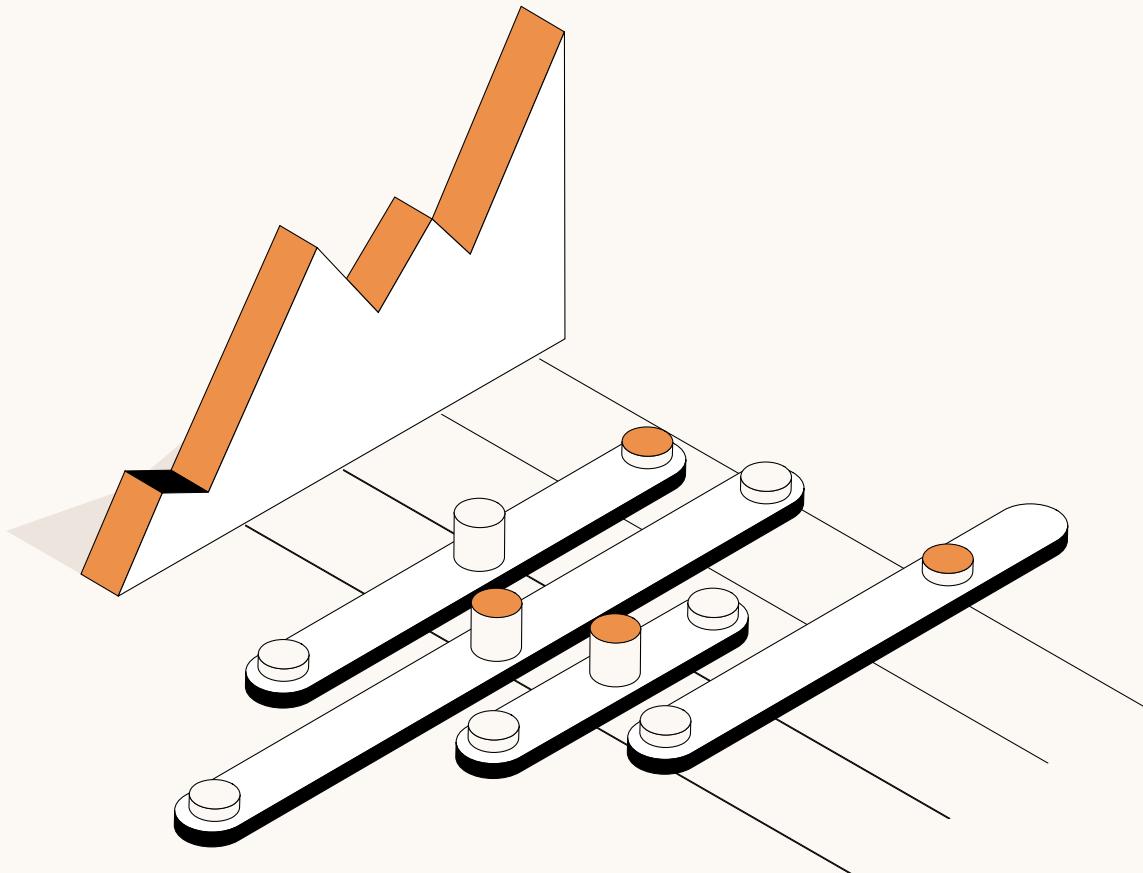


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VC Fund Performance

Data as of Q1 2024

Authors: Peter Walker, Michael Young, Alex Lester, and Kevin Dowd



VC Fund Performance

Q12024

Authors: Peter Walker | Michael Young, PhD | Kevin Dowd | Alex Lester

There has been tremendous upheaval in the venture capital markets since interest rates began to rise in early 2022.

Fundraising has slowed. Liquidity has become scarce—due not only to a dearth of IPOs but lackluster M&A as well.

Against that backdrop, fund managers have found themselves in a heightened competition for limited partner dollars across many asset classes.

So how can fund managers make the case that they deserve a greater allotment of LP cash? Better data, especially for small funds, might help.

We're excited to introduce the first VC Fund Performance report from Carta, based on aggregated and anonymized metrics from 1,803 venture funds currently using Carta Fund Administration.

Carta serves more than 3,000 venture firms across many categories, so we've narrowed this analysis in a few ways to make it more impactful. Only U.S. funds are included, and all included funds are direct venture investors (as opposed to funds of funds). Funds must have been in vintage years 2017 through 2022. More detail on our [methodology](#) can be found at the end of this report.

Each vintage year includes at least 120 underlying funds (and far more in most vintages). As such, we believe this analysis represents a dramatic expansion of the public data available for small VC fund performance.

Note that this report includes data from funds over \$100 million, a traditional delineation point between emerging and established managers.

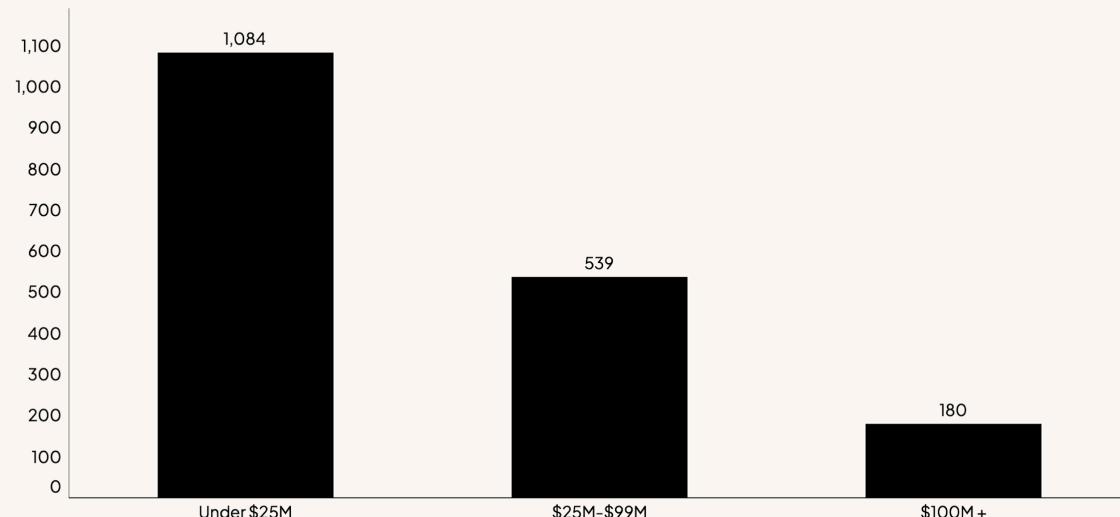
Highlights:

- **Slow capital deployment:** Funds in the 2022 vintage have deployed about 43% of their committed capital at the 24 month mark, the lowest share of any analyzed vintage. Prior vintages ranged from 47%-60% after 24 months.
- **Graduation rates declining:** 30.6% of companies that raised a seed round in Q1 2018 made it to Series A within two years. Only 15.4% of Q1 2022 seed startups did so in the same timeframe.
- **Distributions back to LPs remain elusive:** Less than 10% of 2021 funds have had any DPI after 3 years.

Fund Details & Deployment

1,803 US funds analyzed

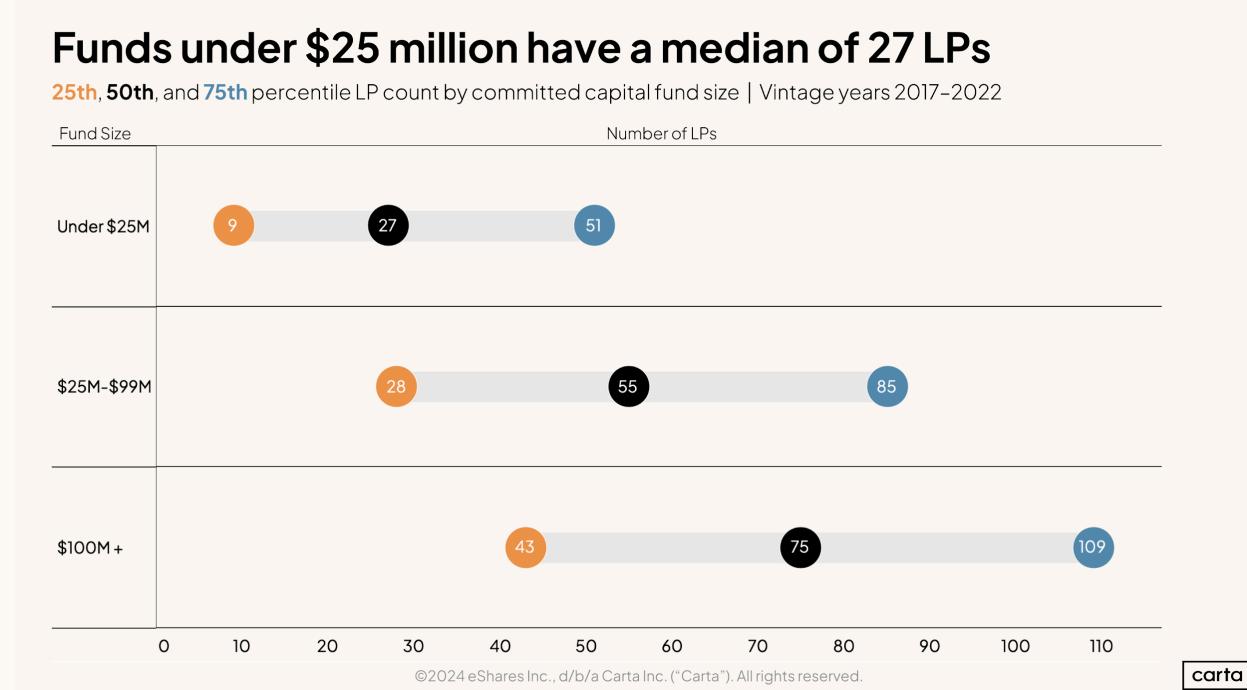
Total venture funds included by committed capital | Vintage years 2017-2022 | Data as of Q1 2024



This report is based on data from 1,803 venture funds, ranging in vintage year from 2017 to 2022. A majority of these funds—about 60%—received less than \$25

million in capital commitments. Another 30% of funds are between \$25 million and \$100 million in size, while 10% are \$100 million or larger.

This distribution of funds by size makes intuitive sense. Emerging managers may start by raising a small fund, while far fewer have the sort of track record, industry connections, and firm infrastructure required to raise a fund of \$100 million or more.



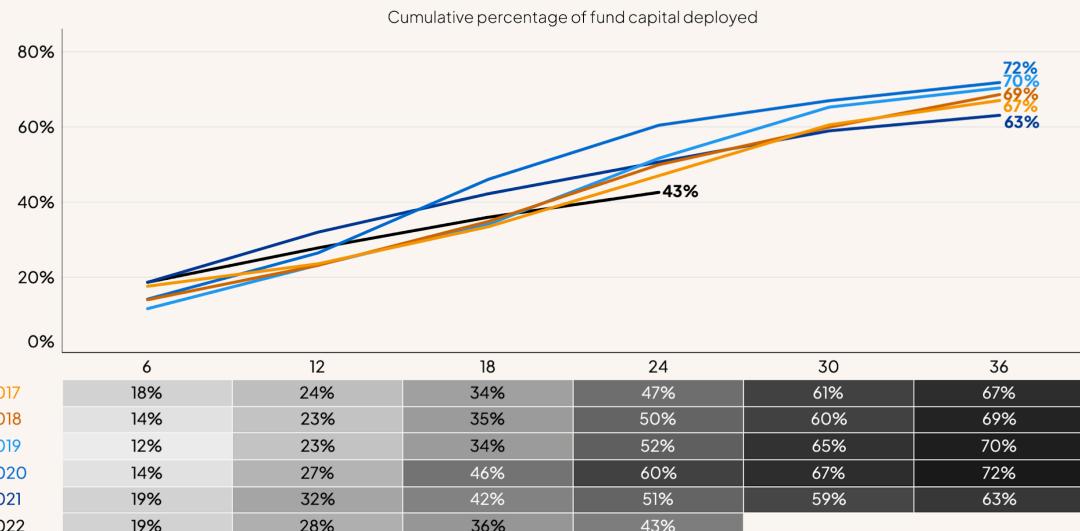
The larger the venture fund, the more LPs it tends to have. But there's considerable variation in the size of the LP base of different funds, even funds that are roughly the same size.

Among the smallest category of funds—those with less than \$25 million in commitments—the median fund closed between 2017 and 2022 had 27 LPs. A fund at the 25th percentile would have 9 LPs, and one at the 75th percentile would have 51.

Funds with \$100 million or more in commitments typically have far more LPs, but the gap between the 25th percentile (31 LPs) and the 75th percentile (102 LPs) is similarly wide. For a venture firm, managing more than a hundred different LP relationships can be a much larger lift than managing a few dozen.

2022 vintage has deployed 43% of capital after 24 months

Cumulative percentage of fund capital deployed by months since vintage inception | Vintage years 2017–2022



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$$\% \text{ fund deployed at time } t = \frac{\sum_{t=0}^T \text{Capital deployed}(t)}{\sum_{t=0}^T \text{Capital committed}(t)}$$

The velocity with which capital deploys has steadily decreased after peaking with the 2020 fund vintage¹. Cumulative capital deployment percentage after 24 months (total dollars deployed / dollars raised at point t) dropped from 60% for the 2020 fund vintage to 43% for the 2022 fund vintage. This points to a larger trend in private capital markets – investors are slowing down the pace of investments as the market reset continues.

¹Total capital committed includes capital raised after a fund first closed.

IRR

$$NPV = \sum_{t=0}^T \frac{C(t)}{(1+IRR)^t} - C_0$$

Where $C(t)$ = net cash flow at a given time t

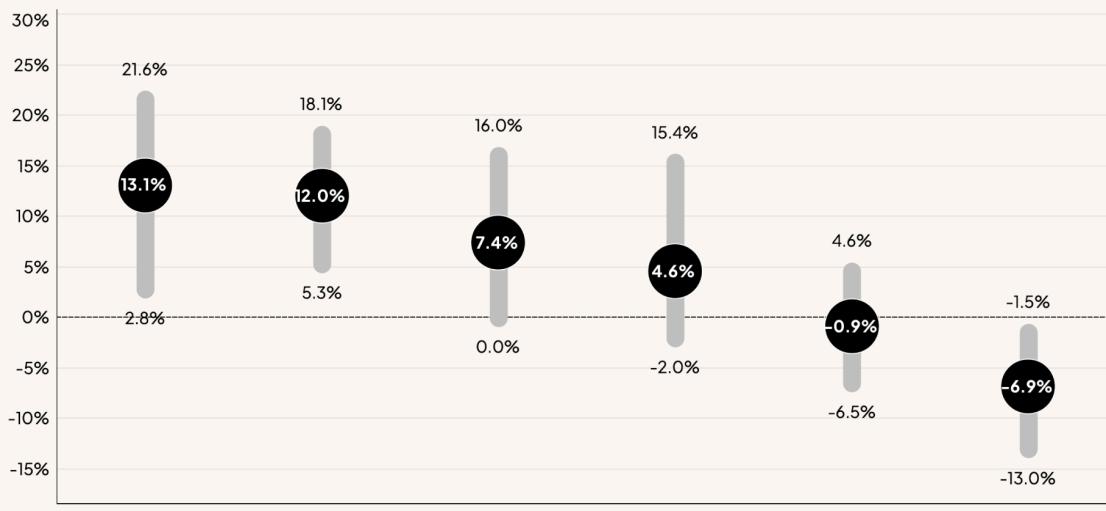
And $C(0)$ = total initial cost of investments

And NPV = net present value of the fund's future cash distribution (set to 0 to numerically solve for IRR)

Internal rate of return (IRR) is one of the most commonly used metrics for fund performance. At a basic level, it's a way to measure the return that a fund has produced (or is expected to produce) for its investors while accounting for the time value of cash flows. This allows funds of different vintage years to be compared against one another. All IRR discussed in this report is net of fees.

Median IRR for vintage years 2021 and 2022 below zero

Unrealized IRR by vintage year | Vintage years 2017–2022 | 25th, Median, and 75th percentiles | Data as of Q12024

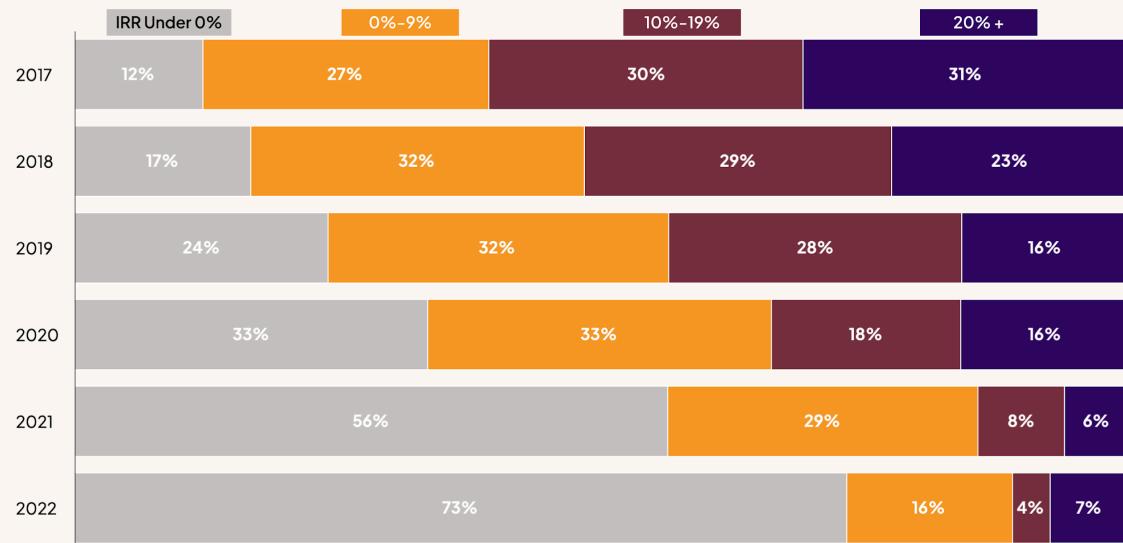


Through the end of Q1 2024, median unrealized IRR for our two most recent vintages (2022 and 2021) remains below zero. The gap between 75th and 25th percentile performance is also narrower for more recent vintages.

Of course comparing IRR for different vintages is inherently tricky, as it's common for IRR to follow a J-curve with an initial loss that quickly turns into significant gains.

16% of 2019 funds have an IRR over 20%

Percent of funds by vintage year by net IRR tier | Data as of Q1 2024



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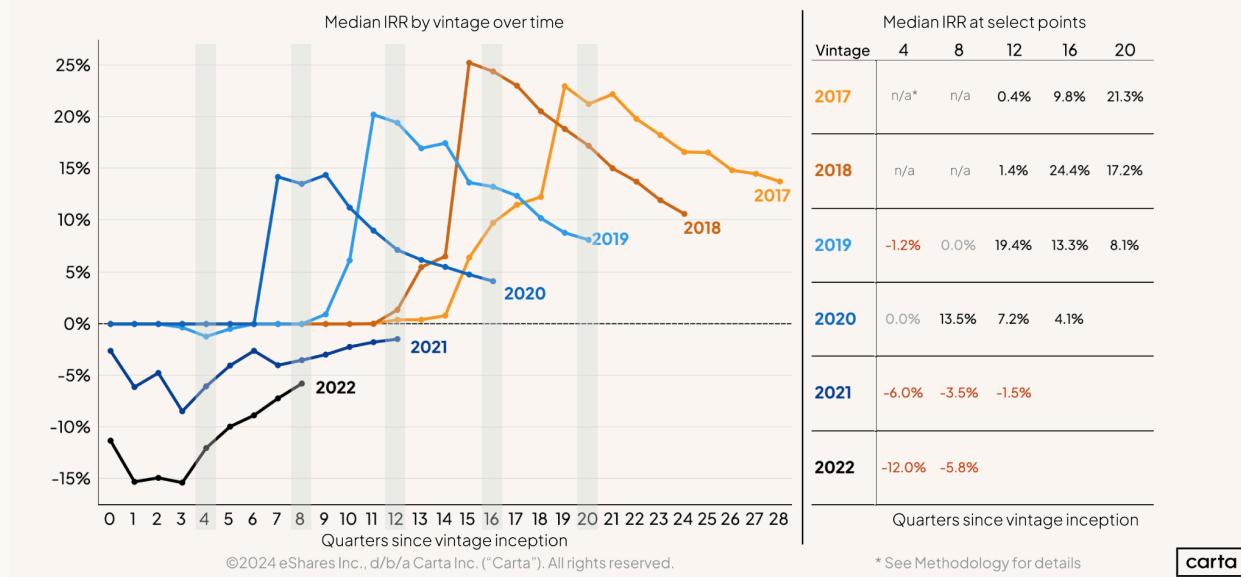


Instead of the traditional percentile breakout, we can also view current performance by bucketing each fund in a given vintage year into a tier by unrealized IRR.

31% of funds in vintage year 2017 have an IRR over 20% (about 7 years into the lifecycle of those funds). A progressively smaller share of funds in each successive vintage are currently clearing the 20% mark, with a slight break in the trend at vintage year 2020.

Median IRR in vintage year 2021 trails earlier vintages

Median net IRR by vintage year by quarters since inception | Vintage years 2017–2022 | Data as of Q1 2024



The stark difference in performance by vintage year is clearer in the chart above. At the 12 quarter mark (three years into a fund's lifecycle), the median IRR for vintage year 2019 had grown to 19.4%. The median IRR for vintage 2021, by contrast, failed to break into positive territory after the same amount of time.

At a basic level, median IRRs were on the rise during the time when venture-backed valuations were rising (2021 and early 2022 in particular), and IRRs have either declined or showed much slower growth since valuations began to decline. Funds in the vintages from 2020 and earlier had time to start posting positive IRRs before that widespread valuation decline commenced; funds in the 2021 and 2022 vintages did not.

It remains to be seen if performance among the 2021 and 2022 vintage years can recover to match earlier vintages or if the macro changes across venture have resigned those vintage years to lower outcomes permanently.

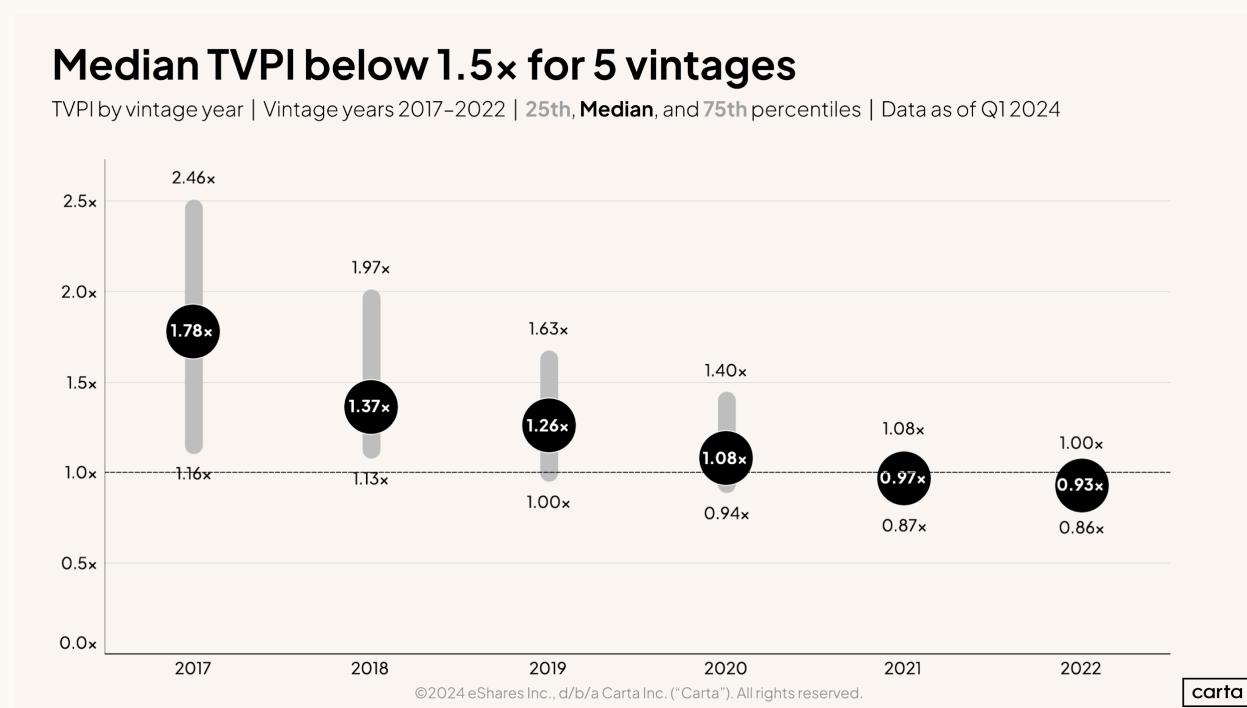
TVPI

$$TVPI = \frac{\text{Distributed capital} + \text{Residual value}}{\text{Paid-in capital}}$$

TVPI—which stands for [total value to paid-in capital](#)—is another of the most common metrics used to measure and compare fund performance. To calculate this multiple, divide the total current value of a fund’s assets and distributions by the amount paid in to date. For funds that still have active portfolio companies, the current value will include some amount of unrealized gains. Changes in TVPI over time reflect fluctuations in the value of these portfolio assets and their ultimate value once gains are realized.

Median TVPI below 1.5x for 5 vintages

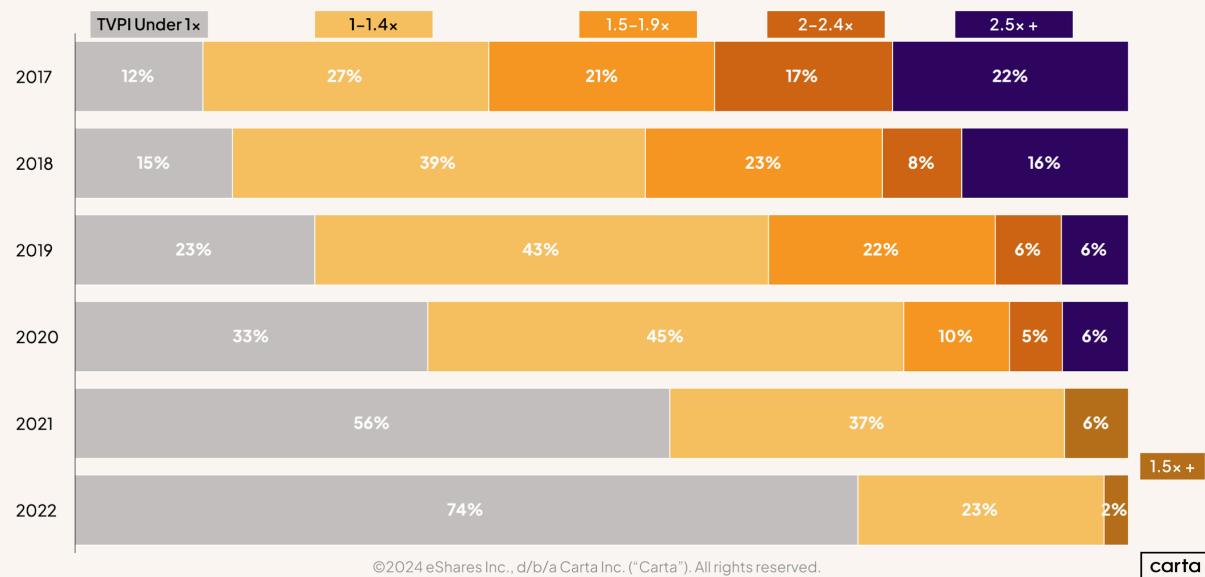
TVPI by vintage year | Vintage years 2017–2022 | 25th, Median, and 75th percentiles | Data as of Q1 2024



As of Q1 2024, median TVPI for our two most recent vintages (2021 and 2022) remains below 1x. At the high end, median TVPI for vintage year 2017 currently stands at 1.78x, with 75th percentile performance close to the 2.5x mark.

22% of 2017 funds have a TVPI of 2.5x or higher

Percent of funds by vintage year in each current TVPI tier | Data as of Q1 2024



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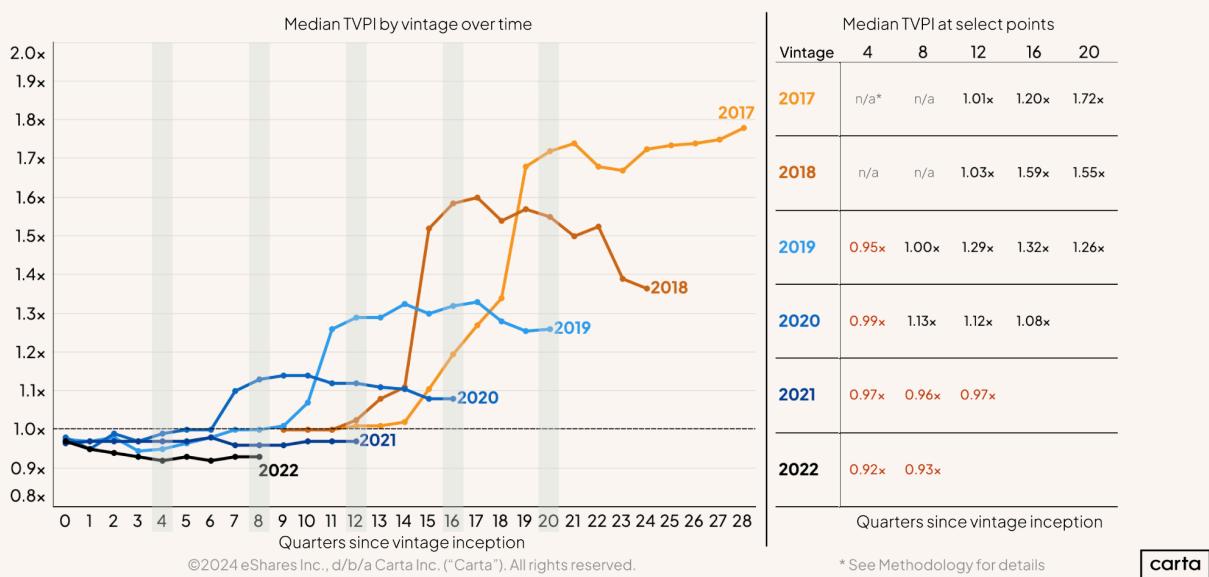
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The older the fund, the more likely it is to be producing positive potential returns. Among the 2018 vintage, for instance, some 85% of funds have a TVPI of 1x or higher, and 24% have a TVPI of 2x or higher. Two years into the 2021 vintage, only 44% of funds even crossed the 1x mark.

Just as with IRR, this difference in performance among recent vintages is expected. TVPI also typically follows a J curve, with multiples starting off flat or negative in a fund's earliest years and then growing over time. To help address that disparity, we can again look at how TVPI performance varies across vintages based on the time since inception.

Median TVPI for vintage year 2021 remains below 1x

Median TVPI by quarters since inception | Vintage years 2017–2022 | Data as of Q1 2024



The frothiest moment for startup valuations came as 2021 ended and 2022 began. It's no coincidence, then, that the sharp upward shift in median TVPI for vintage 2017 happened 18 quarters or so from inception—right on schedule.

More recent vintages—those that have had less time to invest and have been investing in a very different startup environment—are so far following a different trajectory.

For the 2021 vintage, median TVPI at the three-year mark remains below 1x, trailing every earlier vintage at the same checkpoint. Likewise, the 2020 vintage is lagging well behind earlier vintages at the same point, with a 1.08x median TVPI after four years, compared to a 1.32x median four-year TVPI for the 2019 vintage.

DPI

$$DPI = \frac{\text{Distributed capital}}{\text{Paid-in capital}}$$

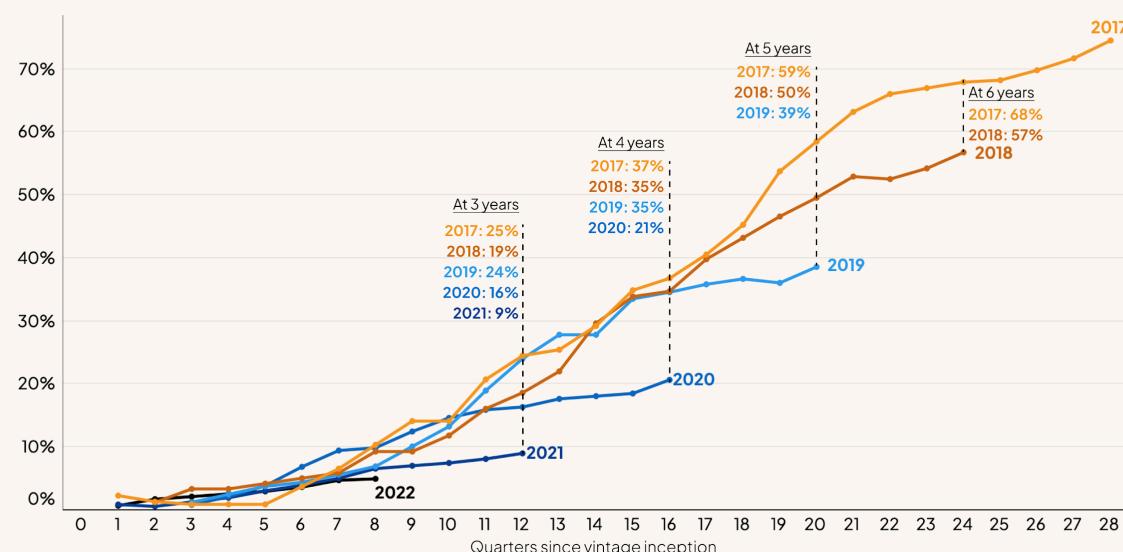
DPI, which stands for [distribution to paid-in capital](#), is the ratio of capital returned to investors to the amount they've paid into a fund to date. While TVPI incorporates measures of unrealized gains, DPI only uses realized gains. In the most basic sense, DPI tells us how much cash fund managers are returning back to LPs from exiting their investments and any other earnings, such as interest or dividends.

Because DPI uses realized gains, the DPI for any one fund tends to be quite low during the first several years of its existence. During these years, fund managers are much more focused on making new investments and helping their portfolio companies grow than they are on finding exits and realizing returns.

However, in this constrained exit environment, the difference between having zero and any DPI can be meaningful.

Fewer funds in recent vintages have DPI

Percent of funds with DPI over zero by quarters since inception | Vintage years 2017–2022 | Data as of Q1 2024



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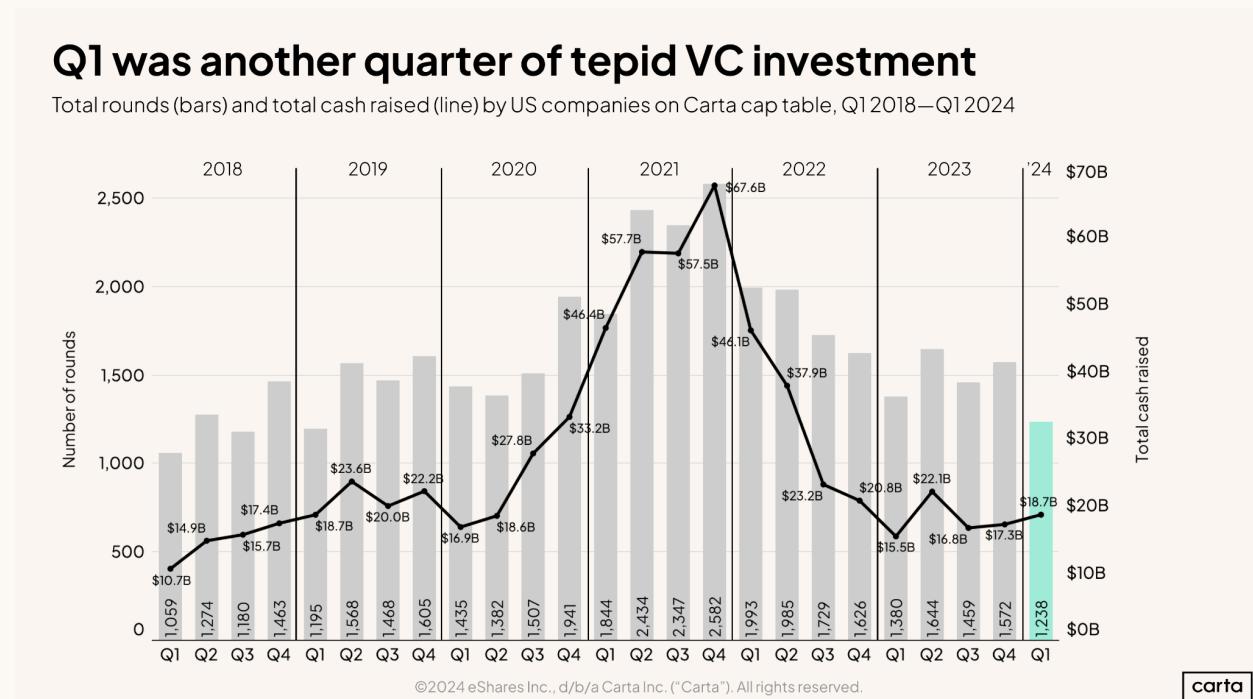


Only 9% of funds in vintage year 2021 have returned any capital to LPs at the 3 year mark. In contrast, 25% of the 2017 vintage had distributed at least some capital at the same checkpoint.

Many managers across the vintage years took advantage of the venture capital valuations boom to return at least some capital to limited partners. But we also see the pattern of recent vintages becoming “stuck” in performance terms as the exit environment has soured in the last 18 months. The percent of funds in the 2019 vintage with any DPI, which had been tracking consistently to 2018 and 2017 vintages in the first 4 years, lags significantly behind by year five.

Market Context

Fund performance benchmarks must take into account the prevailing trends across startups as a whole—Carta’s cap table database of over 45,000 startups allows us to give crucial fundraising and exit context to the fund performance metrics above.

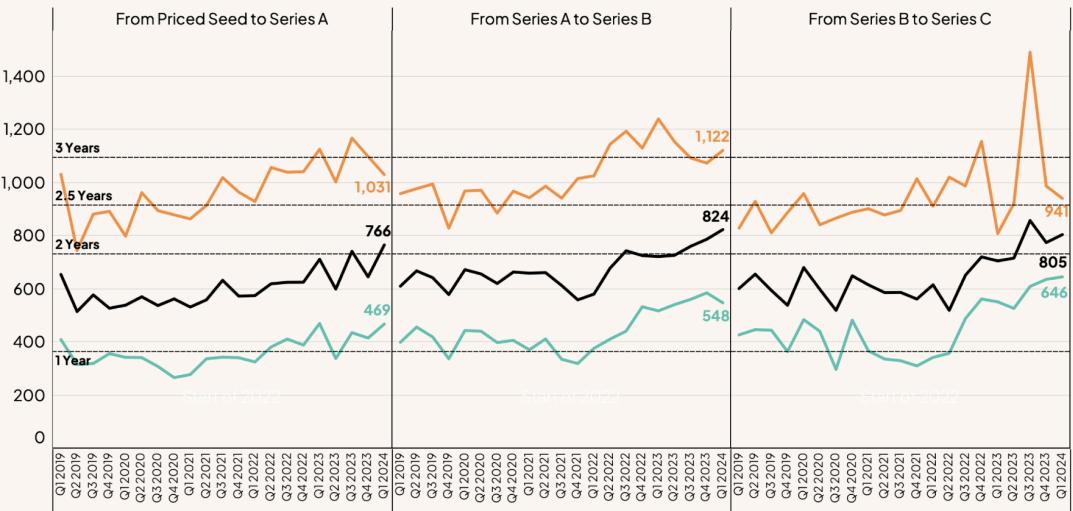


US startups on Carta raised about \$19 billion in priced equity venture capital in Q1 2024. While that figure was slightly higher than the preceding two quarters, it pales

in comparison to the nearly \$68 billion raised in Q4 of 2021, at the fundraising market's peak. The boom times in venture are well and truly over.

Median time between rounds rose in Q1 across early stages

Days between primary financings, Q1 2019–Q1 2024 | 25th Pct | Median | 75th Pct



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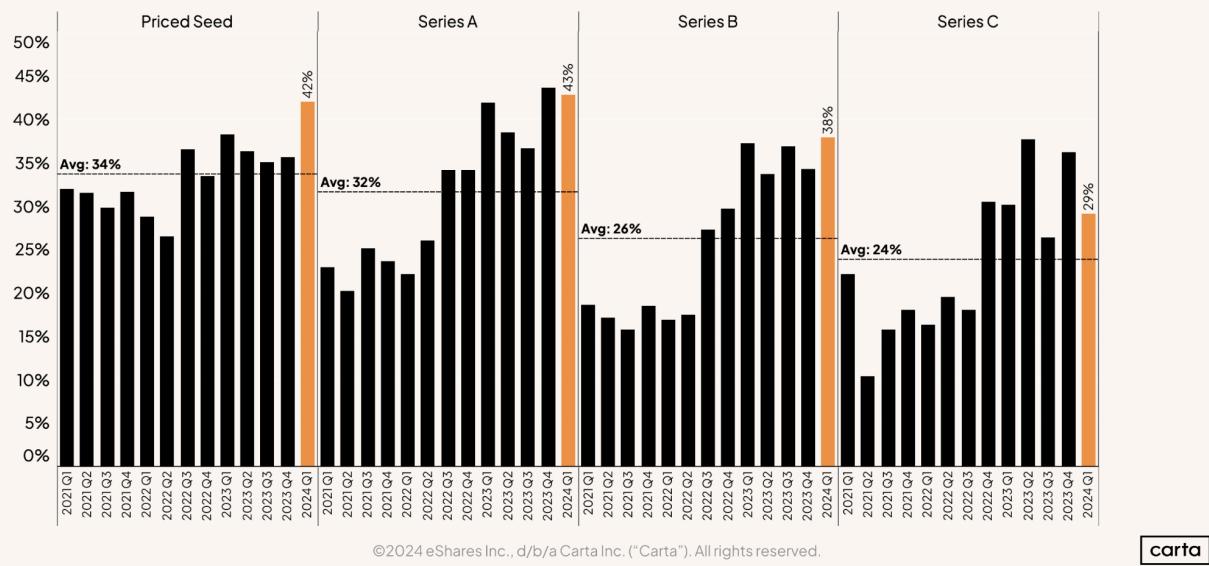


This decline in overall fundraising has obvious effects on the time between venture rounds. The median time between a priced seed round and a Series A is now over two years, while the gap between a Series A and Series B is closer to two and a half years.

While some companies have had to wait longer between priced rounds, others have eschewed priced rounds entirely. Many founders have turned to bridge rounds and extensions as a way to maintain an acceptable level of runway while they adjust their businesses to the new reality of high interest rates and reduced funding.

42% of priced seed rounds in Q1 were bridge rounds

Percent of all rounds that were bridge rounds by stage, Q1 2021–Q1 2024

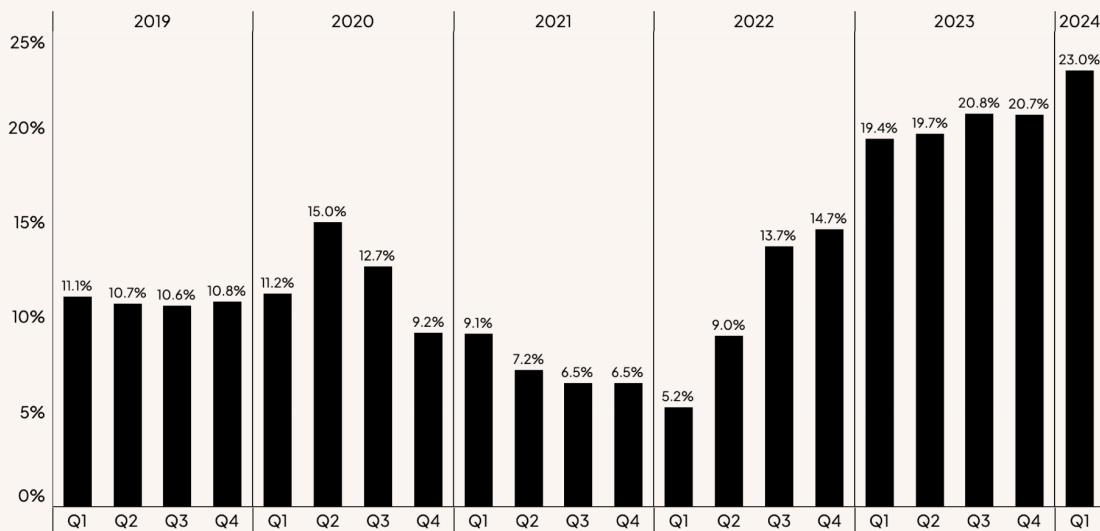


In fact, bridge rounds—defined here as priced capital raised by investors already on the cap table and in the same named series as the prior round—have never taken up a higher share of total rounds than they do today. At Series A, for instance, 43% of fundraising events in Q1 2024 were bridge rounds.

Bridges can also be completed on SAFEs or convertible notes instead of priced equity. These convertible bridges have become more common in recent quarters as well.

Q1 had the highest share of down rounds in the last 5 years

Percent of all rounds that were down rounds in a given quarter, Q1 2019—Q1 2024



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Across both bridges and primaries, the down round has been re-introduced into the startup ecosystem. Nearly one in four rounds on Carta in Q1 2024 was a down round, meaning the valuation of the round came in below the valuation set for that company in its most recent round.

Down rounds had become quite scarce during the excitement of 2021 and early 2022. Throughout 2019 and 2020, they typically accounted for about 10% of all rounds.

Graduation rates from Seed to Series A have fallen

Percent of seed-stage startups that graduated to Series A by cohort of seed fundraise | Q1 2018–Q2 2022

Year / Quarter	Cumulative percent of seed-stage startups that have "graduated" to Series A Under 10% 10%-24% 25%+												
2018	Q1	1.6%	2.8%	9.5%	12.3%	19.0%	23.0%	27.0%	30.6%	32.9%	34.5%	36.5%	36.9%
	Q2	2.2%	3.5%	6.1%	11.8%	16.6%	19.8%	26.2%	28.8%	31.6%	35.8%	39.6%	43.5%
	Q3	2.3%	2.3%	5.4%	9.7%	15.1%	18.7%	22.4%	25.1%	27.8%	30.8%	36.1%	38.5%
	Q4	2.4%	5.6%	8.3%	13.4%	18.8%	23.1%	26.6%	30.6%	34.1%	37.9%	42.7%	46.2%
2019	Q1	1.8%	3.2%	8.5%	13.5%	15.2%	21.3%	24.8%	29.1%	34.8%	39.0%	42.9%	43.6%
	Q2	3.1%	3.9%	7.9%	11.3%	14.4%	19.9%	24.6%	30.4%	34.0%	39.5%	44.5%	46.6%
	Q3	2.6%	4.7%	6.3%	10.7%	14.3%	19.0%	25.3%	30.5%	35.9%	40.6%	43.5%	46.6%
	Q4	1.2%	3.8%	6.2%	9.5%	15.0%	23.6%	27.9%	31.0%	33.8%	37.6%	39.8%	41.0%
2020	Q1	1.8%	3.1%	8.1%	12.5%	22.1%	26.7%	31.0%	35.4%	39.7%	41.7%	43.5%	45.0%
	Q2	2.7%	5.6%	9.1%	17.7%	25.7%	32.2%	36.0%	38.6%	42.8%	44.2%	45.7%	47.5%
	Q3	3.3%	8.0%	13.5%	19.1%	29.0%	34.8%	37.6%	39.5%	41.7%	42.8%	43.6%	44.5%
	Q4	2.6%	8.0%	12.3%	19.9%	25.2%	29.8%	33.4%	35.8%	37.2%	38.0%	39.4%	40.2%
2021	Q1	5.1%	7.4%	13.3%	18.4%	23.7%	27.0%	29.5%	31.9%	34.2%	35.1%	36.0%	36.5%
	Q2	2.5%	5.9%	9.8%	14.8%	19.3%	23.2%	25.3%	26.4%	27.8%	29.2%	30.5%	
	Q3	3.8%	5.6%	7.7%	11.5%	13.8%	15.7%	18.0%	19.9%	20.4%	21.7%		
	Q4	1.5%	3.4%	4.3%	6.6%	8.3%	10.6%	11.9%	14.0%	15.3%			
2022	Q1	4.7%	6.0%	7.4%	8.4%	10.7%	12.6%	14.6%	15.4%				
	Q2	1.5%	2.3%	3.0%	4.7%	6.5%	9.3%	11.8%					

Quarters since cohort inception

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When taking all of these round dynamics into account, it's clear that we should expect graduation rates from one venture stage to another to be significantly reduced for startups raising capital in more recent years compared to startups that raised capital during the venture boom times.

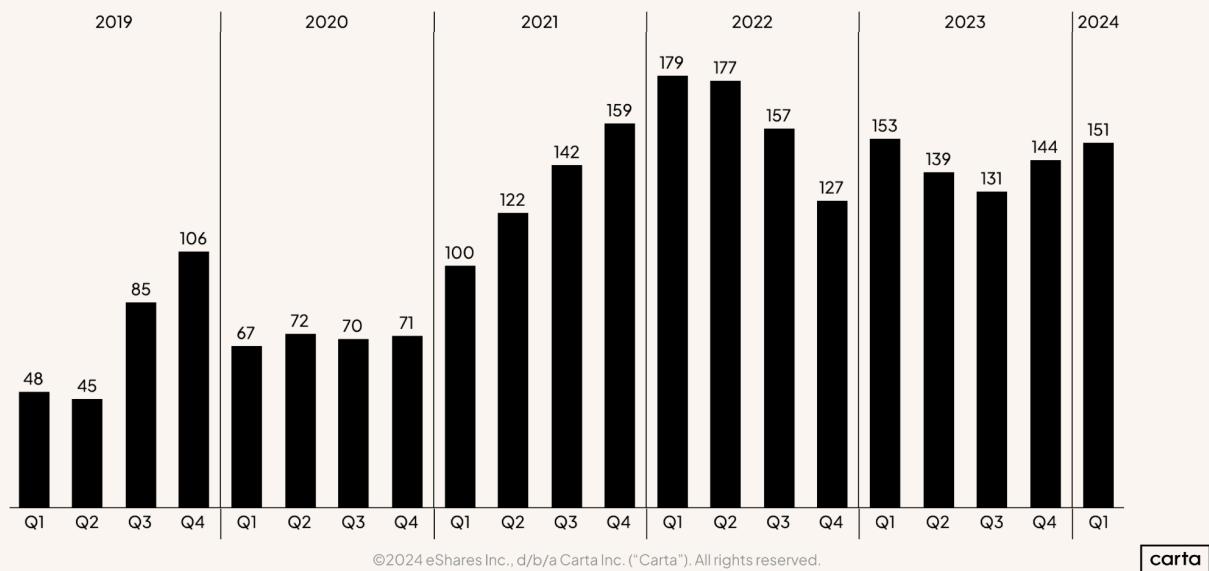
The chart above looks at cohorts of seed-stage companies by the quarter in which they raised their seed rounds. The percentage is the cumulative share of those companies that had raised a primary Series A round after a given number of quarters.

The gap between graduation rates at the two-year mark (eight quarters) is illuminating. Nearly 40% of startups that raised their seed in Q3 2020 had made it to Series A in two years. The comparable percentage for the Q1 2022 cohort is 15.4%.

These trailing indicators mirror the sluggish performance of recent venture fund vintages. Both startups and VCs have struggled to adapt to the abrupt shift in venture valuations and activity over the past 18 months.

Startup M&A rose slightly from Q4 to Q1

Total acquired startups on Carta by quarter, Q1 2019–Q1 2024



There has also been a chill in the exit environment for startups. Conducting an IPO remains a hurdle too high for many late-stage private companies, and M&A activity appears to have plateaued.

140–150 companies on Carta are acquired every quarter. Unlike in 2021, when acquisitions counts rose rapidly, current M&A rates have held steady for the past year or so.

Moreover, a large share of the acquisitions that are happening today are for companies in the pre-seed or seed stages. These exits are unlikely to return a significant amount of capital to existing investors.

Methodology

Carta helps over 3,000 venture firms administer more than \$150 billion in capital. We're setting a new standard in fund administration by sharing insights from our unmatched dataset about the private markets and venture ecosystem to help

investors and limited partners make informed decisions and understand market conditions.

Overview

This study uses an aggregated and anonymized sample of Carta fund customer data. Funds that have contractually requested that we not use their data in anonymized and aggregated studies are not included in this analysis.

We use data through the end of Q1 2024. Historical data may change in future studies because there is typically an administrative lag between the time an event took place and when it is recorded in Carta. In addition, new funds signing up for Carta's services will increase historical data available for the report.

Fund Details

This report only includes funds domiciled in the United States. All funds must have reliable performance data dating back to fund inception and/or when they joined the Carta platform. Included funds are direct investors into startups and do not pursue fund of funds or other strategies. Only funds in vintage years between 2017 and 2022 were included.

We define vintage year as the year in which the first cost basis (either conversion or new investment) for a fund occurred.

Values marked “n/a” for specific vintage years in IRR and TVPI due to insufficient performance sample size in earlier time periods.

Financings

Financings include equity deals raised in USD by U.S.-based corporations. The financing “series” (e.g. Series A) is taken from the share class name in their applicable certificate or articles of incorporation. Financing rounds that don’t follow this standard are not included in any data shown by series but are included in data not shown by series. Primary rounds are defined as the first equity round within a series. Bridge rounds are defined as any round raised after the first round in a given series.

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