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State of the Markets

A Review of the Health and Productivity of the Innovation Economy

February 2023

Executive Summary

February 2023

Short-Term Headwinds, Long-Term Growth

We continue to believe in the innovation economy in the face of adversity. Challenging market conditions are periods for building, particularly for startups. Today, founders have time to slow down, focus on product market fit, and develop long-lasting innovations while drawing on a greater availability of talent. Further, after corrections, there tends to be a long period of economic expansion. In the three years during and directly after the Global Financial Crisis (GFC), 127 unicorns were founded — a 76% increase over the prior three years.

Today, US venture capitalists (VCs) hold a record $300B in dry powder waiting to be deployed, but investment has slowed. Following recessions, the weighted average age of dry powder has historically increased due to decreased investment and fundraising. Today, the weighted average age of dry powder is nearly 50% lower than its peak following the GFC, indicating that if the economy ends up in a so-called “hard landing,” we can expect today’s dry powder to sit on the shelf a little longer. That said, investors are on the clock to deploy capital and generate a return for limited partners (LPs) — and financial incentives are aligned for them to deploy that capital.

As a result of slowing investment, capital is scarce for founders. Tightening venture capital (VC) investment and falling public markets have led to the most significant private market valuation correction in the last 20 years; the median late-stage tech pre-money valuation fell 56% in 2022. Furthermore, 33% of late-stage tech companies have yet to be repriced since 2021, indicating there may be challenging fundraises on the horizon for some companies.

Additionally, the slower fundraising environment has led nearly 40% of US VC-backed tech companies to cut net burn year over year (YoY) as they focus on extending cash runway and improving profitability. Only 50% of US tech companies have increased payroll spending quarter over quarter (QoQ). As a result of decreasing burn and economic headwinds, US VC-backed tech companies are growing more slowly. If headwinds persist, some companies will likely fail, but those that come out the other side will be more efficient, grittier and better equipped for long-term growth and the demands of public markets. With layoffs continuing, we expect many talented workers to found their own companies given falling opportunity costs — fueling the next wave of innovation.

Ultimately, despite headwinds, tech is an integral part of the US economy and will continue to grow. Since 2000, the US digital economy has grown two times faster than the overall economy and now accounts for more than 10% of US GDP. Today, technology is intertwined through every aspect of life and business, yet there are still many opportunities for innovations, from tapping the power of artificial intelligence (AI) to developing solutions to climate change.

Sunita Patel
Chief Business Development Officer
Silicon Valley Bank

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Source: PitchBook, Preqin, SVB proprietary data, US Bureau of Economic Analysis, and SVB analysis.

Outlook for Venture in 2023

Category	Fundraising	Early-Stage	Late-Stage	Exits
2022 Venture Outlook From the H1 2022 Report	Massive exits in 2021 infused LPs with cash, while demand for venture assets continues to grow. However, a prolonged market downturn and slowing growth of active investors means another record year for venture fundraising is unlikely.	The migration of tech talent away from Silicon Valley will continue, as tech companies commit to remote work. With talent bedding in, greater support available for startup founders, and many "massive" market opportunities, we expect Series A tech deals[2] to break 2,000 (1,526 in 2021).	The unprecedented revenue multiples being paid are starting to stretch what is deemed reasonable by investors. As public markets soften, we expect a correction in late-stage valuations starting early Q2.	Underperforming tech IPOs from 2021 will cause hesitation for companies planning on listing in 2022, so we expect fewer IPOs. As a consequence, private secondary markets will rise in popularity as shareholders look for liquidity.
2022 by the Numbers	US VCs raised $139B in 2022, $3B more than 2021; however, fundraising slowed every quarter in 2022, with Q4 accounting for 6% of annual fundraising.[1]	US Series A tech deals fell to 1,447. Furthermore, many companies brought workers back to the office, exemplified by Twitter and Snap.	Multiples for US VC-backed tech companies with $25M-$50M in revenue declined 46% YoY, and late-stage tech valuations fell 56% YoY.[3]	There were only four US VC-backed tech IPOs in 2022 and zero in Q4. Secondary volumes remain suppressed given high bid-ask spread.
Grade for 2022 Outlook	6/10	5/10	9/10	8/10
2023 Venture Outlook	US VC funds will likely raise ~$70B in 2023 — a 50% decline from 2022 highs but still the 4th highest year ever. This decline will be driven by subdued public markets (relative to recent highs), higher interest rates and muted distributions to LPs.	US Series A tech will likely decrease ~15% to ~1,250 deals in 2023, which is aligned with the period of stability witnessed between 2015 and 2020. Mismatched investor and founder valuation expectations, increased investor scrutiny and slowed company growth will facilitate the regression to historic levels.	The median late-stage US tech valuation will likely fall an additional 5%-10% in 2023 — placing it at 60%-65% below Q4 2021 levels. We are nearing a price floor as public and private markets converge. The additional decline will result from companies running out of cash runway and raising rounds on unfavorable terms.	US VC-backed tech IPOs will likely remain dormant in H1 2023. As the market gets clarity on the rate ceiling, forward revenue multiples align with long-term averages and pent-up demand builds from institutional investors and public-ready companies, at least 10 US VC-backed tech companies will IPO in 2023.

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Notes: 1) Fundraising by fund close date. 2) Tech defined using PitchBook's information technology classification. 3) Revenue defined as annual revenue run rate for a given quarter; multiple calculated using trailing three-quarter median; tech defined using SVB's proprietary taxonomy; late-stage defined by PitchBook.

Source: SVB proprietary data, PitchBook, S&P Capital IQ and SVB analysis.

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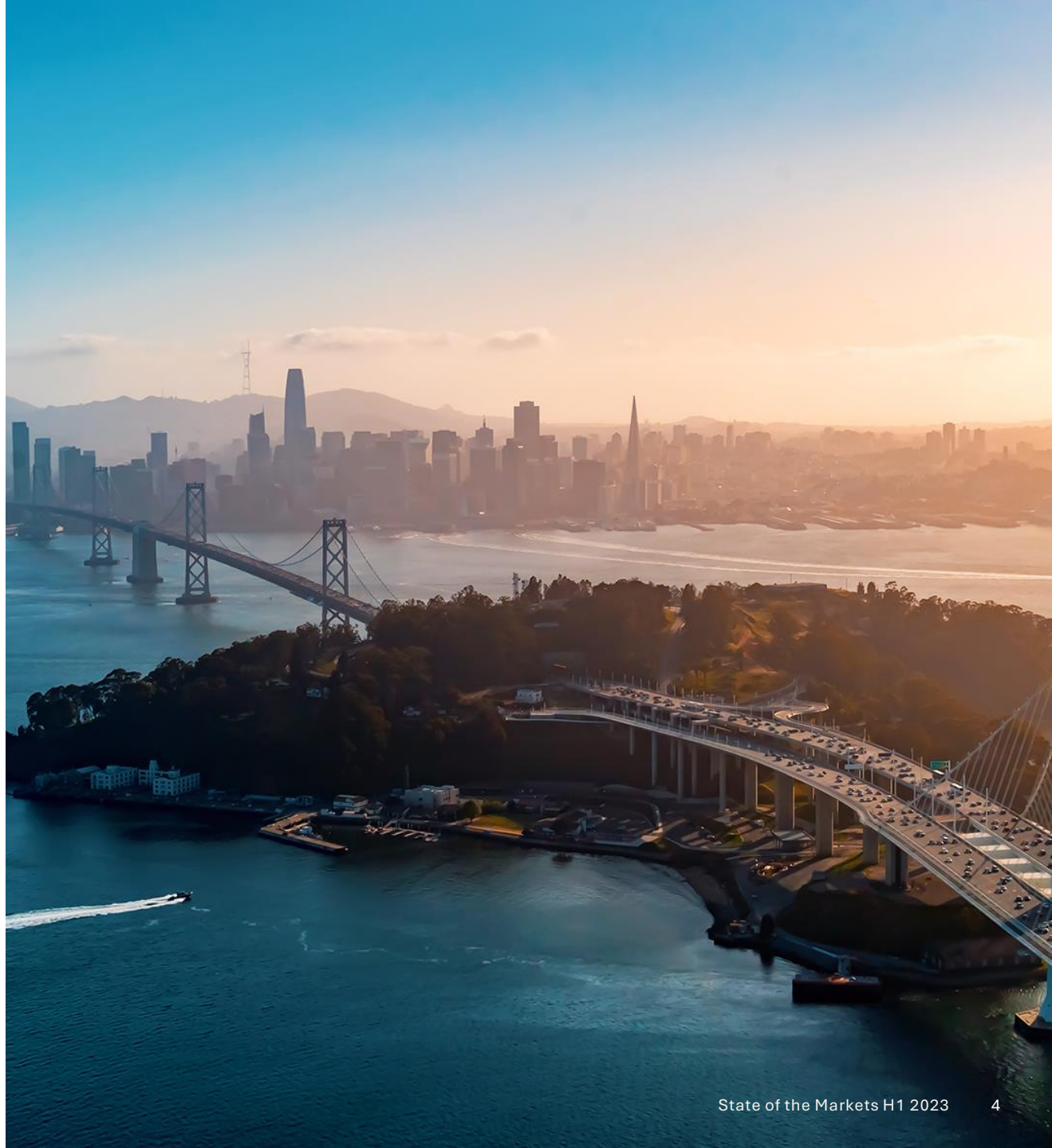
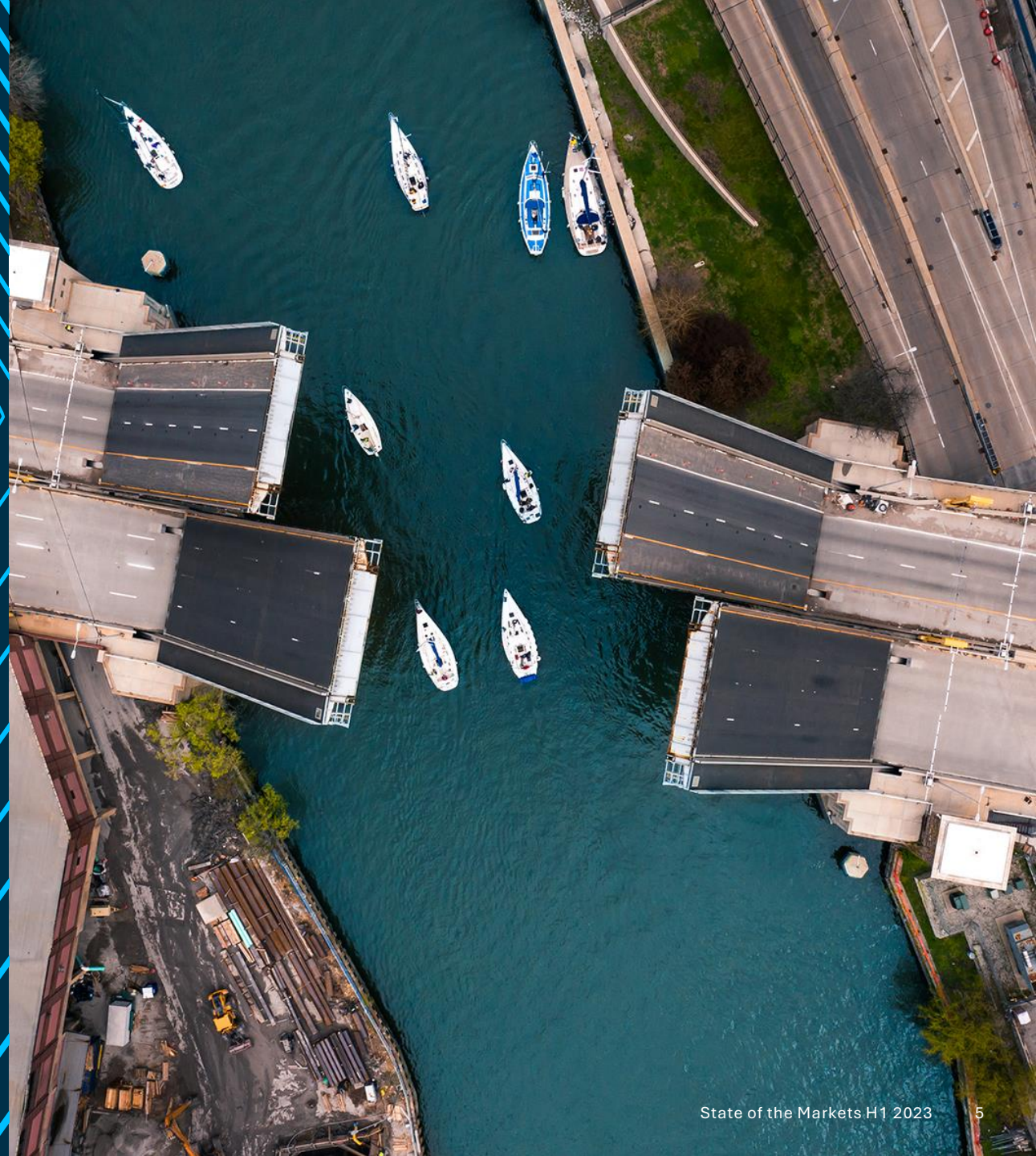


Macro:

“Tech-tonic” Shifts for Long-Term Growth



US Innovation Economy Dashboard[1]

Macro

	YoY	QoQ	
Change in Real GDP[2]	1.0%	0.7%	Change in Real GDP[2]
Change in S&P 500 Performance	-19.4%	7.1%	Change in S&P 500 Performance
Change in Money Supply (M2)	-1.8%	-0.4%	Change in Money Supply (M2)
Change in Consumer Price Index (CPI)	6.4%	0.5%	Change in Consumer Price Index (CPI)
Change in CBOE Volatility Index[3]	26%	-31%	Change in CBOE Volatility Index[3]
Change in USD Index[4]	8.2%	-7.7%	Change in USD Index[4]

Equity

	QoQ	YoY
$9B Quarterly VC Fundraising	-74%	-74%
$37.7B Quarterly VC Investment	-18%	-60%
$70M Median Late-Stage Valuation[5]	5%	-30%

Debt

	QoQ	YoY
3.88% Current 10-Year Treasury Yield	1%	155%
$10B Quarterly Convertible Debt Volume[6]	-9%	-47%
138bps Investment-Grade Credit Spreads[7]	-17%	41%

Liquidity

	QoQ	YoY
0 Quarterly VC-Backed Tech IPOs	-100%	-100%
254 Quarterly VC-Backed M&A	-13%	-57%
7 Quarterly VC-backed De-SPACs[8]	-42%	-76%

Notes: 1) YoY defined as Q4 2021 to Q4 2022; QoQ defined as Q4 to Q3; for index values the last day of each period was used. 2) Real GDP data is subject to revision after initial release. 3) Chicago Board Options Exchange Volatility Index. 4) Measured using the DXY. 5) Late-stage category defined by PitchBook. 6) Convertible debt and preferred volume includes deals greater than $25M in base deal size. 7) ICE BofA US Corporate. Index Option-Adjusted Spread; one basis point (bps) is equivalent to 0.01%. 8) Methodology updated since H1 report to represent de-SPACs of US VC-backed companies.

Source: PitchBook, ICE Data Indices, Federal Reserve Board of Governors, Preqin, ICE Futures, Chicago Board Options Exchange, Bureau of Labor Statistics, Deal Logic, and SVB analysis.

Rates and Inflation Continue to Climb

On the back of a pandemic-driven and stimulus-fueled couple of years, the US is in a sustained market downturn. Despite this, inflation continues to remain elevated — though there are signs of easing in recent readings. Inflation increased 6.5% YoY in December 2022, the smallest 12-month increase since October 2021. However, the types of inflation driving the "core" figures are diverging, with prices of goods falling as supply increases while prices of services are increasing due to a hot job market and escalating labor costs. The intricacies of inflation continue to cause pause for investors as they remain torn over how the Fed should pursue reducing inflation in a tempered way. Despite this, the Fed continues to hike rates at the fastest pace in nearly 30 years and a pace about six times faster than the last cycle. Based on current sentiment and expectations, the Fed is still signaling that it plans to raise interest rates — even as they creep closer to levels not experienced since the 2004–2006 cycle — though it took longer to reach these levels with hikes taking place over two years.

While absolute interest rate levels are important, the pace of interest rate hikes is just as important, especially for equity markets. The current rate cycle is the fastest pace since the 1990s. Looking at historical equity market returns during different rate hike cycles, faster-paced rate hike cycles tend to correspond with lower equity market returns. Notably, among the fast-paced rate hike cycles, the lowest equity return two years after an initial rate hike occurred during the 1973 rate hike cycle — a period also plagued with elevated energy prices and soaring inflation. If history were to repeat itself, this could have significant knock-on effects for the VC ecosystem from general partners (GPs) marking down portfolios to LPs pulling back on private equity (PE) allocations, as other asset classes offer attractive yield and risk management comes more into focus.

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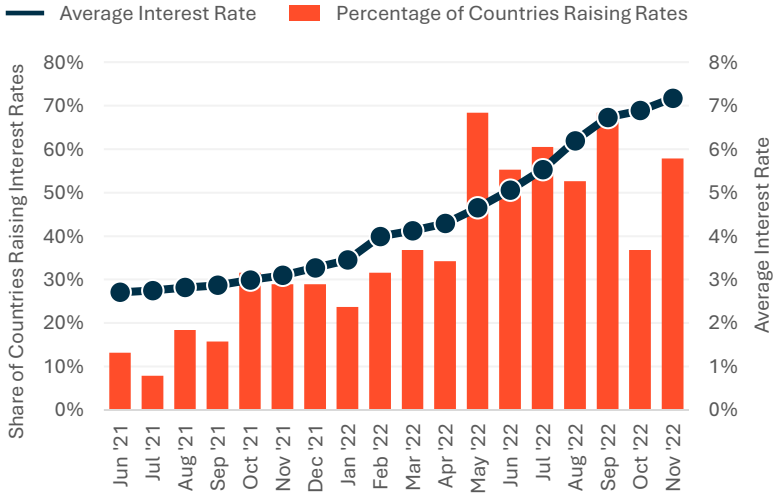
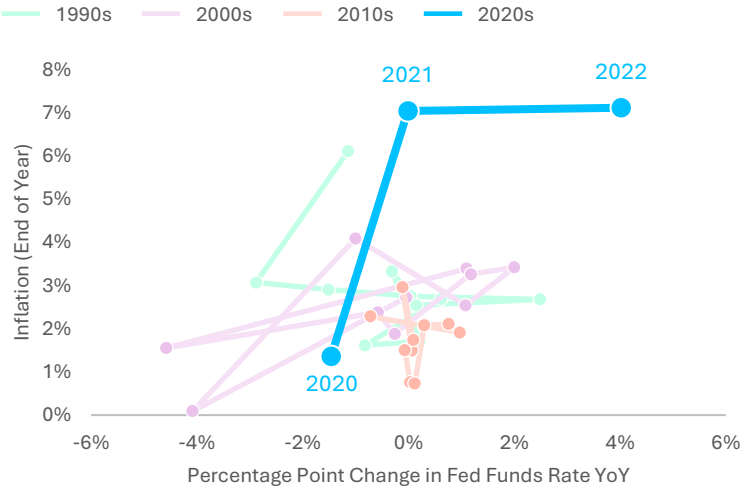
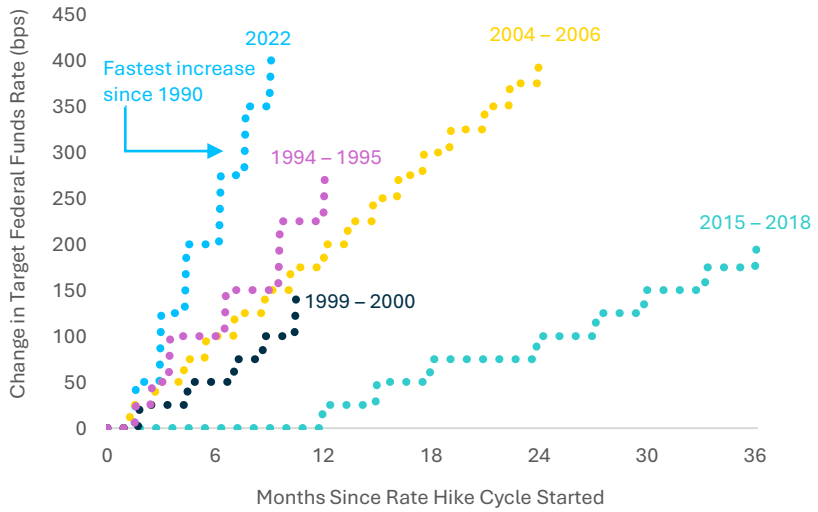
Percentage of Countries Raising Interest Rates and Average Interest Rate[1]



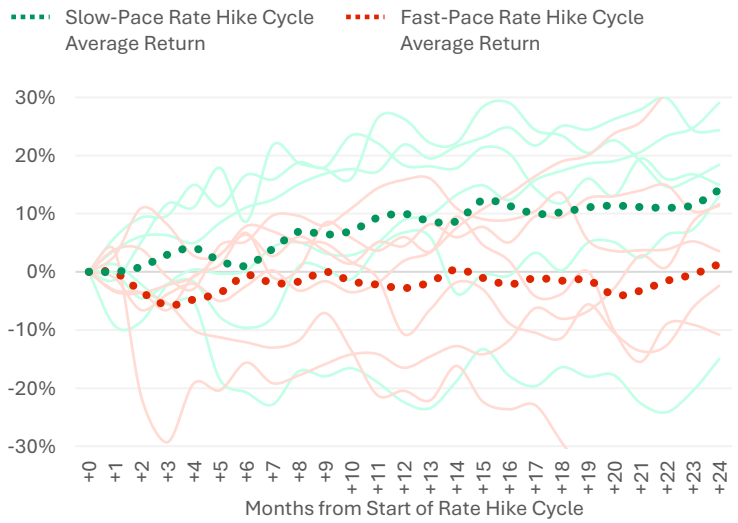
US Inflation[2] and Interest Rate Hikes YoY by Decade



Pace of US Interest Rate Hikes Since 1990[3]



S&P 500 Returns During Rate Hike Cycles[4]



Notes: 1) Based on central bank policy rates for countries reporting to the Bank of International Settlements. Latest available data as of 11/30/2022. 2) Consumer price index for All Urban Consumers (CPI-U), seasonally adjusted. Annual data from 1990 to 2022. 3) Interest rate hike cycles based on changes in the target fed funds rate after the initial rate hike. Data as of 1/10/2023. 4) Light shaded lines represent monthly S&P 500 returns for each respective rate hike cycle.

Source: S&P Capital IQ, Federal Reserve, US Bureau of Labor Statistics, Bank of International Settlements and SVB analysis.

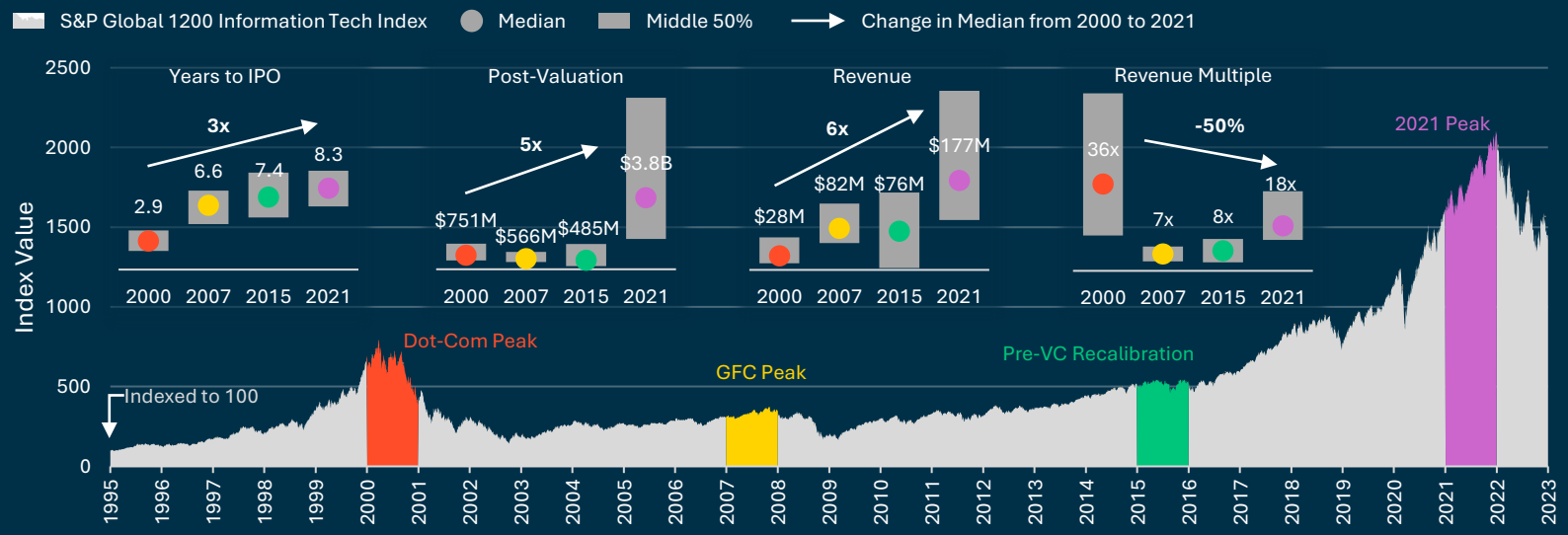
They Don't Build Them Like They Used To

The tech industry has matured significantly in the last two decades. No longer seen as a niche carveout of the broader economy, tech products are integrated into all industries and sectors today. Compared to prior eras when the potential of a new technology was enough to carry a VC-backed company to a public listing in just a few years, founders today are expected to demonstrate higher benchmarks of success for longer before going public.

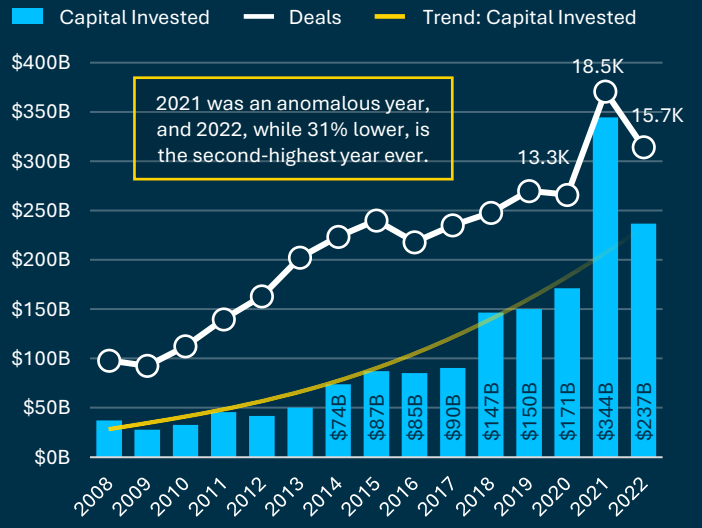
To illustrate this trend, we analyzed cohorts of tech companies that went public during the peak year preceding four recent tech downturns: the dot-com bubble, the GFC, the 2016 tech recalibration, and the current downturn. What emerges when looking at these cohorts is a story of the innovation economy maturing over time, both in terms of company performance and investor expectations. Most dot-com IPO companies would be considered Series B companies in today's environment. The companies that went public in 2000 had a median age under three years from first funding with revenue of less than $30M (in 2021 dollars). Public investors felt the burn when many of these companies failed to reach their potential. By 2007, tech IPO metrics had improved considerably, with median age up to 6.6 years and revenues three times higher than the dot-com cohort.

By 2021, the cohort of new IPO companies had median revenues six times higher than the dot-com cohort and three times more operating experience. But even those more impressive metrics couldn't keep up with rising valuations, which surged to 18x revenue in 2021 as institutional investors flocked to VC. With VC investment declining, valuations will continue to rebase. However, the trend of companies staying private longer will likely continue.

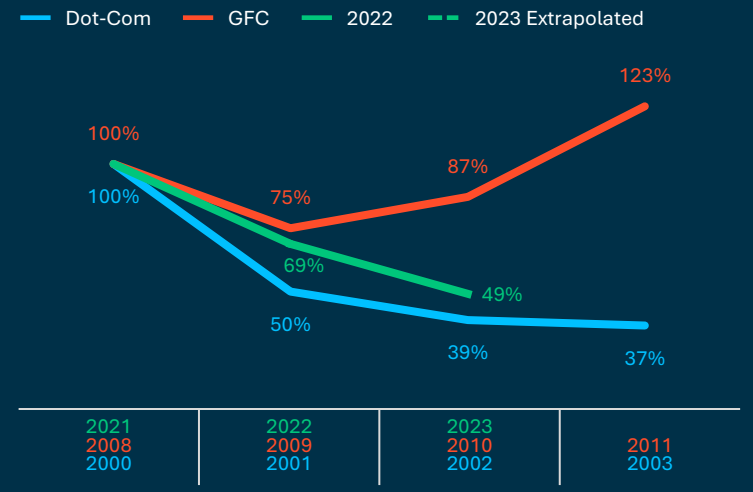
Metrics for US VC-backed Tech Companies at IPO[1] and S&P Tech Sector Returns



US VC Investment YoY



US VC Investment: Trajectory Through Past Downturns[2]



Notes: 1) Revenue and valuations are adjusted to 2021 dollars. Tech sector is the S&P 1200 Global Information Technology Index.2) Extrapolation based on exponential smoothing forecast of monthly data going back to 2011. The 95% prediction interval is from $53B to $285B.

Source: PitchBook, S&P Capital IQ and SVB analysis.

Capital:
Ready and Waiting

Rising Rates (Don't) Lift All Returns

Venture as an asset class is driven by the outsized performance of a few companies within a portfolio; the same is true for funds. For example, between 2005 and 2015 only 31% of funds hit the industry benchmark of 20% net internal rate of return (IRR) with the top 10% of funds returning over 35%. Choosing the right funds becomes even more critical in a rising rate environment. The 10-year US treasury yield — what many investors consider the risk-free rate of return — increased 225 basis points during 2022. In calculating the risk-adjusted rate of return, we see that as the risk-free rate of return climbs, a smaller basket of funds within the venture asset class is capable of generating an acceptable risk-adjusted rate of return.[1] Certainly, the risk-adjusted rate is only one way LPs consider portfolio construction, and most LPs turn to venture for its potential for outsized returns. However, if interest rates continue to climb and remain high for an extended period, we would expect long-term impacts to VC fundraising.

In the short term, the challenge for VCs is realizing the paper value they have amassed in their portfolios. Many VCs and LPs have started to write down their portfolios, including Fidelity, which has written down several late-stage investments between 30% and 60%.[2] In the overall market, the median total value to paid-in capital (TVPI)[3] for vintages between 2010 and 2018 is 49% above the prior 10 years. However, with 92% of US VC-backed tech IPOs since 2020 trading below their IPO market caps, distributions to paid-in capital (DPI)[4] will likely come in well below current TVPI levels. Secondary exchanges are seeing increased interest from buyers and sellers, but few transactions are taking place due to high bid-ask spreads in 2022.[5] As the market bottoms and a price floor is created, we expect increased activity in both secondary markets and in M&A activity, which will help return some capital to LPs, continuing the venture cycle.

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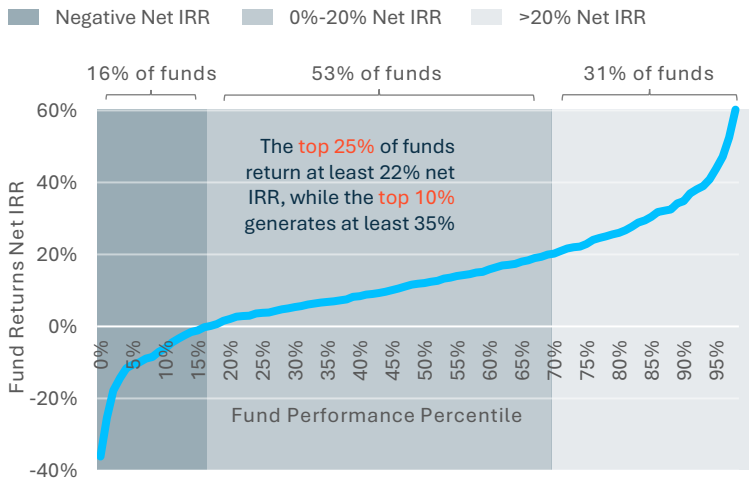
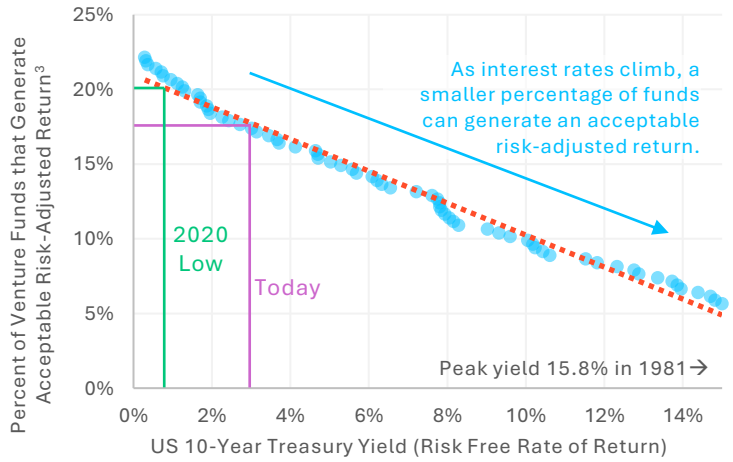
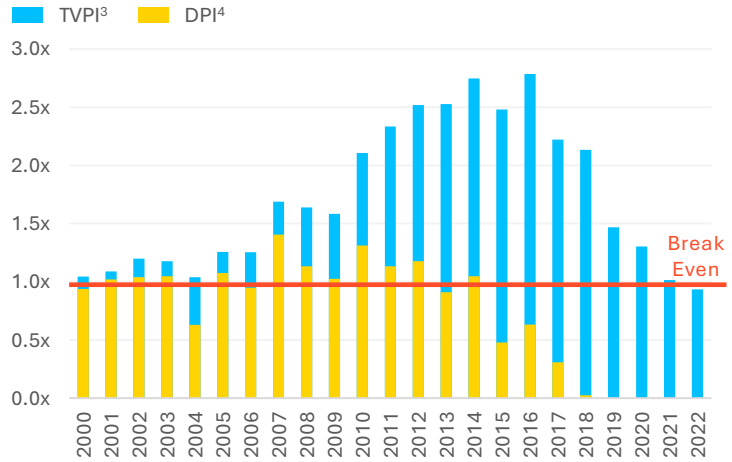
Historical US VC Returns (2005-2015)



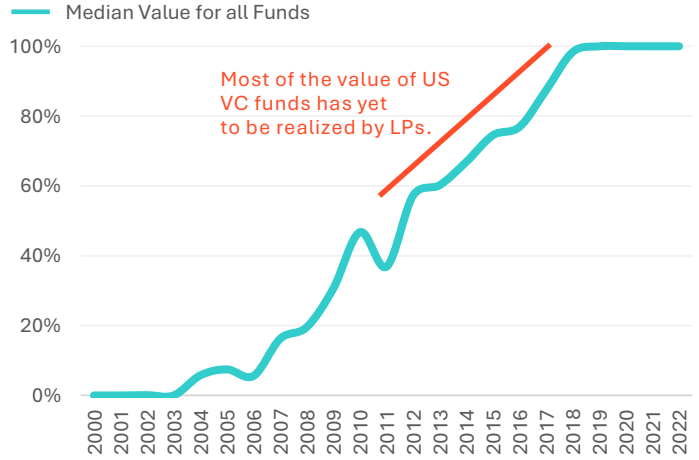
Rising Rates and Risk-Adjusted US Venture Returns[6]



Median TVPI and Median DPI for US VC by Vintage Year



Percentage of US VC Fund TVPI Yet to Be Realized by Vintage



Notes: 1) This analysis is for demonstration purposes and has two assumptions: One the analysis assumes an investor (LP) is capable of choosing a cohort with a high enough return to produce a Sharpe ratio greater than one, two the analysis also assumes the standard deviation of returns (risk) is constant across the venture asset class. 2) From Bloomberg. 3) Total value of fund's investment and distributions to LPs relative to how much LPs have paid in. 4) How much a fund has returned to LPs relative to the amount paid in by LPs. 5) According to Nasdaq Private Market (NPM) commentary. 6) A fund is considered acceptable if its returns are high enough to generate a Sharpe ratio greater than one.

Source: Preqin, US Board of Governors of the Federal Reserve System, Nasdaq Private Markets and SVB analysis.

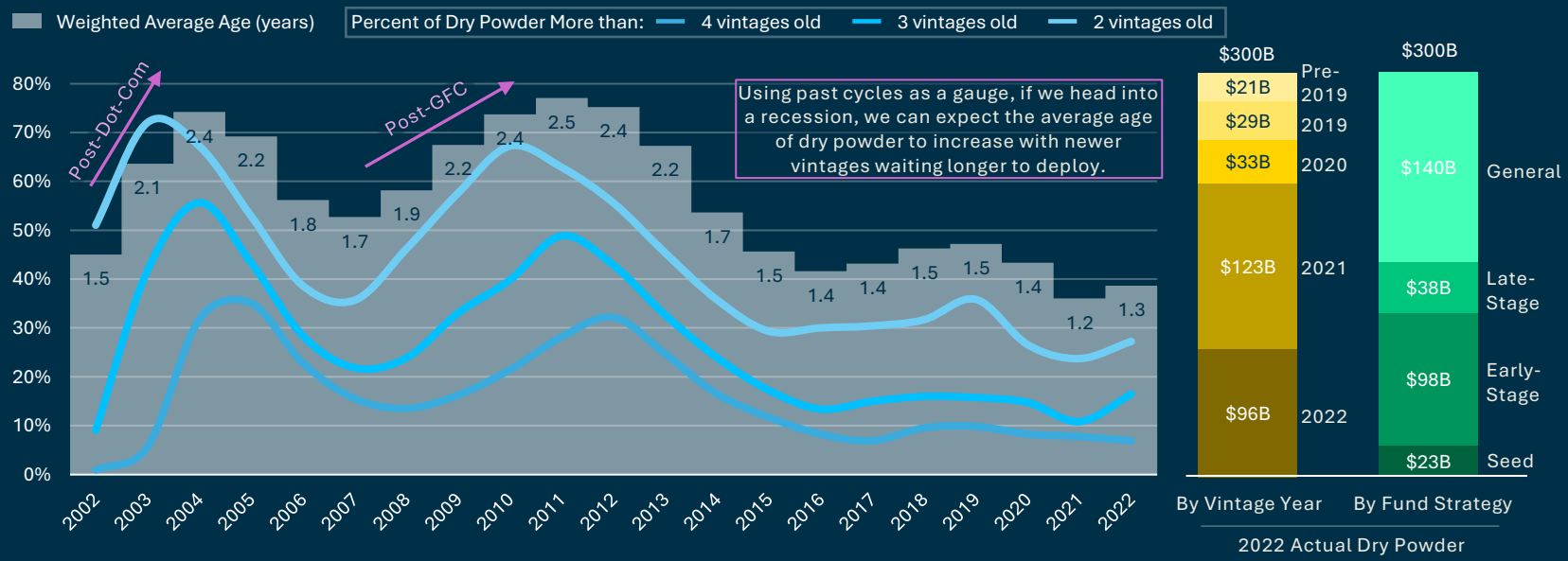
Take a Rain Check: Dry Powder Waits

US VC fundraising had a record year in 2022 with $139B of funds closed. However, fundraising all but came to a halt in Q4, which accounted for just 6% of the year's total. This drop in fundraising in Q4 was also characterized by a decrease in the number of emerging managers (EMs)[2] funded. While 2021 was a record year for EMs, as we enter a period of economic uncertainty, LPs are allocating more heavily to established funds. This also means capital is concentrated in the hands of fewer managers. $1B+ funds accounted for 52% of all capital raised in 2022, up from just 37% in 2021.

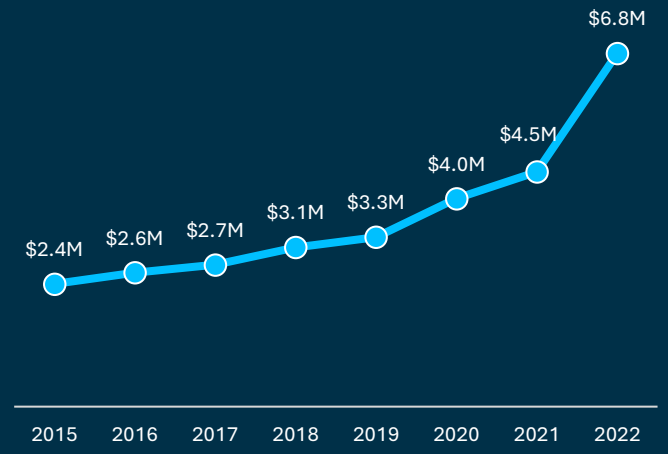
Despite a slowdown in US VC fundraising, there is a record level of VC dry powder in the ecosystem. This has led to the amount of dry powder per VC-backed company increasing by 119%, even as the number of US VC-backed companies increased 20% in the last five years.[1] In other words, today there is roughly $6.8M in US VC dry powder available per company, compared to just $3M in 2018.[1] This means there is more capital available for companies to grow. While there is hesitancy to deploy capital in the current market when price discovery is still happening, the incentive structure of VC is aligned to encourage investors to deploy capital due to the fact that most managers do not make management fees if they do not deploy.

However, in the aftermath of recessions dry powder is deployed more slowly, as evidenced by the increase in average age and the share of dry powder that belongs to older fund vintages. If the economy continues to tip down in 2023, we can expect delayed deployments leading the record dry powder to sit on the shelf a little longer.

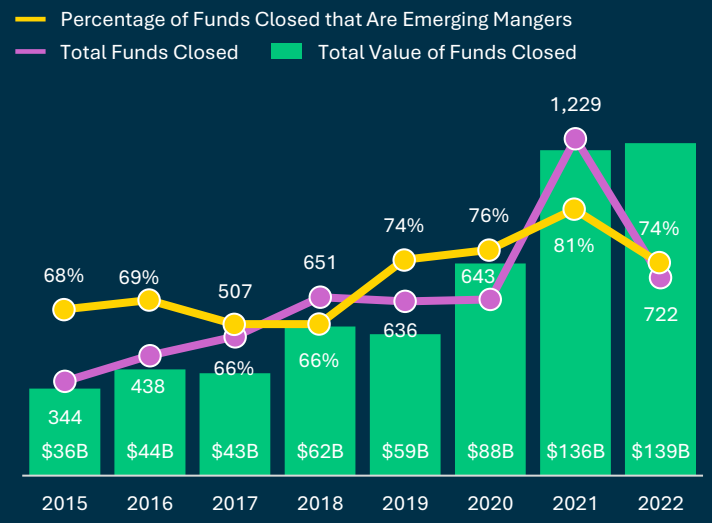
US VC Dry Powder by Average Age, Percentage from Past Vintages and Fund Strategy



US Dry Powder per US VC-Backed Company[1]



US VC Fundraising



Notes: 1) Due to poor tracking of company failures, we defined a US VC-backed company as a US-based company that has raised a venture round in the last five years as a rough proxy for the total number of VC-backed companies. 2) Emerging managers defined as a manager that has closed three or fewer funds, and the fund is under $200M.

Source: Preqin, PitchBook and SVB analysis.

Investment:
Venturing Into a New Normal

Party's Over, Valuations Return to Normal

There is a clear relationship between the amount of capital chasing deals and the valuation those deals receive. More capital was deployed in 2021 than any prior year by a factor of two. This pushed valuations to new highs. But as near-zero interest rates and roughly $5T in government stimulus worked through the US economy, inflation emerged as the predominant concern. The Fed pumped the breaks, raising interest rates at the fastest pace since 1990, which sent public markets into a risk-off cycle. At the end of 2022, the median market cap of 2021 US tech IPOs was down 63%. Late-stage valuations, which are most closely tied to public comparables given they are closer to an exit, saw their post-money valuations fall steeply in the back half of the year, ending up at pre-2021 levels.

The early-stage has been more sheltered from the valuation correction, but not entirely. While valuations haven't dropped as dramatically, our early-stage practice has reported seeing higher liquidation preferences. While these preferences protect founders from the bad optics of a down round, they make it harder to bring in new investors who will often insist on the same terms and make it harder to attract talent with equity-based compensation. Lastly, capital is harder to come by, so not every company that needs capital has been able to raise, which, through survivorship bias, keeps valuations higher.

To raise at an up round while valuations are falling, companies must grow into their new valuation at their new (lower) revenue multiple. While revenue growth rates are moderating, many companies that raised in 2021 have already grown into their valuations, based on implied revenue multiples for current valuations levels. The median Series A company that raised in 2021 requires just three months to grow into its last valuation. However, the median late-stage company (Series D+) requires 13 months to grow into their last valuation, putting these late-stage companies at higher risk of needing to raise a down round. Given these dynamics, SVB has seen more tech companies seeking debt as a tool to extend runway.

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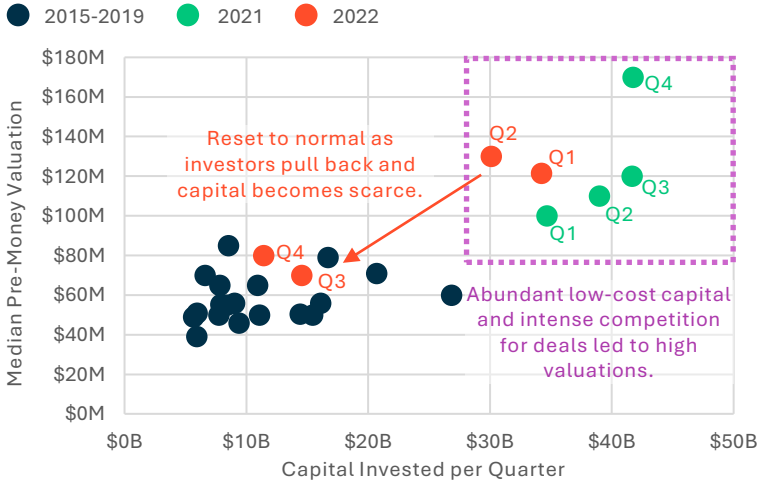
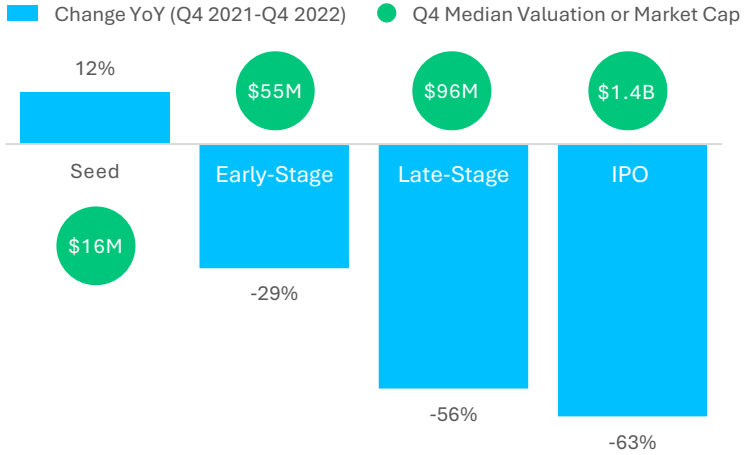
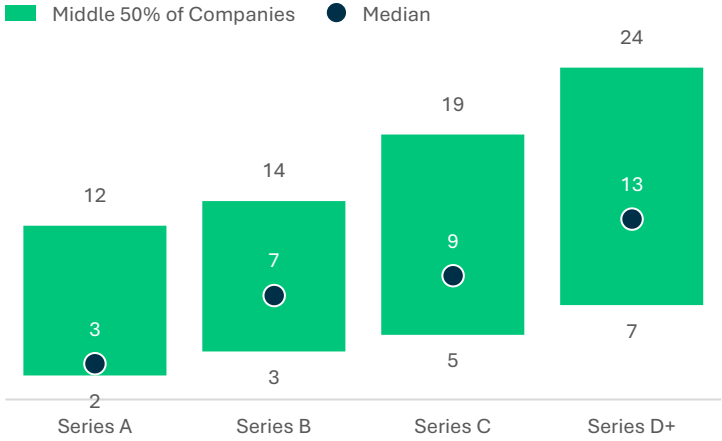
Late-Stage Tech Quarterly VC Investment and Median Pre-Money Valuation[1]



Change in Tech Post-Money and Recent IPO Market Caps YoY[1, 2]



Months Required to Grow into Last Post-Money Valuation by Series for US Tech Companies that Raised in 2021 Given Current Valuation Levels[1, 3]



24%
of companies can grow into last post-money valuation given current cash runway and growth rate.

25%
of companies have less runway than the time it would take to grow into their last post-money valuation.

51%
of companies have already grown into their 2021 post-money valuation.

Notes: 1) Tech defined using SVB taxonomy. 2) Change for private market rounds assessed using the change in median valuations between Q4 2021 and Q4 2022. IPO market caps assessed between 1/1/2022 and 12/31/2022 using US VC-backed tech IPOs on major exchanges. 3) Calculated an implied multiple based on current valuations levels, then calculated the time to grow into those implied multiples while maintaining the same valuation given Q4 2022 growth rates; analysis uses current revenue run rate for the quarter.

Source: PitchBook, SVB proprietary data, S&P Capital IQ and SVB analysis.

Multiple Regression to the Mean

Growth in revenue multiples happened slowly over the last few years until a switch flipped in 2021 and multiples ticked up steeply. Take, for example, US tech companies with less than $10M in annual revenue run rate. Between Q1 2018 and Q4 2020, the median multiple for these companies grew just 28% from 21x to 27x, then increased by 85% to 50x over the next four quarters. The multiple expansion is indicative of three fundamental shifts. First, the embrace of technology during the pandemic catapulted technologies like digital wallets decades ahead in terms of user adoption. Second, record-high investment levels increased demand for private companies; just as public company multiples climb with growing investor demand, so do private company multiples. Finally, in the frenzied VC investment environment of 2021, investors were less sensitive to price. In conversations, many investors mention the fear of missing out as a driving force behind 2021 investment.

However, 2022 marked a departure from the continual multiple expansion. Three primary factors led to the decline in revenue multiples of private companies. First, capital invested into US VC-backed companies decreased 31% YoY. Second, 2021 US VC-backed tech IPOs' enterprise value to next twelve months (EV/NTM) revenue multiples fell 72% in 2022 (which is considered a good approximation of a private market annual recuring revenue (ARR) multiple). Third, revenue growth rates for US VC-backed tech companies declined for companies of all sizes as they cut net burn and focused on profitability over growth. Here again, multiples saw the steepest and quickest declines among larger companies that are closer to an exit, while early-stage companies have seen slower declines.

Beyond the size of companies, multiples have been impacted differently due to the sector of tech companies. Frontier tech companies. for example, take longer to generate revenue, so mature companies can have relatively low revenue leading to high multiples for companies with less than $10M in revenue.

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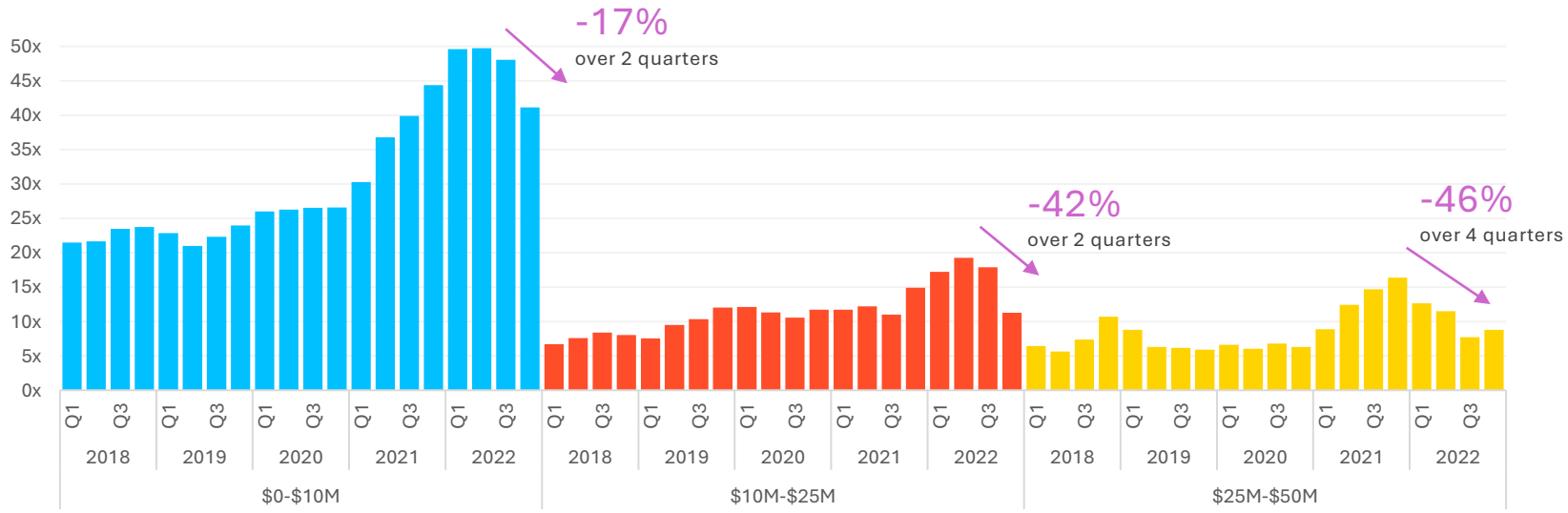
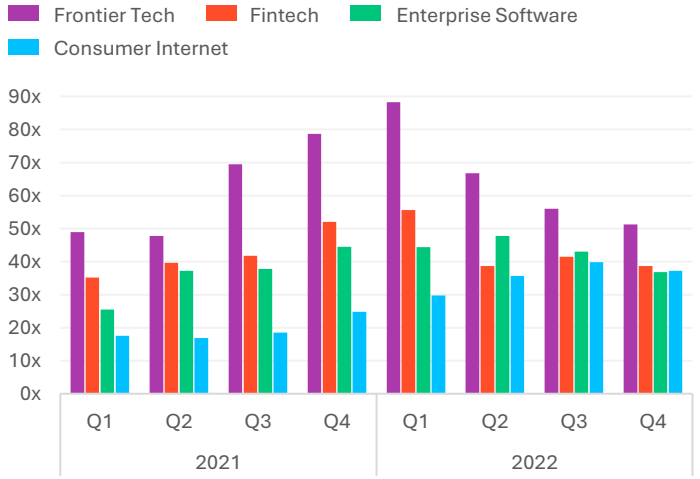
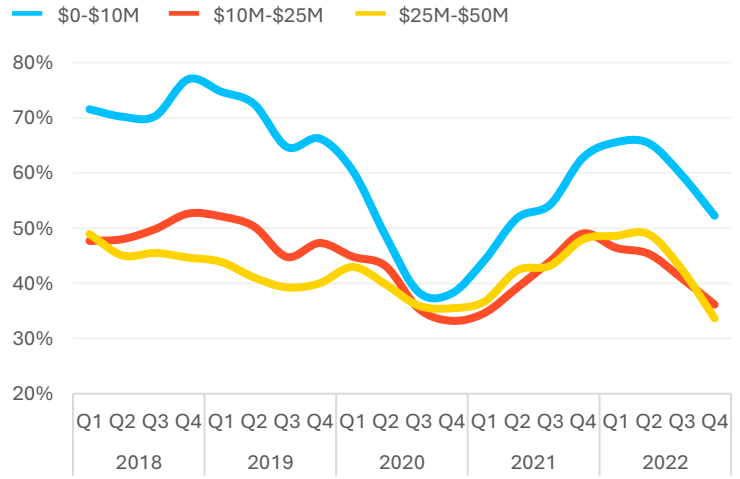
US Tech Median Revenue Multiple by Annual Revenue Run Rate[1, 2, 3]



Median Revenue Multiple for Companies with Less than $10M in Revenue[1, 2]



US Tech Median YoY Revenue Growth Rate by Annual Revenue Run Rate[3, 4]



Notes: 1) Revenue is defined as annual revenue run rate for a given quarter. 2) Revenue multiple defined as post-money valuation divided by annual revenue run rate; uses trailing 3-quarter median. 3) Tech defined using SVB's proprietary taxonomy. 4) Using trailing 3-quarter median.

Source: SVB proprietary data and SVB analysis.

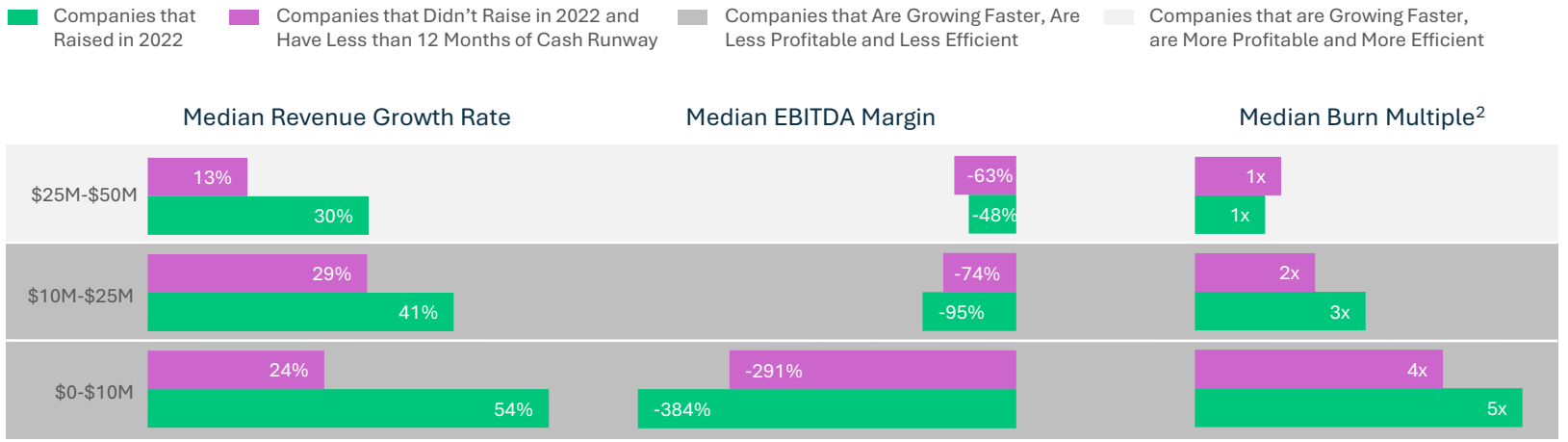
They'll Grow Into It: VCs (Still) Prioritize Growth

With US VC investment down 31% YoY, capital is now a scarce resource and harder for companies to raise. One narrative that's been repeated in market is that investors are seeking to allocate capital to companies that are still growing, are efficient and have a path to profitability. However, in an analysis comparing (1) companies that raised in 2022 and (2) companies that need to raise in the next 12 months and didn't raise in 2022, this trend hasn't played out in the data. For companies under $25M in annual revenue, we see that those that raised in 2022 were less profitable (had a lower Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) margin) and were less efficient (had a higher burn multiple) but had significantly higher revenue growth rates. This suggests that while investors may be looking more at unit economics and profitability, growth is still the predominant factor in determining a company's ability to raise.

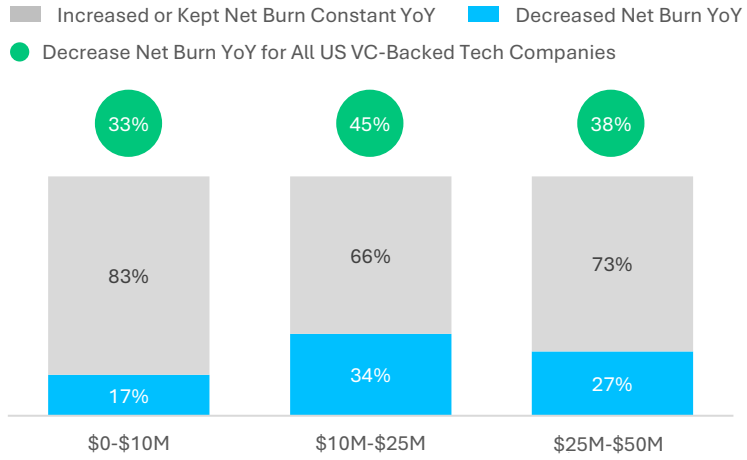
When looking at companies under $25M in revenue, as a result of the low efficiency and profitability, the cash runway isn't much higher than that of all tech companies. However, larger companies with $25M-$50M in revenue are far more capitalized with a median of 21 months of runway. This is in part due to their higher profitability and efficiency.

As companies scaled and had between $25M-$50M in annual revenue, companies that raised had very strong growth, but they also were more profitable and had slightly lower burn multiples compared to those that didn't raise. This indicates a far higher bar placed on later-stage companies, as they not only need to have strong growth, but also higher profitability and efficiency.

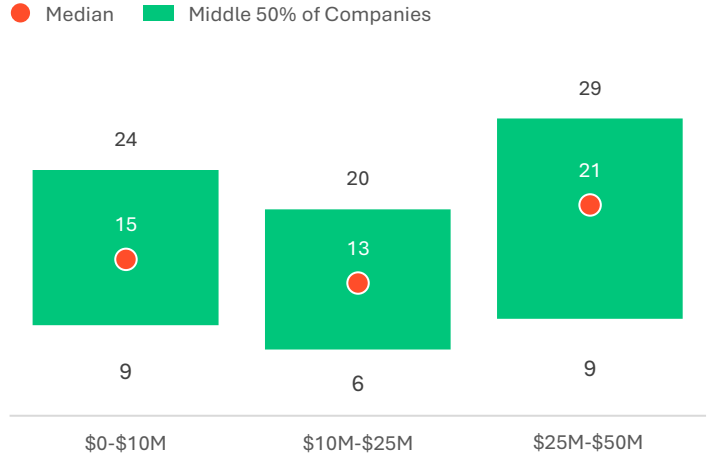
Q4 2022: Select Metrics for US Tech Companies by Annual Revenue Run Rate[1]



Change in Net Burn: US Tech Companies that Raised in 2022 by Revenue Run Rate



Cash Runway in Q4 2022 for Companies that Raised in 2022



Notes: 1) Revenue is defined as annual revenue run rate for a given quarter. 2) Net burn divided by net new revenue; net new revenue calculated using annual revenue run rates for a given quarter.

Source: SVB proprietary data, PitchBook and SVB analysis.

Back to the Good Ol' Days: A Change of Pace

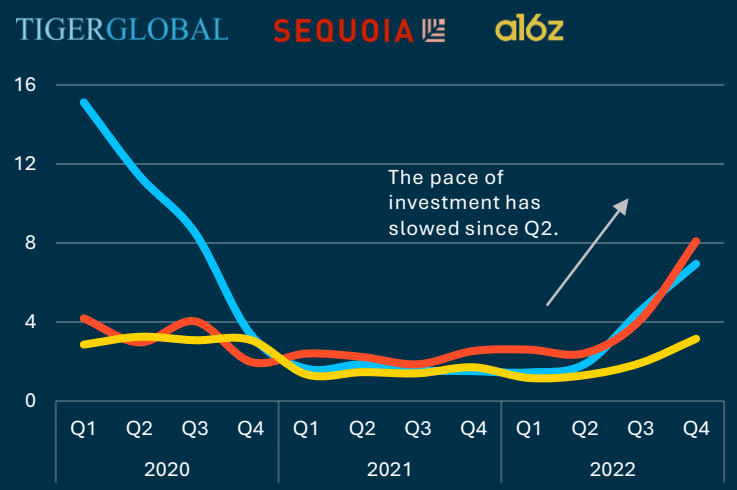
The frenzy to get deals done in the fast-paced funding environment of 2021 shifted the balance of power squarely toward founders. VC investors who were used to taking their time on due diligence found themselves competing with a line of other investors to land the most promising tech companies. With founders in control, VCs who offered term sheets fastest often landed the deal.

In 2023, VCs are in the driver's seat again, and they've taken their foot off the gas. Industry-leading VC firms dialed back the pace to 2020 levels or slower. In Q4, Sequoia Capital completed a deal every 9.1 days, down from every 3.5 days the year prior. Tiger Global, the hybrid investment firm that drew attention for its fast-paced dealmaking and large investments in 2021, also drew back, completing deals every 7.9 days in Q4, down from every 2.7 days in Q4 2021.

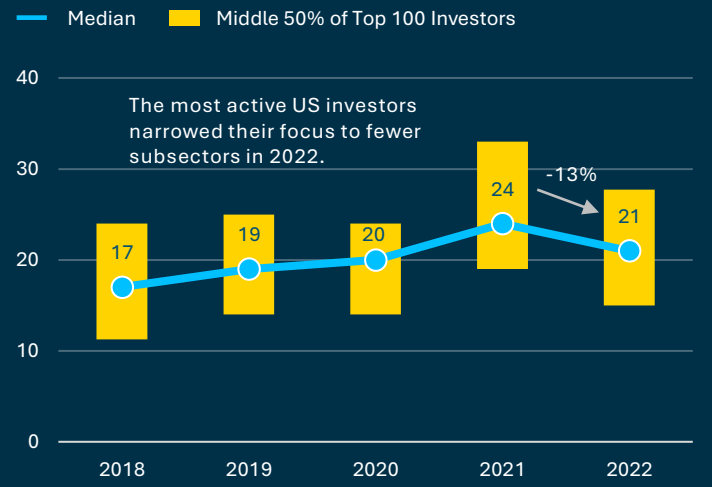
In addition to slowing the pace of dealmaking, investors also refocused on their thesis, tightening the scope of their investments, which broadened in 2021. The most active US investors targeted 13% fewer subsectors in 2022, narrowing the median number of subsectors represented by investments from 24 to 21.

The result of this slower pace is that companies can expect to wait longer between rounds. Across all stages, the elapsed time between funding rounds for companies receiving VC checks jumped about four months over the last two years. The most significant change occurred at the later stage. The average time between Series C and Series D deals for companies closing in Q4 2022 was 20.9 months, up 27% from 16.4 months in Q1 2022.

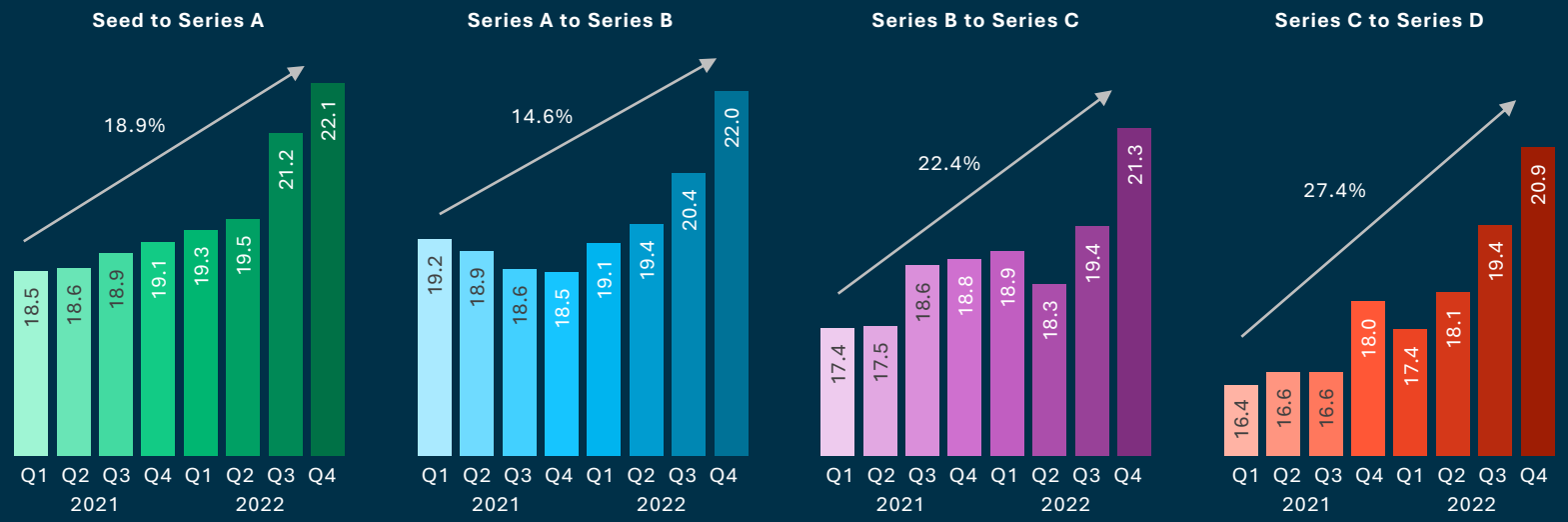
Average Number of Days Between US VC Deals for Select Firms



Median Number of Tech Subsectors[1] Targeted by the Top 100 US Investors[2]



Average Months Elapsed[3] Between Rounds by US VC Series Raised[4]



Notes: 1) Among 70 tech subsectors classified by SVB taxonomy. 2) Determined by total VC deal count since 2018.
3) Three quarter rolling average of the time elapsed between rounds. 4) Analysis excludes companies with add-on deals between rounds.
Source: PitchBook, SVB proprietary data and SVB analysis.

The Early Bird Gets the CVC Investment

In the last decade, corporate venture capital (CVC) has gone mainstream as the number of investors booms. Historically, this investor group was dominated by a small group of legacy tech companies, with the top 15 CVCs accounting for 55% of all deals. But the number of active CVCs has skyrocketed, and a long tail of corporate investors has emerged. Today the top 15 account for just 29% of all deal activity. While some in the industry have hypothesized that top players would be more likely to stick around during this cycle, there has not been an appreciable change in the top 15 CVCs share of deal activity in 2022. This indicates that the long tail of investors (91% of which do fewer than 10 deals per year) have not slowed their pace more significantly than top players. As of Q4, CVC participation rates remain high, accounting for 26% of US VC deals.

This is not to say there are no differences between top-tier funds and the rest of the pack. From a recent survey of 164 CVCs, we defined a group of top-tier investors "bellwethers" that have at least $500M assets under management (AUM), deploy at least $100M annually and have a high reputation in the industry. These bellwethers closely tracked traditional VCs in terms of deal-making, while non-bellwether firms increased their rate of deal activity far more significantly in 2021 than traditional VCs and have since returned to being in line with traditional VC.

As with traditional VC investors, in the face of mounting economic uncertainty, CVCs shifted focus to early-stage companies that have a longer time to exit and may ultimately benefit from the current environment due to the availability of talent and decreased competition. The share of corporate deals going to Seed and Series A deals has increased by nine percentage points to 51% of all deals between 2021 and 2022.

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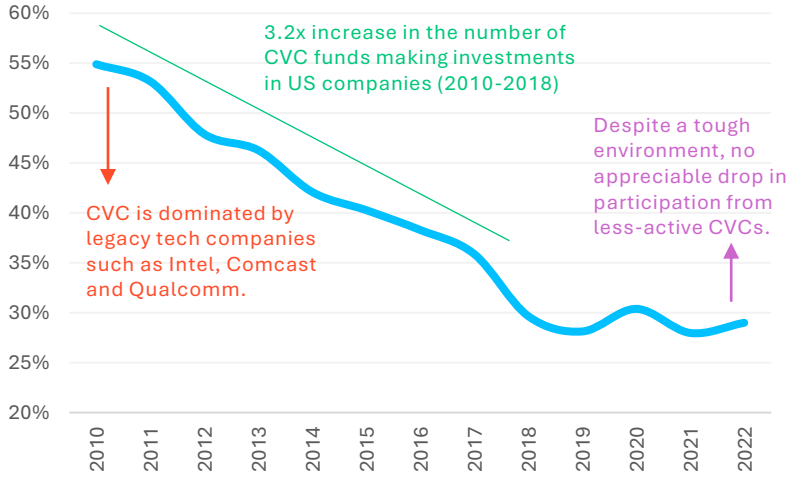
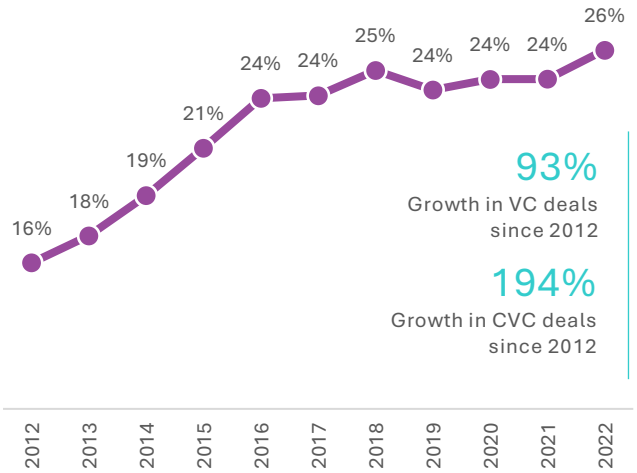
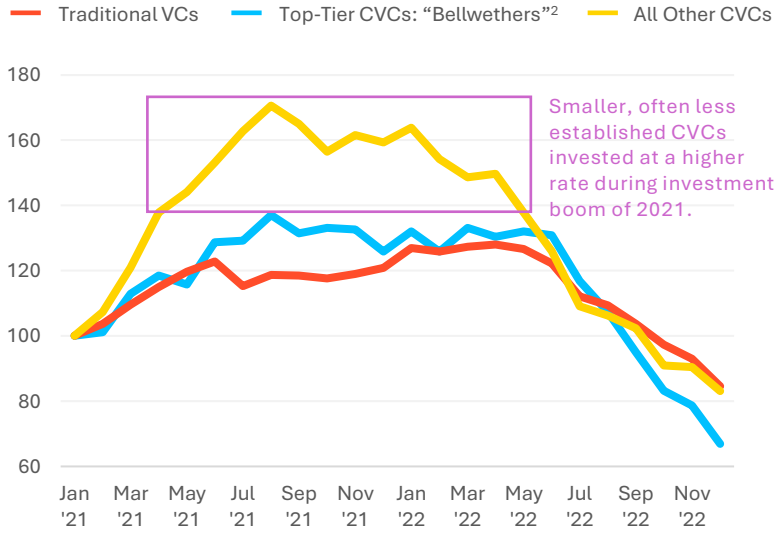
Share of CVC Deals Done by the Top 15 CVCs Each Year



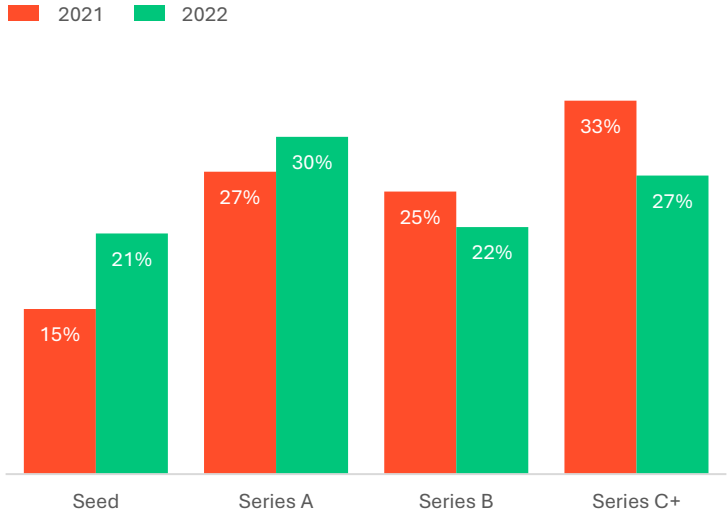
CVC Participation Rates



US VC Deal Activity Index by Investor Type[1]



Share of CVC Deals by Stage



Notes: 1) Index uses trailing six-months' deal activity. 2) Bellwether defined as a CVC with at least $500M AUM, deploy at least $100M per year and have a strong reputation in the industry.

Source: PitchBook, SVB & Counterpart Ventures CVC survey and SVB analysis.

Crypto Dysphoria

Crypto was the star tech sector of 2021, but falling asset prices and the collapse of several high-profile projects made for blinding headwinds in 2022. The price of Bitcoin fell 65% from Q4 2021 to Q4 2022, draining liquidity from the market and sapping the public interest that had fueled last year's investment frenzy. During the run-up of 2020 and 2021, crypto took a larger share of the VC pie, jumping from 1.5% of US VC investment to 6.9% at its peak. Now the trend is reversing, with crypto accounting for 4.8% of VC investment in Q4 2022. It could fall lower as the industry grapples with the fallout from the November 2022 collapse of the crypto exchange FTX.

The company's $32.5B bankruptcy constitutes the largest loss in value for any private VC-backed company on record — nearly four times greater than the Theranos fraud. Eighty-five VC investors — including leading firms such as Sequoia, SoftBank and Lightspeed — invested $2.7B into FTX over the last four years. In turn, FTX and its affiliate hedge fund invested in 235 startups, including 22 companies valued over $1B. The founders of these companies now face the task of untangling from FTX, while the industry faces the more daunting challenge of repairing public confidence. FTX customers may be owed more than $8B in lost deposits, according to the US Commodities Futures Trading Commission.

State and federal regulators have ramped up scrutiny on crypto companies. In January 2023, the Securities and Exchange Commission (SEC) charged crypto exchange Gemini and crypto lender Genesis with selling unregistered securities, while the Department of Justice (DOJ) charged crypto exchange Bitzlato with unlicensed money transmitting. Ultimately, tighter regulations may help the industry. In a January 2023 letter announcing layoffs, Coinbase CEO Brian Armstrong cited "emerging regulatory clarity" as a long-term benefit to Coinbase. "Progress doesn't always happen in a straight line," he said.

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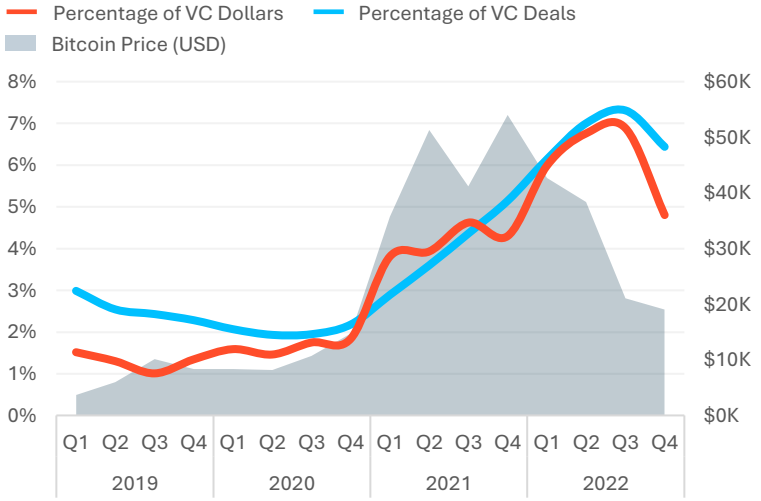
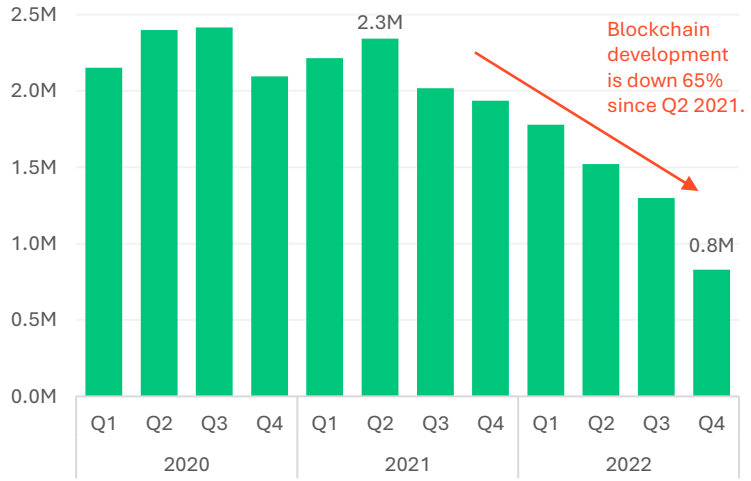
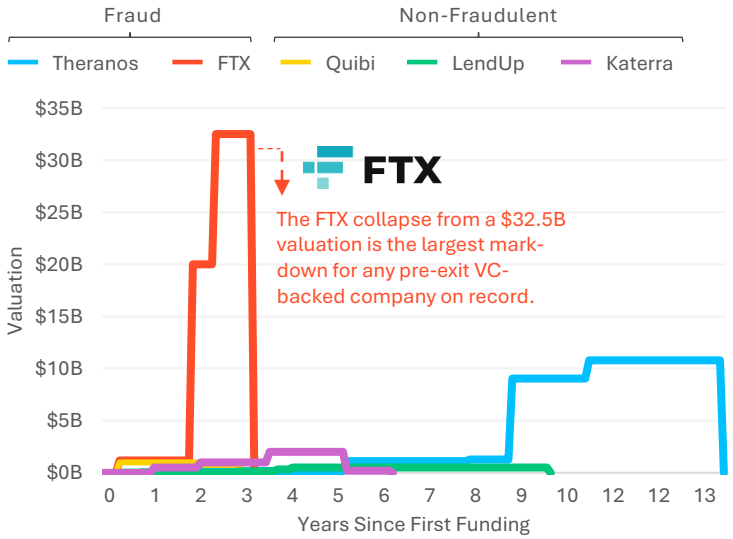
Share of US VC Investment in Crypto and the Price of Bitcoin[1]



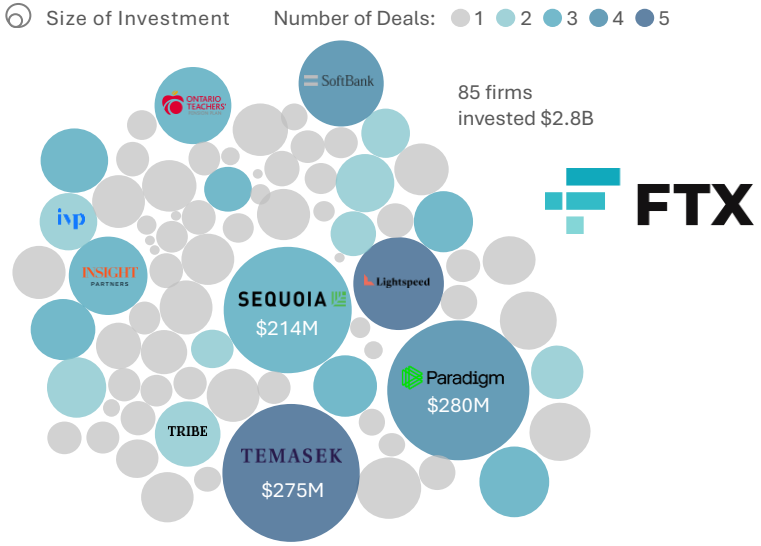
Estimated Quarterly Commits by Blockchain Developers[2]



Notable VC-Backed Company Collapses



FTX VC Investors and Estimated Losses[3]

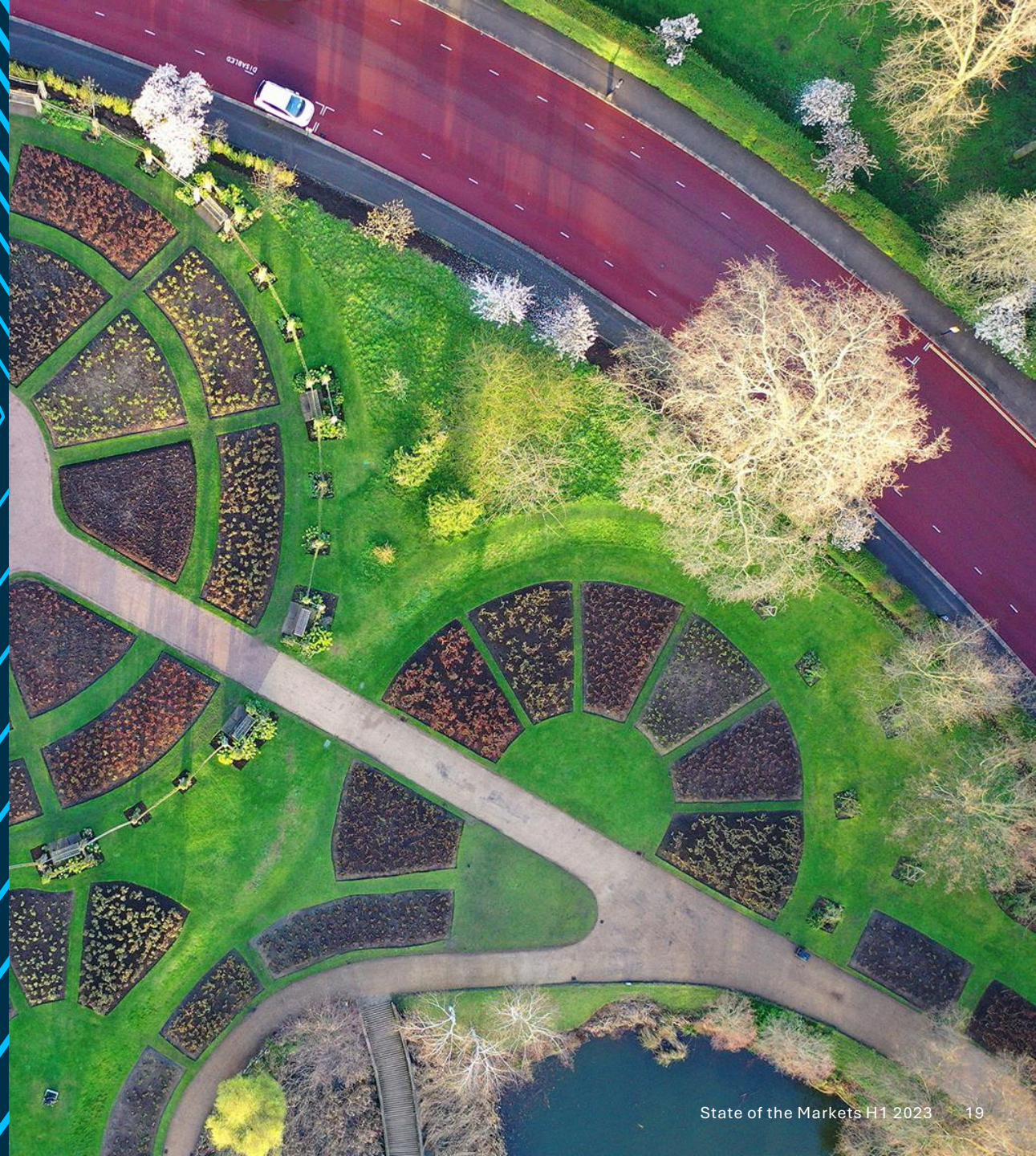


Notes: 1) Bitcoin price displayed as a monthly average of the daily settlement price. 2) Quarterly sum of daily coding commits to blockchain networks. 3) Includes FTX, and FTX US. Losses estimated based on public disclosures from investors, round size and number of investors per round.

Source: PitchBook, Artemis.xyz and SVB analysis.

Private Market Benchmarks:

Extinguishing Excess Burn



Don't Let Runway Run Away From You

A new reality cemented itself in 2022. Public markets began to deteriorate, exit markets came to a screeching halt, fundraising slowed and US VC investment fell to approximately $38B in Q4 2022 — the lowest quarterly level since Q2 2020. With capital no longer a commodity and tech demand falling, startups have had to pivot by cutting spend to extend runway. However, unlike the last downturn at the onset of the pandemic, there are different factors at play — namely inflation. Inflation's negative impact on cash runway has too often been underappreciated. With the consumer price index continuing to hover around 7%, startups are losing over a month of runway due to elevated inflation.

For startups that benefitted from the enormous fundraising waves of the last few years and hold an abundance of cash, this may prompt them to explore higher yielding assets to offset the erosion of purchasing power. While this may be enticing, especially in an environment where inflation may erode runway, liquidity reigns supreme. The purpose of raising VC is to have money when the company needs it.

On the other hand, for companies that don't have ample cash at their disposal, the situation is much more dire. As the market environment remains uncertain, investors have continued to pull back, cutting off critical oxygen for companies to survive. This is ever more important as our proprietary data shows an increasing share of companies with less than 12 months of cash runway. The median cash runway for companies has fallen from 16 months in Q4 2021 to just over 12 months as of Q4 2022.[1] This is just shy of the median length of a recession.[2] However, if this current downturn were to mimic the GFC or 1970s energy crisis — the latter of which has a number of parallels to today's environment — startups would need closer to 18 to 24 months of runway to survive. Nonetheless, as more companies reach the end of their cash runway, we expect VC activity to increase as companies start to accept lower valuations.

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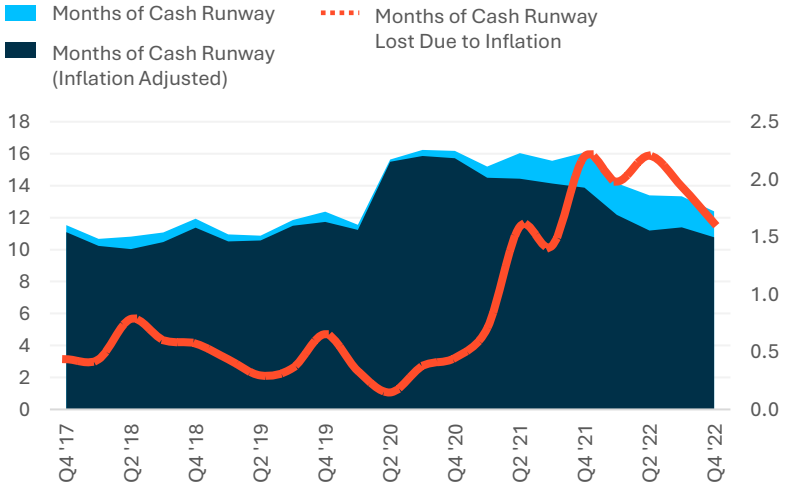
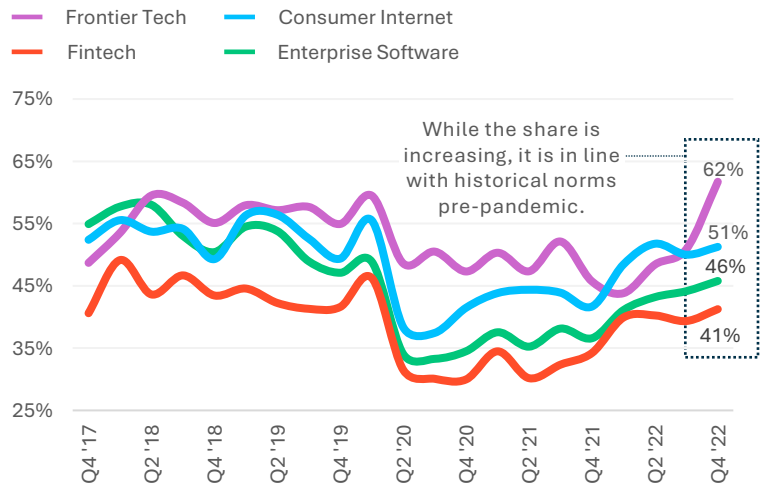
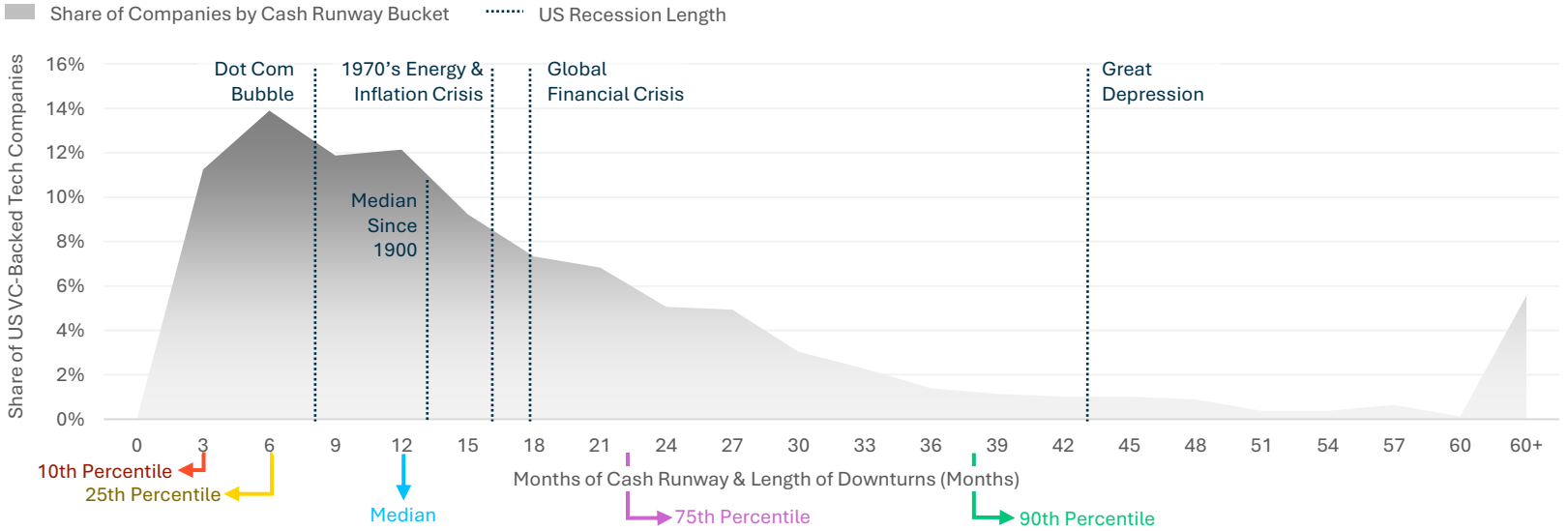
Effect of Inflation on Cash Runway for US VC-Backed Tech[3] Companies[4]



Share of US VC-Backed Tech[3] Companies with Less than 12 Months of Runway



Cash Runway for US VC-Backed Tech[3] Companies vs. Length of Notable Downturns



Notes: 1) Based on SVB proprietary data. 2) Median length of a US recession since 1900. 3) Tech defined using SVB taxonomy. 4) Analysis assumes only operating expenses at each quarter are impacted by the annual inflation percentage at the respective quarter. No adjustments are made to revenue.
Source: US Bureau of Labor and Statistics, National Bureau of Economic Research, S&P Capital IQ, SVB proprietary data and SVB analysis.

“Slow Down, You’re Moving too Fast...”

The last decade in the innovation economy can be delineated into four distinct periods. First, the pre-COVID-19 period was characterized by the longest bull-run market in history with abundant capital and strong VC investment hitting record levels eight years in a row. This period filled the pockets of many companies, allowing them to move fast and burn capital quickly to scale. The second period started in March 2020 when the World Health Organization (WHO) declared COVID-19 a global pandemic. Public markets panicked and companies quickly reacted by cutting burn to ensure ample cash runway for a potentially bumpy road ahead. The third period started in 2021 when the innovation economy entered a frenzy of activity with a doubling of VC investment in one year, increasing competition among investors and growing net burn rates. Finally, in 2022 we entered the fourth period, characterized by monetary tightening, a risk-off mindset in public markets and rationalization in private markets. Venture investment slowed, and in time companies cut net burn focusing on improving efficiency, getting to profitability and extending cash runway. Nearly 40% of all pre-profit US tech companies have reduced net burn. These reductions have started to motorize into moderate improvements in profitability in Q4 2022 as measured by EBITDA margins.

There are also some important nuances in sectors. Fintech, consumer internet and enterprise software all started to see improvements to net burn starting in Q3 2022. However, given the more hardware-intensive nature of frontier tech, cutting burn takes longer. It isn’t as simple as cutting cloud computing spend, for instance. Therefore, Q4 was the first time net burn dropped for frontier tech companies.

Ultimately, while cutting company spending can be painful, we believe the companies that do will become more efficient, more profitable and more ready for the demands placed on public companies.

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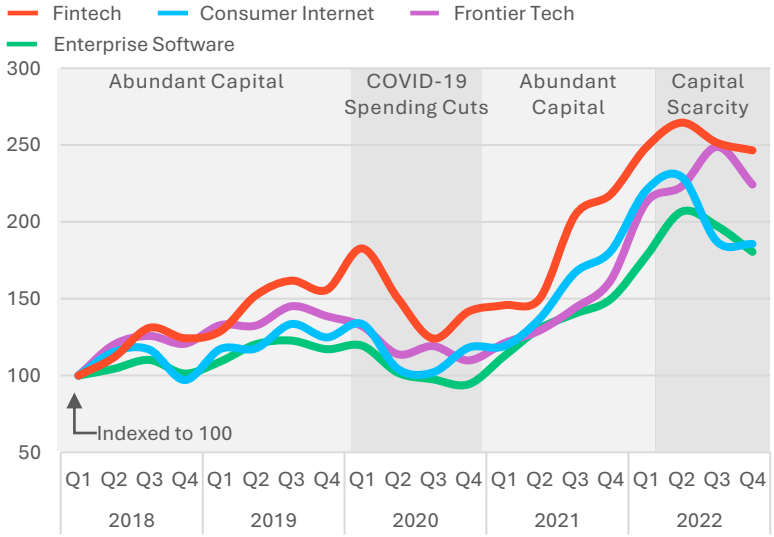
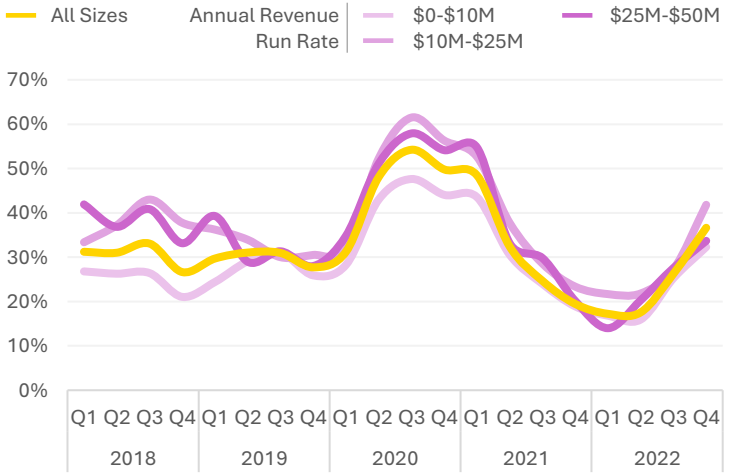
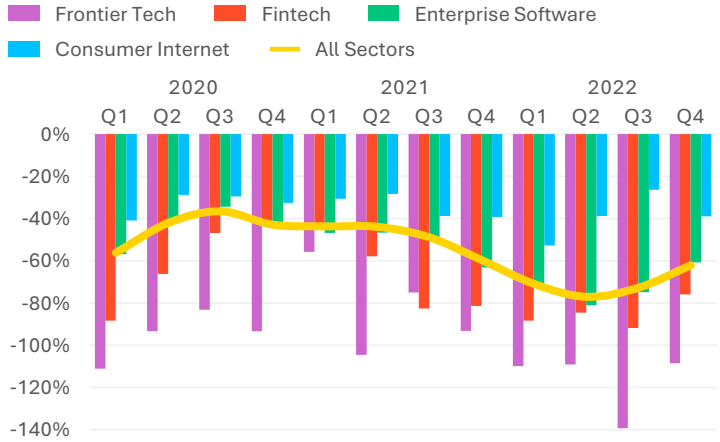
US VC-Backed Tech: Net Burn Index[1]



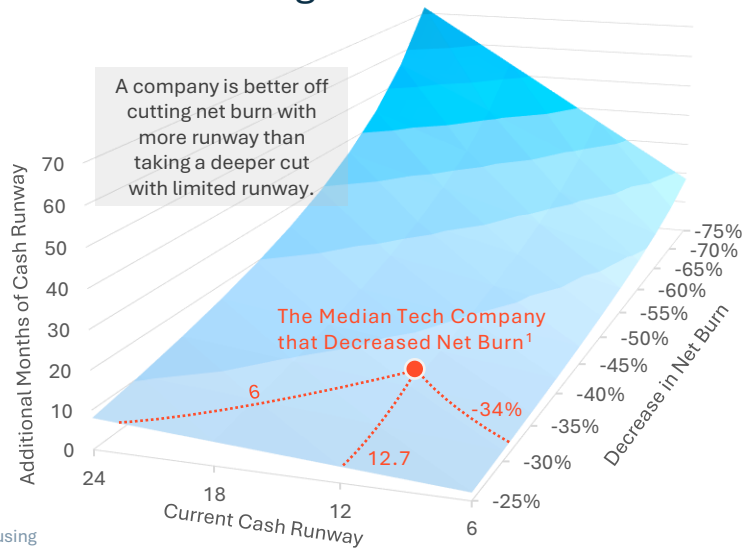
Percentage of US VC-Backed Tech Companies Decreasing Net Burn YoY[2, 3]



Median EBITDA Margin for US Backed Companies with $10M-$25M in Revenue[3]



Additional Months of Cash Runway from Decreasing Net Burn



Notes: 1) Median net burn on a quarterly basis by tech sector indexed to 100 in Q1 2018. 2) Tech defined using SVB’s proprietary taxonomy. 3) Revenue is defined as annual revenue run rate for a given quarter.

Source: SVB proprietary data and SVB analysis.

Cost-Cutting Hitting Headcount

One of the main areas grabbing headlines in today's environment is headcount. Following a pandemic-related hiring boom that led to record employment, rising wages and surging headcount, companies have started to pull back the reins as the new reality sets in. Tech layoffs (both in terms of the number of companies reporting layoffs and the number of employees being let go) in Q4 2022 surged to the highest level since the onset of the pandemic. Furthermore, more companies are doing second and third rounds of layoffs.

Prominent executives of notable public tech firms have openly admitted to hiring too fast, citing misguided optimism in tech demand and economic growth post-pandemic. Today, the focus is on the need to reduce costs given the current landscape and even proactively using the current environment to cut underperforming employees. In the extreme, corporate restructuring has taken place, such as Elon Musk's recent "house cleaning" of Twitter, which saw nearly half of its employees depart the firm.

Ripple effects have cascaded throughout private companies, too. Across major tech sectors, SVB proprietary data shows that the share of companies increasing payroll has declined by more than 20 percentage points on average since the peak in late 2021. Additionally, median growth rate of payroll spend across tech subsectors has fallen to low double digits YoY in Q4 2022, a stark contrast to north of 50%+ YoY median payroll spend at the same time last year.[1]

While layoffs may bring challenges for the tech workforce in the near term, it could serve as a potential opportunity for current startups to scoop up great talent at lower costs. It may also lead to the creation of new companies as former tech employees look to build something on their own.

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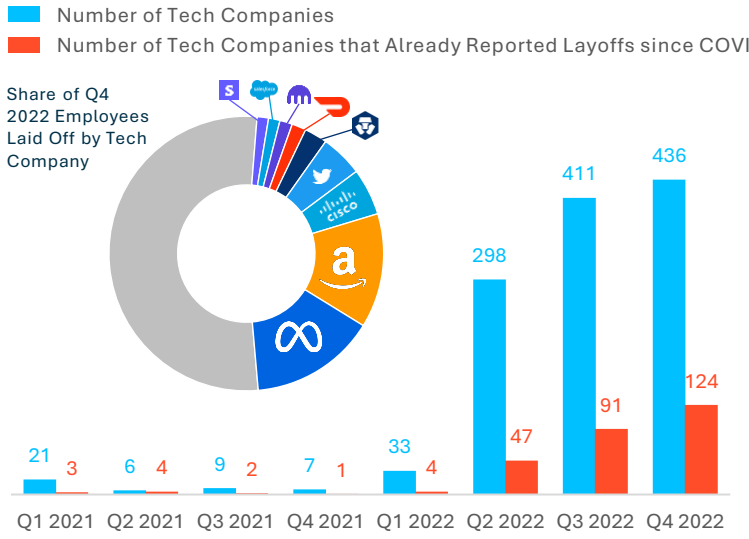
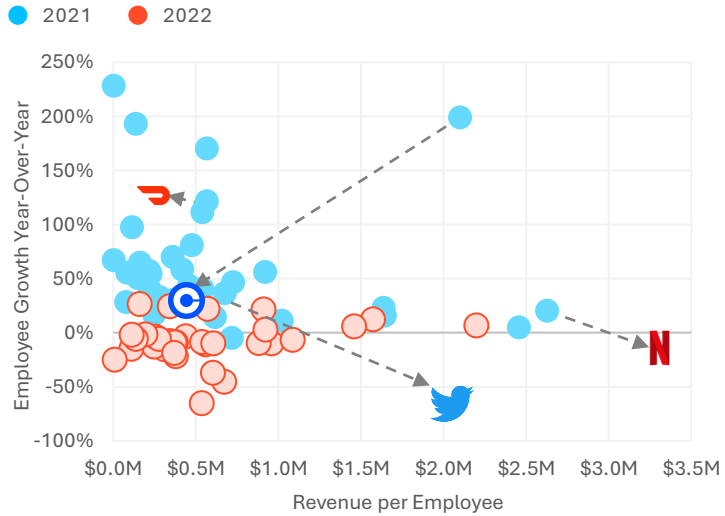
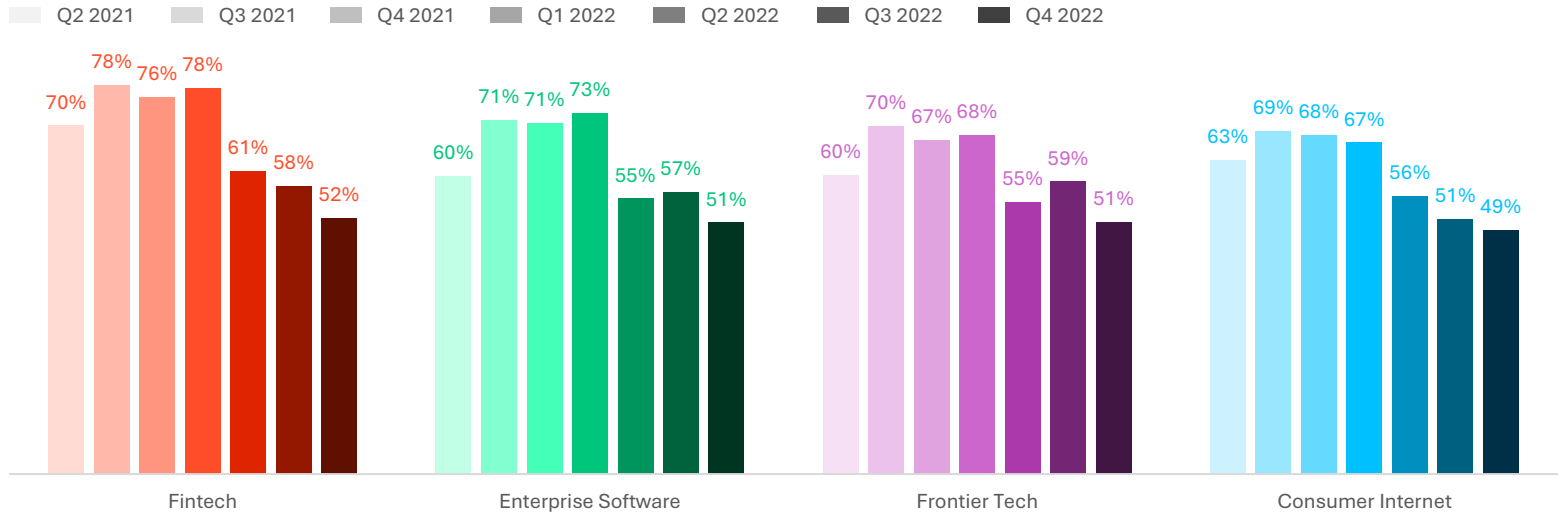
Tech Companies Reporting Layoffs



Hiring Growth Rates YoY and Revenue per Employee for Notable Tech[2] Companies[3]



Share of US Tech[2] Companies with Increasing Payroll QoQ

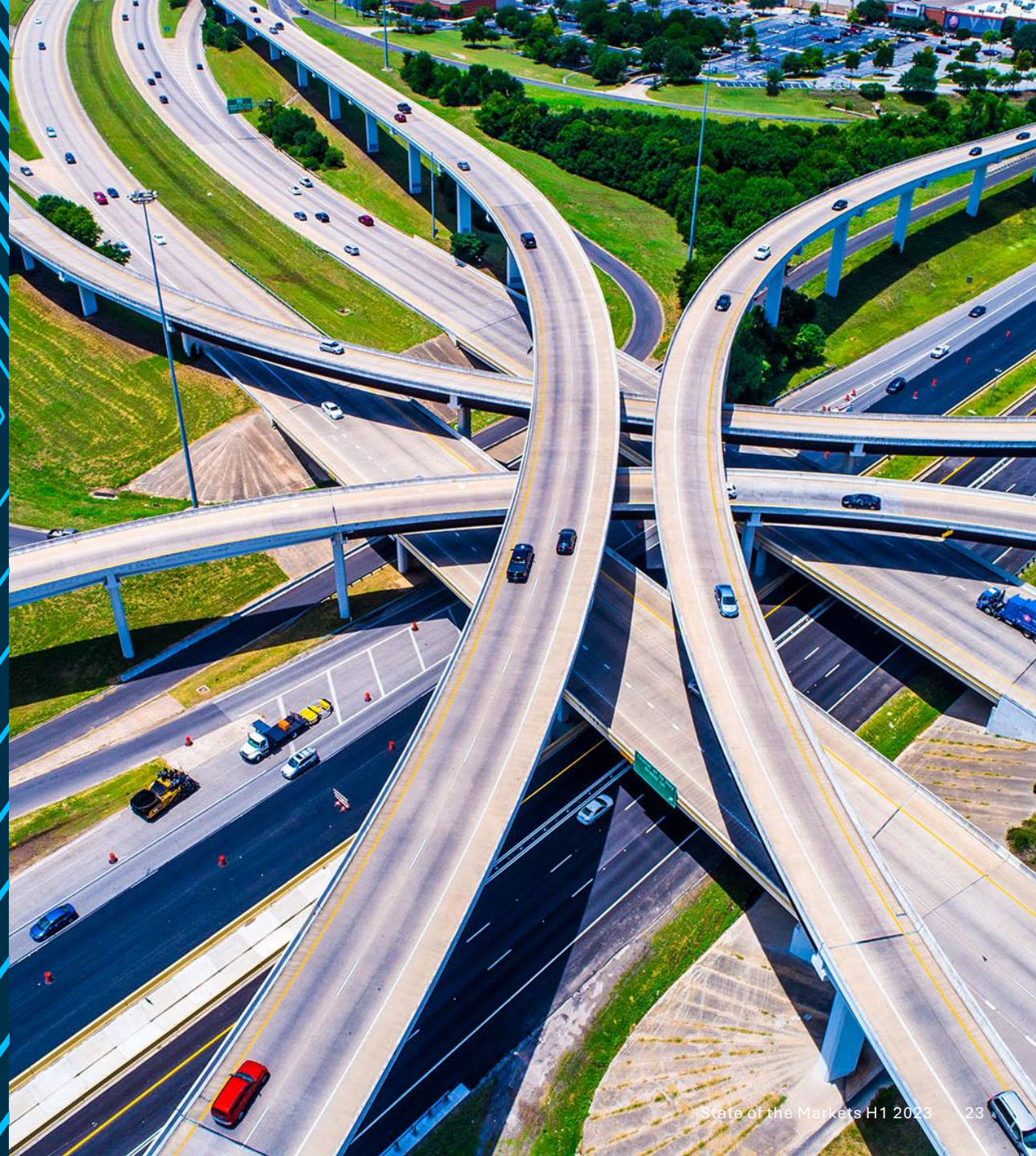


Notes: 1) Based on SVB proprietary data on median payroll spend. 2) Tech defined using SVB's proprietary taxonomy. 3) Annual revenue and employee data for 2021 based on reported figures from the respective company's SEC filings. Revenue data for 2022 based on the annualized latest available quarterly data. Employee data for 2022 estimated based on data from Layoffs.fyi, company press releases and news articles. Data as of 1/5/2023.

Source: Layoffs.fyi, S&P Capital IQ, SVB proprietary data and SVB analysis.

Exits:

Coming Soon...
Please Try Again Later



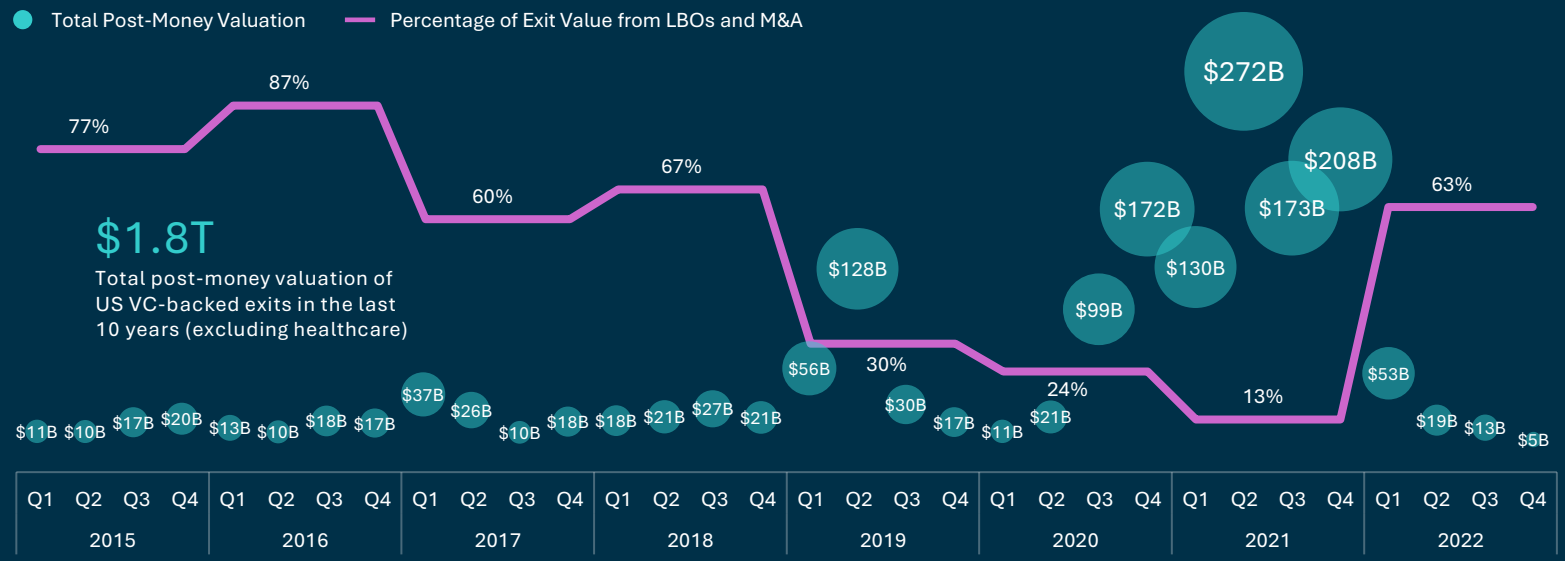
Acquisitions Take Hold as IPOs Stall

As volatility reintroduced itself and public markets softened in 2022, IPOs and de-SPACs came to a screeching halt. After a massive year for public exits in 2021 and three successive years of private exits taking a smaller share of total value, the script has flipped. Acquisitions have started to take the lion's share of deals — albeit at a smaller absolute level relative to last year — punctuated by deals such as Nuance Communications ($19B), Deliverr ($2B) and Xandr ($1B). While some deals have been lauded as successful strategic mergers, such as Adobe's $20B announced acquisition of Figma at over 50x revenue, the reality is that most private acquisitions will be under circumstances of duress as investors pull back and runway shortens. This last point rings especially true as proprietary data shows nearly half of US private tech companies have less than 12 months of runway — a jump of 10 percentage points from Q4 2021.

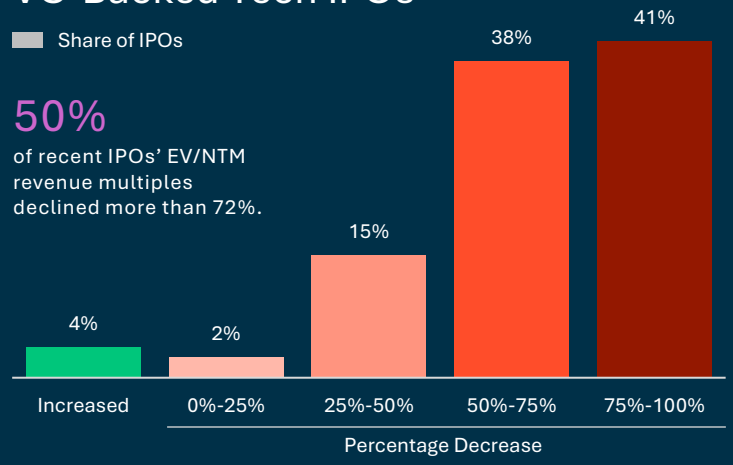
However, should public markets open up this year, there remains a massive backlog of unicorns (and potential liquidity) ready to be unlocked. Since Q4 2021, the aggregate value of private, US VC-backed unicorns has grown over 13% to $2.3T, while the aggregate number of private, US VC-backed unicorns has jumped nearly 30%.[1] As these companies remain private longer, they have time to achieve the best operating metrics possible before a potential exit. On the other hand, investors are unable to realize gains, so there is mounting pressure for companies to exit.

Should public markets remain depressed, valuation multiples for public companies will continue to remain muted. However, this isn't all doom and gloom as this also provides an opportunity for investors to scoop up great companies at lower prices. Look no further than Thoma Bravo's acquisition of Coupa. With over $1.8T in global VC and PE dry powder, there remains ample cash ready to be put to use.[2]

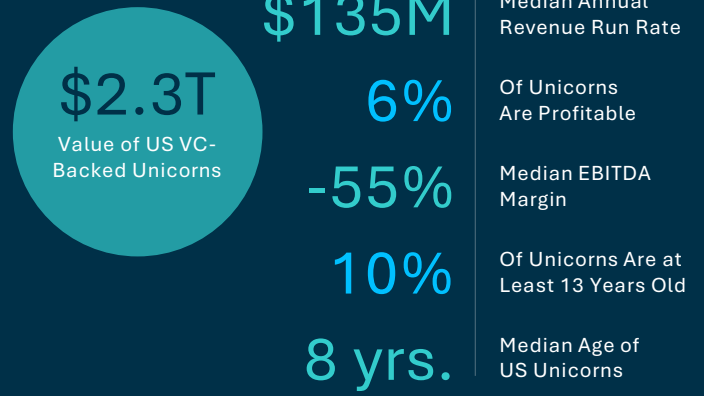
Total Post-Money Valuation by Quarter for US VC-Backed Exits (Excluding Healthcare)



Distribution: Change in EV/NTM Revenue Multiples in 2022 for US VC-Backed Tech IPOs[3]



US VC-Backed Unicorn Statistics



Notes: 1) Data as of 12/31/2022 and subject to change based on data updates by data provider. 2) Data as of 1/23/2023 and subject to change based on data updates from data provider. 3) Tech defined using SVB's proprietary taxonomy; enterprise value to next twelve months (EV/NTM) revenue.

Source: PitchBook, S&P Capital IQ, Preqin, SVB proprietary data and SVB analysis.

Shopping Around for a Discount

Since October 2022, the decline in late-stage tech valuations has begun to mirror the decline in recent US VC-backed tech IPOs. This suggests that late-stage tech valuation levels are starting to find the bottom (assuming public markets don't continue to correct). However, 33% of late-stage private tech companies raised their last priced round during the market peak in 2021. So many companies have yet to face the new fundraising environment. The dynamics of price discovery are a gating factor for M&A activity. Many buyers are looking to acquire companies at a discount, but many sellers are still tied to their 2021 valuations since they have not yet had to reprice. Given the robust cash runway and the use of alternative financing mechanisms, many late-stage companies are simply waiting as long as possible to raise. As such, M&A activity of US VC-backed companies by strategic acquirers has declined 57% YoY.

Yet another gating factor for M&A activity is a tightening debt market, not only due to rising rates but also a lower risk appetite. For example, Leveraged buyout (LBO) debt in Q3 2022 had an average original issue discount of 92.2 cents on the dollar vs. 99.2 in January 2022 banks are selling debt at a higher discount.[1] As a result of these dynamics, Morgan Stanley is set to lose $500M on the Twitter deal,[2] and debt providers may be wary of financing other large transactions. We expect a higher percentage of equity in deal capital structures. Some PE funds are already announcing deals without debt financing, such as Francisco Partners, Thoma Bravo, and Stonepeak Partners. These funds have relied on equity from record dry powder to get deals done.

Finally, relatively low prices among recent tech IPOs may lead to PE investors taking public companies private. For recent tech IPOs, the median enterprise value to next twelve months revenue multiple fell 72% in 2022, and 52% of tech companies that went public between 2020 and 2021 are trading below their last private valuation.

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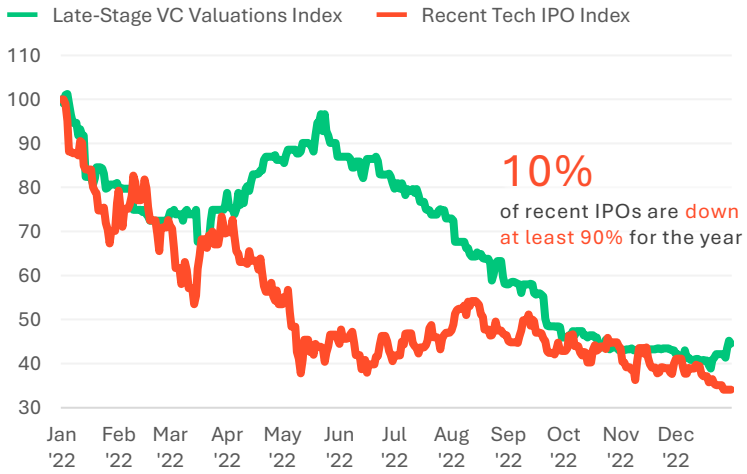
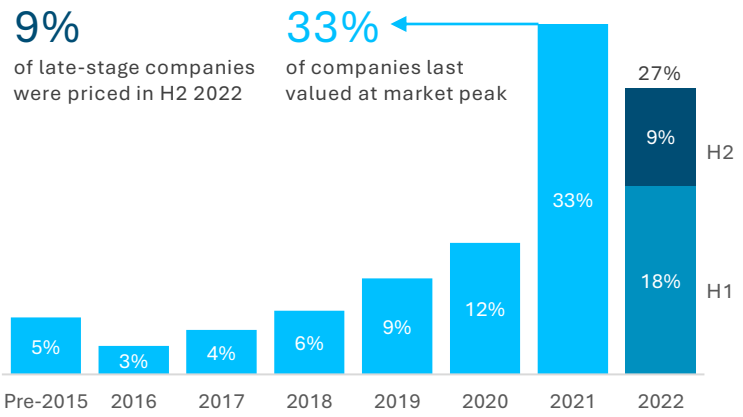
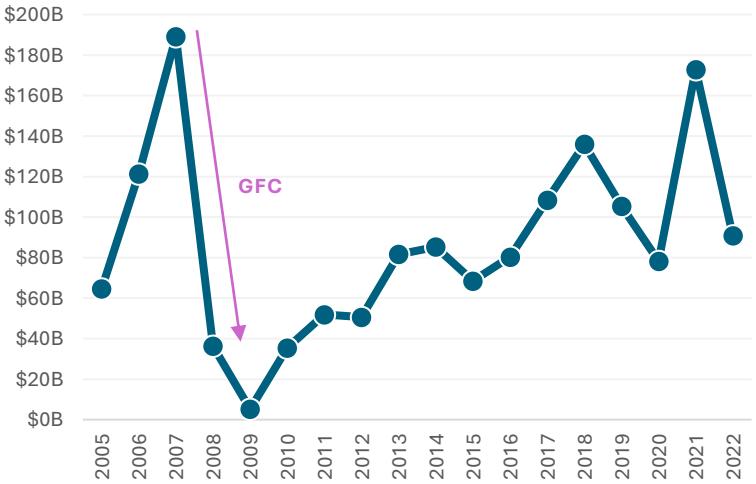
Valuations of Late-Stage Tech VC vs. Recent Tech IPO Index[3, 4]



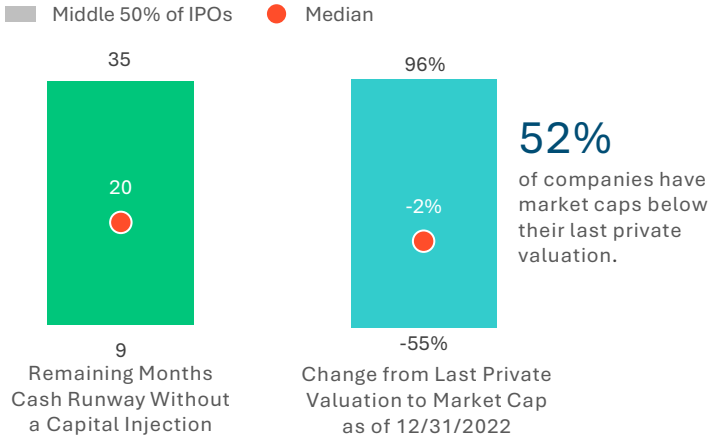
Distribution of Late-Stage VC-Backed Tech Companies by Date of Last Round[4]



US Leveraged Buyout Loan Volume



Key Metrics for Recent US VC-Backed Tech IPOs[4, 5]



Notes: 1) Insufficient data to calculate Q4 2023. 2) As reported by Bloomberg. 3) US tech late-stage VC valuation index calculated as median post-money valuation over the last 90 days indexed to 100; US VC-backed recent tech IPO index calculated as the total market cap of US VC-backed tech IPOs that exited on major US exchanges between 2020 and 2021 indexed to 100. 4) Tech defined using SVB's proprietary taxonomy. 5) IPOs on major US exchanges that exited between 2020 and 2021.

Source: PitchBook, S&P Capital IQ, Leveraged Commentary & Data, Bloomberg, SVB proprietary data and SVB analysis.

International:

Heading North and Crossing the Pond

Dollar Weakens, Impacts Key Metrics

The tide has begun to shift following more than a year of a strong US dollar (USD) bull run, which saw the USD trade near a 20-year high.[1] From the relative bottom in May 2021 to the relative peak in September 2022, the USD strengthened over 28% compared to a basket of foreign currencies, driven by the USD's status as a safe haven asset and the Fed's interest rate hikes.[2] However, beginning in Q4, the USD began to soften, falling 9% from its recent peak.[3]

While a modest decline in the broader index shouldn't cause alarm bells to ring, it's worth noting that looking at a diversified index can be deceiving as not all currencies move the same. Several currencies, both from advanced and emerging markets, have strengthened against the USD as additional external factors — such as competing interest rate hikes and macroeconomic conditions — cause disparity among currency movements.

Further softening wouldn't be unprecedented. The USD index has fallen nearly 15% several times in recent history — most recently during 2016-2018 and again in 2020-2021. However, longer-term secular downtrends have also occurred, most notably in the late 1980s and post-dot-com bust. Such prolonged downtrends can have massive implications on key startup operating metrics such as cash runway and operating margins.

Using the worst rolling one year performance since 2000 for select currencies, our proprietary data shows that cash runway can be shortened by up to two months in a particular currency due to unfavorable movements versus the USD. Additionally, operating margins can deteriorate by almost nine percentage points. Not proactively implementing an FX strategy can introduce material variability in key operating metrics — a disadvantage for startups, particularly during a downturn. For more information on FX risk management services, strategies and insights, visit our dedicated resources here.

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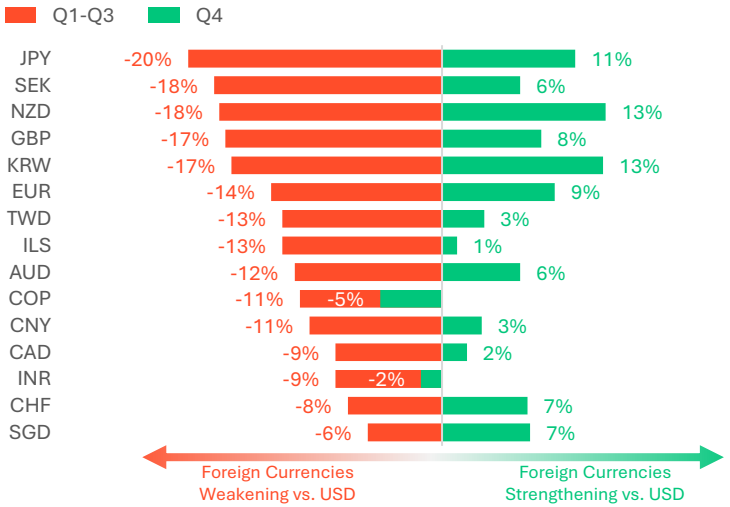
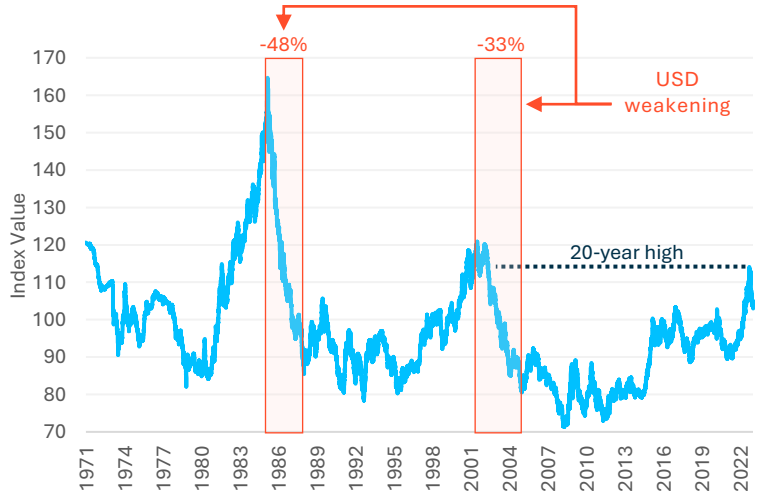
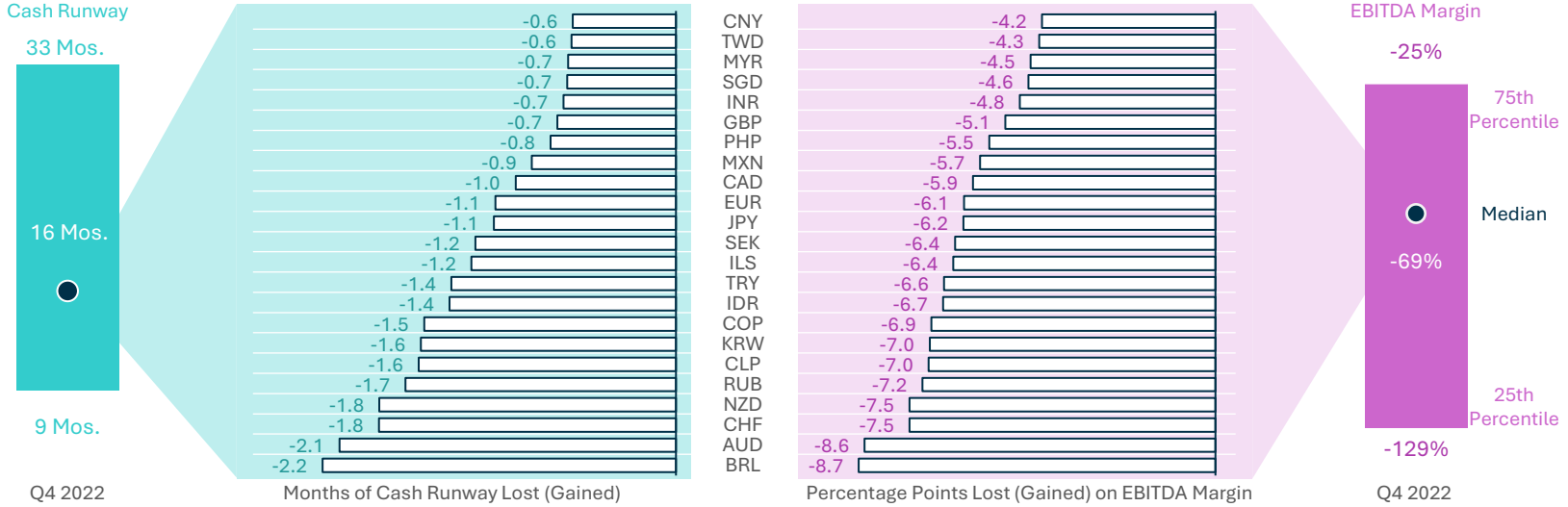
Change in Notable Currencies vs. the US Dollar in 2022



US Dollar vs. a Basket of Foreign Currencies Since 1971[1]



Effect on Key Operating Metrics Based on Worst One-Year FX Movement Since 2000[4]



Notes: 1) Based on the DXY. Previous high was in 5/16/2002. 2) USD return from 1/5/2021 to 9/26/2022. 3) USD return from 9/26/2022 to 1/10/2023. 4) Analysis based on proprietary data for companies with >$1M net USD sold in 2022, which reflects only the amount of USD sold versus currencies that SVB FX is active in and may not include all of the currencies listed above. Analysis assumes FX movements only effect operating expenses.

Source: Bloomberg, S&P Capital IQ, SVB proprietary data and SVB analysis.

More Growth and Less Burn in Canada

US and Canadian VC investment have trended similarly. Trailing twelve-month VC investment peaked in early 2022 after an anomalous 2021. However, when we break down the YoY changes on a quarterly basis, the US has fared far worse — US VC investment fell 60% from Q4 2021 to Q4 2022 while Canada saw only a 36% decline.

While Canadian investment has remained more robust, Canadian valuations have rebased far more quickly than the US, even though Canadian companies typically have lower valuations for any given venture round. Take, for example, companies that have raised five or more venture rounds. The US saw pre-money valuations fall 30% compared to 77% for Canadian tech companies. Despite what valuations might suggest, Canadian companies are not faring any worse than their US counterparts. In fact, while revenue growth rates are falling, Canadian companies have seen higher revenue growth rates throughout 2022 than US companies of the same size.

Canadian companies are generally burning less cash than US companies. Since 2020 the median net burn for Canadian companies was 38% less than their US counterparts. This indicates higher efficiency for Canadian startups given that 2022 growth rates are similar. Furthermore, from conversations with Canadian startups, many have done headcount reductions in the back half of 2022 and expect net burn to fall as a result in 2023. In addition to burning less cash, Canadian startups, especially early-stage companies, have benefited from non-dilutive government funding, making private investments in these companies go further. We expect to see continued US investor interest in Canadian startups given the non-dilutive funding available, lower pricing and high performance.

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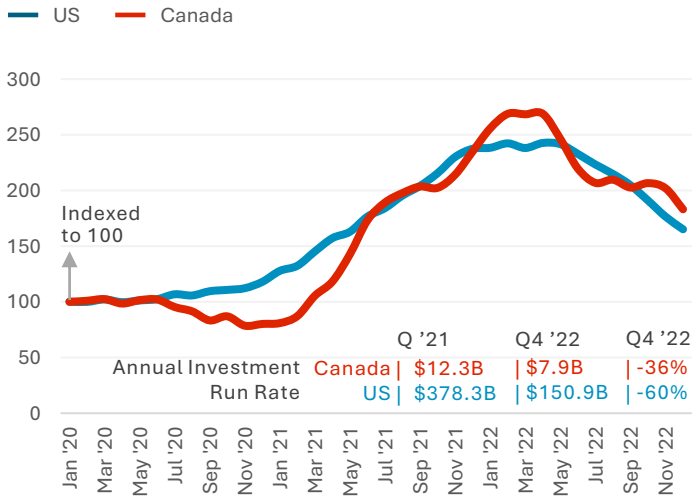
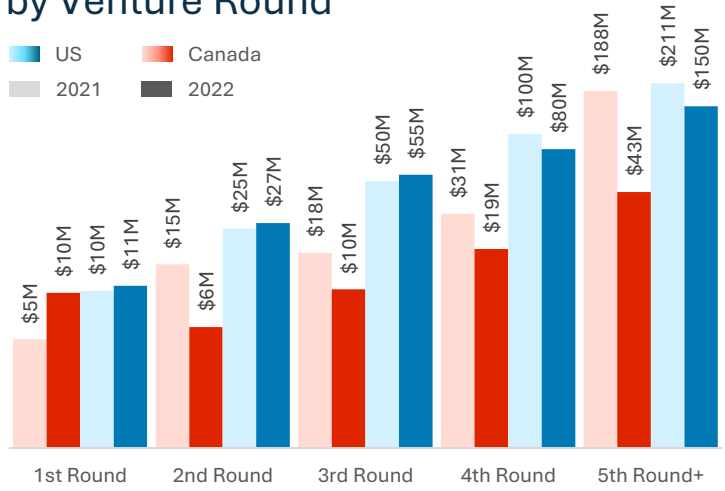
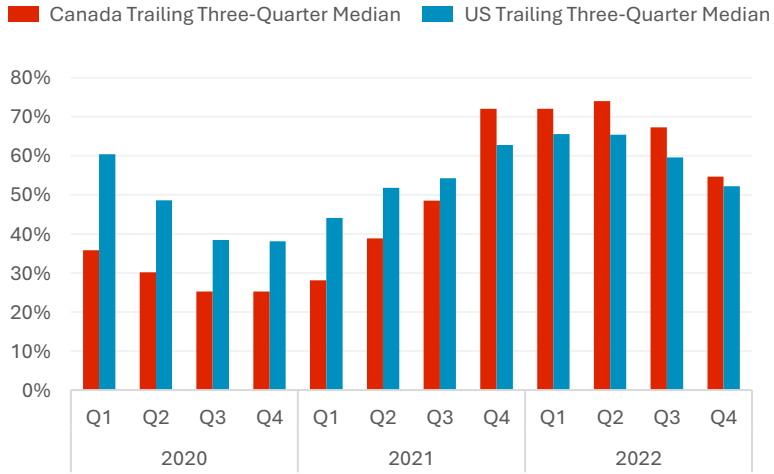
Trailing Twelve-Month US and Canada VC Investment Index



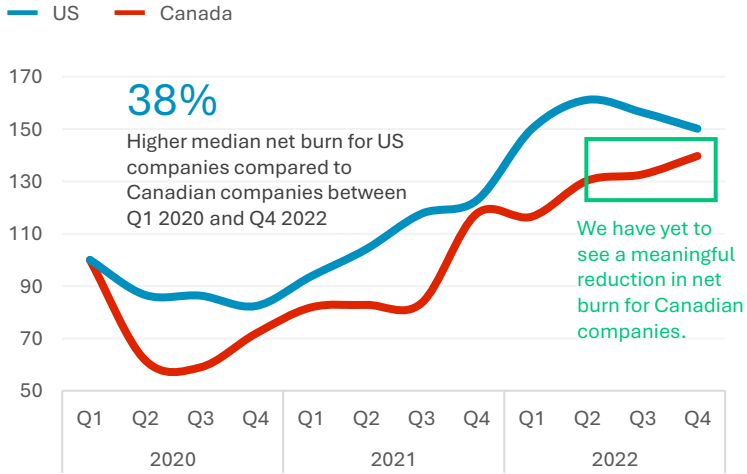
Median Pre-Money Valuations by Venture Round



YoY Revenue Rate for Tech Companies with $0-$10M in Annual Revenue[1, 2]



Net Burn Index for Tech Companies with $0-$10M in Annual Revenue[1, 3]



Notes: 1) Tech defined using SVB's proprietary taxonomy. 2) Using annual revenue run rate for the quarter; metric is a trailing three-quarter median. 3) Median net burn on a quarterly basis by tech sector indexed to 100 in Q1 2018.

Source: PitchBook, SVB proprietary data and SVB analysis.

The European VC Ecosystem at a Glance

Amid market uncertainties and high asset valuations, European investor interest shifted to early-stage opportunities, with Q4 2022 early-stage fundraising increasing by 11% QoQ. Early-stage startups are a greater distance from public markets, so they have been relatively insulated and saw valuations bolstered in 2022 by investor competition. The median pre-money valuation for seed-stage companies grew 32% YoY while late-stage valuations declined 5% in 2022 and are likely to continue their decline.

Although early-stage funding slowed down in 2022, the median deal value increased by 30% YoY. This is driven by companies flocking to early-stage deals as public market volatility makes late-stage deals less attractive given the increased uncertainty of an exit. This ultimately diminishes the short-term upside that made late-stage deal so attractive in 2022.

The Ukraine war and the general macro environment has significantly impact on public markets, leading to a slowdown in IPO activity. There were 13 VC-backed European IPOs in H1 2022 compared to 35 in the first half of 2021. This has led to M&A gaining a higher percentage of all exits, despite the total value of those deals declining.

At the country level, the UK faced a difficult last year. Inflation and political uncertainty coupled with high energy costs continue to affect the economy and the tech sector. Yet, the UK tech industry demonstrated its resilience in 2022, reaching a combined market value of $1T. With the threat of a recession looming over the UK economy, we won't see the record investment levels of 2021. However, we do expect a return to pre-pandemic levels of investment as tech continues to become increasingly entrenched in the broader economy.

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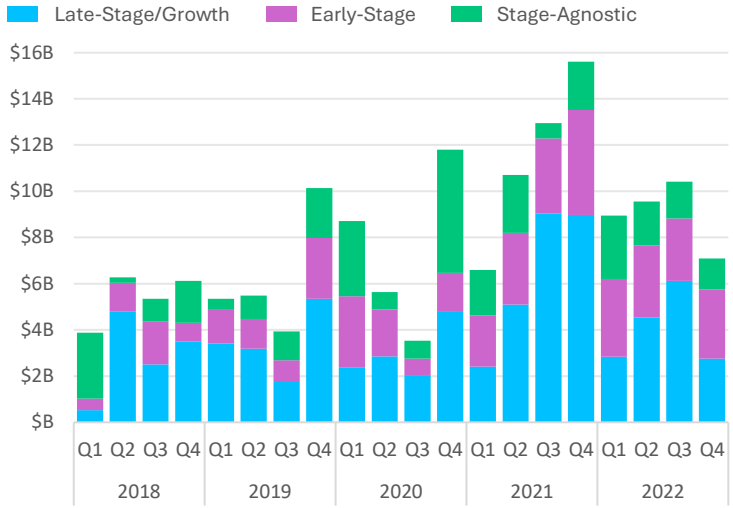
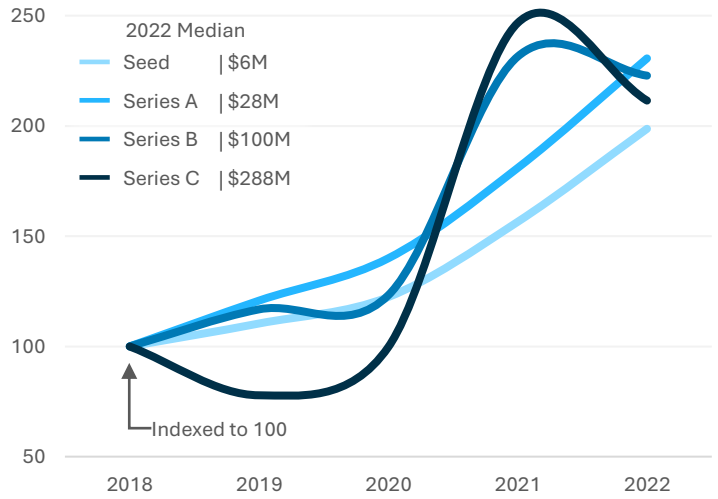
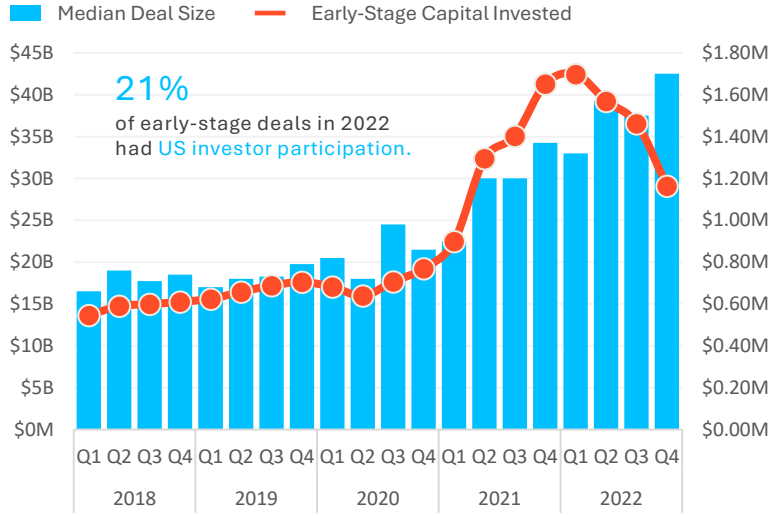
European VC and PE Growth Fundraising[1]



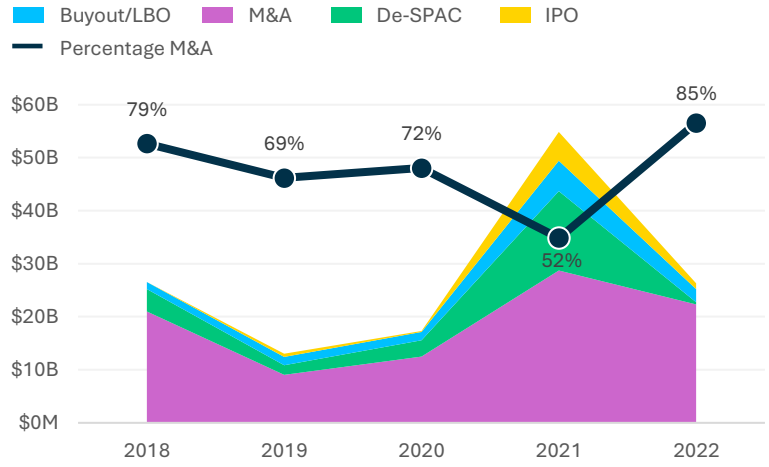
European Median Pre-Money Valuation



European Early-Stage Deal Size and Capital Invested Trailing Twelve Months[2]



European VC-backed Exit Value by Type & M&A Share of VC-Backed Exit Value



Notes: 1) By year closed. Only funds whose manager is located in Europe are included. 2) Early Stage includes Angel, Seed & Series A.

Source: Preqin, PitchBook and SVB analysis.

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Special Thanks

The 25+ subject matter experts from SVB and external organizations that provided insights, market analyses and guidance.

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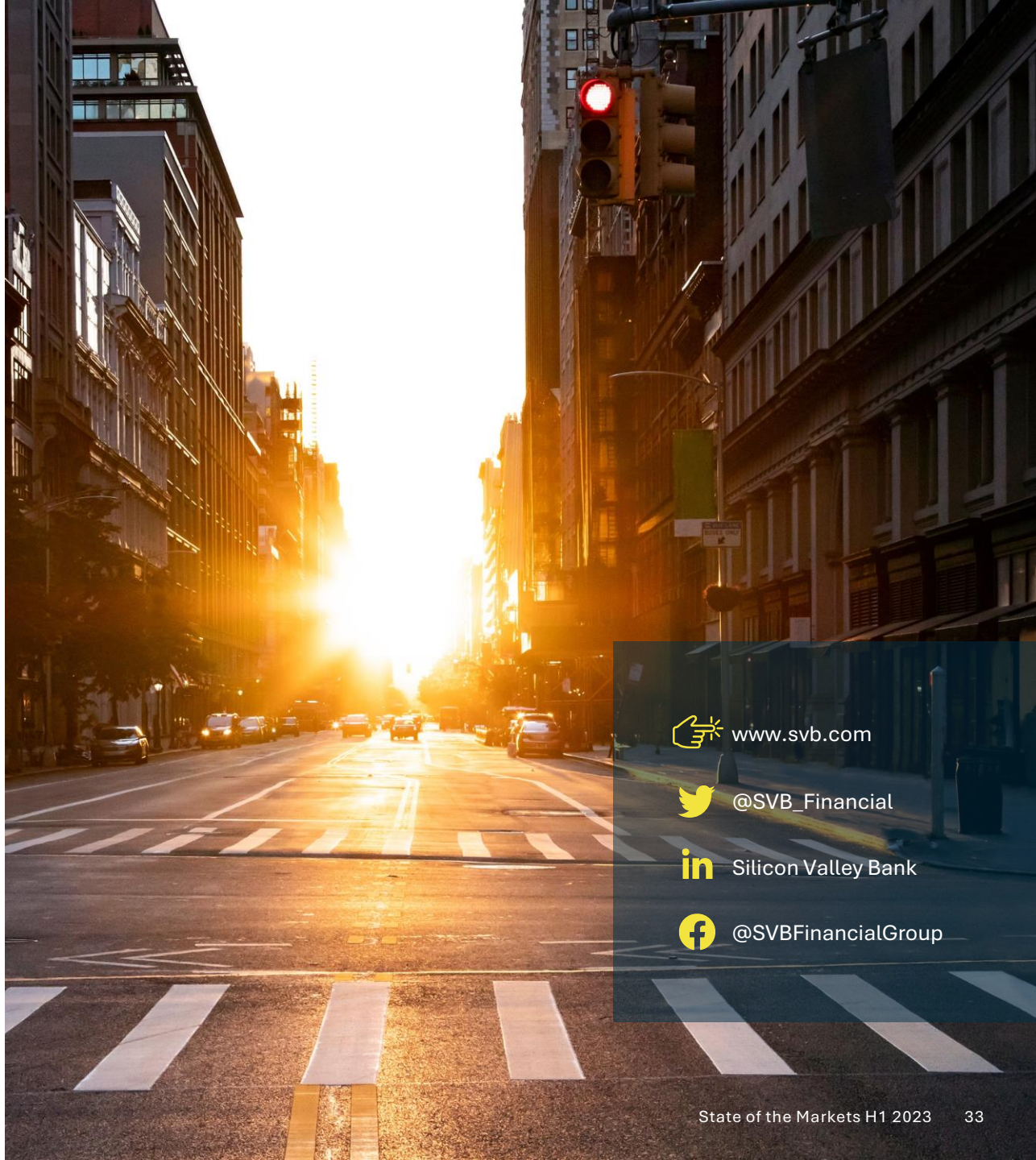

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