



2020 PHILADELPHIA VENTURE REPORT



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Introduction

2020 was a watershed moment on so many fronts. The COVID-19 pandemic will forever change how we live, work, and interact. The killings of George Floyd, Breonna Taylor, Ahmaud Arbery, and countless others have brought focus and urgency to attacking racism, racial injustice, and the resulting inequities in our society. Philadelphia has always been a city fueled by passion and determination to challenge the status quo, think differently, invent, and push forward together. This report showcases the fruits of that passion in the form of capital raised to fuel innovation. Healthcare has never been more at the forefront of our collective consciousness, and the strength of Philadelphia’s community in life sciences and healthcare continues to shine on a global stage. Foundational research at Penn Medicine by Drew Weissman, MD, PhD, a professor of Infectious Diseases in Penn’s Perelman School of Medicine, and Katalin Karikó, PhD, an adjunct associate professor at Penn and a senior vice president at BioNTech, helped unlock the therapeutic power of mRNA, leading to two groundbreaking COVID-19 vaccines. You will not find that data in this report, but you will find many examples of current and future shining stars in Philadelphia’s entrepreneurial ecosystem, in healthcare, life sciences, enterprise technology, and many other sectors. Please join me in thanking our 2020 report sponsors. PACT looks forward to working with them and all of you to continue to elevate Philadelphia.

Dean Miller, President & CEO

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Data pull date: January 15, 2021

Note: This report covers the Philadelphia-Camden-Wilmington Metropolitan Statistical Area (Philadelphia), which includes parts of Pennsylvania, New Jersey, Delaware, and Maryland. All data and charts cited throughout the report are based on companies and/or investors headquartered in this region. References to data for the US and other MSAs sources from the “Q4 2020 PitchBook-NVCA Venture Monitor.”

About the Cell & Gene Therapy and Connected Health Initiative:

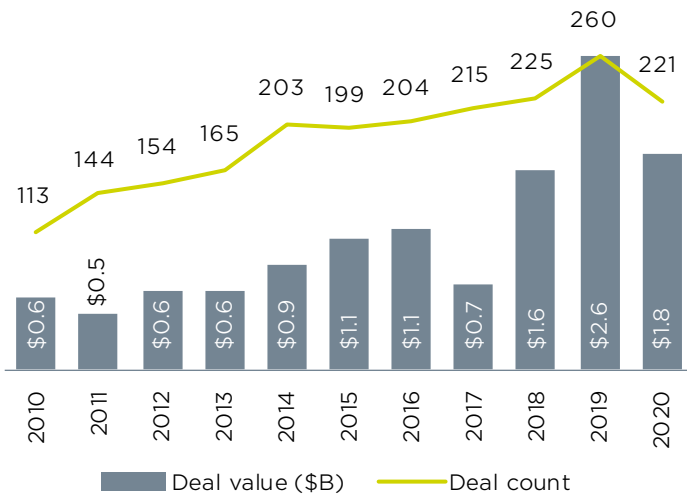
The Chamber, through its CEO Council for Growth, along with collaborating institutions, organizations, and companies, has launched a multi-year initiative to leverage and promote Greater Philadelphia’s cell and gene therapy, gene editing, and connected health sectors. The objective of the initiative is to strengthen the region’s innovation economy through efforts including shared storytelling that build awareness of the region’s assets, providing resources to start-up and scaling companies, assessing the talent needs of the sectors, and supporting the development of critical infrastructure for the sector’s growth. The initiative is supported by 11 partner companies, institutions and universities in the Greater Philadelphia region. For more information, visit <http://www.ceocouncilforgrowth.com>

Report Sponsors



Dealmaking

VC deal activity



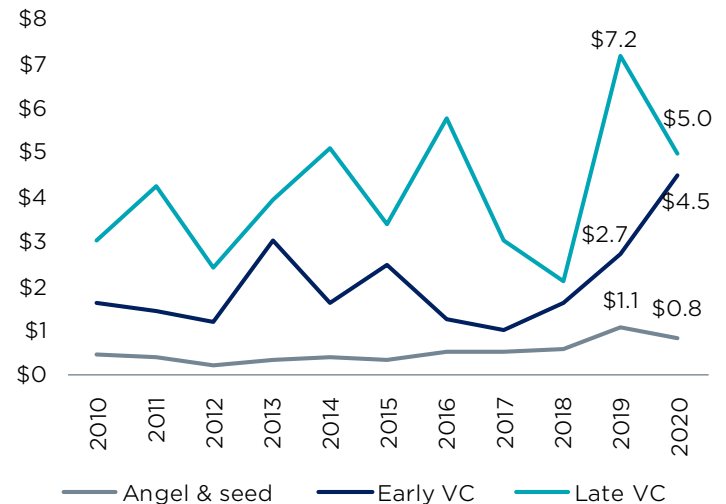
Source: PitchBook | Geography: Philadelphia

Philadelphia's venture capital (VC) and emerging technology ecosystem concluded a turbulent 2020 on a resilient note. Companies raised \$1.8 billion across 221 VC deals by year-end, recording the MSA's second-highest annual deal value and third-highest deal count despite COVID-19's economic impact. Sustained investor interest in Philly's roster of up-and-coming companies helped to push the MSA's average VC deal size in 2020 to \$8.1 million.

The Philadelphia VC and emerging tech ecosystem has matured considerably in recent years, and startups across sectors have matured along with it. However, just half of the capital deployed to the MSA over the past year went to late-stage companies. By contrast, at the broader US level, late-stage companies collected two out of every three venture dollars invested in 2020. While total late-stage deal value fell by a third from \$1.2 billion in 2019 to about \$900 million in 2020, late-stage deal count in 2020 matched 2018's total of 44. Between 2010 and 2020, late-stage VC deal value expanded at a compound annual growth rate (CAGR) of some 8.5% on, effectively, a flat CAGR for deal count, as investors cut larger but fewer checks, a trend only accelerated by COVID-19.

Meanwhile, Philly's aggregate VC deal value and count across all stages expanded at an 11.5% CAGR and a 6.9%

Median VC deal size (\$M)

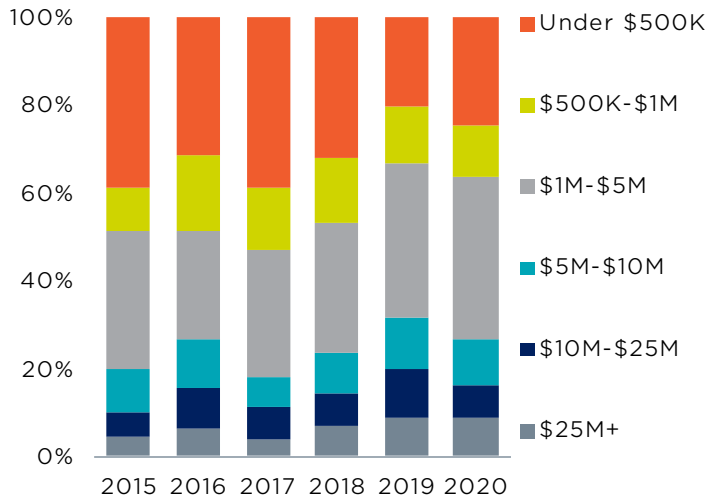


Source: PitchBook | Geography: Philadelphia

CAGR, respectively, between 2010 and 2020. The quality of companies coming to market in recent years has driven much of this dynamic, which continued into 2020. Philly-based companies at the angel, seed, and early stages collectively raised about as much as late-stage companies did in 2020, securing nearly \$900 million combined. The trend of fewer but larger checks also helped push the median early-stage deal size to \$4.5 million in 2020, which topped 2019's posting by some 66% year-over-year (YoY) and marked the fourth consecutive year of growth in this metric.

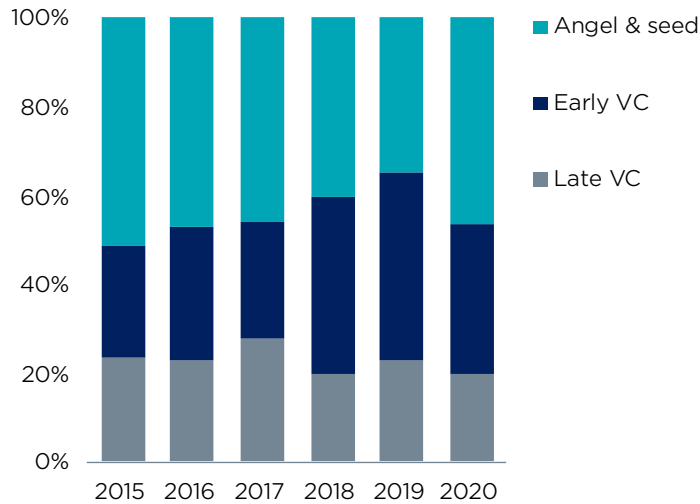
At the same time, Philly's early-stage companies remained significantly undervalued compared to the broader US early-stage ecosystem, producing a \$20.0 million median pre-money valuation versus the US' \$30.0 million median in 2020. Likewise, although the median angel & seed deal size fell slightly to \$800,000 in 2020, Philly-based startups operating at this most nascent phase still recorded one of the strongest years on record for pre-money valuations at \$5.0 million. Aggregate deal value at the angel & seed stage has risen considerably in recent years, expanding at a CAGR of 20.3% between 2010 and 2020 even as deal count grew at a more modest rate of 14.3%. Despite the adverse impact the pandemic had on dealmaking when it first hit, 2020 data suggests venture activity in Philly actually remained healthy.

VC deals (#) by size



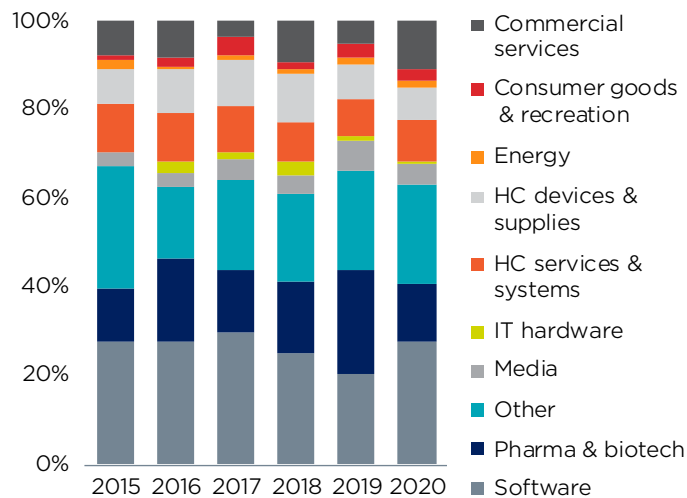
Source: PitchBook | Geography: Philadelphia

VC deals (#) by stage



Source: PitchBook | Geography: Philadelphia

VC deals (#) by sector



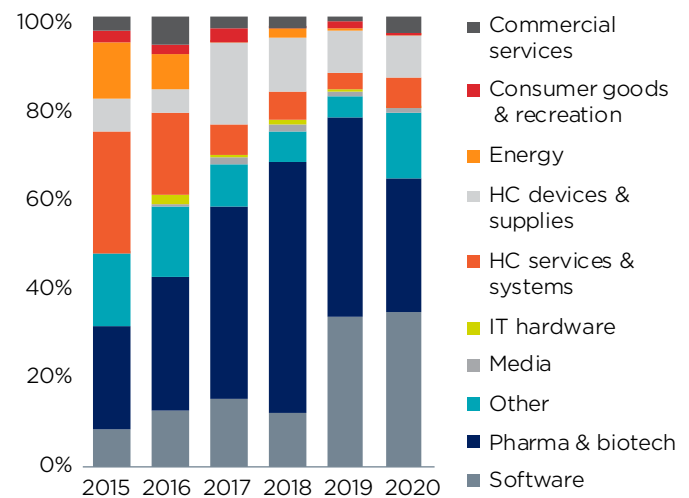
Source: PitchBook | Geography: Philadelphia

Top Philadelphia-based company fundraisings in 2020

Company name	Industry	Deal size (\$M)
goPuff	Application software	\$380.0
Imvax	Drug discovery	\$112.0
Misfits Market	Other services (B2C non-financial)	\$85.0
SwanBio Therapeutics	Therapeutic devices	\$77.0
Castle Creek Biosciences	Drug discovery	\$75.0
Carisma Therapeutics	Drug discovery	\$59.0
Prelude Therapeutics	Drug discovery	\$50.0
Nikang Therapeutics	Biotechnology	\$50.0
MediSponsor	Enterprise systems (healthcare)	\$50.0
Renmatix	Agricultural chemicals	\$48.6
Carisma Therapeutics	Drug discovery	\$47.0
Palvella Therapeutics	Biotechnology	\$45.0

Source: PitchBook | Geography: Philadelphia

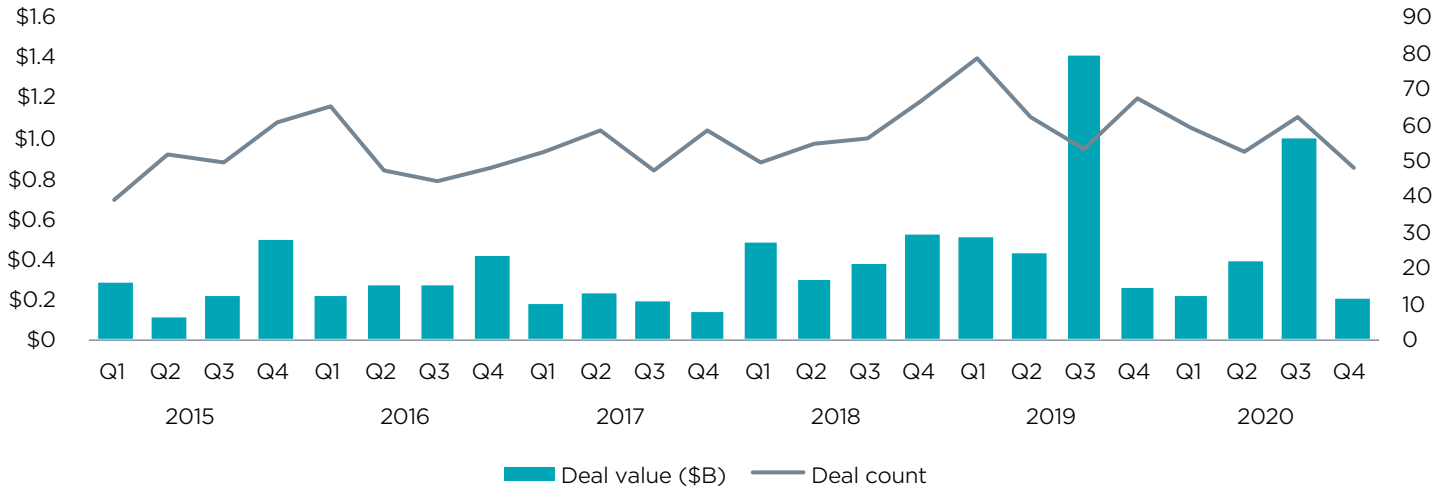
VC deals (\$) by sector



Source: PitchBook | Geography: Philadelphia

The Pandemic's Impact

VC deal activity



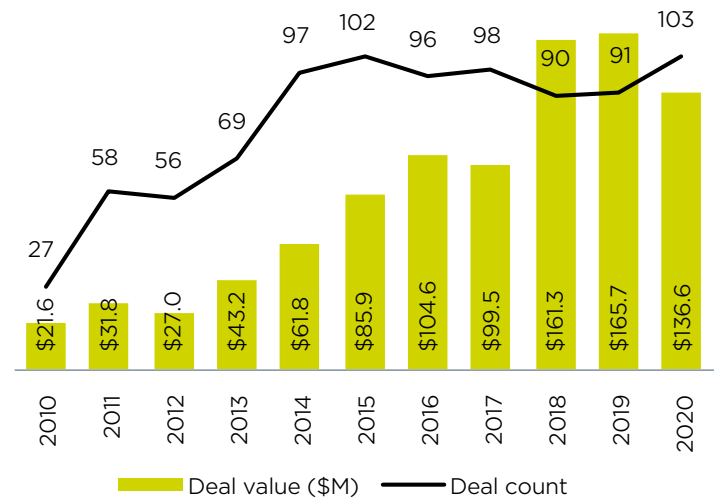
Source: PitchBook | Geography: Philadelphia

Philadelphians embody grittiness. In 2020, the MSA posted record seed and angel deal activity, signaling no slowdown to the startup scene, while the biopharma and healthcare communities continued to shine, despite AND in response to COVID-19.

The COVID-19 pandemic hit every sector hard in 2020. However, Philly's entrepreneurial community demonstrated its durability and then some once investors adjusted to rolling restrictions on in-person communication. All those meetings and conferences went virtual in the wake of the pandemic, if not canceled outright, at times to the detriment of newcomers. Despite market uncertainty in Q2 2020, Philly-based startups raised \$376.7 million across 52 deals, nearly doubling the sum raised in the quarter prior across fewer total deals. Deal value and volume in the quarter actually represented declines of just 12.1% and 16.1%, respectively, from Q2 2019's recordings, largely due to the resurgence of late-stage funding.

Once the back half of 2020 rolled around, prospective investors and company founders had already adjusted to the new normal in dealmaking across stages and sectors. Q3 recorded Philly's second-highest quarterly VC deal value and the second time the MSA ever raised more than \$1 billion in a single quarter. The combined value of Series B rounds and beyond jumped from \$75.0 million in Q2 to \$556.2 million in Q3, while topping the volume of deals completed quarter-over-quarter (QoQ) by 10 transactions.

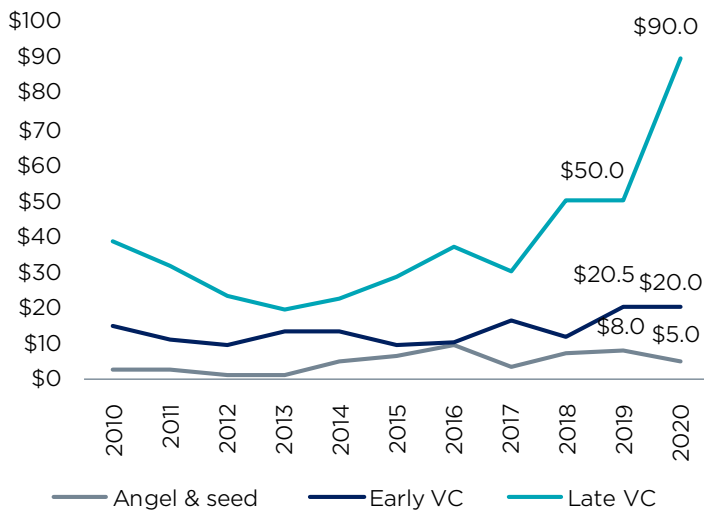
Angel & seed deal activity



Source: PitchBook | Geography: Philadelphia

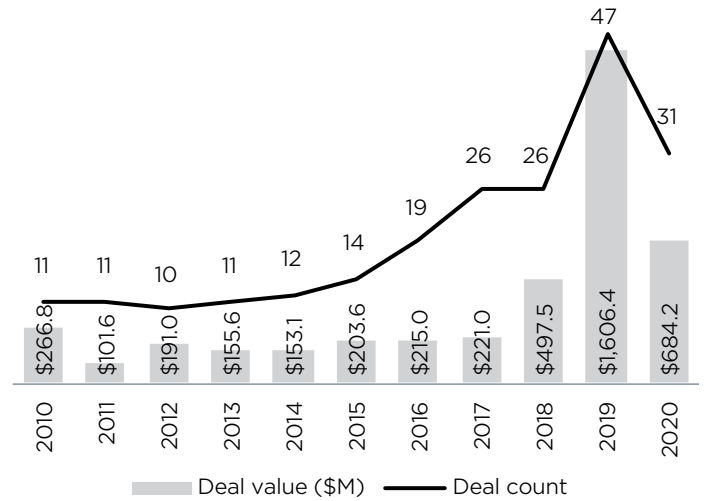
Some sectors made the transition to remote dealmaking with greater success than others, however. For example, Philly's robust software and biotech & pharma segments captured more of the upside from the midyear rebound in investment activity. Software deal count climbed from 15 in Q2 2020 to 22 in Q3. Q3 actually accounted for 60.7% of all Philly software deals closed in 2020 and 85.4% of the \$613.7 million generated by those deals in aggregate. The largest raise of the year, a \$380.0 million round for on-demand delivery company goPuff at a \$3.9 billion valuation, highlights how the pandemic accelerated changes in consumer behaviors and revisions to supply chains. Likewise, several sizable rounds raised in Philly's enterprise tech sector point to the pandemic's impact on a global workforce operating on a distributed footing at scale.

Median VC pre-money valuation (\$M) by stage



Source: PitchBook | Geography: Philadelphia

VC deal activity with CVC investor participation



Source: PitchBook | Geography: Philadelphia

In April, Fishtown Analytics secured a \$12.9 million Series A round led by Andreessen Horowitz and then added another \$29.5 million in a Series B round led by Sequoia Capital in November. Founded in 2016, the startup’s open-source data engineering tool dbt makes it easier for data analysts to create and disseminate organizational knowledge. The platform is used by 3,000 companies per week, including GitLab and fellow Philly-based enterprise tech startup Crossbeam, which raised a \$25.0 million Series B of its own last year. Both Fishtown’s and Crossbeam’s fundraising success speak to the rapid transition to distributed workforces as well as the ongoing interest in Philly’s growing enterprise tech ecosystem from outside and corporate investors.

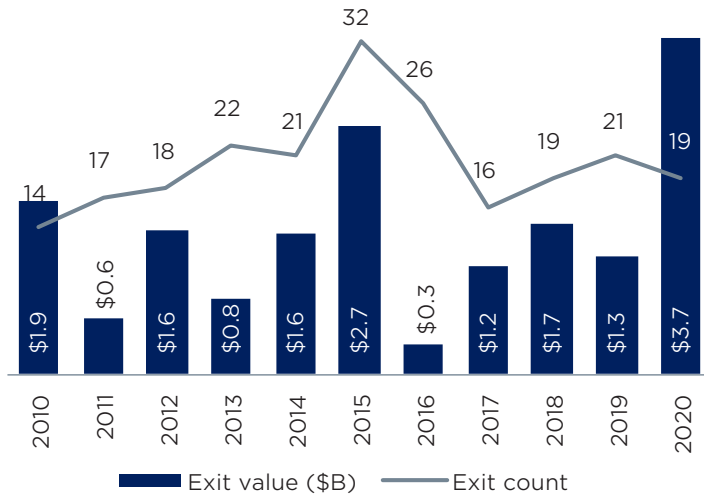
In addition to providing strong local government support to entrepreneurs, Philly also houses a pipeline of developer talent coming from some of the top universities in the US. Moreover, the city is just a train ride away from the New York, Boston, and Washington, D.C., metro areas and their additional customer bases. While Fishtown raised a combined \$42.4 million from Silicon Valley giants such as Andreessen Horowitz and Sequoia in 2020, Crossbeam’s funding came not only from existing investors FirstMark Capital and Uncork Capital, but also corporate VC (CVC) investors Salesforce Ventures and Slack Fund. After posting a record level of aggregate disclosed deal value on unprecedented volume in 2019, CVCs pulled back YoY, deploying \$684.2 million across 31 deals with Philly-based companies. Meanwhile, venture firms based in the Bay Area, Boston, and New York MSAs all invested higher sums into Philly’s ecosystem in 2020. Funding from Bay Area firms grew in aggregate to \$946.7 million on 46 transactions in 2020, while investment from New York expanded to \$817.1 million overall, and Boston-based firms closed 16 deals in Philly for \$378.3 million in value.

At the same time, Philly’s biotech & pharma sector exhibited many of the same trends in funding sources and concentration at the late stage, generating \$566.3 million overall on just 33 rounds. The rebound in dealmaking at midyear across this space produced half of all activity and all but roughly \$100 million in aggregate disclosed value in 2020. Although biotech & pharma companies in the MSA secured roughly half the VC they did in 2019, when they raised a record \$1.2 billion, Philly’s robust life sciences space closed more than 30 deals for a fifth consecutive year. Imvax, a Washington Square biotech company developing immunotherapy-based treatments for solid-tumor cancers, raised the top round in the space with a \$112.0 million Series C in July—another testament to late-stage funding success in Philly for the year. Likewise, Carisma Therapeutics secured \$106.0 million across its Series A and Series B rounds, the latter of which closed just before year-end.

Angel & seed stage deals remain vital to the broader VC ecosystem. The strength of angel & seed stage startups in Philly helped buck the national trend in 2020 of investors retreating to more familiar names once the pandemic hit. As investors continue to source and diligence deals virtually in 2021, the ease of investing in companies wherever they happen to be based should continue to bolster Philly’s ecosystem even further. This trend is already benefiting businesses headquartered in second- and third-tier cities falling outside of the usual investment hubs. For example, backing of Bay Area angel & seed stage startups fell almost 20% shy of the volume posted in 2019. By contrast, angel investors participated in 11 more deals targeting Philly’s most nascent startups YoY, while seed-stage deal count held steady, posting one more deal in 2020 than 2019. These figures punctuate a significant period of expansion, with angel deal count posting a CAGR of 14.6% since 2010 and seed deal count growing by a CAGR of 14.0% over the same period.

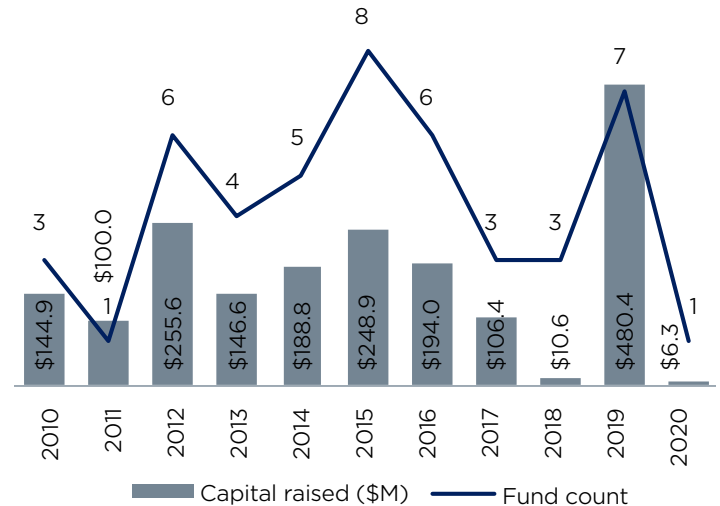
Exits & Fundraising

VC exit activity



Source: PitchBook | Geography: Philadelphia

VC fundraising activity



Source: PitchBook | Geography: Philadelphia

The COVID-19 pandemic could well have spelled doom for liquidity in 2020 excepting distressed asset sales. But between one of the best years in recent memory for IPOs, the sustained success of direct listings, and the rise of special purpose acquisition vehicles, 2020 represented boom times for investors seeking liquidity—all before considering conventional M&A. Aggregate exit value in the US topped \$290 billion in 2020 while exit count totaled 1,101, with the IPO window blowing wide open thanks to public market debuts from the likes of Airbnb and DoorDash near year-end

Philly also benefited from this strong exit environment. Companies in the MSA generated more liquidity on an annual basis than ever before, securing \$3.7 billion in aggregate value across 19 exits. The biotech & pharma space produced the bulk of that sum, contributing \$2.7 billion in aggregate value on seven exits. The public debuts of Accolade, Passage Bio, and Prelude Therapeutics led the way, generating some \$2 billion in combined liquidity. Ben Franklin, BioAdvance, and OrbiMed were the principal beneficiaries of this development, exiting a total of eleven investments in 2020.

Local sources of capital remain the lifeblood of companies just starting out, and the robust exit activity of 2020 should recycle capital into the Philly ecosystem after a recent dry

spell in VC fundraising activity. While capital raised by Philly-based VC firms had been falling YoY since 2015, it spiked considerably to \$480.4 million across seven new vehicles in 2019. However, limited partners largely held off on new commitments in 2020. Chestnut Street Ventures, part of the Alumni Ventures Group syndicate, raised Philly's sole vehicle of the year, closing on \$6.3 million. At the same time, however, several sizable private equity vehicles, including the \$102.0 million growth equity fund spun up by Intrinsic Capital Partners, closed in 2020 to cap a decade during which financial sponsors allocated \$4.2 billion to 217 growth equity rounds since the start of 2010.



\$1.2B

Valuation of health benefits platform Accolade at IPO in July

Q & A

What have been the principal factors in the resilience of Philadelphia’s VC investment and emerging technology community during the COVID-19 pandemic?

Philadelphians have a long-standing reputation as gritty underdogs. By nature, Philadelphians step up when times get tough. The investment and entrepreneurial communities grounded to a halt like everyone else for a brief time in the early days of the pandemic. But they quickly realized that many of their areas of focus—healthcare, life sciences, enterprise technology—were in greater demand as a result of the pandemic, not less. At the same time, we saw more companies getting started in the midst of 2020 as Philadelphia’s base of entrepreneurs has both steadily grown and matured in experience over the past decade. Philadelphia is no longer a well-kept secret among the global investment community when it comes to opportunity. The secret was out before the pandemic, and this only further fueled Philadelphia’s continued attraction of significant capital.

What have been the drivers of valuations, particularly among less mature startups in the Philadelphia ecosystem, across individual sectors over the past year?

Valuation is always a topic driven by supply and demand. While our early- and late-stage valuations have risen over the years, the median valuations of Philadelphia companies are still below the national average. This has attracted more capital, which will in turn continue to drive valuations upward. The angel- and seed-stage company valuations held steady in 2020 with no growth. Ben Franklin is one of the leading seed-stage

investors in the country and does *all* of its investing in the Philadelphia region. Despite this fact, there is still a relative scarcity of seed-stage capital in the region, which keeps valuations from climbing. I do expect a future upward valuation trend with the increase in deal activity among Philadelphia’s angel- and seed-stage companies.

What’s on the horizon for Philadelphia’s VC investment and emerging tech community in 2021, particularly in terms of exit activity?

2020 brought a flurry of successful IPOs to the market in general and specifically to Philadelphia-based companies. The Philadelphia life sciences sector, in particular, took advantage of robust investor appetite for new drugs targeting unmet patient needs. I expect this to continue in parallel with an already robust M&A market, further supported by the eye-popping activity in the SPAC sector.

What role do you see Philadelphia’s VC investment and emerging tech community playing in supporting underrepresented founders going forward?

As one of the leaders of Philadelphia’s investment and entrepreneurial communities, PACT has made equity and access a cornerstone of our strategy. Specifically, we have reduced financial and other barriers to underrepresented founders and entrepreneurs in gaining access to the community we foster and the programs we provide to support entrepreneurs. In partnership with Ben Franklin, the Science Center, and Penn, among others, we continue to grow our Mentor Connect program to serve more underrepresented founders so that they have access



Dean E. Miller
President & CEO, PACT

Dean also serves as Managing Director of the PCOM Innovation Fund, a venture capital fund focused on healthcare innovations. He brings over 20 years of investment and community building expertise to PACT and the PCOM Fund. Prior to PACT, Dean was Managing Director at Novitas Capital, a Safeguard-affiliated fund, where he focused on venture capital investments across healthcare and technology.

to the skills and experience of successful CEO mentors. Philadelphia is a very diverse community in general. However, our investment and emerging tech community is not. We are also supporting the work of multiple organizations to improve the diversity of the investment and emerging tech community, including OnE Philadelphia, a collaborative initiative to create opportunity and equity for all Philadelphians through a comprehensive, accessible, scaled approach to a continuum of technology and entrepreneurial education for our region’s underrepresented youth and young adults.