Silicon Valley Bank
A Division of First Citizens Bank

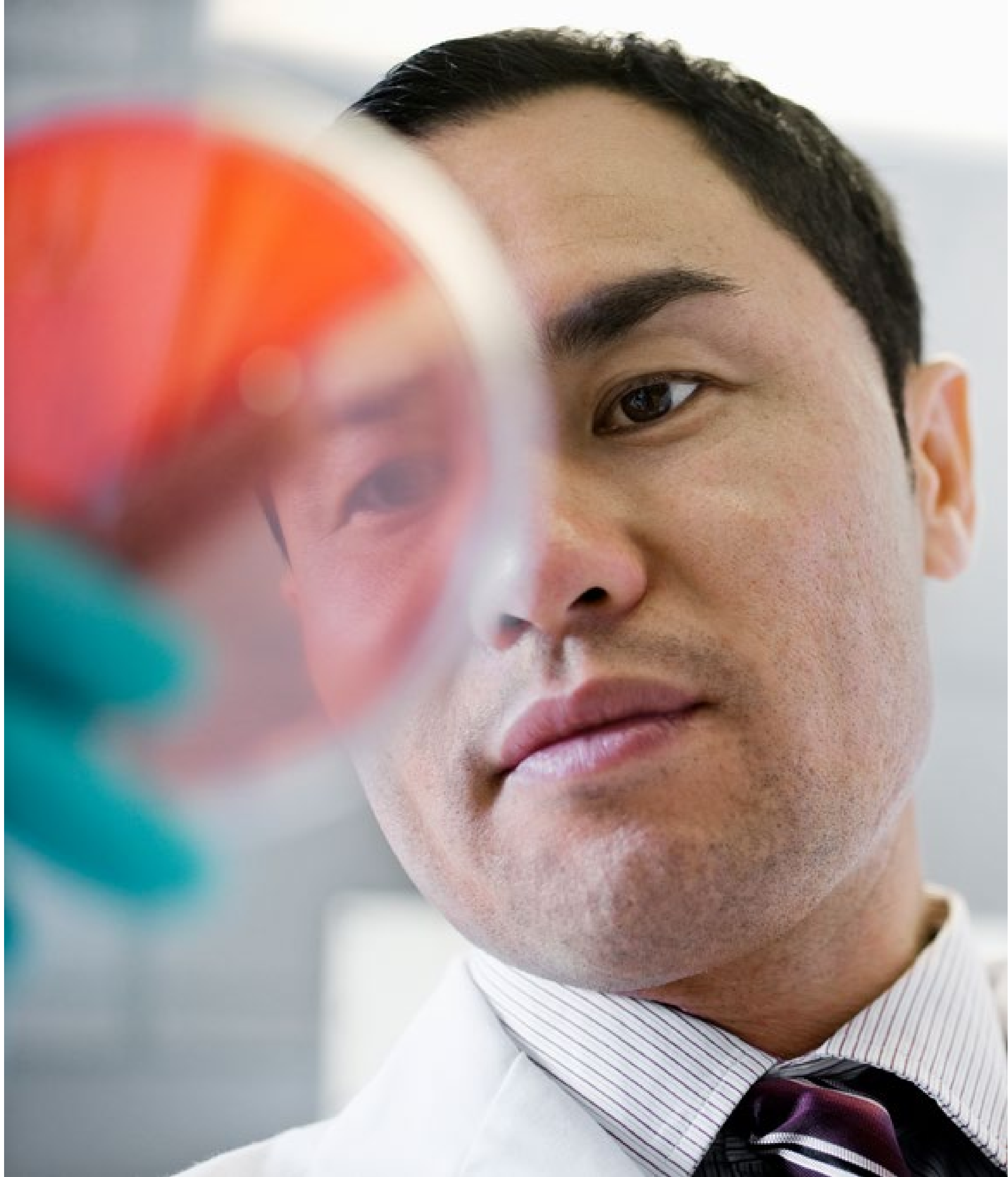
Healthcare Investments and Exits

Q1 2023 Update

Biopharma | Healthtech | Dx/Tools | Device

Silicon Valley Bank
A Division of First Citizens Bank

Contents



svb Silicon Valley Bank
A Division of First Citizens Bank

Executive summary

After a whirlwind two months at SVB, we're thrilled to continue focusing on what we do best: serving our clients. Yes, some things have changed in the last few weeks. SVB is now a division of First Citizens Bank, a move that strengthens our ability to deliver value to the communities we serve. What hasn't changed is our steadfast commitment to the innovation economy. We continue to deliver specialized lending and financial solutions, coupled with premium client service, for innovators redefining the future – as we have for 40 years. It's what we do, and at our core, it's who we are.

As part of our commitment, we are pleased to bring you the *Healthcare Investments and Exits Q1 2023 Update*, a comprehensive analysis of the trends, opportunities and challenges in today's healthcare innovation market.

There's no sugar-coating it. The past year has been difficult for stakeholders across the innovation economy. Tough market conditions including elevated inflation, rising interest rates, geopolitical risk and falling consumer sentiment have created uncertainty and led to a general pullback in investment (see page 8) and growth plans. Healthcare and life science companies have faced these challenges while grappling with unique hurdles of their own. For example, a heightened demand for clinical milestones (highlighted on page 9) and difficulty selling devices into hospitals (page 13).

Despite these challenges, there are reasons for optimism. Downturns are a great time for promising companies to focus on core products, add talent and build value. Historically, challenging times have yielded some of the most disruptive companies. We see signs of growth at the early stage where valuations and investment have been buoyed by strong interest from investors (page 11). At the later stages, investors are marshalling resources to support promising portfolio companies via insider extension and bridge rounds.

While the near-term outlook may be foggy, our belief in the resilience of the innovation economy remains unwavering. With proper steering, the most innovative companies will not only survive this slump but emerge stronger because of it.

Jackie Spencer
Head of Relationship Management for Life Science and Healthcare Banking
Silicon Valley Bank

Kale Frank
Managing Director
Biopharma, Tools and Dx
Silicon Valley Bank

Raysa Bousleiman
Senior Associate
Healthcare Insights
Silicon Valley Bank

Healthcare market highlights: Fundraising, investments and exits

Uncertainty remains in the private investment landscape; investors active on selective basis in Q1'23

Fundraising

Venture healthcare fundraising remained strong in Q1'23 despite late-stage and exit opportunities remaining limited. Limited partner (LP) capital has been tied up in late-stage companies, which limits return distributions. While this caused more investors to slow late-stage fundraising, funds were able to secure capital allocated to early-stage investment. Twenty-seven funds closed in Q1'23, signaling that overall interest in healthcare investment remains strong. There is still an unprecedented amount of healthcare-dedicated venture capital to be deployed. We believe top companies with the right story will continue to attract investor interest, albeit at investor-driven valuations.

Investments

Investment pace continued to slow in Q1'23 as investors weather the continued macro uncertainty and market downturn. There is an increase in insider-led bridge rounds as companies continue to face difficulty attracting new investors while investors' focus has shifted to their portfolio companies. The extended time frame between fundraises is squeezing companies to preserve cash and hit milestones (clinical, operational, partnerships) sooner. Early-stage investment activity was promising in Q1'23 and actually increased from Q4'22 in all sectors but biopharma. There will likely be an increase in larger, outsider-led rounds in H2'23. We anticipate many of these rounds will be down rounds or flat "engineered" rounds with sweeteners for new investors, resetting 2021-vintage valuations.

Biopharma

Market uncertainty heightened investor demand for clinical milestones and drove companies to prioritize assets that can generate in-human proof-of concept. Biopharma investment in 2023 should remain around 2019 levels, although with increased dollars in autoimmune and respiratory indications. We will continue to see large pre-IPO rounds, but likely at a single digit pace per quarter as investors are more selective. Many of the highly valued companies that raised their most recent financings in 2020 and 2021 but cannot go public will either close down rounds or merge with another private company to augment pipeline or technology. We estimate 15-25 IPOs for 2023 and 15-20 M&A, including increased comp bio acquisitions.

Healthtech

Late-stage investment continued to slow in Q1'23, with lower valuations and fewer mega-deals, as public markets continue to put pressure on private valuations. Top healthtech companies have continued raising capital through insider and bridge rounds. Demand for proven value-based care models, mental healthcare and chronic condition management remain high, with top companies that move the needle in these areas successfully raising capital. The public markets remain closed, with zero IPOs in Q1'23. We anticipate that healthtech companies will continue to delay IPO plans until at least late 2023. We also anticipate tech and healthtech acquirers to become more active in H2'23.

Dx/Tools

Investment in dx/tools should rebound from H2'22 to finish 2023 at $8B-$9B – slightly behind 2022's pace – led by early-stage activity. There will likely be selective larger financings ($100M+) with participation from growth/private equity (PE) investors and sovereign wealth funds, likely in liquid biopsy and precision-medicine dx analytics. We expect IPOs to continue to be muted in 2023 as the market watches for a rebound in performance for 2020 and 2021 IPO cohorts. Private companies with unicorn valuations will likely need to wait until 2024 for big M&A exits and may continue to build value by acquiring other venture-backed technologies at favorable prices. M&A deals will likely rise double-digits in 2023 led by dx tests and dx analytics deals.

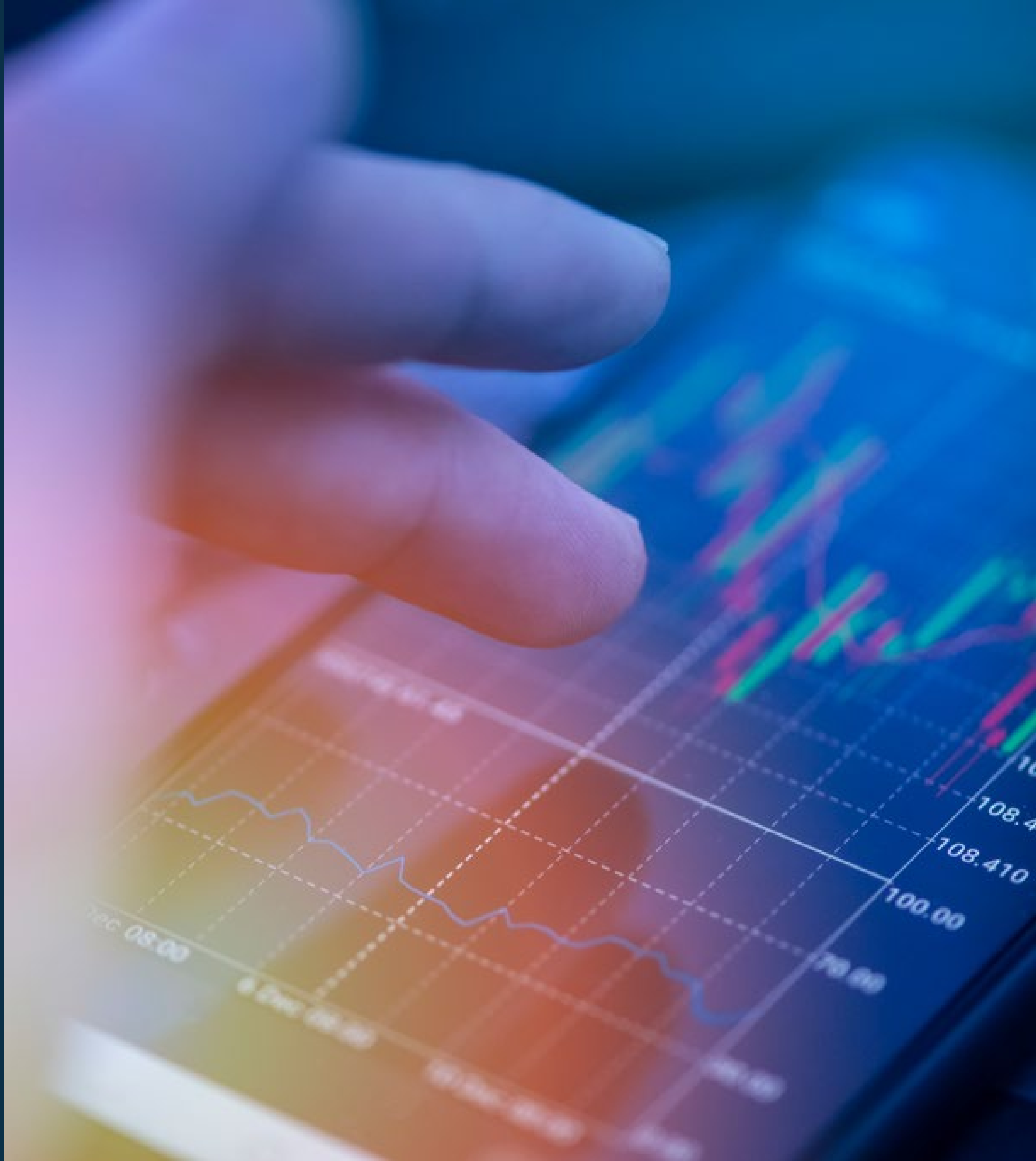
Device

Device investment should hit $6B-$8B in 2023, closely mirroring 2020's pace. We expect fewer $100M+ deals in 2023 as many top companies raised rounds in 2022, and it is uncertain how many later-stage opportunistic device investors will continue to be active. The IPO window will likely stay closed in 2023. However, there will be a strong group of IPO candidates for 2024 with growing revenues and high gross margins, some of which may spur large-dollar acquisition interest in 2023. Overall, we expect M&A deals to increase to the mid-teens in 2023.

Source: SVB proprietary data, as of 3/31/23

Healthcare fundraising and investments

US, EU & UK



Continued demand for life science funds

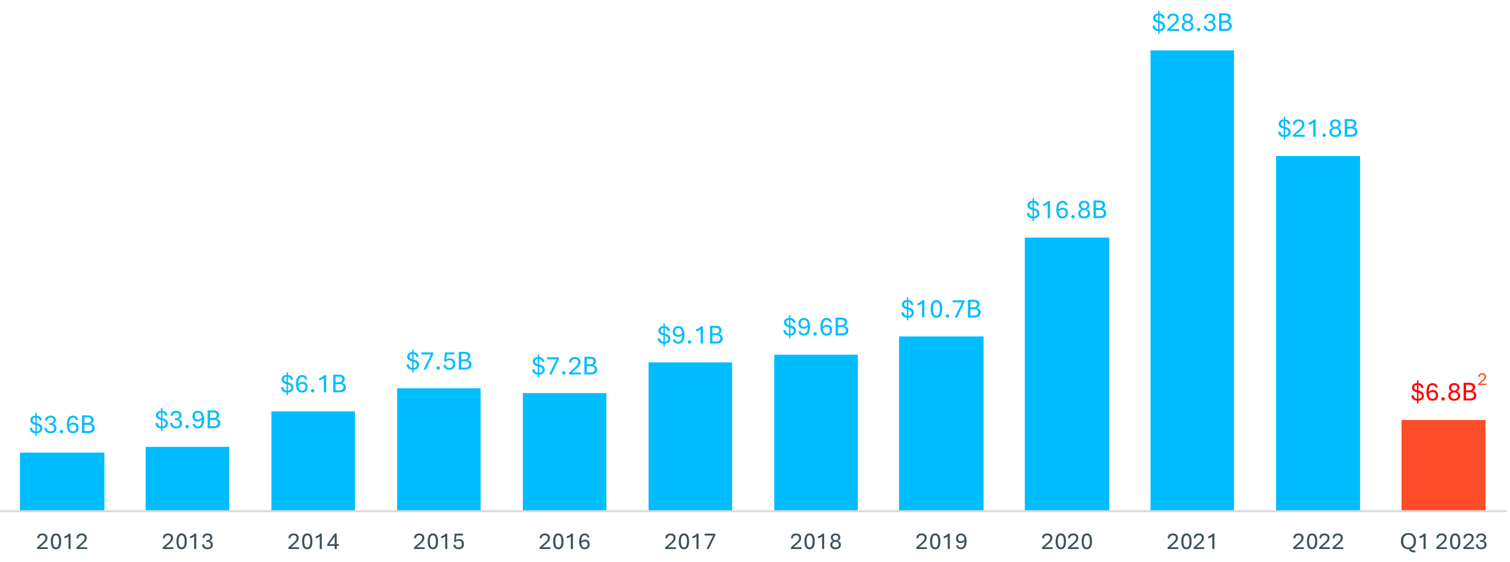
In the first half of 2022, venture capital (VC) investors accelerated their healthcare fundraising, beating the record pace of 2021. Despite a slowdown in the second half of 2022, venture funds raised nearly $22B to invest into healthcare companies, marking the second-biggest fundraising year ever. In Q1’23, the pace of fundraising accelerated slightly to $6.8B. This could be a sign of investor excitement around expectations of improving macro trends and a shift to investor-friendly deal terms.

Healthcare exits fell sharply in 2022 and haven’t recovered as public valuations remain muted and late-stage investors focus on “cheap” public companies. Consequently, LP capital remains tied up in late-stage private companies with uncertain exit opportunities. This year, we have seen early-stage investors eschew late-stage investing in favor of their traditional seed and Series A strategies. For example, Lux Capital, a primarily early-stage investor, raised its 2023 fund without a dedicated late-stage entity. In March, Y Combinator scaled back on growth stage investments by shutting down its continuity fund and cut nearly 20% of staff.

Despite the slowdown, VCs remain well-positioned to fund new healthcare companies with over $55B raised since 2021.

US Healthcare Venture Capital Fundraising[1]

2012-2023



Notable Funds with Allocations to Healthcare[3]

Notes: 1) US Healthcare Venture Capital Fundraising defined as an approximation of healthcare investment dollars to be invested by firms that historically invest in +50% US companies. 2) Estimates based off of anecdotal conversations with investors and expert analysis of last fund deal pace and focus on healthtech. 3) Notable funds based on largest estimated allocation to venture healthcare.

Source: PitchBook and SVB proprietary data.

Investment continues to slow in 2023, but no free fall

In 2022, the public market's dramatic pullback and federal interest rate hikes caused sharp drops in investment dollars from 2021's historic highs. This slowdown continued into Q1'23 but not as sharply, with Q1'23 investments dropping 13% from Q4'22. The sharpest drops were seen in Q2'22 and Q3'22, which both dropped 30% from the prior quarter.

This year, concerns about slower economic growth and rising inflation remain top of mind, while poor public market performance continues to apply downward pressure on the private markets. However, investment dollars this year remained above average quarterly investment for every quarter before 2020. The main reasons for drop-off in investment include: 1) Later-stage companies need to demonstrate more progress to new lead investors as investors focus on inside rounds for existing portfolio companies, and 2) many later-stage investors have paused new deal activity as public market valuations remain depressed (and attractive), causing the number of larger crossover pre-IPO deals to decline significantly.

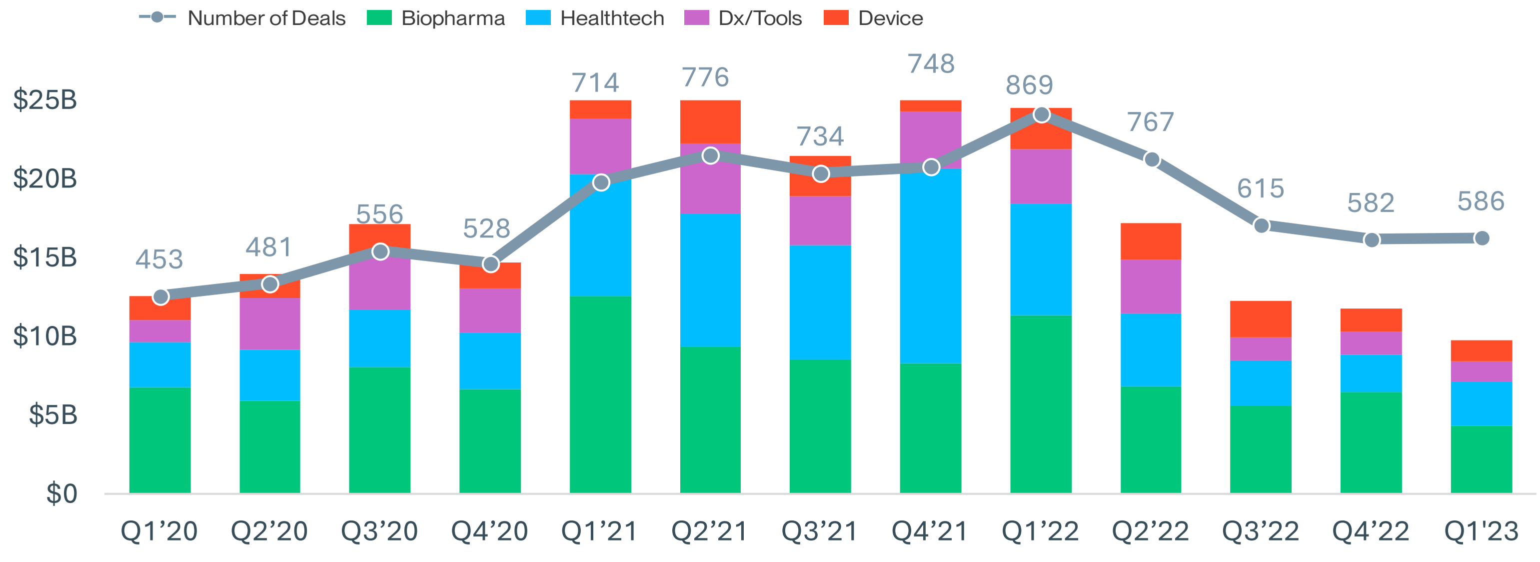
Time will tell if we've found a bottom or will return to pre-pandemic levels, but optimism is warranted as VCs have raised more investable cash in the last two years than ever before.

svb Silicon Valley Bank

A Division of First Citizens Bank

VC Dollars and Deals by Healthcare Sectors

US, EU & UK



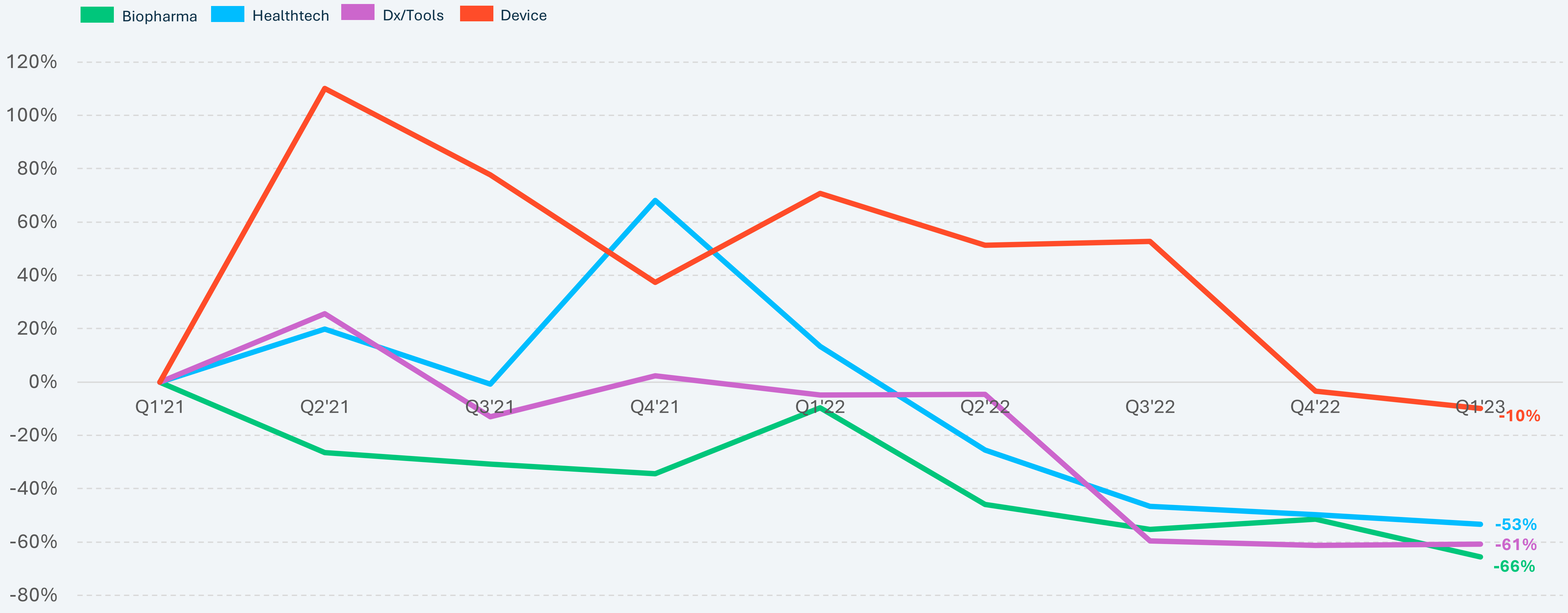
	2020			2021			2022			Q1 2023		
Sectors ($M)	**US**	**EU & UK**	**Total**	**US**	**EU & UK**	**Total**	**US**	**EU & UK**	**Total**	**US**	**EU & UK**	**Total**
Biopharma	22,594	4,795	27,389	31,730	6,919	38,649	25,379	4,914	30,292	3,498	831	4,328
Healthtech[1]	11,760	1,613	13,373	33,031	2,869	35,900	13,074	3,865	16,940	2,584	203	2,786
Dx/Tools	9,116	1,784	10,900	11,964	2,703	14,667	8,199	1,619	9,817	1,020	369	1,389
Device	5,769	821	6,590	6,774	2,429	9,203	7,084	1,598	8,683	979	357	1,335
Total	**49,239**	**9,013**	**58,252**	**83,499**	**14,920**	**98,419**	**53,736**	**11,996**	**65,732**	**8,092**	**1,759**	**9,851**

Note: 1) Healthtech deals that overlap with other sectors are not included in healthtech totals on this slide but are included in healthtech-specific analyses on page 11. Financing data include private financings by venture-backed companies in the US, EU and UK. Dates of financing rounds are subject to change based on add-on investments.

Source: PitchBook and SVB proprietary data.

Healthcare investment down but stabilizing in Q1’23

Percent change in investment dollars by sector relative to Q1’21



svb Silicon Valley Bank
A Division of First Citizens Bank

Note: Financing data include private financings by venture-backed companies in the US, EU and UK. Dates of financing rounds are subject to change based on add-on investments.
Source: PitchBook and SVB proprietary data.

Heightened demand for clinical milestones

Early-stage investment in Q1'23 ($816M) slowed from its already slowing pace in Q4'22, nearing the quarterly investment paces we saw in 2018 and 2019

Promisingly, deal size and valuations remain strong for early-stage deals, likely due to the conviction required by investors to get a deal closed and the desire to fund companies through meaningful milestones needed to catalyze another round. However, as investors continue using funds to shore up existing portfolios, funding for new early-stage opportunities may continue to decline.

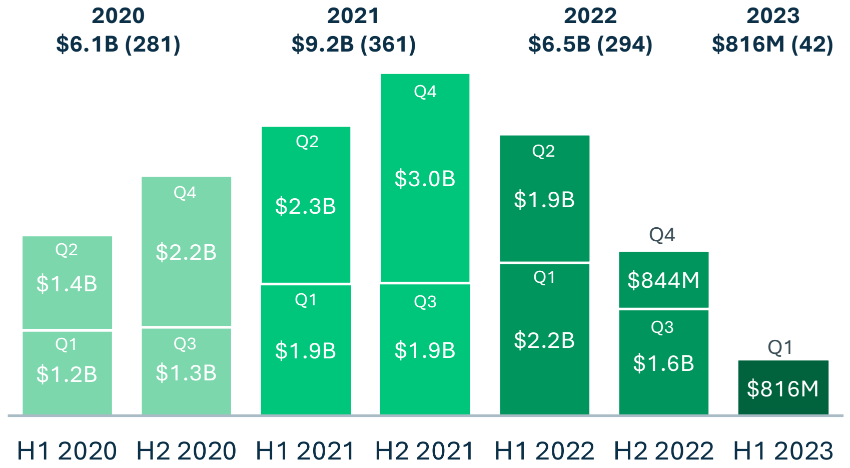
The market downturn has increased investor scrutiny, especially at the later stages. Demand is heightened for companies to either have drugs in the clinic or to be hitting milestones for drug candidates. Consequently, companies that raised large seed/Series A deals in 2023 often had programs in clinical development, proven drug discovery platforms or veteran management teams. Increased demand for clinical outcomes, coupled with difficulty securing funding, may cause early-stage platform companies to take more conservative approaches to pipeline management. Many startups are choosing to laser-focus on one indication with their most promising programs and apply for grants, which had fallen out of focus during the funding boom. We expect companies further along in their clinical development to continue to earn the largest early-stage financings.

Despite less capital being deployed this year, there is a historically large amount of dry powder available to companies with promising drug candidates and cutting-edge platform technologies.

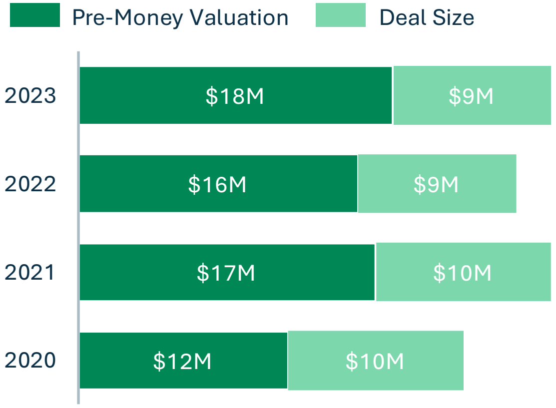
Silicon Valley Bank

A Division of First Citizens Bank

Seed/Series A[1] Dollars and (Deals)



Median Seed/Series A Valuations



Seed/Series A Dollars and Deals by Top Indications

	Q3'22		Q4'22		Q1'23	
Indications	Dollars	Deals	Dollars	Deals	Dollars	Deals
Oncology	$268M	15	$310M	15	$125M	17
Platform	$594M	18	$190M	8	$342M	11
Neurology	$57M	4	$130M	4	$224M	4
Auto-Immune	$129M	6	$5M	2	$4M	1
AgBio/Animal Health	$28M	5	$0M	0	$12M	2
Anti-Infective	$53M	4	$0M	0	$58M	2
Respiratory	$412M	4	$25M	1	$6M	1

Largest 2023 Seed/Series A Deals

rapport therapeutics
paratus SCIENCES
Avilar THERAPEUTICS
BRAIN REPAIR
Ampersand biomedicines
EpiBiologics
Belharra THERAPEUTICS
transcend THERAPEUTICS

Note: 1) Seed/Series A includes first-time investments from institutional or corporate venture investment in the US, EU and UK and any first-round investments equal to or greater than $2M, regardless of investor. Dates of financing rounds are subject to change based on add-on investments.

Source: PitchBook and SVB proprietary data.

Fewer late-stage rounds as investors shore up existing portfolios

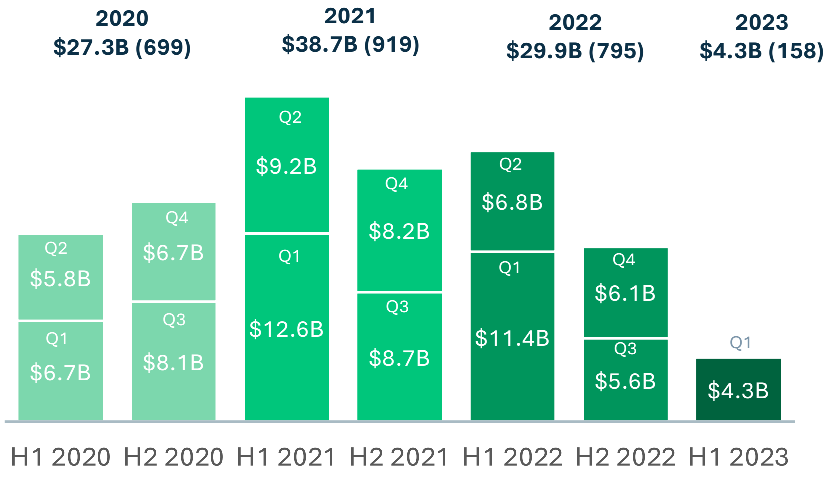
This year saw the lowest quarterly investment activity since Q4’19, with dollars hitting just $4.3B.

The shortfall in biopharma investment was driven by two main factors. First, crossovers funded fewer LIPO[1] rounds in 2022 as public market performance remains poor while uncertainty around inflation and the federal pace of interest rate hikes remains. There is a worsening mismatch between 2021-vintage late-stage biopharma valuations and current public comps for VC-backed biopharma publics. Second, new investors demanded more progress before funding the next round (mostly at Series B), forcing companies to close smaller extensions or insider rounds.

In 2023, biopharma companies will continue trying to avoid down rounds that discourage follow-on investors, instead raising insider/bridge and extension rounds to give the companies more time and runway to meet new investor’s expectations. However, existing investors may be nearing allocation caps which would force valuations resets or company closures.

In this notoriously difficult fundraising environment, companies are focused on cash preservation and narrowing focus to one or two therapeutic areas. Big bets on platform companies are less appetizing to investors as focus shifts to achieving in-human proof-of-concept. Oncology, neurology, and orphan/rare companies lead Q1’23 investment.

Total Dollars and (Deals)



Highest-Valued 2023 Financings[2]

SONOMA BIOTHERAPEUTICS	Auto-Immune	$715M post
Ring THERAPEUTICS	Platform	$602M post
ADARx PHARMACEUTICALS	Orphan/Rare	$491M post
CHROMA MEDICINE	Platform	$455M post
ARRIVENT	Oncology	$380M post
Hexagon Bio	Platform	$330M post
CARGO THERAPEUTICS	Oncology	$315M post
FLARE THERAPEUTICS	Oncology	$273M post
BRAIN REPAIR	Neurology	$271M post
NOEMA PHARMA	Neurology	$263M post
IMMUNE-ONC therapeutics	Oncology	$255M post

LIPO Deal Activity in Biopharma[3]

Quarter	LIPO Deals	Median Pre-Money ($M)	Median Deal Size ($M)	IPO %
Q1’20	17	$245	$108	88%
Q2’20	21	$150	$86	62%
Q3’20	28	$140	$92	54%
Q4’20	15	$140	$87	53%
Q1’21	38	$184	$100	53%
Q2’21	31	$200	$105	10%
Q3’21	24	$169	$90	13%
Q4’21	16	$172	$102	0%
Q1’22	17	$160	$100	5%
Q2’22	11	$147	$102	0%
Q3’22	6	-	-	0%
Q4’22	7	-	-	0%
Q1’23	3	-	-	0%

Note:. 1) The LIPO (Likely to IPO) list tracks the top 15 crossover-funded private mezzanine deals ($40M+) as a proxy for IPO sentiment and pipeline. 2) Only includes private post-money values from publicly disclosed 2023 financings in PitchBook. 3) Financing data includes private financings by venture-backed companies in the US, EU and UK. Dates of financing rounds are subject to change based on add-on investments.

Source: PitchBook and SVB proprietary data.

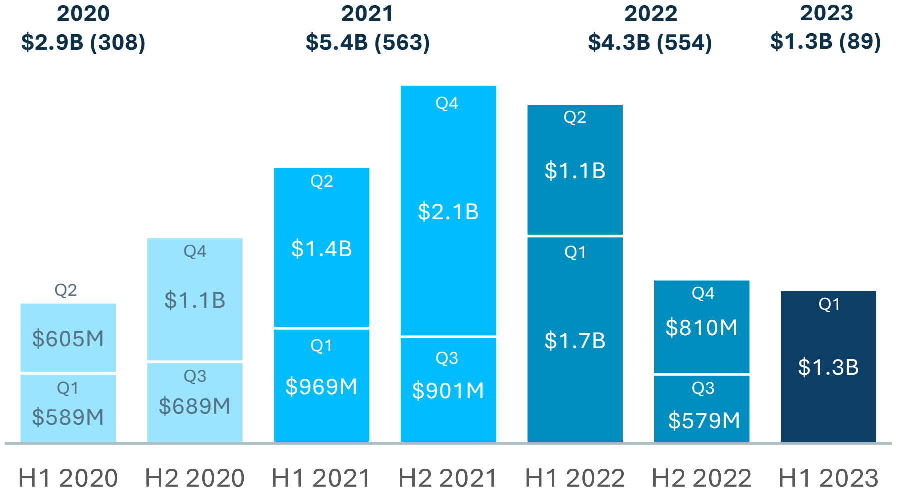
Rightsized investment led by early stages

While 2022 marked a rightsizing in the healthtech investment landscape as a whole, early-stage investment flourished. This trend has continued into 2023, with Q1'23 investment up 60% from Q4'22. Healthtech companies were especially prone to high valuations in 2021, spurred by tech investors deploying capital into the space at unprecedented rates. Early-stage companies presented new opportunities in 2023 to invest at conservative valuations driven by company performance, revenue and ability to improve healthcare outcomes and costs.

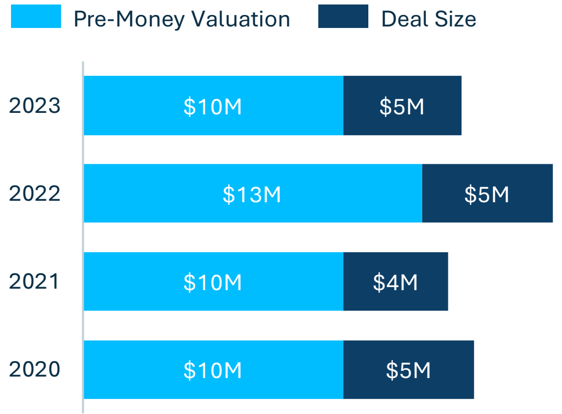
Difficulty in fundraising amidst the market downturn led to more insider-lead rounds in 2023, with insider rounds comprising 34% of all healthtech deals (104 of 307) in Q1'23, up from 30% in 2022 and 28% in 2021. As market uncertainty persists, we expect this trend to continue.

Provider operations companies continued to dominate investment activity, with new companies forming to help implement efficiencies in provider workflows, reduce administrative burden and utilize technology to improve decision-making. Alternative care companies with effective, proven value-based care models lead investment activity as demand for improved care at lower costs grows. Market saturation in the alternative care space is pushing companies to demonstrate proven ROI unit economics to secure later-stage rounds.

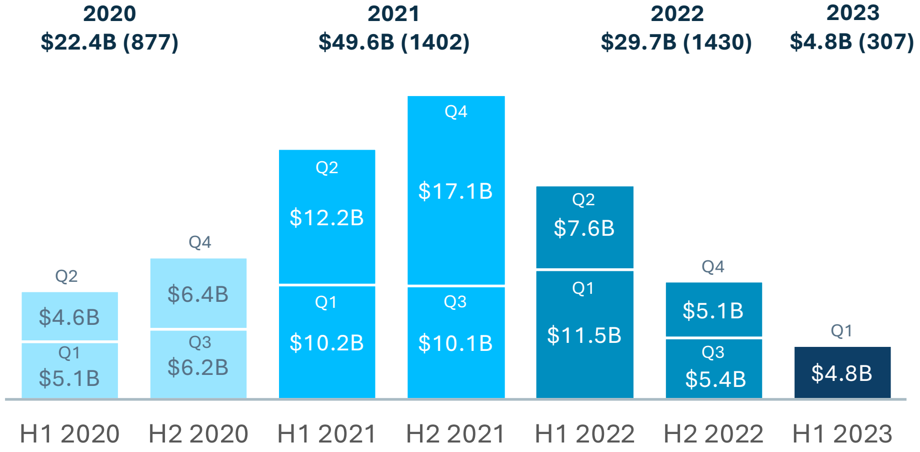
Seed/Series A[1] Dollars and (Deals)



Median Seed/Series A Valuations



Total Dollars and (Deals)



Largest 2023 Deals[2]

Seed/Series A	Later Stage
Paradigm	monogram health
synapse health	wellvana
bend	ShiftMed
Nest Health	Angle Health
medix infusion	Carbon Health
fount	JANUS
CODAMETRIX	Clearsense
empassion	PPRENTICE
SEVARO	Vytalize

Note: 1) Seed/Series A includes first-time investments from institutional or corporate venture investment in the US, EU, and UK and any first-round investments equal to or greater than $2M, regardless of investor. 2) Biopharma drug discovery companies excluded from healthtech data. Dates of financing rounds are subject to change based on add-on investments.

Source: PitchBook and SVB proprietary data.

svb Silicon Valley Bank
A Division of First Citizens Bank

R&D tools and early-stage activity promising

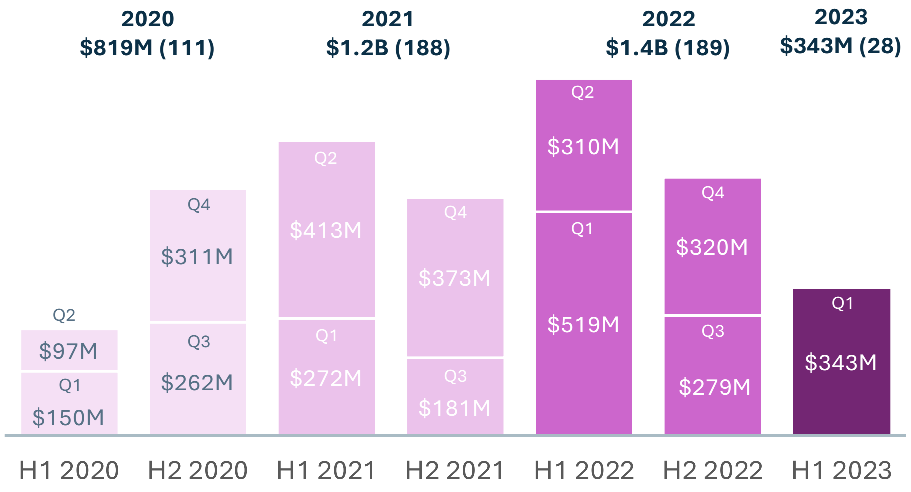
Dx/tools early-stage investment increased in Q1'23 from late 2022 while late-stage investment fell flat. Options for late stage dx/tools companies remain restricted as the shrinking public market limits near-term opportunities to match the huge dx/tools exits from 2020 and 2021 (including three $1B+ private M&A and 13 US/UK IPOs with $1B+ market caps).

Three of the four largest early-stage 2022 dx/tools deals closed in Q4'22 as many investors wait out the public market downturn by putting dollars to work in seed/Series A deals. Q1'23 activity was led by Artera's $90M Series A, a dx analytics precision medicine company developing artificial intelligence (AI) tests for cancer patients.

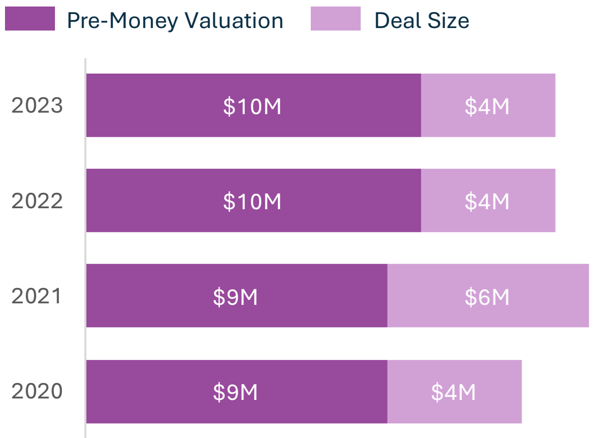
Dx tests investment decreased sharply from Q4'22 ($421M) to Q1'23 ($167M), likely because the subsector has a historically difficult reimbursement and revenue ramp. Interestingly, R&D tools investment spiked this year despite exceptionally poor public market performance. Investment hit $727M in Q1'23, up 132% from Q4'22 ($314M). The top three earners in the space are all highly technical, gene therapy-enabling platforms utilizing computational biology and AI, showing investors' continued appetite for AI and advanced analytics in the diagnostics space. Leading companies include Asimov ($175M), Colossal Laboratories & Biosciences ($150M) and Evonetix ($55M). We've also seen at-home chronic condition monitoring continue to attract investment as these tools offer better prevention and early detection for value-based care delivery.

svb Silicon Valley Bank
A Division of First Citizens Bank

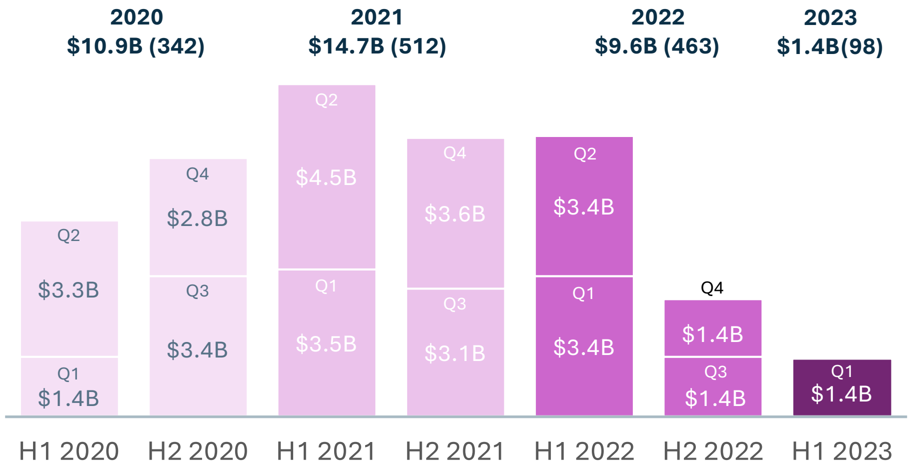
Seed/Series A[1] Dollars and (Deals)



Median Seed/Series A Valuations



Total Dollars and (Deals)



Largest 2023 Deals

Seed/Series A	Later Stage
ARTERA	ASIMOV
BIOLOG	Viz.ai
EVOSEP	cellanome
DELVE BIO	colossal
tally HEALTH	evonetix
deepc	Lunaphore
OncoVerity	Metabolon
	ChromaCode

Note: 1) Seed/Series A includes first-time investments from institutional or corporate venture investment in the US, EU and UK and any first-round investments equal to or greater than $2M, regardless of investor. 2) These companies overlap with the healthtech sector and are included in both sets of sector-specific analyses. Dates of financing rounds are subject to change based on add-on investments.

Source: PitchBook and SVB proprietary data.

Device decline in H2; retreat by strategics

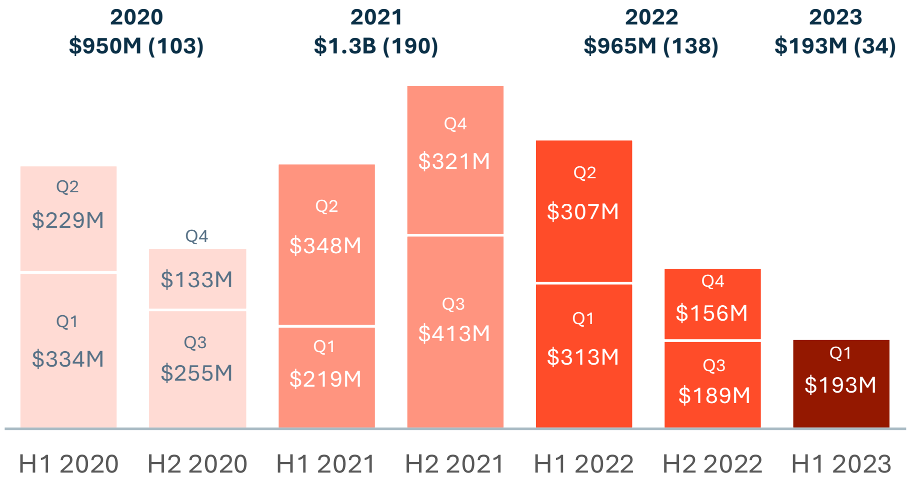
Device investment is down from 2022's pace, but early-stage investment remains a bright spot and is up 24% from Q4'22. This could indicate a shift from 2022 investor activity, which migrated away from new early-stage deals and instead to portfolio preservation to help existing later-stage portfolio companies extend cash runways.

We saw the biggest drop in non-invasive monitoring deals. Many non-invasive monitoring companies include consumer apps and attracted non-traditional investors in 2020 and 2021, driving valuations up. The recent pullback is possibly a correction after exceptional investment activity in this indication over the past two years.

Device companies in 2023 remain focused on many of the same challenges that emerged in 2022: cash preservation and difficulty attracting new investors for fundraising. This year, some companies are facing increased challenges selling devices into hospitals, especially expensive devices. However, there is heightened demand for advanced Internet of Things (IoT) and AI/machine learning (ML) based devices, especially those focused on early detection and chronic condition management to improve early interventions and avoid acute, high-cost health expenses. As hospitals face increased pressure to improve profit margins and drive cost of care down, they will be most receptive to devices that improve value-based care model adoption.

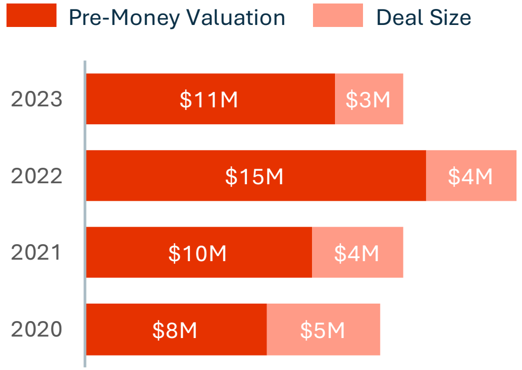
Seed/Series A[1] Dollars and (Deals)

US, EU & UK



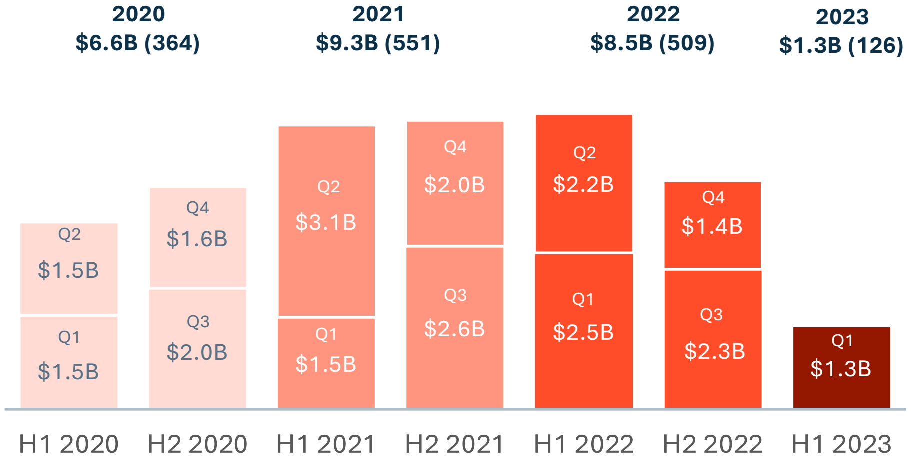
Median Seed/Series A Valuations

US, EU & UK



Total Dollars and (Deals)

US, EU & UK



Largest 2023 Deals

US, EU & UK

Seed/Series A

- Companion Spine
- leva Pelvic Health System
- AVS Pulse Intravascular Lithotripsy
- Vitestro

Later Stage

- Setpoint Medical
- FIRE1
- Alleviant
- Shoulder Innovations
- Cognito Therapeutics
- Precision
- Volta Medical
- GT Medical Technologies

Note: 1) Seed/Series A includes first-time investments from institutional or corporate venture investment in the US, EU and UK and any first-round investments equal to or greater than $2M, regardless of investor. Dates of financing rounds are subject to change based on add-on investments.

Source: PitchBook and SVB proprietary data.

svb Silicon Valley Bank
A Division of First Citizens Bank

Authors

Jackie Spencer
Head of Relationship Management for Life Science and Healthcare Banking
Jspencer@svb.com

Jackie Spencer heads up the U.S. Relationship Management team for Life Science and Healthcare Accelerator and Growth. Jackie and her team are focused on providing banking and financing solutions to innovative companies in the sector. Since joining SVB in 2007, Jackie's worked across both the technology and healthcare practices from emerging market to late stage corporate finance.

She graduated from the St. Mary's College of California with honors, receiving a bachelors in finance.

Kale Frank
Managing Director
Biopharma, Tools and Dx
kfrank@svb.com

Kale Frank leads the Biopharma, Tools and Dx practice for the Bay Area and Pacific Northwest. He and the life science team provide insights, advice, venture financing and banking solutions to help companies scale from Series A and beyond.

Kale has been at SVB for over seven years and has worked in banking for 12 years.

He graduated from the University of Notre Dame with honors and can be found hiking or playing music when he's not working with the most interesting companies on the planet.

Raysa Bousleiman
Senior Associate
Healthcare Insights
rbousleiman@svb.com

Raysa Bousleiman is responsible for conducting data-driven analyses on the global innovation economy that SVB serves. In this role, she supports global research efforts that explore investment, fundraising and exit dynamics in the venture ecosystem.

Prior to SVB, Raysa worked as a healthcare consultant focusing on health systems revenue cycle management and operations.

Raysa graduated from the University of Southern California with honors, receiving a B.S. in human biology.

Contributors

Ben Johnson
Managing Director
Life Science Startup Banking
bjohnson@svb.com

Bill Sideris
Director
Healthtech and Device
bsideris@svb.com

Dennis He
Managing Director
Life Science and Healthcare
dhe@svb.com

Glossary

Descriptions

All-In Deal defined as an acquisition where the full deal value is paid at deal close.

Series A defined as all first-round institutional or corporate venture investment, and all first-round investments equal to or greater than $2M, regardless of investor.

Upfront Payments defined as initial proceeds from an acquisition paid upon the close of a structured deal; they do not include milestones.

Milestones to be Earned defined as proceeds from an acquisition that are paid once predetermined milestones are met.

Total Deal Value defined as the full value of the acquisition, including milestones to be earned.

Time to Exit defined as the time from the close of a company's first institutional round of financing to the exit.

Step-Up defined as the valuation change from the last round post-money value to the next round pre-money value.

Corporate Investor defined as a corporate venture and parent company investment into venture-backed companies.

Computational Biology: To qualify as a computational biology company in this analysis, per review of their website, the company must (1) focus on drug discovery and/or development (biopharma/R&D tools), (2) apply novel computational tools to gain biological and/or chemical insights, (3) have the ability or potential for platform creation and (4) have a team with computational experience.

European Data: All European data and statistics include data from the European Union and the United Kingdom.

Device Regulatory Definitions

Non-approved defined as a device product that has not obtained regulatory clearance or approval for its product.

CE Mark defined as a device company that has CE Mark approval but has not received FDA approval. CE Mark is a European Union designation that is typically less difficult to obtain than FDA approval, and the approval process often has a faster timeline.

US Commercial defined as a device company that has received FDA approval or clearance of its product and is usually in a commercial stage.

510(k): FDA process of scientific and regulatory review to evaluate the safety and effectiveness of Class II medical devices. Typically there are little to no human clinical trials required for 510(k) clearance.

PMA: Premarket approval (PMA) is the FDA process of scientific and regulatory review to evaluate the safety and effectiveness of Class III medical devices. Typically there are extensive human clinical trials involved for PMA approval.

Indication Definitions

Neurology defined as CNS, pain and psychology companies, as well as neurology implant technologies.

Non-Invasive Monitoring (NIM) defined as medical data collection through sensors and other technology worn outside the body.

Dx Tests defined as proprietary yes/no diagnostic tests.

Dx Analytics defined as actionable data analytics to help determine treatment.

R&D Tools defined as research equipment/services for biopharma and academia.

Healthtech Subsector Definitions

Provider Operations defined as companies that provide solutions to increase the efficiency and accuracy of provider-provider and provider-patient interactions.

Alternative Care defined as companies that provide primary or specialty care outside a hospital or private practice.

Clinical Trial Enablement defined as companies that develop solutions to accelerate drug discovery and the digitization of clinical trials.

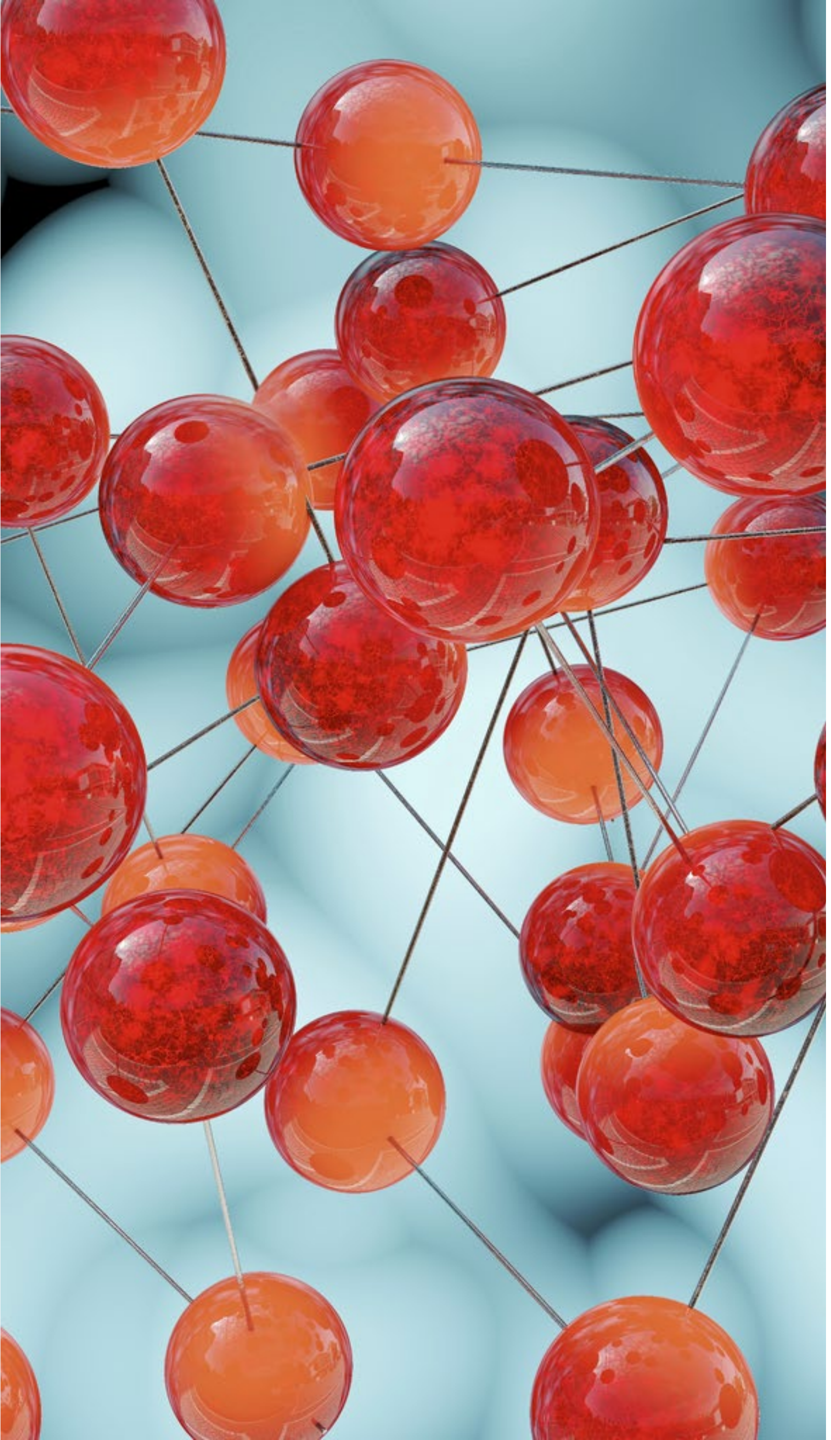
Healthcare Navigation defined as companies that guide users to relevant providers and/or payers based on their needs.

Medication Management defined as companies that aid users in access and adherence to their prescribed medication.

Wellness & Education defined as companies that inform users of healthy lifestyle and medical best practices, as well as medical education companies.

Biopharma Top 15 Crossover Investors

Biopharma Top 15 Crossover Investor defined as a public-minded investor who strategically invests in private companies. The Top 15 list includes: RA Capital, Perceptive Advisors, Deerfield Management, Redmile Group, Cormorant Asset Management, The Invus Group, Fidelity (et al.), EcoR1, Casdin Capital, Janus, Logos, Viking, Citadel, Rock Springs Capital and Wellington Management.



Silicon Valley Bank
A Division of First Citizens Bank

Disclaimers

The views expressed in this report are solely those of the authors and do not necessarily reflect the views of SVB.

This material, including without limitation to the statistical information herein, is provided for informational purposes only. The material is based in part on information from third-party sources that we believe to be reliable but which has not been independently verified by us, and, as such, we do not represent the information is accurate or complete. The information should not be viewed as tax, accounting, investment, legal or other advice, nor is it to be relied on in making an investment or other decision. You should obtain relevant and specific professional advice before making any investment decision. Nothing relating to the material should be construed as a solicitation, offer or recommendation to acquire or dispose of any investment, or to engage in any other transaction.

All non-SVB named companies listed throughout this document, as represented with the various statistical, thoughts, analysis and insights shared in this document, are independent third parties and are not affiliated with Silicon Valley Bank or First Citizen Bank. Any predictions are based on subjective assessments and assumptions. Accordingly, any predictions, projections or analysis should not be viewed as factual and should not be relied upon as an accurate prediction of future results.

Investment Products :

Are not insured by the FDIC or any other federal government agency	Are not deposits of or guaranteed by a bank	May lose value

Silicon Valley Bank
A Division of First Citizens Bank

About Silicon Valley Bank

Silicon Valley Bank (SVB), a division of First Citizens Bank, is the bank of the world's most innovative companies and investors. SVB provides commercial and private banking to individuals and companies in the technology, life science and healthcare, private equity, venture capital and premium wine industries. SVB operates in centers of innovation throughout the United States, serving the unique needs of its dynamic clients with deep sector expertise, insights and connections. SVB's parent company, First Citizens BancShares, Inc. (NASDAQ: FCNCA), is a top 20 U.S. financial institution with more than $200 billion in assets. First Citizens Bank, Member FDIC. Learn more at svb.com.

#SVBHealthcare

Silicon Valley Bank

www.svb.com

See complete disclaimers on previous page.