Rothschild & Co
Global Advisory

Growth Equity Update

October 2023 – Edition 19

- ***And away***…The Arm Holdings, Instacart and Klaviyo IPOs all priced at the top end of their respective ranges (the latter two had increased their price ranges), all three got away, all three had a good first day premium and two of the three remain above the issue price
- ***IPO market is open*** but conditions remain difficult. Valuation – all three were IPO down rounds - was cautious. Supply was modest with less than 10% of the equity sold in each case. Cornerstones absorbed 15% of the available Arm stock, 17% of Klaviyo's and 61% of Instacart's
- ***Widening out - Birkenstock to the NYSE:*** Other substantial IPO processes are underway. Notably Birkenstock plans to float on the NYSE raising c$1.6bn at a valuation of c$9.9bn with cornerstones buying $625m, representing c 40% of the stock available
- ***Higher for longer:*** The Fed held rates on September 20th but sent out a series of higher for *'some time'* messages sending bond yields to a 16 year high and the equity markets sharply lower
- ***The NASDAQ Composite dropped 6% in September***. Having been up 32% in H1 the index is now up 27% ytd. The equivalent figures for the tech focused NASDAQ 100 are 46%/36%; S&P 500 16%/11%: STOXX 600 8%/3%; FTSE 100 flat/-2%; Refinitiv Venture Capital Index, 29%/ 23%
- ***VC optimism:*** US VC funds' IRR fell to -16.8% in Q4 2022 *(Pitchbook)*, the worst for a decade. Nevertheless a GS survey indicates LPs/GPs' growing enthusiasm for private market strategies. 64% see improved market conditions versus a year ago. Many LPs are still under-allocated
- ***VC investment picking up:*** Q3 VC investment figures in US /Europe remain down yoy. This disguises a resurgent September when Europe saw its strongest month, c$7bn, since 2021.

Higher for longer

Markets, interest rates and IPOs

'Higher for longer': Markets took a setback in September as bonds came under pressure. The yield on 30 year US Treasuries reached a 16 year high (high yields equal lower bond prices) at just under 5%, the highest they have been since 2007 just before the global financial crisis.

Perversely the bond market weakness appears to have been caused by the signs of continued robustness in the US economy. This has caused the Fed to be more hawkish in its commentary on interest rates fuelling the concept, that has been present for the last few months, that interest rates will remain 'higher for longer'.

As a reminder the August US CPI figure was disappointing rising from 3.2% in July to 3.7% impacted by rising petrol prices . Core inflation, on which the Fed is more focused, also rose, albeit at a lower rate, up 0.3% points month on month after 0.2% points in July. It stands at 4.3% down yoy from 4.7%.

The Fed kept US interest rates unchanged at 5.25%-5.5% at its meeting on September 19-20. The majority view, particularly after the fiscal tightening that is an effect of sharply rising bond yields, is for no more interest rate rises in this cycle. The minority view (c30%) is for one more 25bps rise to a high of 5.75% and for this to happen by the end of 2023. There are only two more Fed meetings this calendar year – on November 1 and December 13.

What appears to have changed, as a slew of positive indicators on the US economy has continued to come in (manufacturing activity strong, job openings improving unexpectedly in August/September), is the view on whether the Fed was posturing in its hard line comments on keeping the pressure on inflation or whether it actually means what it says. The Fed has worked consistently since its September pause to stress that interest rates will need to stay higher for longer.

'Some time' Although the market's core expectation is that Fed interest rates have peaked, hopes that interest rates might then fall relatively quickly have dissipated. Fed officials bolstered this view in a series of remarks at the start of October, all of them on of a *'higher for longer'* theme.

The Fed Chair Jerome Powell said on October 2 that restrictive policies on interest rates would be needed for ***'some time'***.

Speaking on the same day Fed Governor Michelle Bowman said,

*"I remain willing to support raising the federal funds rate at a future meeting if the incoming data indicates that progress on inflation has stalled or is too slow to bring inflation to 2% in a timely way. Inflation continues to be too high, and I expect it will likely be appropriate .. to raise rates further and hold them at a restrictive level for **some time.**"*

At almost the same time the Fed Vice Chair for Supervision Michael Barr commented,

*"In my view, the most important question at this point is not whether an additional rate increase is needed this year or not, but rather how long we will need to hold rates at a sufficiently restrictive level to achieve our goals. I expect it will take **some time.**"*

At the end of September the President of Federal Reserve Bank of New York John Williams said,

*"My current assessment is that we are at, or near, the peak level of the target range for the federal funds rate. I expect we will need to maintain a restrictive stance of monetary policy for **some time** to fully restore balance to demand and supply and bring inflation back to desired levels."*

As far as equity markets are concerned, the prospect of *'higher for longer'* interest rates combines the beneficial assumption of an economic soft-landing with the more negative implication that the economy will have to deal with the impact of higher interest rates for longer, stunting growth. At a simple level investors also anticipate a higher yield from bonds, making equities less attractive.

Meanwhile, futures markets appear still to be pricing in up to three Fed interest rate cuts by the end of 2024 implying rates dropping back from a peak of 5.75% to c5%. At the end of August the market had been looking for rates to fall to c4.5% by that point.

September was thus rough for markets.

The ***NASDAQ Composite*** dropped 6% between 4th September to 4th October. Having been up 32% in H1, and having peaked in mid-July at up 38%, the index is now up just 27% ytd.

The tech focused ***NASDAQ 100*** lost 5% in the last month. It was up 46% ytd at its mid-July peak and is now up 36%.

The ***S&P 500*** was up 16% in H1. It has lost c5.5% since the start of September and is now up 11% ytd.

The ***STOXX 600 Europe*** was up 8% in H1, lost 4% in September and is now up 3% ytd.

The ***FTSE 100*** was flat in H1, was flat in September and is down 2% ytd.

The ***Refinitiv Venture Capital Index,*** which seeks to monitor the real time performance of the venture capital industry and whose performance is partly driven by the moves in public markets, and particularly tech heavy indices like NASDAQ, was up 29% at the end of H1. It lost 10% in September and is now up 23% ytd.

Where next? The turmoil in the bond markets also has commentators looking at substantial budget deficits on both sides of the Atlantic. Typically government requirements to borrow more because of deficits tends to drive up bond yields.

"Developed economy sovereign debts are unsustainable"

Melissa Davies - Redburn economist – 25th August 2023

As successive US government shutdowns indicate, the US budget deficit is running at an unusually high rate of close to 7%. This factor was presciently observed as likely to impact equity markets by our Redburn colleague Melissa Davies in her note *'Paying The Piper'* published on August 25. The opening line of the note was *"Developed economy sovereign debts are unsustainable."*

She continued:

"In the meantime, unsustainable deficits mean central banks will struggle to get a grip on inflation. Perhaps cold comfort but central bank profitability problems caused by raising rates are just a sideshow to the main event of deteriorating public sector balance sheets. Raising interest rates will make the fiscal problem worse, not better, with an inflationary cost.

The historic record is littered with economies switching from fiscal calm to crisis. Structurally higher interest rates have rendered seemingly manageable public finances unaffordable. Nominal bonds will be the casualty until the advent of an austere fiscal regime shift."

The fall back in equity markets came just as a number of IPOs hit the US market. These have, of course, been closely watched as an indicator of whether IPO markets will reopen more broadly. The feeling is that IPO markets are re-opening but that it is hard work to convince investors of the attributes of even very strong companies. This means that it helps, if a company is looking to IPO now, if it is not super-sensitive to valuation, because it is unlikely in these market conditions to hit its highest aspirations.

Looking at the fate of the three major US IPOs that were on the blocks at the beginning of September, the first thing to say is that all of them got away and are now successfully listed as public companies. All three enjoyed a *'pop'* on the first day. All three have sunk back since then. One, Instacart, is trading at below the issue price. Two, Arm Holdings and Klaviyo are trading above their issue prices, Klaviyo healthily so.

Performance of September's 'Big three' IPOs.

	Symbol	Offer date	Shares (m)	Offer price $	Amount sold ($m)	First day Close $	Change %	Current price $	Change %
Arm Holdings	ARM	14-Sep-23	95.5	51	4871	63.6	25	53.5	5
Instacart	CART	19-Sep-23	22	30	660	33.7	12	27.3	(9)
Klaviyo	KVYO	20-Sep-23	19.2	30	576	32.7	9	32.8	9

Source: Rothschild & Co

Looking at their fates in turn:

Arm Holdings: The initial pricing range for the Arm IPO was announced on September 5th at $47-$51 per share, valuing ARM at between $48.2bn and $52.3bn. Supported by $735m in investment from cornerstone investors including AMD, Apple, Cadence, Google, Intel, MediaTek, NVIDIA, Samsung, Synopsys and TSMC, and limited supply – only 9.4% of Arm's shares were sold – demand was strong and the books for the flotation closed a day early at five times oversubscribed. The stock was priced at the top end of the range at $51 per share, raising $4.9bn on a valuation of $52.3bn.

Arm shares saw a significant *'pop'* on day one of trading, closing up 25% at $63.6 per share. This has proven so far to be the high. The shares lost 4% a day for the next four days. After the Fed's more hawkish than expected remarks following its holding of interest rates on September 20th, Arm shares went below the offer price intraday albeit the lowest close, on September 22, was just above the offer price at $51.3. The shares are (October 5th) at $53.5 up 5% on the offer price.

Instacart: The price range for the Instacart IPO was originally set at $26-$28. Following the strong demand for the Arm IPO and with an eye on the initial pop of those shares, the Instacart vendors then raised the price range c7% to $28-$30. On the 18th September the IPO was priced at the top end of this new range at $30 raising around $660m with a fully diluted valuation of $10.2bn. Again there was substantial support from cornerstone investors, including existing VC owners of the company with Norges, TCV, Sequoia, D1 Capital Partners and Valiant committed to buy $400m of stock.

Instacart shares rose by as much as 43% intraday to $42.95 on the first day of trading before closing up 12% at $33.7. The following day the shares touched an intraday low of $29.96, just beneath the offer price, before closing at $30.10, marginally above it. The shares have since drifted, closing at a low of $26.5, 12% below the offer price on October 3rd and remain close to those levels.

Klaviyo: The Klaviyo IPO timetable ran a day behind that of Instacart and like Instacart its sponsors took encouragement from the early experience of Arm's trading to raise the price range. Initially set at $25-$27 the range was increased to $27-$29 on September 18. The shares were then priced at above the range at $30 per share. With 19.2m shares being sold it raised $576m at a valuation of $9.2bn. Again cornerstone investors played a big part with BlackRock and Alliance Bernstein having committed to buy $100m of stock.

Klaviyo shares hit an initial peak of $36.75 on day one before closing up 9% on their first day at $32.7. Klaviyo has been the most solidly performing of the three shares, briefly climbing back to $36 six days into trading and going no lower than $31 despite the weak markets at the end of September. By October 5th the shares are at $32.9, 9% above the float price.

So what are the takeaways? Has the IPO market reopened or does the initial experience of these IPOs and the weakness in broader equity markets since mid-September provide a deterrent to further issues?

We have observed that the three issues had some common characteristics.

Valuation was relatively cautious in historical context – all three represented downrounds on their last private raises. Against peers the Arm pricing was probably the most ambitious of the three.

Supply was limited with in each case less than 10% of the equity being sold. The Instacart and Klaviyo fund raises at $575m-$660m were smaller than the private raises in September for Anthropic ($1.25bn) and Stack AV ($1bn) in the US or the H2GreenSteel ($1.65bn), Verkor ($910m) or Zenobe ($750m) venture raises in Europe.

The extensive use of cornerstone investors smacks of a *'safety first'* approach after a long hiatus in the IPO market. Cornerstones absorbed 15% of the available Arm stock, 17% of Klaviyo's and 61% of Instacart's.

All three of the issues got away, all three had a good first day performance, two of the three remain above the offer price, albeit neither of them substantially so.

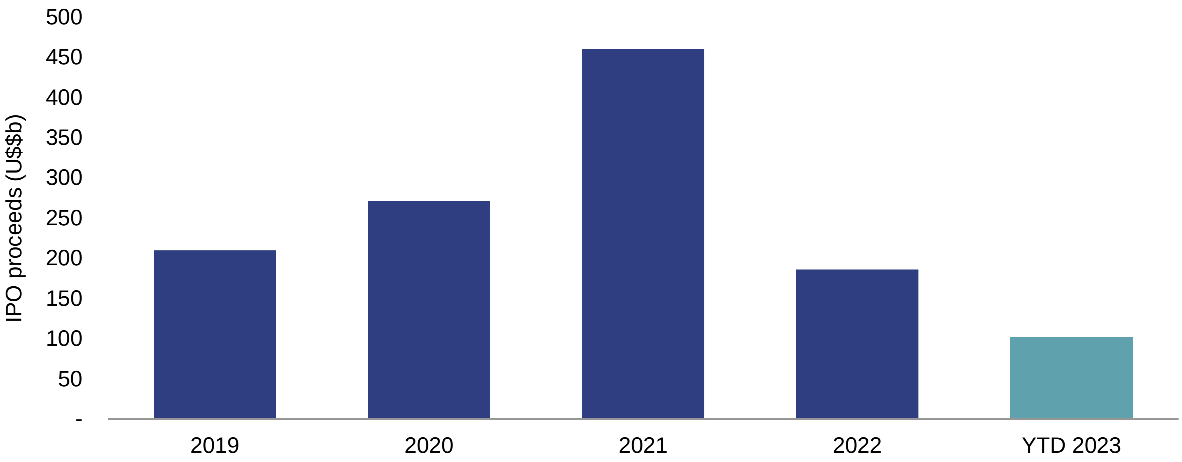
The chief takeaway is that the IPO market is now open but that market conditions are still difficult. The companies most likely to step forward are those with a specific reason to do so – a requirement for capital, a need to fund employee stock options - a feature of both the Instacart and Klaviyo raises and the recent private raise by Stripe, a requirement or desire by the owners to provide an exit – arguably a factor for SoftBank in the Arm IPO - or an indifference to extracting a high valuation for a first tranche of initially floated shares.

Birkenstock to the NYSE: There are other substantial IPO processes underway. Most notably Birkenstock has continued with its plans to float on the NYSE. The US sandal maker has set an initial IPO range of $44-$49 raising c$1.6bn for the company at a valuation of c$9.9bn fully diluted. Again cornerstone investors are expected to play a pivotal role. Financière Agache, the family company of Bernard Arnault, is lined up to buy $325m of stock and Norges and Durable Capital $300m. Together this $625m would represent just under 40% of the stock available.

Overall IPO activity remains depressed against recent levels based on the outturn for the first nine months of 2023. The chart, sourced from EY's IPO trends report, shows that global IPO proceeds peaked in 2021 at $460bn, fell back sharply in 2022 to $184bn (-60%) and after three quarters of 2023 have reached $101bn, suggesting that 2021's full year total will fall short of 2022. The $101bn figure is down 32% on the $148bn figure after nine months of 2022.

Global IPO activity by IPO proceeds (US$bn)

2019-2022 (full years), YTD 2023



Source: EY https://www.ey.com/en_gl/ipo/trends

Viewed by geography, the Americas remains the smallest bloc in terms of IPO value with $19.3bn raised after nine months of 2023. This though represents a substantial upturn yoy, up 159% against the lacklustre $7.5bn total at 9m 2022. Europe, Middle East, India and Africa (EMEIA) remains in second place at $21.9bn raised after 9 months, down 44% on 2022. Asia Pacific remains the leading IPO market in terms of funds raised at $60bn, albeit down 40% on 9M 2022, in part due to tighter regulations on companies aiming to go public in mainland China.

Q1-Q3 2023 IPO activity

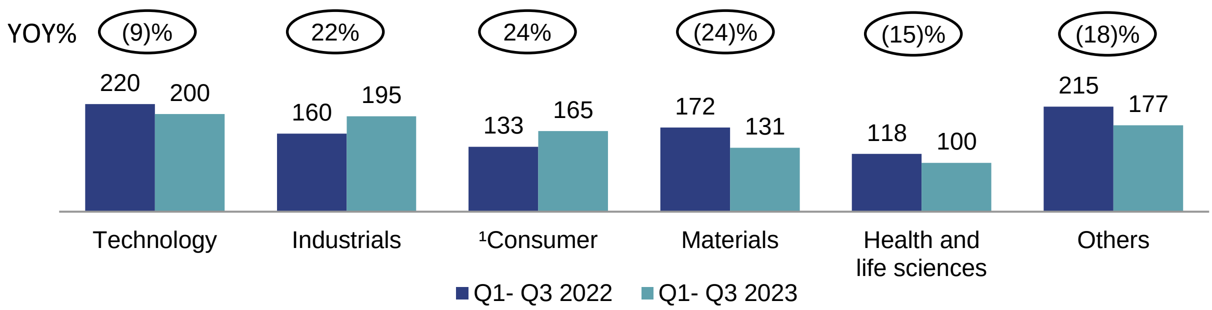
	Q1-Q3 2022		Q1-Q3 2023		% change	
	Number of IPOs	Proceeds (US$b)	Number of IPOs	Proceeds (US$b)	Number of IPOs	Proceeds (US$b)
Global	1,018	**147.9**	968	**101.2**	(5%)	(32%)
Americas	116	**7.5**	113	**19.3**	(3%)	159%
Asia-Pacific	621	**101.3**	569	**60.0**	(8%)	(41%)
EMEIA	281	**39.1**	286	**21.9**	2%	(44%)

01-03 2023 refers to the first nine months of 2023 and covers completed IPOs from 1 January 2023 to 18 September 2023. plus expected IPOs by 30 September 2023 (forecasted as of 18 September 2023). 01-03 2022 refers to the first nine months of 2022 and covers completed IPOs from 1 January 2022 to 30 September 2022

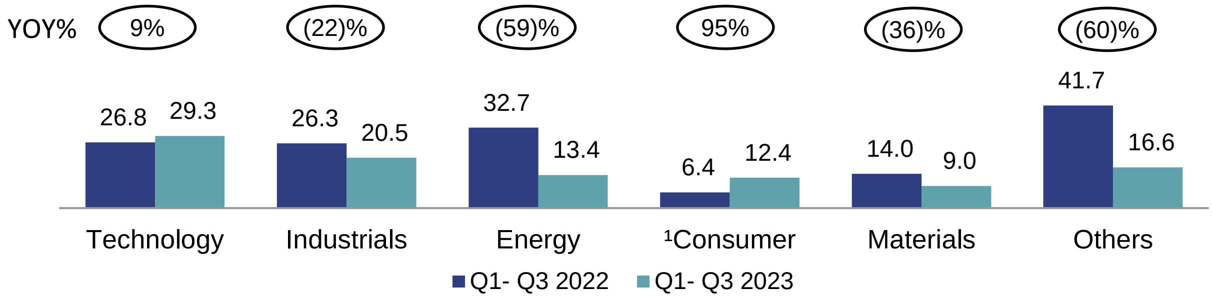
Sources: EY analysis,Dealogic

By industry and funds raised the largest IPO category in the first nine months of 2023 is technology and it is the one of only two categories to have seen yoy growth in IPO proceeds. Consumer staples, products and services is the other. The biggest drop in IPO proceeds has been experienced in the energy sector.

Number of IPOs by sector – First nine months of 2023

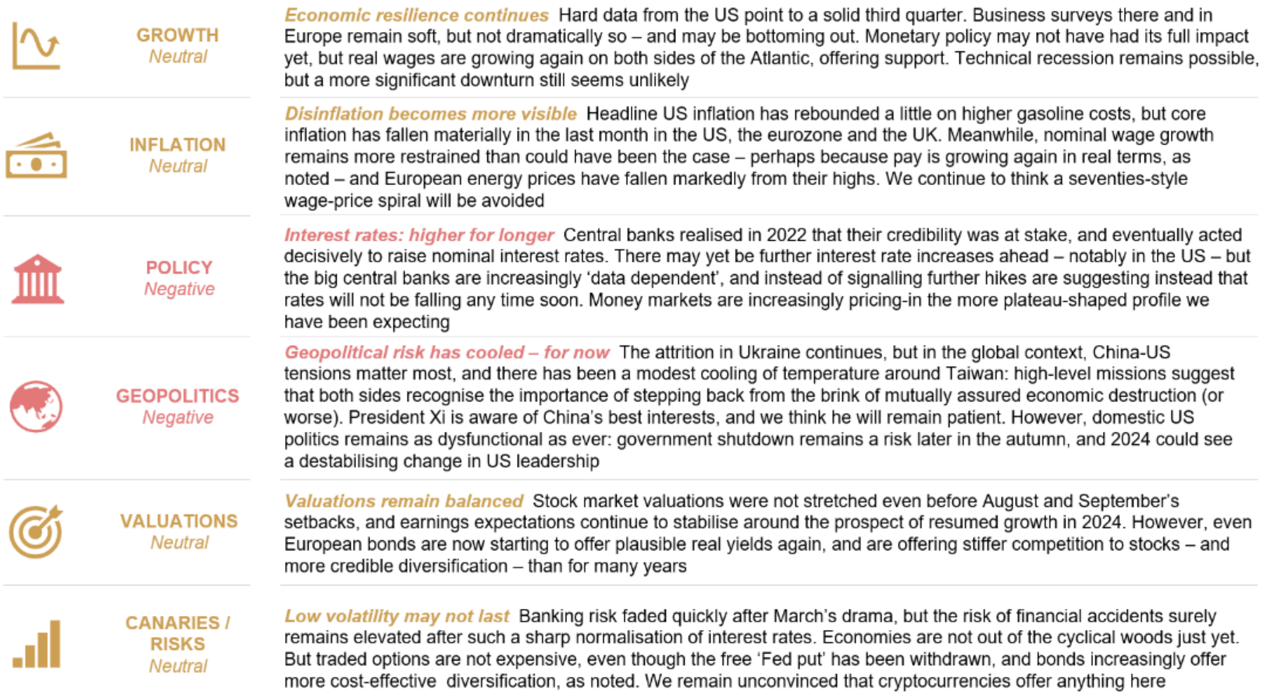


IPO proceeds by sector (US$bn) - First nine months of 2023



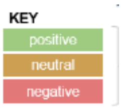
1 Consumer includes the combination of "Consumer staples" and "Consumer products and services" sectors. YTD 2023 or Q1-Q3 2023 refers to the first nine months of 2023 and covers completed IPOs from 1 January 2023 to 18 September 2023, plus expected IPOs by 30 September 2023 (forecasted as of 18 September 2023). Q1-Q3 2022 refers to the first nine months of 2022 and covers completed IPOs from 1 January 2022 to 30 September 2022. Sources: EY analysis, Dealogic

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



GROWTH *Neutral*	***Economic resilience continues*** Hard data from the US point to a solid third quarter. Business surveys there and in Europe remain soft, but not dramatically so – and may be bottoming out. Monetary policy may not have had its full impact yet, but real wages are growing again on both sides of the Atlantic, offering support. Technical recession remains possible, but a more significant downturn still seems unlikely
INFLATION *Neutral*	***Disinflation becomes more visible*** Headline US inflation has rebounded a little on higher gasoline costs, but core inflation has fallen materially in the last month in the US, the eurozone and the UK. Meanwhile, nominal wage growth remains more restrained than could have been the case – perhaps because pay is growing again in real terms, as noted – and European energy prices have fallen markedly from their highs. We continue to think a seventies-style wage-price spiral will be avoided
POLICY *Negative*	***Interest rates: higher for longer*** Central banks realised in 2022 that their credibility was at stake, and eventually acted decisively to raise nominal interest rates. There may yet be further interest rate increases ahead – notably in the US – but the big central banks are increasingly 'data dependent', and instead of signalling further hikes are suggesting instead that rates will not be falling any time soon. Money markets are increasingly pricing-in the more plateau-shaped profile we have been expecting
GEOPOLITICS *Negative*	***Geopolitical risk has cooled – for now*** The attrition in Ukraine continues, but in the global context, China-US tensions matter most, and there has been a modest cooling of temperature around Taiwan: high-level missions suggest that both sides recognise the importance of stepping back from the brink of mutually assured economic destruction (or worse). President Xi is aware of China's best interests, and we think he will remain patient. However, domestic US politics remains as dysfunctional as ever: government shutdown remains a risk later in the autumn, and 2024 could see a destabilising change in US leadership
VALUATIONS *Neutral*	***Valuations remain balanced*** Stock market valuations were not stretched even before August and September's setbacks, and earnings expectations continue to stabilise around the prospect of resumed growth in 2024. However, even European bonds are now starting to offer plausible real yields again, and are offering stiffer competition to stocks – and more credible diversification – than for many years
CANARIES / RISKS *Neutral*	***Low volatility may not last*** Banking risk faded quickly after March's drama, but the risk of financial accidents surely remains elevated after such a sharp normalisation of interest rates. Economies are not out of the cyclical woods just yet. But traded options are not expensive, even though the free 'Fed put' has been withdrawn, and bonds increasingly offer more cost-effective diversification, as noted. We remain unconvinced that cryptocurrencies offer anything here

Source: Rothschild & Co

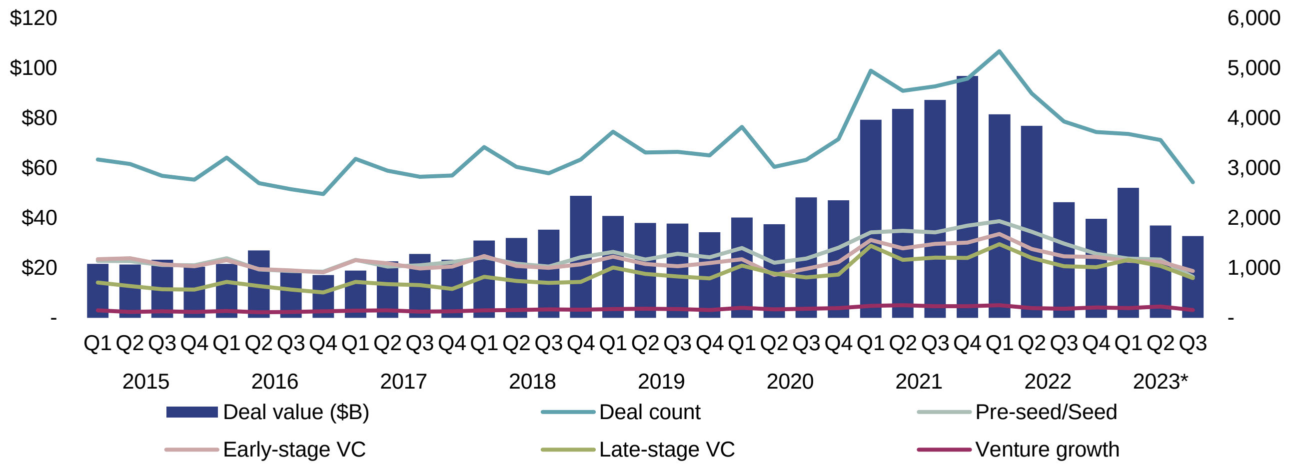


Venture Capital trends in Q3 2023

Data from the Pitchbook NVCA Venture Monitor indicates that funds deployed into companies by VC investors in the US were $32.7bn in Q3 2023. This was down from $37bn in Q2 and from $46.4bn in Q3 2022. The yoy fall of 30% was still steep but much less than the 52% decline yoy in Q2.

Venture capital has begun to lap the weaker quarters of 2022 and these yoy falls should not be so marked in the coming quarters. The Q2 2022 comp for instance is just $39bn. Indeed, after a slow start to Q3 in the anyway seasonally low months of July and August, there was a sharp pick up in VC activity in September.

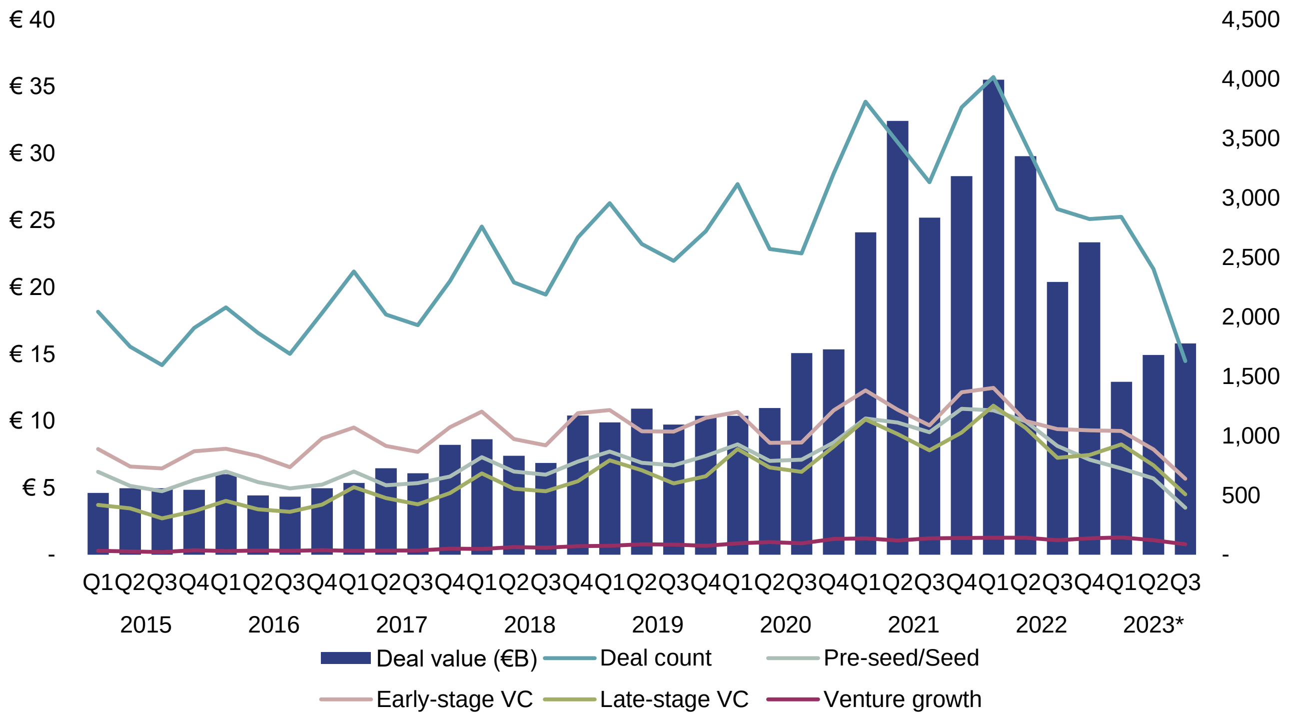
US VC investment - $32.7bn in Q3 2023, down 30% yoy



Source: Pitchbook NVCA

The shape of the curve looks different in Europe. Deal value was €12.9bn in Q1, €14.9bn in Q2 and €15.8bn in Q3, a rising trend as opposed to the falling one seen ytd in the US. The yoy decline in Q3 was 23%, still reasonably steep. Again the comparable drops sharply in Q4 (Q4 2022 was at €20.4bn) implying the yoy decline is likely to be much smaller in Q4.

European VC investment - €15.8bn in Q3 2023, down 23% yoy



Source: Pitchbook NVCA

Looking at the monthly trend, our own survey of European venture deals indicates that after a good June there was a sharp fall away in funding in July and August followed by a very strong month in September with c$7bn of raises. The September monthly total appears easily to have been the largest single month total since 2021.

Europe – Largest venture capital raises Q3 2023

	Company	Sector	Date	Country	Stage	Raise $m	Led by	Activity
1	H2 Green Steel	ClimateTech	Sep-23	Sweden	Funding	1649	Altor, GIC, Hy24 and Just Climate,	Green steel
2	Northvolt	ClimateTech	Aug-23	Sweden	Convertible	1300	Blackrock, IMCO, CPP, Omers	Battery maker
3	Verkor	ClimateTech	Sep-23	France	Climate Tech	910	Macquarie	Low carbon bateery gigafactory
4	Zenobe	ClimateTech	Sep-23	UK	Funding	750	KKR, Infracapital	Transport electrificatioion, batteries
5	Getir	Consumer	Sep-23	Turkey	Funding	500	Mubadala	On demand grocery
6	Butternut Box	Consumer	Sep-23	UK	Funding	355	GA, L Catterton	DTC dog food
7	Cato Networks	Software	Sep-23	Israel	Funding	238	LightSpeed,Adams Street , Softbank VF2,	single-vendor Secure Access Service Edge platform
8	Helsing	Software/AI	Sep-23	Germany	Series B	226	General Catalyst, SAAB	Defense AI
9	EGYM	Fitness	Jul-23	Germany	Series F	225	Affinity Partners, Mayfair Equity Partners, Bayern Kapital.	Connected fitness company
10	TechMet	Natural resources	Aug-23	Ireland	Equity	200	DFC and Swiss-based Mercuria Energy,	Permanent capital vehicle across the minerals value chain
11	CMR Surgical	HealthTech	Sep-23	UK	Funding	165	SoftBank	Soft tissue robotic-assisted surgery
12	ShopCircle	Software	Sep-23	UK	Series A	120	645 Ventures, 3VC	Software suite for Ecommerce brands
13	Smart Photonics	Deeptech	Jul-23	Netherlands	Funding	109	Dutch government, ASML, NXO, VDL Groep	Foundry for photonic integrated circuits
14	ChapsVision	Software	Sep-23	France	Funding	105	Qualium	Data analysis platform
15	Poolside	Software/AI	Aug-23	France	Seed +	100	Xavier Niel., Felicis	Foundation model provider
16	Pvcase	Software	Jul-23	Lithuania	Funding	100	Highland Europe, Energize , Elephant.	Solar project design software
17	Netcraft	Cybersecurity	Jul-23	UK	Funding	100	Spectrum Equity	Subscription-based cybercrime detection, disruption
18	GoStudent	Edtech	Aug-23	Austria	Equity & Debt	95	Deutsche Bank, Left Lane, DN, TenCent	Tutor marketplace
19	Aphea.Bio	AgriTech	Jul-23	Belgium	Series C	77	Innovation Industries, joined by Korys Investments	Integrated microbial product development company
20	Tenpoint Therapeutics	Biotech	Jul-23	UK	Series A	70	British Patient Capital, F-Prime Capital, Sofinnova Partners,	Vision-restoring engineered cell-based therapeutics

Source: Rothschild &Co; FINSMES; TechCrunch; Sifted, various

The four largest raises in Europe in Q3 were all in Climate Tech. ***H2 Green Steel*** had another significant raise with a $1.65bn round taking its equity funding since February 2021 to more than $2bn.

The next three largest raises were all of battery makers.

Northvolt followed up its €1.1bn convertible bond from July 2022 with a further €1.2bn convertible raise in August. The company has ambitious capex plans, intending to build four battery gigafactories as electric vehicle demand increases.

Verkor raised $910m (€850m) in Series C equity funding led by Macquarie Asset Management as part of a larger €2bn plus fundraising which also involved €600m debt support from the European Investment Bank and French state subsidies of c€650m. The funding will support the construction of Verkor's first gigafactory for the manufacture of high performance low-carbon battery cells.

KKR is investing c$750m in UK battery storage developer ***Zenobe*** in a deal announced in September.

Two big raises in the Consumer sector came through in September. The on demand grocery business ***Getir*** was reported in the FT as having raised a further $500m in a round led by Mubadala and G Squared at a valuation of $2.5bn, down from a high of a valuation of $11.8bn reached in its $800m raise in March 2022. The subscription based online dog food manufacturer and distributor ***Butternut Box*** raised $355m in a round led by General Atlantic and L Catterton.

Software and AI businesses saw six raises in the top 20 in the quarter, amongst them a couple of AI focused deals. ***Helsing*** of Germany is a defense tech business which is providing AI enabled electronic warfare capability for projects such as the Eurofighter and the Future Combat Air System. General Catalyst and Saab led the $223m round which put Helsing's valuation at c€1.7bn post money.

Originally a US business, ***Poolside AI*** is redomiciling to France and in August raised $126m in a round led by Xavier Niel and Felicis. Poolside AI is building a foundational AI model with the aim of enabling users to create code for applications using plain language.

In the US the big venture deals have remained dominated by AI. ***Anthropic*** received a $4bn investment from Amazon, an immediate $1.25bn with a deal allowing Amazon to inject a further $2.75bn. The autonomous driving business ***Stack AV*** raised $1bn in a round led by SoftBank. The data analytics business powered by AI, ***Databricks*** raised a $500m Series I led by T Rowe Price and including Nvidia. The data management business Denodo raised $336m from TPG.

Energy was another big focus. The nuclear energy business ***TerraPower*** (originally founded by Bill Gates) raised $750m in a round led by South Korean energy business, SK. ***Lunar Energy*** raised $300m, also supported by SK. Lunar is developing hardware and software systems to allow homes to become energy independent by creating and storing their own power. ***Longroad Energy*** raised $500m for wind, solar and storage in a deal led by MEAG.

Redwood Materials, the battery recycling business raised $1bn in a Series D valuing the company at over $5bn in a deal led by Goldman Sachs, Capricorn and T Rowe Price. ***Ascend Elements,*** which manufactures sustainable battery materials for EVs, raised $460m led by Decarbonisation Partners, a Blackrock-Temasek venture.

There were no fintech deals in the top 20 in Q3 in Europe but in the US the wealth management firm ***Lvrch Capital Advisory*** raised $400m. In real estate ***Flow*** raised $350m in a deal led by a16z.

Temperature check – the mood of GPs and LPs

Pitchbook reports that US-based venture capital funds' IRR fell to -16.8% in Q4 2022, the worst quarterly return for a decade. In Q2 2022 venture capital funds returned -8.2% and -4.8% in Q3. Q2 2022 was the first time venture funds returns had fallen below zero since 2016.

The Q4 numbers tend to be a relative low point in the year. This is because venture companies are under pressure from their auditors in the year end audit to ensure that valuations for their private assets are realistic. Through the rest of the year companies only tend to re-mark the value of their assets when a new round goes through creating an updated valuation mark.

Updated numbers for 2023 performance are not yet available. There is some optimism that 2023 may show a better performance. Public market values for tech stocks have resurged. There have been a number of highly publicised down rounds but the effect of this should have been at least partly absorbed in the markdowns of private company valuations seen in Q4 2022. There are a number of up rounds, most notably in generative AI but also in other categories which may offset the broader downwards pressure.

US VC funds rolling one-year IRRs through 2022

Source: PitchBook data

Even as returns have come under pressure a survey published by Goldman Sachs at the end of September indicates that Limited Partners and General Partners are growing in their enthusiasm for private market strategies.

The survey indicated that:

More optimistic: When asked about investment opportunities in private market strategies compared to a year ago 64% of LPs and GP see improved market conditions. 22% think market conditions are stabilising.

LPs remain under-allocated: As public market indices fell the concern developed that LPs would perforce be overallocated to private investments. The GS survey is reassuring in this respect. Despite concerns about over-allocation, a high portion of LPs surveyed are under-allocated to alternatives.

The survey concludes *"Counter intuitive to the headlines about 'overallocation,' and amidst higher perceived risks, our survey shows that not only are many LPs under-allocated in most strategies, but most LPs are instead increasing allocation."*

58% of LPs report zero allocation to co-investments but 59% plan to increase allocations over the next two to three years. Secondaries rank second (48%) for increasing allocations, followed by private credit (46%), venture capital (41%), infrastructure (40%), and opportunistic/distressed (40%). The top choices amongst LPs for decreasing allocations are Real Estate (28%), growth (16%) and buyouts (15%).

This ***optimism on private markets*** comes despite a majority of respondents anticipating a recession. 77% of respondents said they expected a US recession on the next two years. 90% expect a Eurozone recession.

US LPs and GPs – Largest average allocations and most under allocated areas

Largest average allocatiions	
Buyouts	12.2%
Private Credit	10.1%
Real estate	9.6%
Infrastructure	6.4%
Growth	5.1%
Secondaries	5.1%
Venture Capital	3.9%
Opportunistic/Depressed	2.6%

LPs - Most underallocated areas	
Co-Investments	51.0%
Opportunistic/Depressed	46.0%
Infrastructure	44.0%
Venture Capital	41.0%

Source: GSAM

https://www.gsam.com/content/gsam/no/en/advisers/about-gsam/news-and-media/2023/goldman-sachs-survey-show-limited-partners-interest-in-private-markets-continues-despite-fundraising-slowdown.html

Exits: Most GPs see full exits via asset sales as the most likely path to liquidity in the year ahead. By contrast LPs say they are engaging as secondary fund investors (45%) rather than looking primarily to sales (10%) as an exit.

GPs are most likely to revalue positions based on private market transaction values (44% say 'large impact'), and by changes in operating metrics such as revenue (38%) and EBITDA margins (25%). Public market valuations likely will have a 'moderate impact' according to 56% of respondents.

Fundraising for GPs has become more difficult: 66% cite their top non-investment challenge as being fundraising Some 68% of GPs are looking to raise funds in the next year and typically they expect fundraising timelines to be longer.

LPs view track record as the primary factor when evaluating GPs, potentially making it more difficult for new GPs to break in. When evaluating managers, the factor most cited by LPs is track record (51%), followed by operational expertise (48%) and fees/terms (46%).

Goldman Sachs surveyed 46 GP firms and 166 LP firms in June & July 2023.

France and the UK – promoting AI investment

Initiatives in the last month in both France and the UK to promote investment in AI.

In France Xavier Niel, chairman of Iliad, has announced that Scaleway the cloud provider that is part of the Iliad Group will host an AI conference in Paris in November. Dubbed the ***'first European AI conference'*** its intention is to highlight recent advances in artificial intelligence, to assess the impact of AI models on the world of business and analyse upcoming trends. The conference will take place at Station F. Owned by Xavier Niel and based in Paris' 13th arrondissement in a former rail freight depot, Station F is described as the world's largest start up campus with 1,000 startups.

Xavier Niel and his group of companies have a number of AI initiatives. Iliad has opened an AI research centre in Paris with an initial €100m commitment. Scaleway is a significant European GPU cloud computing capability provider.

Separately Xavier Niel is an investor in *Mistral* alongside Lightspeed, Bpifrance, and former Google CEO Eric Schmidt amongst others. The French AI company raised a $113m seed round in June this year at a valuation of $260m. At the time the business had been founded only a month earlier. Headed by three prominent AI experienced founders, Arthur Mensch (formerly at DeepMind in Paris), Timothée Lacroix (and Guillaume Lample (both formerly in Meta's Paris AI business) its plan is to compete with OpenAI in the building, training and application of large language models and generative AI using only publicly available data

Xavier Niel is also a recent investor in *Poolside AI* which recently raised $126m to build a foundational AI model enabling users to create code for applications using plain language.

"For artificial intelligence to work, you need three things: researchers, computing power and companies that exploit all of that. ...To influence the AI market, you need computing power. To have computing power, you need supercomputers. And to have supercomputers, you have to invest massively.

Xavier Niel

In June President Macron made one of his regular annual appearances at the VivaTech technology trade show in Paris appearing on stage with the founders of several French startups, including Arthur Mensch of Mistral AI.

President Macron announced €500m in new funding to *'create champions'* in AI. He outlined plans to boost the level of training in AI to create several centres of excellence, including support for French-language language models.

The investment is an extension of France's 2018 'AI plan', initially endowed with €1.5bn after the Villani report five years ago. It is intended that the €500m package should create between five and ten AI clusters. There will be €40m to attract investment in generative AI and two state subsidies of €50m each to accelerate the capacity of supercomputers.

Mr Macron also presented the 'Tibi 2' program, where institutional investors, operating French citizen savings, have pledged to re-direct some €7bn to the real economy. President Emmanuel Macron says the intention is "*to help create five to 10 clusters in France and to have two or three world-class centres of excellence."*

As part of the budget in March 2023 the U.K. government pledged "*Around £1 billion of government funding for the next generation of supercomputing and AI research to establish the UK as a science and technology superpower."*

The Chancellor also confirmed around £900m in investment into a new 'exascale' supercomputer and a dedicated AI Research Resource. Exascale computers are the next frontier in computing, and it is intended that the funding will provide a significant uplift in the UK's computing capacity, maximising the potential in AI and, by providing strong infrastructure, attracting talent and researchers.

The UK has also launched an AI White Paper advising industry regulators on a principles-based approach to regulating AI which it hopes will be a more flexible way of regulating AI than the European 'AI Act'. More recently though the UK Prime Minister has set up an international AI Safety Summit to take place at Bletchley Park at the beginning of November, he has referred to 'existential risk', and has set up an AI safety taskforce .

Meanwhile the public figures show the extent of the lag between investment in the US in AI ventures and levels of investment in France and the UK. The figures to mid-September 2023 from Dealroom indicate that the US has attracted $22.5bn of VC investment in AI companies including the $10bn invested by Microsoft in Open AI (but before the $4bn just invested in Anthropic by Amazon).

By contrast, prior to the €220m recent investment in the open-source AI platform Hugging Face, French companies had attracted only $175m of AI VC investment 2019-23. UK companies stood at $494m.

Leading countries worldwide by VC investment in Generative AI (US $bn)

Country	2019-2023	2023	2022	2021	2020
US	$22.5B	$14.6B	$2.78	$2.7B	$872.5M
Israel	$865.3M	$195.2M	$268.9M	$164.7M	$66.0M
Canada	$684.4M	$284.7M	$133.3M	$178.2M	$84.1M
UK	$494.2M	$114.8M	$245.2M	$89.7M	$22.4M
Germany	$456.8M	$279.8M	$61.0M	$87.6M	$25.0M
China	$265.6M	$260.2M	$1.4M	$4.0M	$0.0
France	$175.4M	$118.5M	$33.4M	$20.6M	$165.0K
Netherlands	$138.2M	$99.0M	$22.6M	$13.7M	$2.3M
Sweden	$128.4M	$28.0M	$72.5M	$18.2M	$9.7M
India	$109.5M	$12.6M	$37.2M	$49.6M	$10.1M

2023 data as of 19th Sep 2023; Source: Dealroom

Our views on the state of the venture capital markets

2022 saw sharp falls in the public markets on the back of a combination of global inflation, rising interest rates, and increased geopolitical risk. By Q3 2023 inflation is coming down and interest rates appear to be close to their peak. There has been a substantial rally on NASDAQ, led by the major tech stocks, a rally more palely reflected in other markets. The Refinitiv Venture Capital Index, which seeks to monitor the real time performance of the venture capital industry, fell 55% in 2022. YTD to early October it is up 23%, meaning the total fall since the start of 2022 is now 47%. 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 reductions in some high-profile VC rounds

▪ There is substantial dry powder in the VC industry. This though appears to be prioritised to support 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, ClimateTech and Software. Certain investors remain very active in the space with substantial funds to deploy

▪ 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

▪ For much of the year big late-stage deals were few and far between with the strongest part of the market in terms of appetite being in Seed and Series A where there is less immediate pressure on valuation. Recent weeks though have seen a notable pick-up in large later stage deals, most notably in ClimateTech and Software

▪ 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

▪ It seems likely that the more difficult conditions for fundraising, and the lack of a clear path in some cases to early cash positive status, will mean a flurry of venture capital backed businesses looking to sell or merge their businesses

▪ Valuation priorities have shifted with investors having moved away from an emphasis on revenue growth and revenue multiple emphasis. There is a sharp focus instead on profitability (or a rapid path to it), on positive free cash flow and an emphasis on DCF and comparative based multiples.

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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