Private Equity and Venture Capital Markets in Europe

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Synonyms

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Introduction

Venture Capital investments are a fundamental pillar for the future of European firms and European innovation. They are increasing at an unforeseen rate, leveraging on the unprecedented size of the resources available and the huge opportunities, as the ESG paradigm, arising in the continent. The literature entangling venture capital in Europe is relatively young. Nevertheless, Europe represents an excellent ground to test research ideas, as the venture capital markets considered are mature but rich in variety of specificities within them.

The Venture Capital Industry in Europe

Entrepreneurial finance gained relevance in Europe in the 1990s, when the supply of venture capital in most EU countries dramatically increased, providing unprecedented access to risk capital financing for entrepreneurial companies. Several new equity markets targeting innovative firms were created, and policies toward the financing of ventures experienced a renewed spurt. For example, in the late 1990s, multiple countries introduced more favorable treatments of capital gains (Bottazzi et al. 2003).

Historically, the European investment culture has been known to be more cautious and conservative than the US one. For instance, European stock markets have traditionally been unwelcoming of young companies without an established track record (Pagano, Panetta, and Zingales (1998), Rydqvist and Högholm (1995)). However, disruptive changes occurred in the most recent period. Private capital assets under management (AUM henceforth) have doubled in seven years, rising from €1.3 trillion in 2015 to reach €2.2 trillion by the end of 2021 (Prequin, 2022). More relevantly, in 2021, a significant part of European private capital AUM was committed to venture capital (VC henceforth) investments: 10% of the private equity market, compared to about 3% of that in the US. The shift towards increased risk-taking is evident.

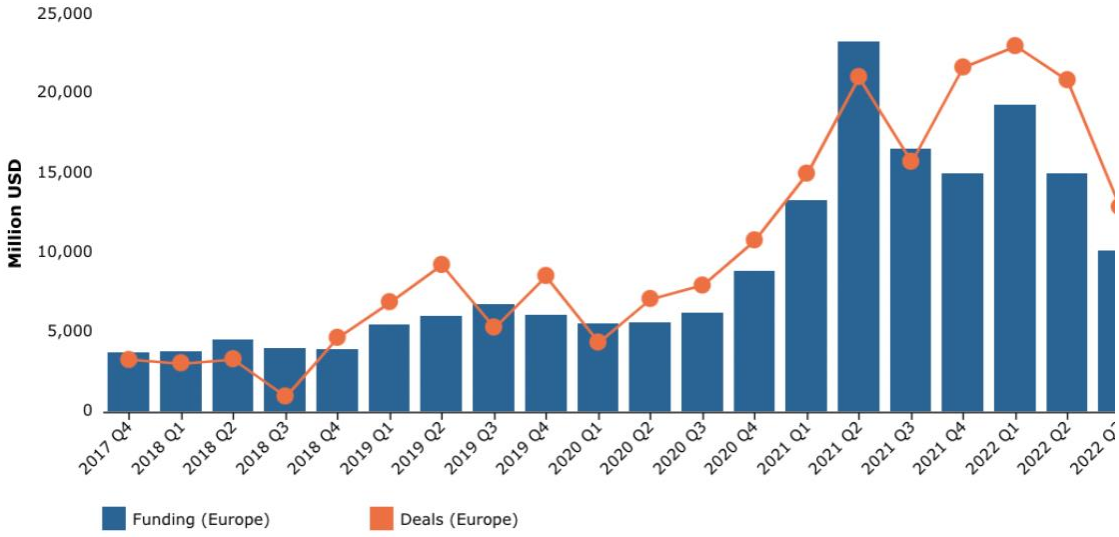
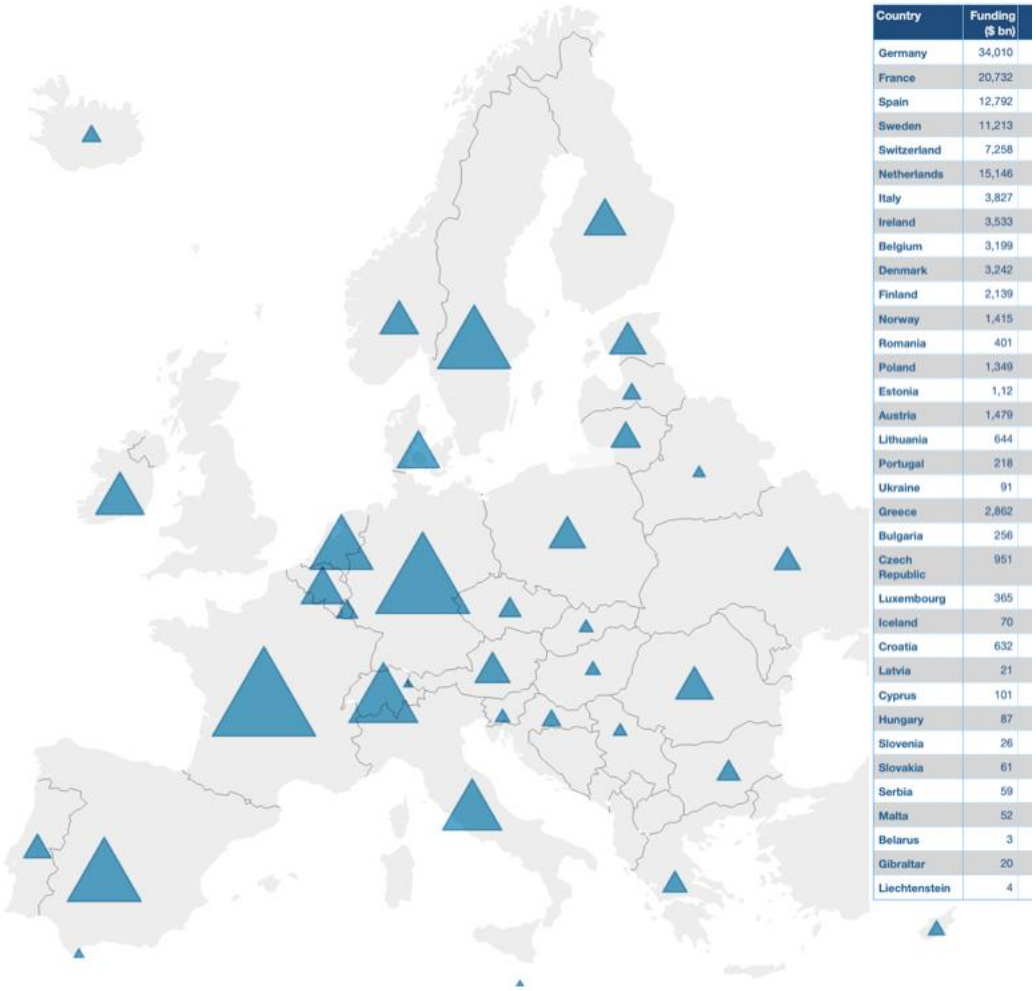


Exhibit 1. Evolution of quarterly venture capital investments in Europe. Data expressed in million USD and in number of deals. *Source: CB Insights.*

Nevertheless, it must be noted that, while growth is steep, in absolute terms the numbers in Europe are much smaller than those in the US. Year-on-year growth in the European VC investments approached 155% in 2021, mending the stability of 2020 and increasing the respectful 42% witnessed in 2019. In comparison, VC investments in the US-and-Canada doubled in 2021, grew by 17% in 2020, and decreased by 4% in 2019. Withal, the numbers are still unmatched: in 2021, VC investments amounted to $56,4 billion in the EU and $285,9 billion in the US and Canada (Bloomberg). The evolution of VC investments and the key metrics over the period 2017Q4-2022Q3 are shown in ***Exhibit 1***.

Not all European countries are facing the same growth rates. The biggest VC economy in Europe is Germany, where investments increased by 60% in 2021. It is followed by France, Spain, Sweden, the Netherlands, and Italy, in which investments approximately doubled in 2021. But a few emerging VC economies entered the spotlight in 2021 for their incredible growth rates: x30 in Malta, x16 in Cyprus, and x10 in the Czech Republic. A representation of the yearly VC investments that occurred in 2021 by European countries is displayed in ***Exhibit 2***.



Country	Funding ($ bn)
Germany	34,010
France	20,732
Spain	12,792
Sweden	11,213
Switzerland	7,258
Netherlands	15,146
Italy	3,827
Ireland	3,533
Belgium	3,199
Denmark	3,242
Finland	2,139
Norway	1,415
Romania	401
Poland	1,349
Estonia	1,12
Austria	1,479
Lithuania	644
Portugal	218
Ukraine	91
Greece	2,862
Bulgaria	256
Czech Republic	951
Luxembourg	365
Iceland	70
Croatia	632
Latvia	21
Cyprus	101
Hungary	87
Slovenia	26
Slovakia	61
Serbia	59
Malta	52
Belarus	3
Gibraltar	20
Liechtenstein	4

Exhibit 2. Venture capital investments in 2021 by European country. Data expressed in million USD and in number of deals. *Source: CB Insights.*

The differences in VC investment growth rates and preferences among European countries are in part due to VC funds being spread across countries. Indeed, 18% of European VC funds are located in Germany, 16% are headquartered in France, and 10% are based in the Netherlands (Dealroom, 2021). In contrast, 35% of US VC funds are stationed in Silicon Valley. Besides, European VCs are accustomed to having a second office: 38% of funds have one. In addition, 90% of the mentioned second offices are situated outside of the headquartered country - in half of the cases, a non-European country. The aim for internationalization resulted in 16% of European VC firms having a presence in the United States. In comparison, only 29% of US VCs with second offices have an international presence. The results are in line with the findings of Bottazzi et al. 2004, based on the at-the-time innovative Survey of European Venture Capital (SEVeCa). The ecosystem is expected to keep being dispersed across different parts of Europe, strengthening its presence in currently under-represented countries, and increasing its internationality.

The astonishing growth that Europe has faced can be explained by the unparalleled favourable conditions accumulated in 2021. On the capital supply side, with the help of very supportive fiscal and monetary policies across the world at the start of the pandemic, the stock market offered many rich IPO windows, which were promptly

exploited by VCs. The capital gained from the favourable exits flowed directly into new deals. On the capital demand side, the ability to work remotely allowed start-up teams to be dispersed and therefore more international. Companies capable of riding the wave of innovation are expected to increase in scale, value, and importance. The offering of appealing deals has rarely been so abundant.

Regarding industries, recent studies have shown that investment trends are seeing rises in clean technology, digital health, life sciences, B2B software, gaming, and big data. Over the 2020-2021 period, 47% of investments were related to Internet startups and were within the €1 million - €5 million range. Moreover, 55% of all deals were Seed or Angel stage, followed by 25% of Series A stage. More details can be seen in **Exhibit 3**. Nevertheless, it is worth mentioning that Series A investments in Europe are generally smaller and targeting earlier stage startups than Series A investments in the US. We recommend against comparing the two markets without taking this fact into account.

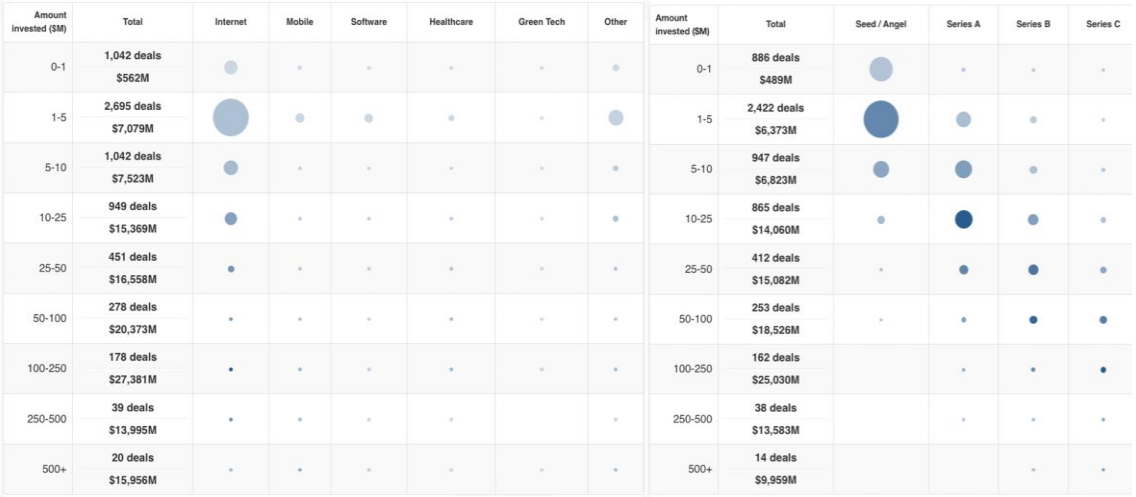


Exhibit 3. Venture capital investments in 2020 and 2021 by (a) amount invested and sector and (b) amount invested and stage. Data expressed in million USD and in number of deals. *Source: CB Insights.*

Government support plays a relevant role in the European VC ecosystem. At the European level, the initiatives promoted by the European Investment Fund (EIF) and the European Innovation Council (EIC) provide investment funds and technical assistance. The former mainly operates with a matching perspective, de-facto doubling the investments made by selected VC firms and Angel investors. The latter offers million-euro grants and direct investments to companies operating in cutting-edge innovation. Initiatives at the country level are taken by the so-called National Promotional Institutions of the main European economies, namely Bpifrance in France, KfW in Germany, CDP in Italy, and ICO/Axis in Spain.

Aspects deepened by the Literature

Europe is an excellent tasting ground for many research ideas since it comprises a set of comparable countries with reasonably mature venture capital markets, yet it features a rich variety of specificities within them.

Lerner and Leamon (2011) proposed an in-depth lead analysis of the European VC market outlining the central role of investment banks, which consequently shaped the practice of deal initiation through auction, a method known to affect the investment performance, since in auctions firms are rarely priced under market value. Further, the note stresses the accentuated importance of relationships in getting access to deals. At the time, the most common and preferred form of exit is identified in the sale to a corporate acquirer, though nowadays IPOs are favoured when possible.

Ahead of its time, Moerland (1995) outlined how holding and networking structures predominate in France, Belgium, and the Netherlands, and Manigard et al. (2002) developed on the research to distinguish between the importance of long-term relationships over frequent and detailed valuation of companies in different countries, regarding investments decisions. The latter showed that executives in VC firms have different skills depending on the aforementioned preference and that expected returns are lower in some European countries (France, Belgium, and the Netherlands) compared to those in the US. The European market shows lower returns and shorter expected holding periods. Specifically, the research outlines that Belgian and Dutch venture capital firms, compared to their American counterparts, require a significantly lower after-tax return for all investment stages, while French VC firms require a significantly lower return for expansion investments.

As a matter of fact, not only intrinsic investors' preferences but also the legal frameworks are different in each country, as is the tax environment. Caselli and Negri (2021) offer a complete outline of the institutional and regulatory challenges that are specific to European funds, listing legal, auditing, and tax specificities. Furthermore, they explain in which way different financial institutions may be used as vehicles for the realization of private equity finance in each country. For instance, in Italy, a closed-end fund is the best way to manage private equity finance, despite banks or investment firms that may also realize deals. A double scheme emerges across European countries: limited partnership companies and asset management company (AMC) fund scheme.

On a different line, Bottazzi et al. (2009) leveraged the variety of legal systems within European countries to study their impact on investors' actions. The research found that better legal systems are associated with more investor involvement and more downside protection for investors. The results are more pronounced if the investor's headquarter is located where the better legal system is implemented, rather than the company's main office.

Most European countries were also analysed in another research by the same author (Bottazzi et al. 2016) to study how trust influences investments. Making use of the Eurobarometer survey data of bilateral trust between nations, the study focuses on three main outcomes, namely, that early-stage deals require a higher trust, syndication becomes more attractive in low-trust deals, and contingent contracts are more likely to be used in high-trust deals.

From a macro point of view, Groh et al. (2010) developed a composite index to measure the attractiveness of 27 European countries for Venture Capital and Private Equity investors. They identified six key determinants that affect a country's attractiveness: economic activity, depth of capital market, taxation, investor protection and corporate governance, human and social environment, and entrepreneurial culture. At the time, Nordic and Germanic countries were scoring the highest indexes.

Moving towards a firm-specific perspective, in a pioneering study on the European VC, Sapienza et al. (1996), examined the determinants of the interaction between VCs and CEOs, the roles VCs assume, and VCs' perceptions of how much value they add

through these roles. They shed light on how and when VCs in four major markets expend their greatest effort to provide oversight and value-added assistance to their investment companies. In France, for example, VCs put great emphasis on their financial role in comparison to other roles, but they contribute much less than VCs elsewhere via other strategic, interpersonal, and networking roles.

On the same line, Bottazzi et al. (2008) used the European deals data to examine the determinants and consequences of investor activism, pioneering the studying of human capital within the financial intermediation-related literature. They find that prior business experience is an important predictor of an active investment style. Organizational structure also matters, especially whether a venture capital firm is structured as an independent entity. Manigart et al. (2006) also pointed out that syndication in Europe is driven by different reasons than in the US. In European countries, VCs opt to syndicate for portfolio management motives, while in the US the reasons are often deal-specific. In Europe, risk sharing, portfolio diversification, and access to larger deals are more important than the selection and monitoring of deals.

Another prominent investigation area is the study of innovation and knowledge diffusion. The ground breaking research of Bottazzi et al. (2003) deepened the importance of spatial proximity and geography for innovative activity. Since, at the European level, regional heterogeneity is still high, the local, as well as the regional dimension, is particularly relevant. They find that most of the cross-regional differences in innovation rates can be explained by their own R&D. Moreover, significant spillovers are found among geographically close regions, especially if they are technologically similar.

The presence of government-backed venture capital (GVC henceforth), as previously outlined, is very relevant in European countries, therefore Europe is also a useful ground for studying the role that the government plays in the venture capital industry. GVC are defined as VC funds set up and managed by a company entirely possessed by governmental (or public administration) bodies (Cumming et al., 2017). Following a rich strand of literature, Cumming and Johan (2006) compared contractual covenants across European countries and focused on studying the institutional factors that might foster the VC industry. In a subsequent research, the author also focused on studying government versus private independent venture capital backing (Cumming et al., 2017). The relevant role of GVC in Europe might also influence the preferences of investors which, in some countries, as shown by Manigart et al. 2002, prefer regional development and job creation over outstanding economic returns.

Lastly, theories are also tested in country-specific environments. For instance, Caselli et al. (2008) focused on the Italian subset of VC-backed initial public offers (IPOs) to understand the role of VC on innovation, showing that innovation is a crucial factor during the selection phase but once the investment is made, the company does not promote continued innovation and concentrates all efforts to improve other economic and managerial aspects. Results apply to VCs that used IPO as an exit strategy. In Caselli (2006), the author focused on the board of directors' composition, showing that the dependence (or independence) of board members did not affect venture-backed firms' performance in terms of firm growth and the final return of the closed-end fund.

Similarly, Martí (2002) and Alemany (2006) distinguished themselves by shedding light on the dynamics of the venture capital industry in Spain. Moreover, Alemany and Martí (2005) jointly worked in studying the overall economic impact of venture capital using Spanish data. The study shows a positive correlation between the cumulative VC investment in a firm and the growth in employment, sales, gross margin, total assets, net intangible assets, and corporate taxes over time.

The venture capital market challenge in Europe: how to escape from the little brother syndrome?

Indeed, Venture Capital is a fundamental pillar of the European future and a puzzle still partly unsolved. On one side, it is a fundamental pillar because only a strong involvement and development of venture capital within the different European countries can act as a real booster of innovation, investment, and therefore of GDP growth and employment. On the other, it is an unsolved puzzle because the evidence cannot be denied: Europe suffers from a “little brother” syndrome (i.e., of the eternal second) compared to the United States. It is clear that the American market has always played a leading role in the venture capital industry. Great Britain is the only place where a relevant market has prospered, but the island is intrinsically different from Europe (regardless of Brexit). The "eternal second" role is dangerous because it focuses the whole attention on how an impossible overtaking can be practiced, to the detriment of keeping a high appeal compared to other markets in the world /that in the meantime are advancing, not only in terms of volumes). Europe must reflect in a different fashion: what action must be taken to ensure that Europe becomes an attractive (in term of capital, of talent, and of business) and competitive eco-system, genuinely capable of supporting the growth of the European GDP?

The conditions for this to happen are tangible and ready to be taken. Two are the main opportunities that entangle Europe: the unprecedented size of the resources available; the rise of sustainability principles in corporates and finance. The risks that the current geo-political situation entails, along with the risks of recession, are not negligible. Nevertheless, the scenario should actually accentuate the push you even further to look further through-the-cycle and engage in a sharper use of patient and long-term capital.

The size of the financial resources available today is extraordinary. While the world’s GDP has exceeded $110 trillion, wealth is a growing multiple of this value: financial institutions own over $500 trillion is the financial assets, as companies and government entities do, plus more than $550 trillion in wealth are composed of real assets where the real estate is the dominant component. A third of these assets are liquid and therefore ready to be invested at any time. As an example, in a country as Italy where the amount of private savings is the highest in Europe, the financial assets owned by households amount to 5.3 trillion dollars and a third is represented by cash.

The mass of liquidity is an extraordinary buffer against uncertainty and is going to act as a shock absorber to better absorb the blows of the recession that is approaching. At the same time, the liquidity can be directed towards any asset or project, allowing it to increase its value. In the current scenario, investments have an unprecedented responsibility with respect to their allocation. It cannot be wasted, as in some cases happens by diverting it to crypto-assets or crypto-currency with no underlying value and no impact on the real economy. Precisely for this reason, linking liquidity to the real economy, through equity investment and therefore venture capital, should become a mainstream choice, expected to be undertaken by all the investors (insurance, pension funds, etc.) who need to generate a medium-long-term performance.

Hence, for many companies the VC industry represents the unique opportunity to open their capital, to be more robust in the face of uncertainty - financial, geopolitical, and economic - and to intercept resources that can change their size and their destiny. The multiplication of financial instruments dedicated to equity investment (ELTIF, SPAC, VC

Funds, etc.) creates an increasingly important and articulated bridge between saving and development of the real system.

ESG finance is located at this juncture, with the dual face of both a new investment product and a different way of doing finance. It is transversal to any financial instrument, from liquid stock to real estate. Today, ESG finance encompasses and overcomes many experiments that have characterized the market in the last thirty years. Many forms of "social" finance rather than CSR-related instruments have occupied the market in a meritorious but marginal way, being based on a very simple idea of "discount": the investor renounces a large part of his return, reaping the moral benefit of having contributed to a just cause. The ESG perspective is radically different, asking not the saver to make a sacrifice, but the financed subject to adopt active and effective policies and behaviours for their impact along the environmental dimension (E), the social dimension (S) and that the corporate governance dimension (G). They are not only meant to generate a "moral" benefit for the community, but they are substantially able to reconcile the growth of production and jobs with that of the wider social return. The shift was made possible thanks to the awareness that some trends can seriously and definitively compromise our eco-system and the ability of companies themselves to produce. Water scarcity, fossil fuels use, air and water pollution, and inadequate forms of government are some of the many dramatic situations that can only be contrasted by equally concrete responses as energy transition, circular economy, ecological transition, and good governance. ESG finance aims to support and make these choices operational, covering the role of a structural and definitive phenomenon meant to stay. The social dimension is therefore no longer a discount, but rather a premium as it creates spaces for growth, compatible with the protection of our eco-system.

What should we expect for the future? If the ESG dimension cannot be defined as transitory, returning to the initial question, what will be the impact of ESG finance on the European VC industry? The impact will be strong and decisive. The first reason is because the cost of not adhering to the ESG principles is gradually increasing at the expenses of companies (and states). It is safe to imagine that in the short term companies without ESG rating or with very low values will be cut off from the map of funding and investments. And it is not excluded - but above all it is desirable! - that a similar scenario also occurs in the United States. The second reason is the loss of opportunity: a decisive action towards the ESG dimension for a company means benefiting from higher multiples (because more capital goes in that direction), from higher growth spaces of its EBITDA (due to ecological or energy transition processes), from a lower cost of capital (as a result of lower risk). The third reason is a demographic fact: by 2029 two thirds of investors will be millennials and Z-gen. *It is more than a hope* to bet on a different attitude to the meaning of their investment choices and the acceptance of ethical principles that put the eco-system at the center of decisions. The European Union is an important laboratory of all this, and sustainability becomes a key element of its greater unity, its dignity, and its autonomy, as we are observing in the hours of the Ukrainian tragedy. The power and charm of this new challenge will be to be able to write in history books not that a different and "better" finance will have changed the world, but that finance - which we remember needs risk and real return, to create GDP and employment, and to pay for our welfare - will have been decisive to change, for the better, the face of our society. How we invest can make a difference.

If the opportunities are obvious, what are the major policy choices that Europe - and the individual member countries of the European Union - must implement quickly? We identified the following six key actions:

1. The role of PPPs initiatives: we need a common background of best practices to enhance schemes like the US SBICs and the Israeli Yozma-Fund to have effective and smart cooperation between private and public-admin investors, acting as feeders. Only a strict cooperation between institutional/governmental players and private investors can generate a powerful snowball effect to definitely promote a solid venture capital eco-system in Europe.
2. PPPs initiatives would be great both to attract capital on VC market and to stimulate initiatives stay-in-the-middle between VC and PE (i.e., facilitating the real growth of small initiatives and start-ups). It is true that while money devoted to seed and start-up are abundant also in Europe, money devoted to bridge VC to PE are missing and the risk of loosing the VC momentum in Europe is high.
3. EU has to showcase the entire VC industry to make more evident the details and the magnitude both of investors and of new ventures: we need an outstanding EU data base, also to connect existing hubs, represented by vibrant cities throughout Europe that can attract more talents, scientists and entrepreneurs.
4. Taxation is not the enemy, while it is vice versa the best enabler and facilitator. Taxation has to support VC investment, a) to compensate their higher risk and, b) to move to more long-term holding period. The QSBS rule in US is the brightest example for the a) case and, it can easily extended into European countries. The b) case can be combined with the ELTIF initiatives and it can be applied to any investor keeping their stake for a longer time (for example, five years).
5. Mobility for young entrepreneurs is crucial, to create new personal alliances and to enhance their network. It is the right time to debate and to set a new "Erasmus program" for young entrepreneurs.
6. The liquidity event for some categories of investor (business angels and incubators) could be a great obstacle and it becomes the excuse for a less professional or less-oriented-to-growth investment. A market/platform to facilitate exchanges and exits could be very effective.

The speed, the magnitude and the coherence with these choices will be decisive if Europe is to overcome the syndrome of the eternal second or the little brother, to avoid the risk of being instead third or fourth in the world in a few years.

Cross-References

- Contracting in Venture Capital
- Financing Booms in Venture Capital
- Internationalization of Venture Capital
- Performance

References

Alemany, L., Marti, J., 2005. Unbiased estimation of economic impact of venture capital backed firms, SSRN.

Bottazzi, L., 2001. Globalization and local proximity in innovation: A dynamic process. European Economic Review.

Bottazzi, L., and, M. Da Rin. 2002. Venture capital in Europe and the financing of innovative companies. Economic Policy.

Bottazzi, L., G. Peri, 2003. Innovation and Spillovers in Regions: Evidence from European Patent Data. European Economic Review.

Bottazzi, L., M. Da Rin, and, T. Hellmann, 2004. The Changing Face of the European Venture Capital Industry: Facts and Analysis. The journal of private equity.

Bottazzi, L., M. Da Rin, and, T. Hellmann, 2009. What is the role of legal systems in financial intermediation? Theory and evidence. Journal of Financial Intermediation.

Bottazzi, L., M. Da Rin, and, T. Hellmann, 2016. The Importance of Trust for Investment: Evidence from Venture Capital. The review of Financial Studies.

Caselli S., 2006. Dependent or Independent? The Performance Contribution of Board Members in Italian Venture-Backed Firms. Corporate Ownership and Control.

Caselli S., G. Negri, 2021. Private Equity and Venture Capital in Europe -3rd Edition - Markets, Techniques, and Deals. Elsevier, Amsterdam, Paesi Bassi.

Caselli S., Gatti S., Perrini F., 2009. Are Venture Capitalists a Catalyst for Innovation? European Financial Management.

Cumming, D.J., and S.A. Johan, 2013. Venture Capital and Private Equity Contracting, 2nd Edition, Elsevier Science Academic Press.

Cumming, D.J., and S.A. Johan, 2006. Is it the Law or the Lawyers? Investment Covenants around the World. European Financial Management.

Cumming, D.J., Grilli L., Murtinu S., 2017. Governmental and independent venture capital investments in Europe: a firm-level performance analysis. Journal of Corporate Finance.

Demertzis, M. and L. Guetta-Jeanrenaud, 2022. Europe's venture capital boom: a new breath of life for entrepreneurship? Bruegel Blog, 10 February.

Groh, A.P., von Liechtenstein, H., Lieser, K., 2010. The European Venture Capital and Private Equity country attractiveness indices. Journal of Corporate Finance 16, 205–224.

Lerner, J., A. Leamon, 2011. A Note on European Private Equity, Harvard Business School Finance Case No. 811-103.

Manigart, S., K. De Waele, M. Wright, K. Robbie, P. Desbrières, H. J. Sapienza, A. Beekman, 2002. Determinants of required return in venture capital investments: a five-country study. Journal of Business Venturing.

Manigart, S., A. Lockett, M. Meuleman, M. Wright, H. Landström, H. Bruining, P. Desbrières, H. Hommel, 2006. Venture Capitalists' Decision to Syndicate. Entrepreneurship Theory and Practice

Martí, J.,2002. Oferta y Demanda De Capital Riesgo En España, 2001. Madrid: Biblioteca Civitas Economía y Empresa.

Moerland, P.W., 1995. Alternative disciplinary mechanisms in different corporate systems. Journal of Economic Behavior & Organization, 26, 17–34.

Pagano, M., F. Panetta, and L. Zingales, 1998.Why Do Companies Go Public? An Empirical Analysis. Journal of Finance, v.53, n.1, 27-64.

Preqin 2022: Alternatives in Europe, September 7, 2022. https://www.preqin.com/insights/research/reports/preqin-2022-alternatives-in-europe

Rydqvist, K., K. Högholm, 1995. Going Public in the 1980s: Evidence from Sweden. European Financial Management, v.1, 287-316.

Sapienza, H., S. Manigart, and, W. Vermeir. 1996. Venture Capitalist Governance and Value-Added in Four Countries, Journal of Business Venturing 11:6, 439-47