

The logo for Silicon Valley Bank, consisting of the lowercase letters 'svb' in white on a blue square background.

svb



Silicon Valley Bank

State of the Markets

Outlook on the health and productivity
of the innovation economy

H1 2022

State of the Markets

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5 **Macro:**
Inflated Expectations

8 **Fundraising:**
A New Normal?

11 **Investment:**
Off to the Races

15 **Spotlight:**
Web3, The Next Big Thing?

17 **Benchmarking:**
Balanced Growth

22 **Liquidity:**
Resilient Exit Activity

26 **International:**
Greener Pastures

Executive Summary

Reaching a Plateau

It's safe to say 2021 exceeded expectations, with record highs reached for the most critical innovation economy fundamentals. US venture capital (VC) fundraising grew 38% over 2020, US VC dry powder 48%, US VC investment 98%, late-stage valuations 112% and M&A deal activity 34%. As we enter 2022 amid rising COVID-19 cases, inflation, talent shortages and a market downturn, the question becomes will the innovation economy continue to grow?

The fundamentals of the innovation economy are strong and company formation is on the rise, yet we don't expect the same unbridled growth experienced in 2021 to continue through 2022. Signs are starting to point to an ecosystem reaching capacity, with the growth rates of funds actively raising declining quarter-over-quarter in 2021. The rosy picture painted in the last 18 months has clouds looming, for instance the drop in markets since the turn of the year. With US markets down (9% as of 1/25), investors might take a breath from the rapid pace of 2021 and assess. Depending on the length of this correction, private valuations may recalibrate and investment pace slow, as founders—many flush with cash—wince at the prospect of higher dilution. If there is a recalibration, followed by a series of poorly performing IPOs, expect late-stage valuations to fall, especially for companies on the IPO-path.

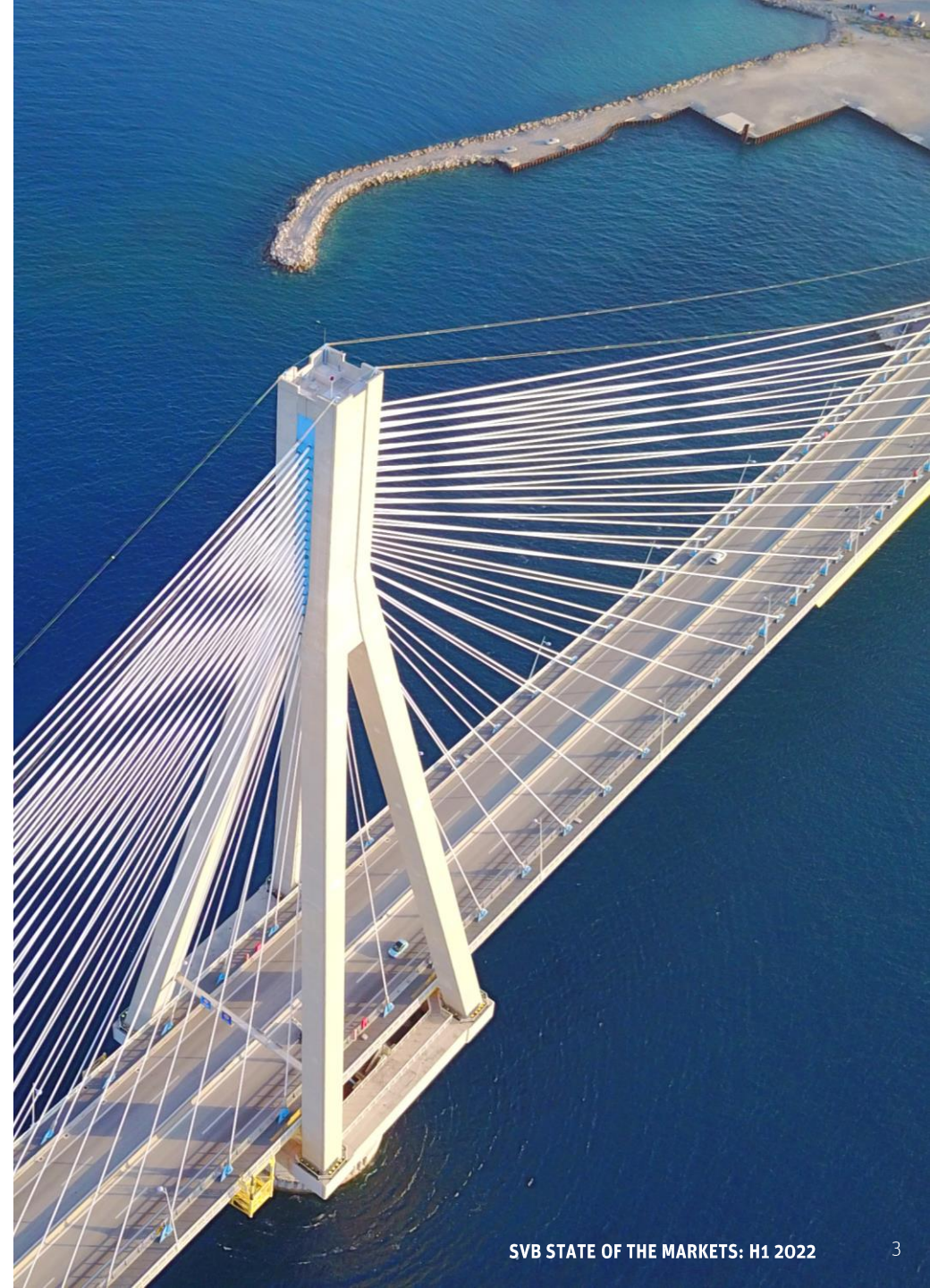
For startups, shortages of tech talent, inflation and supply chain delays all remain headwinds and will continue to drive up the costs of doing business. On the flip side, an abundance of capital—\$228B in US VC dry powder—may continue to fuel growth, providing the capital is affordable. Across all industries, companies are raising more capital and spending it to grow at the expense of profitability. The good news is there are many new and reemerging opportunities for technology startups including Web3 and climate tech.

Sunita Patel





Chief Business Development Officer
Silicon Valley Bank



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



Outlook for Venture in 2022

Category	 Fundraising	 Early-Stage	 Late-Stage	 Exits
2021 Venture Outlook	Increased LP demand and larger deal sizes will push fundraising to an all-time high.	Remote work will encourage migration to low-cost geographies and increase company formation outside of traditional tech hubs.	Late-stage valuations will continue to increase as GPs are sitting on record levels of dry powder and will continue to pay a premium for the (perceived) best companies.	The number of IPOs will increase in 2021, given the growing backlog of Unicorns, provided the public markets continue to tolerate heightened valuations.
By the Numbers	Median US VC deal sizes increased 33% between 2020 and 2021, spurring US VCs to raise additional capital— \$118B in 2021, a 57% increase over 2020. LPs remained hungry for venture, as the average 2021 fund closed at 113% of its target size .	Austin, Nashville, Charlotte, Jacksonville and Denver were the top five destinations for tech workers with San Francisco seeing the biggest decline. California and New York increased their share of company formation.	The median late-stage tech valuation increased 2.2x since Q4 2020 to \$200M ; the top quartile (75th) valuation also increased 2.2x to \$803M .	In total, 70 VC-backed tech companies went public in 2021, up from 26 in 2020 . The median last private valuation for the 2021 cohort was \$1.6B , versus \$1.5B in 2020's.
Grade	A	C	A	A
2022 Venture Outlook	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 ¹ 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.

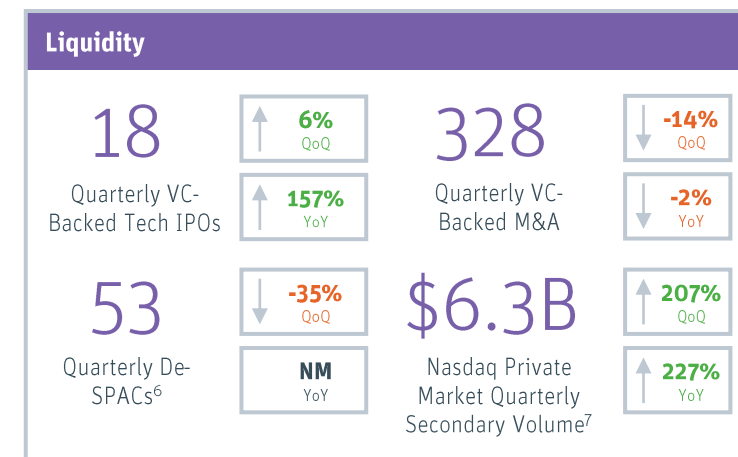
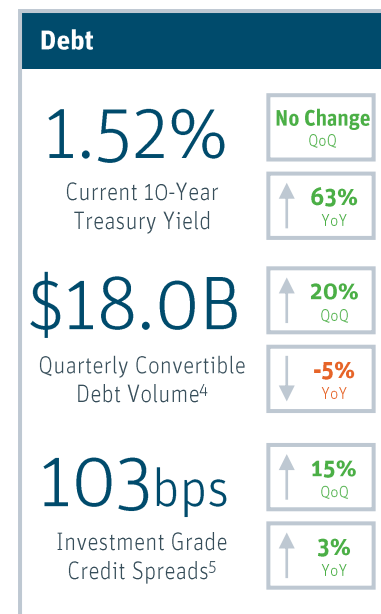
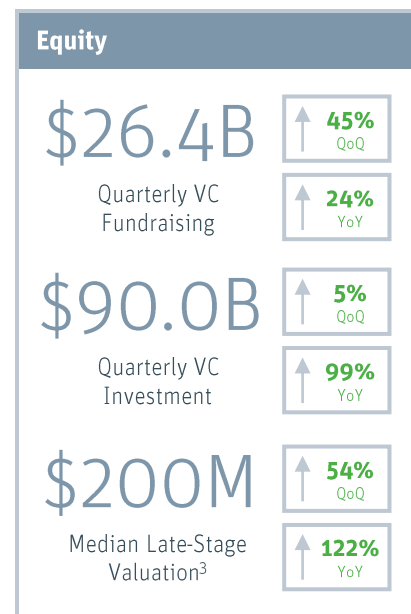
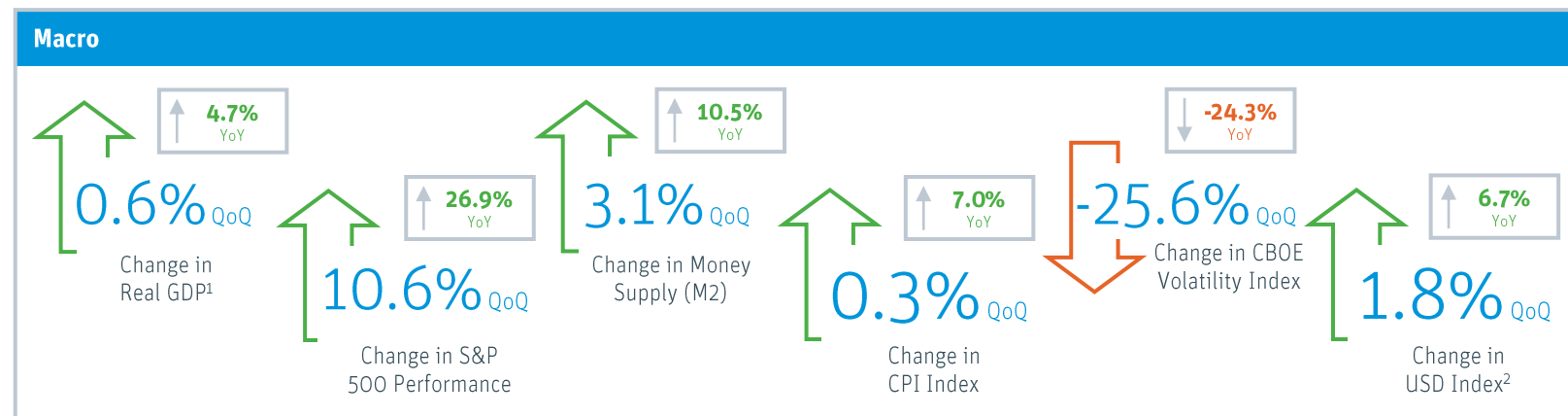
Macro: Inflated Expectations

Momentum Continues Amid Uncertainty

The US economy continued to rebound in 2021 with GDP growing 4.7% (YoY), a historical high increase given the persistence of the COVID-19 pandemic. The key indicators for 2021 were inflation, interest rates, the market and employment (or resignations). It was a year of extremes (especially in the US). Inflation at 7% was the highest it has been since June 1982, fueled by myriad factors, including unprecedented stimulus driving demand, while supply chain issues constrained supply plus an expanding money supply. Between December 2019 and 2021 the money supply rose 39%, the highest ever increase recorded. Interest rates remained at record lows, which meant the US 10-year Treasury hasn't covered inflation all year, currently 5.5 percentage points lower. Thus, many are predicting interest rate rises by the Federal Reserve.

Nearly every metric to measure the innovation economy broke some sort of record. Venture fundraising recovered from a holiday lull in Q3 to end the year 24% higher than 2020, while venture investment exploded, doubling to \$333B (the size of Chile's economy). The mass influx of capital meant fierce competition for deals sending valuations skyrocketing. Even so, the long-touted public/private market divide didn't show as VC-backed companies went public in record amounts, 70 for 2021 vs 26 in 2020. The number of de-SPACs grew in 2021, albeit the pace has slowed and the number of SPACs looking for targets increased 152%. M&A deals for VC-backed companies also hit a new high with 1,433 in 2021 compared to 1,020 in 2020. With record liquidity came a huge uptick in secondary activity, which returns capital to all stakeholders who often reinvest in the ecosystem.

US Innovation Economy Indicator Dashboard: Q4 2021



Notes: 1) Real GDP data as of Q3 2021. 2) Measured using the DXY index. 3) Late-stage category defined by PitchBook. 4) Convertible debt and preferred volume. 5) ICE BofA US Corporate. Index Option-Adjusted Spread. 6) Number switched to represent all SPACs. 7) Nasdaq Private Market was launched as a joint venture between SVB, Nasdaq, Citi, Morgan Stanley and Goldman Sachs. More details can be found [here](#). Source: St. Louis Fed, BLS, IMF, PitchBook, S&P Capital IQ and SVB analysis.

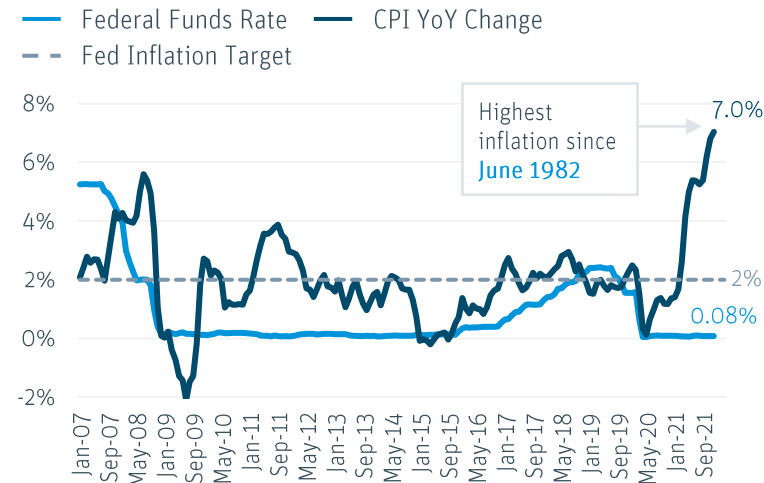
Inflated Expectations

A perfect storm of consumer demand (fueled by government stimulus) and supply chain constraints caused inflation to balloon in 2021, reaching a 39-year high. The surge in demand for goods constrained an already at-capacity global supply chain. In the US, a shortage of truckers and longshoremen and containers/ships created backlogs at the busiest ports, while COVID-19 created lockdowns and absenteeism hindered manufacturers. A new index compiled by the Fed illustrates what an abnormal period it has been for supply chain pressures. One of the most important items disrupted was semiconductors, which at the same time was experiencing record demand (up 24% in 2021) from a digitizing economy accelerated by the pandemic.

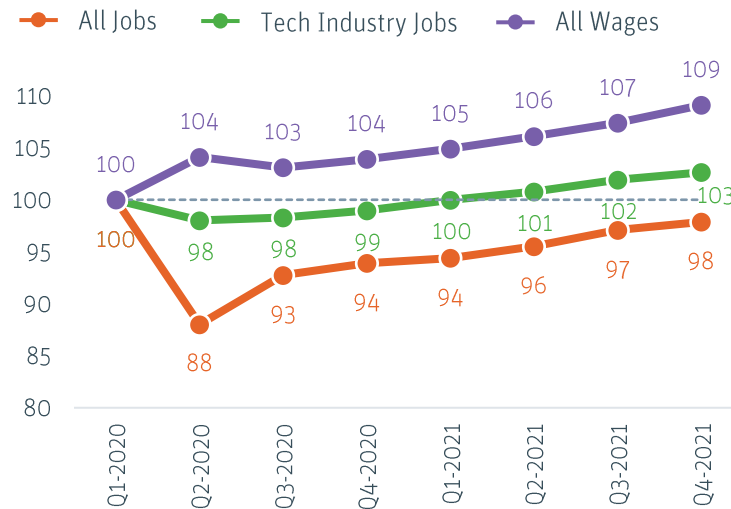
The competition for talent within the tech industry is at its peak. The on-demand executive talent marketplace Bolster found that 1 in 3 executives in their network changed jobs in 2021. The work-from-home paradigm has spread talent beyond the traditional tech hubs, as workers migrate to lower-cost regions. Stripe CEO Patrick Collison tweeted 74% of his company's Q4 hires were outside the Bay Area, up from 39% in Q1 2019. Brian Armstrong, CEO of Coinbase, added weight to the argument, tweeting 89% of Q4 hires were outside the Bay Area, compared to 30% in Q1 2019. Job postings from the tech industry group CompTIA confirm the trend, showing the strongest hiring momentum in Texas, Florida, Georgia, Virginia and Colorado.

Rising inflation and low unemployment have many expecting multiple interest rate hikes in 2022. Depending on how this is baked into the market, raising rates too quickly, combined with moderating economic growth, would likely cause public markets to drop, which could temper the incredible activity VC experienced in 2021.

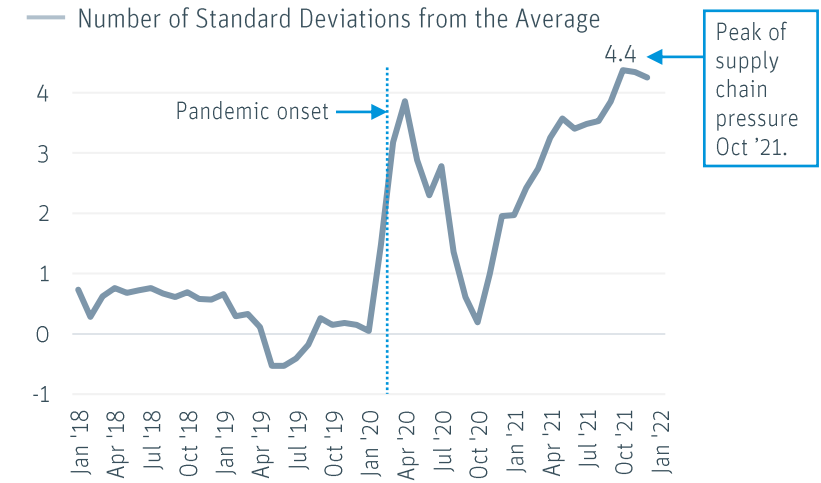
US Inflation and Interest Rates¹



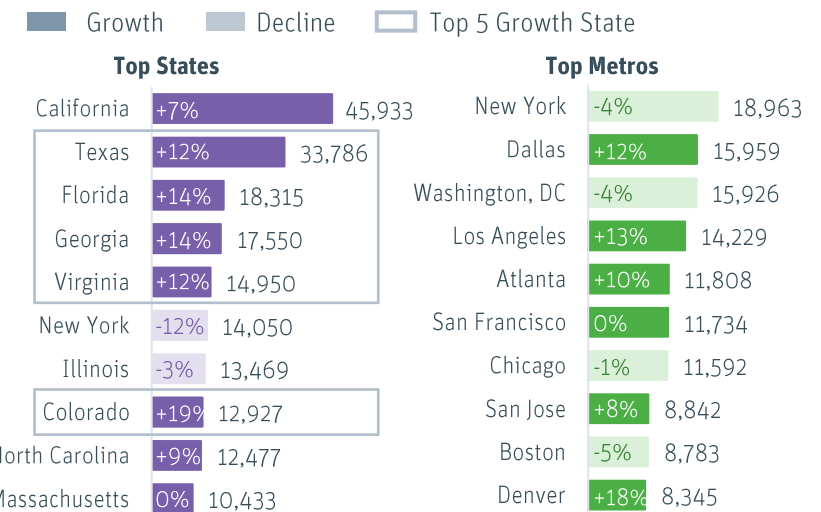
US Employment and Wages³



Global Supply Chain Pressure Index²



US Tech Job Postings By Location⁴



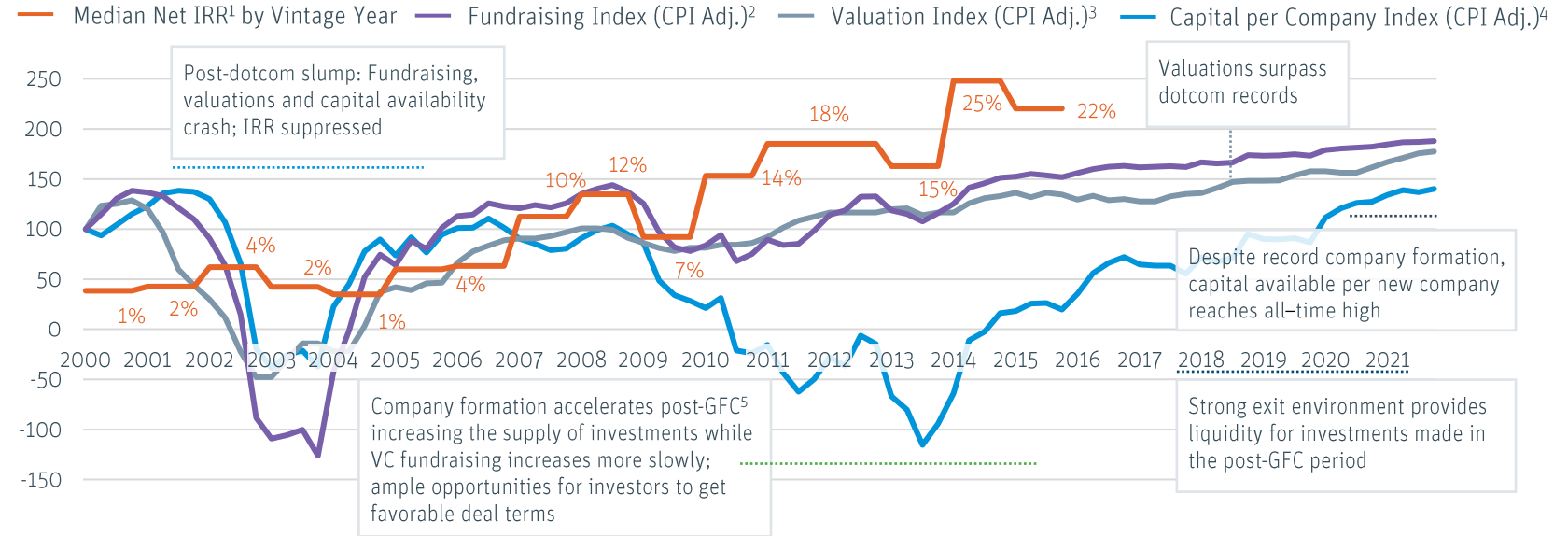
Fundraising: A New Normal?

Peak Venture Capital?

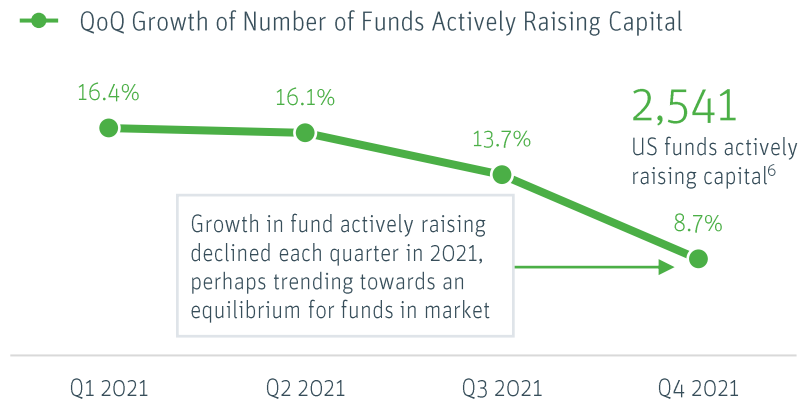
The flow of capital into the asset class depends on investors (limited partners) making a comparative return with other assets when risk-adjusted. Returns for the asset class have been rising YoY (lagged based on fund life cycle), and with recent record IPO and M&A activity, subsequent years' returns should be boosted. The average fund closed at 113% of its target close size, up seven percentage points from 2020, demonstrating the high level of demand for the asset class. Capital raised is being deployed fast, flooding the market. Company formation cannot keep up, evident by the significant rise since 2014 in the capital available per company, albeit this capital is not evenly shared. The outpacing of company formation by venture investment has driven valuations higher YoY. It is unwise for investors to let capital raised sit on the sidelines for too long, yet record-high valuations may stifle activity or hit future venture returns.

VC fundraising topped \$118B in 2021, a 38% increase over 2020's previous record, raising dry powder to a record \$228B (48% above 2021's high water mark). This growth in fundraising was fueled by a large number of funds coming to market. Compared to Q4 2020, there are 67% more US-based funds actively raising capital—2,188 funds in total. However, the growth in the number of funds raising slowed each quarter in 2021, perhaps indicating that we are approaching capacity. Breaking down the funds that are fundraising, we see the majority are small—86% of funds are under \$200M in size. The majority of capital (51%) is being raised by the largest 6% of funds.

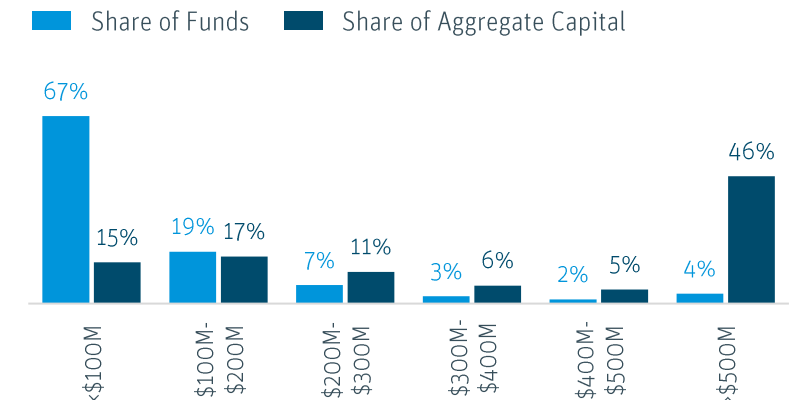
Key Indicator Trends for US VC Activity



Growth Rate of US VC Funds Actively Raising



Fund Size Distribution of US VC Funds Actively Raising

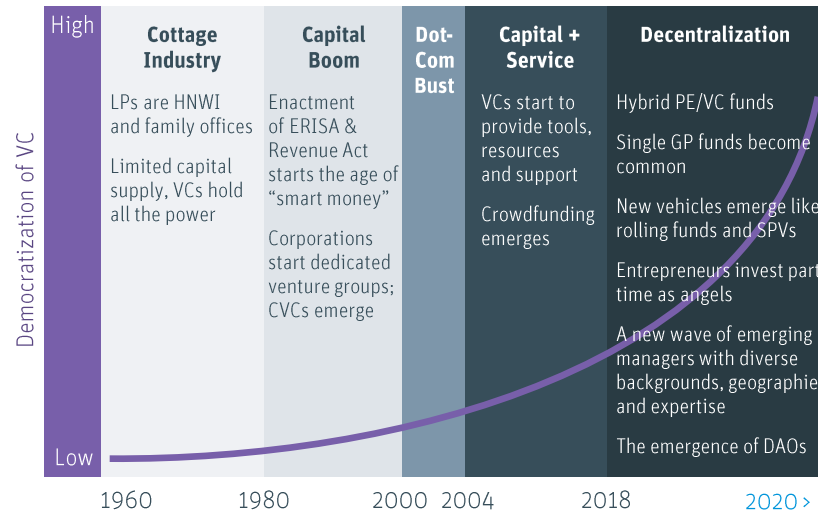


Emerging Trends in Venture Fundraising

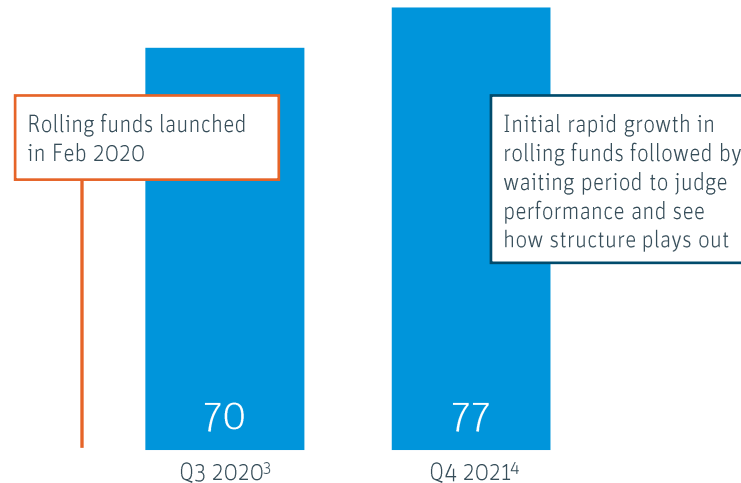
In the early days of VC, a handful of venture capitalists controlled the majority of capital, which predominantly came from High Net Worth Individuals (HNWIs) and family offices. Originally industrials and retail, it wasn't long before tech came into focus, starting with Digital Equipment Corp. (DEC) and followed by Fairchild Semiconductor. The personal computing age accelerated the venture VC industry (as well as regulatory changes) bringing new types of LPs and investors, such as CVCs. The dotcom bust followed peak tech/venture, which left the industry scarred. However, it recovered and the capital once again flowed. A new breed of investors emerged, providing both capital and services to support companies and differentiate themselves. Firms such as Y Combinator, a16z and First Round Capital exemplified this trend. In addition, crowdfunding began.

Starting in 2018, but accelerating at the start of the COVID-19 pandemic, was the shift from differentiation to decentralization. No longer is the majority of capital controlled by Sand Hill Road elites. Hybrid Private equity (PE)/VC firms are writing massive checks and investing at a record clip. On the other end of the spectrum, emerging manager (EM) firm formation is up an estimated 97% since 2020.¹ Finally, new investment vehicles have increased access and disrupted traditional fund structures. Rolling funds allow individuals to make small bets on new managers on a quarterly basis. Decentralized Autonomous Organizations (DAOs) could be the next big VC innovation or go the way of the Initial Coin Offering. Currently only a handful of DAOs are focused on venture investing. DAOs allow groups of investors to collectively deploy capital by voting as a group. The result is a decentralized and democratized structure, which could resolve many issues with the current venture industry.

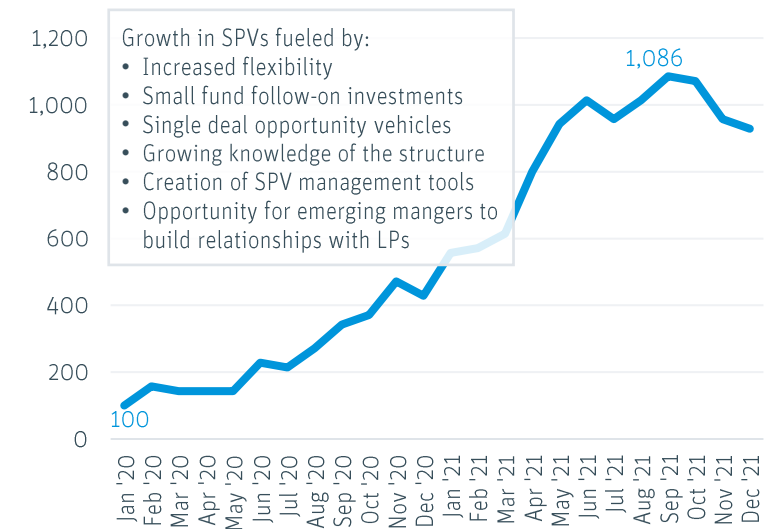
A New Epoch for Venture Investing



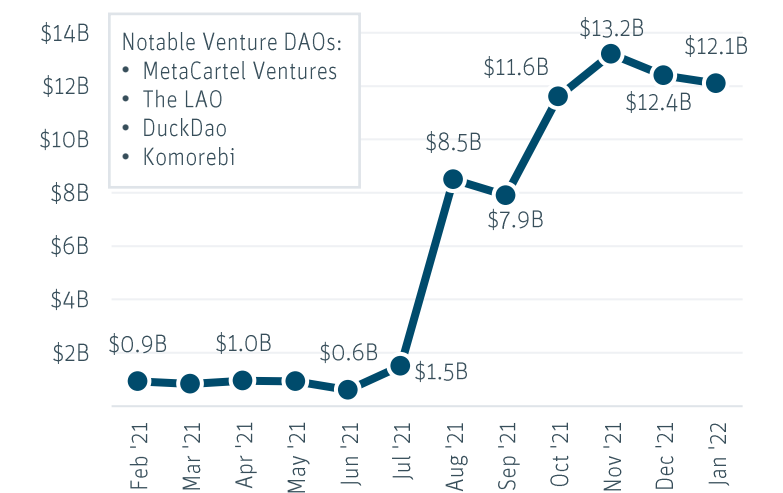
Active Rolling Funds



SVB Special Purpose Vehicle (SPV) Index²



Estimated Total Treasury of DAOs⁵



An aerial photograph of a city skyline, likely San Francisco, featuring numerous skyscrapers and a complex highway interchange. A large, semi-transparent green diagonal shape covers the left side of the image, serving as a background for the title text.

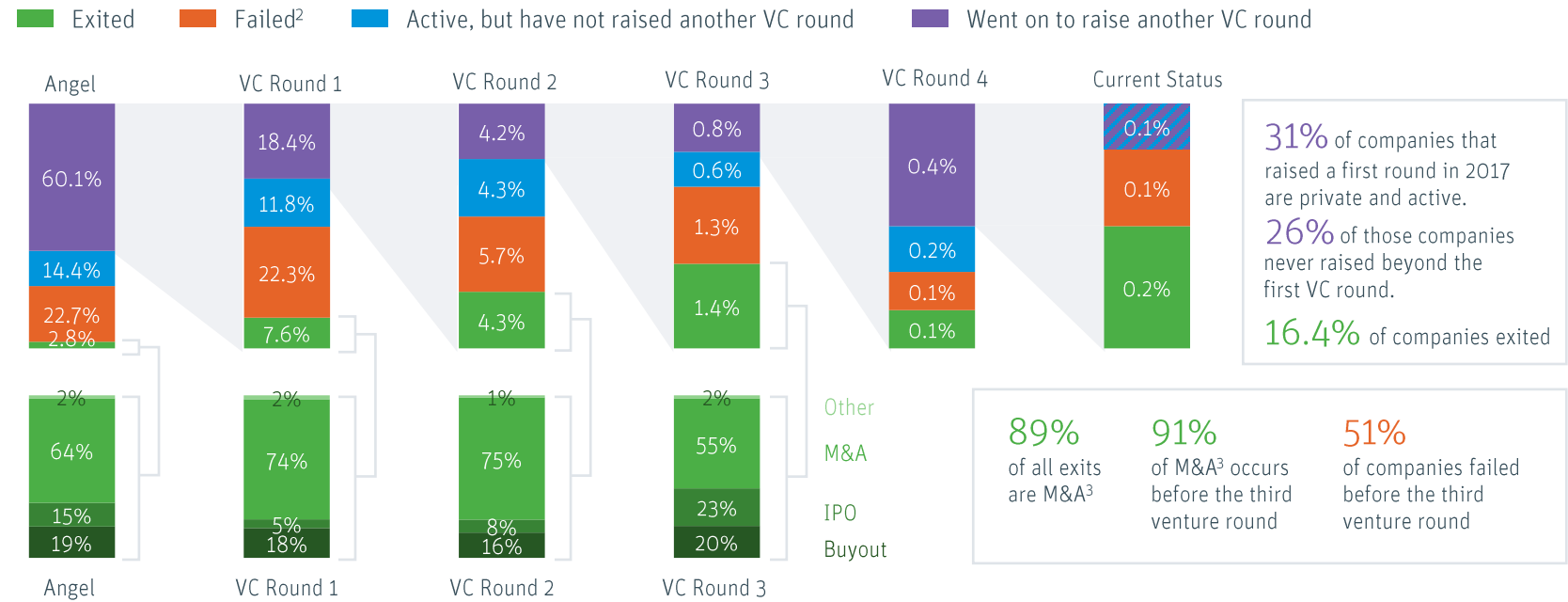
Investment: Off to the Races

The Startup Cannonball Run

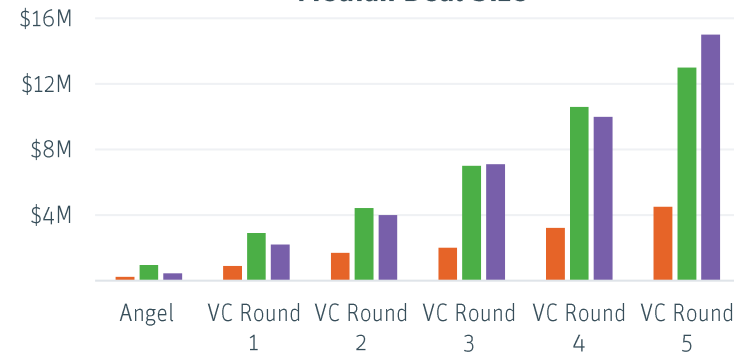
The (old) rule of thumb in venture was out of 10 startups, three or four fail, another few return the original investment and then one or two produce substantial returns. It's a generalization for a world of nuance. It is true startups fail, especially at the early-stage where the failure rate across the first three funding rounds is over 50%. This is logical; startups by nature are attempting to bring new, innovative products and services to market, and with it come significant risk—developing technologies, finding product-market fit and bringing on customers. This is made all the more difficult in the current climate when many are working remotely and talent is in short supply. The number one reason for failure is running out of capital. Whether investor bias, shifts in the market or confidence in the team, not being able to raise capital is a death knell. The optimistic point of view is that a recycling of entrepreneurs and talent with more experience under their belts should lead to better outcomes in the future.

Talent plays a key role in the type of exit. Acqui-hires were the number one reason for early-stage M&A, with tech companies and other startups pouncing on specialized talent. For instance, over the last decade Alphabet has made 14 acquisitions in the artificial intelligence (AI) space. In value-creation terms, companies that stay private longer have benefited from valuations outpacing their failed or exited peers. This suggests, if a company does not need to exit, it will benefit from significant valuation step-ups in each subsequent round raised (at least up to its fifth round).

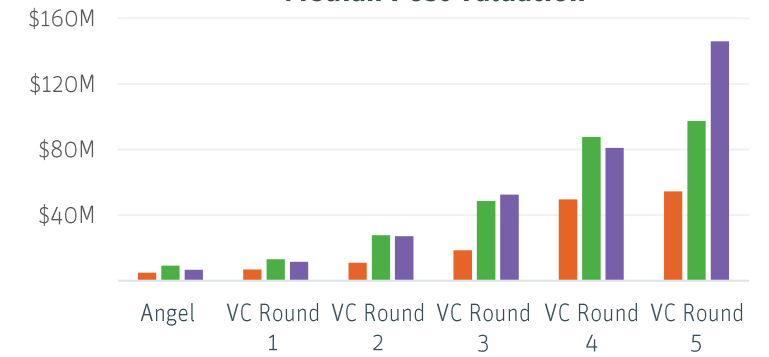
Fundraising Outcomes for US Companies That First Raised in 2017¹



Median Deal Size



Median Post-Valuation



Legend: Exited (Green), Failed⁴ (Orange), Active/on to raise another VC round (Purple)

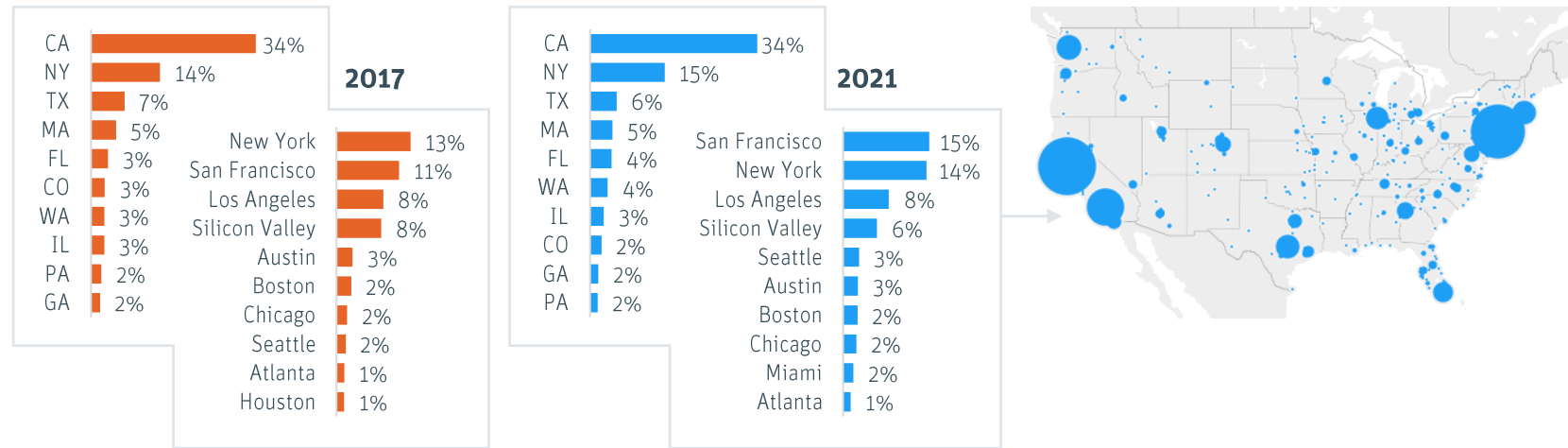
Location, Location, Formation

Despite headlines of tech workers moving and companies relocating, California and New York maintain the top locations for company formation, which has largely not changed over the past five years. Surprisingly, as this bucks the narrative of the downfall of Silicon Valley, yet even with the tech workforce dispersing, San Francisco is still the major innovation center—perhaps helped in part by declining residential and commercial rents.

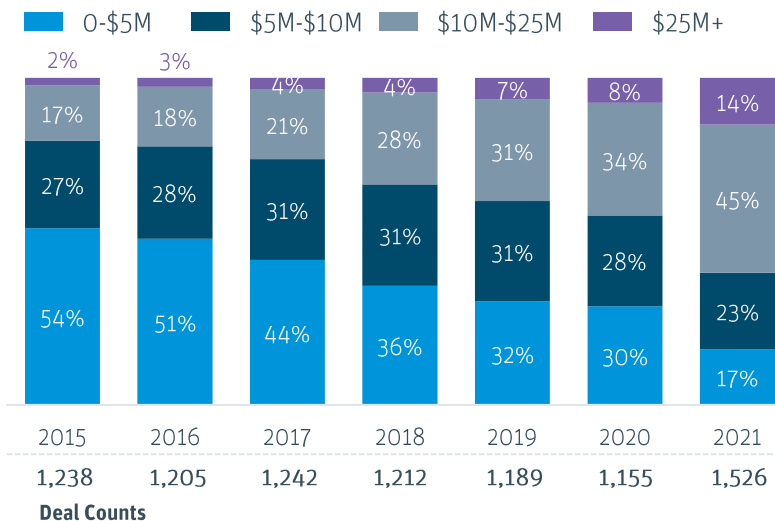
Miami is a notable new entrant to the mix. Miami's tech industry got its start in the 1980s when the likes of IBM, Motorola and Alienware established data centers and PC manufacturing, and in 2012 the Knight Foundation embarked on a long-term commitment to Miami's startup ecosystem. Brickell is the financial center for investors and, based on demographics, is a gateway to Latin America. Atlanta is another innovation hub to keep an eye on. The metro area now has the second-fastest-growing economy in the country (behind San Francisco) with a strong talent pool via Georgia Tech, Vanderbilt and Emory and the historically black colleges and universities like Morehouse, Spelman and Xavier.

The size for Series A deals has been getting larger and larger. In 2015 over half of deals were under \$5M; whereas, in 2021 over half of deals were larger than \$10M. This has been punctuated by freak \$100M plus Series A deals, with incredibly high valuations. While each has its nuances, questions remain on how these companies will trade off future valuations vs. dilution and position themselves for an exit.

US Tech Companies Founded in 2021 By Geography¹



US Tech Companies Series A Deal Size²



Notable \$100M+ Series A Deals²



1-Year Founded 2-Deal Date 3-Deal Size 4-Sector 5-Lead(s)

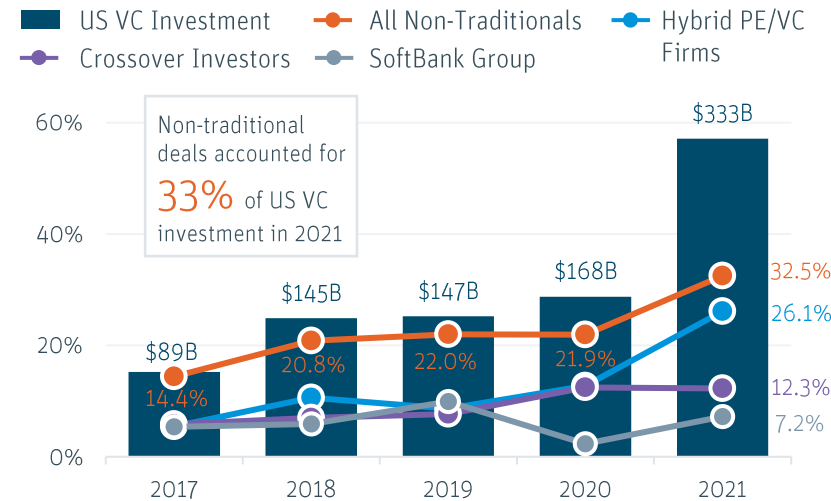
Hybrids Set the Pace

The innovation economy has lured a new wave of non-traditional investors to VC in recent years. These firms, personified by Tiger Global Management, are rewriting the rules of traditional venture investing by writing bigger checks, conducting faster due diligence and not taking board seats. These non-traditional VC investors, including “hybrid” PE/VC firms, crossover asset managers and SoftBank, participated in deals accounting for 33% of all VC investment in the US in 2021, up from 22% in 2020. This cohort favors speed in their dealmaking. The pace of deals for non-traditional investors has increased at over twice the rate of traditional VC firms. Annual deal counts for this cohort doubled from 2017 to 2020, then doubled again in 2021.

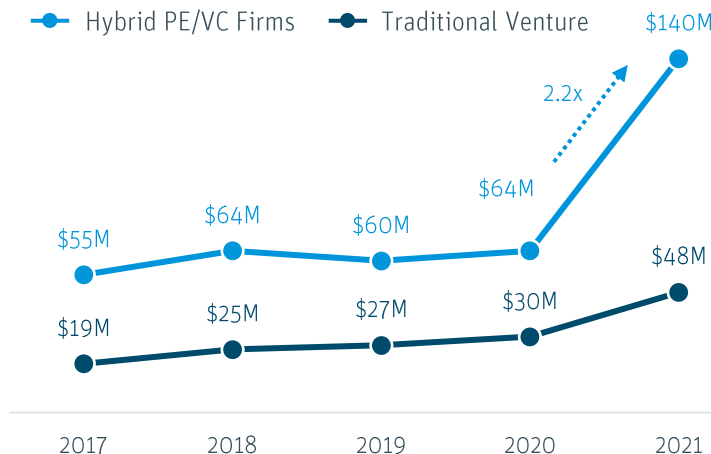
While traditional VC firms such as a16z have sought to distinguish themselves by offering founders access to deep subject matter expertise and an elite professional network, hybrids prioritize fast cash and a hands-off philosophy. This has led to deal size and valuation inflation, as hybrids race to secure the most promising companies on founder-friendly terms. The result is sometimes eye-popping deals. In 2021, the median valuation for an early-stage company receiving a hybrid investment jumped to \$140M, up from \$64M in 2020 and three times higher than traditional VC.

Compared to the traditional VC universe, which evenly covers seed, early- and late-stage companies in terms of deals, hybrid firms favored later-stage deals. However, as competition for deals heats up, hybrids could look to invest earlier. This is contingent on their risk tolerance. This is evident by hybrids preference for software-as-a-service (SaaS) companies who have more predictable revenue streams and lower fixed costs than other technology sectors.

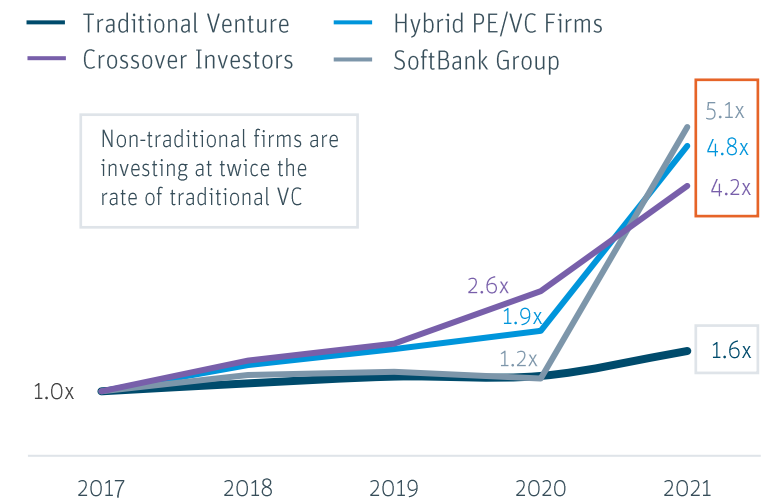
Non-Traditionals Share of US VC Investment¹



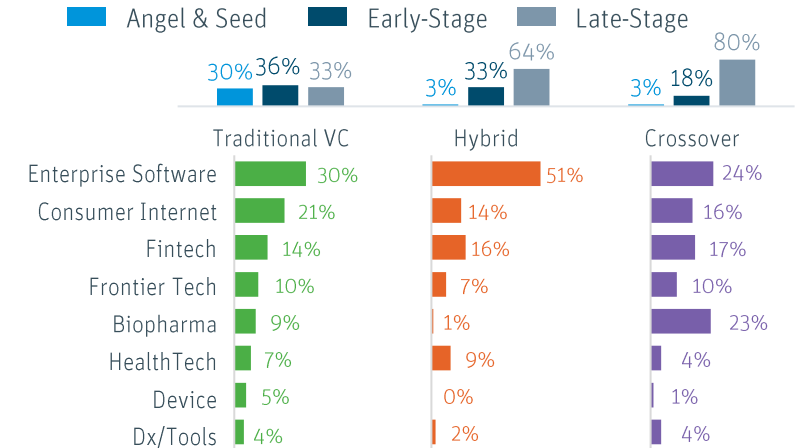
Median Valuation of Early-Stage US VC Deals by Investor Type²



US VC Deal Pace Based on Investor Type



Sector Distribution of US VC Deals by Investor Type³



Notes: 1) Share represents aggregate invested capital of deals with at least one cohort firm participating. Hybrid cohort includes Tiger Global Management, Coatue Management, Insight Partners, INCONIQ Capital, D1 Capital Partners, Accel. Crossover Equity includes T. Rowe Price, BlackRock, Franklin Templeton, Fidelity Investments, Harford Financial Group, Wellington Management. 2) Early-stage as defined by PitchBook. Usually a Series A to Series B financing deal within five years of the company's founding. Pre-money valuations. 3) Deals classified by SVB industry taxonomy. Source: PitchBook and SVB analysis.

A nighttime photograph of a city skyline, featuring the One World Trade Center as the central focus. The building is illuminated with blue and white lights, standing out against the dark blue twilight sky. Other skyscrapers are lit up with warm yellow and orange lights, creating a vibrant contrast. The city extends to the water's edge on the right, with lights reflecting on the surface. A dark teal diagonal shape is overlaid on the left side of the image, serving as a background for the text.

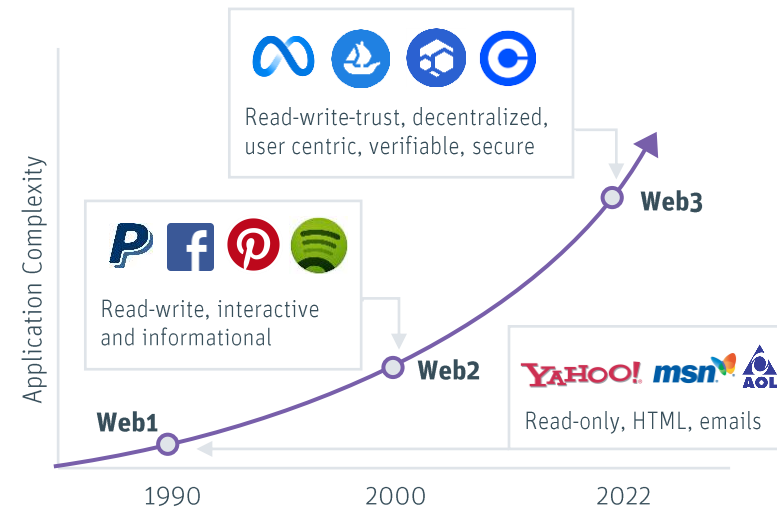
Spotlight: Web3, The Next Big Thing?

Move Over, NFTs— Here Comes Web3

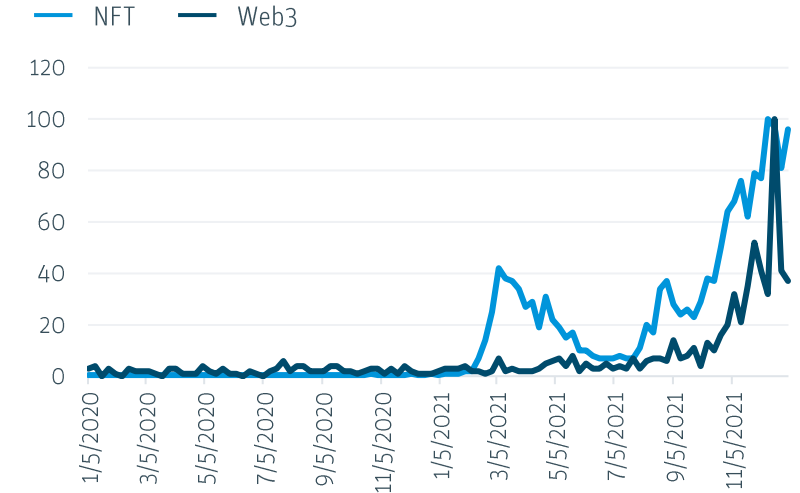
The internet is entering its next epoch. It started as static web pages of information (Web1). Next, the “read-write” era (Web2) came, which brought interaction and creation, and spawned the likes of Tumblr, Craigslist and later Facebook and Twitter. Now we are on the precipice of the next iteration of the internet. Web3 is all about ownership, protection of personal privacy (data) and decentralizing control. As a16z’s Chris Dixon described it, “an internet owned by users and builders orchestrated with tokens.” Speaking of tokens, NFTs or non-fungible tokens were everywhere in 2021, but as Avery Akkineni of VaynerNFT put it “If 2021’s word of the year was NFT, 2022’s will be Web3.”

In 2021, venture investment in Web3 companies exploded. The largest proportion of deals was tied to the blockchain and had a finance lean. Specifically, the most common applications were exchanges, data exploration and analytics, financial services (including trading, asset management and derivatives), plus cloud security and storage. A flood of talent is entering the space, leaving traditional tech and finance to explore the countless opportunities to reinvent traditional industries. The incentive mechanism inherent in many Web3 solutions, tokens, will help the speed of adoption. As seen with the recent NFT mayhem, activity can go from slow to massive very quickly. Take OpenSea, the NFT marketplace, which went from \$329M transaction volume to \$3.4B the next month. One thing to keep an eye on is regulation. EU legislators are currently working on laws pertaining to NFTs, and it won’t be long until US regulators follow.

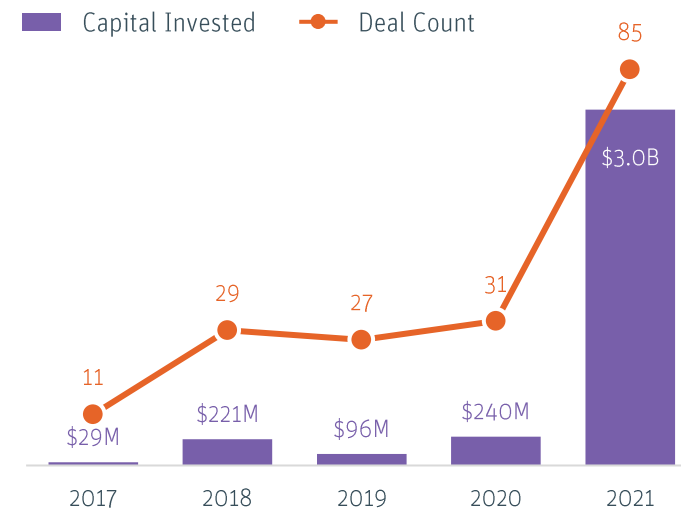
The Evolution of the Internet



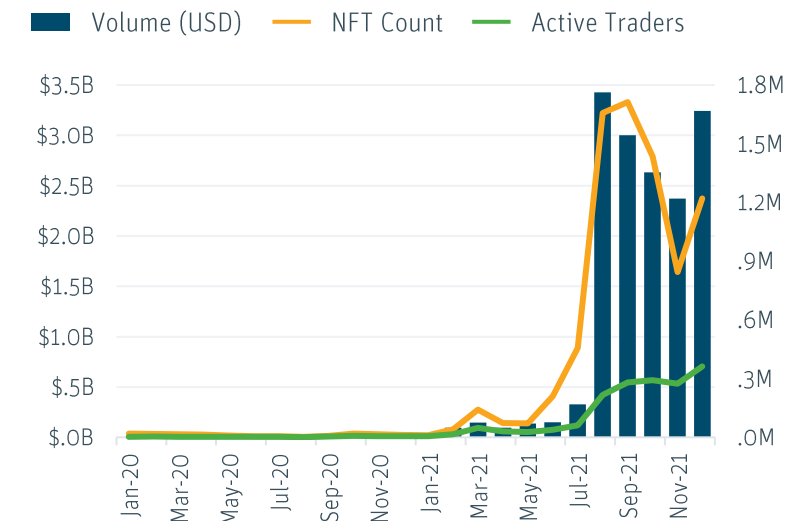
Google Key Word Trends



VC Activity for Web3-Based Companies¹



OpenSea Platform Growth²



Benchmarking: Balanced Growth

Consumer Internet

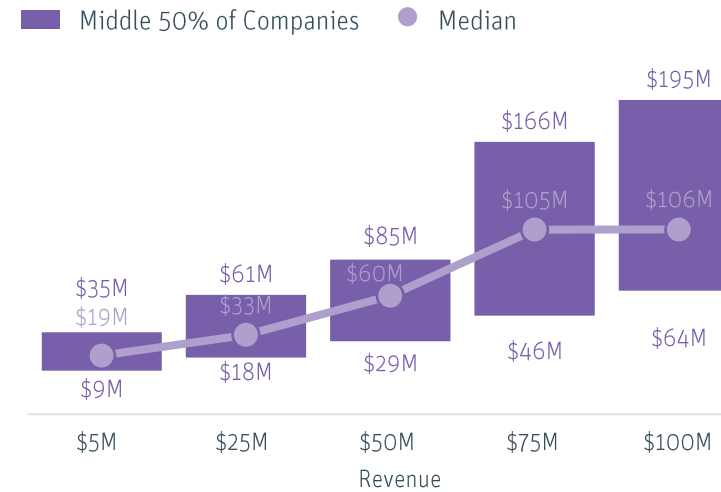
The COVID-19 pandemic brought lockdowns and social distancing, which changed consumer behavior, perhaps indefinitely. This forced conventional retailers and brands to rethink their go-to-market strategies to sustain and improve customer engagement.

Over 18% of US goods are now purchased online, over a 10 percentage point increase since 2012. The merging of the online and offline worlds has brought new challenges for retailers, especially brands – reintroducing “omnichannel.” The term is over a decade old, but changes in consumer behavior accelerated by the pandemic have increased the importance for brands to provide customers a seamless shopping experience from their computer, mobile device, telephone or in-store. Similarly, e-commerce companies recognize the value in physical locations as a sales channel and in capturing behavioral data.

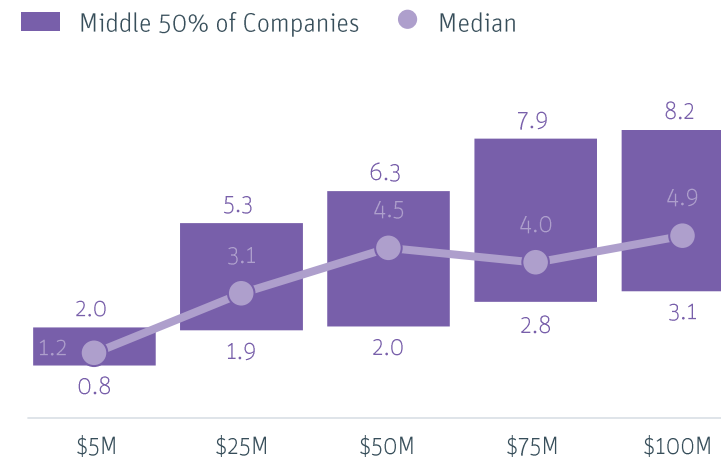
All this change has caught investors’ attention. Venture investment in commerce companies increased over 100% in 2021. On the exits front, highly anticipated IPOs like Warby Parker debuted with even more likely to come, based on the number of commerce “unicorns.” Finally, 2021 saw an uptick in acquisitions as retailers looked to bolster their omnichannel capabilities. All this suggests that retail is at the forefront of a significant reimagining and primed for innovation.

The above narrative was taken from SVB’s “The Future of Retail” report published in January 2022. For a deep dive into the consumer industry, the report can be found [here](#) or at [svb.com](#).

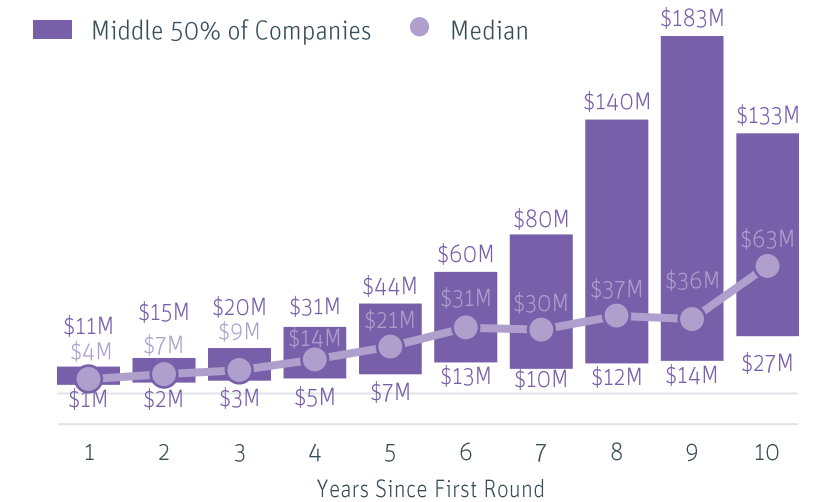
Capital Raised by Revenue Threshold 2021¹



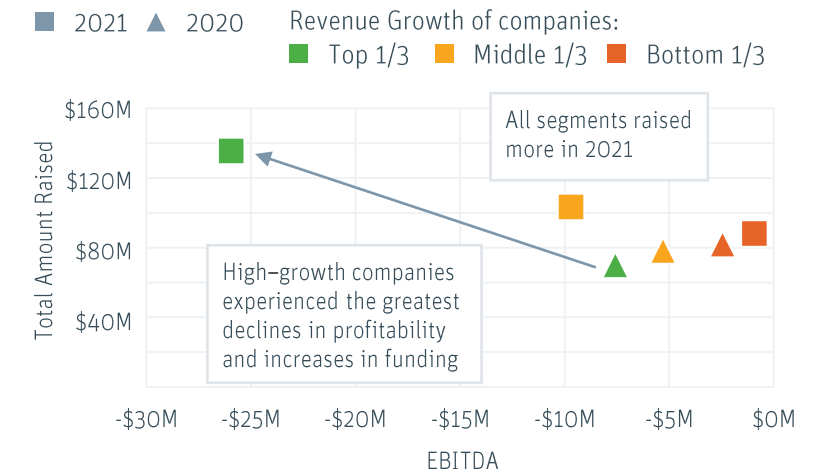
Employee Efficiency: Revenue/Payroll by Revenue Threshold 2021



Revenue by Time Since First Round 2021



Late-Stage² Companies Revenue Growth by Total Amount Raised and EBITDA 2021³



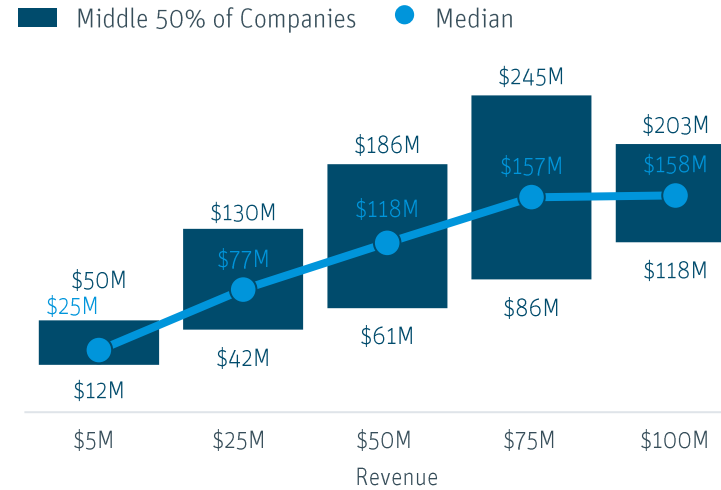
Enterprise Software

It was an incredible year for enterprise software companies in terms of amount invested, multiples and valuations, both in the private and public markets. The low interest rate pushed more investors to seek out alpha, and enterprise software companies—with more familiar operating metrics and business models—is where they looked.

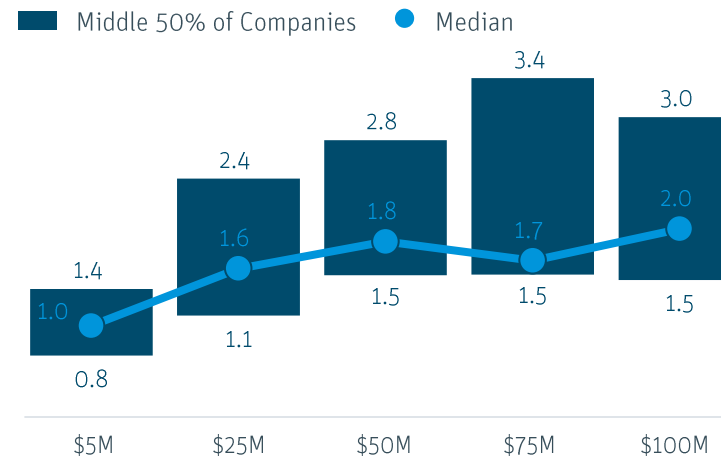
For many companies, it was full-steam ahead to capitalize on expanding market opportunities. The COVID-19 pandemic forced corporations to adopt digital and remote work. Many of the cutting-edge products and services to do this were sold by startups. This period of adjustment increased risk appetite (and budgets) to purchase a broader range of services from startups, including productivity tools, HR and marketing software, automation solutions and data infrastructure. Supply chain software and cybersecurity software (given the need defend the an increased surface area of the enterprise due to accelerated digital transformation), were two of the hottest sectors.

VCs saw this trend and doubled down on the industry. In fact the abundance substantial inflation of enterprise software business. For example, Snowflake—a recently public cybersecurity company—was valued at \$104B on 12/31/2021, based on TTM revenue of \$1B, a 104x multiple. If just Amazon’s AWS business was valued the same way, Amazon would have a \$5.9T market cap, vs. \$1.7T (for all revenue streams). So expect to see VCs be more thoughtful on valuations, which might lead to a dip in the short-term. Whereas, long-term capital will continue to flow to SaaS businesses. So with capital availability tightening, combined with a tech talent crunch, expect an uptick in consolidation, acquihires, down rounds and startup failures. Also, look out for more applied AI in the enterprise, as corporates continue to mature their data infrastructure.

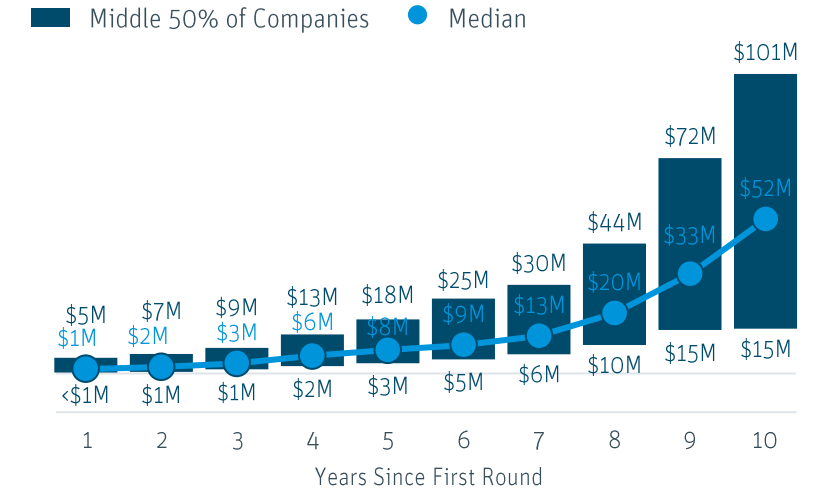
Capital Raised by Revenue Threshold 2021¹



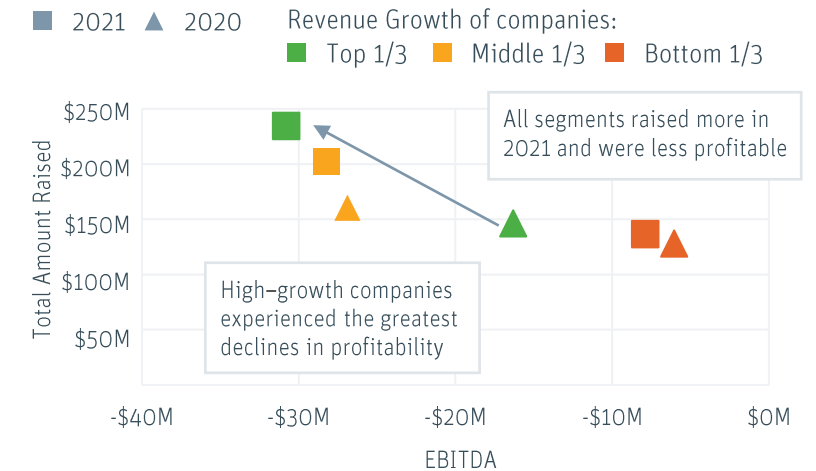
Employee Efficiency: Revenue/Payroll by Revenue Threshold 2021



Revenue by Time Since First Round 2021



Late-Stage² Companies Revenue Growth by Total Amount Raised and EBITDA 2021



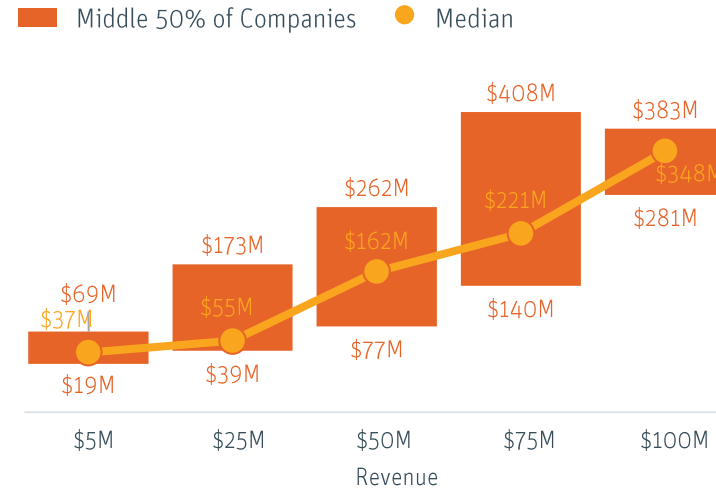
Fintech

Fintech companies were highly desired by investors in 2021. Forced digitization brought on by the pandemic continued to provide a tailwind for many fintech startups, boosting revenue and bolstering balance sheets from added customers and accelerating transaction volumes. Late-stage deals dominated the venture landscape, minting a record number of “dragons.” The best-of-breed companies came back to market quicker, tapping into investors with ample amounts of capital, and valuations continued to climb as investors poured money into perceived winners.

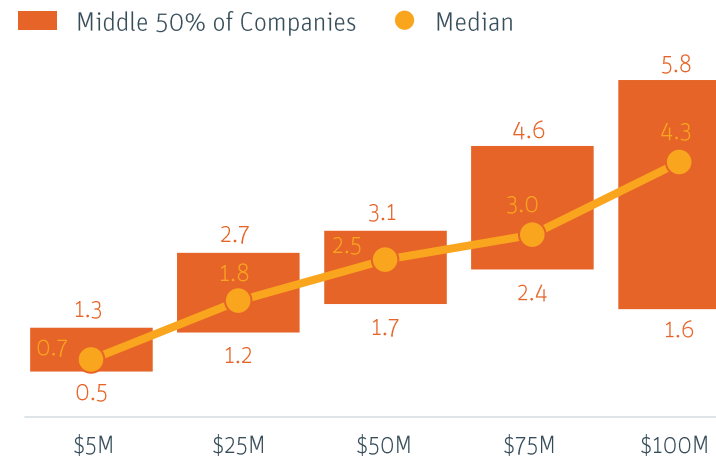
Fintech matured as an industry in 2021, with the likes of Square and Stripe now household names. Fintech darlings such as Robinhood, Affirm, Coinbase and more hit the public markets, bringing long-awaited liquidity to investors, which should get recycled back into the ecosystem. New trends emerged as the year progressed. Digital assets from cryptocurrency to NFTs exploded – setting records in transaction prices and volumes along the way. Not every area of fintech thrived, as Insurtech struggled.

Looking ahead to 2022, crypto is primed for another strong year as the amount of funding and talent floating about makes it feel like a tipping point for new innovations and broader market acceptance. Valuations in the private market remain strong, even though public markets are now seeing some correction. That will likely result in a bit of a haircut in the private market, but FinTech remains desirable, and is favorably positioned for the sweeping wave of decentralized finance and a rising interest rate environment. For a comprehensive overview on the state of fintech, read our latest report [here](#) or at [svb.com](#).

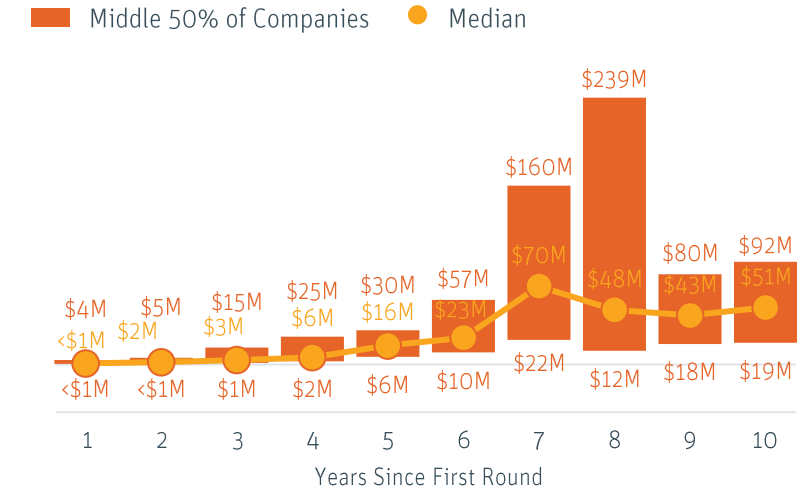
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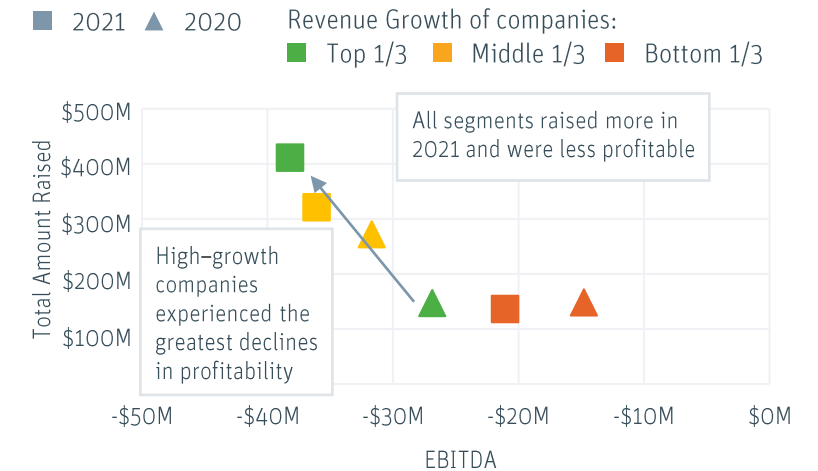
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Revenue by Time Since First Round 2021



Late-Stage² Companies Revenue Growth by Total Amount Raised and EBITDA 2021



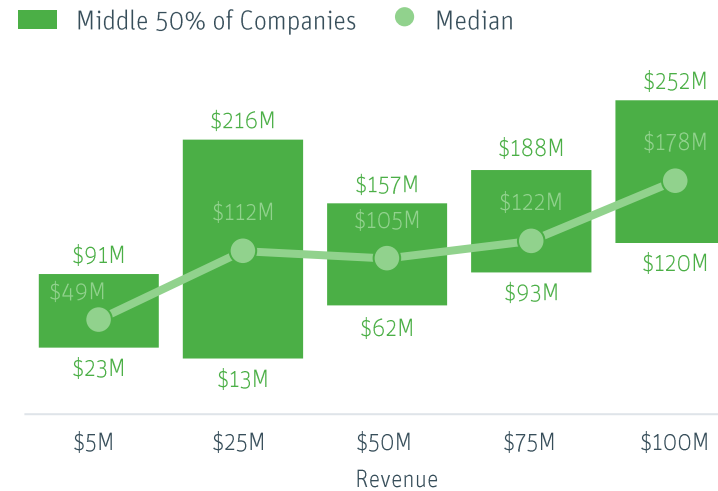
Frontier Tech

A record amount of funding went into Frontier Tech companies in 2021. This was much needed, and now the cohort has a higher proportion of companies progressing from the R&D phase of the business to pilots and production. While SPACs have generally had a bad year, they have been invaluable to frontier tech companies. They have filled the gap between early-stage investment for prototyping and late-stage investment for scale-up. Many industries with a high risk of failure would have previously not even had their shot at success, but SPACs have proved a lifeline, especially for space and electric/autonomous vehicle companies. However, a not-so-positive outcome is the influence of SPACs on private valuations.

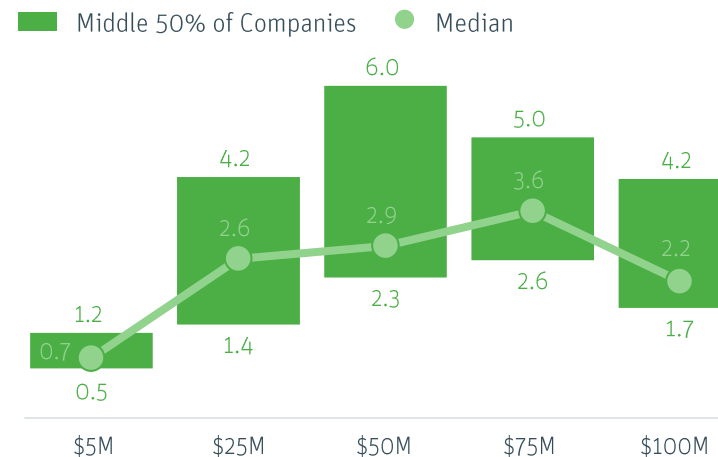
The shift to deploying products and growing the business is more prevalent, but it has been stifled by supply chain constraints. The sector has been hit hard and not just by the lack of semiconductor availability, but also basic raw materials. To get around this, many are ordering 3x-5x the raw materials they need in advance (if they become available) vs just buying when a purchase order is received. In turn, this lumpy supply chain is putting pressures on inventory management and the manufacturing process.

Looking ahead to 2022, space tech and transportation will continue to draw in investors, what with the massive potential market size. Expect to see a reemergence of virtual and augmented reality companies. With Facebook's rebranding to Meta and numerous companies eyeing the metaverse, investors will likely pour money back into the space and corporates will make acquisitions to catch up.

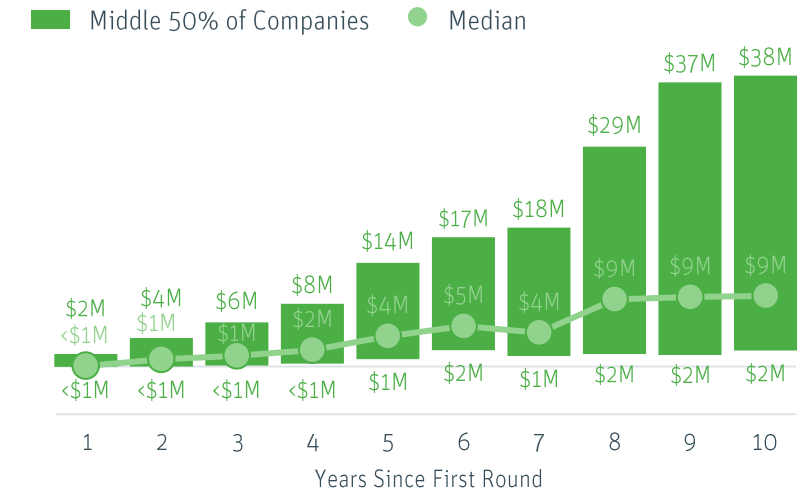
Capital Raised by Revenue Threshold 2021¹



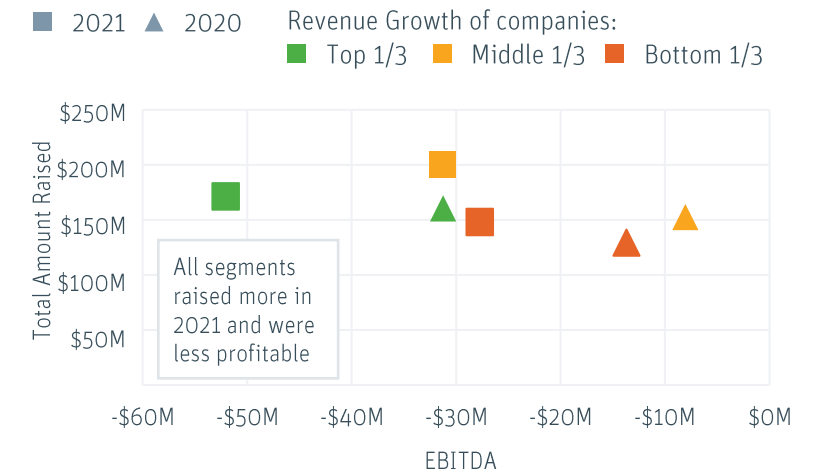
Employee Efficiency: Revenue/Payroll by Revenue Threshold 2021



Revenue by Time Since First Round 2021



Late-Stage² Companies Revenue Growth by Total Amount Raised and EBITDA 2021



Liquidity: Resilient Exit Activity

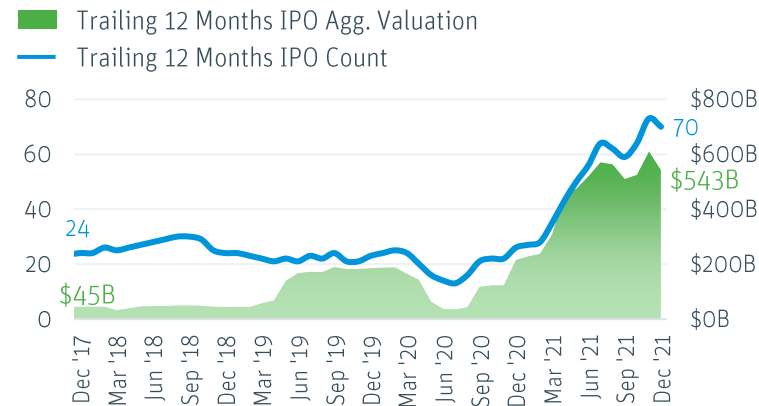
IPOs Slump Despite Record Year

Last year proved to be a record-breaking year on multiple fronts as tech companies hit the markets at a blistering pace, with 70 startups going public in 2021, amassing an aggregate valuation of \$543B. This is roughly the size of Sweden's 2020 GDP and is more than the *combined* aggregate value of US VC-backed tech IPOs for the previous five years!

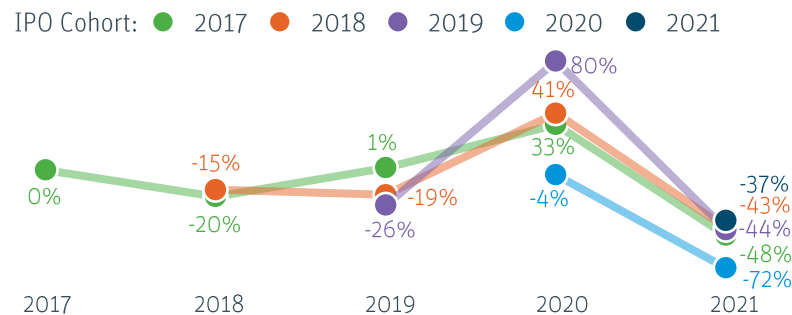
Efficiencies provided by the ongoing virtual nature of IPO roadshows, supportive capital markets and recent IPO cohorts receiving record valuations continued to attract private companies to the public markets, after sitting out for so long. Revenue multiples of this year's cohort ticked up for the fifth straight year as revenue growth recovered from a 2020 dip. Profitability is coming back in vogue as the initial flood of public investors to newly minted tech companies starts to temper from rising valuations. The top quartile revenue multiple surpassed 30x for the first time, and the bottom quartile stood at 10x—the same median revenue multiple as two years ago. However, this premium hasn't necessarily translated to positive performance.

Despite tech IPOs delivering strong initial performance—the median first day pop was 30%—growth stocks began to fall out of favor as the year progressed in part due to heightened valuations, rising inflation and interest rate hike uncertainty. While this may cause some pause, there remains a substantial backlog of high-quality companies poised to access markets. Continued volatility in growth stocks is likely to increase price sensitivity and create a more challenging execution environment. Still, high-quality companies will continue to attract investors as appetite remains strong.

US VC-Backed Tech IPO Activity



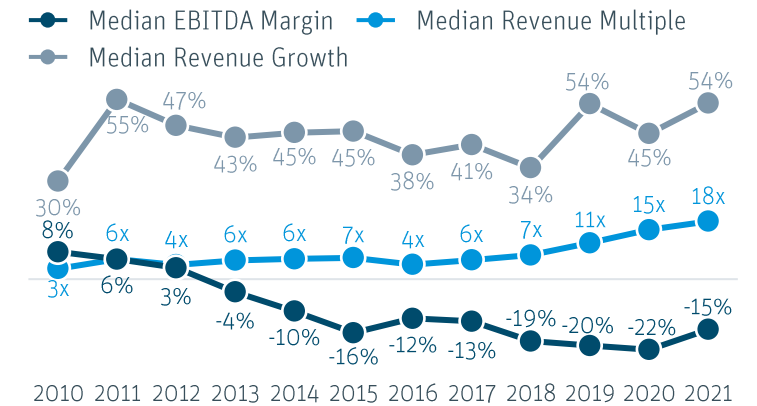
IPO Cohort Relative Performance to S&P 500



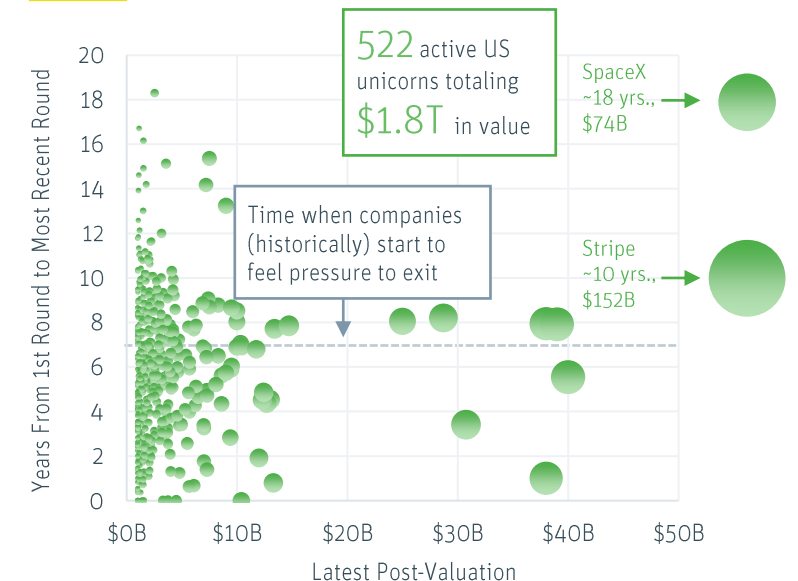
Year	S&P 500 Performance	% Above IPO Price (Cohort Year End) ¹	% Above IPO Price (All) ²
2017	19%	54%	54%
2018	-6%	33%	43%
2019	29%	26%	38%
2020	16%	58%	67%
2021	27%	20%	39%

Notes: 1) For each IPO cohort's respective year (e.g., 26% of the 2019 IPO cohort was above issue price at 12/31/2019). 2) Rolling cumulative percentage (e.g., as of 12/31/2019, 38% of all IPOs from 2017-2019 were above issue price.)
Source: PitchBook, S&P Capital IQ, SEC and SVB analysis.

Fundamentals for US VC-Backed Tech IPOs



The IPO Backlog: Active US Unicorns



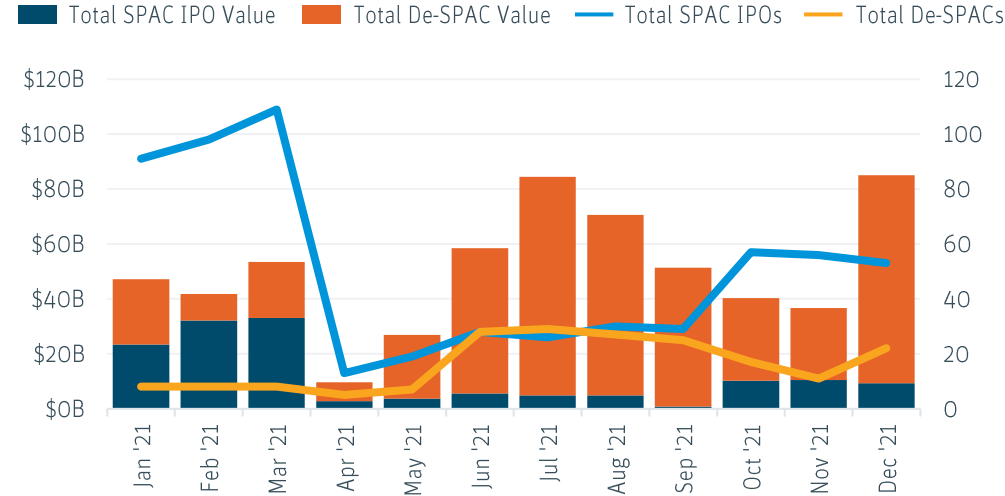
SPACs Against the Wall

It's safe to say 2021 was an eventful year for SPACs. Following on from a record year in 2020, SPAC IPOs were trending higher until April when the number dropped by 88% from 109 to 13, due to increased regulator scrutiny, difficulties finding targets and poor market performance. Ironically, de-SPAC activity increased mid-year, although this didn't make a dent in the number of SPACs searching targets, which rose 152% to 575. The largest de-SPAC was Lucid Motors at a \$20B valuation and a closing price of \$38.05 (SPAC shares are typically priced nominally at \$10)!

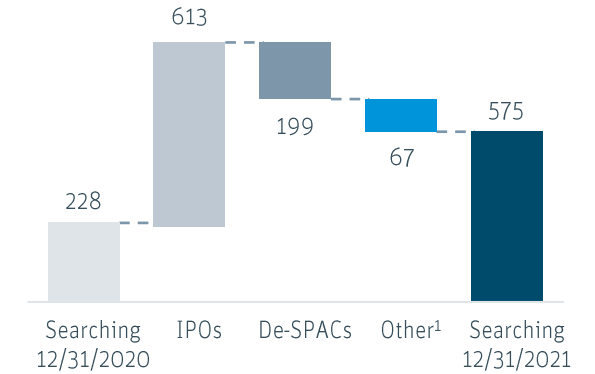
Redemption rates, when SPAC sponsors ask for their money back, have been on the rise with the average rate rising from 25% in June to 67% by November. The consequence is either SPACs have to scale down the size of target they can merge with or raise a larger PIPE financing to make up the difference. The number of PIPE commitments gradually declined in 2021, with a slight rebound in December. So SPACs with high redemption rates will have a more limited group of targets in an arena already with plenty of competition. On the regulatory front, two legislative proposals, H.R. 5910 and H.R. 5913, passed the House Committee on Financial Services and await action by the full US House of Representatives. H.R. 5910 would eliminate publishing forward-looking information, while the other prohibits retail investor participation in SPAC IPOs (unless certain requirements are satisfied).

Around 30% of SPACs searching for a target are due to expire in 2022. For the de-SPACs in 2021, 84% had negative returns by year-end. With looming regulation, a sizable expiration cliff and continued weak performance, we expect a higher level of redemptions and the number of liquidations to increase from 1 in 2021.

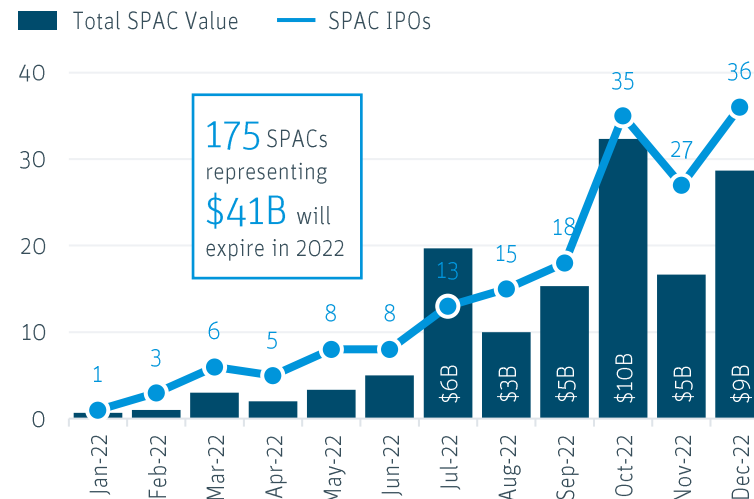
US SPAC IPOs and De-SPACs Activity



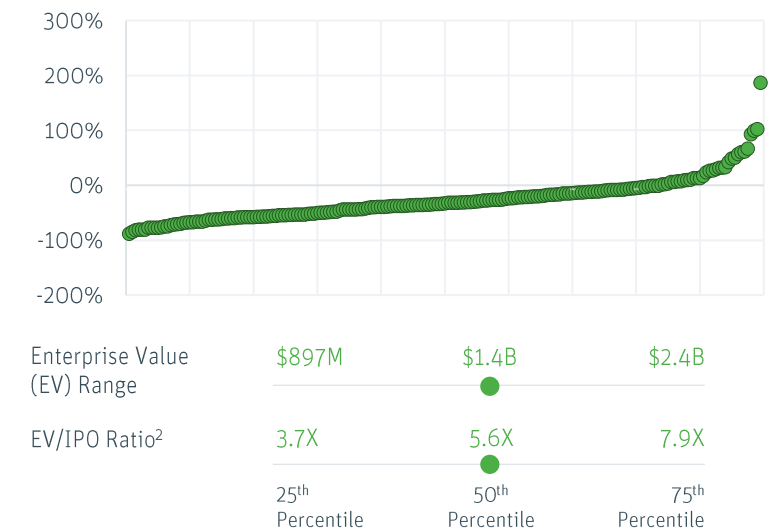
Change in SPACs Searching for Targets



US SPAC Expiration Schedule for 2022



2021 US De-SPAC Returns in Ascending Order



Notes: 1) Includes in-process deals, expirations and liquidations. 2) Ratio represents the enterprise value of the de-SPAC (company merged with) to the IPO of the SPAC. The majority of the difference accounted for by the PIPE financing. Source: PitchBook, S&P Capital IQ and SVB analysis.

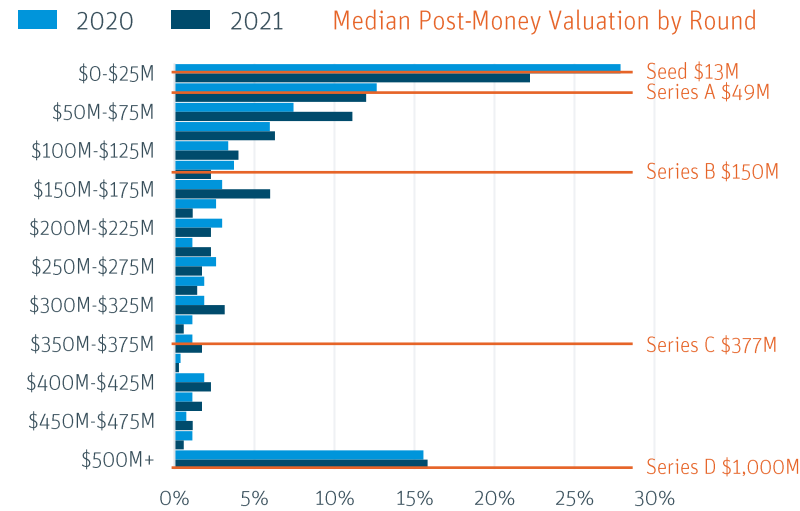
M&A Here, There and Everywhere

For the first time in a while, M&A of US VC-backed companies saw a noticeable increase, rising from 996 in 2020 to 1,330 in 2021, a 34% increase. For context, between 2014 and 2020, the number of US VC-backed M&A deals had fallen to between 900 to 1,100 deals. It was a big year for PE with 15 of the top 20 acquirers in 2021 being PE firms, led by TA Associates Management. Only Microsoft (#7) and Meta (#17) of the “Big Tech” cohort made the top 20 accompanied by Coinbase (#9) that went public in April.

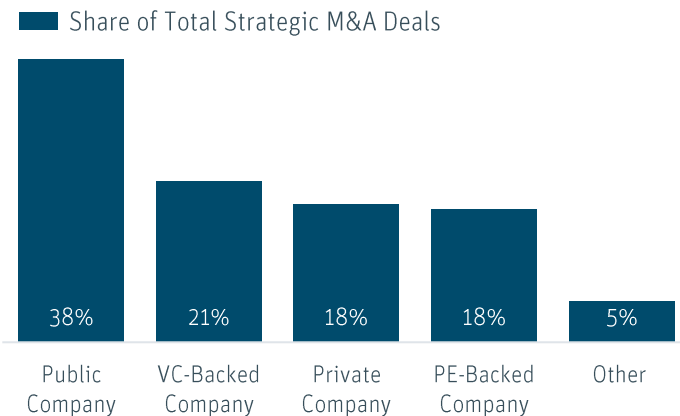
The distribution of deal sizes is heavily concentrated at either end of the spectrum. There were 26 deals over \$1B, which for context is now the median Series D post-money valuation. At the other end of the spectrum, deals under \$50M still dominated (34% of all deals) but to a lesser extent than in 2020 (41% of all deals). Despite the oodles of capital entering the venture ecosystem, it looks like a number of companies might have been forced into being acquired. If the rule of thumb for cash runway is 18 to 24 months, then over 50% of transactions occurred above this range, particularly at the early-stage, which makes sense given the difficulty for startups to gain traction.

With cash stockpiles for public companies increasing, it shouldn't come as a surprise that they had the greatest share of strategic M&A deals. A trend that continued was the number of VC-backed companies making acquisitions, which accounted for more strategic purchases than private and PE-backed companies. Finally, acquisitions of foreign companies by US acquirers leaped 49% in 2021, drawn in by favorable valuations. The headline deal was Square's (now Block) \$29B purchase of buy-now-pay-later company Afterpay.

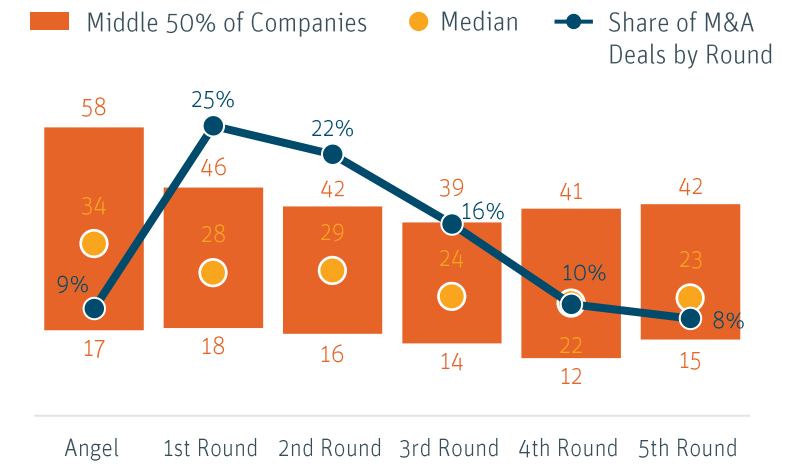
US M&A Activity by Deal Size¹



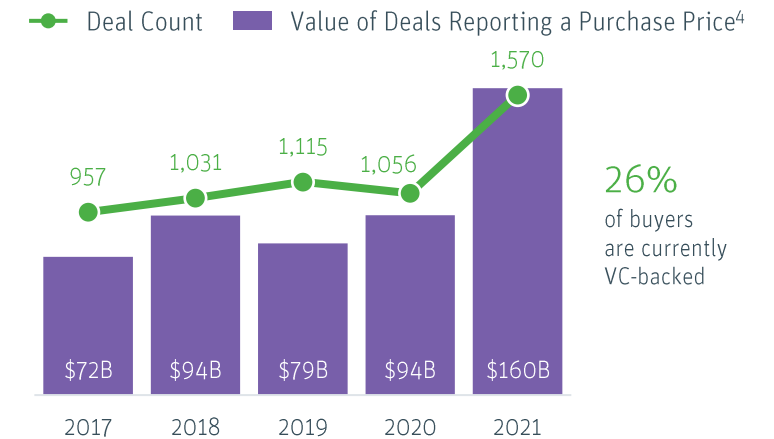
US Strategic M&A Activity by Acquirer Type^{1, 3}



US M&A Activity: Time in Months Since Last Venture Round Raised^{1, 2}



US Acquirer Activity: Foreign VC-Backed Companies



International: Greener Pastures

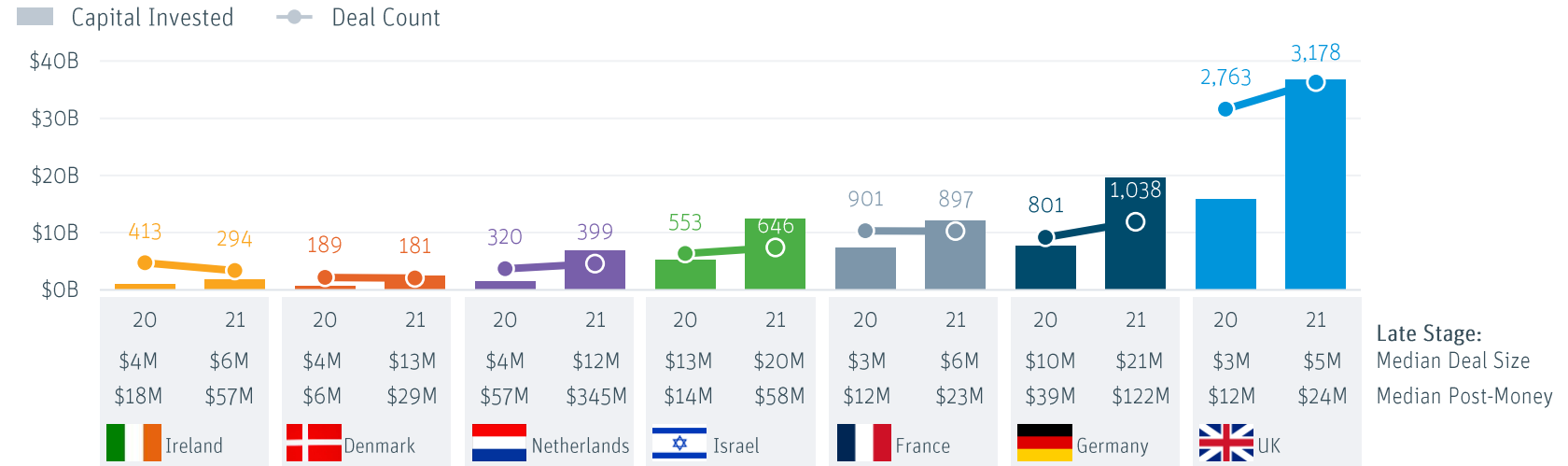
EMEA Grows Unicorns

The pace of innovation in Europe, the Middle East and Africa (EMEA) is accelerating. In 2021, the UK retained the top spot with \$36.8B in funding, more than double 2020's amount. However, it was the Netherlands that saw the biggest increase in VC (\$7.9B up from \$1.5B) among the top five highest-funded countries in EMEA. The eye-popping growth in investment keeps up with trends in the US and Canada. According to Atomico's State of European Tech, US investors participated in 28% of all deals, up from 19% in 2019.

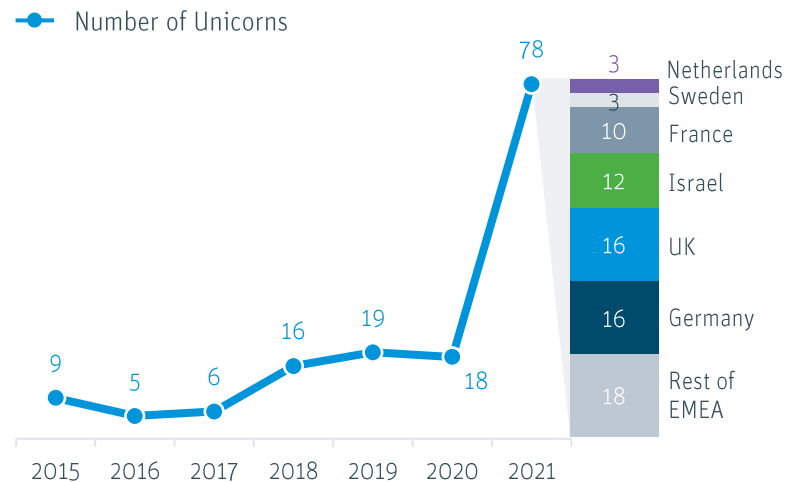
In 2021, 78 EMEA-based vc-backed unicorns were minted, which are more than the last five years combined. When benchmarked against a cohort of US unicorns, EMEA's are remarkably similar in terms of time to reach unicorn status and the amount of funding raised to get there. In 2021, three EMEA fintech companies reached dragon status. To achieve this a company must be valued at least \$12 billion net of the amount VC raised: Revolut (UK) \$33B, Klarna (Sweden) \$46B valuation and Checkout.com (UK) \$40B. With these fantastically large companies, IPO speculation is rife. Revolut and Klarna are expected to go public in 2022.

In September 2021, the US-EU Trade and Technology Council (TTC) held its inaugural meeting and released its first agenda, which includes strengthening semiconductor supply chains and a unified approach to regulating global tech platforms. In January 2022, the European Parliament adopted the initial draft of the Digital Services Act, which will prevent platforms from targeting ads based on personal demographic information, and hold platforms responsible for illegal content. The US followed suit, introducing "The Banning Surveillance Advertising Act," which bans digital ad targeting on platforms like Meta and Google.

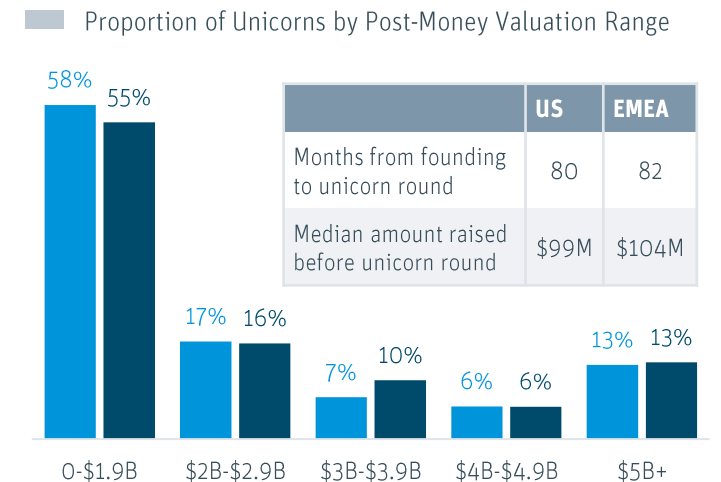
VC Investment by Select Countries¹



Number of VC-backed Unicorns Over Time²



Unicorns by Valuation: US vs. EMEA²

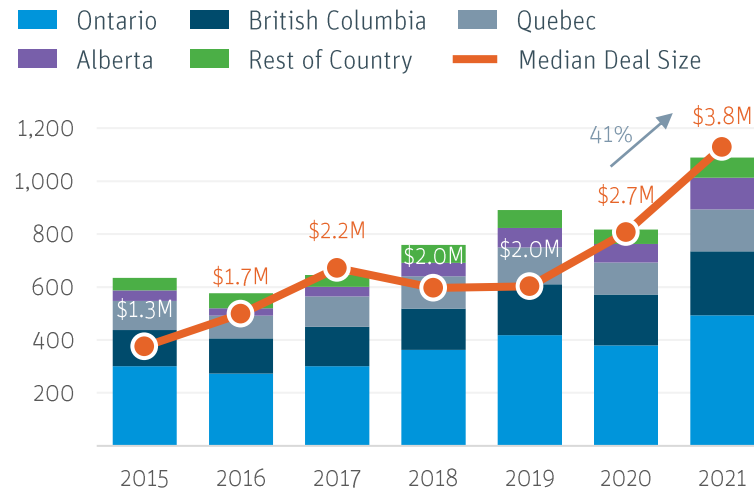


Canada's Sweet \$16 Billion

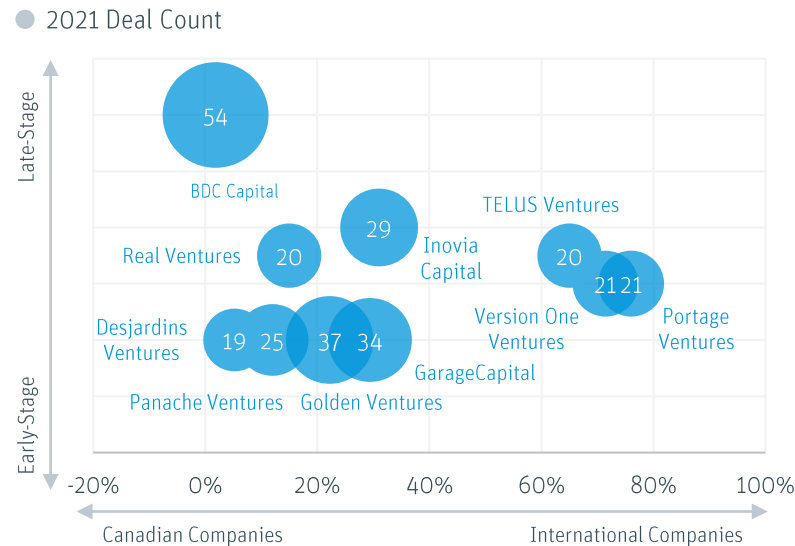
2021 was a banner year for Canada's tech ecosystem. Canadian companies raised over \$16B CAD in 2021, with \$8.8B coming from 44 deals that were over \$100M CAD in size. Like the US market, valuations spiked with the median valuation more than doubling from \$11.7M to \$26.0M. While Ontario, British Columbia and Quebec received the largest shares of venture investment, Alberta is catching up with 71% more deals in 2021 than 2020. This is promising news, given ongoing investment in the province's tech ecosystem. In 2021 Opportunity Calgary Investment Fund (OCIF) provided funds and resources for San Francisco-based accelerator Plug and Play to expand into Alberta. The OCIF also selected 500 Global's Alberta Accelerator, Alberta Pre-Accelerator and Alchemist Accelerator for funding. To keep up with the demand for tech talent, the province launched "Accelerated Tech Pathway," an immigration express entry stream targeting tech workers.

A record 14 Canadian companies reached unicorn status in 2021, notable because only four unicorns existed previously: Wealthsimple, ApplyBoard, Hootsuite and Shopify (TSE: SHOP). Most new unicorns were in the enterprise software space. Trulioo's \$476M Series D, Dapper Labs's \$440M Series A and Clearco's \$440M Series C were the largest VC rounds in 2021. Notably, over half of their investors are US-based. The Business Development Bank of Canada (BDC) played a vital role funding innovation, with four investments in 2021. It also partnered with the Canadian government and the National Aboriginal Capital Corporations Association to launch a first-of-a-kind fund (\$150M in size) supporting indigenous entrepreneurs.

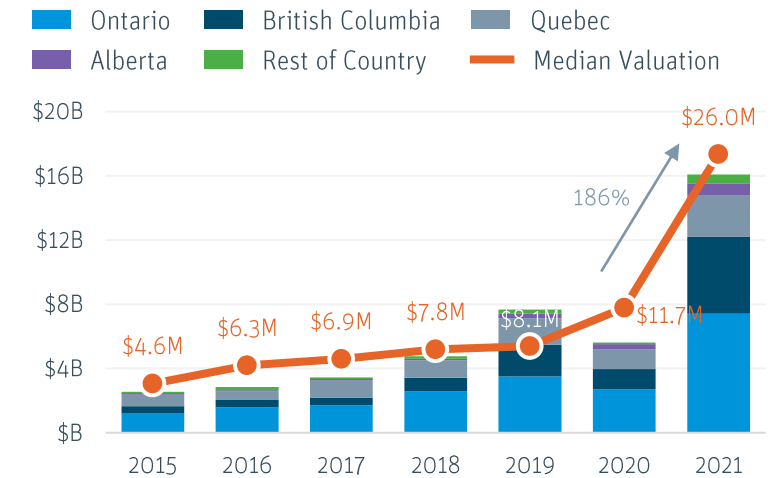
Canada VC-Backed Tech Deals¹



Notable Active Canadian VC Investors 2021²



Canada VC-Backed Tech Investment¹



Canadian Unicorns Minted in 2021³

Company	Sector	Rounds to Get to Unicorn (>\$1B) Status	Most Recent Post-Money Valuation (USD)	% US Investors
1Password	Enterprise	2	\$2.0B	56%
Ada	Enterprise	9	\$1.2B	36%
Blockstream	Fintech	6	\$2.6B	57%
CLEARCO	Fintech	7	\$2.0B	72%
Clio	Enterprise	7	\$1.6B	42%
Dapper	Enterprise	5	\$7.6B	61%
Figment	Enterprise	6	\$1.4B	65%
FreshBooks	Enterprise	6	\$1.0B	65%
hoppr	Enterprise	9	\$3.5B	48%
NEXII	Enterprise	7	\$1.2B	17%
SSENSE	Consumer	2	\$4.1B	0%
terstorrent	Frontier Tech	5	\$1.0B	50%
Trulioo	Enterprise	9	\$1.8B	72%
>isier	Enterprise	5	\$1.0B	73%



Notes 1) Canadian dollars. Venture capital deals exclude accelerator/incubator deals. 2) Deal stage based on median deal numbers for investors portfolio in 2021. Excludes accelerator/incubator deals. 3) A unicorn is defined as a \$1B (USD) post-valuation converted. Source: PitchBook and SVB analysis.

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