Healthcare Investments and Exits

Biopharma | HealthTech | Dx/Tools | Device

Presentation for UConn Bio Panel 2/8/22

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Healthcare Fundraising and Investments
US and Europe
Investors Double Down on Venture Healthcare Promise

The rapid pace of investment, coupled with the increasingly quick turnaround from first venture investment to exit over the past five years, has propelled firms to deploy capital faster than ever before. These firms have benefited from great mark-ups after mezz rounds to increase TVPI and have used IPOs and M&A proceeds to smash though J-curves and return capital at a record pace.

The frothy market has led firms to increase their fund size and also raise stand-alone opportunity funds to double down on perceived portfolio winners. All this momentum has turned 2021 into the largest healthcare fundraising year ever, surpassing 2020’s record of $16.8B and nearly tripling the capital available just two years ago. There is now a very large supply of investor capital to support venture companies over the next few years.

Flagship Pioneering, Arch Venture and Orbimed all closed $1B+ healthcare-only funds in 2021. A number of firms with significant allocations to healthcare closed multiple strategic or opportunity funds in 2021, including Abingworth Management, Bessemer Venture Partners, Define Ventures, Foresite Capital Management, HLM Venture Partners, Khosla Ventures, Lux Capital, Venrock and Versant Ventures.

In 2022, we anticipate US venture fundraising will drop to about $16B, as most healthcare firms have recently raised new funds and will likely slow their investment pace.

Note: 1) TVPI is defined as the ratio of the current value of fund investments plus distributions to date to the total amount of capital invested to date. 2) Notable funds based on largest estimated allocation to venture healthcare. 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.

Source: PitchBook and SVB proprietary data.
Investment Peaks in Record Q2; Biopharma Declines in 2H

Overall healthcare investment has more than doubled every two years since 2017, from $16B to $34B to $86B in 2021. All four sectors showed record investment this year, with healthtech up 157% compared to 2020. Device, led by a 3x increase in European investment, was up 53%.

Q1 2021 set a new quarterly record for investment, then Q2 eclipsed that record. Biopharma and healthtech led the charge, accounting for 46% and 31% of total investment in the first half, respectively. Biopharma was driven by the open IPO window, which was met with an increase in large pre-IPO mezzanine rounds, especially in Q1. In healthtech, the global pandemic drove a surge of investment into alternative care solutions and provider operations companies.

However, in 2H 2021 we observed a decrease in investment. Biopharma saw the most precipitous drop. Following a 24% decrease from Q1 to Q2, we noted another 17% from Q2 to Q3 and 9% from Q3 to Q4. Poor performance of biopharma IPOs in 1H led to fewer IPOs in 2H and caused more crossover-funded companies to remain private. This discouraged crossover investors from investing in additional private pre-IPO mezzanine rounds (LIPO1 deals), which reduced biopharma investment numbers. Interestingly, though IPOs saw similar poor performance in healthtech, this sector showed fairly consistent investment dollars in 2H.

**Note:**
1) The LIPO (Likely to IPO) List tracks Top 15 Crossover funded private mezzanine deals ($40M+) as a proxy for IPO sentiment and pipeline.
2) HealthTech deals that overlap with other sectors are not included in healthtech totals on this slide but are included in healthtech-specific analyses on pages 12-15.

With overlap, healthtech investments for 2021 total $40B. Financing data include private financings by venture-backed companies in the US and Europe. Dates of financing rounds are subject to change based on add-on investments. Source: PitchBook and SVB proprietary data.
Series A Growth Led by Anti-Infective, Neuro and Platform

Seed/series A deals and dollars were up significantly overall, though flat in Europe. While later-stage biopharma investment decreased significantly in 2H 2021, early-stage activity remained strong throughout the year. Seed deal sizes increased substantially in 2021, blurring the line between seed and series A. Recent seed deals regularly total $10-20M, often backed by institutional investors.

In terms of dollars, platform companies led seed/series A biopharma for the second year in a row. Since 2019, we saw a huge 6.8x increase in neurology dollars and a 4x increase in anti-infective (driven by a 2.9x increase from 2020 to 2021). By contrast, orphan/rare dollars dropped by 57% compared to 2019.

CAR-T cell therapy and CRISPR deals garner interest. We also noted numerous early-stage internal innovation “hub and spoke” deals where the underlying technology was leveraged into separately-funded companies.

There were 14 $50M+ seed/series A investments in computational biology companies in 2021, up from four in 2019 and seven in 2020. This was led by huge deals from Neumora ($400M), Odyssey Therapeutics ($218M), Treeline ($212M), and Eikon ($148M).

The $30M+ deals saw the largest jump in pre-money valuation, up 52% from a median of $27M in 2020 to $41M in 2021. However, we did notice valuations cool down in Q4 as crossover activity slowed. We counted 18 $40M+ seed/series A deals funded by top 15 crossover investors in 1H 2021, but only six in 2H 2021.

Note: 1) Seed/series A includes first-time investments from institutional or corporate venture investment in the US and Europe and any first-round investments equal to or greater than $2M, regardless of investor. 2) This company overlaps with the healthtech sector and is 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.
In 2021, there were 21 $200M+ biopharma financings, doubling that in 2020 and totaling $6.8B. Five of these deals closed in Q4, even as total investment dollars decreased in that quarter. This year, we saw the most growth in investment for platform (up 1.9x in deals and 1.8x in dollars from 2020) and auto-immune deals (up 2x in deals and 2.8x in dollars from 2020).

The robust post-IPO performance from 2019 and 2020 worsened for the IPO class of 2021, which has negatively impacted LIPO activity. Since Q1 2021, we saw fewer LIPO deals each quarter, while the number of still private mezz-funded companies continued to grow. When crossover investors engaged in due diligence for private deals in Q3/4 2021, they were more focused on clinical-stage rather than pre-clinical companies. We will likely see a resurgence of series C financing rounds next year when mezz-funded Series B companies need to raise more private capital and the public market becomes more discerning.

Biopharma computational biology companies raised large, highly-valued rounds in 2021, including three of the top eight (Insitro, ATAI and Generate Biomedicines). Of the highest valued companies to close a private financing in 2021, ATAI, Adagio and InstilBio completed IPOs. However, at the end of 2021 ATAI and Adagio were trading at around half of their last private post-money value.

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US Biopharma Investment by Region

### Top Cities

<table>
<thead>
<tr>
<th>City</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston Area</td>
<td>$3.2B</td>
<td>$6.8B</td>
<td>$12.3B</td>
</tr>
<tr>
<td>Bay Area</td>
<td>$3.7B</td>
<td>$4.5B</td>
<td>$5.7B</td>
</tr>
<tr>
<td>San Diego</td>
<td>$715M</td>
<td>$2.1B</td>
<td>$2.8B</td>
</tr>
<tr>
<td>New York</td>
<td>$567M</td>
<td>$2.6B</td>
<td>$1.2B</td>
</tr>
<tr>
<td>Seattle</td>
<td>$540M</td>
<td>$941M</td>
<td>$792M</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>$680M</td>
<td>$242M</td>
<td>$458M</td>
</tr>
</tbody>
</table>

Notable Private Financings, US 2021

<table>
<thead>
<tr>
<th>City</th>
<th>2019</th>
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<th>2021</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

Note: 1) These companies overlap with the healthtech sector and are included in both sets of sector-specific analyses.
Source: Pitchbook, SVB proprietary data and SVB analysis.
The onset of the pandemic in 2020 thrust healthtech into the spotlight. The sudden demand for digital health solutions created opportunities for venture-backed healthtech companies with new technologies and engagement models. Investors certainly noticed this trend, as dollars hit a record high of $40B in 2021, more than double 2020 and nearly 4x the average annual investment from 2018-2019 ($11B). With another year of substantial growth and investment, buoyed by a growth in exits, healthtech is firing on all cylinders.

Private equity, asset managers and late-stage venture capital investors are deploying huge amounts of capital into healthtech faster than ever before, raising valuations and disrupting the traditional venture model. The majority of 2021 funding (60%) came from 105 mega-rounds1. Mega-rounds are up substantially from 2019 (17 deals, 30% of funding dollars) and 2020 (43 deals, 41%). This investment has resulted in a 4.7x increase in the number of new unicorns in 2021 (42) vs 2020 (9).

Alternative Care (AC) companies continued to lead healthtech investment, receiving 38% of dollars this year and showing a 3x increase over 2020. We expect investor focus on AC to continue into 2022 as the healthcare industry faces mounting pressure from patients to swiftly adopt AC solutions.

Highly-valued private healthtech deals (including Color which also overlaps with dx/tools) have hit new heights, as the top eight deals are higher than the highest private valuation of 2020 (Bright Health, $4B valuation).

Note: 1) Mega-round is a private round greater than or equal to $100M. 2) Only includes private post-money values from publicly disclosed 2021 financings in PitchBook. Financing data include private financings by venture-backed companies in the US and Europe. 3) These companies overlap with the biopharma, dx/tools or device sectors 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, SVB proprietary data and SVB HealthTech Report.
## Most Active¹ New HealthTech Investors

### US and Europe (2020-2021)

<table>
<thead>
<tr>
<th>Venture Activity Overall</th>
<th>Late Stage/Crossover Activity Overall</th>
<th>Alternative Care</th>
<th>Provider Operations</th>
<th>Clinical Trial Enablement</th>
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<tbody>
<tr>
<td>28</td>
<td><strong>TIGERGLOBAL</strong></td>
<td>12</td>
<td>9</td>
<td>12</td>
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<tr>
<td>24</td>
<td><strong>TIGERGLOBAL</strong></td>
<td>12</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>20</td>
<td><strong>SoftBank</strong></td>
<td>9</td>
<td><strong>DEERFIELD</strong></td>
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<tr>
<td>17</td>
<td><strong>DEERFIELD</strong></td>
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<td>8</td>
<td>6</td>
</tr>
<tr>
<td>14</td>
<td><strong>Corporate Activity Overall</strong></td>
<td>7</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>13</td>
<td><strong>TIGERGLOBAL</strong></td>
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<td>7</td>
<td>5</td>
</tr>
<tr>
<td>13</td>
<td><strong>Operator</strong></td>
<td>7</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td><strong>Kaiser Permanente.</strong></td>
<td>7</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td><strong>Polaris</strong></td>
<td>7</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: 1) Most active new investors calculated as new (first-time) investments in US and European companies from 2020-2021. Dates of financing rounds subject to change based on add-on investments. Corporate parent and corporate venture investment are combined under Corporate Investor. 2) Other investors not listed due to space limitations. Alexandria Investments typically averages $2M per deal. AREE, Inc. Earnings 12/31/19. Source: PitchBook and SVB proprietary data.
US HealthTech Investment by Region

Notable Private Financings, US 2021

Note: 1) These companies overlap with the biopharma, dx/tools, or device sector and are included in both sets of sector-specific analyses. Source: PitchBook, SVB proprietary data and SVB analysis.
Series A Funding Trails Other Sectors but Deal Numbers Up

Total dx/tools investment hit a record in 2021, surpassing the capital invested in device by $4B. However, while early-stage investment in dx/tools was up in 2021, dollars continued to lag the other three sectors for the second year in a row. Surprisingly, seed/series A deal count was up significantly, doubling the deal pace of the last two years.

The UK continues to be a hotbed for seed/series A dx/tools activity this year (20 deals), matching Massachusetts and just lagging behind Northern California (26).

The pandemic continued to drive consumer demand for home testing. As a result, dx tests deal activity spiked in 2021, with a heightened focus on platform technologies, but also oncology (11), anti-infective (9) and urology/gynecology (5).

R&D Tools recorded four $20M+ financings and three of the top four largest early-stage deals. We continue to see significant seed/series A activity in computational biology companies (Beacon Biosignals, Sequare, One Biosciences and Immuned) and synthetic biology (Slingshot). Dx Analytics, which leverages artificial intelligence/machine learning algorithms to help clinicians determine the best treatment, experienced more deal activity in 2021, with the largest focus on oncology (12 deals). Dx Analytics also had the highest median pre-money valuation ($12M) of the three subsectors.

Note: 1) Seed/series A includes first-time investments from institutional or corporate venture investment in the US and Europe and any first-round investments equal to or greater than $2M, regardless of investor. 2) This company overlaps with the healthtech sector and is 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.
R&D Tools Investment Leads Record Late-Stage Activity

Dx/Tools investment reached new heights in 2021, more than doubling the dollar totals from 2018 and 2019. For the dx tests subsector, deal activity was up, but growth in investment dollars lagged slightly behind the other two subsectors.

There were 40 $100M+ financings in 2021, more than tripling 2020’s activity. Twelve of these financings yielded $1B+ valuations.

Despite the uneven IPO performance in 2021, investors remained bullish on exciting later-stage technologies in the second half. The most active investors in $50M+ deals in 2H 2021 included SoftBank Investment Advisors, Catalio Capital Management and Morningside Group (three deals each) and Coatue Management, Sherpa Venture Capital, Koch Disruptive Technologies, Wellington Management, D1 Capital Partners and Perceptive Advisors (two deals each). However, as a caution we have seen anecdotal evidence that valuations compressed late in Q4.

While IPO performance was down, there were positive examples of highly-valued private companies that went public. Oxford Nanopore, an R&D tools company focused on sequencing and molecular analysis, had the third highest-valued financing in 2021. This company went public in Q3 and was trading at more than 2x its last private valuation at the end of 2021.

Note: 1) These companies overlap with the healthtech sector and are included in both sets of sector-specific analyses. 2) Only includes private post-money values from publicly disclosed 2021 financings in PitchBook. Financing data include private financings by venture-backed companies in the US and Europe. Dates of financing rounds are subject to change based on add-on investments. Source: PitchBook and SVB proprietary data.
US Dx/Tools Investment by Region

Notable Private Financings, US 2021

Note: 1) These companies overlap with the healthtech sector and are included in both sets of sector-specific analyses.

Source: PitchBook, SVB proprietary data and SVB analysis.
Early Device Dollars Spike, Led by Tech-Enabled Services

Early-stage device investment eclipsed $1B for the first time ever. This increase was led by non-invasive monitoring (NIM) investment, which was up 92% over 2020. The need to monitor patients outside the hospital has become paramount during the COVID-19 pandemic, ushering in more investment in tech-enabled service models (NIM, imaging). We have already seen multiple M&A in NIM this year, including Preventice Solutions and Bardy Dx. While these two NIM exits were in the cardiovascular space, seed/series A activity in NIM exploded across multiple areas, led by neurology (10 deals), cardiovascular (nine), respiratory (five) and metabolic (three) companies.

The imaging subsector also drew significant early-stage investment as hospitals looked to optimize procedure efficiency in their most profitable surgical areas. We also noted a surge of investment in platform technologies in 2021, with the largest deals focused on organ preservation (Bridge to Life, Advitos) and aging treatments (Aviv Scientific).

Even in the face of declining elective procedures, two of the largest series A deals were dermatology companies focused on aesthetics, Revelle Aesthetics and Cartessa Aesthetics. Surprisingly, cardiovascular had only one of the 10 largest financings (Galaxy Medical). While neurology was not represented in the largest 10 deals, we did see continued early-stage investment into brain/computer interface technologies (INBRAIN Neuroelectronics, Precision Neuroscience and Blackrock Neurotech).

European investment activity centered on NIM (17) and ophthalmology (four) companies, accounting for close to half the deal activity in each indication.

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Device Investment Surge Led by Large, Later-Stage Rounds

Device investment scaled to new heights in 2021, far ahead of 2020 investment and almost doubling the investment pace of 2018 and 2019. Device investment peaked at $3B in Q2 then declined slightly in Q3 and Q4. The top five financings, totaling $1.5B, all clustered in June and July.

Technology-enabled services (NIM, imaging) continued to attract the lion’s share of investment in device. However, as a caution for this indication, we have noticed some supply-chain issues for commercial-stage NIM companies that might impact their revenue trajectories into 2022.

Neurology and cardiovascular activity was also up significantly. The seven largest cardiovascular deals (with a median post-money value of $150M) and six of the seven largest neurology deals (with a median post-money of $183M) were all series C or later financings, setting the stage for these companies to ramp revenue and explore potential exit discussions.

It is interesting to note that half of the highest valued private device companies on this list have not yet reached the revenue stage. For these early-stage companies, execution risk is still a large part of their story, and access to the public market may be impacted by the poor IPO performance we experienced in 2021.

Based on broad public market trends, crossovers will likely be less active in late-stage device deals in 2022. Venture investors remain interested with freshly raised capital, though likely more valuation-sensitive than the crossovers.

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US Device Investment by Region

Notable Private Financings, US 2021

Note: 1) These companies overlap with the healthtech sector and are included in both sets of sector-specific analyses. Source: Pitchbook, SVB proprietary data and SVB analysis.
Deep Dive: Computational Bio Analysis
**Comp Bio: A New Paradigm of Drug Discovery & Development**

A growing number of companies are leveraging massive biological datasets to develop algorithms that offer deeper insights into disease and fundamentally change the drug discovery and development process. This field, computational biology (comp bio), gained traction through accelerators and incubators that created a structured space to collaborate and experiment with data management and analysis in healthcare. Venture investor activity in this area has accelerated dramatically over the past three years.

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

Comp bio companies accounted for 129 (18%) of 707 total biopharma and R&D tools companies that raised their first seed/series A round since 2019. Investment into comp bio deals spiked this year, nearly doubling the combined dollars raised in 2019 and 2020. In Massachusetts and NorCal, where we’ve seen the most comp bio activity over the past three years, seed/series A dollars spiked 3x from 2020 to 2021. Notably, we also saw eight deals in the UK this year, after none in 2020.

Of these 129 comp bio companies, 89 (69%) incorporate machine learning or artificial intelligence algorithms into their technology, most often applied for genomic analysis to inform the discovery of small molecule therapeutics.

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**Overall Biopharma/R&D Tool (707 Seed/Series A¹ Deals): Investment by Year**
**US and Europe**

<table>
<thead>
<tr>
<th>Year</th>
<th>Comp Bio Investment</th>
<th>Non-Comp Bio Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>$3.8B (168)</td>
<td>$780M (32)</td>
</tr>
<tr>
<td>2020</td>
<td>$5.7B (223)</td>
<td>$736M (32)</td>
</tr>
<tr>
<td>2021</td>
<td>$8.2B (316)</td>
<td>$5.9B (252)</td>
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**Comp Bio (129 Seed/Series A Deals): Investment by Region**
**US and Europe, 2019-2021**

<table>
<thead>
<tr>
<th>Region</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Massachusetts</td>
<td>$224M (8)</td>
<td>$366M (11)</td>
<td>$1.1B (18)</td>
</tr>
<tr>
<td>NorCal</td>
<td>$386M (10)</td>
<td>$104M (3)</td>
<td>$317M (6)</td>
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<tr>
<td>United Kingdom</td>
<td>$33M (1)</td>
<td>$50M (0)</td>
<td>$135M (8)</td>
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<td>New York</td>
<td>$6M (1)</td>
<td>$32M (3)</td>
<td>$125M (5)</td>
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<tr>
<td>SoCal</td>
<td>$51M (2)</td>
<td>$60M (3)</td>
<td>$104M (4)</td>
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**Comp Bio (129 Seed/Series A Deals): Top Modalities and Applications²**
**US and Europe, 2019-2021**

<table>
<thead>
<tr>
<th>Drug Modalities</th>
<th>Comp Bio Investment</th>
<th>Non-Comp Bio Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Molecule</td>
<td>$1.3B (38)</td>
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</tr>
<tr>
<td>Antibody</td>
<td>$285M (12)</td>
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</tr>
<tr>
<td>Gene Editing</td>
<td>$241M (5)</td>
<td></td>
</tr>
<tr>
<td>RNA</td>
<td>$162M (5)</td>
<td></td>
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<td>Cell Therapy</td>
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<tr>
<td>Protein</td>
<td>$63M (8)</td>
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</tr>
<tr>
<td>Vaccine</td>
<td>$21M (4)</td>
<td></td>
</tr>
</tbody>
</table>

**Drug Modalities**

**Computational Applications**

- Drug Discovery: $1.7B (71)
- Drug Optimization: $1.2B (37)
- Genomic Analysis: $1.2B (36)
- Target Discovery: $683M (26)
- Proteomics: $452M (12)
- Structure Analysis: $416M (12)
- Single-Cell Analysis: $388M (18)
- Biomarker Analysis: $386M (15)

---

Note: 1) This analysis includes any first-round investments equal to or greater than $2.5M. 2) Drug modalities and computational applications are not mutually exclusive, and deals may be counted under multiple categories. Source: PitchBook and SVB proprietary data.

“There will be more progress in discovering new medicines in the next ten years than the last one hundred. Software-driven innovation is transforming how drugs are developed, and will soon make the term computational biology redundant.”

- John Noonan, Managing Partner LifeForce Capital

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1. This analysis includes any first-round investments equal to or greater than $2.5M.
2. Drug modalities and computational applications are not mutually exclusive, and deals may be counted under multiple categories. Source: PitchBook and SVB proprietary data.
Comp Bio: Early-Stage Investment Leaders

We landscaped a subset of 70 smaller early-stage deals ($2.5M-$10M each) that have helped to push the field forward since 2019. Since their first seed/series A deal, 16 (23%) of the companies in this subset have already raised a follow-on financing.

Upon review of these companies’ websites, we categorized the deals based on whether the company publicly stated that they were creating their own portfolio of therapeutics (biopharma) or developing technologies to enable drug discovery and development (R&D tools). We have seen many R&D tools companies begin to develop or license assets over time, so we predict that a number of these current R&D tools companies will later pivot to the biopharma sector.

We listed a snapshot of investors who are leaders in the early-stage comp bio space. While not an exhaustive list, these investors have a core investment thesis in comp bio, actively invest in this space and typically lead or anchor seed/series A rounds.

To identify promising early-stage companies, these investors often look for a novel computational approach, differentiated data, and a strong founding team. Most of the firms that are comfortable with underwriting this risk in seed/series A deals have expertise in both life science and technology, enabling them to provide critical resources including top talent, exposure to partners and access to new investors.

<table>
<thead>
<tr>
<th>Biopharma</th>
<th>R&amp;D Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average pre-money</strong></td>
<td>$11.8M (n=8)²</td>
</tr>
<tr>
<td><strong>Average deal size</strong></td>
<td>$5.3M (n=10)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biopharma</strong></td>
<td><strong>R&amp;D Tools</strong></td>
<td><strong>Biopharma</strong></td>
</tr>
<tr>
<td>Raised at least one follow-on deal</td>
<td>Raised at least one follow-on deal</td>
<td>Raised at least one follow-on deal</td>
</tr>
<tr>
<td>Melonfrost</td>
<td>Melonfrost</td>
<td>Melonfrost</td>
</tr>
</tbody>
</table>

Note: 1) This analysis includes any first-round investments between $2.5M and $10M. 2) Number of available data points in PitchBook (n) is reported for each average.

Source: PitchBook and SVB proprietary data.
Comp Bio: Building Value in Follow-On Deals and Exits

For comp bio companies that already raised both a seed/series A and another follow-on deal in the past three years, the step-ups\(^2\) have been impressive, with a median step-up of 2.1x. Traditional life sciences investors and crossovers joined many of these follow-on deals, indicating that they believe comp bio will play an integral role in the future of drug discovery and development.

To unlock this investor set, companies must often validate their platform through partnerships, which are key to (1) demonstrate interest from pharma, (2) leverage revenue/milestones to defray costs and (3) pique M&A interest. This year, for instance, Outpace Bio (biopharma) raised a $30M series A round and partnered with Lyell to commercialize a cancer immunotherapy. Other companies like A-Alpha Bio (R&D tools) applied their platform technology to help pharma partners accelerate their drug pipeline.

Of the 52 biopharma and R&D tools IPOs valued at $1B+, since 2019, 13 (25%) were comp bio companies. These IPOs have performed tremendously, increasing total market cap by 3.7x and showing a median post-IPO performance of 54%. This growth was led by BioTech (a key contributor to the COVID-19 response), 10x Genomics and Kymera. There were significantly fewer big M&A deals, as acquirers focused on targeting therapeutic assets with definitive clinical data rather than comp bio platforms. One notable exception was Vividion, which was acquired by Bayer this year for $1.5B upfront and up to $500M in milestones.

Comp Bio (22 Seed/series A\(^1\) Follow-On Deals): Step-Ups\(^2\)
US and Europe, 2019-2021

<table>
<thead>
<tr>
<th>Step-Up</th>
<th>Biopharma</th>
<th>R&amp;D Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5x</td>
<td>4.9x</td>
<td>5.0x</td>
</tr>
<tr>
<td>2.8x</td>
<td>2.6x</td>
<td>1.5x</td>
</tr>
<tr>
<td>4.5x</td>
<td>2.3x</td>
<td>1.5x</td>
</tr>
<tr>
<td>13x+</td>
<td>13x+</td>
<td>13x+</td>
</tr>
</tbody>
</table>

Comp Bio (All Deal Stages): 2021 Top Post-Money Values (US and Europe)

<table>
<thead>
<tr>
<th>Company</th>
<th>Market Cap (US and Europe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insitro</td>
<td>$2.5B</td>
</tr>
<tr>
<td>Xeal</td>
<td>$2.3B</td>
</tr>
<tr>
<td>Generate</td>
<td>$2.0B</td>
</tr>
<tr>
<td>Immunai</td>
<td>$1.9B</td>
</tr>
<tr>
<td>OWKIN</td>
<td>$1.8B</td>
</tr>
<tr>
<td>Excentia</td>
<td>$1.8B</td>
</tr>
<tr>
<td>Neumora</td>
<td>$1.7B</td>
</tr>
<tr>
<td>Vividion</td>
<td>$1.6B</td>
</tr>
</tbody>
</table>

Comp Bio: Largest IPOs by IPO Market Cap
US and Europe, 2019-2021

<table>
<thead>
<tr>
<th>SVB Subsector</th>
<th>IPO Price (Date)</th>
<th>Market Cap at IPO</th>
<th>Price +/-</th>
<th>Market Cap 12/31/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biopharma</td>
<td>$20.00 (12/11/20)</td>
<td>$25.00 (2/21)</td>
<td>+282%</td>
<td>$81.28</td>
</tr>
<tr>
<td>R&amp;D Tools</td>
<td>$39.00 (9/13/19)</td>
<td>$15.00 (10/10/19)</td>
<td>+1619%</td>
<td>$20.00 (6/27/19)</td>
</tr>
<tr>
<td>Biopharma</td>
<td>$15.00 (1/16/21)</td>
<td>$15.00 (1/16/21)</td>
<td>5%</td>
<td>$17.13</td>
</tr>
<tr>
<td>R&amp;D Tools</td>
<td>$18.00 (4/16/21)</td>
<td>$18.00 (4/16/21)</td>
<td>-10%</td>
<td>$19.76</td>
</tr>
<tr>
<td>Biopharma</td>
<td>$22.00 (10/1/21)</td>
<td>$20.00 (8/12/21)</td>
<td>+40%</td>
<td>$28.06</td>
</tr>
<tr>
<td>Biopharma</td>
<td>$2.48 (8/27/19)</td>
<td>$2.48 (8/27/19)</td>
<td>-49%</td>
<td>$7.63</td>
</tr>
<tr>
<td>Biopharma</td>
<td>$1.5x (13/5)</td>
<td>$1.5x (13/5)</td>
<td>+54%</td>
<td>$30.71</td>
</tr>
<tr>
<td>Biopharma</td>
<td>$4.08 (12/31/20)</td>
<td>$2.88 (12/31/20)</td>
<td>+217%</td>
<td>$16.68</td>
</tr>
</tbody>
</table>

Note: 1) This analysis includes any first-round investments equal to or greater than $2.5M. 2) For companies that raised seed/series A and at least one follow-on since 2019, step-ups calculated as pre-money of first follow-on divided by post-money of seed/series A. 3) Step-ups calculated as pre-money of most recent deal divided by post-money of last round. Step-ups included for companies with valuations in Pitchbook. Source: Pitchbook.
Healthcare M&A and IPO Activity
Global
There were a record number of IPOs in 2021, but post-IPO performance was significantly down vs the previous two years. For the class of 2021, the average post-IPO performance was -21%, with only three companies trading above +100%.

By comparison, the average post-IPO performance for the class of 2020 was +100% at the end of 2020. However, this class also suffered during 2021 and was up just +12% at year end. The class of 2020 still had 11 companies with post-IPO performance over +100% at 2021 year end, including five early-stage companies (two pre-clinical and three phase I at IPO). However, as a sign of the current times, the bottom 11 performers (-68% performance and below) also contained five early-stage companies.

Private M&A activity in 2021 dropped to the lowest level we have seen since 2013. This downward trend is directly related to the open IPO window over the past five years, as most early-stage companies have embraced mezzanine rounds and then IPOs (at very good valuations) rather than early-stage exits. Many healthcare venture firms also raised later-stage opportunity funds which influenced companies to spurn early M&A.

While private M&A was down, we believe venture M&A is still quite viable with strong activity in pre-clinical deals. In addition, numerous venture-backed companies have also recently gone public and then were acquired, such as Translate Bio ($3.2B), Viela Bio ($3B), Pandion ($1.9B) and Constellation ($1.7B).

Note: 1) This company overlaps with the healthtech sector and is included in both sets of sector-specific analyses. M&A defined as all private, global, venture-backed M&A deals with upfront payments of at least $75M. IPO defined as all private, global, venture-backed IPOs raising at least $25M in proceeds. Market cap at IPO used to estimate value of public companies. Public market performance metrics calculated as of 12/31/21. Source: PitchBook, Capital IQ and SVB proprietary data.
Private M&A Activity Down; Pre-Clinical Deals Reward VCs

Early-stage pre-clinical and phase I deals continued to dominate private M&A in 2021. The number of pre-clinical deals (nine) jumped to set a new yearly record.

These pre-clinical deals had a median $31M in venture capital invested and exited in a median 5.2 years from the close of series A. The median upfront deal value was $350M, with an additional $358M in milestones. The median multiple on investment for the upfront payment (upfront payment divided by total capital invested) was an impressive 5.6x. Of the nine deals, three were acquired for $1B+ in total deal value in 2021: Vividion Therapeutics (by Bayer), Teneobio (by Amgen) and Amunix (by Sanofi).

Big pharma has lots of cash, so we expect M&A to be robust in 2022, although the activity will likely be dominated by large acquirers that are hunting for recently public companies trading at depressed valuations. Many of these IPOs were pre-clinical or phase I at IPO (131 of 280 total since 2018), with current market caps significantly off their previous highs. These companies may be open to M&A as an attractive alternative to raising more equity. It will be harder to convince private companies and investors of mezz-funded deals to acquiesce to M&A at reduced values that do not match venture-type returns. However, we still believe that there is a large subset of higher-valued private early-stage companies to fill big pharma’s need for pipeline assets and platform technologies.
Since 2018 Early-Stage IPOs Fare Better Than Later-Stage

IPO median pre-money valuations hit a record high in 2020 ($500M) then dropped in 1H 2021 ($478M). From there, we saw a continued downward trend in Q3 ($412M) and Q4 ($378M). Post-IPO performance for the class of 2021 IPOs averaged -21% at year end.

The top 10 post-IPO performers in the class of 2021 averaged +75% and were split across clinical stages, with two pre-clinical (Verve Therapeutics and Dice Molecules), three phase I (Prometheus Biosciences, Arecor and Icosovax), three phase II (Vera Therapeutics, Rani Therapeutics and Imago Biosciences) and two commercial (San Nuvo Technology and Brii Biosciences). These deals had a median step-up of 1.4x from venture to mezz and 1.3x from mezz to pre-money IPO.

Oncology-focused deals continued to dominate the number of IPOs, accounting for 43 of the 93 IPOs in 2021 (average post-IPO performance of -32%), followed by 10 platform companies (-9%), seven orphan/rare (-34%), six anti-infective (the best-performing indication at -5%) and eight neurology deals (-30%).

Since 2018, early-stage IPOs (pre-clinical and phase I) appeared to have better post-IPO performance than later-stage deals (phase II to commercial). However, the large difference between average and median performance for these early-stage IPOs indicate that a few huge winners were responsible for driving the performance up. These early-stage deals also received better step-ups from venture to mezz to pre-money IPO valuations. We think that early-stage IPOs will continue to be part of the IPO mix in 2022, offering lucrative returns for early investors even if IPO performance is muted.

Note: 1) Step-Up defined as the valuation change from the last round post-money value to the next round pre-money value) Public market performance metrics calculated as of 12/31/21. IPO defined as all private, global, venture-backed IPOs raising at least $25M in proceeds.

Source: Pitchbook, Capital IQ and SVB proprietary data.
HealthTech Exits Marked by Hefty Market Caps

HealthTech’s IPO window remained open despite the pandemic, with seven IPOs in 2020 and a record 16 in 2021. Insurance companies Oscar Health ($1.4B in proceeds with a market cap of $7.9B) and Bright Health ($924M in proceeds with a market cap of $11B) completed the two largest IPOs of 2021. These IPOs helped propel healthtech exit values to $46B, more than doubling the record performance of 2019 and beating 2020 exit values by more than 3x.

However, the class of 2021’s performance remains largely negative, with an average post-IPO performance of -28%. Oscar Health (-80%) and Bright Health (-81%) are both down substantially. The aggressive valuation premiums we have seen in the healthtech private market have not translated to the public market. The notable exception is provider operations company Doximity, which went public at the third largest healthcare market cap ($4.6B) and is now up +93% at year end 2021. Immuneeering is the only other IPO to be trading higher than its IPO price.

On the private M&A side, increased consolidation of point solutions healthcare companies drove increased activity, almost doubling acquisitions in 2020.

We have seen private companies, many of which are venture funded, become acquirers. Flush with cash from large rounds raised in 2020 and 2021, these private healthtech companies have accelerated M&A in 2021 to expand both vertically and horizontally, by integrating point solutions in their product offerings and scaling commercial growth and revenue.

Note: 1) These companies overlap with dx/tools or biopharma sectors and are included in both sets of sector-specific analyses. M&A defined as all private, venture-backed M&A deals with no upfront limitations, globally. IPO defined as all private, venture-backed IPOs raising at least $25M in proceeds, globally. Market cap at IPO used to estimate value of public companies. Public market performance metrics calculated as of 12/31/21.

Source: Pitchbook, Capital IQ, SVB proprietary data and SVB HealthTech Report.
With 122 M&A deals this year, 2021 shot past 2019’s record of 76. While deal volume increased, acquisition prices were slightly down; median deal size was $63M, down from 2020 ($84M) but ahead of 2019 ($40M). The majority of acquirers were healthcare companies, and we noted acquisitions by PE firms have declined in 2021.

While there were no $1B+ venture-backed private M&A in 2020, we saw three big transactions in 2021, all in the alternative care space: Ginger (virtual care) was acquired by Headspace for $3.0B, MDLive (virtual care) by Cigna for $2.0B and Iora Health (hybrid care) by One Medical for $1.4B. Another $1B+ transaction, while not an M&A but worth noting, was the Grand Rounds and Doctor on Demand all-stock merger.

Provider operations continued to dominate the M&A space in deal activity with larger M&A deals such as PatientCo, OODA Health, Citizen and VisitPay. However, alternative care saw the largest uptick in deal activity this year (2x 2020’s pace) with the three $1B+ deals noted above and other sizable M&A such as PlushCare, Contessa and Access Physicians.

The uptick in M&A this year is further evidence of companies shifting to either a more vertical integrated strategy to capture more of a patient’s continuum of care or a horizontal strategy to provide platform solutions to broader consumer bases. We expect this high volume of private M&A to continue in 2022 as companies look to enhance their platforms.

Note: 1) These companies overlap with the dx/tools or device sector and are included in both sets of sector-specific analyses. M&A defined as all private, venture-backed M&A deals with no upfront limitations, globally. Source: PitchBook, SVB proprietary data and SVB HealthTech Report.

### HealthTech M&A Deal Median Values by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Deal</th>
<th>Years to Exit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>$63M</td>
<td>5.0</td>
</tr>
<tr>
<td>2020</td>
<td>$84M</td>
<td>6.2</td>
</tr>
<tr>
<td>2019</td>
<td>$40M</td>
<td>5.8</td>
</tr>
<tr>
<td>2018</td>
<td>$100M</td>
<td>4.9</td>
</tr>
<tr>
<td>2017</td>
<td>$41M</td>
<td>3.6</td>
</tr>
<tr>
<td>2016</td>
<td>$10M</td>
<td>4.2</td>
</tr>
<tr>
<td>2015</td>
<td>$70M</td>
<td>4.3</td>
</tr>
</tbody>
</table>

### 2021 Notable M&A Deals

- **Alternative Care**
  - ginger
  - MDLIVE
  - ZeaMed

- **Clinical Trial Enablement**
  - Genuity
  - 4C

- **Healthcare Navigation**
  - Healthify
  - dotorrent
  - Tango Health

- **Provider Operations**
  - PatientCo
  - Citizen
  - VisitPay
Dx/Tools Exit Activity Catches Fire; IPO Performance Down

There was record M&A and IPO activity in 2021. IPOs tripled and M&A doubled 2020 records.

The median pre-money value and dollars raised for 2021 IPOs was $582M and $131M, doubling 2019 medians but falling behind 2020 medians of $929M and $178M.

However, IPO performance in 2021 was mixed, with average post-IPO performance just breaking positive at +3%. R&D Tools deals performed much better than dx tests. The 17 R&D tools IPOs were up an average of +25% from their IPO, while the 10 dx tests companies were down -26%.

Most of the positive IPO performance was outside of the US, including the two biggest IPOs by market cap, Oxford Nanopore Technologies and Vazyme Biotech. At year end, 14 US-based companies traded down an average of -36% from their IPO prices. Only one of the 14 was in positive territory (Alpha Teknova) while three were down more than 50% (Zymergen, Tails Biomedical and Sera Prognostics). On the other hand, the nine China IPOs in 2021 shined, showing an average performance increase of +78%.

Previous IPOs show mixed performance during 2021, with the class of 2019 (+139% after one year) still strong at +198%. Five deals were still trading over +100% from their IPO price, including 10X Genomics and Castle Biosciences. The IPO class of 2020 (+110% after one year) was down substantially to -13% at 2021 year end, with only Shrodinger over +100%.

M&A was strong in 2021, with nine deals garnering $300M+ upfront payments (vs six in 2020 and two in 2019).

### 2021 Largest IPOs by IPO Market Cap

<table>
<thead>
<tr>
<th>Subsector</th>
<th>IPO Price (Date)</th>
<th>Market Cap at IPO</th>
<th>Price 12/31/21</th>
<th>Price +/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSE-ONT</td>
<td>$5.63 (8/23/21)</td>
<td>$4.6B</td>
<td>$9.45</td>
<td>+68%</td>
</tr>
<tr>
<td>SHSE-688105</td>
<td>$8.63 (11/15/21)</td>
<td>$3.4B</td>
<td>$16.68</td>
<td>+93%</td>
</tr>
<tr>
<td>NAS:ZY</td>
<td>$31.00 (4/22/21)</td>
<td>$833M</td>
<td>$6.69</td>
<td>-78%</td>
</tr>
<tr>
<td>NAS:EXAI</td>
<td>$22.00 (10/1/21)</td>
<td>$2.8B</td>
<td>$19.76</td>
<td>-10%</td>
</tr>
<tr>
<td>NAS:HLTH</td>
<td>$16.00 (9/24/21)</td>
<td>$1.4B</td>
<td>$13.41</td>
<td>-16%</td>
</tr>
<tr>
<td>NAS:CTKB</td>
<td>$17.00 (7/23/21)</td>
<td>$1.0B</td>
<td>$16.32</td>
<td>-4%</td>
</tr>
<tr>
<td>SEHK:6606</td>
<td>$3.43 (2/17/21)</td>
<td>$1.5B</td>
<td>$2.83</td>
<td>-17%</td>
</tr>
<tr>
<td>NAS:ABSI</td>
<td>$16.00 (7/22/21)</td>
<td>$1.0B</td>
<td>$8.20</td>
<td>-49%</td>
</tr>
<tr>
<td>NAS:OMIC</td>
<td>$22.00 (5/27/21)</td>
<td>$1.0B</td>
<td>$11.56</td>
<td>-47%</td>
</tr>
<tr>
<td>SEHK:2251</td>
<td>$9.64 (11/5/21)</td>
<td>$1.0B</td>
<td>$4.92</td>
<td>-49%</td>
</tr>
</tbody>
</table>

Note: 1) These companies overlap with the healthtech sector and are included in both sets of sector-specific analyses. M&A defined as all private, venture-backed M&A deals with at least $50M upfront, globally. IPO defined as all private, venture-backed IPOs raising at least $25M in proceeds, globally. Market cap at IPO used to estimate value of public companies. Public market performance metrics calculated as of 12/31/21.

Source: PitchBook, Capital IQ, SVB proprietary data.
Dx/Tools Deal Multiples Up; Mid-Cap Activity Grows

M&A activity exploded in 2021. While median deal values were down vs 2020, the median upfront deal multiple (upfront payment divided by total invested capital) was the highest we have seen. The median multiple was a paltry 1.3x in 2018, growing to 3.2x in 2019, 4.3x in 2020 and 5.3x in 2021. This growth is impressive considering that 18 of the 20 deals were already commercial-stage, and recent IPO comps have been down. Of the three subsectors, dx tests had the highest median upfront value ($310M), followed by R&D tools ($222M) and dx analytics ($62M).

In 2021 we noted recently public biopharma companies buying R&D tools companies to help expand their technology or offerings, with acquisitions of Guide (by Beam) and ZebAI (by Relay). We also saw well-funded private venture-backed companies pick up dx/tools companies. R&D Tools company Escientia acquired Alcyte (dx analytics) to expand drug discovery capabilities, and well-funded healthtech company Ro acquired Modern Fertility (dx tests) to expand its women’s health vertical.

Two dx tests acquirers picked up dx analytics companies in 1H: HalioDx (by Veracyte) and Trapelo Health (by NeoGenomics). These acquirers struck again in 2H, each picking up a dx tests company: Decipher Biosciences (by Veracyte) and Inivata (by NeoGenomics).

Hologic completed two dx tests acquisitions in 2021, Biotheranostics and Diagenode, as well as two medical device deals.

Note: 1) These companies overlap with the healthtech sector and are included in both sets of sector-specific analyses. M&A defined as all private, venture-backed M&A deals with at least $50M upfront, globally. Source: Pitchbook and SVB proprietary data.
IPOs Doubled, M&A Value Up as Exit Values Soared

2021 yielded record device IPO and M&A activity, beating 2015’s previous high-water marks. The median upfront value for M&A also reached a six-year high. Device exit value, mainly fueled by IPO market caps, doubled 2020’s record.

Over the previous three years, device IPOs have outperformed all other healthcare sectors, driven by 10 outsized IPOs that have shown an average post-IPO performance of +470%. Overall, these IPOs helped their IPO classes achieve impressive performance through 2021. At year end, the class of 2018 was still up an average of +197% (led by Inspire Medical Systems, Establishment Labs and Axonics Modulation Technology), and the class of 2019 was up +204% (led by Shockwave Medical and Silk Road Medical). The IPO class of 2020’s performance fell more than half during this year but still reached +60% by the end of 2021 (led by Inari Medical, Outset Medical and Pulmonx).

However, the 24 IPOs in the class of 2021 treaded just above water, coming in at an average post-IPO performance of +2%. The 14 US-based IPOs fared worse, at -28%, with only Elite Body Sculpture, Paragon 28 and PROCEPT BioRobotics in positive territory. By contrast, China device IPOs excelled in the public market, up +73%, though many were more mature companies. This tough market in the US has already deterred a number of pre-IPO device companies, as many pushed off 2H 2021 IPO plans and raised additional private capital instead.

2021 Largest IPOs by IPO Market Cap

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>$4.7B</td>
<td>$5.1B</td>
<td>$7.6B</td>
<td>$13B</td>
<td>$14B</td>
<td>$13B</td>
<td>$14B</td>
<td>$14B</td>
</tr>
<tr>
<td>2020</td>
<td>$8.4B</td>
<td>$4.7B</td>
<td>$5.1B</td>
<td>$7.6B</td>
<td>$13B</td>
<td>$13B</td>
<td>$14B</td>
<td>$14B</td>
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<tr>
<td>2019</td>
<td>$16.00</td>
<td>$17.57</td>
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<td>$25.01</td>
<td>$21.93</td>
<td>$13.44</td>
<td>$13.44</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>$17.57</td>
<td>$25.01</td>
<td>$25.01</td>
<td>$21.93</td>
<td>$13.44</td>
<td>$13.44</td>
<td></td>
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<tr>
<td>2017</td>
<td>$19.5M</td>
<td>$14.0M</td>
<td>$14.0M</td>
<td>$14.0M</td>
<td>$14.0M</td>
<td>$14.0M</td>
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</table>

Note: M&A defined as all private, venture-backed M&A deals with at least $50M upfront, globally. IPO defined as all private, venture-backed IPOs raising at least $25M in proceeds, globally. Market cap at IPO used to estimate value of public companies. Public market performance metrics calculated as of 12/31/21. Source: PitchBook, Capital IQ, SVB proprietary data.
Record Number of M&A Led by Small/Mid-Cap Acquirers

M&A activity was busy in 2021, beating 2015’s records for number of deals and median upfront deal value. The mix of new acquirers expanded to include multiple small and mid-cap acquirers, big company spin-offs and China-based companies. Many of the IPOs over the last five years have grown into small to mid-cap companies, and have built up investment arms of their own to fund venture-backed deals. These firms have also started to pull the trigger on technology acquisitions, forcing bigger players to buy companies earlier. This has led to a very active M&A market.

Implants and surgical tools continue to lead acquisition opportunities. However, tech-enabled services exits have become more prevalent as acquirers look to expand connected care and/or imaging solutions. We saw four tech-enabled services exits in 2021, lead by three deals in NIM (acquired by Boston Scientific, Hill-Rom and Hologic) and one in imaging (acquired by Olympus).

The majority of 510(k) pathway companies continue to need FDA clearance and revenue uptake at exit. The median upfront payment for 510(k) deals was up this year ($160M) vs the historical median from 2015-2020 ($105M), and the time to exit was faster. PMA pathway exits typically happen prior to commercialization, but in 2021 we saw more commercial-stage exits. Deal size also increased in 2021 to hit a median of $275M upfront (vs $206M), however time to exit also increased.

A) Device Private M&A Deals by Indications

B) Device M&A Deal Median Values by Year

C) 2021 Notable M&A Deals

Note: 1) These companies overlap with the healthtech sector and are included in both sets of sector-specific analyses. M&A defined as all private, venture-backed M&A deals with at least $50M upfront, globally. Source: Pitchbook and SVB proprietary data.
Healthcare Outlook: 2022 and Beyond

Fundraising and Investments: Venture healthcare fundraising in the US will likely hit $16B and investment into companies in the US and Europe will total about $64B, as VCs slow down their deal pace but continue to invest from recently-closed funds.

Biopharma: LiPO deals will mirror Q4 2021 activity or decrease, leading to less investment in the sector and lower valuations for series B and later deals. We think IPO activity will be down about 50% (50+ IPO), favoring companies with a differentiated but straightforward story and strong insider syndicate. M&A should pick up in 2022 but will focus more on newly-public companies already trading at a discount and private pre-clinical deals.

HealthTech: 2022 will be the year of M&A for healthtech as we anticipate massive consolidation. Investments will be healthy but not at 2021 levels. This will create many acquisition opportunities as companies look to enhance their product offerings, expand their reach to other markets or acquire for talent and/or clinicians (both of which are in short supply).

Dx/Tools: IPO valuations were high in 2021 and post-IPO performance was mixed. Some air has come out of the sector to push revenue multiples back to pre-2019 levels. We estimate another 10-15 IPOs in 2022, but at lower valuations. Private M&A will remain strong with 20+ deals in 2022. We will monitor the ability of highly-valued private companies to exit.

Device: Investment will likely decline as non-venture investors slow down mezz investing. The IPO window will remain open for big market stories with early revenue traction, leading to an estimated 10-12 IPOs in 2022. Pre-revenue companies or 510(k) deals with burgeoning revenue will find it challenging to go public. M&A activity will stay hot, as a diverse set of acquirers compete for the top deals.

All predictions made are based on previous data trends, which have been quoted accordingly. Source: SVB proprietary data.
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Jonathan Norris spearheads strategic relationships with many healthcare VC firms and serial entrepreneurs. In addition, he helps SVB Capital through sourcing and advising on limited partnership allocations and direct investments.

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Outside of SVB, Beatriz is a Ph.D. candidate at Stanford University. She has more than seven years of experience developing new biomedical technologies, from peptide-based therapeutics to microfluidic and bioinformatics tools.

Beatriz earned a B.S. in bioengineering from the California Institute of Technology.
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.
Corporate Investor defined as a corporate venture and parent company investment into venture-backed companies.
Special Purpose Acquisition Company (SPAC) defined as a company with no commercial operations that is formed strictly to raise capital through an initial public offering (IPO) for the purpose of acquiring an existing company.
De-Special Purpose Acquisition Company (De-SPAC) defined as a transaction consisting of a completed merger between a private operating company and a publicly traded SPAC.
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 tool), (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 includes 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 usually is in a commercial stage.

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.

Biopharma Top 15 Crossover Investors

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