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Impact on Humanity

SECURING EUROPE'S TECHNOLOGICAL SOVEREIGNTY

Members Insights

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SECURING EUROPE'S TECHNOLOGICAL SOVEREIGNTY

Europe's sovereignty is under scrutiny. In particular its ability to control its destiny in technology, defence and energy. But the future is bright.

EUROPE'S SOVEREIGNTY – IN PARTICULAR ITS ability to control its destiny in technology, defence and energy — is under scrutiny. The continent has grown to be overly-reliant on products and services imported from abroad. Whether energy from Russia, manufacturing from China or technology from the United States, this overreliance is weakening its political, economic and cultural power. But the future is bright. A revolution in Europe's start-up financing ecosystem, underpinned by historical strength in education and research, has put the continent on a firm footing as it seeks to commercialise a new wave of innovation in artificial intelligence, quantum computing, defence tech, climate tech, and more. Policymakers have taken the initiative by backing start-ups with billions of euros of taxpayer funds, with more to come. This has made the ground fertile for investors seeking to support European innovation.

ENERGY, DEFENCE AND TECHNOLOGICAL SOVERE IGNTY UNDER SCRUTINY

After consecutive world wars laid waste to Europe in the first half of the twentieth century, political thinkers turned their minds to economics as they searched for solutions to bring a lasting peace. By 1951, a common European market in coal and steel had been created, the theory being that free trade in these crucial commodities between wartime enemies would bring peace through shared economic prosperity. The six-nation European Coal and Steel Community would catalyse the formation of the European Union.

The EU's rise went hand-in-hand with the rise of globalisation. But today, the globalist ideology has been undermined by conflict and political retreat, exposing shortcomings in the sovereignty of many that embraced it. Europe's shortcomings in energy and defence were brought into sharp focus by Russia's invasion of Ukraine in 2022, which highlighted the continent's overreliance on cheap Russian natural gas and its need for military support from the US.

Europe is seeking to address these shortfalls financially as well as politically. For one, Nadia Calviño, president of the European Investment Bank, indicated recently that she wants to invest more in Europe's nuclear energy and defence industries[1]. This would mark a distinct policy shift by the EIB, the world's largest multilateral lender, which has historically avoided investing in these sectors.

The war in Ukraine prompted the European Commission to draw up its firstever defence industrial strategy. Shortly before it was unveiled in March this year, Ursula von der Leyen, President of the Commission, said she wanted to see Europe "turbo-charging our defence industrial capacity in the next five years," adding: "Europe must spend more"[2].

Josep Borrell, the EU High Representative for Foreign and Security Policy and one of the architects of the strategy, said Europe needs to ensure "better access to finance for the European defence industry both from private and public sources."[3] Margrethe Vestager, the commission's Executive Vice President, said: "Some of the most innovative companies are small players, →

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ABOUT THE AUTHOR

KLAUS HOMMELS, Founder & Chairman of Lakestar, is one of Europe's leading business angels and venture capitalists. He is also a prominent voice for the European Tech Ecosystem with the aim of strengthening Europe's sovereignty in times of digital transformation.

NINJA STRUYE DE SWIELANDE, CCO and Head of Investor Relations of Lakestar, is Partner at Lakestar and focuses on PR, Marketing and Investor Relations. She is responsible for Lakestar's positioning in the ecosystem, including events, PR and Lakestar's social media footprint. She also heads fundraising and the firm's relationships with investors globally.

Ninja is also Chairwoman of the Lakestar Industry Advisory Board.

→ coming from the civilian side, whose products can help give our militaries an edge."[4]

Necessity breeds innovation and many technologies repurposed and deployed by Ukraine have been developed wholly or in part by European tech start-ups. Among them are a drone operating system created by Auterion, and artificially intelligent battlefield mapping system developed by Helsing, a German d efence AI start-up.

Steps are being taken to address concerns about both military and civilian start-up financing in Europe — something that is arguably as important to the continent's sovereignty and shared economic prosperity as coal and steel were in 1951.

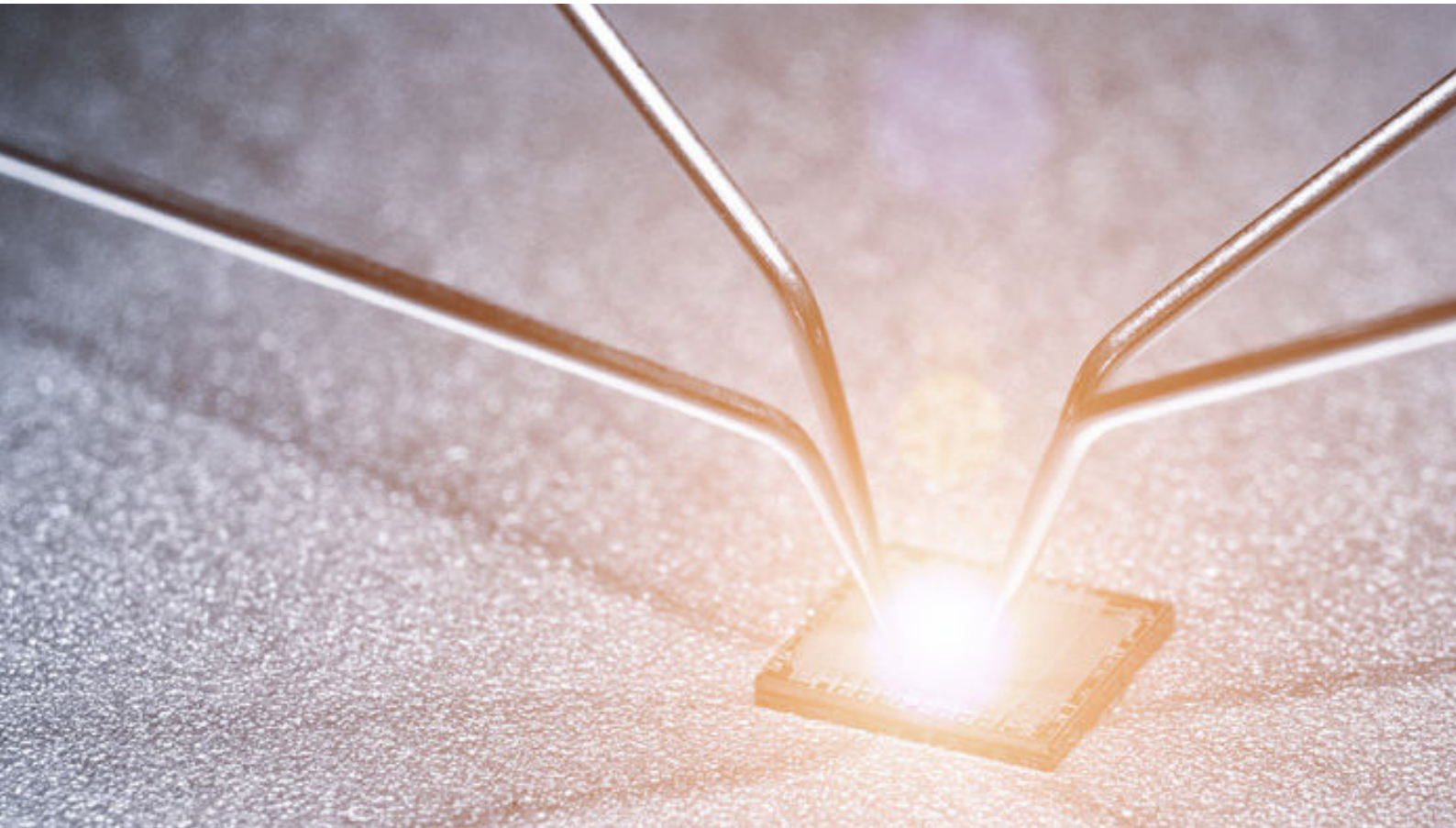
EUROPE'S LATE REVOLUTION IN START-UP FINANCING

In the period of reconstruction after World War II, banks were the stalwarts of growth financing in Europe, making traditional loans to predominantly industrial companies that would take 15 or more years to scale. This period spurred the growth of companies that today are among the constituents of Europe's leading stock indexes — the likes of Germany's BMW, Bayer and Bosch.

In the late 1990s, technology emerged as the dominant growth sector, with loss-making start-ups taking as few as five years to scale. Banks shied away from these risky investments, putting the onus on venture capital and other growth investors. But Europe, unlike the US, was slow to embrace private growth financing, meaning that it won a comparatively small share of the immense value creation gains of the internet boom.

As a result, Europeans came to rely heavily on digital services and infrastructure provided by US tech companies that dominate their European peers in terms of size. The imbalance of corporate tech power once led French President Emmanuel Macron to joke that while the US had the GAFA (Google, Apple, Facebook and Amazon), and China had the BATX (Baidu, Alibaba, Tencent and Xiaomi), Europe had the GDPR (General Data Protection Regulation)[5]. His dark humour encapsulated Brussels' defensive approach to clawing back technological sovereignty: regulation over creation. Protectionism does not of itself foster economic prosperity. What is needed is a thriving education and research base, the desire and the nous to commercialise innovation, and the necessary financing to allow promising young companies to scale. At the turn of the century, Europe was falling short on commercialisation and financing. However, over the last 20 years, the continent learned to embrace entrepreneurialism and enjoyed a full-scale revolution. [6]

World University Rankings 2024, Times Higher Education (September 2023) of its tech financing ecosystem. This has presented an opportunity for investors today to integrate themselves into a thriving community of world-leading start-ups that are innovating in fields such as artificial intelligence, quantum computing, space tech, climate tech, nuclear fusion, fintech, mobility, and lab-grown protein, to name a few. It has also given Europe the opportunity to secure its technological sovereignty through creation rather than regulation. →



→ THE EDUCATION AND RESEARCH BASE

Europe has long been blessed with a large share of the world's leading research and teaching institutions. Four of the world's top ten universities for research — the University of Oxford, Imperial College London, University College London, and Vita-Salute San Raffaele University — are in Europe, as are four of the world's top ten universities for studying computer science: the University of Oxford, ETH Zurich, the University of Cambridge, and Imperial College London6. Together, this helps to create a rich ecosystem and powerful network effect for start-ups with facilities like UnternehmerTUM, part of the Technical University of Munich, recognized as start-up hubs in Europe.

THE START- UP FINANCING REVOLUTION BREEDS HUNDREDS OF "UNICORNS"

In 2012, Europe's venture capital and private equity firms together raised €29 billion. In 2022, they raised €170 billion — nearly five times more than ten years prior[7]. Europe's share of global venture capital financing quadrupled between 2003 and 2022, to 20 per cent[8].

The vast improvement in the funding environment, underpinned by deep-rooted strength in education and research, is part of the reason why the number of tech start-ups created in Europe has exceeded the number created in the US every year since at least 2019.

Europe today is home to 209 "unicorns" — private start-ups valued above $1 billion. With 61, the UK has the lion's share, including two of the 11 largest globally: Checkout.com, which is valued at $40 billion, and Revolut, which is valued at $33 billion. A further 39 unicorns can be found in Germany and 30 in France[9].

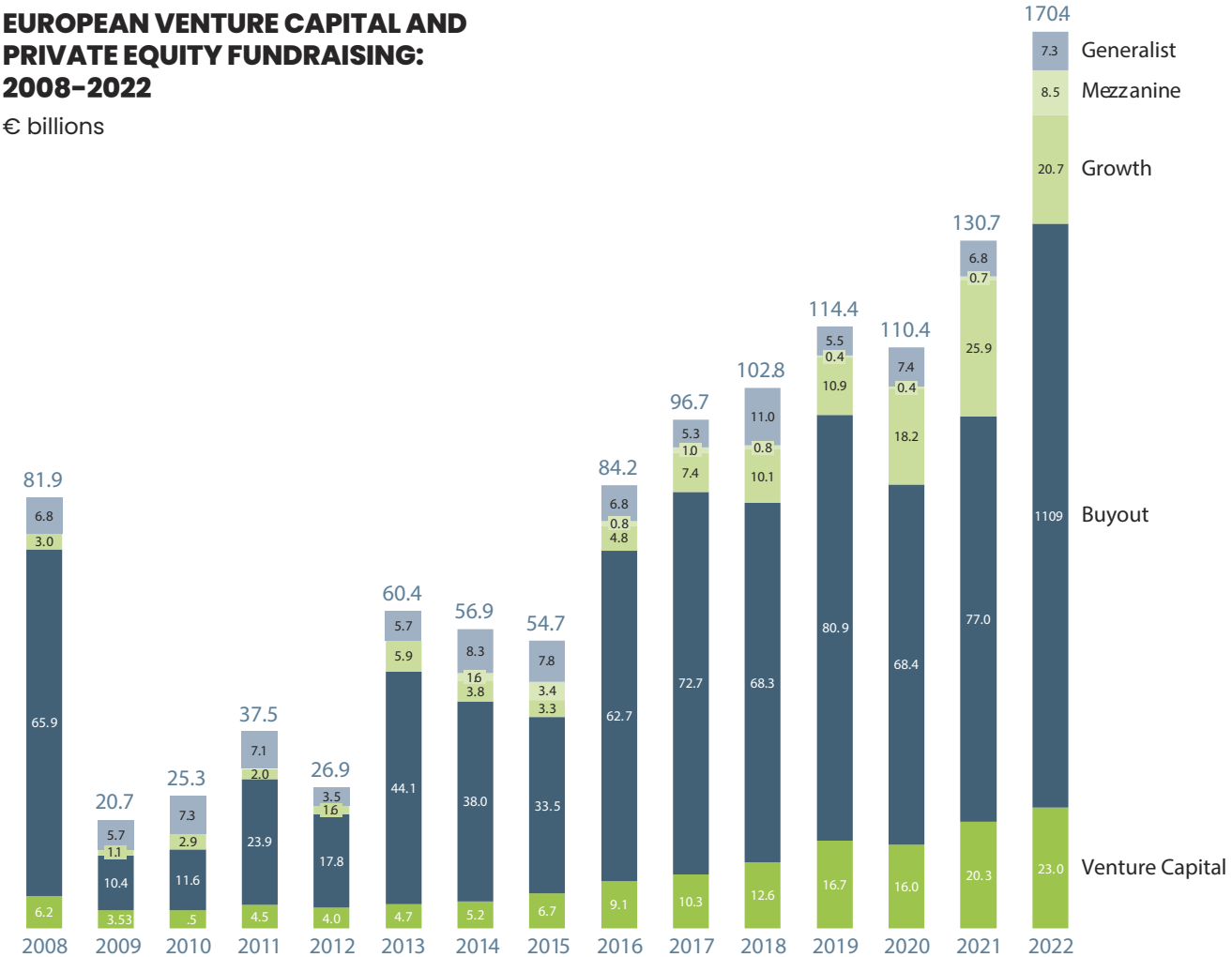
Importantly, investors in European start-ups have enjoyed superior returns compared with their US peers. In the five years to 2022, European venture capital firms secured an average net annual return of 31.4 per cent, compared with 25.2 per cent in the US and 19.7 per cent for the rest of the world. Over the same period, the MSCI Europe index, the continent's benchmark equity index, gained 9.5 per cent. European returns also beat US returns over 10-year and 20-year horizons[10].

THE EU BRINGS FINANCIAL BACKING TO POLITIC AL RHETORIC

European lenders such as the EIB are generally prevented by law from funding R&D that is solely for defence purposes. They are, however, allowed to fund →

EUROPEAN VENTURE CAPITAL AND PRIVATE EQUITY FUNDRAISING: 2008–2022

€ billions



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→ "dual-use" R&D into technologies that have both civilian and defence applications, such as drones. In January, the Commission proposed expanding funding for dual-use R&D. Among other things, it proposed lifting a restriction on Horizon Europe, its €95.5 billion research fund, that permits it to invest only in civilian projects[11]. In February, in a meeting with the EU Economic and Financial Affairs Council, the EIB's Calviño outlined plans to increase security and defence financing with a "strong focus" on "new technologies" as well as "cybersecurity, space and dual-use technologies like drones"[12].

Outside of defence, the 2021 launch of the European Innovation Council brought with it €10.1 billion of EU taxpayer-backed venture capital financing to support growth companies. The council's main fund invests between €500,000 and €15 million exclusively in European start-ups, and to date, has deployed €1.3 billion across 201 investments[13].

Last year, the European Investment Fund, an offshoot of the European Investment Bank, launched the European Champions Tech Initiative, a €3.8 billion fund-of-funds designed to boost late-stage growth investment. The initiative is seeking to make 10 to 15 investments in European venture capital funds that hold €1 billion or more, with the ultimate aim of unlocking €50 million-plus investments for latestage start-ups to allow them to "compete on a global scale". The commitment shown by EU policymakers to further improving start-up funding conditions is shared by individual nations; for example, Germany and France this year announced new multibillion-euro start-up financing projects of their own.

European policymakers continue to use regulation as a shield — indeed, the European Commission fined Apple €1.8 billion in early March for breaking competition rules — but developments since 2020 indicate a newfound desire among the political classes to use finance as a sword in the battle to secure Europe's technological sovereignty.

CONCLUSION

Politicians and the public need to be educated about the scale of the problem and the size of the opportunity. Politicians must be encouraged to see entrepreneurialism and commercialization, not regulation, as the most constructive means to the end of securing Europe's technological sovereignty.

Access to growth funds needs to be improved to open up new sources of capital which can be channeled to key sectors such as deeptech, AI, Quantum and cyber security. This could be achieved by lowering minimum investment thresholds, thereby opening growth funds to small, private investors in the form of a better-educated public.

There are reasons to be optimistic. European venture capital firms are sitting on a record amount of undeployed capital after several record years for fundraising. Research suggests that Europe is now producing more new founders than the US.

The most constructive solution surely lies in fostering conditions that help Europe's bright young tech companies to grow. This approach would surely enhance economic prosperity, employment and living standards across the continent — the foundations upon which a prosperous, secure and peaceful Europe were built. ■

1 FINANCIAL TIMES (2024)
2 EURACTIV (2024)
3 EU DIPLOMATIC SERVICE (2024)
4 EUROPEAN COMMISSION (2024)
5 STATEMENT BY PRESIDENT EMMANUEL MACRON ON LINKEDIN (2020)
6 WORLD UNIVERSITY RANKINGS 2024, TIMES HIGHER EDUCATION (SEPTEMBER 2023)
7 PRIVATE EQUITY ACTIVITY 2022, INVEST EUROPE (2023)
8 EUROPEAN TECH ASCENDANCY, CREANDUM (2023)
9 THE CRUNCHBASE UNICORN BOARD, CRUNCHBASE (2024)
10 VENTURE CAPITAL: FUELLING EUROPEAN INNOVATION, INVEST EUROPE (2023)
11 EUROPEAN COMMISSION (2024)
12 EUROPEAN INVESTMENT BANK (2024)
13 EUROPEAN INNOVATION COUNCIL (2024)

ABOUT FII INSTITUTE

FUTURE INVESTMENT INITIATIVE (FII) INSTITUTE IS a global non-profit foundation with an investment arm and one agenda: Impact on Humanity. Global, inclusive, and driven by data, we foster great minds from around the world and turn ideas into tangible solutions and actions in four critical areas: Artificial Intelligence (AI) and Robotics, Education, Healthcare and Sustainability. We are in the right place at the right time: when decision-makers, investors and an engaged generation of youth come together in aspiration, energized and ready for change.

We harness that energy into three pillars: THINK, XCHANGE, ACT. Our THINK pillar empowers the world's brightest minds to identify technological solutions to the most pressing issues facing humanity. Our XCHANGE pillar builds inclusive platforms for international dialogue, knowledge-sharing and partnership. Our ACT pillar curates and invests directly in the technologies of the future to secure sustainable real-world solutions. Join us to own, cocreate and actualize a brighter, more sustainable future for humanity.

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Future Investment Initiative Institute

Contact

FII Institute:
THINK
think@fii-institute.org

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