

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

Working Paper

European Small Business Finance Outlook: June 2018

EIF Working Paper, No. 2018/50

Provided in Cooperation with:

European Investment Fund (EIF), Luxembourg

Suggested Citation: Kraemer-Eis, Helmut; Botsari, Antonia; Gvetadze, Salome; Lang, Frank; Torfs, Wouter (2018) : European Small Business Finance Outlook: June 2018, EIF Working Paper, No. 2018/50, European Investment Fund (EIF), Luxembourg, http://www.eif.org/news_centre/publications/EIF_Working_Paper_2018_50.htm

This Version is available at:

<https://hdl.handle.net/10419/180655>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

European Small Business Finance Outlook

June 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, June 2018



Scan above to
obtain a PDF
version of this
working paper

Disclaimer:

This Working Paper should not be referred to as representing the views of the European Investment Fund (EIF) or of the European Investment Bank Group (EIB Group). Any views expressed herein, including interpretation(s) of regulations, reflect the current views of the author(s), which do not necessarily correspond to the views of EIF or of the EIB Group. Views expressed herein may differ from views set out in other documents, including similar research papers, published by EIF or by the EIB Group. Contents of this Working Paper, including views expressed, are current at the date of publication set out above, and may change without notice. No representation or warranty, express or implied, is or will be made and no liability or responsibility is or will be accepted by EIF or by the EIB Group in respect of the accuracy or completeness of the information contained herein and any such liability is expressly disclaimed. Nothing in this Working Paper constitutes investment, legal, or tax advice, nor shall be relied upon as such advice. Specific professional advice should always be sought separately before taking any action based on this Working Paper. Reproduction, publication and reprint are subject to prior written authorisation.

Executive summary¹

This European Small Business Finance Outlook (ESBFO) provides an overview of the main markets relevant to EIF (equity², guarantees, securitisation, microfinance). It is an update of the December 2017 ESBFO edition.

We start by discussing the general market environment, then look at the main aspects of equity finance and guarantees/SME Securitisation (SMESec)³. 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 global economic outlook has steadily continued its path towards recovery.
- Lingering political uncertainties on the international political scenery have the potential to disrupt and reverse the progress towards full economic recovery made so far.
- European SMEs are benefitting from the EU's economic recovery and are becoming exceedingly optimistic about their economic situation.
- Borrowing costs for NFCs remain historically low: early 2018, the ECB's composite borrowing cost indicator reached a new record low of 1.67 percent.
- These low rates are finally starting to impact the stock of outstanding loans to NFCs in the Euro Area: outstanding loans recorded a 1.5 percent increase year-on-year and a 3 percent increase since its lowest value in 2015. The deleveraging process that set in following the financial crisis has finally reversed.
- Small loans to NFCs have been increasing steadily since 2013 and continued to do so during the past 6 months.
- Small lending conditions are characterised by a substantial amount of cross-country heterogeneity: SME lending is most costly in Greece, Ireland and Slovenia, whereas the relative importance of small loans is highest in Portugal, Italy and Spain.
- The SAFE and BLS survey reveal some contradicting evidence with respect to the evolution of the financing gap. On average, Euro Area Banks continue to ease the credit standards they apply to borrowing SMEs. Accordingly, SMEs perceive the financing gap to have shrunk over the past 6 months. At the same time, the share of SMEs indicating access to finance to be a significant problem increased again for the first time in five years.
- Banks' applied credit standards also differ greatly between countries, as does the finance gap perceived by SMEs and the share of SMEs indicating access to finance to be a significant problem. For example, around 1 in 2 Greek SMEs reported to have significant

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, Remi Charrier, Graham Cope, Andrea Crisanti, Cindy Daniel, Per-Erik Eriksson, Oscar Farres, Daniela Francovicchio, Giovanni Inglisa, Carsten Just, Tomasz Kozlowski, Marco Natoli, Christine Panier, Arnaud Vanbellinghen, Virginie Varga and Johannes Virkkunen. We would also like to thank colleagues from AECM, AFME, Collier Capital, ECB, EMN, Euler Hermes, Experior Venture Fund, GEM, the Invest Europe research team, the UEAPME study unit, and the University of Trier 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 includes neither Leveraged Buyouts (LBOs) nor Public Equity. The reader is also referred to the Private Equity glossary in Annex 1.

³ The term SME Securitisation (SMESec) comprises transactions backed by SME loans, leases, etc.

difficulties in accessing finance during the second half of 2017. In Finland, only 1 in 10 SMEs had significant finance issues.

- The results of the most recent update of the EIF SME Access to Finance Index, using 2017 data, confirm the idea that finance conditions vary greatly between countries across all 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 levels.
- 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. The VC activity levels are still far below their pre-crisis highs, but some of the remaining gaps have been filled by business angels. Results from the *EIF VC Survey* have indicated an ongoing high market activity.
- 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.
- 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.
- 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.

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, Italy, Hungary and Portugal have the largest markets.
- For 2017, AECM reports an impressive increase in new guarantee issuance and outstanding guarantees. However, this trend is largely due to a very important shift in the

guarantee activity of one Turkish AECM member, while a significant heterogeneity across countries is documented.

- Aside Turkey, the growth in new guarantee activity was particularly strong in Luxembourg, the Czech Republic and Romania. By contrast, newly-granted guarantees decreased the most in Bosnia-Herzegovina, Estonia and Serbia.

SME securitisation:

- The visible issued volume of SME deals in 2017 was only EUR 14.1bn, representing 6% of the overall securitisation issuance.⁴ Most of the activity happened in Belgium, Spain, and Italy (altogether 87% of the SMESec issuance).
- In terms of new issuances the SMESec market is still relatively weak and the retention rate remains very high (95.7% in 2017). 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.
- Despite the financial and sovereign crisis, the European securitisation market has performed relatively well, with the SME segment showing low default rates.
- 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.
- Although some precisions of the new regime still need to be provided and many public consultations are still collecting opinions from market participants, the fog around the future regulation design has lifted – which is good in order to reduce uncertainty.
- The new securitisation regulation entered into force on 17.01.2018 and will apply from 01.01.2019. It has 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 - in particular on the overall monetary policy.

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 an increase in the external financing gap indicator. Moreover, the share of enterprises which see access to finance as their most important problem remained higher among microenterprises than among their larger peers.
- Microenterprises are often discouraged to apply for a bank loan mainly because of high interest rates, but also because of “too much paperwork”.
- 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

⁴ 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).

to job creation. Aside the financial support, unemployed people are often in need of acquiring the necessary skills for success through coaching and mentoring.

- The recent EMN-MFC survey reports a growth both in the overall total value and the number of microloans provided by the surveyed Microfinance Institutions.

Fintechs:

- While global Fintech VC investment activity has slowed down during the last quarter of 2017, the European Fintech market continued to grow.
- The importance of crowdfunding (CF) as a source for SMEs' external financing needs further increased in 2016, across different platform types.
- While fundraising on equity and debt platforms both increased in absolute terms, the relative importance of debt platforms in total CF business financing further rose between 2015 and 2016.
- The CF sector is becoming increasingly institutionalised. The growing participation of institution has possibly led to an increase in average deal sizes.
- Recent research has shown that for some SMEs, equity CF presents a 'measure of last resort', a source of financing only used after traditional financing sources have been exhausted.

Table of contents



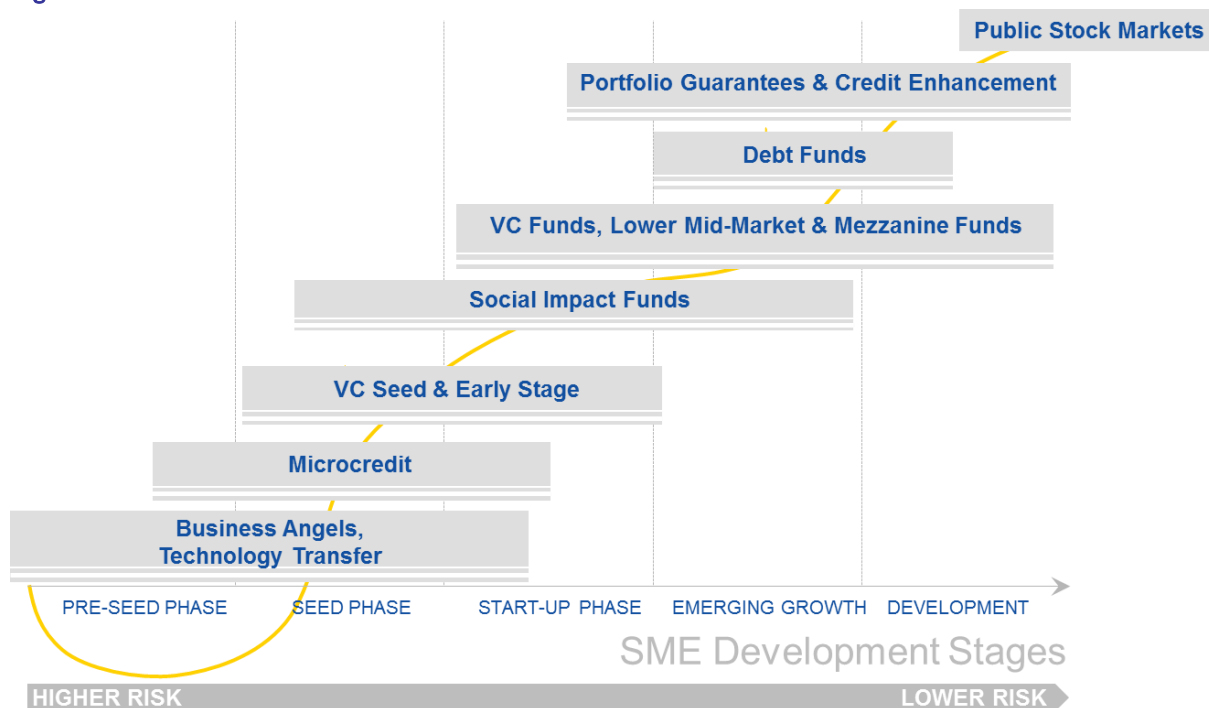
1	Introduction	1
2	Economic Outlook	3
3	SME business environment	6
3.1	The EIF SME Access to Finance Index.....	6
3.2	Loan volumes and borrowing costs.....	9
3.3	SME financing from a supply perspective.....	13
3.4	SME financing from a demand perspective.....	16
4	Private equity	26
4.1	Investment activity.....	26
4.1.1	Private equity funds.....	26
4.1.2	Business angels.....	40
4.2	Fundraising activity.....	43
4.3	Divestment activity.....	48
4.4	Lower mid-market and hybrid debt/equity finance: An important market segment.....	51
4.5	PE prospects.....	53
4.5.1	Current situation, risks and market actors' concerns.....	53
4.5.2	Structural challenges affecting European PE and VC.....	55
4.5.3	Policy intervention in European PE and VC: Findings from recent studies.....	58
4.5.4	Policy intervention in European PE and VC: A practical approach.....	59
5	SME guarantees and SME Securitisation in Europe	61
5.1	SME guarantees.....	61
5.1.1	Market failure and policy response.....	61
5.1.2	Market size and activity in 2017.....	65
5.2	SME Securitisation.....	70
5.2.1	SMESec market activity.....	72
5.2.2	SMESec prospects.....	80
6	Microfinance	86
6.1	Microfinance and social inclusion.....	86
6.1.1	What is Microfinance?.....	86
6.1.2	A support tool for necessity-driven business creation.....	87
6.2	The demand for microfinance: microenterprises and their finance decisions.....	91
6.3	The supply of microfinance: a sector characterised by significant diversity.....	93
6.4	The microenterprise access to finance.....	96

6.5	Microfinance prospects	99
7	<i>Fintechs</i>	101
7.1	What are Fintechs?.....	101
7.2	European Fintech VC market size.....	102
7.3	Crowdfunding in Europe.....	104
7.4	Fintechs: the end of the financial system as we know it?.....	108
8	<i>Concluding remarks</i>	110
<i>ANNEX</i>		115
	Annex 1: Private Equity Glossary.....	115
	Annex 2: Securitisation Glossary.....	118
	Annex 3: List of acronyms.....	119
<i>References</i>		122
<i>About</i>		131
	... <i>the European Investment Fund</i>	131
	... <i>EIF's Research & Market Analysis</i>	131
	... <i>this Working Paper series</i>	131
<i>EIF Working Papers</i>		132

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 a 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 Commission⁵ 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 of no more than EUR 43m (see Table 1).

⁵ Commission Recommendation 2003/361/CE of 6 May 2003.

Table 1: EU definition of SMEs

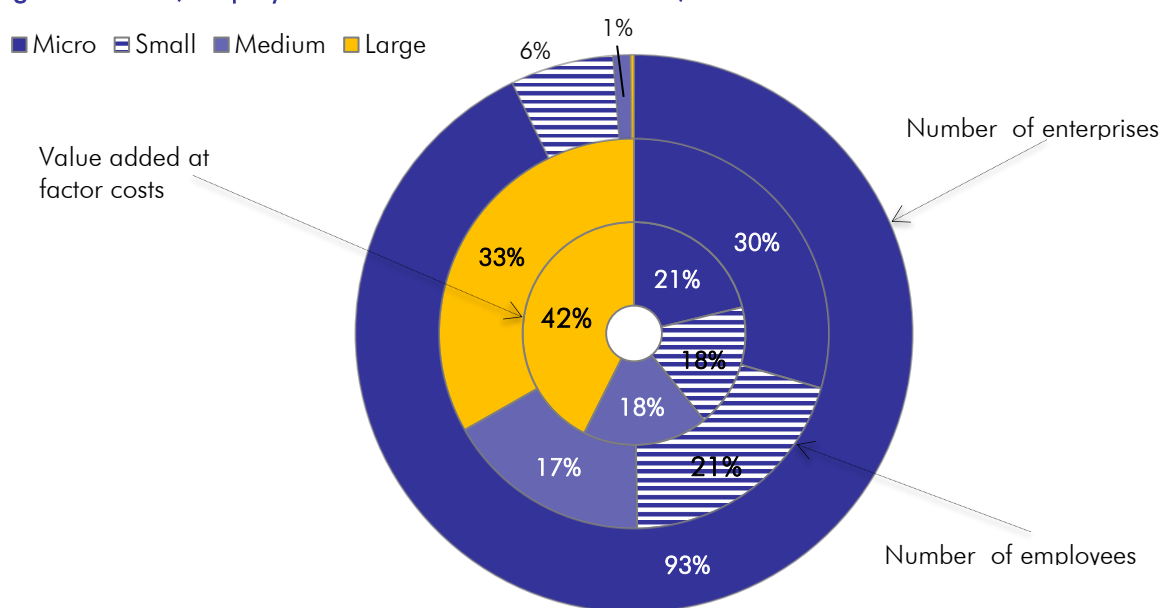
	Employees	Turnover	Balance sheet total
Micro	<10	≤ EUR 2m	≤ EUR 2m
Small	<50	≤ EUR 10m	≤ EUR 10m
Medium-sized	<250	≤ EUR 50m	≤ EUR 43m

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 (2017a)

Small and medium-sized enterprises contribute significantly to European job creation and economic growth (Figure 2). In 2016, nearly 24 million SMEs in the European Union made up 99.8% of all non-financial enterprises, employed around 93 million people (66.6% of total employment) and generated 56.8% of total added value (EUR 4,030bn).

Figure 2: SMEs, employment and value added in the EU, 2016



Source: Authors, based on European Commission (2017a)

The European Small Business Finance Outlook (ESBFO) provides an overview of the main SME financing markets relevant to EIF (equity², guarantees, securitisation, microfinance and Fintech). The present edition is an update of the ESBFO December 2017.

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 economic outlook has steadily continued its recovery. According to the IMF (2018) global growth for 2017 materialised at 3.8 percent, exceeding expectations by 0.2 percentage points. Accordingly, compared to the previous edition of the ESBFO (Kraemer-Eis et al., 2017b) the IMF revised their 2018 global growth forecast upwards by 0.1 percentage points, to 3.8 percent. Their optimism about the general economic environment is shared by the European Commission (EC, 2018a). The commission also revised its growth forecasts for 2017 to 2019 upwards, for the second consecutive time. Growth rates are expected to decline slightly after 2017 but are predicted to remain at robust levels of 2.3 and 2.0 percent for 2018 and 2019, respectively.

Inflation forecasts remain unaltered, just below the 2 percent target level. The EU's strong economic performance had a positive effect on the government budget balance, which for the first time since the crisis is expected to dip below the 1 percent-deficit threshold. Favourable economic conditions meant these continued deficits did not lead to a rise in gross government debt relative to GDP, which has been steadily declining and is expected to do so over the coming years.

While the economy has been steadily recovering, there is still a substantial degree of uncertainty with regards to the outcome of several ongoing political events. For example, the Brexit negotiations are still ongoing and the outcome is all but certain. Also the looming trade disputes on the international political scenery have the potential to disrupt and reverse the progress towards full economic recovery that has been made so far.

Table 2: European Commission spring 2018 forecast for the EU

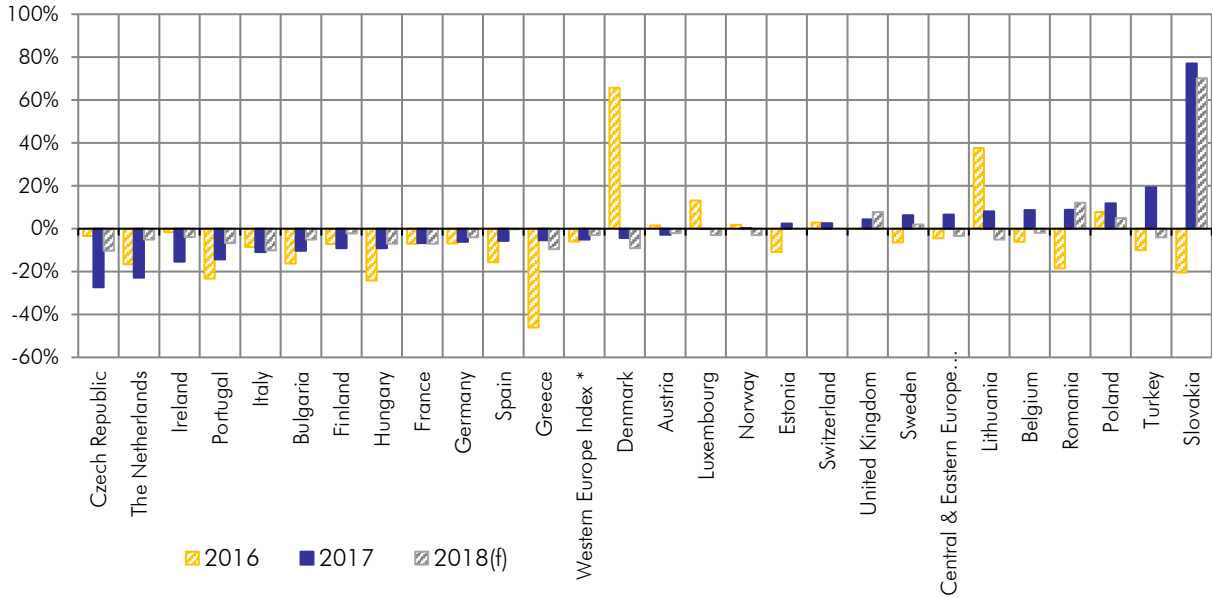
(Real annual percentage change, unless otherwise stated)				Spring 2018 estimates		
	2014	2015	2016	2017	2018	2019
GDP	1.8	2.3	2.0	2.4	2.3	2.0
Private consumption	1.2	2.1	2.4	1.9	1.8	1.8
Public consumption	1.2	1.3	1.6	1.1	1.4	1.3
Gross fixed capital formation	3.0	3.6	3.5	3.4	4.2	3.2
Employment	1.0	1.2	1.3	1.5	1.1	0.9
Unemployment rate (a)	10.2	9.4	8.6	7.6	7.1	6.7
Inflation (b)	0.5	0.0	0.3	1.7	1.7	1.8
Government balance (actual, % GDP)	-3.0	-2.4	-1.6	-1.0	-0.8	-0.8
Gross government debt (% GDP)	88.5	86.5	84.8	83.1	81.2	79.1
	Contribution to change in GDP					
Private and Public Consumption	0.9	1.5	1.6	1.3	1.3	1.3
Investment and Inventories	0.9	0.8	0.7	0.7	0.8	0.7
Net exports	-0.1	0.1	-0.4	0.5	0.2	0.1

(a) Percentage of the labour force.

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

Source: European Commission (2018a)

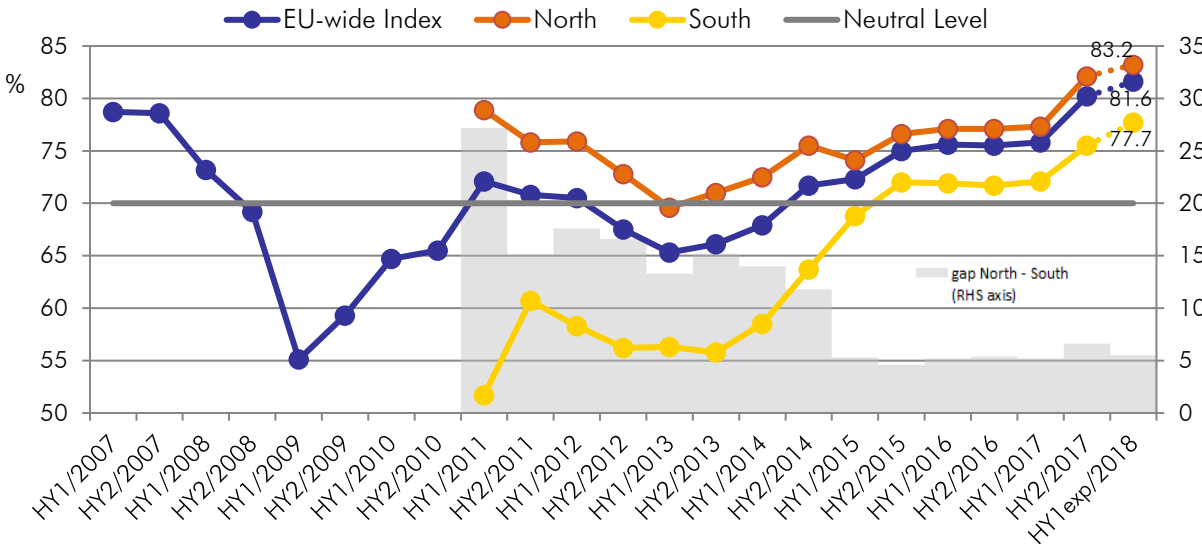
Figure 3: Rate of change in insolvencies, 2016-2017-2018(f)*



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

The recent recovery of the European economy has led to a further 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 picked up again.⁶ In Western Europe, a modest decrease was recorded. Sweden and Belgium went against the Western European trend and saw their insolvencies increase.

Figure 4: SME business climate index



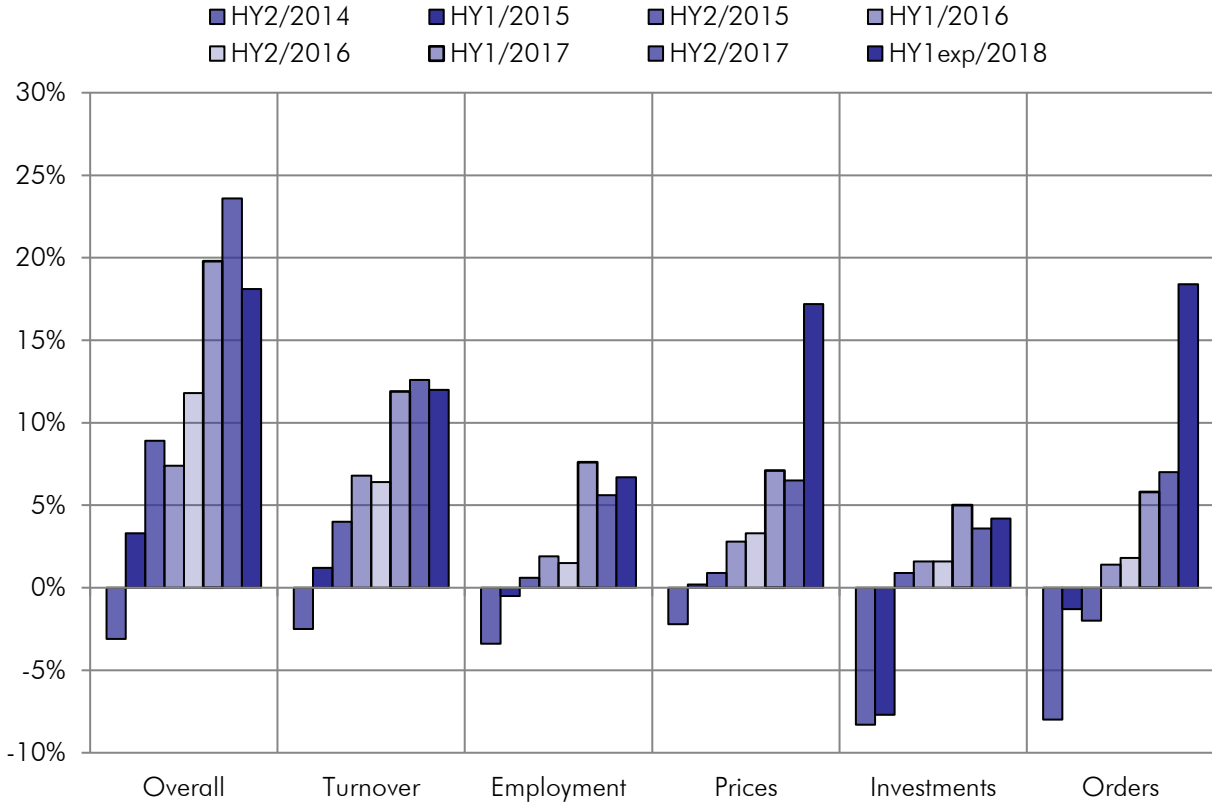
Source: Authors, based on UEAPME Study Unit (2018)

⁶ The large increase in Slovakia was rooted in an administrative factor.

UEAPME’s semi-annual EU Craft and SME Barometer (UEAPME, 2018) shows that European SMEs are benefitting from the EU’s economic recovery as they are exceedingly optimistic about their economic situation. The EU-wide index has now exceeded its pre-crisis level of early 2017. The gap between the North/Centre⁷ and the Southern/Vulnerable⁸ regions persists, but remains relatively low compared to earlier years, dropping one percentage point to 5.5 percent.

Figure 5 plots net responses⁹ on SMEs’ perception about a series of different economic indicators contained in UEAPME’s Barometer, such as the overall economic situation, turnover, employment, prices, investments and orders. The second semester of 2017 turned out to be positive across all factors considered, in particular turnover. Looking ahead, SMEs are expecting orders to further increase during the first semester of 2018. Prices are also expected to evolve in their favour. Compared to other factors, the investment climate remains to be an issue.

Figure 5: Main results of the EU craft and SME barometer HY2/2017



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

⁷ Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Romania, Slovakia, Sweden and UK.
⁸ Croatia, Cyprus, Greece, Ireland, Italy, Malta, Portugal, Slovenia and Spain.
⁹ The net response is calculated as the share of positive minus negative responses.

3 SME business environment

3.1 The EIF SME Access to Finance Index

The EIF SME Access to Finance (ESAF) Index is a composite indicator that summarises the state of SME financing for the 28 EU 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 is composed of 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. The methodology underlying the construction of the index is detailed in Gvetadze et al. (2018a). In addition, the outcome of the most recent update, using data for 2017, is elaborated upon in Torfs (2018).

Figure 6: The four ESAF subindicators

<p><i>Loans:</i></p> <ul style="list-style-type: none">■ 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) <p><i>Equity:</i></p> <ul style="list-style-type: none">■ Venture Capital Investments / GDP■ Venture capital availability index■ Value of IPO market / GDP■ Percentage of SMEs using equity capital in last 6 months <p><i>Credit and Leasing:</i></p> <ul style="list-style-type: none">■ 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 <p><i>Macro Factors:</i></p> <ul style="list-style-type: none">■ 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"

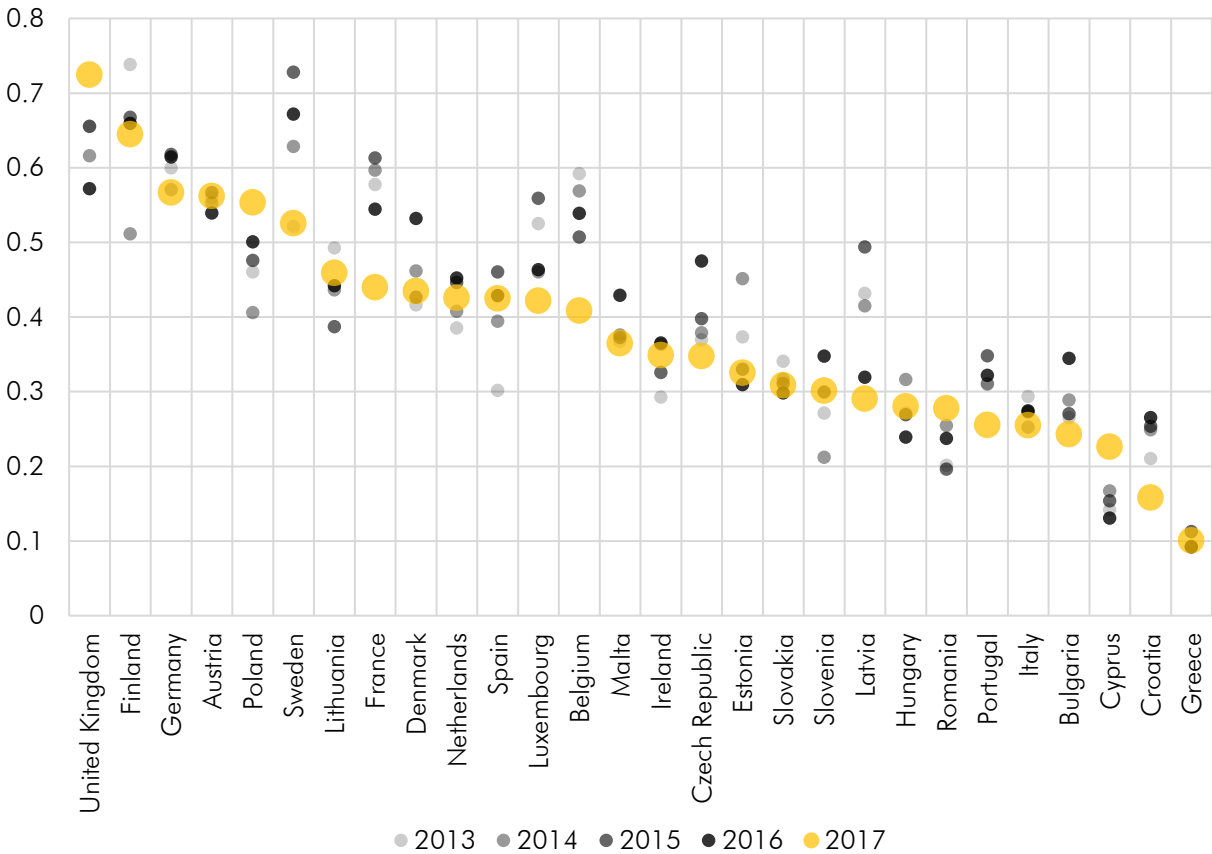
The results of the most recent update are presented in Figure 7 (yellow dots). The 2017 ESAF ranking is headed by the United Kingdom, who takes the lead from Sweden. While the UK consistently performed well over the past five years, the improvement in British SMEs' finance conditions between 2016 to 2017 might come as a surprise to some given the political background against which it occurred. Sweden fell five spots in the ranking, and in addition to the UK, is now preceded by Finland, Germany, Austria and Poland, recording its worst relative performance since the beginning of measurements. Sweden and the UK were also the two countries that experienced the biggest change in the value of the indicator, in absolute value. The ranking drop of Sweden appears to be

caused by a deterioration of the conditions on the Credit & Leasing market, but also the Macro conditions turned less favourable (Figure 8).

Greece still closes the ESAF ranking, preceded by Croatia, who fell back two spots in the ESAF ranking due to dismal performance of its equity markets (last place) and deteriorating conditions on the loan market (last place) and the credit and leasing market (26th place). Cyprus, due to positive evolutions in both the equity as well as the loan market, was therefore able to move up one place, after ranking next to last from 2013 to 2016.

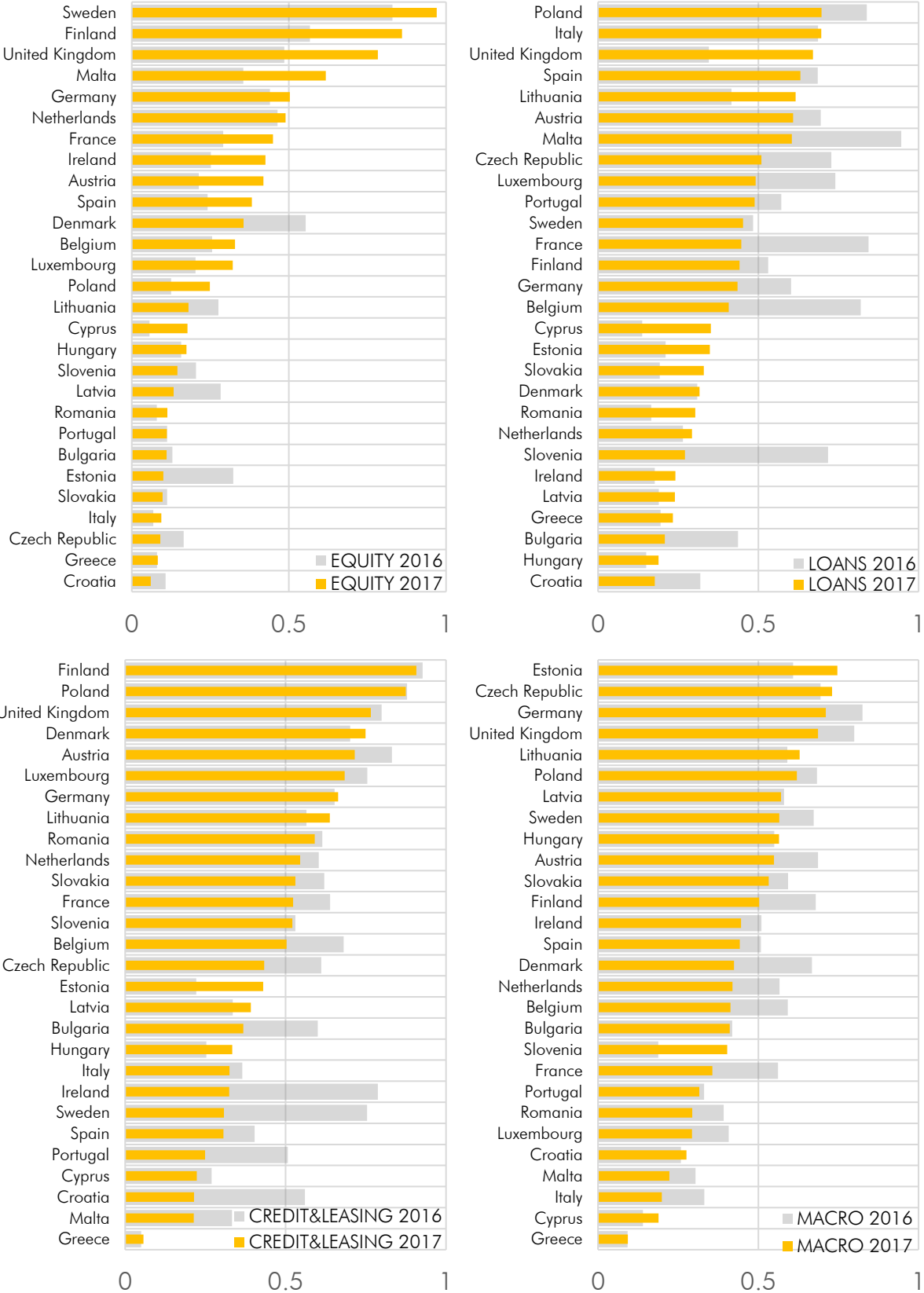
Two other noteworthy evolutions are the consistent positive performances of Spain and Romania. For Spain, the 2017 improvement is a continuation of its gradual climb in the ranking, climbing up from the 21st to the 11th place over the course of the last five years. The favourable evolutions on the Spanish external finance market are in line with the exceptional post-crisis recovery the country has experienced, reflected in strong growth numbers and a significant decline in the country’s unemployment rate over the past years. While Romania’s position has consistently improved over the past five years, it still has a long way to go to escape the lower end of the distribution.

Figure 7: The EIF SME Finance Index: Country comparison and evolution over time



Source: Torfs (2018)

Figure 8: The ESAF subindexes: Equity, loans, credit and leasing, and macro (by country)

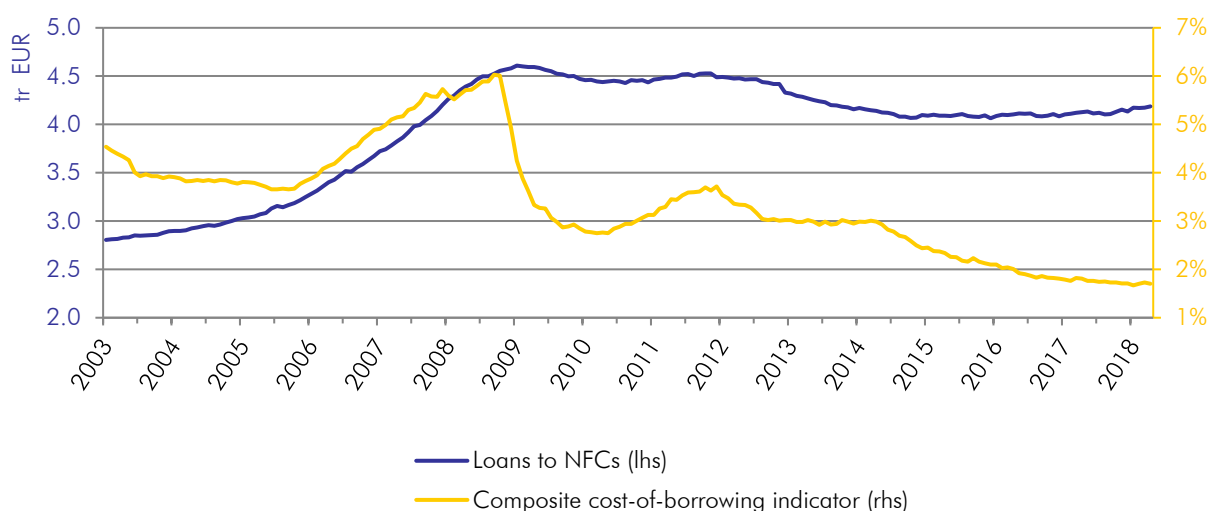


Source: Torfs (2018)

3.2 Loan volumes and borrowing costs

Figure 9 illustrates how borrowing costs and outstanding loans to non-financial corporations (NFCs) evolved from their pre-crisis levels to their present levels. Borrowing costs for NFCs remain historically low: early 2018, the ECB’s composite borrowing cost indicator¹⁰ reached a new record low of 1.67 percent. The indicator has risen slightly since, to 1.7 percent in April. These low rates are finally starting to impact the stock of outstanding loans to NFCs in the Euro Area: the deleveraging process that set in following the financial crisis seems to have reversed. Outstanding loans to non-financial corporations increased to EUR 4.19tr, an increase of 1.5 percent year to year, and an increase of 3 percent since its lowest value, recorded at the end of 2015.

Figure 9: Outstanding loans and composite cost-of-borrowing indicator for non-financial corporations in the Euro Area



Source: Authors, based on ECB Data Warehouse

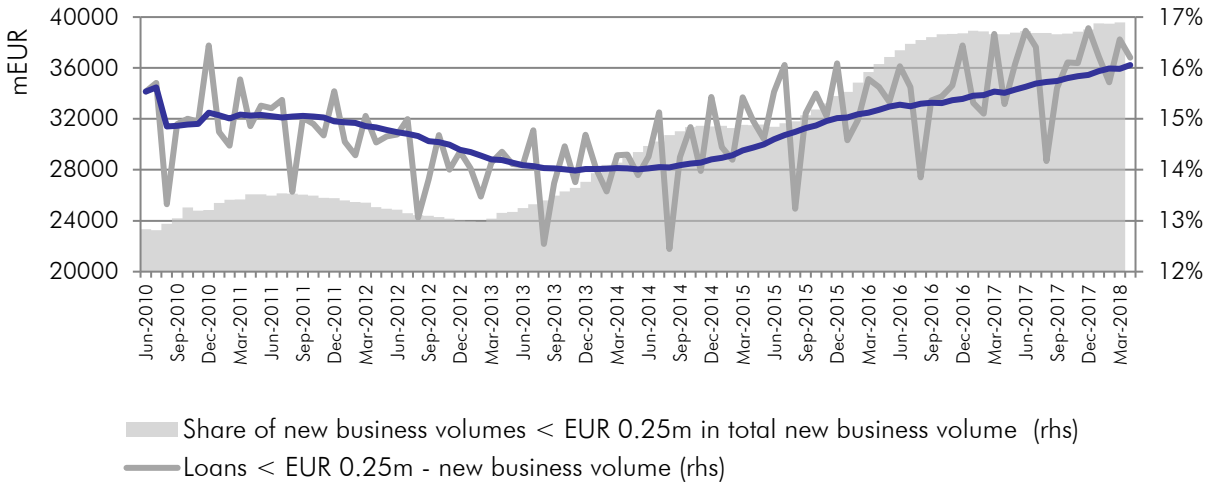
To proxy SME lending specifically, we use data on loans below the EUR 0.25m threshold (Huerga et al., 2012).¹¹ Figure 10 plots their evolution (new business volumes) in the Euro Area starting from June 2010. New business volumes of small loans first contracted, after which it picked up pace early 2014 and has been rising ever since, totalling EUR 36.8bn in April 2018.¹² 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 declined, implying that the contraction was more pronounced in the small loans business segment. However, during the recovery thereafter, the share of small loans in total new business volumes has been increasing consistently, reaching 16.9 percent in April 2018, implying that the SME lending segment is recovering faster than their larger counterparts, and has partly caught up over the past years.

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”.

¹¹ 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.

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

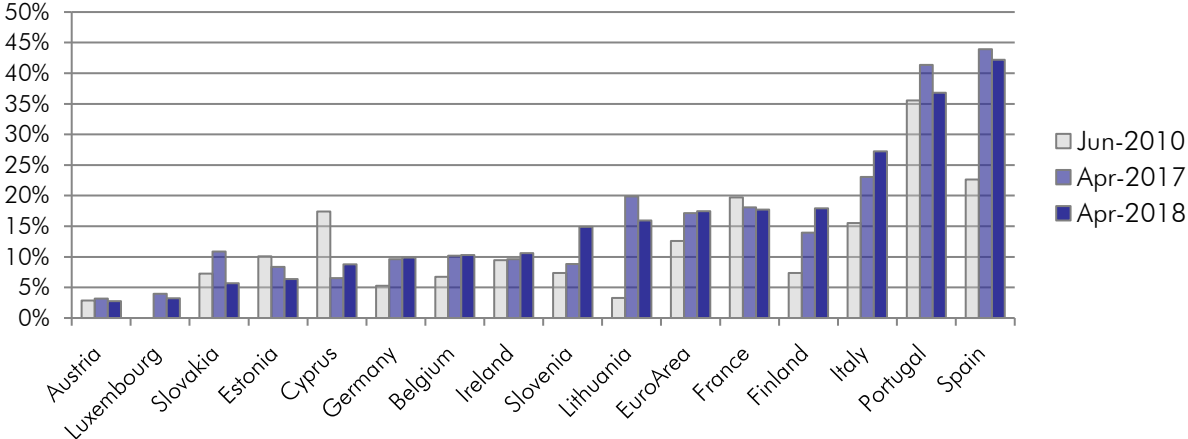
Figure 10: Small loans to NFCs (< EUR 0.25m), new business volumes in the Euro Area (12m moving averages)



Source: Authors, based on ECB Data Warehouse

Figure 11 reveals large country-level differences in the small loan share. In April 2018 (latest available data with wide country-level coverage), small loans made up anywhere between 2.7 percent (Austria) and 42 percent (Spain) of total volume. Small lending appears to be of higher relative importance for vulnerable economies, with the highest shares recorded for Spain, Italy and Portugal.

Figure 11: Small loans (< EUR 0.25m) as a share of total NFC lending (NBV*), by country



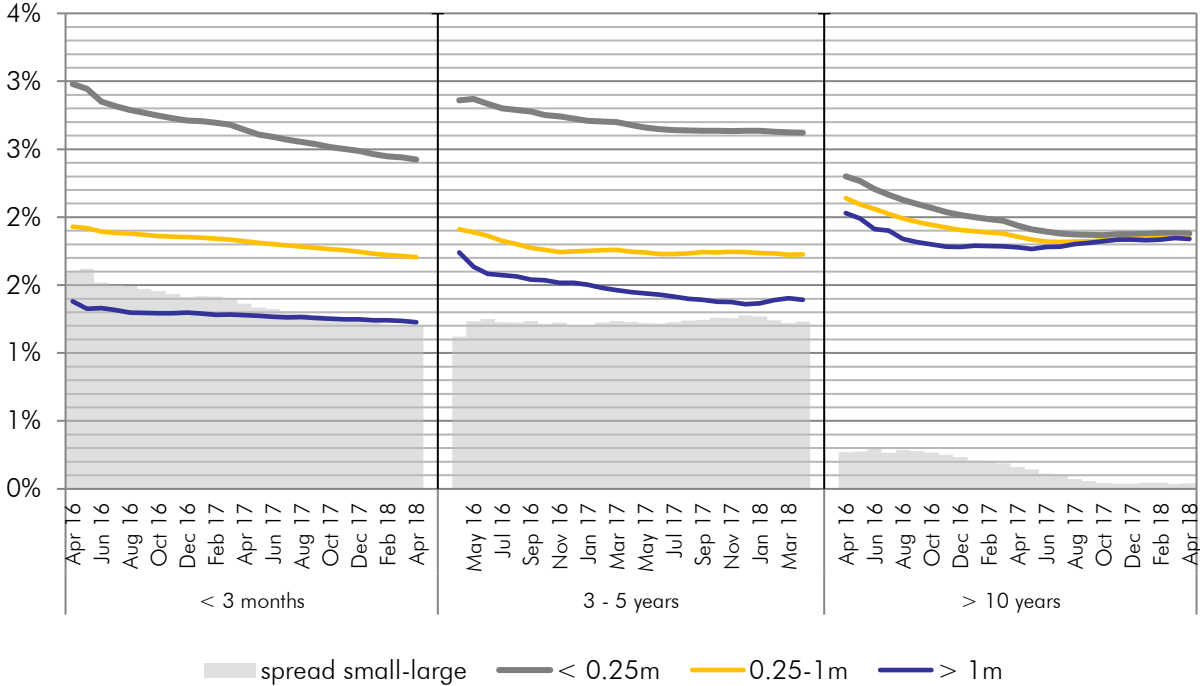
*NBV: Net book value.

Source: Authors, based on ECB Data Warehouse

Borrowing costs are an important driver of the evolution of lending volumes. Figure 12 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 is further subdivided according to loan maturity. The data show that the interest rate evolution might be at the verge of a turnaround. For the first time since long, there are no consistent declines in interest rates

across all categories. Moreover, long term interest rates¹³ have increased across all categories, including for small loans. Although the cost increase for the small loan category has been relatively modest, it could imply the start of a longer trend. This implies rising interest rates will increase the cost of durable investments. Short term lending on the other hand, continued to get cheaper, especially for small loans.

Figure 12: Interest rates by loan size and maturity, and the interest rate size spread



*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).

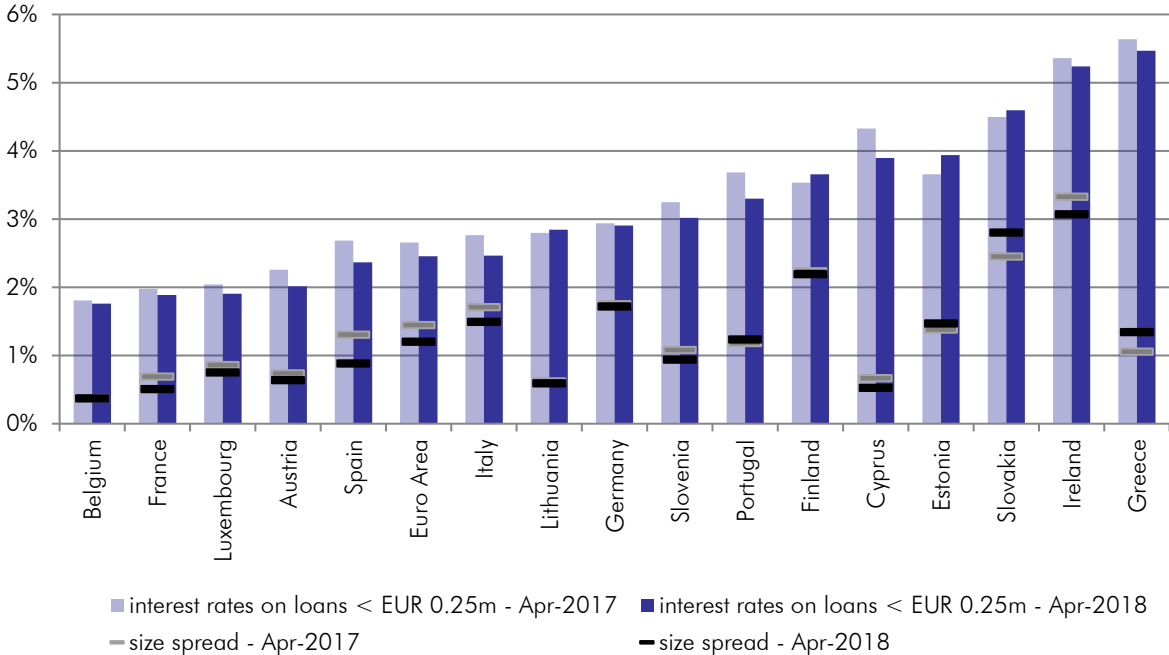
Source: Authors, based on ECB Data Warehouse

A more general finding arising from Figure 12 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. Note that the size spread on long term loans has continued to converge towards zero, driven by the increase in the price of large long term loans, as discussed above.

¹³ Measured as a 12 month moving average.

Figure 12 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.

Figure 13: 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 for which no sufficient data was available are omitted.

Source: Authors, based on ECB Data Warehouse

While overall financing costs for Euro Area NFCs might be decreasing, Figure 13 indicates that the aggregates enfold significant country-level heterogeneity.¹⁴ It plots the 12-month moving average of the interest rate charged to NFCs on loans not exceeding EUR 0.25m for a selection of countries for which data was available. It also depicts the size spread, 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.

Between April 2017 and April 2018, the interest rate on small loans¹⁵ continued to decrease in all but three countries: Slovakia, Estonia and Lithuania. For Slovakia and Estonia, this is the third consecutive semester the small loan interest rate evolution goes against the European trend (see (Kraemer-Eis et al., 2017a and 2017b)). In Slovakia, the increase in the cost of small loans was

¹⁴ See also 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.

¹⁵ As measured by a 12-month backward looking moving average, to eliminate the influence of erratic monthly fluctuations.

accompanied by a third consecutive rise in the interest rate spread, indicating a further deterioration of Slovakian SMEs' relative 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 by nature, but specific to the small loans segment, as overall borrowing costs did not decrease at a similar rate. This led to a drop in the size spread. In Greece, on the other hand, interest rates are high for small and large loans, implying a general unfavourable financing environment.

At the tails of the distribution, the situation remains the same compared to previous semester. Small loans continue to be cheapest in Belgium and France, and most costly in Ireland and Greece. Ireland also continues to record the highest size spread of all European countries for which data was available.

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 on the subject 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, inter alia, recoverability of collateral and lack of competition in the banking sector. This latter explanatory factor appears to be particularly relevant for explaining the interest rate size-spread documented in Figure 12 and Figure 13. 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

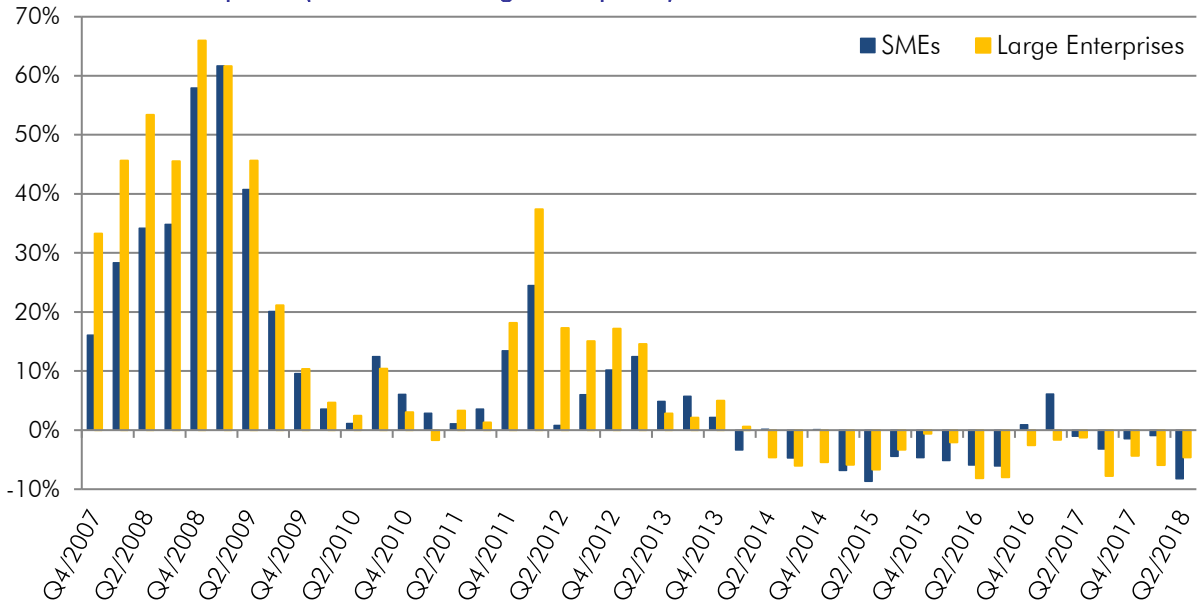
The ECB's latest Bank Lending Survey (ECB, 2018a) provides an overview of the current state of the SME lending market from the perspective of the banks. It is conducted quarterly and asks banks about the credit standards they uphold towards corporate borrowers. Figure 14 plots the quarterly net change¹⁶ in credit standards and illustrates how banks' perception of credit standards upheld to NFCs has changed since the beginning of the financial crisis.¹⁷ A positive value indicates that banks tightened credit standards, whereas a negative value indicated an easing of standards. Figure 14 shows that credit standards continued to ease for the fifth consecutive quarter during the first semester of 2018, although significantly more for large firms than for SMEs.

The different factors driving the changes in credit standards are illustrated in Figure 15. All factors, apart from banks' capital position, contributed to the loosening of credit standards. Especially competition among banks and a general optimism about the overall economic situation were reported to be important determinants.

¹⁶ 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.

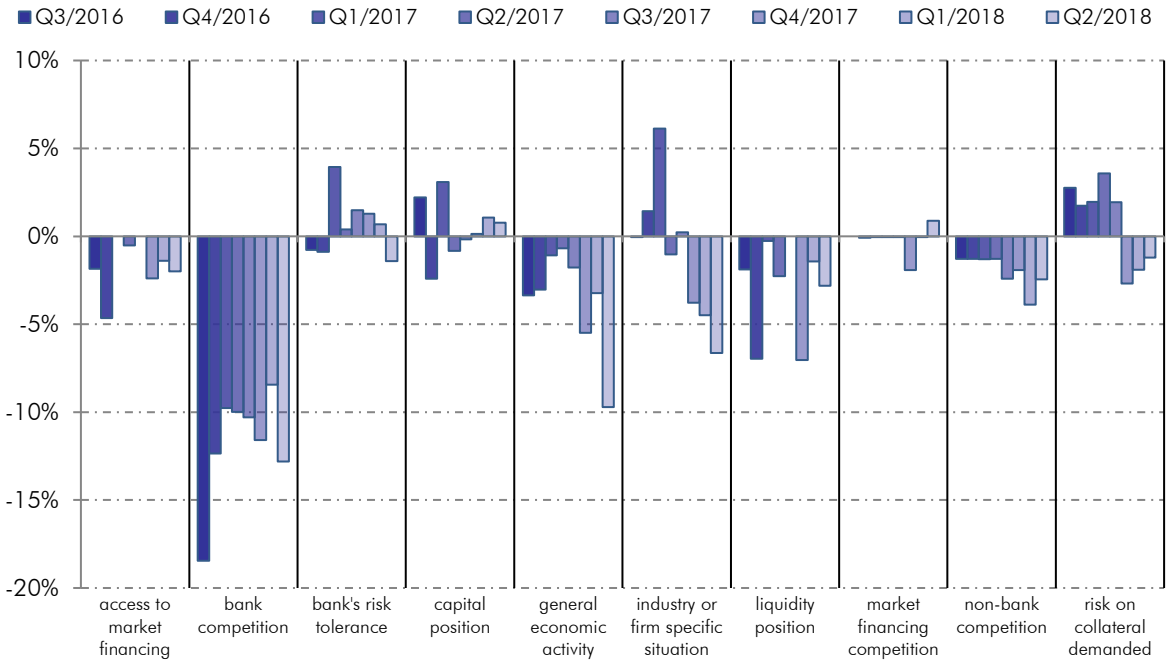
¹⁷ Banks are asked the following question: "Over the past three months how have your banks' credit standards as applied to the approval of loans or credit lines to enterprises changed?"

Figure 14: 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)

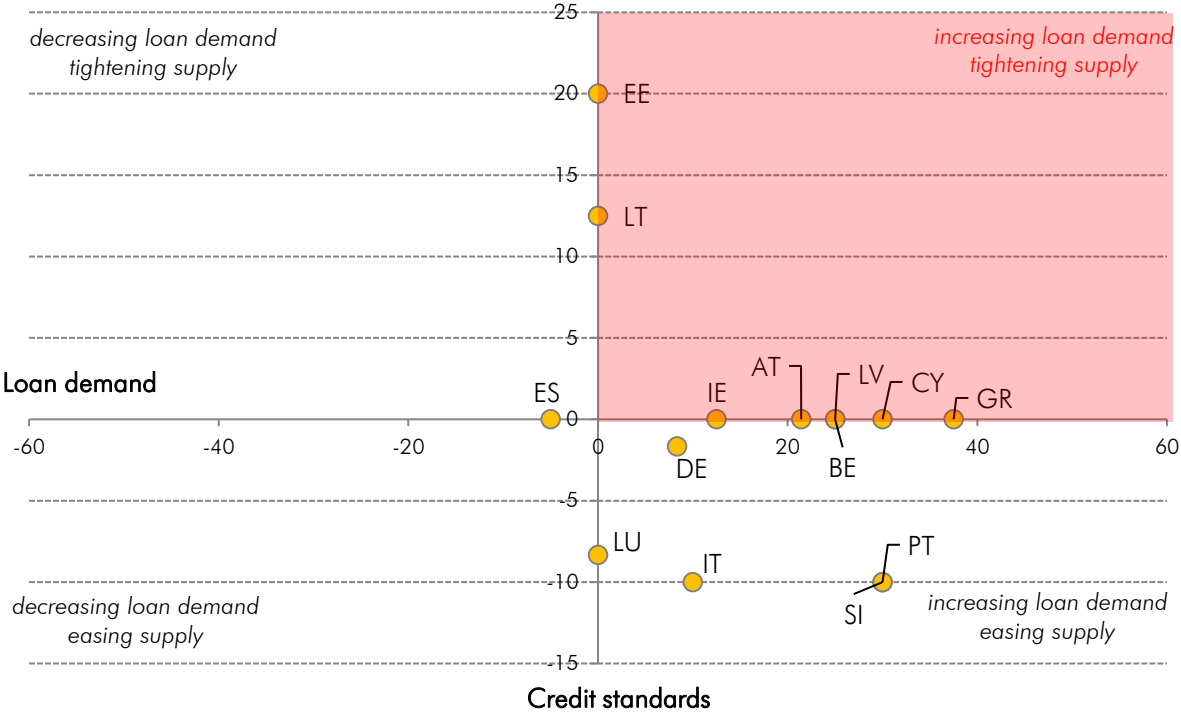
Figure 15: Factors contributing to changes in credit standards to SMEs*



* 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 16: The SME financing gap from a supply perspective (Q2/2018)



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

We conclude the supply side section by illustrating how banks themselves perceive the SME financing gap to have evolved over the final quarter of 2017, on a country-by-country basis. We are combining the answers of two BLS survey questions in Figure 16. The first question asks banks to what extent they have tightened SME credit standards. The answers are mapped on the Y-axis. The values represent the net percentage¹⁸ of banks that have tightened credit standards in a given country: a positive value implying 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 implying higher loan demand). In the quadrant formed by both axes, the North-Western quadrant represents a situation one would expect during a period of economic contraction, where decreased loan demand is accompanied by tightening credit conditions. During the second quarter of 2018, no countries were projected in this quadrant, consistent with the general economic recovery taking place in Europe (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. Whereas during the final quarter of 2017 Germany was the only country in this situation (Kraemer-Eis et al., 2017b), it is now joined by three others: Italy, Portugal and Slovenia. Missing quantitative information in the BLS prevents us from making predictions on the evolution of the supply gap for countries in the South-Eastern quadrant, as it depends on the relative magnitude of both forces. However, for SMEs

¹⁸ 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 1 for lenders answering “considerably” and score of 0.5 for lenders answering “somewhat”) and the share of banks reporting a decline.”

operating in countries situated in the other two quadrants, or on the bordering axes, it is possible to infer predictions about the financing gap they are facing.

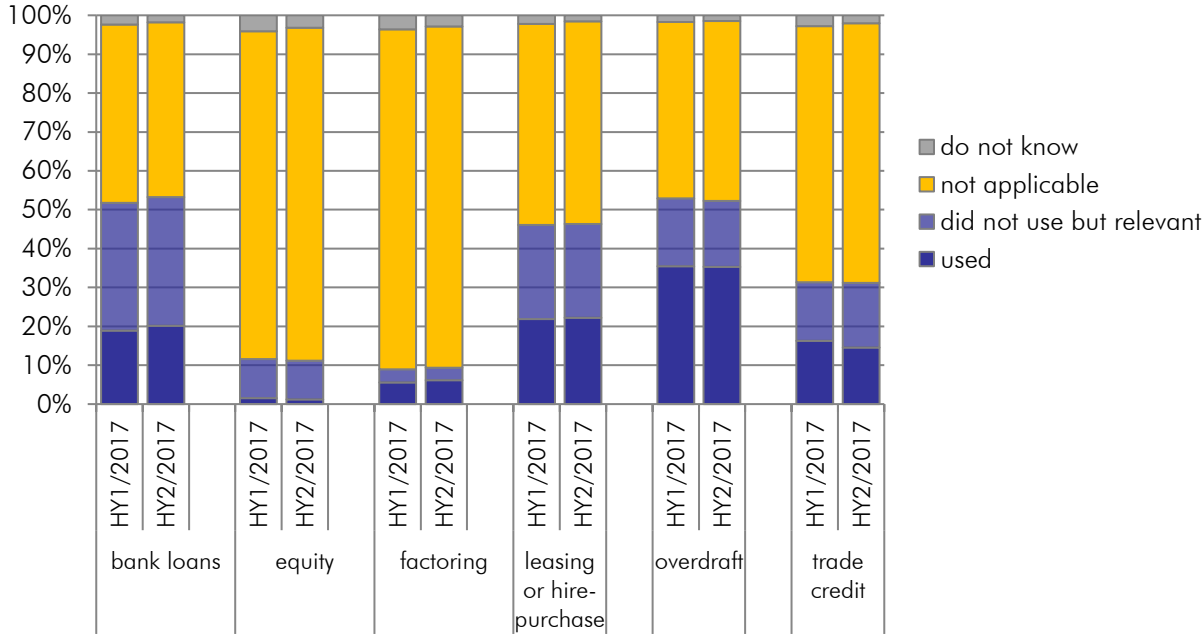
Spain is the only country in which banks report SME loan demand to have decreased. At the same time, they report to have loosened credit supply. This implies a shrinking financing gap. It is likely that the Spanish credit supply is catching up, after a period of contraction, following the long and deep economic recession. For Estonia, Lithuania and Luxembourg, SME loan demand reportedly remained constant. For Estonia and Lithuania this went hand in hand with a contracting supply, thereby increasing the supply gap. In Luxembourg, on the other hand, supply of bank credit to SMEs expanded, effectively decreasing the supply gap.

While banks in Ireland, Austria, Latvia, Belgium, Cyprus and Greece kept supply of SME credit constant, SME loan demand in these countries increased, albeit to a varying degree. In Greece and Cyprus, loan demand increased strongly, implying a significant increase in the SME credit supply gap.

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. While it covers all the entire EU28, not all countries are covered to the same extent.

Figure 17: Sources of external financing of Euro Area SMEs



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

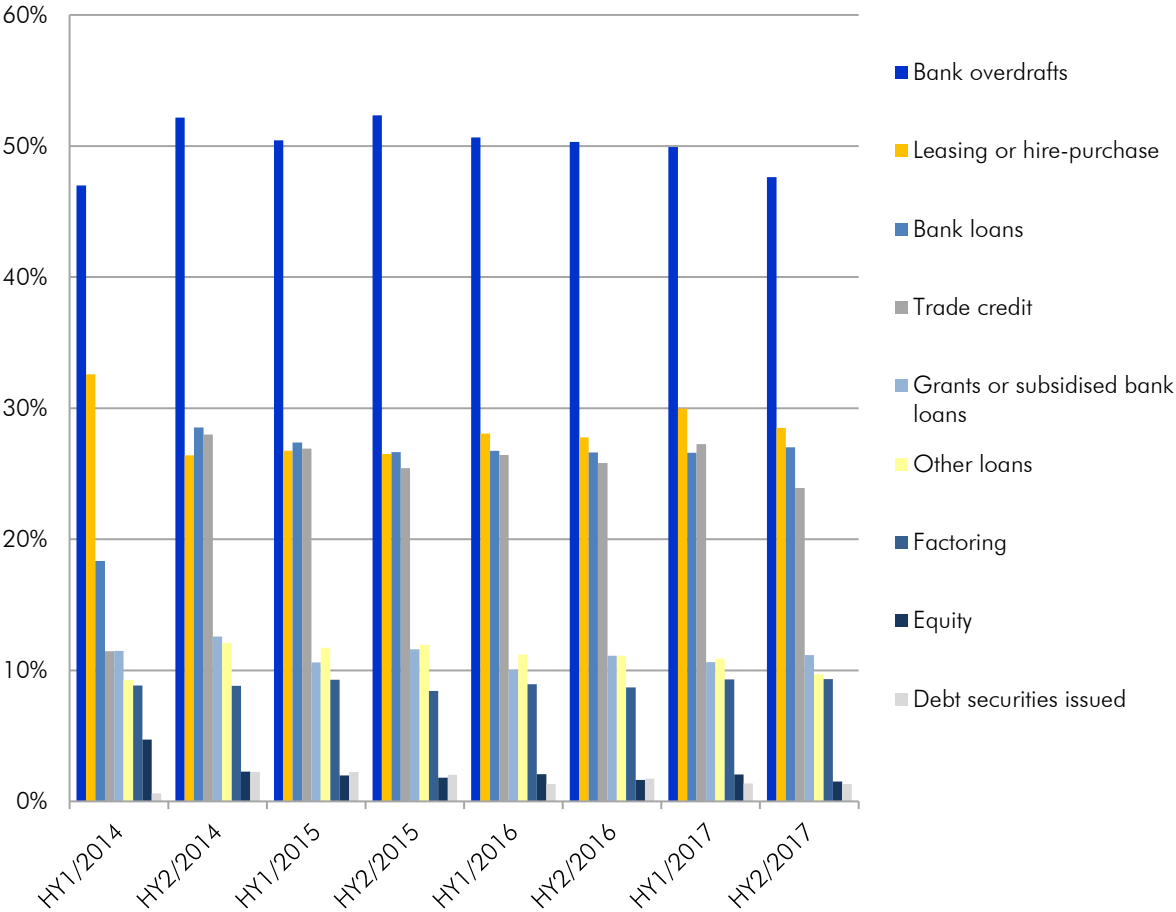
We use the information contained in the SAFE survey (ECB, 2018b) to illustrate the relative importance of different financing instruments (Figure 17), which remained roughly constant. Bank products (loans and overdraft) are still the most popular instruments for SMEs, followed by leasing and hire-purchase (see Box 1). 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 Fintech or 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 crowdfunding as a source of external financing for European SMEs).

Box 1: SME leasing in Europe

Based on the ECB SAFE surveys for the Euro Area over the last four 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 almost 30% of Euro Area SMEs stating that they have indeed used leasing or hire-purchase over the six months preceding the survey (see Figure B1.1).

Figure B1.1: Use of external sources of financing by Euro Area SMEs



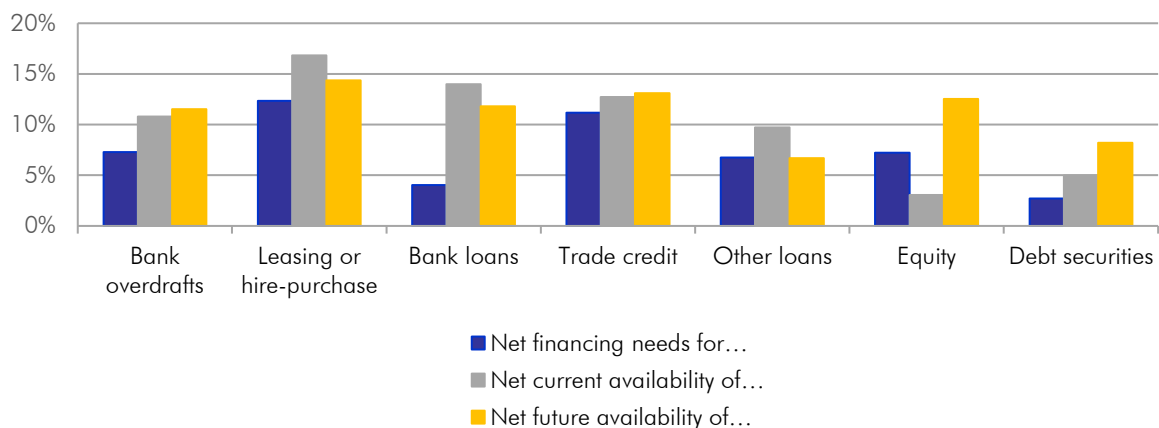
*Note: percentage of respondents (weighted results) stating that they have used the respective financing source over the past six months.

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

According to the latest ECB SAFE survey wave (October 2017 – March 2018), Euro Area SMEs state that the 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 B1.2). 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 1 continued:

Figure B1.2: Financing needs and availability of financing sources for Euro Area SMEs

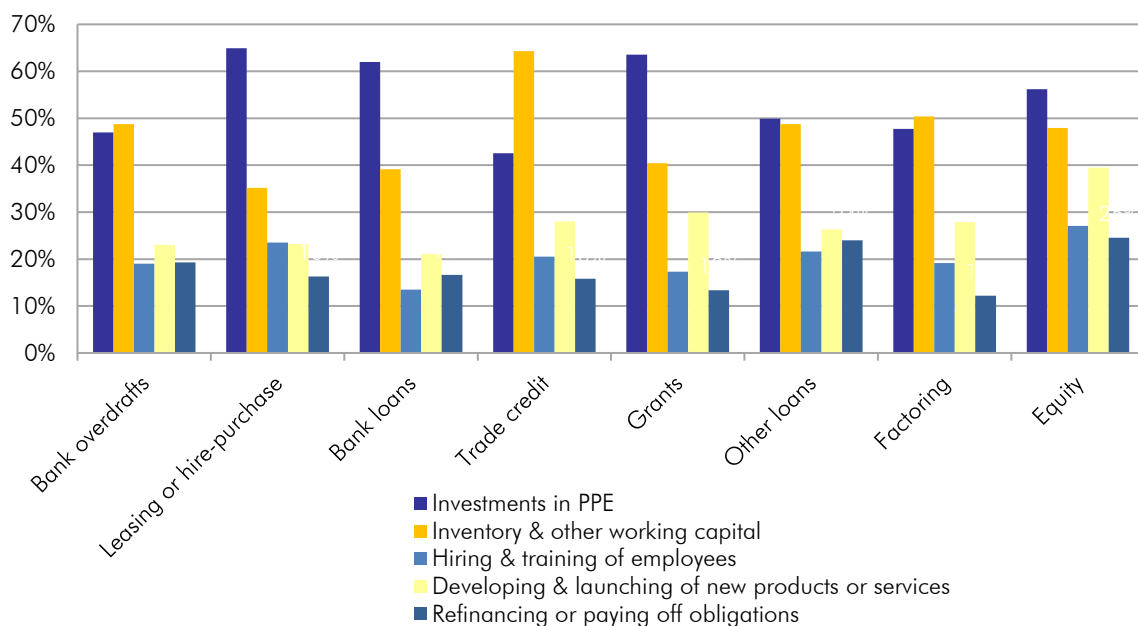


*Notes: "Net financing needs" reflects the percentage of respondents stating that their needs for the respective financing source have increased over the past six months minus the percentage of those stating a decrease; "Net current (future) availability" reflects the percentage of respondents stating (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 to their enterprise.

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

Looking at the purpose for which financing is used by Euro Area SMEs (see Figure B1.3), leasing is mainly used for investments in property, plant or equipment. Moreover, the percentage of SMEs who use leasing for fixed-asset investments is higher than the percentage of 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 B1.3: Purpose of financing by source of financing used, Euro Area SMEs



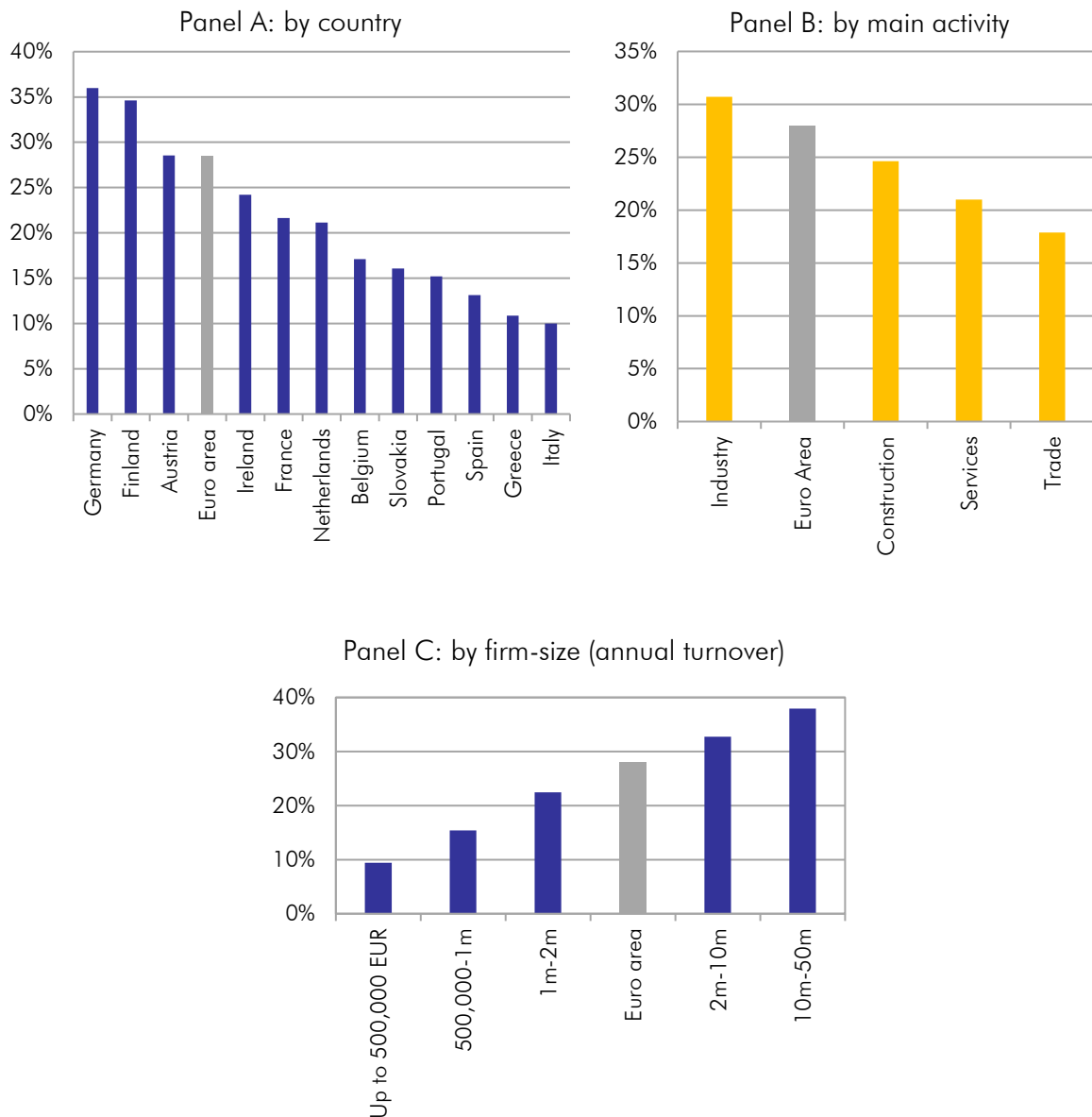
*Note: percentage of respondents (weighted results) stating that they have used the respective financing source for the various investment purposes over the past six months.

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

Box 1 continued:

There is a wide heterogeneity in the use of leasing, across countries, industries and firm-sizes. A country-by-country analysis (see Figure B1.4, 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 B1.4, 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 B1.4, Panel C.

Figure B1.4: Use of leasing or hire-purchase by Euro Area SMEs – across countries, industries and firm-sizes

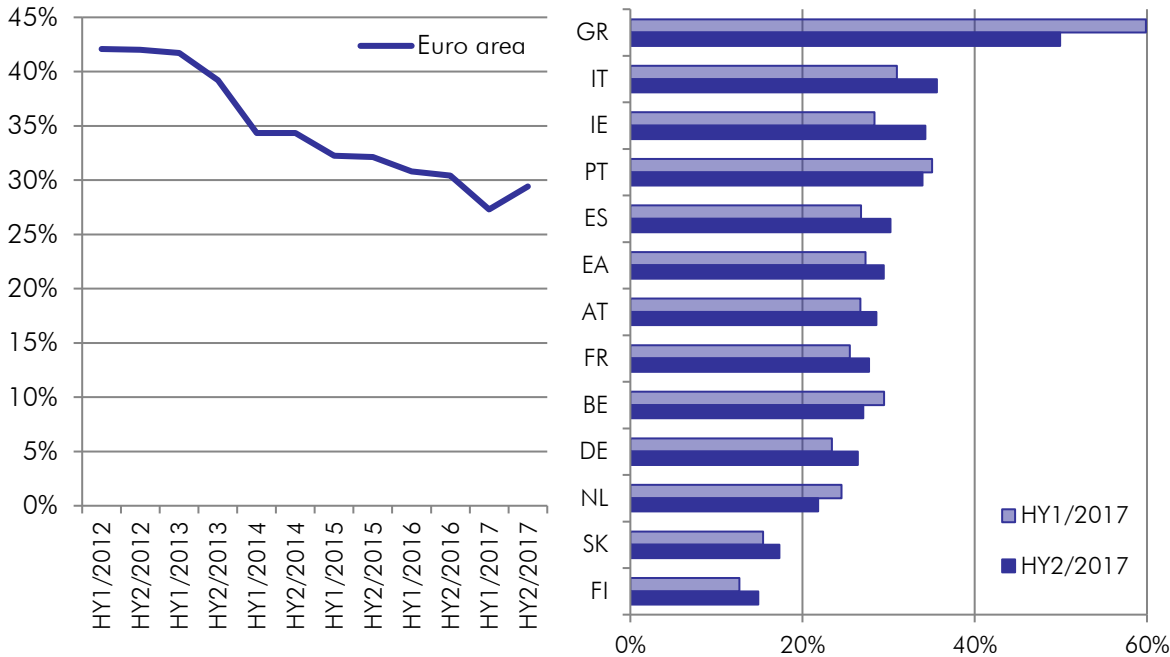


*Notes: percentage of respondents (weighted results) stating that they have used leasing or hire-purchase over the past six months; “Industry” includes manufacturing, mining and electricity, gas and water supply.

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

The SAFE also surveys SMEs on how they perceive their external financing situation. Over the second semester of 2017, the share of Euro Area SMEs that considers access to finance to be a highly important problem¹⁹ has increased for the first time in 5 years (Figure 18, left panel). Now, 29.4 percent of SMEs reported difficulties in accessing external finance, a 2 percentage point increase compared to one semester earlier.

Figure 18: Percentage of SMEs ranking access to finance as a highly important issue



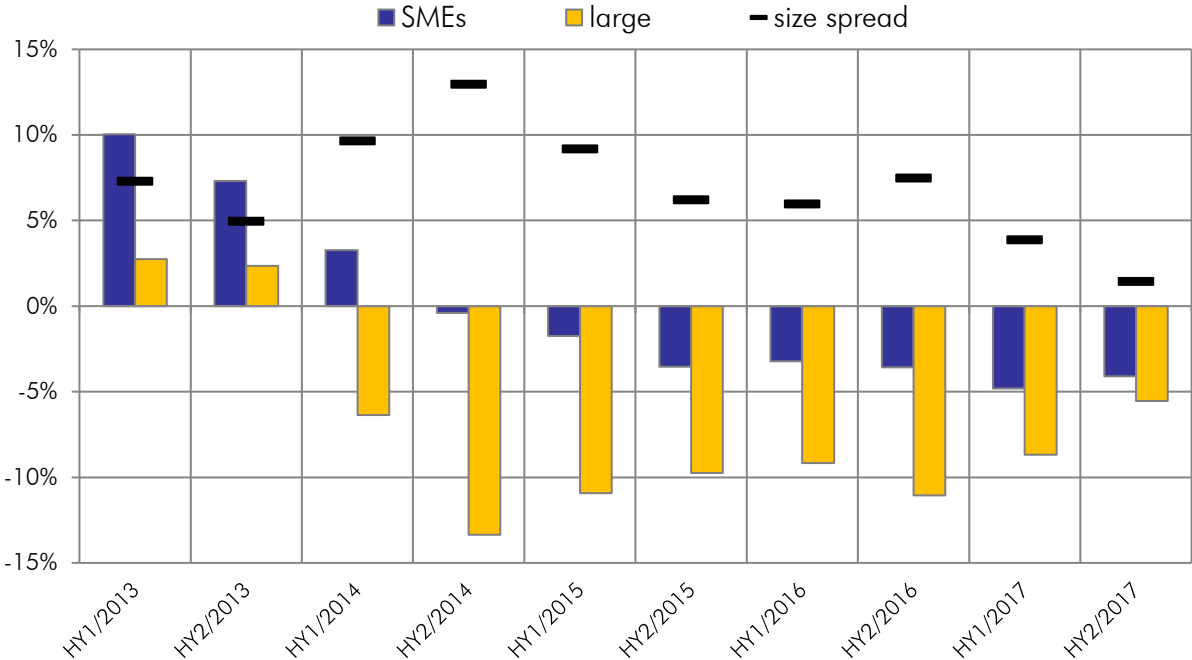
Source: Authors, based on ECB SAFE (ECB, 2018b)

The right panel of shows that this percentage varies significantly by country. In Greece, 50 percent of SMEs reported to have significant issues accessing finance, a sharp drop from one semester earlier. This contrasts with the supply-side evidence presented in section 3.3, where Greek banks reported to face increased demand, at a constant supply (see Figure 16). The next SAFE wave will shed light on whether this constitutes a true trend reversal for Greek SMEs, or a one-off anomaly. In most other countries, and in line with the average European trend, SMEs experienced a deterioration of general finance conditions, especially in Ireland and Italy.

Figure 19 demonstrates another external finance gap indicator, designed by the ECB. It is based on perceived changes in the needs and availability of external financing and constructed using SAFE data. The gap is depicted for both SMEs and large firms. A negative value of the indicator implies a perceived shrinking financing gap. The intuition is similar to the supply side gap-diagram illustrated in Figure 16. Figure 19 shows how during the second semester of 2017, firms from all size classes reported a shrinking financing gap for the 7th consecutive semester. Also noteworthy is the continued downward trend in the size spread.

¹⁹ Rating it 7 or higher on a scale of 10 for the survey item Q0b, pressingness of problems that the firm is facing.

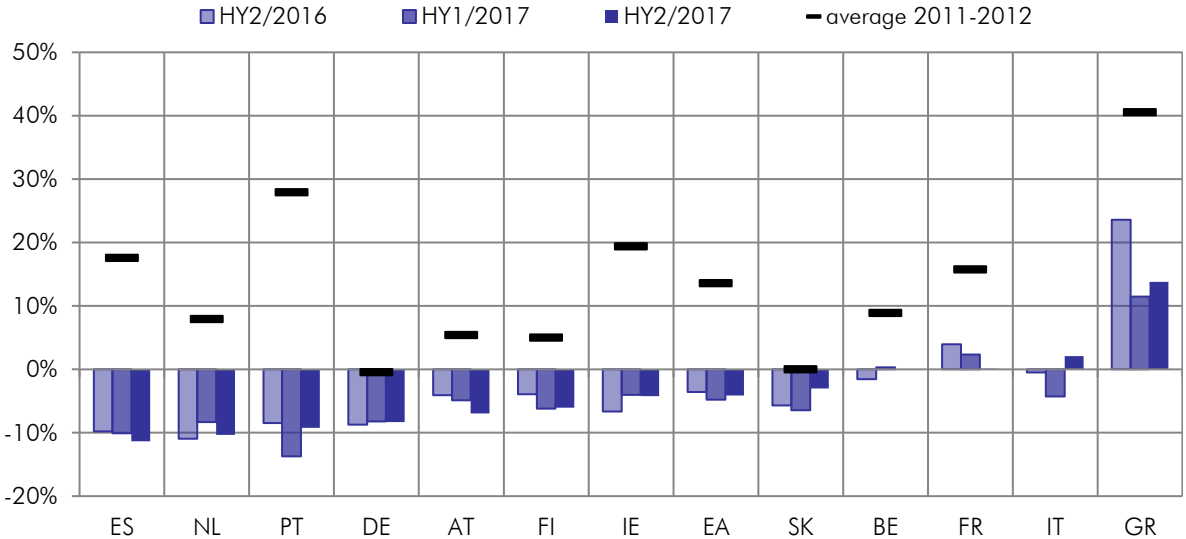
Figure 19: Perceived change in the external financing gap by SMEs and large firms*



* 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)

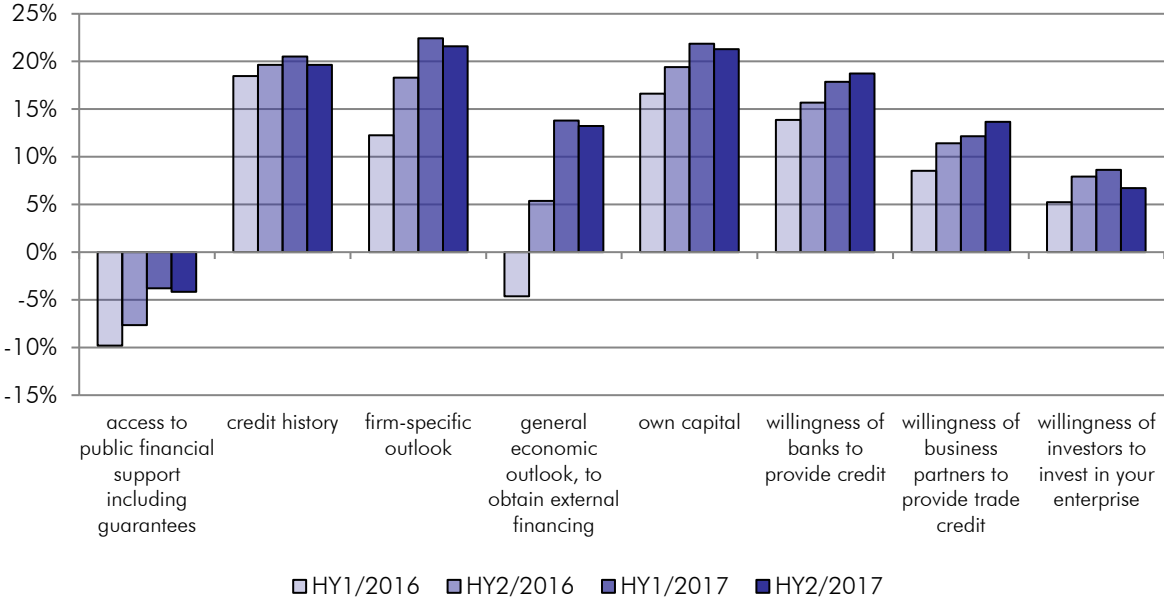
Figure 20: Perceived change in the external financing gap by SMEs at the country-level*



*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 21: Factors driving the availability of external financing to Euro Area SMEs



Source: ECB SAFE (ECB, 2018b)

Figure 20 illustrates the country-level heterogeneity underlying Figure 19. In most countries for which the indicator is made available, SMEs perceived an improvement in their access to finance. In particular Spanish SMEs were positive about their financing prospects, reflecting the favourable economic conditions in the country. The gap reportedly increased in just two countries: Italy and Greece. The evidence regarding the evolution of access to finance for SMEs in Greece is somewhat mixed. On the one hand, Figure 18 made clear that even though 1 in 2 Greek SMEs declared access to finance to be a significant problem, the situation somewhat improved during the second half of 2017. On the other hand, at the same time, SMEs (Figure 20) as well as banks (Figure 14 in Kraemer-Eis et al. (2017a) for Q4/2017 data) perceived the financing gap to have increased.

The SAFE survey also asks SMEs which factors they believe to be driving the availability of external financing. Figure 21 illustrates how their responses evolved during the last two years. During the second semester of 2017, all factors but one were believed to contribute positively to the availability of external finance. Consistent with earlier periods, SMEs reported a lack of access to public financial support, such as government supported guarantee schemes. Factor that contributed most to finance availability were firm-specific economic outlook, a favourable own capital position and a positive credit history. SMEs also reported that banks become more willing to provide credit.

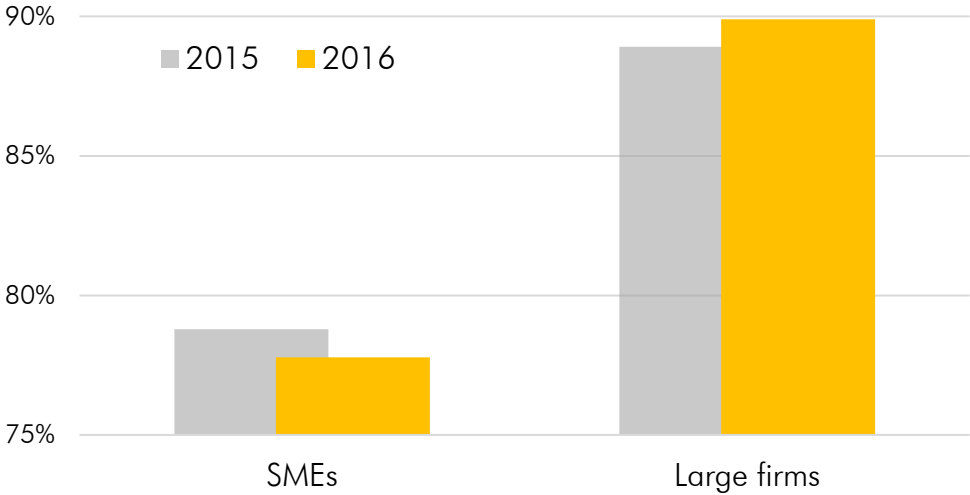
In conclusion, while the general economic outlook improved significantly since the publication of the previous European Small Business Financing Outlook in June 2017, the evidence with regards to the evolution of SME access to finance was rather mixed. Monetary policy further drove borrowing costs for NFCs to record lows, but the interest rate spread between small and large loans remains significant. Despite these favourable evolutions, SMEs in the Euro Area reported a small but significant deterioration in access to external finance, although the situation varied greatly between countries. Finally, Box 2 provides a brief overview of European SME investment activities, based on the EIB Investment Survey.

Box 2: SME investment activity in the EU, a snapshot of the EIB Investment Survey

The EIB investment survey (EIBIS)²⁰ is an EU-wide survey that gathers qualitative and quantitative information on investment activities by both small and larger corporates, their financing requirements and the difficulties they face. It provides a unique insight into investment behaviour of European SMEs. Figure B2.1 illustrates the share of EU SMEs and large firms that invested in 2015 and 2016. In 2016, 77.8 percent of SMEs invested, slightly down from 2015 (78.8 percent). When comparing to large firms, it becomes clear that the European investment landscape is characterised by a significant investment gap between small and larger firms. This is consistent with the evidence provided in this chapter, which shows that SMEs consistently face tougher financing conditions.

Expectedly, investment propensity of SMEs is characterised by a substantial amount of cross-country heterogeneity (figure B2.2). On the left-hand side of the spectrum, we find that just one in two Greek SMEs reported to have invested in 2016, a striking difference of over 40 percentage points with the country at the top of the ranking, Finland, where just 1 in 10 SMEs did not invest. The top 3 is completed by Sweden and Denmark. There is also a clear gap noticeable between countries from South, Central and Eastern Europe on the one hand, and countries from Western Europe on the other.

Figure B2.1: Proportion of EU SMEs that invested



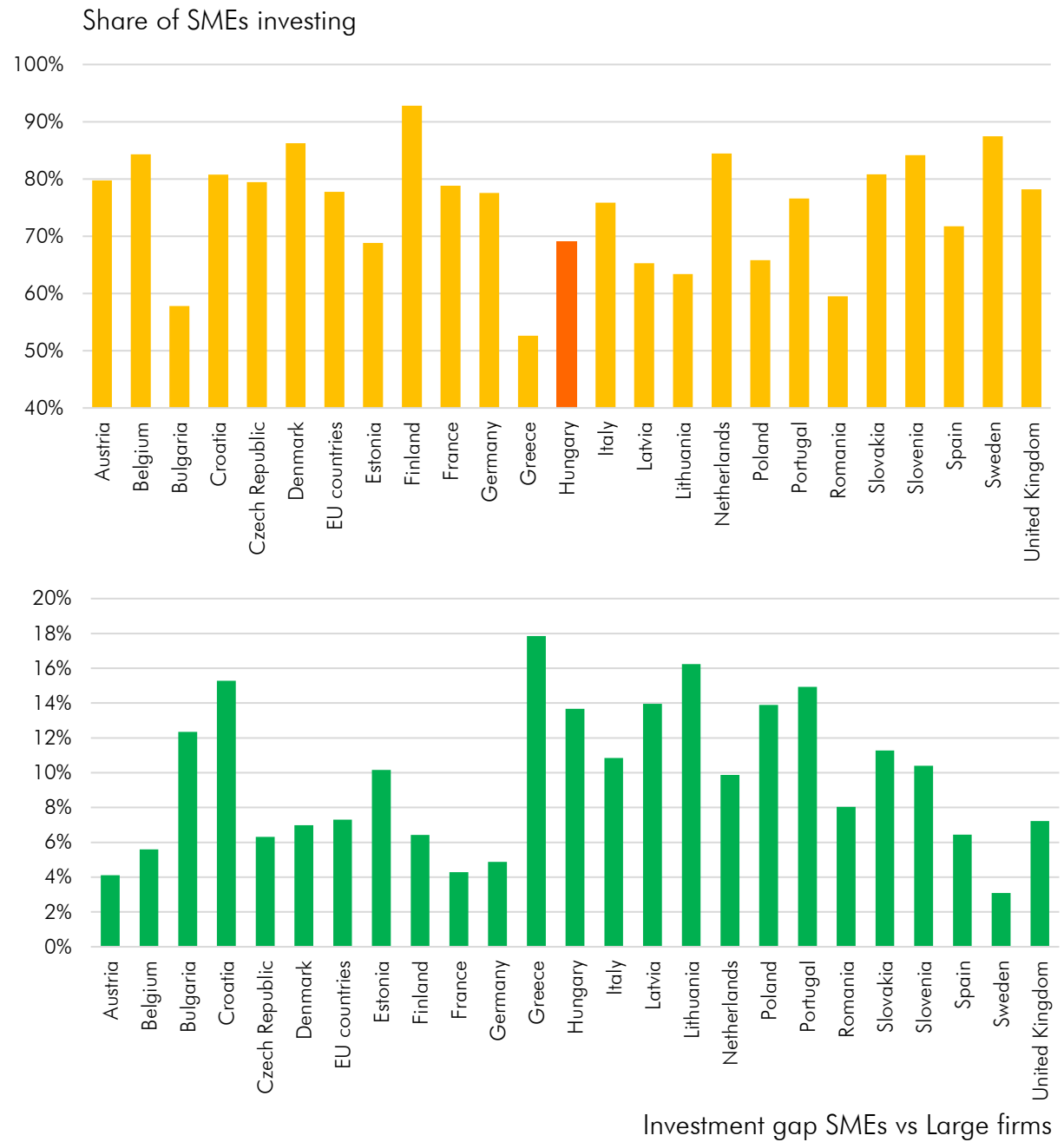
Source: EIBIS

The bottom panel of figure B2.2 illustrates the 2016 investment size-gap: for all countries considered, the investment gap is negative – implying SMEs invest less than large firms. Only in Slovakia is the situation reversed. Overall, it appears that countries in which SMEs have a relatively low propensity to invest also tend to be characterised by a large investment size-gap, which could be indicative of structural market failures on the external financing market, to which SMEs are in general more prone to fall victim to. Figure B2.3 provides some supporting evidence for the claim that the investment shortfall of SMEs is rooted in market failures, as it shows how countries with a high proportion of SMEs that feel financially constraint also tend to have a relatively low share of SMEs that invest.

²⁰ See Bending and Brutscher (2016) for a more elaborate description of the EIBIS.

Box 2 continued:

Figure B2.2: Proportion of SMEs investing and the SME investment gap, by country²¹ (2016)



*The investment gap is defined as the percentage point difference in the proportion of investing firms between SMEs and large firms. A negative number implies a shortfall in SMEs investment.

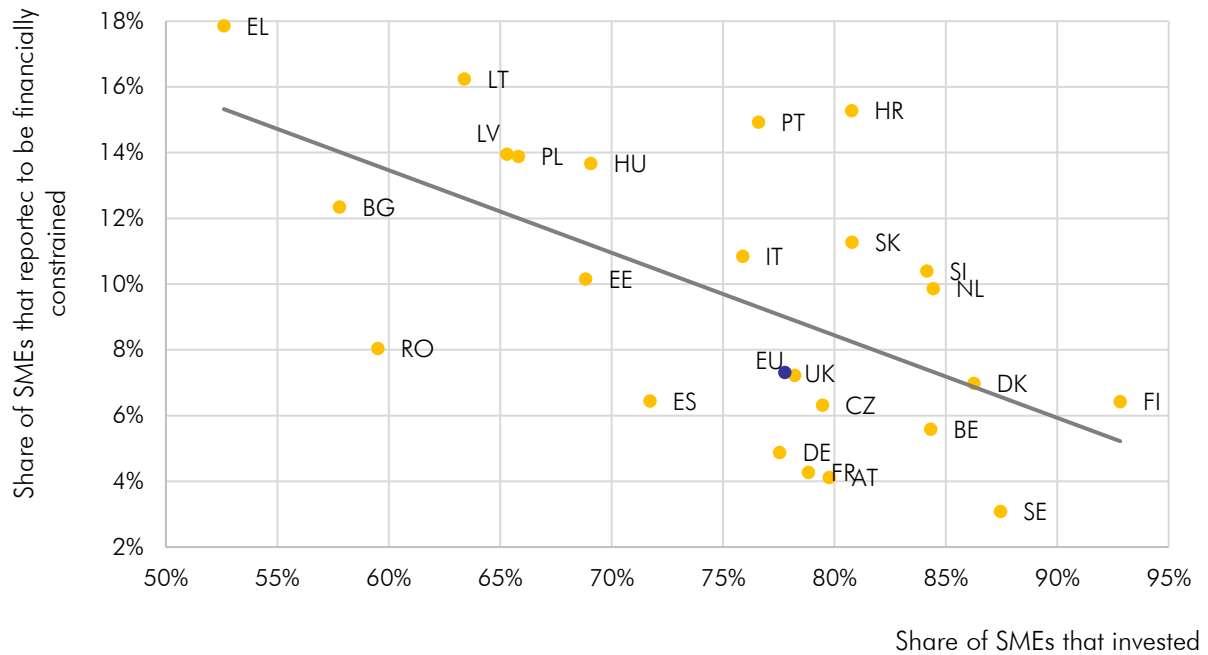
Source: EIBIS

²¹ A representative investment gap could only be calculated for countries with a sufficient amount of responses from both large and small companies. Countries with an insufficiently large sample for either group are omitted from the figure.

Box 2 continued:

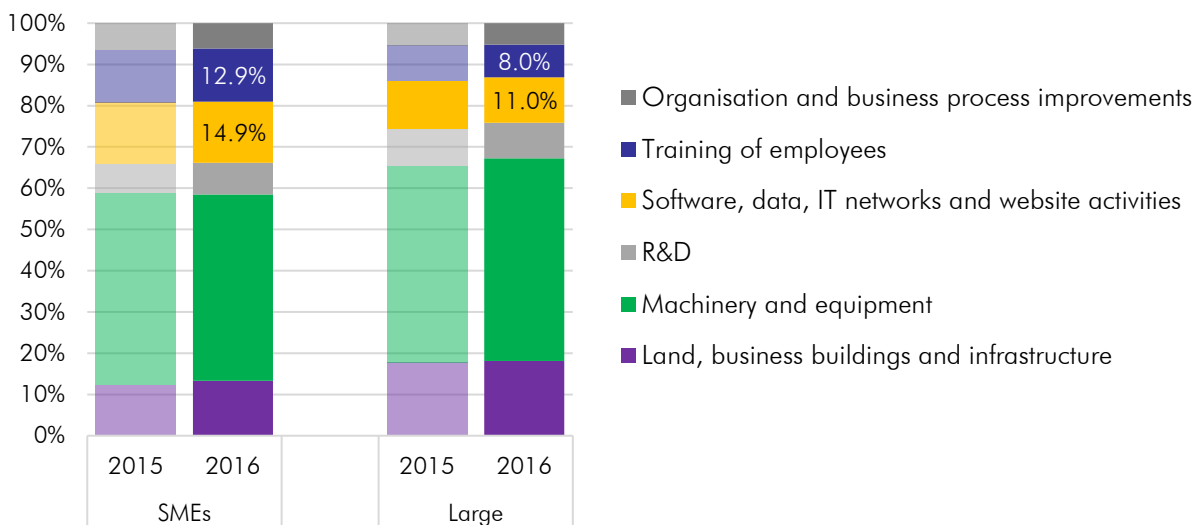
That SMEs tend to invest less is unfortunate, because when they invest, they invest a larger portion of their funds in asset classes related to digitalisation and training of employees (figure B2.4), and less in traditional asset classes like machinery /equipment and building /infrastructure. Enhancing SME access to finance can therefore facilitate countries' transition towards a digital economy, by increasing investment in digitalisation and providing workers with on-the-job training opportunities.

Figure B2.3: EU SMEs' financial constraints vs their propensity to invest (2016)



Source: EIBIS

Figure B2.4: Investment categories, EU SMEs vs Large firms



Source: EIBIS

4 Private equity

Private Equity (PE)/Venture Capital (VC) 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.²²

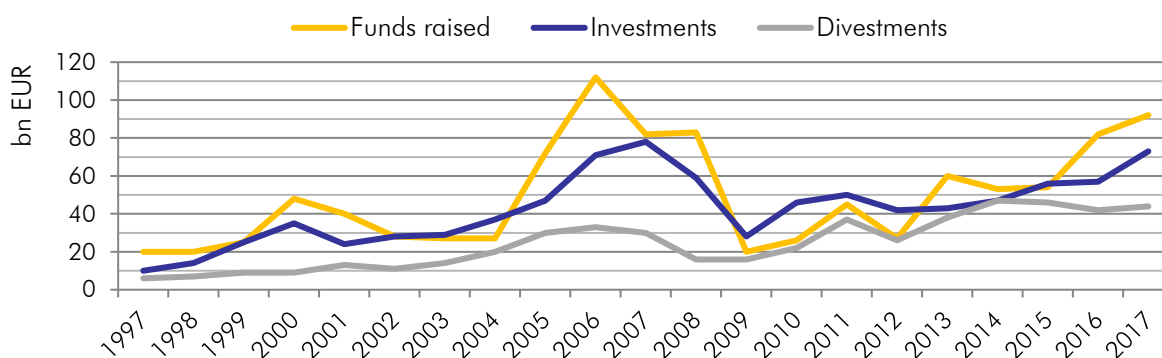
Against this background, it is one of EIF’s aims to play a crucial role in establishing a sustainable VC ecosystem in Europe. We provide an overview of the European PE/VC market activity and prospects in this chapter.

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 22; Box 3 provides more information on the Invest Europe data).

Figure 22: Fundraising, investment and divestment amounts by PE firms located in Europe²³



Source: Authors, based on data from Invest Europe

²² See chapter 5.1.1, Market failure and policy response, for an overview of the rationale for public intervention in SME financing.

²³ 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.

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.

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”).²⁴

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.

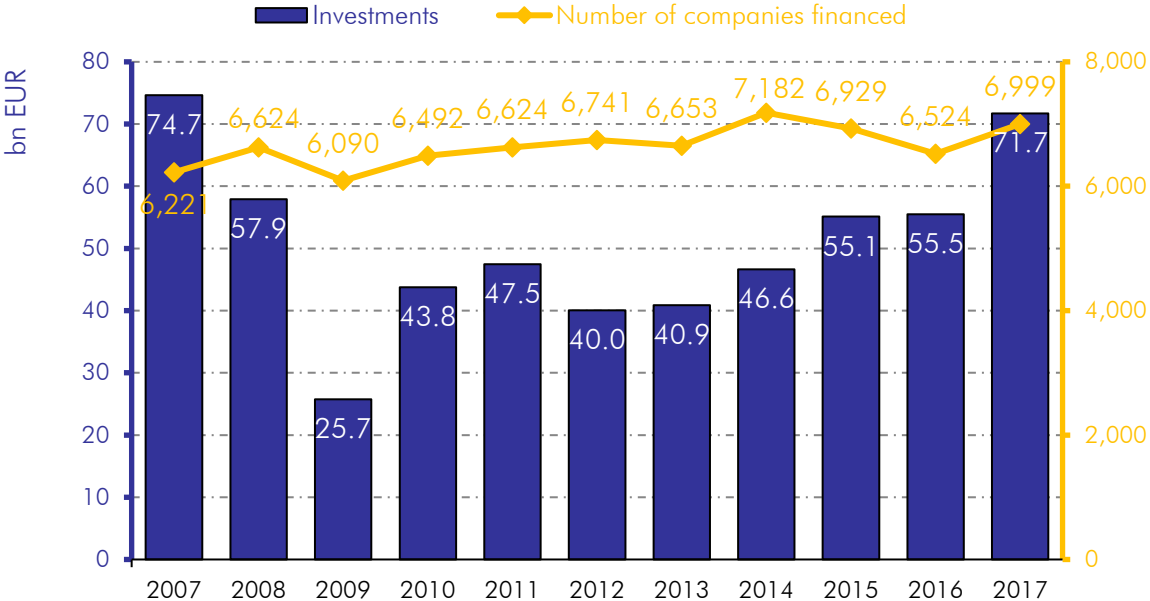
See, for more details, Invest Europe (2017 and 2018a) and the Invest Europe website (www.investeurope.eu).

In 2017, the PE investments surged strongly. PE funds located in Europe (statistics based on the “industry approach”; see Figure 22)²³ 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 23). The number of European companies financed increased by 7% to 6,999.

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). 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 24).

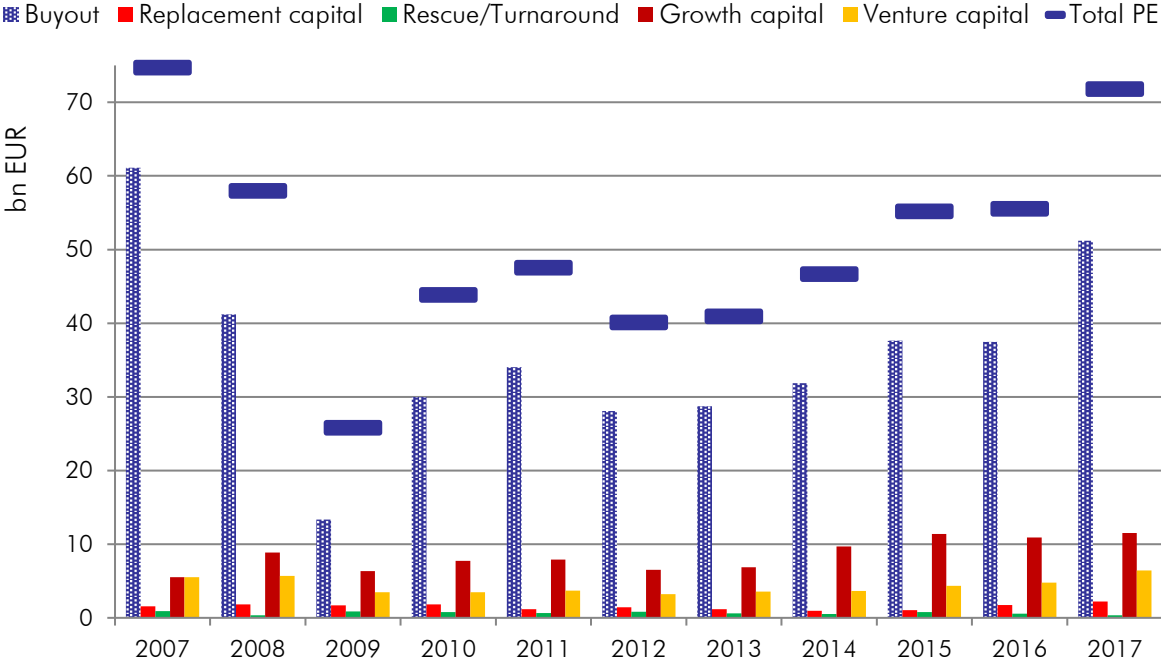
²⁴ Data on the PE and VC market is scarce and sometimes inconsistent with one another when comparing different data bases. This is mainly due to a lack of data disclosure and different data collecting and compiling approaches. Therefore, it is “difficult to paint in definitive terms the level of investment 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”.

Figure 23: 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 24: 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

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.

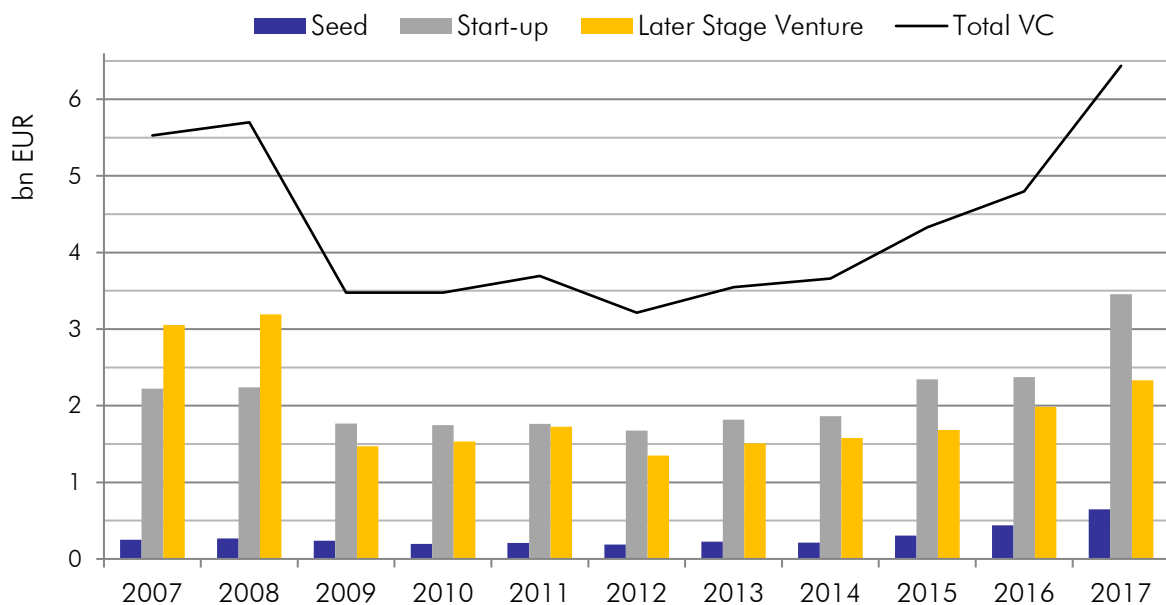
Buyout: Financing provided to acquire a company. It may use a significant amount of borrowed capital to meet the cost of acquisition. Typically by purchasing majority or controlling stakes.

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 25: 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 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 25), 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.²⁵

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 Technology Transfer 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.

With regard to seed investments, 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 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).

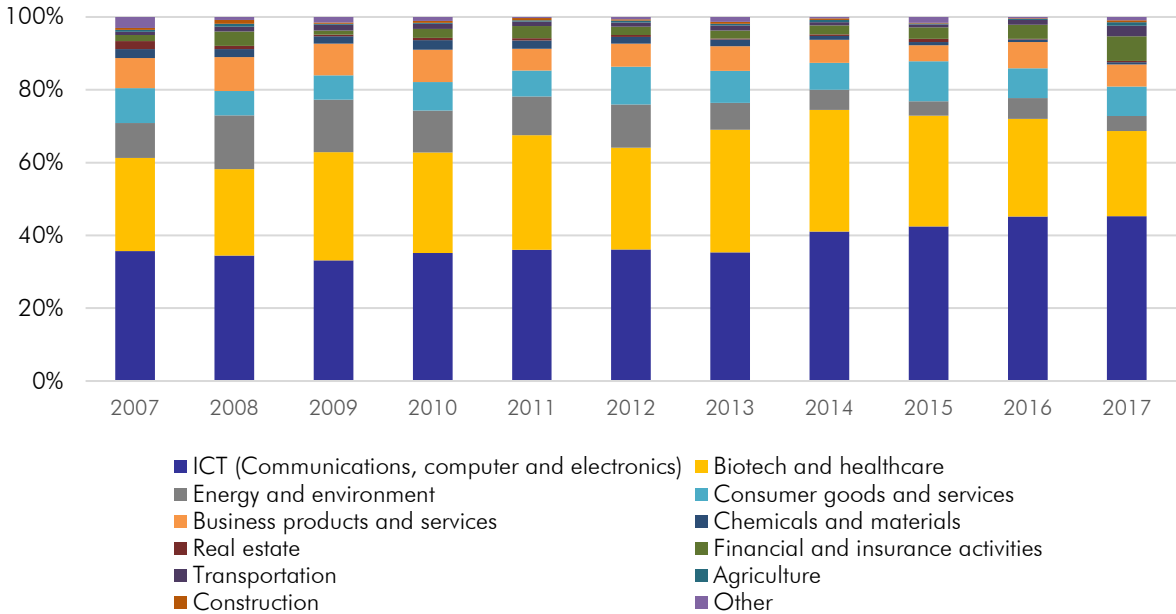
Source: EIF

Developments in venture investment by sector are shown in Figure 26. The relative importance of sectors has a certain stability over time: ICT (communications, computer and electronics) and biotech & healthcare have remained by far the most relevant industries for venture investment in Europe since 2007. Over the most recent 4 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 4 years.²⁶ In Box 4 we look more deeply into a subsector that has received increased attention over the recent past, namely cybersecurity. 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.

²⁵ 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.

²⁶ This development might be due to a re-positioning of traditional Cleantech VCs, who have stopped investing in capital-intensive companies to focus on digital solutions for energy and environment. This new strand of investments are then typically classified under ICT.

Figure 26: 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 13.5% 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., 2017b, for an overview).

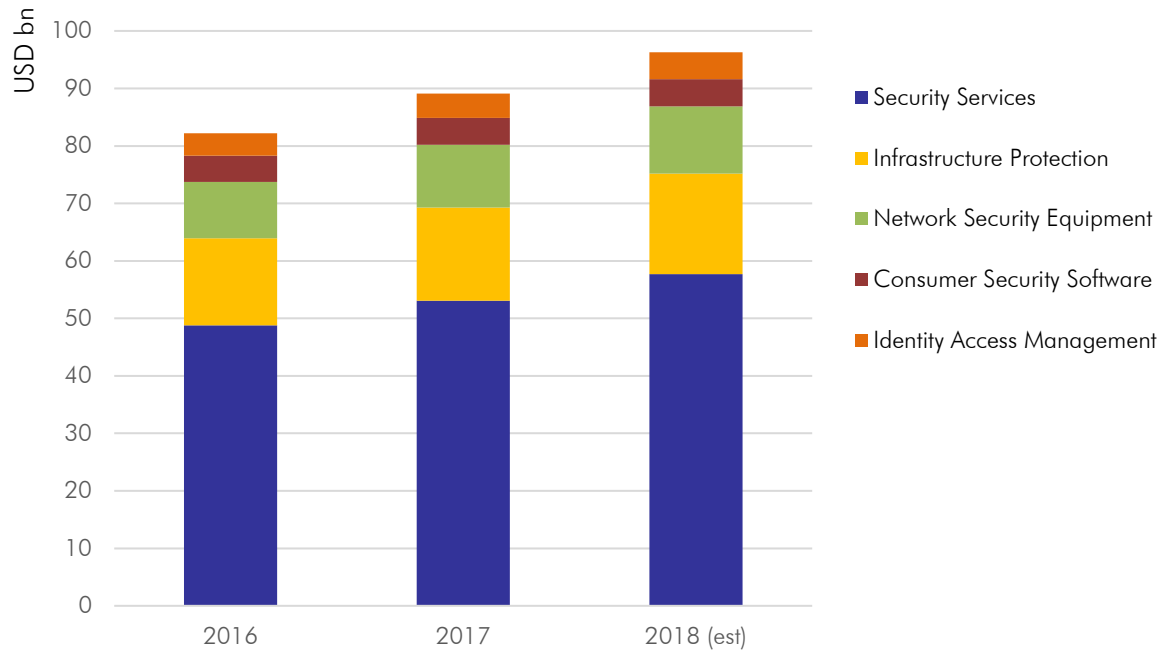
Box 6: Venture capital in cybersecurity

With European citizens and businesses increasingly connected, the last few years have seen a sharp rise in cyber crime. Some notable cases include high-profile data breaches from the likes of Yahoo, Equifax and LinkedIn, election interference by foreign adverseries and fraudulent practices with mobile payments. In a recent report, Cyber Security Ventures (2017) estimated cybercrime related damages to total 6 trillion dollars by 2021. Unsurprisingly, companies and governments world wide are investing significant sums in securing their IT infrastructure against outside threats. Gartner estimates IT security spending for 2018 to reach nearly USD 100bn (Gartner, 2018, see Figure B6.1), of which USD 25bn is expected to take place in Europe (PWC, 2017). The rise in the popularity of new digital technologies, such as the internet of things, mobile payments and autonomous cars, as well as the implementation of the European General Data Protection Regulation (GDPR), will further boost demand for cybersecurity services in the near future.

Cybersecurity firms typically operate in a rapidly changing environment, which creates unique challenges for potential investors. Therefore, Venture Capital has proven to be an important finance source during the rapid expansion of the sector. This was also evidenced by a recent survey among VC funds in Europe (see Kraemer-Eis et al., 2018), which brought to light that 39 percent of European VC funds had at least one investee that operated in the field of cybersecurity (Figure B6.2).

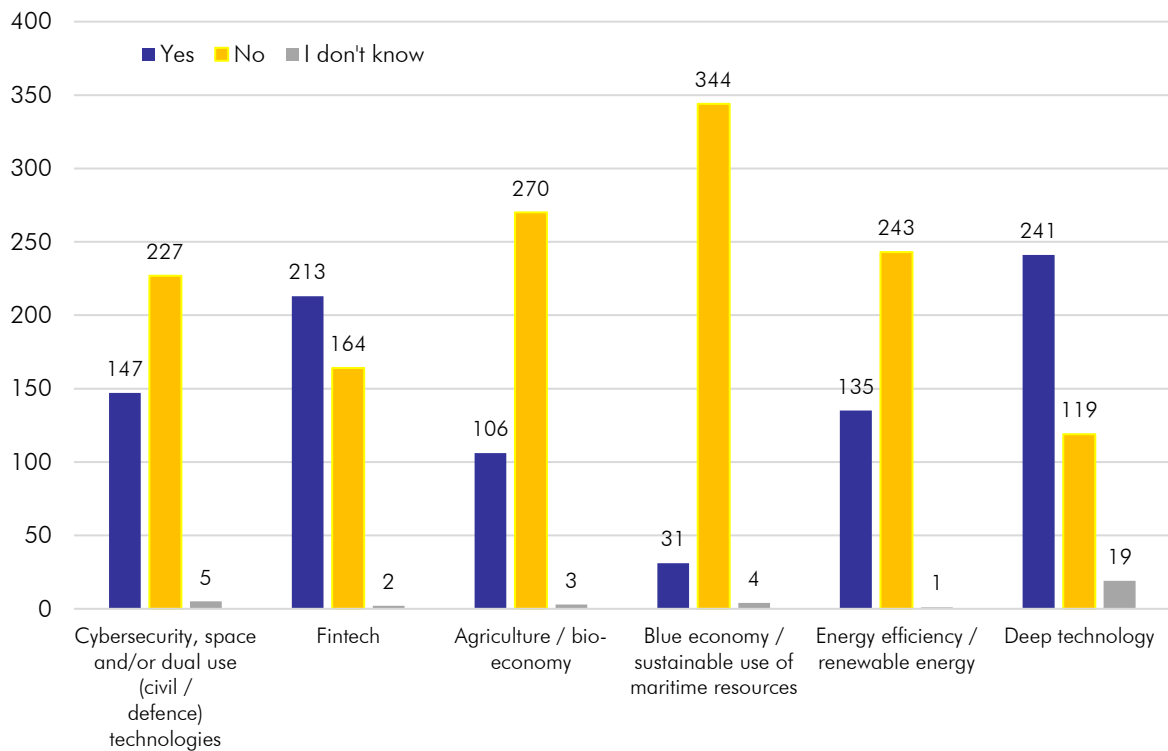
Box 6 continued:

Figure B6.1: Global IT security spending by segment (in billions of USD)



Source: Gartner (2018)

Figure B6.2: European VC firms' portfolio companies (selected sectors)



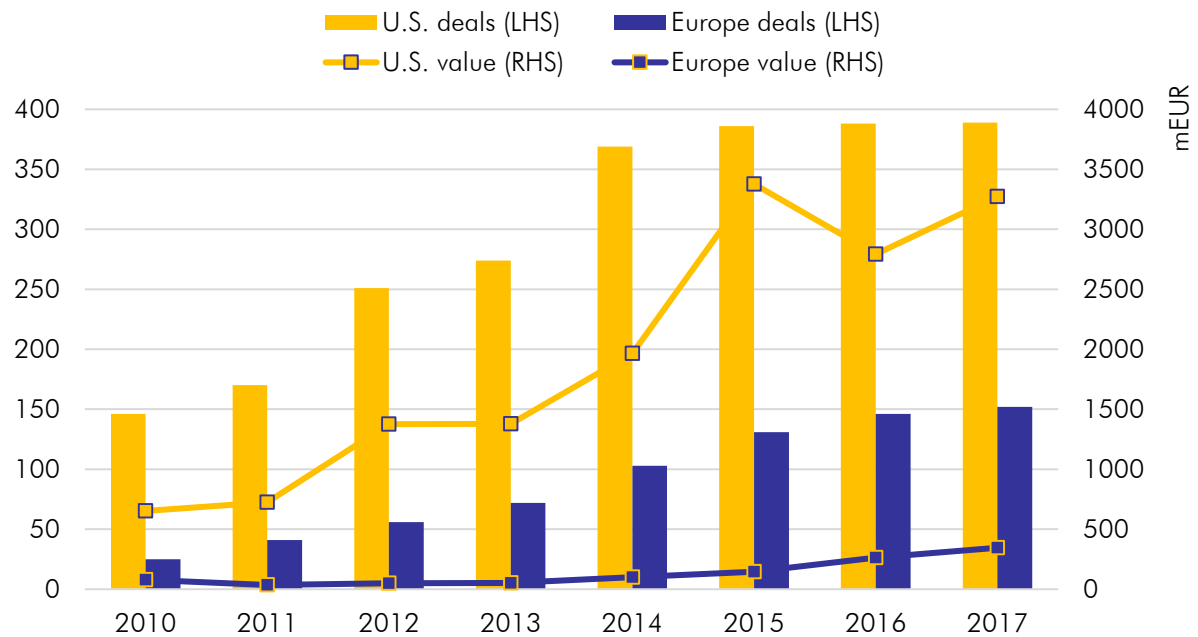
*Question: Does your current investment portfolio include an investee in the area of...?

Source: Kraemer-Eis et al. (2018)

Box 6 continued:

Figure B6.3 illustrates the growing number of cybersecurity VC investments between 2011 and 2017, for the United States and Europe. These two markets combined make up the vast majority of global cybersecurity investments (roughly 90 percent).

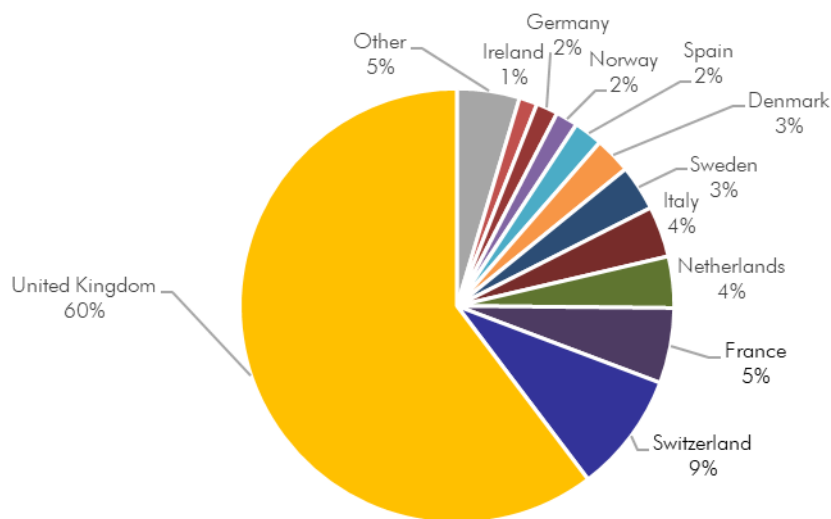
Figure B6.3: VC investments in cybersecurity: Europe* vs the U.S.



* Europe is defined based on geography and the aggregate contains investment made in Latvia, Ukraine, Luxembourg, Cyprus, Greece, Portugal, Romania, Slovakia, Iceland, Poland, Bulgaria, Czech, Republic, Belgium, Austria, Finland, Hungary, Estonia, Russia, Ireland, Germany, Norway, Spain, Denmark, Sweden, Italy, Netherlands, France, Switzerland and the United Kingdom.

Source: Pitchbook

Figure B6.4: VC investments in cybersecurity, by location portfolio companies (2011-2017)



Source: Pitchbook

Box 6 continued:

While the gravity point of the sector still seems to be in the United States,²⁷ the relative importance of Europe in the global cybersecurity VC market has been steadily increasing, from 3.8 percent of global investments in 2011, to just shy of 9 percent in 2017. Within Europe, the UK has received by far the biggest inflow of cybersecurity VC investments during the period considered (60 percent, Figure B6.4), followed by Switzerland (9 percent), France (5 percent) and the Netherlands. The current roll-out of the GDPR is expected to create additional growth opportunities for the European cybersecurity industry, as companies are currently struggling to comply with the complex set of rules.

The strategic importance of cybersecurity requires European policy makers to be vigilant and remove any hurdle that could hamper the development of the sector. This has been acknowledged by the European Commission, who made cybersecurity a corner stone of their Digital Single Market policy measures. It was implemented through a number of initiatives, such as an EU wide cybersecurity agency (ENISA), the NIS directive (Directive on security of network and information systems), a blueprint for rapid emergence response and a single cybersecurity market. For the latter pillar, ensuring access to finance for emerging cybersecurity ventures is of great importance, especially in light of the British dominance in the cybersecurity market and the pending Brexit.

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.

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).²⁸ 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).

Although CVC investment could assist European companies with high growth potential in becoming global leaders, we know that "Europe's corporations are not benefiting from the success of European scale-ups" (Mawson et al., 2017). Only a comparatively small share of high-growth companies'

²⁷ For example, as per June 2018, a total of 7 cybersecurity unicorns have emerged in the industry (CB Insights, 2018), 6 are US-based and one is Chinese.

²⁸ Data on corporate venture capital is scarce, in particular for Europe, but information presented by "Global Corporate Venturing", a media publication and data provider for the CVC industry (<http://www.globalcorporateventuring.com/>) can give a flavour of the market developments. According to those estimates, in 2016, USD 83bn were invested by 965 corporate investors in 1,961 CVC deals worldwide, which would account for two thirds of global venture capital investments, based on a VC definition that is broader than Invest Europe's (Mawson et al., 2017).

finance is provided by CVC investors in Europe. Despite a strong increase over the past years, there are still fewer EU corporations active in CVC than in the US and Asia, where the CVC activity also exhibited higher growth. 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. Moreover, corporate investors have started to supply more financing to European scale-ups than in the past (Go4Venture, 2017; see also Slush & Atomico, 2017).

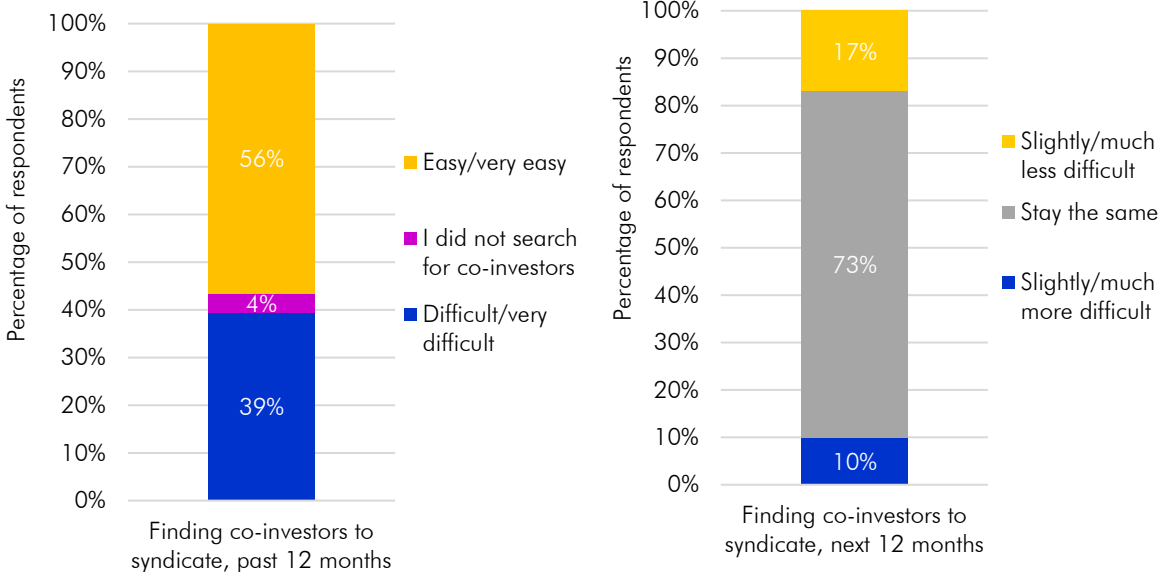
Co-investment

In order to strengthen investment capacities, co-investment can be a promising feature of the PE 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 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 by the majority of European VC GPs, with expectations remaining largely the same for 2018 (see Figure 27; see Box 7 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., 2018). 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 27: 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. (2018)

Secondary market

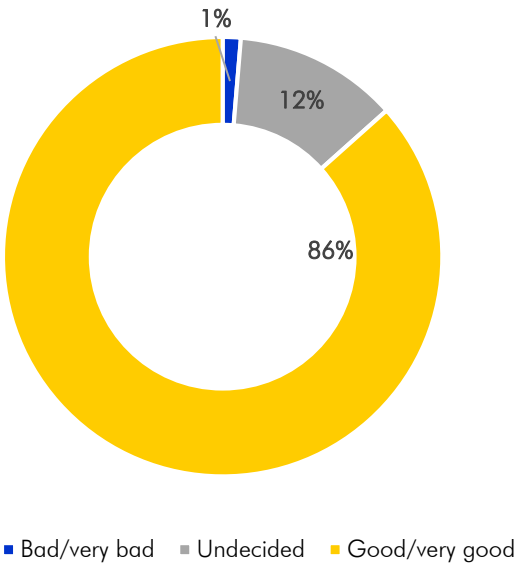
Secondary sales support a PE funds’ portfolio management. After a slight decrease in 2016, the secondary market volume reached a historical record in 2017, led by strong dry powder and less market volatility compared to the year before. Moreover, the market environment in 2016 had led some buyers to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

Recent trends

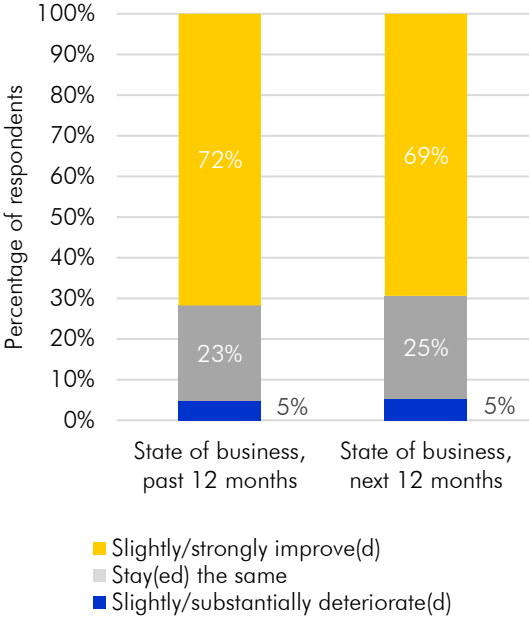
There are indications for an ongoing high market activity. In the EIF VC Survey, a survey among VC fund managers in Europe that was conducted between 7 November and 18 December 2017, respondents perceived their state of business as being positive, with the vast majority of the fund managers reporting an improvement in 2017 and a positive outlook for 2018 (see Figure 28). The number of investment proposals as well as new investments were expected to increase, and a further improvement in portfolio development was expected. See Box 7 for more details about the EIF VC Survey.

Figure 28: VC fund managers' state of business – EIF VC Survey results

a) Current state of business



b) Past and expected future state of business



Source: Kraemer-Eis et al. (2018), based on EIF VC Survey data

The positive outlook for the market activity is underpinned by global levels of “dry powder” capital reaching new highs, which has to be put to work (Preqin, 2018a). However, looking ahead, there are also important challenges for a further market recovery, mainly due to risks related to the global and European structural and political framework conditions (see Chapter 4.5 for details).

Box 7: The EIF VC Survey

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. A recent EIF Working Paper (Kraemer-Eis et al., 2018) summarises the findings of the first two parts, while the third part will be presented in a forthcoming study. The first paper provides a detailed overview of the respondents’ state of business and market activity as well as their general perception of the European VC market. In doing so, this part of the study looks at the current situation, developments in the recent past, and expectations for the future. In the following, we summarise the content of the paper:

Market sentiment

State of business

- The state of business is perceived as positive, with the vast majority of the fund managers reporting an improvement over the last year and a positive outlook for 2018.

Box 7 continued:

Availability of funding and fundraising environment

- A large majority of the fund managers consider that there is a lack of funding to finance VC-supported companies' prospects in general; but fewer believe that this is an issue affecting their own portfolio companies in particular.
- Fewer than half of the fund managers consider the fundraising environment over the preceding year to have been good; with only one third of the respondents expecting an improvement in the subsequent year.
- Finding co-investors to syndicate was perceived relatively easy by the majority of respondents, with expectations largely the same for 2018. However, two fifths of the fund managers did report difficulties in finding co-investors.

Investments and portfolio development

- The number of qualified investment proposals received and of new investments undertaken were both expected, on balance, to increase in 2018.
- Portfolio development during the preceding year was at least in line with expectations, with further improvement expected for 2018.
- Trade sales dominated the exit activity in 2017, while improved exit opportunities were expected for 2018.

Important challenges in the European VC business

- Exit environment, fundraising and IPO market were perceived as the three biggest challenges in the European VC business.
- Recruiting high-quality professionals was perceived as the biggest challenge faced by VC-supported companies; securing financing ranked second.
- The extent of the regulatory requirements applied in the European VC business was largely expected to remain the same, bringing no significant change to the VCs' state of business.

Overall prospects of the European VC market, promising countries and industries for future VC investments

- The overall VC market in Europe and investment activities in the European VC market were both expected to improve in 2018.
- Fund managers were rather confident about the long-term growth prospects of the VC industry in their market and in Europe altogether.
- While Germany, UK and France were perceived as the three most promising countries for VC investments in 2018, the UK was expected to lose ground, in particular to Germany.
- ICT and Life Sciences were perceived as the two most promising industries for VC investments in 2018.
- Alongside traditional industries, the importance of relatively newer sectors such as cybersecurity, Fintech and Deep Technology is also expected to rise in the future.
- Variations across countries and industries do exist in certain aspects of the survey. In particular, the uncertainty surrounding the Brexit implications seems to have negatively affected the market sentiment of UK-based fund managers.

Box 7 continued:

Role of the public sector

- Public support in general is perceived as crucial for the European VC market.
- The VC managers are especially calling for an improved public role to increase investment volumes and target different stages in venture capital financing.
- The vast majority of the respondents (64%) indicated governmental support should be increased for early stage businesses.
- The fund managers are more satisfied with the European programs than with national or regional programs.
- Involvement of pension funds as investors appears to be the most important element that is currently underdeveloped.
- The respondents perceive the readiness of large private institutional investors to invest in European VC to be poor and they appreciate governmental programs that encourage other private LPs to invest.

Policy implications:

- The lack of funding to finance portfolio companies' prospects is still perceived as significant. The challenges relating to fundraising and exit opportunities prevent European venture capital from becoming a more attractive asset class. At the level of the portfolio companies, securing financing is perceived as the second most important challenge (after "recruiting high-quality professionals").
- The VC managers perceive the European VC market as underdeveloped in some parts and not dynamic enough. In particular, the large private institutional investors are not ready to invest in European venture capital. European VC funds are too small to be attractive to large private institutional investors. Moreover, cultural attitudes as regards risk perception play a big role. The European VC market seems to lack risk appetite and LPs state not to be well informed about the track records of VC funds' performance.
- In general, the market needs to raise awareness about the social and economic impact of VC. It needs more success stories, which according to the respondents, can be supported by data-driven research. The market needs to demonstrate that the European VC companies are viable, that they have strong financial returns and successful exits.
- In general, the respondents expressed their appreciation regarding the governmental support programs. To stimulate the ecosystem, public support can play a role in two ways: (i) by tax incentives and simplified and harmonised regulatory systems, and (ii) by the provision of more public resources to increase investment volumes and encourage other private LPs to invest.
- The survey respondents stated that the provision of more public resources could help in order to crowd in large private institutional investors. Moreover, the VC market needs to be more harmonised across Europe. The fund managers called for supporting pan-European funds, more cross-border investments and a harmonisation of legal frameworks and tax systems. It also appears that the full picture of the public VC supply is unknown to many funds. The respondents think that better coordination is needed among the governmental programs targeting the same instrument/product/sector/country and mapping investors would also be helpful.

Box 7 continued:

The insights from the EIF VC Survey will help to further improve EIF's product offer and the European VC ecosystem in line with markets' needs. Moreover, the project forms part of EIF's work to assess the impact of its activities and complements the recent and ongoing quantitative analyses of the economic effects of EIF's VC operations. It is envisaged to repeat this study regularly. Based on this survey, a venture capital market sentiment index (barometer) is in development and will provide the possibility to track the VC market sentiment over time. Additionally, precise policy recommendations are expected to emerge from future waves. As such, this project contributes to establish a sustainable venture capital ecosystem in Europe – a key objective of the EIF.

Source: Kraemer-Eis et al. (2018)

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 business 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, 2017c). 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. 98% 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' funds (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 lower 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 on 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 2017). 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, 2017c). In the following, we use such statistics keeping in mind its shortcomings (see, for example, the related EBAN disclaimer that we show in Box 8). Information on angel investing in different European countries can also be found in BAE (2015).

Box 8: 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 Business Angels 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 EBAN publication comprises information collected through direct surveys from BA networks, national federations and other early stage investors. Additional data were collected from different sources, namely Zephyr, Crunchbase, market reports, EC and national publications, press articles and research papers, as well as other early-stage actors in Europe.

Source: EBAN (2017)

At a European level, the European Business Angel Network (EBAN) reported an increase in BA investment by 10%, compared to the year before, to a record amount of EUR 6.7bn in Europe in 2016 (EBAN, 2017; 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 667m, represents

10% of the whole market.²⁹ The estimated number of investments increased by 16% to 38.2k. The number of BAs is estimated at 312.5k, which represents an increase by 3% compared to 2015. The number of BA networks (BANs) in Europe was at 474 in 2016. 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 1.3% from 2013 till 2016, which demonstrates a certain consolidation in the market as networks became more formalised (EBAN, 2017).

Most of the BA activity within the EU is happening in the UK, Spain, Finland, Germany and France. When compared to GDP, total BA investment amounts are relatively high in Estonia and Finland. 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, 2017c). In some countries BA co-investment funds, tax break or grant schemes do not support or even allow investment abroad (EBAN, 2016, 2017).

In 2016, investments per individual European angel and funding round varied between EUR 10k and EUR 500k with its average increasing by 13% to EUR 22.5k (EBAN, 2017). In contrast, the average amount invested *per company* decreased by 10% to EUR 166k in 2016, following an average annual growth of 6% over the preceding two years. 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 330k USD (EBAN, 2017).

ICT and other technological sectors continued to be by far the most attractive target sector for BA deals (European Commission, 2017c). Within the Tech sector, FinTech, BioTech and MedTech receive most investments given their strong growth and scalability potential (EBAN, 2017). With regard to the investee companies' development stages pre-seed and seed phase companies receive the largest attention.

While co-investments with other BAs are still the most common deal form, the relevance of investments alongside early-stage funds has increased (EBAN, 2017; European Commission, 2017c). 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 equity to BAs and other non-institutional investors for financing innovative companies in the form of co-investments.³⁰ 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, 2016, 2017).

As explained, the invisible part of the market is dominant – therefore, data availability for general statements is limited. However, it can be assumed that BAs behaviour did not move in the same direction like bank lending or venture capital supply during the crisis (OECD, 2017a). Mason and Harrison (2013) showed for the UK that angel investment activity has held up since the onset of the

²⁹ 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 (EBAN, 2017).

³⁰ See www.eif.org/eaf for more information about the EAF.

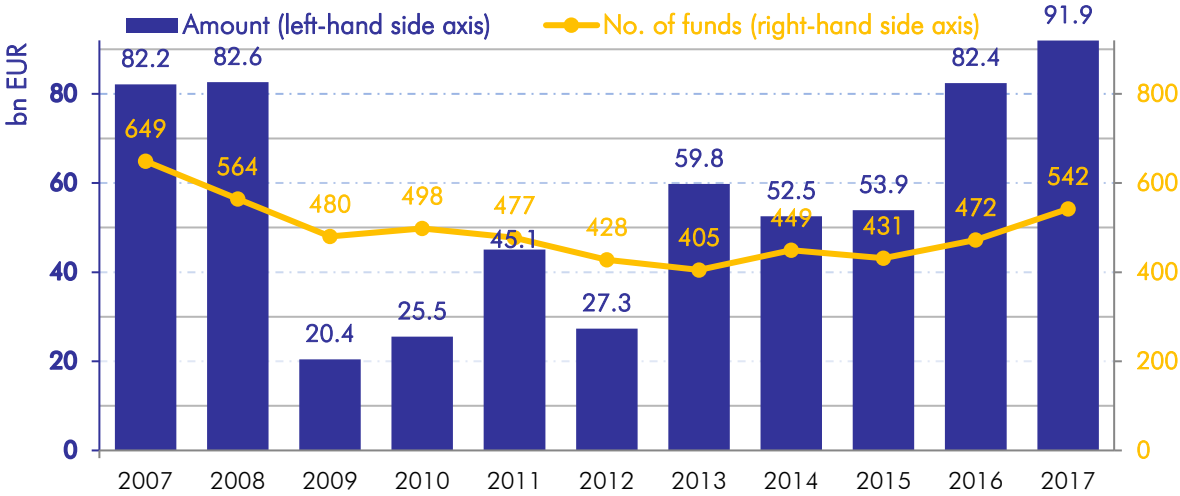
crisis. They emphasise the economic significance of this market segment and underline the need for ongoing government support. However, policy measures have to be well targeted to the specific nature of BA investors. For example, based on the assumption that the supply of BA capital depends on investors who have already been successful entrepreneurs, Hellmann and Thiele (2017) identify a rationale for funding policies (a tax credit in their model) that allow entrepreneurs to retain a larger ownership fraction and create more entrepreneurial wealth in order to increase the future supply of capital and to create a long-term impact on entrepreneurial activity. Findings by Hellmann, Schure and Vo (2015) also suggest that public support for start-up financing should go beyond an exclusive support of formal venture capital, because additional policy measures for angel investors “would reach a different set of entrepreneurial companies that develop outside of the reach of venture capitalists”. Hence, “the central role of BAs is increasingly recognised by policy makers [...], and initiatives to support angel activities have expanded in recent years as part of a broader shift towards policies that aim to make equity-type instruments more widely available for start-ups and SMEs” (OECD, 2016). According to the OECD (2016), public-private co-investment schemes are able to catalyse the private market, “but only if the existing angel market is sufficiently well developed, so that a sufficient number of investor-ready deals can be financed and the government does not have to be overly engaged in matching supply and demand for early-stage equity”. However, despite initiatives for more policy support and better framework conditions, including under the CMU action plan (see 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 29 and Figure 22). 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).³¹ 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).

³¹ Box 9 provides an overview of the Invest Europe fund stage focus definitions.

Figure 29: Amounts raised and number of 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 9: 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.

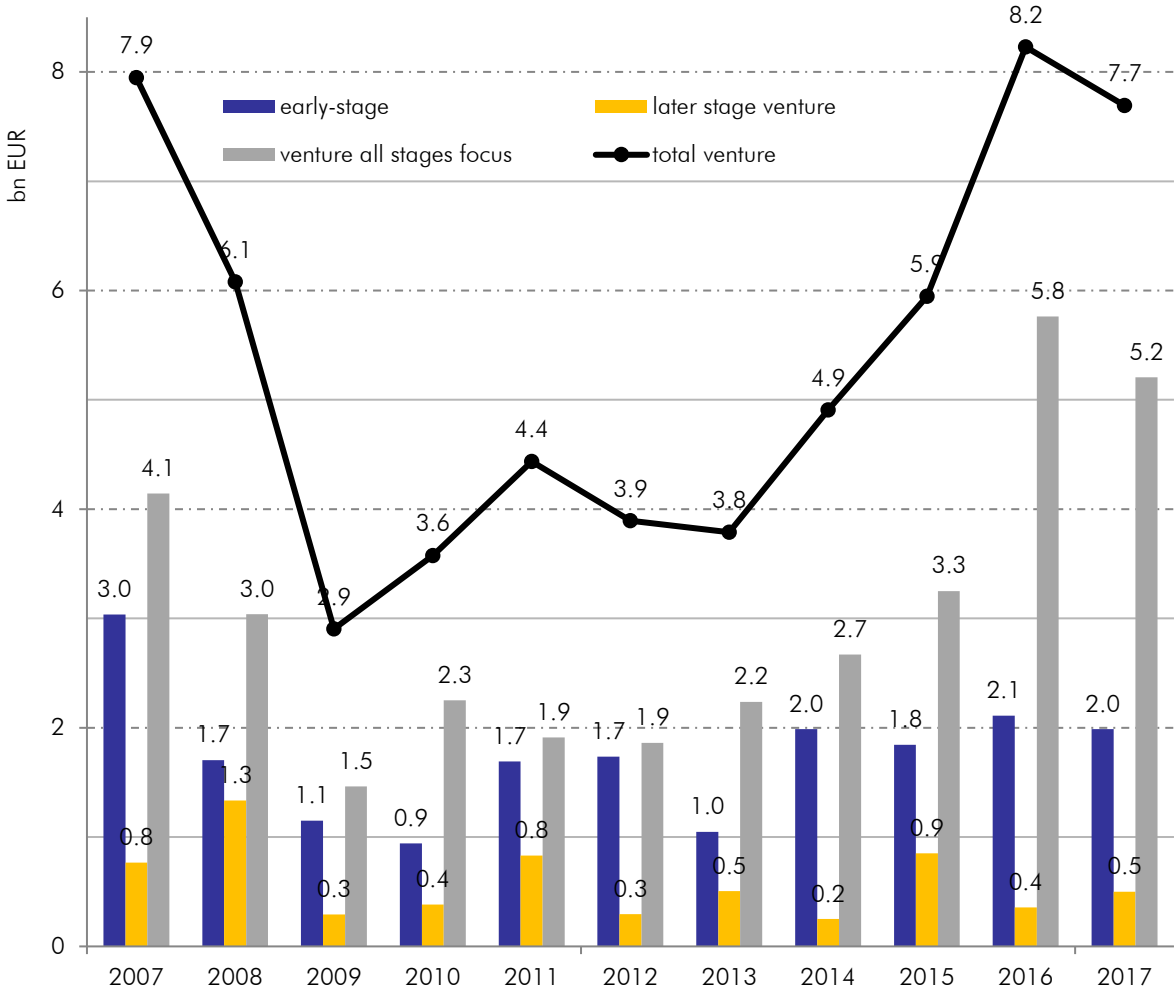
Source: Invest Europe (2018a, 2018b)

In the venture capital segment, fundraising decreased by 7% to EUR 7.7bn (see Figure 30). 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.³² 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 33). 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

³² Invest Europe started publishing fundraising by fund stage focus in 2007.

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.

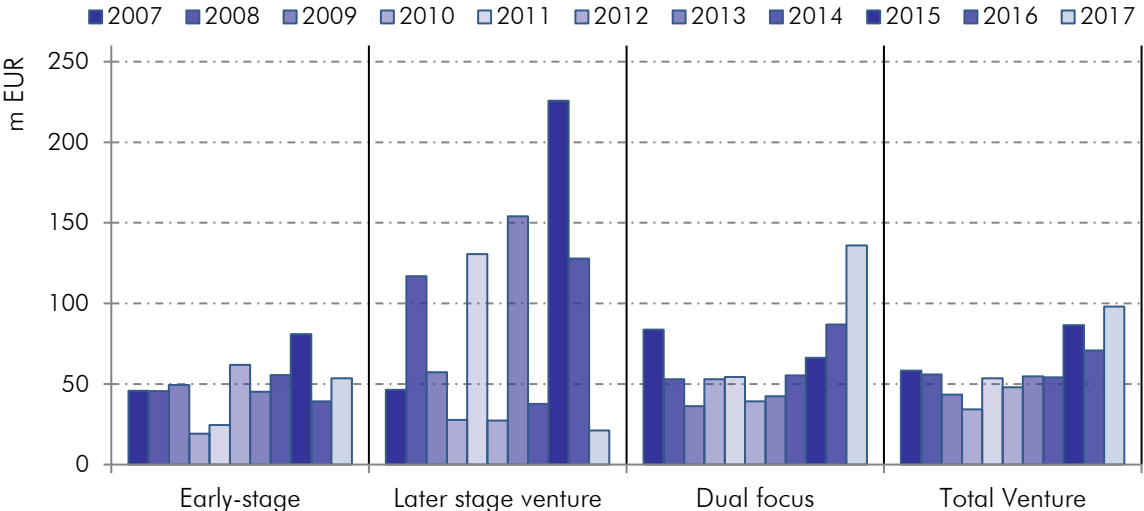
Figure 30: Amounts raised by VC funds located in Europe



Note: incremental amounts raised during period.
 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 31), 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.

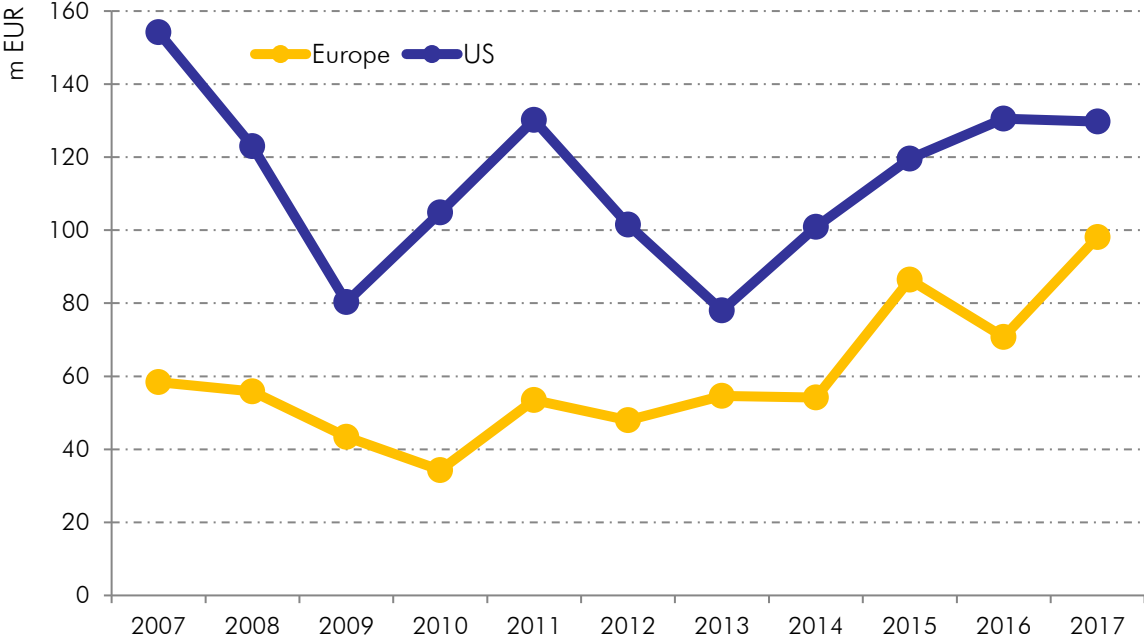
Figure 31: Average VC fund size³³ (at final closing; cumulative amounts raised since inception)



Source: Authors, based on data from Invest Europe

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 32), 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 32: Average VC fund sizes in Europe and the USA

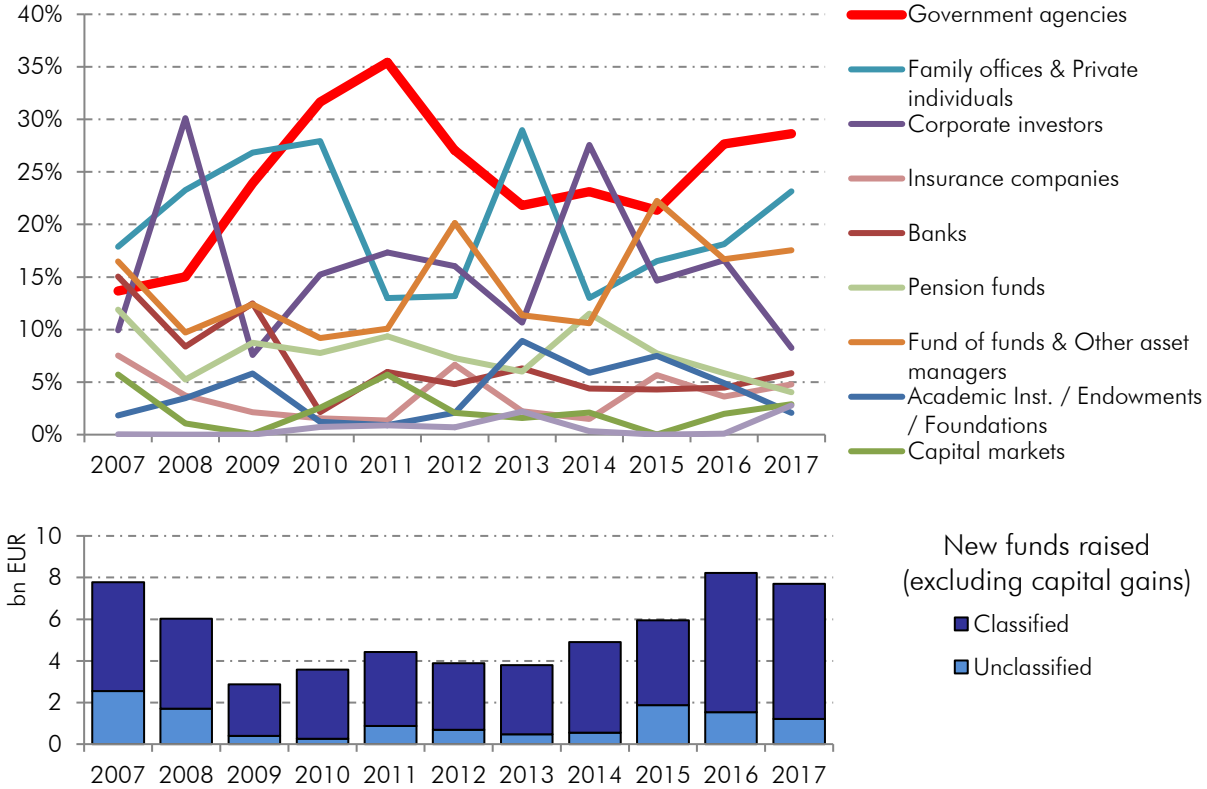


Source: Authors, based on data from Invest Europe and NVCA

³³ 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).

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.

Figure 33: Investor base: Share of government agencies in VC fundraising³⁴



Source: Authors, based on data from Invest Europe

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 33). 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

³⁴ % of incremental amounts raised during year (in contrast to final closings only). Note: Excludes capital gains. Unclassified sources of funds have been extrapolated.

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 achieving 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).

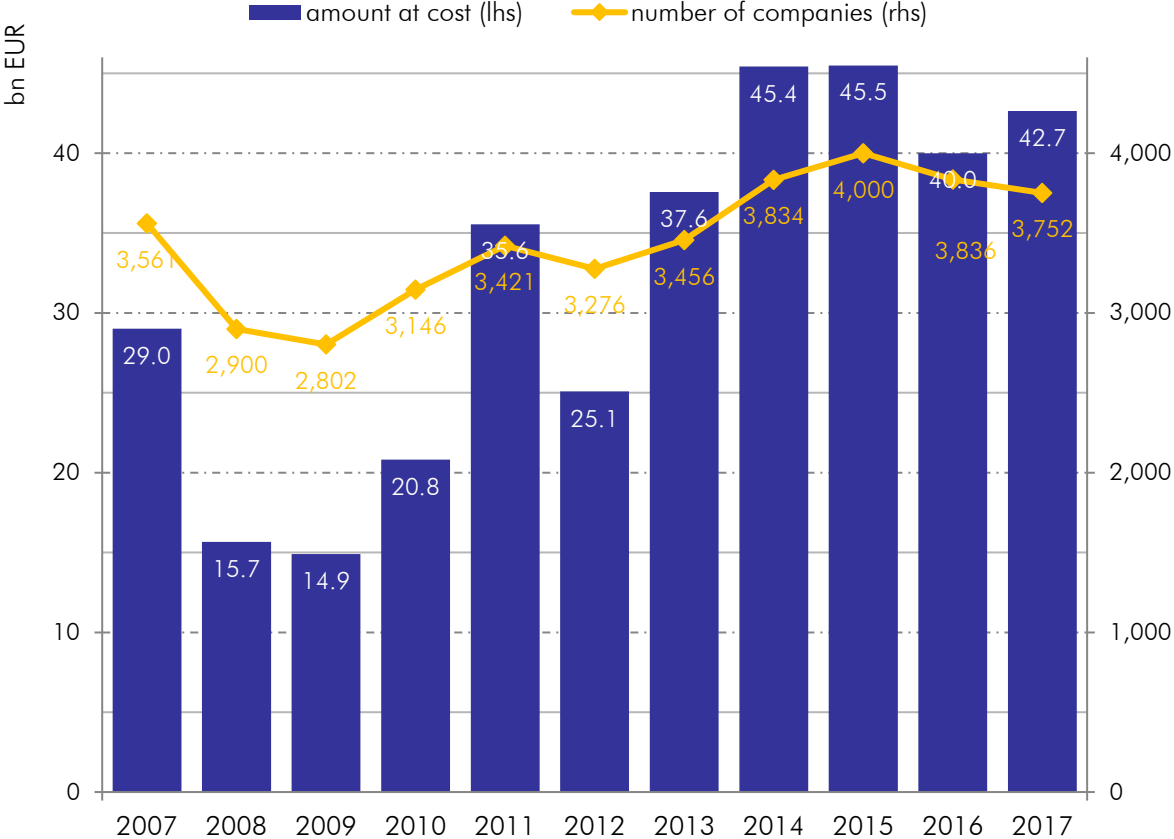
Moreover, EIF is supporting a relatively high number of first-time teams and many VC funds in which EIF invested successfully managed to close at their full target size. It is also important to see that many of the more established VC funds, pillars of Europe's VC market today, would not be there without 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., 2018). 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 22). Following a 12% drop to EUR 40.0bn in 2016, divestments increased again by 7% in 2017 to EUR 42.7bn (see Figure 34).³⁵ The number of companies divested decreased by 2% to 3,752 in 2017.

³⁵ 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.

Figure 34: Total PE divestments (by amount at cost) of European portfolio companies



Source: Authors, based on data from Invest Europe

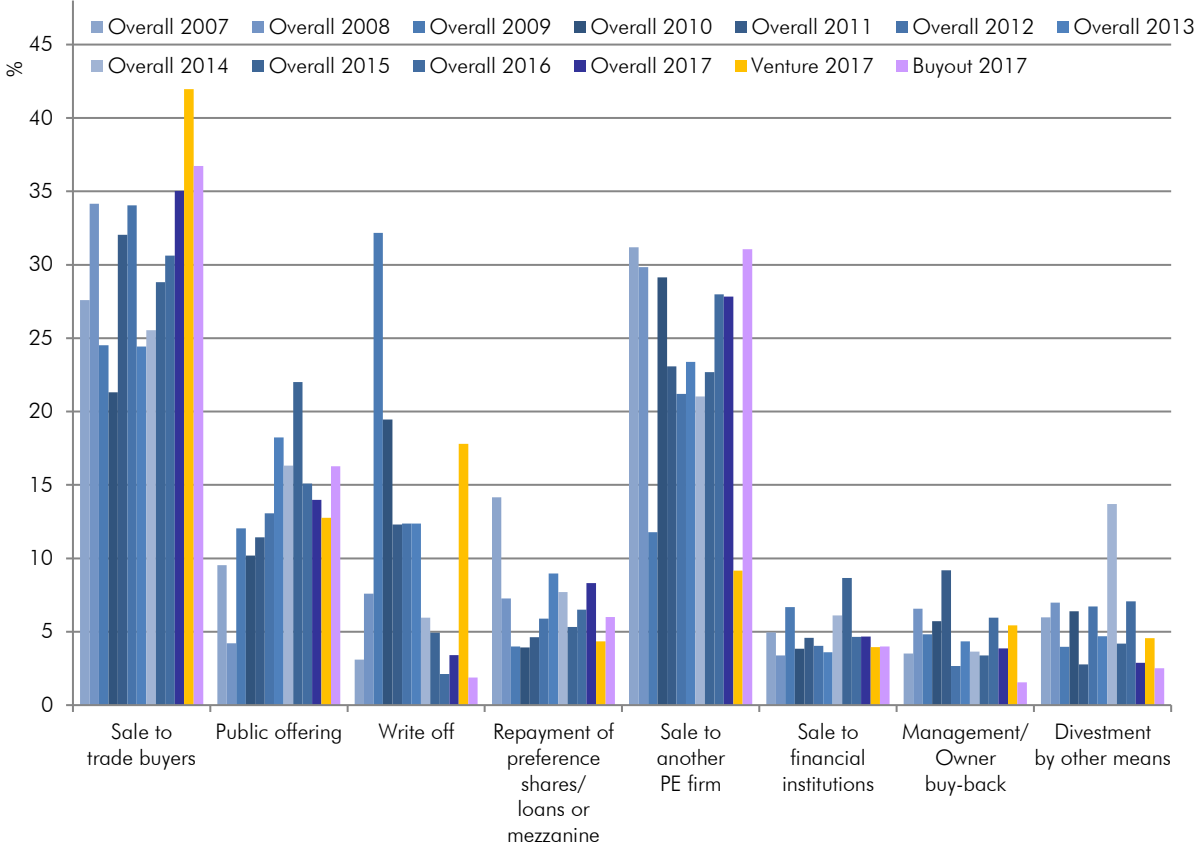
The increase in the total divestment amount in 2017 was mainly due to higher activity in the buyout (+21% to EUR 32.6bn) segment of the market. In contrast, divestments in the venture (-7% to EUR 2.1bn) and growth (-5% to EUR 5.7bn) capital segments decreased.³⁶

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 35). Trade sales and sales to another PE house together account for almost 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 2012.³⁷ 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%).

³⁶ 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.

³⁷ In the Invest Europe data, the category "Public Offerings" includes first divestment following flotation (IPO) and sale of quoted equity post flotation.

Figure 35: Divestment routes (amount divested at cost; % of total)³⁸



Source: Authors, based on data from Invest Europe

Box 10: 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 “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 10 continued:

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

- *Depository institutions:* deposit-taking institutions that accept and manage deposits and make loans, including banks, building societies, credit unions, trust companies, and mortgage loan companies.
- *Contractual institutions:* Insurance companies and pension funds.
- *Investment 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 insight suggests that the number of “fast” exits on the VC side (less than 2 years holding period) have tended to increase over recent years. However, in 2017, excluding debt funds, the ratio of early exits decreased. Early exits might tend to be more difficult to achieve due to potential scarcer opportunities or market expectations by fund managers again justifying longer buy-and-build strategies.

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

Following EIF’s definition (see EIF, 2016), the 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-equity³⁹ and private debt) as alternative sources of long-term finance to established businesses and later-stage technology companies (see Box 11 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 2017 the EIF has observed the continuation of the trend from the past two 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 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 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 shorter timeframe than before. Nevertheless, first time teams are having more difficulties fundraising, leading to capital being more concentrated.

³⁹ Hybrid debt-equity/mezzanine finance is a diverse asset class in between traditional senior debt and equity instruments. According to the OECD (2014b), “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.”

As mentioned in other parts of chapter 4, 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 ample liquidity in the markets. Unsurprisingly in this environment, the Argos Mid-Market Index, which measures every quarter the level of private mid-market company valuations in the Euro Area, increased to a record high in the first quarter of 2018, which was driven by a favourable macro-economic and financial environment as well as a highly competitive field. At the same time, the M&A mid-market activity declined, as high price levels might have discouraged certain buyers (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. Moreover, in a recent Collier Capital survey among LPs, lower mid-market buyouts and growth/expansion capital ranked highest in terms of expected high-quality fund investment opportunities for the coming 3 years among the different strategies targeting PE's developed markets (Collier Capital, 2017).⁴⁰

Box 11: Private debt and debt funds⁴¹

Private debt and 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. 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 in the US, Fintech enterprises. A recent trend visible in the private debt industry is represented by established managers raising different funds offering products with different level of seniority (i.e., senior loans, unitranche, subordinated loans, etc.).

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 without depleting their own resources or increasing their risk exposure. In addition, this allows banks to provide less capital-intensive products and services, which is an added source of revenue, as well as to retain the primary customer relationship.

⁴⁰ Collier Capital's Global Private Equity Barometer is published twice-yearly and intends to give an overview of the plans and opinions of institutional PE investors (LPs) based in North America, Europe and Asia-Pacific (incl. the Middle East). The 27th edition (winter 2017-18) captured the views of 110 PE investors from around the world (of which 40% are based in Europe), surveyed in September-October 2017.

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

Box 11 continued:

Between 2006 and 2016, the global private debt industry nearly quadrupled in size, with assets under management increasing from USD 152bn to USD 593bn. 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. The largest single market is still the US (around 60% of the world total), but Europe exhibits the fastest growth, as its world market share has grown from 10% in 2010 to 30% at the end of 2015. Although the data are not SME-specific, most activities are thought to fund SMEs. 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.

The private debt market which originally arose as an appendage of the PE market is becoming a stand-alone market section. The vast majority 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 ca. 20% during 2017 (Deloitte, 2018) and many analysts expect further increases in sponsor-less deals as this part of the market becomes better known. The private debt market could conceivably compete with more traditional parts of the debt market, although the high levels of fees constitute a barrier to expansion at this time.

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) for more information on this topic.

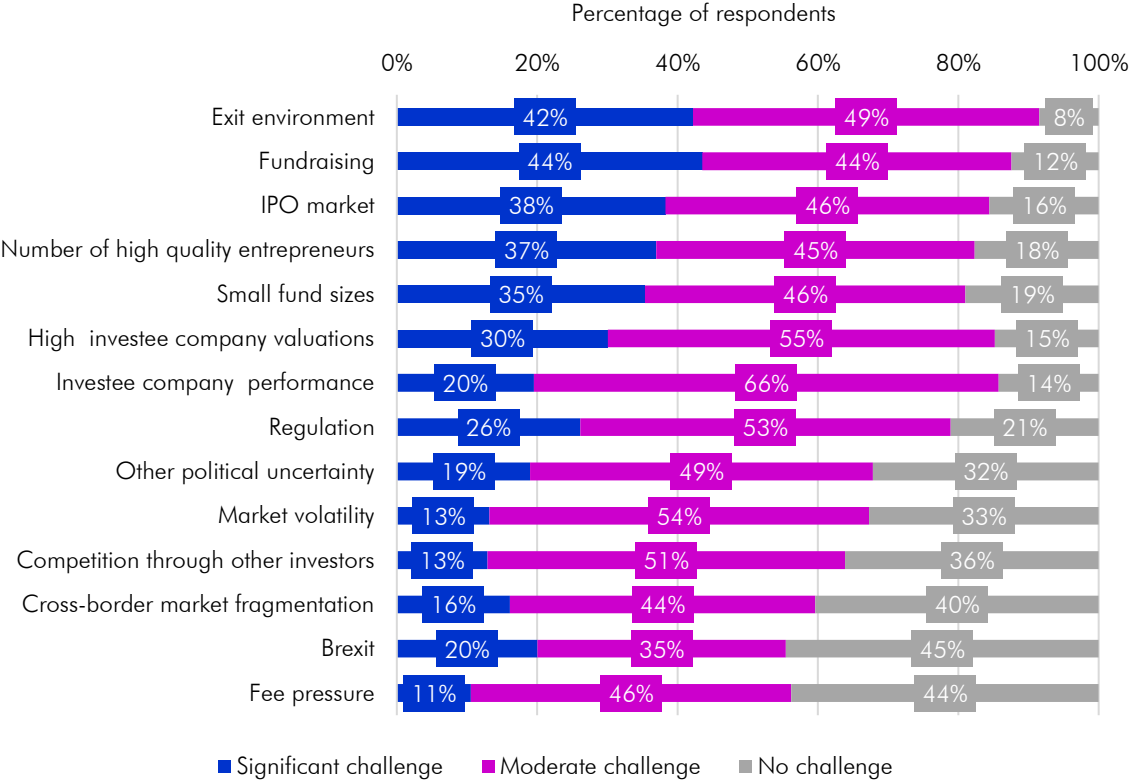
4.5 PE prospects

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 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 some areas, in particular in its commitment to sustainability and the environment, according to a recent international investment decision makers’ survey (Invest Europe, 2017b; overview of key results in Kraemer-Eis et al., 2018). According to the survey, other strengths of the region are the rule of law and corruption prevention, the availability of high-skilled workforce, social and political

stability, transport infrastructure, the regulatory climate and the availability of government incentives. However, the perceptions differ to a large extent by the location of the survey respondents.

Figure 36: 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. (2018)

The recent favourable developments in the PE/VC market might become contested by risks related to the economic, monetary and political environment. According to a recent Preqin worldwide survey among institutional investors, valuations were still perceived as the biggest challenge that investors into VC were facing, followed by the exit environment (Preqin, 2018b).⁴² Warning voices of possible overheating have been uttered since some time (e.g. Go4Venture Advisers, 2015), because of the strongly expansive monetary policy stance that has led to ample global liquidity and still very low interest rates.

European fund managers stated the exit environment and fundraising to be the biggest challenges in the VC business, according to the EIF VC Survey; see Figure 36 (see Kraemer-Eis et al., 2018; Box 7, on page 37) provides an overview of the key results).

⁴² The latest issue of the “Preqin Investor Outlook: Alternative Assets” is mainly based on a series of interviews with more than 550 institutional investors from around the world, of which 30% were located in Europe. The interviews were conducted in December 2017 (Preqin 2018b).

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, Europe has too few established players, which explains why European funding rounds, especially in digital technology growth capital, have typically been led by US VC growth capital funds. However, a number of European growth stage VC funds have recently started leading in funding rounds of, for example, digital economy companies in Europe on their pathway to global category leaders.

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).

Box 12: Venture debt in Europe⁴³

Recently there have been several calls for supporting a more enhanced and larger venture debt market in Europe (see, e.g., AFME, 2017, and Duruflé et al., 2017). Although there is no universally accepted definition of “venture debt” (Duruflé et al., 2017), it is often defined as a form of debt financing provided to VC-backed or early stage companies that lack the collateral or cash flow to access traditional loan financing or that prefer higher flexibility. Venture debt can also be useful in situations where the company wants to purchase new equipment or undertake an acquisition, or when the financial demands are too small to be met in a financing round (Gordan, 2012; Feinstein et al., 2015). In this way, it complements the equity financing of the company, as it provides customised debt to young and innovative companies as an interim financing to grow their operations before having another VC financing round. However, venture debt should not be used as a financing of last resort, debt payment should not be too burdensome for the company and discourage future equity investors (AFME, 2017).

Typically, venture debt comes in the form of “senior debt, collateralised by a company’s tangible or intangible asset and structured as a term loan which could be amortised over time, with warrants for company stock” (AFME, 2017). It is usually provided by specialised banks or funds (Duruflé et al., 2017).

In Europe, the venture debt market is small compared to the U.S. Estimates suggest that 15-20% of VC-backed companies receive venture debt in the U.S., but only 8-10% in the UK and 5-7% in continental Europe (AFME, 2017; Duruflé et al., 2017; EY, 2015). Promoting the venture debt financing route could help enhance the financing of fast-growing and innovative European businesses (AFME, 2017; Duruflé et al., 2017).

Since data about the European venture debt market is sparse, Reddemann (2018) made an attempt to broaden the knowledge-base. For her analysis of the venture debt market she investigated the markets in France, Germany, Spain, Sweden and the UK, using an online research approach. According to the results, the venture debt market grew rapidly from 2010 to 2017, with the UK, especially London being the hotspot for venture debt (ranking highest in terms of deal amount, investment size and number of venture lenders). In terms of sector, IT companies attract the highest venture debt amount, with deals accounting for two thirds of the total market. Venture lending providers in Europe include some players from the US, such as the Silicon Valley Bank. Other initiatives of funds raised by managers such as Harbert and Kreos will certainly lead the way to attract additional capital to the European market and motivate additional venture debt providers to enter the EU market so that it could be expected to converge towards the US benchmark (i.e. >10% of VC-backed companies). Moreover, the EIB Group ranks among the largest European venture debt providers.

A comparison of PE statistics confirms that the gap between the VC markets in the US and in Europe is particularly high at the later stage (AFME, 2017; Echikson 2017). In the growth capital segment, the amounts invested in the US exceed those in Europe by 3 times. These differences are also reflected by substantial distinctions in fund and deal sizes: while at the start-up stage there is relatively little difference in terms of fund size (US vs Europe), US companies are funded by significantly larger funds at the scale-up stage. Furthermore, in the period 2007–2015, the average VC-backed US company received five times higher amounts than its EU counterpart, i.e. EUR 6.3m compared to EUR 1.3m (AFME, 2017; 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, reinvigoration of tech IPOs, improved markets for secondary shares and avoiding to sell companies too early. (See Box 12 for a

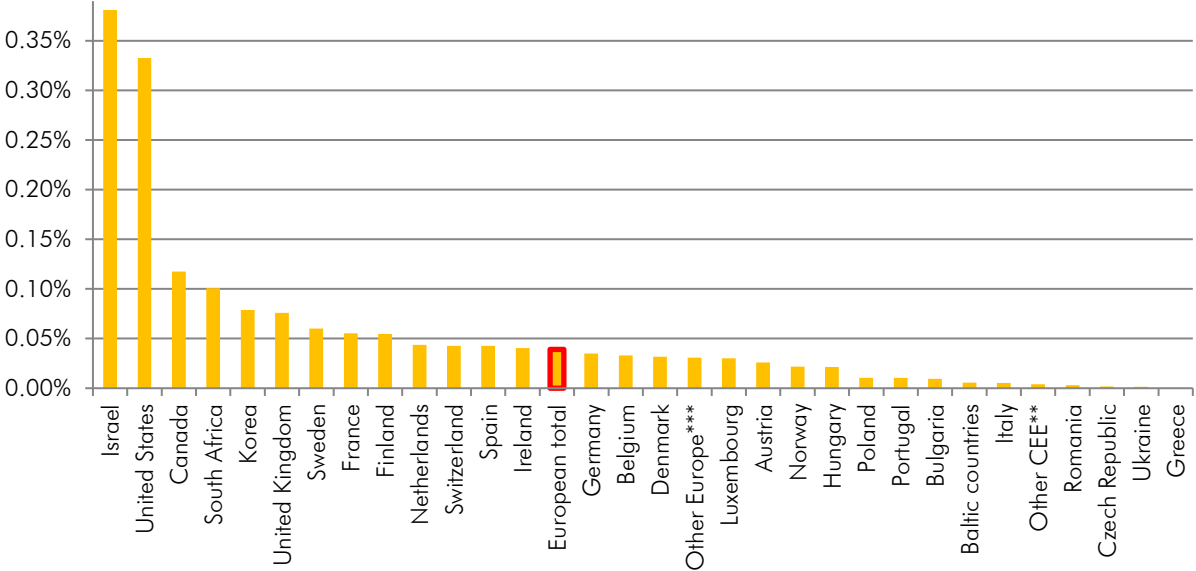
⁴³ This text box is mainly based on Kraemer-Eis et al. (2017) and Reddemann (2018).

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.)

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 37 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., 2018).

Figure 37: VC investments by country of portfolio company, % 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)⁴⁴

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

⁴⁴ 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 Ex-Yugoslavian countries that are not part of the EU).

hubs: 23% of these remains in the hub, 40% reaches out to other in-country locations and the remaining 37% travels beyond the national frontier (Kraemer-Eis, Signore and Prencipe, 2016). Since higher cross-border investments can be interpreted as the signal of a deeper integration of the European VC market, EIF may hold a vantage point in fostering the consolidation of a 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. The difficulties for young innovative companies to access seed and early stage finance increased during the crisis (Wilson, 2015b; Nepelski et al., 2016). This supports a view that public backing is needed in order to strengthen the market. 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. Indeed, an Unquote Intelligence (2014) survey found that “public money remains absolutely critical to the European venture industry and is likely to remain so for the next five years”, and this has been particularly true for new funds, as most public funding bodies support first-time funds, while this is true for only approximately half of private investors.

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. 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 VCs⁴⁵ 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

⁴⁵ 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.

investment.⁴⁶ 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 (2014) show a higher likelihood of a positive exit for companies backed by independent and governmental VCs together than for companies that are backed by one of the two investor groups only. Moreover, Bertoni and Tykvořá (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-up⁴⁷, SME and mid-cap landscape, to foster the recovery from the financial and economic crisis and 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 area of instruments adapted to diverse market conditions in the various geographies of the EU. Large-scale venture initiatives need however to be associated with the knowledge of how to grow businesses to larger scale to make a desired impact on the EU’s competitiveness.

Measures aiming at regulatory simplification, harmonization 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 4.1). One of these measures is the “pan-European passport” for VC investors, which aims at ensuring that VC funds established in any EU Member State can invest freely in other Member States, and its extensions

⁴⁶ Dubovik and Steegmans (2017) provide a brief overview.

⁴⁷ 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).

and complementary measures under the initiatives related to the Capital Markets Union (see Kraemer-Eis and Lang 2017 for an overview).

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

In times of scarcity of private capital, the temptation grows to construct policy instruments that substitute the private sector. In fact there is a need to use public sector resources primarily to mobilise private sector capital, as clearly demonstrated by the leverage factor built in the Investment Plan for Europe (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 and pilot initiatives. This will contribute to the EC’s “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.⁴⁸ 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.⁴⁹ 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.

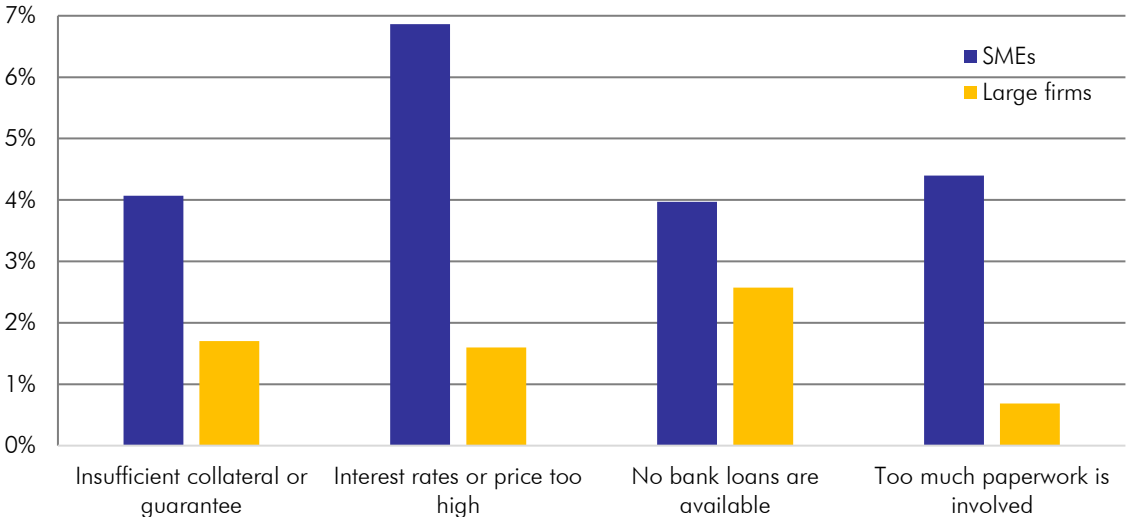
Credit rationing is particularly prevalent in the market for lending to SMEs, for two reasons. The first reason relates to their lack of collateral: the availability of collateral provides a way for borrowers to directly eliminate the asymmetric information problem. Pledging collateral in a loan-agreement 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

⁴⁸ See OECD (2018b) for an overview of market failures in SME lending and mitigation techniques.

⁴⁹ 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 Figure 38). 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 38: Reasons why bank loans are not a relevant financing source for Euro Area SMEs (HY2/2017)



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.⁵⁰ 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

⁵⁰ 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 commerce and 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,⁵¹ 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).

⁵¹ 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.⁵² 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. Schich

⁵² 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.

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).⁵³

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.⁵⁴

5.1.2 Market size and activity in 2017

Market information concerning CGSs in Europe is gathered by AECM, the European Association of Guarantee Institutions.⁵⁵ In the following, we provide information about the use of guarantees in countries with at least one AECM member to show the state and development of this important market segment.

According to the OECD (2013), guarantees are particularly relevant “in those countries where a network of local or sectoral guarantee institutions is well established”. Key figures, based on *outstanding guarantees* on SME loan portfolios (as at 31.12.2017 or latest available data), are presented in Table 3 (see page 69). In terms of total *volumes* of guarantee activities, the core countries are Turkey (44bn), Italy (EUR 34.2bn), France (EUR 21.8bn), Germany (EUR 5.5bn) and Spain (EUR 4bn).

Italy has the highest total *number* of outstanding guarantees (1,055,010), followed by Turkey (974,126) and France (585,900). The total number of SME beneficiaries in the portfolios of the AECM members amounts to 2.97m, nearly half of which (more than 1.3m) are located in Italy.

Latvia granted the highest average size of outstanding guarantee in portfolio (EUR 159.4k), followed by Austria (EUR 154.2k), Germany (EUR 125.2k) and Croatia (EUR 121k). Italy and France, despite exhibiting two of the highest volumes of outstanding guarantees in portfolio, have relatively small average sizes of guarantees (EUR 32.4k and EUR 37.3k, respectively), reflecting the presence of large populations of SMEs borrowing small loans in their portfolios.

In 2017, the guarantee activity of AECM members has, on average, considerably increased compared to the year before. The total volume of outstanding guarantees in portfolio exhibited a remarkable increase of more than 47% in H2/2017 compared to the same period the year before.

⁵³ A short summary of this methodological approach is provided in Kraemer-Eis, Botsari, Lang, Gvetadze 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.

⁵⁴ See for more information the EIF website www.eif.org.

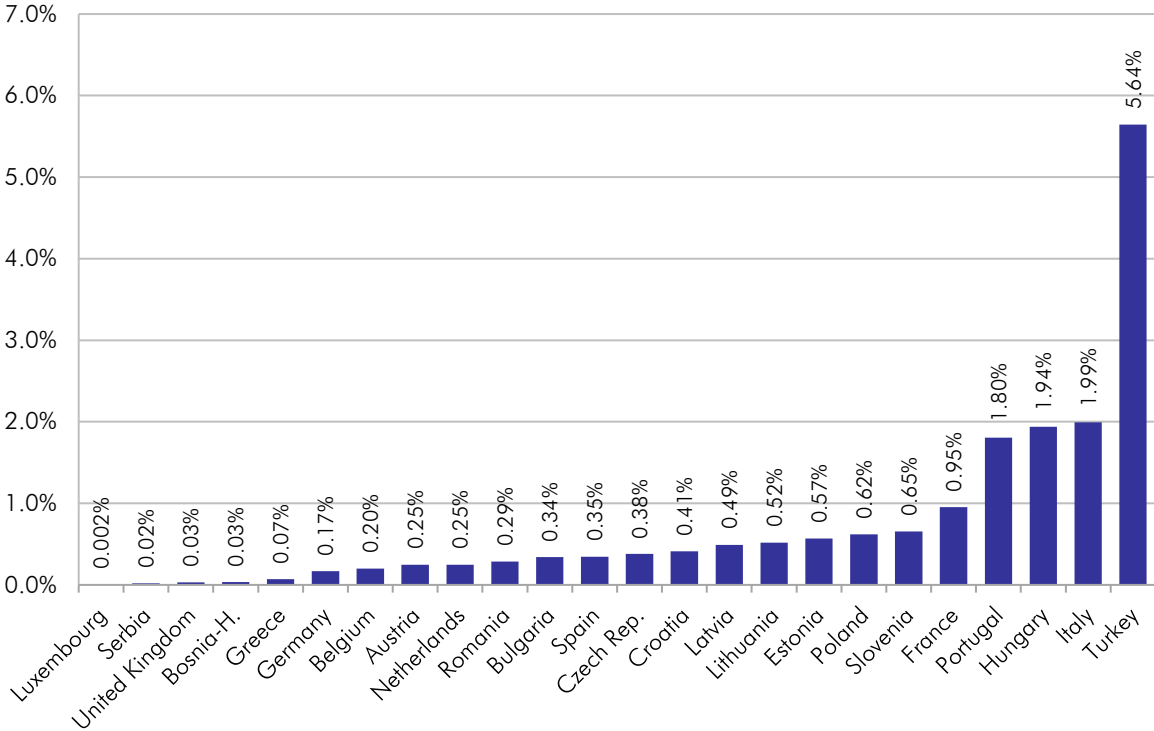
⁵⁵ We thank our colleagues from AECM for their support. AECM has currently 42 members in 22 EU Member States plus Bosnia and Herzegovina, Russia, Serbia and Turkey. In the AECM member countries, the AECM members cover all or almost all SME guarantee activity. Some AECM members are national associations or networks and thus have their own member organisations. AECM has purely private, mutual, public, and public-private mixed members. Source: AECM.

It needs to be noted however that this trend 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 in one year alone. Excluding the statistics of this AECM member, the increase in outstanding guarantee volumes in H2/2017 is more moderate, but still at a significant 5.6% compared to the previous year (H2/2016) or 3.9% compared to the previous semester (H1/2017).

Apart from Turkey, the highest growth rates on an annual basis were recorded in Lithuania (+71.7%), Hungary (+25.7%), Poland (+22.7%) and Luxembourg (+18.7%). By contrast, the outstanding guarantee value decreased the most in Bosnia-Herzegovina (-35.4%), Greece (-33.6%), Serbia (-25.2%) and the United Kingdom (-10.5%).

As shown in Figure 39 and for the reasons outlined above, Turkey leads the ranking in terms of the relative importance of guarantees compared to the value of economic activity (5.64 percent of GDP). The top three is completed by Italy (1.99 percent) and Hungary (1.94 percent). Relative to GDP, Turkey also recorded the highest amount of *new guarantees* in 2017 (6.10 percent,⁵⁶ see Figure 40), followed by Hungary and Portugal (1.67 and 0.64 percent, respectively).

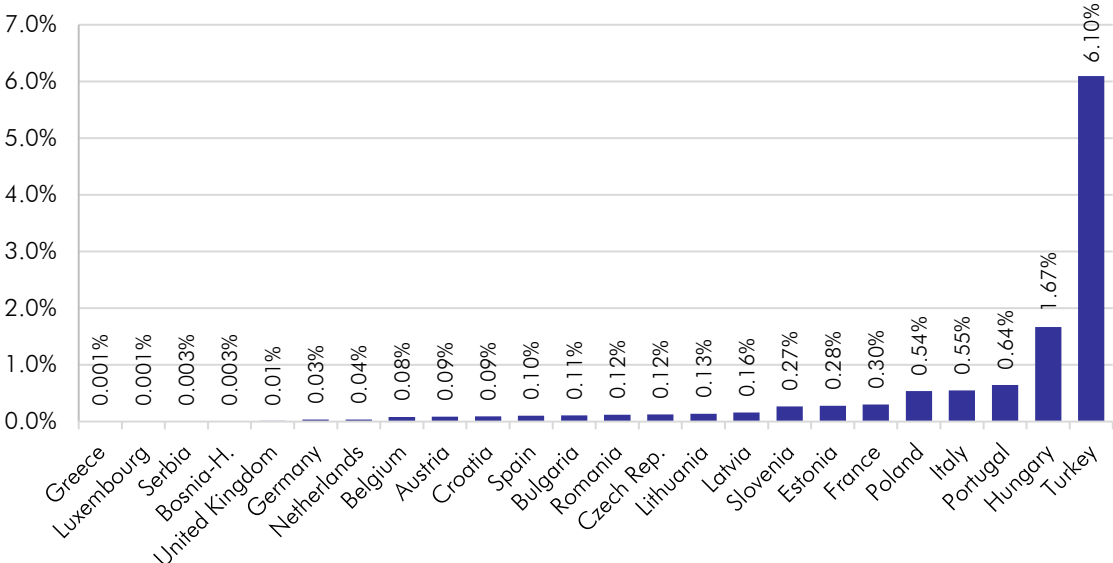
Figure 39: Volumes of outstanding guarantees in portfolio scaled by GDP*



*As at 31.12.2017 or latest available data.
Sources: Authors, based on data from AECM, Eurostat and World Bank

⁵⁶ For Turkey, the importance of guarantees relative to GDP is greater when new guarantee activity is considered. This is because new guarantee volumes in Turkey for the full-year 2017 exceeded the volume of outstanding guarantees in portfolio for the same period (see Note 3, Table 4).

Figure 40: Volumes of guarantees granted in the full-year 2017 scaled by GDP*



*As at 31.12.2017 or latest available data.
 Sources: Authors, based on data from AECM, Eurostat and World Bank

As can be seen in Table 4 (page 69), the total new guarantee activity in the full-year 2017 constitutes 41.1 percent of the total volume of outstanding guarantees for the same period. Newly-granted guarantees in the full-year 2017 amounted to EUR 74bn, with one Turkish AECM member accounting for almost EUR 45bn of this total. As a result, although at first glance new guarantee activity by AECM members shows an impressive increase of 65% in 2017 compared to 2016, excluding the statistics of the Turkish AECM member in question leads to a significantly lower and much more moderate increase of 1.9%.

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 full-year 2017 increased strongly (apart from Turkey) in Luxembourg (+84.5%), the Czech Republic (+76.2%) and Romania (+44.9%); while, on the other hand, new granted guarantees decreased significantly in Bosnia-Herzegovina (-43.9%), Estonia (-31%) and Serbia (-16%).

Relating new guarantee volumes by Euro Area AECM members in the full-year 2017 to new loan (below EUR 250k) volumes for the same period (as per the ECB Data Warehouse statistics) could provide a rough indication of the relevance of guarantees for SME financing. Based on this proxy, guaranteed SME lending (newly-granted guarantees as a percentage of new-below-EUR250k loans) in the Euro Area is approximately 10% on average,⁵⁷ with significant heterogeneity though across countries.

⁵⁷ This figure should be interpreted with caution and used only as a rough estimate of the magnitude of guarantee relevance. This is because an indicator based on new guarantee volumes is likely to be less persistent than one constructed on the basis of outstanding guarantee volumes. Unfortunately, however, data on outstanding loan volumes by country are not available per loan size-class.

Table 3: Outstanding guarantees and number of SME beneficiaries in portfolio, AECM members by country

Country	Outstanding guarantees H2/2017				% change in Volume	
	Volume [k EUR]	Number	Implied average guarantee size [k EUR]	Number of SME beneficiaries	H2/2017 vs. H1/2017	H2/2017 vs. H2/2016
Austria	911,412	5,912	154.2	4,554	3.3%	10.8%
Belgium	880,624	10,992	80.1	9,141	4.2%	11.6%
Bosnia-Herzegovina	5,263	56	94.0	34	-9.3%	-35.4%
Bulgaria	171,365	3,612	47.4	3,309	0.0%	13.8%
Croatia	199,690	1,650	121.0	1,626	1.3%	2.6%
Czech Rep.	729,146	9,840	74.1	7,262	2.2%	4.1%
Estonia	130,444	1,263	103.3	910	1.1%	-2.9%
France	21,865,983	585,900	37.3	577,825	13.5%	16.2%
Germany	5,544,510	44,268	125.2	36,701	-0.6%	-0.2%
Greece	128,508	3,958	32.5	3,958	-29.5%	-33.6%
Hungary	2,393,431	54,505	43.9	45,433	11.2%	25.7%
Italy	34,204,118	1,055,010	32.4	1,331,832	0.9%	1.1%
Latvia	131,988	828	159.4	623	7.4%	15.0%
Lithuania	217,254	2,621	82.9	2,266	5.7%	71.7%
Luxembourg	1,105	58	19.1	58	-1.9%	18.7%
Netherlands	1,824,191	18,069	101.0	15,957	0.0%	-0.2%
Poland	2,884,024	90,307	31.9	90,307	1.5%	22.7%
Portugal	3,482,689	92,646	37.6	52,714	1.5%	3.6%
Romania	538,892	6,865	78.5	5,297	9.3%	2.6%
Serbia	6,419	536	12.0	520	-14.0%	-25.2%
Slovenia	283,067	2,430	116.5	2,418	8.1%	9.2%
Spain	4,031,854	71,952	56.0	126,592	1.1%	0.7%
Turkey	44,038,601	974,126	45.2	644,833	9.8%	415.3%
UK	735,389	10,584	69.5	9,235	-4.3%	-10.5%
Total	125,339,967	3,047,988	41.1	2,973,405	6.1%	47.4%

Notes:

- One Belgian AECM member, one Romanian and one Slovenian did not report data in 2016. For consistency and comparability, the statistics for 2017 also exclude the business figures of these members.
- The statistics do not include the business figures of one Hungarian AECM member and one further Romanian that only have a Counter Guarantee activity.
- 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.

Source: Authors, based on data from AECM

Table 4: Newly granted guarantees, AECM members by country

Country	New guarantee volumes [k EUR]				
	H2/2017	H1/2017	Total 2017	Percentage of outstanding	% change from 2016
Austria	190,927	126,346	317,273	34.8%	37.3%
Belgium	164,395	195,505	359,900	40.9%	10.8%
Bosnia-Herzegovina	147	285	432	8.2%	-43.9%
Bulgaria	n/a	54,470	54,470	(1)	(2)
Croatia	26,696	17,337	44,033	22.1%	30.5%
Czech Rep.	162,731	75,637	238,368	32.7%	76.2%
Estonia	30,798	33,034	63,832	48.9%	-31.0%
France	3,549,177	3,360,011	6,909,188	31.6%	0.5%
Germany	554,592	540,139	1,094,731	19.7%	0.6%
Greece	n/a	829	829	(1)	(2)
Hungary	1,061,440	995,626	2,057,066	85.9%	29.5%
Italy	4,693,536	4,731,918	9,425,454	27.6%	-0.1%
Latvia	20,200	22,600	42,800	32.4%	31.9%
Lithuania	29,335	27,111	56,446	(1)	(2)
Luxembourg	316	195	511	46.2%	84.5%
Netherlands	n/a	280,302	280,302	(1)	(2)
Poland	1,226,873	1,266,282	2,493,155	86.4%	14.5%
Portugal	612,441	631,172	1,243,613	35.7%	-6.0%
Romania	169,105	59,469	228,574	42.4%	44.9%
Serbia	569	369	938	14.6%	-16.0%
Slovenia	61,249	55,171	116,420	41.1%	4.8%
Spain	615,594	568,161	1,183,755	29.4%	7.9%
Turkey	12,403,759	35,163,586	47,567,345	108.0% (3)	1025.8%
UK	124,345	119,410	243,755	33.1%	-0.7%
Total	25,698,225	48,324,965	74,023,190	41.1%	65.1%

Notes:

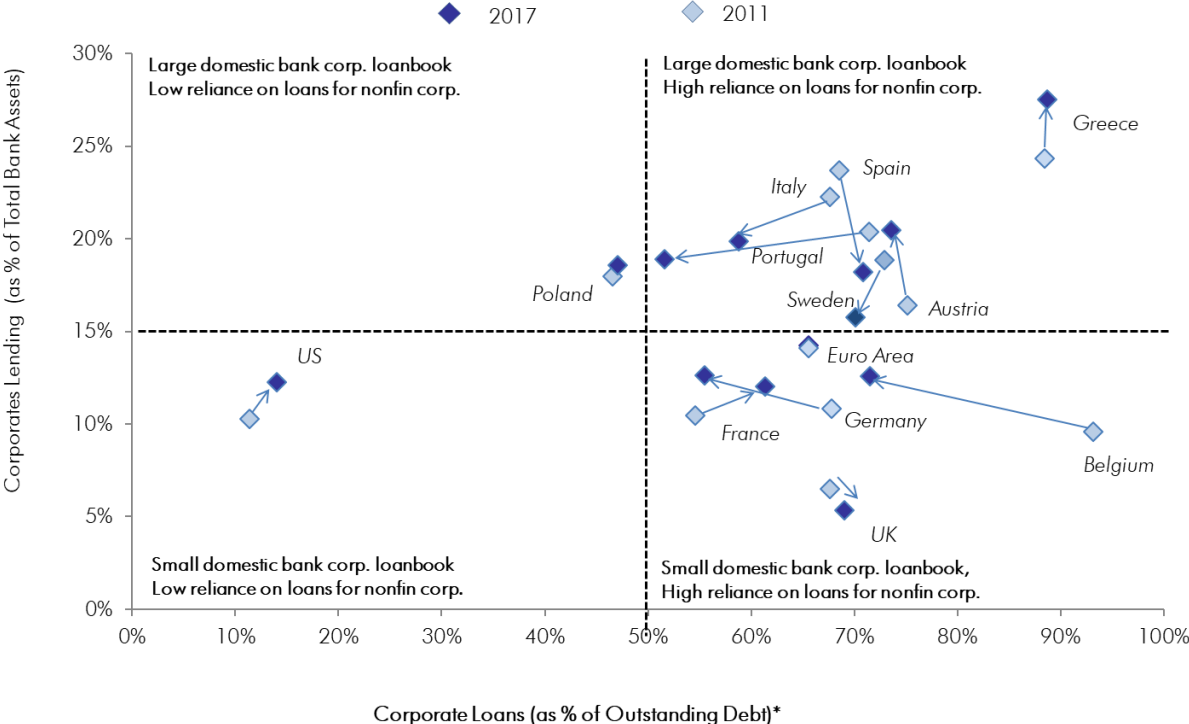
- One Belgian AECM member, one Romanian and one Slovenian did not report data in 2016. For consistency and comparability, the statistics for 2017 also exclude the business figures of these members.
 - The statistics do not include the business figures of one Hungarian AECM member and one further Romanian that only have a Counter Guarantee activity.
- (1) The share of total outstanding volumes is only reported 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 2016 is only reported for countries in which all AECM members consistently reported the relevant statistics for both years.
- (3) For one Turkish AECM member, the total new guarantee activity in the full-year 2017 exceeded the total volume of outstanding guarantees for the same period. As a result, new guarantees in Turkey are in excess of 100% of outstanding guarantees in portfolio. The Turkish AECM member in question mostly offers short-term guarantees. If the duration of the latter is less than one year, it is reasonable to assume that many of the newly-granted guarantees are reported in the related statistics on new guarantee volumes, but are not subsequently reflected in the statistics on outstanding guarantees.

Source: Authors, based on data from AECM

5.2 SME Securitisation⁵⁸

European SMEs rely heavily on bank lending; Figure 41 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 42): 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 41: Reliance on bank financing by non-financial corporations (in %)

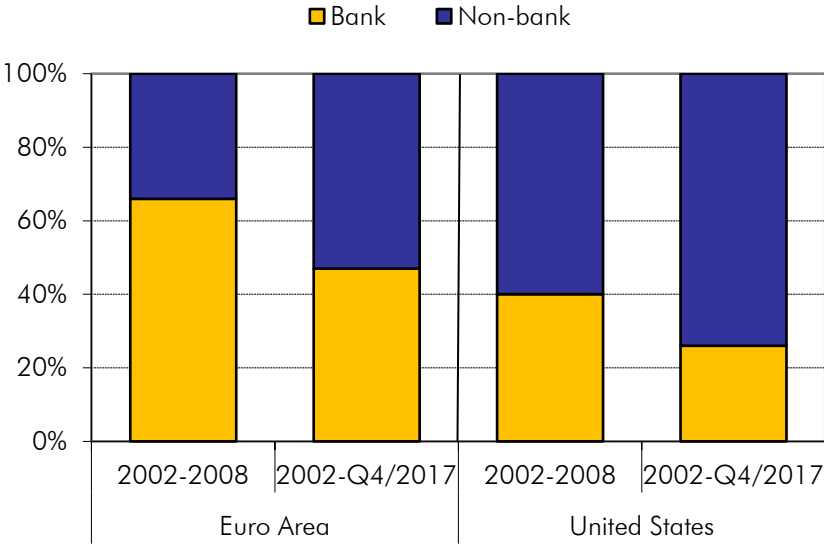


Source: Authors, based on IMF (2012) and updated information (as per YE/2017)

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.

⁵⁸ 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).

Figure 42: 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 Q4/2017)

Empirical literature shows that securitisation can strengthen the capacity of banks to supply new loans (Altunbas et al., 2007); as it can mitigate credit supply frictions, securitisation has the potential of having positive real effects on investment, sales, and employment (Berg et al., 2015). 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. "Taken together, 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; a de-stigmatisation is happening, and the general perception is shifting from one of "toxic waste" to a means that could help overcome the negative effects of the crisis. 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 activity⁵⁹

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 43). 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;⁶⁰ 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.

Issuance

In 2017, the most active markets in terms of *overall securitisation issuance* were the UK (market share: 20%), France (16%), and Italy (16%). The overall market activity in 2017 (EUR 236.5bn) was similar compared to 2016 (EUR 238.9bn) and remained on relatively low level (see Figure 38).

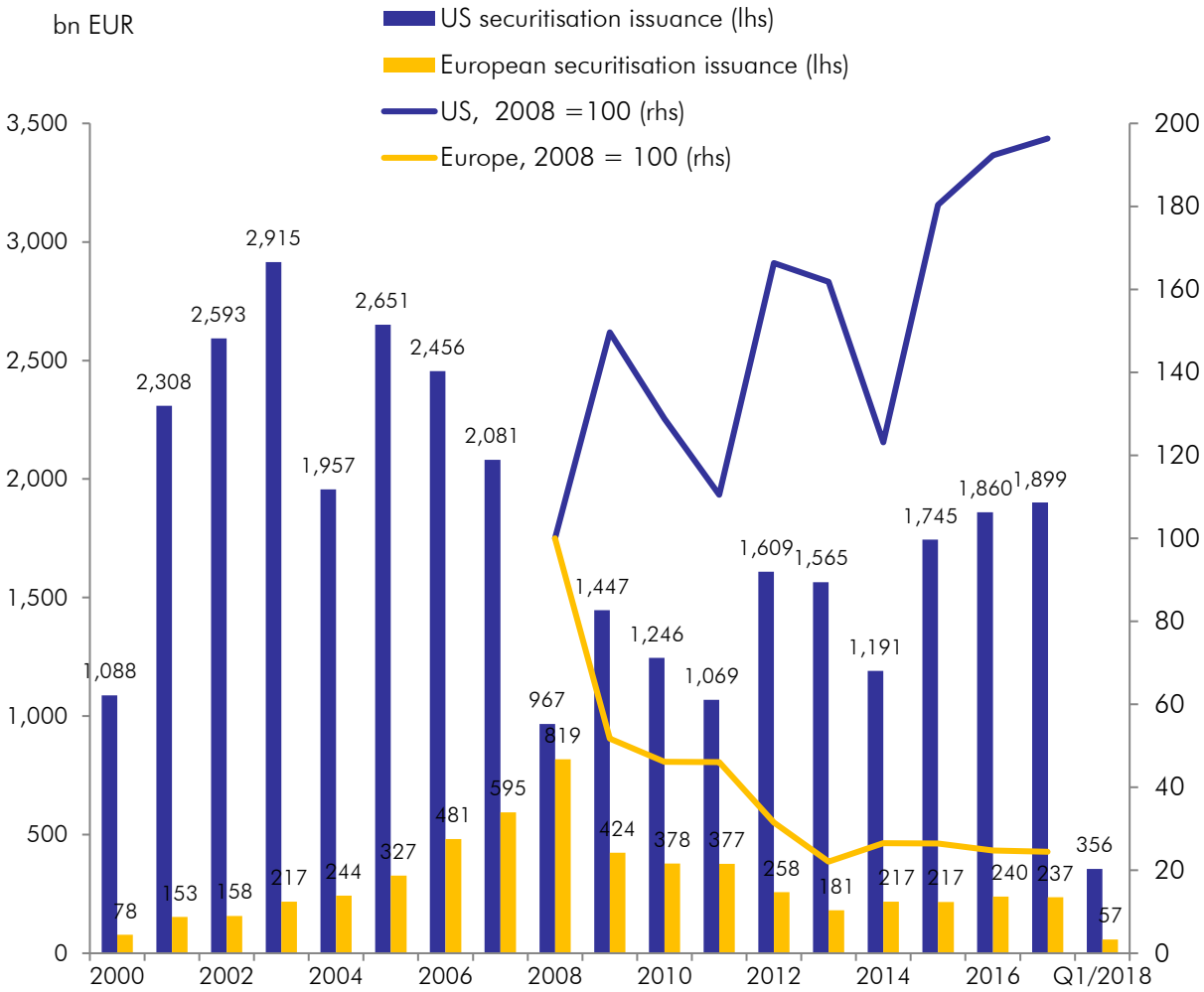
SMESec *issuance* is still suffering from the crisis and remains at low level as well. The overall issued (and visible) volume of SME deals in 2017 (EUR 14.1bn) was significantly lower than 2016 values (EUR 19.9bn, see Figure 44) and it was the lowest value since 2004. The market share of SMESec in overall securitisation issuance rose (with some volatility) from 6% in 2001 to 18% (of total yearly

⁵⁹ If not flagged otherwise, the data source is AFME, the Association for Financial Markets in Europe.

⁶⁰ The ECB's asset repurchase or "repo" facility allows (among other assets) Asset Backed Securities to be used as collateral for funding.

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 2017, the share of SMESec went back to 6% (and in Q1/2018 the share was only 5%). 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 43: Securitisation issuance Europe versus US (annual issuance 2000 – Q1/2018, bn EUR)

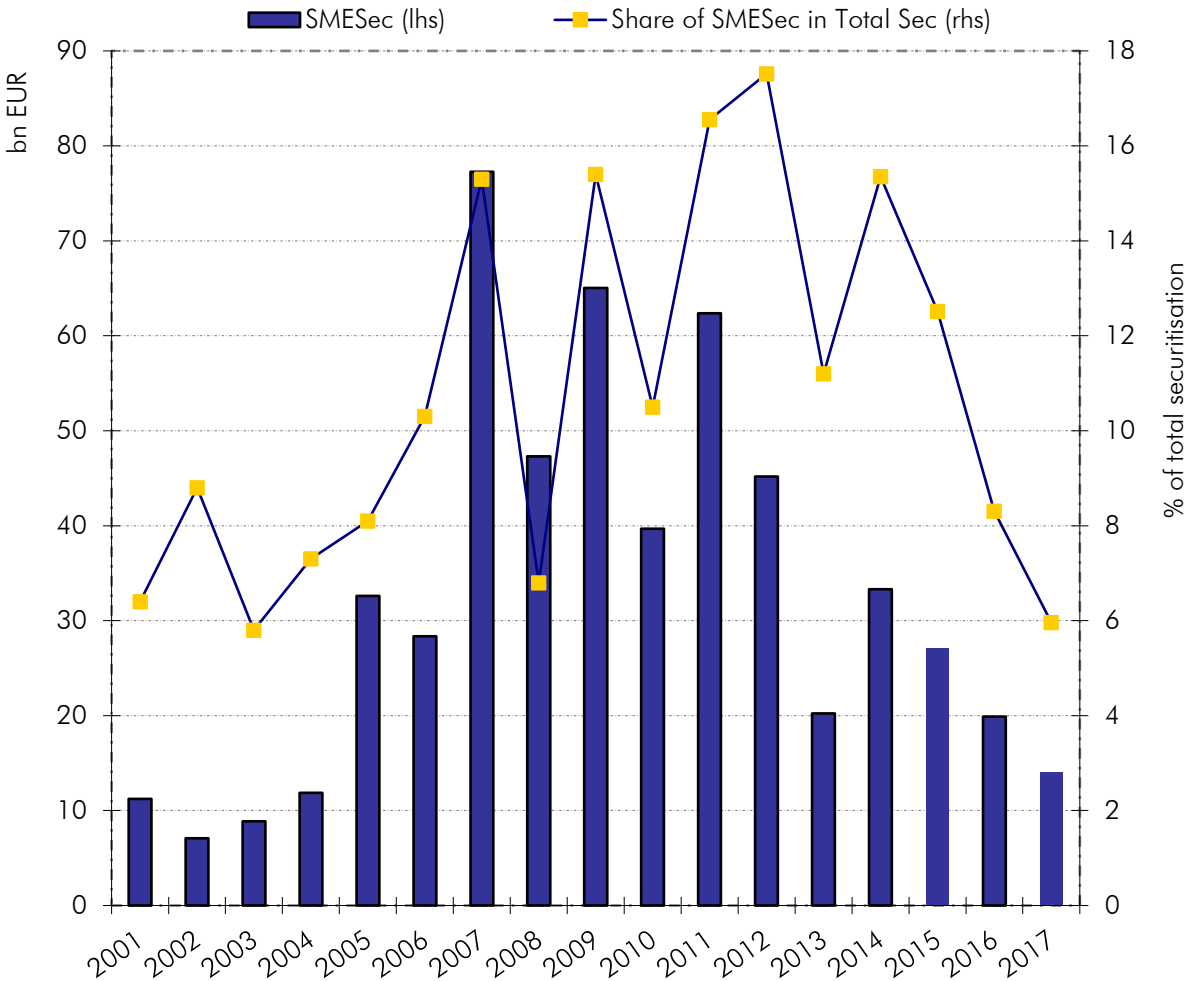


Source: Authors, based on data from AFME

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. According to BoA/ML (2016) and to EIF market insight there was recently a significant rise in number and volume of synthetic SME transactions, driven by risk transfer, asset liability management aspects, and regulatory capital considerations. 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); 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 44: SMESec issuance in Europe (volume and share of total securitisation, bn EUR and %)

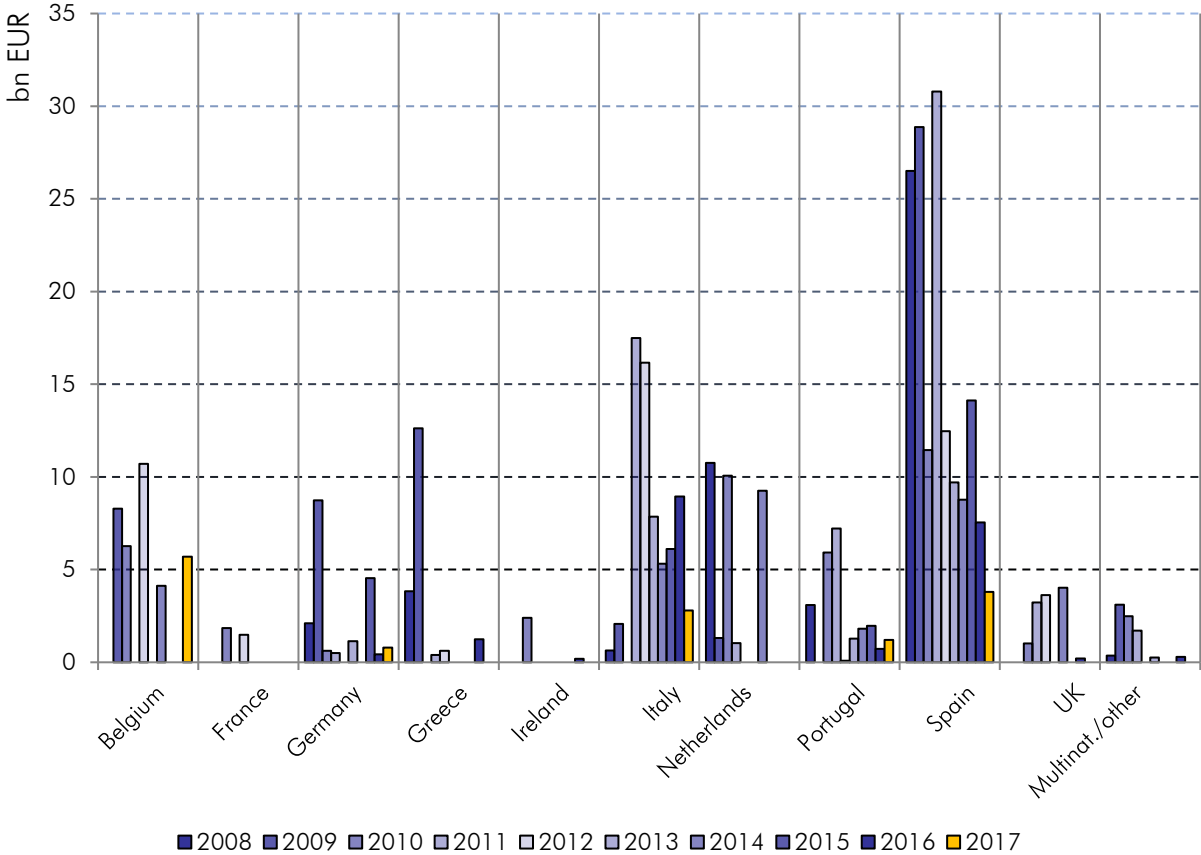


Source: Authors, based on data from AFME and own calculations

In terms of countries, the market activity is concentrated: The SMESec issuance in 2017 occurred mainly in Belgium (EUR 5.7bn, 40% of SME issuance), Spain (EUR 3.8bn, 27%), and Italy (EUR 2.8bn, 20%). Minor activity also happened in Portugal and Germany – see Figure 45 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, 2018b).

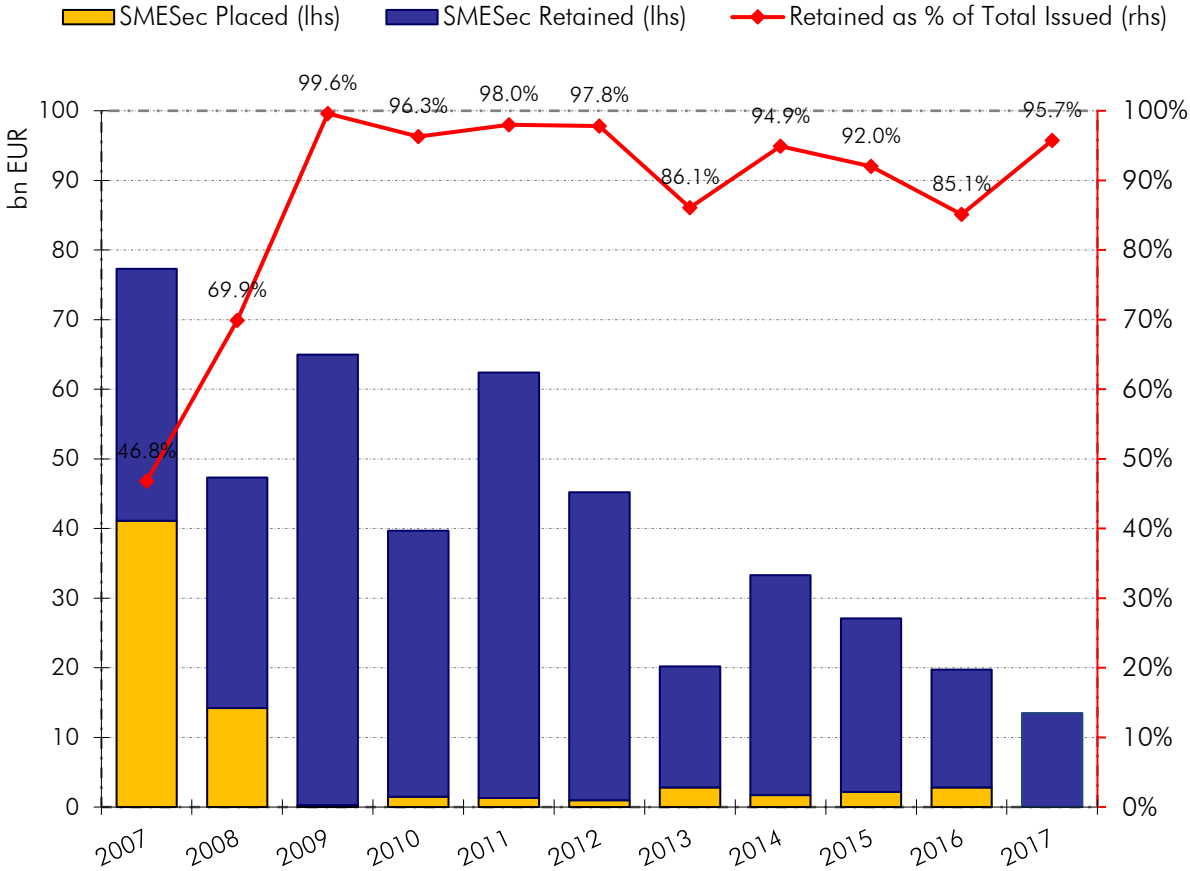
Figure 45: European SMESec issuance during the crisis (by country, in bn EUR)



Source: Authors, based on data from AFME

As already mentioned, it is important to note that only a very small fraction of the issuance has been placed with investors – the investor base has not recovered (see Figure 46). The nature of the SMESec market changed from a developing market (pre-crisis, with most transactions placed in the primary market) to a purely retained/ECB repo-driven market during the crisis (with almost no placement on the primary market). This shift led to liquidity drying up and originators accepting higher all-in costs as, in addition to the credit enhancement, the repos envisage considerable haircuts to the face value of the notes.

Figure 46: European SMESec by retention (bn EUR and %)



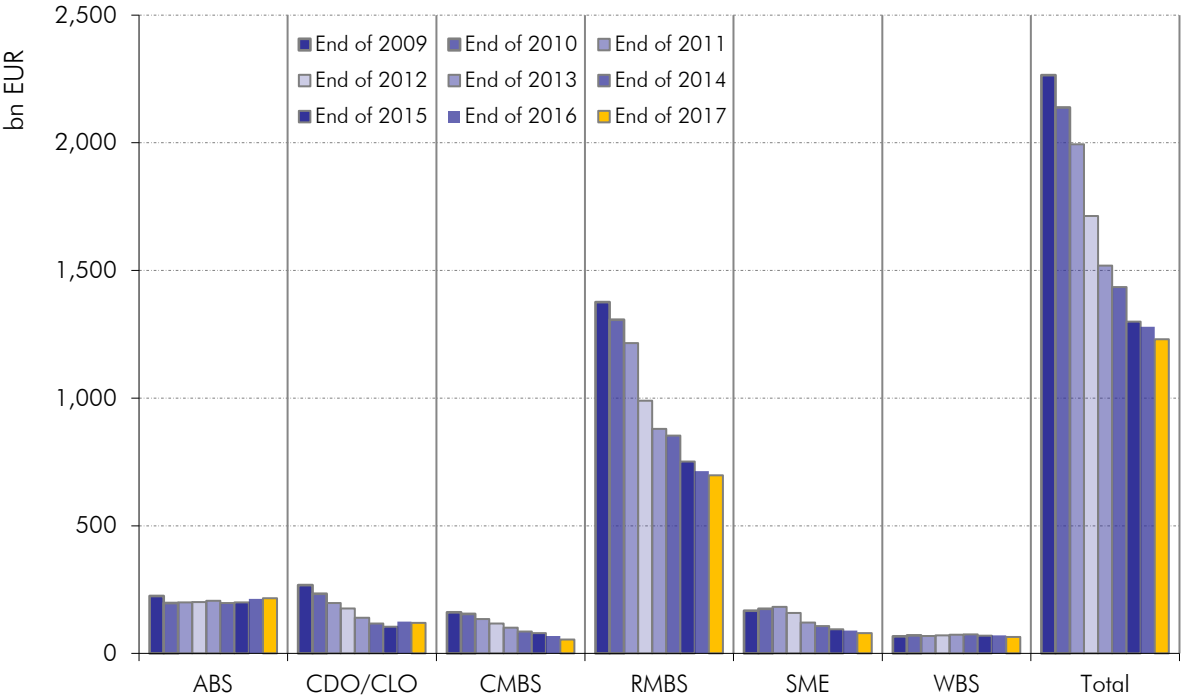
Source: Authors, based on data from AFME

Outstanding

Due to low new activity levels, the volume of *total outstanding securitisation transactions* (see Figure 47) is on a downward trend (negative net supply). RMBS continues to be the most dominant securitisation type (by collateral). From the end of 2016 until the end of 2017, the total securitisation outstanding decreased further by around 4%. The overall decrease of volume in total outstanding securitisation transactions since the end of 2009 is 46%. During the same period, the volume of outstanding SMESec transactions decreased even stronger – it more than halved (minus 53%), from EUR 168bn to EUR 79.4bn (end of 2017, as per end of Q1/2018: EUR 78.5bn).

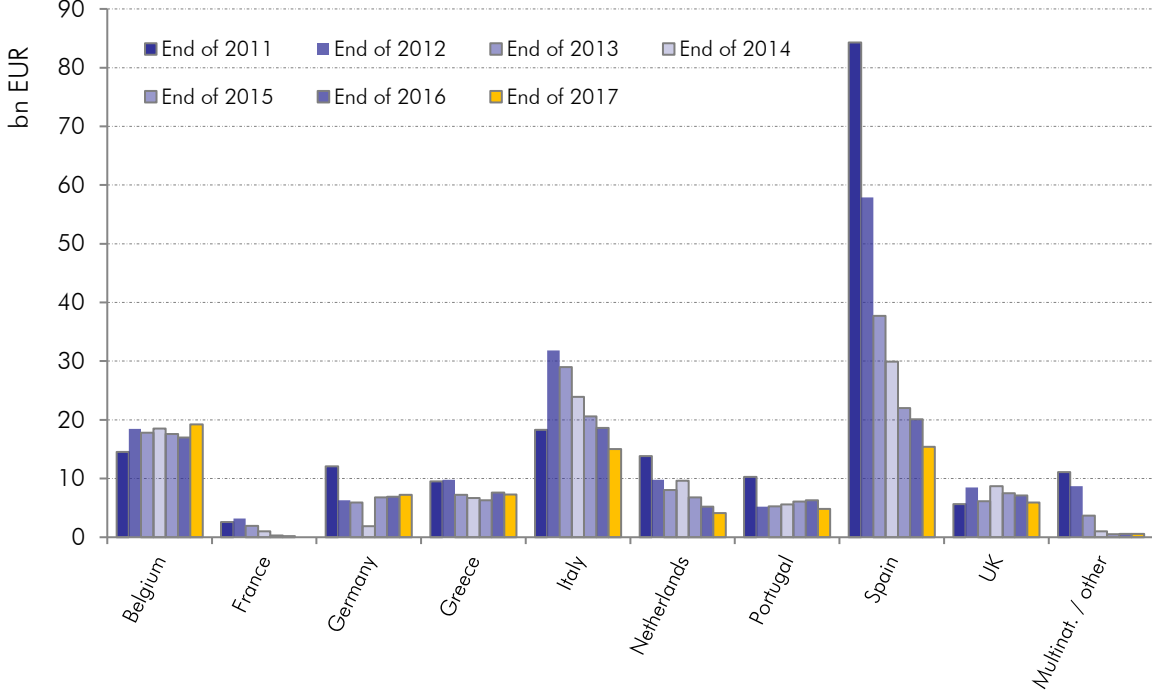
Breaking down SMESec volumes per end of 2017 by country shows; that the main three countries together represent more than 62% in terms of outstanding: Belgium (EUR 19.2bn/24.4%), Spain (EUR 15.4bn, 19.5%), and Italy (EUR 15bn, 18.9%), see Figure 48. These countries are followed by Greece (9.2%), Germany (9.1%), UK (7.4%), and Portugal (6%).

Figure 47: European outstanding securitisation transactions by collateral (bn EUR)



Source: Authors, based on data from AFME

Figure 48: 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.⁶¹ 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 for example 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, 2018b).

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).

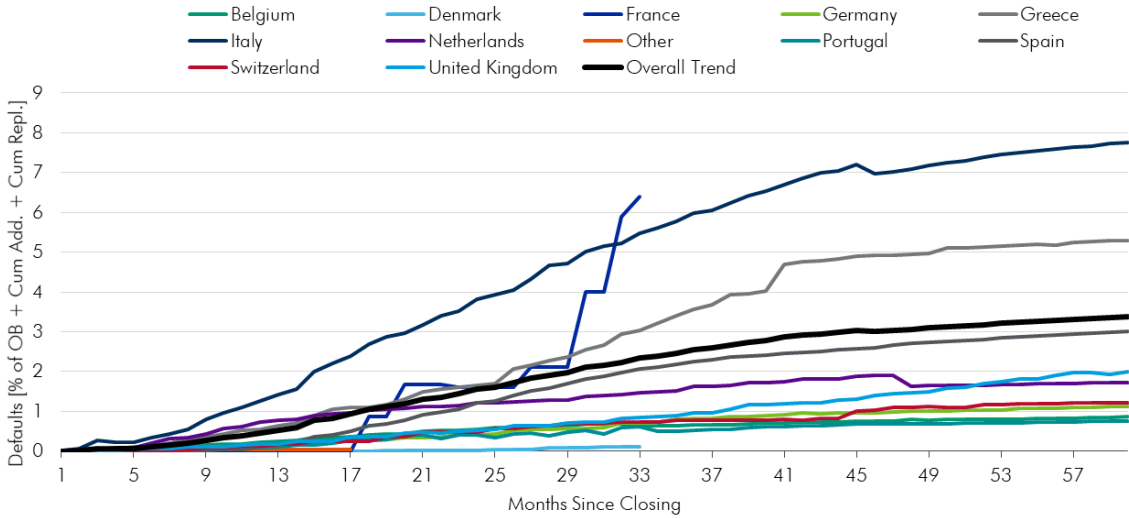
On the one hand, before the crisis started, SMESec volumes were small compared to the overall securitisation market – and the market had not had much time to develop. On the other hand, the limited track record was one of the reasons for the relatively conservative SMESec structures which could explain the good SMESec performance in Europe compared to other segments of the European securitisation market and to the US.⁶² Figure 49 and Figure 50 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). Currently (June 2018) Moody's sees the performance of EMEA SME ABS to remain stable to improving, supported by a robust macroeconomic environment, good refinancing conditions for SMEs and continued recovery in real estate markets (Moody's, 2018b).

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).

⁶¹ With some exceptions, i.e. the non-granular hybrid transactions (German Mezzanine CDOs). For more details see Kraemer-Eis, Passaris, and Tappi (2013).

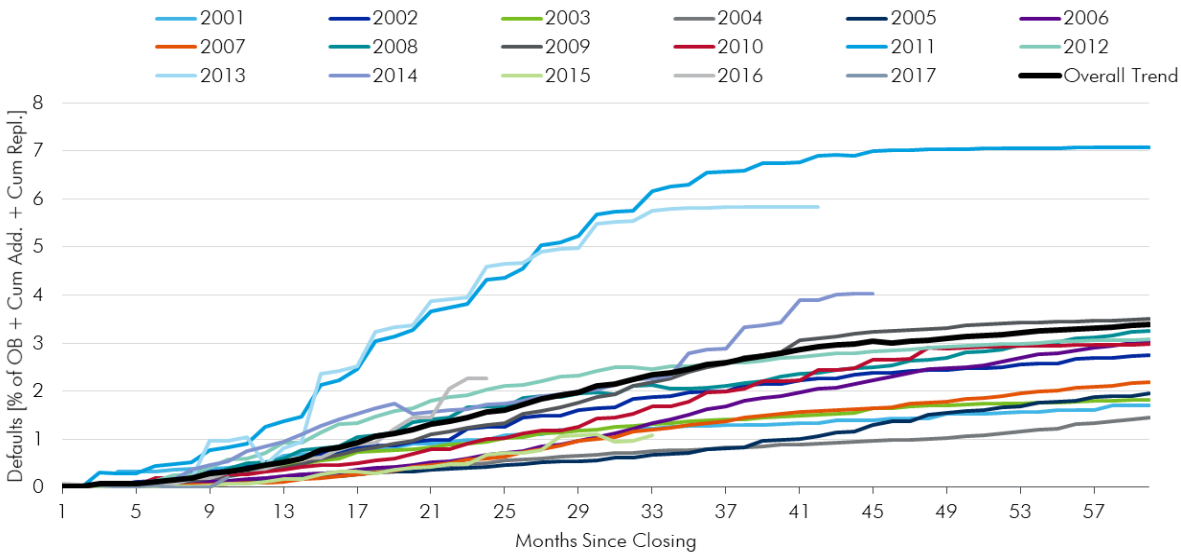
⁶² According to Standard & Poor's (2014), only 1.58% of European Structured Finance notes (rated by Standard & Poor's) outstanding in mid-2007 had defaulted by mid-2014. The cumulative default rate for SMESec transactions was at 0.55% – for comparison: the cumulative default rate for US Structured Finance notes was at 19.3%, the one for CDO of ABS was at 41.08%. FitchRatings (2017) expects 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.

Figure 49: SME loan and lease ABS - Cumulative credit events or defaults on original balance (seasoning by country)⁶³



Source: Moody's (2018a)

Figure 50: SME loan and lease ABS - Cumulative credit events or defaults on original balance (seasoning by vintage)⁶⁴



Source: Moody's (2018a)

⁶³ 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.

⁶⁴ The chart differs from indices published by Moody’s prior to March 2016 due to the inclusion in the denominator of Additions and Replenishments.

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, 68% (by number⁶⁵) have paid in full (pif), 16% are still AAA, 6% moved down to AA etc.

Table 5: Fitch European SMEs rating transition matrix (March 2018)⁶⁶

% of tranches	Current rating									
	PIF	AAAsf	AAsf	Asf	BBBsf	BBsf	Bsf	CCCsf	CCsf	Csf
Initial Ratings AAAsf	68%	16%	6%	10%	0%	0%	0%	0%	0%	0%
AAsf	43%	4%	39%	4%	9%	0%	0%	0%	0%	0%
Asf	21%	4%	13%	58%	0%	4%	0%	0%	0%	0%
BBBsf	11%	0%	11%	5%	42%	5%	11%	0%	11%	5%
BBsf	0%	0%	0%	0%	8%	58%	0%	8%	25%	0%
Bsf	0%	0%	0%	25%	13%	25%	38%	0%	0%	0%
CCCsf	0%	0%	0%	0%	0%	17%	0%	17%	33%	33%
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)

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 indirect⁶⁷ support measures are aiming at a market revival, amongst which

⁶⁵ Relative to the number of tranches in a given initial rating category.

⁶⁶ The addition sf indicates a rating for structured finance transactions.

⁶⁷ 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,

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 securitisations (incl. SMESec) - which receive preferential regulatory treatment – is an important step.⁶⁸ In this context, the European Commission states that “[T]he development of a simple, transparent and standardised securitisation market constitutes a building block of the Capital Markets Union (CMU) and contributes to the Commission’s priority objective to support job creation and a return to sustainable growth. A high quality framework for EU securitisation can promote integration of EU financial markets, help diversify funding sources and unlock capital, making it easier for credit institutions and lenders to lend to households and business” (European Commission, 2015).⁶⁹

Interpreting the effects of the new regulations, it has to be borne in mind that the proposed 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. 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).

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 must be published by 18.10.2018. According to PCS, “strong and sensible guidelines would provide a major boost to the likelihood of a successful STS regime and a commensurate growth in a safe European securitisation market. At the same time, over-complex or unrealistic guidelines could dramatically reduce the chances of the STS regime delivering hoped-for benefits to the European economy” (PCS, 2018c).

as it is based on publicly placed transactions, there is almost no direct impact on the SME segment on the market. As per 15.06.2018, ABSPP holdings stood at EUR 27.609bn (48% primary market, 52% secondary market), compared to EUR 254.375bn 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.

⁶⁸ 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.

⁶⁹ For more information on the relation between CMU and SME financing see Kraemer-Eis and Lang (2017).

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.

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-ERBA⁷⁰. 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.

⁷⁰ SEC-IRBA and SEC-SA are approaches based on formulae whose inputs refer to the underlying portfolio. SEC-ERBA is an approach predetermined, rating-dependent, risk-weights. See for an explanation of the different approaches under Basel III Kraemer-Eis, Passaris, Tappi, Inglis (2015).

Box 13 continued:

- 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 (further round of consultations expected for later 2018).
- EBA draft RTS on risk retention for securitisation transactions⁷¹.
- 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 conditions⁷².
- 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 the EIB Group will participate in an attempt to ensure that verifying the suitability of a transaction to the STS framework will be as straightforward as possible).

⁷¹ 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).

⁷² 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).

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

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.

Over the recent past, EIF has been involved in a number of diverse and innovative transactions. 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. 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.⁷³ 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. EIF is planning to open the call for interest for a potential second wave of applications in HY2-2018. 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.⁷⁴

We expect synthetic deals to represent an important portion of our future pipeline. Moreover, new types of transactions are appearing on the market, and new initiatives are emerging. We presented recently (Kraemer-Eis et al., 2016a) an example of a new type of transaction (SBOLT-2016-1) that can be seen as a milestone in the area of marketplace lending securitisation: on the back of the success of the first SBOLT, EIF has pursued the SBOLT 2018 transaction by providing a guarantee to KfW (a member of the ENSI network) 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.

⁷³ SME Initiative Italy: http://www.eif.org/what_we_do/guarantees/sme_initiative/smei_italy/index.htm.

⁷⁴ EIF’s ambition is to incentivise private investors and not to crowd them out.

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).⁷⁵

Furthermore, a platform as cooperation between EIF and National Promotional Institutions (NPIs), the EIF-NPIs Securitisation Initiative (ENSI), has been launched and is active.⁷⁶ In addition, Italy recently opted-in to the so-called SME Initiative as the first country to implement the securitisation instrument.⁷⁷ Last, but not least, an envisaged intensified use of the resources of the European Fund for Strategic Investments for securitisation transactions might give additional boost to the revival of the European SMESec market (see the Concluding Remarks of this Working Paper for details about EFSI).

⁷⁵ For an overview as regards investing in P2P and Marketplace lending see Integer Advisors (2018b).

⁷⁶ 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 Crédito 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

⁷⁷ For more information see: http://www.eif.org/what_we_do/guarantees/sme_initiative/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 services⁷⁸. 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).

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).

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.

⁷⁸ CGAP Definition, Consultative Group to Assist the Poor.

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 section 3.2).

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” indicator⁷⁹, depicted in Figure 51. 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.⁸⁰ In 2016, nearly one fourth of EU-28 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 mostly Nordic and Western European countries on the other side of the spectrum (Finland, Netherlands, Sweden).

The statistics depicted in Figure 51 are relevant because people at risk of poverty are a potentially important group of business creators, since a decision to start a business often arises out of necessity. Indeed, the OECD (2014a) reports that the majority of entrepreneurs start businesses to improve

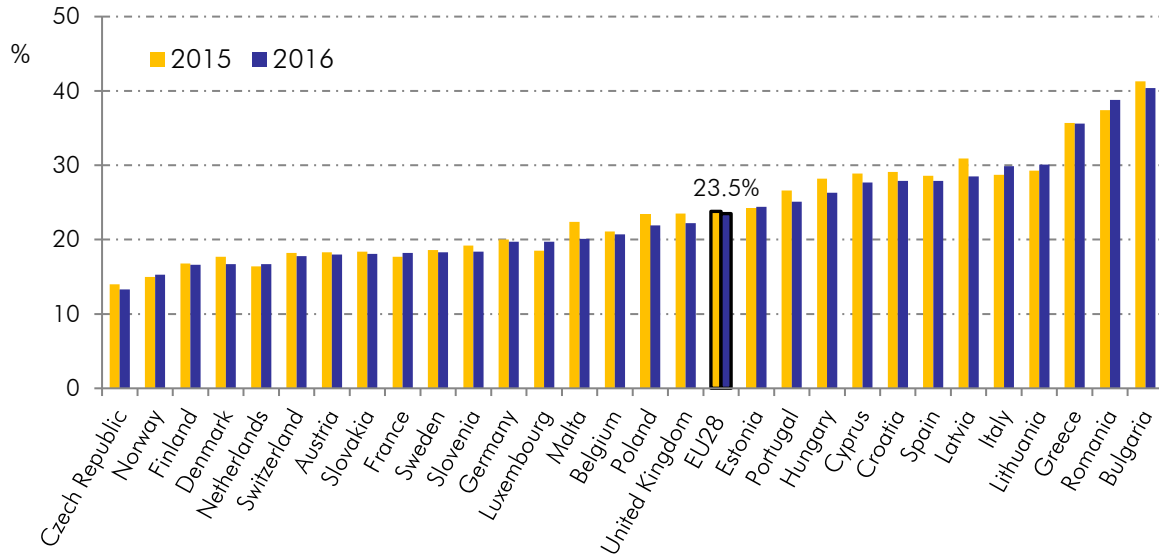
⁷⁹ See the Eurostat internet site on the Europe 2020 indicators at:

http://epp.eurostat.ec.europa.eu/portal/page/portal/europe_2020_indicators/headline_indicators.

⁸⁰ 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.

their economic situation.⁸¹ Box 15 describes how this is particularly relevant these days, in light of the current refugee crisis.

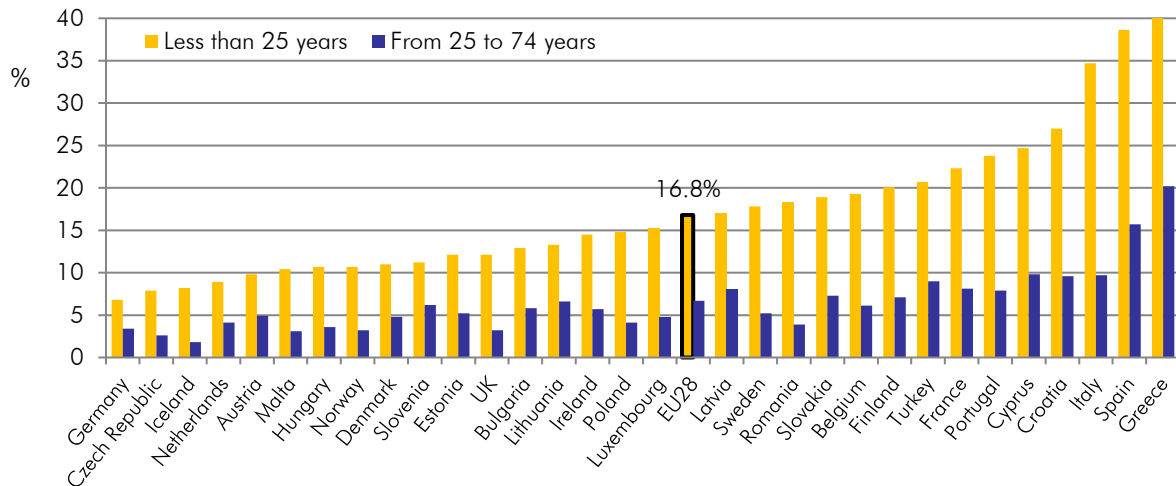
Figure 51: People at risk of poverty or social exclusion (percentage of total population)



Source: Authors, based on data from Eurostat

Since adverse labour market conditions are the most important driver for necessity-driven entrepreneurship, Figure 52 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.

Figure 52: Unemployment rate by age groups, 2017



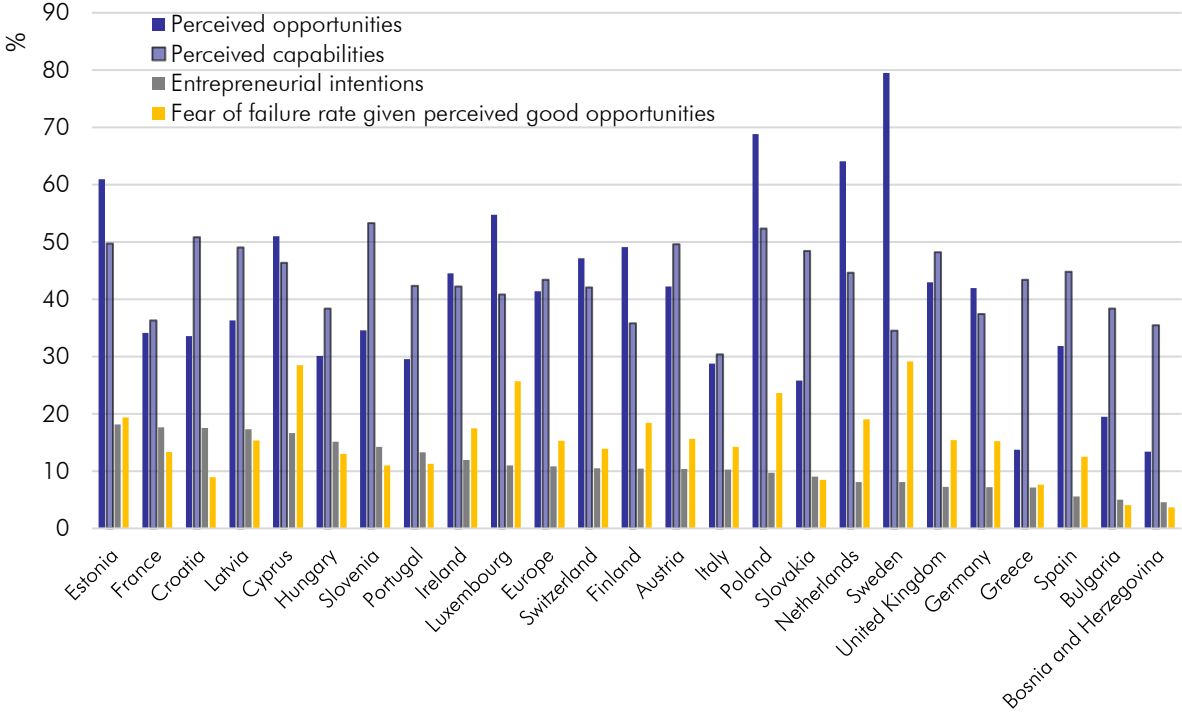
Source: Authors, based on data from Eurostat

⁸¹ According to the Eurobarometer Survey on Entrepreneurship (European Commission, 2012a), in most countries of the EU, the majority of self-employed people found dissatisfaction with their previous work very important in their decision to start a business.

Figure 53 and Figure 54 shows results from the Global Entrepreneurship Monitor (GEM) survey. Figure 53 presents entrepreneurial intentions, while Figure 54 depicts early-stage entrepreneurial activity and intended job creation. According to the results, 41.4% of the adult population in Europe see good opportunities to start a firm in the area they live (perceived opportunities), 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 most confident about their own entrepreneurial skills seemed to be the Slovenian and the Polish population 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.

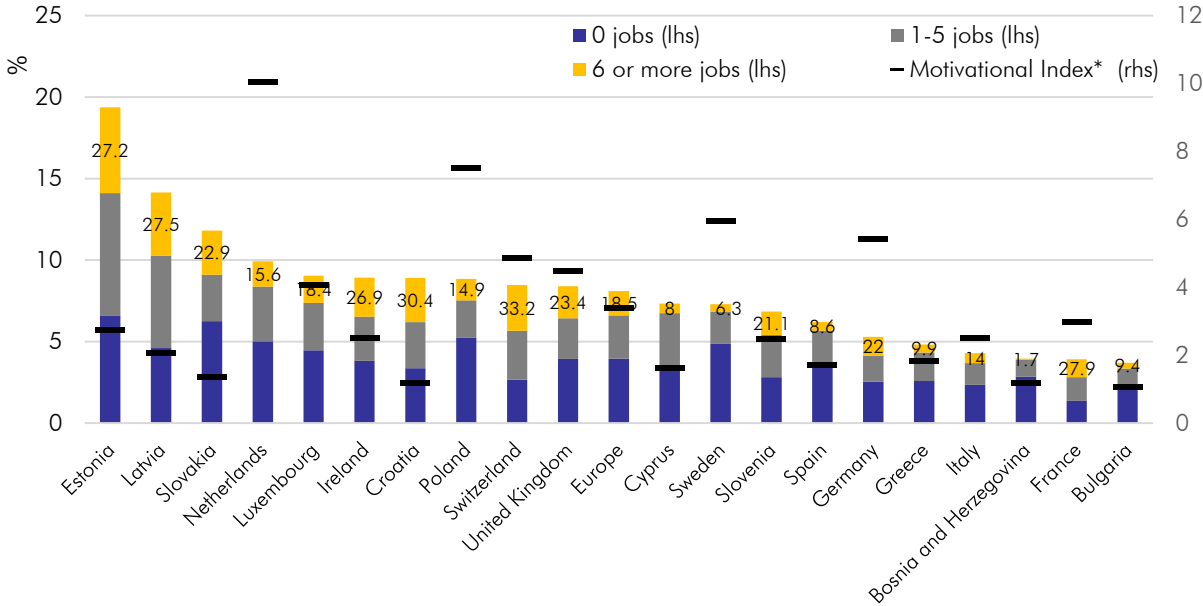
As for actual number of new business owners, Estonia, Latvia, Slovakia, and the Netherlands are leading the list. In these countries it is not immediately apparent whether or not the entrepreneurial activity was poverty-driven. For example, in the Netherlands, where the unemployment rate is the lowest (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 54 shows that the Greeks don't perceive good opportunities in their country; which perhaps discourages them to start a business. In Greece, the motivation index is low, meaning that people who started businesses were mainly driven out of necessity.

Figure 53: Entrepreneurial intentions, 2017



Source: GEM 2016/17 Global Report

Figure 54: Early-stage entrepreneurial activity by job creation in 5 years, % of population (2017)



*Percentage of those involved in total early-stage entrepreneurial activity that are improvement-driven opportunity motivated, divided by the percentage of total early-stage entrepreneurial activity that is necessity-motivated.

Source: GEM 2016/17 Global Report

European entrepreneurs seem to be less focused on high job creation. According to the GEM survey, only 18.5% of entrepreneurs anticipated hiring six or more employees in the next five years (see Figure 54). For more information on job creation in the context of migrants, please see Box 2.

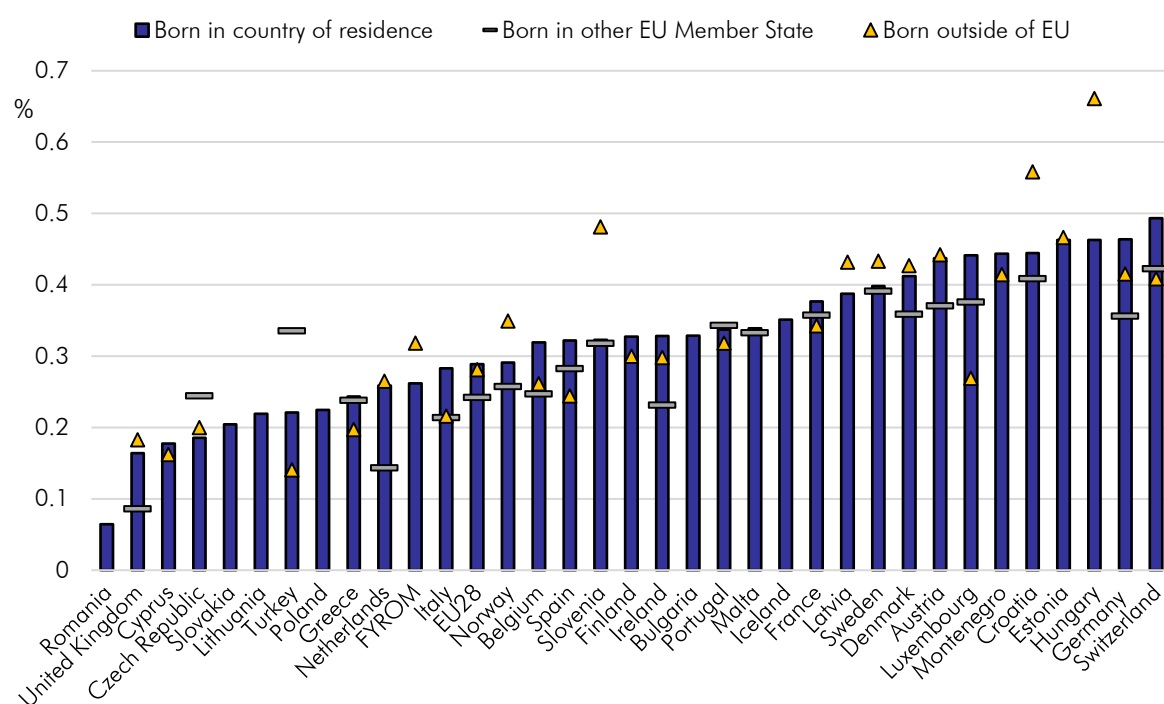
Box 15: Migrants as job creators

There is a tradition of debates whether immigrants are a burden or a benefit to society and whether they take jobs away from the natives (Borjas, 1995, 1999, 2017, OECD, 2017b). Often, migrants not only don't "steal jobs" but they also contribute to entrepreneurial activity and create jobs.

In the European Union, foreign-born self-employed were as likely to create jobs as the native-born self-employed in 2017. Moreover, non-EU self-employed were more likely to create jobs than self-employed EU born migrants (28% vs. 24%). Immigrants were important job creators especially in the Central and Eastern European countries: more than half of the self-employed born outside of the European Union had employees in Hungary (66%), in Croatia (55%) and in Slovenia (48%). Unfortunately, data on immigrant job creators were not available in some countries including Romania, Bulgaria and Poland. Such results are remarkable when considering that immigrant entrepreneurs, especially those born outside the EU, typically face greater barriers to entrepreneurship than the native population. Immigrants face additional obstacles including language, cultural differences, settling costs and limited access to entrepreneurship training programmes or grant schemes. Due to all this, immigrants need specific attention to overcome the challenges and stimulate entrepreneurial activities (OECD, 2017b, EESC, 2017).

Box 15 continued:

Figure B5.1: Proportion of foreign-born self-employed with employees by country, 2017



Note: Not all data points are available for all EU28 countries.

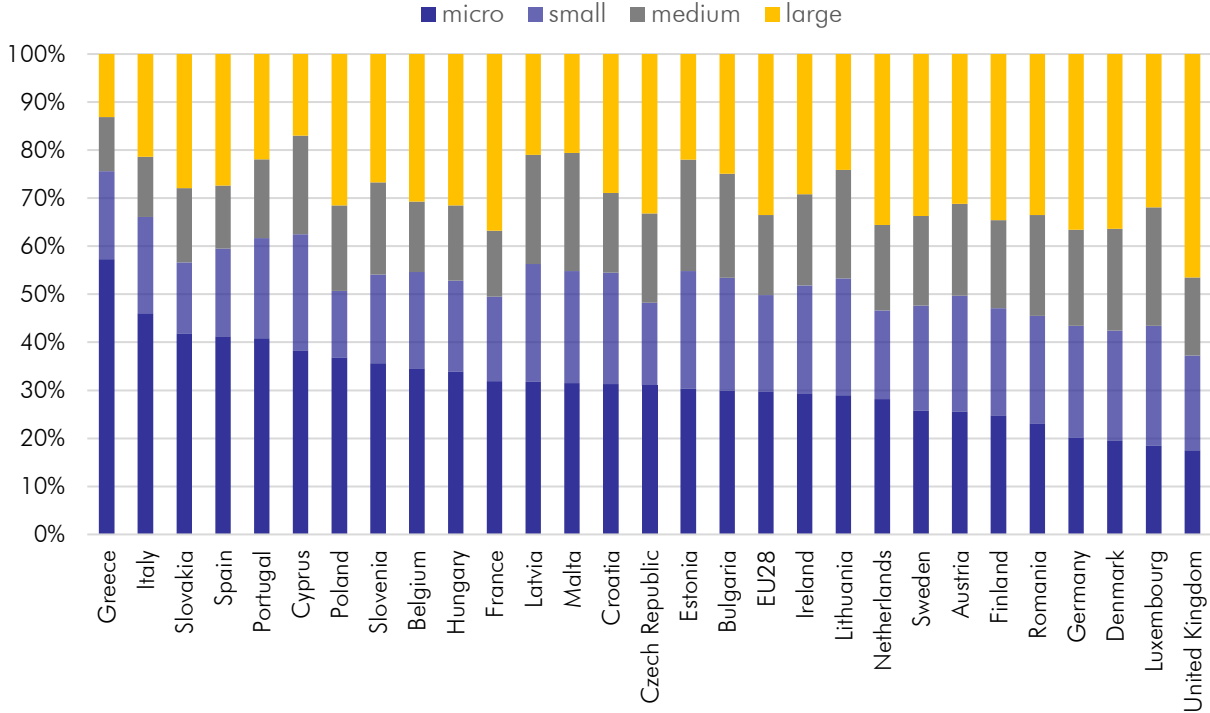
Source: Eurostat, based on own calculations

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. Micro-businesses seem to be relatively more important in countries with elevated unemployment levels. In Spain, Portugal and Italy employment by microenterprises accounts for more than 40% of total employment and in Greece this amounts to almost 60% (Figure 55).

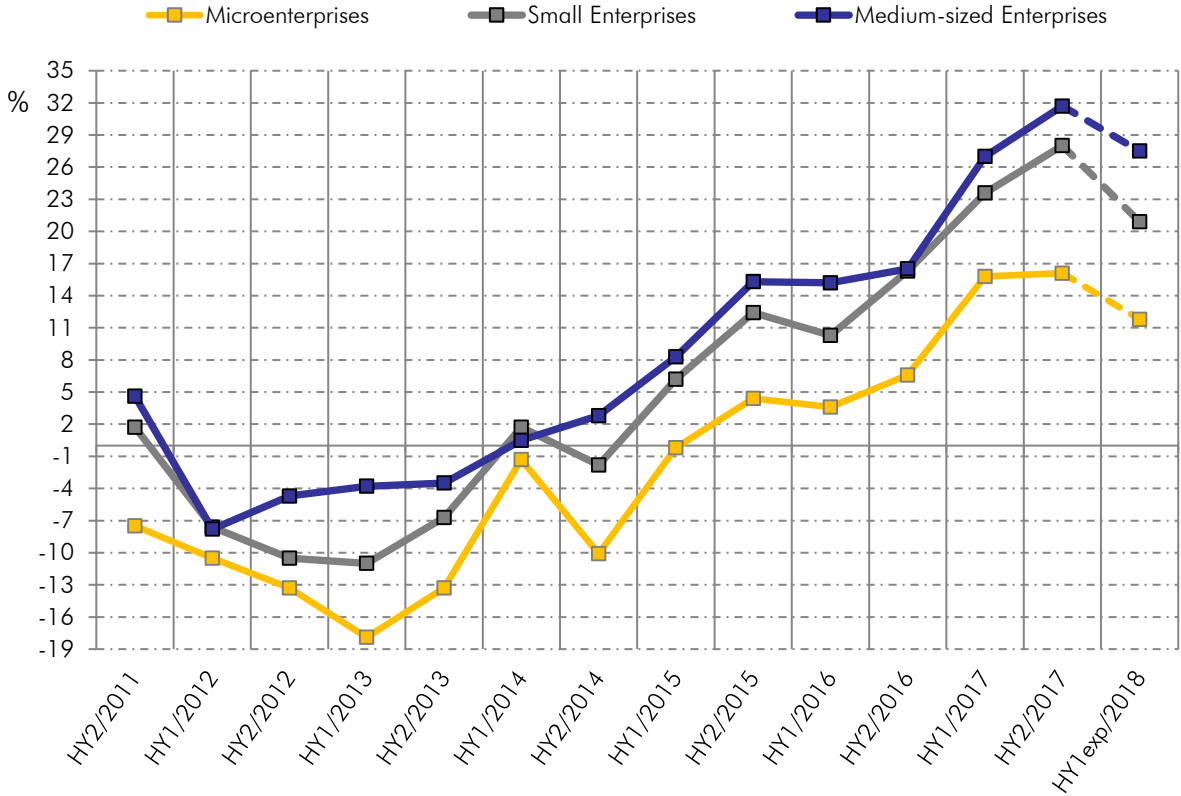
While microenterprises are an important element in the European economic fabric, they generally face more challenging conditions compared to their larger counterparts. This is evidenced by Figure 56, which illustrates microenterprises' perception about the current economic climate and compares it to larger firms' perception. The overall situation for the second half of 2017 shows improvements for SMEs, while almost no improvement for microenterprises. For the first half of 2018, microenterprises are on balance expecting a negative change (11.8%) in their overall situation, thereby being more pessimistic than their larger counterparts. The UEAPME survey furthermore reveals that they expect their investment climate to worsen (UEAPME, 2018).

Figure 55: Relative employment share by microenterprises compared to other size classes (2016)



Source: European Commission (2017a)

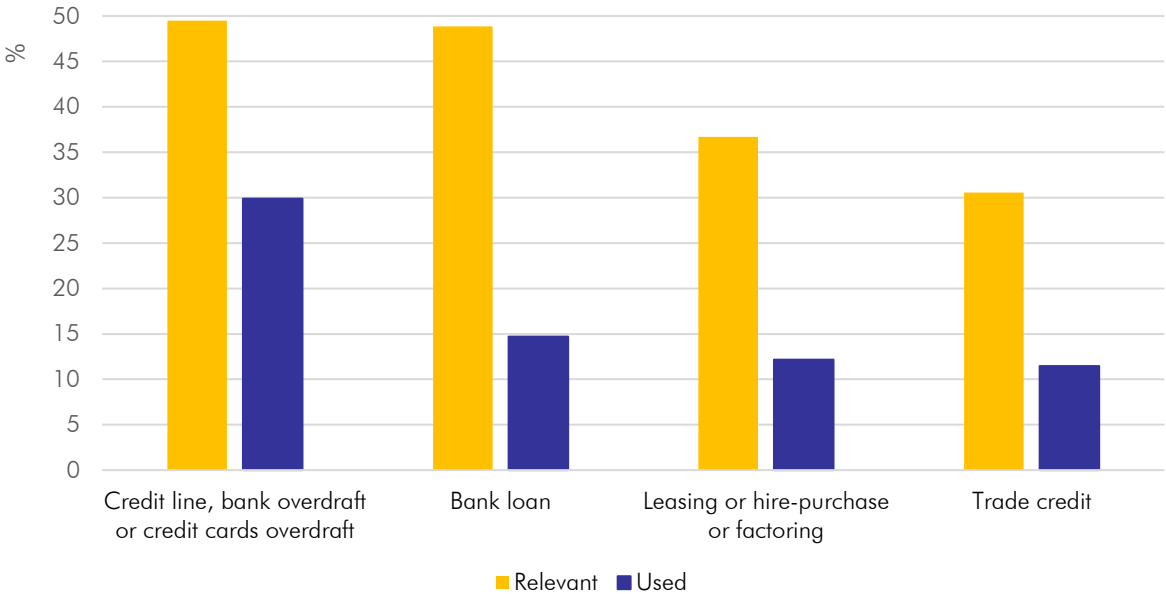
Figure 56: Overall situation of European microenterprises compared to other size classes



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 21.7% of small companies and 29% of medium companies, while only 14.7% of microenterprises used bank loan. Interestingly, almost half of the microenterprises indicated that bank loans were relevant sources of financing, which is much higher than what they actually use (see Figure 57).

Figure 57: Relevance and use of different financing sources for microenterprises (HY2/2017)



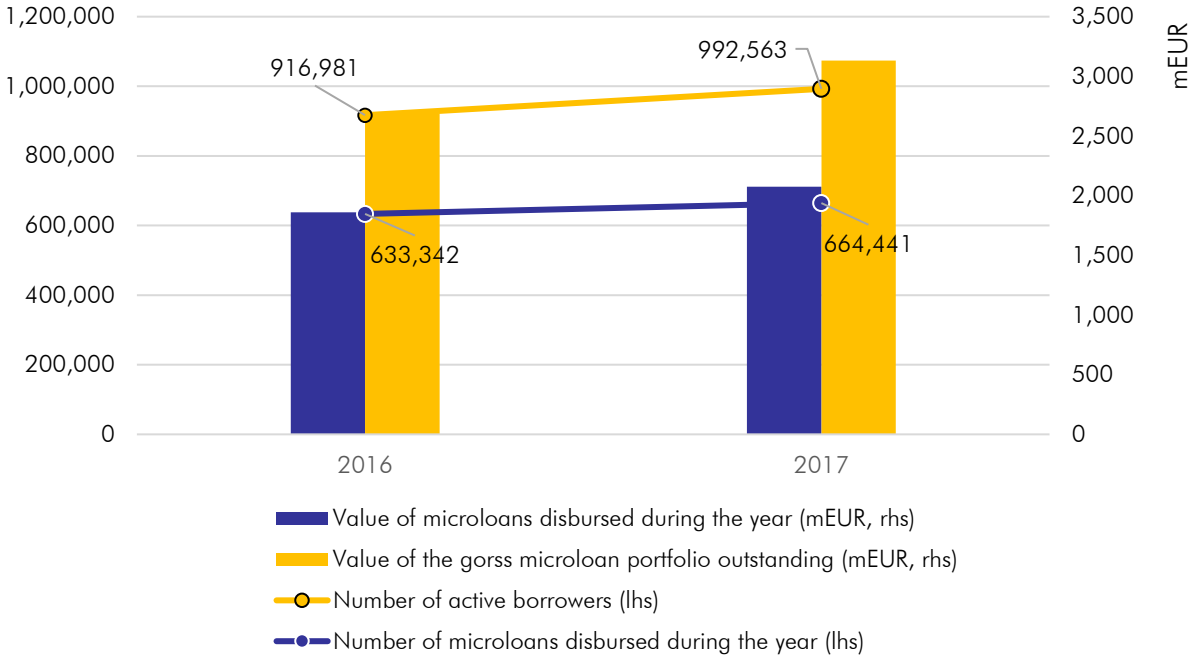
Source: Authors, based on ECB SAFE (2018b) data

6.3 The supply of microfinance: a sector characterised by significant diversity

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: microfinance associations, credit unions, cooperatives, Community Development Financial Institutions (CDFIs), non-bank financial institutions (NBFIs), government bodies, religious institutions and Non-Governmental Organisations (NGOs). The focus of MFIs’ activities changes from Western to 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. Moreover, Eastern European MFIs are more focused on providing financial products and services, while Western European MFIs provide both, financial and non-financial products and services. The duality indicates that the development process of the microfinance sector is highly dependent on the geographic market under consideration (EMN-MFC, 2016).

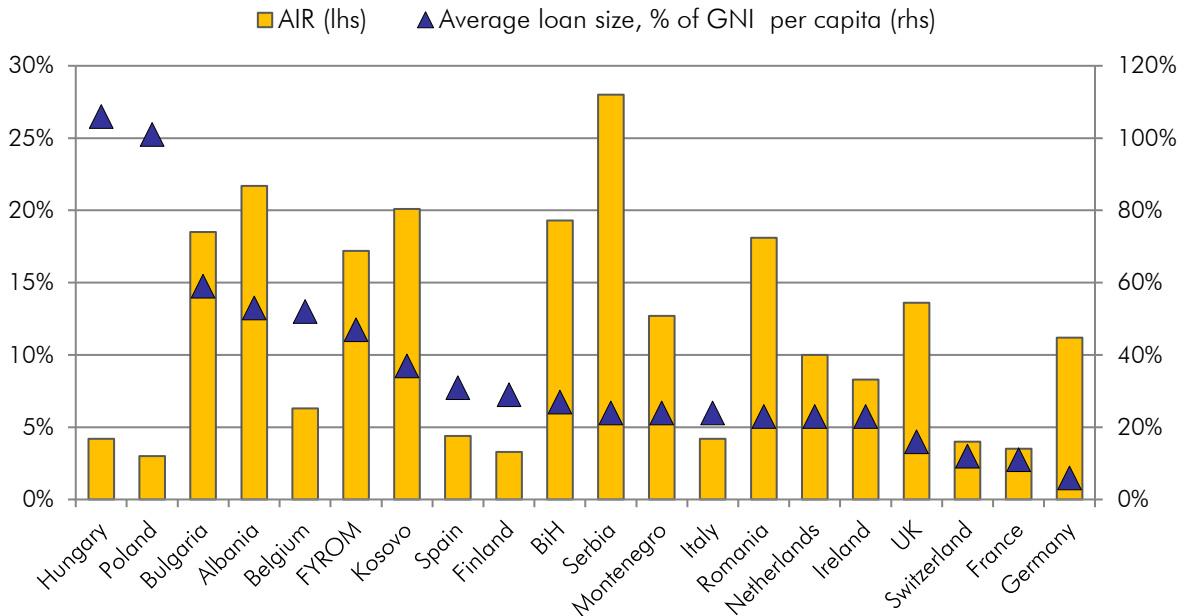
The latest EMN market survey data show that, in 2017, more than 992 thousand microenterprises and start-ups received support by the surveyed organisations, an increase of 8% compared to 2016. Over the same period, total microloan portfolio outstanding increased by 16% and reached EUR 3.1bn reported from 136 MFIs (see Figure 58).

Figure 58: Trend in microcredit supply in Europe



Source: EMN-MFC (2018)

Figure 59: Microcredit conditions in Europe per 2015



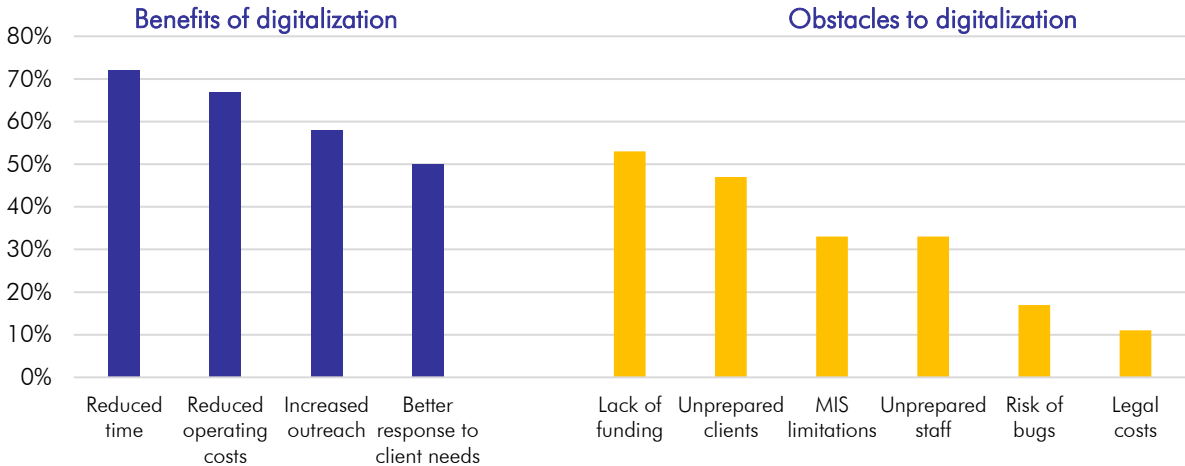
Note: AIR is average interest rate, GNI is Gross National Income
 Source: Authors, based on data from EMN-MFC (2016)

The interest rates charged for microloans for business purposes differ strongly between countries (see Figure 59). According to the previous EMN-MFC survey for the period 2014-2015⁸², the average interest rate among the surveyed microfinance providers amounted to 10.7% in 2015, but ranged from 3% in Poland and Finland, to as high as 18% in Bulgaria and Romania, and even higher in non-EU Balkan states (EMN-MFC, 2016).

The microfinance sector is characterised also by diversity across different 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 come from grants, while in Bulgaria, Romania and in non-EU Balkan countries, the surveyed MFIs don't depend on grants at all but the interest rates for their clients are the highest.

The differences in average interest rates are typically 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 micro-loans typically reflect the non-subsidised, cost-covering business models (often MFIs in the central-eastern part of the EU). The lower interest rates are reflecting 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).

Figure 60: Benefits of and obstacles to digitalisation (%MFIs)



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

⁸² Interest rate statistics for EMN-MFC survey 2016-2017 is not yet elaborated, therefore we present the previous survey results.

European MFIs are only partially digitalised but ready to adopt more in their operations in order to stay competitive, according to a new 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 fix 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 60). The second biggest challenge is unprepared clients. As Figure 61 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).

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.⁸³ This section discusses some indicators that illustrate how access to finance often is restricted for vulnerable labour market segments and microenterprises.

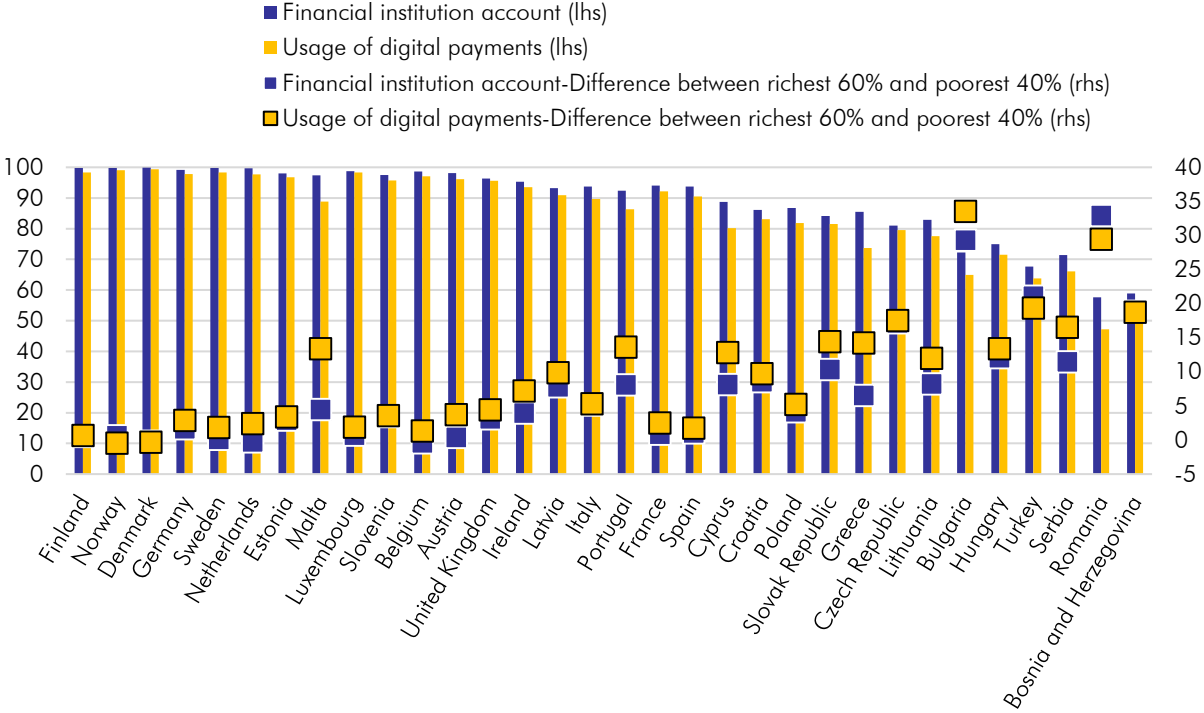
At its most basic level, financial inclusion starts by having access to a simple bank account. The Global Findex, the financial inclusion survey⁸⁴, illustrates how financial inclusiveness varies strongly between countries and social groups (see Figure 61). In countries like Finland, Norway, and Denmark, 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 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.

⁸³ For a full discussion on the mechanisms underlying finance market failures and credit rationing, see Section 5.1.1.

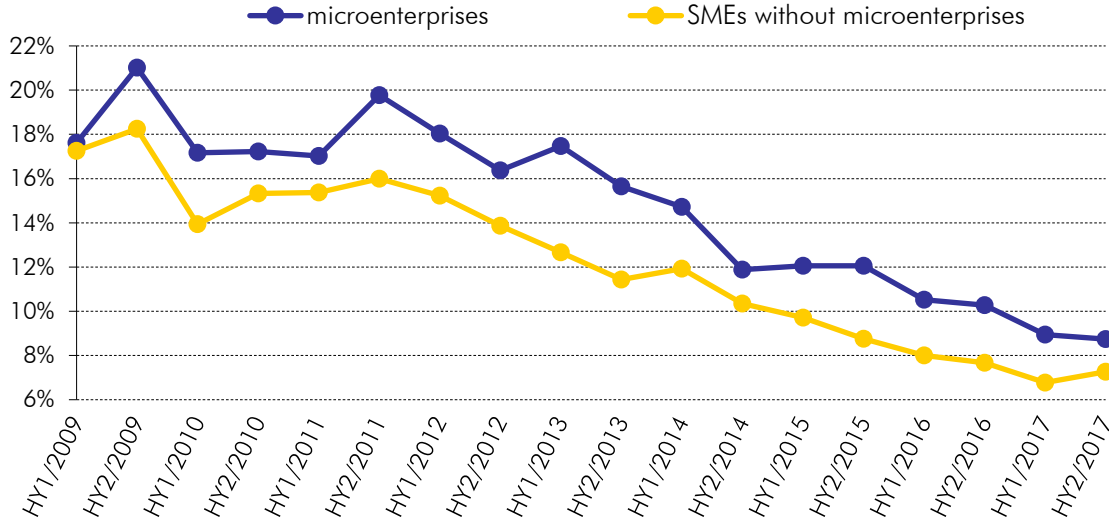
⁸⁴ The Global Financial Inclusion (Global Findex) database, launched by the World Bank in 2011, provides comparable indicators showing how people around the world save, borrow, make payments, and manage risk. The indicators in the 2014 Global Financial Inclusion (Global Findex) database are drawn from survey data covering almost 150,000 people in 144 economies - representing more than 97 percent of the world's population.

Figure 61: Financial institution account and use of digital payments, 2017



Source: Global Index Database

Figure 62: Share of enterprises reporting access to finance as their most important problem

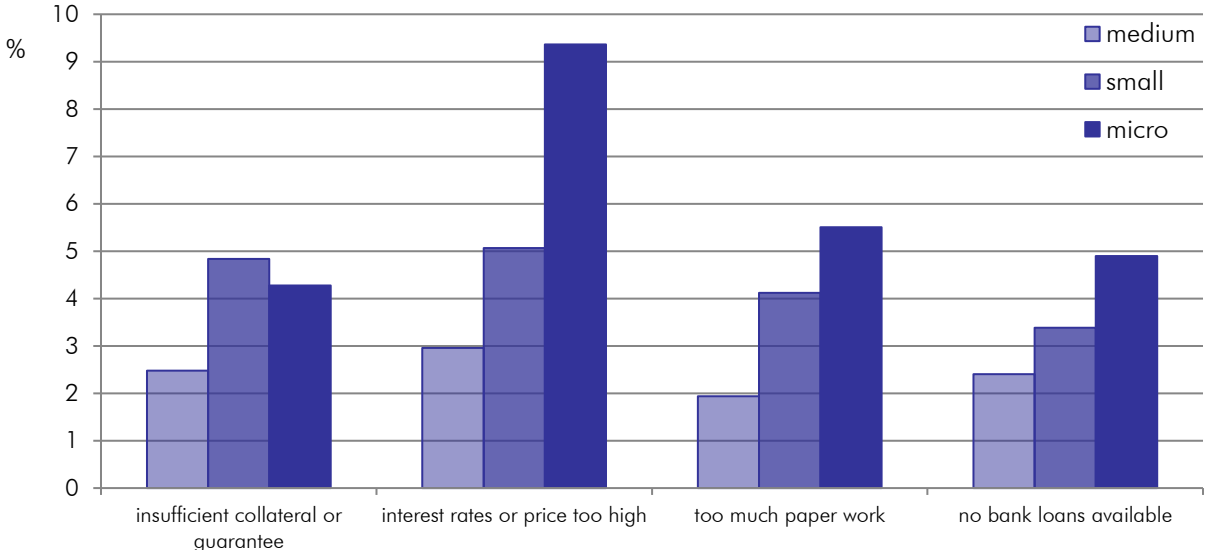


Source: Authors, based on data from ECB (2018b), Statistical Data Warehouse

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 62). The same survey states that bank loan rejection rate is still the highest for microenterprises (6.4%), compared to 4.1% for small firms and 2.5% 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 6.6%. 45% of the SMEs (49.6% 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” and “too much paperwork” is involved (see Figure 63).

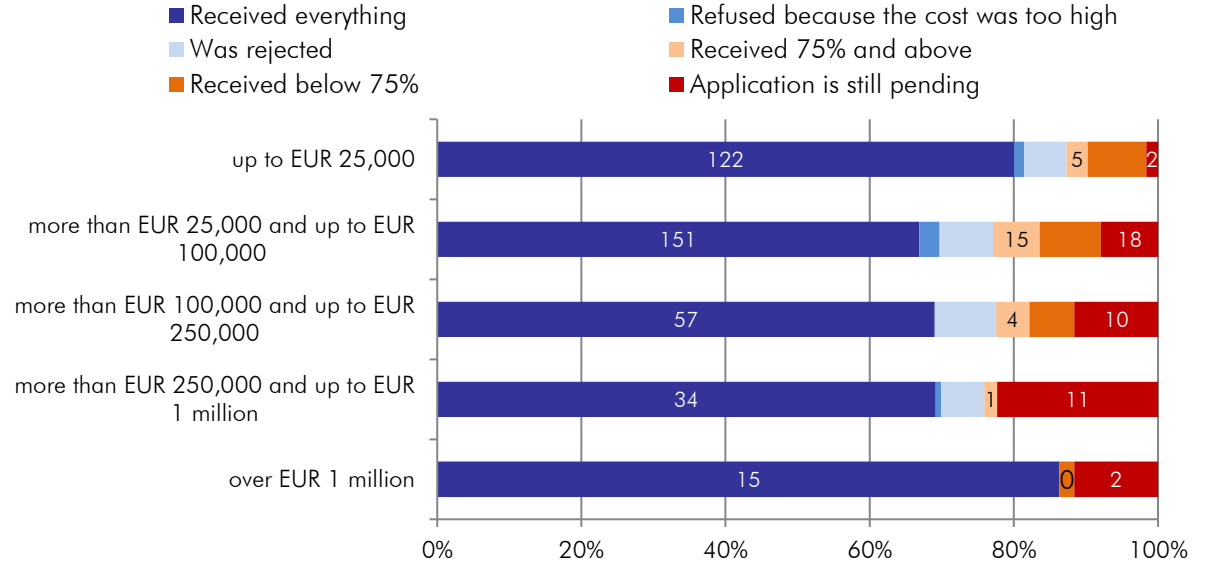
Figure 63: Reasons for bank loans being not relevant (by enterprise size class), HY2/2017



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

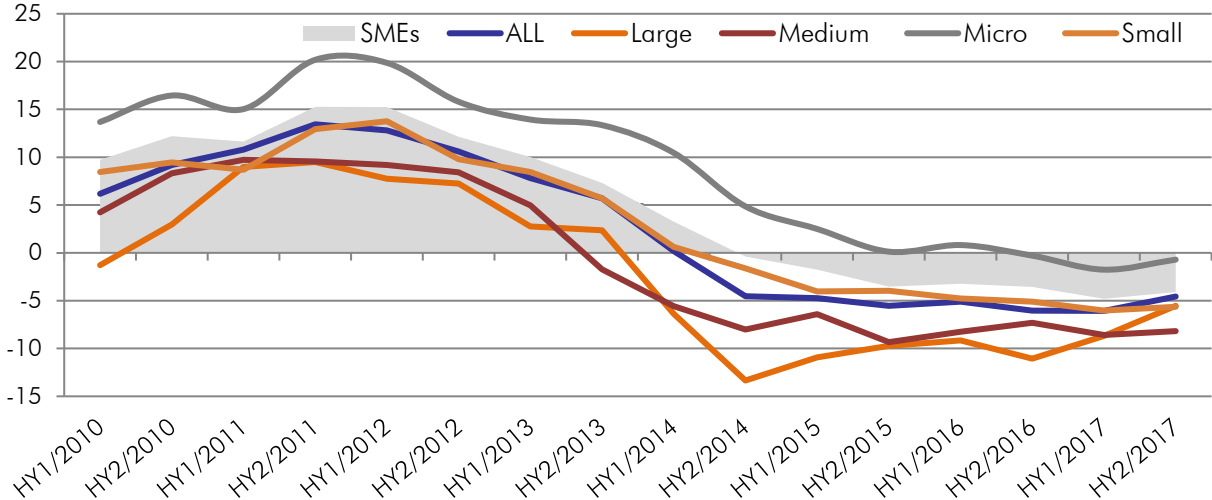
When microenterprises decide to apply for a bank loan, they are more likely to be rejected than their larger peers. Unsurprisingly, microenterprises have better chances to receive microloans than bigger loans. This implies that microenterprises with high funding needs face persistent barriers to growth (see Figure 64).

Figure 64: Application status of bank loans requested by microenterprises (by loan size), HY2/2017



Note: the figure is based on responses from 541 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

Figure 65: 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 65 shows how microenterprises report changes in their perceived financing gap and compares this to other company size classes. Also here it becomes apparent that microenterprises believe they operate in a more challenging environment than larger firms: 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. MIFs are aware of the benefits of digitalisation but they lack the financial resources to bring technology to their organizations (EMN, 2017). On the other hand, one success factor in small business lending is the direct contact between lenders and borrowers (“know your customer”). Digitalisation should not be used to eliminate such relationships, but to make them more efficient.

Skills: In addition to financial support, unemployed people or clients from other vulnerable groups are often in need of acquiring the necessary skills for success through coaching and mentoring. Technical assistance is crucial for entrepreneurs to succeed and decrease the risk of default. Nevertheless, the technical assistance provided during the loan term is often limited⁸⁵. Aside from the financial products and services, many European MIFs provide non-financial services as well, but without public support, cost-free non-financial services may become a burden for MIFs (EMN-MFC, 2016).

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 mid-2018 EIF had signed 75 EaSI guarantee agreements covering 23 countries (including Albania, Montenegro and Serbia outside of EU-28). Around 41% of the EaSI guarantee agreements had been entered into with non-banks. Over time these guarantee agreements will mobilise around EUR 1.5bn of new financing to micro-borrowers and social enterprises.

⁸⁵ Source: 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 sometimes also refers to *companies*, often SMEs, which pursue a business model of innovation with the aim of disrupting traditional financial service mechanisms.

Fintechs are not a stand-alone phenomenon. Recently, new blending solutions have emerged, in particular in the field of crowdfunding (both for lending and for equity). Hybrid forms are becoming increasingly common, mixing microfinance with crowd lending or business angel/Venture Capital financing with crowd investing. Mainstream banks are also entering the Fintech space, using marketplace lenders as distribution channels and acting as counterparts in SMESec transactions.

Digital innovation is central to the business model of many Fintechs and is becoming increasingly important for the population of SMEs as a whole. Box 16 discusses the process of SME digitalisation in the EU and some related policy initiatives.

Box 16: SME digitalisation

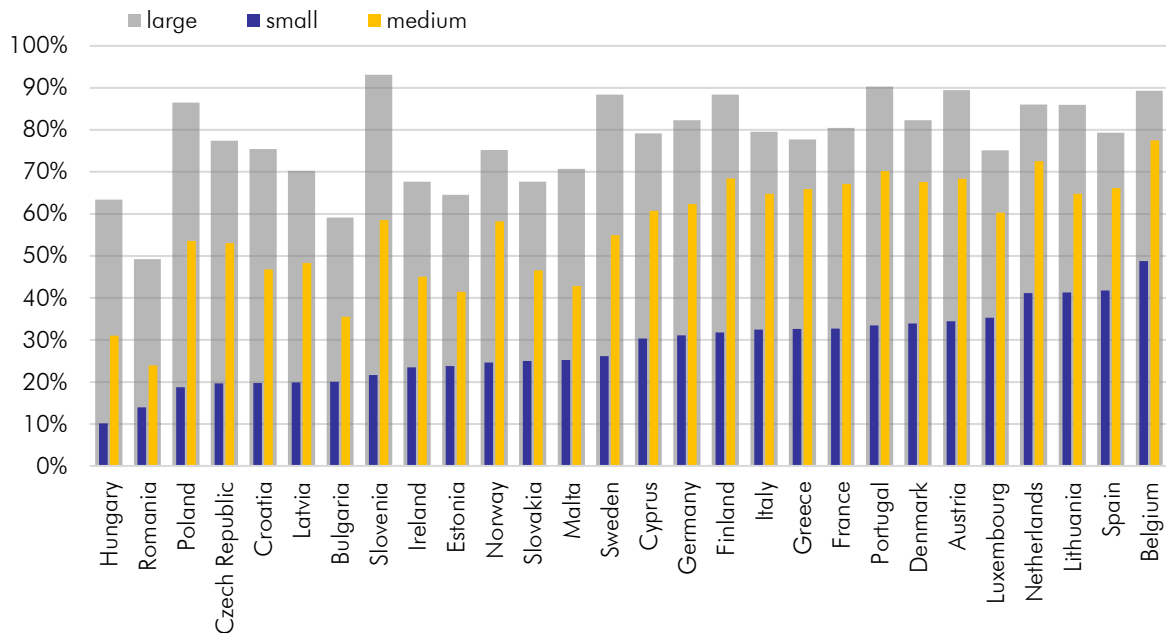
Corporate digitalisation refers to the process of employing digital technologies to transform a company’s business model. The rise of some high-visibility digital technologies, such artificial intelligence and the growing availability of big data, has pushed corporate digitalisation to the top of the European policy agenda. The digitalisation of production processes is an important driver of efficiency gains, cost savings and innovation in general. It is of particular importance that SMEs have unhampered access to these digital technologies. This will enable them to remain competitive and continue to push the boundaries of European innovation efforts. Unfortunately, SMEs are lagging behind in the digitalisation process.

Figure B6.1 shows the extent to which European firms have adopted *Enterprise Resource Planning* (ERP) software package. ERP aims to digitally integrate different internal business processes, such as finance, inventory management and sales/purchase accounting. ERP adoption is a useful measure to monitor the extent of SME digitalisation because its value extends across industries and business models. While one might rightfully argue that ERP is not relevant for the very smallest of firms, the data illustrated in figure B6.1 refer only to firms with 10 employees or more.

Clearly, there exist vast differences of SMEs’ ERP adaption between countries. For example, in Hungary, just 1 in 10 small companies and 3 in 10 medium-sized companies were using ERP software packages in 2017. ERP implementation rates are lowest in Eastern European countries: the bottom 8 countries all belong to the CESEE region. At the top of the ranking, 1 in 2 small Belgian firms use ERP, and for medium-sized firms, this share rises to more than 7 in 10, rendering the difference with their larger counterparts relatively small. This is not the case for all countries. In Slovenia, Hungary, but also Sweden, for example, this difference is much larger. The differences between SME ERP adoption rates at the country level, as well as the within-country difference between large firms and SMEs, indicate unused digitalisation potential, and hence lost cost-saving opportunities.

Box 16 continued:

Figure B6.1: European enterprises that internally share information with Enterprise Resource Planning software



*The category of small enterprises excluded firms with 10 or less employees. The financial services sector is excluded from all size categories. The data refer to the year 2017.

Source: European Commission, Digital scoreboard.

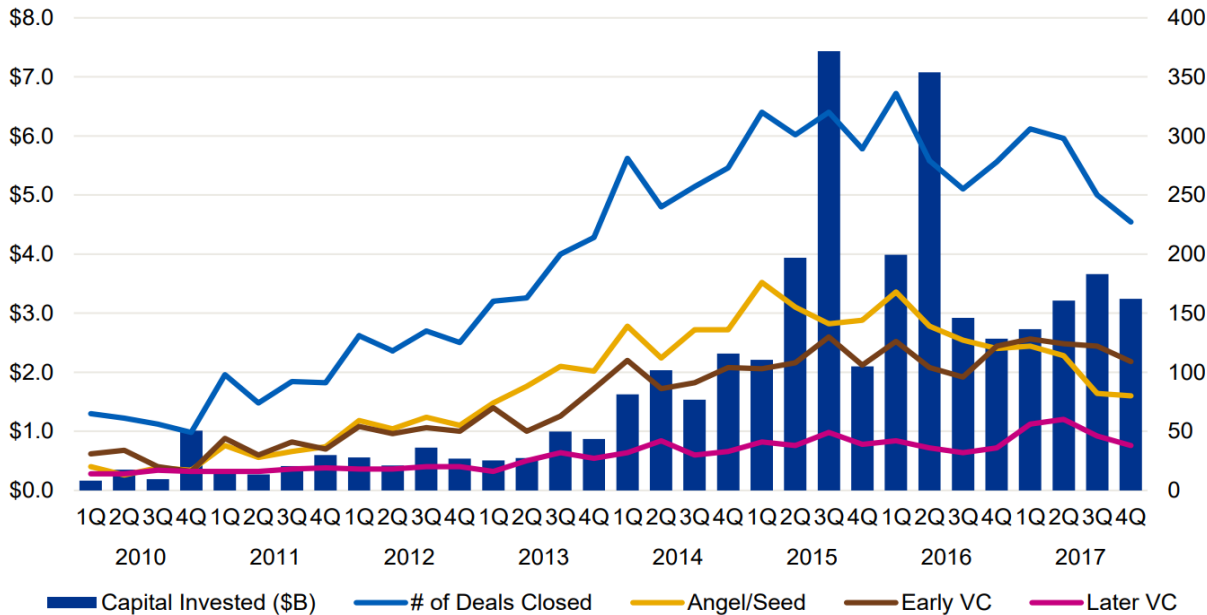
Another noteworthy observation that arises from Figure B6.1 is the relatively poor performance of German SMEs. A recent KfW report provides a potential explanation as it found that the vast majority (77 percent) of digitalisation investments implemented by German SMEs are funded through internal resources (compared to 58 percent for tangible assets), which could be indicative of the presence of a market failure on external finance markets, and the resulting finance gap (Saam et al., 2016).

Several policy initiatives have been launched to assist European SMEs in their digital transformation efforts, at the European and the national level. For example, the German national promotional institute, KfW, has recently launched the KfW Loan for Growth program, as part of the German government's Tech Growth Fund initiative, which supports digitalisation projects in medium-sized enterprises and helps companies scale up their business models (European Commission, 2017b). At the European level, the digital single market initiative aims to enhance access to digital goods and services for businesses across Europe. The initiative entails an investment of EUR 5b in the creation of a network of digital innovation hubs across Europe (European Commission, 2018b). In addition, the creation of a new European-level platform brings together different national digitalisation initiatives, to promote collaboration and joint investments and create synergies across different projects.

7.2 European Fintech VC market size

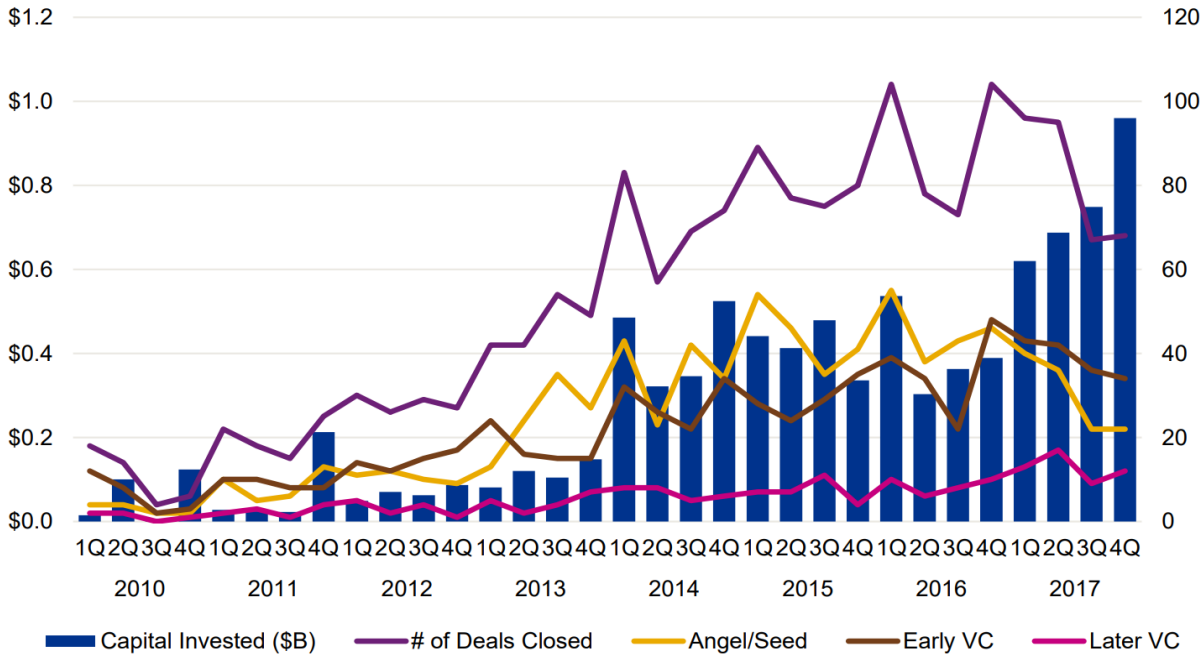
Figure 66 and Figure 67 depict total VC investment activity in Fintech companies since 2010, globally and in Europe, as illustrated in KPMG's quarterly 'Pulse of Fintech' report. During the fourth quarter of 2017, global VC Fintech activity slumped, in terms of volume and in terms of deal count. This followed a period of four consecutive quarters of rising volumes, so it is likely that the global market is merely taking a breath.

Figure 66: Global Fintech VC investment activity



Source: KPMG (2018)

Figure 67: European Fintech VC investment activity



Source: KPMG (2018)

In contrast, the European market showed no signs of slowing down (Figure 67). Investment volumes continued to grow and reached a record volume of nearly EUR 1b during the final quarter of 2017. Europe thereby significantly increased its market share in the Fintech VC space to around one third of global VC volumes. Deal count stagnated, continuing the trend towards consolidation and rising average deal values.

7.3 Crowdfunding in Europe⁸⁶

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 led to a decreasing European market share in global funded volumes from 8.6 percent in 2013 to 2.9 percent in 2016.⁸⁷ Within Europe, the UK still accounts for the majority of funded volumes (73 percent), but the importance of other European markets is growing. The statistics presented in this section focus on continental Europe.

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 68 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 percent. The total number of funded SMEs⁸⁸ also increased, but at a slower rate (54 percent), which implies a further increase in the average transaction size to EUR 77 543 per funded business.

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 percent (Figure 69), 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.

Among debt-based platforms, 2016 saw the rise of new CF concepts such as real estate CF and P2P property lending.⁸⁹ 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 70 illustrates the evolution of funding volumes on some of the platforms most relevant to SME financing.

⁸⁶ This section is derived mostly from an annual publication of Cambridge Centre for Alternative Finance (2018), which details the results of their annual survey among 344 CF platforms in 45 countries on the European continent.

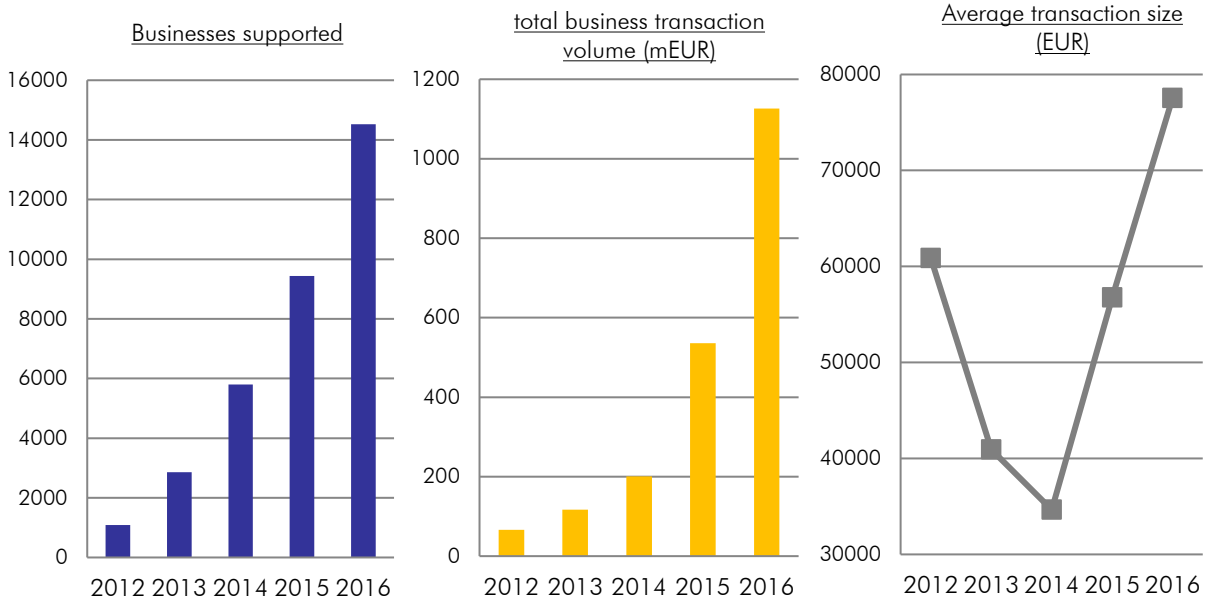
⁸⁷ Across all platform types, not just business related CF.

⁸⁸ The statistics refer to business in general, but it is safe to assume the share of non-SMEs in that population is negligible.

⁸⁹ Real estate CF aims to fund real estate purchases. P2P property lending is the collateralised version of "traditional" P2P business lending.

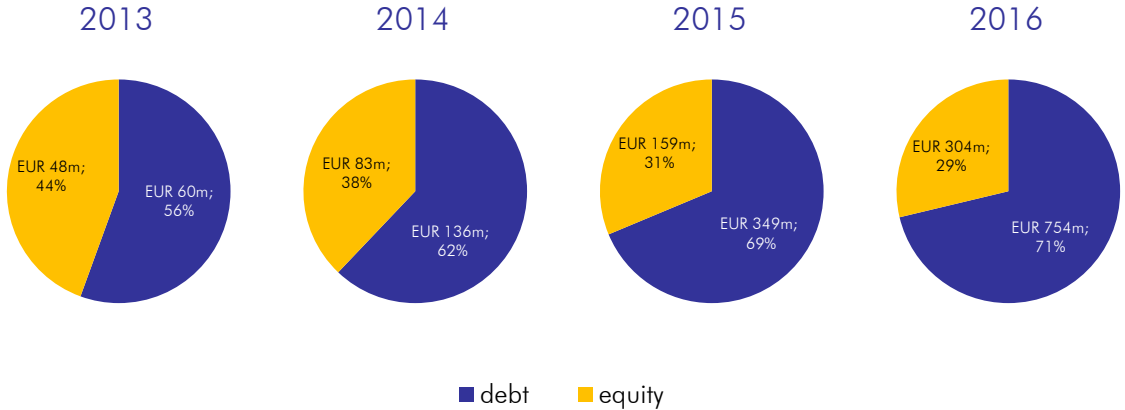
Average deal sizes differ greatly across platform types. Unsurprisingly, they were highest for real estate CF (EUR 453 536), followed by equity CF (EUR 302 621), and lowest for reward-based CF (EUR 15 069) and invoice trading (EUR 27 029).

Figure 68: The evolution of business-related transaction volume⁹⁰ 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)

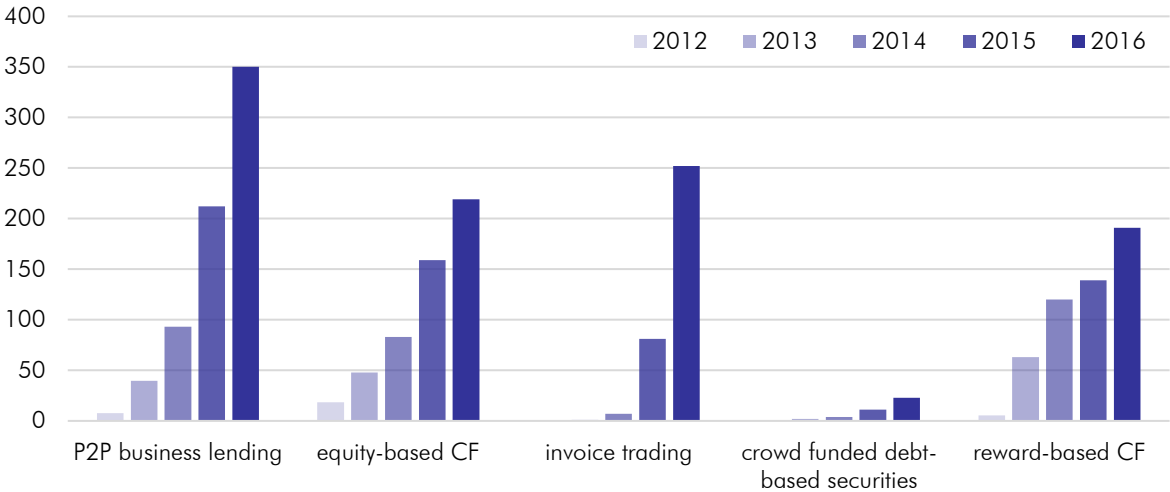
Figure 69: Business financing on equity and debt-based crowdfunding platforms: transaction volumes raised on equity vs debt-based models (mEUR)



Source: Cambridge Centre for Alternative Finance (2018)

⁹⁰ 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 Rewardbased CF models (Cambridge Centre for Alternative Finance, 2018).

Figure 70: The evolution of funding volumes on some platform types most relevant to SMEs



Source: Cambridge Centre for Alternative Finance (2018)

Institutionalisation

One potential explanation for the growing average deal sizes depicted (Figure 68) 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 percent of funding volume came from institutional investors, double the share recorded in 2015 (see Figure 71). For all other platform types, the crowd still accounted for the majority of funding.

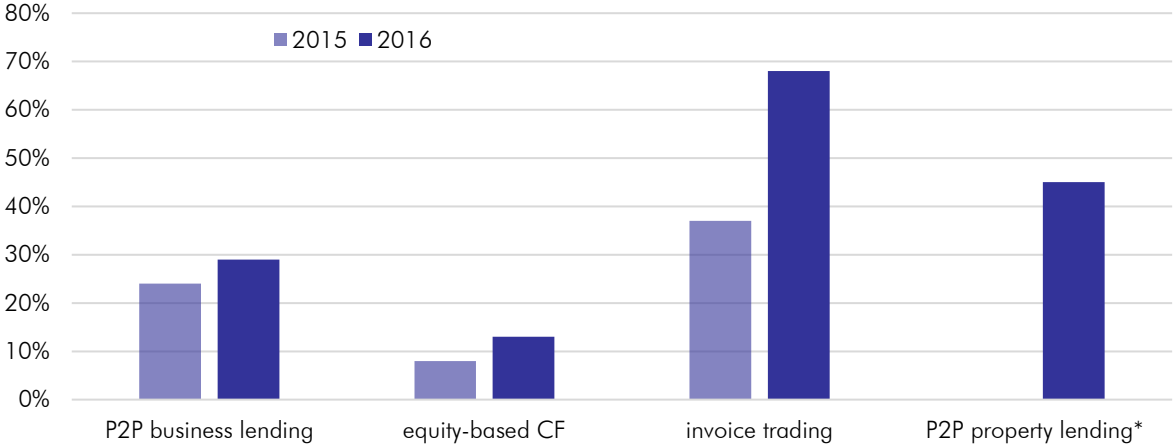
The evidence on whether or not institutional investment’s performance exceeds that of the crowd is mixed. Institutional portfolios do not always outperform those of retail investors (Lin et al., 2017), which casts doubt on the crowding-out hypothesis. However, Mohammadi and Shafi (2017), come to the 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.

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 percent of all fundraisers is accepted on the platform. The subsequent

successful funding rate is accordingly relatively high, with 85 percent of issuers successfully reaching the desired funding levels. In contrast, invoice trading has a much higher on-boarding rate (28 percent), but a lower successful funding rate (65 percent). Furthermore, invoice trading has the highest rate of repeated funding, with 60 percent of successful borrowers using the platform for at least the second time.

Figure 71: 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)

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 percent of platform who do source some inflows from abroad, about half limits this amount to just 10 percent 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 disproportionately 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, that have no internal funds available and have been rejected by the traditional financial sector. In the context of equity crowdfunding, 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 and could point to a complementary role of CF platforms in financing highly innovative firms, a subsegment known to be left aside by the traditional financial market players.

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. In this context, 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 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 a dynamic may lead to efficiency gains and cost reductions, it can also lead to an increasing consolidation within the financial service sector. Fintechs also form collaborative relationships 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 have been impenetrable.

Finally, 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. 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 & Schwenbacher, 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 the larger crowd.

Whether being a truly disruptive force, or rather a logical phase in the inevitable and continuous evolution of the financial service sector, it is undisputable that 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 might help reduce the pronounced asymmetric information problem in small business lending, for example, through technological advances in information processing. In addition, apart from being drivers for new business models, they are often start-ups and SMEs themselves, facing significant challenges in securing access to external finance sources. It is therefore important for policy makers to pre-emptively design an appropriate policy framework to ensure their contribution to the evolution of the financial service sector reaches its full potential.

8 Concluding remarks

The economic outlook for Europe remains positive, confirmed by the recent increased growth forecasts by the European Commission. Also the financing outlook of European SMEs has further improved since the publication of the last ESBFO in December 2017. However, these improvements do not necessarily translate into more financing for SMEs. For example, new credit flows to SMEs do not improve in many countries (OECD, 2018b). 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. Worries about the general economic outlook weigh on firms' investment decisions and in several countries there is a low growth trap. The impact of Brexit, with downside risks for both the UK and the EU27, is highly uncertain. Moreover, despite positive developments, 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 (OECD, 2018b).

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. EIF has increased – as the key catalytic investor in European venture and growth capital funds – its counter-cyclical role in providing financing solutions to boost entrepreneurship and innovation. 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, highly 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 latest 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.⁹¹

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)⁹² 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 72.

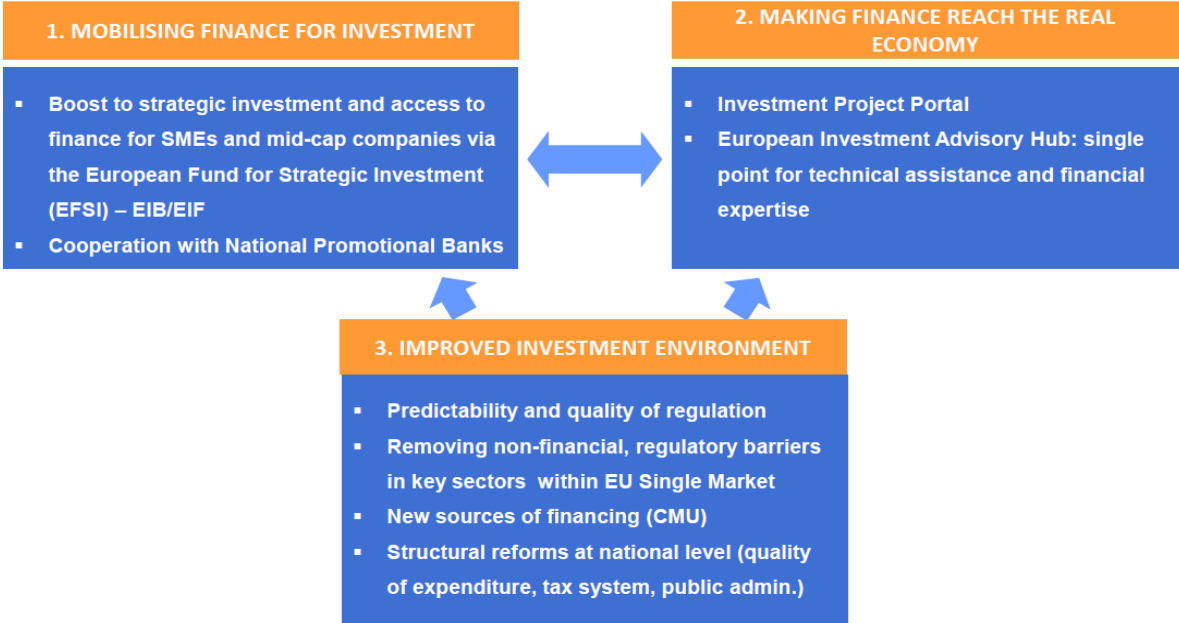
As part of the IPE’s pillar one, the European Fund for Strategic Investments (EFSI) aimed initially at unlocking additional investments of at least EUR 315bn over a three year period by addressing market gaps and mobilising private resources. EFSI is a strategic partnership between the EC and the EIB 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 66):

- 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.

⁹¹ A detailed overview regarding the CMU and how it can support SME financing is provided in Kraemer-Eis & Lang (2017).

⁹² See <http://www.eib.org/efsi/index.htm> and http://www.eif.org/what_we_do/efsi/index.htm.

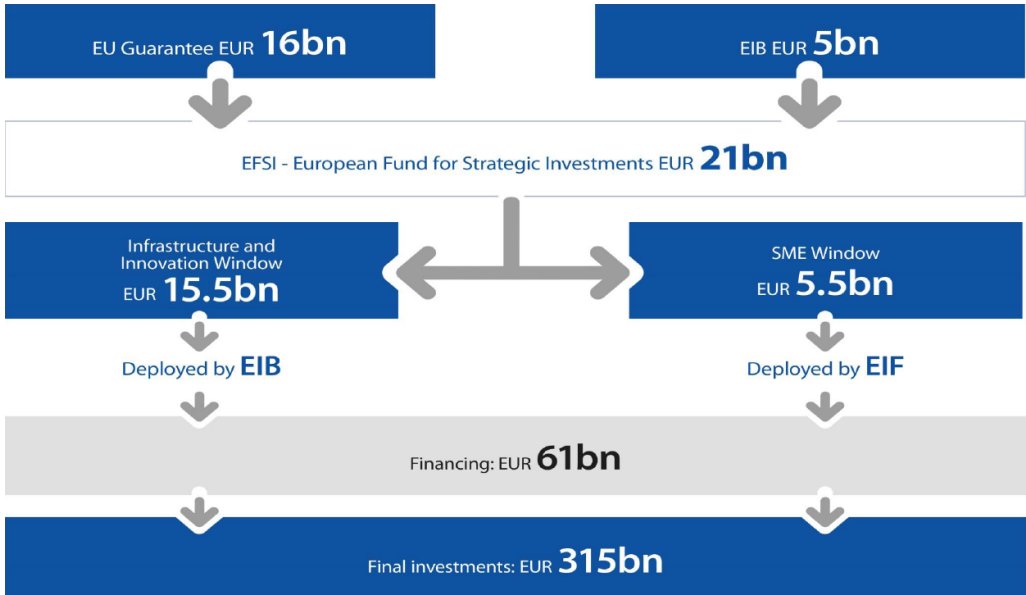
Figure 72: Pillars of the IPE



Source: European Commission

The resources under EFSI enable 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 are 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.

Figure 73: EFSI structure



Source: EIB Group

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.

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).

Discussions are still on-going with the EIB and the EC about the products to be deployed under the EUR 5bn SMEW increase. Indicative expectations are as follows:

- EUR 1.5bn from EIB to further increase the existing equity mandate RCR (without EFSI EU Guarantee);
- EUR 1 bn to further increase InnovFin SMEG, COSME LGF, EaSI Guarantee and CCS Guarantee;
- EUR 1bn to increase the SMEW Equity product;
- EUR 1.5bn to be deployed through various SME products, such as a diversified loan fund product, EFSI/ESIF/EAFRD/ESF/regional combinations and/or dedicated pilots (e.g. SME scale-ups, digitalization, etc.) subject to further discussions with the EC.

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 more money being allocated to support SMEs and the creation of 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 4 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 to provide a guarantee of EUR 38bn 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

Annex 1: Private equity glossary

(selection, from EVCA/Invest Europe)

- **Buyout:** A buyout is a transaction financed by a mix of debt and equity, in which a business, a business unit or a company is acquired with the help of a financial investor from the current shareholders (the vendor).
- **Buyout fund:** Funds whose strategy is to acquire other businesses; this may also include mezzanine debt funds which provide (generally subordinated) debt to facilitate financing buyouts, frequently alongside a right to some of the equity upside.
- **Capital weighted average IRR:** The average IRR weighted by fund size.
- **Carried interest:** A share of the profit accruing to an investment fund management company or individual members of the fund management team, as a compensation for the own capital invested and their risk taken. Carried interest (typically up to 20% of the profits of the fund) becomes payable once the limited partners have achieved repayment of their original investment in the fund plus a defined hurdle rate.
- **Closing:** A closing is reached when a certain amount of money has been committed to a private equity fund. Several intermediary closings can occur before the final closing of a fund is reached.
- **Commitment:** A limited partner's obligation to provide a certain amount of capital to a private equity fund when the general partner asks for capital.
- **Deal flow:** The number of investment opportunities available to a private equity house.
- **Disbursement:** The flow of investment funds from private equity funds into portfolio companies.
- **Distribution:** The amount disbursed to the limited partners in a private equity fund.
- **Divestment:** See exit.
- **Drawdown:** When investors commit themselves to back a private equity fund, all the funding may not be needed at once. Some is used as drawn down later. The amount that is drawn down is defined as contributed capital.
- **Early stage:** Seed and start-up stages of a business.
- **Early stage fund:** Venture capital funds focused on investing in companies in the early part of their lives.
- **Exit:** Liquidation of holdings by a private equity fund. Among the various methods of exiting an investment are: trade sale; sale by public offering (including IPO); write-offs; repayment of preference shares/loans; sale to another venture capitalist; sale to a financial institution.
- **Expansion capital:** Also called development capital. Financing provided for the growth and expansion of a company, which may or may not break even or trade profitably. Capital may be used to: finance increased production capacity; market or product development; provide additional working capital.
- **Follow-on investment:** An additional investment in a portfolio company which has already received funding from a private equity firm.
- **Fund:** A private equity investment fund is a vehicle for enabling pooled investment by a number of investors in equity and equity-related securities of companies (investee companies). These are generally private companies whose shares are not quoted on any stock exchange. The fund can take the form either of a company or of an unincorporated arrangement such as a limited partnership. See limited partnership.
- **Fund of Funds:** A fund that takes equity positions in other funds. A fund of fund that primarily invests in new funds is a Primary or Primaries fund of funds. One that focuses on investing in existing funds is referred to as a Secondary fund of funds.
- **Fund size:** the total amount of capital committed by the limited and general partners of a fund.

- **Fundraising:** The process in which venture capitalists themselves raise money to create an investment fund. These funds are raised from private, corporate or institutional investors, who make commitments to the fund which will be invested by the general partner.
- **General Partner:** A partner in a private equity management company who has unlimited personal liability for the debts and obligations of the limited partnership and the right to participate in its management.
- **General Partner's commitment:** Fund managers typically invest their personal capital right alongside their investors' capital, which often works to instil a higher level of confidence in the fund. The limited partners look for a meaningful general partner investment of 1% to 3% of the fund.
- **Generalist fund:** Funds with either a stated focus of investing in all stages of private equity investment, or funds with a broad area of investment activity.
- **Holding period:** The length of time an investment remains in a portfolio. Can also mean the length of time an investment must be held in order to qualify for Capital Gains Tax benefits.
- **Horizon IRR:** The Horizon IRR allows for an indication of performance trends in the industry. It uses the fund's net asset value at the beginning of the period as an initial cash outflow and the Residual Value at the end of the period as the terminal cash flow. The IRR is calculated using those values plus any cash actually received into or paid by the fund from or to investors in the defined time period (i.e. horizon).
- **Hurdle rate:** A return ceiling that a private equity fund management company needs to return to the fund's investors in addition to the repayment of their initial commitment, before fund managers become entitled to carried interest payments from the fund.
- **Inception:** The starting point at which IRR calculations for a fund are calculated; the vintage year or date of first capital drawdown.
- **Institutional investor:** An organisation such as a bank, investment company, mutual fund, insurance company, pension fund or endowment fund, which professionally invest, substantial assets in international capital markets.
- **Internal rate of return (IRR):** The IRR is the interim net return earned by investors (Limited Partners), from the fund from inception to a stated date. The IRR is calculated as an annualised effective compounded rate of return using monthly cash flows to and from investors, together with the Residual Value as a terminal cash flow to investors. The IRR is therefore net, i.e. after deduction of all fees and carried interest. In cases of captive or semi-captive investment vehicles without fees or carried interest, the IRR is adjusted to create a synthetic net return using assumed fees and carried interest. For the avoidance of doubts: IRR means the financial IRR and not the economic IRR, i.e. it does not account for any externalities.
- **IPO (Initial public offering):** The sale or distribution of a company's shares to the public for the first time. An IPO of the investee company's shares is one the ways in which a private equity fund can exit from an investment.
- **Later stage:** Expansion, replacement capital and buyout stages of investment.
- **Leverage buyout (LBO):** A buyout in which the New Company's capital structure incorporates a particularly high level of debt, much of which is normally secured against the company's assets.
- **Limited Partnership:** The legal structure used by most venture and private equity funds. The partnership is usually a fixed-life investment vehicle, and consists of a general partner (the management firm, which has unlimited liability) and limited partners (the investors, who have limited liability and are not involved in the day-to-day operations). The general partner receives a management fee and a percentage of the profits. The limited partners receive income, capital gains, and tax benefits. The general partner (management firm) manages the partnership using policy laid down in a Partnership Agreement. The agreement also covers, terms, fees, structures and other items agreed between the limited partners and the general partner.
- **Management fees:** Fee received by a private equity fund management company from its limited partners, to cover the fund's overhead costs, allowing for the proper management of the company. This annual management charge is equal to a certain percentage of the investors' commitments to the fund.

- **Mezzanine finance:** Loan finance that is halfway between equity and secured debt, either unsecured or with junior access to security. Typically, some of the return on the instrument is deferred in the form of rolled-up payment-in-kind (PIK) interest and/or an equity kicker. A mezzanine fund is a fund focusing on mezzanine financing.
- **Multiples or relative valuation:** This estimates the value of an asset by looking at the pricing of "comparable" assets relative to a variable such as earnings, cash flows, book value or sales.
- **Pooled IRR:** The IRR obtained by taking cash flows from inception together with the Residual Value for each fund and aggregating them into a pool as if they were a single fund. This is superior to either the average, which can be skewed by large returns on relatively small investments, or the capital weighted IRR which weights each IRR by capital committed. This latter measure would be accurate only if all investments were made at once at the beginning of the funds life.
- **Portfolio company:** The company or entity into which a private equity fund invests directly.
- **Pre seed stage:** The investment stage before a company is at the seed level. Pre-seed investments are mainly linked to universities and to the financing of research projects, with the aim of building a commercial company around it later on.
- **Private Equity:** Private equity provides equity capital to enterprises not quoted on a stock market. Private equity can be used to develop new products and technologies (also called venture capital), to expand working capital, to make acquisitions, or to strengthen a company's balance sheet. It can also resolve ownership and management issues. A succession in family-owned companies, or the buyout and buying of a business by experienced managers may be achieved by using private equity funding.
- **Private Equity Fund:** A private equity investment fund is a vehicle for enabling pooled investment by a number of investors in equity and equity-related securities of companies. These are generally private companies whose shares are not quoted on a stock exchange. The fund can take the form of either a company or an unincorporated arrangement such as a Limited Partnership.
- **Quartile:** The IRR which lies a quarter from the bottom (lower quartile point) or top (upper quartile point) of the table ranking the individual fund IRRs.
- **Rounds:** Stages of financing of a company. A first round of financing is the initial raising of outside capital. Successive rounds may attract different types of investors as companies mature.
- **Secondary investment:** An investment where a fund buys either, a portfolio of direct investments of an existing private equity fund or limited partner's positions in these funds.
- **Seed stage:** Financing provided to research, assess and develop an initial concept before a business has reached the start-up phase.
- **Start-up:** Companies that are in the process of being set up or may have been in business for a short time, but have not sold their product commercially.
- **Target company:** The company that the offeror is considering investing in. In the context of a public-to-private deal this company will be the listed company that an offeror is considering investing in with the objective of bringing the company back into private ownership.
- **Top Quarter:** Comprises funds with an IRR equal to or above the upper quartile point.
- **Track record:** A private equity management house's experience, history and past performance.
- **Venture Capital:** Professional equity co-invested with the entrepreneur to fund an early-stage (seed and start-up) or expansion venture. Offsetting the high risk the investor takes is the expectation of higher than average return on the investment. Venture capital is a subset of private equity.
- **Venture Capitalist:** The manager of private equity fund who has responsibility for the management of the fund's investment in a particular portfolio company. In the hands-on approach (the general model for private equity investment), the venture capitalist brings in not only moneys as equity capital (i.e. without security/charge on assets), but also extremely valuable domain knowledge, business contacts, brand-equity, strategic advice, etc.
- **Vintage year:** The year of fund formation and first drawdown of capital.
- **Volatility:** The volatility of a stock describes the extent of its variance over time.
- **Write-off:** The write-down of a portfolio company's value to zero. The value of the investment is eliminated and the return to investors is zero or negative.

Annex 2: Securitisation glossary

- **Attachment Point:** The attachment point is the level of subordination that a particular tranche has beneath it. The attachment point is a proxy of percentage of the transaction that will absorb losses before the senior tranche is adversely affected.
- **Credit Default Swap:** An agreement used in synthetic securitisations where the originator (protection buyer) sells the credit risk of an underlying portfolio to a counterparty (protection seller) without transferring the ownership of the assets.
- **Credit Enhancement:** Refers to one or more measures taken in a securitisation structure to enhance the security, the credit quality or the rating of the securitised instrument, e.g. by providing a third party guarantee (such as the EIF guarantee). The credit enhancement could be provided in the form of:
 - (i) Structural credit enhancement (tranching of the transaction in senior, mezzanine and junior tranches);
 - (ii) Originator credit enhancement (cash collateral, profit retention, interest sub-participation);
 - (iii) Third party credit enhancement (e.g. EIF or monoline insurers).
- **Credit Linked Notes (CLN):** A security issued by an SPV (or directly from the balance-sheet of the originator) credit-linked to the default risk of an underlying portfolio of assets. Usually used in synthetic securitisations for the mezzanine tranches of a transaction.
- **Collateralised loan obligations (CLOs)** are a form of securitisation where payments from multiple middle sized and large business loans are pooled together and passed on to different classes of owners in various tranches.
- **First Loss Piece (FLP):** Part of a securitisation transaction which is usually kept by the originator (as an “equity piece”) and which covers the risk of first loss in the portfolio. Its size is a function of the historical losses, so as to protect the investors against the economic risk (estimated loss) of the transaction.
- **Issuer:** Refers to the SPV which issues the securities to the investors.
- **Kirb:** means the sum of the expected loss and regulatory capital that a financial intermediary assigns to an exposure (a portfolio) by using an Internal Rating Based (IRB) approach.
- **Mezzanine Risk:** Risk or tranche which is subordinated to senior risk, but ranks senior to the FLP.
- **Originator:** The entity assigning receivables in a securitisation transaction (funded transaction) or seeking credit risk protection on the assets (unfunded transaction).
- **Primary market:** The market in which securities are issued.
- **Secondary market:** The market where issued securities are traded.
- **Senior:** The class of securities with the highest claim against the underlying assets in a securitisation transaction. Often they are secured or collateralised, or have a prior claim against the assets. In true sale structures they rank senior in the cash flow allocation of the issuer’s available funds.
- **Servicer:** Refers to the entity that continues to collect the receivables, enforcement of receivables, etc. Generally, the originator is also the servicer.
- **Special Purpose Vehicle (SPV):** Issuing entity holding the legal rights over the assets transferred by the originator. An SPV has generally a limited purpose and/or life.
- **Subordinated:** The classes of securities with lower priority or claim against the underlying assets in a securitisation transaction. Typically, these are unsecured obligations. They are also called Junior (or Mezzanine) notes and bonds.
- **Synthetic securitisation:** A transaction where the assets are not sold to an SPV but remain on balance sheet; and where only the credit risk of the assets is transferred to the market through credit default swaps or credit linked notes.
- **Tranche:** A piece, a portion or slice within a structured transaction.

- **Portfolio Tranching Cover:** The technique by which an Originator can buy protection on a portfolio. Such protection is only activated when the losses exceed a given threshold (Attachment Point).
- **True sale:** It refers to the separation of the portfolio risk from the risk of the originator, i.e. there is a non-recourse assignment of assets from the originator to the issuer (special purpose vehicle). To be contrasted with synthetic securitisations where only the underlying credit risk is transferred.
- **Whole Business Securitisation (WBS):** Securitisation of the general operating cash flow arising from a certain line or area of the business of the originator over the long term.

Annex 3: 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
- EU-28: 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 (Microfinance 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
- 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
- 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

- 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.
- Affinito, M., & Farabullini, F. (2009). Does the law of one price hold in euro-area retail banking? An empirical analysis of interest rate differentials across the monetary union. *International Journal of Central Banking*, 5(1), pp. 5-37.
- AFME (2017). The Shortage of Risk Capital for Europe’s High Growth Businesses. March 2017.
- AFME (2018). Securitisation data report Q1/2018 (and earlier reports).
- 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.
- AFME, EBF, eurofinas, Leaseurope, DSA, efama, ICMA, Pensions Europe (2016). The importance of securitisation for jobs and growth in Europe. October 2016.
- Aiyar, S., Al-Eyd, A., Barkbu, B., and Jobst, A. (2015). Revitalizing Securitization for Small and Medium-Sized Enterprises in Europe. IMF Staff Discussion Note SDN/15/07. May 2015.
- Akerlof, G. (1970). The market for “lemons”: Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics*, 84 (3), 488–500.
- Albertazzi, U., Bottero, M., Gambacorta, L., and Ongena, S. (2017). Asymmetric information and the securitisation of SME loans. BIS Working Paper No. 601. <http://www.bis.org/publ/work601.htm>; a more recent version can be found here:
- Altunbas, Y., Gambacorta, L, and Marques, D. (2007). Securitisation and the bank lending channel. ECB Working Paper Series No 838, December 2007.
- Andonov, K. (2017). Deal numbers rebound in May. In: Global Corporate Venturing: The GCV Symposium 2017. June 2017.
- Anginer, D., De la Torre, A. and Ize, A. (2014). Risk-bearing by the state: When is it good public policy? *Journal of Financial Stability*, 10, 76–86.
- Arping, S., Lóránth, G. and Morrison, A. (2010). Public initiatives to support entrepreneurs: Credit guarantees versus co-funding. *Journal of Financial Stability*, 6, 26–35.
- Arrow, K. (1985). Informational structure of the firm. *The American Economic Review*, 75 (2), 303–307.
- Asdrubali, P. and Signore, S. (2015). The economic impact of EU guarantees on credit to SMEs: Evidence from CESEE countries. European Commission’s European Economy Discussion Paper 002 and EIF Working Paper 2015/29. http://www.eif.org/news_centre/research/index.htm
- 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.
- Bell, Ian (2017). STS – the end of a long march, maybe the start of a new dawn. PCS newsletter. 26.10.2017.
- Bending, T. and Brutscher, P. (2016). The EIB Investment Survey: a preview. In: EIB (2016). Investment and Investment Finance in Europe.
- Berg, T., Streitz, D., and Wedow, M. (2015). Real Effects of Securitization. BAFFI CAREFIN Centre Research Paper No. 2015-14.
- Berger, A. N., & Udell, G. F. (2006). A more complete conceptual framework for SME finance. *Journal of Banking & Finance*, 30(11), 2945-2966.

- Bertoni, F. and Tykiová, 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), 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), 391-405.
- BI Intelligence (2016). 1 in 5 European bank would buy fintech startups. *Business Insider*. Retrieved from: <http://www.businessinsider.com/1-in-5-european-banks-would-buy-fintech-startups-2016-6>.
- 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.
- Borjas G.J., (1995), "The economic benefits from immigration", *Journal of Economic Perspectives*, 9 (2), 3 22.
- Borjas G.J., (1999), "Heaven's door: immigration policy and the American economy", Princeton University Press.
- Borjas G.J., (2017), "The Earnings of Undocumented Immigrants", NBER Working Paper No. 23236.
- 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., Schmiegl, F., and Wu, X. (2016). Corporate Venturing Shifts Gears : How the Largest Companies Apply a Broad Set of Tools to Speed Innovation. The Boston Consulting Group. April 2016.
- Brinckmann, P. (2015). Influence of the entrepreneur's profile on the start-up's performance. Master Thesis. Delivered at the University of Trier. 15.10.2015. Mimeo.
- Bruhn-Leon, B., Eriksson, P.-E., and Kraemer-Eis, H. (2012). Progress for microfinance in Europe. EIF Research & Market Analysis. Working Paper 2012/013. January 2012. http://www.eif.org/news_centre/research/index.htm
- Cambridge Center for Alternative Finance (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., & McCann, F. (2016). Understanding SME interest rate variation across Europe. *Quarterly Bulletin Articles*, 60-76.
- 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/research/index.htm
- 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.

- Council of the EU (2017a). Capital markets union: agreement reached on securitisation. Press release 314/17. 30.05.2017.
- Cour-Thimann, P. and Winkler, B. (2013). The ECB's non-standard monetary policy measures. The role of institutional factors and financial structure. ECB Working Paper Series. No 1528. April 2013.
- CSES (2012). Evaluation of EU Member States' Business Angel Markets and Policies. Final Report. October 2012.
- Cumming, D.J., Grilli, L. and Murtinu, S. (2014). Governmental and independent venture capital investments in Europe: A firm-level performance analysis. In: Journal of Corporate Finance. In Press, Corrected Proof.
- Cyber Security Ventures (2017). Annual Cybercrime Report 2017, Cybercrime damages will cost the world \$6 trillion annually by 2021.
- D'Ambrosio, M., & Gianfrate, G. (2016). Crowdfunding and Venture Capital: Substitutes or Complements?. *The Journal of Private Equity*, 20(1), 7-20.
- Deloitte (2018). Spreading their wings : Direct Lenders evolve their product suite. Deloitte Alternative Lender Deal Tracker Spring 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.
- EBAN (2014). Statistics Compendium.
- EBAN (2016). European Early Stage Market Statistics 2015. May 2016.
- EBAN (2017). EBAN Statistics Compendium 2016: European Early Stage Market Statistics. November 2017.
- EBF (2015). Financial dialogue. Fostering financial knowledge among European SMEs.
- ECB (2013) Cost of borrowing indicators: methodological note. DG Statistics, ECB Public. 2013.
- ECB (2016). Report on financial structures. October 2016.
- ECB (2018a). The Euro Area bank lending survey. First quarter 2018. April 2018.
- ECB (2018b). Survey on the access to finance of enterprises in the Euro Area. October 2017 to March 2018.
- Echikson, W. (2017). Step aside Silicon Valley, there is a new tech hub in town. World Economic Forum; published in collaboration with Project Syndicate. 19.4.2017.
- EIF (2016). Annual Report 2015. Supporting smart, sustainable and inclusive economic growth for SMEs. 02.05.2016. http://www.eif.org/news_centre/research/index.htm
- EIF (2017). Annual Report 2016. Supporting smart, sustainable and inclusive growth for SMEs. 25.04.2017. http://www.eif.org/news_centre/research/index.htm
- 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 (2018). Evers & jung GmbH. Assessing the European market potential of business microcredit and the associated funding needs of non-bank MFIs. February 2018.
- EMN-MFC (2016). Microfinance in Europe: A Survey of EMN-MFC Members. Report 2014-2015. 2016.
- Epsilon Research (2018). Argos Mid-Market Index. May 2018.
- 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). Annual Report on European SMEs 2016/2017 – Focus on self-employment. November 2017.
- European Commission (2017b). European countries join forces to digitise industry. Retrieved from: <https://ec.europa.eu/digital-single-market/en/news/european-countries-join-forces-digitise-industry>
- European Commission (2017c). 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 (2017d). Commission welcomes European Parliament vote on extension and reinforcement of the European Fund for Strategic Investments (EFSI), the heart of the Juncker Plan. European Commission - Press release. 15.05.2017.
- European Commission (2018b). KfW strengthens its financing offer for SMEs on the path to the digital future. European Commission Press Release. 6 June 2018.
- European Commission (2018a). Spring 2018 Economic Forecast: Expansion to continue, amid new risks. May 2018. Economic and Financial Affairs. Institutional Paper 077.
- European Economic and Social Committee, EESC (2017), "Assessment of the effectiveness of the EU SME policies 2007-2015".
- EY (2015). Liquidity meets perspective: Venture Capital and Start-ups in Germany 2015. VC Trends initiative by EY.
- Feinstein, B., Netterfield, C., and Miller, A. (2015). Ten Questions Every Founder Should Ask before Raising Venture Debt. Bessemer Venture Partners. Retrieved October 25, 2016, from <https://bvp.app.box.com/v/venturedebt>
- FitchRatings (2017). Global Structured Finance Losses: 2000 – 2016 Issuance. Special Report. 13.09.2017.
- FitchRatings (2018). SME CLO Compare. March 2018.
- Gartner (2018). Gartner forecasts worldwide security spending will reach \$96 Billion in 2018, up 8 percent from 2017. Gartner press release. Retrieved from: <https://www.gartner.com/newsroom/id/3836563>
- GEM (2018). 2016/2017 Global Report. Global entrepreneurship monitor.
- Giese, V. (2014). Characteristics of European Corporate Venture Capital Investments – A Quantitative Analysis across Selected Industries. Master thesis, University of Trier. 4.11.2014. Mimeo.
- Go4Venture (2017). European Scaleup Index Report, Q3 2017. November 2017.
- Go4Venture Advisers (2015). European Venture & Growth Equity Market Monthly Bulletin. March 2015. 02.05.2015.
- Gordan, P. (2012). Venture Debt: A Capital Idea for Startups. Kauffman Fellows Press.
- Gvetadze S., Kraemer-Eis, H., Lang, F., Prencipe, D., Signore, S., & 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 31, 2017).
- Hellmann, T., Schure, P., and Vo, D. (2015). Angels and Venture Capitalists: Substitutes or Complements? (February 23, 2015).

- Holmstrom, B. and Tirole, J. (1997). Financial intermediation, loanable funds and the real sector. *The Quarterly Journal of Economics*, 112 (3), 663–691.
- Honohan, P. (2010). Partial credit guarantees: Principles and practice. *Journal of Financial Stability*, 6, 1–9.
- Hornuf, L., & Schwienbacher, A. (2016). 15 Crowdfunding: angel investing for the masses?. *Handbook of research on business angels*, 381.
- Huerge, 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 (2018). World Economic Outlook, April 2018: Cyclical upswing, structural change.
- 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/>
- Jaffee, D. and Russell, T. (1976). Imperfect information, uncertainty, and credit rationing. *The Quarterly Journal of Economics*, 90 (4), 651–666.
- Kaplan, S.N., and Lerner, J. (2016). Venture Capital Data: Opportunities and Challenges. NBER Working Paper 22500. August 2016. <http://www.nber.org/papers/w22500> Published in: Haltiwanger, J., Hurst, E., Miranda, J., and Schoar, A. (eds.): *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*. 2017.
- 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.
- 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, No. 1. Pp. 20-55.
- KPMG (2018). The Pulse of Fintech Q4 2017, global report on fintech investment trends. KPMG Report. 13 February 2018.
- 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 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. (2018). 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., Lang, F., and Gvetadze, S. (2013). Bottlenecks in SME financing. In: Kolev, A., Tanayama, T., and Wagenvoort, R. (ec. eds.) (2013). Investment and Investment Finance in Europe. EIB Economics Department. Pp. 277ff. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Lang, F., and Gvetadze, S. (2015a). European Small Business Finance Outlook. EIF Working Paper 2014/28. EIF Research & Market Analysis. June 2015. http://www.eif.org/news_centre/research/index.htm
- 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., Lang, F., Torfs, W., and Gvetadze, S. (2016b). European Small Business Finance Outlook. EIF Working Paper 2016/37. EIF Research & Market Analysis. December 2016. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Lang, F., Torfs, W., and Gvetadze, S. (2017a). European Small Business Finance Outlook. EIF Working Paper 2017/43. EIF Research & Market Analysis. June 2017. http://www.eif.org/news_centre/research/index.htm
- Kraemer-Eis, H., Botsari, A., Gvetadze, S., Lang, F., and Torfs, W. (2017b). European Small Business Finance Outlook: December 2017. EIF Working Paper 2017/46. EIF Research & Market Analysis. 18 December 2017. 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 Prencepe, 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., & 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.
<https://www.ft.com/content/57ba6236-f766-11e6-bd4e-68d53499ed71>
- Mersch, Yves (2017). Securitisation revisited. Keynote speech at the Euro Finance Week, 16.11.2017. Frankfurt/M.
- MFC (2017). Justyna Pytkowska, Piotr Korynski. Digitalizing Microfinance in Europe. MFC Research Paper. December 2017.
- Mohammadi, A., & Shafi, K. (2017). How Wise Are Crowd? A Comparative Study of Crowd and Institutions in Peer-to-Business Online Lending Markets (No. 450). Royal Institute of Technology, CESIS-Centre of Excellence for Science and Innovation Studies.
- Moody's (2017). Securitisation is a relevant source of funding for the European economy. Sector in-depth, Securitisation – Europe. 25.09.2017.
- Moody's (2018a). SME loan and lease ABS - Europe: Performance Update. January 2018. 18.04.2014.
- Moody's (2018b). SME & Mid-Cap Focus. May 2018.
- Moore, W., & Craigwell, R. (2003). The relationship between commercial banks' interest rates and loan sizes: evidence from a small open economy. Applied Financial Economics, 13(4), pp. 257-266.
- 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 (2014a). Entrepreneurship at a Glance 2014.
- OECD (2014b). 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 (2017a). Financing SMEs and Entrepreneurs 2017. An OECD Scoreboard. April 2017.
- OECD (2017b). International Migration Outlook 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/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.
- PCS (2018c). EBA consultation on STS criteria interpretation is released. 20.04.2018.

- 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 Outlook: Alternative Assets, H1 2018.
- PWC (2017). Cyber security: European emerging market leaders. January 2017.
- 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.
- Reddemann, C.C. (2018). Venture debt in Europe – A market overview. Master thesis. Delivered at the University of Düsseldorf. Mimeo. April 2018.
- Ryan, R., O'Toole, C. and McCann, F. (2014). Does bank market power affect SME financing constraints? *Journal of Banking & Finance*, 49, 495–505.
- Saam, C., Viete, M. and Schiel, S. (2016): Digitalisierung im Mittelstand: Status Quo, aktuelle Entwicklungen und Herausforderungen [SMEs and digitalisation: The current position, recent developments and challenges]. Forschungsprojekt im Auftrag der KfW Bankengruppe. Zentrum für Europäische Wirtschaftsforschung (ZEW), Mannheim (in German).
- Saunders-Calvert, L. (2017). Global Venture Capital.
- Schich, S., Cariboni, J., Naszodi, A., Maccaferri, S. (2017). Evaluating publicly supported Credit Guarantee Programmes for SMEs: Literature review and synthesis of responses to an OECD/EC survey. OECD Financial Market Trends.
- Signore, 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. & Vismara, S. (2017) Does success bring success? The post-offering lives of equity-crowdfunded firms. *Journal of Corporate Finance*, forthcoming.
- Singh, Permith (2017). Funding Unlocked. In: *The Treasurer*. May 2017.
- Slush and Atomico (2017). *The State of European Tech 2017*. November 2017.
- Stiglitz, J. and Weiss, A. (1981). Credit rationing in markets with imperfect information. *The American Economic Review*, 71 (3), 393–410.
- Stiglitz, J. E. (1972). Some aspects of the pure theory of corporate finance: bankruptcies and takeovers. *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., 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/H1*. March 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.
- 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.
- Wagenvoort, R. J., Ebner, A., & Borys, M. M. (2011). A factor analysis approach to measuring European loan and bond market integration. *Journal of Banking & Finance*, 35(4), pp. 1011-1025.

- WEF (2017). Beyond Fintech: a pragmatic assessment of disruptive potential in financial services. *World Economic Forum*.
- Wehinger, G. and Nassr, I (2015). Unlocking SME finance through market-based debt: Securitisation, private placements and bonds, In: *OECD Journal: Financial Market Trends*. April 2015.
- 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.
- Zetsche D. & Preiner, C. (2017) Cross-border crowdfunding – Towards a single crowdfunding market for Europe. *European Business Organization Law Review*, forthcoming.

About ...

... the European Investment Fund

The European Investment Fund (EIF) is Europe's leading risk finance provider for small and medium sized enterprises (SMEs) and mid-caps, with a central mission to facilitate their access to finance. As part of the European Investment Bank (EIB) Group, EIF designs, promotes and implements equity and debt financial instruments which specifically target the needs of these market segments.

In this role, EIF fosters EU objectives in support of innovation, research and development, entrepreneurship, growth, and employment. EIF manages resources on behalf of the EIB, the European Commission, national and regional authorities and other third parties. EIF support to enterprises is provided through a wide range of selected financial intermediaries across Europe. EIF is a public-private partnership whose tripartite shareholding structure includes the EIB, the European Union represented by the European Commission and various public and private financial institutions from European Union Member States and Turkey. For further information, please visit www.eif.org.

... EIF's Research & Market Analysis

Research & Market Analysis (RMA) supports EIF's strategic decision-making, product development and mandate management processes through applied research and market analyses. RMA works as internal advisor, participates in international fora and maintains liaison with many organisations and institutions.

... this Working Paper series

The EIF Working Papers are designed to make available to a wider readership selected topics and studies in relation to EIF's business. The Working Papers are edited by EIF's Research & Market Analysis and are typically authored or co-authored by EIF staff, or written in cooperation with EIF. The Working Papers are usually available only in English and distributed in electronic form (pdf).

EIF Working Papers

- 2009/001 *Microfinance in Europe – A market overview.*
November 2009.
- 2009/002 *Financing Technology Transfer.*
December 2009.
- 2010/003 *Private Equity Market in Europe – Rise of a new cycle or tail of the recession?*
February 2010.
- 2010/004 *Private Equity and Venture Capital Indicators – A research of EU27 Private Equity and Venture Capital Markets.* April 2010.
- 2010/005 *Private Equity Market Outlook.*
May 2010.
- 2010/006 *Drivers of Private Equity Investment activity. Are Buyout and Venture investors really so different?* August 2010
- 2010/007 *SME Loan Securitisation – an important tool to support European SME lending.*
October 2010.
- 2010/008 *Impact of Legislation on Credit Risk – How different are the U.K. and Germany?*
November 2010.
- 2011/009 *The performance and prospects of European Venture Capital.*
May 2011.
- 2011/010 *European Small Business Finance Outlook.*
June 2011.
- 2011/011 *Business Angels in Germany. EIF's initiative to support the non-institutional financing market.* November 2011.
- 2011/012 *European Small Business Finance Outlook 2/2011.*
December 2011.
- 2012/013 *Progress for microfinance in Europe.*
January 2012.
- 2012/014 *European Small Business Finance Outlook.*
May 2012.
- 2012/015 *The importance of leasing for SME finance.*
August 2012.
- 2012/016 *European Small Business Finance Outlook.*
December 2012.
- 2013/017 *Forecasting distress in European SME portfolios.*
May 2013.
- 2013/018 *European Small Business Finance Outlook.*
June 2013.

- 2013/019 *SME loan securitisation 2.0 – Market assessment and policy options.*
October 2013.
- 2013/020 *European Small Business Finance Outlook.*
December 2013.
- 2014/021 *Financing the mobility of students in European higher education.*
January 2014.
- 2014/022 *Guidelines for SME Access to Finance Market Assessments.*
April 2014.
- 2014/023 *Pricing Default Risk: the Good, the Bad, and the Anomaly.*
June 2014.
- 2014/024 *European Small Business Finance Outlook.*
June 2014.
- 2014/025 *Institutional non-bank lending and the role of debt funds.*
October 2014.
- 2014/026 *European Small Business Finance Outlook.*
December 2014.
- 2015/027 *Bridging the university funding gap: determinants and consequences of university seed funds and proof-of-concept Programs in Europe.*
May 2015.
- 2015/028 *European Small Business Finance Outlook.*
June 2015.
- 2015/029 *The Economic Impact of EU Guarantees on Credit to SMEs - Evidence from CESEE Countries.* July 2015.
- 2015/030 *Financing patterns of European SMEs: An Empirical Taxonomy*
November 2015
- 2015/031 *SME Securitisation – at a crossroads?*
December 2015.
- 2015/032 *European Small Business Finance Outlook.*
December 2015.
- 2016/033 *Evaluating the impact of European microfinance. The foundations.*
January 2016
- 2016/034 *The European Venture Capital Landscape: an EIF perspective. Volume I: the impact of EIF on the VC ecosystem.* June 2016.
- 2016/035 *European Small Business Finance Outlook.*
June 2016.
- 2016/036 *The role of cooperative banks and smaller institutions for the financing of SMEs and small midcaps in Europe.* July 2016.
- 2016/037 *European Small Business Finance Outlook.*
December 2016.
- 2016/038 *The European Venture Capital Landscape: an EIF perspective. Volume II: Growth patterns of EIF-backed startups.* December 2016.

- 2017/039 *Guaranteeing Social Enterprises – The EaSI way.*
February 2017.
- 2017/040 *Financing Patterns of European SMEs Revisited: An Updated Empirical Taxonomy and Determinants of SME Financing Clusters.* March 2017.
- 2017/041 *The European Venture Capital landscape: an EIF perspective. Volume III: Liquidity events and returns of EIF-backed VC investments.* April 2017.
- 2017/042 *Credit Guarantee Schemes for SME lending in Western Europe.*
June 2017.
- 2017/043 *European Small Business Finance Outlook.*
June 2017.
- 2017/044 *Financing Micro Firms in Europe: An Empirical Analysis.*
September 2017.
- 2017/045 *The European venture capital landscape: an EIF perspective.*
Volume IV: The value of innovation for EIF-backed startups. December 2017.
- 2017/046 *European Small Business Finance Outlook.*
December 2017.
- 2018/047 *EIF SME Access to Finance Index.*
January 2018.
- 2018/048 *EIF VC Survey 2018 – Fund managers’ market sentiment and views on public intervention.* April 2018.
- 2018/049 *EIF SME Access to Finance Index – June 2018 update.*
June 2018.
- 2018/050 *European Small Business Finance Outlook.*
June 2018.

The page is intentionally left blank

