in funds that have access to private sector capital even without EIF support. Moreover, in practice the EIF often avoids crowding out other LPs by reducing its commitments to funds when there is sufficient interest from private investors. As regards the EIF's perceived impact on the VC market, the survey evidence, in particular the result that the EIF's presence in the market helps to crowd-in private investors, points to the catalytic role of the EIF for the European VC market rather than to a crowding-out effect. It indicates the crucial role of public support in attracting other VC investors and shows that the EIF's investment in the fund has a positive signalling effect rather than deterring LPs from committing.

Concerning the EIF's products and procedures and the length of the investment selection process in particular, the survey has evidenced the need for the EIF to permanently reassess its processes for identifying unnecessary red tape when interacting with its stakeholders. At the same time, the EIF recognises the need to implement a thorough due diligence process for two main reasons: first, due to the strings attached to EU-mandated resources and EU policy objectives; and second, due to the fact that, as fund managers indicated, the EIF's investment in a fund is considered a "quality stamp" that attracts other LPs.

Recent EIF initiatives can help to meet another suggestion from the survey respondents, i.e. the call for more networking and good-practice sharing opportunities: On the occasion of the "Investment Plan for Europe", the EIF-NPI Equity Platform was established as a collaborative initiative that promotes knowledge-sharing and best practices, in this case between EIF and national promotional institutions (NPIs) or banks (NPBs) across EU Member States. Moreover, the EIF organised its first VC conference in October 2017 in Berlin and a second one in October 2018 in Luxembourg, which were both attended, inter alia, by many GP representatives. The EIF will also continue to share its market intelligence through publications by the EIF's Research & Market Analysis.

The EIF VC Survey project complements both recent and future quantitative analyses of the economic impact of the EIF's VC operations. Furthermore, the EIF VC survey is going to be repeated on a regular basis in order to derive robust results and implications. As such, future waves will include additional policy implications and improvements in the EIF's processes and products, as well as a comprehensive market overview of the VC landscape including a VC market sentiment index over time.

Source: Kraemer-Eis et al. (2018b)

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; OECD, 2016; BAND, 2016; and OECD, 2018b.)

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 per cent 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 and the holding periods of BA investments are typically shorter than the corresponding periods in VC funds (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). According to several studies, 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 the crisis, 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 used more often by BAs – in particular by younger and less experienced ones – as tools to find investment opportunities, thereby allowing them to make investments in a wider geographical area (OECD, 2016).

However, 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. 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 2018). Such difficulties must be borne in mind when describing the market.

Currently there is no robust and consistent data available on the Business Angel market in Europe; published data can only be used as indication or very rough estimate (see also OECD, 2018b). For the visible market segment, data is collected by angel associations from angel groups and networks. Ad-hoc surveys 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 7). Information on angel investing in different European countries can also be found in BAE (2015).

Box 7: 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. 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 (2018)

At a European level, the European Business Angel Network (EBAN) reported an increase in BA investment by 9%, compared to the year before, to a record amount of EUR 7.3bn in 2017 (EBAN, 2018; more recent data is not yet available). However, this number is based on the assumption that the visible market, for which EBAN reports investments of EUR 727m, represents 10% of the whole market.[30] The estimated number of investments increased by 3% to 39.4k. The number of BAs is estimated at 337.5k, which represents an increase by 8% compared to 2016. The number of BA networks (BANs) in Europe was at 475 in 2017. 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 1.5% from 2013 till 2017, which demonstrates a certain consolidation in the market as networks became more formalised (EBAN, 2018).

[30] 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, 2018).

Most of the BA activity within the EU is happening in the UK, Germany, France, Spain and Finland. When comparing BA investment amounts to GDP, the picture looks different, with Monaco, Estonia, Malta and Bulgaria being on top of the ranking. In 2016 only 8% of BA deals (most recent investments) targeted companies outside their home country, but 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).

In 2017, investments per individual European angel and funding round varied between EUR 10k and EUR 500k with its average increasing by 13% to EUR 25.4k (EBAN, 2018). The average total amount invested *per company* increased by 10% to EUR 182k in 2017. This is well in line with the results of other studies (e.g., CSES, 2012), which estimated that BAs provided on average around EUR 100k to 200k per deal. In the US, investment per deal is much higher, i.e. at 380k USD (EBAN, 2018).

ICT and other technological sectors continued to be by far the most attractive target sector for BA deals (European Commission, 2017b). Within the Tech sector, FinTech, BioTech and MedTech receive most investments given their strong growth and scalability potential (EBAN, 2017). In line with this, Dealroom statistics show FinTech (25%), ICT (21%) and Health (16%) as the sectors that received the largest BA investment amounts. 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. 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 (44%) and seed (63%, multiple responses possible) investments are most popular, while a third of BAs also goes beyond these stages (EBAN, 2018).

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; European Commission, 2017b). In some countries, governments created such funds with favourable terms for BAs' co-investment, inter alia supported by the European Angel Fund (EAF), an initiative advised by the EIF. This provides a co-investment scheme for BAs investing in innovative companies (i.e. 1:1 matching of BA funding with EAF funding).[31] Syndication among angels has also increased, partly due to co-investment schemes for projects in which the threshold amount is relatively high for a single BA (EBAN, 2018).

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

[31] See www.eif.org/eaf for more information about the EAF.

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 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.

4.2 Fundraising activity

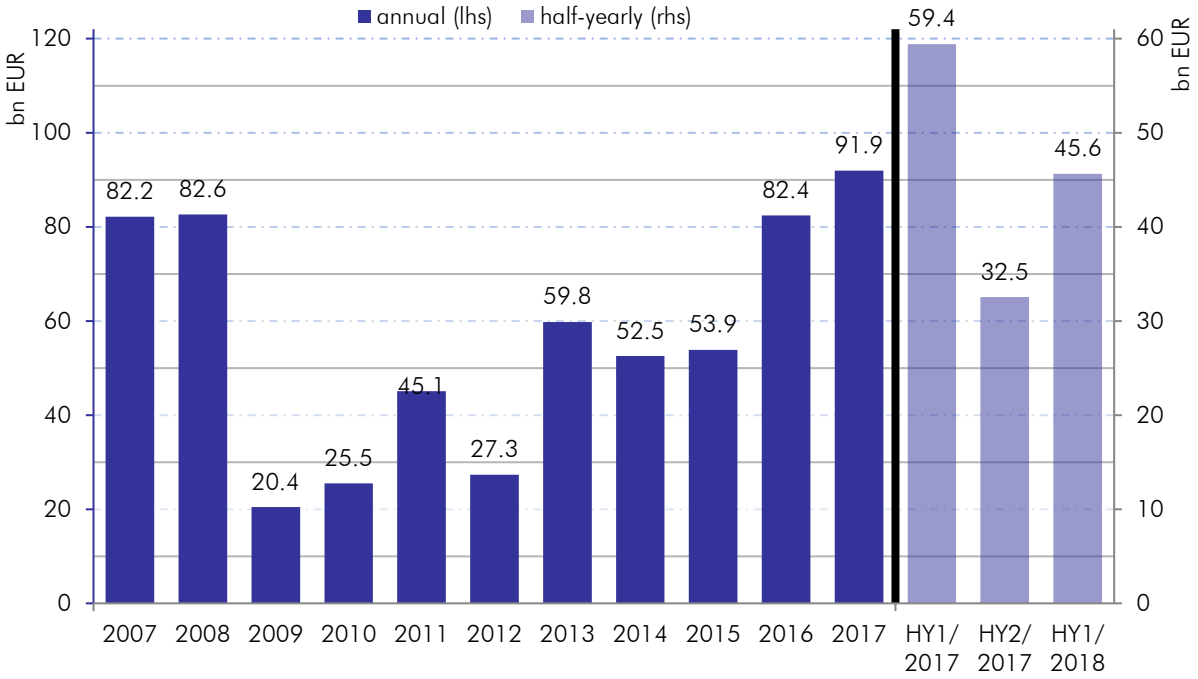
In 2017, total funds raised by PE firms located in Europe strongly increased by 12%, compared to the year before, to EUR 91.9bn, which constitutes the highest value since 2006 (see Figure 26 and Figure 20). This was mainly due to strong increases in the amounts raised by funds with a focus on growth capital (+41% to EUR 6.8bn), mezzanine capital (+146% to EUR 1.7bn), buyouts (+5% to EUR 65.1bn) and generalist funds (+58% to EUR 10.7bn).[32] The strong global PE fundraising activity was to a large extent driven by the positive net distributions that fund investors have received over the last years (Preqin, 2018a). In the first half-year of 2018, PE fundraising amounted to EUR 45.6bn, according to preliminary Invest Europe data.

In the venture capital segment, fundraising decreased by 7% to EUR 7.7bn (see Figure 27). This followed, however, the record year 2016, when the total VC fundraising amount had reached the highest level ever recorded in the Invest Europe statistics.[33] According to those fundraising data that were identifiable by investor category, the decrease in VC fundraising was mainly driven by a 52% drop in corporate investors' contribution to VC funds in 2017 (see Figure 30). While funds with a focus on the early stage (–6% to EUR 2.0bn) and venture funds with a focus on all stages (–10% to EUR 5.2bn) raised less volumes, a remarkable increase was recorded for venture funds with a focus on later stage investments (+40% to EUR 0.5bn). Final closings (total venture, amounts raised since inception) reached a record high (EUR 4.9bn) in 2017. In the first half-year of 2018, VC fundraising

[32] Box 8 provides an overview of the Invest Europe fund stage focus definitions.
[33] Invest Europe started publishing fundraising by fund stage focus in 2007.

amounted to EUR 3.1bn (incremental amounts raised during year) and EUR 2.3bn (final closings) respectively, with a strong increase reported for funds with an early-stage focus.

Figure 26: Amounts raised by PE funds located in Europe



Note: Incremental amounts raised during period by PE funds located in Europe.
Source: Authors, based on data from Invest Europe

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.

Early-stage fund: Venture capital funds focused on investing in companies in the early stages of their lives.

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.

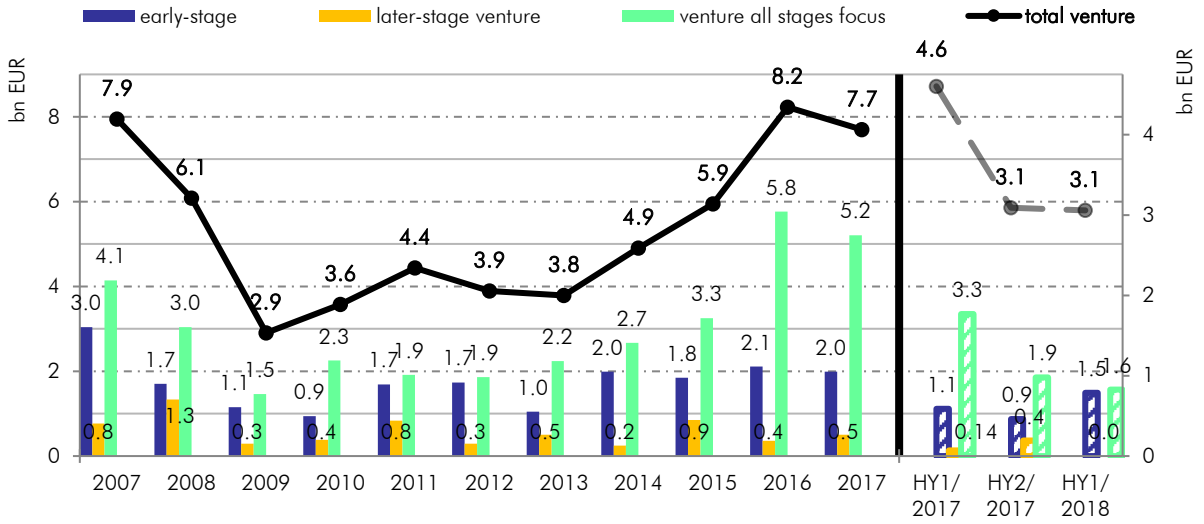
Later-stage fund: Venture capital funds providing capital for an operating company which may or may not be profitable. Typically in C or D rounds.

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 fund: Venture capital funds focused on both early and later stage investments.

Source: Invest Europe (2018a, 2018b)

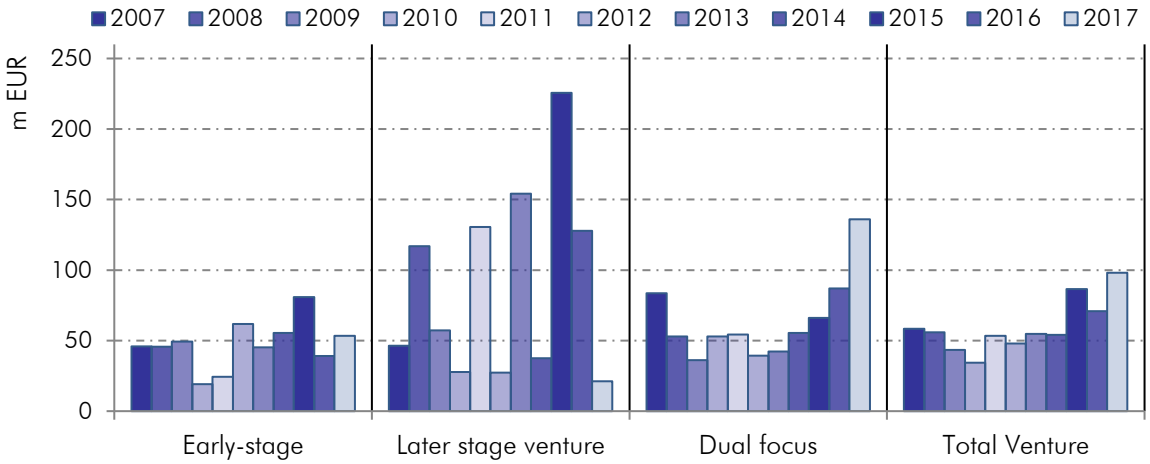
Figure 27: Amounts raised by VC funds located in Europe



Note: incremental amounts raised during period. Full year amounts (lhs) and half-year amounts (rhs).
Source: Authors, based on data from Invest Europe

In 2017, the average VC fund size increased to a record high of EUR 98m (see Figure 28), according to the Invest Europe statistics, which started to report VC fund sizes in 2007. However, while the average sizes of funds focussing either on the early stage (+36% to EUR 53m) and venture funds with a focus on all stages (+56% to EUR 136m) increased substantially, those funds with a focus on later stage venture showed a strong decline (–83% to EUR 21m). The number of final fund closings decreased to 50 in 2017 (60 in 2016). Final closings of funds with a primary focus on the early stage as well as venture funds with a focus on all stages decreased, while more funds with a focus on later stage venture were finally closed.

Figure 28: Average VC fund size[34] (at final closing; cumulative amounts raised since inception)

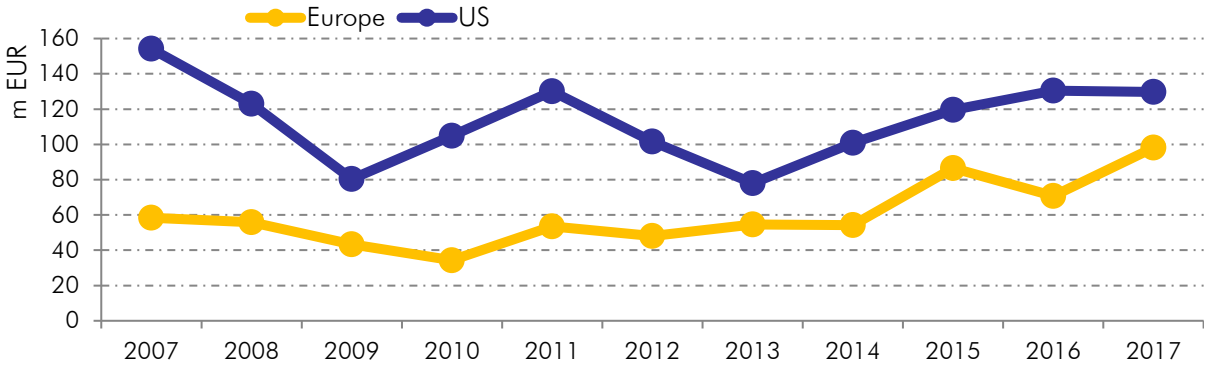


Source: Authors, based on data from Invest Europe

[34] The results for 2017 are based on 50 final VC fund closings (16 funds with an early-stage focus, 5 funds with a later stage focus and 29 venture funds with a focus on all stages).

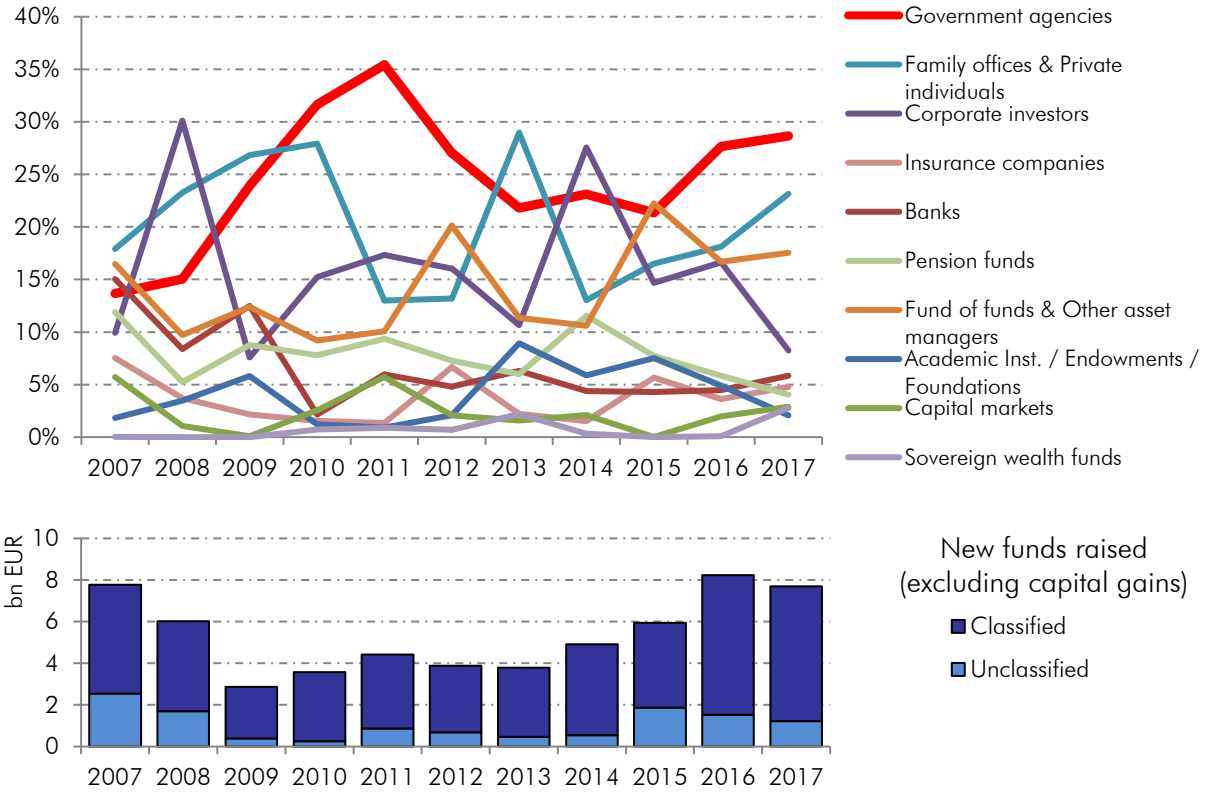
Given the evidence in previous studies, which indicated that small fund size was one of the reasons for poor European VC performance (Kelly, 2011), the increase in average VC fund sizes might mean positive news. However, the average venture fund size in the US is still remarkably larger (see Figure 29), 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 29: Average VC fund sizes in Europe and the USA



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

Figure 30: Investor base: Share of government agencies in VC fundraising[35]



Source: Authors, based on data from Invest Europe

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

EIF 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.

As a consequence of the crisis, investors exhibited a cautious sentiment for VC. The shift in the investor base, which went on during the past years, was a sign for this (see Figure 30). In 2017, according to Invest Europe figures, VC funds raised 29% of their capital from government agencies. This share had increased from 14% 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 2007-2009 to, on average, EUR 1.2bn in the years thereafter. It remains to be seen if the percentages reported for government agencies in 2016 and 2017 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). A longer summary is provided in a previous ESBFO edition (Kraemer-Eis, Lang, Torfs and Gvetadze, 2016a).

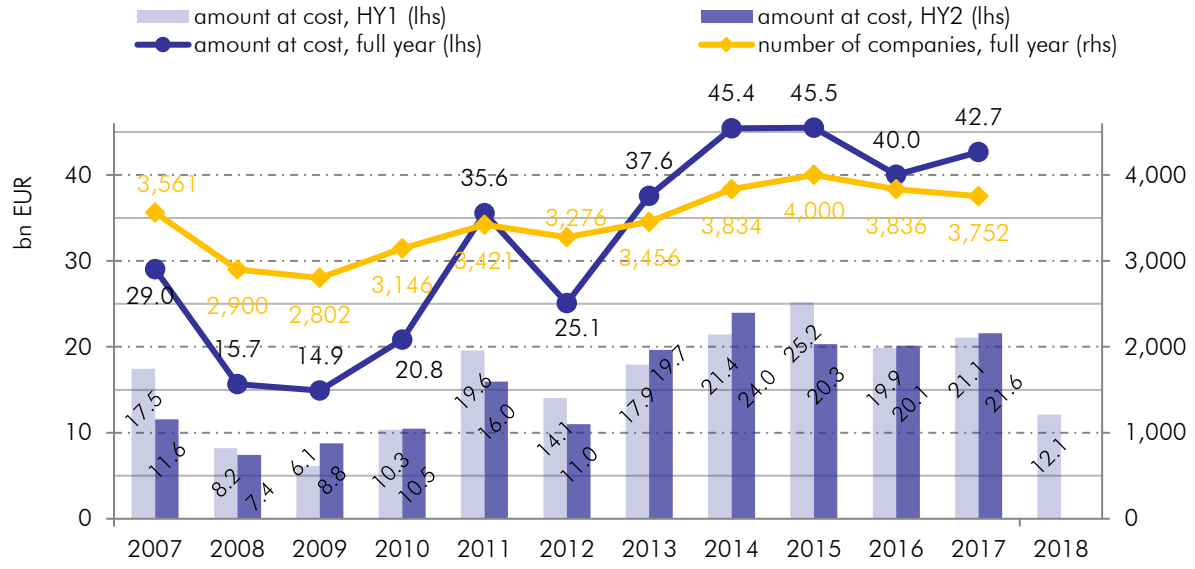
Moreover, EIF is supporting a relatively high number of first-time teams and many VC funds in which EIF invested successfully managed to close at their full target size. It is also important to see that many of the more established VC funds, pillars of Europe's VC market today, would not be there

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 recent *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 et al., 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".

4.3 Divestment activity

Over the past years, the exit market has shown remarkable strength. From 2013 to 2015, total PE divestments of European portfolio companies rose to the largest amounts ever reached in the Invest Europe statistics (see Figure 20). Following a 12% drop to EUR 40.0bn in 2016, divestments increased again by 7% in 2017 to EUR 42.7bn (see Figure 31).[36] The number of companies divested decreased by 2% to 3,752 in 2017. In the first half-year of 2018, PE divestments amounted to EUR 12.1bn, according to preliminary Invest Europe data.

Figure 31: Total PE divestments (by amount at cost) of European portfolio companies



Source: Authors, based on data from Invest Europe

The increase in the total divestment amount in 2017 was mainly due to higher activity in the buyout (+21% to EUR 32.6bn) segment of the market. In contrast, divestments in the venture (–7% to EUR 2.1bn) and growth (–5% to EUR 5.7bn) capital segments decreased.[37]

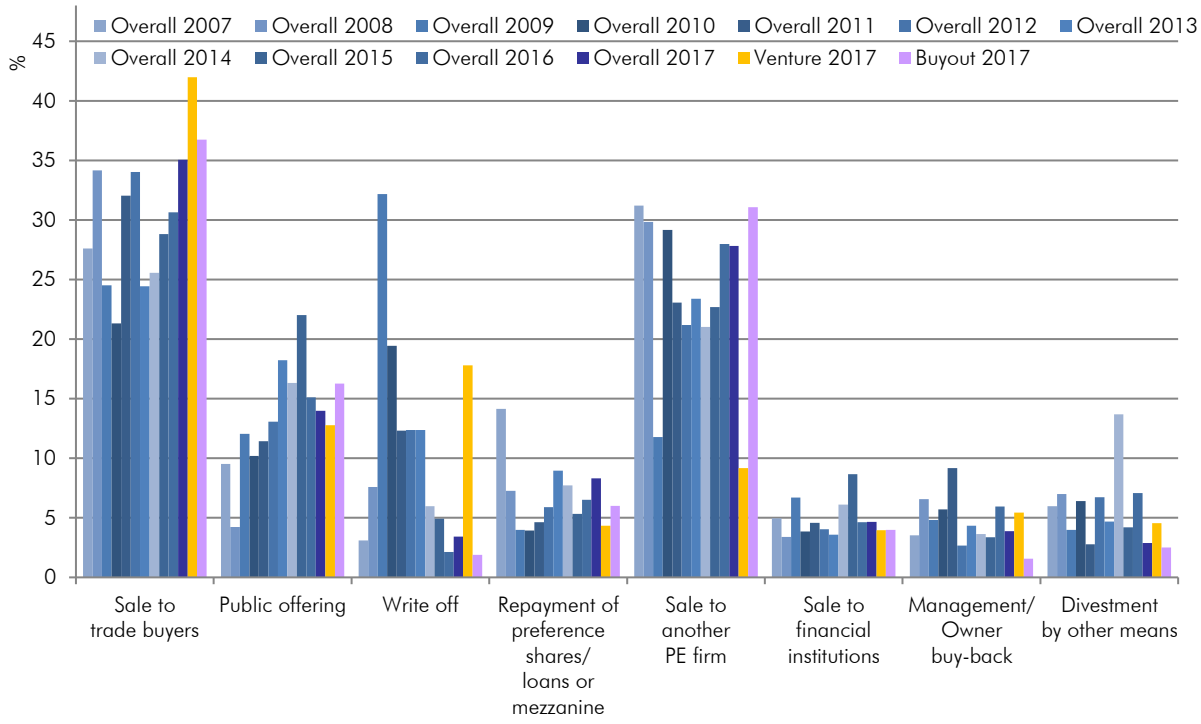
As regards overall PE, the relative importance of write-offs continuously decreased from 2011 to 2016. Despite an increase in 2017, the share of write-offs over total divestments was still below the 2015 values (see Figure 32). Trade sales and sales to another PE house together account for almost

[36] 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.

[37] 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.

two thirds of the total divestment amounts. The share of public offerings decreased in 2016 and 2017, but is still at higher levels than during the years 2007 to 2012.[38] In the VC market, the relative importance of write-offs also declined since its peak in 2012 when write-offs accounted for 30% of all VC divestments. In 2017, the share of write-offs over total VC divestments was at 18% (2016: 14%).

Figure 32: Divestment routes (amount divested at cost; percentage of total)[39]



Source: Authors, based on data from Invest Europe

Box 9: Invest Europe definition of exit routes

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.

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

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 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.

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

[38] In the Invest Europe data, the category "Public Offerings" includes first divestment following flotation (IPO) and sale of quoted equity post flotation.

[39] "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.

Box 9 continued:

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

- Depositary 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 institutes 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.

Source: Invest Europe (2018a, 2018b)

Besides that, EIF mid-year-2018 insight suggests that VC fund managers tend to have a quite balanced approach, investing still in longer term buy-and-hold value creation and seizing opportunities when possible.

4.4 Lower mid-market and hybrid debt/equity finance: An important market segment

Following EIF's definition (see EIF, 2016), the PE lower mid-market (LMM) covers fund strategies targeting equity and mezzanine investments at growth and buyout stages with a particular focus on SMEs and mid-caps. EIF provides its core LMM products (equity, hybrid debt-equity[40] and private debt) as alternative sources of long-term finance to established businesses and later-stage technology companies (see Box 10 for more information on private debt financing). 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.

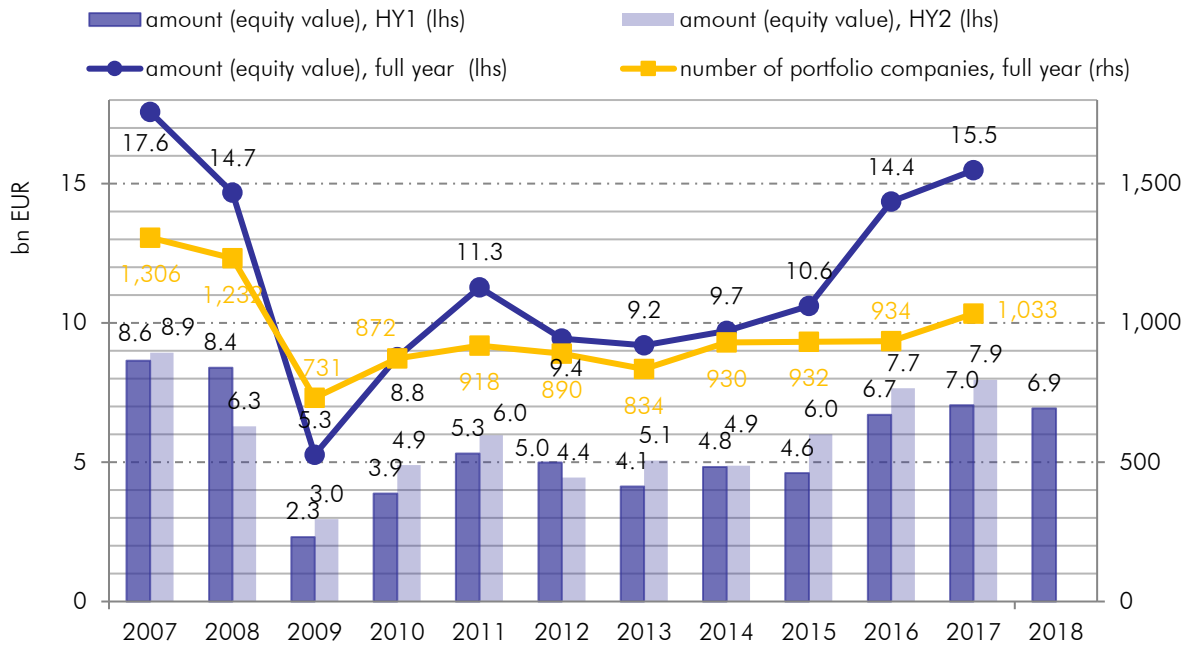
In 2018 the EIF has observed the continuation of the trend from the past three years insofar as the lower-mid and mezzanine markets are concerned: relatively high levels of confidence in the business climate, availability of a diverse set of investors to allocate liquidity to the private equity market, a growing deal flow and still considerably high exit activity, effectively confirming the recovery observed since 2015. Record distributions from private equity funds in recent years led to high levels of investor satisfaction, with much of the capital returned to investors being redeployed in private equity. This has led in turn, together with a backdrop of still relatively strong European macroeconomic data, to a very active 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 are having more difficulties fundraising, leading to capital being more concentrated.

The generally positive market environment is also reflected by the upward trend of small and lower mid-market buyout investments in European portfolio companies. Investment amounts (equity value)

[40] Hybrid debt-equity/mezzanine finance is a diverse asset class in between traditional senior debt and equity instruments. According to the OECD (2014), "this form of 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."

increased by 8% to EUR 15.5m in 2017, and remained at a high level of EUR 6.9m during the first half-year of 2018 (see Figure 33).

Figure 33: Small and lower mid-market buyout equity investments in European portfolio companies



Note: 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

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 Argos Mid-Market Index, which measures every quarter the level of private mid-market company valuations in the Euro area, stabilised close to its record high level in the third quarter of 2018 (Epsilon Research, 2018). However, 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 mid-year 2018 insight suggests that LMM fund managers tend to exit quicker their investments than previously, perhaps in light of more exit opportunities (increased ratio of exits on mature active companies and decreased average holding period of investment above cost). Another hypothesis could be that market expectations by fund managers would justify shorter term strategy to benefit from potential overvaluation.

Box 10: Private debt funds[41]

Private debt funds have gained importance as an alternative asset class for investors and a new financing source for SMEs and mid-caps in recent years, through the so-called direct lending funds. Similar to private equity (PE), "specialised loan funds" operate through a manager, typically unconnected to a banking institution, 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. 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. Private debt markets 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, 2018). Several years after the start of the private debt raise, the market segmented into three main alternative asset classes: (i) Senior loans and unitranche, (ii) Mezzanine / Subordinated loans / Hybrid debt-equity and (iii) Venture Debt. Some already well established managers are also raising different funds offering products with different level of seniority (i.e., senior loans, unitranches, subordinated loans, 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 with a financial or industrial equity sponsor) and (ii) managers targeting sponsor-less transactions (i.e. financing of a transaction without equity 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% since Q4/2017 (Deloitte, 2018). Adopting a sponsor-less investment approach could create a competitive advantage especially for those smaller-sized funds targeting SMEs.

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, 2018c). Around one-third of this market consisted of "dry powder" (unused capital commitments), meaning that substantial funds for new investments are at hand. This market has expanded steadily since 2006, with no visible slackening during the crisis. In this context, competition has become very aggressive on pricing of sponsored unitranche issuances towards mid-market companies.

[41] The content of this text box is mainly based on OECD (2018a), OECD (2018b) and EIF market information.

Box 10 continued:

The largest single market is still the US, but Europe exhibits the fastest growth, as its world market share has grown from 10% in 2010 to 30% at the end of 2015. As at August 2018, funds with a primary focus on Europe accounted for 34% of the aggregated target capital of private debt funds in the global market. Moreover, in a survey among institutional investors, conducted by Preqin in June 2018, the largest share of respondents stated Europe to be the region presenting the best opportunities over the next year (Preqin, 2018c).

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. 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) and Box 2 in Kraemer-Eis, Lang, Torfs and Gvetadze (2016a), as well as the EIF website, for more information on this topic.

4.5 Prospects

4.5.1 Current situation, risks and market actors' concerns

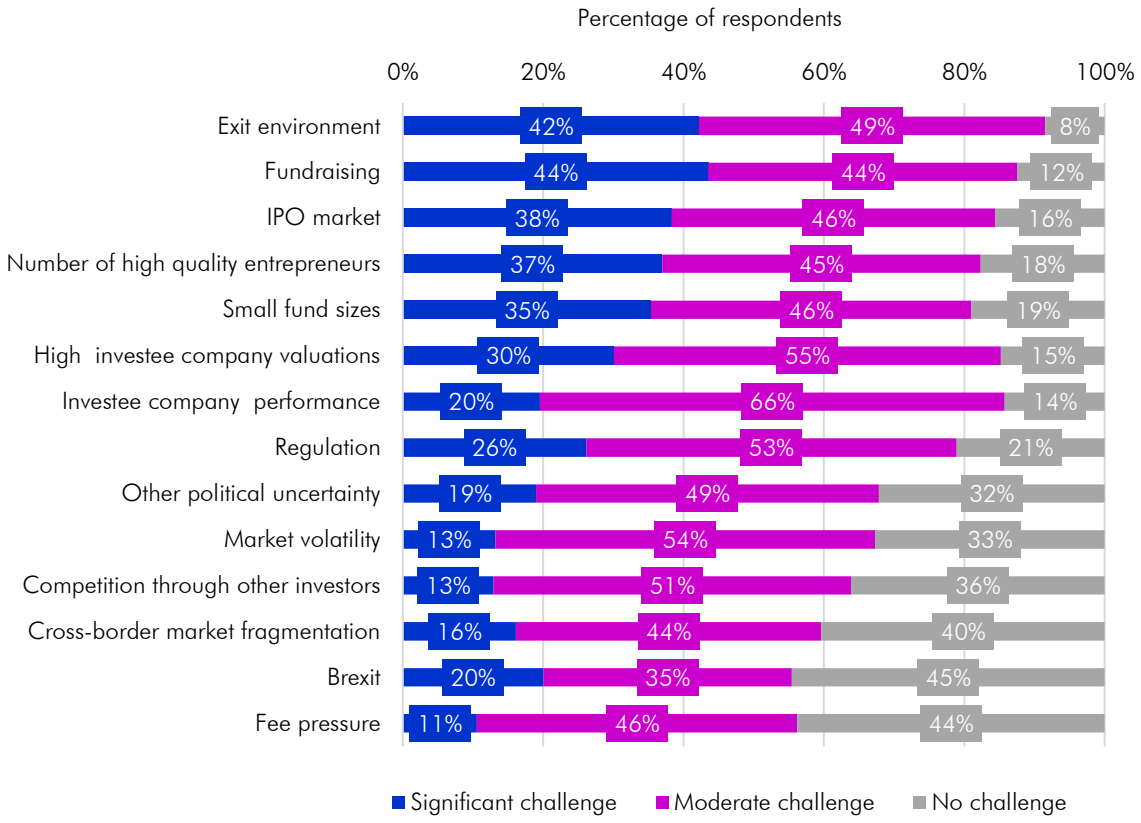
Following the severe crisis of European private equity and venture capital markets in the years 2008-2009 and beyond, remarkable positive developments have been observed in the recent past. However, it remains still an open question if a sustainable longer-term positive trend will become prevalent, and 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. All this is to be looked at with caution, in particular in times of an upcoming shift in monetary policy. It is then 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. 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 a recent international investment decision makers' survey (Invest Europe, 2018c). Compared to last year's survey, the perceived attractiveness of Europe as an investment destination has even increased, primarily due to increased innovation and returns on investment.

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 a recent Preqin worldwide survey among institutional investors, valuations were (again) perceived as the biggest challenge that

investors into PE are facing (Preqin, 2018b).[42] Warning voices of possible overheating have been uttered since some time, because of the strongly expansive monetary policy stance that has led to ample global liquidity and still very low interest rates. In the recent Preqin survey, 27% 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 majority of the investors (56%) believe that the equity markets have peaked already (Preqin, 2018b).

In the *EIF VC Survey*, European fund managers stated the exit environment and fundraising to be the biggest challenges in the VC business; see Figure 34 (Kraemer-Eis et al., 2018a; Box 6 provides an overview of some key *EIF VC Survey* results). We summarise results from the *EIF VC Survey* and Invest Europe data with regard to the Brexit in Box 11.

Figure 34: Biggest challenges in VC business



Note: Diagram shows the aggregated results for the EIF VC Survey question "Where do you currently see the biggest challenges in venture capital business? Please indicate from significant challenge to no challenge."
Source: Kraemer-Eis et al. (2018a)

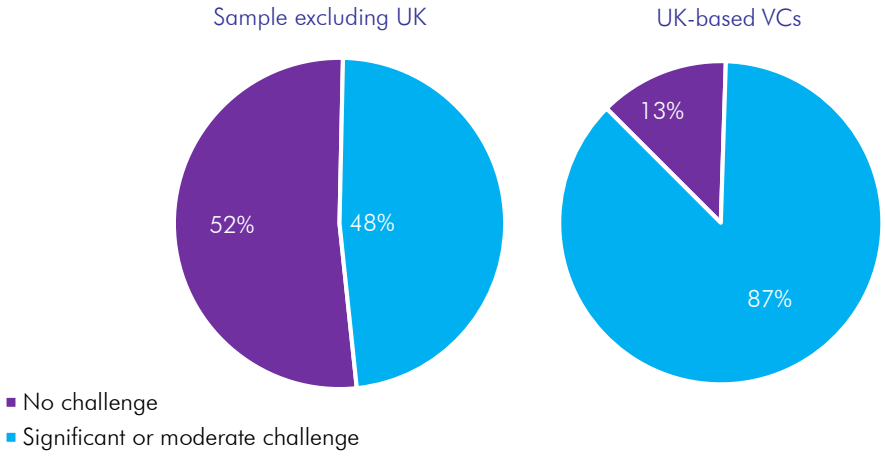
[42] The latest issue of the "Preqin Investor Update: Alternative Assets" is mainly based on a survey of 530 institutional investors from around the world, of which 29% were located in Europe. The interviews were conducted in June 2018 (Preqin 2018b).

Box 11: Brexit effects in the EIF VC Survey and Invest Europe PE/VC investment data

The *EIF VC Survey*[43] provides some insight into the uncertainty surrounding the Brexit implications that seem to have negatively affected the market sentiment of UK-based fund managers. Indeed, UK-based VC managers had responded quite differently from the rest of the *EIF VC Survey* sample in a series of questions relating mainly to the challenges faced by the European VC market as well as the outlook for the year ahead.

While almost 1 in 2 non-UK VC managers consider Brexit a (significant or moderate) challenge for the European VC business – with Brexit, however, ranked very low on the overall list of the relevant challenges – this proportion was at a remarkable 87% for UK-based VCs (Figure B11.1). At the same time, for VC managers whose firms are headquartered in the UK, Brexit is perceived as the number one most significant challenge.

Figure B11.1: Brexit as a challenge in the European VC business – UK vs. rest of the *EIF VC Survey* sample



Source: Kraemer-Eis et al. (2018b)

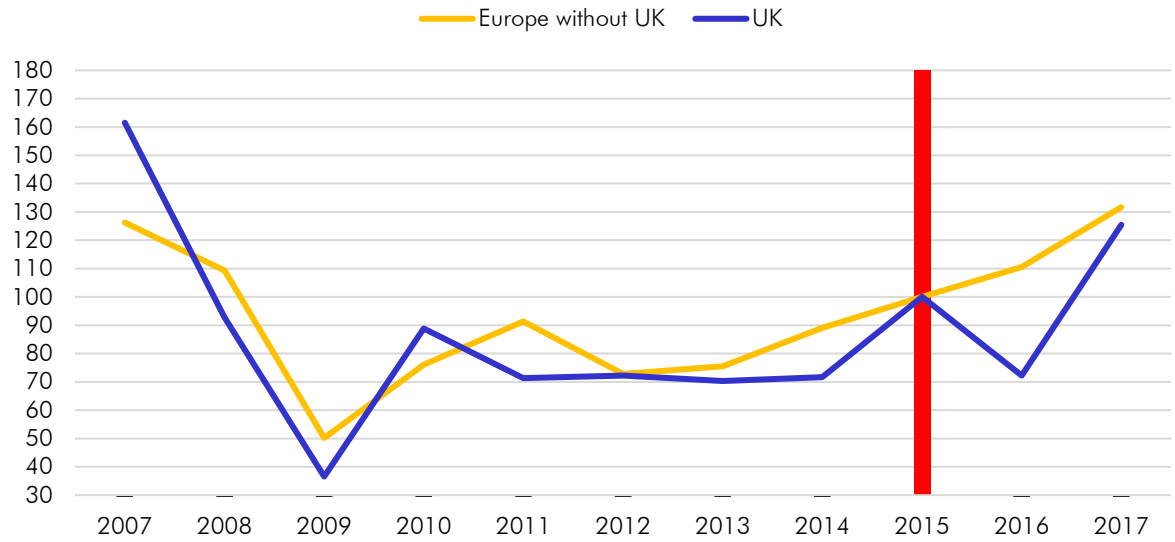
Moreover, UK-based VC managers were much more pessimistic regarding the overall prospects of the European VC market in the subsequent 12 months. This was also reflected in the much lower confidence that UK-based VCs showed, on average, in both the long-term growth prospects of the VC industry in their market as well as in the long-term growth prospects of the overall VC industry in Europe

Despite these negative sentiment data, the effects of Brexit are not (yet) clearly visible in the Invest Europe investment activity data. PE investments in the UK increased by 74% in 2017, following a 28% decline in 2016. However, since 2015, the last year before the Brexit vote, the level of PE investments has grown less than in the rest of Europe (see Figure B11.2). In 2017, PE investments in the UK were 25% higher than in 2015, but PE investments in the rest of Europe exceeded the 2015 values by 32%.

[43] The *EIF VC Survey* is a survey among VC GPs headquartered in Europe; the first survey wave was conducted in November/December 2017. See Box 6 for a summary of key *EIF VC Survey* results and Kraemer-Eis et al. (2018b) for a detailed overview.

Box 11 continued:

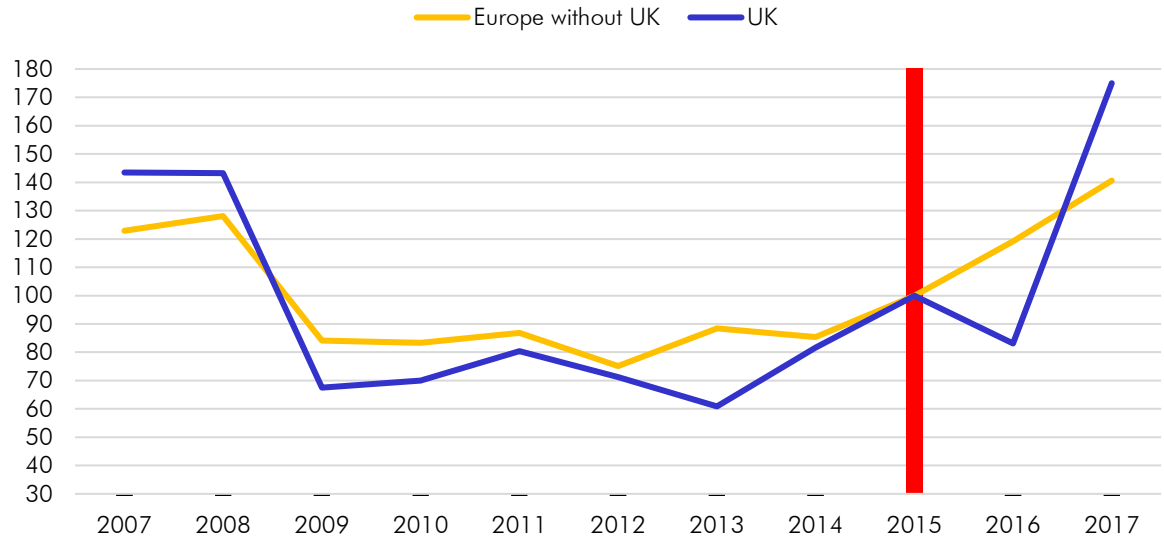
Figure B11.2: PE investment amounts in portfolio companies in the UK and other Europe, 2015=100



Source: Authors, based on data from Invest Europe

The investment volumes in the VC segment of the PE market in the UK have developed better than the total PE investments in the UK. VC investment amounts slumped by 17% in 2016, but this was followed by a 111% increase in 2017.[44] The 2017 VC investment amount is 75% higher than the 2015 level. In the rest of Europe, VC investments increased only by 41% in 2017 compared to 2015 (see Figure B11.3).

Figure B11.3: VC investment amounts in portfolio companies in the UK and other Europe, 2015=100



Source: Authors, based on data from Invest Europe

It remains to be seen if the PE market will react more strongly after the actual Brexit date in 2019.

[44] The strong increase in UK VC investments in 2017 includes a few outlier investment rounds.

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. However, it is expected that more large-scale funding rounds will happen in Europe as well (Atomico, 2018).

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 hybrid debt 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).

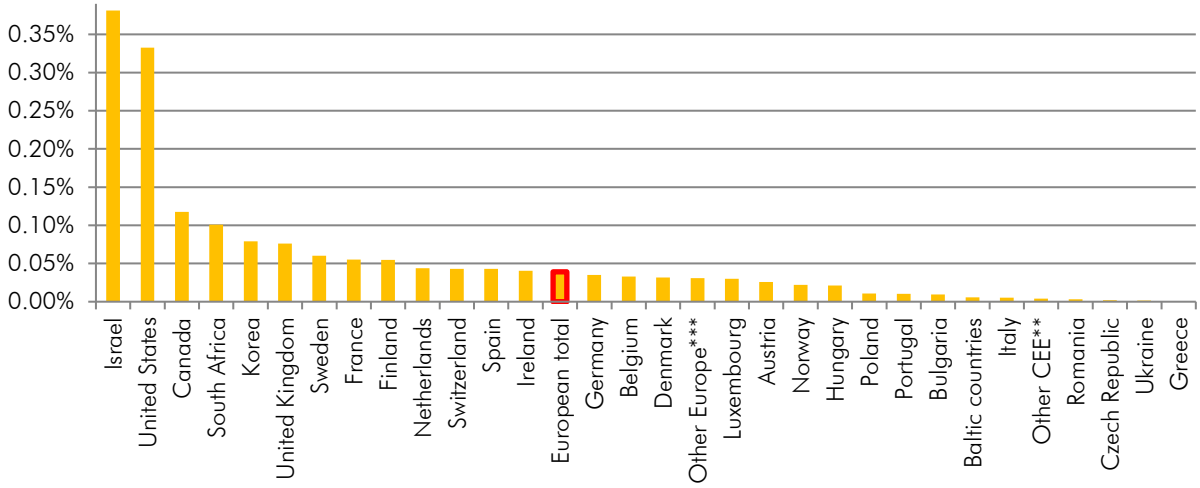
A comparison of PE/VC statistics confirms that the gap between the VC markets in the US and in Europe is particularly high at the later stage (AFME, 2017; Echiksone 2017). In the growth capital segment, the amounts invested in the US exceed those in Europe by 3 times. These differences are also reflected 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 market[45], reinvigoration of tech IPOs, improved markets for secondary shares and avoiding to sell companies too early.

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); Figure 35 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 et al., 2018a).

Figure 35: VC investments by country of portfolio company, percentage of GDP, 2017*



*2017, or latest available year.
**Other CEE: Bosnia - Herzegovina, Croatia, FYROM, Moldova, Montenegro, Serbia, Slovakia, Slovenia.
***Other Europe: Cyprus, Iceland, Liechtenstein, Malta, San Marino, Vatican City.
Source: Invest Europe, OECD (2018b)[46]

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

[45] See the previous ESBFO issue 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.
[46] 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).

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 European-wide VC ecosystem.

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 et al., 2018b). 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. 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 VCs[47] 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.

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.[48] 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 Martinu (2017) show a higher likelihood of a positive exit for companies backed by

[47] 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.
[48] Dubovik and Steegmans (2017) provide a brief overview.

independent and governmental VCs together than for companies that are backed by one of the two investor groups only. Morever, Bertoni and Tykvová (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).

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-up[49], 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, 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.

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

[49] 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, 2015b).

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 (see Chapter 8 for more details) and other instruments implemented by the EIF. One way to attract private investors to the VC market is a fund-of-funds approach (Acevedo et al., 2016), pursued by the EIF. As a reference catalytic investor in European venture and growth capital funds, EIF is providing financing solutions to boost entrepreneurship and innovation. 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 guarantees and SME Securitisation in Europe

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.[50] 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.[51] 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.

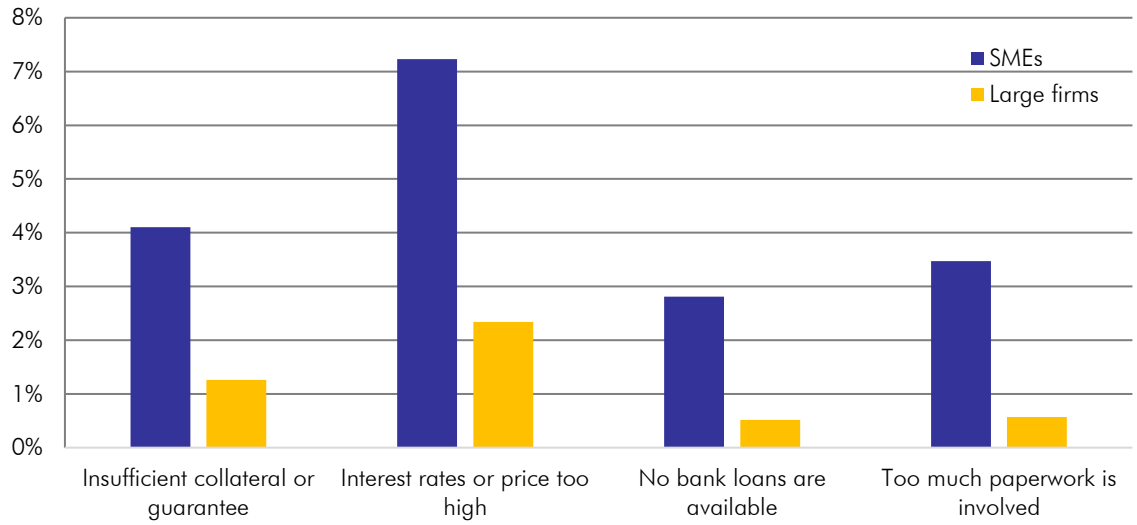
Credit rationing is particularly prevalent in the market for lending to SMEs, for two reasons. The first reason relates to their lack of collateral: the availability of collateral provides a way for borrowers to directly eliminate the asymmetric information problem. Pledging collateral in a loan-agreement 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, 2018b) confirms the argument that the insufficient availability of collateral and guarantees continues to be an important

[50] See OECD (2018b) for an overview of market failures in SME lending and mitigation techniques.

[51] 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).

reason why SMEs consider bank loans not relevant for them (see section 3.4 and Figure 36). The 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 36: Reasons why bank loans are not a relevant financing source for Euro area SMEs (HY1/2018)



Source: Authors, based on ECB SAFE (ECB, 2018b)

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.[52] 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

[52] 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.

(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 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. These 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, 2018b). 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,[53] 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).

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[53] 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).

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 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. [54] 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.

The importance of Credit Guarantee Schemes has been confirmed, inter alia, in two recent studies by the EIB Group on the use of CGSs in Europe (see Chatzouz et al., 2017; VIWGCGS, 2014) and in a joint Working Paper of the EIF and the European Commission (Asdrubali and Signore, 2015; for a summary, see Kraemer-Eis, Lang and Gvetadze, 2015a). Based on an analysis of the Multi-Annual Program for enterprises and entrepreneurship (MAP) 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.

[54] 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.

Following the publication of Asdrubali and Signore (2015), the European Court of Auditors (ECA) commissioned a comparable study on MAP and CIP-guaranteed loans in France. The results of such follow-up study, published in Colombo et al. (2018), prove to be in line with the positive findings of Asdrubali and Signore and are discussed in Box 12. 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 (2017).[55]

Box 12: The effects of EU-funded guarantee instruments on the performance of SMEs: evidence from France

The study assesses the real performance effects of EU-guaranteed loans to SMEs disbursed in France from 2002 to 2016. It estimates the average effect of guaranteed loans up to 10 years after disbursement, using a combination of econometric techniques. On average, French SMEs benefitting from EU-guaranteed loans experienced additional 9% asset growth, 7% sales growth, and 8% employment growth compared to similar firms which did not receive the guaranteed loans. The magnitude of the effect is typically higher for smaller and younger firms. Beneficiary SMEs also experienced 5% lower default rates. The study also estimates the effects of guaranteed loans on SME productivity. Consistent with earlier works, the analysis finds a short-run dip in productivity, accompanied by a medium-run recovery and a long-run positive effect, signalling adjustment costs following loan-induced investments.

Similar studies are currently being carried out, focusing on various countries, with the goal of providing for the first time a consistent, pan-European impact assessment of EU-funded loan guarantee instruments. Notably, a follow-up study looking at the impact of CGSs in Benelux, Italy, and the Nordic countries is currently in the making, with expected finalisation by end of 2018.

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 5.2), the EIF offers guarantees/counter-guarantees for portfolios of microcredits, SME loans or leases.[56]

5.1.2 Market size and activity during the first semester of 2018

Market information concerning CGSs in Europe is gathered by AECM, the European Association of Guarantee Institutions.[57] In the following, based on the latest AECM Scoreboard, [58] we provide

[55] A short summary of this methodological approach is provided in Kraemer-Eis, Botsari, Gvetadze, Lang and Torfs (2017). EIF provided input to the project. The publication of the final version of the toolbox by the World Bank is in preparation.

[56] See for more information the EIF website www.eif.org.

[57] We thank our colleagues from AECM for their support. AECM currently has 48 members in 23 EU Member States plus 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.

[58] See "AECM Scoreboard H1 2018; Figures of the European Guarantee Sector: Providing a half-yearly trend indication on the evolution of the guarantee activity in Europe".

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.

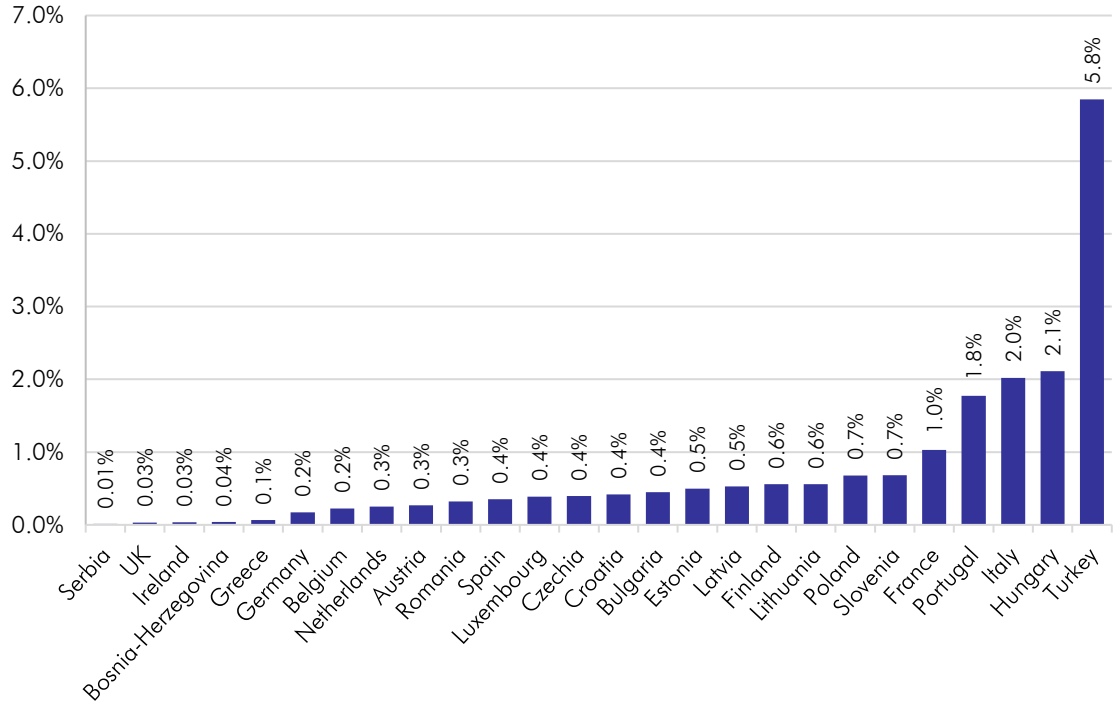
According to the OECD (2013), guarantees are particularly relevant "in those countries where a network of local or sectoral guarantee institutions is well established". Key figures based on *outstanding guarantees* on SME loan portfolios (as at 30.06.2018) are presented in Table 4 (see page 63).

In terms of total *volumes* of guarantee activities, the core countries are Turkey (EUR 44.1bn), Italy (EUR 34.8bn), France (EUR 23.6bn), Germany (EUR 5.6bn) and Spain (EUR 4.1bn). Turkey and Italy also have the highest total *number* of outstanding guarantees (1,097,360 and 1,067,418 respectively), followed by France (627,911).

The total number of *SME beneficiaries* in the portfolios of the AECM members amounts to 3.1m, nearly half of which (more than 1.3m) are located in Italy.

The highest *average size* of outstanding guarantee in portfolio was documented in Latvia (EUR 167.9k), followed by Austria (EUR 164.9k), Germany (EUR 126.4k) and Croatia (EUR 117.1k). Italy and France, despite exhibiting two of the highest volumes of outstanding guarantees in portfolio, have relatively small average sizes of guarantees (EUR 32.6k and EUR 37.6k, respectively), reflecting the presence of large populations of SMEs borrowing small loans in their portfolios.

Figure 37: Volumes of outstanding guarantees in portfolio scaled by GDP*



*At 31.12.2017 or latest available data.

Sources: Authors, based on data from AECM, Eurostat and World Bank

Table 4: Outstanding guarantees and number of SME beneficiaries in portfolio, AECM members by country

	Outstanding guarantees HY1/2018				% change in Volume	
Country	Volume [k EUR]	Number	Implied average guarantee size [k EUR]	Number of SME beneficiaries	HY1/2018 vs. HY2/2017	HY1/2018 vs. HY1/2017
Austria	988,731	5,997	164.9	4,578	8.5%	12.0%
Belgium	989,208	(1)	n/a	(1)	8.2%	12.8%
Bosnia-Herzegovina	5,732	70	81.9	46	8.9%	-1.2%
Bulgaria	231,898	5,024	46.2	4,527	35.3%	35.3%
Croatia	204,000	1,742	117.1	1,356	2.2%	3.5%
Czechia	755,465	11,058	68.3	8,076	3.6%	5.9%
Estonia	117,085	1,255	93.3	233	-10.2%	-9.3%
Finland	1,247,504	12,765	97.7	9,985	1.7%	5.1%
France	23,601,386	627,911	37.6	602,671	7.9%	22.5%
Germany	5,572,199	44,073	126.4	36,410	0.5%	-0.1%
Greece	116,000	3,758	30.9	3,758	-9.7%	-36.4%
Hungary	2,620,426	57,722	45.4	47,432	9.5%	21.8%
Ireland	98,695	3,523	28.0	3,523	-5.3%	n/a
Italy	34,849,433	1,067,418	32.6	1,340,245	1.9%	2.8%
Latvia	142,913	851	167.9	628	8.3%	16.3%
Lithuania	236,124	2,535	93.1	1,895	8.7%	14.9%
Luxembourg	214,392	(1)	n/a	654	19302.0%	18940.1%
Netherlands	1,860,166	18,108	102.7	16,074	2.0%	2.0%
Poland	3,174,167	92,573	34.3	92,573	10.1%	11.7%
Portugal	3,455,322	94,080	36.7	53,771	-0.8%	0.7%
Romania	613,923	9,132	67.2	7,886	12.2%	24.5%
Serbia	5,508	490	11.2	461	-14.2%	-26.2%
Slovenia	292,821	2,718	107.7	2,148	2.5%	11.4%
Spain	4,111,714	73,019	56.3	128,831	2.0%	3.1%
Turkey	44,095,469	1,097,360	40.2	700,135	0.1%	10.0%
UK	702,085	10,082	69.6	8,915	-4.5%	-8.6%
Total	**130,302,366**	**3,243,264**	**40.2**	**3,076,811**	**2.8%**	**9.2%**

Notes:

- The statistics do not include the business figures of one Romanian AECM member that only has a Counter Guarantee activity and of one Hungarian AECM member for which no data were available.
- For Italy and Spain, the number of SME beneficiaries 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 SME beneficiaries. Therefore, for the purpose of computing the implied average guarantee size, the 'Total Number of Guarantees Outstanding' rather than the 'Total Number of SME Beneficiaries' is taken into consideration.

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

Source: Authors, based on data from AECM

Table 5: Newly granted guarantees, AECM members by country

	New guarantee volumes [k EUR]			
Country	HY1/2018	HY1/2018 vs. HY2/2017	HY1/2018 vs. HY1/2017	Percentage of outstanding
Austria	183,424	-3.9%	45.2%	18.6%
Belgium	211,339	28.6%	8.1%	(1)
Bosnia-Herzegovina	831	465.3%	191.6%	14.5%
Bulgaria	62,394	n/a	14.5%	26.9%
Croatia	21,231	-20.5%	22.5%	10.4%
Czechia	238,802	46.7%	215.7%	31.6%
Estonia	38,964	26.5%	18.0%	33.3%
Finland	394,928	n/a	n/a	31.7%
France	4,829,937	36.1%	43.7%	20.5%
Germany	526,333	-5.1%	-2.6%	9.4%
Greece	0	-100.0%	-100.0%	0.0%
Hungary	1,244,684	17.3%	25.0%	47.5%
Ireland	4,145	-81.5%	-96.6%	4.2%
Italy	4,344,049	-7.4%	-8.2%	12.5%
Latvia	23,210	14.9%	2.7%	16.2%
Lithuania	43,797	(2)	61.5%	18.5%
Luxembourg	36,692	11511.4%	18716.4%	17.1%
Netherlands	309,111	n/a	10.3%	16.6%
Poland	1,381,681	12.6%	9.1%	43.5%
Portugal	549,112	-10.3%	-13.0%	15.9%
Romania	186,646	7.4%	190.8%	30.4%
Serbia	597	4.9%	61.8%	10.8%
Slovenia	39,852	-36.7%	-27.9%	13.6%
Spain	663,891	7.8%	16.8%	16.1%
Turkey	12,294,153	-0.9%	-65.0%	27.9%
UK	110,705	-11.0%	-7.3%	15.8%
Total	**27,740,509**	**7.8%**	**- 42.7%**	**21.3%**

Notes:

- The statistics do not include the business figures of one Romanian AECM member that only has a Counter Guarantee activity and of one Hungarian AECM member for which no data were available.

(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

In the first semester of 2018, the guarantee activity of AECM members has, on average, considerably increased compared to both the previous semester (+2.8% relative to HY2/2017) and the first semester of 2017 (+9.2% relative to HY1/2017). The highest growth rates compared to the previous semester (HY2/2017) were recorded in Luxembourg (an increase by almost 200 times), Bulgaria (+35.3%), Romania (+12.2%) and Poland (+10.1%). The reason for the impressive increase in the volume of outstanding guarantees in portfolio for Luxembourg is twofold: first, an existing AECM member increased the maximum amounts for guarantees; and second, a new member joined AECM and provided data for the first time in June 2018. By contrast, the outstanding guarantee value decreased the most in Serbia (–14.2%), Estonia (–10.2%), Greece (–9.7%) and Ireland (–5.3%).

In terms of the relative importance of guarantees compared to the value of economic activity (see Figure 37), Turkey leads the ranking, with the volume of outstanding guarantees in portfolio amounting to 5.8% of its GDP. This is largely due to a very important shift in the guarantee activity of one Turkish AECM member, causing outstanding guarantee volumes in Turkey to increase by more than five times during 2017.[59] The top three is completed by Hungary (2.1% of GDP) and Italy (2.0% of GDP).

As can be seen in Table 5 (see page 64), the total new guarantee activity in the first semester of 2018 constitutes 21.3% of the total volume of outstanding guarantees for the same period. Newly-granted guarantees in the first semester of 2018 amounted to EUR 27.7bn, with one Turkish AECM member accounting for almost 40% 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.

Compared to the previous semester (HY2/2017), the new guarantee activity by AECM members in the first semester of 2018 shows, on average, a significant increase of 7.8%. This is largely driven by the new guarantee volumes of four new (as of June 2018) AECM members. Excluding the business figures of these four members, a marginal increase of 0.7% is documented.

At the same time, significant variation in the growth rates of new guarantee activity is documented across countries. For example, new guarantee activity in the first semester of 2018 increased strongly in Luxembourg (for the reasons stated earlier), Bosnia-Herzegovina (+465.3%), Czechia (+46.7%) and France (+36.1%); while, on the other hand, new granted guarantees decreased significantly in Greece (–100%), Ireland (–81.5%) and Slovenia (–36.7%).

Compared to the first semester of 2017 (HY1/2017), new guarantee volumes in the first semester of 2018 appear to have decreased almost by half. However, as also discussed earlier, this trend is attributable to one Turkish AECM member who experienced an unprecedented increase in its guarantee activity during that time. Indeed, when the statistics of this member are excluded from the

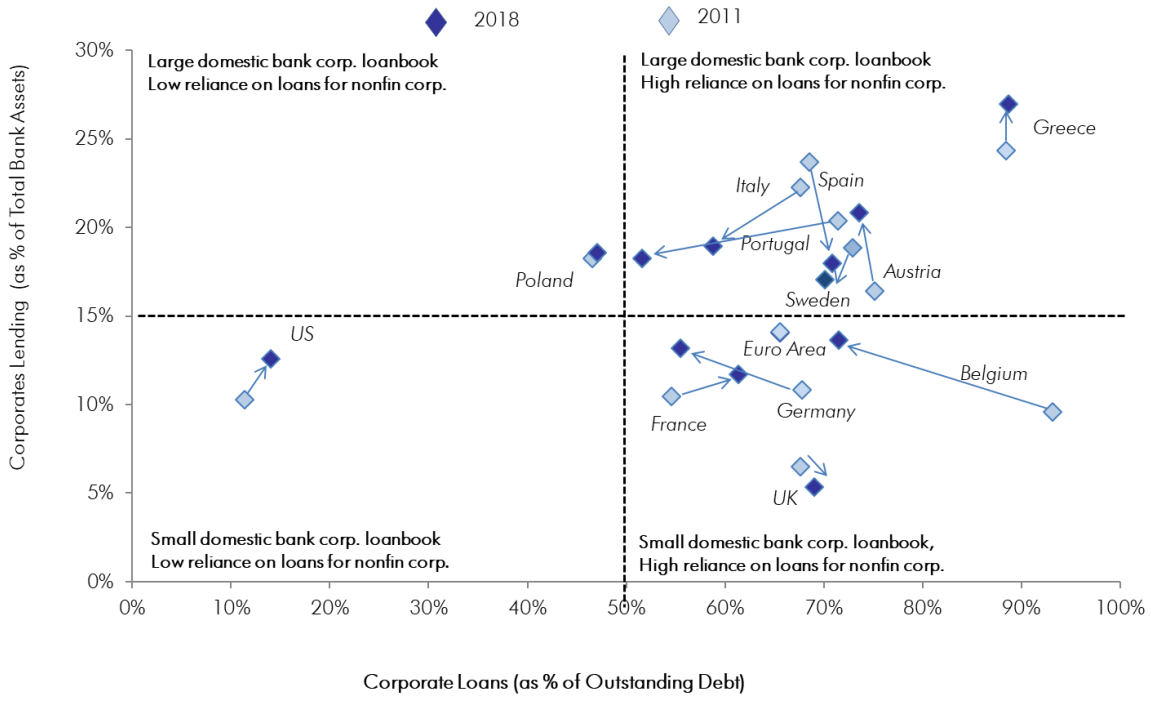
[59] According to an analysis provided by AECM, "alongside the impact of various improvements, the sudden increase in the figures of the Turkish member in question mainly resulted from the implementation of Portfolio Guarantee System (PGS) in Treasury backed bank loan guarantees. While those funds (Turkish Treasury commitment) used to be utilised under the conventional loan guarantee approach, the organisation started to apply PGS in late 2016, resulting in a rapid growth of guarantee indicators in 2017/HY1".

aggregate figures, new guarantee volumes in the first semester of 2018 actually show an increase of 19% compared to the same semester a year ago.

5.2 SME Securitisation[60]

European SMEs rely heavily on bank lending; Figure 38 provides an indication of the different levels of bank reliance for various countries. 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) is dominated by bank financing (in the Euro area); however, as the authors point out, this split refers to the stock; in terms of flows the figures fluctuate significantly, 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. During the crisis, part of the declining bank lending was offset by an increase in capital market funding (see Figure 39): debt securities issued by corporations (but also quoted shares issued) increased. But, "such substitution is primarily possible for large corporations; it is less so for small and medium-sized firms, which constitute the bulk of employment and activity in the Euro area" (Cour-Thimann and Winkler, 2013).

Figure 38: Reliance on bank financing by non-financial corporations (in per cent)

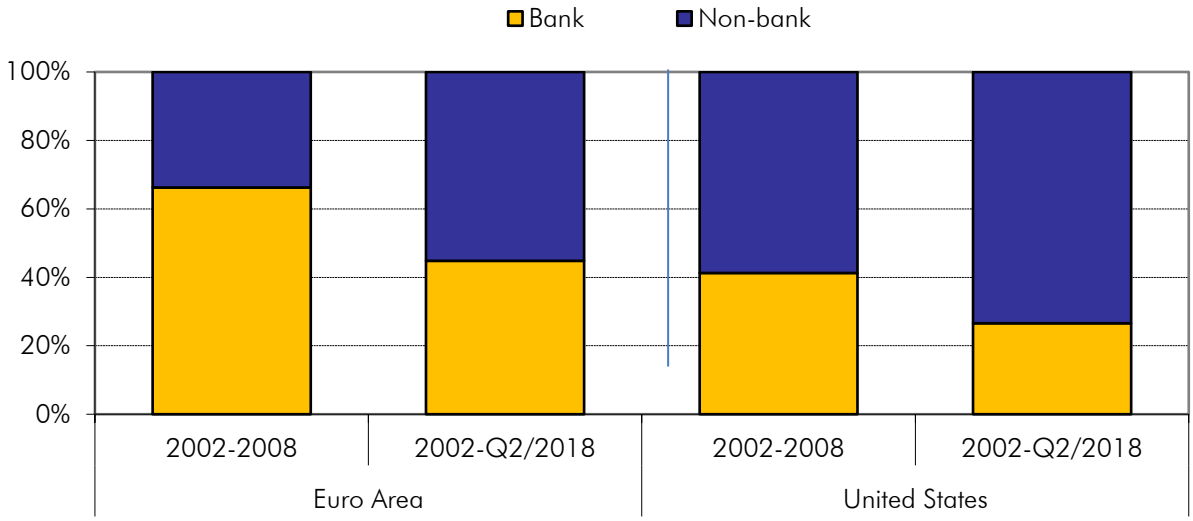


Source: Authors, based on IMF (2012) and updated information (per 2018/latest available information)

[60] 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).

Given that SMEs have no 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.

Figure 39: 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 (as per end of Q2/2018)

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 (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.

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 stated already in our previous publications: 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. 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.

5.2.1 SMESec market activity[61]

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 40). 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;[62] then the overall market activity decreased to the 2003/2004 levels.

To date, public issuance is still hindered in particular by the regulatory environment (and related uncertainties, a problem that now starts to downsize), by the availability of cheap funding for banks driven by the ultra-loose monetary policy, and by ECB eligibility rules under the repo-collateral framework that favour alternative instruments, such as sovereign bonds or secured/unsecured bank debt.

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.

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[61] If not flagged otherwise, the data source is AFME, the Association for Financial Markets in Europe.

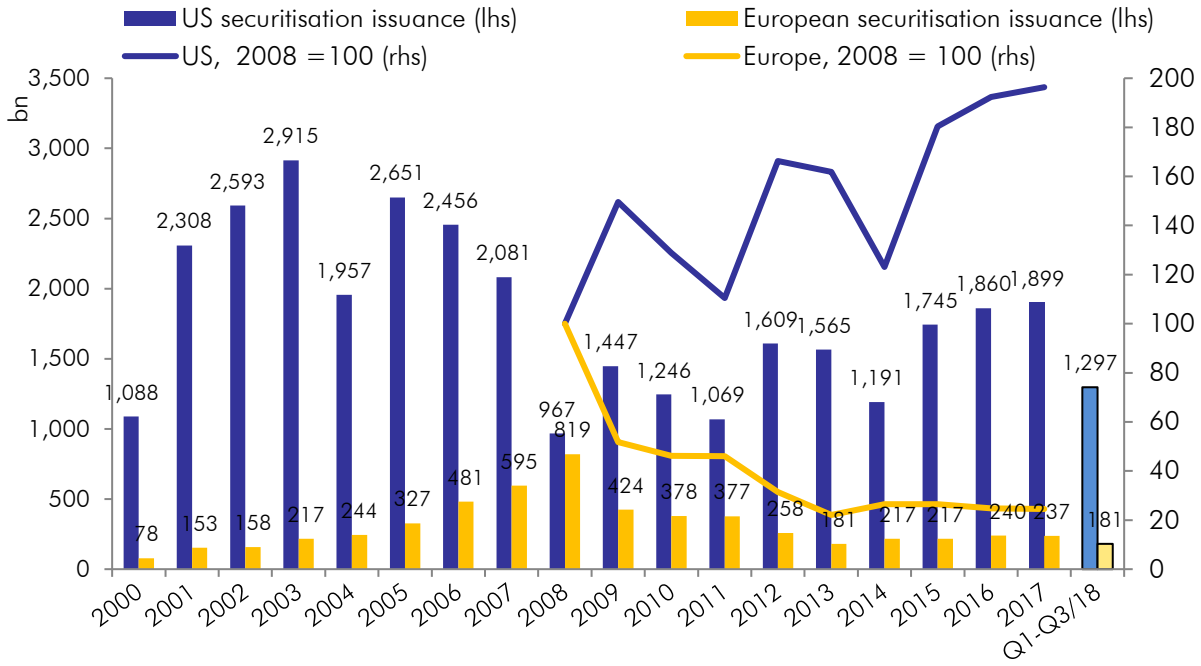
[62] The ECB's asset repurchase or "repo" facility allows (among other assets) Asset Backed Securities to be used as collateral for funding.

Issuance

In HY1/2018, the most active markets in terms of *overall securitisation issuance* were the UK and the Netherlands (market share: 19% each), Italy (12%), and France (9%). The overall market activity in HY1/2018 (EUR 125.7bn) was 11% higher compared to the same period 2017 (EUR 112.8bn), but remained on relatively low level – also in Q3 we saw a slight increase compared to the year before (Q1-Q3/2018: EUR 181bn, compared to EUR 162bn (see also Figure 40)).

SMESec issuance is still suffering from the crisis and remains at low level as well. The overall issued (and visible) volume of SME deals in HY1/2018 (EUR 5.2bn) was significantly lower than during the same period 2017 (EUR 10bn, see also Figure 41). 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). In HY1/2018, the share of SMESec went back to 4%, the lowest level in this decade so far. We observe that total European ABS issuance volumes have roughly been stable during the past years, while the specific weights of the different asset classes have been shifting. SMESec has been decreasing year to year due to a lower origination activity and to shrinking SME stocks in the financial intermediaries' loan books.

Figure 40: Securitisation issuance Europe versus US (annual issuance 2000 – Q3/2018, bn EUR)

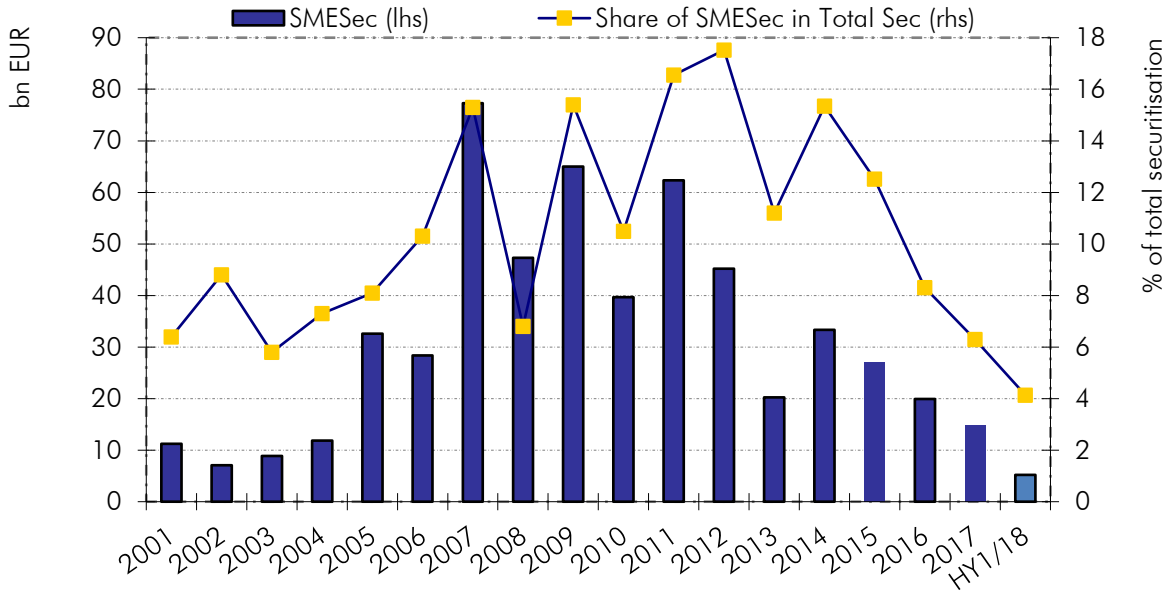


Source: Authors, based on data from AFME

Also, 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.

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 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. As an 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 (BoA/ML, 2016) and the respective activity volume in 2017 could be at par with 2016 (BoA/ML, 2017). Deutsche Bank estimates even higher volumes and assumes a total new issuance volume of synthetic balance sheet transactions of EUR 94bn for 2016 (Kaya, 2017). These transactions do not appear in the statistics. Therefore, the numbers, shown here, are an underestimation of the market size and can be seen as a lower bound.

Figure 41: SMESec issuance in Europe (volume and share of total securitisation, bn EUR and %)

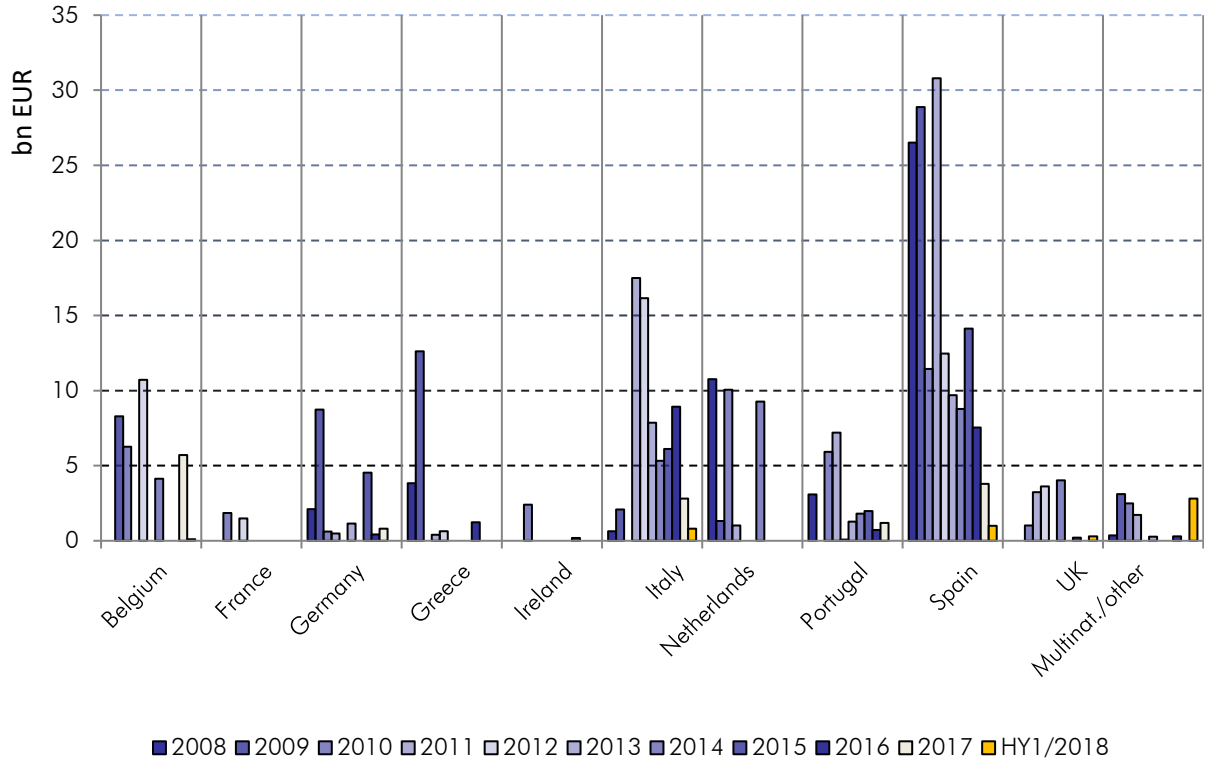


Source: Authors, based on data from AFME and own calculations

In terms of countries, the SMESec issuance in HY1/2018 occurred mainly in the "multinational" category (56%). In addition, some activity happened in Spain (EUR 1bn) and Italy (EUR 0.8bn). Minor activity also took place in the UK and Belgium – see Figure 42 for an overview of the SMESec issuance by country over time.

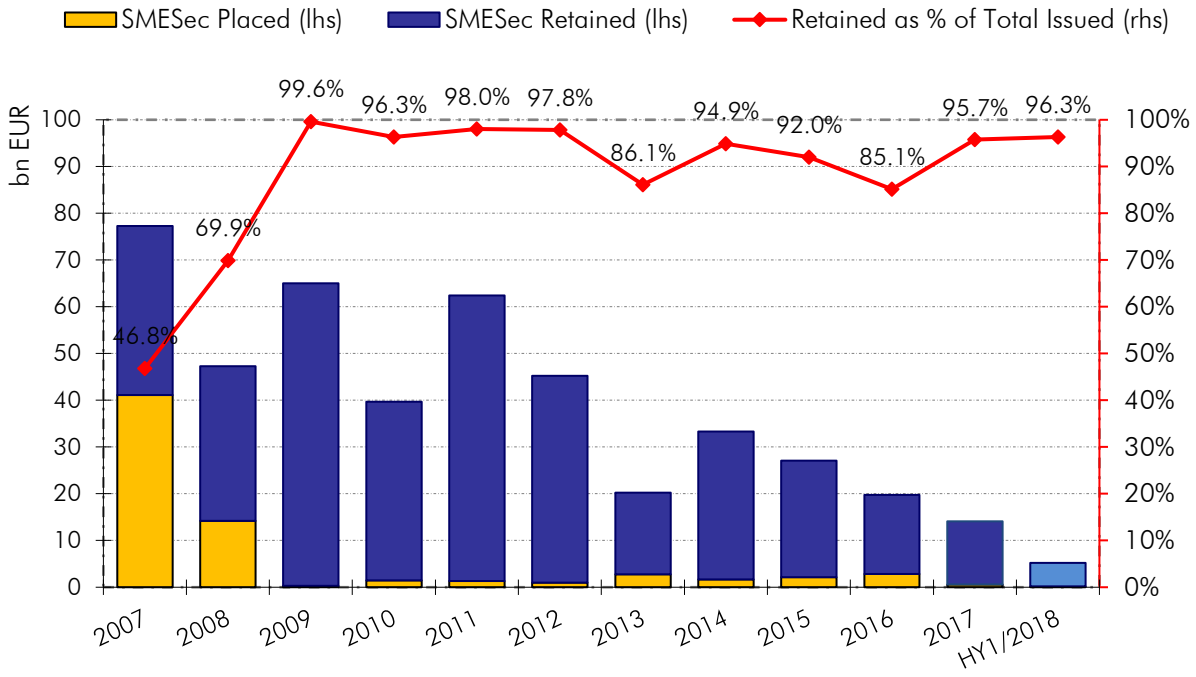
Typical originators are large banks or banking groups – some of them are active as originators in several countries, but also mid-sized banks. Moreover, in particular in the field of leasing, non-bank asset finance providers are active as originators. Current market activity is dominated by repeat originators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

Figure 42: European SMESec issuance (by country, in bn EUR)



Source: Authors, based on data from AFME

Figure 43: European SMESec by retention (bn EUR and %)



Source: Authors, based on data from AFME

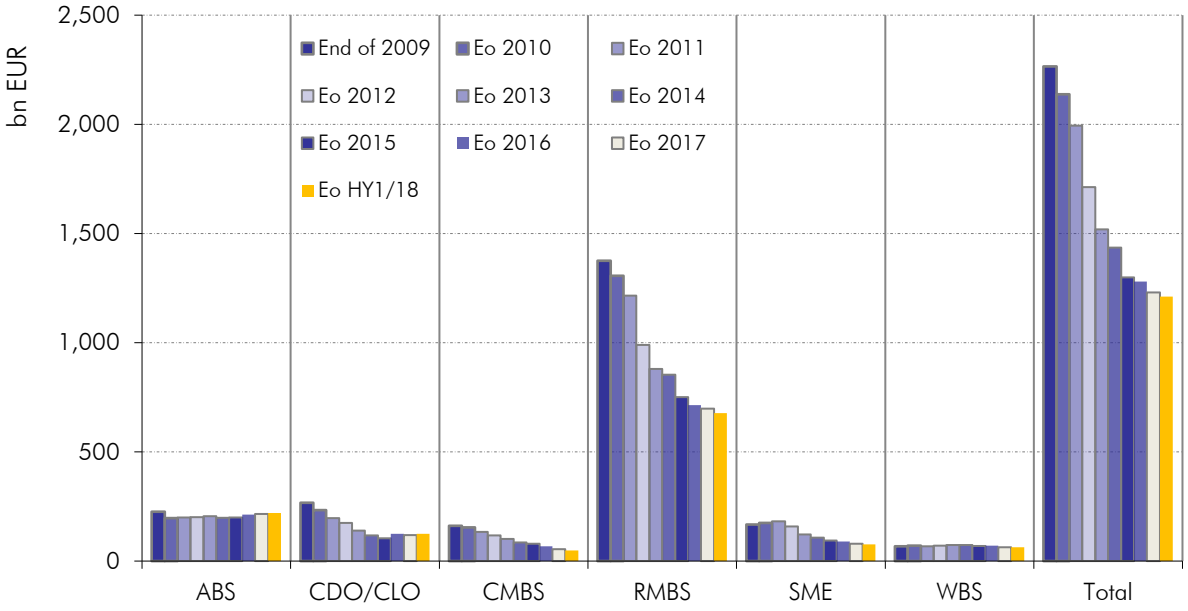
As already mentioned, it is important to note that only a very small fraction of the issuance has been placed with investors – the investor base has not recovered (see Figure 43). The nature of the SMESec market changed from a developing market (pre-crisis, with most transactions placed in the primary 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.

Outstanding

Due to low new activity levels, the volume of *total outstanding securitisation transactions* (see Figure 44) 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 is 47%. During the same period, the volume of outstanding SMESec transactions decreased even stronger – it more than halved (minus 54%), from EUR 168bn to EUR 76.6bn (end of Q2/2018).

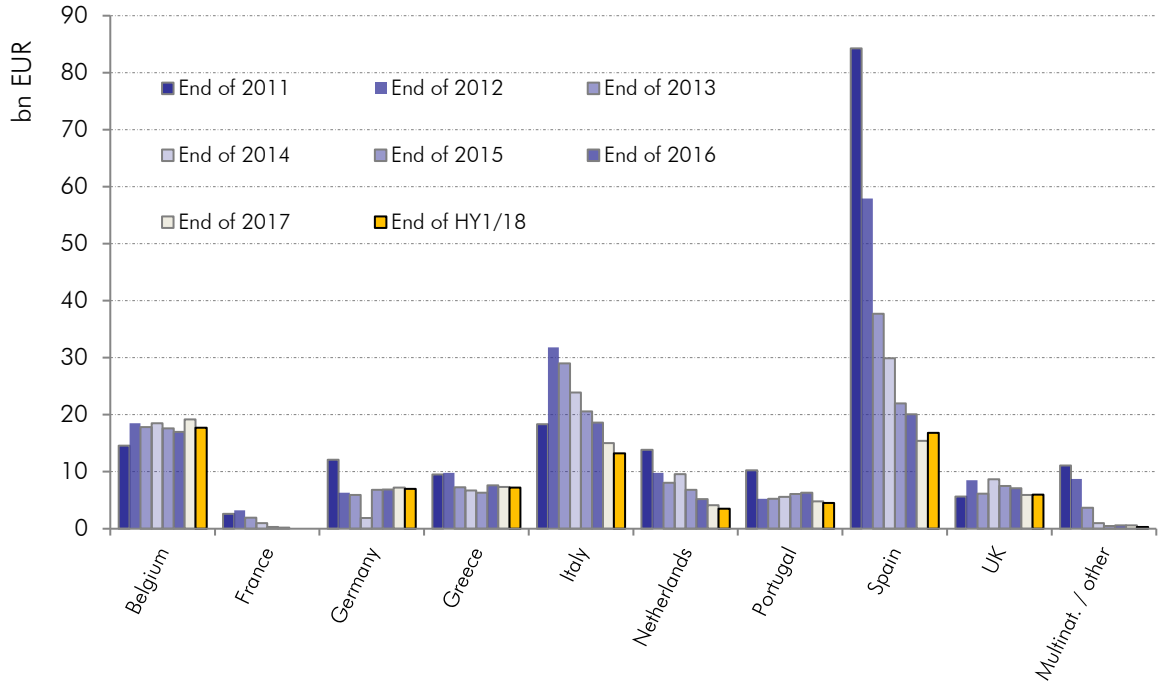
Breaking down SMESec volumes per end of Q2/2018 by country shows that the main three countries together represent 60% in terms of outstanding: Belgium (EUR 17.7bn/22.3%), Spain (EUR 16.8bn, 21.1%), and Italy (EUR 13.2bn, 16.6%), see Figure 45. These countries are followed by Greece (9.1%), Germany (8.8%), UK (7.5%), and Portugal (5.7%).

Figure 44: European outstanding securitisation transactions by collateral (bn EUR)



Source: Authors, based on data from AFME

Figure 45: 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.[63] 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, 2018a).

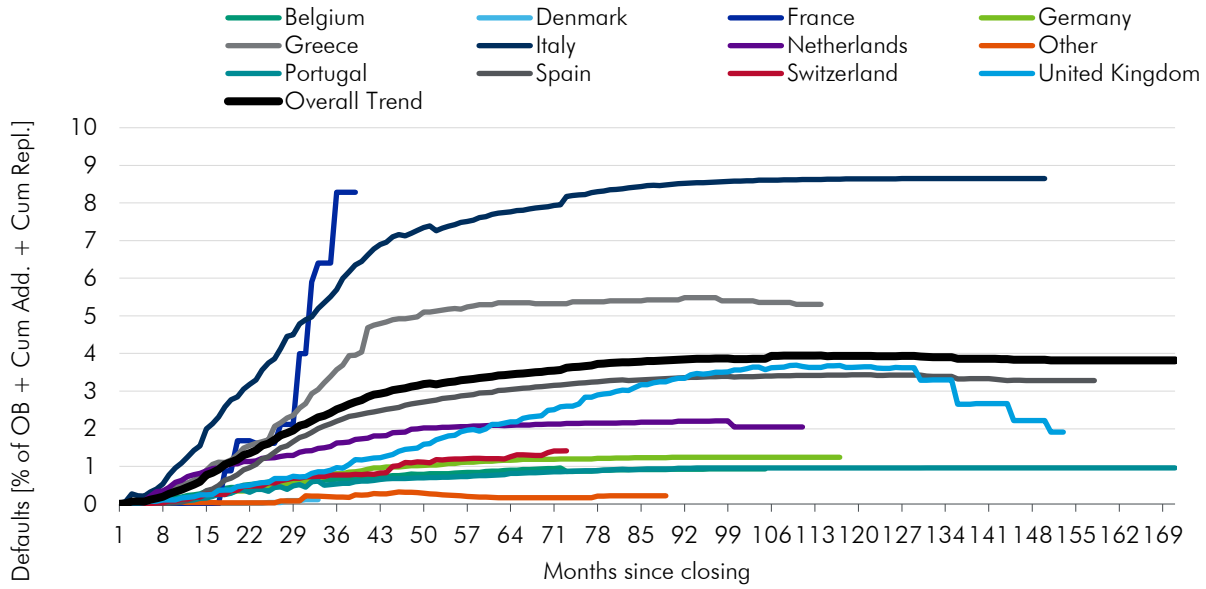
The track record of SMESec in Europe is relatively limited as the market started only towards the end of the 1990s. At the time, this segment was relatively unknown to investors and rating agencies (based on the novelty of the applied tools, as well as on the heterogeneity of SMEs/SME loans), and the 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).

[63] With some exceptions, i.e. the non-granular hybrid transactions (German Mezzanine CDOs). For more details see Kraemer-Eis, Passaris, and Tappi (2013).

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 could explain the good SMESec performance in Europe compared to other segments of the European securitisation market and to the US.[64] Figure 46 and Figure 47 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 performance of EMEA SME ABS remains remain stable, supported by a robust macroeconomic environment, good refinancing conditions for SMEs and continued recovery in real estate markets.

As explained in more detail in our previous working papers, the SMESec market has also 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).

Figure 46: SME loan and lease ABS - Cumulative credit events or defaults on original balance (seasoning by country)[65]

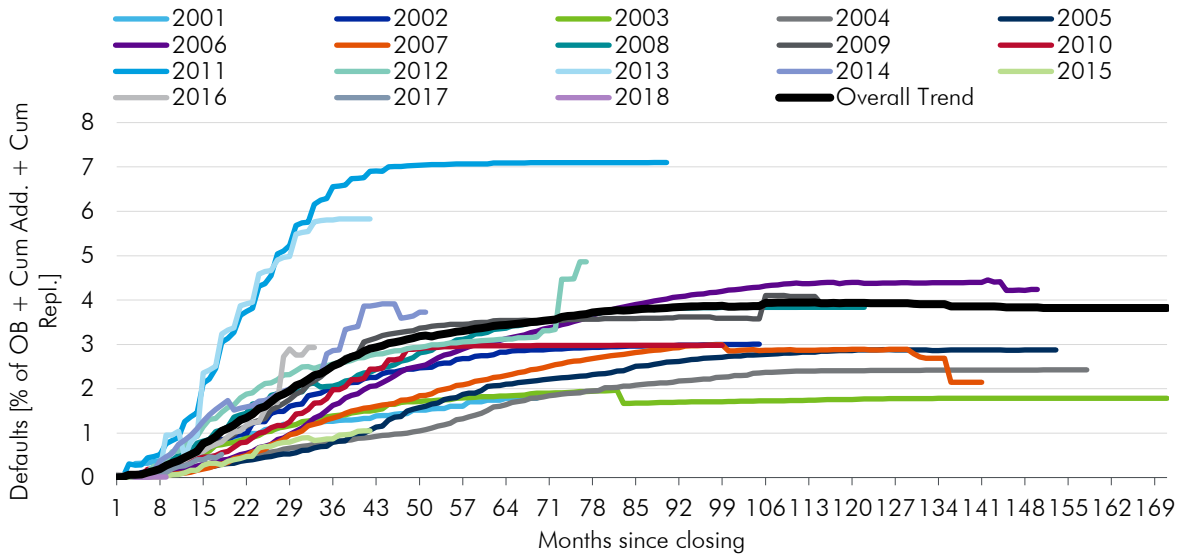


Source: Moody's (2018b)

[64] FitchRatings (2017) expected the total losses for pre-crisis vintage European structured finance transactions (2000 to 2008, transactions rated by Fitch) to be in the area of 0.9% (ABS: 0.2%), compared to 6.5% for the US. See also EBA (2014) for an analysis of historical credit performance of the securitisation market.

[65] 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.

Figure 47: SME loan and lease ABS - Cumulative credit events or defaults on original balance (seasoning by vintage)[66]



Source: Moody's (2018b)

For 2019, Moody's (Moody's 2018c) expects the SME ABS credit characteristics to remain broadly unchanged, with performance of existing transactions to be stable to improving. Downside potential exists in particular based on political event risk with subsequent economic deterioration (e.g. a disorderly Brexit).

The rating transition data shows that the downgrade pressure for SME transactions persists across all tranche levels. The example below (Table 5) shows the rating migration of SME Collateralised Loan Obligation (CLO) transactions (rated by Fitch, migration since transaction closing). For example, of all the tranches initially rated AAA, 71% (by number[67]) have paid in full (pif), 13% are still AAA, 4% moved down to AA etc.

Table 6: Fitch European SMEs rating transition matrix (October 2018)[68]

% of tranches		Current rating									
		PIF	AAAsf	AAsf	Asf	BBBsf	BBsf	Bsf	CCCsf	CCsf	Csf
Initial Ratings	AAAsf	71%	13%	4%	13%	0%	0%	0%	0%	0%	0%
	AAsf	41%	0%	47%	12%	0%	0%	0%	0%	0%	0%
	Asf	22%	11%	6%	61%	0%	0%	0%	0%	0%	0%
	BBBsf	0%	0%	7%	21%	50%	0%	7%	0%	14%	0%
	BBsf	0%	0%	0%	11%	22%	44%	11%	0%	11%	0%
	Bsf	0%	0%	0%	14%	43%	0%	43%	0%	0%	0%
	CCCsf	0%	0%	0%	0%	0%	20%	0%	20%	20%	40%
	CCsf	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
	Csf	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Source: FitchRatings (2018)

[66] The chart differs from indices published by Moody's prior to March 2016 due to the inclusion in the denominator of Additions and Replenishments.

[67] Relative to the number of tranches in a given initial rating category.

[68] The addition sf indicates a rating for structured finance transactions.

5.2.2 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), Singh (2017) or the joint statement of eight leading trade associations: AFME et al. (2016)).

A 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[69] support measures are aiming at a market revival, amongst which are important regulatory adjustments (see Box 13 below for details). The new securitisation regulation entered into force on 17.01.2018 and will apply for securitisation transactions from 01.01.2019 onwards in all Member States; some grandfathering provisions are applicable. The envisaged signalling approach via simple, transparent, and standardised (STS)-labelled[70] securitisations (incl. SMESec) - which receive preferential regulatory treatment – is an important step and forms a building block of the Capital Markets Union (CMU).[71]

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/Merril Lynch, 2018). Hence, future activity volumes - for securitisation in general, but in

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[69] For example, in November 2014, the ECB started its Asset Backed Purchase Programme (ABSPP). The overall objective is 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, is a positive step. However, the programme has not achieved significant volumes, moreover, as it is based on publicly placed transactions, there is almost no direct impact on the SME segment on the market. As per 26.10.2018, ABSPP holdings stood at EUR 27.312bn (48% primary market, 52% secondary market), compared to EUR 260.428bn under the Covered Bond Purchase Programme (source: ECB). On 14.06.2018 the ECB announced to reduce the asset purchases from October 2018 onwards, and then to stop the Asset Purchase Programmes by the end of 2018.

[70] 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.

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

particular for STS transactions - will be dependent on the market players' ability to meet the new requirements – it can be expected that the adaptation process will still take time.

Interpreting the effects of the new regulations, it has to be borne in mind that the new risk weights for STS will still result in increased capital requirements for IRB banks compared to today. 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. Implementation will start from January 2019 onwards. To obtain STS status, a transaction has to meet a set of multiple regulatory criteria – to that end, in April 2018, the EBA issued a consultation paper on guidelines on STS criteria (EBA 2018). The transition from current market practise to the new regime will pose many types of challenges (legal, structural, informational, IT) to market participants, i.e. issuers and investors (PCS, 2018a and b).

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.

Various consultations collect opinions from the market participants (see Box 12). In particular the EBA consultation on STS criteria interpretation plays an important role regarding the timely implementation of the framework. The EBA's guidelines, published in April 2018, touched on a number of important topics, such as:

- What has to be considered active portfolio management – in this respect EIF made the point that amendments to the underlying loans which are limited in magnitude and amount and are described under the servicing agreement are not to be deemed as active portfolio management;

- Underwriting standards – EIF stressed the fact that, to achieve STS eligibility:
  i. the securitised exposures should have been originated by applying underwriting standards that are not materially different compared to exposures that were not securitised;
  ii. for revolving deals, the underwriting standards should not change in a way that is prejudicial to the interest of the investors; and
  iii. the servicing agreement should provide that the collection policies will not change in a way that is prejudicial to the interest of the investors.

- The concept of securitised loans not carrying significantly higher risk compared to those not securitised: we believe that this criterion should not be needed because the investor performs a due diligence on the transferred portfolio, and therefore he/she knows the risk being taken.

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

The EC proposed a framework and started a legislative process; important milestones can be summarised as follows:

• 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.

Box 13 continued:

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

• 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-ERBA72. 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, 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.

According to the European Commission (2017d), "the swift implementation of the securitisation package could unlock up to EUR 150bn of additional funding to the real economy".

Since end of 2017, a wave of public consultations is underway (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 transactions[73].

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

[73] 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, 2018a).

Box 13 continued:

- 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[74].

- 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).

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. Once the STS framework is in place, a calibration of the Solvency II is envisaged.

All these measures can support a revival of the securitisation market. However, a real recovery and development will depend on the overall monetary policy of the ECB and related quantitative tapering. "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).

Innovations and EIF involvement

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.[75]

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

- 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.

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[74] In the context of disclosure requirements for SMESec transaction detailed reporting requirements are foreseen, e.g. as regards individual obligor turnover, NACE industry codes, NUTS regional codes, etc. (Integer Advisors, 2018a).

[75] EIF's involvement in the SME securitisation market is twofold: 1) guaranteeing tranches of ABS transactions issued by banks in order to obtain funding (for the calendar years of 2016 and 2017 EIF concluded 21 ABS transactions for an amount of EUR 1.9bn), and 2) by guaranteeing tranches of synthetic securitisations which allow banks to release regulatory capital (for the calendar years of 2016 and 2017 EIF concluded 13 synthetic transactions for an amount of EUR 1.2bn). For 2018 EIF expects to invest in up to EUR 2.6bn of securitisation transactions (predominantly synthetic).

- 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. In 2018 EIF expects to close several transactions in Poland while the pipeline for 2019 features transactions from all regions mentioned above.
- New types of transactions are appearing on the market, and new initiatives are emerging, like SBOLT-2016-1 and SBOLT 2018 transactions as milestones in the area of marketplace lending securitisation (EIF providing a guarantee to KfW on their cash investment in the senior notes). These transactions in UK show that the securitisation technique can be applied to new types of originators.[76] The growth of lending in this sector might provide opportunities for further transactions in this area.
- In 2017 in Italy, EIF rolled out 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.[77] A total of five intermediaries participated (UBI Banca, Unicredito, Intesa Sanpaolo, Banca Popolare di Bari and BCP Torre del Greco), committing to channel to Italian SMEs over EUR 1.5bn of new loans in the following three years. The banks are starting to originate the on-lending portfolios. As the initiative falls under *de minimis*, the aid associated with each financing granted by the banks shall be recorded under the recently operational National registry for state aid. In order to allow a smooth interaction with the registry, EIF made available an IT platform to the partner banks. EIF is planning to open the call for interest for a potential second wave of applications at the end of 2018.
- On the funding front, mezzanine transactions have dominated the scene, with EIF providing guarantees on mezzanine tranches purchased by institutional investors, including the members of the below defined ENSI platform. 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.[78]
- Furthermore, a platform as cooperation between EIF and National Promotional Institutions (NPIs), the EIF-NPIs Securitisation Initiative (ENSI), has been launched and is active.[79]

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[76] According to Integer Advisors (2018b) the UK Marketplace Lending (MPL) ABS market has seen so far four securitisation transactions (totalling just over GBP 660m (excluding retention tranches, including consumer (Zopa) and SME loans (Funding Circle/SBOLT)) – compared to a total issuance of USD 60bn in the US MPL ABS market (since inception in 2013). For an overview as regards investing in P2P and Marketplace lending see Integer Advisors (2018b).

[77] SME Initiative Italy: http://www.eif.org/what_we_do/guarantees/sme_initiative/smei_italy/index.htm.

[78] EIF's ambition is to incentivise private investors and not to crowd them out.

[79] The ENSI partner institutions are EIF, EIB, bpifrance (FR), British Business Bank (BBB, UK), Cassa Depositi e Prestiti (CDP, IT), Kreditanstalt für Wiederaufbau (KfW, DE), Instituição Financeira de Desenvolvimento (IFD, PT), Instituto de

We think that the 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 we expect the combination of ECB withdrawal from QE and TLTRO and rise of interest rates to lead to an increase of both demand and supply of funded ABS transactions.

Credito Oficial (ICO, ES), Malta Development Bank Working Group (MT), and the European Bank for Reconstruction and Development (EBRD). For more details see: http://www.eif.org/what_we_do/guarantees/ENSI/index.htm

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 services[80]. 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 unbanked[81] 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 14 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).

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[80] CGAP Definition, Consultative Group to Assist the Poor.

[81] 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 14: 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

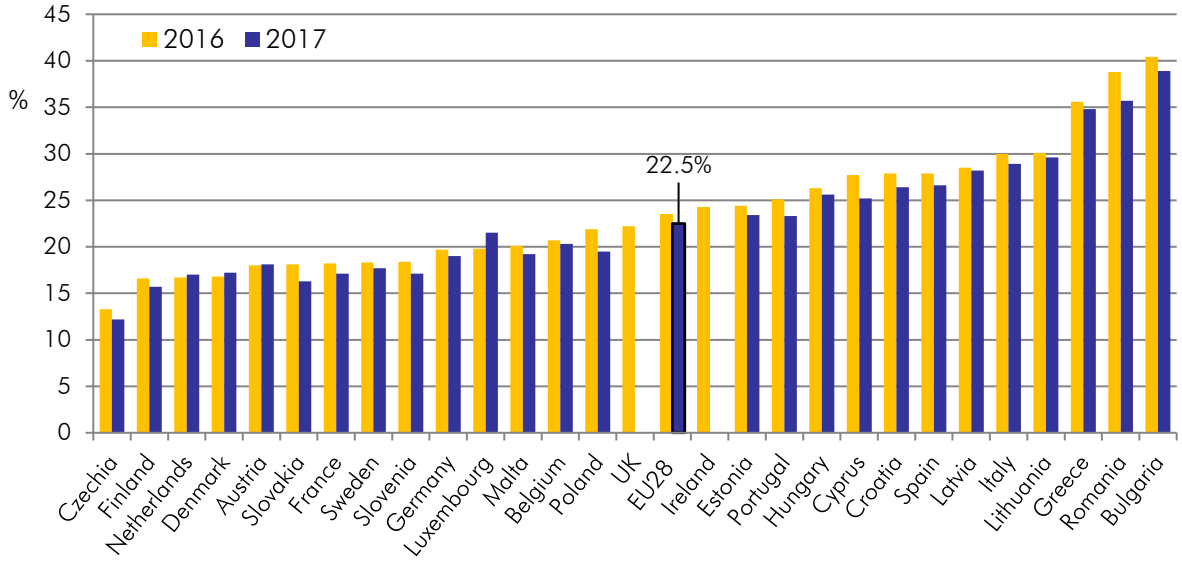
Mapping target groups for microfinance and inclusive finance is a challenging task. To grasp the magnitude of the market, we look at some important indicators related to unemployment, poverty and social exclusion, entrepreneurial motivation and intentions. These indicators are particularly important 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 conducts the "people at risk of poverty or social exclusion" indicator, depicted in Figure 48. 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.[82] In 2017, nearly one fourth of EU28 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

[82] 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.

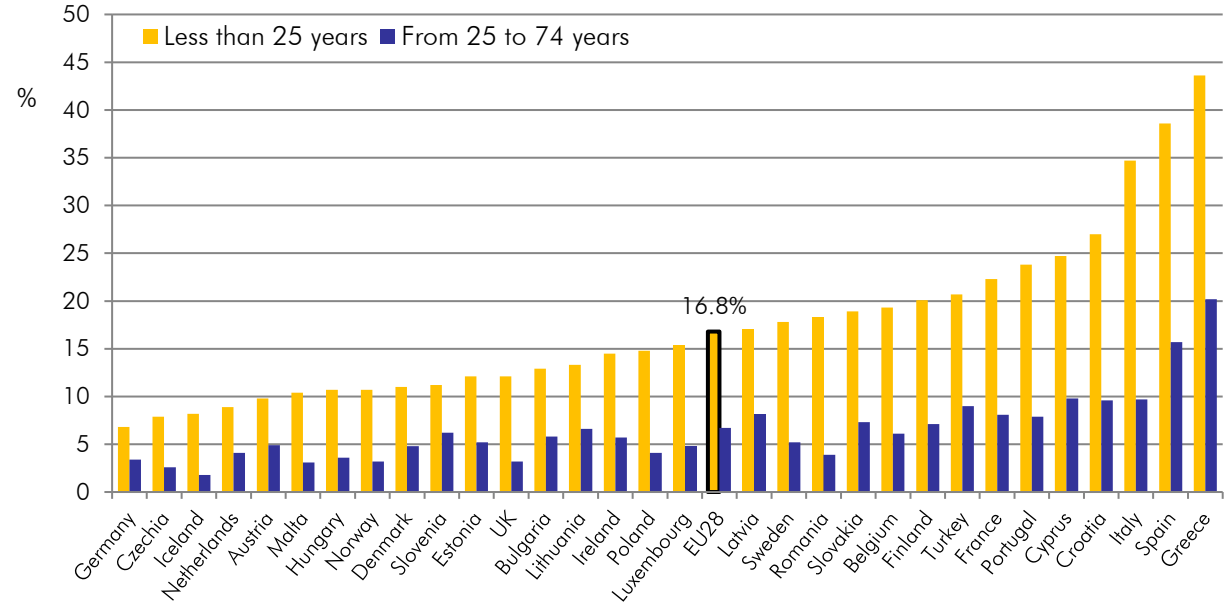
mostly Nordic and Western European countries on the other side of the spectrum (Finland, Netherlands, Denmark).

Figure 48: People at risk of poverty or social exclusion (percentage of total population)



Source: Authors, based on data from Eurostat

Figure 49: Unemployment rate by age groups, 2017

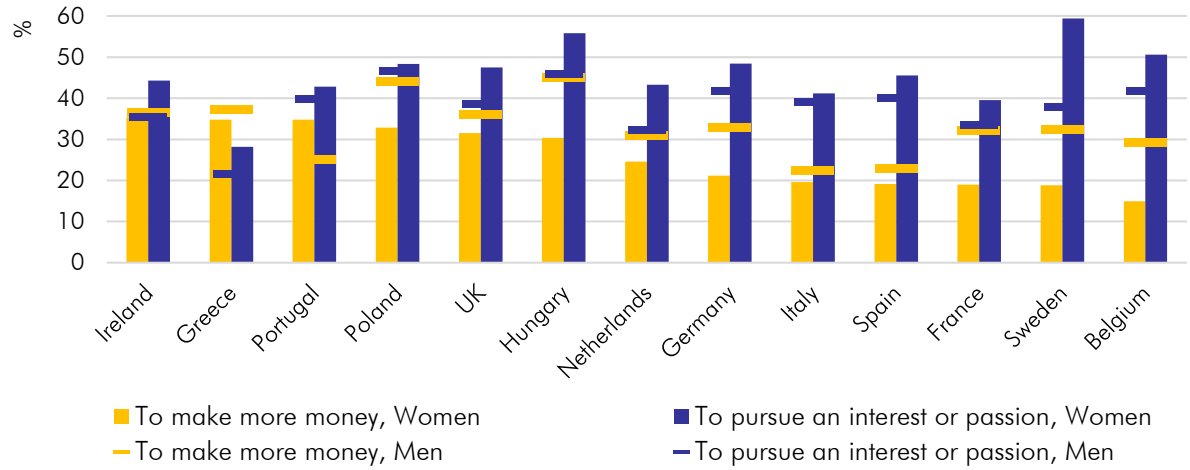


Source: Authors, based on data from Eurostat

Since adverse labour market conditions are the most important driver for necessity-driven entrepreneurship, Figure 49 plots the unemployment rate for a number of European countries. While since recently unemployment in Europe has been declining, large country-level variation exists. Also youth unemployment remains at elevated levels.

The statistics depicted in Figure 48 and Figure 49 are relevant because people at risk of poverty and unemployed people are a potentially important group of business creators, since a decision to start a business often arises out of necessity. Indeed, the OECD (2018c) reports that entrepreneurs often start businesses to improve their economic situation (see Figure 50).

Figure 50: Motivations to set up a business, 2018 (selected European countries)

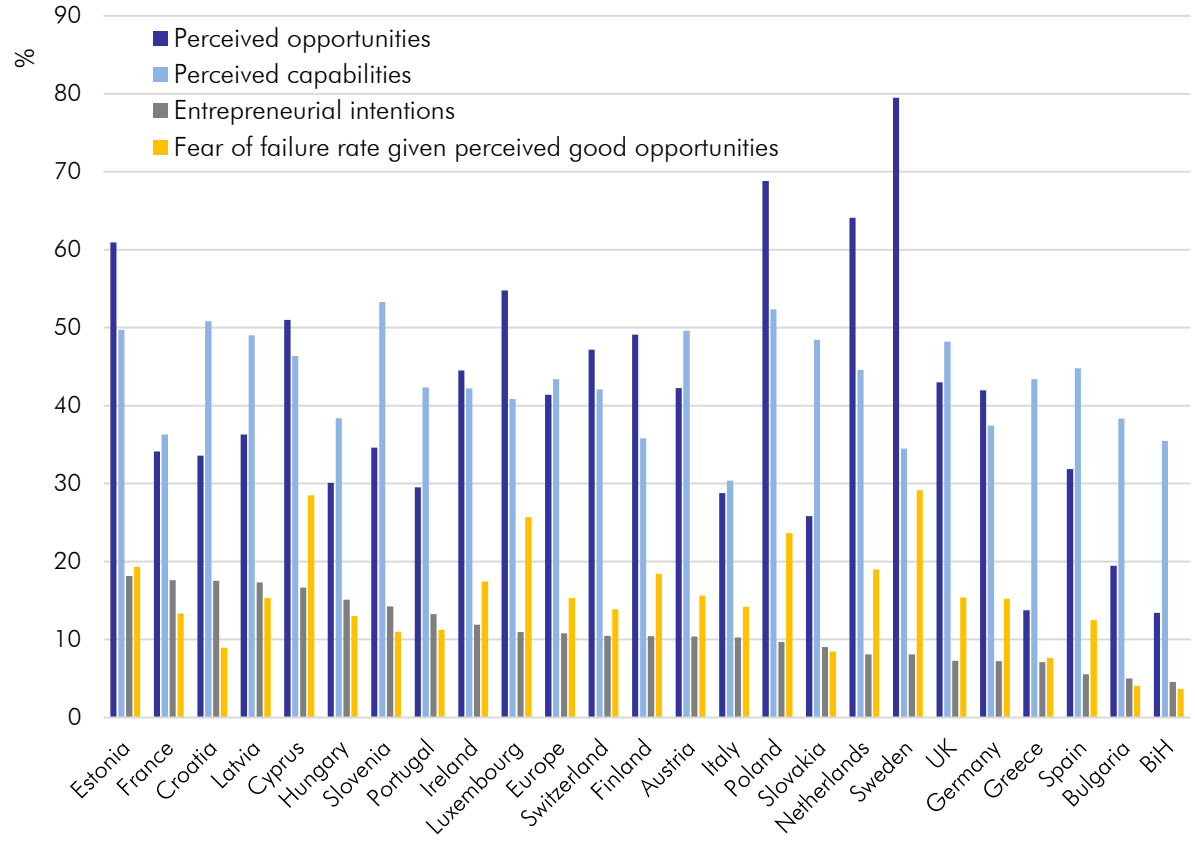


Source: OECD (2018c)

According to the Global Entrepreneurship Monitor (GEM) survey, 41.4% of the adult population in Europe see good opportunities to start a firm in the area they live, while 43.4% of them believe they have the required entrepreneurial skills and knowledge (perceived capabilities). The highest rates of perceived opportunities were observed in Sweden and Poland while the worst opportunities were seen in Greece. The Slovenian and the Polish population were most confident about their own entrepreneurial skills and the least confident population was found in Italy. Despite the high perception of opportunities and capabilities, only 10.8% of the European population indicated that they intend to start a business within three years.

As for the actual number of new business owners, Estonia, Latvia, Slovakia, and the Netherlands are leading the list. In these countries, it is not immediately apparent whether or not the entrepreneurial activity was poverty-driven. For example, in the Netherlands, where the unemployment rate is the lowest (1.8%), early stage entrepreneurial activity was reported to be one of the highest (almost 10%). According to the GEM data, the Netherlands reported the highest motivational index (ratio of improvement-driven opportunity to necessity). It means, that almost all Dutch entrepreneurs are improvement-driven and only a small share (lowest in Europe) is necessity-motivated. On the other hand, Greece, where the unemployment rate is the highest, early stage entrepreneurial activity is very low. Figure 51 shows that the Greeks 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.

Figure 51: Entrepreneurial intentions, 2017



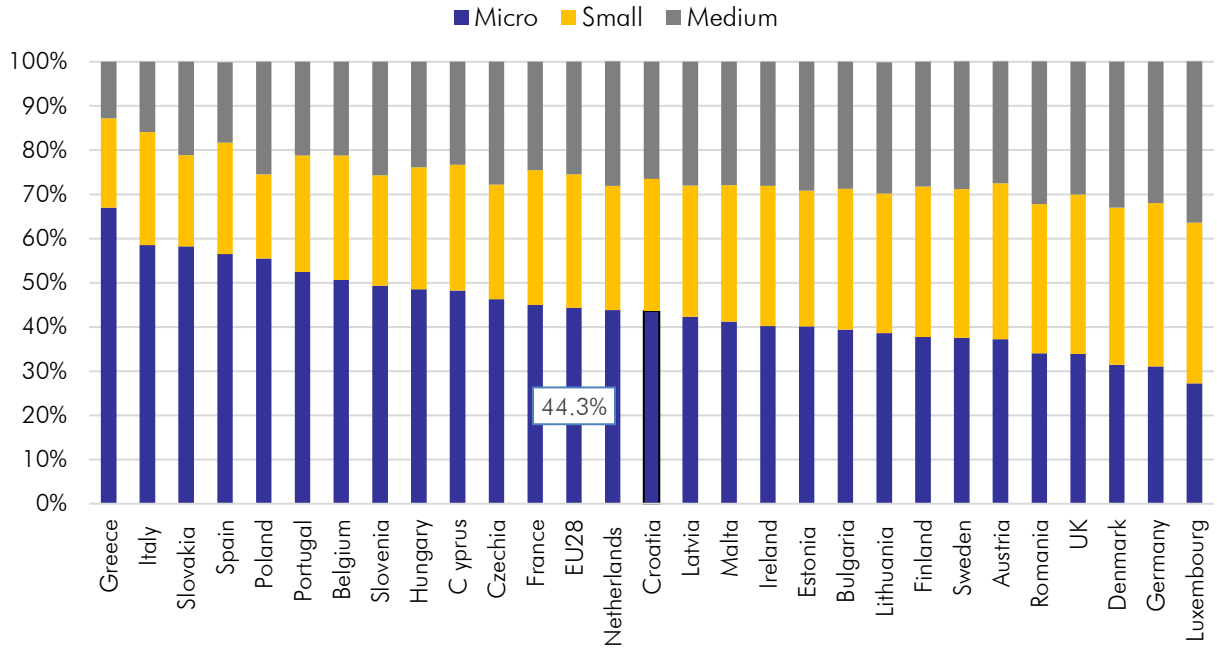
Source: GEM 2016/17 Global Report

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, 2018a). 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 52).

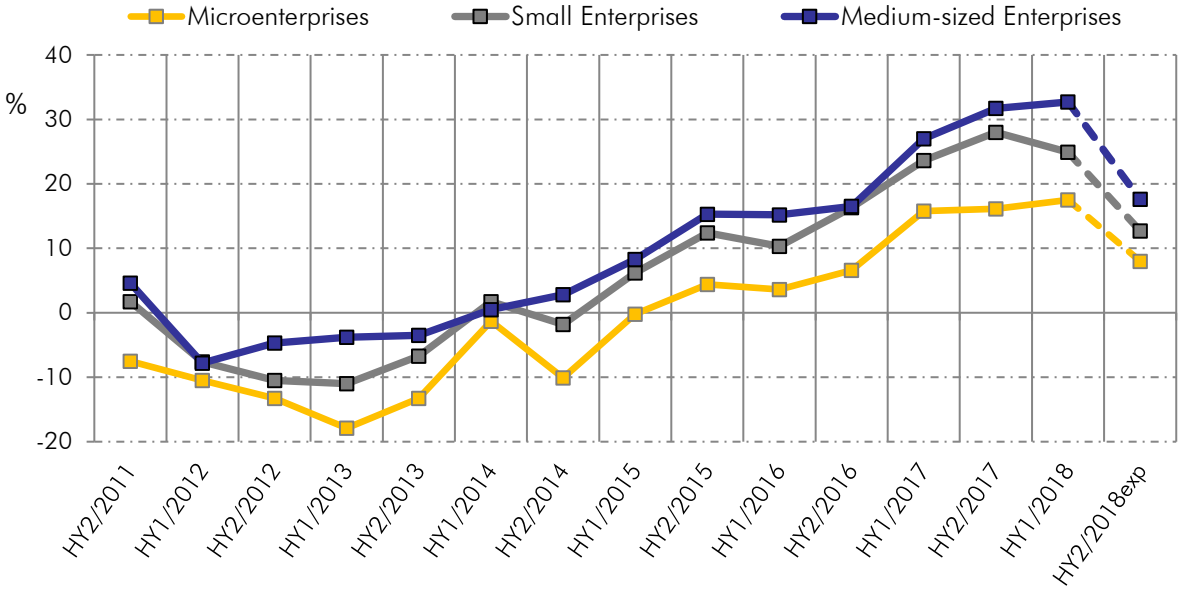
While microenterprises are an important element in the European economic fabric, they generally face more challenging conditions compared to their larger counterparts. This is evidenced by Figure 53, which illustrates microenterprises' perception about the current economic climate and compares it to larger firms' perception. For the second half of 2018, microenterprises are on balance expecting a negative change (8%) in their overall situation, thereby being more pessimistic than their larger counterparts are. The UEAPME survey furthermore reveals that they expect their investment climate to worsen (UEAPME, 2018).

Figure 52: Relative employment share by microenterprises compared to other size classes (2017)



Source: European Commission (2018a)

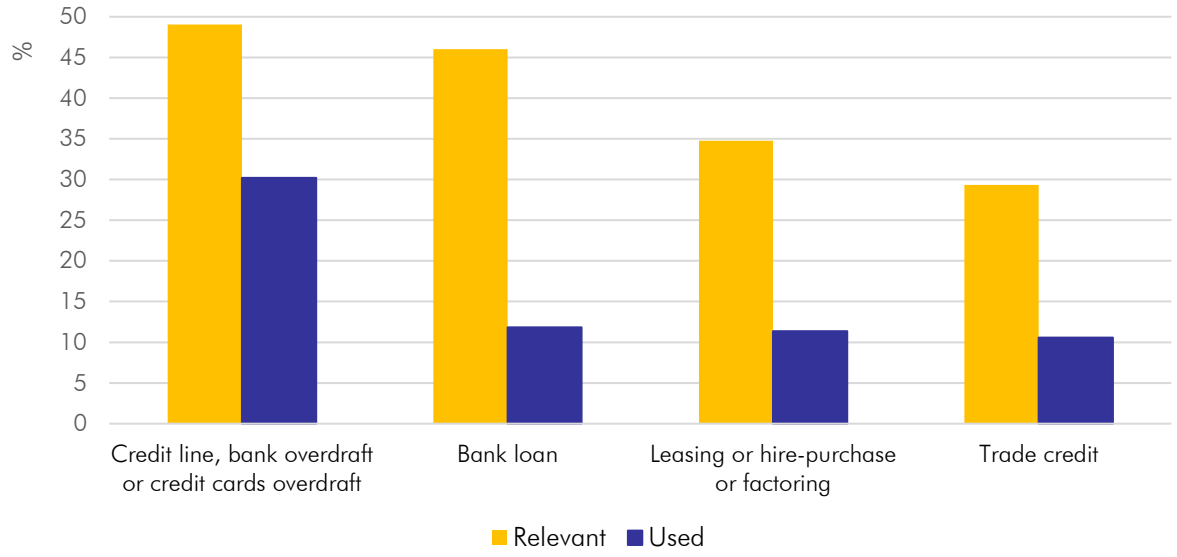
Figure 53: Overall situation of European microenterprises compared to other size classes



Note: The figure plots net responses, which are calculated as the share of positive minus negative responses.
Source: UEAPME Study Unit (2018)

Microenterprises, in general, use less external financing instruments than their larger peers, presumably due to difficult access to finance. For example, bank loans are used by 20.2% of small companies and 25.6% of medium companies, while only 11.9% of microenterprises used bank loans. Interestingly, almost half of the microenterprises indicated that bank loans were relevant sources of financing, which is much higher than what they actually used (see Figure 54).

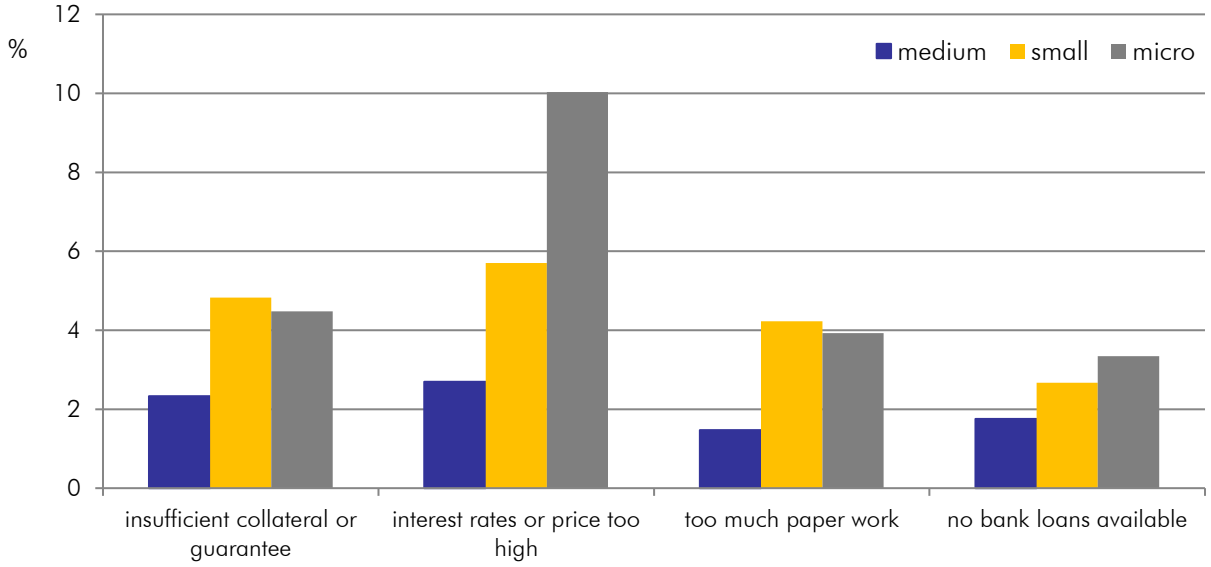
Figure 54: Relevance and use of different financing sources for microenterprises (HY1/2018)



Source: Authors, based on ECB SAFE (2018b) data

The same survey states that the bank loan rejection rate is still the highest for microenterprises (7.2%), compared to 1.5% for small firms and 2.1% for medium-sized firms. Consequently, the share of microenterprises that did not apply for a loan due to fear of rejection (discouraged borrowers) remains high at 6.0%. Forty-seven per cent of the SMEs (52.3% 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 too high" or there is "too much paperwork" involved (see Figure 55).

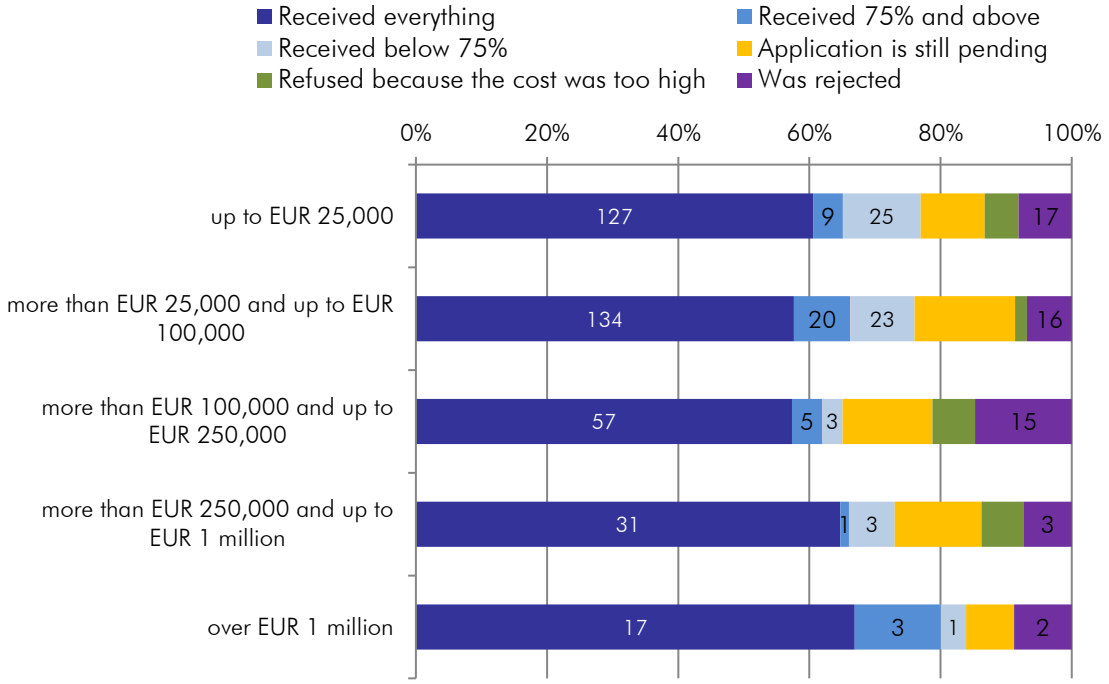
Figure 55: Reasons for bank loans being not relevant (by enterprise size class), HY1/2018



Source: Authors, based on ECB SAFE (2018b) 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 56).

Figure 56: Application status of bank loans requested by microenterprises (by loan size), HY1/2018



Note: the figure is based on responses from 631 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 (2018b) 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"[83].

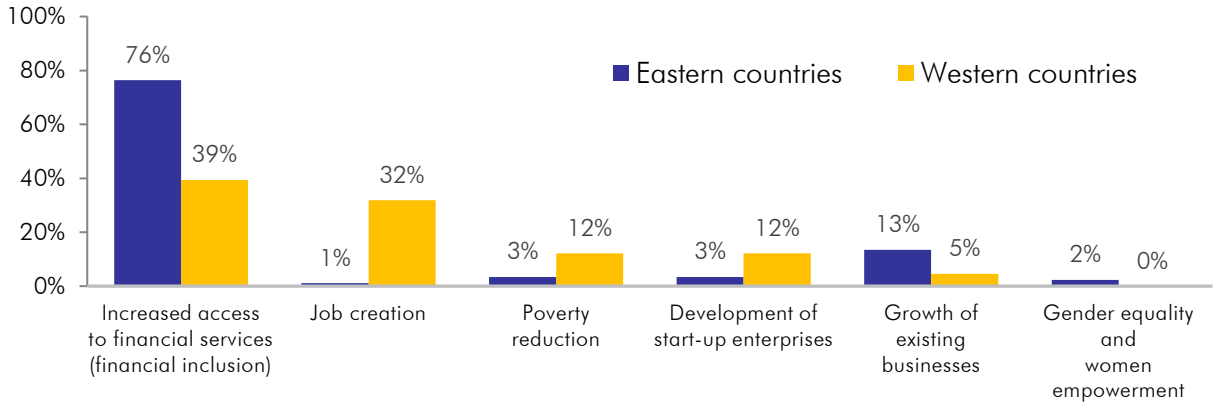
6.3 The supply of microfinance: the diversity of European MFIs

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).

[83] Source: based on interim results from an ongoing research project on "Measuring Microfinance Impact in the EU".

The focus of MFIs' activities differs between Western and Eastern Europe. Most of the 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 (see Figure 57).

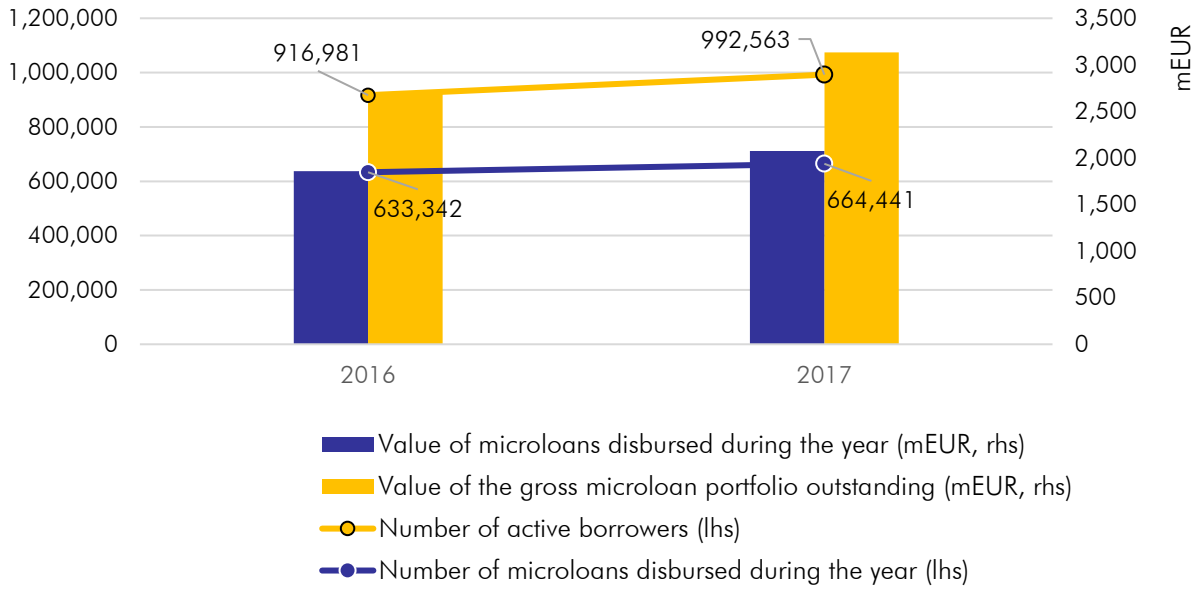
Figure 57: Primary mission by region, 2017



Source: EMN-MFC (2018)

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 3.1bn reported from 136 MFIs (see Figure 58).

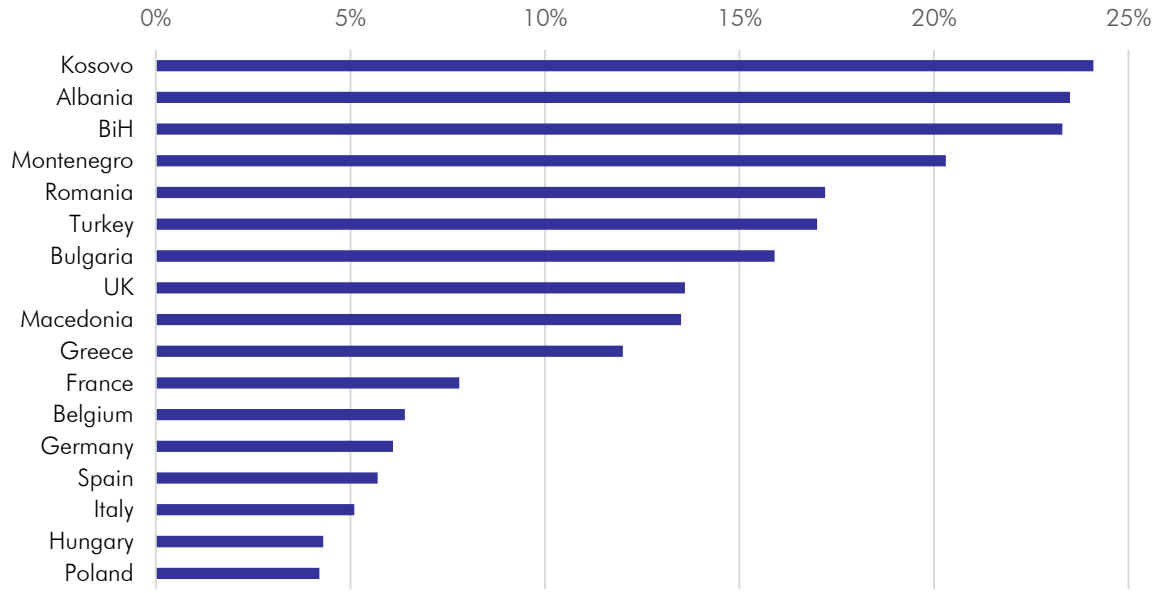
Figure 58: Trend in microcredit supply in Europe, 2017



Source: EMN-MFC (2018)

The interest rates charged on microloans for business purposes differ strongly between countries (see Figure 59). 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 59: Average annual interest rate by country, 2017

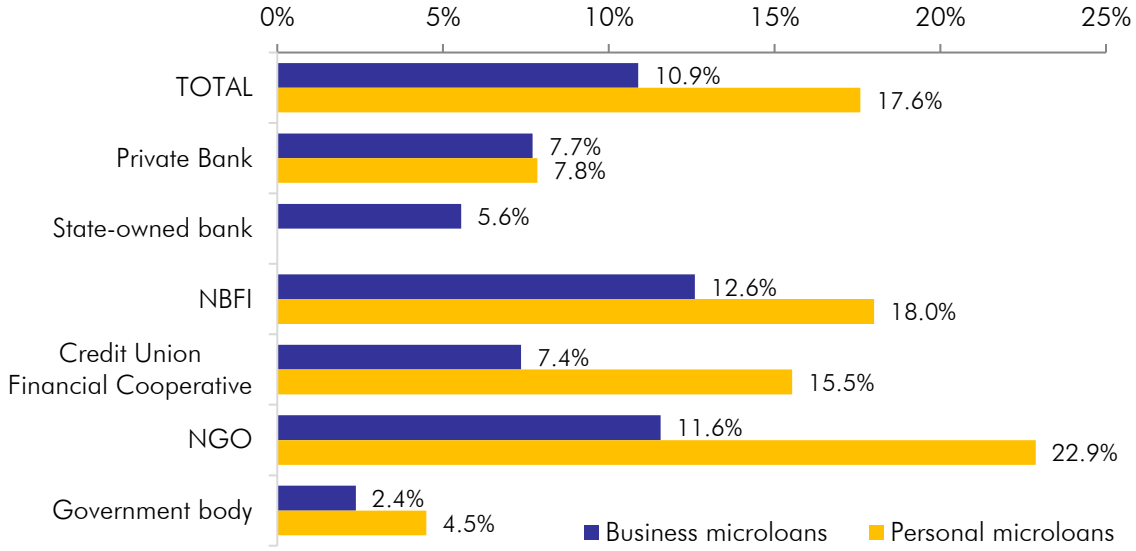


Source: EMN-MFC (2018)

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). 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).

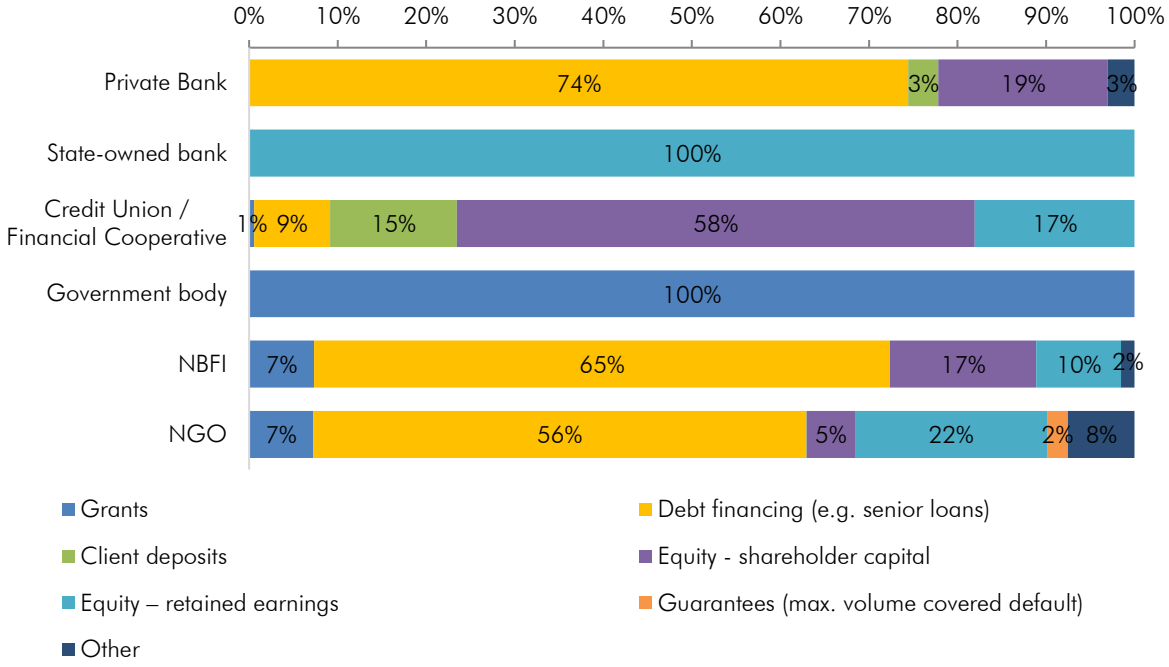
The interest rates also differ across MFI types. For example, interest rates on business loans charged by NBFIs are on average higher than those charged by NGOs and government bodies. The level of the interest rate charged by MFIs depends on their funding structure, among other things. For example, in Poland, where the average interest rate is the lowest, 30% of funding sources came from grants, while in Bulgaria, Romania and in non-EU Balkan countries, the surveyed MFIs do not depend on grants at all but the interest rates for their clients are the highest (EMN-MFC, 2016). Similarly, Government bodies rely on grants solely, which allows them to charge the lowest interests rates (see Figure 60 and Figure 61).

Figure 60: Average annual interest rate by institutional type, 2017



Source: EMN-MFC (2018)

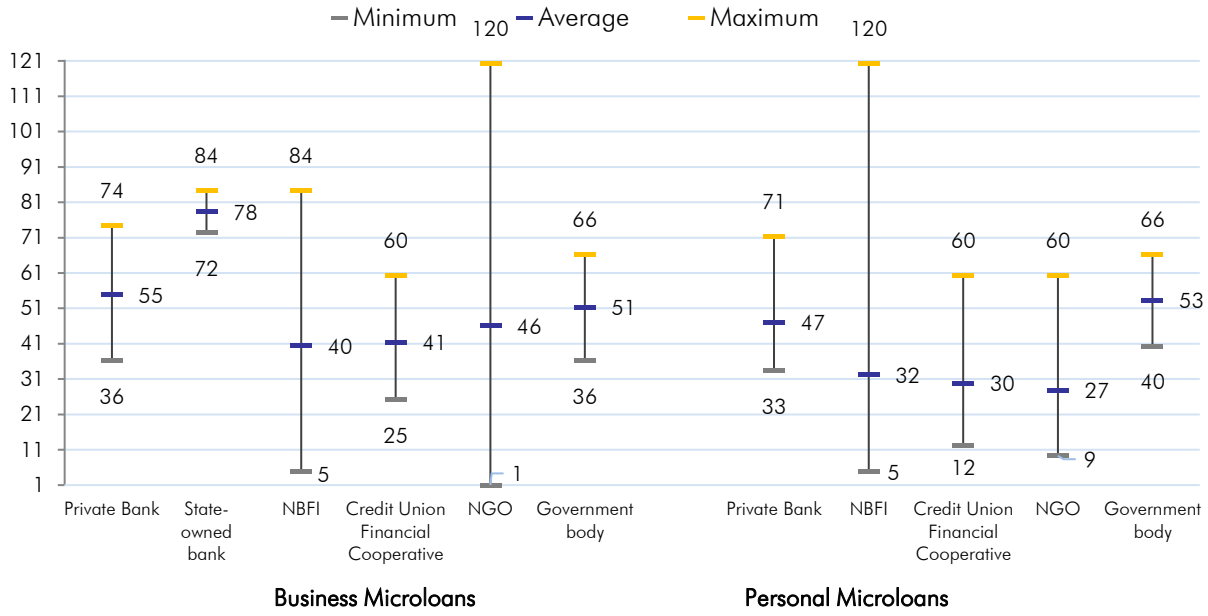
Figure 61: Average funding structure by value and type of institution, 2017



Source: EMN-MFC (2018)

Interest rates also depend on other loan conditions including loan durations and loan sizes. The average duration of business microloans is 45 months (see Figure 62) 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).

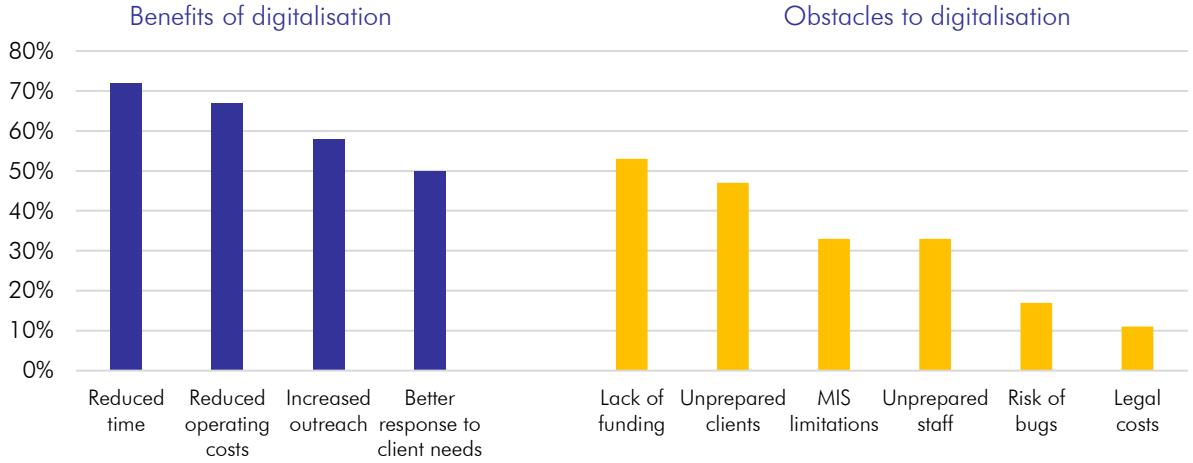
Figure 62: Average microloan term by institutional type (months), 2017



Source: EMN-MFC (2018)

European MFIs are only partially digitalised but ready to adopt more in their operations in order to stay competitive, according to a survey of MFIs conducted by Microfinance Center (MFC, 2017). According to the surveyed MFIs, digitalisation brings efficiency of operations, 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. The main challenge for MFIs is to find funding to introduce the digital solutions (see Figure 63). The second biggest challenge is unprepared clients. As Figure 65 shows in the next chapter, in many countries, mainly in Eastern Europe, access to digital payments remains an issue (more on Fintechs, see Chapter 7).

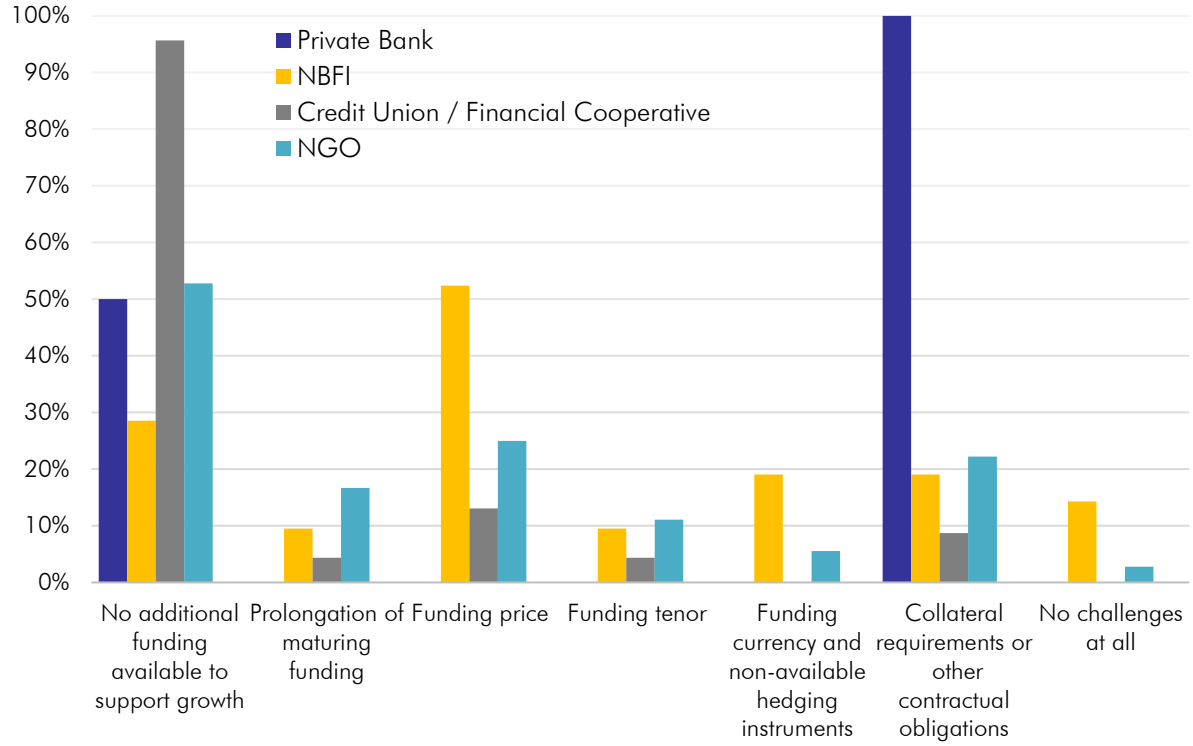
Figure 63: Benefits of and obstacles to digitalisation (% MFIs)



Note: the results are based on 36 MFIs from 16 European Countries
Source: MFC (2017)

As discussed above (see Figure 61), debt financing is the main funding source for European MFIs, mainly for private banks and NBFIs. As for future funding needs, debt finance still remains the most needed funding source: 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 64). MFIs need to meet the increasing demand for microfinance. Currently, the total value of potential demand for accessible small business loans from actors in the banking and non-banking sector in EU28 is estimated to amount EUR 17.4bn annually (EMN, 2017).

Figure 64: Challenges faced by MFIs, 2017



Source: EMN-MFC (2018)

6.4 The microenterprise access to finance

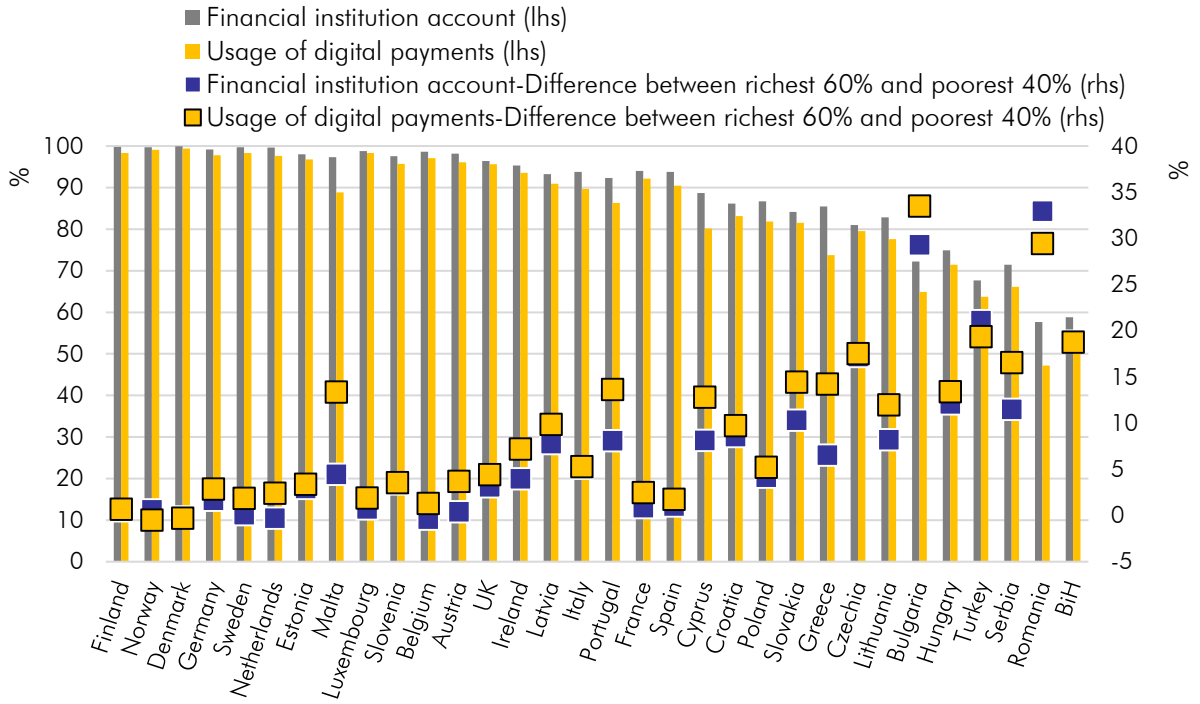
The challenges for microenterprises to access external financing are even greater than for other (bigger) types of SMEs. Almost by construction, these are young firms without prior track record or formal reporting obligations. In addition, necessity-driven entrepreneurs, again by definition, are highly 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.[84] This section discusses some indicators that illustrate how access to finance often is restricted for vulnerable labour market segments and microenterprises.

[84] 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 survey[85], illustrates how financial inclusiveness varies strongly between countries and social groups (see Figure 65). 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%).

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.

Figure 65: Financial institution account and use of digital payments, 2017

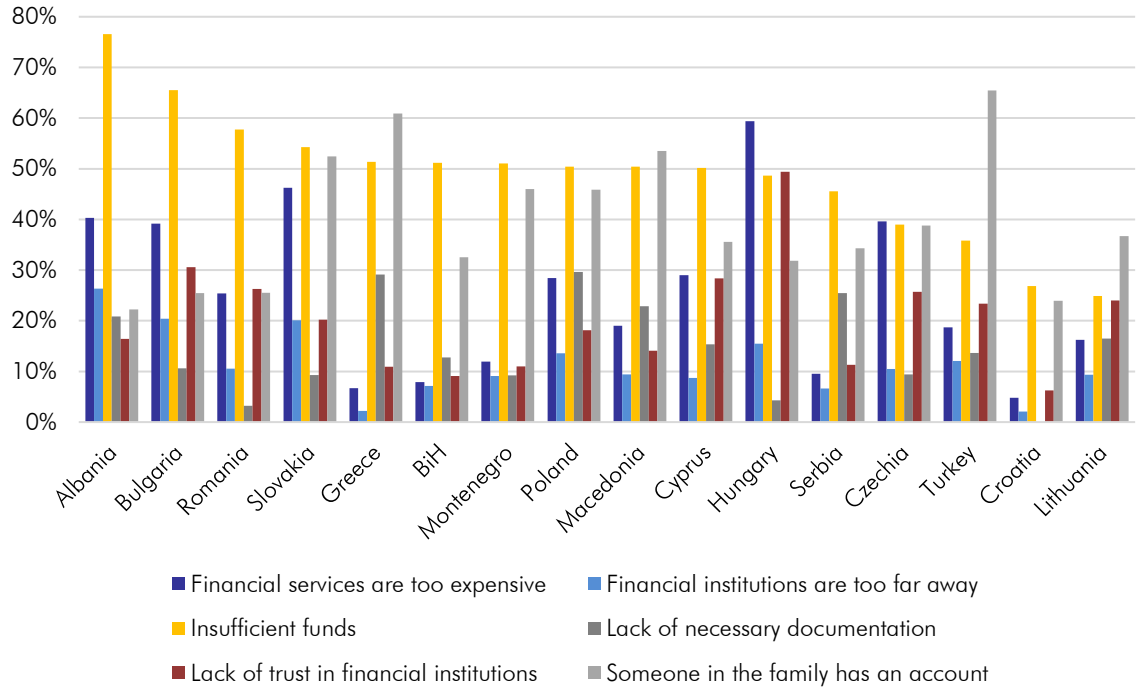


Source: Global Findex Database

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 (see Figure 66).

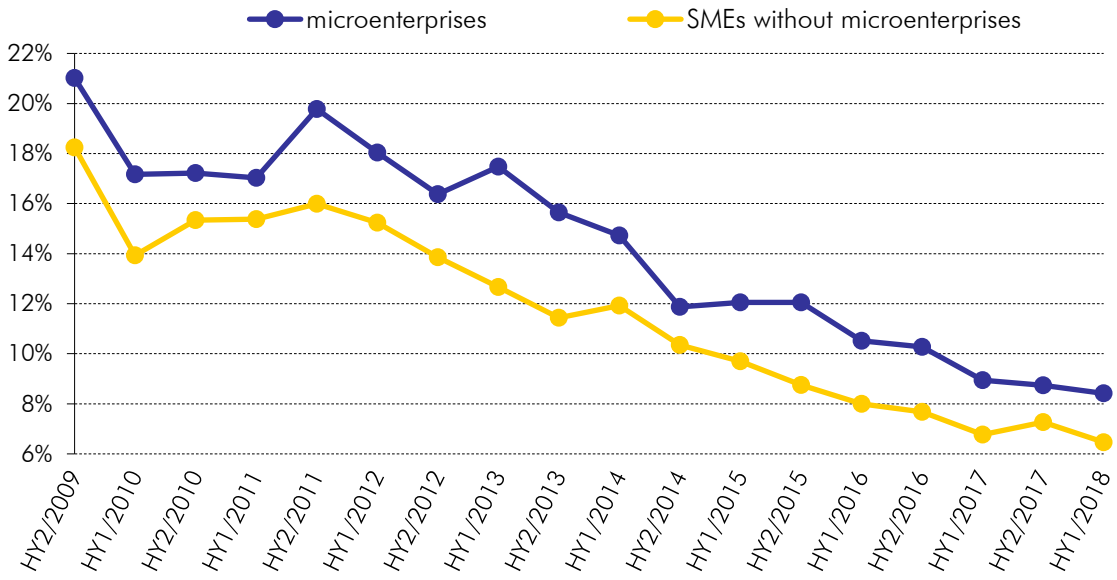
[85] The Global Financial Inclusion (Global Findex) database, launched by the World Bank in 2011, provides comparable indicators showing how people around the world save, borrow, make payments, and manage risk. The indicators in the 2014 Global Financial Inclusion (Global Findex) database are drawn from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

Figure 66: Reason for not having an account (per cent without a financial institution account)



Note: Respondents could choose more than one reason.
Source: Global Findex Database

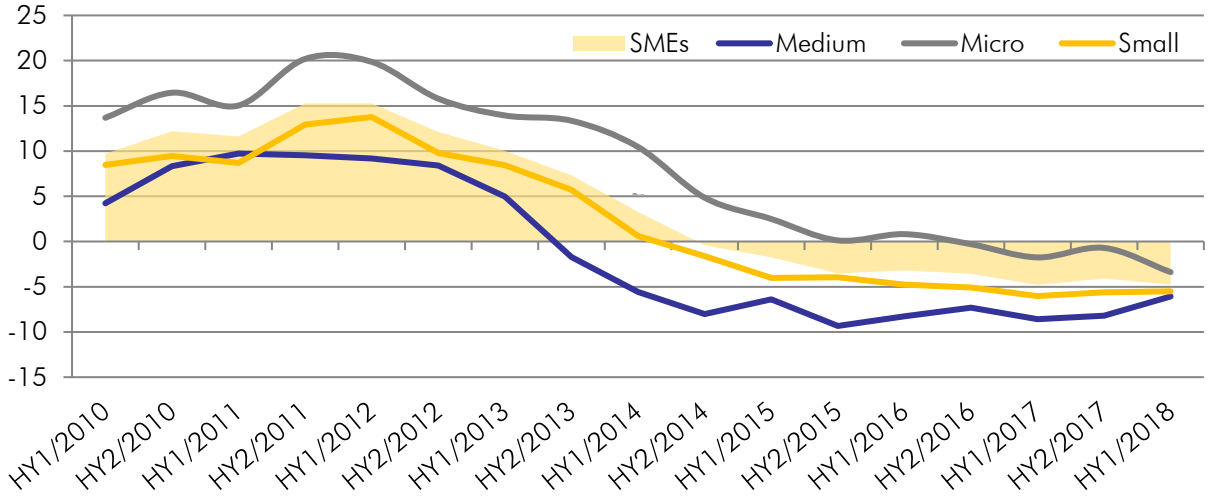
Figure 67: Share of enterprises reporting access to finance as their most important problem



Source: Authors, based on data from ECB (2018b), Statistical Data Warehouse

The ECB SAFE survey in the Euro area (ECB, 2018b) provides additional insights regarding 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 decreased but still exceeds the share of bigger SMEs facing the same problem (Figure 67).

Figure 68: 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 (2018b), Statistical Data Warehouse

Figure 68 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: 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. Alternatively, one should think about ways for MFIs to reduce their fixed costs related to lending activities, perhaps via digitalisation.

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 costumer"). 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 limited[86]. 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 also are 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 two instruments: (i) the EaSI Guarantee Instrument to increase access to finance for microenterprises, social enterprises and vulnerable groups and (ii) the EaSI Capacity Building Investments Window to help build up the market via investments. This can be by: 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.

By end-2018 EIF had signed 97 EaSI guarantee agreements covering 26 countries (including Albania, FYROM, Montenegro, Serbia and Turkey outside of EU28). Around 40% of the EaSI guarantee agreements had been entered into with non-banks. Over time these guarantee agreements will mobilise around EUR 2.0bn of new financing to micro-borrowers and social enterprises.

[86] Based on interim results from an ongoing research project on "Measuring Microfinance Impact in the EU".

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.

Fintechs are crucial players in the SME financing landscape. 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.

This chapter is built on two main sections. Section 7.2 provides a market overview on investment flowing into Fintech companies, where section 7.3 illustrates how the Fintech revolution impacts SME financing directly by discussing the European CF sector.

7.2 Investment in Fintechs[87]

7.2.1 Global Fintech investments

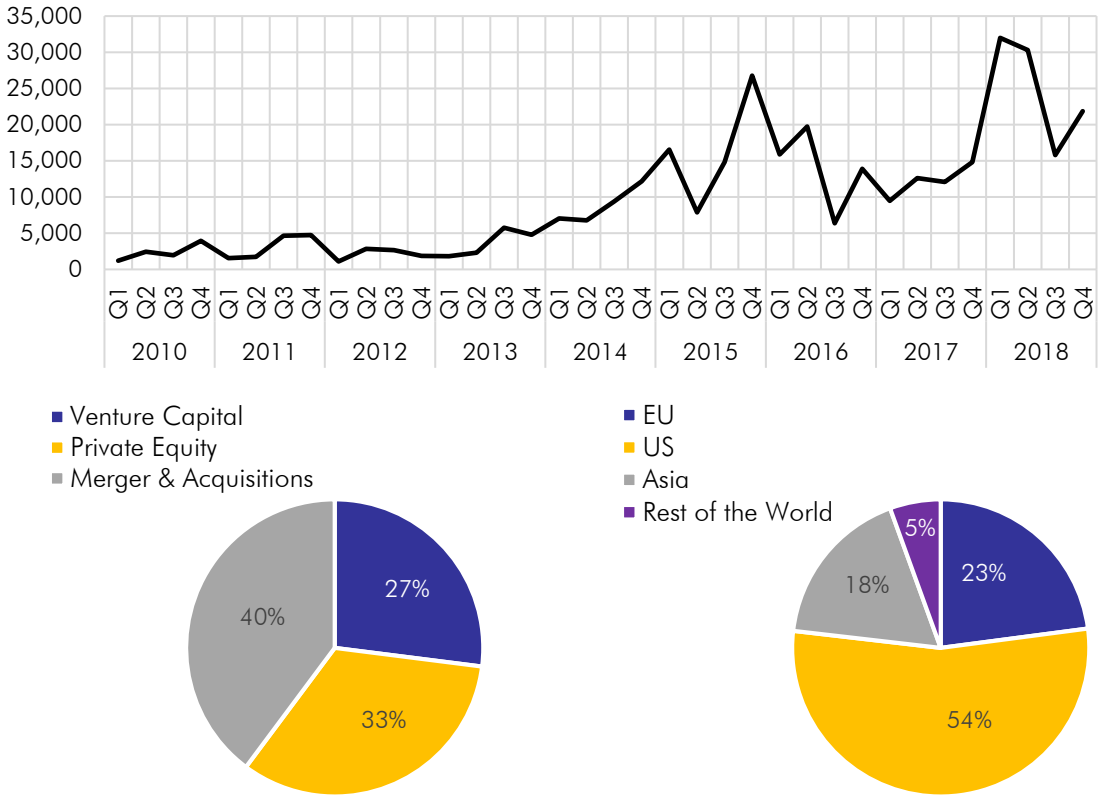
In the past year, investment volumes in the global Fintech market have been subject to large fluctuations (Figure 69). Following a fierce start in the first quarter of 2018, driven by a few very large deals,[88] investments levelled off in Q2 and fell back significantly in Q3. This sudden decrease is likely to be of temporary nature, as dramatic drops in investment volumes have been observed in

[87] The statistics presented in this chapter rely on the data platform PitchBook, who identify 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 collections information on deals in the Venture Capital, Private Equity or Merger & Acquisitian (M&A) market. All statistics presented below refer to investments and geographical data refer to the location of the beneficiary firms.

[88] The merger of WorldPay and Vantiv in the European Merger & Acquisition segment and a large VC funding round of Ant Financial in China.

the past and have so far always been followed by an equally quick recovery.[89] In fact, preliminary figures for Q4 seem to signal the Fintech market is poised for a rebound indeed. The largest deals in 2018 took place mostly in the segments of digital payment technologies[90] and information technology services.[91]

Figure 69: The evolution of global Fintech investments (VC/PE/MA) and its distribution over deal types and regions from 2010 onwards



Source: Authors' calculations based on PitchBook data

The sharp decrease in global investment volumes between Q1/2018 and Q3/2018 occurred despite relative strength on the US market, where volumes remained roughly constant between Q1 and Q3 (Figure 70). During that same period, the European Fintech market almost disappeared, collapsing completely from a record high of EUR 16.6bn in Q1/2018 to just EUR 3.6bn in Q3/2018. While caution is advised in interpreting these numbers, as they are likely to be subject to change on subsequent updates of the underlying data, the contrast with the evolution on the US market is striking nevertheless. Also in Asia Fintech investment volumes slumped. Figure 70 further reveals that the rebound of the global Fintech market in the final quarter of 2018 was driven entirely by evolutions on the US private equity market.[92]

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[89] In addition, the 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 caution as they likely present an underbound of the true numbers.

[90] WorldPay (EUR 10.5bn, Europe), Nets (EUR 4.4bn, Europe), Blackhawk Network Holdings (EUR 3bn, US), Verifone (EUR 2.9bn, US), iZettle (EUR 1.9bn, Europe).

[91] Refinitiv (EUR 14.5bn, US), Fidessa Group (EUR 1.7bn, Europe)

[92] Which in turn can be traced back to a single large deal: the buyout of Refinitiv.

Historically,[93] most Fintech investment activity has occurred in the Merger & Acquisitions segment (42%, Figure 69), followed by Private Equity (31%) and Venture Capital (27%), although the relative importance of these segments tends to vary strongly over the considered time period and differs significantly between geographies (as shown in Figure 70).

Over the entire period considered,[94] the US and the EU28 together accounted for more than three quarters of the global Fintech investments (bottom right panel of Figure 69, by country of investee company). Another 18% flowed to the Asian continent. The rest of the world accounted for only a negligible fraction of the market.

The dominant position of the US and the EU on the global Fintech market has been under threat in recent years. Their combined market share has dropped from 90% over the 2010-2012 period to 70% over 2016 to 2018. This evolution was driven by strong growth in the Asian market. This came in particular at the expense of Europe's market share, which declined from 36% in 2010-2012 to 21% in 2016-2018.

Over the entire period, covered in Figure 70, the M&A segment has been the largest investment market in Europe and accounted for 41% of total deal value, where VC accounted for only 12%. In Asia, on the contrary, a lively Venture Capital market has driven the gain in the Asian Fintech market share, accounting for the vast majority of total investment volume (72%).

7.2.2 The Fintech Venture Capital market

A healthy Venture Capital market drives innovation and long term growth. Therefore, Figure 71 takes a closer look at this market and illustrates its underlying dynamics for the three dominant global regions by illustrating investment volumes for different VC stages.

The European VC Fintech market experienced an exceptionally strong 2017, with record volumes in the final quarter for both the Late Stage (EUR 507m) and Early Stage (EUR 369m) segments. During the first half of 2018, investment volumes dropped substantially, as both segments fell back from their record highs to just over EUR 300m each. Preliminary figures for 2018's final quarter appear to indicate a modest rebound in the Late Stage segment, with just over EUR 250m of investments already recorded at the time of writing, while the Early Stage segment could be headed for further decline.

The European VC ecosystem differs structurally from the other two global markets, although not in the way one might suspect. In the US and Asia the Late Stage Segment is almost non-existent and the VC market is dominated by Early Stage and Angel investments. On the contrary, European Late Stage investments trump all other segments. At first glance, this appears in contrast with the common assertion that the European VC market fails to reach sufficient scale, because an underdeveloped later stage segment results in low average investment volumes (VentureBeat, 2016).

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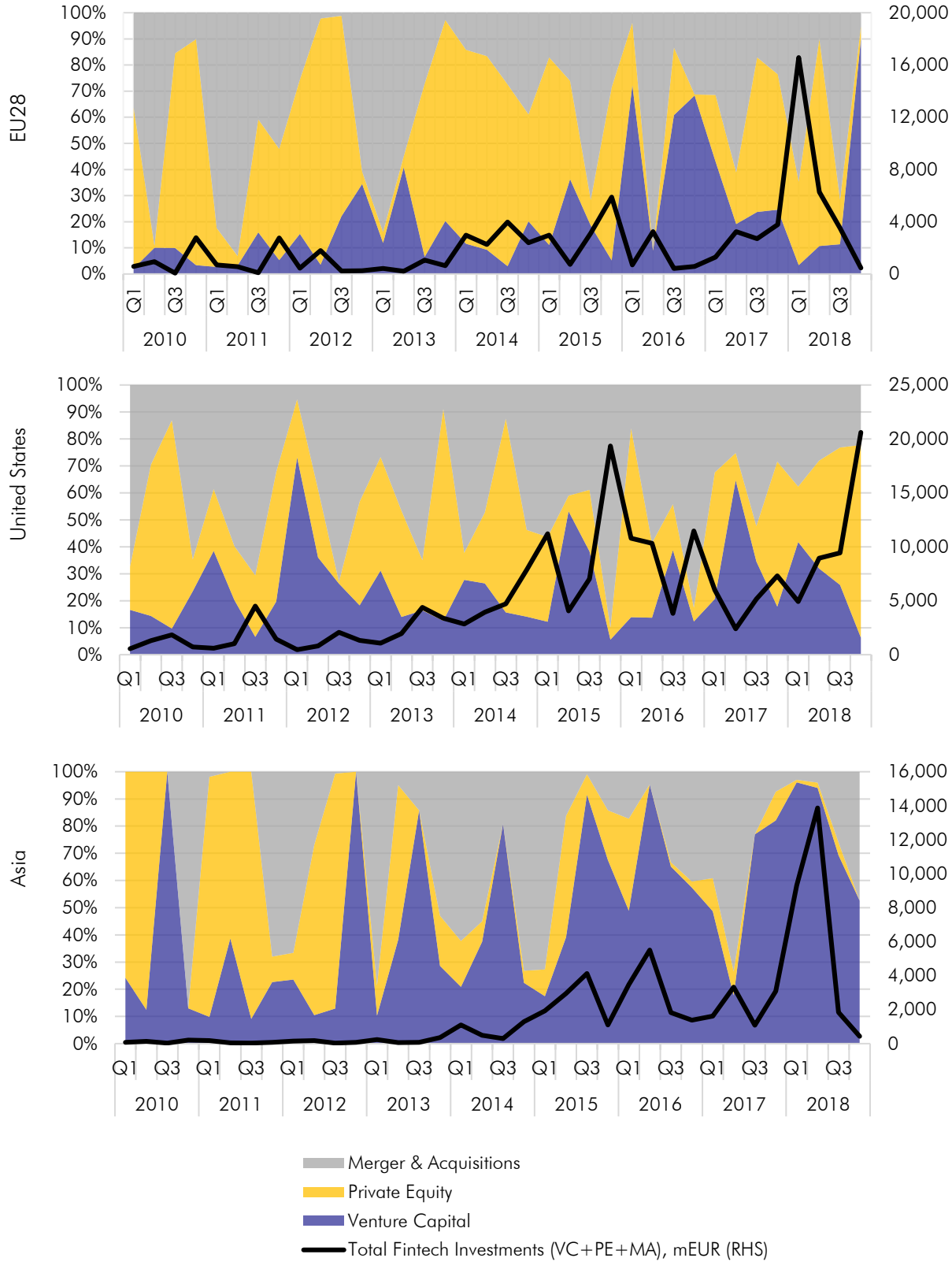
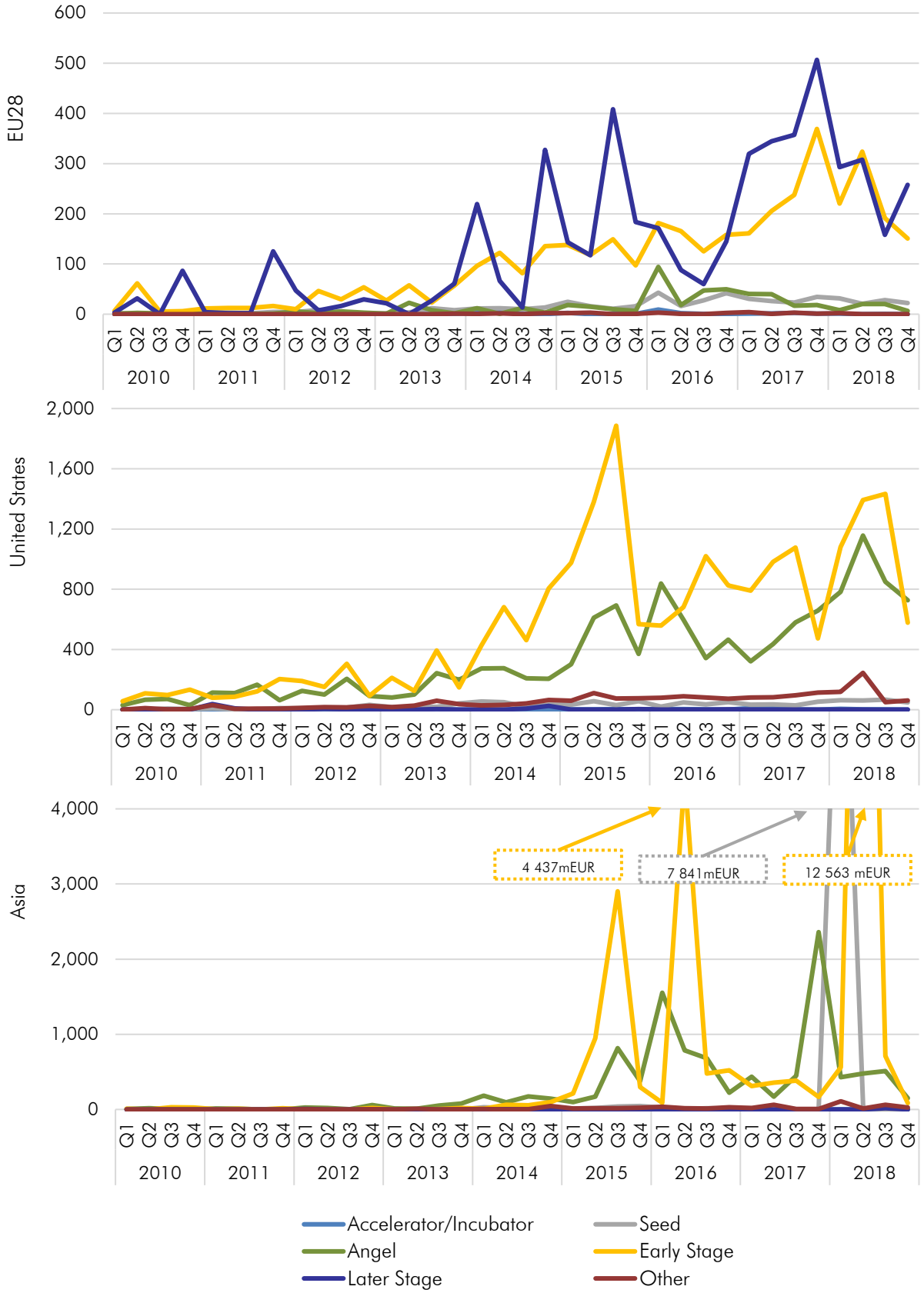
[93] Aggregating all data over time, from 2010 onwards, until the most recent information available at the time of writing.
[94] Accounting for all data that was available on 27th of November 2018.

Figure 70: Fintech investments per global region and deal type: the EU28 vs the US and Asia



Source: Authors' calculations based on PitchBook data

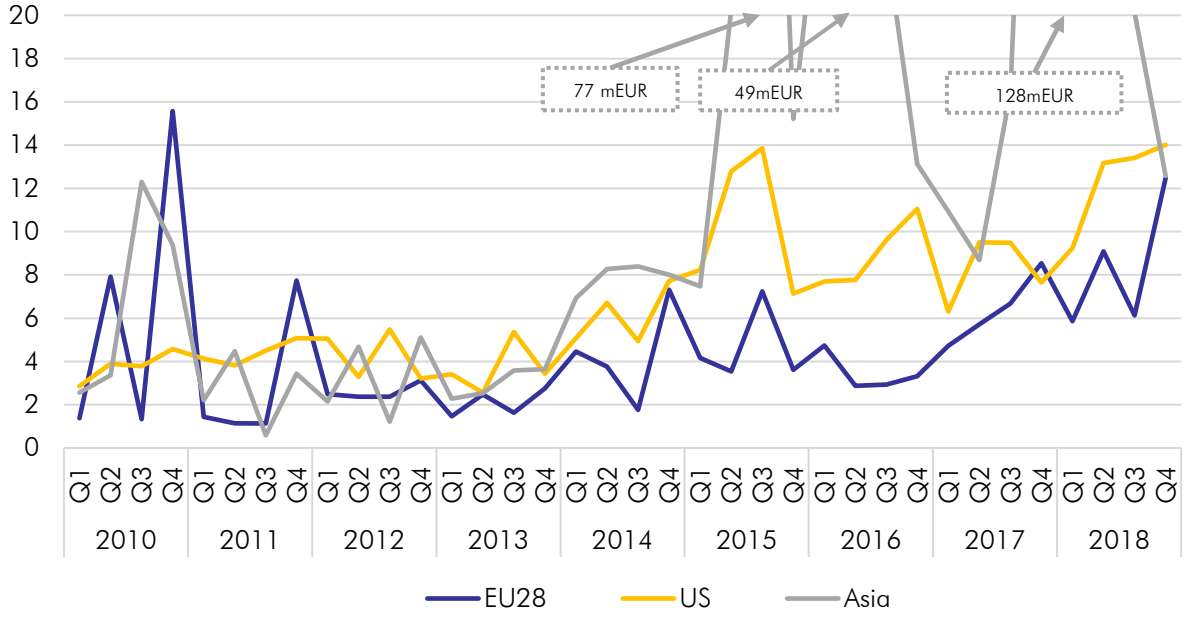
Figure 71: Regional differences in the composition of VC investments across global regions (mEUR)



Source: Authors' calculations based on PitchBook data

However, the dominance of Late Stage investments is not reflected into a significantly higher deal sizes (Figure 72). Prior to 2014, average VC deal size was roughly equal across continents, hovering between EUR 2m and EUR 4m.[95] From 2014 onwards, VC investments started to scale up globally, but the pace at which it did was much faster on US and Asian markets, leading to a divergence in scaling between the EU and the rest of the world. Between 2016 and 2017, the European VC market caught up as average deal size increased from EUR 3m to around EUR 8m. From 2018 onwards, the European scale-up experience seems to have stagnated. While it is still too early to draw definite conclusions, future updates will bring clarity on further market developments.

Figure 72: Average VC investment size (mEUR)



Source: Authors' calculations based on PitchBook data

7.3 Investments from Fintechs: The European Crowdfunding market[96]

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. From a global perspective, the European CF market is still relatively underdeveloped. In fact, for the past four years the growth rate of the global CF market has consistently outpaced European growth. This lead to a decreasing European market share in global funded volumes from 8.6% in 2013 to 2.9% in 2016.[97] Within Europe, the UK still accounts for the majority of funded volumes (73%), but the importance of other European markets is growing. The statistics presented in this section focus on continental Europe.

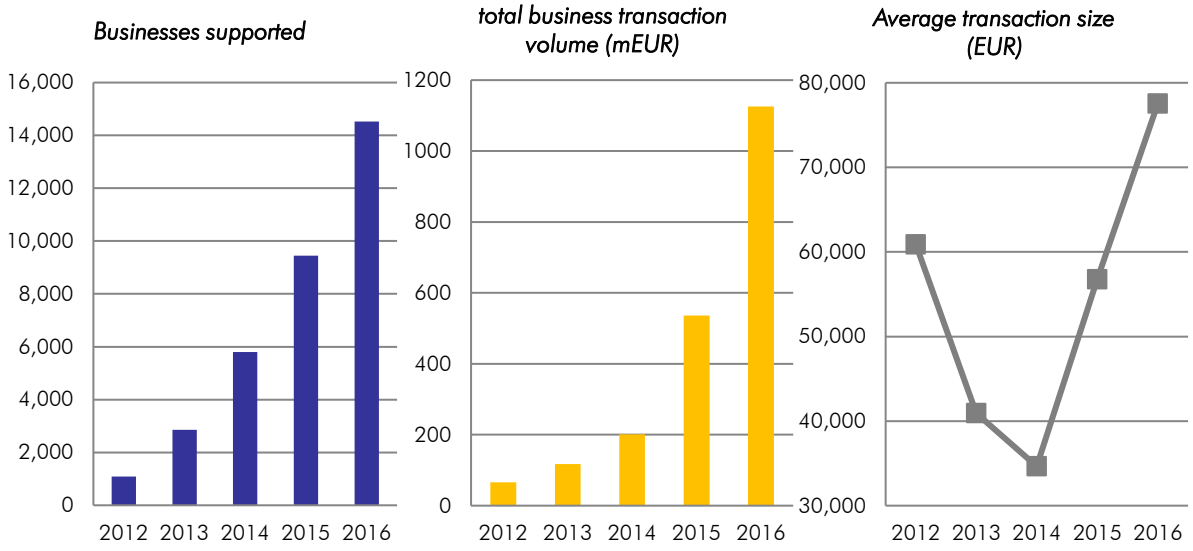
[95] With the exception of some quarterly peaks due to some individual high volume deals.
[96] This section uses data derived from the annual publication of Cambridge Centre for Alternative Finance (2018), which details the results of an annual survey among 344 CF platforms in 45 countries on the European continent.
[97] Across all platform types, not just business related CF.

While the most high-profile 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.

Evolution

Figure 73 depicts the evolution of business related transaction volumes on CF platforms across Europe (excluding the UK). Total volume increased strongly between 2015 and 2016, more than doubling from EUR 536n to EUR 1,126m. While impressive, the rate of growth decreased slightly compared to 2014-2015, when volumes increased by 167%. The total number of funded SMEs[98] also increased, but at a slower rate (54%), which implies a further increase in the average transaction size to EUR 77,543 per funded business.

Figure 73: The evolution of business-related transaction volume[99] on the crowdfunding market from all platform types in Europe (exc. UK) and the number of fundraising SMEs.



Source: Cambridge Centre for Alternative Finance (2018)

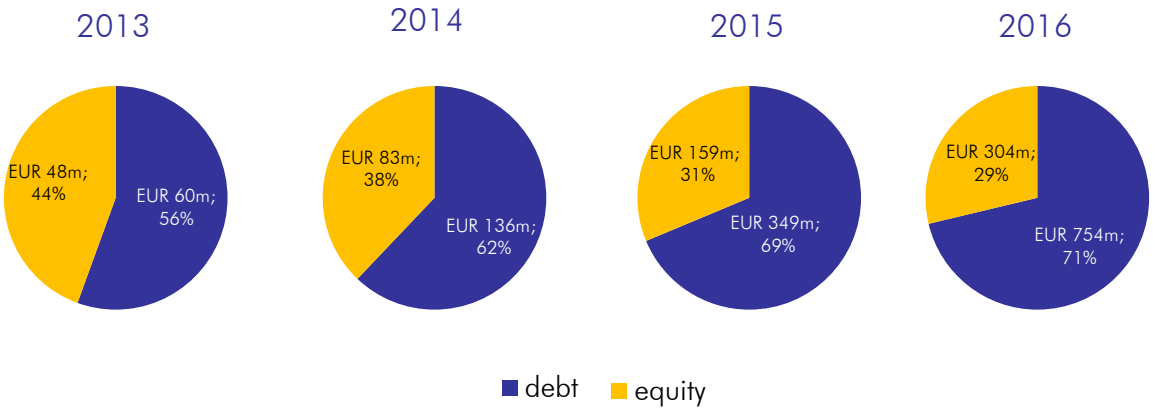
The growth in business-related CF was driven by growth in the equity-based CF and in the different debt-based segments. Since debt-based CF increased slightly more than the former, its market share further increased to 71% (Figure 74), a continuation of the trend that started since the collection of data in 2013, when the debt-based platforms made up just over half of total business CF transactions.

[98] The statistics refer to business in general, but it is safe to assume the share of non-SMEs in that population is negligible.
[99] 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 (Cambridge Centre for Alternative Finance, 2018).

Among debt-based platforms, 2016 saw the rise of new CF concepts such as real estate CF and P2P property lending.[100] Also balance sheet business lending, in which the platform provides a loan directly to the borrower and therefore acts as a financial institution rather than just the middle man, gained significance (EUR 59m). Another newly emerged CF product are the mini bonds, accounting for EUR 10m of funding in 2016. Figure 75 illustrates the evolution of funding volumes on some of the platforms most relevant to SME financing.

Average deal sizes differ greatly across platform types. Unsurprisingly, they were highest for real estate CF (EUR 453,536), followed by equity CF (EUR 302,621), and lowest for reward-based CF (EUR 15 069) and invoice trading (EUR 27,029).

Figure 74: Business financing on equity and debt- based crowdfunding platforms: transaction volumes raised on equity vs debt-based models (mEUR)



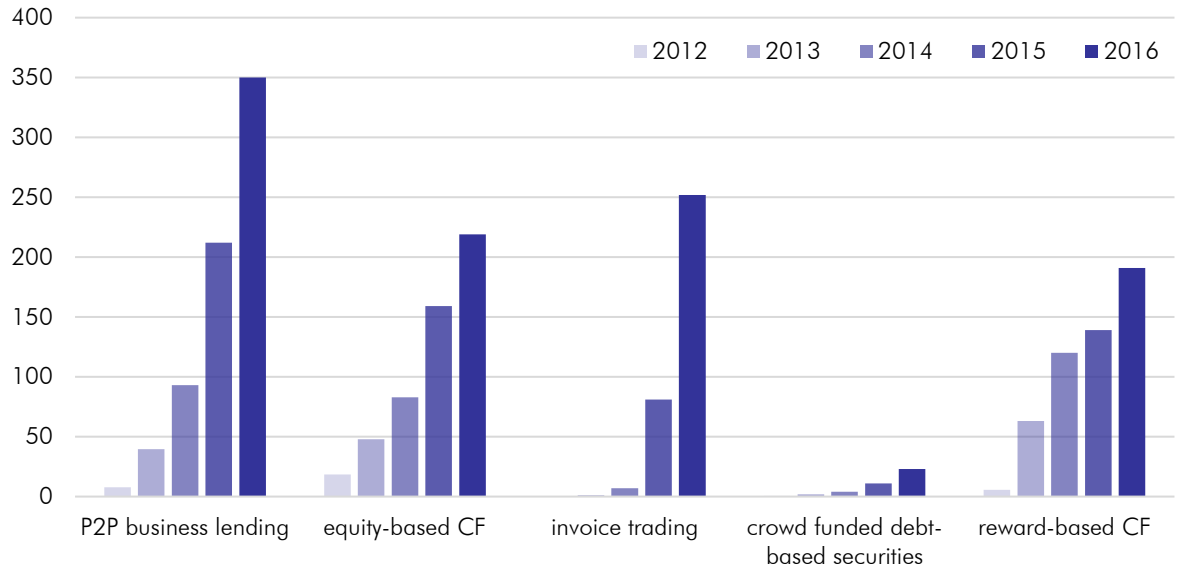
Source: Cambridge Centre for Alternative Finance (2018)

Institutionalisation

One potential explanation for the growing average deal sizes depicted (Figure 73) could be the rise in institutional involvement in the CF sector which increased across platform types, stronger for some platform types than for others. The institutionalisation of the crowd funding sector is seen by some as a drift away from the essence of the CF concept. However, institutional involvement can also bring benefits to the borrowing entity as well as the crowd. 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., 2017). 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. Per 2016, rates of institutionalisation were highest for invoice trading, where almost 70% of funding volume came from institutional investors, doubling the share recorded in 2015 (see Figure 76). The crowd still accounted for the majority of funding on all platform types.

[100] Real estate CF aims to fund real estate purchases. P2P property lending is the collateralised version of "traditional" P2P business lending.

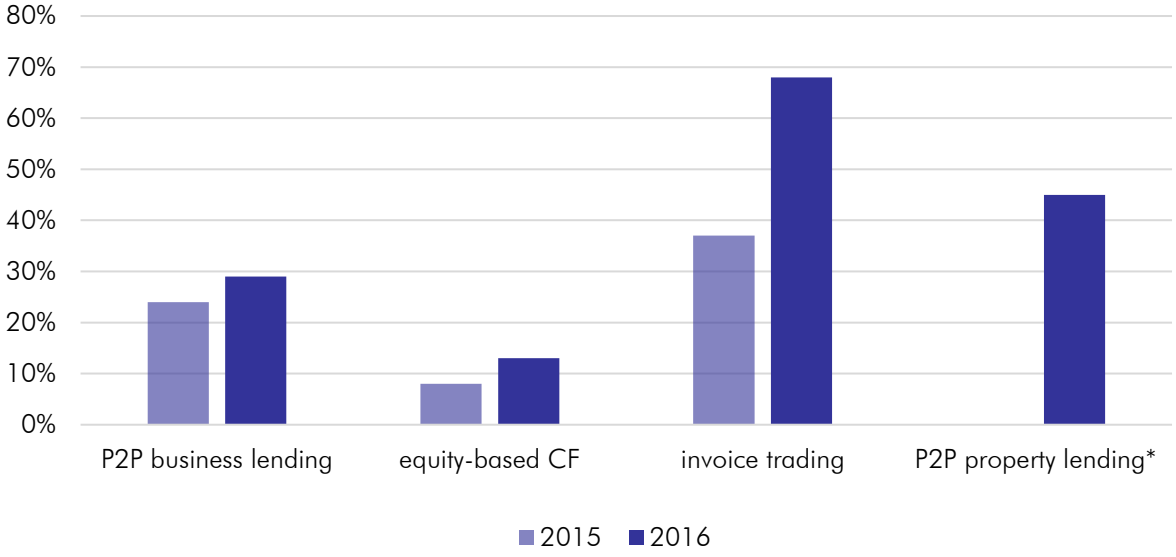
Figure 75: The evolution of funding volumes on some platform types most relevant to SMEs



Source: Cambridge Centre for Alternative Finance (2018)

The evidence on whether or not institutional investment's performance exceeds that of the crowd is mixed. Institutional portfolios do not always outperform those of retail investors (Lin et al., 2017), which casts doubt on the crowding-out hypothesis. However, Mohammadi and Shafi (2017) come to the opposite conclusion by exploiting the randomised assignment of loans to either institutions or the crowd. Institutions significantly outperformed the crowd and 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.

Figure 76: The percentage of institutional investors 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 (2018)

Onboarding 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 'onboarding'). Once published, evidently, the project needs to attract sufficient funding for the campaign to be considered successful. The onboarding rates are lowest for P2P business lending, where just 12% of all fundraisers is accepted on the platform. The subsequent successful funding rate is accordingly relatively high, with 85% of issuers successfully reaching the desired funding levels. In contrast, invoice trading has a much higher on-boarding rate (28%), but a lower successful funding rate (65%). Furthermore, invoice trading has the highest rate of repeated funding, with 60% of successful borrowers using the platform for at least the second time.

Internationalisation

The internationalisation of the European CF sector stands in stark contrast with the global nature of the internet. While internationalisation rates did increase significantly compared to 2015, CF remains predominantly a national matter in 2016: about 1 in 4 platforms relied exclusively on national funders and more than half of platforms only funded projects that were located in the same country. Of the 77% of platform who do source some inflows from abroad, about half limits this amount to just 10% of total inflows.

The economic viability of commercial CF platforms often requires a critical mass which cannot be attained in smaller economies. Hence, the lack of cross-border CF flows will disproportionally affect SMEs in smaller Member States. The lack of cross-border activity of CF platforms could therefore hamper the formation of a European CMU and will hinder future growth prospects of the European CF sector in general. These problems are predominantly rooted in legislative issues, as differences in national legislation can drive platforms' decision to focus solely on the domestic market (Zetzsche and Preiner, 2017). A unified European regulation could therefore promote further growth in the sector.

CF, a measure of last resort?

Assessing the riskiness of CF investments is a difficult task, since CF platforms are generally reluctant to release transparent information on default rates. Critics of the sector sometimes argue that CF attracts firms in dire financial health, which have no internal funds available and have been rejected by the traditional financial sector.

In the context of equity CF, Walthoff-Borm et al. (2018) present evidence of such a waterfall-type mechanism, in which firms initially look for external financing in the traditional financial sector, only to fall back on equity CF if all other channels have been exhausted. Firms that resort to equity CF appear on average less profitable and more indebted than other firms. The authors interpret this as evidence in favour of the pecking order theory, in which firms – because of the costs related to information asymmetry – fall back on equity funding only when all other options, such as internal funds and debt funding, have been exhausted. Interestingly, they also provide evidence that firms who use equity CF on average have more intangible assets on their balance sheets. This nuances their findings as it points to a complementary role of equity CF platforms in financing highly innovative firms.

7.4 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 it doesn't need to be the case. A study by the World Economic Forum (WEF, 2017) concluded that while "*Fintechs have materially changed the basis of competition in financial services, [they] have not yet materially changed the competitive landscape. They play a critical role in defining the pace and direction of innovation across the sector but have struggled to overcome the scale advantages of large financial institutions.*"

There are several reasons the total disruption of the financial system as we know it has not (yet) materialised. First, it has proven hard for Fintech start-ups to break the hegemony of incumbents, partly because consumers lack the willingness to switch away from their trusted financial institutions. Second, Fintechs have not yet succeeded in scaling up to a sufficient degree in order to compete with the traditional ecosystems and infrastructure. The second reason is of course largely connected to the first, which is evidenced by the fact that Fintech entrants do succeed to scale up in regions where incumbent service providers did not yet exist (WEF, 2017).

Thirdly, many Fintechs, after developing a successful and possibly disrupting innovation, are at a later stage acquired by incumbent financial players, thereby preserving existing power and market structures. A recent survey brought to light that around 1 in 5 European banks would consider Fintechs as possible technology acquisitions (BI Intelligence, 2016). As mentioned earlier, while such dynamics may lead to cost reductions and efficiency gains, it can also lead to an increasing consolidation within the financial service sector. Fintechs also form collaborative relationship with their larger counterparts, as the benefits of such a relationship are mutual. On the one hand, it allows for a technology transfer that innovates or streamlines the incumbents' production processes. On the other hand, through the existing distribution network of the incumbent, it enables smaller Fintechs to access markets which would otherwise be impenetrable.

Fintechs often serve markets that are not served by the traditional financial players. 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 traditional 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 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 the initial offering on CF platforms is strongly 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. Also at the aggregate level Fintechs complement the traditional financial system. A recent study found that following the financial crisis, Fintech investment flourished primarily in markets without a major financial centre (Cumming and Schwienbacher, 2018).

Technological innovations are becoming an integral part of the SME financing landscape. Fintech market actors play an important role in enhancing access to finance for SMEs, as their innovations help to reduce the pronounced asymmetric information problem in small business lending, for example, through technological advances in information processing. This 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. Recent years also saw the emergence of Fintech giants, established technological market players such as Amazon and Paypal (SME lending program), who are aggressively positioning themselves in the financial service industry. With Amazon Pay and Amazon Cash, Amazon has been building an impressive payment infrastructure, whereas Paypal recently launched an SME lending initiative. Unlike smaller Fintechs, these giants can compete with incumbents at a much larger scale, posing a new disruptive threat in an ever-changing financial market environment.

8 Concluding remarks

The financing outlook of European SMEs has been roughly stable since the publication of the last ESBFO in June 2018. The economic outlook for Europe, however, is becoming increasingly cloudy, as the European Commission warns the EU's growth prospects are under threat by recent evolutions on the international political scene. The outcome of the Brexit negotiations, as it stands at the time of writing, is highly uncertain. The pending parliamentary vote will need to decide on the validation of the Brexit deal and a disastrous no-deal scenario is still a potential outcome. Hence, the impact of Brexit, with downside risks for both the UK and the EU27, remains highly uncertain. These worries about the general economic outlook are likely to weigh on firms' investment decisions.

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, 2019). Reasons can be both demand- and supply-side driven. In several countries, there is still 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. According to the OECD (2019), 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. Digitalisation plays an increasing 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, 2019).

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.

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.

Finally, *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 the EU Member States.

An area that we now - due to its rising importance - cover regularly is *Fintech*. Fintechs are attracting considerable attention – and while it is probably too early at this stage to draw conclusions on the overall contribution to the economy of these structures, it is a fact that Fintechs are becoming an integral part of the SME financing landscape. They are drivers for 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. introduction of dedicated own platforms), they can go for cooperation/partnerships (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 not only 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', but also to mitigate 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 spirit of the European Commission's plan to establish a Capital Markets Union and 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 European Union by creating a pass-porting and licensing framework would go a long way towards creating a pan-European Fintech market.[101]

As shown above, despite significantly increased public support for SMEs, including by the EIB Group, many SMEs continue to perceive issues in accessing external finance. In this context, the relevance of the *Investment Plan for Europe* (IPE)[102] cannot be overstated. The IPE is based on three pillars, mobilising finance for investment, making finance reach the real economy, and improved investment environment, see Figure 77.

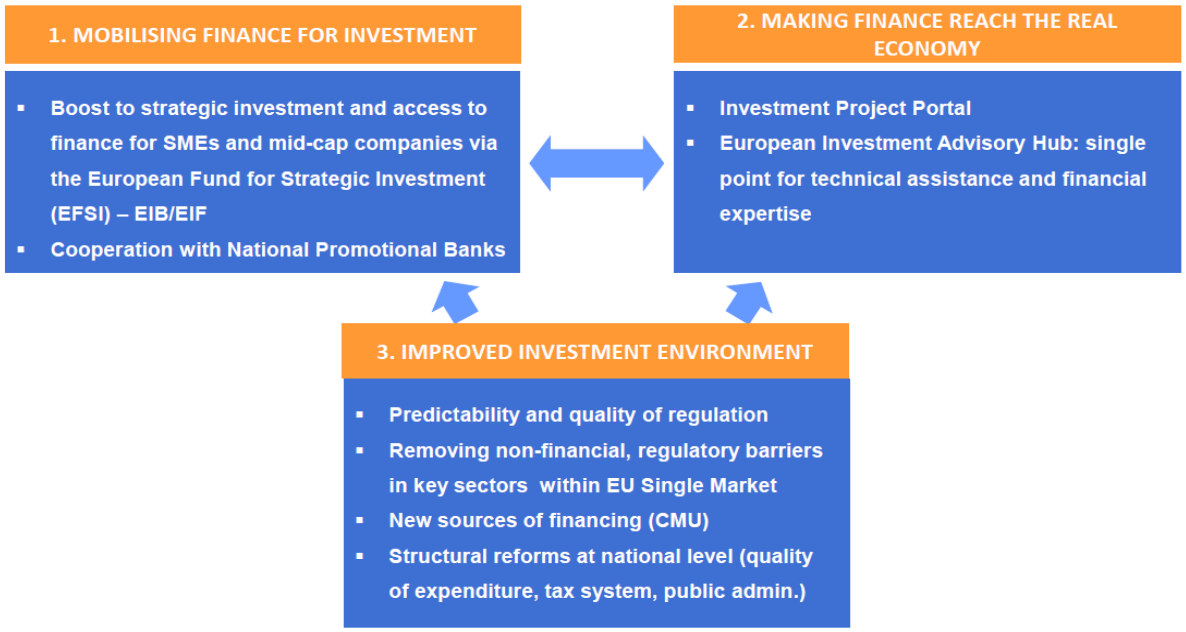
As part of the IPE's pillar one, the European Fund for Strategic Investments (EFSI) aimed initially at unlocking additional investments of at least EUR 315bn over a three year period by addressing market gaps and mobilising private resources. EFSI is a strategic partnership between the EC and

[101] A detailed overview regarding the CMU and how it can support SME financing is provided in Kraemer-Eis and Lang (2017).
[102] See http://www.eib.org/efsi/index.htm and http://www.eif.org/what_we_do/efsi/index.htm.

the EIB Group. The EIB Group contributes EUR 5bn to the initiative alongside a EUR 16bn guarantee from the EU budget. EFSI has two components (see as well Figure 78):

- the Infrastructure and Innovation Window (IIW, EUR 15.5bn), deployed through the EIB, and
- the SME Window (SMEW, EUR 5.5bn), implemented through EIF. The financial instruments used for the purposes of the EFSI SME Window are mainly guarantees and equity investments.

Figure 77: Pillars of the IPE

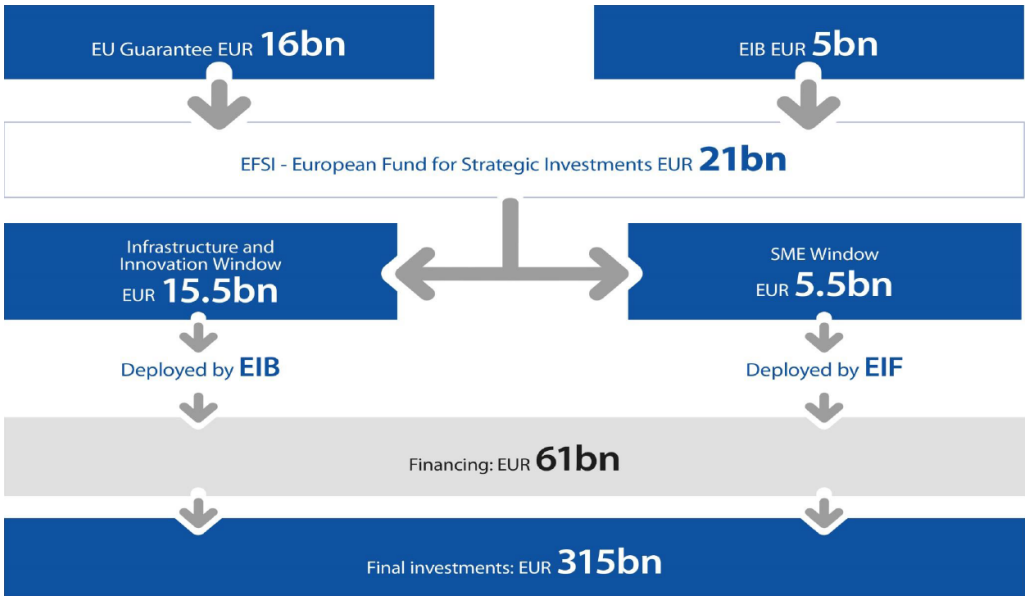


Source: European Commission

The resources under EFSI enabled EIF to deploy its existing support for SMEs at a higher and faster rate than initially planned to satisfy strong demand of support to SME access to finance. At the beginning, initial EFSI resources under the SME Window were being used to accelerate and enhance the deployment of existing EU flagship programmes which EIF manages – i.e. COSME, InnovFin and EaSI – and to significantly increase the Risk Capital Resources (RCR) mandate for equity investments, which EIB has entrusted to EIF. Thanks to EFSI, the RCR equity mandate has been increased by EUR 2.5bn.

In addition, during 2016, the roll-out of new products started, including a new Pan-European Venture Capital Fund(s)-of-Funds programme, a guarantee for social impact and microfinance, a guarantee for cultural and creative SMEs, as well as products in relation to the new equity and securitisation platforms. Amongst those, through the EIF-NPI Equity Investment Platform, a non-binding governance framework, EIF offers the possibility for National Promotional Institutions (NPIs) to match the total budget of investments under the EFSI SME Window. In addition, through the EIF-NPI Securitisation Initiative (ENSI) - a cooperation and risk sharing platform with several NPIs - EIF aims at providing more funding to SMEs by revitalising the SMESec market while catalysing resources from the private sector. These initiatives are an opportunity for EIF and NPIs to establish a closer, more coordinated operational interaction, reflecting the spirit of EFSI aiming to achieve a much wider outreach in support of SMEs.

Figure 78: EFSI structure



Source: EIB Group

It was intended to achieve the investment objectives of the SMEW by July 2018. However, based on the transactions approved in October 2017, the overall targets have already been reached and exceeded, much earlier than initially scheduled. Based on the success of the EFSI implementation, the preparation of a second phase of EFSI started during 2017 - referred to as EFSI 2.0. It includes an extension in terms of both duration and financial capacity.

On 13th December 2017, Members of the European Parliament voted to adopt the Regulation to extend and enhance the EFSI. The EFSI 2.0 Regulation entered into force on 29 December 2017 and the EFSI Agreement with EIB was signed on 09 March 2018 (including the back to back agreement with EIF for the SME Window). The timeline for approving transactions is extended from mid-2018 to the end of 2020, and the investment target is increased from EUR 315bn to EUR 500bn (EFSI 1 + 2, incl. SMEW). The EFSI SME Window will be increased to EUR 10.5bn, including EUR 6.5bn (initially EUR 3bn) guaranteed by the EU under EFSI and EUR 4bn to be contributed by EIB (initially EUR 2.5bn).

Following discussions with the EIB and the EC about the products to be deployed under the SMEW increase, the following has been approved (and signed in the case of RCR):

- EUR 1.5bn from EIB to further increase the existing equity mandate RCR (without EFSI EU Guarantee); signed
- EUR 0.7bn to further increase InnovFin SMEG, COSME LGF, EaSI Guarantee and CCS Guarantee; expected to be signed before year-end
- EUR 1bn to increase the SMEW Equity product;
- EUR 0.6bn to be deployed through various SME products, such as a diversified loan fund product and EFSI/ESIF/EAFRD/ESF/regional combinations.

Further discussions are now taking place with the EIB and the EC about dedicated pilots (e.g. SME scale-ups under "Escalar" branding, digitalisation, education and skills, supply chain, etc. including possibly via blending grants and financial instruments).

The investment volume expected to be triggered under the EFSI SME Window by end 2018 amounts to EUR 127bn (with more than 850k SMEs benefitting). This entails an estimated 21-fold leverage (way above the fifteen-fold leverage), meaning that every 1 EUR spent by EIF would generate EUR 21 of investment in the real economy, at the level of the enterprises.

On 02 May 2018, the EC published an important Communication regarding its plans for the next Multi-Annual Financial Framework (MFF). The Commission aims to simplify the EU budget in order to deliver efficiently to the EU priorities with a performance based outlook focusing on results. The focus shall be on exploiting complementarities and synergies among EU funding programmes (e.g. the use of a Single Rule book). The EC's proposal also suggests to allocate more money to support SMEs and to create a single entry point for EU investment support in the form of loans, guarantees and equity after 2020 (alias InvestEU). InvestEU would be the successor of EFSI and would pool all centrally managed financial instruments in a single, flexible, multi-policy guarantee instrument at EU level. InvestEU shall comprise of four Windows viz. sustainable infrastructure, research and innovation, social investment and skills, and SMEs. Digital investment shall be a key cross-cutting priority for all 4 windows. The Commission proposes to allocate EUR 15.2bn of budget, enabling the provision of a EUR 38bn guarantee for financial instruments (with the EIB Group as the main implementing partner together with others, including NPIs, which would contribute EUR 9.5bn in addition). InvestEU is expected to mobilise more than EUR 650bn of additional investment across Europe. InvestEU will also allow for simple combination with grants from EU budget and ESIF. The legislative proposal has been published on the 6th of June with the view to be debated further with the various implementing parties, the Member States via the European Council and the European Parliament for a targeted adoption in 2019.

Annex

List of acronyms

- ABCP: Asset Backed Commercial Paper
- ABSPP: Asset Backed Securities Purchase Programme
- AECM: European Association of Mutual Guarantee Societies
- AFME: Association for Financial Markets in Europe
- AIFMD: Alternative Investment Fund Managers Directive
- AIR: Average interest rate
- AMUF: Asset Management Umbrella Fund
- BA: Business Angel
- BAE: Business Angels Europe
- BAN: Business Angels Network
- BCBS-IOSCO: Basel Committee on Banking Supervision-Board of the International Organisation of Securities Commissions
- BiH: Bosnia and Herzegovina
- BIS: Bank for International Settlements
- BLS: Bank Lending Survey
- bn: billion
- bp: basis point(s)
- CDFIs: Community Development Financial Institutions
- CDO: Collateralised Debt Obligation
- CDP: Cassa Depositi e Prestiti, Italy
- CEE (countries): (countries in) Central and Eastern Europe
- CESEE (countries): (countries in) Central, Eastern and South-Eastern Europe
- CF: Crowdfunding
- CGAP: Consultative Group to Assist the Poor
- CGS: Credit Guarantee Scheme
- CLN: Credit Linked Note
- CLO: Collateralised Loan Obligation
- CMU: Capital Markets Union
- COM: European Commission (also: EC)
- COSME: Programme for the Competitiveness of enterprises and SMEs (COSME) 2014-2020
- CRD: Capital Requirements Directive
- CRR: Capital Requirements Regulation
- CVC: Corporate Venture Capital
- EAF: European Angels Fund
- EaSI: The European Commission's Programme for Employment and Social Innovation
- EBA: European Banking Authority
- EBAN: European Business Angels Network
- EBF: European Banking Federation
- EC: European Commission (also: COM)
- ECB: European Central Bank
- EFSI: European Fund for Strategic Investments
- EIB: European Investment Bank

- EIF: European Investment Fund
- EIOPA: European Insurance and Occupational Pensions Authority
- ELTIF: European Long-Term Investment Fund
- EMEA: Europe, Middle East, and Africa
- EMN: European Microfinance Network
- ENSI: EIF-NPIs Securitisation Initiative
- EREM: EIB Group Risk Enhancement Mandate
- ESBFO: European Small Business Finance Outlook
- ESIF: European Structural and Investment Fund
- ESMA: European Securities and Markets Authority
- EU28: the 28 EU Member States
- EUR: Euro
- EuVECA: European Venture Capital Fund Regulation
- EVCA: European Private Equity & Venture Capital Association
- FIRST (Initiative): Financial Sector Reform and Strengthening (Initiative)
- FLP: First Loss Piece
- FLPG: First Loss Portfolio Guarantee
- FoF: Fund of Fund(s)
- FYROM: Former Yugoslav Republic of Macedonia
- GDP: Gross Domestic Product
- GEM: Global Entrepreneurship monitor
- GNI is Gross National Income
- GP: General Partner
- GVC: governmental VC investor
- HICP: Harmonised index of consumer prices
- HQS: High Quality Securitisation
- HY: Half Year
- ICT: Information and communications technologies
- IIF: Institute for International Finance
- IIW: Infrastructure and Innovation Window
- IMF: International Monetary Fund
- InnovFin: EU Finance for Innovators
- IORP: Institutions for Occupational Retirement Provision
- IPE: Investment Plan for Europe
- IPO: Initial Public Offering
- IRB: Internal Ratings Based
- IRR: Internal Rate of Return
- IT: Information Technology
- IVC: independent VC investor
- k: thousand
- KfW: Kreditanstalt für Wiederaufbau, Germany
- Kirb: IRB capital requirements for the underlying pool of securitised assets
- LBO: Leveraged buy out
- lhs: left-hand side
- LP: Limited Partner

- M&A: mergers and acquisitions
- m: million
- MAP: Multi Annual Programme for Enterprise and Entrepreneurship
- MFC (Microfinnace Center)
- MFI (in the context of ECB): Monetary Financial Institutions
- MFI (in the context of microfinance): Microfinance Institution
- MiFID: Markets in Financial Instruments Directive
- MiFIR: Markets in Financial Instruments Regulation
- NBFIs: Non-bank Financial Institutions
- NBV: Net book value
- NFC: Non-financial corporation
- NGO: Non-Governmental Organisation
- NPBIs: National Promotional Banks and Institutions
- NPI: National Promotional Institution
- NPL: Non-performing loan
- OECD: Organisation for Economic Co-Operation and Development
- PCS: Prime Collateralised Securities
- PE: Private Equity
- PFB: Public Funding Body
- pif: paid in full
- PPE: property, plant or equipment
- Q: Quarter
- QE: Quantitative Easing
- RCR: Risk Capital Resources
- rhs: right-hand side
- RMA: Research and Market Analysis
- RMBS: Residential mortgage backed securities
- RSI: Risk-Sharing Instrument for Innovative and Research oriented SMEs and small mid-caps
- SAFE: Survey on the Access to Finance of Enterprises
- SEC-SA: Securitisation Standardised Approach
- SEC-ERBA: Securitisation External Ratings Based Approach
- SEC-IRBA: Securitisation Internal Ratings Based Approach
- sf: Structured Finance
- SFA: Supervisory Formula Approach
- SIA: Social Impact Accelerator
- SME: Small and medium-sized enterprise
- SMESec: SME Securitisation (comprising transactions based on SME loans, leases etc.)
- SMEW: SME Window
- SPV: Special Purpose Vehicle
- SSM: Single Supervisory Mechanism
- SST: simple, standard and transparent
- STC: simple, transparent and comparable
- STS: simple, transparent and standardised
- TMT: Technology, Media, Telecom
- TT: Technology transfer

- UEAPME: European Association of Craft, small and medium-sized Enterprises
- UK: United Kingdom
- US: United States
- USD: US dollar
- VC: Venture Capital
- WBS: Whole Business Securitisation
- WEF: World Economic Forum

References

- ACC (2018). Financing the Economy 2018: The role of private credit managers in supporting economic growth. 6 November 2018.
- 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. December 2016.
- AECM (2018). Figures of the European Guarantee Sector: Providing a half-yearly trend indication on the evolution of the guarantee activity in Europe. AECM Scoreboard H1 2018, AECM Publishing, Brussels.
- Affinito, M. and 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. March 2017.
- AFME and BCG (2015). Bridging the growth gap - investor views on European and US capital markets and how they drive investment and economic growth. Report, Association for Financial Markets in Europe.
- Akerlof, G. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics*, 84 (3), pp. 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. http://www.bis.org/publ/work601.htm
- 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, pp. 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, pp. 26–35.
- Arrow, K. (1985). Informational structure of the firm. *The American Economic Review*, 75 (2), pp. 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. http://ec.europa.eu/economy_finance/publications/eedp/pdf/dp002_en.pdf
- Atomico (2018). The state of European tech 2018. In partnership with Slush & Orrick. 4 December 2018.
- 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. and Udell, G. F. (2006). A more complete conceptual framework for SME finance. *Journal of Banking & Finance*, 30(11), pp. 2945-2966.
- Bertoni, F. and Tykvová, T. (2012). Which form of venture capital is most supportive of innovation? ZEW Discussion Papers. No. 12-018.
- 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.
- BoA/ML (2016). European SF 2016-2017: on the threshold of an 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.
- 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.
- 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., Schmieg, 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 (2018) Expanding Horizons. The 3th 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*. Vol. 17, No. 4, 2015.
- Carroll, J. and McCann, F. (2016). Understanding SME interest rate variation across Europe. Quarterly Bulletin Articles, pp. 60-76.
- CBInsights (2018). The 2017 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. http://www.eif.org/news_centre/publications/eif_wp_42.pdf
- 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.
- Coller Capital (2015). Global Private Equity Barometer. Summer 2015. June 2015.
- Coller Capital (2016a). Global Private Equity Barometer. Summer 2016. June 2016.
- Coller Capital (2016b). Global Private Equity Barometer. Winter 2016-17. December 2016.
- Coller Capital (2017). Global Private Equity Barometer. Winter 2017-18. December 2017.
- Colombo, M.G., Cumming, D.J., and Vismara, S. (2014). Governmental Venture Capital for Innovative Young Firms. July 25, 2014.
- Colombo, M., Bertoni, F. 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 2018/5X. . http://www.eif.org/news_centre/research/index.htm
- 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.
- CSES (2012). Evaluation of EU Member States' Business Angel Markets and Policies. Final Report. October 2012.

- Cumming, D. J. and 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. In: Journal of Corporate Finance, 42, pp. 439-459, 2017.
- D'Ambrosio, M. and Gianfrate, G. (2016). Crowdfunding and Venture Capital: Substitutes or Complements?. *The Journal of Private Equity*, 20(1), pp. 7-20.
- 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 (2018). Direct Lenders: seizing opportunity in an uncertain world. Deloitte Alternative Lender Deal Tracker Autumn 2018.
- Dubovik, A., and Steegmans, J. (2017). The Performance of Publicly Managed Venture Capital Funds. CPB Discussion Paper No. 355.
- Duruflé, 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 (2014). EBA Discussion Paper on simple standard and transparent securitisation. European Banking Authority. 14.10.2014.
- 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.
- EBAN (2014). Statistics Compendium.
- EBAN (2017). EBAN Statistics Compendium 2016: European Early Stage Market Statistics. November 2017.
- EBAN (2018). EBAN Statistics Compendium 2017. European Early Stage Market Statistics. July 2018.
- ECB (2013) Cost-of-borrowing indicators. Methodological note.
- EBF (2015). Financial dialogue. Fostering financial knowledge among European SMEs.
- ECB (2016). Report on financial structures. October 2016.
- ECB (2018a). The Euro Area bank lending survey. Thirds quarter 2018. October 2018.
- ECB (2018b). Survey on the access to finance of enterprises in the Euro Area. April 2018 to September 2018.
- Echiksone, 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 (2018). Annual Report 2017. Supporting smart, sustainable and inclusive growth for SMEs. 16.04.2018.
- 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 (2014). Bendig, M., Unterberg, M., and Sarpong, B. (2014). Overview of the Microcredit Sector in the European Union 2012-2013. European Microfinance Network. September 2014.
- EMN (2017). Assessing the European market potential of business microcredit and the associated funding needs of non-bank MFIs. February 2017.
- 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 (2018). Argos Mid-Market Index. November 2018. http://www.epsilon-research.com/Market/Argos
- Euler Hermes (2018). Macroeconomic, Country Risk and Global Sector Outlook. Economic Outlook. April, 2018.
- European Commission (2011). Social Business Initiative, COM/2011/0682.
- European Commission (2012). Report from the Commission to the European Parliament and the Council on the application of Directive 2006/48/EC to microcredit. COM (2012) 769 final. 18.12.2012.
- 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) 733 final. 22.11.2016.
- European Commission (2017a). Mid-term review of the capital markets union action plan. 08.03.2017. https://ec.europa.eu/info/business-economy-euro/growth-and-investment/capital-markets-union/capital-markets-union-action-plan_en
- 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 (2018a). Annual Report on European SMEs 2017/2018 – SMEs growing beyond borders. November 2018.
- European Commission (2018b). Autumn 2018 Economic Forecast: sustained but less dynamic growth amid high uncertainty. November 2018. Economic and Financial Affairs. Institutional Paper 089.
- FitchRatings (2017). Global Structured Finance Losses: 2000 – 2016 Issuance. Special Report. 13.09.2017.
- FitchRatings (2018). SME CLO Compare. October 2018.
- GEM (2018). 2016/2017 Global Report. Global entrepreneurship monitor.
- Gvetadze S., Kraemer-Eis, H., Lang, F., Prencipe, D., Signore, S., and Torfs, W. (2018). EIF SME Access to Finance Index. EIF Working Paper 2018/47. EIF Research & Market Analysis. January 2018. http://www.eif.org/news_centre/research/index.htm
- 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), pp. 663–691.
- Honohan, P. (2010). Partial credit guarantees: Principles and practice. *Journal of Financial Stability*, 6, pp. 1–9.
- Hornuf, L. and Schwienbacher, A. (2016). Crowdinvesting: 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 (2012). Global Financial Stability Report. 2012.
- IMF (2018). World Economic Outlook, October 2018: Challenges to Steady Growth
- Integer Advisors (2018a). Securitisation Regulation – More by way of prescriptions. 20.02.2018.

- Integer Advisors (2018b). Investing in P2P/Marketplace Opportunities – dissecting a Novel Capital Market. 22.05.2018.
- Invest Europe (2017). 2016 European Private Equity Activity. Statistics on Fundraising, Investments & Divestments. 15.5.2017.
- Invest Europe (2018a). 2017 European Private Equity Activity. Statistics on Fundraising, Investments & Divestments. Presentation as of 02.05.2018.
- Invest Europe (2018b). About Research, Glossary. Retrieved from: https://www.investeurope.eu/research/about-research/glossary/
- Invest Europe (2018c). Global Investment Decision Makers Survey. November 2018.
- Jaffee, D. and Russell, T. (1976). Imperfect information, uncertainty, and credit rationing. *The Quarterly Journal of Economics*, 90 (4), pp. 651–666.
- 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 securitisaiton: 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.
- 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. 22.08.2012. 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 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 Passaris, G. (2015). SME Securitization in Europe. In: *The Journal of Structured Finance*, Vol. 20, No. 4, Winter 2015.

- 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., Gvetadze, S., and Lang, F. (2018a). EIF VC Survey 2018: Fund managers' market sentiment and views on public intervention. EIF Working Paper 2018/48. EIF Research & Market Analysis. 26 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. EIF Research & Market Analysis. 27 September 2018. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Botsari, A., Gvetadze, S., Lang, F., and Torfs, W. (2018c). European Small Business Finance Outlook: June 2018. EIF Working Paper 2018/50. EIF Research & Market Analysis. 2 June 2018. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Botsari, A., Gvetadze, S., Lang, F., and Torfs, W. (2017). European Small Business Finance Outlook: December 2017. EIF Working Paper 2017/46. EIF Research & Market Analysis. 18 December 2017. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Gvetadze, S., and Lang, F. (2015a). European Small Business Finance Outlook. EIF Working Paper 2015/28. EIF Research & Market Analysis. June 2015. http://www.eif.org/news_centre/publications/eif_wp_28.pdf
- Kraemer-Eis, H., Lang, F., Torfs, W., and Gvetadze, S. (2015b). 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., Lang, F., Torfs, W., and Gvetadze, S. (2016a). European Small Business Finance Outlook. 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. EIF Working Paper 2016/37. EIF Research & Market Analysis. December 2016. http://www.eif.org/news_centre/publications/eif_wp_37_esbfo_dec16_final.pdf
- 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., Passaris, G., and Tappi, A. (2013). SME loan securitisation 2.0 – Market assessment and policy options. EIF Working Paper 2013/019. EIF Research & Market Analysis. 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. EIF Research & Market Analysis. 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. EIF Research & Market Analysis. 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. EIF Research & Market Analysis. June 2016. http://www.eif.org/news_centre/research/index.htm
- 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. and Wei, Z. (2017). Institutional Investors in Online Crowdfunding.
- 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. Marc-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.
- Mohammadi, A. and 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 (2018a). SME & Mid-Cap Focus. May 2018.
- Moody's (2018b). SME loan and lease ABS - Europe: Performance Update. July 2018. 20.09.2018.
- Moody's (2018c). ABS SME – EMEA. 2019 Outlook. 04.12.2018.
- Moore, W. and 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.
- 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, OECD Publishing, Paris.
- 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 (2017). Financing SMEs and Entrepreneurs 2017. An OECD Scoreboard. April 2017.
- OECD (2018a). Alternative Financing Instruments for SMEs and Entrepreneurs: The Case of Capital Market Finance. OECD Publishing. Paris. Forthcoming.
- OECD (2018b). Financing SMEs and entrepreneurs 2018. An OECD Scoreboard, OECD Publishing, Paris.
- OECD (2018c). Entrepreneurship at a Glance 2018.
- OECD (2019). Financing SMEs and Entrepreneurs 2019. An OECD Scoreboard. Forthcoming.
- OECD/The European Commission (2014). The Missing Entrepreneurs: Policies for inclusive entrepreneurship in Europe. 2014.
- PCS (2018a). Response to the consultation on the LCR Rules. 21.02.2018.

- PCS (2018b). PCS starts to provide analysis for market participants in first step to the market's transition to the new STS Regime. Press Release. 22.02.2018.
- 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. 10.4.2017. http://www.eif.org/news_centre/research/index.htm
- Preqin (2018a). Preqin Global Private Equity & Venture Capital Report. Sample Pages.
- Preqin (2018b). Preqin Investor Update: Alternative Assets, H2 2018. August 2018.
- Preqin (2018c). Private Debt Spotlight. September 2018.
- Preqin (2018d). The Global Secondaries Market. November 2018.
- 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.
- Ryan, R., O'Toole, C. and McCann, F. (2014). Does bank market power affect SME financing constraints? *Journal of Banking & Finance*, 49, pp. 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.
- Scope (2018). The tentative case for European Secured Notes: outcome uncertain. Scope Ratings commentary. 30.07.2018.
- 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. 13.12.2017. http://www.eif.org/news_centre/research/index.htm
- Signori, A., and Vismara, S. (2018). Does success bring success? The post-offering lives of equity-crowdfunded firms. *Journal of Corporate Finance*, 50, pp. 575-591.
- Stiglitz, J. and Weiss, A. (1981). Credit rationing in markets with imperfect information. *The American Economic Review*, 71 (3), pp. 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. (2018). EIF SME Access to Finance Index – June 2018 update. EIF Working Paper 2018/49. EIF Research & Market Analysis. January 2018. http://www.eif.org/news_centre/research/index.htm
- Torfs, W. and Lupoli, M. (2017). Guaranteeing Social Enterprises– The EaSI way. Working Paper 2017/39. February 2017. http://www.eif.org/news_centre/research/index.htm
- UEAPME Study Unit (2018). The EU Craft and SME Barometer 2018/H2. October 2018.
- Uhde, A. and Heimeshoff, U. (2009). Consolidation in banking and financial stability in Europe: Empirical evidence. *Journal of Banking & Finance*, 33 (7), 1299–1311.
- Unquote Intelligence (2014). The Role of Public Funding Bodies in European Venture Capital. Q2 2014.
- VentureBeat (2016). Why Europe lags behind the US in VC investment. Retrieved from: https://venturebeat.com/2016/03/13/why-europe-lags-behind-the-us-in-vc-investment/
- VIWGCGS (2014). Credit Guarantee Schemes for SME lending in Central, Eastern and South-Eastern Europe. A report by the Vienna Initiative Working Group on Credit Guarantee Schemes. November 2014. http://www.eib.org/infocentre/publications/all/viwg-credit-guarantee-schemes-report.htm
- Wagenvoort, R. J., Ebner, A., and 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., and Vanacker, T. (2018). Equity crowdfunding: First resort or last resort? *Journal of Business Venturing*. 44(4), pp. 513-533.
- WEF (2017). Beyond Fintech: a pragmatic assessment of disruptive potential in financial services. *World Economic Forum*.
- 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 Group and FIRST Initiative (2017). Task force for the development of a toolkit for impact evaluation of public Credit Guarantee Schemes for SMEs. Consultative Document prepared by the Secretariat of the Task Force. August 2017.
- Zetzsche, D. and Preiner, C. (2017) Cross-border crowdfunding – Towards a single crowdfunding market for Europe. European Business Organization Law Review, forthcoming.

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