

PUBLIC POLICIES TO PROMOTE VENTURE CAPITAL: HOW TO GET NATIONAL AND EU MEASURES IN SYNC

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SUMMARY

Despite the potential of 510 million customers in the Single Market, European start-ups have difficulties in growing as fast as their US competitors. The availability of venture capital (VC) is an important catalyst for a thriving and innovative start-up ecosystem. In this respect, however, Europe lags behind: the European VC industry is smaller, less attractive for investors and many barriers for cross-border investments persist.

This policy paper analyses two policy tools through which the EU and its member states promote venture capital: public VC funds and tax incentives for VC investors. While in both areas policy-makers have been busy improving their toolboxes, **too little effort was made to align and coordinate measures at national and European levels**. This policy paper therefore suggests two initiatives that member states and EU institutions could implement jointly.

Public VC funds: Government agencies have reacted to the weaknesses of the European VC market by introducing funding instruments that focus on the growth phase of start-ups and attract additional private investments. In order to tackle **the fragmentation of national VC markets requires, however, a more institutionalised form of cooperation** between public actors than is currently the case.

Therefore, the European Investment Fund (EIF) and national promotional institutions (NPIs) should **upgrade their existing cooperation platform with an EIF-NPI Equity Pool** that would dedicate more resources to the promotion of cross-border VC investments. A pooling of resources would allow the EIF and NPIs to exploit synergies more effectively rather than duplicating capacities.

Tax incentives: European governments have adopted numerous tax incentive schemes to make VC investments more attractive. The paper finds that the **heterogeneity between national tax systems creates competition and also imposes transaction and information costs** on international investors.

This is why member states should **adopt a single tax framework for VC investments** in order to ensure transparent and non-discriminatory tax treatment of cross-border investments. The new framework should render the permanent establishment of VC funds and tax declaration in multiple member states obsolete.

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INTRODUCTION: WHY EUROPE NEEDS MORE VENTURE CAPITAL

The successes of technology start-ups such as Uber, Airbnb and Co have inspired governments around the globe to support the development of national start-up ecosystems. The incentives are clear: young innovative enterprises are major drivers of economic and employment growth. In the UK, only 6 % of VC-funded companies accounted for half of the employment creation between 2002 and 2008.¹ Furthermore, start-ups may develop disruptive products and business models that provide the economy with a competitive edge in new technologies. Successful start-up ecosystems do not only depend on the research infrastructure and an entrepreneurship culture but also on the availability of sufficient financing.

Traditional financing channels for small and medium-size enterprises (SMEs) such as bank loans fail to provide start-ups with sufficient financial resources. From a bank's perspective a start-up is an opaque and risky investment. It usually has little collateral, its business model lacks a proof of concept and failure is quite likely. The income from interest cannot compensate the riskiness of such an investment. Therefore, start-ups need investors that can profit from the potentially large return on investment if the start-up grows into a successful company. Venture capital (VC) funds and other private equity investors have specialised in this high-risk high-return segment and thereby fulfil a critical role not only in the start-up ecosystem but in the economy at large.²

” THE VC INDUSTRY
IS PRONE TO SEVERAL
MARKET FAILURES ”

Despite the specialisation of VC fund teams to identify lucrative portfolio companies and assist them with their networks and experience, the VC industry is prone to several market failures, such as asymmetric information and high exposure to the economic cycle, as well as positive externalities due to its positive impact on innovation and employment. These market imperfections result in insufficient funding for venture capital markets relative to their potential societal benefits.³

Furthermore, VC is a learning process, which means a VC industry is not very attractive for investors before it reaches a certain maturity level. VC funds need to gain experience to be profitable and a critical mass of investors is necessary to develop scale economies. This development takes time and puts younger markets like Europe's at a disadvantage compared to the USA's or Israel's.⁴

Positive externalities and the high threshold before markets become experienced and sophisticated enough to become self-sustaining have motivated governments around the world to support their venture capital ecosystem. Even in countries like the USA and Israel, where VC markets are relatively large (0.28 % and 0.38 % of GDP compared to 0.028 % of GDP in Europe)⁵ governments maintain public funding programmes and tax incentive schemes to promote venture capital.

In Europe, two governance levels are at work to promote the VC industry: national governments provide funding through their national promotional institutions (NPIs) like the KfW in Germany or Bpifrance in France, and they use tax incentive schemes to limit the riskiness of VC investments for private investors. At the European level, the European Investment Fund (EIF) also intervenes in the VC market. Furthermore, the European Commission identifies barriers for cross-border investments due to different tax regimes or regulatory requirements, and promotes best practice.

1. Nesta, *The vital 6 per cent: How high-growth innovative business generate prosperity and jobs*, Research summary, October 2009.

2. OECD, *Financing SMEs and Entrepreneurs 2017: An OECD Scoreboard*, Paris, OECD Publishing, 2017.

3. Acevedo, Miguel F. et al., *France, Germany, Italy, Spain and the United Kingdom: Building Momentum in Venture Capital across Europe*, Bpifrance, Cassa depositi e prestiti SpA, Instituto de Crédito Oficial, British Business Bank, KfW Bankengruppe, December 2016.

4. Kraemer-Eis, Helmut, Signore, S. & Prencipe, D., *The European venture capital landscape: an EIF perspective, Volume I: The impact of EIF on the VC ecosystem*, EIF Research and Market Analysis, Working Paper 2016/34, 2016; Wilson, Karen E., *Policy lessons from financing young innovative firms*. OECD Science, Technology and Industry Policy Papers, No 24, OECD Publishing, Paris, 2015 and Lerner, J., *Boulevard of broken dreams: why public efforts to boost entrepreneurship and venture capital have failed – and what to do about it*, Princeton University Press, 2009.

5. Data refers to 2016 or latest. See OECD, *Entrepreneurship at a Glance 2016*, OECD Publishing, Paris, 2016 and Invest Europe, *2016 European Private Equity Activity*, May 2017.

Despite the potential market of 510 million customers, Europe lacks behind with regard to start-up successes. By July 2017 there were just 16 European unicorns compared to 96 from the USA and 47 from Asia.⁶ Besides the relative youth of the European start-up and VC ecosystems, the fragmentation into national markets with different languages, different tax systems and different administrative processes raises barriers that limit the potential of European VC firms.

This paper assesses the policy tools used by governments and European actors to tackle the weaknesses of VC markets. Many policy contributions have assessed such measures, either at the European level or in individual member states, and most papers conclude that the European VC market needs to integrate and that policies need to tackle cross-border barriers.⁷ This paper identifies two tangible initiatives that can align national and European efforts to promote cross-border activity of the VC industry in Europe.

The first section analyses four major weaknesses in European VC markets that deserve attention by policy-makers. In the second section, the paper assesses policies in the area of government VC funding and tax incentives, and provides recommendations on how to improve the policy mix.

1. Weaknesses in the European VC market and reasons for public intervention

In most European economies, venture capital is a rather new source of business finance that developed in the 1990s or 2000s. In its early phase, European VC markets were hit by two economic crises: first, by the burst of the dot-com bubble in 2001 and, just when markets started to recover, a second time by the global financial crisis in 2008/2009.⁸

Besides a bumpy start, the European VC industry also has to cope with the remaining barriers for cross-border investments, which limit the potential of the Single Market. This section identifies four weaknesses that disadvantage the European VC markets against more mature markets such as the US. The analysis also takes cross-border differences between European markets into account, mainly looking at the largest industries located in the UK, France, Germany and Sweden.

1.1. Exits are less profitable

From the point of the investor, the European VC market looks as follows: to realise a return on investment, the investor needs to exit the company at one point. Three of those exit routes are particularly interesting: the potentially most lucrative exit is an initial public offering (IPO) on the stock market. Other interesting exit routes are an acquisition by a larger corporation, a so-called trade sale, or a takeover by another private equity firm in a secondary buyout.

In the USA, public offerings of a venture-backed company are more common than in Europe. In 2015, 18 % of exits of VC-backed companies took that route, compared to 10 % in Europe. What is even more important is the amount of capital raised by the IPOs: In the USA the 77 IPOs raised a total of USD 8.1 billion, while the 76

6. A unicorn is a VC-backed company that reached a market valuation of USD 1 billion or more. Data retrieved from: *The Wall Street Journal* and Dow Jones VentureSource, *The Billion Dollar Startup Club*, on 11 July 2017.

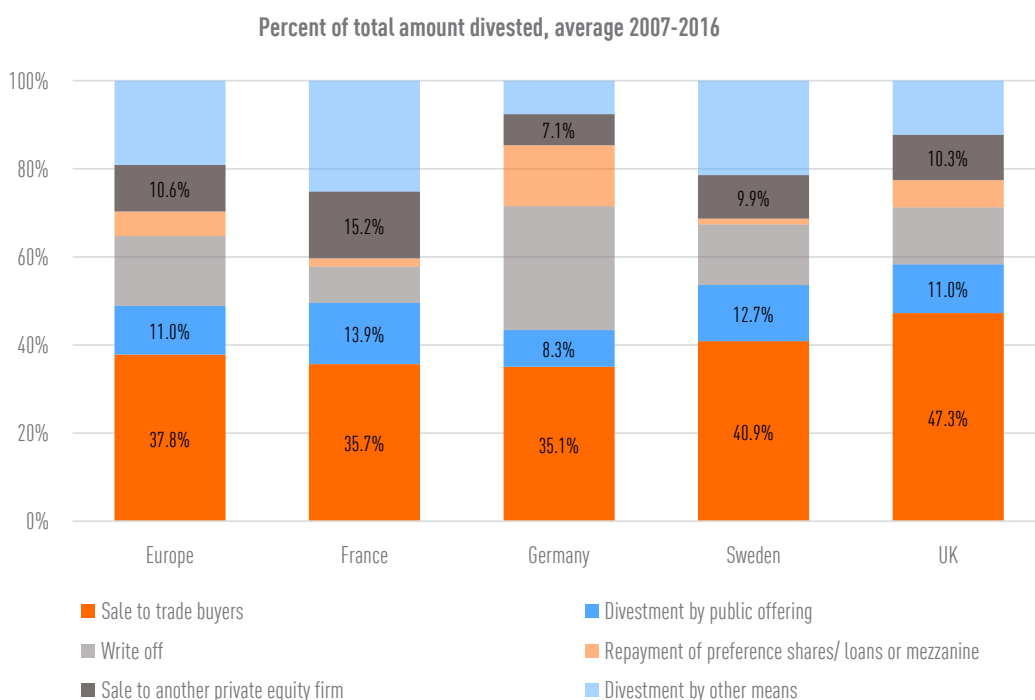
7. See for example AFME, *The Shortage of Risk Capital for Europe's High Growth Businesses*, March 2017; Duruflé, Gilles, Hellmann, T. and Wilson, K., *From start-up to scale-up: examining public policies for the financing of high-growth ventures*, Bruegel Working Paper Issue 04/2017, 2017; Thomadakis, Apostolos, *Nothing ventured nothing gained: How the EU can boost growth in small businesses and start-ups*, ECMI Research Report No 10/2016, 2016 and Onetti, Alberto, *Towards the EU Capital Markets Union: Venture Capital, Crowdfunding and Start-ups*. Startup Europe Partnership Policy Report, March 2015.

8. Kraemer-Eis, Helmut, Signore, S. & Prencipe, D., *The European venture capital landscape: an EIF perspective, Volume I: The impact of EIF on the VC ecosystem*, EIF Research and Market Analysis, Working Paper 2016/34, 2016.

European offerings raised only EUR 212 million.⁹ The weaker IPO performance results in fewer highly valuable VC-backed companies over time.

Figure 1 shows that trade sales are the most common exit route in Europe, making up 38 % of divestments from portfolio companies between 2007 and 2016. Public offerings made up on average 11 %. In France and Sweden, the share was higher with 14 and 13 %, respectively. In Germany, IPOs were particularly rare, making up only 8 % of divestments.

FIGURE 1 ▶ Form of divestment from portfolio companies in the European VC market



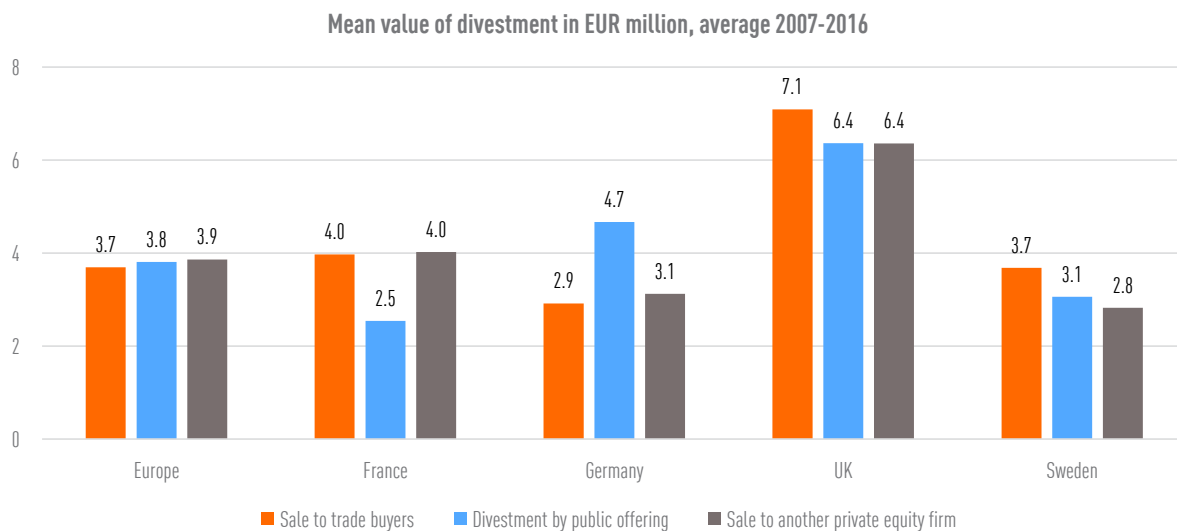
Source: Invest Europe, author's calculations.

One important reason for the less developed IPO market in Europe is the fragmentation of stock markets. To compare, the USA has a few very liquid stock markets with sizable specialised markets such as the small-cap and mid-cap segments of NASDAQ. Although many European stock markets have developed second-tier markets, they lack behind in size.

Figure 2 shows that IPOs are not necessarily the most lucrative way to exit a VC-backed company. With a divestment value of EUR 3.9 million, secondary buyouts were on average slightly more valuable than IPOs in Europe. In France, IPOs are significantly less valuable than other forms of divestment, while in Germany it is the other way around. Companies from the UK accounted for the most valuable exits in all three categories.

⁹. Based on data provided by National Venture Capital Association and Invest Europe.

FIGURE 2 ▶ Public offerings are not the most profitable exit route in most European countries



Source: Invest Europe, author's calculation.

Less valuable exits in Europe are also accompanied by weaker growth afterwards.¹⁰ This entails the risk that European start-ups are disproportionately often taken over by US companies compared to the reverse case of a European start-up taking over a US rival. Although foreign takeovers can add to the attractiveness of a start-up ecosystem, a lack of reciprocity becomes a problem, because the most innovative and experienced entrepreneurs are tempted to relocate to the USA to seek faster growth and a more attractive exit environment, which means that Europe loses important expertise on how to successfully grow start-ups.¹¹

1.2. Scaling-up is challenging

Today, the European start-up ecosystems are quite successful in providing seed and early stage financing. To find sufficient scale-up capital for the growth and expansion phase is however much more difficult.¹² Start-ups with a platform-based business model are particularly in need of a lot of growth capital in a short period of time to reach a critical market share. In an entrepreneur survey only 41 % of European respondents said that the scale-up conditions were favourable, compared to 63 % of North American respondents.¹³

Venture capital is disbursed in funding rounds and investee firms usually have to report some form of progress to receive larger follow-up funding rounds. In the USA, funding rounds are, from the seed phase onwards, on average four to six times larger than in Europe (see Figure 3). This means US start-ups are capable of spending much more resources on product development, business development and marketing compared to their European competitors. As a consequence they are able to develop much faster into mature and valuable companies, which also qualify at an earlier stage for an IPO as compared to a trade sale.

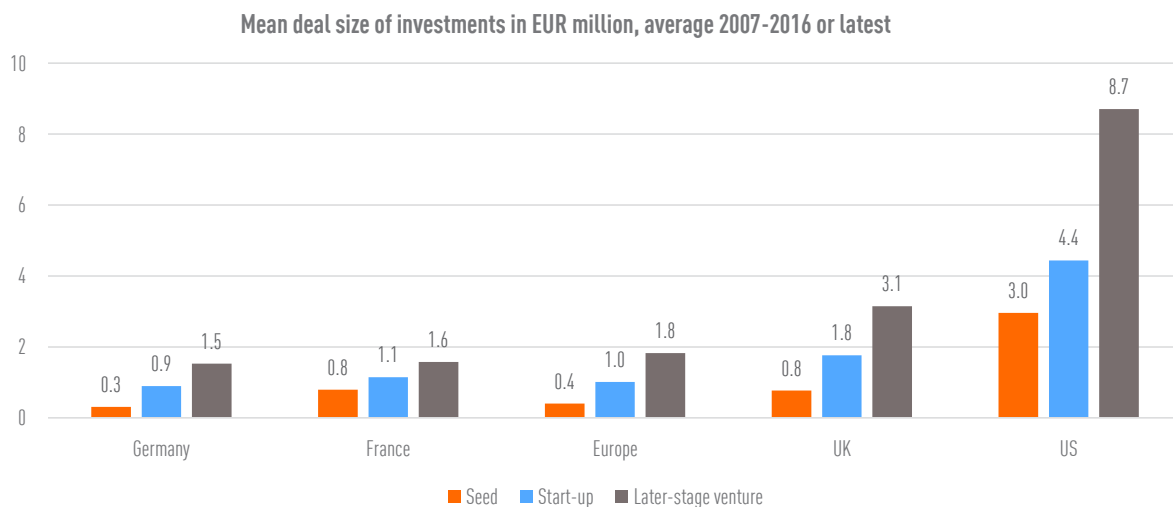
10. Duruflé, Gilles, Hellmann, Thomas and Wilson, Karen, *From start-up to scale-up: examining public policies for the financing of high-growth ventures*, Bruegel Working Paper Issue 04/2017, (2017).

11. Hellmann, Thomas & Thiele, V., *Fostering Entrepreneurship: Promoting Founding or Funding?* mimeo, University of Oxford, 2016.

12. Duruflé, Gilles, Hellmann, Thomas and Wilson, Karen, *From start-up to scale-up: examining public policies for the financing of high-growth ventures*, Bruegel Working Paper Issue 04/2017, (2017).

13. World Economic Forum, *Enhancing Europe's Competitiveness: Fostering Innovation-driven Entrepreneurship in Europe*, Insight Report, June 2014.

FIGURE 3 ▶ Average size of venture capital deals by stages in the USA and Europe



Sources: Invest Europe, NVCA, author's calculations.

Figure 3 reflects the structural weakness of continental European VC markets compared to the USA and also to the UK. In recent years, however, an encouraging trend of growing later-stage deals can be observed. Later-stage deals have on average almost doubled between 2012 and 2016. This trend is particularly driven by the growth of later stage deals in the German market.

Despite a positive trend in terms of deal size, European VC funds still allocate relatively few resources to later-stage ventures. Since companies in the growth phase need much larger funding rounds, a distribution of VC investments where more than half of the funding is allocated to the growth phase would be preferable. However, between 2012 and 2016 growth-stage financing was only at 43 % and no upward trend is visible to date.¹⁴ By comparison, in the USA 64 % of VC investments in 2015 were dedicated to the growth and expansion phase.¹⁵

Scale-up financing requires deep-pocketed investors. Small VC funds are less capable of providing capital for large funding rounds as this could lead to over-exposure towards a few portfolio companies. Compared to the USA, Europe has few large VC funds that could provide the necessary scale-up capital. Only 10 % of European funds had resources of more than USD 250 million, compared to 28 % of US funds.¹⁶

The scale-up challenge is often explained by the fact that European start-ups and VC ecosystems are much younger than their US peers. After two economic crises, the ongoing recovery in the EU could help the European VC industry to mature and to develop the necessary scale-up capacities.

1.3. Lack of private investors

A key goal of government intervention in VC markets is the crowding-in of private investors. While cyclical effects, such as the collapse of private investment during the global financial crisis, and the relative youth of European VC markets have justified government intervention over the last decades, the dependence of the VC market on public funding is worrying. From 2007 to 2016, government agencies were the most important sources of funding, making up 18 % of total VC fundraising (Figure 4). As the government usually acts as a co-investor, meaning it only invests together with private funds, an even larger proportion of the VC market is government-backed.¹⁷

14. Calculations based on data provided by Invest Europe.

15. Acevedo, Miguel F. et al., *France, Germany, Italy, Spain and the United Kingdom: Building Momentum in Venture Capital across Europe*, Bpifrance, Cassa depositi e prestiti SpA, Instituto de Crédito Oficial, British Business Bank, KfW Bankengruppe, December 2016.

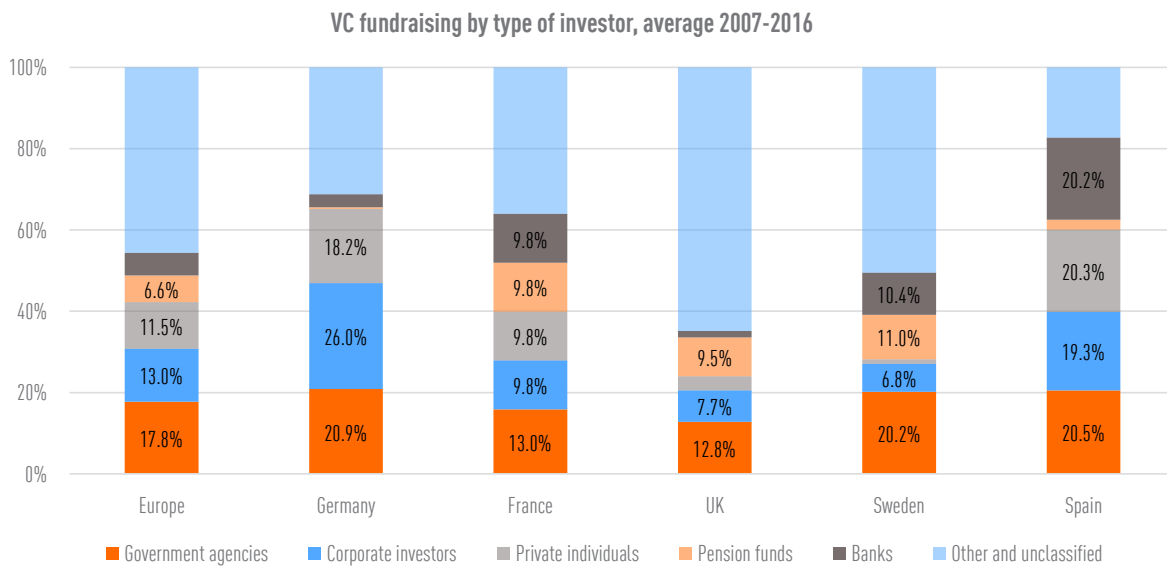
16. Duruflé, Gilles, Hellmann, Thomas and Wilson, Karen, *From start-up to scale-up: examining public policies for the financing of high-growth ventures*, Bruegel Working Paper Issue 04/2017, (2017).

17. The EIF estimates that it accounted directly for 10 % in 2015 (5 % in 2007) of European VC investments and backed total investments of about 41 % (29 %).

Figure 4 shows that corporate investors and private individuals are the most important sources of private funding. Large institutional investors, such as pension funds, insurance companies, banks and university endowments, which are the most important sources of VC capital in the USA, play however, a less prominent role in Europe, apart from the UK, the Netherlands, Sweden and Denmark.¹⁸

One explanation for the lack of institutional investors in the European VC market is the historically rather low rate of return on venture capital funds compared to other private equity funds and also compared to US VC funds.¹⁹ A second explanation is a regulatory disincentive for the financial industry to invest in venture capital due to high-risk weights and asymmetric treatment of equity and debt financing.²⁰ In the USA, but also in Sweden, relaxing regulatory requirements for pension funds and allowing more risky investments has led to increasing investments into the VC industry.²¹ While the deregulation of such sensitive financial services is no trivial task, institutional investors with a long-term investment horizon are particularly suitable to support the economy with capital for equity and infrastructure investments because they do not need to sell when asset markets go down and can therefore act as a counter-cyclical stabiliser to the market.²²

FIGURE 4 ▶ Public actors are the largest investors in the VC market



Source: Invest Europe, author's calculations.

Coping with the lack of private investors and the lack of scale-up capital at the same time is challenging because they call for conflicting policy strategies. The lack of private investors would suggest a withdrawal of public actors where possible, while more government funding would be required to provide growth-stage funding. Section 2 discusses this trade-off.

1.4. European VC markets are fragmented

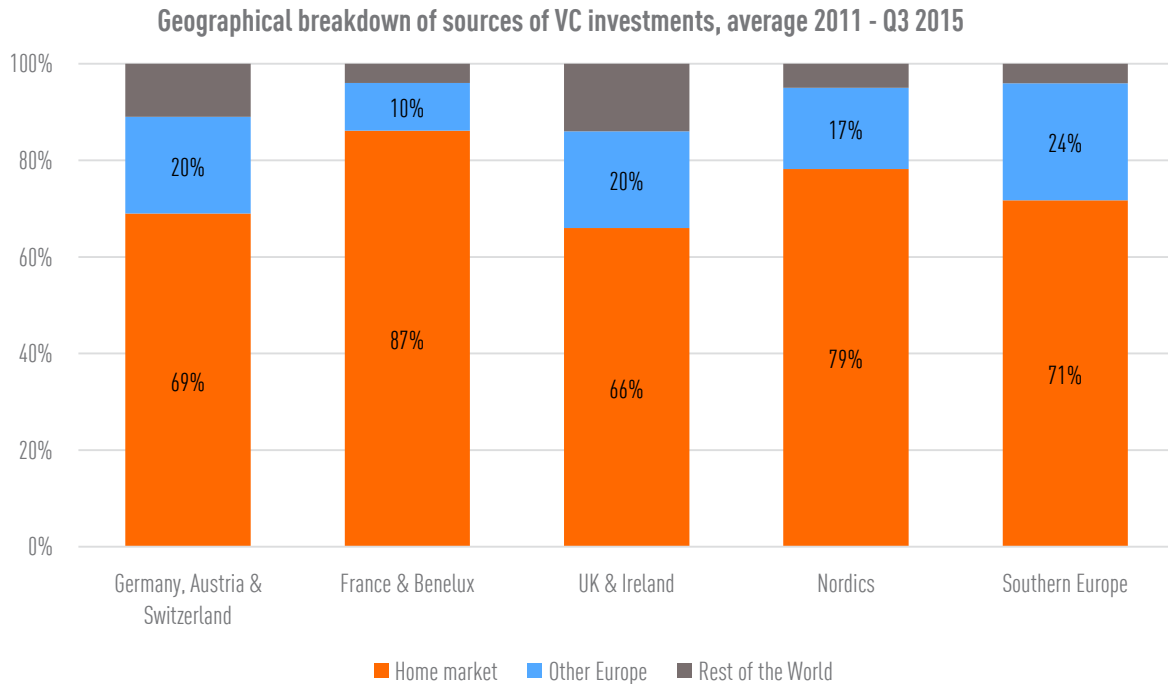
Taken together, Europe is the second largest VC market in the world but today one can hardly speak of a single European market. With Brexit looming, Europe also risks becoming detached from its most international VC market.

Most European VC funds focus their activity on a European sub-region, which leads to a significant home bias of VC ecosystems. Figure 5 shows that the five most significant European VC markets source on average more than 70 % of fundraising from their home markets. The regions around the UK and Germany are slightly more

18. The European Commission identified the low, and for insurance companies even declining share of equity investment as a key challenge for the Capital Markets Union. See European Commission, *Mid-Term Review of the Capital Markets Union Action Plan*, Commission Communication COM(2017) 292 final, 8 June 2017.
 19. EVCA, *2013 Pan-European Private Equity Performance Benchmarks Study*, June 2014.
 20. OECD, *Financing SMEs and Entrepreneurs 2017: An OECD Scoreboard*, Paris, OECD Publishing, 2017.
 21. AFME, *The Shortage of Risk Capital for Europe's High Growth Businesses*, March 2017.
 22. European Commission, *Economic Analysis on the Mid-Term Review of the Capital Markets Union Action Plan*, Commission Staff Working Document SWD(2017) 224 final, 8 June 2017.

internationalised, with funding from other European regions of about 20 % and more than 10 % coming from outside Europe, most importantly from North America. Although an analysis of the European VC landscape by the EIF finds several long-established cross-country investment routes, also extending to North America, it supports the general picture of strong home biases.²³

FIGURE 5 ▶ The five largest European VC markets maintain a large home bias



Source: InvestEurope/PEREP_Analytics, European Commission, 2011 - Q3-2015, author's calculations.

The local focus of European VC industries relates to the other weaknesses in several ways: First, locally oriented funds are likely to be smaller than international funds, which adds to the scale-up challenge. Second, the fragmentation of stock markets prevents economies of scale. Third, European VC markets show signs of divergence, which can be explained by national economic performance. While the German market, for example, was able to reach investment levels seen in 2007 and 2008, markets in France, Italy, Spain and the UK have not yet reached these levels.²⁴

Finally, Brexit could lead to a disintegration of cross-border investments between the UK and the EU-27. Additional barriers between the UK and the EU would damage the European VC market for three reasons: first, from 2007 to 2016, the UK had been the largest VC market, although it has fallen behind Germany and France in 2016.²⁵ Second, the UK has one of Europe's most thriving IPO markets and is home to Europe's largest stock markets. Third, the UK is an important domicile for internationally active VC funds, which operate across Europe. However, these funds might be forced to establish subsidiaries in the EU-27, which would increase their costs.²⁶ Today there are 25 UK fund managers operating under the EuVECA Regulation, a European passport for venture capital firms.²⁷ Although the impact of Brexit on the VC industry is uncertain, it will most likely add to the current market fragmentation.

23. Kraemer-Eis, Helmut, Signore, S. & Prencipe, D., *The European venture capital landscape: an EIF perspective, Volume I: The impact of EIF on the VC ecosystem*, EIF Research and Market Analysis, Working Paper 2016/34, 2016.

24. Acevedo, Miguel F. et al., *France, Germany, Italy, Spain and the United Kingdom: Building Momentum in Venture Capital across Europe*, Bpifrance, Cassa depositi e prestiti SpA, Instituto de Crédito Oficial, British Business Bank, KfW Bankengruppe, December 2016.

25. Calculation based on data provided by Invest Europe.

26. Ständer, Philipp, *What will happen with Capital Markets Union after Brexit?* Policy Paper No 181, Jacques Delors Institut – Berlin, December 2016.

27. Thomadakis, Apostolos, *Nothing ventured nothing gained: How the EU can boost growth in small businesses and start-ups*, ECMI Research Report No 10/2016, 2016.

” MARKET
FRAGMENTATION IS AN
AGGRAVATING FACTOR FOR
OTHER PROBLEMS”

This section identified four supply-side weaknesses that cause the European venture capital industry to perform below potential. From a multi-level governance perspective, the lack of integration of the European VC market is particularly important. The analysis also shows that market fragmentation is an aggravating factor for other problems, such as limited scale-up capital, a less attractive exit environment and less profitable VC funds, which discourages institutional investors.

2. What can public policy do (better) to support VC investment?

Governments justify intervention in the VC market along two basic arguments: first, market failures are responsible for unsatisfactory low levels of funding and second, VC markets produce positive spill-over effects for the economy as a whole due to their positive impact on employment and innovation.

This section assesses two major instruments of government intervention: (1) many governments choose to intervene directly in the VC market through public VC funds launched and managed by national promotional institutions (NPIs); (2) governments use targeted tax incentives to lower the riskiness of VC investments, for example by lowering taxation on corporate income or capital gains taxes. At the same time, tax systems can provide a significant barrier for cross-border investment because they impose transaction and information costs on non-resident investors.²⁸

Public policies to promote VC investments have an important multi-level governance component. In the EU, industrial policy (such as public VC funds) as well as taxation are, to a large extent, competences of the member states. Nevertheless, the limited integration of the European VC industry calls for coordination and even a pooling of these activities at European level. This section analyses the policy mix of national governments and EU institutions and makes recommendations on how to align activities at the two levels.

2.1. The government as VC investor

In Europe, government agencies are the most significant investor group in the VC market. Over the last decade they provided about 18 % of funding. In their role as investors, public agents enjoy a substantial degree of discretion as they are directly involved in the allocation of financial resources. This can help to promote strategic sectors that are not yet competitive but it also carries the risk of inefficient favouritism. Despite mixed evidence of the efficiency of government VC funding and the theoretical question as to whether public actors are as suitable as private investors to select the most promising portfolio companies, public money is undoubtedly an important stabiliser in times of crisis.²⁹

The key goal of public investments is the development of a profitable and self-sustaining private market. To achieve this, public agents have to be careful not to replace or discourage private VC funding (crowding-out) but to leverage additional private investment (crowding-in). Furthermore, public agents may become so dominant that private actors start to rely on their ‘seal of approval’ with regard to filtration and due diligence of portfolio companies rather than building up these capacities themselves.³⁰

In Europe, the major public actor in VC markets is the European Investment Fund (EIF), acting on behalf of the European Investment Bank, the European Commission and in some cases on behalf of member states. On the national level, national promotional institutions (NPIs) also play an important role. Examples are the Banque Publique d’Investissement (Bpifrance) in France, the British Business Bank (BBB) in the UK or the

28. The paper focuses on these two policy tools as they are the most cost-intensive policy tools and potentially also those with the largest impact. Nevertheless, there are also other possibilities of government intervention, for instance through financial market regulation, financial literacy programmes for SMEs and other consulting or network services. See for example OECD, *Financing SMEs and Entrepreneurs 2017: An OECD Scoreboard*, Paris, OECD Publishing, 2017.

29. OECD, *Financing SMEs and Entrepreneurs 2017: An OECD Scoreboard*, Paris, OECD Publishing, 2017.

30. For a more in-depth discussion of the drawbacks of government intervention, see for example Ekeland, Marie, Landler, Augustin and Tirole, J., *Strengthening French Venture Capital*, Les notes du conseil d’analyse économique, No 33, July 2016.

Kreditanstalt für Wiederaufbau (KfW) in Germany. Today, all these players deploy a diverse toolbox of equity instruments through which they try to compensate for the deficiencies in the VC market.

BOX 1 ► Examples of government VC funding programmes

Pan-European VC Fund of Funds (EU): With a capacity of EUR 300 million, the EIF contributes between 7.5 % and 25 % to the privately managed Pan-European Funds of Funds with a volume of at least EUR 500 million each. Qualifying funds should pursue a balanced strategy (at least 30 % to early-stage), operate across at least four member states and fundraise at least 50 % from private sources.³¹

ERP-EIF Co-investment Growth Facility (Germany): This EUR 500 million facility acts as a co-investor alongside private fund managers. It is managed by the EIF on behalf of the German government and was launched in 2016. The facility can contribute EUR 20 million to EUR 60 million to VC investments into innovative German SMEs and Mid-Caps that seek expansion and internationalisation.³²

Fonds national d'amorçage (France): The fund of funds programme operated by Bpifrance aims at promoting VC investments in the seed phase. Between its launch in 2011 and the end of 2015 it invested EUR 400 million in 21 different funds that, combined, invested in 230 companies in strategic sectors such as life science, IT or clean energy. The fund has a volume of EUR 600 million.³³

Business Angle Co-fund (United Kingdom): The fund acts as a co-investor with at least three business angles and provides funding from GBP 50 000 up to GBP 1 million. Private investors are responsible for carrying out due diligence. The fund was launched in 2011 with a volume of GBP 50 million and has so far leveraged investments of GBP 145 million.

Box 1 presents four examples of equity instruments that NPIs and the EIF deploy today. The instruments differ first of all with regard to the structure. A fund of funds (FoF) invests in other VC funds and not directly in a portfolio company. In a co-investment scheme, the public agent invests alongside the private investor (usually providing not more than 50 %). Second, the funds differ in their stage focus. Large public players like the EIF and Bpifrance provide a range of instruments along the entire funding escalator from seed investments to expansion. Third, governments select different agents to manage the instruments. The Pan-European FoF will be managed by private managers. The management of the German growth facility is delegated to the EIF, and the French and British programmes are managed by their respective NPIs. These examples do not provide a full picture of the governments' strategies but rather illustrate the variety of available instruments. A detailed table of funding instruments on national level is provided in the Appendix.

2.1.1. Recent developments of government VC instruments

In recent years, policy-makers have adjusted the funding instruments to the specific problems of European VC markets. Three broad trends are observable:

First, public funds increasingly invest 'indirectly' to detach government agencies from the investment decision, either through FoF structures or by passing the management of public funds to private fund managers (like for example, the German fund Coparion). The Pan-European FoF programme does both.

Second, British, French and German governments as well as the EU have all launched funds that specifically target the growth phase. These funds are equipped with more capital and can sign larger deals.

Third, national governments and their NPIs increasingly cooperate with each other and with the EIF. Such cooperations can take the form of a long-term delegation or of ad hoc cooperation. The German government, for example, has handed over the management of large portions of its multi-billion VC support to the EIF in 2004 (see Annex for details). In 2015, the EIF, Bpifrance and KfW pioneered a joint VC investment of EUR 75 million in a large transatlantic growth fund.³⁴

31. EIF, Pan-European Venture Capital Fund(s)-of-Funds programme, 8 November 2016.

32. EIF, ERP-EIF Co-Investment Growth Facility.

33. Acevedo, Miguel F. et al., *France, Germany, Italy, Spain and the United Kingdom: Building Momentum in Venture Capital across Europe*, Bpifrance, Cassa depositi e prestiti SpA, Instituto de Crédito Oficial, British Business Bank, KfW Bankengruppe, December 2016.

34. EIF, *The European Investment Fund (EIF), Bpifrance and KfW co-invest EUR 75m in growth-capital fund Partech Growth*, Press Release, 27 October 2015.

In autumn 2016, the EIF together with European NPIs launched the EIF-NPI Equity Platform to enhance cooperation between the EIF and NPIs as well as between NPIs. The Equity Platform, still in a formative phase, aims to build up soft cooperation such as sharing of information and best practice as well as operational cooperation to facilitate joint investments through public equity instruments.³⁵

2.1.2. Several challenges remain

First, crowding-in of private investors only works to a limited extent. Despite the significant leverage of public VC investments up to a factor of four, the overall size of the VC market still lacks behind pre-crisis levels and has shown signs of recovery only since 2015.³⁶ Furthermore, the dominant role of some public players may become problematic: Bpifrance and the EIF for instance have become benchmark investors with important signalling functions for private investors.³⁷ One way to work against this problematic dependency would be to adopt a policy of ‘progressive withdrawal’ from more mature funds. This recommendation is, however, at odds with the goal of many new public funds to promote growth-stage financing by supporting particularly successful private funds.

Instead of questioning the overall strategy of public VC funding one should, however, remember that the European VC industry is still relatively young and has experienced the dot-com bubble and the Great Recession, two major setbacks in its early years. The more mature industries in the USA and Israel also took decades to develop and still receive significant government support.

” THE LIMITED COOPERATION AND USE OF SYNERGIES BETWEEN NPIs AND THE EIF IS A CHALLENGE ”

The second challenge is the limited cooperation and use of synergies between NPIs and the EIF, particularly in southern European countries and France. Despite the encouraging examples mentioned above, Germany is the only of the five largest EU economies that has delegated the management of a significant share of its public VC funding to the European level.³⁸ Both, NPIs and the EIF, can contribute valuable capacities: NPIs have an in-depth knowledge of the local market and may be in a better position to identify suitable projects; the EIF gathers market insights across Europe and as the largest VC investor advanced operational and analytical capacities.

However, to date there is no consensus to what extent complementarities between the two levels should be explored. Some NPIs are opposed to an active role of the EIF on national level and argue this would create counterproductive competition between public VC investors. At the same time not all European NPIs have the mandate to invest in cross-border funds, which may aggravate market fragmentation. And even if NPIs can invest in cross-border funds, governments usually require that at least the same amount (sometimes more) is invested back into the home market, which limits the flexibility of private investors. Such home country restrictions also apply to funding delegated to the EIF by national governments.

2.1.3. Proposal: A common equity pool for national and European public investors

” POOLING OF NPI AND EIF RESOURCES AND OPERATIONAL CAPACITIES WOULD MAKE A REAL DIFFERENCE ”

As national governments and NPIs are limited in their ability to promote cross-border investments and also lack the motivation as it would channel taxpayer money to entrepreneurs in other countries, **the EIF seems better equipped to address the challenge of market fragmentation.** In 2016, two-thirds of its 31 VC deals were multi-country deals. The new Pan-European FoF programme even demands that supported funds operate in at least four EU member states.

35. EIF, EIF-NPI Equity Platform.

36. The EIF, for instance, reports that its EUR 1.5 billion early-stage equity investments in 2016 leveraged about EUR 6.7 billion in private investments. EIF, *Annual Report 2016: Supporting smart, sustainable and inclusive growth for SMEs*, Luxembourg, European Investment Fund, April 2017.

37. Ekeland, Marie, Landler, Augustin and Tirole, J., *Strengthening French Venture Capital*, Les notes du conseil d’analyse économique, No 33, July 2016.

38. Besides the German ERP Facility, the EIF also manages the Dutch Venture Initiative and the Swedish Venture Initiative. See EIF, *Annual Report 2016: Supporting smart, sustainable and inclusive growth for SMEs*, Luxembourg, European Investment Fund, April 2017.

Such EU initiatives go in the right direction but more efforts are needed to overcome the market fragmentation. What would really make a difference is a pooling of NPI and EIF resources and operational capacities. With the recently created EIF-NPI Equity Platform the EIF intends to go in this direction by enabling NPIs to tap into EIFs multi-country funds or by standardized co-investments.

To date, however, the Equity Platform is still in its formation phase and its scope and purpose are up for discussion. What is critical in this new format is that the EIF takes on a coordinating function and that operational capacities on both levels complement each other instead of both levels attempting to develop full-service solutions. This is not self-evident as the current disagreement about the role of the EIF in national markets shows. Some NPIs could also strive for a reallocation of European resources to national funding instruments or for a purely intergovernmental cooperation.

An EIF-NPI Equity Pool would embed national and European equity instruments in a common framework. It would be an institutionalised form of cooperation between the EIF and those NPIs whose governments wish to contribute. The Equity Pool should apply the following principles:

- Develop **operational structures** that allow for a joint management of VC instruments.
- Share **capacities of market analysis** and identification of investments with cross-border dimension.
- Refrain from **home-country restrictions** on resources provided to the Equity Pool.
- Set **annual targets on cooperation** projects in order to increase and where possible to institutionalise the collaboration.

A more institutionalised cooperation between NPIs and the EIF would allow the two governance levels to exploit synergies rather than duplicating capacities. Growth-stage funding could increasingly take place at the European level because it would give investee funds more flexibility as to where to allocate resources, boost the growth of cross-border VC funds and ultimately promote the rise of truly European start-ups. NPIs on the other hand might have a comparative advantage in seed and early-stage funding, as well as in the direct funding of strategic sectors. Complementary funding instruments would be able to provide a “seamless funding infrastructure” to support start-up financing along the funding escalator, as called for in a recent EIF paper.³⁹

Such a proposal will meet resistance in European capitals, as it is hard to explain to parliamentarians why parts of the national budget should be spent in other European countries. And there are some tricky design questions such as who can sign a venture deal, and how can a certain level of reciprocity be upheld so that all member states get something in return for their contribution?

However, **upholding the current structure of NPIs mainly investing in domestic markets reinforces the reluctance of private funds to invest across borders.**⁴⁰ In the past, member state governments have adjusted VC instruments pragmatically and given away control, for example by more indirect funding instruments, in order to address market failures. The same pragmatism should prevail when confronting the challenge of fragmentation in European VC markets.

2.2. Using tax incentives for VC investments

Although taxation is mainly a member state competence, it has implications for the functioning of the Single Market. Differences in tax rates can distort competition and the heterogeneity of national tax schemes can impose transaction costs on cross-border investments. Thus a minimum level of coordination between member states is necessary.

39. Kraemer-Eis, Helmut, et al., *European Small Business Finance Outlook*, EIF Working Paper 2017/43, June 2017.

40. Onetti, Alberto, *Towards the EU Capital Markets Union: Venture Capital, Crowdfunding and Start-ups*, Startup Europe Partnership Policy Report, March 2015.

2.2.1. Fiscal incentives and tax competition

A comparison of capital gains taxes (CGTs) in the three largest European VC markets (Germany France and the UK) reveals significant differences in the attractiveness of tax schemes. CGTs are important for VC investors as the tax usually applies when investors or founders exit the portfolio company to realise a return on investment. A high CGT was found to be associated with fewer VC-backed companies.⁴¹

In France, the upper limit of the CGT is 62 % but can be reduced to 24 % if the entrepreneur holds the company for at least 8 years. In Germany, a general rate of 26 % applies. The UK lowered its CGT in 2016 from 28 % to 20 %, making it the most attractive VC destination. The rate can be further lowered to 10 % under certain conditions (see the example below, Entrepreneur's Relief).⁴² Such differences are likely to shape the preferences of investors and entrepreneurs where to exit a company.

Box 2 provides four examples of tax schemes that make VC investments more attractive. The most significant forms of tax relief are (1) on exit gains, (2) on initial investments, for example in the form of a tax credit or grant, as well as (3) on losses, allowing losses to be deducted from future taxable income.⁴³

BOX 2 ► Examples of tax incentive schemes to promote VC and business angle investment

Entrepreneur's Relief (UK): Individual shareholders (directors, partners, employees who own at least a 5 % stake) of a company can benefit from a reduced CGT of 10 % when selling their business up to an amount of GBP 10 million.⁴⁴

Entrepreneur-investor account (France): The scheme enables individual shareholders to reinvest profits from an exit into a new start-up or VC fund without being immediately taxed (deferred taxation). The scheme incentivises reinvestment by experienced entrepreneurs, which helps to create a powerful network of business angles.⁴⁵

Venture Capital Grant INVEST (Germany): The programme grants private and corporate investors an upfront relief in the form of 20 % of the investment in start-up shares. The novelty of this scheme is that the relief takes place in the form of a grant and not a tax credit. This overcomes the problem of many cross-border investors who do not have tax liabilities in the jurisdiction against which they could use a granted tax credit. The scheme also provides tax relief on exit gains from 2017 onwards.

Losses carried forward (Germany): The treatment of losses in corporate taxation matters as start-ups usually only become profitable after several years. In Germany, start-ups are able to carry forward losses indefinitely; however, before 2016 in the event that ownership of more than 25 % of the enterprise changed, the losses were no longer usable. Germany changed the law to make VC investments and IPOs more attractive. Now the new shareholder structure does not affect the losses carried forward.⁴⁶

In recent years, more and more countries have adopted tax schemes targeted on VC investments. Figure 6 shows that the UK and France were most active in providing fiscal incentives for risk capital investments. However, a potential problem arises when such schemes incentivise a relocation of investments or businesses that would not otherwise have taken place.

The combination with a more attractive exit environment may particularly motivate founders to relocate their businesses from France or Germany to the UK due to the more dynamic IPO market and the attractive Entrepreneur's Relief lowering CGT to just 10 %. Neither the German INVEST nor the French entrepreneur-investor account can provide such a favourable tax treatment for capital gains of up to GBP 10 million.

41. Bock, Carolin. and Watzinger M., *The Capital Gains Tax: A Curse but Also a Blessing for Venture Capital Investment*, Discussion Paper No 30, Rationality and Competition, 26 April 2017.

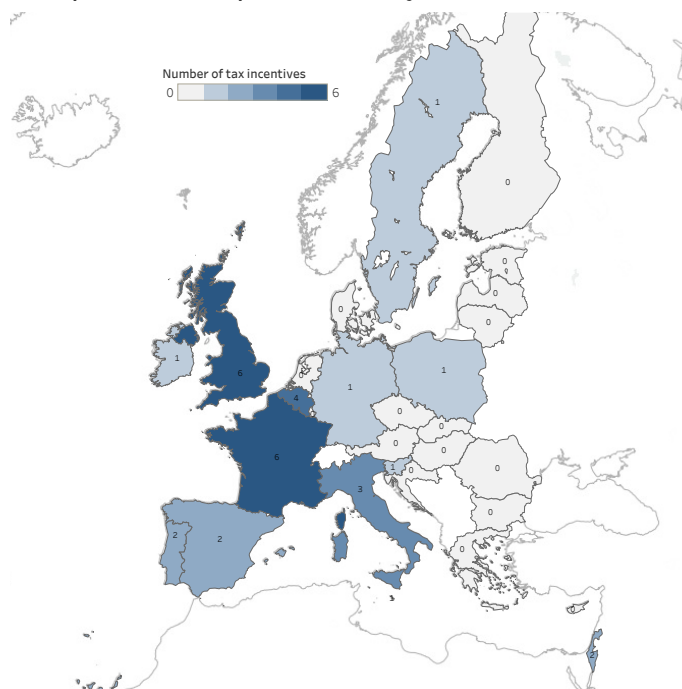
42. Deutsche Börse and Ernst & Young, *Die wirtschaftliche, steuerliche und regulatorische Attraktivität von Startup-Ökosystemen: Eine Analyse für Deutschland, Israel, das Vereinigte Königreich und Kalifornien (USA)*, White Paper, June 2017; Ekeland, Marie, Landler, A. and Tirole, J., *Strengthening French Venture Capital*, Les notes du conseil d'analyse économique, No 33, July 2016.

43. European Commission, *Effectiveness of tax incentives for venture capital and business angles to foster the investment of SMEs and start-ups*, Final Report, June 2017.

44. HM Revenue & Customs, *Guidance HS275 Entrepreneurs' Relief*, Updated 6 April 2017.

45. Ekeland, Marie, Landler, A. and Tirole, J., *Strengthening French Venture Capital*, Les notes du conseil d'analyse économique, No 33, July 2016.

46. Deutsche Börse and Ernst & Young, *Die wirtschaftliche, steuerliche und regulatorische Attraktivität von Startup-Ökosystemen: Eine Analyse für Deutschland, Israel, das Vereinigte Königreich und Kalifornien (USA)*, White Paper, June 2017.

FIGURE 6 ► Number of tax incentives to promote venture capital or business angle investments

Source: European Commission, *Effectiveness of tax incentives for venture capital and business angles to foster the investment of SMEs and start-ups*, Final Report, June 2017.

2.2.2. Lack of cohesion of national tax systems

The second cross-border dimension of taxation is the potential deterring effect of transaction and information costs caused by complex administrative requirements or discrimination against overseas investors. Participants of the SEP Investors Forum workshop described cross-border investments as a ‘nightmare’ because of incoherent tax regimes.⁴⁷ The Commission has highlighted these cross-border barriers to VC investments in a number of reports. The most important barriers detected are:

- **VC investors need to establish a local presence** in the country of the investee firm.
- **A cross-border VC investment runs the risk of double taxation** (once in the country where the portfolio company is located and once in the country where the investors are based). This depends on whether the national tax authority regards the VC fund activities as permanent or non-permanent, a decision that is not always predictable. As a consequence, VC funds limit their cross-border activities artificially.⁴⁸
- **VC funds face different tax classification and different tax treatments** from member state to member state. Tax authorities frequently discriminate between non-resident and resident VC funds.⁴⁹

Besides the heterogeneity of baseline tax schemes, the adoption of tax relief schemes like the examples in Box 2 have the potential to further complicate cross-border VC investments. The benchmarking exercise of venture capital and business angle tax incentives by the European Commission reveals the difficulties that such incentive schemes pose to overseas investors:

- The tax authorities in 12 countries demanded a **permanent establishment of beneficiaries**; this was not necessary in seven countries.⁵⁰
- Tax relief is granted in five different forms (tax credits, tax exemption, tax deferral, etc.) In some cases, the practice is **disadvantageous for international investors without tax liabilities** because they cannot benefit from an upfront tax relief.

47. Onetti, Alberto, *Towards the EU Capital Markets Union: Venture Capital, Crowdfunding and Start-ups*. Startup Europe Partnership Policy Report, March 2015.

48. European Commission, *Report of Expert Group on removing tax obstacles to cross-border Venture Capital Investments*, 2010.

49. European Commission, *Problems that arise in the direct tax field when venture capital is invested across borders*, Public Consultation Paper, 3 August 2012.

50. The benchmark exercise by the European Commission included 36 OECD countries. See European Commission, *Effectiveness of tax incentives for venture capital and business angles to foster the investment of SMEs and start-ups*, Final Report, June 2017.

- There is a **lack of information** and possibility of online application. When considering the five largest VC markets in Europe⁵¹, only 8 out of 16 tax schemes allowed for an online application. Tax authorities provided manuals only in five cases.

Administrative barriers such as the absence of information and online application procedures are often unintentional barriers and could be resolved relatively easy. Other features, such as the form of relief, the necessity of permanent establishment or the risk of double taxation, are more difficult to tackle as they stem from the preferences for policy design of national authorities. These require collective action by member states.

2.2.3. Proposal: A single tax framework for VC investments

The main cross-border barriers to VC investments were already identified in 2010 but they have hardly been resolved.⁵² Since the EU lacks the competence to promote harmonisation in the area of taxation and restrains itself to the identification of barriers and best practice,⁵³ the member states need to tackle cross-border barriers voluntarily. The most promising route to promote convergence of VC-related tax schemes are bilateral or multilateral initiatives that could motivate more countries to follow.

A **single tax framework for VC investments** would encompass the following features:

- Create a one-stop solution, so that investors have to make **only one tax declaration** in their home country.
- Prohibit the need for **permanent establishment** of EU investors in order to undertake VC investments or to benefit from tax relief in other member states.
- Ensure **equal tax treatment** of national VC fund structures and common international legal structures.
- Adopt **common definitions** for the various forms of tax relief to increase transparency and predictability.
- Provide **upfront relief** on investments **in the form of grants** and not as tax credits (similar to the German INVEST grant) in order to enable cross-border investors to benefit in the same way.
- Provide **information and application procedures online** and provide an English translation.

A single tax framework for VC investments would be an ambitious step to reduce transaction and information costs, but it would not require countries to harmonise baseline tax rates or the generosity of relief schemes, which depend on the national context and societal preferences.

”IT WOULD NOT REQUIRE COUNTRIES TO HARMONISE BASELINE TAX RATES”

The European Commission already observed a convergence in the design of VC tax relief schemes, possibly because each scheme needs to pass a state aid evaluation and policy-makers therefore choose to copy designs that already won approval. A single tax framework would be the logical next step to resolve cross-border barriers that remain in VC-related tax schemes.

3. How to get national and EU measures in sync?

The venture capital industry is an important catalyst for a thriving start-up ecosystem. This paper assesses the policy toolbox of member states and EU institutions to promote VC investments, and identifies two areas where common initiatives would render a more efficient use of fiscal resources to tackle the weaknesses of the European VC market.

51. Germany, France, United Kingdom, Spain and Sweden had the highest average VC investments between 2007 and 2016. Calculations based on data provided by Invest Europe.

52. Although the EuVECA regulation provides for a passport for venture capital fund managers, its prevalence is limited and cross-border barriers also remain for EuVECA funds. See Thomadakis, Apostolos, *Nothing ventured nothing gained: How the EU can boost growth in small businesses and start-ups*, ECMI Research Report No 10/2016, 2016.

53. See for example European Commission, *Mid-Term Review of the Capital Markets Union Action Plan*, Commission Communication COM(2017) 292 final, 8 June 2017.

National equity instruments and tax incentive schemes are well suited to address country-specific challenges and reduce risks for private investors, but they are less successful in stimulating cross-border investment. To the contrary, many national policies promote a local investment focus and create barriers by raising transaction costs for international investors. Market fragmentation, however, is a key reason why the European VC market performs below potential.

The policy paper therefore suggests two initiatives that member states and EU institutions could implement jointly: an EIF-NPI equity pool and a single tax framework. An equity pool would embed national equity instruments in a European structure under the coordination of the EIF. A single tax framework would be based on a bilateral or multilateral initiative to tackle cross-border barriers for VC investments created by tax regimes.

FIGURE 7 ► Policy options to exploit synergies of national and EU measures

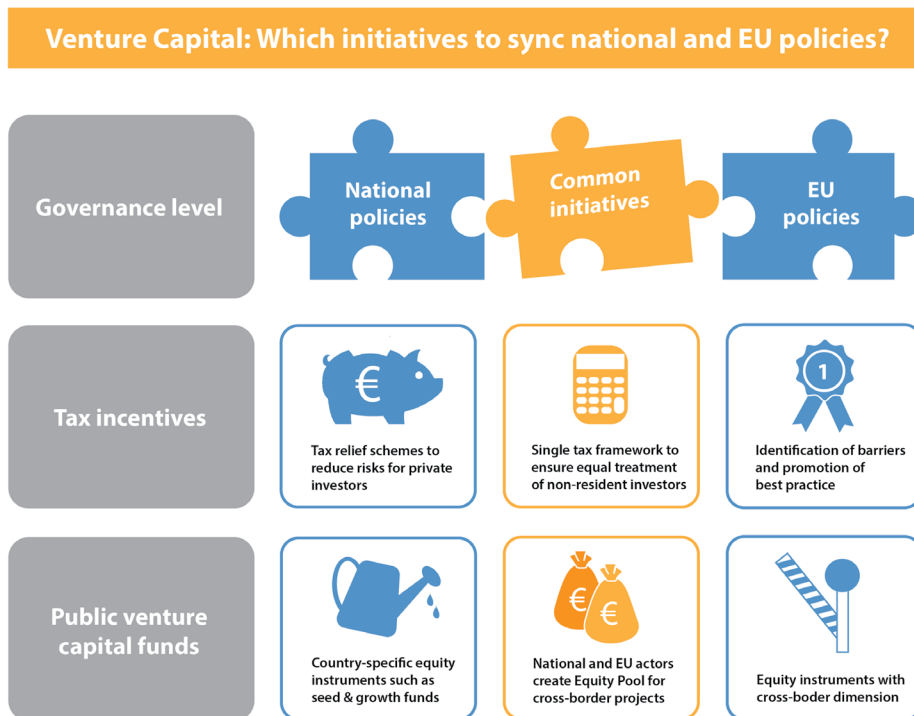


Illustration: Cinthya Nataly Haas-Arana

” TO TACKLE BARRIERS AT THE EUROPEAN LEVEL DOES NOT REQUIRE MORE RESOURCES, JUST BETTER COORDINATION”

These initiatives are ambitious and are likely to meet some resistance. Nevertheless, most governments share the view that thriving European start-up ecosystems have an important role to play in growth, innovation and competitiveness, and policy-makers have been pragmatic to promote venture capital in the past. Tackling barriers and market failures at the national level already requires the use of significant fiscal resources. To tackle the barriers at the European level does not necessarily require more resources, just a better coordination of existing measures.

A re-energised Franco-German tandem could create the necessary political momentum and lead by example. Both governments signalled their interest in collaborating on VC funding as well as on tax harmonisation at the recent Franco-German Council of Ministers.⁵⁴

54. German Federal Government, Franco-German Council of Ministers in Paris, 13 July 2017.

APPENDIX

TABLE ► Public VC instruments in Germany, France and the UK

COUNTRY	AGENCY	INSTRUMENT	TYPE OF FUNDS	FOCUS (PHASE OR SECTOR)	VOLUME	SINCE
DE	EIF	ERP/EIF Fund of Funds	Fund of funds	Early and growth phase	€3.2 bn	2004
		ERP/EIF Growth Facility	Co-investment	Growth phase	€500 m part of the above	2016
	KfW	ERP-Venture Capital Fund	Fund of funds	Early and growth phase	€400 m	2015
		Coparion	Co-investment	Early phase	€225 m	2016
		High-Tech Start-up Fund	Direct and co-investment	Seed stage	€50 m/ year	2004
FR	Bpifrance	Funds of funds	Fund of funds	All stages, though focus on growth phase	€467 m ⁵⁵	1990
		Fonds national d'amorçage (FNA)	Fund of funds	Seed phase	€600 m	2011
		Large venture	Direct fund	Growth phase	€600 m	2009
		Sectoral funds	Direct funds	All stages Emerging/ strategic sectors	Not specified	
UK	British Business Bank	Enterprise Capital Funds	Fund of funds	Early stage	£666 m	2006
		VC Catalyst Fund	Fund of funds	Growth/late stage	Not specified, part of above	2013
		UK Innovation Investment Fund	Co-investment	Early stage Emerging/strategic sectors	£150 m	2009
		Angel CoFund	Co-investment	Early stage	£50 m	2011

Sources: Bpifrance, British Business Bank, KfW Bankengruppe.

55. Number refers to 2014 and non-current flows.

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