

State of the Markets

SVB's Innovation Economy Outlook

H1 2024

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Dawn After the Downturn?

Two years into the most significant contraction of the innovation economy since the dot-com bubble, and signs of normalization — dare we say recovery — are on the horizon. It feels like we are closer to the end than the beginning. Late-stage tech valuations reached the bottom in mid-2023, ticking up in the back half of the year. Seed activity remains resilient as valuations still trend up. Investment, while not growing, seems to have stabilized.

Many companies are only now facing the full effect of the venture capital (VC) investment downturn. The combination of near-record cash runway at the start of 2022 and drastic reductions in burn helped delay down rounds, closures, and the need to raise a funding round. But the reckoning is upon us. Down rounds make up one in four Series D+ deals (and many more go unreported).

For companies unable to raise, a good buyer is hard to find. Companies looking for soft landing M&A deals are coming up empty with shutdowns and selloffs mounting. The storm won't pass overnight, and we don't expect investment to tick up quickly or return to prior highs anytime soon.

But we have reasons for optimism. We believe Series A tech deal activity will increase in 2024 as a robust cohort of seed stage companies comes back to market. The recent rebound in public markets —

including the 53% jump in the Renaissance Capital IPO index in 2023 — may open the IPO window for the largest cohort of unicorns the innovation economy has ever had.

In some ways, the reset is good for the long-term health of the innovation economy. In the mania of 2021, the line between the old economy and the innovation economy blurred.

VC investors put money into everything from lobster rolls to undifferentiated clothing brands. But as capital dries up, VCs' focus is shifting back toward true north: highly scalable businesses that have the potential to disrupt large markets. Growth has always been the mandate of VC, but the last two years have shown that balance is important. More than ever before, investors say they want to see a clear path to profitability.

As startups reach profitability sooner and become less dependent on outside late-stage capital, they will exit earlier. This shift has been catalyzed by late-stage capital drying up as hybrid PE/VC investors pulled back. With future IPOs exiting sooner and raising less private capital, we may see more alpha left on the table for public markets. IPOs will look

like they did a decade ago: smaller, more efficient companies exiting earlier.

As we continue on the long path toward recovery, we are encouraged by the innovation we see all around us. The rise of AI and resurgence of climate tech are reminders that game-changing technologies are the result of patience, persistence and perseverance. Some of today's best companies emerged after the dot-com collapse and the global financial crisis (GFC). Technology will continue to expand its share of the economy. In this new era of heightened investor scrutiny, companies will become more efficient and more technically differentiated, and the companies that make it to the other side will thrive.



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Macro

2023 Outlook (Mostly) Accurate; Here's What We Think for 2024



VC Fundraising

US VC Fundraising¹



Our 2024 outlook

We expect fewer funds will return to market as lower levels of VC deployment persist. Funds that are raising have fewer investors to choose from. Many LPs² are tapped out with allocations to alternatives at or above their targets and distributions few and far between. As a result, fundraising will consolidate among fewer large managers. And some managers will need to reduce head count while others will shut their doors.



Early-Stage

US Series A Tech Deals³



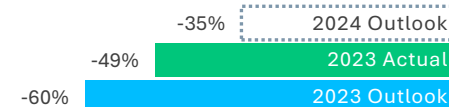
Our 2024 outlook

Series A tech deals will likely bounce off the bottom in the back half of 2024 as investors currently on the sidelines test the waters at the early stage. The number of active investors has decreased 45% since 2021 — and Series A accounted for one in four deals by these inactive investors. Their return to market should bolster Series A deal activity along with a robust cohort of seed companies coming back to raise in 2024.



Late-Stage

US Late-Stage Tech Valuations Relative to Peak (Q4 2021)^{3,4}



Our 2024 outlook

Late-stage valuations are likely to climb following public market gains in 2023 — including a 53% jump for the Renaissance Capital IPO Index. But with revenue multiples for recent US tech IPOs 55% below their 2021 year-end values, it's unlikely valuations will grow too much. Furthermore, valuation overhang persists, and we expect to see an elevated number of down rounds and undisclosed deals as companies raise in the new environment.



Exits

US VC-Backed Tech IPOs on Major US Exchanges



Our 2024 outlook

We anticipate at least 15 US VC-backed tech IPOs — with the possibility for more. Anticipated public market strength, with the potential for rate cuts, will likely open the IPO window. For the 725 US unicorns that face limited access to private capital, an IPO may be an enticing option. But for companies that go public, down round IPOs could be the norm — a deterrent for companies with enough runway to wait for public markets to improve.

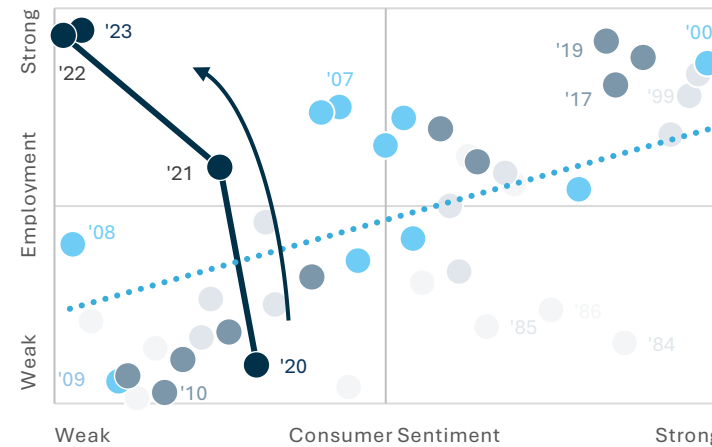
A Tale of Two (Tech) Economies

By most measures, 2023 was a good year for the US economy. Unemployment stayed near record lows, the S&P 500 posted double-digit gains and GDP¹ grew at 6.5%, twice the normal expansion rate. Why, then, didn't it feel that good?

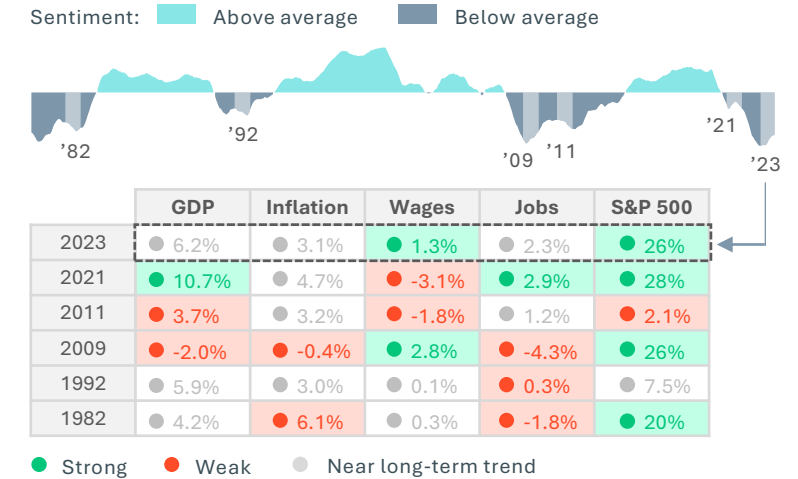
What people seem to care about is spending power — and a dollar just doesn't stretch as far as it used to. Consumer sentiment averaged near the record low in 2023. Food prices² have jumped 32% in the last four years, surpassing even housing costs (up 21%) as the fastest growing household spending category. The concern with low consumer sentiment is that it will lead to a drop in spending — the main component of GDP — but so far, that hasn't happened. Wages have largely kept pace with prices; personal consumption rose 6% in 2023.

For tech companies, it's a tale of two economies. The promise of generative AI is propelling big tech stocks to new heights. **Led by chipmaker Nvidia, the Magnificent Seven³ have reclaimed or surpassed their prior peak values, even as companies that had an IPO during the VC boom are still struggling to climb back.** But smaller tech companies are making progress. The Renaissance IPO ETF, a proxy for recent tech IPOs, is up nearly 40% from its low point in December 2022, and public revenue multiples are up across most tech sectors. Helping this rally are signs that the Fed may begin lowering interest rates. However, the upcoming presidential election could dampen a recovery if it leads to increased uncertainty.

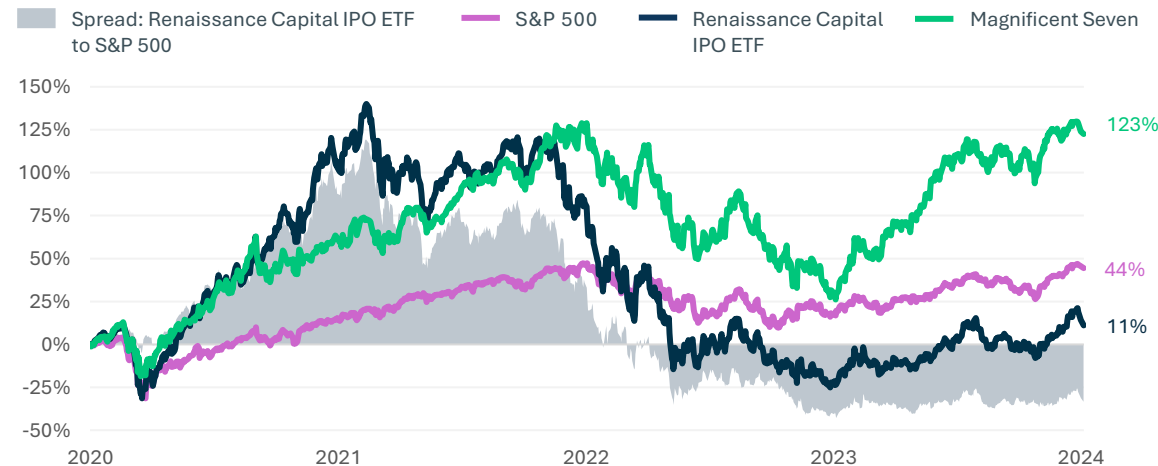
A Good Economy Never Felt So Bad Rank of Consumer Sentiment and Employment Since 1980⁴



... But Indicators Tell a Positive Story Consumer Sentiment (shaded) and YoY Change in Metrics (table)⁵



Big Tech Lifts Public Markets, as Recent IPOs Struggle Indexed Returns since 2020 of Tech IPOs, Magnificent Seven³ and S&P 500



Notes: 1) Annual YoY change for 2023. 2) Producer Price Index of groceries and supermarkets. 3) Magnificent Seven includes: Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia and Tesla. 4) Rank of annual averages for the US unemployment rate and the University of Michigan Consumer Sentiment Index. 5) Strong indicators are those above the historic average (since 1980 for wages, jobs and GDP and 1960 for S&P returns and inflation), weak are below average and neutral are within half a standard deviation of the average. 6) Based on EOY market cap/NTM revenue. Source: Federal Reserve of St. Louis, Bureau of Labor Statistics, S&P Capital IQ and SVB analysis.

Median Revenue Multiples⁶ for US VC-Backed Companies That had an IPO Since 2015:

	2021	2022	2023
Enterprise Software	8.3x	4.0x	4.1x
Frontier Tech	7.7x	1.5x	3.8x
Consumer Internet	6.6x	2.0x	2.3x
Fintech	12.7x	2.6x	4.8x

Indicators for VC: A Cloudy Crystal Ball

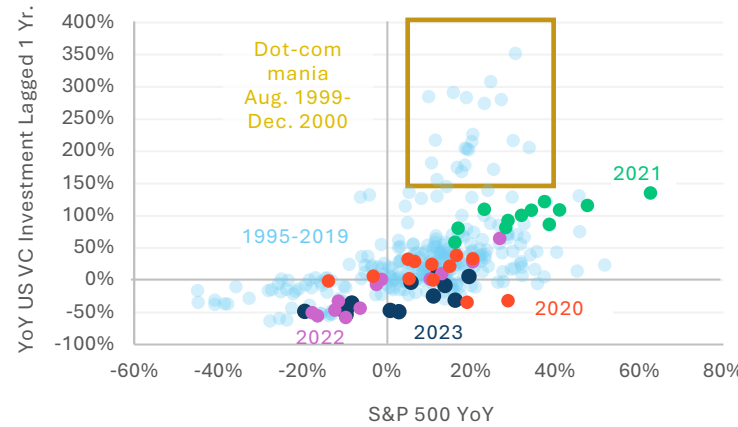
The amount of VC invested in US companies impacts everything from a startup being able to keep its doors open to a company staying private another six months before facing the IPO market. But no one leading indicator shows how VC will trend. Instead, we track four primary metrics: interest rates, public market performance, dry powder and company formation.

One of the highest correlated variables to VC investment is the 10-year Treasury yield. As yields go up, VC tends to decline. But private markets are slow to react to rate changes, and the correlation is clearest a year after rates change. **Even if rates fall in 2024, investment may be slow to follow. Changes in public market performance also have a clear relationship to VC — and the relationship has only gotten tighter as VC has gone mainstream.** With public markets picking up steam in 2023, the historical trend would suggest an uptick in VC investment this year.

US VC dry powder remains high. But perhaps this doesn't mean as much as we would like to think. Much of this dry powder is already earmarked to support existing investments rather than to fund new companies. Relative to VC investment levels, there is a limited amount of dry powder available compared to after the dot-com bubble or the GFC. Our fourth indicator, company formations, reflects the ceiling of how many companies investors may fund. With formations trending down, there may be fewer opportunities for investors in the long term.

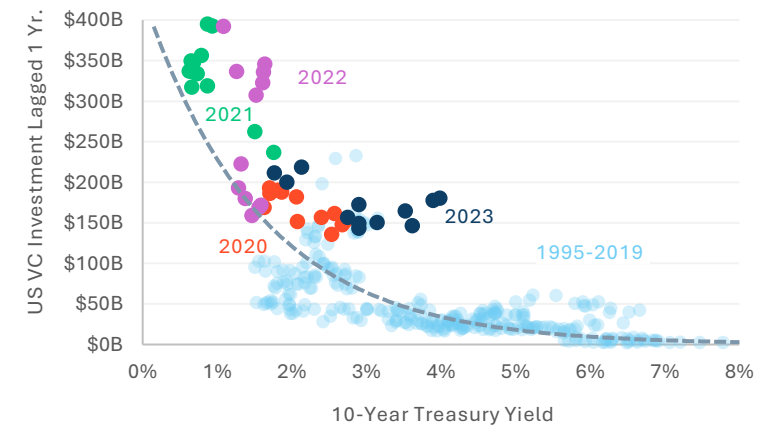
Public Markets Lead Private Markets

S&P 500 YoY Change vs. One Year Lagged US VC Investment YoY Change¹



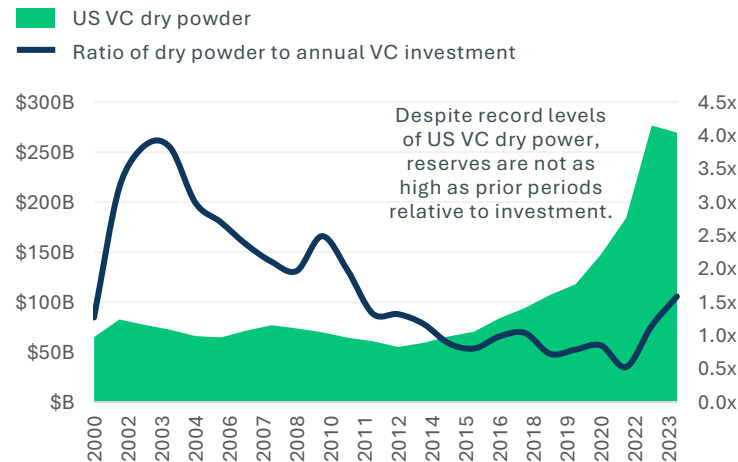
Higher Rates Mean Lower VC Investment

10-Year Treasury Yield and One Year Lagged US VC Investment¹



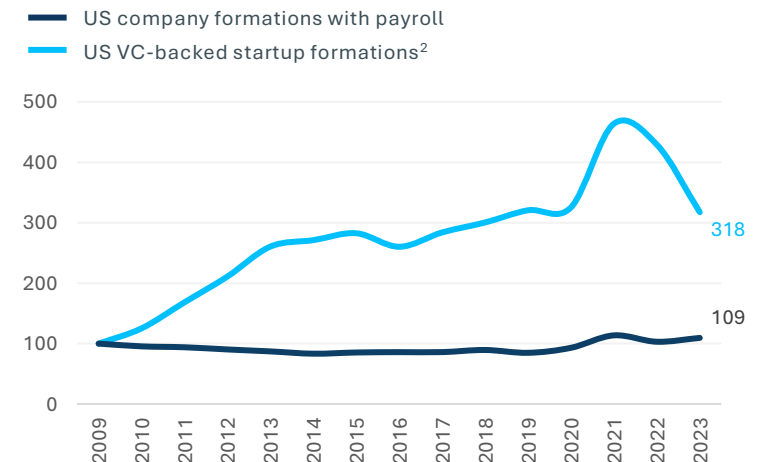
Dry Powder: Not as Dry as You Think

US VC Dry Powder Relative to US VC Investment



Startup Formations Tripled Since 2009

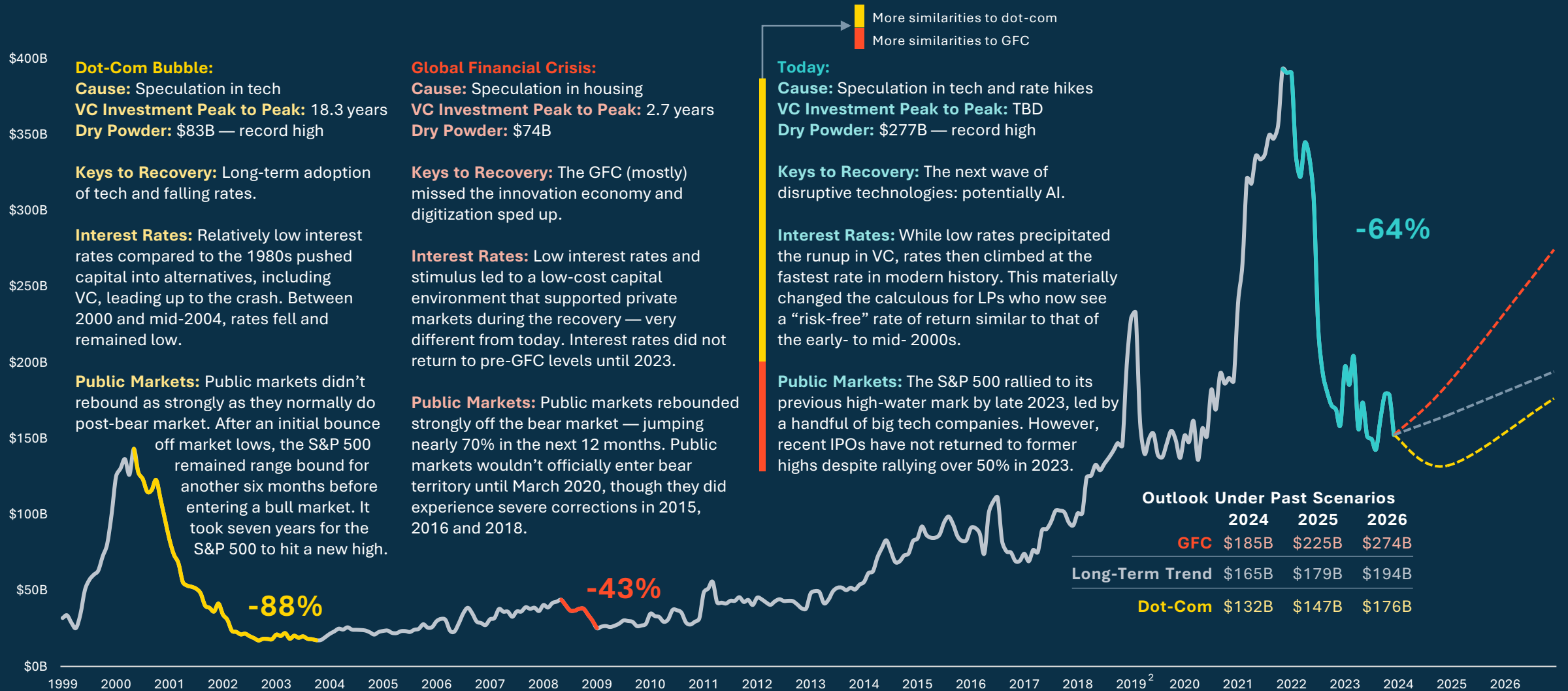
Index: Formations of US Businesses vs. US Tech Startups



Notes: 1) Monthly US VC investment lagged one year, measured as trailing three months annualized.
2) US VC-backed formations are estimated using the first VC round a company raises.
Source: PitchBook Data, Inc., S&P Capital IQ, Preqin, US Census Bureau and SVB analysis.

Oh, the Bubbles We've Seen: US VC Investment to Recover Slowly

VC Investment in US Companies Trailing Three-months Annualized through Past Cycles and Under Different Scenarios¹





Fundraising

A Future of Fewer Funds?

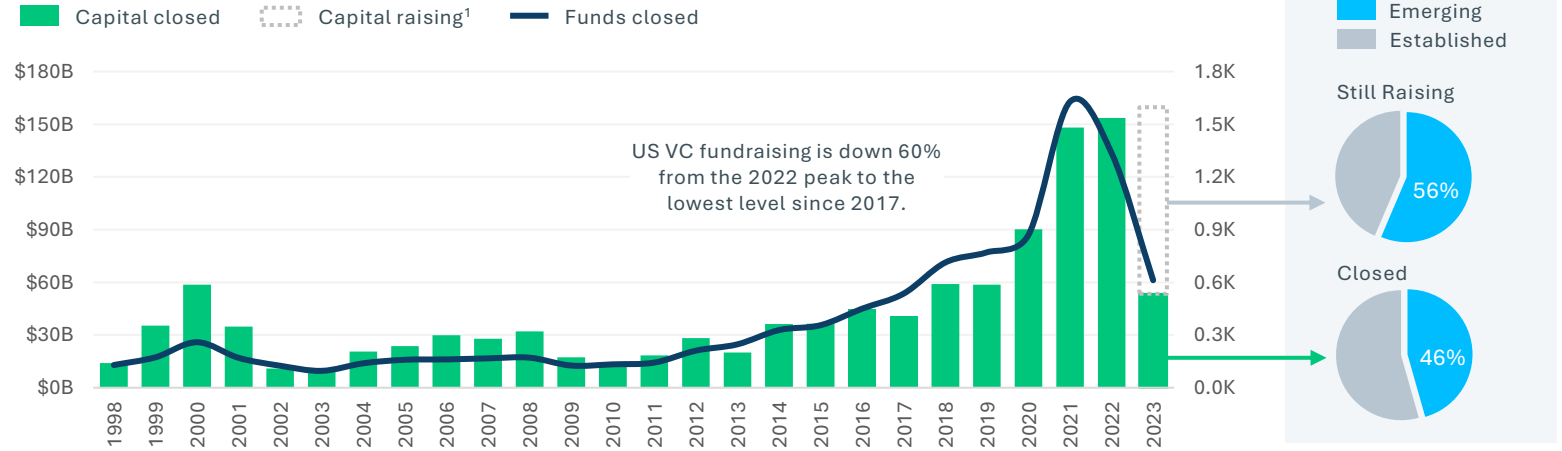
Against a backdrop of slowing deployments and diminishing LP interest, VC fundraising last year hit its lowest level since 2017. Fund managers closed \$53B, a 62% drop from the record high in 2022. It wasn't for a lack of trying. **For every VC dollar that was closed, nearly two dollars in announced funds went uncollected.**

With the venture ecosystem contracting and funds closing at smaller levels, we anticipate layoffs, including at the general partner (GP) level. Notable firms have already announced departures among senior investors. Anecdotally, partners are also rethinking their board seats with some shedding positions they took on during 2021.

There will likely be fewer GPs and also fewer funds. Funds that debuted prior to the dot-com crash generally stuck around with 68% going on to raise a second fund within five years. But funds that debuted in the years after the crash didn't fare as well. **Far fewer managers emerged post-dot-com, and those that did had lower odds of raising a second fund, with only 34% raising again within three years. We may see the same trend play out again.** Funds are coming back to market much slower. In 2022, the typical fund manager closed a new fund 1.7 years after its last fund closed. Last year the pace slowed to 2.5 years.

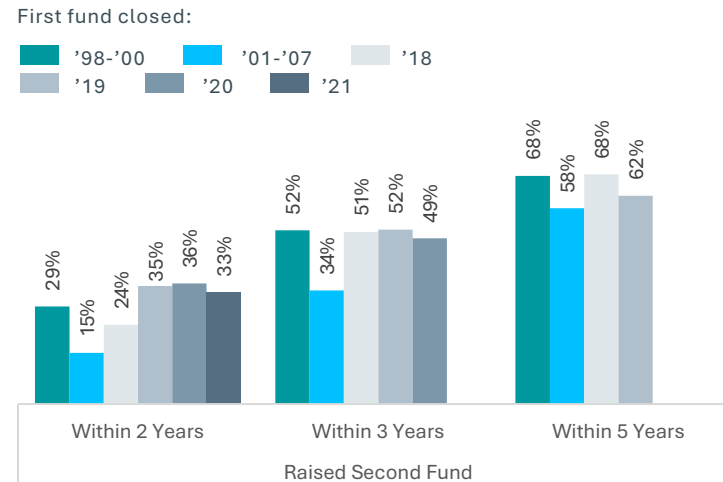
VC Fundraising Sinks to Six-Year Low

US VC Fundraising Totals by Date Closed



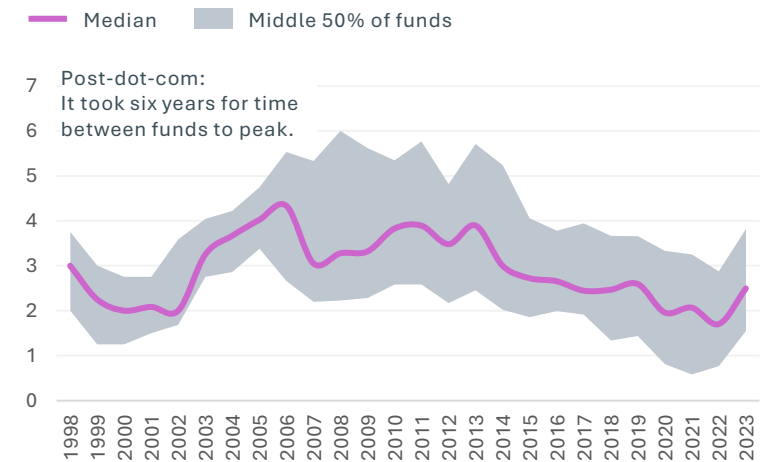
Living to Raise Another Day

Percentage of First Funds that Raised Again³



Pumping the Breaks: Fundraising Slows

Years Between US VC Funds of the Same Series



Notes: 1) Still raising calculated from funds with a vintage year of 2023 that have not closed. 2) Emerging managers have fewer than four closed funds and a max fund size of \$200M. Percentages reflect number of funds, not capital. 3) Percentages reflect the number of firms that last raised more recently than the time.

Source: Preqin and SVB analysis.

A Cold Reception for Emerging Funds

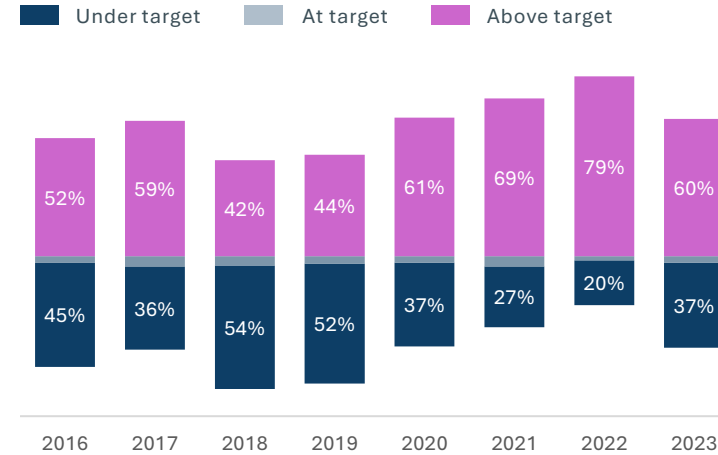
Not only is the pace of closing funds slowing, but also fewer funds are hitting their original targets. Many funds that do close — at least 37% in 2023 — are simply closing the fund below their initial target amount.

Emerging managers are having less success fundraising than established managers. **For general VC funds announced last year, 37% of emerging managers closed their funds compared to a 48% closure rate for established funds.** This goes hand in hand with a concentration of capital that has occurred at the late stage.

First-time funds faced the toughest barriers. Emerging managers that launched their debut VC funds in 2023 met an icy reception. **Only 123 first-time funds closed in 2023, down 60% from the peak in 2021 and the fewest since 2015.** These funds had a median fund size of \$20M, down from \$26M in 2022 and the lowest since 2016. Despite these muted metrics, emerging managers actually increased their share of all funds closed in 2023, reversing a long-term trend toward more established firms. **This is likely a result of a temporary drawback in fundraising among established firms that already have plenty of dry powder and saw deployment slow down in 2023** — a short-term trend we saw following the dot-com crash and the GFC.

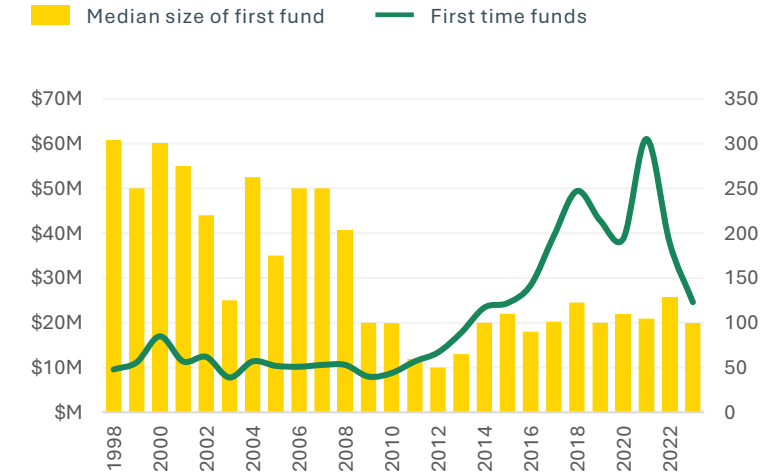
Fewer Funds Surpassing Targets

US VC and Hybrid Funds Closed vs. Initial Target¹



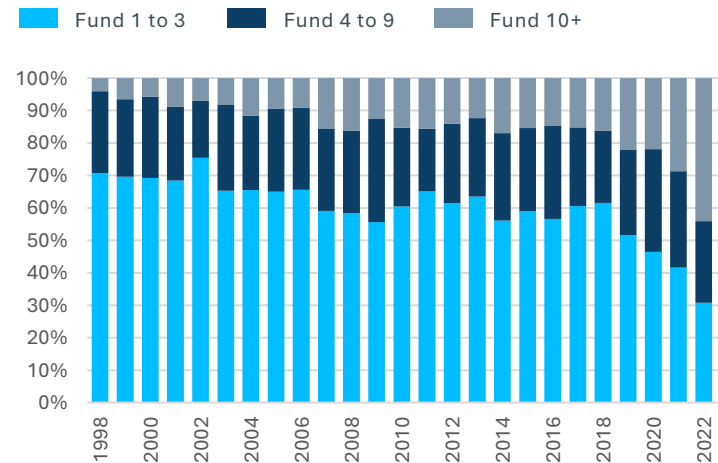
Emerging Managers on Shaky Ground

Median Fund Size and Count of Debut VC Funds for US EMs²



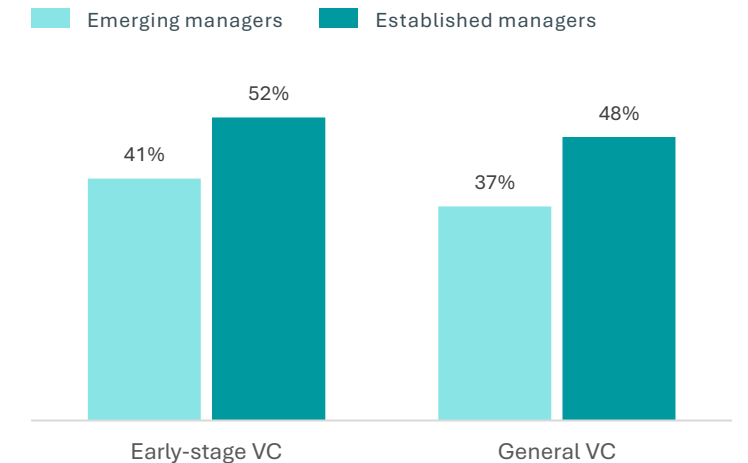
Raise, Rinse, Repeat: Fundraising Matures

Percentage of Closed US VC Funds



Experienced Firms Have an Edge

Percentage of Announced 2023 Funds That Closed in 2023³



Notes: 1) Compares closed amount to initial target, if known. 2) EMs are emerging managers, defined as VC managers with fewer than four closed funds and with a max fund size of \$200M. 3) Funds with a 2023 vintage year that are still raising, plus funds that had a final close in 2023.

Source: Preqin and SVB analysis.



Investment

Overcapitalized, Undifferentiated

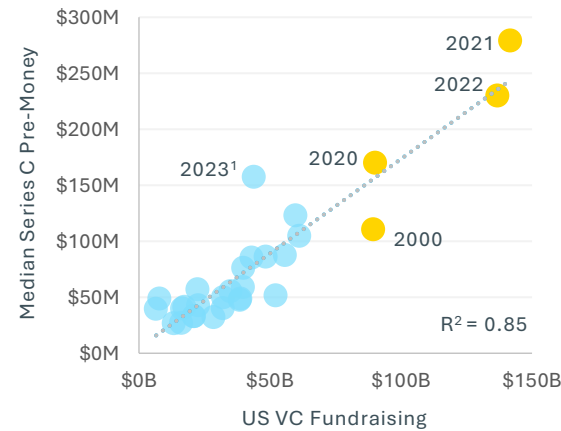
There are only so many OpenAIs to go around — not all companies are a home run. As more money looks for innovative companies, higher competition for a limited number of innovative companies ensues. This played out in 2021. Valuations surged and investors allocated capital to companies that otherwise wouldn't have raised. Some of these companies didn't have technical differentiation and ended up in a race to the bottom as competition entered the market.

With these dynamics in mind, it seems **the US innovation economy passed a limit in 2020-2021 to the amount of capital it can absorb without significant valuation inflation and bloating to company operations** — not to mention funding companies not suited to the venture model.

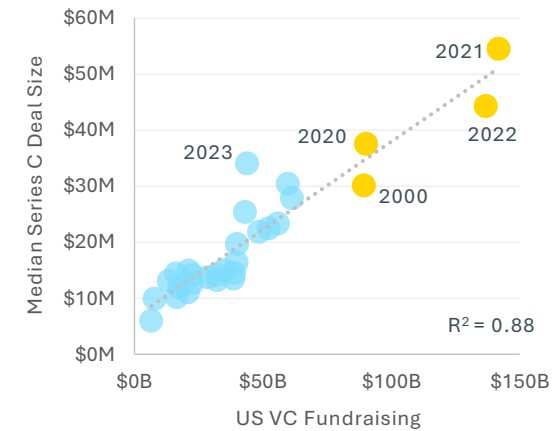
But now, after a few years of partying, the cheap-capital-induced hangover has set in and companies and investors are taking their medicine. Investors are neglecting business models without a clear path to profitability and are moving toward greater technical differentiation. This can be seen in **a trend toward investing in companies with more intellectual property**. Companies with more than 15 patent documents have seen deal activity slow 30% within the last 18 months, while those with no patents have seen VC deal activity fall 44%.

Since 1995, Valuations and Deal Sizes Track Investor Interest in Venture Capital

US VC Fundraising vs. Series C Valuations^{1,2}



US VC Fundraising vs. Series C Deal Sizes¹



Excess Capital Environment

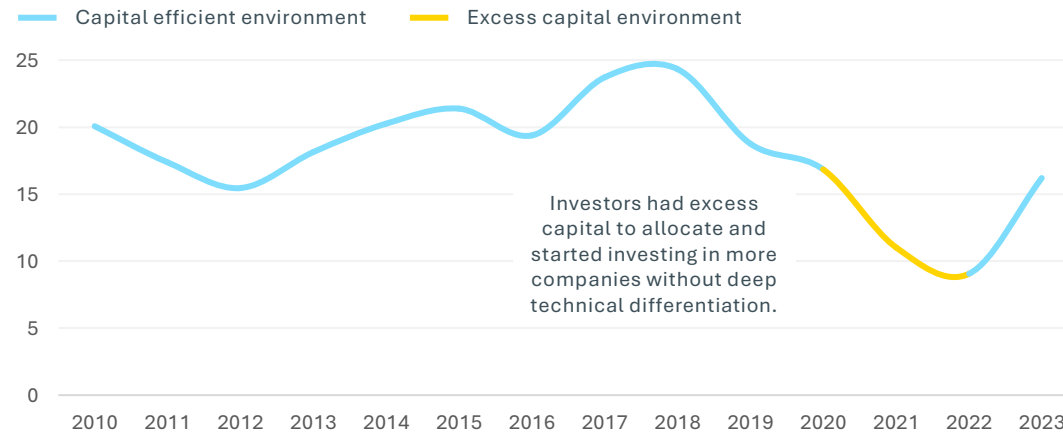
- Valuations surge
- Companies receive larger investments
- Low margin, cash burning business models funded

Capital Efficient Environment

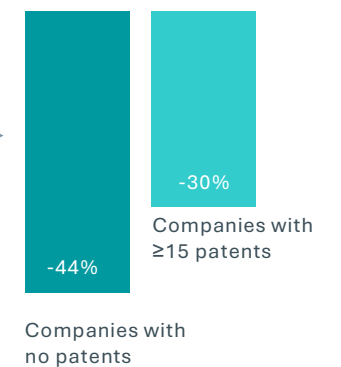
- Investors prefer greater efficiency
- Technical differentiation takes preference over undifferentiated businesses that can result in “race to the bottom,” cash burning dynamics

During the Boom ... No Tech? No Problem

Average number of Patents Held by a Company at Series D+³



Decline In Deal Activity Last 18 Months



Notes: 1) Compares CPI-adjusted median annual valuation or deal size to the CPI adjusted VC fundraising. 2) Note that the percentage of companies reporting valuations has fallen, likely the result of companies not wishing to disclose unfavorable terms. Thus, 2023 is likely less of an outlier than this analysis indicates. 3) The average number of patents, while a telling measure for trends afoot in the overall economy, is heavily influenced by the top quartile of companies that have significantly more patents than those in the bottom quartile. Data prepared by PitchBook Data, Inc. While the sample size is statistically significant, a large percentage of US VC-backed companies do not have patent information.

Source: PitchBook Data, Inc., PitchBook Data, Inc. custom analysis and SVB analysis.

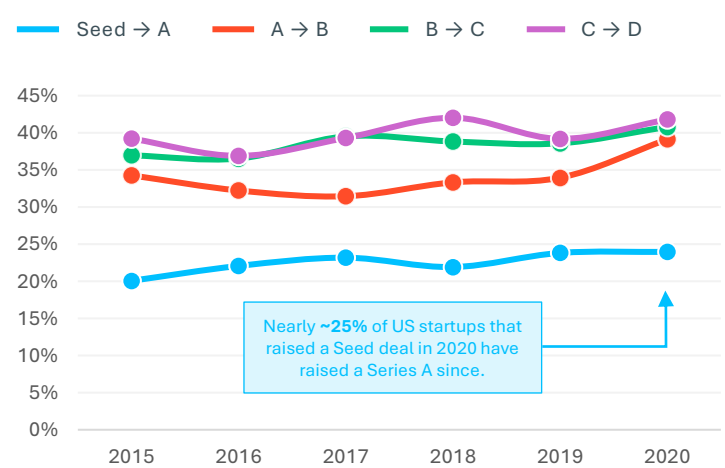
These Are My Successions

The original rule of thumb in venture was: out of 10 startups, three or four fail, another few return the original investment and then one or two produce substantial returns. It's a broad generalization for an industry defined by nuance and exceptions.

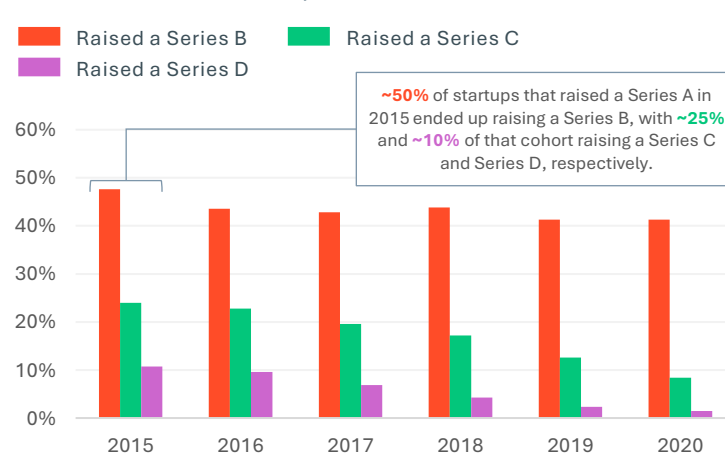
The riskiest time for founders in the growth process is at the early stage from Seed to Series A. Nearly one in four companies fail at this stage. This is logical as startups by nature are attempting to bring new, innovative products and services to market, and with it comes significant risk — developing technologies, finding product-market fit and bringing on customers. This is made all the more difficult in the current climate where capital is not a commodity, and investors are more selective and scrutinizing deals more closely.

Despite this, graduation rates within the first three years have stayed resilient. However, when looking at simply the first year, 2022 graduation rates were markedly lower than 2021 and 2020. **This widened distribution could illustrate the unique situation the pandemic brought in 2020, as well as late-stage investors leaving the market post-2021 amid higher rates and a market downturn.**

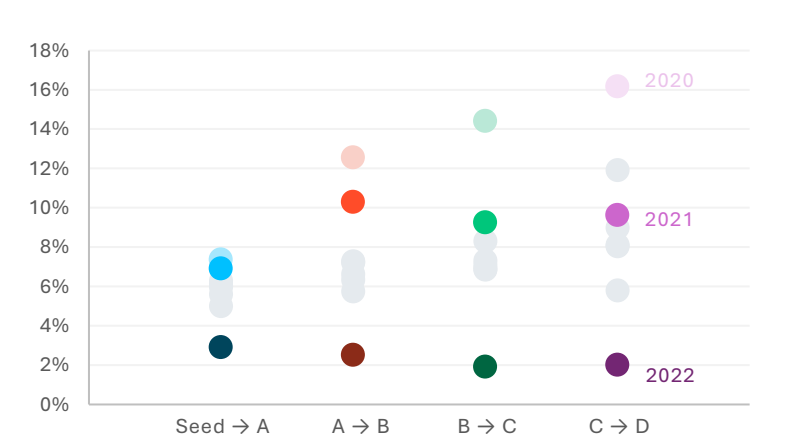
Graduation Rates Steady in First Three Years



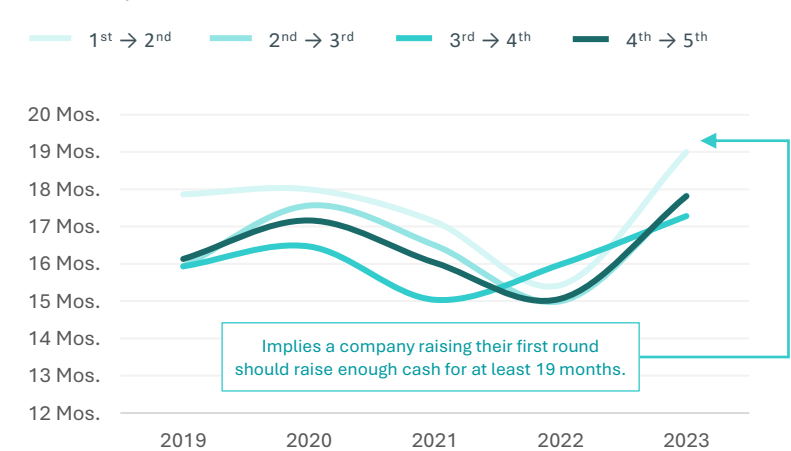
Graduation Rates From Series A Hold Firm



Analyzing in First Year Shows Different Story



Time to Raise Between Rounds Increasing



Notes: 1) Graduation rates by series excludes extension rounds. Analysis is strictly from one series to the next (i.e., Series A to Series B, etc.).
Source: PitchBook Data, Inc. and SVB analysis.

Had a Bad Day, Take a Down Round

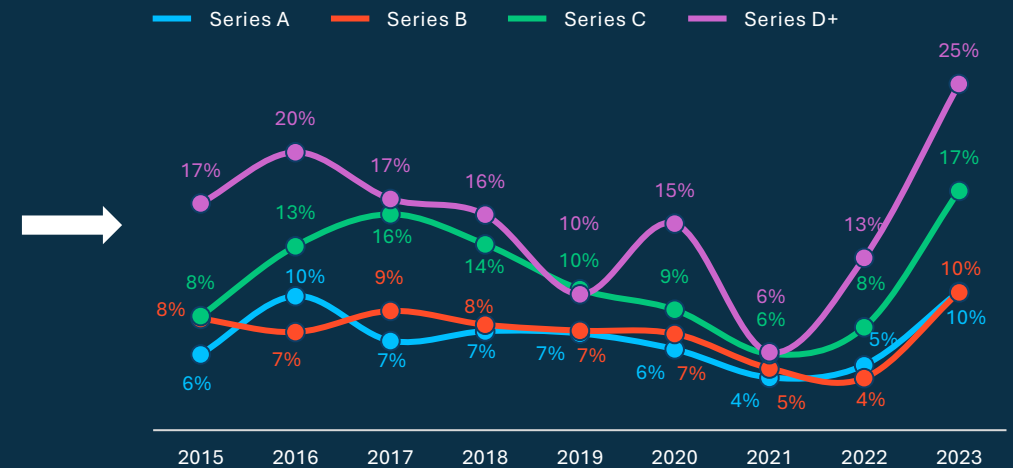
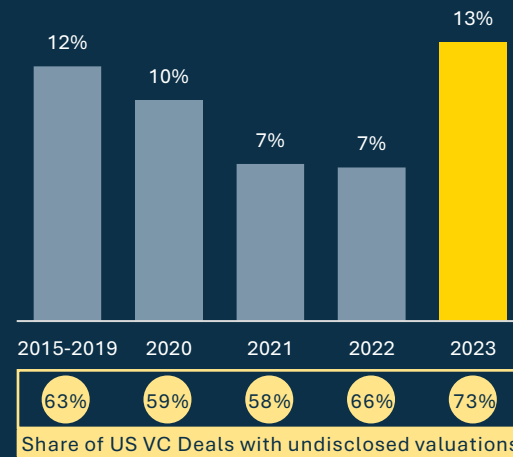
After much chatter among the startup community with little data to show for it, down rounds and recapitalizations cemented themselves as a reality in 2023. **For Series D and later, nearly a quarter of disclosed deals were down rounds last year, the highest share since 2016.** This makes sense as the more scaled a company gets, the more comparable it gets to public company benchmarks. Furthermore, the potential attached to early-stage promise has largely been realized. With public markets slowly creeping up and funds feeling the pressure to deploy, down rounds could be less pervasive this year at the later stage.

While down rounds often have a negative aura to them due to disgruntled investors, employees' concerns over their equity and negative public perception, they are hardly the end of the road for startups. In fact, it's quite the opposite. Dating back to 2015, **roughly 60%-70% of startups that raised a down round went on to raise another equity round or exit in their next deal. Of the cohort that raised a subsequent equity round, 60%-80% raised an up round.** Of those that raised an up round, a majority had valuations jump north of 100% over their previous valuation.

For companies that exited following a down round, a soft-landing acquisition is the most common outcome with M&A accounting for 74% of these companies. Public exits are rare, accounting for roughly 8%.

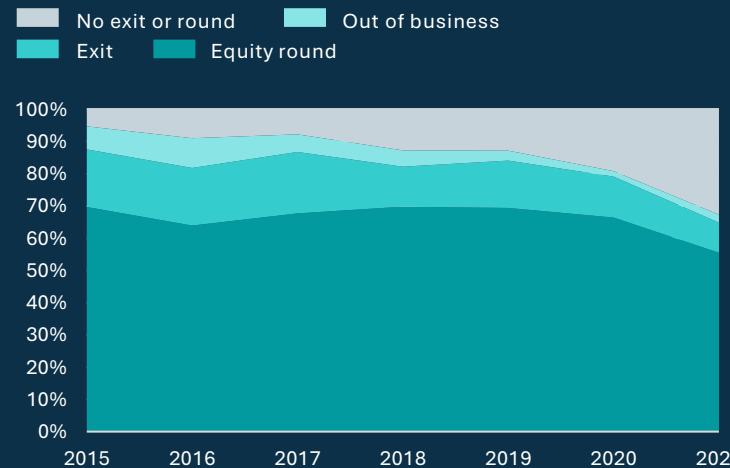
Down Rounds Jump in 2023

Down Rounds as a Share of Total Rounds Overall and by Series for US Startups¹



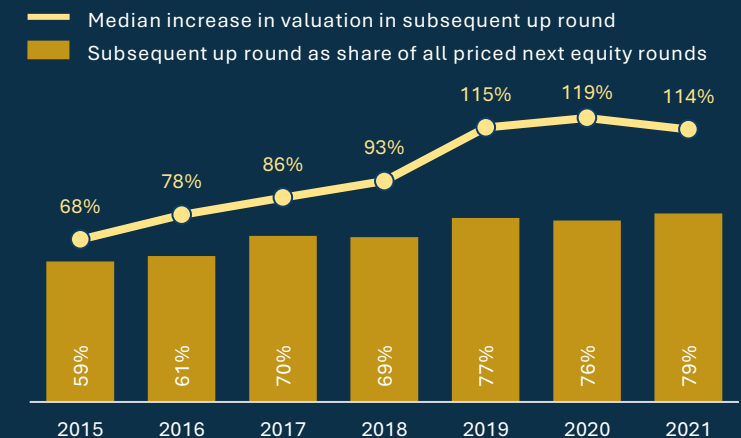
Startups Still Raise or Exit Post-Down Round

Outcomes For Next Round Post-Down Round for US Startups²



Startups Can Still See Valuations Rise

Share of US Startups That Raised Subsequent Up Round and Valuation Increase of Up Round³



Notes: 1) Analysis excludes any extension rounds. 2) Analysis looks at only the next deal (either exit via buyout or M&A or equity raise) immediately following the down round. If a startup has not raised an equity round or exited via buyout or M&A, it is classified as "No Exit or Round." 3) Median increase in valuation is only for deals where the startup raised an up round following a down round. Valuation increase calculated as pre-money valuation from up round over the post-money valuation of the down round.

Source: PitchBook Data, Inc. and SVB analysis.

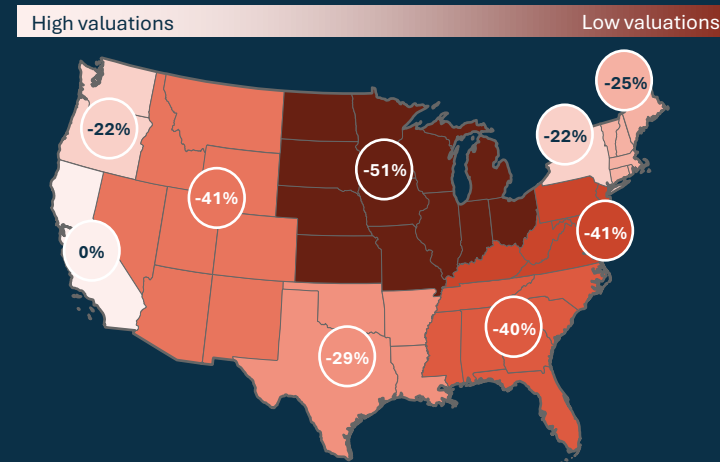
Capital Coasts vs. Heartland Hustle

While we often talk about the US innovation economy as a monolith, the reality is that there is significant variability between markets within the US. Generally speaking, **companies in the middle of the country have less access to the deep-pocketed investors on the coasts and in core markets such as New York and California.** Companies in non-core markets tend to have lower valuations than core markets.

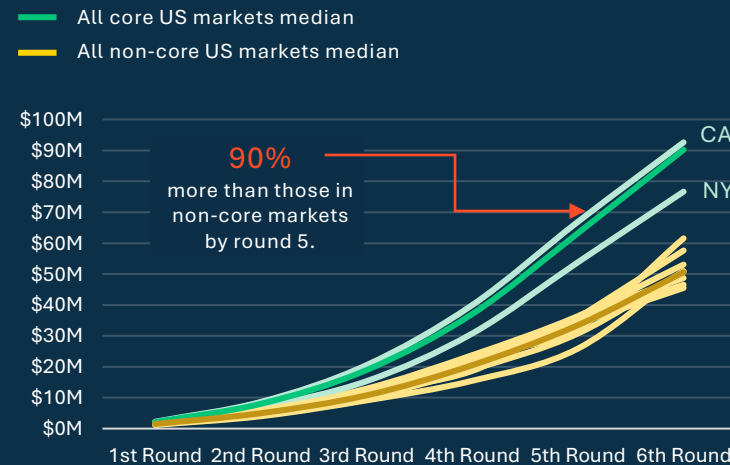
Companies on the coasts also raise more capital each round than those in non-core markets, which compounds round-over-round. **By a company's fifth round, the median company from a core market has raised 90% more capital than one from a non-core market.** This helps explain why California and New York accounted for 59% of US VC investment in 2023.

But the extra cash going to companies in core markets doesn't necessarily make them better. Typical revenue growth is also similar across core and non-core markets. In fact, it may just make them bloated. **For companies with the same revenue and same sector, those in non-core markets are more profitable** — meaning they have achieved the same scale and have a shorter path to profitability. This serves as a reminder to companies that face a tougher fundraising environment — that more money is not always the right answer. Being capital efficient not only decreases dilution but also can improve core operating metrics.

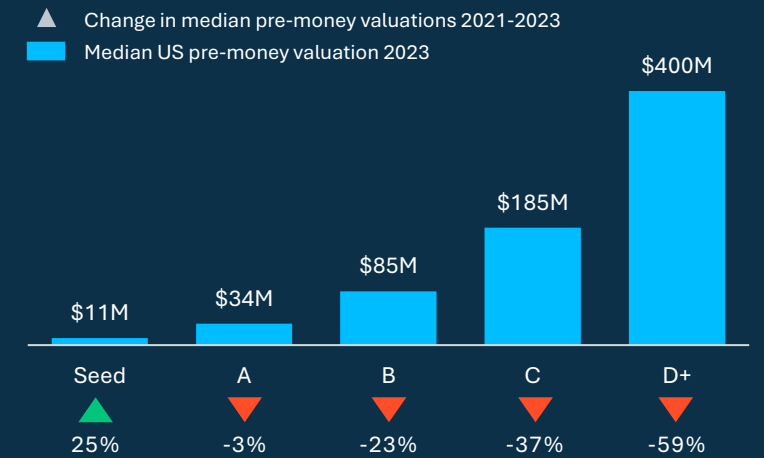
Valuations are Not a Monolith Across the US 2023 Valuation by Region Relative to California¹



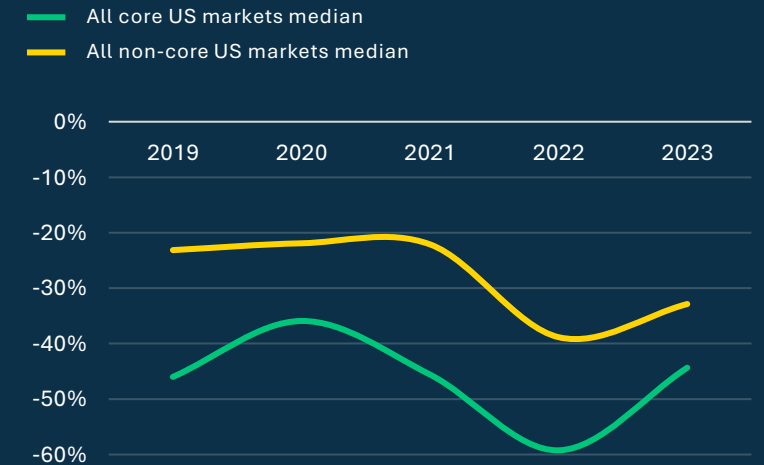
Companies in Core Markets Raise More Median total Capital Raised by Round



New Benchmarks for Valuations US Median Pre-Money Valuation by Series



Core Markets Yield Less Profitable Companies Median EBITDA Margin for Tech Companies with \$25M-\$50M²



Notes: 1) Calculated a valuation index for each area by equally weighting early- and late-stage median pre-money valuations, then calculating the percentage difference from California (the highest). 2) Annual revenue calculated as annual revenue run rate for a given statement period.
Source: PitchBook Data, Inc., SVB proprietary data and SVB analysis.



Benchmarking

Show Me the Growth

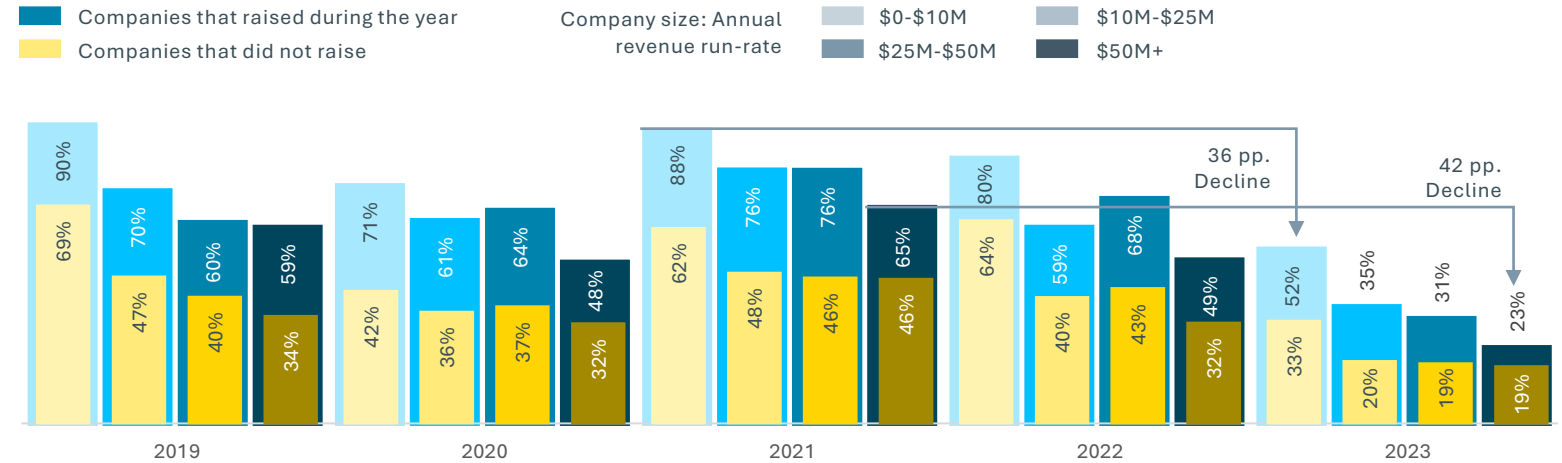
Twin headwinds have squeezed revenue growth. **First, external factors are shrinking customer contracts, extending sales cycles and increasing churn.** These conditions have made it harder for companies to both maintain existing revenue and add new revenue. **Second, as companies increasingly focus on profitability, they are simply spending less on growth efforts, such as marketing or launching new products.** In turn, revenue growth has plummeted for companies at all stages.

Despite the prevalence of declining revenue growth, investors still have a strong preference for growth. **Companies that have successfully raised capital have had substantially higher year-over-year revenue growth compared to those that haven't.** But the delta between those that have and those that haven't raised shrank in 2023 as investors prioritized other metrics like burn and efficiency. Companies that have successfully raised in the last two years had substantially lower increases to their net burn as compared to those companies that raised in 2021.

When revenue growth slows, it's harder to plot a path to profitability. As a result, we haven't seen any significant changes to EBITDA margins for companies that have successfully raised in 2022 and 2023. In fact, for tech companies that have successfully raised capital, EBITDA margins have fallen for Series A, B and C.

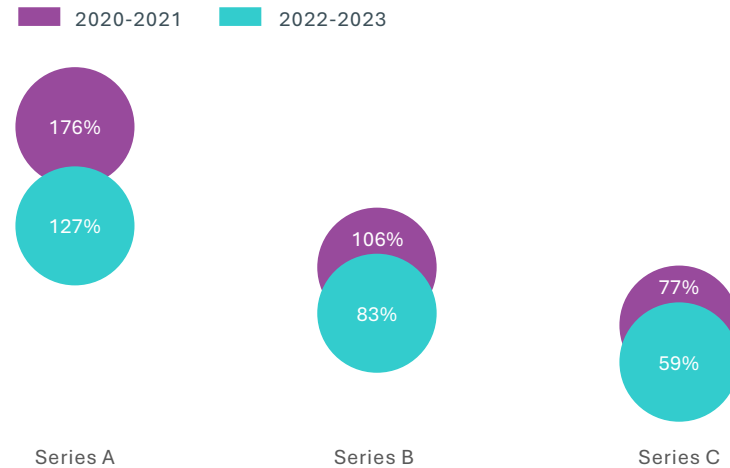
Raising Capital Requires Growth, but Growth Is Increasingly Hard to Find

Median Revenue Growth by Company Size for US Tech companies¹



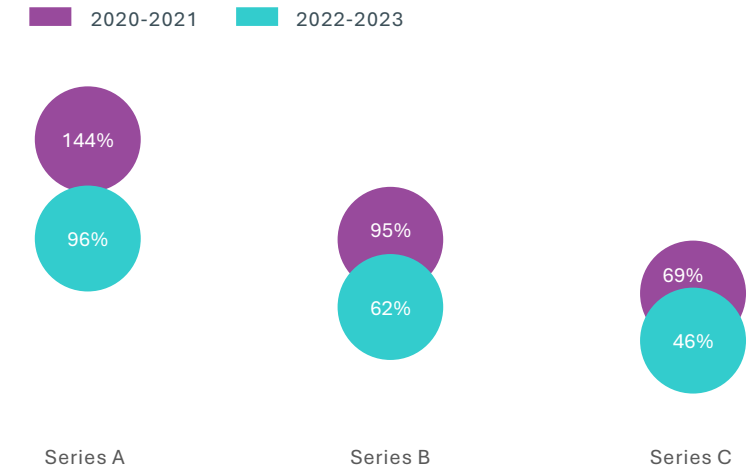
The New Revenue Growth Benchmarks

Median Annual Growth Rate for US Tech at Time of Round



Increasing Net Burn, but at a Slower Clip

Median YoY Change in Net Burn for US Tech at Time of Round



Notes: 1) Annual revenue calculated as annual revenue run rate for a given statement period.
Source: PitchBook Data, Inc., SVB proprietary data and SVB analysis.

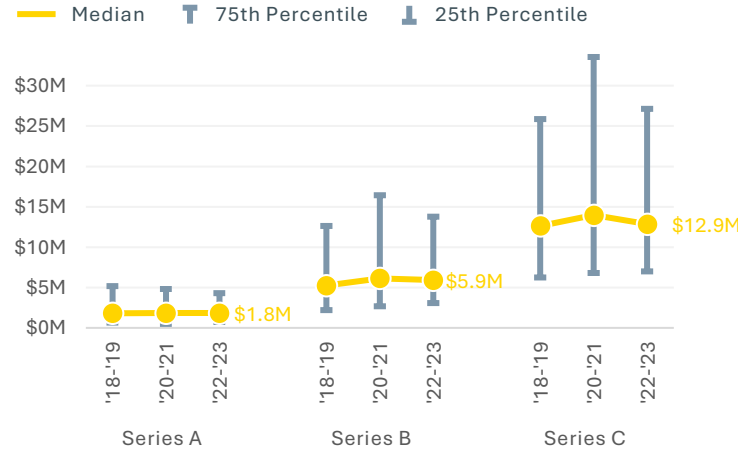
What Are VCs Looking For?

While revenue growth is a good indicator of a company's ability to raise, absolute revenue is not. For a given series, there is a high degree of variability in annual revenue for companies that raise. This is seen in the large delta between the 25th and 75th percentiles. Differences between sectors are also stark. Consumer internet companies, whose business models often generate revenue early in their life cycle, have a median \$19M at Series B, while enterprise software companies (slower to ramp revenue in the earlier stages) only have \$7M at Series B. **Given that revenue is highly contingent on companies' business models and the type of technology, it does little to explain which company an investor will choose.** Instead, revenue growth seems to be a more reliable indicator.

But what about profitability and burn? VCs have been quick to share that they are looking for companies with better efficiency and profitability. But **the companies that are raising today are burning more capital than those raising at the peak of the market.** Net burn for US VC-backed tech companies that raised a Series A, B or C round between 2022-2023 has increased 36%, 21% and 2% respectively compared to those that raised between 2020 and 2021. Furthermore, EBITDA margins are trending down for Series A-C. But this stat only tells part of the story. Many of those that haven't raised have managed burn and extended their runway to avoid raising in a bad environment on potentially unfavorable terms.

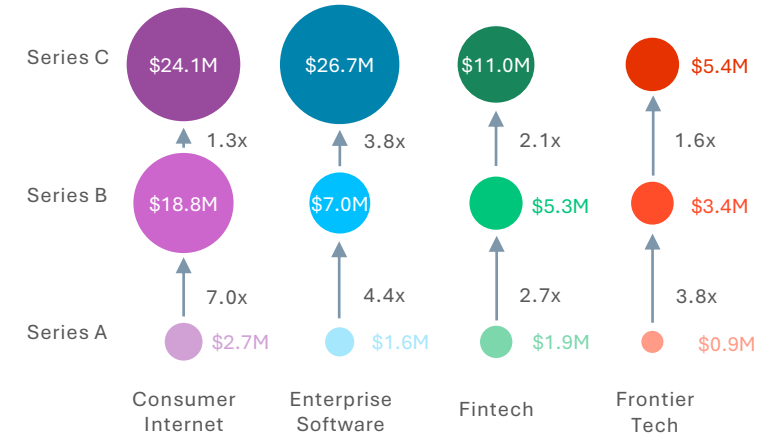
Revenue Benchmarks Trending Down

US Tech Annual Revenue by Series at Time of Round¹



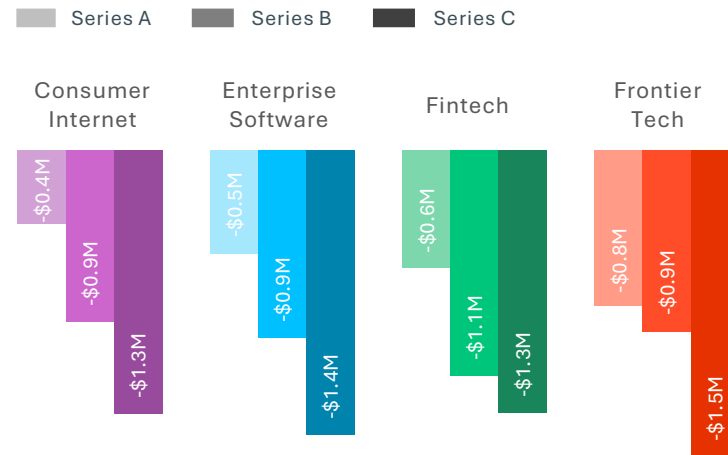
Significant Variability Across Sectors

Median Revenue for US Companies at Time of Round '22-'23¹



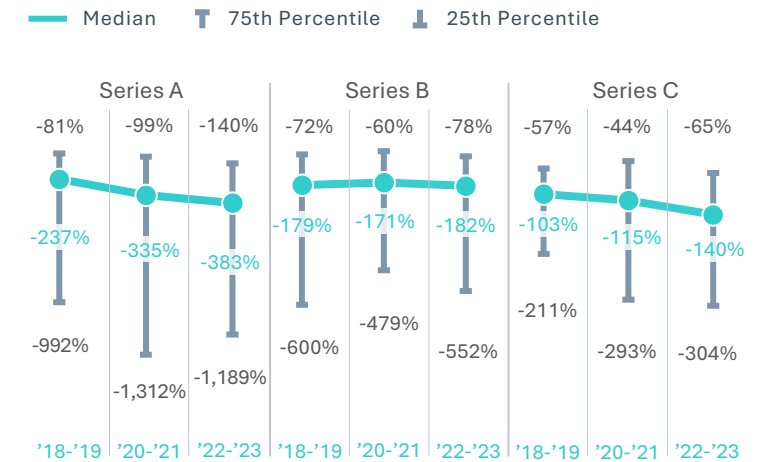
Monthly Net Burn Benchmarks

US VC-backed Companies 2023 Median Monthly Net Burn



VCs Want Profitability—They Aren't Finding It

US Tech EBITDA Margin by Series at Time of Round



Notes: 1) Annual revenue calculated as a run rate from a given statement period for companies with revenue. Source: PitchBook Data, Inc., SVB proprietary data and SVB analysis.

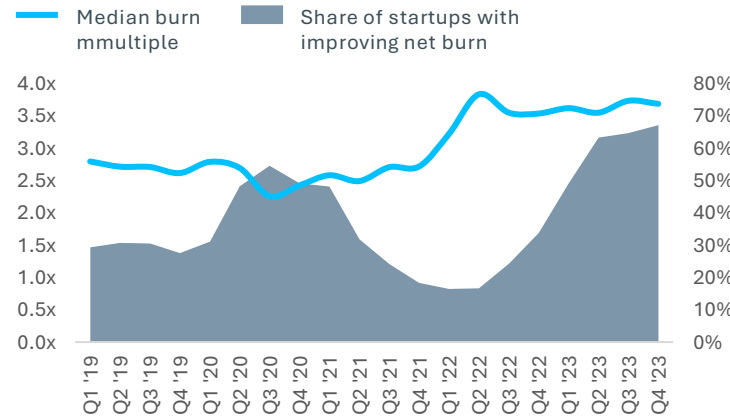
Back to Basics: Efficiency in Focus

Gone are the times of “growth at all costs.” Efficient growth, measured by the burn multiple, and profitability — or a path to it — reigns supreme in today’s environment. **With this top of mind, the share of startups cutting net burn has climbed to nearly 70%.** That’s higher than what occurred during the onset of the pandemic, and burn multiples have since steadied. But how much exactly are firms cutting? **For those that have decreased net burn, they’ve done so by 46% year-over-year on a median basis in Q4 2023, the largest drop since early 2021.** When looking at it by sector, consumer startups have pulled back the most, while frontier tech companies (inherently more capital intensive) have seen more shallow cuts. However, as evident in the data, this isn’t a new trend. There is only so much you can cut, at which point it becomes a matter of survival.

One popular efficiency metric for enterprise startups is the “Rule of 40.”⁵ When looking at it by year, it’s clear that 2019 and 2021 were boom times, with growth far to the right and operating margins deep into the negative. As 2020 hit, companies quickly pivoted, which led to margins improving rapidly while revenue growth fell at a slower clip. Fast-forward to 2022: Margins got worse as revenue slowed, indicating that startups were slow to appreciate the tougher environment. The script flipped in 2023 as companies reduced net burn and margins improved. Private, later-stage enterprise software startups saw the third consecutive quarter of improving rule of 40 metrics, but the median stood at just 8% — half what it was in early 2021.

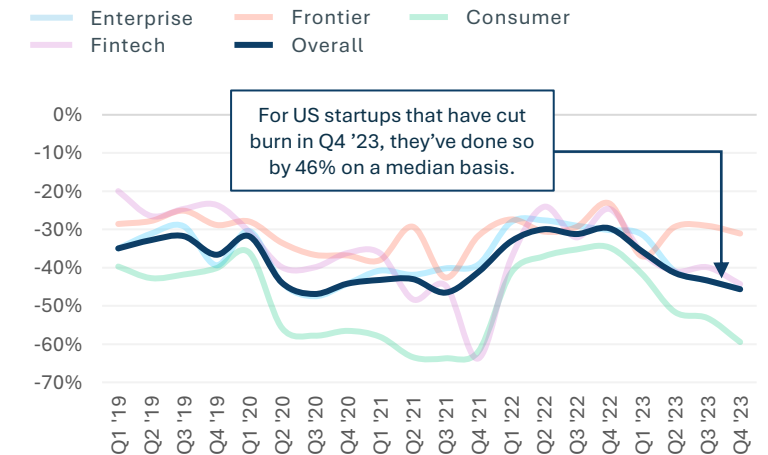
Startups Continue to Cut Net Burn

Median Net Burn Multiple and Share of US Startups With Improving Net Burn YoY¹



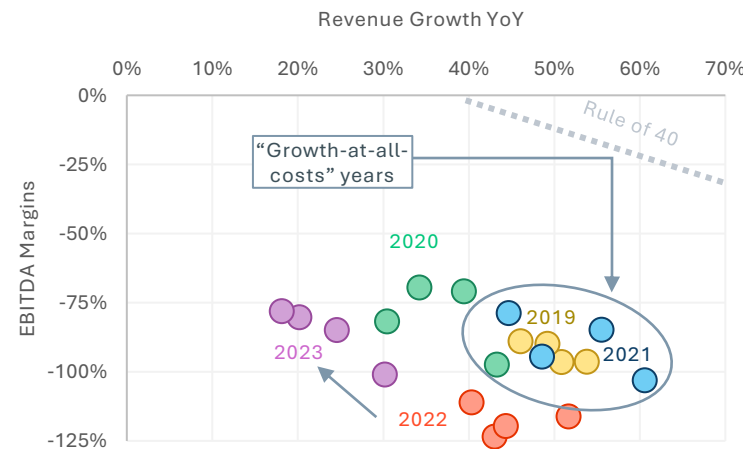
Sectors Decreasing Burn Across the Board

Median Decrease in Net Burn YoY for US Startups That Cut Burn²



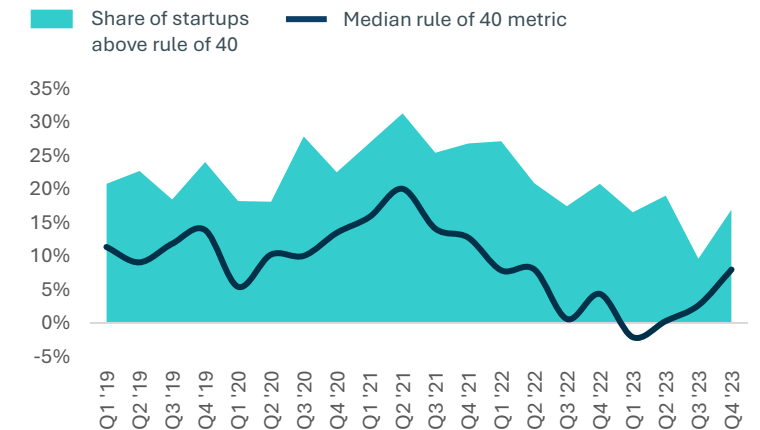
Companies Not Improving Margins Enough

Operating Margins and Revenue Growth YoY for US Startups³



Rule of 40 Slowly Improving

Median Rule of 40 and Share of Above Metric for Private, Large US Enterprise Software Startups⁴



Notes: 1) Net burn multiple calculated as negative EBITDA divided by net new revenue. 2) Analysis only includes US startups that cut burn in the respective quarter. 3) Analysis based on US startups across tech sectors and uses the average annualized revenue in a given quarter to calculate year-over-year revenue growth. 4) Analysis only includes US startups designated as enterprise software by SVB proprietary taxonomy. Large defined as \$50M+ in annual revenue. 5) Rule of 40 suggests that growth rate and EBITDA margin should sum to 40 for healthy companies.

Source: SVB proprietary data and SVB analysis.

Wake Me Up When December Ends

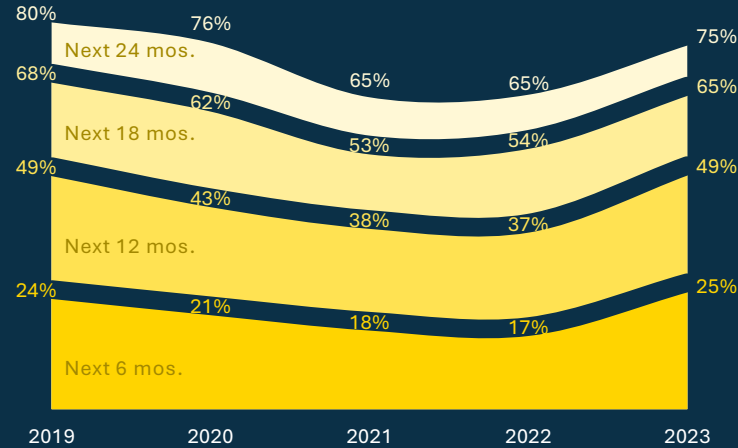
As it currently stands, **roughly half of US VC-backed startups need to raise cash come December this year.** Compared to the trajectory of past years at Q4, this is the highest share that need to raise by that point since 2019. **While the median cash runway for startups hasn't markedly changed in recent quarters, the distribution of that runway has.**

Companies at the top decile of runway saw a 33% drop in their runway between 2021 and 2022. However, it moved much less last year. This signals that not only are cash-heavy companies running out of options to cut burn, they are also slower to adjust to current conditions — resulting from the fact that companies failed to substantially reduce net burn early in 2022. In fact, **the spread between the 90th percentile and the 10th percentile cash runway has fallen to 34 months in Q4 2023, a 40% drop from the peak in Q4 2021.**

It's no surprise that later-stage companies have the longest runway across all sectors. As expected, capital-intensive frontier tech has a median cash runway in the single digits across stages. With capital growing scarce, startups will need to be more critical than ever of how they spend their hard-raised cash. **Should we begin to see rate cuts and a muted funding environment, look for startups to consider debt as a means to extend runway without giving up ownership.**

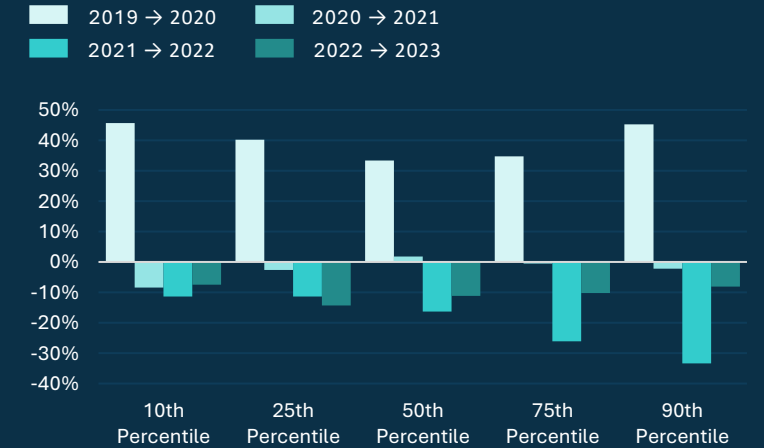
Growing Mound of Cash-Hungry Startups

Share of US Startups Running Out of Runway by Date¹



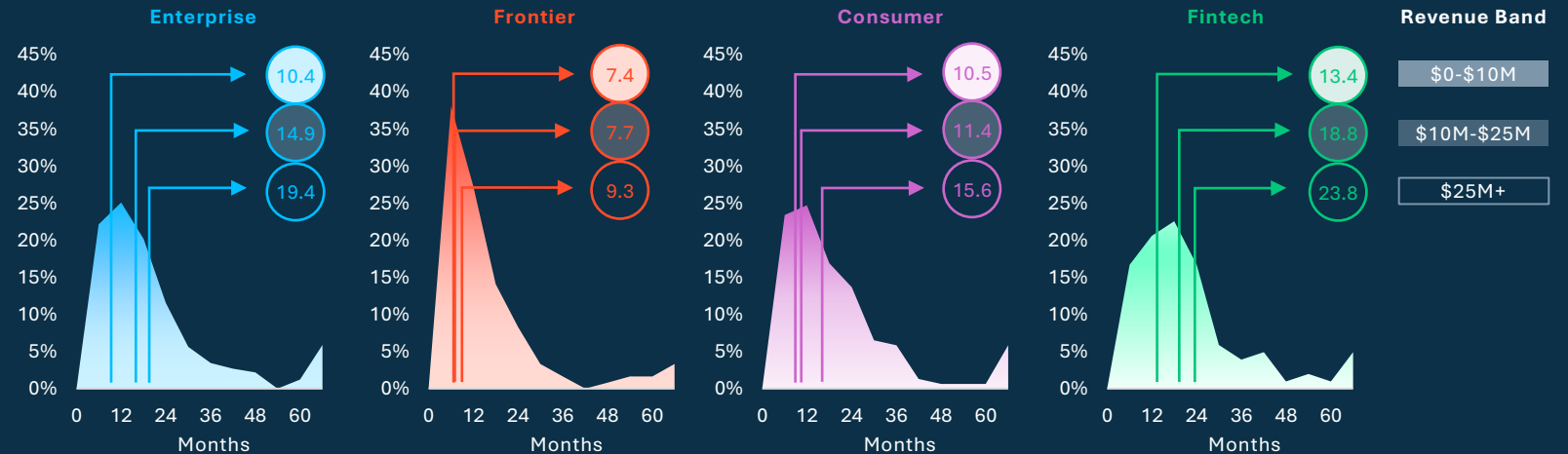
Runway Declines at Top End

Change in Runway by Percentile for US Startups²



Runway for Frontier Skews Short while Fintech Outshines

Distribution of US Tech³ Startups by Months of Runway and Median Cash Runway by Revenue Band



Notes: 1) Runway calculated as negative EBITDA divided by cash and cash equivalents. Share of US startups needing to raise by date calculated as of Q4 for each respective year. Runway calculations assume the startup's burn profile and growth rates remain constant and also assume no additional equity rounds are raised. 2) Percentile buckets for a given year determined using only Q4 data. 3) Tech sectors determined using SVB proprietary taxonomy. Runway data is as of 12/31/2023.

Source: SVB proprietary data and SVB analysis.



AI Spotlight

AI: Tec(h)tonic Shift in the Making

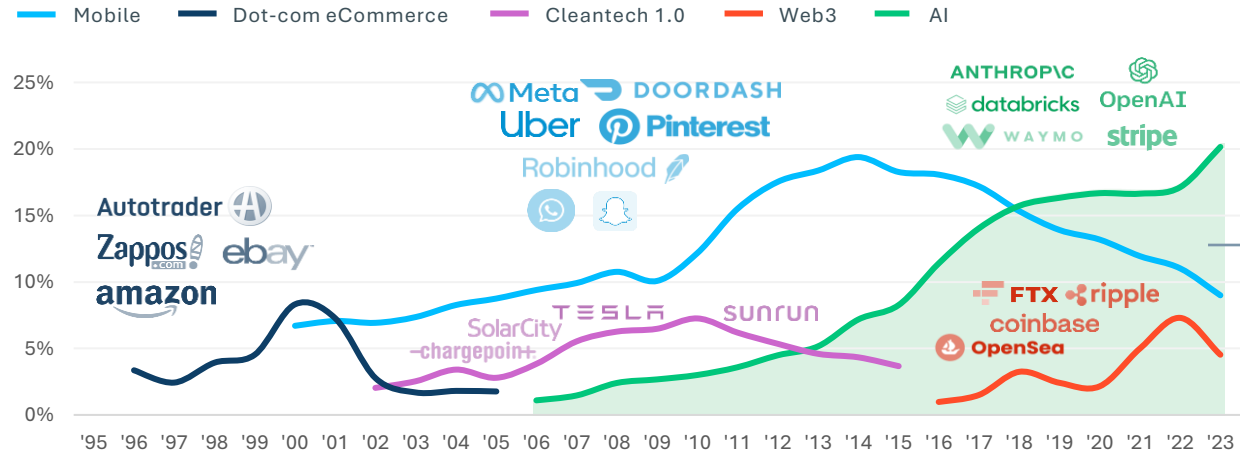
Just as the iPhone or the internet unlocked the potential of a long-term investment cycle that resulted in dozens of unicorns, ChatGPT ushered in a new era of AI. OpenAI's large language model marked a seismic event amid long-term tectonic shifts in AI occurring since the first machine learning research was conducted in the 1950s.

The current cycle of AI investment has steadily increased over the last decade, but just recently surpassed mobile in its relative size. There are now over 7,500 US VC-backed companies that have AI as part of their goods and services. With this robust cohort of existing companies, the question becomes, are those investors and companies flocking to the AI space after over a decade of VC investment too late in the game? Many VCs and LPs don't think so. **One in four funds that closed in 2023 had a stated focus in AI.** In fact, among funds that raised in 2023, those mentioning AI as a specialty were nearly twice as likely to close their fund as those that didn't. AI has also become decoupled from the rest of the innovation economy, holding the line while other sectors see 50%+ declines in investment.

While recent investment trends may reflect a bit of bluster, AI has potential to become a horizontal platform crossing all industries and creating efficiency gains everywhere from New York office buildings to Iowa corn fields.

AI: A Once-in-a-Decade Cycle

VC Deals in a Given Technology as a Percentage of all US VC Deals



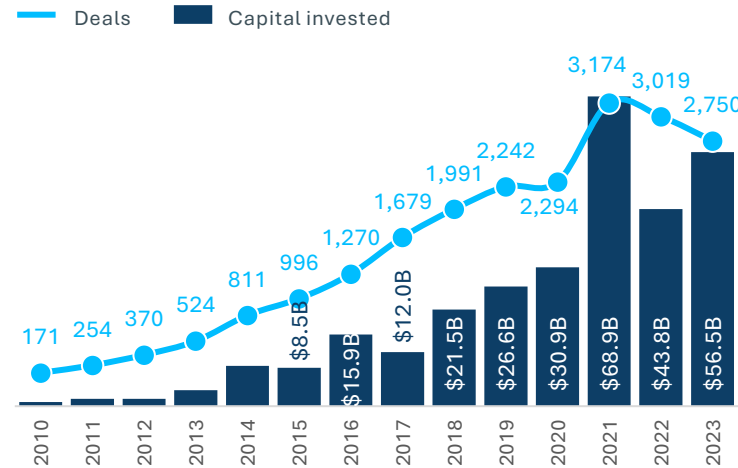
The arrival of ChatGPT supercharged AI investing. Between 2019 and 2021, AI had a strong correlation to overall VC investment. Post-ChatGPT, AI investing became its own beast.

R-Squared: AI VC & All VC

Pre-ChatGPT	0.84
Post-ChatGPT	0.47

AI Investment: High But Not Peaking

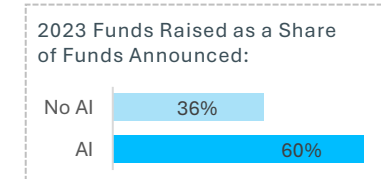
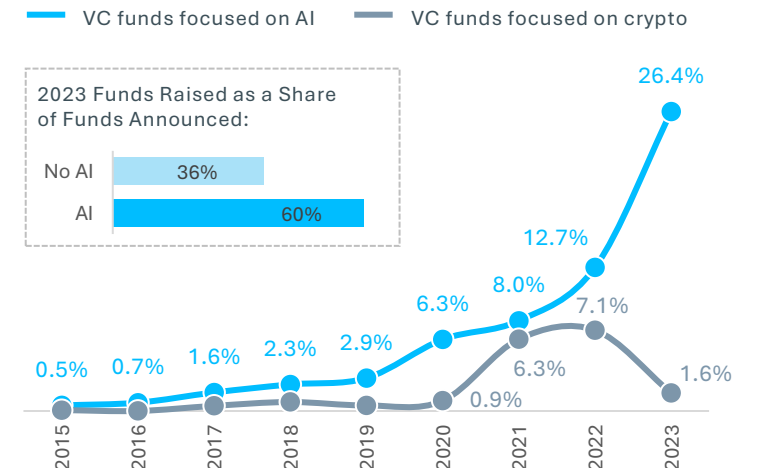
VC Investment in US AI Companies



Notes: 1) Self-reported data by funds.
Source: PitchBook Data, Inc., Prequin and SVB analysis.

All Aboard! VC Fundraisers Embrace AI

Percentage of Closed US VC Funds with AI as a Focus¹



Peeling Back the AI Stack

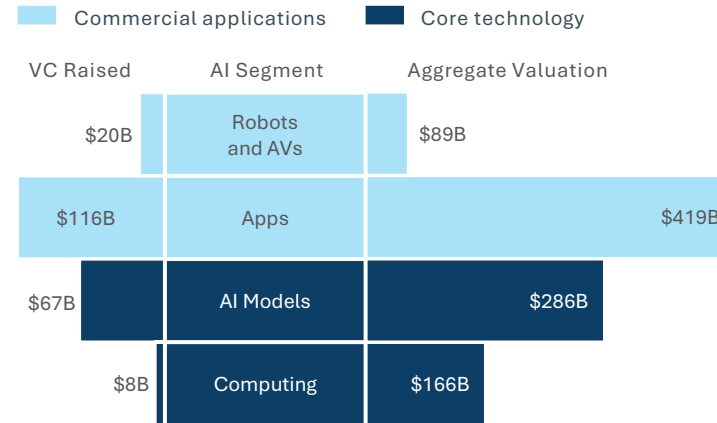
What are investors really investing in when they invest in AI? Most of the companies within the AI universe are not developing the core technology, but finding ways to apply it. **Among the nearly 700 US companies involved in AI that have raised over \$50M, fewer than one-third are building large language models or creating new computing infrastructure.** These core companies have raised a combined \$75B, but account for \$452B in value, with OpenAI accounting for \$100B of this.

Corporates are funding much of the innovation. Microsoft's \$10B investment into OpenAI helped it surpass Apple in January as the world's most valuable company. Microsoft is using GPT to power its Copilot suite of AI assistant products within Office. Nvidia, the AI chipmaker, has backed Mistral AI betting that the open source platform can compete with OpenAI's ChatGPT. Meanwhile, Google and Amazon have backed GPT competitor Anthropic, which is valued at \$25B.

On the application layer, companies from Spotify to Stripe are incorporating AI into recommendation engines and other client-facing products. While these new features can create opportunities, developing them can carry risks. Innovation is moving so fast that in-house R&D efforts run the risk of being displaced by new tech by the time they're launched. The same trend applies to late-stage AI companies. The valuation growth premium enjoyed by seed-stage AI companies disappears by Series C.

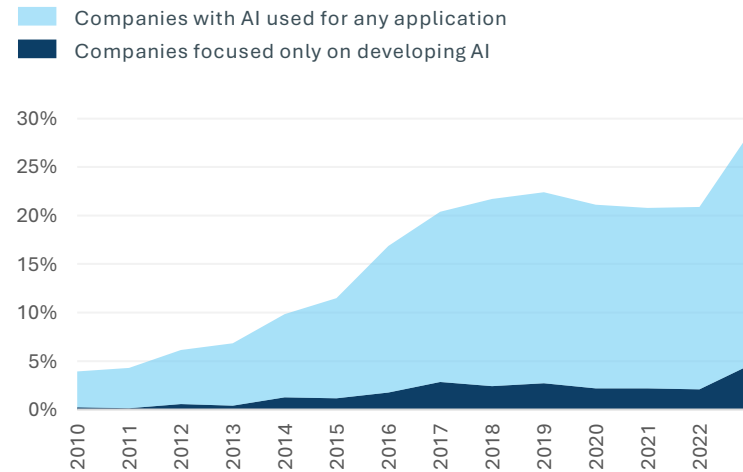
Investing in the AI Tech Stack

US VC Investment and Valuations for AI Companies with At Least \$50M Raised¹



One-Quarter of US Seed Deals are in AI

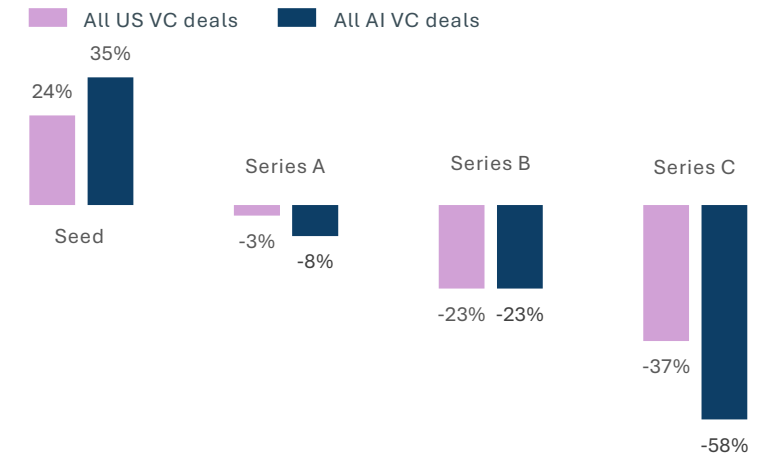
US Seed Deals in AI as a Percentage of All Seed Deals



Notes: 1) Aggregated VC investment and valuations for companies that have raised over \$50M in VC capital with the latest deal since January 2021. Segments based on PitchBook Data, Inc. taxonomy. Source: PitchBook Data, Inc. and SVB analysis.

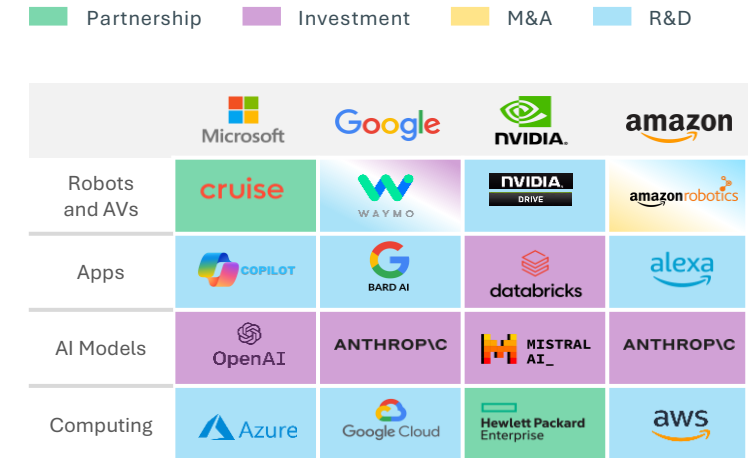
Investment Held the Line, But Valuations Fell

Change in Median Pre-Money Valuation 2021-2023



Corporate Strategy Driving AI Innovation

Key AI Investments, Partnerships, Acquisitions and R&D



The Next Frontier: Exploring the AI Universe

US VC-Backed AI Companies by Latest Valuation for Companies that Raised Since 2021¹

Vertical Applications

The largest share of the AI universe. These companies bake AI into their core products, building on top of language models such as ChatGPT. Just be sure to pick the right AI platform. With the pace of innovation only accelerating, picking the wrong AI model could render a product obsolete before it can recoup the costs of development.

Autonomous Machines

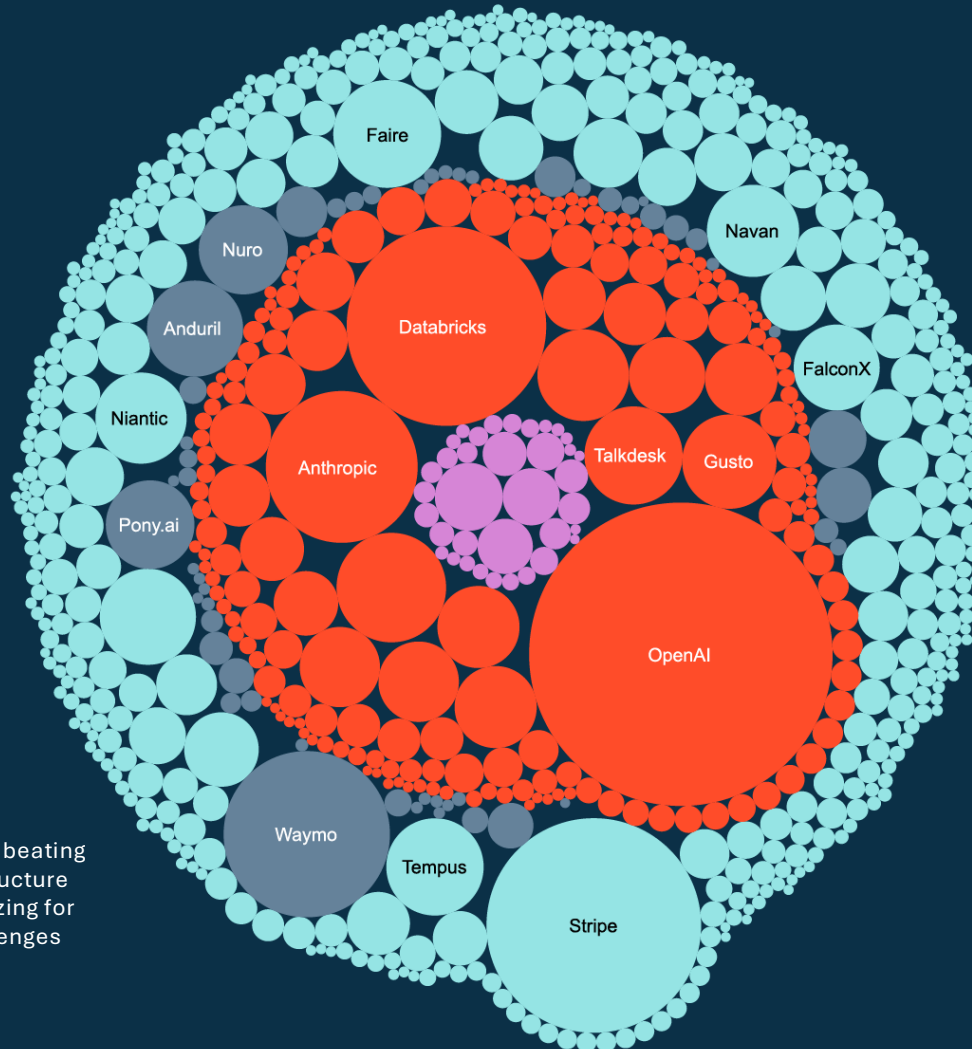
Factory robots and self-driving vehicles make up the lion's share of this group, which is applying computer vision algorithms to improve manufacturing and transportation. Waymo and Nuro are among the highest valued startups in this space, which also shows promise in climate tech.

AI Model Development

This core group is enabling the AI revolution by developing the principal technology of algorithms and language models. These companies are creating the open source and proprietary platforms that other companies build upon as they incorporate AI into products and apps.

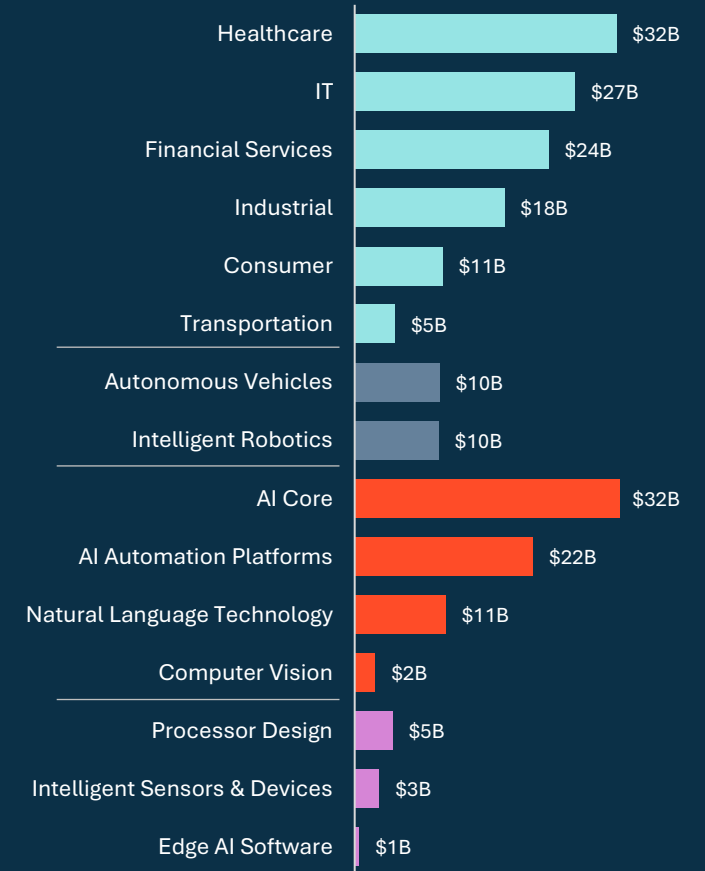
Computing Infrastructure

If language models are the brain of AI, semiconductors are the beating heart. Hardware companies are reinventing computing infrastructure for the massive new scale that AI computing demands. Optimizing for efficient energy usage, security and performance are key challenges being solved in this space.



Investing in the AI Universe

US VC Investment in AI Subsegments¹



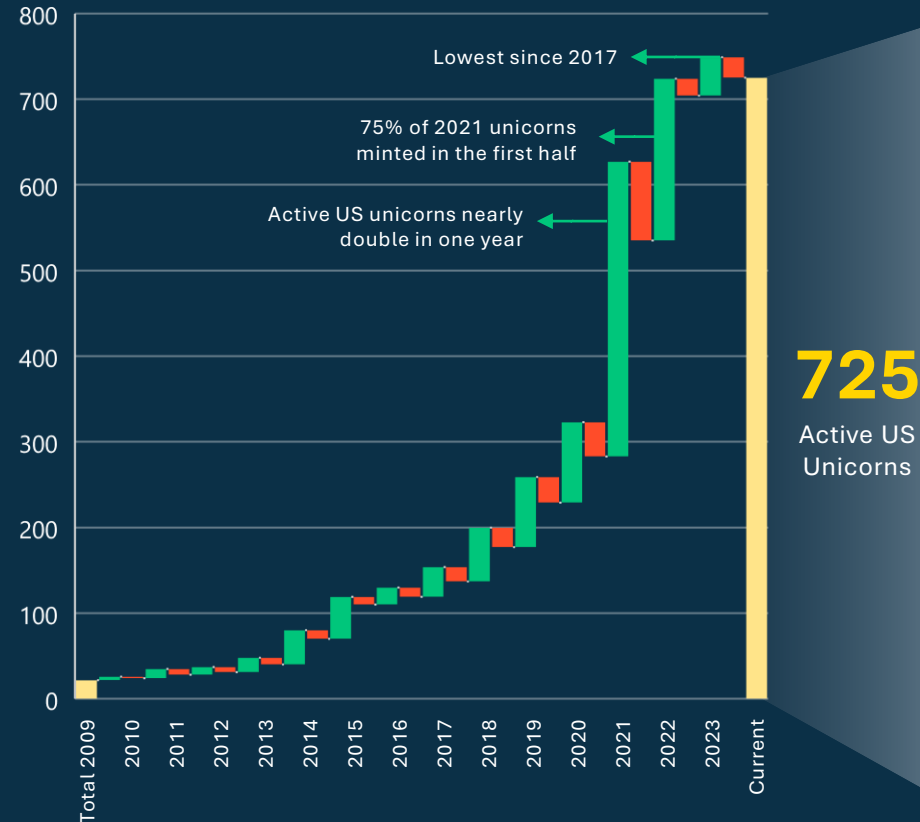


Exits

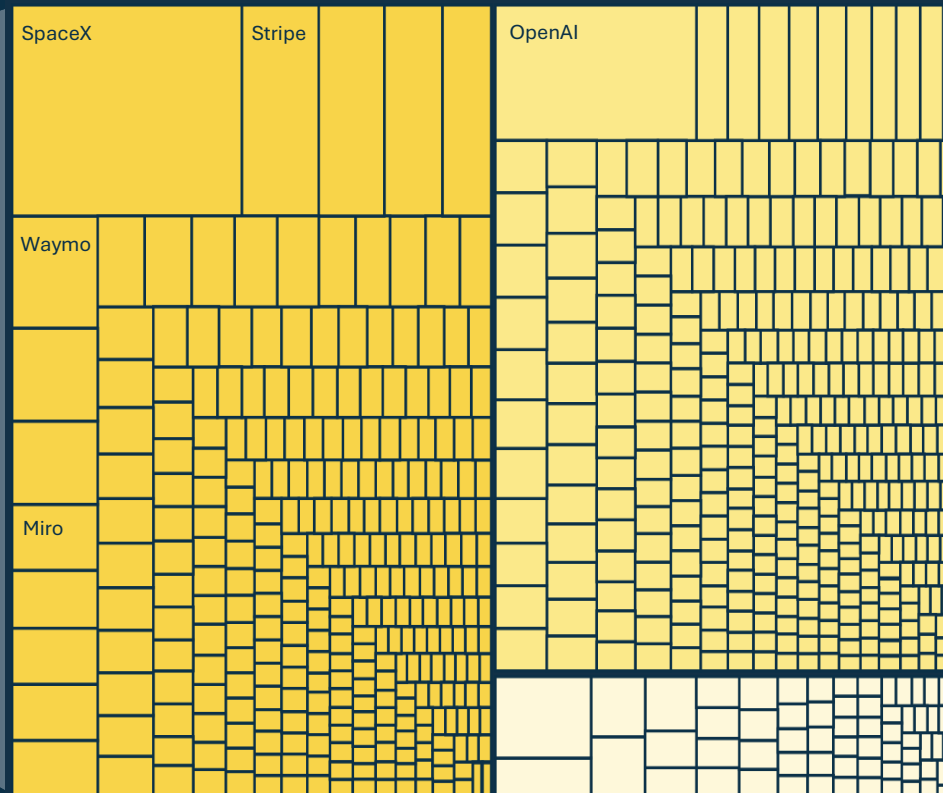
Exit-Ready Companies Waiting in the Wings for IPO Window

Number of US Unicorns and Outcomes and Unicorns by Age and Last Known Valuation

- Number of new unicorns
- Number of exited, failed and fallen unicorns¹
- Beginning and ending number of active US unicorns



Unicorn Age ²	< 5 Years	5-10 Years	> 10 Years
Pressure to Exit Given Company Age	Low	Moderate	High
Aggregate Last Know Valuation	\$181B	\$974B	\$1.2T



A record backlog of companies ready to exit as unicorns has formed, but with exit markets shuttered in 2023, these companies have had to wait. As late-stage VC investment remains suppressed, and investors push for liquidity in their portfolios, these companies will be looking to exit if the IPO window opens in 2024. We estimate that 20% of unicorns will have to raise capital in the next 12 months or run out of runway, and if private market investors aren't willing to foot the bill, companies will be looking to public markets.

Since 2010, 48% of unicorns have gone out via IPO — **if history is a guide that means roughly 350 US VC-backed unicorns in the current cohort may exit to public markets.** These companies (according to their last know valuation) would likely be worth north of \$1T. However, many of these companies will experience down rounds.

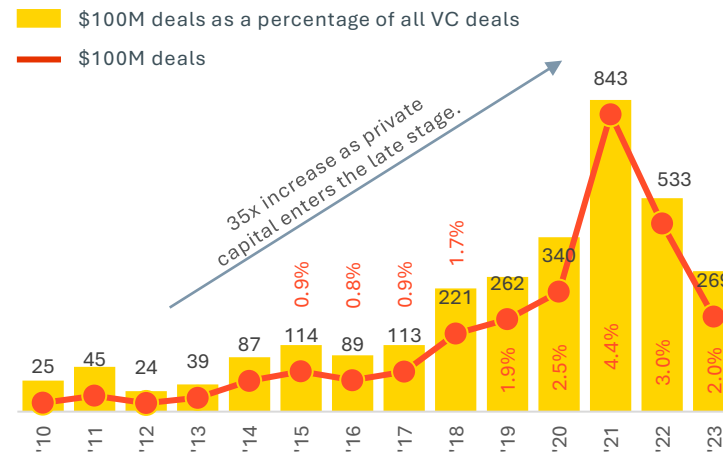
Hybrids Had Enough (Ad)Venture

Hybrid PE/VC investors that fueled massive investments (and valuations) into late-stage companies have, for the most part, gotten out of the venture investing business. In 2021, VC deals with PE investors accounted for 56% of all capital invested, but in 2023, that number was just 34%.

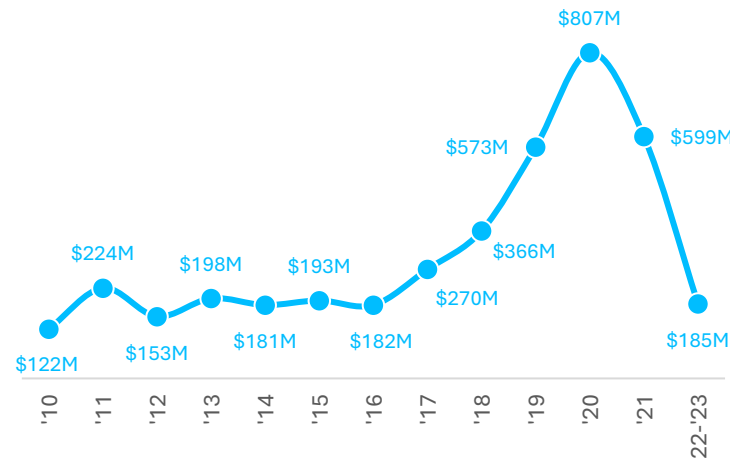
Late-stage investors across the board are taking a step back. The number of private IPOs (deals over \$100M) has fallen precipitously. Many of the investors that participated in these deals have paid their tuition dollars at venture university and have learned lessons in the form of significant valuation overhang. **For those late-stage companies that already raised a ton of cash at high private valuations, many face the possibility of down-round IPOs.** Look no further than Instacart, whose last private valuation (LPV) was \$39B in 2021, had a failed M&A deal at \$45B that same year and then went public at just \$8.3B in 2023, placing the company nearly 80% below its last round's value.

This raises the question, as late-stage capital dries up, what happens to the companies that have come to depend on it? As late-stage capital has become more available, companies stayed private longer and raised more before their IPO. Private market investors have thus captured the return that public market investors used to receive from IPOs. Now, that trend may revert back to the norm as companies will be forced to exit sooner as late-stage capital disappears.

The Private IPO Is Beginning to Disappear US VC Deals Larger Than \$100M

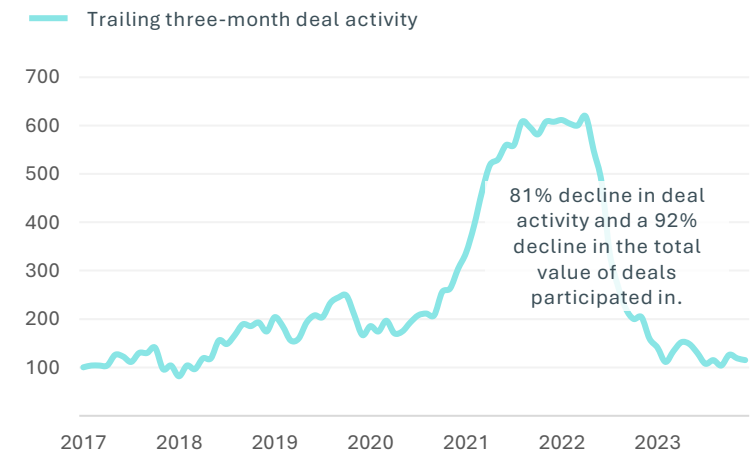


IPOs With Less Private Market Capital Median Capital Raised Prior to IPO: US VC-Backed Tech IPOs²

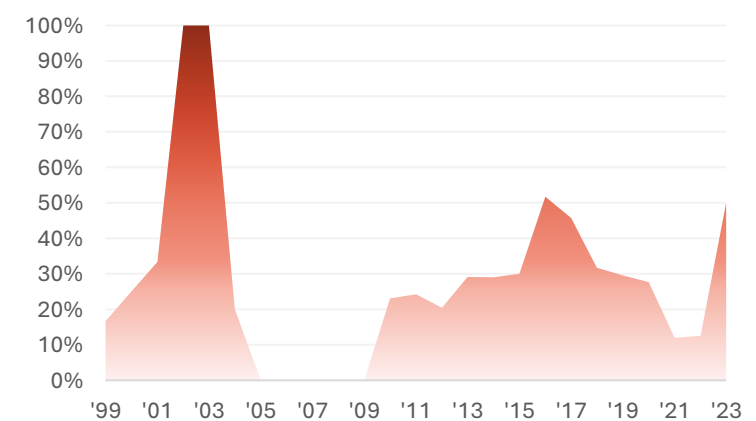


Notes: 1) Deal activity for Coatue Management, LLC., Insight Partners, SoftBank Group and Tiger Global Management indexed to 100, January 2017. 2) SVB proprietary definition of Tech; combines 2022-2023 given sample size. 3) Includes all IPOs apart from healthcare. Source: PitchBook Data, Inc., S&P Capital IQ, SVB proprietary data and SVB analysis.

Hybrids All But Stop VC Investment Notable Hybrid Fund Deal Activity Index¹



Down-Round IPOs Likely to Continue Down Round IPOs Percent of All IPOs for US VC-Backed IPOs on Major US Exchanges Trailing 24 Months Excluding Healthcare³



Companies at a Loss for Worth

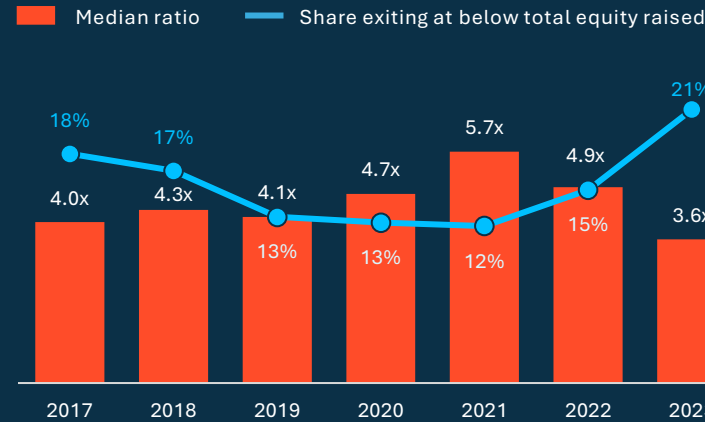
It's no secret, investors are hard to come by — even when trying to sell yourself. As the IPO window remains shut, funding continues to be challenging, and companies are running out of levers to pull to extend runway. They're increasingly being forced into unattractive acquisitions.

Last year, 21% of US VC-backed startups exited at a valuation lower than the aggregate amount of VC equity raised — the highest in recent history. Among notable startups to sell for a deep discount include SoftBank- and Sequoia-backed Clutter, which sold for pennies on the dollar to Iron Mountain. Uplift, which was buoyed by pandemic-era spending habits, sold to Upgrade as it faced consolidation pressure in the buy now, pay later space. Fair, once valued at over \$1B, sold to Shift as it burned through ~\$800M in equity raised as it scaled in an inefficient, unprofitable way.

Even for those that did sell for a higher valuation, the prices reported are much less than the heights of 2021. This may not be the full story though. Fewer companies are reporting their exit valuation — a sign that investors and startups may be attempting to avoid the public black eye of selling for less than desired. As uncertainty remains, companies likely look for more public market rebound and macroeconomic clarity before moving forward with a transformational deal. This doesn't mean they don't have the cash for it. Current **corporate cash on hand for the S&P 500 cohort stands at \$3.6T** — just slightly below 2021's peak of \$3.7T.

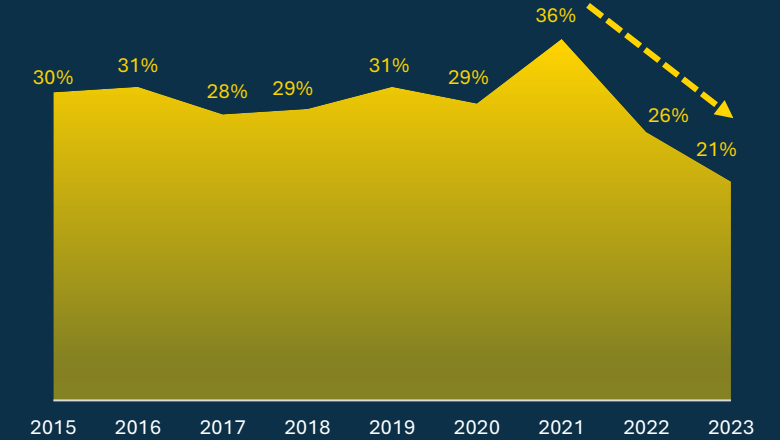
Startups Selling for Less

Median M&A Valuation to VC Equity Raised Ratio and Share Selling at a Loss via M&A by Year for US VC-Backed Startups¹



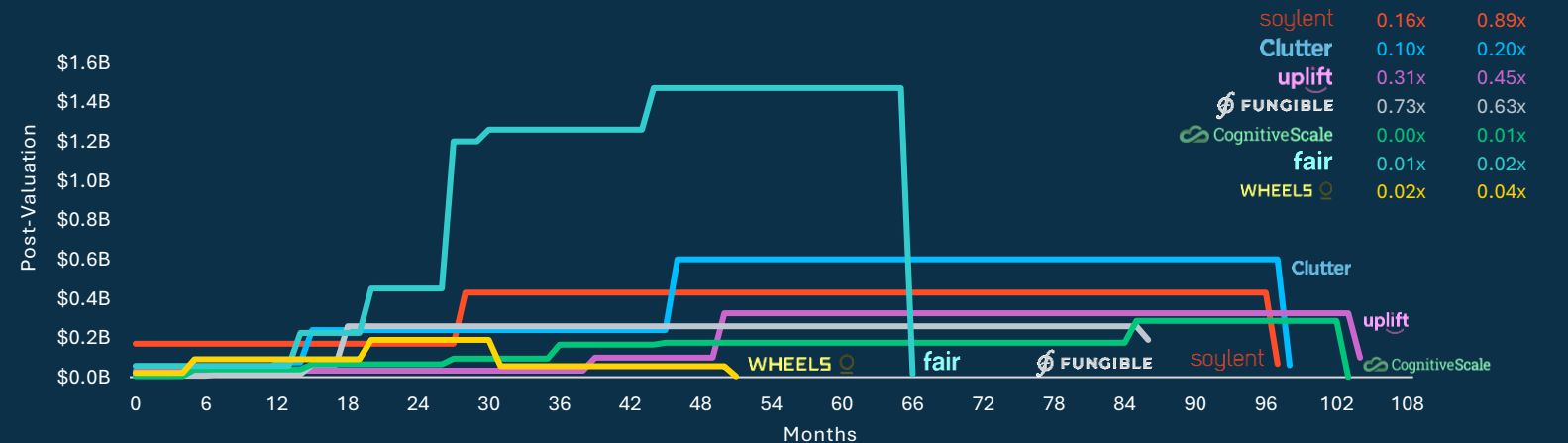
Startups Not Reporting M&A Valuations

Share of US VC-Backed Startups With Reported Valuation²



Valuation Journey: Notable Startups Selling at a Loss in Past 24 Months

VC Round Post-Valuation to M&A Valuation for Notable US VC-Backed Startups³



Notes: 1) VC equity raised only since previous exit, if applicable. Selling at a loss defined as the M&A valuation being lower than the last private valuation from a VC round. Analysis includes only US headquartered startups and deals where the M&A valuation and previous VC round valuations are disclosed. 2) Analysis excludes buyouts and includes only US headquartered startups designated as formerly VC-backed by PitchBook Data, Inc. 3) Notable startups determined by SVB. Analysis for individual startups does not include deals where the VC round valuation is not publicly disclosed. 4) Equity raised prior to M&A exit includes VC rounds where deal size is disclosed but valuation is not.

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

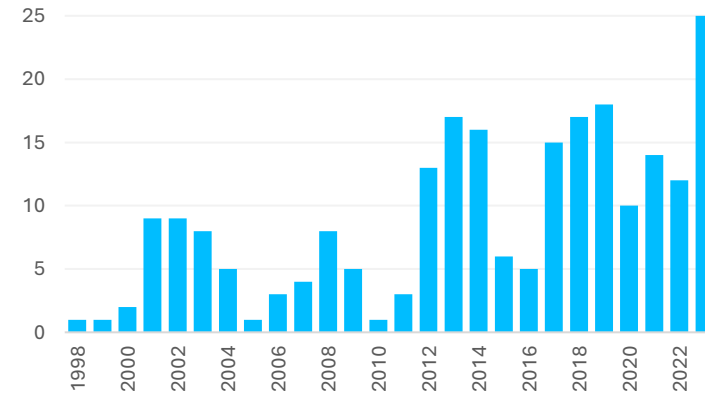
Bracing for Impact: Shutdowns Mount

When the severity of the VC downturn was first becoming clear, Y Combinator joined a growing chorus of VC's urging founders to preserve cash and plan for the worst: "It's your responsibility to ensure your company will survive if you cannot raise money for the next 24 months," the company told founders in an open letter. We're now 26 months into that downturn, and many companies are, indeed, running out of cash.

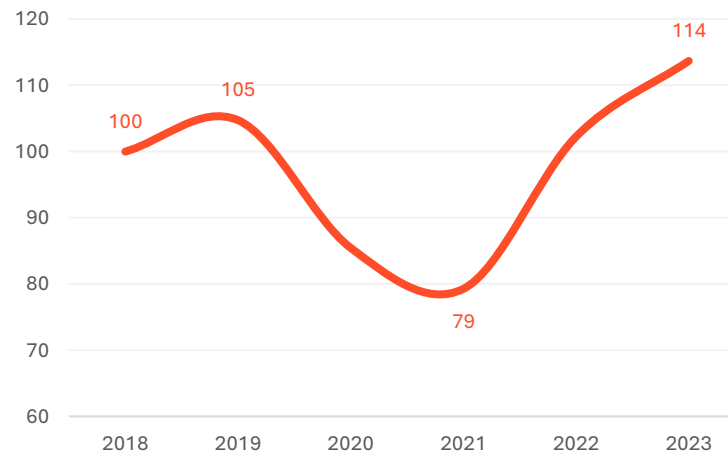
Bankruptcies, which had been staved off by insider rounds, extension deals and waves of painful budget cuts, are finally unavoidable for many companies. **Some 2,300 VC-backed companies¹ went out of business in 2023, including at least 25 that raised over \$100M.** Notable shutdowns include indoor farm startup AppHarvest, once valued at \$2.3B, and Convoy, the logistics tech company last valued at \$3.8B. Convoy raised \$400M in April 2022 and announced a first round of layoffs two months later. They weren't alone. Tech layoffs gradually increased throughout 2022 and spiked in early 2023. Now, layoffs are dwindling as most startups have already cut non-essential jobs.

Some formerly VC-backed public companies are also facing the end of the road. TuSimple, developer of a self-driving long-haul truck, shut down its US operations in December. Like the laptops and ping pong tables of other closed startups, TuSimple's fleet of 10 self-driving trucks is headed to auction. Sale site Silicon Valley Disposition saw a 50% jump in such auctions in the last two years.

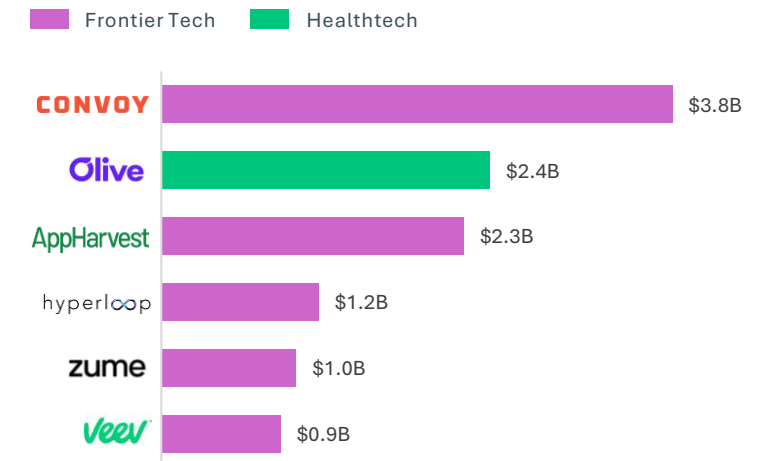
A Wave of Bankruptcies Washes Through
Bankruptcies for US VC-Backed Companies that Raised \$100M+ in VC²



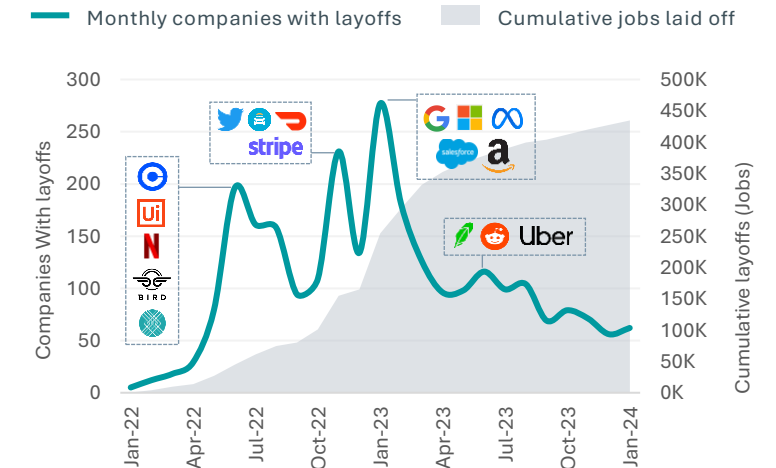
Troubled Companies on the Rise
US VC-Backed Tech Troubled Company Index³



Pour One Out: Startups Lost in 2023
Notable Failures by Last Valuation



Nothing Left to Cut: Layoffs Are Dwindling
Tech Layoffs Since January 2022



Notes: 1) According to Pitchbook Data Inc. 2) Bankruptcies for VC-backed companies that have raised over \$100M and have never exited. 3) Troubled companies are those VC-backed companies with limited runway and below average growth and profitability. Source: Layoffs.FYI, Pitchbook Data, Inc. and SVB analysis.

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Marc Cadieux is president of Silicon Valley Bank's commercial banking business where he focuses on the needs of innovation companies at all stages of development, including the investors who back them.

Marc's career at Silicon Valley Bank, a division of First Citizens Bank, began in 1992. In the three decades since, he has held a variety of top credit and sales roles serving some of the world's most innovative companies. Most recently, he served as chief credit officer, appointed in 2013, and oversaw credit policy and process, credit underwriting, loan approval and portfolio management activities. He is a strong advocate of bank initiatives to expand opportunities for those who are underrepresented in the innovation economy. He serves as an executive sponsor for the company's employee resource group focused on women employees.



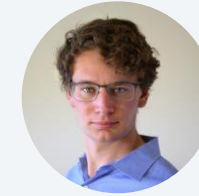
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Mark Gallagher is the co-head of the investor coverage practice. He and his team provide tailored services, industry insights and strategic guidance to top investors in the innovation economy.

Mark has served as a financial partner to venture capital firms and technology and life science companies for the majority of his career. During his 22-year tenure with SVB, he has been involved in a number of strategic projects and initiatives, most recently leading the corporate venture capital practice. He's held numerous leadership roles including head of the Northeast technology banking practice, head of business development in New England and several years running the Northeast life science practice.

A supporter and champion of the New England technology community, Mark serves as a board member for BUILD Boston and was formerly on the board of overseers for The Mass Technology Leadership Council (MTLC).

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About Silicon Valley Bank

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