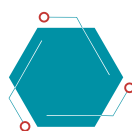


Findings and Recommendations

Accelerating alternative finance for innovative SMEs by improving connections with stock exchanges and growth marketplaces



TechCapMarkets



TechTour



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Foreword

The TechCapMarkets project¹ is a collaboration between Tech Tour, PME Finance and IESE Business School funded by the European Union and guided by an Advisory Board of market experts. In April 2017 the European Commission, under the Horizon 2020 Research and Innovation programme, issued a call for proposals to improve the access of innovative small and medium sized enterprises (SMEs) to alternative finance.

Within this context TechCapMarkets deals with the specific task of improving the supply of alternative finance to innovative SMEs, by examining ways to improve the opportunities for fast-growth tech companies to list on European stock exchanges. And in turn, improve the exit, return, and opportunities for private market tech investors.

This project is set against the wider backdrop and challenge of ensuring Europe's most promising, fast-growth and innovative SMEs have the opportunity to become global leaders while remaining both European and independent. Through the project, we consulted with a

wide variety of stakeholders that all have a key role to play in ensuring high-growth innovative SMEs can realise their potential. These included entrepreneurs, venture capital fund managers, public market investors, investment banks, national development banks and stock exchange operators.

As it may be expected there were different views on specific issues, or the relative importance of some challenges, as such, the recommendations contained in the report are guided by the following principles:

- They will directly, or indirectly, increase the number of public market investors with the knowledge and appetite to invest in European tech companies listed on European stock exchanges.
- They will contribute to enabling European tech companies to achieve sufficient market penetration, scale and valuations, while remaining private, in order that if they do choose to execute an Initial Public Offering, they are relevant to as broad a set of public market investors as possible.

This report is one important component of the TechCapMarkets project. It gathers and views on the long-term challenges European tech companies face to listing on European public markets, and provides recommendations on how these may be addressed, and where appropriate, gives examples of good, existing practices.

As the sources of private market capital grow and become more sophisticated, it is still worth considering that on a global basis the capital available via the public markets dwarfs the private markets, companies listed on regulated European public markets are required to meet high quality governance standards, and individual citizens can invest for the price of a share.

Through this report we seek to stimulate a debate and provide actionable recommendations to policy makers and regulators.

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Executive Summary

Listing on stock exchanges, or going public, can bring strong advantages for small and medium enterprises (SMEs) including access to capital at competitive valuations, a higher degree of diversification of investors, visibility and brand recognition, as well as liquidity for existing shareholders. Despite this, public markets across the EU have been struggling to attract new SMEs as issuers for most of the past two decades.

In this context, the purpose of the TechCapMarkets report is to describe the market conditions for innovative European SMEs and mid-caps to access European public markets, identify challenges and impediments which may prevent them from doing so, and provide policy recommendations as to how these challenges may be addressed.

The report is also set against the backdrop of a record year in 2019 for European companies to raise venture capital funding, and in particular later-stage funding rounds, and the broader rise globally of the private markets. This increase in private capital, has resulted, particularly in US tech companies remaining private for longer, so when they do go public, even if still loss making, they have achieved a scale, and level of market penetration, that makes them appealing to a wide range of public market investors. And while these conditions

may emerge in Europe, by the time they do, the gap with other regions such as the US and China may well have further increased.

Europe has created just one tech company with a market capitalisation greater than \$150B (SAP) in comparison to eight in the US up to 21 October 2019. Furthermore, 31 of the 100 largest companies by market capitalization were founded in the last 30 years, 18 of those from China and 13 from the United States. No new company from Europe founded in the same period made the list. And since 2012, 64% of all exited US Unicorns have gone public (as opposed to acquisitions) in comparison only 32% of European exited Unicorns over the same time period have listed on stock exchanges. If Europe's most promising tech companies do not go public, it seems difficult to see when the next SAP will emerge.

The single largest challenge for tech SMEs to go public is the lack of liquidity post listing. This is common for many SMEs and mid-caps, and all the other challenges can be seen as part of a negative feedback loop, i.e. both a result of this lack of liquidity as well as a contributing factor. These sub-issues or challenges include:

- The lack of equity analysis and research coverage of European tech SMEs and mid-caps

- European tech companies often exit too early, and new expectations are being set in regard to what a tech IPO should "look like" due to large, headline making exits particularly in the US. These are characterized by:

- \$1 billion or greater market capitalization at IPO
- Companies achieving significant market share (even though the company may still be loss-making) prior to listing

- A lack of specialist public market tech funds

- A challenge in attracting mainstream listed equity investors (asset managers of institutional and retail investors) due to smaller size of companies at IPO in Europe

- A lack of specialist sector knowledge and growth investing skill or appetite (especially in loss making companies) from the majority of public market investors

To address the above challenges, the report presents five recommendations. Some of them may be applicable to all growth SMEs, not just those in the technology sectors, but others are designed to help innovative SMEs scale to a size and maturity appropriate to attracting mainstream public market investors interest prior to and at IPO.

Overview of the recommendations and challenges addressed:



As a starting point, the report recommends **the European Investment Bank Group to support the development of crossover investment funds or companies**. This intervention would take the form of the EIF/EIB selecting the fund manager(s) or adviser, and investing on a pari-passu basis, alongside national promotional banks, and private sector institutional investors. The fund managers would be responsible for proposing the appropriate fund structure or investment vehicle.

The lack of quality equity analyst coverage for listed SMEs in general is a long-standing challenge, which may have been exacerbated by the “unbundling rules” in MIFID II. **Governments should actively encourage research on tech SMEs**. Support at a European level could take the form of a recommendation to (cross-over) funds to ensure research on their portfolio companies, at a member state level this could take the form of corporation tax relief. Companies eligible for support would be SMEs as defined in MIFID II.

To address the lack of liquidity for listed tech SMEs and reduce high price volatility generated by small transactions, it is recommended to **developing a pan-European SME block trade platform to match buyers and sellers**. This would take the form of a closed platform on which brokers can post block trade requirements, particularly in tech SMEs (and possibly all SMEs), without disclosing the final counterparties. There would be no requirement to post bid/sell offers and the actual trade would be executed via existing marketplaces. The SME block

trade platform would need to be developed by a consortium of exchange operators, potentially facilitated initially by an independent body such as the European Commission.

Furthermore, **governments should consider incentives for retail investors to participate in IPOs and primary issuances**. Attracting retail investors is important, although the challenge is far from homogeneous across European countries and EU Member States. Certain countries, for example Sweden, have well developed retail markets for listed tech companies – although this is usually a function of the wider capital markets and tech ecosystem. Tax incentives, investor education, and a minimum allocation to retail investors at IPO could all be considered while taking into account the need for retail investor protection.

Finally, the report recommends **European Stock Exchanges to permit the issue of dual-class shares upon listing**. In a variable or “super” voting structure, available in venues including the US and Hong Kong, ordinary shareholders receive shares with one vote per share while founders receive shares with multiple votes. While the availability of dual-class structures may reduce the potential pool of investors, ultimately it would be a company decision as to whether to issue this type of stock on listing. It will help European exchanges to better face the competition of corporate acquisitions or listing on non-European venues.

These five recommendations are designed to be actionable by governments across Europe, and at a European Union level. As such, these recommendations should

complement recent regulatory and legislative initiatives at an EU level, the use of non-regulated junior markets at a member state level and future initiatives to deepen the single market, reduce European market fragmentation and improve access by European companies to all forms of alternative finance.

The findings are recommendations are based on a thorough methodology that blends insights from previous reports and initiatives, empirical evidence and the experience of a wide variety of market experts and practitioners. This was conducted in four distinct phases:

1. An evidence review of previous proposals and initiatives, academic research and market data to generate a series of potential challenges
2. Primary research including structured interviews with market experts and electronic surveys to both test the relevance of the challenges identified in phase 1 and develop recommendations
3. Validation of the recommendations via roundtable discussions with groups of market experts including the Advisory Board.
4. Production of the report with review and input of the Advisory Board

The recommendations in this report are intended to complement a wide range of legislative and regulatory developments at an EU level and the promotion of non-regulated junior markets at member state level, commonly referred to as junior markets, which are often more suitable for SMEs than main markets.

1. Overview of Expert Opinions

The five recommendations presented in this report are the result of an exhaustive literature review and consultation of experts, such as CEOs, public and private investors, and stock exchange operators. Specifically, they addressed a series of challenges the project partners identified to improve access to European stock exchanges by high-growth tech companies. This chapter presents the main findings of the research as derived from interviews and stakeholder survey data, in which the market challenges identified were tested and discussed to develop the final recommendations. These challenges, and the recommendations that emerged from the process, were further tested with focus groups and a wider market survey to deliver recommendations that, if executed, could materially address the market challenges².

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2. For a full description of the approach see the methodology section of this report.

Nine Potential Challenges Tested

- | | |
|---|--|
| 1
The European market is fragmented | 6
The cost of listing on the public markets outweighs the benefits |
| 2
European retail investors typically do not invest via the capital markets | 7
Lack of secondary trading opportunities for privately held shares in Innovative SMEs |
| 3
The IPO challenge in general is at its most acute in smaller companies | 8
There is a lack of connection between private market and public market investors |
| 4
Junior markets, and their regulation, are not tailored to the specifications of innovative SMEs | 9
There is a lack of equity research coverage for listed tech SMEs |
| 5
Lack of liquidity for listed tech SMEs | |

1.1 Main Findings from Interviews

- The lack of liquidity, post listing for SMEs and mid-caps, is the most significant challenge, and all the other challenges are a result of this, contribute to it or both. Ultimately all recommendations need to address this element.
- The majority of interviewees view market fragmentation, or the number of stock markets in Europe, as a broad issue and, not specific to tech or growth company markets, and not the most significant impediment to tech SMEs and mid-caps listing. Most respondents pointed to the pool of specialist³ tech public market investors, or lack of them, with the skill, or mandate to invest cross-border as a greater challenge. For some interviewees, notably, representatives from Nordic countries and the United Kingdom different national markets are a simple reflection of national diversity in areas such as company law and taxation. It would be more straightforward to harmonize these rules (in their opinion) than attempt market consolidation without it.
- The preference for corporate acquisitions over IPOs is seen as a function because of better valuations, less uncertainty (fixed purchase price vs. share price fluctuation) immediate liquidity, less regulatory requirements and reporting duties.
- Most interviewees agree that the challenge to go public is at its most acute in smaller companies, with new expectations being set of what a tech IPO should “look like” due to large, headline making exits particularly in the US. These are characterized by:
 - \$1 billion or greater market capitalization at IPO
 - Companies achieving significant market share (even though the company may still be loss-making) prior to listing

As such companies should be supported to remain private for longer in Europe to achieve scale, especially through larger pre-IPO funding rounds.

- The separation between the investment activities of private market and public market investors are viewed as a sub-issue of:
 - The lack of specialist public market tech funds (asset managers),
 - A challenge in attracting mainstream listed market investors (asset managers of institutional and retail inves-

tors) due to size of companies at IPO, lack of specialist sector knowledge of investors, and lack of growth investing skill or appetite (especially in loss making companies). These skills were generally accepted to be held primarily with private market investors

- Attracting retail investors is important, however, a well-developed retail investment culture is primarily a function of well-established capital markets and tech ecosystems. Tax incentives, minimum retail tranches at IPO and over the longer-term investor education (including advisors to retail investors), could incentivize retail investors to invest in tech SME and mid-caps via the equity capital markets.
- The lack of equity analyst and research coverage of tech SMEs and mid-caps, potentially exacerbated by recent regulatory changes, is a significant impediment to attracting all classes of public market investors (retail, asset managers, institutional investors, High Net Worth Individuals) either directly or via advisers, which in turn contributes to the lack of liquidity.
- The transactional cost of going public is not seen as an impediment. More importantly, the benefits of being a public company, are not always understood, or promoted to companies. European public market investors are also not used to valuing high-growth tech companies that may still be loss making, but have the sufficient scale, and/or need of capital, to enter the public markets. As such more should be done to:
 - Demonstrate the benefits of being public to companies that have achieved sufficient maturity to list on public markets.
 - Educate private tech companies with the potential to go public on how to communicate effectively with public investors, including the use of paid for equity research, prior to going public
 - Educate private market investors, such as venture capital fund managers, on the additional return opportunities of holding a position in their portfolio companies post IPO. It should be noted that their investment mandates may prohibit them for holding long-term shares in public companies

Fig. 1 gives an overview of the interviewees’ opinion as to whether the nine identified challenges have a material impact on European tech SMEs and mid-caps ability to access public markets.

3. The project partners could not find any long-term empirical evidence to support this.

Figure 1. Overview of Interviewee's Opinion on Potential Market Challenges

Challenge	Agree	Disagree	No Opinion
1 The European IPO market is fragmented	20%	63%	17%
2 European Retail investors typically do not invest via the capital markets	66%	14%	20%
3 The IPO challenge in general is at its most acute in smaller companies	72%	17%	11%
4 Junior Markets, and their regulations, are not tailored to the specifications of innovative SMEs	14%	57%	29%
5 Lack of liquidity for listed tech SMEs	89%	8%	3%
6 The costs of listing on the public markets outweighs the benefits	14%	72%	14%
7 Lack of secondary trading opportunities for privately held shares in Innovative SMEs	34%	34%	32%
8 There is a lack of connection between private market and public market investors	69%	14%	17%
9 There is a lack of research coverage for listed tech SMEs	83%	6%	11%

Source: Prepared by the project partners.

1.2 Main Findings from Survey

For consistency with the initial interviews, the survey participants were asked to qualify nine interrelated potential challenges for publicly listed tech SMEs and mid-caps in Europe. Fig. 2 displays the challenges ranked by the percentage of respondents that identified the challenges as either Extremely or Very Challenging.

Figure 2. Overview of Survey Respondents' Opinion on Market Challenges

Challenge	Challenge extremely or very challenging
1 There is a Lack of secondary trading opportunities for privately held shares in Innovative SMEs	59%
2 Many European tech companies have not achieved sufficient size or scale, at IPO, to be successful as a public company	55%
3 Lack of liquidity for listed tech SMEs	52%
4 There is a lack of research coverage (equity analysis) for listed tech SMEs	48%
5 SME Growth Markets, and other Junior Markets, are not tailored to the specifications of innovative SMEs	41%
6 European public market investors lack the knowledge and appetite to invest in listed tech SMEs and mid-caps	40%
7 The costs of listing outweigh the benefits	41%
8 There are too many stock exchanges in Europe (the market is fragmented)	31%
9 European Retail investors typically do not invest via the capital markets	30%

Source: Prepared by the project partners.

Survey respondents were also asked to qualify five preliminary recommendations developed following the interviews. Fig. 3 displays the recommendations ranked by the percent-

age of respondents that identified the recommendations as either Extremely or Very Important.

Figure 3. Overview of Survey Respondents' Opinion on Preliminary Recommendations

Preliminary recommendation	Extremely or Very Important
1 Promote the development of private sector managed, evergreen, cross-over investment funds or companies	72%
2 Promote the paid for equity research industry	55%
3 Develop a pan-exchange European SME block trade platform	50%
4 Permit the issuance of variable voting right shares upon listing	50%
5 Launch a pan-European exchange list of European tech companies	37%

Source: Prepared by the project partners.

- The one significant difference in perception of the strength of importance of challenge relates to "Lack of secondary trading for privately held shares in Innovative SMEs" this in accounted for in terms of relevance compared to the other challenges
- There is also a less pronounced difference in the importance given to the need for retail investors with more importance being placed on this by the interviewees than the survey respondents
- What is clear is the three interrelated challenges of research, liquidity and size of company at listing are considered the most important by all stakeholder groups
- The consensus by all stakeholders with regard to the importance of each of the challenges is reflected in the final recommendations that address those challenges, and in particular the creation of crossover investment vehicles which address multiple challenges, while the other recommendations can be seen as supporting measures

2. The European Tech Markets in Context

Over the last decade, much has happened to develop the European tech ecosystem and the companies that emerge are increasingly attractive to private market investors with 2019 being a record year for attracting venture capital funding, both from funds domiciled in Europe and further afield. The frequently cited “scale-up challenge”, where European tech companies struggle to move from start-up to scale-up to scaler has also improved significantly in recent years, and the number of Unicorn⁴ companies founded in Europe, driven partly by the availability of later-stage venture capital have increased exponentially. Europe can “do tech”.

There is, however, no room for complacency: the US continues to dwarf Europe in terms of venture capital invested, Unicorns created and perhaps more importantly in the creation of global tech champions. Europe has created just one tech company with a market capitalisation greater than \$150 billion (SAP) in comparison to eight in the US. Furthermore, 31 of the 100 largest companies by market capitalization were founded in the last 30 years, 18 of those from China and 13 from the United States. No new company from Europe founded in the same period made the list⁵. And since 2012, 64% of all exited US Unicorns have gone public (as opposed to acquisitions) in comparison only 32% of European exited Unicorns over the same time period have listed on stock exchanges⁶.

At the sub \$1 billion market capitalization level Europe, however, consistently produces more public tech companies than the US, the challenge, however, has been to maintain growth post listing in comparison with US companies, with the weighted aftermarket performance of US tech IPOs substantially exceeding European IPOs in recent years⁷. The average capital raised by IPO in the US is \$223 million compared to \$76 million in Europe.

Venture capital backed tech companies that do go public now remain private for longer. For companies that went public in 2007 the average time to IPO from first venture capital funding was five years and five months, for companies that went public in 2017 this was seven years and one month⁸.

If Europe is to improve its chances of creating the next SAP it must foster the conditions where tech companies can come to market at sufficient scale and market capitalisation at issuance, and then continue their growth journey as a listed company.

Outside of creating tech champions public markets are in general a well-recognised component of the “next push” stage of the “funding escalator” and “ready access to public markets provide an exit strategy for investors who invested in earlier stages of the company’s life cycle”⁹. Exits to public markets also enable innovative SMEs to maintain independence (as opposed to being acquired by a larger company) and provide both institutional and retail investors¹⁰ with transparent access to innovative SMEs and growth-tech companies.

The benefits of listing for SMEs and mid-caps in general include a reduced dependence on bank funding, a higher degree of diversification of investors, easier access to additional equity capital and debt finance and a higher public profile and brand recognition. Viewed from a broader economic perspective, IPOs are also important given 92% of job growth in companies occurs post IPO and that countries where capital markets, and especially stock markets, are underdeveloped suffer in terms of below average growth¹¹.

4. Private companies with a valuation greater than \$1 billion.

5. *McKinsey&Company (2018)*.

6. The project partners analysed the data retrieved from Dealroom, CB Insights, Crunchbase.

7. *Atomico (2019)*.

8. National Venture Capital Association 2019 Yearbook. *Pitchbook (2019)*.

9. Mid-Term Review of the Capital Markets Union Action Plan. *European Commission (2017)*.

10. Strengthening Europe’s Position in Global Capital Markets. *FESE (2017)*.

11. Kaserer C. and Rapp M. S. Capital Markets and Economic Growth: Long-Term Trends and Policy Challenges *Financeestonia.eu (2014)*.

2.1 European Tech Companies are Increasingly Attractive to Private Investors

Capital for European tech companies from alternative financing sources such as, venture capital and business angels are becoming increasingly accessible. In 2019 over \$34 billion of venture capital was invested in Europe, an increase of 124% since 2015¹², with European venture capital funds raising a record €11.4 billion in 2018, compared to €5.2 billion in 2014¹³. In terms of overall venture capital invested, however, Europe is still dwarfed by the United States (\$116.7 billion venture capital invested in 2019) and risks falling behind to other markets such as China (\$62.5 billion invested in 2019).

The frequently cited “scale-up challenge”, where European tech companies struggle to move from start-up to scale-up to scaler

has also improved significantly in recent years. In 2019, large scale funding rounds of above \$100 million accounted for 36% of all venture capital invested in Europe compared to 22% in 2015¹⁴.

The number of tech Unicorns, private companies at greater than \$1 billion valuation has also increased significantly in Europe in recent years, and while the absolute numbers of global Unicorns (both current and exited) vary significantly according to the data sourced used, the one consistency is the significant difference that still exists between the United States and Europe, with the United States having created approximately 7x the number of Unicorn companies than Europe¹⁵.

2.2 Post IPO European Tech Company Performance is Positive (but size matters)

Empirical analysis, based on a sample of over 500 European companies that were backed by venture capital funds and went public on European stock exchanges during the period from January 1996 to June 2010, provides significant evidence that venture capital-backed IPOs generate positive returns for a specific time period subsequent to the IPO¹⁶.

The returns for larger IPOs with market values above EUR 100 million at the time of the IPO and above EUR 100 million in book values at the end of the first year are positive for the first three-year period after going public. Also, the group of venture capital-backed IPOs significantly outperforms the non-venture capital-backed IPO group for companies listed on the main market segment and for larger IPOs¹⁷.

The five-year performance of Stoxx50 is at +14.2%, while the five-year performance of the Euronext Tech40, young technology stocks listed on Euronext markets and selected by an independent group of European experts is at +20.4%¹⁸.

Europe produces more public tech companies than the US across all sizes of market capitalization at issuance (Fig.5), however, concerning \$1 billion some way public companies there still remains a significant difference (Fig.6). Given the empirical analysis detailed previously, this goes some way to explaining the difference in post-listing performance between the US and Europe. The US figures in particular challenge the general assumption that the longer time to IPO for venture backed companies reduces the opportunity for performance uplift post IPO.

12. The project partners analysed the data retrieved from Dealroom, Atomico, State of European Tech 2019.

13. European Private Equity Activity Report and Data 2018. *Invest Europe* (2019).

14. The project partners analysed the data retrieved from Dealroom, Atomico, State of European Tech 2019.

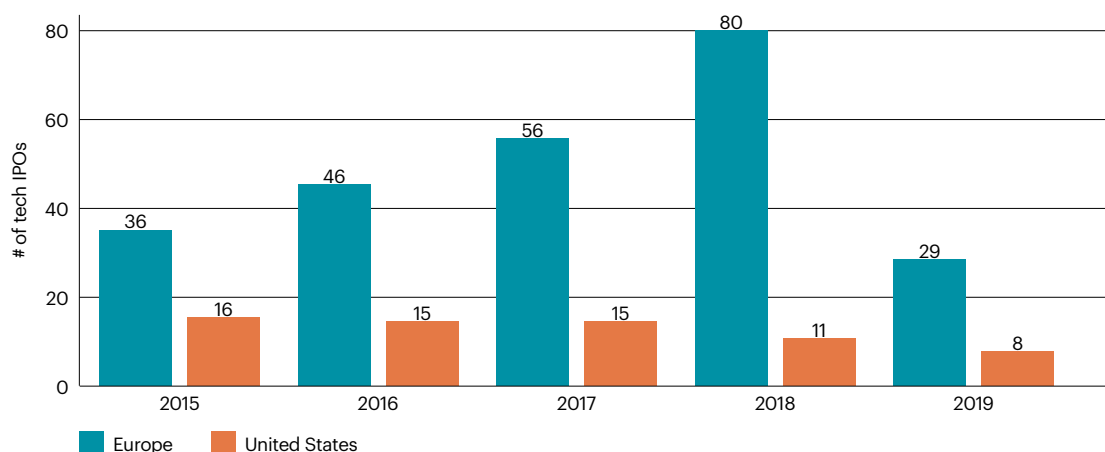
15. The Crunchbase Unicorn Leaderboard. Techcrunch [online] Available at: <https://techcrunch.com/unicorn-leaderboard/> [Accessed 5 Feb.2020].

16. Bessler, W., Martin, S. European Venture-backed IPOs: An Empirical Analysis. *EVCA & Justus-Liebig-University Giessen* (2011).

17. Bessler, Martin (2011).

18. Euronext as of March 22nd, 2018.

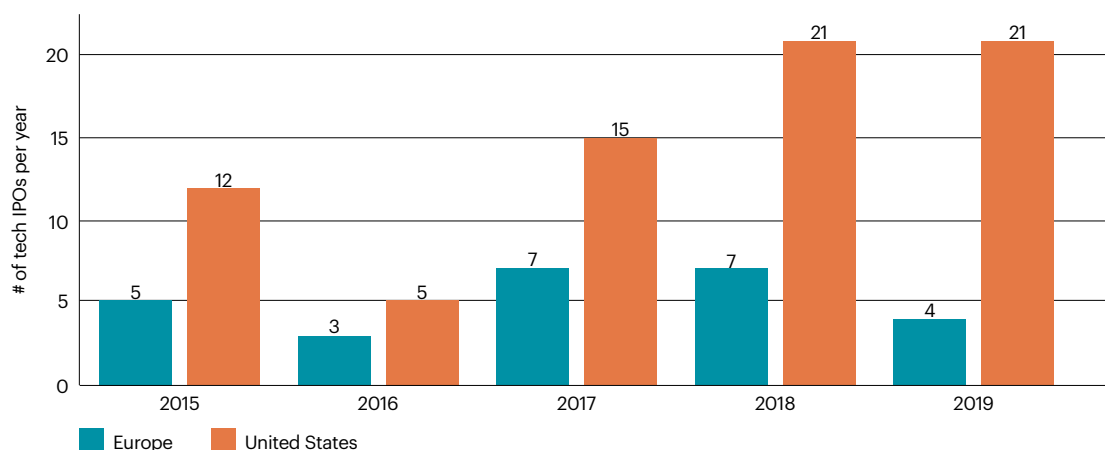
Figure 4. Number of tech IPOs with less than \$1 billion market cap at IPO by year and region



Note: 2019 based on data to September 2019.

Source: London Stock Exchange.

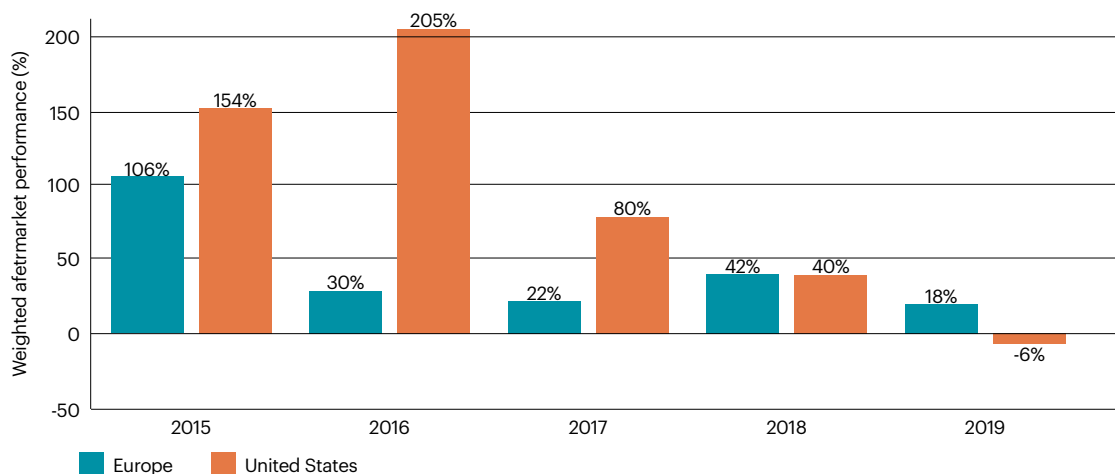
Figure 5. Number of tech IPOs with \$1 billion+ market cap at IPO per year and region



Note: 2019 annualised based on data to September 2019.

Source: London Stock Exchange.

Figure 6. Weighted aftermarket performance of tech IPOs by vintage year



Note: Aftermarket performance is weighted by market cap at IPO. 2019 based on data to 21 October 2019.

Source: London Stock Exchange.

2.3 Globally, Public Equity Markets are Challenged

There are wider global trends that impact the availability of capital for public tech companies.

While the overall state of global public equity markets is outside the scope of this project, it is noted that certain wider trends may also contribute to the availability of funding for European tech companies at IPO.

These include:

- **An overall decline in Initial Public Offerings (IPOs)** across the developed world. From 1993 to 2000, the OECD had an annual average of approximately 1,170 IPOs, this number fell to 670 from 2001 to 2011¹⁹.
- **Share buybacks dominate the value returned to shareholders** - 60% of the capital returned by companies today is in the form of share buybacks, as it is more capital efficient than dividend distributions²⁰.

- **The use of Liability Driven Investment strategies** – where a proportion of a pension scheme's assets are invested in financial instruments to reduce volatility and hedge against inflation, interest rates and the longevity of the pension scheme's beneficiaries.

Liability Driven Investing is used by defined benefit pension schemes to invest a portion of assets to match the sensitivity of its liabilities to factors such as interest rates, inflation and longevity. As pension payments stretch over many decades their present value, or solvency, is directly linked to these factors²¹. This can mean an increasing portion of a pension fund's assets are allocated to financial instruments used to hedge against these liabilities, potentially at the expense of growth assets such as equities. It should be noted that defined benefit schemes are declining and being replaced by defined contribution schemes.

2.4 The Capital Available via the Public Markets Still Dwarfs the Private Markets

In addition to providing an exit route for alternative investors, the capital that is potentially available via the public markets also dwarfs that available to companies that remain private. As such the vast majority of global capital allocated to equities remains in the public markets with an estimated \$73 trillion market capitalisation²².

Globally private assets under management have increased considerably since 2015 and reached a record-high of \$5.2 trillion in 2017, up 12% from \$4.7 trillion in 2016. However,

only \$1 trillion is held in venture capital or growth equity, and of this \$100 billion is held in European venture and growth capital funds and their underlying companies²³.

So, while private markets attract increasing interest from long-term investors such as pension funds and sovereign wealth funds, approximately 80% of this is allocated to Buy-out funds, Real Estate, Private Debt and Infrastructure as opposed to investors in tech companies such as venture capital funds.

2.5 The Relatively Small Number of Tech IPOs is not New

The lack of IPO exits for tech companies is not a new: on average, from 2007 to 2016, 10.7% of European VC exits at cost were by IPO. This relatively small amount of IPOs is not just limited to venture capital backed companies: for the same

time period only 13.7% of all Private Equity exits were by IPO²⁴. For the same time period only 7.2% of US VC exits by number of companies were by IPO²⁵.

19. Rebuilding the IPO On-Ramp. Putting Emerging Companies, Investors and the Job Market Back on the Road to Growth. *IHS Global Insight* (2011).

20. Salvatorelli, F. From Active Investor to Long Term Shareholder, Fiorangelo Salvatorelli. TechCapMarkets.eu [online] Available at: <https://techcapitalmarkets.eu/webinars/> [Accessed 5 Feb.2020].

21. An Introduction to Liability Driven Investment. *Insight Investment* (2018).

22. Desjardings, J. All of the World's Stock Exchanges by Size. Visual Capitalist [online] Available at <https://www.visualcapitalist.com/all-of-the-worlds-stock-exchanges-by-size/> [Accessed 5 Feb.2020].

23. McKinsey&Company (2018).

24. Invest Europe (2019).

25. The project partners analysed the data retrieved from their research together with the ones retrieved from the National Venture Capital Association.

3. Recommendations in Depth

Figure 7. Overview of the recommendations

1 The European Investment Bank Group to support the development of crossover investment funds or companies	2 European Stock Exchanges to permit the issue of dual-class shares upon listing	3 Develop a European SME block trade platform to match buyers and sellers	4 Governments should actively encourage research on tech SMEs	5 Governments should consider incentives for retail investors to participate in IPOs and primary issuances
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3.1 Recommendation 1: The European Investment Bank Group to support the development of crossover investment funds or companies

This intervention would take the form of the European Investment Fund or European Investment Bank establishing a series of funds, and investing on a pari-passu basis, alongside national promotional banks, and potentially private sector institutional investors. This could take the form of an EIF managed vehicle, or given the experience of Baillie Gifford (Fig.8) incentivizing public sector managers to create crossover funds and bringing in venture capital and growth equity experience as appropriate.

The fund(s) or investment companies would:

- Support European tech companies to remain private for longer, and achieve “market ready” size by:

- Investing in later-stage private funding rounds
- Provide liquidity to early-stage investors/venture capital funds via secondary acquisitions

- Provide tech companies at IPO with a specialist tech anchor investor, acting as a reference investor to encourage generalist asset managers to invest

- Transfer the sector specialist skills developed by private investors such as venture capital fund managers to the public markets

- Provide long-term patient capital that can support tech companies scale while both public and private

Figure 8. European Crossover Fund Example: The Ballie Gifford Schiehallion Fund²⁶

Baillie Gifford Schiehallion Fund

Baillie Gifford is an independent global investment management firm established in 1908 and based in Edinburgh, United Kingdom. Its recently launched Schiehallion Fund (listed March 2019) was developed in partnership with a group of existing Baillie Gifford institutional clients. Its global mandate is to invest in technology-backed disruptors worth >\$500 million. The fund is structured as an Investment Trust²⁷, and publicly listed on the London Stock Exchange Specialist Funds Segment.

As a public company, as opposed to the traditional fixed term (usually ten years) Limited Partnership structure common in venture capital, the fund is “evergreen” or permanent capital with no end life. As such the Fund can “provide patient long-term capital to businesses as they scale and, in some cases, enter the public markets”.

Main Features

- Guernsey Investment Company listed on the London Stock Exchange Specialist Funds Segment

- £365 million in Assets Under Management (as of July 2019)
- Investment focus of pre-IPO global growth equity
- Management fee only (no carried interest or performance fees)
- Management fees calculated on the share of Net Asset Value not held as cash, minimizing the fee

The investment strategy is to invest directly in pre-IPO portfolio companies and to continue to hold these investments post-IPO, in cases where there is value in so doing so. Baillie Gifford takes the view that the prevailing model of dividing investment strategies between private and public investing is broken. An arbitrary line is too often drawn at IPO, with investors seeking exposure to growth on one side of the line or the other, but not both. As a result, investors in public companies often have not had access to value created before a company is admitted to trading on a public stock exchange. Investors in private companies, on the other hand, are too often are compelled to invest through limited life funds and are therefore unable to hold investments for the long term after those companies IPO, even if significant upside remains.

26. Gifford, B. Schiehallion Fund Prospectus. *The Schiehallion Fund Limited* (2019).

27. An investment trust is a public listed company. It's designed to generate profits for its shareholders by investing in the shares of other companies. Shares in investment trusts are traded on the London Stock Exchange so investors can buy and sell from the market, rather than dealing with a fund management company. An investment trust is closed-ended i.e. has a fixed number of shares. The fund manager can invest and sell assets when they feel the time is right; not when investors join or leave a fund. It also means the underlying capital investment base is relatively stable. More details available at: <https://am.jpmorgan.com/gb/en/asset-management/gim/per/products/investment-trusts/what-is-an-investment-trust> [Accessed 5 Feb.2020].

The fund(s) or investment vehicle(s) should:

- Be long-term in nature and possibly “evergreen” or perpetual
- Blend the skill of public market investors with the core tech/growth market skills of private market tech investors
- Be of sufficient size to support companies to achieve an optimal size and scale ahead of listing

The first stage to establishing these funds would be to establish an advisory body composed of public market tech investors and venture capital fund managers.

A crossover fund is an investment fund that invests in both publicly traded and privately held companies. Investments in privately held companies by crossover funds are typically made in “IPO-ready” companies before entering the public markets, giving these funds a foothold into a potential IPO at a price lower than the IPO. For the company selling a portion of equity to crossover investors provides additional capital to the private company, potentially giving it more time to reach a stage that public company investors will find more appetising.

A crossover fund investment in a private company can also give a perception of quality. Having one or more “blue chip” crossover funds invested in a private company, and particularly tech specialists, can be a signal to public investors that the private company is potentially a good investment, and provide a reference investor at listing. As we note elsewhere in this report European VCs are more

likely to dispose of their investments at IPO in order to return capital to the investors in their funds. While this generates secondary opportunities, it also means there is often a lack of shareholders post listing, in comparison to the US, which understand the companies’ growth journey and can act as a reference shareholder.

Research in the life sciences sector also demonstrates the value creation impact when crossover funds are involved pre-IPO. A 2014 study comparing pre-money IPO valuations and post-IPO stock performance for 94 therapeutically focused IPOs, of which 24 had crossover led financing rounds. The IPOs took place from January 2013 until September 2014. The median pre-money valuation at IPO for the companies with a crossover led pre-IPO financing was over 128% higher than companies without. When adjusting for the additional capital from the crossover funding, the median pre-money valuation at IPO was still over 80%²⁸.

Despite having a higher valuation at IPO due to the crossover round the 24 companies with crossover financings in the study exhibited a median stock appreciation of 83%. This median return compares favourably to the negative 10% median return for those companies without a crossover round. While this study has some limitations given the sample size and focus on US life sciences, the results are promising, especially considering the need for specialist sector expertise in therapeutics.

As we note in the challenges section of this report of the ten most active crossover tech investors (by number of investments) only one is located in the European Union²⁹.

3.2 Recommendation 2: European Stock Exchanges to permit the issue of dual-class shares upon listing

European exchanges face the competition of corporate acquisitions or listing on non-European venues. In a variable or “super” voting structure, available in venues including the US and Hong Kong, ordinary shareholders receive shares with one vote per share while founders receive shares with multiple votes. Typically, the ratio for the super voting stock is 10 votes per share. A variable voting structure enables founders to retain, or regain, control of their company, giving them voting control over a company that is disproportionate to their equity shareholding.

Pros:

- The existence of super-voting shares can also be an effective defense against hostile takeovers as key insiders can maintain majority voting control of their company without actually owning more than half of the outstanding shares
- Dual-class stock can benefit investors in the early stages of a company, insulating it from short-term market pressures
- Founders can have stronger control over the company which can be particularly important in high-growth companies
- They protect the founding shareholders and beneficiaries of super voting rights from the vagaries of the stock market
- Many entrepreneurs would simply choose not to take their com-

panies public if they could not retain control; this would deprive investors of opportunities to invest in growth companies

Cons:

- Dual-class structures can shrink the field of potential investors
- Dual-class structures could lead to an erosion of corporate governance standards

Despite some potential disadvantages dual-class structures are becoming more common in the US, especially among tech companies such as Google (IPO 2004), Facebook (IPO 2012), Twitter (IPO 2013) and Spotify (IPO 2018). Nearly a quarter of the global market capitalisation of dual-class stocks is in the high-growth tech sector. Alibaba, the Chinese e-commerce company, chose in 2014 the NYSE over Hong Kong and London Stock Exchanges in its listing, as the latter two prohibited the listing of companies that employ dual-class shares structure. Four years later, Hong Kong and Singapore approved this structure.

While the availability of dual-class structures may reduce the potential pool of investors, ultimately it would be a company decision as to issue this type of stock on listing.

28. Booth, B. The Biotech Cross-Over Phenom: Biomarker of Quality? *Forbes* (2014).

29. Tiger Global Reigns As The Most Active Crossover Investor In Tech Startups. CBInsights [online] Available at <https://www.cbinsights.com/research/most-active-crossover-investors-2015/> [Accessed 5 Feb.2020].

3.3 Recommendation 3: Develop a European SME block trade platform to match buyers and sellers

To address the lack of liquidity for listed tech SMEs, we recommend developing a pan-European SME block trade platform to match buyers and sellers. This would take the form of a closed platform on which brokers can post block trade requirements, particularly in tech SMEs (and possibly all SMEs), without disclosing the final counterparties. There would be no requirement to post bid/sell offers and the actual trade would be executed via existing marketplaces. The SME block trade platform would need to be developed by a consortium of exchange operators, potentially facilitated initially by an independent body such as the European Commission.

Figure 9. Examples of Existing European Block Trade Services (2019)

<p>Eurex Frankfurt AG Eurex Block Trade Service supports the off-book trading of standard Eurex products. Buyers and sellers can execute order information into the Eurex® system without execution risk. The Eurex Block Trade Service is available for specific Eurex products and a minimum number of traded contracts. Option strategies or option volatility strategies on the basis of Eurex options listed in the table are also admitted to the Block Trade Service.</p> <p>The Minimum Block Trade Size of option strategies or option volatility strategies is equivalent to the Minimum Block Trade Size of the respective underlying option contracts of the strategy. The Bulk Load Panel within the Block Trade Service further enhances the efficiency in entering order information. This function enables the import of order information for multiple Block Trades directly from a file in CSV format into the Eurex® system.</p>	<p>Borsa Italiana (London Stock Exchange) Borsa Italiana (London Stock Exchange) Cross Orders and Block Trade Facilities (BTF) are two new types of orders available on Borsa Italiana’s Millennium Exchange platform. They enable intermediaries to execute contracts with specified counterparties with flexibility in terms of order size and transaction pricing.</p>
<p>Euronext Euronext Block MTF allows participants to trade blocks with strong focus on executing small & midcap stocks favouring size over speed. Participants benefit from size priority in the matching process, improving fill rates for larger blocks and reducing the impact of interacting with smaller orders. The platform supports both conditional and firm order types allowing for price discovery and potential for price improvement.</p>	

Source: Eurex Frankfurt AG, Borsa Italiana, Euronext.

3.4 Recommendation 4: Governments should actively encourage research on tech SMEs

The lack of quality equity analyst coverage for listed SMEs in general is a long-standing challenge, which may have been exacerbated by the “unbundling rules” in MIFID II. In addition, retail investors typically do not have the same access to information as asset managers and institutional investors.

Innovative, fast growth tech SMEs and mid-caps in particular may have characteristics that warrant the use of specific metrics, both financial and non-financial, by equity analysts.

The companies themselves should be encouraged, and supported, to produce quality research. Support at a European level could take the form of a recommendation to (cross-over) funds to ensure research on their portfolio companies, at a member state level this could take the form of corporation tax relief. Companies eligible for support would be SMEs as defined in MIFID II.

The companies themselves would be responsible for choosing their research provider under such a scheme in order to allow the market to develop.

As Figure 10 shows, there are a number of independent providers; the challenge is more one of cost, and to a certain extent the credibility of commissioned research.

Figure 10. Examples of current providers of paid for research

Research Provider	Country	Description
Edison Group	UK	<p>Edison group is one of the largest sponsored research companies.</p> <p>Their services include amongst other monthly coverages, a detailed note on the company once a year and two video interviews. The research does not carry a rating or recommendation, but it discusses valuation. This allows us them to distribute the research to a much wider audience compared to traditional sell side research.</p> <p>£49,500 per annum for a minimum 12-month coverage contract. Institutional investors can access the research for free.</p>
Sidoti & Company	USA	<p>Sidoti is an Independent small cap securities research, trading and corporate access firm which also offers company sponsored research.</p> <p>Their services include an initiation report and at least one report following each earnings release for the next four quarters. Sidoti states that in practice they publish “Notes” whenever something about a company/industry is newsworthy and they seek to have at least one published communication with their investor base every six weeks.</p> <p>One year of research coverage costs \$40,000.</p>
ACF Equity Research		ACF Equity Research is UK based company that delivers independent corporate sponsored equity research for smaller and midsize companies.
Impetus Equities Research		Impetus Equities Research is a US research company which offers company sponsored equity research for small-cap companies.
SEB Research	Sweden	<p>SEB Research belongs to the Swedish bank Skandinaviska Enskilda Banken AB (SEB AB). They offer company sponsored research for smaller-cap stocks with limited liquidity that otherwise would not be covered by leading securities houses such as SEB.</p> <p>The research is openly available to institutional investors resident in Europe and does not carry recommendations or target prices.</p> <p>SEB charges €50,000 to €60,000 a year for each stock.</p>
Kepler Cheuvreux	France	Kepler Cheuvreux is an independent European financial services company which amongst other services offers sponsored equity research.
DNB Markets	Norway	DNB is Norway's largest financial services group. They cover the pan Nordic equity space. and not include a recommendation (BUY/HOLD/SELL) on the stock. Instead they present a fair value range to indicate what they believe the stock could be worth.
Oddo bhf	France	Franco-German financial group covering Europe which offers sponsored equity research.
Hardman&Co.	UK	<p>Research & Analysis firm from the UK.</p> <p>Their research can be read on their website, through channels like Bloomberg, and on the companies' own websites. Beyond written research reports, they produce audio analyst interviews, and films. They also have a dedicated social media strategy, i.e. LinkedIn and Twitter.</p> <p>They charge up to £45,000 pounds per annum.</p>
AlphaValue	France	French independent research provider which charges about €20,000 a year for sponsored research.
Ascend	USA	<p>NYC-based sell-side equity research firm offering independent, paid-for research for micro-cap companies with little or no analyst coverage.</p> <p>Ascend Equity Research utilizes targeted distribution channels as well as social media and private distribution relationships. They publish quarterly updates, power point presentations and video interviews.</p>
Diamond Equity Research	USA	<p>Diamond Equity Research is a technology-focused equity research firm with online and proprietary distribution and tracking capabilities.</p> <p>Diamond offers an annual subscription to its clients which includes distribution of the research to retail and institutional platforms including Twitter, Google+, Thomson One, Zacks, Factset, S&P Capital IQ, and other leading investment platforms.</p>
Allinvest / Invest Securities		Invest Securities is an independent brokerage company with a complementary business unit including brokerage, analysis office and issuer services. Invest Securities provide solutions to companies, institutional investors as well as to fund managers within Allinvest.

Source: Prepared by the project partners.

3.5 Recommendation 5: Governments should consider incentives for retail investors to participate in IPOs and primary issuances

Attracting retail investors is important, although the challenge is far from homogeneous across European countries and EU Member States. Certain countries, for example Sweden have well developed retail markets for listed tech companies – although this is usually a function of the wider capital markets and tech ecosystem.

Tax incentives, investor education and a minimum allocation to retail investors at IPO could all be considered. Given the differences across Europe it is not possible to provide a single recommendation, however the good practices employed by certain countries should be taken into consideration.

Figure 11. Good Practice in Tax Incentives – The UK Enterprise Investment Scheme³⁰

The UK Enterprise Investment Scheme (EIS)

The Enterprise Investment Scheme (EIS) is designed to encourage investment in small or medium sized companies. This is done by offering tax relief to individual investors who buy new shares in qualifying companies.

Qualifying Companies

- Have a permanent establishment in the UK
- Are not trading on a recognised stock exchange at the time of the share issue and does not plan to do so (AIM traded shares are permitted)
- Do not control another company other than qualifying subsidiaries
- Are not controlled by another company, or does not have more than 50% of its shares owned by another company
- Do not expect to close after completing a project or series of projects
- Do not have gross assets worth more than £15 million before any shares are issued, and not more than £16 million immediately afterwards
- Have less than 250 full-time equivalent employees at the time the shares are issued

Qualifying investments up to £1 million in aggregate in a tax year (husband and wife may each invest £1 million) entitle an investor to the following tax reliefs:

- 30 per cent initial income tax relief on investment ('initial relief') relief is restricted to the actual income tax liability for the year, if lower than 30 per cent of the cost of the investment.
- Exemption from capital gains tax on disposal
 - The investment must be held for three years.
 - Initial relief must not be withdrawn.
 - The exemption is restricted if initial relief was not given on the full amount or if that amount has been reduced.
- Loss relief if the investment fails or is disposed of at a loss
 - This is calculated at an investor's top rate of tax effectively on the net loss, after taking into account the initial tax relief
 - Losses can be relieved either against capital gains in the year of loss or a subsequent year or against income in the year of the loss or the previous year

Source: Prepared by the project partners.

Figure 12. Examples of Minimum Retail Access at IPO on Euronext markets³¹

Country	Details
Belgium	The proportion attributed to retail investors should be sufficient to allow the offer to be considered public. The part of the offer reserved for retail investors can only be reduced in the case of a much larger percentage of oversubscription in the institutional tranche. (Royal Decree 2007)
France	A minimum of 10% of the overall transaction amount (without taking into account the greenshoe option) must be reserved to retail investors.
The Netherlands	In the Netherlands, Dutch laws and regulations do not require a specific amount to be attributed to retail investors. However, at the time of an IPO, at least 10% of the shares admitted to listing (without taking into account the greenshoe option) must be offered to the public.
Portugal	In Portugal, an offer is considered as public if addressed to undetermined persons or to more than 200 identified retail investors (Articles 109 and 110 Securities Code).

Source: Prepared by the project partners.

30. A Guide to AIM Tax Benefits. London Stock Exchange (2012).

31. The Harmonization of Primary Market Practices on Euronext Markets. AMF-France (2003).

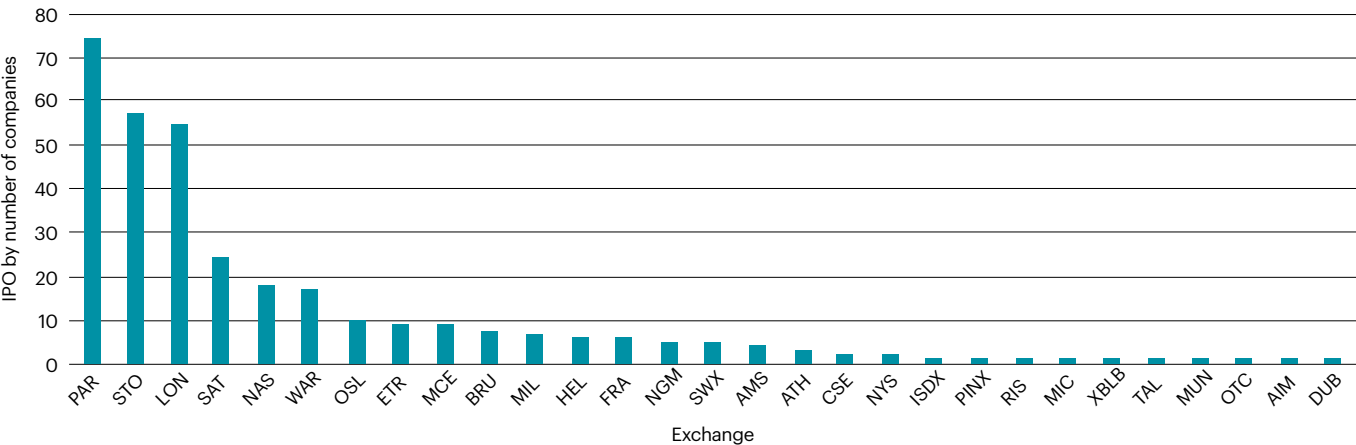
4. Potential Market Challenges Explored In-Depth

Before conducting structured interviews with market experts to evaluate the strength of the potential challenges and develop recommendations to address them as appropriate, the Project partners, in conjunction with the Project’s Advisory Board identified nine potential challenges which are detailed in this section. It should be noted that the Project Advisory Board universally agreed that the cost of listing was not an impediment in Europe, nevertheless this was included to test with the wider market.

Challenge 1: The European IPO Market is Fragmented

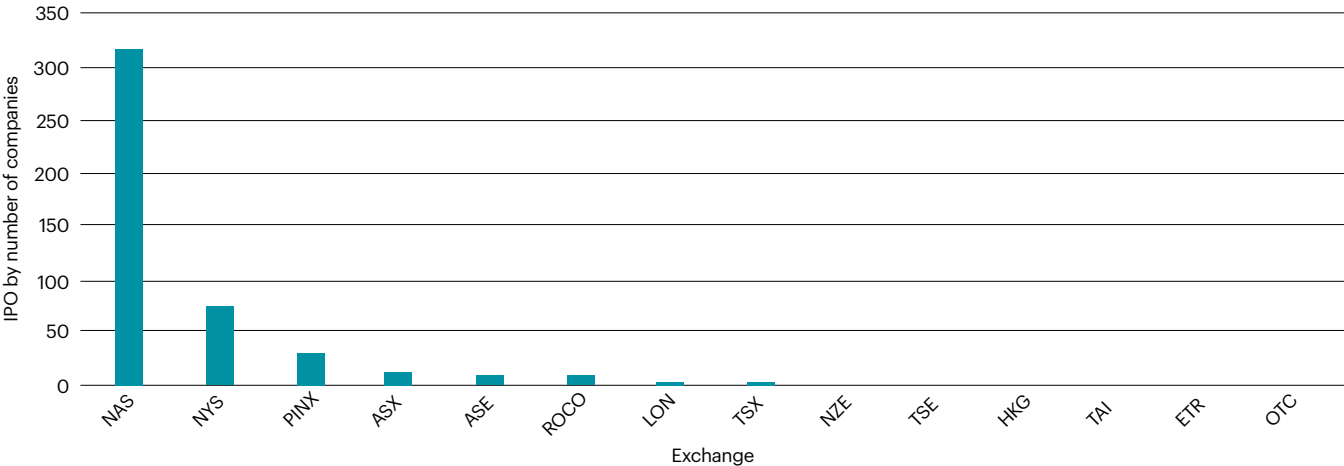
From 2006 to 2018 European venture capital backed companies, that listed in Europe, did so on over 15 different stock exchanges. During the same period the vast majority of US companies backed by venture capital that were admitted to public markets listed on the NASDAQ exchange (70% by number of companies)³².

Figure 13. European Listing Venues of European VC Backed Companies



Source: PitchBook.

Figure 14. Listing Venues of US VC Backed Companies



Source: PitchBook.

32. PitchBook: Venture Capital, Private Equity and M&A Database. Analysis of the data from 2006 to 2017

There is also considerable leakage with many of Europe's most promising venture capital backed companies that are admitted to stock exchanges listing in non-European exchanges. According to Mind the Bridge, an organisation that provides innovation advisory services, 49% of the capital raised at IPO since 2010 by European tech scaleups has been via US stock exchanges³³. And of the 26 venture capital backed European tech IPOs that have taken place since 2012 at a \$1 billion market capitalisation at issuance, 12 have been on either the NASDAQ or NYSE³⁴.

There is a significant difference between Europe's most and least innovative regions, with the most innovative regions include southern Germany, southern England and the Nordic region as well as the cities of Paris and Berlin³⁵. This is also reflected in the development of stock exchanges. While recent regulatory development in general has been positive (e.g. tailoring of the Prospectus Directive, SME Growth Markets under MiFID II), it hasn't solved overall market challenges, or addressed specific legislation and regulation in under-developed EU Member States.

Challenge 2. European retail investors typically do not invest via the capital markets

Savings in the EU represent €2.7 trillion or 20% of GDP (compared to €2.8 trillion and 27% of GDP in the US)³⁶. In 2014 European assets under management from retail investors stood at €4.9 trillion, representing 26% of overall assets under management³⁷.

US households allocate one-third of their incomes to equity compared to just 10% in Germany. There is a relatively strong retail market for listed SMEs in France, and a strengthening market in Italy, this is partly due to favourable tax regimes. French and Italian households allocate 20% of their savings to equity³⁸.

Retail investors typically do not invest cross border and brokers/retail investor platforms do not typically provide the same

amount of market information, or access, outside of their domestic markets.

Challenge 3. The IPO challenge, in general, is at its most acute in smaller companies

The number of IPOs on SME-dedicated markets declined steeply in the wake of the financial crisis and have not picked up significantly since. As a result, Europe is producing only half of the SME IPOs that it generated before the financial crisis: 478 IPOs on average per year in 2006-2007 compared with only 218 between 2009 and 2017 on junior markets specialised in SMEs. Between 2006 and 2007, an average of €13.8 billion was raised annually on European SME-dedicated multilateral trading facilities through IPOs. This amount fell to €2.55 billion on average from 2009 to 2017³⁹.

Challenge 4. Junior markets, and their regulation, are not tailored to the specifications of innovative SMEs

Public policy, regulatory and market initiatives in Europe have intended to tend to focus on SMEs as a whole, rather than the specifics of fast-growth tech companies. There are an increasing number of dedicated exchanges. These include SME Growth Markets⁴⁰ and other Junior Markets including AIM (LSE), First North (Nasdaq), MAB (BME), New Connect (Warsaw SE), and Scale (Deutsche Börse) - characterised by more relaxed listing requirements and lower costs than the main boards.

The Alternative Investment Market (AIM) of the London Stock Exchange (LSE) has under-performed with average returns from small-cap UK companies outside AIM being much stronger⁴¹. From 2012 to 2016 only 10% of companies by market capitalisation and 11% by number of companies admitted to the AIM market have been classified as technology companies⁴².

33. Tech Scaleups IPO Report, *Mind the Bridge* (2019).

34. The project partners analysed the data retrieved from their research together with the ones retrieved from Tech Nation Dealroom, London Tech Week Update June 2019.

35. Regional Innovation Scoreboard 2016. *European Commission* [online] Available at: https://ec.europa.eu/growth/industry/innovation/facts-figures/regional_en [Accessed Feb 5, 2020].

36. Bank of England. More details at: <https://www.bankofengland.co.uk/>.

37. Asset Management in Europe, 8th Annual Review, *EFAMA* (2015).

38. The Shortage of Risk Capital for Europe's High Growth Companies. *AFME* (2017).

39. Funding for SMEs. *European Commission* (2018).

40. As defined in Article 4(1)(12) of MiFID II (Directive 2014/65/EU).

41. Aim — 20 years of a few winners and many losers. *Financial Times* (2015).

42. London Stock Exchange. More details at: <https://www.londonstockexchange.com/home/homepage.htm>.

Recent regulatory changes at an EU level have been positive, but confined to SME Growth markets⁴³, and aimed at SMEs in general, not innovative, fast-growth tech companies.

Different sectors have different challenges and use public markets in a different way. Venture backed life sciences companies use IPOs as a source of capital raising, for digital companies it is an exit. Public markets may offer an alternative to later-stage venture capital funding and allow innovative SMEs and tech companies at large to continue their growth journey.

Challenge 5. Lack of liquidity for listed tech SMEs

Despite the benefits of stock exchange listings, European public markets for SMEs struggle to attract new companies. Of the 20 million SMEs in Europe by May 2018, only 3,000 were listed on stock-exchanges. The low rate is motivated by the high compliance costs and the insufficient liquidity also. Insufficient liquidity means that cost of capital is higher for SMEs, and that it is more difficult for investors to buy and sell SME shares⁴⁴.

Insufficient liquidity can weigh on issuers (due to higher costs of capital), on investors (who can be reluctant to invest in SMEs in the first place due to low liquidity levels and related volatility risks) and on market intermediaries (whose business models rely on customers order flow in liquid markets)⁴⁵.

Challenge 6. The cost of listing on the public markets outweighs the benefits⁴⁶

There are many different costs related to the going public process including direct costs such as underwriter, external auditor, legal and financial reporting advisor fees. Underwriting fees can range from 3.5 to 7 percent of the money raised. The IPO discount or underpricing, where shares are priced in order to rise significantly on initially trading in order to encourage investors who may perceive an IPO as risky because of insufficient historical trading data, benefits institutional investors not the company. The

IPO discount can allow for a targeted share price on initial trading ranging from 15% to 35%⁴⁷.

In the USA underwriting fees are typically 7% of money raised. European IPOs within the \$25 million to \$100 million range, average fees at just over 4%. The same investment banks charge significantly lower fees for conducting IPOs in Europe than for similar IPOs they underwrite in the United States. An examination of legal costs, retail offerings, litigation risk, sell-side analysts, and the possibility that narrower underpricing might offset higher fees, found no evidence that these elements materially explain the difference in fees, in fact European IPOs are underpriced less than U.S. IPOs⁴⁸.

Challenge 7. Lack of secondary trading opportunities for privately held shares in innovative SMEs

If business angels, and other private investors, are to invest more they must have better exit opportunities. Business angels may hold their investment for nine years and more without finding an appropriate buyer. As such the lack of exit opportunities could deter business angels from investing. Equity crowdfunders invest a similar manner to business angels, making investments as minority shareholders, albeit via a crowdfunding platform. As most crowdfunding platforms are simply marketplaces, and do not participate in the transactions, they are therefore not actively involved in exits.

Unless business angels or crowdfunders shares are acquired by larger investors such as venture capital funds, or the company has an exit, there are no obvious ways for smaller investors to generate liquidity. And due to the relative youth of crowdfunding, and other specificities, relatively few exits have taken place.

US markets such as NASDAQ Private Markets/Second Market offer liquidity for early employees, founders and seed

43. SME listing on public markets. EU initiatives to make it easier for SMEs to raise capital on public markets. *European Commission* [online] Available at: https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-markets/securities-markets/sme-listing-public-markets_en#regulatory-initiative-to-promote-sme-growth-markets [Accessed Feb 5.2020].

44. Frequently asked questions: Easier access to financing for smaller businesses through capital markets. *European Commission* (2018).

45. *European Commission* (2018).

46. The TechCapMarket's Advisory Board advised this was not issue, nevertheless it was included in the research at the request of the European Commission.

47. Thomas Weisel Partners LLC, *Financial Times* (2018).

48. Abrahamson, M., Jenkinson, T., Jones, H., Why Don't US Issuers Demand European Fees for IPOs. *The Journal Finance* (2011).

investors with equity in young companies. Transactions on NASDAQ Private Markets reached \$1.6 billion in 2015. Similar private initiatives have been launched in Europe, but many have failed to prosper.

One recent initiative is the Euronext Expert Market: public auctions take place once a week for shares, bonds and other fixed income instruments. Euronext's Expert Market saw the first secondary market trading in crowdfunded securities in Europe in March 2016.

Challenge 8. There is a lack of connection between the private market and public market investors

At a market level one significant difference between an IPO and an M&A transaction is there is an asymmetry of information as the seller, including current private market investors such as venture capital investors, knows more about the asset than the buyer.

At an asset management level there is a clear separation between private market teams and public equities teams.

In Europe there is also a greater openness to investors selling down their position at IPO for liquidity⁴⁹. While this does cre-

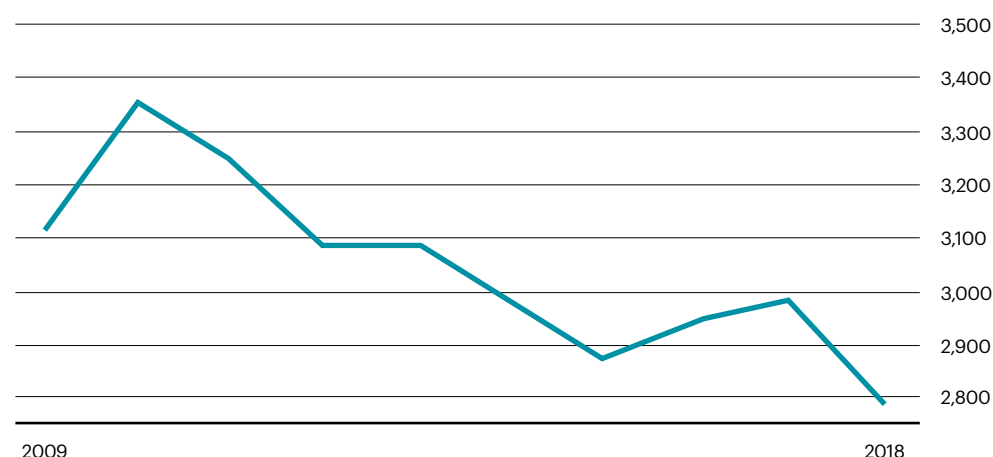
ate some secondary liquidity it also means there is often a lack of shareholders post listing, in comparison to the US, which understand the companies' growth journey and can act as a reference shareholder or anchor investor.

While there are a number of specialist public market tech investor funds and investment vehicles, these are often relatively small and few in number. There are also crossover funds which invest in both public and private companies, however the majority of these do not pursue a specific technology strategy. Of the ten most active crossover tech investors (by number of investments) only one is located in the European Union⁵⁰.

Challenge 9. There is a lack of equity research coverage for listed tech SME

The lack of quality equity analyst coverage for listed SMEs in general is a long-standing challenge as illustrated in Figure 15, which may have been exacerbated by the "unbundling rules" in MIFID II. The provision of research both pre and post IPO has been a market challenge, although the "paid for" research market (by the listed companies themselves) is evolving. Unless companies achieve a sufficient scale, they are unlikely to attract significant analyst attention.

Figure 15. Total Number of Analyst Ratings on Stoxx Europe Small 100



Source: Bloomberg Data (2019).

49. Atomico (2019).

50. CBInsights (2016).

5. Methodology

This study was carried out to answer the question of how to improve access to European stock exchanges by high-growth tech companies. To achieve this objective, a structured research plan was developed (Fig. 16). The empirical study concept triangulates elements of both quantitative and qualitative research. The methodology used best practices developed by the project partners considering their expertise as well as items taken from academic journals and studies of excellence. In particular, the data and information collection methods utilized were:

- Desk research: a review of relevant documentation and academic research relating to global and European IPO trends
- Interviews: phone-based structured interviews were conducted with 36 selected market experts⁵¹
- Online questionnaire-based survey: data was collected from the project partners via an online survey developed by the project partners.
- Focus groups: conference call with expert with the purpose of validating the collected data

Literature review and stakeholder interviews

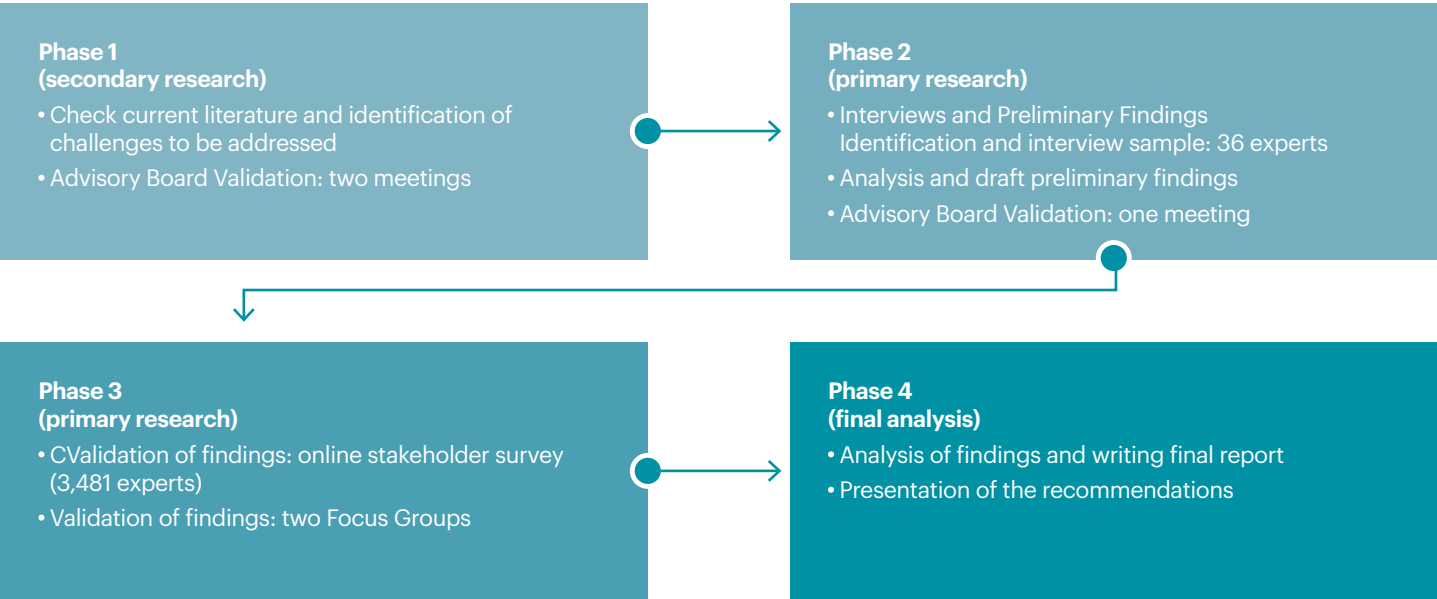
The nine challenges explored were identified following a three-stage process.

1. An initial deep literature review was conducted, exploring the gaps in the current research and pointing out the main issues identified by academics regarding how to improve access to European stock exchanges by high-growth tech companies⁵². The potential challenges were completed following the Project Advisory Board observations as a result of the first meeting.
2. Additional research and analysis of recent institutional reports confirmed the relevance of the challenges identified.
3. The challenges were finalized and validated by the Project Advisory Board during the second meeting. The first research phase generated a list of nine challenges based on which both the interviews and the online survey were developed.

Between March and May 2019, a total of 36 structured interviews were conducted. The experts were all located in Europe and covered the following stakeholder groups⁵³:

- Tech company owners and founders (public and private)
- Private and public market tech investors
- National promotional banks
- Investment banks and brokers
- European stock exchange operators

Figure 16. TechCapMarkets Project, Research and Methodological Plan



Source. Prepared by the project partners.

51. The selection was done by stakeholder category, geographical representation, senior profile with track trend. The experts were contacts provided by the project partners' databases and networks.

52. Full content on the literature review was provided in the D3.1: Report with sub-themes to exploit, approved by the European Commission.

53. Further categories such as academics and policy makers were excluded from the sample as the prior literature review broadly included findings from academic papers and institutional reports.

The interview questionnaire and protocol were designed by the project partners in line with recognized academic best practices with input from Project Advisory Board and prior agreement with the European Commission. The questionnaire was divided in three main sections in which the interviewed answered detailed questions about the challenges identified, regulatory initiatives and financial instruments. All the interviewed received copy of the questionnaire prior the interview.

Once the interviews were recorded and transcribed, an analysis was performed in several stages. Three investigators independently reviewed all responses for clarity, completeness and analysis. The interview method allowed the project partners to gain a deeper understanding of meaningful themes, practices and perspective of market experts beyond the literature review conducted.

To maintain the quality of results, the following actions were put into place:

- All the interviewed were selected in line with the approved criteria (experience, geographical coverage). Despite the specific criteria considered for their selection, the interviewers excluded or gave limited relevance to any answer that appeared speculative and not justified by personal experience or evidence.
- The interviews were structured. The questions were sent ahead allowing the interviewed to limit ambiguities and doubts in its interpretation. Moreover, each interviewee was informed about the possibility to skip any questions that they considered not directly related to his/her experience.
- All the individual considerations and interpretations were discussed in order to evaluate the relevance of the answers in respect to the overall aims of the project.

Stakeholder Survey and Focus Groups

To validate the preliminary recommendations and obtain additional input, the project partners designed and disseminated an online stakeholder survey between June and July 2019. The design of an ad hoc online questionnaire and its dissemination were managed by IESE Business School in line with its established practice.

The questionnaire was composed of 24 open and closed questions and consisted of a first page where a general introduction to both project and survey, a page about the expert's background, six more pages with qualitative and quantitative questions, two pages for general comments and a last page with specific questions on Regulatory Initiatives and EU Financial Instruments⁵⁴.

The surveys were hosted on a private server so that participants could remotely have access from any kind of electronic device.

The questionnaires were sent to a sample of 3,481 experts (4.6% respondent rate), that mirrored the stakeholder category and geographical coverage considered for the interviews. The contacts were filtered in the project partners' databases. Assuming that the participants matched the criteria described, the project partners agreed that the expertise of the respondents guarantee the quality of results.

Figure 17. Overview of survey's structure and criteria

Target group	Method
Company owners/issuers, private market investors, public market investors, national promotional banks operators, advisers, stock exchange operators European countries + Pan-European Institutions	Mixed methodology (qualitative-quantitative questions) 24 questions (optional open questions) Time estimated: 10-15 minutes

Source. Prepared by the project partners.

After the stakeholder survey was closed, an analysis was performed in several stages. The analysis of responses to the close-ended questions were calculated directly through the software. Responses to open-ended questions were summarized narratively. A categorical data analysis was applied to the questions providing quantitative answers. This method allowed the project partners to quickly identify the profile of the respondents and assess the level of consensus or agreement between the respondents. A narrative analysis and interpretation were applied to the responses to the open questions.

The project partners acknowledge that, given the total of experts contacted, a larger sample may increase the validity of content. However, the quality of results is guaranteed by the methodology used for the sample selection. The authors organized two focus groups in order to validate the expert opinions, obtain additional content and balance the stakeholder survey results. A first call included the participation of four listed tech CEOs, while a second involved four stock exchange operators. The focus groups enabled the project partners to gain a larger amount of information in a shorter period compared to conducting more interviews. As for the interviews and stakeholder survey, the contacts were provided by the project partners and selected according to their experience and geographical area. Each member of the focus group received a project overview document and a draft of the preliminary recommendations.

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54. Full content on the questionnaire and results were provided in the D3.2 Stakeholder Survey Results, approved by the European Commission.

6. Appendices

Appendix 1. TechCapMarkets Advisory Board

The members of the Project Advisory Board were convened to:

- Act as strategic counsel to project partners
- Review challenges and issues developed to be tested in market consultations
- Review and provide input into common themes/questions to be addressed by all EWGs

The Project Advisory Board met three times during the course of the project, with each member taking part in an individual capacity independent of their company.



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Appendix 2: Background of Interview Respondents

Figure 18. Interview respondents by category (%)

Stakeholder Group	%
Company owners/issuers	
Innovative SME (Private)	
Innovative SME (Public)	27.8%
Former Innovative SME (Public)	
Private market investors	
Venture Capital	
Growth Equity	
Venture Debt	22.2%
Fund Investor	
Cross-Over Fund	
Public markets investors	
Asset Management	8.3%
Retail Investor	
National Promotional Banks	5.6%
Advisers	
Investment Bank	
Law Firm	19.4%
Research Provider	
Stock Exchanges	16.7%

Source: Prepared by the project partners.

Appendix 3: Background of Survey Respondents

Figure 19. Survey respondents by category (%)

Stakeholder Group	%
Company owners/issuers	
Innovative SME (Private)	
Innovative SME (Public)	35.62%
Former Innovative SME (Public)	
Private market investors	
Venture Capital	
Growth Equity	
Venture Debt	28.77%
Fund Investor	
Cross-Over Fund	
Public markets investors	
Asset Management	16.44%
Retail Investor	
National Promotional Banks	6.85%
Advisers	
Investment Bank	
Law Firm	8.22%
Research Provider	
Stock Exchanges	4.10%

Source: Prepared by the project partners.

Glossary

Add-On Offering	Add-ons are additional shares issued by an already listed company.
Allocation	Allocation is the amount of stock in an initial public offering (IPO) that is sold to a customer.
Alternative Financing	Alternative finance represents any additional source of funds, channels and instruments that stretch beyond the traditional stock, bonds, and cash.
Alternative Market	Alternative markets are designed for specific type of companies. They are usually part of a bigger stock exchange, such as the Alternative Investment Market – AIM. Part of the London Stock Exchange, the AIM was tailored to fulfil the needs of smaller companies.
Amendment	The amendment is an additional registration document that is filed by the issuer with the Securities and Exchange Commission (SEC) that has additional information regarding the proposed offering for that company.
Benefit pension scheme	A defined benefit pension scheme is one where the amount an individual is paid is based on how many years he/she worked and the salary earned.
Best Efforts	The expression Best efforts refers to a contractual term. It is an arrangement whereby investment bankers acting as agents agree to do their best to sell an issue to the public; instead of buying the securities outright, these agents have an option to buy and an authority to sell the securities.
Blockchain	Blockchain could be defined as a ledger of records organized in ‘blocks’ that are linked together by cryptographic validation. In standard business transactions, which take place every second of every day such as orders, payments and account tracking, each participant has his or her own ledger — and, thus, a version of the truth that may differ from other participants.
Block trade	Block trade refers to the sale or purchase of a large number of securities, generally larger than 10,000 shares.
Book	Book is the list of all indications of interest for a new issue offering put together by the lead underwriter. The Book building process entitles the determination of the price at which an IPO will be offered through generating and recording investor demand for shares before arriving at an issue price.
Calendar	Calendar refers to upcoming IPOs and secondary offerings. This refers to upcoming IPOs and secondary offerings; Fidelity maintains equity, bond, and municipal calendars.
Cancellation	Cancellation could happen when an IPO or secondary issue has difficulty getting investor interest to raise the desired capital. The company issuing the shares may cancel the offering in favour for some other form of financing.
Co-Manager	Co-managers are underwriters for the initial public and secondary offerings who are not the lead manager controlling the offering. The names of these underwriters appear on the bottom of the front page of the prospectus, with the most important manager appearing on the top left, and the co-managers arrayed from left to right in order of importance.
Common Stock	A common stock is a unit of ownership in a public company for which the holders can typically vote on matters pertaining to the company and receive dividends from the company's growth. The common stockholders are the last to receive assets if the company liquidates.
Cooling Off Period	Cooling off period refers to a time period, usually about 20 days, between the filing of the registration statement with the Securities and Exchange Commission (SEC) and the offer of those securities to the public. During the cooling off period, the syndicate and selling group members distribute tombstone notifications announcing the new issue, send preliminary prospectuses to qualified investors for review, and take indications of interest from customers.
Covered Non-Public Company	Any non-public company satisfying the following criteria: income of at least \$1 million in the last fiscal year or in two of the last three fiscal years and shareholders' equity of at least \$15 million; shareholders' equity of at least \$30 million and a two-year operating history; or total assets and total revenue of at least \$75 million in the latest fiscal year or in two of the last three fiscal years.
Cross-over fund	Cross-over funds are mutual funds that invest in both publicly traded and privately held companies.
Defined contribution scheme	Defined contribution (DC) schemes are occupational pension schemes where individual's contributions and his/her employer's contributions are both invested, and the proceeds used to buy a pension and/or other benefits at retirement. The value of the ultimate benefits payable from the DC scheme depends on the amount of contributions paid, the investment return achieved less any fees and charges, and the cost of buying the benefits.
Depository Receipt	A depository receipt (DR) is a negotiable financial instrument issued by a bank to represent a foreign company's publicly traded securities. The depository receipt trades on a local stock exchange. Depository receipts facilitate buying shares in foreign companies, because the shares do not have to leave the home country.
Due Diligence	Due Diligence is reasonable investigation conducted by the parties involved in preparing a disclosure document to form a basis for believing that the statements contained therein are true and that no material facts are omitted.
Early Stage Fund	Early stage funds are VC funds focused on investing in companies in the early stages of their lives.
Effective Date	Effective date refers to the day a newly registered security can be offered for sale.
Equity Research	Equity research entitles the analysis of the ratio and company's financials, explore scenarios with the objective of making buy/sell stock investment recommendation.

Final Prospectus	prospectus that is printed after the deal has been made effective and can be offered for sale; it contains the information not available in preliminary prospectus, such as number of shares issued and the offering price.
Firm Commitment	Firm Commitment refers to an underwriter's agreement whereby investment bankers make outright purchases from the issuer of securities to be offered to the public.
Flipper	A flipper describes an investor who has acquired shares of an IPO in order to sell it for a quick profit.
Float	Float refers to the number of a company's shares which are available for trading.
Go Public	Going public is the process by which a privately held company first offers shares of stock to the public. This is done via an initial public offering (IPO).
Green Shoe	Green shoe is part of the underwriting agreement which, in the event the offering is oversubscribed, allows the issuer to authorize additional shares (typically 15%) to be distributed by the syndicate. It can be also called the overallotment option.
Gross Spread	Gross spread is the difference between the offering price and the net proceeds given to the company. The difference is made up of various fees charged to the issuer, including the selling concession, manager's fees, underwriting fees, and reallowance.
Holding Company	A holding company owns enough shares of another company to secure voting control.
Hot Issue	Hot issue is an under-priced issue. It is an IPO that trades at a significantly higher price on the secondary market than its initial offering price—this usually occurs when demand of the issue far exceeds the supply; the Securities and Exchange Commission (SEC) defines an issue as hot when it trades 5% higher than its offering price in the secondary market.
Insiders	Insiders are individuals such as management, directors, and significant stockholders who are privy to information about the operations of a company that is not known to the general public. Insiders are subject to various restrictions and or limitations regarding equity stock offerings.
ICO	Initial Coin Offering (ICO) is a type of crowdfunding using cryptocurrencies which can be a source of crowdfunding for start-up companies.
IPO	Initial public offering (IPO) refers to the process of offering shares of a private corporation to the public in a new stock issuance.
Issue Price	Issue Price refers to the price at which a new security will be distributed to the public prior to the new issue trading on the secondary market. It commonly referred to as offering price.
Lead Underwriter	A lead underwriter is in charge of organizing the syndicate, distributing member participation shares, and making stabilizing transactions. The lead underwriter's name appears on the left side of a prospectus cover.
Liability-driven investing	Liability-driven investing (LDI) is defined as a refocusing of the management of the plan's pension assets away from an asset only approach to an approach that considers both the assets and the specific liabilities of the pension plan. The financial situation of the plan's sponsor is considered also.
Lockup Period	Lockup period refers to the time period after an IPO when insiders at the newly public company are restricted by the lead underwriter from selling their shares in the secondary market.
Market Capitalization	The market capitalization is the method of calculating the value of a company that is equal to the number of shares outstanding multiplied by the price of each share of the stock.
National promotional Banks	National promotional banks are legal institutions carrying out financial, development and promotional activities on a professional basis which are given a mandate by a Member State at central, regional or local level. Their purpose is to facilitate access to finance for start-ups and SMEs that face obstacles to raising financing from the market.
New Issue	New issue defines a security publicly offered for sale for the first time.
Offering Date	The offering date is the first day a security is publicly offered for sale.
Offering Price	The offering price refers to the price for which a new security issue will be sold to the public. It is also known as issue price.
Offering Range	The offering range is the price range at which the company expects to sell its stock in a public offering.
Outstanding Shares	Outstanding shares are a number of shares that have been issued by the company that are held by the insiders and the general investing public.
Overallotment	The overallotment refers to a part of the underwriting agreement which, in the event the offering is oversubscribed, allows the issuer to authorize additional shares (typically 15%) to be distributed by the syndicate. It is called the green shoe also.
Oversubscribed	Oversubscribed is a situation in which investors have expressed an interest in buying more shares of a new security than will be available. Under this condition, the price of the security has a greater likelihood of opening higher in the secondary market than is the offering price.
Pension funds	A pension fund that is regulated under private or public sector law.
Pipeline	A pipeline is a supply of new issues that are tentatively scheduled to come to market. It is called visible supply also.

Postponement	A postponement refers to when an offering that had a tentative “pricing” date is pushed back in timing to a later date. The postponement may occur when market conditions threaten the viability of the offering. Extremely adverse market conditions could lead to cancellation of the offering.
Preliminary Prospectus	The preliminary prospectus is an offering document printed by the issuer containing a description of the business, discussion of strategy, presentation of historical financial statements, explanation of recent financial results, management and their backgrounds and ownership; the preliminary prospectus has red lettering down the left-hand side of the front cover and is sometimes called the red herring.
Premium	If the opening price of an IPO in the secondary market is higher than its offering price, the difference would be the premium.
Price Range	Price range at which the company expects to sell its stock in a public offering. It could be also called offering range.
Private Placement	The private placement is an investment in a company by a group of private investors—the offering is limited both by the number of shares or units and the number of investors; recipients receive restricted stock from the issuer.
Privately Held	A privately held defines a company whose shares have never been offered publicly for sale.
Quiet Period	The quiet period is the time period in which companies are forbidden by the Securities and Exchange Commission (SEC) to promote or hype the offering. It starts the day a company files a registration statement and lasts up to 25 days after a stock starts trading.
Red Herring	Red herring is another name for the preliminary prospectus. The offering document printed by the issuer containing a description of the business, discussion of strategy, presentation of historical financial statements, explanation of recent financial results, management and their backgrounds, and ownership.
Registration	Registration defines the procedure by which a company who would like to go public files a registration statement with the Securities and Exchange Commission (SEC) which contains a description of the company, its management, and its financials. The material is reviewed by the SEC for its completeness, amount of disclosure, and its presentation of accounting information before the SEC declares the registration effective, which allows it to be traded to the public.
Retail investor	Retail investors are small individual investors who commit capital for their personal account rather than on behalf of another company.
Risk Factors	Risk factors are considerations that are disclosed in the preliminary prospectus that might materially affect the company’s financials, stock price, or reputation in a negative way.
Road Show	Also called the “dog and pony show,” the road show refers to a tour taken by a company preparing for an IPO in order to attract interest in its securities. It is attended by potential buyers, including institutional investors, analysts, and money managers by invitation only. Members of the media are forbidden to attend.
Scale-up company	OECD defined a ‘scale up business’ as a company which has seen average annualised growth of at least 20% over three years with 10 or more employees at the start of the period. A scale-up company could be described as the further step in the process of growing of a start-up, then. In a scaleup, the foundation has been set for what the company will become, and instead the company’s priorities move towards trying to figure out how they’re going to get there. The growth and expansion of the company begins to pick-up speed across a variety of metrics including market access, revenue, and number of employees.
Sec	Securities and Exchange Commission, a federal government agency that regulates and supervises the securities industry. The commission administers federal laws, formulates and enforces rules to protect against malpractice, and seeks to ensure that companies provide full disclosure to investors.
Secondary Offering	Secondary offering entitles public sale of previously issued securities held by large investors, usually corporations or institutions.
Selling Concession	The selling concession is a commission paid to brokers to help distribute a public security offering.
Selling Group	A selling group is a of broker/dealers that helps an underwriting syndicate distribute securities of a public offering.
Settlement Date	The settlement date defines the date on which an executed trade of securities must be paid for.
Shareholder	A shareholder is any person who owns shares of a company’s stock.
Shelf Filing	Defined also as shelf registration, shelf filing is a type of public offering. It is a Securities and Exchange Commission rule which allows a company to register a public offering with the SEC which will be made available for sale at some unspecified future date.
Sic Code	Standard Industrial Classification is a four-digit code that identifies the sector specific industry that a company is a member of.
Spinoff	Spin off is a conversion of a subsidiary or division of an existing company into a stand-alone entity.
SME	<ul style="list-style-type: none"> • ‘The category of micro, small and medium-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million.’ (European Commission) • Small and medium-sized enterprises (SMEs) are non-subsidiary, independent firms which employ fewer than a given number of employees. This number varies across countries. The most frequent upper limit designating an SME is 250 employees, as in the European Union. However, some countries set the limit at 200 employees, while the United States considers SMEs to include firms with fewer than 500 employees. (OECD)

SME Growth Market	'SME growth market' is a concept introduced by the MiFID II Directive and means a Multilateral trading facility (MTF) that is registered as an SME growth market in accordance with Article 35 of the said Directive.
Syndicate	A syndicate is a group of underwriters who assist the lead manager or syndicate manager in distributing a new securities issue.
Syndicate Manager	The term syndicate manager also referred to as the lead underwriter or managing underwriter who, among other things, is in charge of organizing the syndicate and distributing member participation shares to other members of the syndicate.
Start-Up	A term start-up defines a company founded by an average of two entrepreneurs and at its first stage of operations. By its nature, it has initial funding from the personal capital of the same entrepreneurs.
Stock Exchange	A Stock Exchange is an organised marketplace where securities trading is conducted by professional stock-brokers.
Tech Company	A Tech company is a company that heavily relies its primary revenue source on providing digital technical services, products, platforms and hardware.
Tombstone	A tombstone is advertisement placed in print media that serves as an official advisory of a securities offering having been completed for a company; it lists all the managers and co-managers who participated in the event.
Tranche	A tranche is a French word used to describe segments of the IPO being sold in different countries. A multi-tranche distribution is commonly used for large U.S. and foreign IPOs where there is demand both in the U.S. and in their home country.
Treasury Stock	Treasury stock, or shares, are the portion of shares that a company keeps in its own treasury.
Underwriter	An underwriter is a brokerage firm that raises money for companies using public equity and debt markets. Underwriters are financial intermediaries that buy stock or bonds from an issuer and then sell these securities to the public, a process which is highly regulated by the SEC and the National Association of Securities Dealers.
Use of Proceeds	The use of proceeds entitles the decision the company takes about how to use the monies it generated from an IPO or secondary offering.
Public company	A public company is company that has held an IPO and whose shares are traded on a stock exchange. By their nature, the public companies are subject to periodic financing controls and other obligations under the federal securities laws. The value of the company is determinate by the daily trading in the market.
Private company	A private company is a company held under a private ownership. Differently from the public companies, the private ones do not trade on public exchanges. However, they can eventually go public to help raise capital to finance growth.
Venture Capital	Venture capital (VC) are a source of money for start-up companies, typically raised by venture capital firms who invest in private companies that need capital to develop and market their products; in return for this investment, the venture capitalists generally receive significant ownership of the company and seats on the board.
Venture Fund	Venture funds are funds focused on both early and later stage investments.
Volatility	Volatility is the characteristic of a security which rises or falls sharply in price within a short time period.
Voting right shares	Voting right shares that allow shareholders to vote on matters of corporate policy such as the election of the board of directors.
Withdrawal	Withdrawal defines the decision of a company to not continue with its proposed offering of securities.

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