Rothschild & Co
Global Advisory

# Growth Equity Update

May 2023 – Edition 14

- Twitter took 65 months to get to 100m global monthly average users (MAUs). Facebook took 54 months, Instagram 28 months and TikTok 9 months. ChatGPT took 2 months
- In this edition we focus on the venture capital world's response to generative AI. Already there are thirteen generative AI unicorns, headed by OpenAI, and the pace and scale of fundraising suggests that this number may grow fast
- *'The potential size of this market is hard to grasp — somewhere between all software and all human endeavours' - Andreessen Horowitz*
- Venture capital's response to generative AI arguably marks a return to what it does best- ambitiously funding small, disruptive, pre-revenue businesses in game changing technologies
- You are invited to the Redburn 2023 AI Conference which will be held on June 15 – featuring Stability.AI, Coreweave, Inworld AI and causaLens: 1506-AI-Conf-Agenda.pdf (redburn.com)
- The most recent Softbank results show the cumulative loss since inception of the SVF1 /SVF2/LatAm funds is now $8.5bn. Meanwhile CFO Yoshimitsu Goto says he '*can't explain clearly how excited'* CEO Masayoshi Son is about the new opportunities presented by generative AI
- Elsewhere, a Pitchbook survey indicates 78% of VCs expect valuations to be more attractive in the next 6-12 months. 43% think 2023 vintage investments will offer the best returns of the 2019-23 period
- With interest rates peaking, NASDAQ is up 19% ytd, the S&P 500/STOXX Europe 600 are up 8%, the FTSE 100 up 2% ytd and the Refinitiv Venture Capital Index up 12% ytd.

## The Generative AI edition

Twitter took 65 months to get to 100m global monthly average users(MAUs). Facebook took 54 months, Instagram 28 months and TikTok 9 months. ChatGPT took 2 months.

Generative AI has applications in data analysis, programming, game development, text generation, video and image production, customer service and translation conversion.

Investment banks are producing baskets of stocks 'most affected' and 'least affected' by generative AI.

Acumen Research and Consulting sizes the global Generative AI Market at $7.9bn in 2021, projected to grow 34% pa to $111bn by 2030. Gartner anticipates that, by 2025, 30% of outbound messages from large organizations will be synthetically generated, up from c 2% in 2022; generative AI will account for 10% of all data produced, up from c1% in 2021; and that more than 30% of new drugs and materials will be systematically discovered using generative AI techniques. It thinks that by 2030, a major blockbuster film will be released with 90% of the film generated by AI, from text to video and that, as early as 2024, 60% of data used for the development of AI and analytics projects will be synthetically generated.

## Generative AI and venture capital

***A return to what venture capital does best– funding disruptive, pre revenue businesses in game changing technologies.***

Generative AI is hitting the headlines for its disruptive capability and its potential ethical consequences. While it does so, the venture capital world has embraced the pioneers of generative AI in a flurry of fund raising.

There are many people within the Rothschild & Co group with much greater knowledge than mine on generative AI – notably the R&Co technology sector team and the Redburn software analysts Alex Heissl and Nina Marques. Indeed Alex's recent report on AI is now the most read report in the history of Redburn. If you would like a copy of Alex's *'AI – The Real Big Thing'* email me at patrick.wellington@rothschildandco.com.

**You are invited to attend the Redburn 2023 AI Conference which will be held on June 15 – details below**

15 June 2023
The 2023 AI Conference

Artificial Intelligence (AI) is the prominent theme of the year, captivating not only technology investors but also the wider market given the value opportunity of adoption and the associated negative impacts. AI has transcended from a buzzword to fundamentally changing the way we interact with technology, presenting material revenue and efficiency opportunities for adopters. We have entered a new era, moving beyond concept to practical adoption.

The rapid evolution of AI means that private companies typically have the most valuable insights. For this conference, we have gathered some of the pioneers across the ML/AI stack to address investors' top questions.

**Speakers include:**

- Scott Draves – **Stability.AI**, open-source foundation model developer best known for Stable Diffusion – VP of Engineering
- Brannin McBee – **CoreWeave**, specialised cloud provider offering NVIDIA GPUs – Co-founder & CSO
- Florin Radu – **Inworld AI,** developer platform of AI characters for gaming & branding – Head of Partnerships
- Darko Matovski – **causaLens**, AI platform utilising causality for enterprise decision-making – Co-founder & CEO

**Virtual Conference, 14.00 BST / 15.00 CEST / 09.00 EDT**

1506-AI-Conf-Agenda.pdf (redburn.com)

In the meantime what is noteworthy is the speed at which generative AI unicorns are being created and the heady 2021 style valuations which these companies are commanding. Arguably this is venture capital reverting to doing what it does best – spotting new technologies and nascent business models and making some big bets on the future of an emerging industry.

**13 generative AI unicorns so far**: So what has been going on? CB Insights counts thirteen generative AI companies that so far have reached a $1bn plus valuation. Five of these thirteen have become unicorns so far during the course of 2023. The average time taken for these companies to become a unicorn has been 3.6 years. Across all unicorns the average time to reach that status is 7 years.

***OpenAI - The mission comes first:*** The biggest of the generative AI unicorns is **OpenAI**. the company behind ChatGPT. It became a unicorn in 2019. Bolstered by a $10bn investment by Microsoft its valuation has grown tenfold since then and stands at c$29bn. Microsoft had initially invested c$1bn in OpenAI in 2019 with the aim of using its capability to enhance its Azure cloud platform. Post the Microsoft funding the company is reported to have raised a further $300m at the $29bn valuation from VC firms including Sequoia Capital, Andreessen Horowitz, Thrive and K2 Global. In February, in a move to monetise its substantial user base, OpenAI launched a $20 per month pilot subscription service, ChatGPT Plus. OpenAI management has forecast $200m in revenue in 2023 and $1bn by 2024.

Interestingly OpenAI started out as a non-profit business. In 2015 it was established as a not for profit that would make its patents and research open to the public. In 2019 it transferred to a 'capped' for-profit status. OpenAI LP, a for-profit business was formed, of which the non-profit OpenAI Inc is the sole controlling shareholder. Stating '*the mission comes first'* (that safe artificial general intelligence is developed and benefits all of humanity) the founders of the company said:

*"We want to increase our ability to raise capital while still serving our mission, and no pre-existing legal structure we know of strikes the right balance. Our solution is to create OpenAI LP as a hybrid of a for-profit and nonprofit—which we are calling a 'capped-profit' company.*

*The fundamental idea of OpenAI LP is that investors and employees can get a capped return if we succeed at our mission, which allows us to raise investment capital and attract employees with startup-like equity. But any returns beyond that amount—and if we are successful, we expect to generate orders of magnitude more value than we'd owe to people who invest in or work at OpenAI LP—are owned by the original OpenAI nonprofit entity."*

**Anthropic - helpful, honest, and harmless:** Next in line in valuation, although a long way back, is **Anthropic**. The company is two years old – it was founded in 2021 by former senior members of OpenAI and has nominal revenues.

In late 2022 Google invested $3bn for a 10% stake in the company. Anthropic in turn sources cloud computing capability from Google. The company launched its ChatGPT style chatbot Claude ('helpful, honest, and harmless') in March 2023.

According to an investor presentation prepared by Anthropic (and seen by TechCrunch, the WSJ and others) Anthropic has indicated that it aims to raise as much as $5bn over the next two years. Initially it intends to build a 'frontier model' known as 'Claude-Next' designed to be ten times more capable than the most powerful AI currently available and has indicated that this will require c$1bn of investment in the next 18 months. In March 2023 Spark Capital led a $300m round at a valuation of $4.1bn.

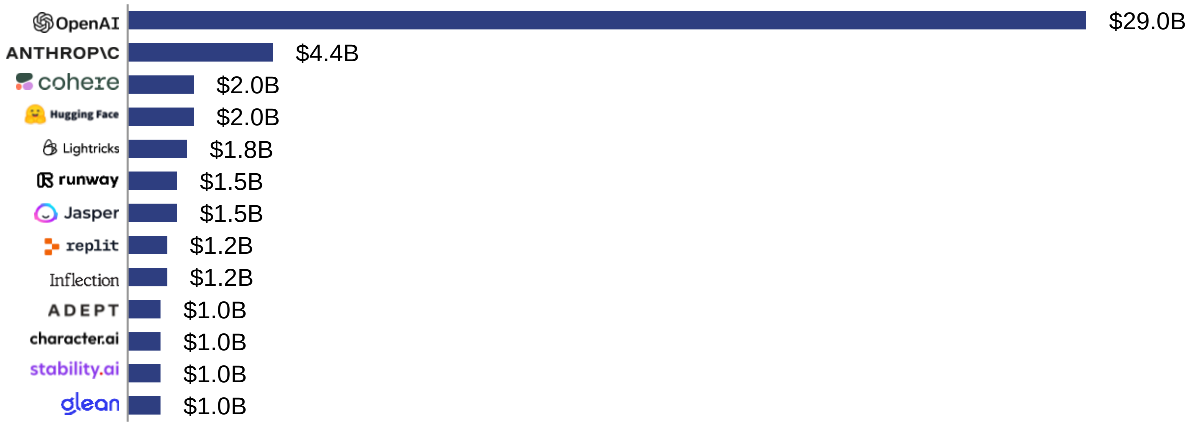
Anthropic was founded as a public benefit corporation in Delaware. This allows it to be a 'for profit' business albeit defined as acting for the public benefit.

Next in line are Cohere and Hugging Face whose last rounds valued them at $2bn each. This could change rapidly.

**Cohere**, which is building a large language model focused on enterprise customers rather than consumers, raised $125m in a Series B round led by Tiger Global and Radical Ventures in February 2022 which followed on from a $40m Series A in September 2021. Cohere is reported by the FT to be close to securing $250m in a new round to be led by Inovia Capital which will include Nvidia and Salesforce amongst its investors. Aidan Gomez, Cohere's CEO, comments *"A switch has flicked this year. We're in the midst of a total transformation in every product or company on earth."*

**Hugging Face** was founded in 2016 as a community driven machine learning platform. It provides an open-source platform to help developers build applications. Hugging Face also hosts services such as the inference API, allowing the training and deployment of models. It has a collaboration with AWS to accelerate the training, fine-tuning, and deployment of large language and vision models used to create generative AI applications. Hugging Face raised $100m in Series C funding in May 2022 at a $2bn valuation in a round led by Lux Capital with Sequoia and Coatue investing for the first time. Hugging Face CEO Clément Delangue comments *"I don't really see a world where machine learning becomes the default way to build technology and where Hugging Face is the No. 1 platform for this, and we don't manage to generate several billion dollars in revenue."*

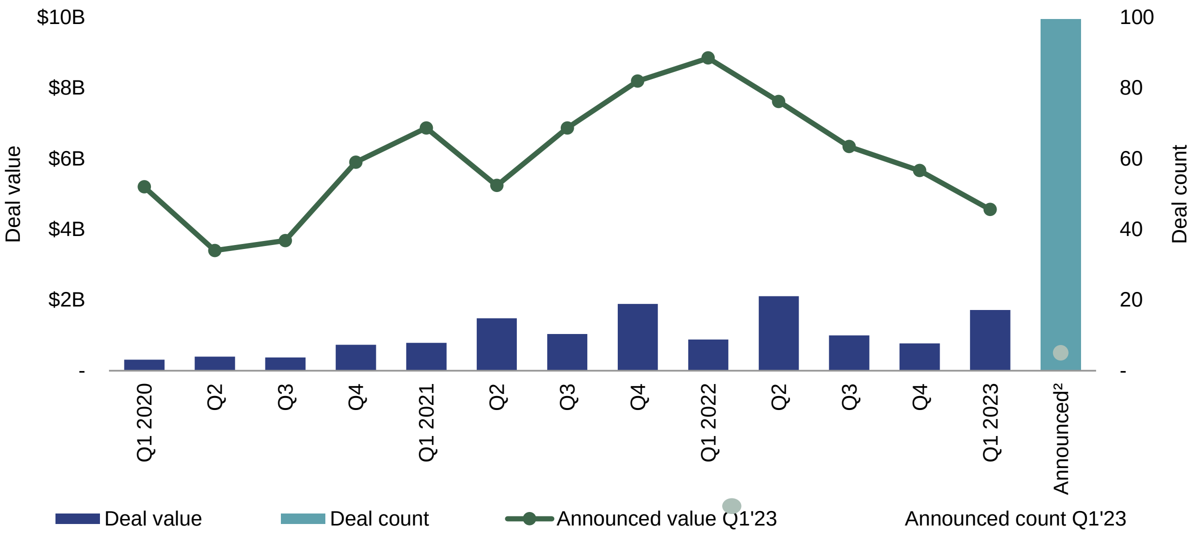
**Generative AI startups with $1bn plus valuations (as at start May 2023)**




*Source: CB Insights*

Pitchbook estimates that generative AI companies closed $1.7bn in funding in Q1 2023 across 46 deals. As the chart indicates, this level of funding is not remarkable in this sector relative to recent quarters - in Q2 2022 for instance $2.1bn was raised across 78 deals. However, taking into account deals announced but not yet closed (notably the Microsoft investment in Open AI) the Q1 2023 total rises by a further $10.7bn.

**VC deals for generative AI**




*Source: Pitchbook data*
*Geography: Global*
*Note:*
*1. As of 4/1/2023*
*2. Includes Microsoft's reported $10 billion Investment in OpenAI*

The pace of deals has remained high. A selection of 2023 generative AI deals includes:

**Character.AI:** The company was founded two years ago by former Google employees. In late March it raised more than $200m in a round led by Andreessen Horowitz which valued the business at $1bn. At the time of the fundraising the business had 22 employees, no revenues but post the launch of its chatbot, which enables users to create customised AI companions, 100 million monthly site visits. Noam Shazeer Character AI's CEO comments *"We started the company because we want to get this technology in the hands of everybody on Earth. A billion people can invent a billion use cases.''* It plans to launch a paid subscription and possibly an ad supported model *'in the not-too-distant future.'*

**Eleven Labs:** This business is relatively small but its recent record demonstrates the pace at which funding rounds in generative AI are succeeding each other and the rapid uplifts in perceived value that are being generated. These features were both characteristic of the heady venture capital market of 2021.

In January 2023 Eleven Labs, which is an AI voice technology business, raised a $2m seed round led by Credo Ventures. Two months later, at the end of March, the business raised a further $18m at a valuation of $100m in a round led by Andreessen Horowitz. The company, founded in 2022, provides a monthly subscription service with a free tier for experimenting with the technology and a standard tier for content creators.

**Humane:** The business was founded by ex-Apple executives and is developing a range of a AI-powered wearable devices. Early demonstrations of its 'iPhone killer' projector show the founder projecting a phone call function onto his hand. Imran Chaudhri, President of Humane says "*It's a new kind of wearable device and platform that's built entirely from the ground up for artificial intelligence. And it's completely standalone. You don't need a smartphone or any other device to pair with it. It interacts with the world the way you interact with the world, hearing what you hear, seeing what you see, while being privacy first, and safe, and completely fading into the background of your life.*"

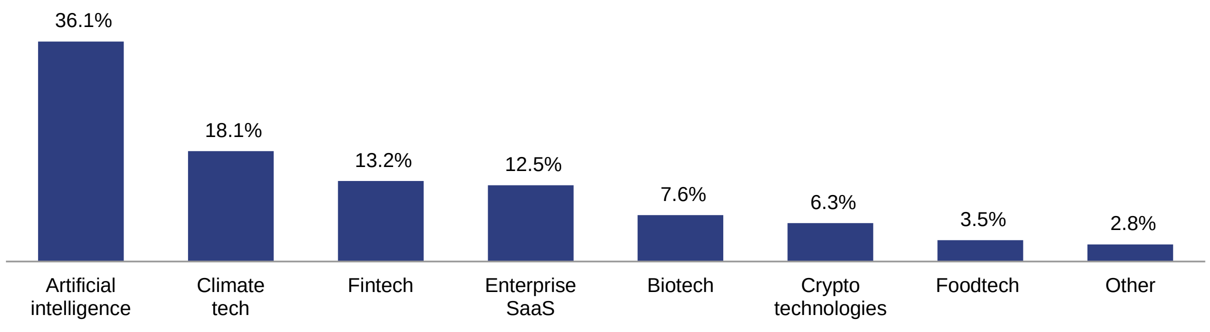
In March Humane raised $100m from investors led by Kindred Ventures. Microsoft is believed to have participated in the funding round. In early May Imran Chaudhri commented: "*We believe AI presents a huge opportunity for us to redefine our relationship to technology and that it will enable personal mobile computing to become faster, more powerful and easier to use. The first Humane device will allow people to bring AI with them everywhere and we're really looking forward to revealing more at our launch later this year.*"

**LangChain:** The company was founded in October 2022 as an open-source library that provides developers with the tools to build applications powered by large language models. In April 2022 it announced a $10m seed funding round led by Benchmark giving it a valuation of $50m. Within weeks it raised a further round led by Sequoia valuing the business at $200m.

**Adept:** Founded in 2022 and with around 25 employees Adept raised $350m in a March 2023 Series B round led by General Catalyst and Spark Capital at a post money valuation of $1bn. Its founders have a strong pedigree in AI. CEO and cofounder David Luan was vice president of engineering at OpenAI and then led the large model projects at Google. Cofounders Ashish Vaswani and Niki Parmar co-authored the Google research paper which invented the transformer deep learning model concept.

In a recent survey Pitchbook asked venture capitalists in which area of technology they expect the most growth and adoption over the next year. 36% of respondents cited AI, ahead of Climate Tech at 18% and 13% for FinTech.

**In which areas of technology do you expect the most growth and adoption over the next 12 months?[1]**




*Source: Pitchbook data*
*Geography: Global*
*Note:*

*1. As of April 4, 2023*

Venture firms are starting up funds specifically targeted at generative AI. Salesforce's Venture arm, Salesforce Ventures, launched a $250m generative AI fund in March. It already has investments in Anthropic, Cohere, Hearth.AI and You.com. Sound Ventures has just closed the Sound Ventures AI Fund, oversubscribed at nearly $240M. The fund invests in artificial intelligence businesses at the foundation model layer and its portfolio includes OpenAI, Anthropic and StabilityAI. True Global Ventures has rebranded its $150m TGV 4 Plus Opportunity Fund to emphasise its intent to invest in Web3 leaders with a roadmap to employ Generative AI and to invest in growth-stage companies that specialise in Generative AI.

> *"The potential size of this market is hard to grasp — somewhere between all software and all human endeavours"* a16z

**The debates on generative AI:** Revenues at generative AI companies at the moment are relatively small. There is uncertainty as to how revenue focused some of these companies are, there is debate as to the potential and defensibility of revenue and the market is unsure as to where the most value might lie. Here's a16z (Andreessen Horowitz) on the subject:

*"Yet the revenue associated with these companies is still relatively small compared to the usage and buzz. In image generation, Stable Diffusion has seen explosive community growth, supported by an ecosystem of user interfaces, hosted offerings, and fine-tuning methods. But Stability gives their major checkpoints away for free as a core tenet of their business. In natural language models, OpenAI dominates with GPT-3/3.5 and ChatGPT. But relatively few killer apps built on OpenAI exist so far, and prices have already dropped once."*

a16z notes the market is also uncertain on the defensibility of the potential business models:

*"There don't appear, today, to be any systemic moats in generative AI. As a first-order approximation, applications lack strong product differentiation because they use similar models; models face unclear long-term differentiation because they are trained on similar datasets with similar architectures; cloud providers lack deep technical differentiation because they run the same GPUs; and even the hardware companies manufacture their chips at the same fabs."*

In some quarters there is scepticism on valuations and the rush of money into the sector. While revenue potential may be substantial, revenue models in many cases are unformed, while the computing cost of training AI models and services is undoubtedly very substantial. Tom Ecc , CTO of industry platforms at IBM observes that *"Right now, AI is an elitist sport – there are very few people who know how to practice it. The top-tier AI researchers are getting paid the salaries of NFL quarterbacks, which tells you the demand and the perceived value."* For reference, the highest paid quarterback in the NFL earns $25m pa, there are over 30 who earn more than $5m pa.

Here's Matt Turck of FirstMark, quoted in the Wall Street Journal, looking at the AI funding phenomenon:

*"It is undeniably a major inflection point, and great products and companies are going to be built [but] as in prior hype cycles, a lot of this will not end well. The market cannot sustain, all of a sudden, a million different companies with half-baked ideas. It feels like the gold rush."*

"*Right now, AI is an elitist sport – there are very few people who know how to practice it. The top-tier AI researchers are getting paid the salaries of NFL quarterbacks, which tells you the demand and the perceived value."*

Tom Eck, CTO of industry platforms at IBM

a16z is though undoubtedly bullish on the long-term market potential.

*"Based on the available data, it's just not clear if there will be a long-term, winner-take-all dynamic in generative AI. This is weird. But to us, it's good news. The potential size of this market is hard to grasp — somewhere between all software and all human endeavours — so we expect many, many players and healthy competition at all levels of the stack. We also expect both horizontal and vertical companies to succeed, with the best approach dictated by end-markets and end-users."*

https://a16z.com/2023/01/19/who-owns-the-generative-ai-platform/

## Softbank – Mixing Defence and Offense in 2023

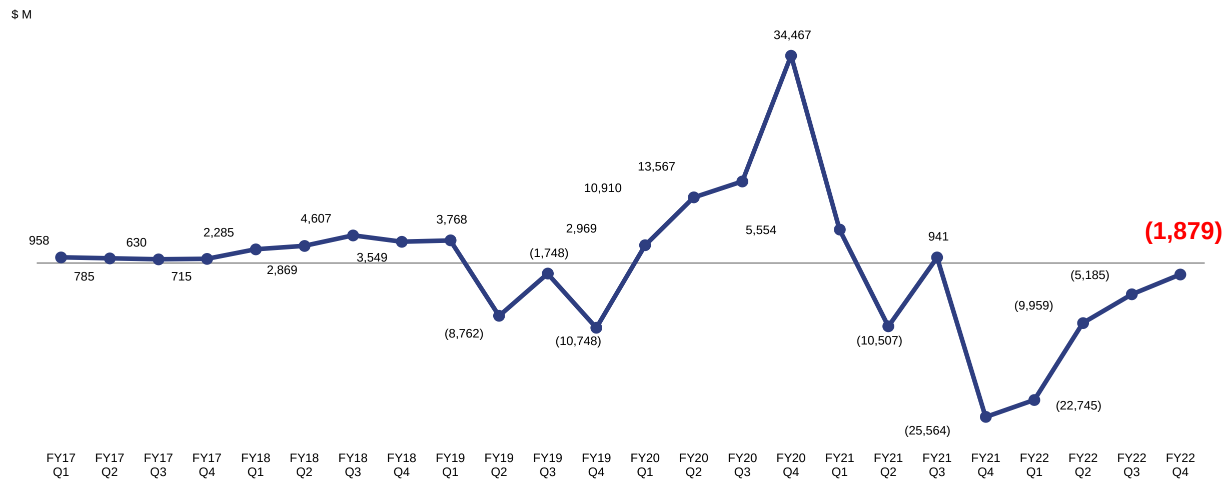
***The more cautious investment approach of 2022 will evolve to a more aggressive stance in 2023 with a particular focus on generative AI.***

Softbank reported its results for the year to end March 2023 on May 11th. The Vision Fund segment recorded a full year 2022 segment loss before tax of ¥4.3 trillion ($32bn) versus a ¥2.55 trillion loss in FY21/2.

This included a loss of ¥5.3 trillion ($39bn) on investments at SVF1 (¥2.3trn), SVF2 (¥2.45trn) and the LatAm funds versus a ¥3.4trn loss a year earlier.

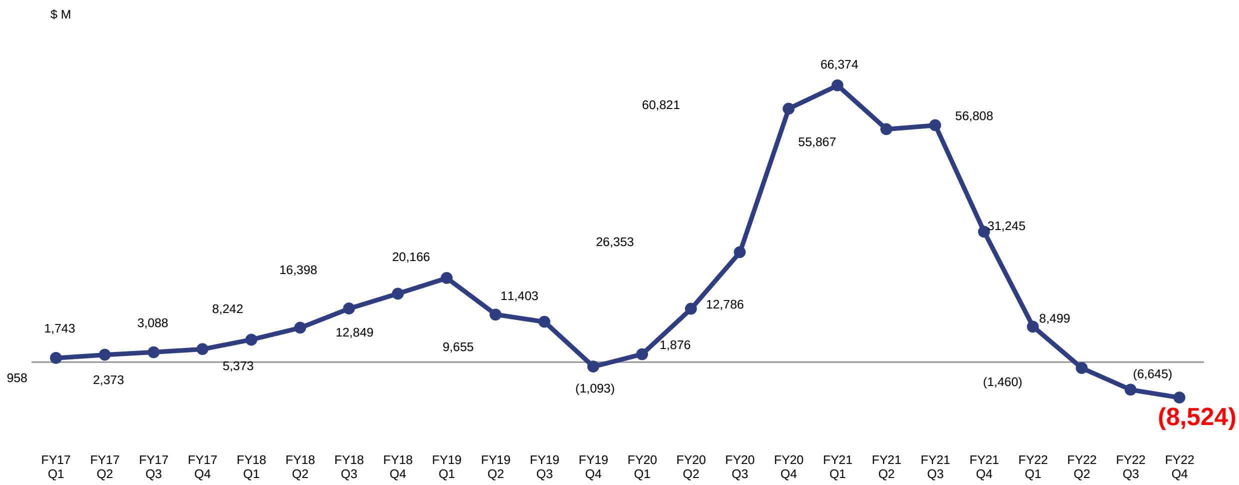
The cumulative loss since inception of the SVF1 /SVF2/LatAm funds is now $8.5bn. The Q4 quarterly result improved to a loss of $1.9bn from a loss of $5.2bn in Q3 and the peak loss of $25.2bn in Q4 FY21.

### Gain/Loss on investments (cumulative)




*Source: Softbank*

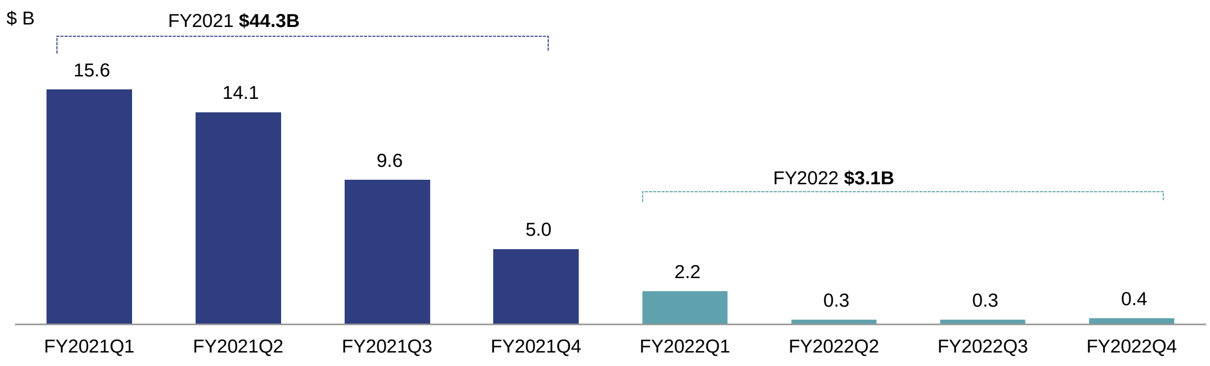
### Gain/Loss on investments (quarterly)




*Source: Softbank*

**Focused on Defence in 2022:** Softbank reiterated that it had adopted a more cautious approach in FY22 *'Focused on Defence'.* The total new and follow on investments in the SVF1+2 funds were $3.1bn, down 93% from the $44.3bn of FY21. Indeed $2.2bn of 2022's new investment was in Q1 with the spend Q2-Q4 amounting to just under $1bn.

**Invested Amounts (SVF1 + 2) significantly curtailed investments**




*Source: Softbank*

**Defence and Offense in 2023**. Having stabilised the business in FY22 Softbank is looking to a greater balance between *'Defence and Offense'* in 2023. The company notes the rally in NASDAQ and in its publicly quoted holdings. CFO Yoshimitsu Goto observed, however, on the earnings call that:

*"Even though we see signs of improvement in the last three months, we can't simply restart investments"*

**Six areas of investment focus**: Nevertheless with falling quarterly losses, there is an appetite at Softbank to renew investment activity in key technology areas. In particular, Softbank highlighted six areas of focus – Generative AI, Quantum Computing, Self-driving, Biotechnology, Advanced Robotics and the Metaverse.

*During its press conference, SoftBank's CFO Yoshimitsu Goto commented he 'can't explain clearly how excited' CEO Masayoshi Son is about the new opportunities presented by AI.*

**Generative AI the key area of focus:** Perhaps unsurprisingly the key area of focus for Softbank in FY23 is generative AI. CFO Yoshimitsu Goto again:

*"Since we founded our company, we wanted to make people happy through the information revolution and since we founded Vision Fund, what was our vision? AI. [The] AI revolution has always been a part of our vision, and from that perspective, we want to identify and invest in opportunities and a lot of things are evolving now, especially visible recently is Generative AI, which has been growing exponentially."*

Indeed Softbank devoted ten pages of its 73 page investor presentation to the potential of Generative AI including this 2017 quote from CEO Masayoshi Son, "*The 'Singularity', when AI surpasses human intelligence, will be the biggest paradigm shift in human history.*"

During its press conference, SoftBank's CFO Yoshimitsu Goto commented he *'can't explain clearly how excited'* Son is about the new opportunities presented by AI.

**(Reference) Investment Performance of SVF1 and SVF2**

| | | Since Inception | | | FY22[1] | |
|---|---|---|---|---|---|---|
| | | Cost[2] | Returns[2] | Gain/loss | Gain/loss Q4 | Gain/loss YTD |
| **SVF1** | | 89.6 | 101.0 | 11.4 | 0.4 | (17.3) |
| | Exited investments | 24.0 | 42.7 | 18.7 | 0.3 | 0.6 |
| | Investments before exit | 65.6 | 55.9 | (9.7) | 0.2 | (14.7) |
| | *Reversal of previously-recorded valuation gain/loss for exited investments in FY2* | | | | (0.1) | (3.2) |
| | Derivatives/Interests/Dividends | 0.0 | 2.4 | 2.4 | (0.0) | 0.0 |
| **SVF2** | | 50.2 | 31.9 | (18.3) | (1.5) | (18.4) |
| | Exited investments | 1.6 | 2.7 | 1.1 | (0.0) | (0.0) |
| | Investments before exit | 48.6 | 29.5 | (19.1) | (1.5) | (18.6) |
| | *Reversal of previously-recorded valuation gain/loss for exited investments in FY2* | | | | 0.0 | 0.1 |
| | Derivatives/Interests/Dividends | - | (0.3) | (0.3) | (0.0) | 0.1 |

*Source: Softbank*

*Note:*

*1. The amount of gains and losses for exited investments in FY22 represents the exit price, net of the investment cost of such investments. Unrealized valuation gains and losses of such investments recorded in prior years, or in or before FY22Q3, are presented as reversal of previously-recorded valuation gain/loss for exited investments in FY22. Therefore, the total amount of gains and losses for each quarter disclosed in or before FY22Q3 and the gains and losses for FY22Q4 for "investments before exits" may not match the amount*

*of gains and losses for FY22 (YTD)*

*2. For derivatives, the investment cost represents the cost of the derivatives. Investment returns represent the exit price for exited investments, the fair value for investments before exits, the settlement amount of settled contracts or the fair value of open contracts for derivatives, and the respective amounts received for interest or dividends.*

## Monitoring VC investor attitudes

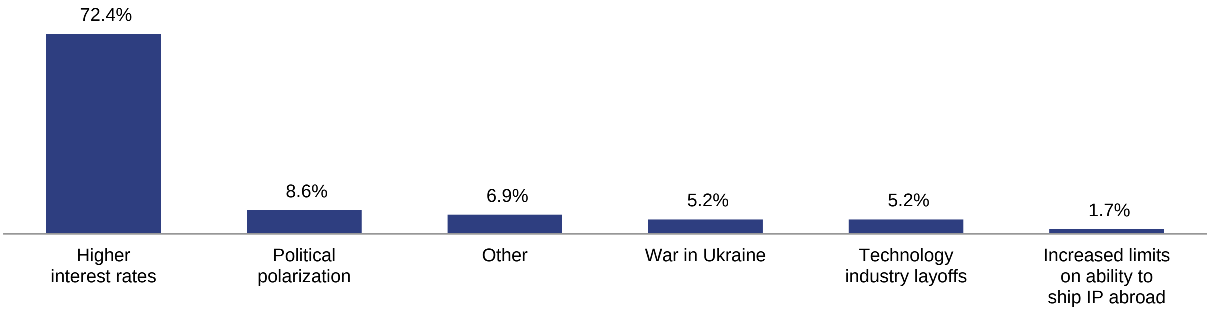
Away from generative AI, at the start of April 2023 Pitchbook surveyed 58 tech-focused venture capital investors to garner their attitudes towards the state of the VC ecosystem.

Key findings

- **43% think VC investment in technology will decrease *'moderately or strongly'* over the next year**
- **78% expect valuations to be more attractive in the next 6-12 months**
- **43% think 2023 vintage investments will offer the best returns of the 2019-23 period.**
- **When considering new investments 50% cite the 'path to profitability' or 'cash runway' as the most important factors. Only 7% cite revenue growth.**

Not surprisingly the investors surveyed thought that the factor most likely to have an impact on technology and its development over the next five years is the higher interest rate environment. 72% of respondents cited this as the key factor.

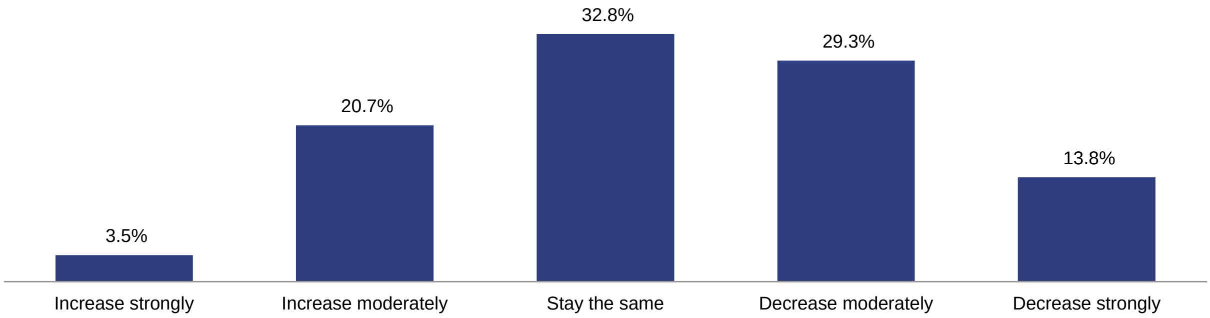
**Which of the following macroeconomic and socio-political factors are likely to have the biggest impact on technology over the next few years?[1]**




*Source: Pitchbook data*
*Geography: Global*
*Note:*
*1. As of April 4, 2023*

Reflecting the current caution towards incremental investment in the VC industry, 43% of investors surveyed thought that VC investment in technology would decrease *'moderately or strongly'* over the next year versus 24% who thought that investment would increase. The survey was carried out shortly after the collapse of Silicon Valley Bank with 62% of respondents thinking that the failure of SVB would reduce funding (56% mildly, 6% extremely). No respondents thought the SVB collapse would improve funding conditions.

**Do you expect total dollars of VC investment in technology start-ups to increase/decrease over the next 12 months compared to the previous 12 months?[1]**

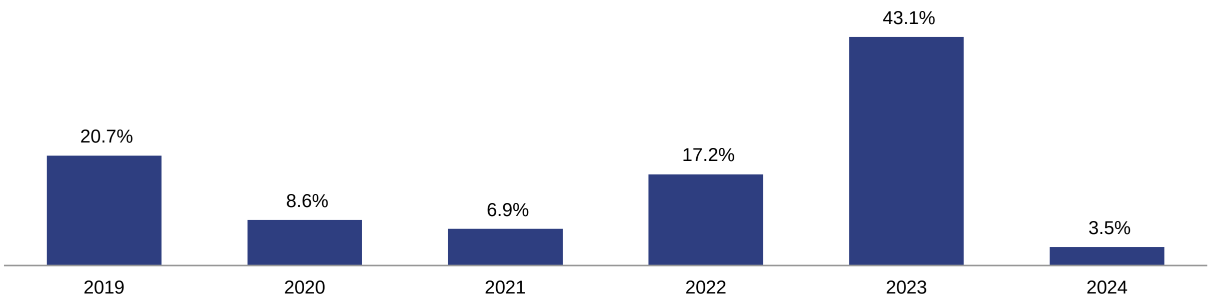



*Source: Pitchbook data*
*Geography: Global*
*Note:*
*1. As of April 4, 2023*

The deterioration in funding conditions in venture capital does, however, have a positive aspect. When asked whether they thought valuations of VC deals will be more or less attractive in the next 6-12 months compared with the previous 6-12, 78% expect valuations to be more attractive (50% a little more, 28% a lot more). Only 7% feel they might be less attractive.

As a result investors are optimistic about the potential to make strong returns from investing in venture capital in 2023. Of those surveyed 43% thought that 2023 vintage investments would offer the best returns of any year in the six years 2019-24. Perhaps not surprisingly the buoyant fundraising period of 2020/2021 is expected to have the lowest IRRs with only 7% thinking 2021 would be the best year for returns and 9% 2020. Perhaps surprisingly, only 4% of respondents thought 2024 might offer the best returns – an answer that might derive either from an inability to project forward to the funding conditions of 2024 or a belief that VC valuations might recover by then and that 2023 represents instead a strong but brief window of valuation opportunity.

**Which VC vintage do you think will have the highest IRR out of this group?[1]**




*Source: Pitchbook data*
*Geography: Global*
*Note:*
*1. As of April 4, 2023*

There has been a lot of debate around the impact of the VC and public market falls in 2022 on the ability of VC funds to raise new money. In fact, 50% of respondents said either that their fundraising plans have not changed or indeed that they have been brought forward. Only 36% said their fundraising plans have been pushed out. 71% said that there has been no change in the reporting requirements demanded from GPs by LPs.

60% of investors observed that the weak IPO market has had no impact, or has positively impacted, early-stage investing.

> *Asked which factors have become more important in the last year when considering new investments 50% cited either the 'path to profitability' or 'cash runway'*

In terms of how investors look at companies, the widely noted switch towards profitability and positive cash flow measures over growth is confirmed in the survey. Asked which factors have become more important in the last year when considering new investments, 50% cited either *the 'path to profitability'* or *'cash runway'* (32%/18%) as the most important factors.  Only 7% cited revenue growth, hitherto a key metric for tech stocks, as having become more important over the last year.

https://files.pitchbook.com/website/files/pdf/Q2_2023_PitchBook_Analyst_Note_H1_2023_VC_Tech_Survey.pdf

Anecdotally, how do VC investors see the environment now? Here's Joe Horowitz, the founder of Silicon Valley based Icon Ventures, which has $1.3bn under management:

**Short term pain:** *The start-up world will bifurcate between the deserving and the undeserving. Significant amounts of capital have come into the venture capital asset class and* ***created a vast number of overvalued companies that will need financing.*** *Venture debt will be less available to help companies that need to course correct. Companies that have low-margin business models and rely on large amounts of capital to succeed will face great difficulty. Cram-down financings and start-up mortality will become far more commonplace.*

**Better time to invest:** *History has repeatedly shown that* ***down financial market cycles can be great times to invest in new startups****. Deal valuations adjust to sensible levels, the pace of investing slows down, relationships matter and talent is more available. We can build businesses one brick at a time with capital efficiency.*

**Good companies will continue to attract money:** *There is always a significant number of well-considered, venture-backed companies that thrive. These are the start-ups based upon differentiated, compelling value propositions that maintain discipline, building their businesses with capital efficiency and growing even through challenging markets.* ***They are always in demand by investors and attract capital at significant premiums.***

**Venture capital industry is adjusting.** *The best venture firms are returning to an earlier-stage focus, which is very exciting, because this is where they can most uniquely apply their exceptional investment talent.*

https://iconventures.com/perspectives/

## Investor Feedback

We monitor feedback from venture capital investors on the state of the market. The key themes we are seeing are;

(i) Investors are seeing activity and value in seed and early-stage rounds

(ii) Attractive opportunities in later stage rounds are fewer and investors report a lot of internal rounds

(iii) There is a sense that well placed companies continue to defer raises in 2023

(iv) Many investors we speak to observe they are looking at opportunities and [are] open for business right now

(v) Investors observe that valuation expectations are often still too high, and that founders' expectations have not fully adjusted

**Investor comments:**

**Deal Activity**

*Early stage remains very active (Series A and pre-Series A)*

*Growth equity rounds being pushed into 2024*

*Expectation that activity is going to pick up as we move into H2 and beyond when even good companies will have to come back to market for capital*

*Lots of internal rounds*

*Many companies have live data rooms and are allowing investors in to review information and build conviction on a non-deal basis, ahead of market improving*

*Companies testing the market to see if appetite from external investors to lead rounds. If not then reverting to internal rounds*

**Investor appetite**

*Focused on companies that are moving towards profitability*

*Target businesses with 12m run way to profitability or have proven underlying profitability*

*Keen to see companies early and build relationships*

**Business models**

*Like to start developing relationships early – sometimes 3-4 years out, no revenue size too small*

*Not keen on pre-revenue; ok pre-profit as long as clear path*

*Very focused on business quality, competitive moat*

*Will invest in profitable and unprofitable businesses if high growth*

**Valuation**

*Private markets – not yet adjusted on valuation.*

*Not interested in looking at value opportunities in the current market*

*Expect to write fewer but larger cheques over the coming period vs 2020-21*

## What about the outlook for equity markets?

Some quick comments on markets. To the 11th of May.

NASDAQ is up 19% year to date and up 20% from its recent low in mid-December.

The recent regional bank turmoil in the US (Silvergate, Silicon Valley Bank, Signature Bank, First Republic) has impacted other indices. The latter three were, after all, the second, third, and fourth largest bank failures in US history. Nevertheless the S&P500 is up 8% ytd as is the STOXX Europe 600. The FTSE 100 index is up just 2% ytd.

The Refinitiv Venture Capital Index, which seeks to monitor the real time performance of the VC industry and whose performance is partly driven by the moves in public markets and particularly tech heavy indices like NASDAQ, is up 12% ytd.

**Interest rates:** The ***most recent Fed move was to increase interest rates by a further 25bps*** to a target range of 5%-5.25% at its early May meeting. Fed chair Jay Powell commented:

*"There is a sense that we're much closer to the end of this than to the beginning. If you add up all the tightening that's going on through various channels, we feel like we're getting close or maybe even there."*

A few days later the April inflation numbers saw US consumer prices rise by just 4.9% yoy, down from 5.0% the previous month. The core inflation index which excludes the more volatile food and energy components fell from 5.6% to 5.5%. The market had already been looking for a Fed "pause" in interest rate hikes in June and these inflation numbers backed that view. The market appears to view that it would now be a substantial surprise if the Fed June 14 meeting saw a further interest rate rise.

***On May 11th the Bank of England made its twelfth successive interest rate rise***, pushing the rate up a further 25bps to 4.5%. Fuelled by food prices, inflation in the UK has remained stubbornly high and the BoE believes inflation, currently at 10.1%, will average just above 5% by Q4 2023 instead of its previous 3.9% forecast, with "significant" risks that the rate could be higher. The Bank's 2% inflation target is now not expected to be reached until the start of 2025, nine months later than previously forecast. The financial markets are anticipating UK rates peaking at c5%.

The Bank's Governor, Andrew Bailey, says the UK is no longer expected to go into recession and indeed is now forecasting that by mid-2026 gross domestic product will be 2.25% greater than it expected in February.

***The ECB raised European interest rates by 0.25% to 3.25% in early May***. Inflation in the Euro area stands at 7%, well above the ECB's 2% target. Core inflation (ex-energy and food) is at 5.6%. The ECB commented that "*Headline inflation has declined over recent months, but underlying price pressures remain strong.''*

Christine Lagarde, President of the European Central Bank commented *"I think it's fair to say that everybody agreed that increasing the rate was necessary and that second we are not pausing, that is very clear … and we know that we have more ground to cover,"*

**IPO activity remains muted.** Dealogic numbers for the first four months of the year to end April show that the number of US offerings dropped 40% yoy with 56 offerings raising just $3.8bn, down 69% yoy and down 97% from the $130bn of the first four months of 2021.

In Europe IPOs have raised £1.8bn ytd to end April, down 40% yoy. The UK has had just six listings raising £90m in total.

There are some more encouraging signs. In early May Kenvue, the consumer arm of Johnson & Johnson, had an upsized $3.8bn IPO offering, valuing the company at $41bn. It was the biggest US listing for 18 months and the stock jumped 22% on its first day of trading. On its own it doubled the amount raised in US IPOs in the four months to end April.

In Europe in mid-April the Apollo owned gambling group Lottomatica priced its IPO at the bottom of the proposed €9-11 range. The €600m offer valued the company at €2.26bn versus the top end of the range at €2.67bn. The shares have subsequently fallen another 11% to €8 per share.

In the UK the GKN automotive business Dowlais was listed in April in a demerger from its owner Melrose Industries. The shares listed at 145p and a valuation of c£2bn and fell 28p on the first day of trading. The shares have since rallied to 126p.

April saw Japan's largest IPO since 2018 with the $625m raise by Rakuten valuing the internet bank at 238bn yen ($1.8bn). The stock performed strongly post offer, ending its first the trading day at 1,930 yen versus an IPO price of 1,400 yen.

The leading IPO market this year remains China which has raised $19.5bn over 80 deals according to Dealogic, still down c$4bn yoy but accounting for just over half the global total in the first four months of 2023.

The tentative signs of reopening are reinforced by the trickle of announcements of company intentions to float. Softbank has, for instance, now submitted a draft registration statement for the flotation of Arm to the SEC although the timing of the proposed IPO remains uncertain.

Rothschild & Co strategist Kevin Gardiner summarises the current key drivers of the market in this graphic:

| | |
|---|---|
| **GROWTH** **Neutral** | ***Downturn may not be severe*** Economies remain more resilient than many feared, partly because of fiscal support, and because the hit from energy prices is fading and moving into reverse. Labour markets remain fully employed, supporting spending. Monetary tightening- still incomplete- has yet to be fully felt, but a major setback is neither necessary nor likely |
| **INFLATION** **Neutral** | ***Inflation is moderating*** Global bottlenecks and commodity prices have eased, the risk of a wage-price spiral looks overstated, and monetary policy is less lenient. Headline inflation seems set to fall briskly through 2023 on both sides of the Atlantic. Core rates will prove more stubborn, and likely remain above target, but should nonetheless also decline visibly |
| **POLICY** **Negative** | ***Interest rates yet to peak - or plateau*** Central banks realised in 2022 that their credibility was at stake, and acted decisively to raise interest rates. The prospective rates priced into money markets have now risen a long way: they have indeed "normalised", but have still not definitively peaked, could easily overshoot - and may not fall quickly |
| **GEOPOLITICS** **Negative** | ***Geopolitical risk remains elevated*** Russia's attack on Ukraine was the biggest geopolitical shock in recent times. The risk of escalation is still real, particularly as the West now feels emboldened to supply Ukraine with tanks, and China is reportedly considering arming Russia. Potentially (even) more alarming however is the China-US face-off over Taiwan: end-year military exercises were a reminder of China's ongoing claim. The potential threat to world trade and peace there dwarfs even that posed in Ukraine, but we think President Xi is aware of China's best interests, and will remain patient |
| **VALUATIONS** **Neutral** | ***Valuations are more balanced*** Long-term stock market valuations (cyclically-adjusted PE ratios) remain close to trend. More tactical metrics have been adjusting to the lower short-term earnings that likely lie ahead, but those long-term measures support plausible projected returns comfortably ahead of likely inflation (even though the latter may stay more elevated than it used to be). In the last month, European government bond yields have also approached reasonable levels (US yields got there some months back), but are still not quite there yet. |
| **MARKET DYNAMICS** **Neutral** | ***The extended run of low volatility appears to be over*** We thought the withdrawal of the free Fed put' as interest rates started to rebound would make traditional options more expensive, and rising rates/geopolitical stress reinforced that view. But bonds' improved valuations suggest they may once again have a role to play as diversifiers at least. We do not see cryptocurrencies as useful in this (or any other) context. |

*Source: Rothschild & Co*

## Our views on the state of the venture capital markets

Since the start of 2022 we have seen sharp falls in the public markets on the back of a combination of global inflation, rising interest rates, and increased geopolitical risk. The Refinitiv Venture Capital Index, which seeks to monitor the real time performance of the venture capital industry fell 55% in 2022. YTD in 2023 it is up 12% meaning the total fall since the start of 2022 is now 50%. Our summary of the outlook is:

- The deterioration in the interest rate, inflation and macro-economic environment has had a sharp impact on valuations in private markets. The scale of the fall in the Refinitiv VC index in 2022 was much more substantial than the 33% fall on NASDAQ. This has been reflected in some big valuation falls on some high-profile VC rounds
- There is substantial dry powder in the VC industry. This may now be prioritised to supporting existing rather than new investments
- Best-in-class companies, addressing critical rather than nice-to-have requirements, continue to attract support. There are still hotspots for investment notably in artificial intelligence, fintech, climate tech and software. Certain investors remain very active in the space with substantial funds to deploy
- There will likely be a growing number of down rounds in 2023, albeit the substantial fund raising of 2021 and the ability of companies to eke out existing resources may limit the immediate number of these. There is the expectation of a crunch point, perhaps as early as H2 2023, when companies will need to raise again but where the environment for fundraising is still not receptive
- The speed of the investment process has slowed considerably. The volume of new deals has reduced. The level of diligence on new deals has stepped up
- In recent months the number of big late-stage deals has slowed down substantially. The strongest part of the market in terms of appetite appears to be in Seed and Series A where there is less immediate pressure on valuation
- Funding for the VCs themselves remains strong which is a positive indicator into 2023
- The dislocation caused by the collapse of Silicon Valley Bank may further hamper conditions in the venture capital market

▪ Valuation priorities have shifted with investors moving away from a growth and revenue multiple emphasis. There is a sharper focus on the path to profitability and positive free cash flow and an emphasis on DCF and comparative based multiples

▪ An interesting paradigm is that earnings forecasts for public companies have remained stubbornly resilient. The fall in the market indices indicates the buy side anticipating earnings deterioration. This in turn means that multiples for public companies are low by recent standards. As earnings forecasts start to fall multiples should naturally inflate. At that point, as multiples for public companies recover, the prospect of fundraising for growth oriented private companies becomes more attractive.

## Rothschild & Co: Selected deals in Growth Equity and Private Capital

A selection of recent deals on which we have advised.

**Skyroot: $51m Series B**

- Sole adviser on its Series B raise of INR 4,030m (US$51m) from GIC Private Limited and LK Advisers
- Looking to 'uberize' space for small satellite operators, Skyroot will use its differentiated solid propulsion technology to offer on-demand, affordable launch vehicles. It plans its first orbital launch by early 2023

**YuLife: c $800m Series C**

- Adviser to YuLife on its investment by T Rowe Price
- TRP's first ever private investment in European FinTech
- The Series C extension values YuLife at c.$800m, a 3x uplift from its valuation at its Series B announced in July 2021

**Carsome: US$290m Series E**

- US$290m Series E fundraise led by SeaTown Holdings International and 65 Equity Partners Holdings
- The funding round brought Carsome's valuation to US$1.69bn, cementing its position as Malaysia's first and largest tech unicorn
- Follows US$170m Series D2 round in Sept 2021, on which we also advised

**Marwyn Acquisition Company II: £500m equity raise**

- Advised Marwyn Acquisition Company II on the launch of its equity raise, by way of a 12-month placing programme
- The company will seek to raise up to £500m during the next twelve months from equity investors in a structure which is distinct from the typical 'SPAC' structure

**FL Entertainment: €7.2bn combination with Pegasus Entrepreneurs and simultaneous c€550m equity raising**

- FL Entertainment is composed of Banijay, largest independent content producer globally, and Betclic Everest Group, Europe's fastest-growing sports betting platform. Pegasus is an Amsterdam-listed SPAC
- Largest ever European SPAC business combination an PIPE raising

**Insight Partners: strategic investment in Precisely**

- Led investment in a recap of Precisely Software Incorporated, in an investor group that will also include Partners Group, Clearlake Capital, TA Associates, and Centerbridge Partners
- Precisely is a leading data integrity and infrastructure software company

**Kpler: Minority stake Acquisition**

- Adviser to Five Arrows Growth Capital and Insight Partners on joint acquisition of a minority stake in Kpler Holding S.A. from its founders
- Consisted of acquisition of c.30% of secondary share capital of Kpler plus primary investment of €20m
- Kpler is a leading SaaS provider of data and analytics to energy markets

**Harmay: US$90m Series D**

- Advised Harmay on its US$90m Series D equity financing from a group of leading Chinese and global growth equity /venture capital funds
- Harmay is a premium beauty retailer
- Raise was led by QY Capital (an entity related to Alibaba New Retail Fund) plus existing investors

**SEBA Bank: CHF110m raise**

- Advised on fundraising co-led by a consortium of new investors specialised in blockchain and fintech including Altive, Ordway Selections and Summer Capital
- DeFi Technologies, leader in decentralized finance, and Alameda Research, a global cryptocurrency quantitative trading firm, also participated

**First Digital Bank: US$120m capital raise**

- Advised on capital raise through a syndicate of investors including Tencent, SBI Investment Co, Julius Baer, and West Coast Equity Partners
- First bank to receive a banking license in Israel for over 42 years and first neobank in Israel

**Fibrus: £270m seven-year debt package**

- Advised on package comprising a £200m capex facility, £20m revolving facility and up to £50m uncommitted accordion facility
- Fibrus is an alternative provider of full fibre network infrastructure and broadband in rural UK
- Highly active in European fibre infrastructure: our 7th debt financing mandate in UK fibre in last 3 years

**Neuberger: US$4.8bn valuation Getty Images combination**

- Advised on business combination valuing Getty at an enterprise value of US $4.8bn, equivalent to 15.2x enterprise value to 2022E Adj. EBITDA of US $315m
- CC Neuberger Principal Holdings II is a special purpose acquisition company that completed its IPO in July 2020, raising US $828m in proceeds

**Azerion: €1,300m enterprise value combination with EFIC1**

- Advised on combination with European FinTeach IPO Company 1 B.V - a SPAC that raised c.€382m through IPO on Euronext Amsterdam in 2021
- Azerion provides solutions to automate purchase and sale of digital advertising inventory
- Landmark transaction - one of the largest de-SPAC transactions across Europe to date

**Gousto: £240m primary and secondary rounds**

- £70m primary financing for food delivery company Gousto with Softbank Vision Fund 2 in Jan '22
- In Feb '22 secondary component of £170m from institutional investors including SoftBank, Grosvenor Food & AgTech, Railpen and Fidelity
- Valued Gousto at £1.2bn on a pre-money basis

**GreenWay: €85m Series C**

- Advised Greenway Infrastructure on its €85m Series C fundraise
- Led by a consortium of infrastructure funds including Generation Capital and Helios Energy Investments. The transaction is the first known investment by an infrastructure fund in an EV charging network in Central and Eastern Europe

**Diabeloop: €37m Series C**

- Advised on its €37m Series C capital raise
- Following extensive investor outreach, LBO France was chosen to lead the raise jointly with existing investors including Supernova Invest, AGIR à dom., CEMAG INVEST and Odyssée VenturesA
- Diabeloop provides automated insulin delivery system and handset facilitating diabetes management

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