Rothschild & Co
Global Advisory

Growth Equity Update

February 2023 – Edition 11

- **Public markets revive at the start of 2023:** A string of perceived positives for the markets with the Fed limiting its January rate rise to 25bps; with the IMF raising its forecasts and becoming more optimistic about the global economy avoiding recession; China reversing its zero Covid policy and signs that inflation is starting to be tamed.
- **IPOs in Western markets have resumed**. In Europe web hosting business Ionos and Italian industrial company EuroGroup (advised by Rothschild & Co) both conducted successful IPOs.
- **Equity inflows:** After a record breaking 48 consecutive weeks of equity outflows Europe saw successive weeks of inflows in January.
- **Venture funding remains strong** with major fund closings since the start of the year including New Enterprise Associates closing two new funds for a total of $6.2bn; B Capital closing its third growth fund series at $2.1bn; and Highland Europe announcing a new €1bn fund targeted at private software and consumer internet companies across Europe.
- **Substantial dry powder**: Meanwhile the most recent Pitchbook data (end Q3) suggests global venture firms were sitting on $585bn of capital raised but not allocated as of the end of Q3 2022.
- **Venture capital fundraising still tough**: At the same time fundraising remains difficult for many. Companies are grappling with the new focus on profitability which is impacting growth. Investors face a higher cost of capital hurdle and the need to manage the valuation expectations of those companies in which they invest. More down rounds are appearing and there are many internal rounds focused on helping companies to breakeven.
- **Focus on climate tech:** Climate Tech had remained an area of intense focus for investors with VC funding devoted to the sector increasing in 2022. We look at some of the factors behind this surge of activity.

Public markets revive at the start of 2023

Public markets have opened strongly at the start of 2023. Ytd to February 15th NASDAQ is up 16%, the S&P 500 and EuroSTOXX 600 are both up by 8% and the FTAll-Share by 6%. This is a reversal of the hierarchy of performance seen in 2022. Investors have moved more risk on.

Rothschild & Co strategist Kevin Gardiner analyses the drivers for this revived sentiment. Apart from the mere change of year, some of the factors driving the market have become 'less bad' as the year has started.

Our investment view-Inflation, interest rates, slowdown and geopolitics are still the main investment issues

	GROWTH Neutral	***Downturn may not be severe*** Economies remain more resilient than many feared, partly because of fiscal support, and partly because the hit from higher energy prices is fading and moving into reverse. Labour markets remain fully employed, supporting spending. Monetary tightening 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*** Central banks recognised in 2022 that their credibility was at stake and acted more decisively to normalise interest rates. The prospective rates priced into money markets have now risen a long way. And are indeed back in what we used to consider "normal" territory, but they have still not definitively peaked and could easily overshoot
	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: Russia has lost ground, and we cannot assume it will act rationally, particularly as the West now feels emboldened to supply Ukraine with tanks. 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 acutely aware of China's best interests, and will remain patient in the face of perceived provocation
	VALUATIONS Neutral	***Valuations are more balanced*** Long-term stock market valuations (cyclically adjusted PE ratios) are close to trend. More tactical metrics still have yet to adjust fully to the lower short-term earnings that likely lie ahead, but taking a long-term view, valuations support plausible projected returns comfortably ahead of likely inflation (even though the latter may stay more elevated than it used to be). For a while it looked as if government bonds too were set to offer long-term positive real returns at last, but in eurozone and UK markets, the recent rally leaves them looking unattractive again
	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 have reinforced that view. We have not seen cryptocurrencies as useful in this (or any other) context

Source: Rothschild & Co
Past performance is not a reliable indicator of future performance and the value of investments and the income from them can fall as well as rise.
This document does not constitute a personal recommendation or an offer or invitation to buy or sell securities or any other banking or investment product. Correct as of 1st February 2023.

Already seen this year:

-The Fed contented itself with a 25 basis points increase in interest rates to 4.5%-4.75% at the start of February. It was the Fed's 8th consecutive hike in rates which cumulatively have seen a rate increase of 450bps. After six successive increases of 50bps or more, dating back to May 2022, this was the first time the Fed had increased by less than 50bps since March 2022.

- Fed Chair Powell in his accompanying commentary said that he expects ***"a couple"* more small rate increases** will be appropriate over the coming months. He also says rate cuts are unlikely in 2023.

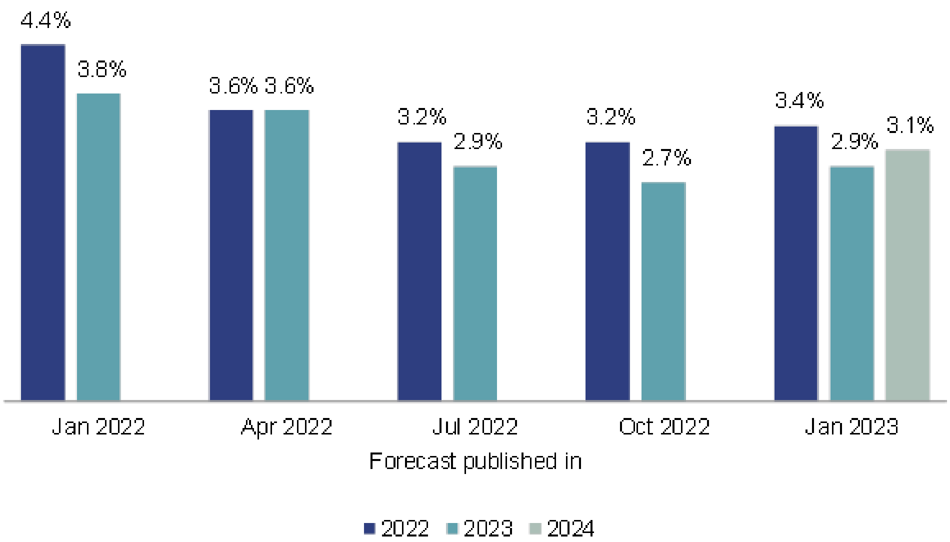
- **The IMF upgraded its Global Economic forecasts** at the end of January suggesting that output would be more resilient than previously anticipated and that a global recession would probably be avoided.

- Global recession in 2023 to be avoided. Global output is now projected to be at 2.9% in 2023, up 20bps versus the 2.7% forecast in October. It was the IMF's first increase of the global growth forecast in over a year. In a change of tone, the IMF now thinks that a global recession in 2023 can probably be avoided. Critically the US is not expected to go into recession.

– Inflation starting to be tamed: The IMF now predicts global inflation reducing to 6.6% in 2023 and then to 4.3% in 2024, well down on the 8.8% of 2022. Energy-related inflation seems to have peaked – even in Europe – after governments implemented fiscal measures and against the background of a relatively mild winter (so far).

-China reverses zero Covid policy. At the end of December China reversed its zero Covid policy. This dramatic change has resulted in a boost to consumer spending and an easing of supply chain issues. Chinese business surveys have seen a big bounce and the IMF now thinks the Chinese economy will grow by 5.2% in 2023.

> *"The fight against inflation is starting to pay off, but central banks must continue their efforts"*
>
> Pierre-Olivier Gourinchas, IMF chief economist



Source: International Monetary Fund

Market impacts

Stock markets have risen.

Equity inflows: Europe had suffered its longest run on record of equity outflows at 48 successive weeks of net withdrawals. This came to an end in January with three successive weeks of inflows. Global equity inflows are also positive with Europe the biggest beneficiary in recent weeks, Asia and emerging markets strong, but the US relatively weak.

IPOs resume: The start of the year has been marked by the return of IPOs in Europe.

Ionos: The process was kicked off with the sale by United Internet of Germany, with its partner Warburg Pincus, of its web hosting arm Ionos. The price range for the IPO was set at €18.50-€22.50 per share implying a market capitalisation of €2.59bn-€3.15bn and corresponding to a 2023 EV/EBITDA multiple of 10.3x to 11.8x – respectable against quoted comps. The range was then narrowed to €18.5-€19.5 and the IPO eventually priced at €18.5 on February 7th. The free float was 17% with c€450m being raised. The offering was oversubscribed multiple times at the bottom of the range. The shares have subsequently slipped by c9% to €16.7 per share.

EuroGroup Laminations: Meanwhile Italian industrial company EuroGroup Laminations raised c€432m in a sale of new and existing shares, representing a free float of just under half the company's stock. The shares had a price range of €5-€6 per share and priced at €5.5 implying a market capitalisation of €922m. Books were covered less than one hour after opening and closed multiple times oversubscribed. The shares traded at €5.6 per share in the aftermarket.

Rothschild & Co acted as sole financial adviser to EuroGroup Laminations and its shareholders EMS (the controlling holding owned by the founding families) and Tikehau Capital.

The success of these two transactions already suggests a change in mood in 2023 after 2022, a year in which just €89bn of equity was raised on European markets, down 61% yoy (source: Association for Financial Markets in Europe).IPOs in Europe raised just €14.2bn in 2022, down 80% from the €69bn raised in 2021.

Interestingly Ionos is an example of a tech company going for an early IPO. Growth stocks, of which tech is a big part, tend to dominate IPO markets.

Investment backdrop

Last year's major risks are still present but we may be turning a corner.

Source: Rothschild & Co. Bloomberg. S&P Global.
Past performance is not a reliable indicator of future performance and the value of investments and the income form them can fall as well as rise. This document does not constitute a personal recommendation or an offer or invitation to buy or sell securities or any other banking or investment product. US earnings yield in second chart is based on cyclically-adjusted earnings. Data correct to 31st January 2023.

Focus on Climate Tech

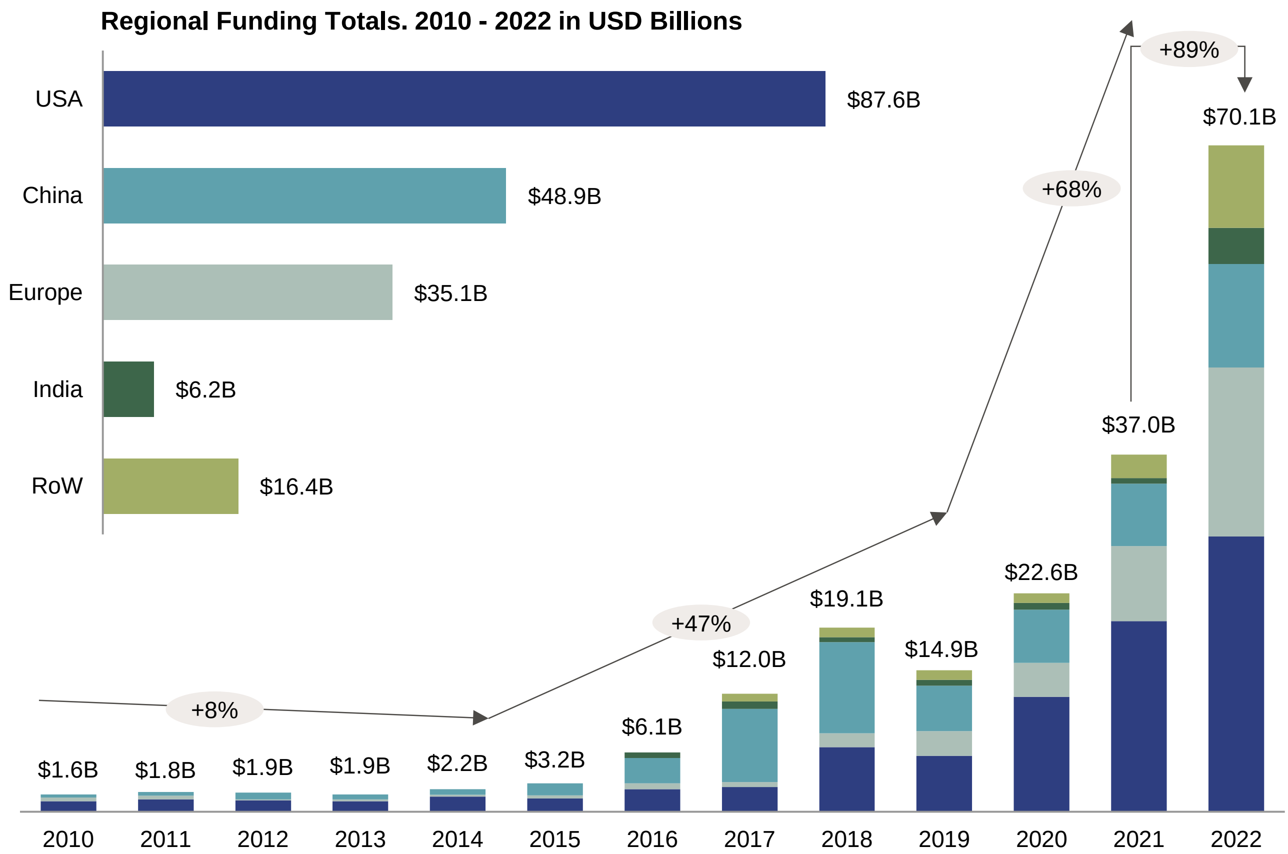
The sector that bucked the trend in venture capital fund raising in 2022.

According to the research group HolonIQ, global Climate Tech VC investment was $70.1bn in 2022 up 89% yoy. This was in contrast to an overall VC funding environment that was sharply down yoy. Climate start-ups in the United States raised nearly $29bn, up from $20bn in 2021. Europe's venture funding into Climate Tech more than doubled in 2022 to $18bn and surpassed that of China ($11bn). India saw strong growth to c$3.7bn of investment.

> *"It is my belief that the next 1,000 unicorns — companies that have a market valuation over a billion dollars — won't be a search engine, won't be a media company, they'll be businesses developing green hydrogen, green agriculture, green steel and green cement."*
>
> Larry Fink- Chairman and CEO Blackrock

According to HolonIQ there are 83 climate-focused unicorns globally.

$70.1bn of Climate Tech Venture Funding for 2022, up 89% on 2021.

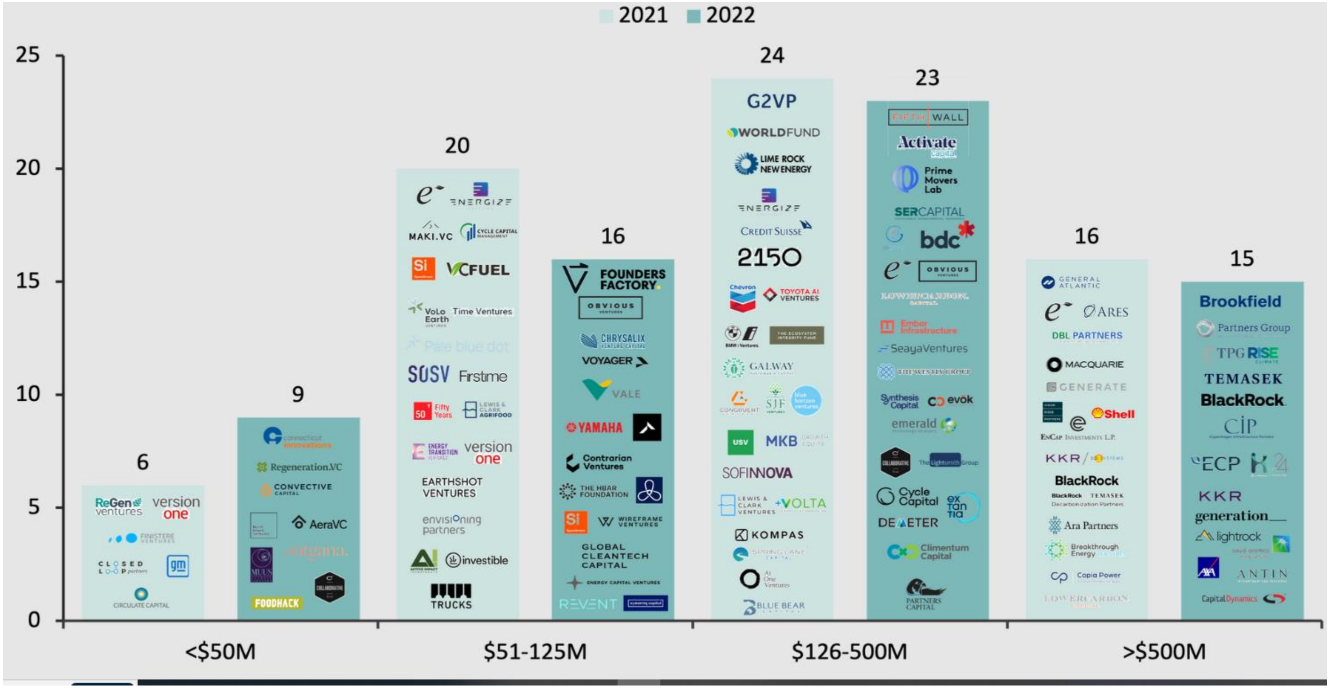


Source: HolonIQ, 2 Jan 2023. All numbers rounded and may not sum exactly due to rounding. Excludes PE transactions. All years calculated at historic FX (spot rate on funding date).

The research firm Climate Tech VC has in the last two years identified 135 new climate investment funds with a declared decarbonisation focus. In total these funds have assets under management of $94bn.

Climate Tech new investors (AUM)

Count of new announced climate investment funds by AUM (FY’21-22 YTD)



Source: Climate Tech VC

In a recent report TechNation estimated that the number of emerging technology companies tackling climate issues globally has increased fourfold since 2010 reaching 44,595 in 2022. The largest concentration of these, some 14,300, are based in the US with the UK the second area of concentration with over 5,200.

TechNation divides the c44,000 climate tech companies into eight major categories:

Energy: Any solution involving the production and sale of energy which contributes to net zero targets. This includes distribution, transmission and storage.

Farming and Food Production: This encompasses companies involved in farming and food production; management of the natural environment or wilderness.

Circular Economy: Companies engaged in activities including sharing, leasing, reusing, repairing and refurbishing existing materials and products to minimise the loss of value of products, components and materials.

Mobility: Companies supporting the movement of people or goods, including freight and logistics, airlines, marine, road and rail, and transportation infrastructure that contributes to net zero.

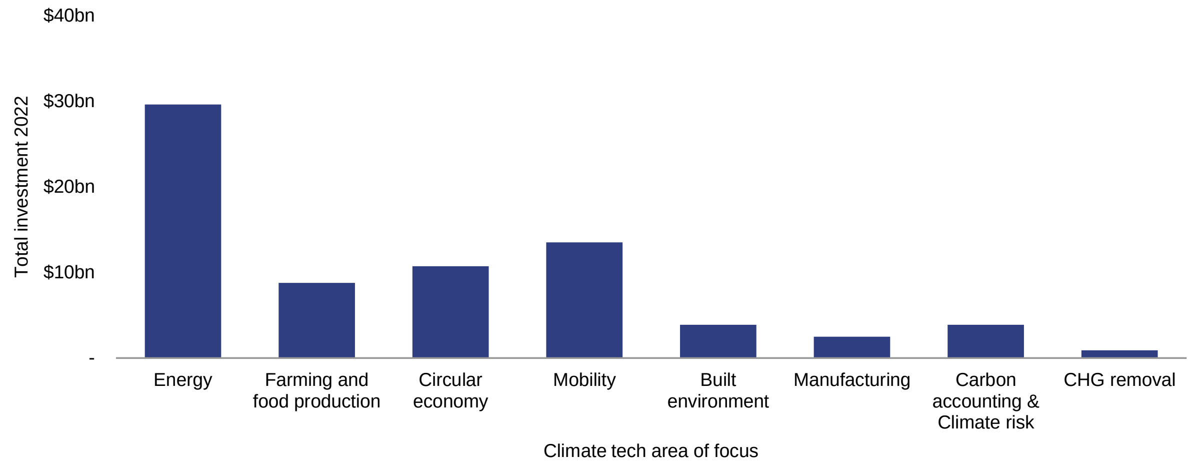
The Built Environment: Reduction of GHG (greenhouse gas) emissions from any man-made surroundings ranging in scale from buildings to parks (particularly improving efficiency in construction, everyday life, and reducing waste).

Manufacturing: Manufacturing of articles and materials in bulk that contribute to net zero, including activities required to manage waste in manufacturing.

Carbon Accounting & Climate Risk: Any software-based tool that facilitates GHG performance management, risk mitigation, and GHG accounting and reporting.

GHG Removal: Any company working on the removal of greenhouse gases from the atmosphere and their storage for long periods.

2022- Investment in climate tech by subsector



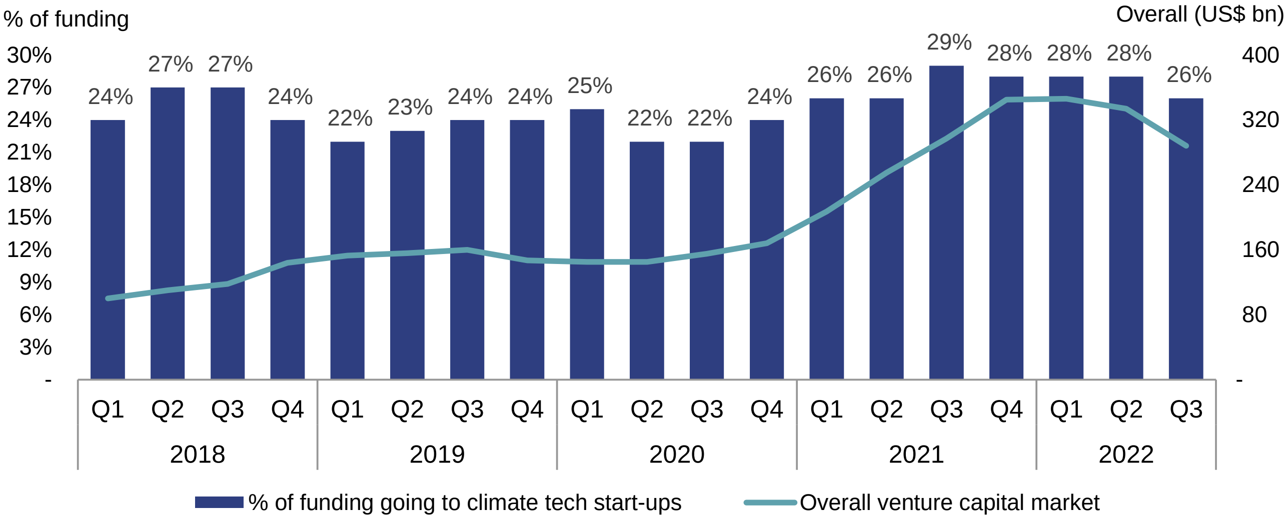
Source: TechNation – Net Zero Insights 2022

Measured by the amount of money invested, energy production led at c$30bn invested in 2022. Mobility was in second place with almost $14bn of investment, headlined by large rounds for electric vehicle companies like Polestar and Arrival.

Energy production and consumption also has the highest number of climate tech start-ups by volume at c29% of the total, followed this time by Farming and food production at 24% by volume.

According to PWC around a quarter of global venture funding is going towards climate tech start-ups with the proportion having been pretty consistent in the last five years.

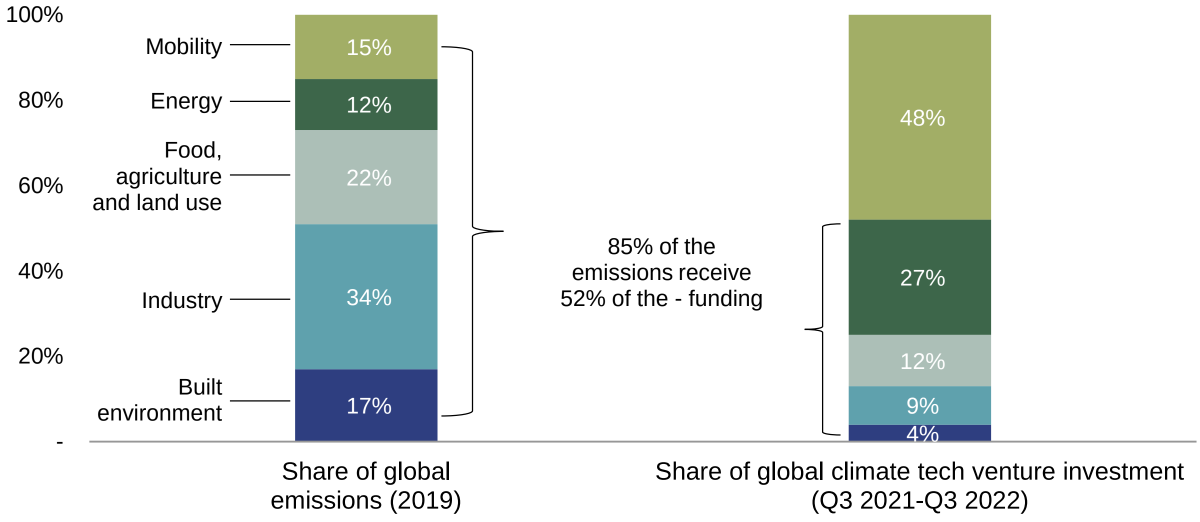
Share of global venture funding going toward climate tech start-ups
(12-month rolling average)



Source: PwC State of Climate Tech report 2022. PwC analysis of Pitchbook data.

Interestingly the apportionment of funds towards the different subsectors of climate tech is arguably inefficient. PWC estimates that 85% of the causes of global emissions receive just 52% of VC funding. The major disparity is in the area of Mobility which, PWC estimates, in 2021/22 accounted for 16%/15% of global emissions yet received 61%/48% of the committed VC funding.

Share of global emissions and climate tech venture investment by sector

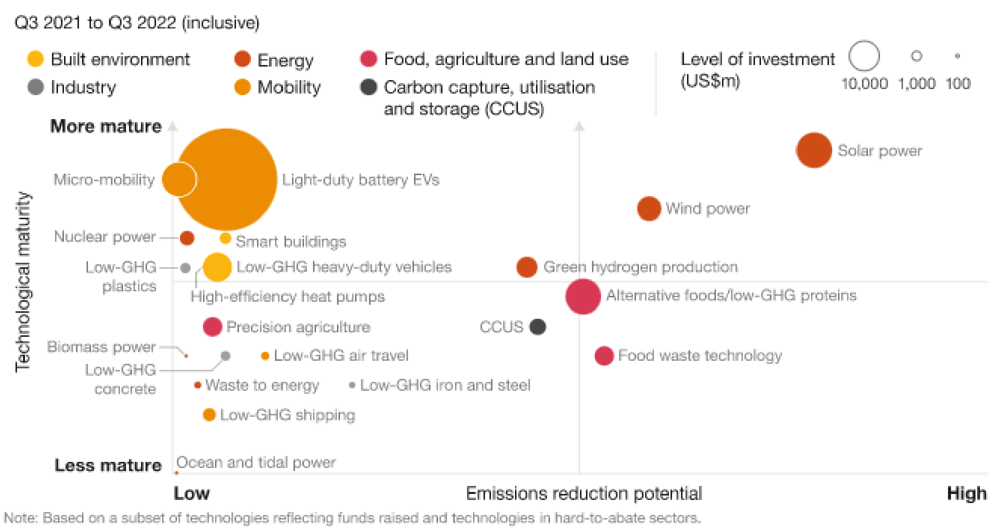


Source: PwC State of Climate Tech Report 2022. PwC analysis of Pitchbook data.

The same relative inefficiency is visible when considering forward looking potential climate impact, which takes into account the technological maturity of potential solutions. In theory, to maximise the prospect of attaining Paris Agreement goals, VC funding should be focused on technologies that have the greatest potential to lower emissions and which are sufficiently far advanced to be able to have an immediate impact on emissions. As the PWC graphic indicates, battery operated electric vehicles and micro -mobility solutions attract a substantial part of available funding but have a relatively low potential for emissions reduction.

An inefficient market for investing in climate outcomes

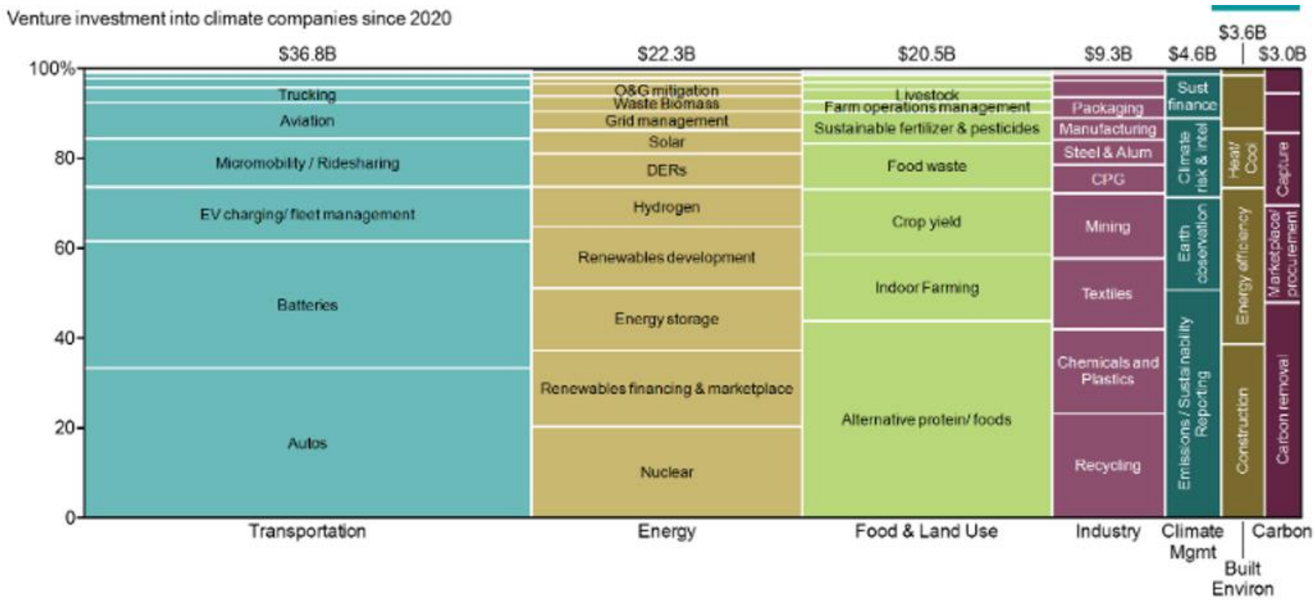
Q3 2021 to Q3 2022 (inclusive)



Source: PwC State of Climate Tech Report 2022. PwC analysis of Pitchbook data.

The climate tech unicorns. There are an estimated 80+ VC backed climate tech companies globally. Using HolonIQ data we break these down by region. Since 2020, c$100bn of venture capital has been invested in climate tech companies, 80% of which has gone to Transportation, Energy, Food & Land Use companies.

Venture investment into climate companies since 2020



Source: HolonIQ

The condition of European Climate Tech

State stimulus:

There is considerable government and regulatory support for the expansion of green technologies in Europe. Under the 2019 EU Green Deal the intention is for the EU to be climate neutral by 2050. The Green Deal includes targets to reduce emissions from cars by 55% by 2030 including zero emissions from new cars by 2035.

The EU plan to reduce greenhouse gas emissions by at least 55% by 2030 requires higher shares of renewable energy and greater energy efficiency with a 40% new renewable energy target by 2023.

Under the *NextGenerationEU* programme the EU has made available €250bn for green measures, including investments supporting the decarbonisation of industry. *Horizon Europe* dedicates €40bn to Green Deal research and innovation in partnership with industry. *EU Cohesion* policies make around €100bn available for green transition.

The EU has stated that in 2022 alone, the Commission approved aid schemes with an overall budget of €51bn to deploy new renewable energy production capacity and decarbonise industrial production in EU member states.

The *Temporary Crisis and Transition Framework (TCTF)* for State aid in 2022 simplified state aid for renewable energy deployments and for decarbonising industrial processes.

The EU is also putting in enhanced investment support schemes for production of strategic net-zero technologies, including the possibility of granting higher aid to match the aid received for similar projects by competitors located outside of the EU – very relevant given the initiatives *(The Inflation Reduction Act)* underway in the US.

The Commission will launch in autumn 2023 a first auction – or competitive bid - for supporting the production of renewable hydrogen with an indicative budget of €800m.

Europe's climate tech unicorns: At the start of 2023 there were 16 European climate tech unicorns. The ranks have been thinned by the subsequent move of Britishvolt into administration. By contrast, ***Northvolt*** of Sweden which designs and manufactures lithium-ion technology for electric vehicles, has the highest valuation of any VC backed climate tech company. Its $11.8bn valuation was established via a $2.75bn VC round in June 2021 co-led by Swedish pension funds AP1, AP2, AP3, AP4 and OMERS Capital Markets alongside existing investors Goldman Sachs Asset Management, Volkswagen Group and others. The company raised a further £$1.1bn via a convertible note in June 2022. At the time Northvolt announced that its first gigafactory, Northvolt Ett, had started commercial deliveries to European customers. The company has announced orders worth $55bn with customers including Volvo Cars, BMW, and Volkswagen.

Other notable unicorns include ***Climeworks***, a 'direct air capture' business which captures carbon dioxide direct from the air. Its first plant launched in 2017 and it now has 15 machines in operation, with the world's first large-scale plant switched on in Iceland in September 2021.

At the smaller end of the unicorn scale, we see a couple of food production pioneers. ***Infarm*** is a Berlin based vertical farming business which has raised a total of $605m in funding. The vertical farming model includes both the operation of own sites and the white label sale of modular IoT devices, machine learning and remote crop monitoring to allow third parties to roll out vertical farming. Capex intensive, the model has come under pressure given rising interest and energy costs. Infarm cut its 500 strong workforce in half in late 2022 and now targets being self-funding by mid-2024.

Ynsect is a vertical farm producing beetles as a low impact form of protein for use initially in animal feeds and fertiliser- thus skirting the regulatory issues surrounding human consumption although it also has protein products for human consumption in development.

European Climate tech unicorns – ranked by last valuation round.

	Europe						
	Company	Country	Sector	Unicom year	Last round	Type	Valuation
1	Northvolt	Sweden	Energy	2019	Jun-21	$2.8B VC Round	$11.8B
2	Octopus Energy	United Kingdom	Energy	2020	Jul-22	$550M Private Equity	$5B+
3	Climeworks	Switzerland	Carbon	2022	Apr-22	$630M VC Round	$2.2B
4	TIER Mobility	Germany	Micromoblllty	2021	Oct-21	$200M Series D	$2B
5	OCSiAI	Luxembourg	Materials	2019	Oct-21	$109M PE Round	$2B
6	BeZero	United Kingdom	Intelligence	2022	Nov-22	$50M Series B	$2B
7	Sunfire	Germany	Energy	2021	Mar-22	$215M Series D	$1.8B
8	Volocopter	Germany	Transport	2021	Nov-22	$350 Series E	$1.7B
9	StoreDot	Israel	Batteries	2022	May-22	Undisclosed	$1.5B
10	OVO Energy	United Kingdom	Energy	2019	Feb-19	$300M Corp Round	$1.4B
11	Enpal	Germany	Energy	2021	Oct-21	$175M Series C	$1.1B
12	Voi	Sweden	Transport	2021	Dec-21	$115M Series D	$1B
13	Polarium	Sweden	Batteries	2022	Jun-22	$105M Secondary	$1B
14	Infarm	Germany	Vertical Farming	2022	Dec-22	$200M Series D	$1B
15	Ynsect	France	Agriculture	2019	Oct-20	$65M Series C	$1B

Source: HolonIQ

United States and Climate Tech.

Three recent pieces of legislation - the Infrastructure Investment and Jobs Act, the CHIPS and Science Act, and the Inflation Reduction Act mean that US government spending on climate technology and clean energy should more than triple in the next 10 years. These acts contain more than $500bn of climate spending pledges.

In the US there are substantial federal government initiatives to promote clean energy. The ***Inflation Reduction Act,*** signed into law in August, has the direction of new federal spend towards reducing carbon initiatives as one of its main tenets. The intention is to stimulate R&D and commercialization of technologies such as carbon capture and storage and clean hydrogen. It also allocates money directly to environmental priorities and requires recipients of many funding initiatives to demonstrate positive environmental impacts.

The ***Infrastructure Investment and Jobs Act*** was signed into law in November 2021.The main thrust of its $550bn incremental spending is to build infrastructure (roads, bridges, public transit, railways etc). There is though considerable provision for incremental spend on clean technologies. The bill includes provision for spending of $21bn on environmental projects, $50bn for water storage and $15bn for electric vehicles. There is an intention to spend $73bn on power infrastructure including the electrical grid's adjustment to renewable energy.

Meanwhile the ***Creating Helpful Incentives to Produce Semiconductors and Science Act of 2022 (CHIPS and Science Act)***, signed into law in August 2022, directs $280bn in spending over the next ten years towards investments in US semiconductor manufacturing capacity. It also seeks to accelerate R&D and commercialization of technologies, such as quantum computing, AI, clean energy, and nanotechnology.

Within all this legislation are commitments to procure 100% zero-emission light-duty vehicles for federal use by 2027 with all federal vehicles emission free by 2035. There will be an increase in tax credits of up to US$85 per metric ton for captured and stored carbon.

These initiatives provide a significant addressable market opportunity for US climate tech start-ups. HolonIQ identifies 45 of the 82 global climate tech unicorns as being US based.

There is a strong representation of agriculture companies led by the ***Farmers Business Network*** and farmers' carbon credits business, ***Indigo***. Solar power (***Aurora*** - design, ***CSI*** – manufacture, ***NEXTracker*** – software & control) in its various forms is well represented.

Energy is represented by ***Redwood Materials*** (circular economy recycling of EV batteries), ***Sila Nanotechnologies*** (silicon battery materials), ***Form Energy*** (iron-air battery storage systems) and ***Crusoe*** (using excess natural gas from energy operations to power data centres). The Micromobility names (***Lime***, ***Rad Power Bikes***) are well known.

Alternative food companies are beginning to emerge (***Perfect Day*** – precision fermentation for animal free dairy, ***Eat Just*** – plant-based eggs and cultivated meat; ***Motif*** - plant-based ingredients and meats, ***UPSIDE Foods*** – cultivated meat).

US Climate tech unicorns – ranked by last valuation round.

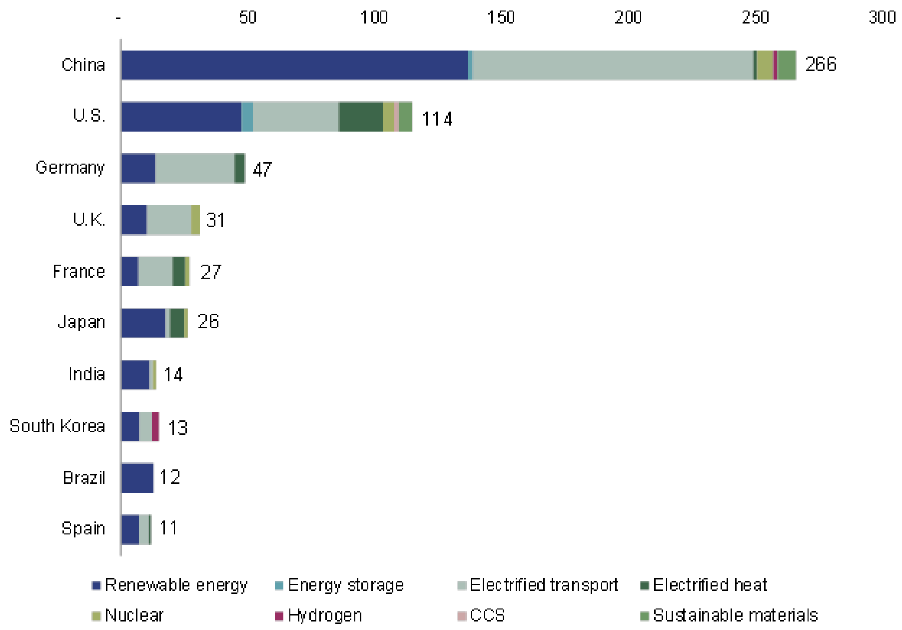
	United States						
	Company	Country	Sector	Unicorn year	Last round	Type	Valuation
1	Farmers Business Network	United States	Agriculture	2020	Aug-20	$250M Series F	$4B
2	Commonwealth Fusion Systems	United States	Energy	2021	Dec-21	$1.8B Series B	$4B
3	Aurora Solar	United States	Solar	2021	Feb-22	$200M Series D	$3.8B
4	CSI Solar	United States	Solar	2020	Sep-20	$260M Secondary	$3.8B
5	Convoy	United States	Transport	2022	Apr-22	$260M Series E	$3.8B
6	Redwood Materials	United States	Energy	2021	Jul-21	$700M Series C	$3.7B
7	Helion Energy	united States	Nuclear	2021	Nov-21	$500M Series E	$3.58
8	Indigo	United States	Agriculture	2017	Aug-20	$360M Series F	$3.5B
9	Sila Nanotechnologies	United States	Energy	2021	Jan-21	$590M Series F	$3.3B
10	NEXTracker	United States	Solar	2022	Feb-22	$500M VC Round	$3.0B
11	Lime	United States	Micromobility	2018	Oct-21	Series D	$2.4B
12	Zume	United States	Sustainable Packaging	2018	Nov-18	$375M PE Round	$2.3B
13	Bowery Farming	United States	Agriculture	2021	Jan-22	$150M Debt Round	$2.3B
14	Beta Technologies	United States	Transport	2021	Apr-22	$375M Series B	$2B
15	Apeel	united States	Agriculture	2020	Aug-21	$250M Series E	$2B
16	Pivot Bio	United States	Agriculture	2021	Jul-21	$430M Series D	$2B
17	Solugen	United States	Environment	2021	Oct-22	$200M Series D	$2B
18	Diamond Foundry	United States	Materials	2021	Mar-21	$200M VC Round	$1.8B
19	Form Energy	united States	Energy	2021	Oct-22	$450M Series E	$1.8B
20	Crusoe Energy Systems	United States	Energy	2021	Apr-22	$350M Series	$1.8B
21	Rad Power Bikes	United States	Micromobility	2021	Oct-21	$154M Series D	$1.7B
22	Group 14 Technology	United States	Batteries	2022	May-22	$400M Series C	$1.6B
23	Prometheus Fuels	United States	Energy	2021	Sep-21	$100M Series B	$1.5B
24	Inari	United States	Agriculture	2021	Oct-22	$124M Private Equity	$1.5B
25	Perfect Day	united States	Food	2021	Sep-21	$350M Series D	$1.5B
26	NotCo	United States	Agriculture	2021	Jul-21	$235M Series D	$1.5B
27	Uplight	United States	Energy	2021	Mar-21	Private Equity	$1.5B
28	Arcadia	United States	Utilities	2022	May-22	$200M Series E	$1.45B
29	Epirus	United States	Grids	2022	Feb-22	$200M Series C	$1.35B
30	Eat Just	United States	Food system	2017	Aug-22	$25M Top Up	$1.3B
31	Bolt Threads	United States	Textiles	2021	Sep-21	$253M Series E	$1.2B
32	Motif	United States	Food	2021	Jun-21	$226M Series B	$1.2B
33	SOURCE Global	United States	Water	2022	Apr-22	$130M Series D	$1.16B
34	Firefly Aerospace	united States	Aircraft	2021	Mar-22	$75M Series B	$1.1B
35	RoadRunner Recycling	United States	Recycling	2022	Nov-22	$20M Series D	$1.1B
36	Fulcrum BioEnergy	United States	Oil Transition	2019	Dec-21	$50M VC Round	$1.1B
37	Boom Supersonic	united States	Aircraft	2020	Jun-22	Undisclosed	$1B
38	EcoFlow	United States	Power	2021	Jun-22	$100M Series B	$1B
39	Plenty	United States	Agriculture	2020	Jan-22	$400M Series E	$1B
40	Palmetto	united States	Solar	2022	Feb-22	$375M Series C	$1B
41	Mainspring	United States	Batteries	2022	Sep-22	$140M Series E	$1B
42	Watershed	united States	Carbon	2021	Feb-22	$70M Series B	$1B
43	Turntide Technologies	United States	Energy	2022	Jun-22	$80M VC Round	$1B
44	UPSIDE Foods	United States	Food	2022	Apr-22	$400M Series C	$1B
45	Nature's Fynd	United States	Food	2021	Jul-21	$350M Series C	$1B

Source: HolonIQ

China – a dichotomy: As an emerging market China's emissions path is at a different stage of development from that of mature Western economies. Whereas the UK is now 44% below the level of its 1990 emissions and the US, having peaked in carbon emissions in 2007, is now at just 2% above its 1990 levels, China's emissions are yet to peak. It is planned that they should do so in 2030, with carbon neutrality targeted for 2060.

At the same time China has invested very heavily in energy transition. According to BloombergNEF China spent $266bn on the deployment of low-carbon technologies in 2021, more than a third of the global total of $755bn. Investment focused on a variety of projects. $137bn was spent on renewable energy, with growth driven by investments in solar projects. China also led with $110bn in in electric vehicle (EV) investment.

Global investment in energy transition by country -2021 $bn



Source: BloombergNEF.
Note CCS = Carbon capture and storage

China added an estimated 74 unicorns in 2022 with 70% coming from four disciplines- Clean technology; renewable energy; healthcare; and smart logistics (source- Forbes China). By contrast, ten semiconductor companies made the list and just one gaming and one metaverse company.

China - Climate tech unicorns – ranked by last valuation round.

China						
Company	Country	Sector	Unicom year	Last round	Type	Valuation
WM Motor	China	Vehicles	2017	Nov-21	$152M Series D	$7B
Meical	China	Agriculture	2016	Oct-18	$800M Series F	$7B
Ola Electric	China	Vehicles	2019	Jan-22	$200M Series D	$5B
Hozon	China	Transport	2021	Feb-22	$310M Series D	$4B
Youxia Motors	China	Vehicles	2018	Aug-18	$350M Series B	$3.4B
Ofo	China	Micromobility	2017	Mar-18	$866M Series F	$3.0B
SVOLT	China	Energy	2021	Dec-21	$943B Series B	$2.7B
Star Charge	China	EV Charging	2021	May-21	Series B	$2.4B
Leapmotor	China	Transport	2015	Jan-21	$520M Series B	$2.3B
TELD New Energy	China	EV Charging	2021	Jan-21	$46M VC Round	$2B
Aulton New Energy	China	EV Charging	2021	Sep-21	$215M Series B	$2B
Enovate Motors	China	Vehicles	2018	Oct-20	$720M VC Round	$1.9B
AIWAYS	China	Vehicles	2022	Jan-22	Undisclosed	$1.6B
Qdama	China	Agriculture	2019	Dec-19	$142M Series D	$1.6B
Greater Bay Technology	China	Batteries	2022	Apr-22	$157 Series A	$1.26B
Nxin	China	Agriculture	2018	Sep-18	$56M Series B	$1.1B
Meike Solar	China	Solar	2021	Nov-21	Undisclosed	$1.1B
SITECH DEV	China	Vehicles	2019	May-19	Undisclosed	$1B
Jiangsu Horizon New Energy Technology	China	Energy	2022	44805	$195M VC Round	$1B

Source: HolonIQ

Venture funding remains strong

Given the well-publicised difficulties of the venture capital market in 2022 the level of announcement of new funds has remained buoyant. Since the start of 2023:

New Enterprise Associates has closed two new funds for a total of $6.2bn.

B Capital, the New York multi-stage investment firm, has closed its third growth fund series at $2.1bn. It focuses on seed to late-stage venture growth investments, primarily in the enterprise, financial technology and healthcare sectors.

Highland Europe has announced a new €1bn fund targeted at private software and consumer internet companies across Europe.

Volition Capital, a Boston growth equity investment firm, closed Volition Capital Fund V, at over $675m in aggregate capital commitments.

Dimension, a new VC firm focusing on biotechnology and medicine, raised $350m. Dimension plans to focus mostly on early-stage companies.

M33 in Boston closed its Third Fund at $340m.

Cowboy Ventures, a Palo Alto based early-stage venture capital firm, raised $260m raised for two new funds.

FJ Labs, a New York venture capital firm, raised $260M across two funds. It is focused on marketplaces and network effect businesses.

Sapphire Sport closed a second fund of $181m. Its focus is on seed to Series B companies capturing trends in consumer behaviour across media, digital commerce, gaming, health, culture and community.

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 many fewer.

(iii) Investors report a lot of internal rounds.

(iv) It appears that companies who are able to do so are deferring raises in the hope that market conditions and valuation will improve.

(v) The number of public down rounds has picked up at the end of 2022 and into 2023.

(vi) There is an expectation that 2023 will see more down rounds as companies are forced back into fund raising as runways shorten.

(vii) There is a recognition that some companies won't be able to raise on acceptable terms and that the level of M&A and of business failures will increase.

(viii) The sense remains that valuation expectations between founders and potential investors are still not aligned.

(ix) Investors remain active. They are conscious though of changed priorities with the focus on profit, cash flow and positive unit economics prevailing over the pursuit of concept and out-and-out growth.

Investor comments:

Deal Activity

Cautious into 2023 – likely to focus on investing later stage for more profitable businesses

See current environment as quite difficult for raising / investing

Lots of internal rounds

Looking through their portfolio to see what can be monetised via strategic exits

Deploying most in earlier stage companies at the moment

Q4 light on new deals. Activity picked up in January

Not seeing any $100m+ raises at the moment - in the tens of millions

Business models

Very high hurdle at the moment will only look at businesses which are executing extremely well, strong unit economics and clear path to profitability

Really focused on growth businesses

Need positive unit economics

No tech risk

Will fund off order book but needs commercial traction / validation

FinTech – very cautious at moment, given changing interest rate environment

Key is not to have too many layers of risk; proven unit economics

Valuations

Perhaps a chart. This is a CB Insights chart on the movement in median tech valuations 2022 versus 2021.

Source: CB Insights Tech Valuations 2022 report

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 rising 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 (although it is up 13% ytd in 2023). 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 is 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 at c$585bn.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 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.

- 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.

- 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

For more information, or advice, contact our Growth Equity team:

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