A new VC agenda for Germany and Europe

Why we need to mobilize private growth capital and how to do it

BVK IE.F SCHALAST LAW | TAX LAKE STAR

Our thanks go to the interviewees who made this study possible

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Preface

Back in 2018, our study *Venture Capital – Fueling Innovation and Economic Growth* explored the venture capital ecosystem in Germany and analyzed the obstacles that stand in the way of VC investment. Since then, there have been significant improvements in the German venture capital market and, hence, in opportunities for German startups and fast-growing young companies to source funding. However, the financing gap between Europe and the USA and China has not narrowed. Moreover, much of the growth we do see in Germany and Europe is attributable to considerably greater commitments by US and other international investors.

Where does this leave us? Germany still has a lot of work to do to safeguard its economic and technological position – as well as the economic sovereignty and prosperity that are inextricably intertwined with this position. Startups are the SMEs of tomorrow; and young tech companies are a pivotal driver of growth, a shaper of transformation processes. Yet much of their potential still remains untapped for the simple reason that – in Europe in general and Germany in particular – there is still too little venture capital, despite recent positive developments. The capital resources are there in the form of European and German pension schemes and private assets: The problem is that not enough of these resources are directed into the most economically effective and profitable channels.

The German government's strategy includes significant measures to promote the startup and venture capital landscape in Germany and Europe. Plans for a Future Financing Act and the simplification of immigration for skilled workers are two legislative initiatives that address key weaknesses in this ecosystem. What is crucial, however, is for the announced measures to be implemented swiftly and comprehensively.

The German Private Equity and Venture Capital Association (BVK), the Internet Economy Foundation (IE.F), Lakestar and the Schalast Tax | Law practice have now once again shone a light on the German venture capital market. Besides surveying the current situation, our study also analyzes obstacles to growth. Additionally, it identifies five specific recommendations for political action with a view to mobilizing more venture capital in Germany and Europe. These recommendations can be instrumental in crafting a German VC hub and transforming Europe into a global powerhouse. But for that to happen, it will take intensive dialogue and the government and market actors engaging with each other as equals. We trust that the study you are reading will play a part in this process, and we cordially invite you to take an active role!

Ulrike Hinrichs
Executive Member of the BVK Board

Dr. Friedbert Pflüger
Chairman of the Internet Economy Foundation

A VC AGENDA FOR GERMANY

Five areas where action is needed to make Germany a champion

1. Knowledge transfer

We must get decision makers and the wider population to understand the benefits of growth capital

2. Asset mobilization

We must stimulate capital and allow it to flow to the right places

3. Tearing down obstacles

We must design a legal framework that is internationally competitive

4. Good ideas, good business

We need better support for spin-offs

5. Greater diversity

We must support the involvement of women in startups and venture capital funds

Contents

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THE RATIONALE

WHY GROWTH CAPITAL IS MORE IMPORTANT NOW THAN EVER

A willingness to take risks can pay off, especially at a time of crisis. Witness the likes of Airbnb, Uber and WhatsApp, for example. All three were founded with the aid of venture capital[1] during or shortly after the 2008/2009 financial crisis in the USA. In the aftermath – supported by further venture capital – they all grew to become global corporations. Germany had similar experiences in the 1950s, when bold investments and an enterprising spirit prepared the ground for the 'economic miracle'. It remains to be seen in the years ahead whether a new generation of fast-growing European companies can follow in their footsteps.

Be that as it may, Europe's VC market today finds itself on the cusp of the biggest test it has faced to date. Following the upturn in interest rates and economic uncertainties surrounding the Russian attack on Ukraine, the investment climate has cooled noticeably.[2] For many high-growth companies, it has thus become much harder to source capital. Faced with the current crisis, some of the US venture capital funds that are so important to larger financing rounds in particular (upward of 50 million euros) have pulled out of the European market, and things may well stay that way. Their retreat comes at a bad time: Europe as a whole, and especially Germany, needs not less but substantially more venture capital investments to shore up economic prosperity.

In all honesty, the gap in financing relative to the USA has not narrowed significantly in recent years. On closer inspection, Europe's race to catch up is decidedly patchy. Measured in terms of average deal size, Europe reaches US dimensions only in the angel/seed phase: In all subsequent phases, the gulf between them is vast. A wide variety of investors pumped venture capital worth a total of roughly 77 billion euros into Europe last year – about 111 billion euros less than the 188 billion euros that went to the USA.[3] To put that another way: Around two and a half times as much venture capital was made available in the USA as in Europe. On a per capita basis, the gap is even wider. Moreover, the Inflation Reduction Act that came into force in August 2022 grants massive subsidies to value creation on the ground in the USA, making America even more attractive to startups[4] and potentially making the financing gap even broader.

The Achilles' heel of the German startup scene, as ever, is the huge shortfall in what is known as late-stage financing (in the growth phase). On the Old Continent, high-growth European companies manage to source far less capital on average than international competitors. While US companies acquire a mean total of 13.7 million euros in later stage financing, their European counterparts have to make do with 5.8 million euros.[5]

Nor does Germany fare any better than its European neighbors. Here, investors supplied high-growth companies with 9.4 billion euros in 2022[6] – equivalent to 0.25% of German GDP in 2022. By comparison, the equivalent of 0.78% of US GDP was invested in the form of venture capital in the same year. The difference remains significant. A similar picture emerges in China, where promoting future sectors such as artificial intelligence, biotechnology and the chip industry has been enshrined in state policy.

In Germany, the need to act is becoming ever more urgent as the foreign trade surplus shrinks year after year.[7] In key industries such as automotive engineering, chemicals and the financial sector, German players have, over the past two decades, seen their value and importance drop sharply on a global level.[8] There is currently no way to predict which companies will close Europe's gap in the future and usher in the prosperity of tomorrow. A glance across the Atlantic does, however, suggest how the process might unfold: Five of the seven most valuable US firms today are tech companies that are less than 50 years old.

At least there is no lack of assets and capital for potential investment. Even just the capital stock of Europe's 1,000 largest pension funds increased by 600 billion euros to around 9.7 trillion euros in 2021.[9] A mere fraction of this privately owned wealth would be enough to close the venture capital gap relative to the USA. Similar thought experiments can be played out for Germany, where private households set aside 316 billion euros in fresh savings in 2021 and held total financial assets of 7.5 trillion euros in mid-2022.[10] It is thus fair to say that anyone who avoids the VC market a priori in their investment decisions is depriving themselves of an attractive element of wealth creation in old age.

Against the backdrop outlined above, this study takes stock of the German and European venture capital market as it stands today: How has the VC industry developed here compared to pioneering sectors in other countries? Where has ground been made up? Where do dependencies persist? One central insight is that the list of obstacles to the growth of startup investments has not grown shorter in recent years. At the same time, the dominance of foreign investors has increased markedly.

The study therefore submits proposals on how a dynamic venture capital market with a weighty international presence can be developed in Germany and Europe so that the startup entrepreneurs of tomorrow can be supported out of home-grown resources – and so that the whole economy can benefit from gains in prosperity.

The core statements made in this study – along with all quotations – are based on the numerous interviews we conducted with the managers of VC funds, investors and other stakeholders in the venture capital market in November and December 2022. In preparing the study, we also analyzed extensive data sets and study materials.

HENDRIK BRANDIS

»Europe lacks growth capital for direct VC investment. Yet there is no shortage of money in Germany and Europe. Compared to the amounts available for other expenditures, investments in the VC market are almost pathetic.«

KLAUS HOMMELS

»The attractiveness of growth capital is not an article of faith. It is not an opinion. The figures are absolutely robust.«

INGO POTTHOF

»Germany has made tremendous progress in venture capital in recent years. But the gap between Germany and the USA still remains.«

REGINA HODITS

»As external conditions change, we currently run the risk that the Americans will invest more and more money in their domestic market, thus withdrawing capital from the European markets. I would like to see European investors closing the gap.«

ZOE FABIAN

»Right now we are seeing a healthy shake-out in the tech funding and startup ecosystem. Investors with short-term horizons are pulling capital out of the market, and there is generally a stronger focus on efficiency. Startup teams and the products and technologies they develop and bring to market have lost none of their strength. So, this is a portentous time in which innovations are being advanced.«

2
A GUARANTEE OF FUTURE SUCCESS
THE IMPORTANCE OF VENTURE CAPITAL FOR GERMANY AND EUROPE

Oliver Samwer, founder of numerous successful startups as well as the private equity firm Rocket Internet, put the secret of a smooth-running company in a nutshell a few years ago: “For a business, you need an idea, a founder and capital. You can’t replace a lack of capital with a better idea.”[11] That has not changed: Without sufficient capital resources, a company cannot survive and thrive, however promising its product ideas may be and however motivated its founders are.

There is no shortage of good ideas in Germany, where 2.0 patent applications per 1,000 inhabitants put the country well ahead of the USA (1.5) and China (1.0). Other European countries nevertheless lag behind Germany’s two biggest rivals. France manages just under 1.0 patents per 1,000 inhabitants, the UK 0.8 and Italy 0.6.[12] Despite the coronavirus crisis, the startup scene was very dynamic in 2020 and 2021: 3,010 startups were launched in Germany in 2020, a year-on-year increase of almost 19%. In 2021, the number of new startups rose to 3,348, a further gain of a good 11%.[13]

The biggest obstacle is the challenge of mobilizing venture capital. Data from the German *Startup Monitor* 2022 indicates that, in that year, funding shortfalls were the biggest hindrance to business for 43.8% of German startups. No other factor was cited more frequently in 2022. The lack of skilled labor (35.3%), disrupted supply chains (28.4%), inflation (27.8%), flat demand/low orders (24.6%), the Ukraine crisis (23.7%) and the coronavirus pandemic (22.3%) all ranked well behind the lack of capital resources.[14]

Why is it so important to make sufficient capital available to startups and energetic company founders throughout the entire growth phase? We see six reasons that have an existential impact on the German and European economies and, by extension, on the people who live in these economies. →A

1. Driver of transformation

We are witnessing an unprecedented transformation toward a sustainable and digital economy. In international competition, the front-runners will be the ones that quickly and successfully transform their economies. Europe has a lot to offer in this process: excellently trained specialists, a very good command of sustainable economic principles in both the corporate community and academia, consumers who are open to the concept of sustainability, ambitious projects at the national and EU levels, and plenty of funds that can be made available to realize these plans.[15] There is no question that the forthcoming and far-reaching transformation can succeed only on the back of vibrant innovation and growth – the two essential strands of startup DNA. Armed with mostly digital business models, startups are a principal driver of digitalization in the economy and society. Furthermore, large numbers of European startups are applying themselves to sustainable solutions – witness the “1000+ profitable solutions to protect the environment” identified by the Solar Impulse Foundation. (The sustainability and marketability of these solutions is validated by independent experts.)[16] According to data from the World Fund, which specializes in climate technology, the 363 new climate tech startups in Europe in 2021 exceeded the corresponding number (243) in the USA.[17] In 2022, 46% of all startups in Germany classed their

A **Venture capital plays a crucial role in the European economy and its future prospects**

Six reasons why venture capital is so important for Europe

1 Driver of transformation	**4** Renewal of the SME landscape
2 Strengthening Europe against global competition	**5** Startups' extensive role in value chains
3 Broad spread of providers for innovative solutions	**6** Startups as an engine of employment

Source: Roland Berger

products and/or services as part of the green economy.[18] Given sufficient European venture capital, the aim now must be to leverage this vast potential and make these companies large and successful.

2. Strengthening Europe against global competition

On a global scale, Europe has to compete with the USA, China and an assortment of emerging economies. The USA is the technology leader in many critical areas of economic activity – above all in the digital economy (the cloud, smartphones, satellite communication, search engines, e-commerce, AI, etc.). But it is also home to the world's leading startup and venture capital scene. In the second half of 2022, the Inflation Reduction Act set in motion a subsidy law that gives precedence to domestic value creation and employment in forward-looking industries such as renewable energy, e-mobility and new kinds of production processes.[19] The new act puts Europe under pressure by making the USA even more attractive to startups. China's industry policy – underscored by head of state and party leader Xi Jinping at the 14th Conference of the Chinese Communist Party (CCP) in October 2022 – targets a leading position in key technologies, to which end the country is investing massively both at home and abroad. The digital titans of these two countries dominate the world's Internet economy.

Europe can continue to compete with the USA and China only if it succeeds in translating the vast store of knowledge it holds at universities, research institutions and in the corporate sector into marketable products and business models. And startups are indispensable if this is to happen. Startups inject new ideas. They act quickly, and their solutions and business models are often disruptive. Their founders are creative, have an entrepreneurial mindset and are highly motivated. Yet if they are to grow and enjoy success, startups need adequate capital. Moreover, since they are competing with the USA and China, it matters where the capital for European startups comes from. European nations and their citizens share the same values, and European sovereignty only remains intact if European startups are largely funded by European investors. The same goes for Germany: Europe's largest economy must set itself the goal of having a potent and well-resourced venture capital scene that stands up to international comparison.

3. Broad spread of providers for innovative solutions

Startups roll out innovative solutions for consumers and companies alike. In rivaling incumbents, they freshen up competition[20] – provided they are given the chance to scale up their business model and sell their solutions to large numbers of customers. As a result, not only do consumers and corporate customers choose from an ever wider portfolio, but prices remain low too. Broad swathes of the consumer landscape benefit from this situation, while companies that use the solutions sharpen their own competitive edge. The only catch is that these startups have to make it to market, which means that the flow of funds must not dry up before they do.

4. Renewal of the SME landscape

Small and medium-sized enterprises (SMEs) are the backbone of the European economy in general and the German economy in particular. Many SMEs have operated successfully for decades by pursuing a long-term strategy and continually adapting their business model. In the first decades after the Federal Republic of Germany came into being, bundles of money were pumped into building an SME landscape that became the bedrock of the country's economic prosperity. From 1950 through 1970, the amount channeled into SMEs and new companies was roughly 4% of GDP – most of it in the form of bank loans. Today, the figure is only 1%.[21] However, a flourishing SME landscape still needs external input: New companies have to join the fray and both cooperate and compete with established SMEs. Today's startups are tomorrow's SMEs. But they can only fulfill this role if they receive enough financing to grow into competitive companies that contribute to employment, prosperity and innovation. The measure of how well startups are becoming established is the number of 'unicorns', which are startups with a market valuation of more than a billion US dollars. And although Germany ended 2022 with 36 unicorns, the second-highest figure in Europe after the UK (57), the gap relative to China (244) and the USA (701) remains nothing short of immense.[22]

DANIJEL VIŠEVIĆ

»Startups are the seeds from which the industry of the next decade will grow. The soil quality is great. We mustn't forget to water them.«

HENDRIK BRANDIS

»The origin of the capital makes a difference. Whoever invests in ventures influences business decisions regarding strategy and about where to locate.«

INGO POTTHOF

»I'm not the slightest bit worried about the relevance of innovations growing out of the startup scene. The foundations are much stronger today than they used to be.«

KLAUS HOMMELS

»When it comes to VC funding, our European sovereignty is at stake. We can only stay sovereign if we regulate assertively and put a lot of European money into the growth phase in order to keep governance here.«

MARK SCHMITZ

»All too often, venture capital is only associated with the risk of loss. In actual fact there are excellent ways to diversify it and, thereby, to virtually eliminate the risk of blanket default if you manage your portfolio intelligently – and at the same time prospective returns remain attractive.«

5. Startups' extensive role in value chains

The possibility of investing in startups is of interest not only to wealthy private and institutional investors, but also to broad swathes of the population. There is no denying that attractive yields can be earned by investing in startups: The data is unequivocal. Anyone investing 100 euros in European venture capital ten years ago would have received an average annual return of 20.70 euros. A similar investment made five years ago would have yielded 30.70 euros per annum. By comparison, investments in the MSCI Europe Index would have delivered net annual yields of 5.10 euros (if invested ten years ago) or 1.60 euros (if invested five years ago).[23]

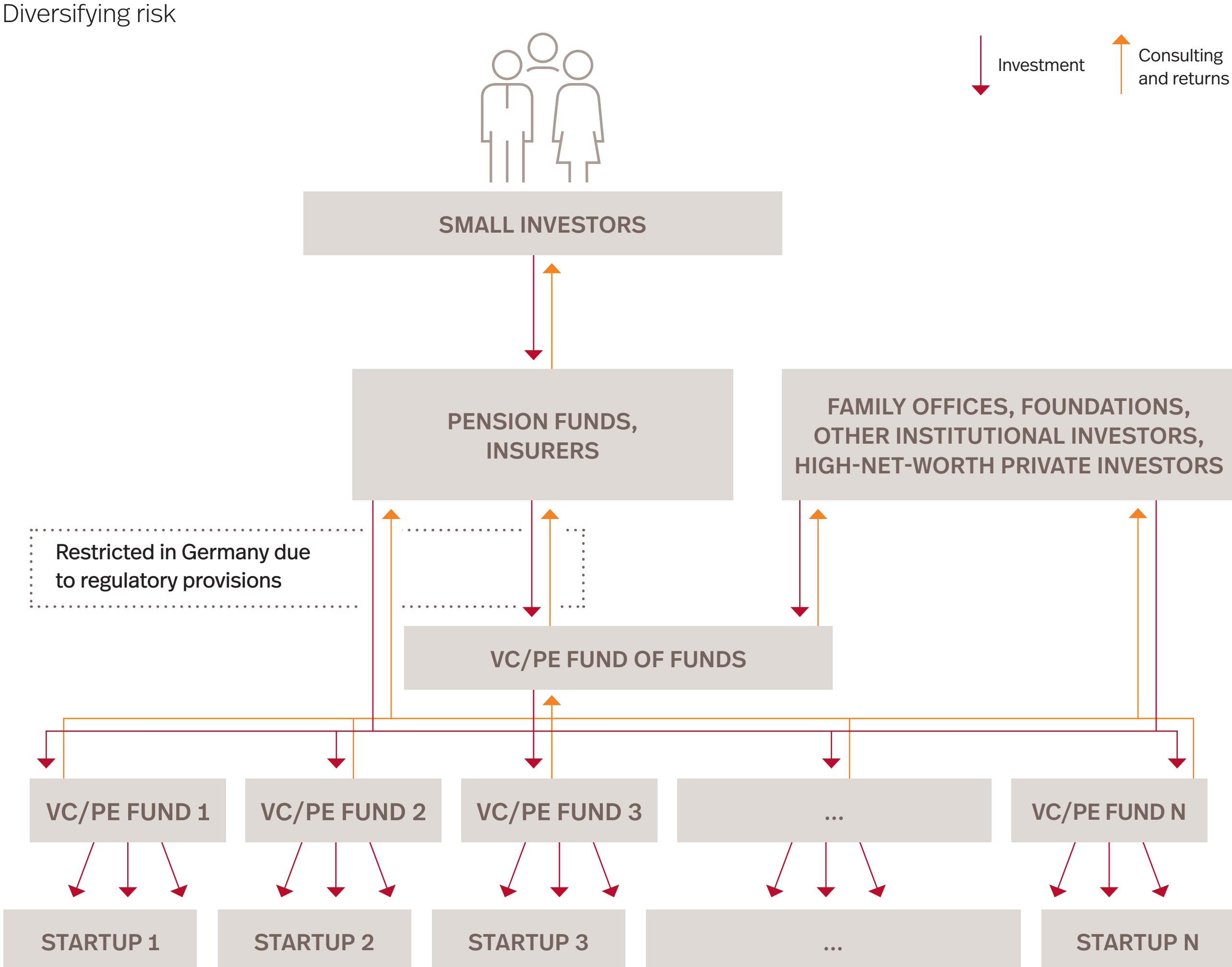
It is nevertheless frequently argued that investing in startups is too risky for the average citizen. However, this contention does not hold water where small investors put their money not directly into individual startups but – via professional institutional investors – in a highly diverse portfolio of such companies. While this is the case in the USA, regulatory constraints mean that it is possible in Germany only to a limited extent or not at all (see the section on "Too little institutional investment" in chapter 4). Small investors channel their money into pension funds and insurance policies, especially as a form of provident saving. Pension funds and insurers in turn invest primarily in venture capital and/or private equity funds of funds, where capital is sliced up across a large number of individual funds. Each individual fund then itself invests in a broad portfolio of startups. Such multi-level diversification spreads risk very widely, keeping the risk of losses low for investors. →B

In a study conducted by equation AG, an asset manager for private capital markets, a Monte Carlo simulation was used to determine what venture capital returns can be realized by investing in funds of funds as a function of the level of diversification.[24] →C A well-diversified fund of funds portfolio (little risk of default, high potential yields) will hold 12 to 15 funds or 350 to 500 portfolio companies if its focus is on early-stage investment (80% pre-seed and seed, 10% series A and B and 10% series C+), or 250 to 350 companies if it is a mixed portfolio (60% pre-seed and seed, 30% series A and B and 10% series C+). A smaller number of funds would lead to a disproportionate increase in risk, whereas larger numbers erode potential returns but reduce risk only marginally.

Analysis by venture capital fund Lakestar shows that adding alternative asset classes such as venture capital, buyouts,[25] real estate and natural resources (i.e. anything other than stocks and fixed-interest securities) to an investment portfolio not only boosts yields but also curbs volatility.[26] One main reason is that alternative investments are traded off the floor and are therefore less tightly interconnected than, say, investments in stock indices. Good examples of investment strategies that focus more on alternative asset classes, especially venture capital, include the major public and private US pension funds and the endowment funds of top US universities. Yale University's Endowment altered its investment strategy when David Swensen took over as investment manager in 1985. Swensen created what became known as the 'endowment model' by shifting its focus from stocks to alternative investments.[27] Over the 35 years that followed, he successfully multiplied

B **How investing in funds of funds and investment funds spreads risk**

Diversifying risk



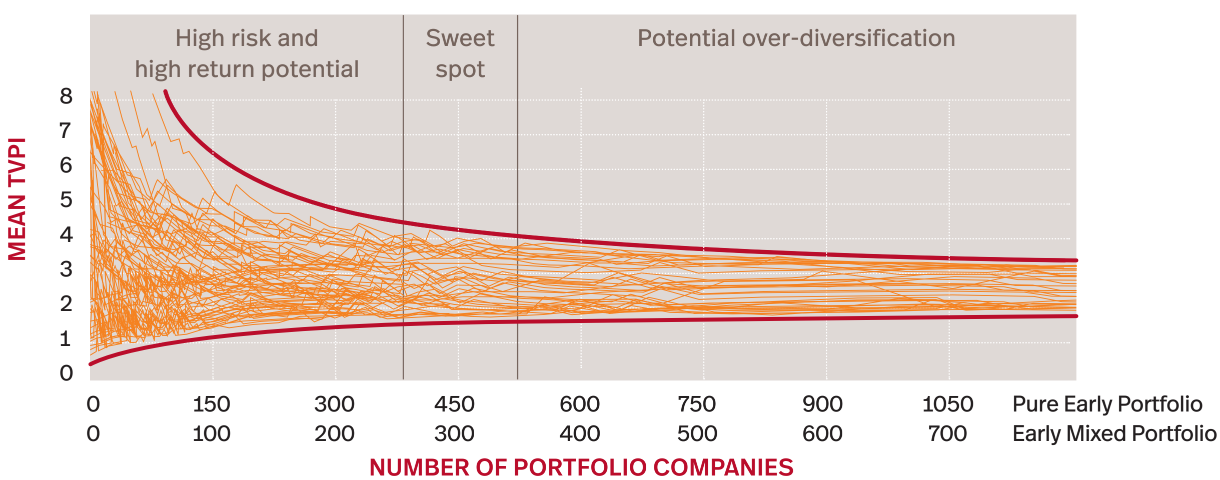
Source: Roland Berger

the endowment's assets from 1.3 billion US dollars to 30 billion US dollars. The annual rate of return was 10%. In the period from 1999 through 2021, the value of the Yale Endowment increased sixfold, significantly outperforming stock indices such as the EURO STOXX 50, MSCI World and S&P 500, whose values rose by factors of only 1.5, 3.5 and 5.0 respectively. Other US universities followed Yale's model with similar success.[28]

As a median value, institutional investors in the USA channel 6.4% of their funds into private equity (2019). The figure for China is even higher, at 10.0%, against just 3.6% in Western Europe.[29] Broad-based participation in corporate value creation is very pronounced in the USA and has put public pension funds in charge of substantial assets. To take one example: CalPERS (the California Public Employees' Retirement System) represents the pension affairs of more than two million people[30] and managed investments worth 439 billion US dollars in 2022.[31] 44.4% of its funds are invested in stocks, 26.7% in fixed-interest securities, 15.8% in real estate, 12.0% in private equity and 1.1% in other asset

C A well-diversified VC portfolio boasts an attractive opportunity/risk profile

The TVPI depends on the number of portfolio companies[1]



[1] Lines within the envelope curves are for illustration purposes only. TVPI = total value to paid-in capital. The TVPI denotes the total value of a fund contribution relative to called fund capital. The TVPI is calculated from realized proceeds at fund-of-funds level and the shares that remain in the target fund.

Source: equation

classes. Investments made 30 years ago yielded annual returns of 7.7% through mid-2022, as did investments made ten years ago. Investments made five years ago returned 6.7% per annum. Since the pension fund has seen the value of its investment objects perform very well, the term 'CalPERS effect' has been coined to denote successful shareholder engagement.[32]

6. Startups as an engine of employment

Startups create jobs, attract talents and train them. A 2021 study by the German Startup Association, Deutsche Börse, the Internet Economy Foundation and Roland Berger found that the number of employees at startups had risen from 267,000 in 2018 to 415,000 in 2020, an increase of 55%.[33] Factoring in multiplier effects as well – employment impacts among suppliers and due to consumption by primary employees – the figure climbs as high as 1.6 million people. Compared with other countries, however, Germany still has a lot of catching up to do. The 415,000 startup employees mentioned above account for only 0.9% of Germany's total gainfully employed population. This contrasts sharply with the figures for the UK (2.2%), Israel (5.4%) and the USA (8.4% – almost ten times Germany's share).

Startups' keen focus on innovation is particularly attractive to well-educated, creative talents, all over the world. In 2022, 27.5% of those employed by German startups came from abroad.[34] That said, German startups are finding it increasingly difficult to recruit skilled labor. While only 17% of them cited personnel planning and recruiting as a challenge in 2021, this number had already surged to around 35% by 2022.[35] And personnel procurement is another issue that has to do with funding. Why? Because startups have to compete with established firms that are in a position to pay high salaries for beginners in addition to the prospect of substantial raises in the course of their career. Admittedly, startups operate different incentive structures, and employee share programs are especially relevant (see chapters 4 and 5). Nevertheless, startups too need adequate financial resources to hold out a credible promise of growth and attract top people.

PATRICK BEITEL

»We must invest in young companies in Europe to create the jobs of the future.«

REGINA HODITS

»We have established a vibrant ecosystem for startups and venture capital in Germany in recent years. We must not allow the achievements of the past few years to be squandered as the market environment changes.«

MARKUS SOLIBIEDA

»Companies have understood that the challenges of the major transformational trends – sustainability and digitalization – can be mastered only if they work together with startups.«

PAUL-JOSEF PATT

»Climate change and the acute energy crisis give us huge opportunities to place our technological accomplishments more forcefully on international markets.«

SOPHIE AHRENS-GRUBER

»SMEs are the source of innovation and growth, but also of resilience and integration in this country. Those startups that stay here are the ones that are renewing the SME segment and accompanying the transformation.«

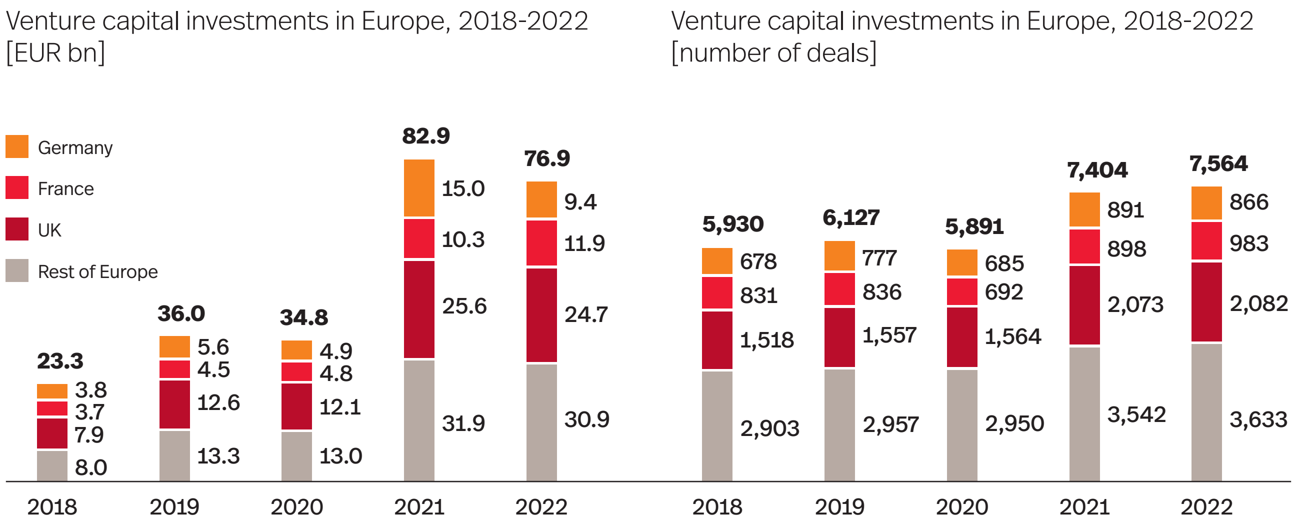
3
THE FACTS
GERMANY AND EUROPE ARE SHORT OF VENTURE CAPITAL

A glance at the data shows that the European and German venture capital markets have enjoyed vigorous growth in recent years. 2021 in particular saw large-scale investments and rising valuations. Yet other regions of the world also saw their VC markets grow markedly in the same year. And despite recent positive developments, the all-too-familiar financing gap between Europe and other regions such as the USA has not been narrowed on a sustainable basis.

The international benchmark data used for the analyses that follow came from CB Insights, a data provider that specializes in startups and venture capital. It restricts itself solely to information about private-equity-funded companies. Financing rounds by publicly traded companies are not included even where the money came from venture capitalists.

In 2021, private equity companies and other investors poured venture capital to the tune of around 15.0 billion euros into startups and young, fast-growing companies in Germany – more than three times as much as in the preceding year. →D The frenzy of activity cooled off noticeably in 2022, with 9.4 billion euros of venture capital invested in Germany, down 37% year on year. That is still considerably more than in the years prior to

D The 2021 boom was followed by a moderate slowdown in VC investments in Europe in 2022



Source: CB Insights, Roland Berger

2021, however. At 866, the number of deals in 2022 was slightly lower than in 2021 (891) but again much higher than in the preceding years.[36]

Germany was not the only country to enjoy a boom in the venture capital market in 2021: Other European countries likewise experienced a steep increase in VC investments. Similarly, the consolidation in 2022 was also visible across the continent, although the overall decline of a good 7% was considerably softer than in Germany. And indeed, much of the European consolidation was based on a retreat from Germany. The number of deals in Europe was actually slightly higher in 2022 than in 2021. Both the investment volume and the number of deals were on a significantly higher level in 2022 than in the years before 2021.

Europe lags behind other economic regions

Seen in relation to the world's other major economic regions, however, it quickly becomes apparent that Europe falls far short in terms of venture capital investments. →E Venture capital totaling around 36 billion euros was invested in Europe in 2019, the year before the pandemic. That is equivalent to 0.18% of European GDP. In the USA, 116 billion euros (0.61% of GDP) was invested in the same year – 3.2 times more in absolute terms. Asia too invested more venture capital than Europe in 2019 in both absolute and relative numbers: the equivalent of roughly 68 billion euros, or 0.27% of GDP. The USA was able to slightly extend its lead over Asia and Europe in 2020, the first year of the pandemic, and then to considerably extend it the following year. In 2021, total VC investments came to 1.35% of GDP in the USA, 0.56% in Asia and 0.40% in Europe. In 2022, the US share of GDP dropped sharply to just 0.78%, compared to milder declines in Asia (to 0.34%) and Europe (to 0.33%). Nevertheless, a wide gulf separates both of the latter regions from the USA.

With a GDP share of 0.25%, Germany fell even below the European average in 2022. It was a long way behind the UK (0.85%) and France (0.45%). In 2021, VC investments still accounted for a 0.42% share of GDP in Germany, before the marked slump in VC investments described above made itself felt in 2022.

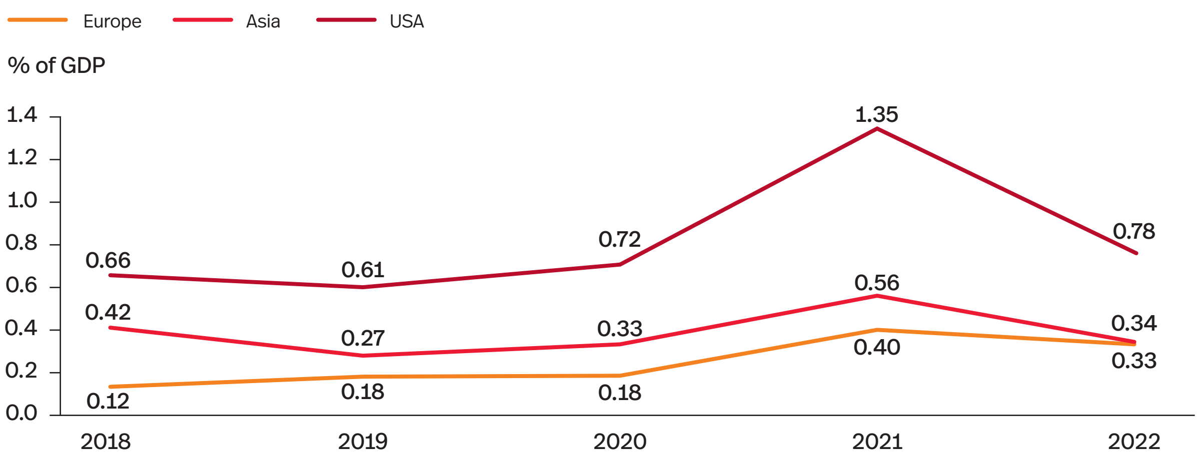
Large differences in individual financing rounds

Breaking VC investments in Germany and Europe down into individual financing rounds, one trend stands out: In the later stage that is crucial to help firms become firmly established on the market, less venture capital is invested here than in the USA. Generally speaking, startups that make it to the later stage have proven that their business model is viable. They are already active players on the market. During this phase, the main issue is often to scale the business model up and increase market share. That takes a lot of money – to acquire competitors, for example, or to expand production facilities.

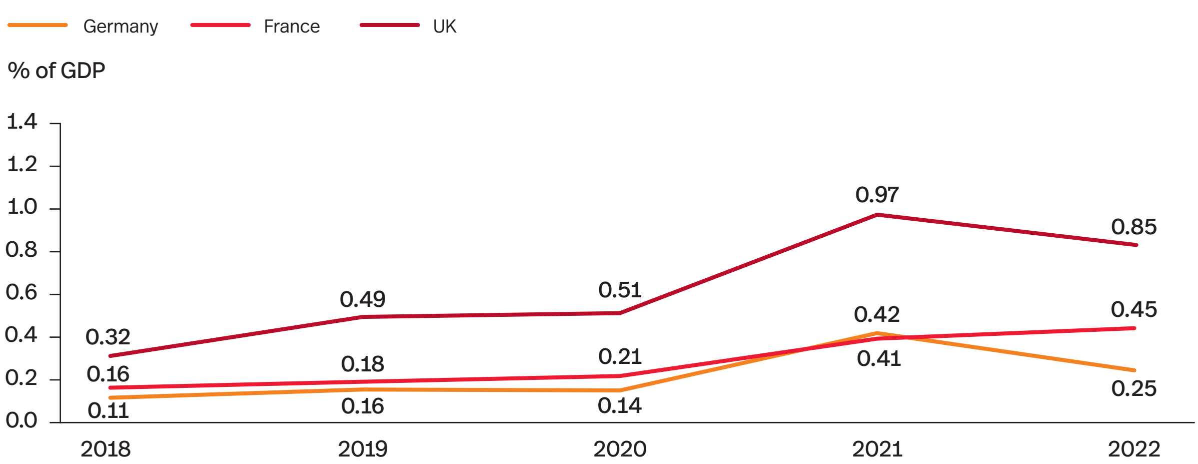
In the years from 2018 through 2022, later-stage financing rounds accounted for about 46% of total VC investments in Germany, compared to around 50% in the USA. In Europe as a whole, later-stage VC inflows were even lower than those in Germany in relative terms. →F

E Relative to economic output, VC investments in Europe are lower than in other regions

VC investments in Europe, the USA and Asia, 2018-2022 [% of GDP]



VC investments in Germany, France and the UK, 2018-2022 [% of GDP]



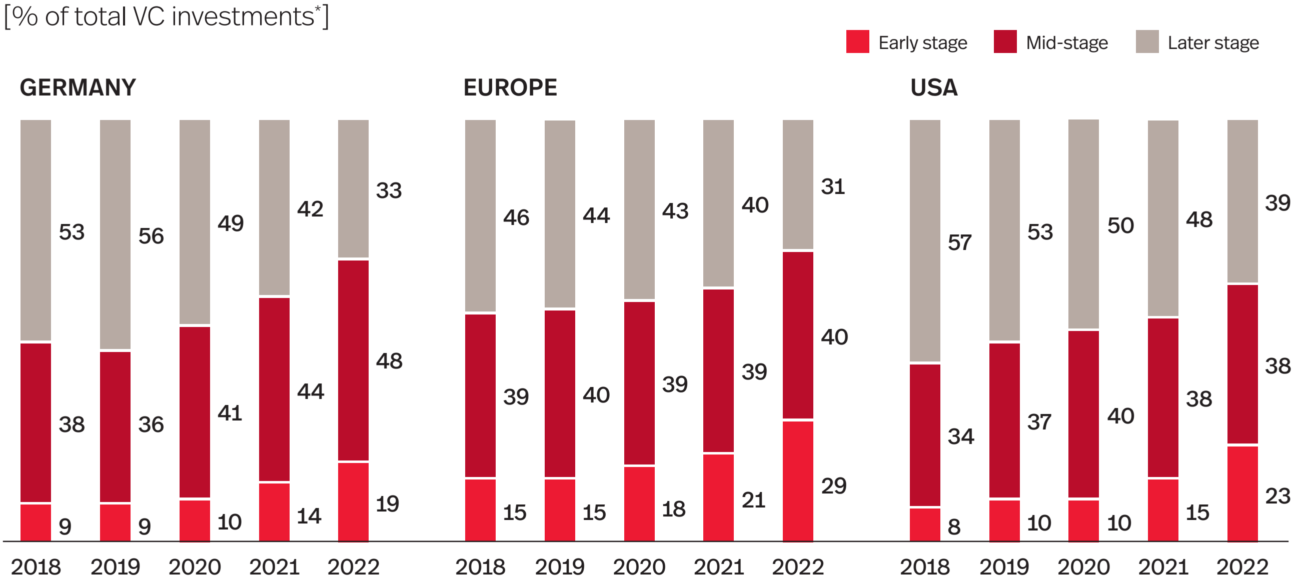
Source: CB Insights, Oxford Economics, Roland Berger

In contrast, Germany's share of early-stage VC investments is roughly on a par with that of the USA, with more money actually invested in Europe than in the USA at this stage in relative terms. As a proportion of total VC investments, larger sums also go into what is called mid-stage financing in Germany and Europe.[37] Looking at the average volume of financing rounds, it is noticeable that Europe's later rounds in particular tend to be smaller than those in the USA and below the global average. →G According to data from the Venture Pulse Report, European companies received a median value of around 5.8 million in later-stage financing in 2021.[38] That is some 15% above the figure for the prior year (5.1 million euros) and a full 63% higher than in 2019 (3.6 million euros), but still falls far short of both the USA and the global average.

In later-stage rounds, US startups received an average of 13.7 million euros in 2021 – more than twice as much

F Too little later-stage funding is provided in Germany and Europe

VC in the different phases of financing in Germany, Europe and the USA, 2018-2022
[% of total VC investments*]



* Totals may deviate from 100% due to rounding.

Source: CB Insights, Roland Berger

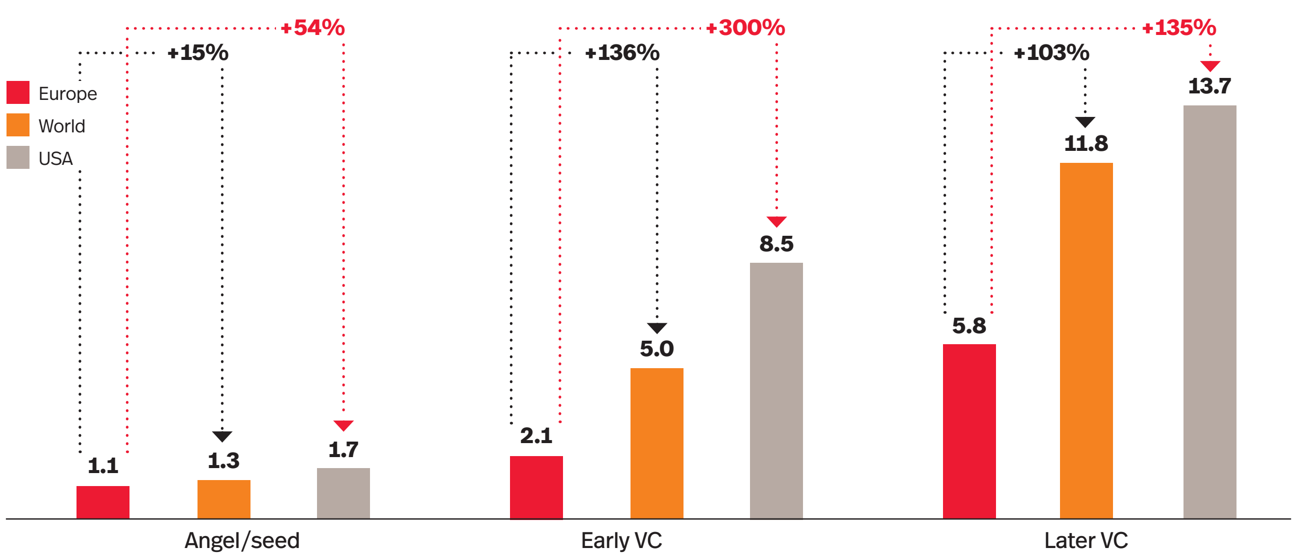
growth capital as their European peers. Again, financing rounds in Europe are also smaller than the global average: Globally, later-stage funding at least averaged 11.8 million in 2021. And although much has changed for the better in recent years, it must still be said that both Germany and Europe as a whole still primarily lack capital resources for more sizable later-stage financing rounds. Here, a considerable financial shortfall still remains compared to the American market.

The funding gap in Germany

We will now address the issue of how much the VC market would have to grow by for Germany to catch up with the USA, the world's front-runner. Our assumption is that medium-term efforts will be needed to close this gap. For the purposes of analysis, we have assumed that 0.78% of German GDP should be invested in the venture capital market in the year 2030. This figure mirrors the

G In terms of the size of financing rounds, Europe still lags behind

Median VC financing by phase in Europe, USA and the world, 2021 [EUR m]



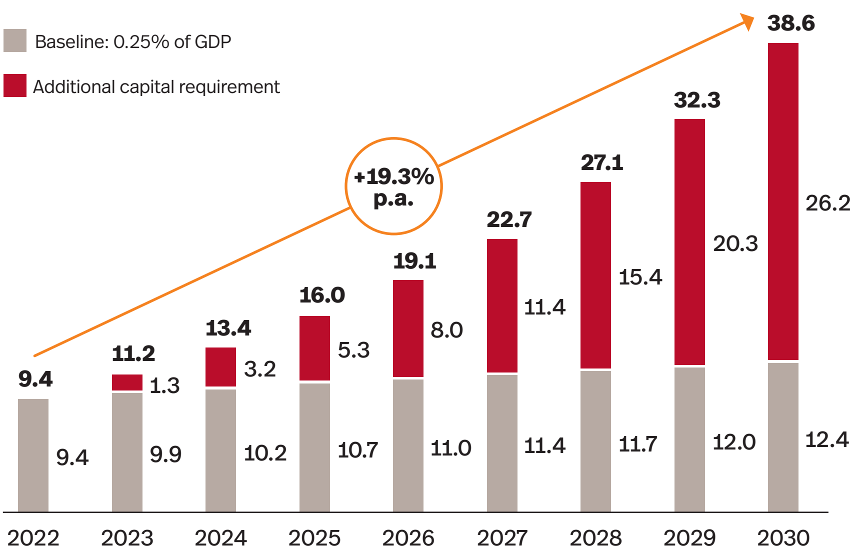
Source: Venture Pulse

level of American VC investments as a share of US GDP in 2022 (see above), which we have taken as the benchmark. As discussed above, the share of German GDP channeled into VC investments in 2022 was 0.25%, which in turn serves as the baseline for our model. Additionally, we have assumed that the funding gap will be closed in gradual stages through 2030, i.e. that extra VC investments will increase every year as of 2030. In the interests of simplicity, we have assumed linear growth in VC investments each year.

Current forecasts indicate that German GDP will reach 4,946 billion euros in the year 2030.[39] To reach the targeted level of 0.78% of GDP in 2030 – i.e. to match the US share of GDP in 2022 – it would be necessary to invest 38.6 billion euros in venture capital in 2030. →H To gradually arrive at this figure, total VC investments would have to increase by 19.3% each year from 2023 through 2030. That would take 1.3 billion euros of extra VC investments in 2023 and 26.2 billion euros in 2030, averaging out at 11.4 billion euros per year.

H Germany must significantly increase its VC investments if it wants to catch up with the USA

Venture capital investments needed to close the funding gap relative to the USA by 2030
[EUR bn]



91.1 billion euros

Total additional capital needed from 2023 through 2030 to close the funding gap on the USA by 2030

Average of 11.4 billion euros

Average additional **annual** capital requirement to close the funding gap on the USA by 2030

Growth of 19.3% p.a.

Annual growth rate needed for total venture capital investments to close the funding gap on the USA by 2030

Source: CB Insights, Oxford Economics, Roland Berger

Germany has the capital it needs to close the funding gap

How the extra capital needed compares with other parameters

11.4
billion euros

The average additional **annual** capital requirement to close the funding gap on the USA by 2030 is roughly equivalent to ...

3.4%
... of annual payments into German pension insurance programs (2020)

3.6%
... of annual private household savings (2021)

91.1
billion euros

The **total** additional capital needed to close the funding gap on the USA by 2030 is roughly equivalent to ...

2.6%
... of total assets under management (AUM) in Germany (2021)

1.2%
... of the financial assets of private households (Q2 2022)

Source: CB Insights, Oxford Economics, DRV, Destatis, EFAMA, Deutsche Bundesbank, Roland Berger

Taken together, this adds up to an additional capital requirement of 91.1 billion euros between 2023 and 2030.

While the amounts we have calculated are voluminous, it is fair to describe them as modest compared to other expenditures. Estimates suggest that 240 billion euros a year will need to be invested to make Germany climate neutral by 2050, for example.[40] Moreover, adjusted for today's purchasing power, Germany invested 500 billion euros a year (in the form of debt and equity) in SMEs and new companies in the period from 1950 through 1970.[41] In light of previous growth rates, the notion of boosting investments in venture capital by the 19.3% figure we have calculated appears perfectly feasible: In the past, Germany's VC market has at times already expanded by more than 20% per annum – not only in the exceptionally strong year 2021, but also in 2019, for instance.[42] Unlike in the past, however, such high growth rates must become constant to close the gap on the USA.

Setting the calculated funding gap in relation to other financial parameters, it is also apparent that Germany is not short of the extra capital. According to data from the European Fund and Asset Management Association (EFAMA), German fund and asset managers had managed assets totaling some 3.5 trillion euros in 2021.[43] Something like 2.6% of the assets entrusted to their care would therefore be enough to close the entire funding gap of around 91 billion euros by 2030. In terms of the financial assets owned by private households in Germany, which totaled about 7.5 trillion euros in mid-2022, a mere 1.2% would be needed to close the gap.[44] To take another comparison: Of the roughly 334 billion euros paid into German pension insurance programs every year (based on data from 2020), only 3.4% would be sufficient to provide the 11.4 billion euros needed as an annual average.[45] Or again, 3.6% of private households' annual savings in Germany would be enough (based on data from 2021).[46] The numbers could not be clearer: The capital is there. It simply needs to be steered in the right direction. →I

DANIJEL VIŠEVIĆ

»Germany lacks the capital needed to transform our good startups into global market leaders. In this country, more than two thirds of financing rounds worth over 100 million euros are led by non-European VCs.«

MARKUS SOLIBIEDA

»Europe has failed to catch up with other VC markets, because developments on those markets have been at least as dynamic as here in recent years.«

PATRICK BEITEL

»For years, we in Europe have missed out on building a sufficiently large financing infrastructure to service the big growth funding tickets. This playing field is dominated entirely by the Americans.«

ZOE FABIAN

»The trend in the early-stage segment is very positive. There are enough strong local investors in the various European countries. But that does not solve the problem faced by company founders who want to conquer the global market and need substantial growth capital to do so. At this end of the market, there are still too few European investment partners who, in addition to capital, can also provide support for international scaling.«

4

AN URGENT NEED TO CATCH UP

THE BIGGEST OBSTACLES TO VC INVESTMENTS IN GERMANY AND EUROPE

Looking back at its point of departure, the startup segment in Germany and Europe has come a long way in the past few years. The number of startup entrepreneurs has shot up. There are more unicorns.[47] And anyone looking for clever business ideas can find them. Evidence of this uptrend is found, for example, in the way non-European investors have rapidly enlarged their footprint.

What is astonishing is that so little has been done to overcome existing obstacles in recent years. Talking to venture capitalists about the conditions needed for startup investments, the disappointment is palpable. The general tenor is that little or nothing has improved, and that the obstacles are mostly the same ones as the ones we faced years ago.

Above all, we have failed to break out of the vicious circle of having venture capital funds that are too small and that institutional investors from Europe therefore disregard as potential investments.[48] As a result, too little European institutional capital flows into European venture capital and growth funds. Since fund volumes remain modest, the European funds are not attractive to large-scale investors. This effect is further amplified by regulatory restrictions that make it unnecessarily difficult for investors to acquire and finance companies.

In the long run, Europe is squandering immense potential. More European capital could significantly improve the ability to scale innovative companies. At the same time, it could also reduce dependency on major foreign investors.

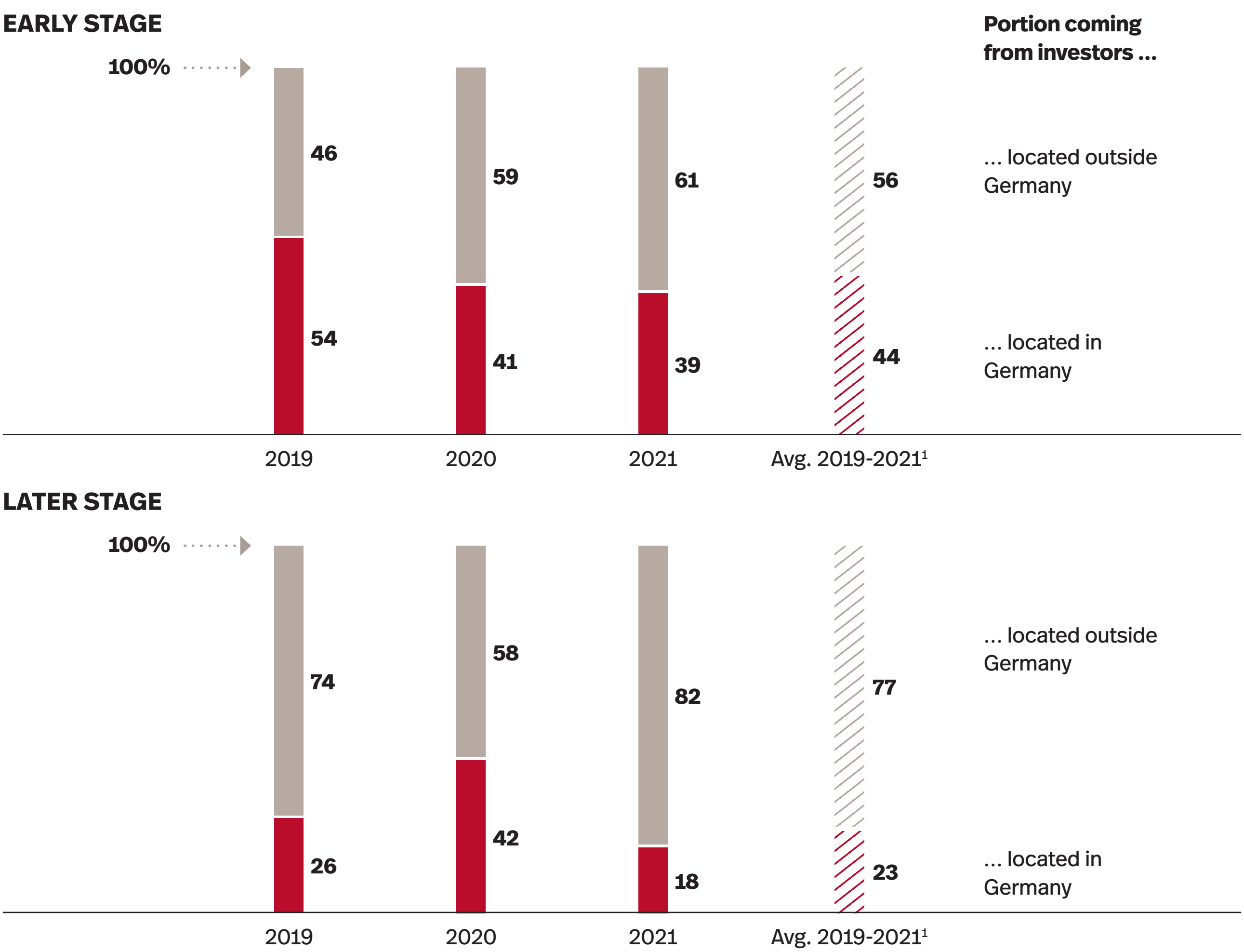
Too few large venture capital funds. Any investigation of the origins of those funds that handle large financing rounds in Europe quickly reveals that later-stage investments of 100 million euros and more are possible almost exclusively with the aid of American backers. Venture capital funds of the size of US giant Sequoia simply do not exist in this country. In 2022, Sequoia managed assets worth around 85 billion euros via a number of funds. In stark contrast, the biggest European VC companies only have around 4.5 billion euros at their disposal. Throughout Europe, large funds are the exception rather than the rule. While European funds rarely manage more than 500 million euros, funds endowed with billions are regularly launched in the USA.[49]

Even within Europe, Germany does not command top slot in terms of fund size. Since the largest German venture capital company manages assets of just 3 billion euros,[50] commitments upward of 100 million euros quickly lead to cluster risks in portfolios. The upshot is that, in many highly promising later-stage deals, the Europeans have to defer to financiers from abroad.

Just how big this dependency is is illustrated by the origins of the venture capital currently invested in Germany. In recent years, the share of investors domiciled abroad has almost always been in excess of 50%, and the imbalance is even more blatant in later-stage financing. In times of crisis, such capital can quickly be siphoned off again, as is currently the observable case. →J

J Acute capital dependencies in the later stage

Origins of VC capital investors in German startups, 2019-2021 [%]



[1] Weighted average for the years 2019 through 2021.

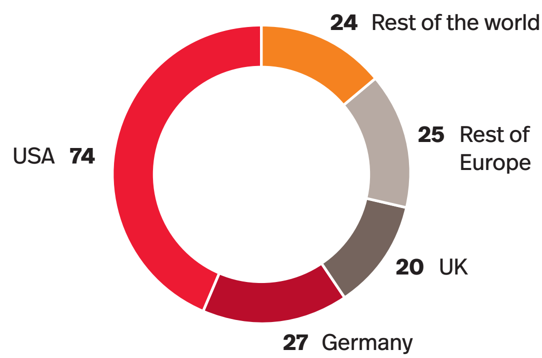
Source: European Data Cooperative (EDC)/BVK, Roland Berger

Even in good times, such heavy dependency harbors serious risks. For example, if European investors are under-represented in supervisory bodies, the danger is that a European perspective may quickly be lost. As a result, it is not unusual for the headquarters and/or key functions of promising startups and young companies to be moved abroad, along with research activities and sizable shares of value added – quite apart from all the negative consequences for tax receipts and jobs. A glance at the origins of investors in Germany's ten most valuable unicorns underscores how serious this issue is. →K

K Predominance of foreign investors

Origins of VC investors in the top ten German unicorns, 2022 [%]

No. of investors = 170



Source: CB Insights, Roland Berger

Too cautious self-promotion. The good news is that attractive yields can now be realized on investments in European and German startups. Unfortunately, this news has not yet got around to an adequate extent. Institutional investors in particular are still traumatized by the negative experiences of the dotcom crisis. Yet the startup ecosystem built up over the past decade cannot be compared to the situation over 20 years ago. Very many of the startups back then did not have business models. In addition, the digital ecosystem and important elements such as infrastructure, devices, platforms, consumer behavior and networks were still in their early days around the turn of the millennium. Since then, tremendous progress has been made. Startups today can build on a conducive (if imperfect) environment and advanced technologies, and their business models are measured not in page views but in sales growth and profits. On top of these advantages, venture capital funds active in Europe have delivered robust returns and value gains for their investors in recent years. At long last, they can boast the all-important track record that lets them prove the attraction of this asset class. The problem is that they are too timid about publicly promoting these successes. Institutional investors remain reserved in the same way.

Too few attractive ways for startup employees to participate. To improve the conditions for startups, the government has launched a variety of new initiatives. None of these have yet been stunning successes, however – especially in the case of the employee stock option plans (ESOPs) that are so important to employee participation and that, in Germany, are in desperate need of an overhaul.

INGO POTTHOF

»Money scores goals. In that respect, VC is no different to soccer.«

JULIANE HAHN

»Many company founders say to me: When we need a lot of growth capital, we will have to move our headquarters to the USA.«

MARK SCHMITZ

»Compared with other countries, we in Germany still have funds that are too small to be able to play a major role in the growth phase.«

DANIJEL VIŠEVIĆ

»In the past two decades, venture capital was the most successful asset class in Europe. But hardly anyone knows it.«

Unlike in the case of virtual stock option plans (VSOPs), for example, ESOPs do not involve purely promissory contracts. Instead, the allocation of shares in the business allows the employees of a startup to participate directly in the company's development. In this context, representatives of the venture capital sector speak of a 'historic milestone' that must be reached as a matter of urgency. If this does not happen, Germany will increasingly miss out on top talents in the face of international competition. And that, of course, will negatively affect the ability of German startups to compete.

Germany's Federal Ministry of Finance formulated a proposal in January 2023 to improve the tax framework for employees' equity participation. The proposal addresses such issues as dry income (the tax burden on the value of equity even when no cash flows directly to the employee) and marks an important step toward internationally competitive conditions.

Too many handicaps for venture capital funds in Germany. Empirical studies show that most venture capital investment activity takes place in the places where VC funds are based. On this score, complex and unattractive fiscal and other legal prescriptions mean that Germany fails to fulfill its potential. The biggest disadvantages of Germany as a venue for VC activity include the imposition of a sales tax on management fees and the fact that the fiscal transparency of venture capital funds has still not been regulated satisfactorily. In the key EU member states with which Germany competes in the venture capital arena, management fees do not bear the burden of sales tax. This puts German funds at a cost disadvantage as they compete for international investors' capital. Domestic startups suffer as a result. In the eyes of the law, fiscal transparency revolves around the issue of whether a VC fund acts purely as an asset manager (in which case it is not liable for trade tax), or whether it also provides advice or is even involved in the operations of investment objects (in which case it is liable for trade tax). The extent to which investments in target companies can draw on debt capital and where the fund manager is headquartered are two further matters that are unclear. In Germany, difficulties in drawing clear distinctions repeatedly bring cases before the country's tax courts, depriving investors of the ability to plan reliably. In many other countries, such difficulties do not exist. In others, planning certainty has been created to make these countries more competitive by means of regulatory provisions determining that VC funds are not involved in trading activities. More than a few funds have moved their headquarters and their fund management activities abroad for this reason. In so doing, they also shift the focus of their investments away from Germany and toward a more international playing field.

Too little institutional investment. Setting up the German Future Fund (GFF)[51] was a step in the right direction. In seeking to mobilize institutional capital, special importance is attached to the Growth Fund, a module of the Future Fund. The DeepTech & Climate Fund (DTCF), which aims specially to develop global market leaders in climate-friendly technologies, is likewise of huge importance to Germany.[52] Yet although venture capital has been one of the most successful asset classes in Europe in recent years, it still suffers serious neglect at the hands of many institutional investors. In 2019, European pension funds held 46% of their assets in fixed-interest investments but only 13% in alternative investment forms (hedge funds, natural resources, infrastructure, buyouts and VC). Insurers committed as much as 64% of their assets to fixed-interest securities and only 7% to alternative investment forms.[53] One reason for such minimal attention to alternative assets is the number of regulatory hurdles that stand in the way.

Capital adequacy regulations are just one example of such hurdles. Specifically, the question is how much of its capital must, say, an insurer hold in order to invest in a VC fund rather than in a corporate or treasury bond? In practice, competition is distorted because privileges are granted to debt capital investments but also to highly liquid investments. The reason can be found in the legislator's risk-averse mindset. However, this position overlooks the fact that, for institutional investors with a long-term horizon and broad diversification, the risks of a VC investment must be assessed on a completely different basis to the risks for private investors. While the latter may have to be able to access their capital at short notice and may therefore suffer worse from short-term market volatility, that is not the case for institutional investors.

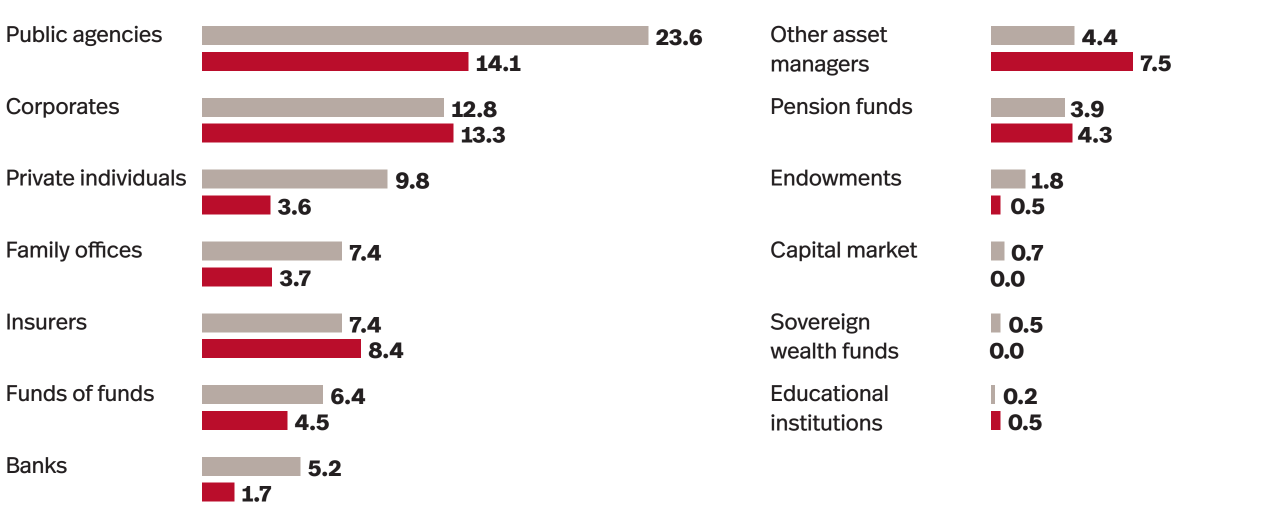
As it stands, the legal situation makes it hard for insurers and pension funds to invest even comparatively small sums in 'future positions'. Due to a well-meaning belief that this protects consumers, yield opportunities are willfully wasted – to the detriment of insured parties and pensioners in Germany. Pension and insurance funds from abroad make much more active use of such opportunities. How different things could be is demonstrated by the successful endowment fund model operated by elite US universities and the extensive venture capital commitments of public and private US pension funds. However, these examples have not yet caught on in Europe. In the years from 2017 through 2021, an average of only 1.8% of newly acquired VC funding came from endowments and 3.9% from pension funds. →L In Germany too, endowments and pension funds largely steer clear of both asset classes. The comparable figures in this country are 0.5% for endowments and 4.3% for pension funds. Not even insurers reach a double-digit share, with only 7.4% (in Europe) and 8.4% (in Germany). The main investors in Europe and Germany are public agencies and companies.

Too little diversity. Managers emphasize the point: Diverse investment teams make better investment

L In Europe and Germany, institutional investors such as insurers, pension funds and endowments hold only minor venture capital investments

Where venture capital funds get their money from[1]
[% of total volume, average through 2017-2021]

European Union Germany



[1] Methodology: Statistics on the origins of funding represent investors' financing commitments. The methodology of fundraising excluding capital gains is applied. 15.9% of funding in the EU and 38.0% of funding in Germany is not classified and therefore does not appear in the chart.

Source: Invest Europe, Roland Berger

decisions. The same finding is also reached by empirical studies. From 2009 through 2018, 69.2% of the most successful VC investment teams (the top quartile) in the USA had a diverse composition. Just 30.8% were male only. US investment teams that incorporated more female partners delivered exits that were 9.7% more profitable than less diverse teams. In emerging countries, diverse investment teams staffed by between 30 and 70% women generated returns that were 20% higher than those of teams dominated by just one gender.[54] Regrettably, however, much remains to be done to promote female involvement in VC teams. In Germany, women account for only 17% of venture capital fund staff. And among the partners – those individuals who ultimately make the investment decisions – the figure is a mere 7%.[55] →M A similar picture emerges across the other countries of Europe. Worse still, women who do lead a fund generally have far less resources at their disposal than male-led funds. One consequence is that gender bias causes predominantly male-led startups to receive financing. The chances of teams of female entrepreneurs receiving funds thus decline. On average, female-led teams are indeed funded less frequently and with less venture capital.[56]

Diversity is also lacking with regard to technical competence. Understanding the competitive advantage afforded by a deep tech startup presupposes an intimate understanding of its technology. This in turn creates a need for more venture capitalists with a background in the STEM disciplines (science, technology, engineering and mathematics). As things stand, however, this cohort is under-represented in investor teams, most of which are dominated by economists.

WHAT OUR INTERVIEWEES THINK …

GESA MICZAIKA

»How much work we still have to do on diversity in VC is evident from the fact that even the semi-public VC funds in Germany have never had a female general partner.«

PATRICK BEITEL

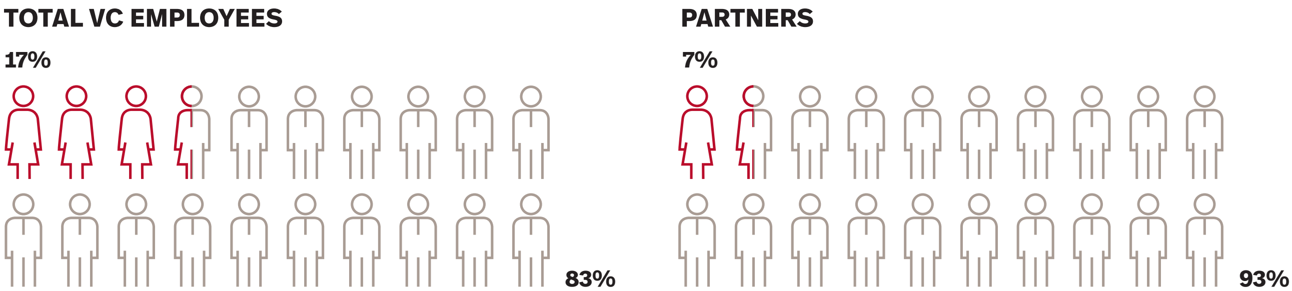
»At German investors such as insurance companies, the decision-makers still remember how they lost lots of money when the dotcom bubble burst a good 20 years ago. So they are still very skeptical of VC.«

Too few ways for normal citizens to participate. Small investors have a hard time participating in the business success of fast-growing companies. Institutional investors do not provide enough offerings that make this asset class accessible even for smaller financial investments. Similarly, the problem of maturities for capital commitments has yet to be resolved. Ten years – the standard term for venture capital funds – is a very long time. During this period, investors cannot withdraw their capital without jeopardizing the essential viability of the high-growth company. In principle, though, there is no reason why a venture capital investment must be held until the exit date: It could instead be handed over prematurely to new investors or co-investors. However, this practice requires a liquid secondary market that does not exist yet, although Deutsche Börse is currently working on a European platform for this purpose.[57]

Equally, it is high time to get started with share-based pensions, preparations for which are already underway in Germany. The Swedish model in particular has proven its worth in this context. In Sweden, a defined portion of pension contributions goes into capital market-based products. In Germany's pay-as-you-go pension system, however, this aspect is still completely absent. Employees therefore make far too little use of potential capital market returns for their own pension provisions.

M Male dominance in the VC industry

Gender distribution in German VC companies



Source: KfW

PAUL-JOSEF PATT

»We are still at a huge competitive disadvantage on employee participation. Find a candidate for a management position from the USA, then try to explain to them how our ESOP system works and what the tax consequences are.«

HENDRIK BRANDIS

»In the USA, around two thirds of growth capital comes from pension funds and endowments. This capital is lacking almost in its entirety in Europe because of the regulatory hurdles placed in the way of investors such as pension funds.«

JEANNETTE ZU FÜRSTENBERG

»Diversity in the VC and tech startup sector is still abysmal.«

DANIJEL VIŠEVIĆ

»Many investment teams lack diversity. Especially in climate tech, you need investment managers with a background in STEM disciplines. That is important, because you have to understand the technology to recognize a venture's competitive edge.«

SOPHIE AHRENS-GRUBER

»I find it problematic that people who are not particularly wealthy are essentially excluded from high-yield investment options. This only widens the gap between rich and poor.«

5

A VC AGENDA FOR GERMANY

FIVE AREAS WHERE ACTION IS NEEDED TO MAKE GERMANY A CHAMPION

We have clearly seen why venture capital is so important – especially today – and what part it plays in future-proofing the German and European economies. The numbers vividly demonstrate that Europe has fallen behind the USA and Asia in raising venture capital, and that this puts it at a critical disadvantage in global competition. We have also analyzed the reasons why this is so and looked at which obstacles hinder the more extensive use of venture capital investments in Germany and Europe. So, what needs to be done? Following on from our 2018 study, we see five key areas where Germany must take action: strengthening knowledge transfer, mobilizing available assets, tearing down legal obstacles, stepping up the promotion of spin-offs, and improving diversity in venture capital funds and startups.

1 KNOWLEDGE TRANSFER

We must get decision makers and the wider population to understand the benefits of growth capital.

We have seen that robust data and analyses demonstrate the attractiveness of venture capital compared to other asset classes. Venture capital leads to higher returns and is – assuming a clever and diversified strategy – associated with containable risks. Venture capital is less volatile than other asset classes and reduces volatility in a portfolio of different assets. It is also a fundamental prerequisite for innovation, growth, jobs, prosperity and economic sovereignty in Europe. Yet despite many positive developments, there is still no broad-based understanding of these issues. It is therefore vital to continue to share this information both within political circles and in society. Well-informed politicians are fundamental to overcoming obstacles that stand in the way of the VC market. The wider population too needs to understand that investing in growth capital is an extremely lucrative element of provident saving with reasonable risk exposure, and that it also protects Germany as a business base.

How can this knowledge transfer take place? Clearly, the process of educating and informing will be a long one. It is a relatively simple matter to explain the importance of venture capital to our economy, even if large corporates and midcaps dominate the headlines in our business culture. However, risk aversion appears to be deeply ingrained in underlying German structures. Facts are one thing; a change in awareness and behavior based on these facts is another. There is therefore no need to draw any distinction between the population at large and people in politics. Recruiting multipliers and ambassadors thus becomes a crucial strategy. Unions too have a part to play. On the one hand, they have a vested interest in secure and adequate old-age pensions for their members. On the other hand, fast-growing companies create jobs, while also making up for job losses that occur in companies and sectors that are no longer competitive in an economy increasingly shaped by transformative change processes. Aided by multipliers representing business, politics and society, the topic of growth capital can be more deeply embedded in the awareness of politicians and broad swathes of the population. At the same time, it is obviously important to directly address the government as well – through studies such as this one, and through media work, events and direct contacts. Here again, it is important to persevere and continually repeat the messages, even though understanding has already grown and deepened in recent years. This is equally true in respect of professional investors – such as insurance companies – who often shy away from investing in venture capital due to legacy experiences with the bursting of the dotcom bubble more than 20 years ago.

Another approach to knowledge transfer kicks in much earlier: Germany must graft economic and financial topics into school curricula on a broad basis. At schools and universities alike, it is essential both to teach an in-depth knowledge of company startups and capital investments and to kindle interest in and enthusiasm for these issues. We must succeed in planting a startup culture in the minds of young people so that they perceive participation in growing companies as an opportunity rather than a risk.

2 ASSET MOBILIZATION

We must stimulate capital and allow it to flow to the right places.

As we saw in chapter 3, private households in Germany have vast financial wealth at their disposal. In mid-2022, the total was 7.5 trillion euros. Just 1.2% of this sum would be enough to close Germany's venture capital funding gap on the USA. Still more capital could be mobilized via the pension system. Along the lines of Bpifrance Entreprises 2 in France, Germany should establish a state-guaranteed fund for small and private investors. This fund should invest in startups and SMEs that operate in sectors of relevance to the transformation. If the wider population were enabled to participate in the performance of venture capital, they themselves would benefit, but so too would the whole economy. →N

In the context of commitments by institutional investors such as insurers and pension funds, the law as it stands grants privileges to investments with high credit ratings in order to protect the investors behind these funds from losses. Given the strong creditworthiness of debt instruments, Solvency II, for example, requires only a small capital buffer to be kept in place for them. Yet the capital adequacy required for equity instruments such as stocks and private equity (to which venture capital belongs) is inordinately higher, at up to 49%. Moreover, the high-risk investment ratio prescribed by the German Investment Ordinance (AnlV) further restricts equity investments. By consequence, institutional investors put most of their resources into fixed-interest and supposedly safe papers such as treasury bonds. The problem is that investors with a long-term horizon are thus deprived of high-yield opportunities and hence future prosperity, even though – as we have already seen – the risks can be contained by the professional management of diversified equity instruments (across different market segments, fund managers, regions and years).

The German government has understood this and plans to set up a share portfolio in the shape of the share-based

KLAUS HOMMELS

»This is the biggest mystery for me: We need investments in venture capital to develop wealth and retain technological sovereignty. And we have the capital to do so. But we forbid it to flow to the right places, supposedly because we want to protect the investors. In truth, however, we are cheating the population at large out of vast sums of money they could use in old age.«

INGO POTTHOF

»We must make it even clearer to investors that healthy yields can be realized in Germany, too. The message has trickled down only slowly in recent years. There is still a lack of understanding.«

MARK SCHMITZ

»The capital supply chain is broken. We must repair and strengthen it if we want to sustainably finance innovation.«

MARKUS SOLIBIEDA

»Insurers and pension funds need to be made aware that you can earn money with growth capital in Europe. The data is there.«

ZOE FABIAN

»We need the European insurers and pension funds to get more involved. Only then will value gains in the tech sector come back to Europe.«

N Capital must be able to flow to the right place

The logical chain – and the wall in the middle: Two perspectives on why it is so important to employ growth capital

We have the capital here! Supply of capital

Private households' financial assets in Germany:

Q2 2022: 7.5 trillion euros

PRECONCEPTIONS

LACK OF KNOWLEDGE

LEGAL HURDLES

POLITICAL ACTION

We need the capital here! Demand for capital

Funding for high-growth companies
Funding gap in Germany compared to the USA:

91.1 bn euros = 1.2% of 7.5 tn euros

TEAR DOWN THIS WALL!

Benefits for investors

- Broad participation in high yields
- Risk spreading
- Co-determination
- Demographically aligned old-age pensions

Benefits for the economy

- Innovation
- Growth, prosperity, jobs
- European champions, European sovereignty

Source: Roland Berger, Deutsche Bundesbank pension system it has announced. An important first step toward adding a funded component to the German pay-as-you-go pension system has thus been taken. Now, to support startups and tap into further yield opportunities for the wider population, a second step must follow: Institutional investors should be placed under obligation (or at least given regulatory exemptions up to a certain level) to invest part of their assets in growth capital. The level should be 5 to 10% venture capital in order to have a tangible effect. For institutional investors, the risk would be manageable as they have a constant stream of premium revenues now but payment obligations that do not mature until later – the ideal constellation in which to invest in equity, which delivers high yields in the long term. Corresponding conditions should also be created at the European level. In the meantime, the German government must raise the high-risk investment ratio prescribed by the Investment Ordinance and, in European consultations on Solvency II, advocate further reductions in capital adequacy obligations for investments in private equity and venture capital.

The Growth Fund that is planned as part of the German Future Fund constitutes an initial government-backed instrument to mobilize substantial capital amounts from major German institutional investors for venture capital investments in the future. The same goes for the DeepTech & Climate Fund, whose aim is to drive the global success of startups in areas of deep tech such as robotics, artificial intelligence, quantum computing and process automation and whose focus is on climate-friendly technologies.[58] If this is to happen, the funds must be accepted as attractive, marketable products by their target group comprising institutional investors, family offices and endowments. How the project can be made to succeed in the long term is demonstrated by Denmark's public-private partnership model, which is now into its third fund-of-funds generation in cooperation with Danish insurers and pension funds.[59]

There is another crucial source of capital that can be ramped up: companies that use corporate venture capital activities of their own to invest in startups with a view to reinforcing and complementing their research and development activities. It should be possible for these investments to be recognized as R&D expenditures, while losses should be tax-deductible.

3
TEARING DOWN OBSTACLES

We must design a legal framework that is internationally competitive.

If Germany is to compete internationally in mobilizing venture capital, obstacles that directly hinder investment in this asset class must be torn down. The same goes for obstacles that affect the ecosystem and the startups and thus have a indirect impact on these investments and their performance.

Imponderables in the taxation of VC funds and their investors directly affect investments in growth capital in Germany. Right now, they put German funds at a serious competitive disadvantage. Tax neutrality is a central

REGINA HODITS

»Large intermediaries such as insurers, pension funds, strategic investors and endowments must be given incentives to participate in the success of the German VC market.«

MARK SCHMITZ

»We need to radically improve the regulatory and fiscal conditions surrounding fund management in Germany if we want to be competitive in the international arena.«

JEANNETTE ZU FÜRSTENBERG

»Whoever solves the problem of employee participation in Germany will have made a real breakthrough.«

ZOE FABIAN

»We must make our startups more competitive. It is urgent for government to tackle the issues of talent remuneration, employees' share ownership and more flexible visa policies.«

feature of every fund: Every investor pays tax on their share in the yields on capital investments in their home country and based on their personal tax class. Tax neutrality is thus the international standard that enables funds to compete internationally for the capital resources of the big institutional investors. Funds that manage assets can be set up in Germany and should theoretically enjoy tax transparency here as well. Unlike in other countries, however, Germany is fraught with uncertainties. Funds that are not tax-transparent, i.e. commercial funds, are also not tax-neutral and are therefore out of the question as targets for international institutional investors. German private equity and venture capital funds currently enjoy tax transparency solely on the basis of a letter written by the Federal Ministry of Finance (BMF) in 2003. Yet this letter no longer satisfies modern requirements and in no way guarantees legal certainty. The objective must be to anchor tax transparency in law in a way that meets modern criteria for tax transparency. Since legal uncertainty is a handicap in competition for investors' capital, legal certainty will immediately lead to greater investments.[60]

Internationally, the most important groups that invest in private equity and venture capital are pension funds and other provident saving institutions. They need this legal certainty. Codifying the tax neutrality of German private equity and venture capital funds in law would make them largely neutral regarding the amount of tax paid by investors. From an international perspective, the German private equity and venture capital market is very small and currently makes almost exclusive use of tax-neutral funds. Legal certainty would, however, make these funds much more attractive to German and, in particular, foreign investors, thereby opening the door to more investment in startups and small and medium-sized enterprises.

The sales tax imposed on the administrative activities of fund managers is likewise detrimental to Germany as things stand. In the key EU member states with which Germany competes for private equity/venture capital business, management fees are exempted from sales tax. Compared to its relevant EU-based competitors, Germany is indeed one of the few member states that (since a Finance Ministry letter dated May 31, 2007) essentially see the management of private equity and venture capital funds as a taxable exchange of services. Only in a few exceptional cases is exemption from sales tax granted, and the exception added in 2021 for venture capital funds does not solve the problem. All German private equity and venture capital funds should be exempted from sales tax everywhere in the EU. The current situation handicaps German funds in international competition and effectively constitutes a barrier to entry for putative new German funds. Young tech startups thus find themselves starved of urgently needed venture capital. Removing the tax burden would not privilege these funds: It would merely align them with common practice in many EU member states and would bolster fund activities in Germany overall. Further simplifications and sales tax exemptions have been announced under the forthcoming Future Financing Act. Federal government must not deviate from these intentions.

A further issue that puts German startups and the German ecosystem at a material disadvantage is rooted in its singularly unfavorable rules governing employees' equity participation. These rules make it significantly more difficult to recruit specialists and managers from abroad, motivate teams and thus help young, fast-growing companies to compete. In the context of employees' share participation, it is especially important to tackle the issue of dry income taxation. The tax deferral introduced in 2021 is a good start but must be placed on a more practicable footing. A change of job, for example, should not trigger the elimination of this deferral but rather the sale of the shares. Such risk-laden rulings make it impossible to attract specialists from abroad. The German government has recognized this problem, which is not new, and addressed it in the Fund Location Act that was resolved in mid-2021. These initial improvements cannot be the last word, however. We therefore welcome the plan aired by the Ministry of Finance and the Ministry of Justice to go further with this issue in a Future Financing Act.[61] Likewise, we welcome the contents of the position paper released by the Ministry of Justice in early January 2022. The tax-exempt amount is to be raised further from 1,440 euros to 5,000 euros,[62] and the deferral option is to be improved (for example by expanding the admissible range of company shares and extending the time horizon from 12 to 20 years). Notwithstanding, the ruling still suffers from major drawbacks.

Above and beyond these matters, the influx of specialists to Germany is rendered difficult by protracted visa procedures and the complicated practice of recognizing higher education and vocational qualifications obtained abroad. These processes are in urgent need of streamlining and acceleration. It was important to see the German Foreign Office draft an "action plan on visa acceleration" in mid-January 2023. The plan envisages substantially increasing the number of staff processing visa applications, making visa procedures digital and thereby speeding them up.[63] For their part, the Federal Ministry of the Interior and the Federal Ministry of Labor in January presented a draft bill to advance skilled immigration. Applicants can be given an 'Opportunities Card' if they qualify thanks to a system of points that takes special account of vocational qualifications, language skills, career experience and age, for example. The Opportunities Card gives them a chance to move to Germany even if they do not have a contract of employment. For other forms of immigration, minimum salary thresholds and language skills will be lowered. Recognized skilled workers should in future be able to work in any unregulated profession. Startups would benefit from this new ruling, which the government hopes will bring in 50,000 extra workers per year.[64]

To conclude this list, it would also strengthen Germany as a venue for venture capital if companies were able to recognize investments in startups as R&D expenses. This would encourage the important segment of corporate venture capital. If such an investment turns out to be profitable, a tax on capital gains would offset the tax break arising from the earlier direct tax deduction.

At the European level, it would be useful if the much-vaunted capital market union finally became reality. Harmonized European regulations that are conducive to investments in startups would save national governments the trouble of having to come up with national solutions. That would avoid unnecessary competition to see who has the better laws for startup financing, which would considerably reduce investors' information costs. All of this would give a tremendous boost to the mobilization of European venture capital. Moreover, there is nothing to prevent exemplary national rulings from being incorporated in a shared body of regulation at the EU level.[65]

4
GOOD IDEAS, GOOD BUSINESS

We need better support for spin-offs

It is gratifying to see that more and more students in Germany are keen to start a company. Our interviewees underscored this positive development, even though they admitted that the same phenomenon is also observable in other countries where, as in Germany, a career at a well-known company or a civil service career have hitherto been the most coveted post-study trajectories. The entrepreneurial spirit is alive and well, it seems, and German universities possess an excellent knowledge of the technologies of tomorrow. Teams at universities are increasingly motivated to commercialize the knowledge born of their academic projects and their creative ideas. What is often lacking, however, are the necessary structures and the requisite support from the universities themselves. Good ideas must be cross-pollinated with contacts, a grasp of business management, tax issues and legal matters, infrastructure such as offices and laboratories, and startup financing. There is therefore a need to foster in situ cooperation between universities, investors, incubators, accelerators, companies and the regional economic development agency in order to create the conditions for a spin-off culture.

Although a growing number of universities have now established their own entrepreneurship centers, lots of potential still goes to waste. A handful of lighthouses such as TUM in Munich, RWTH Aachen University, the Technical University of Darmstadt and the WHU Otto Beisheim School of Management attach great importance to commercializing the research outcomes and business ideas they develop. Not content merely to teach about the attraction of startups, their startup centers also provide extensive support and intensive assistance in the form of mentors, programs and networks. Other universities can look to them to find pioneers, as well as blueprints showing them the way forward.

Critical stimulus is also needed from the political realm. It is a good sign that federal government wants to flank the EXIST Potential funding program with a lighthouse competition for entrepreneurship centers. The aim of the competition is to establish "cross-university ecosystems with an international reach that are closely integrated in regional and national value chains".[66] To encourage spin-offs not only in these projects but at every university, federal and regional governments should place every university under obligation to appoint and fund a startup adviser. Funding business angels is another way to support spin-offs and increase the likelihood that they will succeed. Federal government's desire to re-run the INVEST program to

PAUL-JOSEF PATT

»Technological progress is the only way to solve the major problems of our day, such as climate change and digitalization. German universities and institutes harbor vast potential that we must channel much more energetically into the development and commercialization of innovative products.«

GESA MICZAIKA

»In Sweden, intellectual property belongs to the person who developed it, not to the university. That should be the case here, too.«

MARKUS SOLIBIEDA

»The most important change is that many good graduates can today imagine assuming an entrepreneurial role, though that also applies in countries outside Europe.«

JULIANE HAHN

»When fledgling companies are spun off, universities must provide the students with much more support in the form of relevant knowledge and appropriate infrastructure. They need to be prepared for a startup. In Germany, TUM sets an example in this regard, but too little is yet being done nationwide. In countries like the USA, this has long been standard practice at good universities.«

»In the early phase, highly specialized ecosystems often need suitably specialized investors. That is why we need funding programs – even for business angels who operate or could operate in this kind of environmen.«

revitalize the business angel ecosystem in Germany points in the right direction.[67] However, to realize the full potential that lies dormant in Germany's transfer and innovation landscape, the funding gap between EXIST and venture capital financing must be plugged by startup funding from private or public investors in the form of a public fund. Existing ideas from the Federal Ministry of Education and Research about a German Technology Transfer Fund (GTTF) are a positive step and need to be fleshed out.

One more issue in need of urgent government attention is the handling of intellectual property (IP). Today, IP rights belong to the research organizations, not the researchers. But without these rights, the latter cannot build a startup with a business model that works, nor can they enlist venture capital investors. If they are allowed to use the rights, existing law lets the research organizations levy a fixed license fee whether the new company succeeds or fails. Yet for many startups, such a burden right at the outset is simply too heavy. Nor does a startup have the option of transferring the IP rights to third parties. Voices in the startup community are therefore rightly demanding that license fees be linked to revenues.[68] In addition, it should be possible for startups to purchase the IP rights. Here again, revenue-linked payments could be agreed, allowing the research units to profit from the success of the startup. Ultimately, there is also a need to rethink the way the performance of universities is measured. The government should assess universities not only based on the number of patents and prizes or the volume of third-party funding they secure: The number and quality of spin-offs should likewise be factored into the equation.

5
GREATER DIVERSITY

We must support the involvement of women in startups and venture capital funds.

Women make up only a very tiny proportion of VC fund teams, and even fewer of them find their way into management positions. In the past few years, the number of women in startups has been growing continually but is still only a good 20%.[69] Massive potential is thus being wasted, given that women account for the majority of students and graduates in many university disciplines. Also, women often leave school and/or university with better grades than their male peers. Initiatives like #Startupdiversity and networks such as Grace and Global Digital Women support female startup entrepreneurs. Level20 focuses more on supporting women in private equity companies. These initiatives are all good but not enough. The political framework too must reflect the realities of life for female entrepreneurs and investors. Starting a family in Germany confronts women with huge obstacles as they seek to reconcile their career and family life. Unlike in the case of employees, self-employed women enjoy no comparable protections with regard to maternity leave, parental leave and tax-deductible childcare costs. Startup entrepreneurs need far better government support, along the lines of what is available in France. Just across Germany's western border, it is taken for granted that the government will help both women and men strike a healthy balance between career and family. In its startup strategy, the German government has now announced that measures are being launched to make it easier for female entrepreneurs to reconcile working and family life. That needs to happen fast so that suitable tools can quickly be put in place. Under the aegis of the Future Fund, plans for separate managed accounts (with a focus on diversity and impact investments) are already being touted as a workable tool to support greater diversity. If more women play an active role in the VC market and at startups, that can spark off a cultural transition that will amplify future developments.

The public sector should also formulate special programs or instruments to support selective investments in startups that comply with a prescribed proportion of women. The government's startup strategy explicitly states that venture capital funds with a female and diverse composition will receive special support via resources from the Future Fund. This is yet another good step that must be taken without delay.

A further aspect of diversity involves addressing the issue that the STEM subjects still produce too few female graduates. This fact alone keeps the ratio of female startup entrepreneurs and managers low at tech-focused venture capital funds, and hence in key areas such as climate tech, biotechnology and mobility. To capture the enthusiasm of more women for STEM disciplines, change must begin in elementary schools, with greater depth added in secondary schools. National initiatives such as Komm, mach MINT[70] ("Come and do STEM") are a good thing. Their impact must be evaluated constantly to see where a stronger emphasis or complementary measures are needed. Programming skills must become standard practice for all schoolchildren. When combined with the business, entrepreneurship and capital investment skills discussed above, a broad-based STEM education would lay the interdisciplinary foundation for Germany to build on its strengths in the technical domain. How desperately this is needed can be seen in the latest MINT Herbstreport (STEM Fall Report) published by the German Economic Institute (IW) in Cologne: In 2021 and 2022, the STEM shortfall in Germany rose to over 500,000 unfilled vacancies.[71]

GESA MICZAIKA

»The government must set an example. We need female general partners at semi-public VC funds. And the state must make sure that the VC funds in which it invests as a limited partner have a diverse management team.«

JEANNETTE ZU FÜRSTENBERG

»Women need a lot more support to juggle family and career. And we need to get schoolgirls excited about STEM subjects. Coding must become the lingua franca.«

SOPHIE AHRENS-GRUBER

»We need more women in male-dominated professions, and vice versa. It is time to talk openly about obstacles and incentives if we want to tap our full societal potential.«

We have discussed five specific areas where action must be taken to mobilize more venture capital in Germany and Europe. Above and beyond these areas, our interviewees stressed how vital it is for key representatives of politics and the government to own the topics of startups and venture capital and, in so doing, fan the flames of an entrepreneurial spirit and unleash a wave of startups. We have cited France as a role model. Emmanuel Macron, its president, regularly tweets in celebration of the success of French startups. He invites them to the Élysée Palace. We in Germany likewise have a window of opportunity right now: Key federal ministers such as Christian Lindner (Finance), Robert Habeck (Economic Affairs and Climate Action) and Bettina Stark-Watzinger (Education and Research), as well as Jörg Kukies, currently Secretary of State at the Chancellor's Office, understand the importance of startups for the German economy. They also see the unused potential that is available to the German venture capital ecosystem. They are bringing the debate about how to strengthen the startup ecosystem into the public arena. The only thing still lacking is the implementation of effective measures.

The startup strategy published by federal government in July 2022 includes significant measures to drive forward the startup and venture capital landscape in Germany and Europe. Above all, it addresses the issues of startup funding, spin-offs and diversity.[72] In 2021, the Fund Location Act had already addressed weaknesses in the ecosystem. The planned Future Financing Act now goes a step further in seeking to remedy them, especially by making employees' equity participation more attractive. Skilled immigration is also to be simplified. All these initiatives are heading in the right direction. The crucial issue now is for the announced measures to be implemented swiftly and comprehensively – and for them to genuinely provide the targeted stimulus.

This study is intended as a contribution to conversation with the government. Our aim is to support it in transforming Germany – and with it Europe – into a global venture capital powerhouse.

OUR FUTURE IS AT STAKE. LET'S GET MOVING!

Footnotes

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