Surfing Turbulent Cash Flow Waves

Analyzing cash flow patterns across asset classes

PitchBook is a Morningstar company providing the most comprehensive, most accurate, and hard-to-find data for professionals doing business in the private markets.

PitchBook Data, Inc.

John Gabbert Founder, CEO

Nizar Tarhuni Vice President, Institutional Research and Editorial

Daniel Cook, CFA Head of Quantitative Research

Institutional Research Group

Analysis

Juliet Clemens
Analyst, Fund Strategies
juliet.clemens@pitchbook.com

Zane Carmean, CFA, CAIA
Lead Analyst, Quantitative and Funds Research
zane.carmean@pitchbook.com

Data

Susan Hu
Associate Quantitative Research Analyst

Miles Ostroff
Associate Quantitative Research Analyst

pbinstitutionalresearch@pitchbook.com

Publishing

Designed by **Chloe Ladwig**

Published on March 8, 2024

Contents

Key takeaways

- While private market participants have been hearing a lot about historically low distributions in PE and VC, the capital call activity and resulting net cash flows parts of the narrative have not been addressed as thoroughly. These metrics provide a fuller picture of what liquidity looks like from an LP’s standpoint and are explored throughout this research.
- Distributions as a percentage of NAV across the industry were well below their respective historical averages throughout 2023, except for real assets funds. We estimate less than 5% of reported NAVs in VC funds were distributed in the year ending Q3 2023, while private debt has held up at around 20%.
- Meanwhile, capital calls as a proportion of available dry powder have held up near historical averages, with PE, private debt, and real assets funds calling down more than 30% of uncalled capital over the year ending Q3 2023. In VC and real estate, the pace of investment has slowed relative to each asset classes’ historical norm, as both are suffering from dealmaking headwinds.
- Our equal-weighted net cash flow measure, which nets distributions as percentage of NAV with capital calls as a percentage of dry powder, suggests PE and real assets are near post-GFC lows, although they have been traveling in opposite directions since 2022. For VC, private debt, and real estate, net cash flows have been near neutral levels.

Introduction

There is no question that investors across the spectrum of asset classes got caught up in the dealmaking fever of 2021. As rates rose in 2022 and the party wound down, the hangover started, persisting through 2023. While private market participants have been hearing a lot about historically low distributions in PE and VC, the capital call activity and resulting net cash flows parts of the narrative have not been addressed as thoroughly. Analysis of other private fund strategies have so far been lacking as well, but real estate, real assets, and private debt make up sizeable portions of many allocator portfolios and have all been impacted uniquely over different environments, including in 2023. A closed exit environment, commercial real estate headwinds, and fears of recession in 2022 and 2023 have had a material impact on the liquidity of allocators' private fund portfolios. LP portfolios have experienced a whiplash in fund flows over the last few years.

Our analysis looks across thousands of funds with cash flow and NAV data in the PitchBook data base. We analyze distributions relative to NAVs and capital calls relative to uncalled commitments, which provides a normalized way of looking at the exit and dealmaking environments over time. This note explores historical distributions, capital calls, and net cash flows across closed-end funds in each of the primary asset classes to assess how these metrics have fluctuated in different market climates, and what that may tell us about the various ways these metrics may trend in the future, using history as a guide.

Tracking the rise and fall of tides

In many ways, the ebb and flow of private fund cash flows resembles the rise and fall of tides. In times that private markets become awash with capital, the rising tide encourages GPs to call commitments down quickly, taking advantage of the abundance of deal opportunities sloshing around. This dealmaking activity from GPs to corporates and other market participants creates waves of distributions back to limited partners' shores, allowing allocators to recycle capital into fresh fund commitments to be drawn down and invested. During these periods of high tides, the waves can come with great frequency and in various sizes. When the tide recedes, cash flows fall, typically with distributions pulling back more than capital calls.

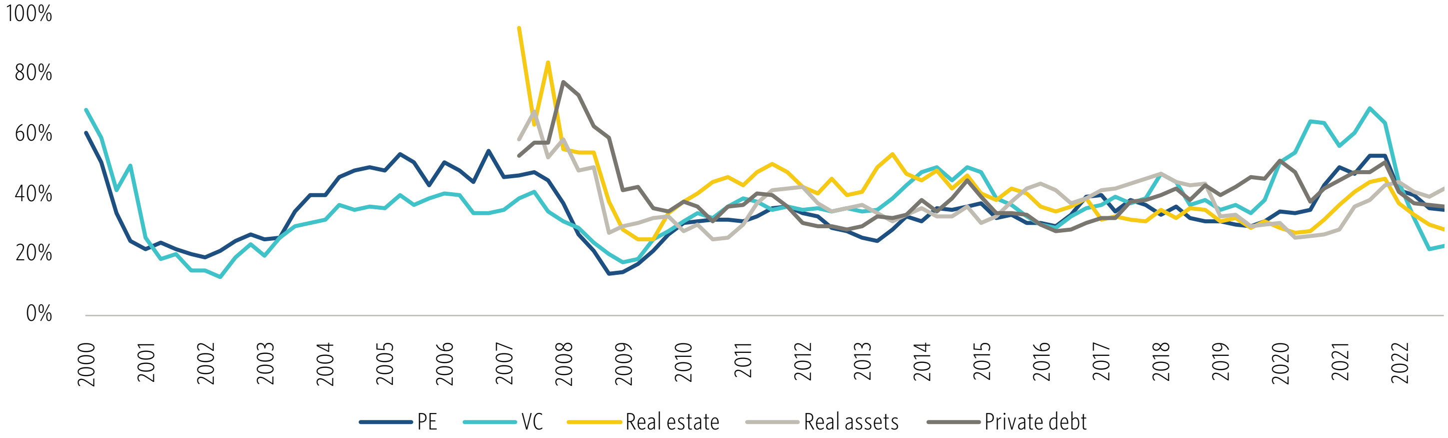
For an LP, tracking the rise and fall of these tides to identify trends in their level and movement can be important for determining the outlook of a private fund portfolio's liquidity. Many LPs strive to achieve a state where their private market portfolios are self-financing in that distributions coming back from older funds pay for capital calls from newer funds. When distributions are pacing well relative to capital call rates, recycling into new fund commitments becomes a straightforward exercise and allows for investments to compound. But when mature portfolios see slower cash flows—and especially when distributions dry up faster than capital calls—LPs can experience uncomfortable, liquidity-related headaches.

There has been a substantial pullback in dealmaking across private markets in the last two years, particularly in VC and PE growth investment. Growth in GP-led secondaries, NAV lending, and other liquidity innovations notwithstanding, the tide has drawn back, drying up sources of capital for both GPs wanting to conduct deals and for LPs looking to receive distributions from long-held assets in their GPs' funds. In prior research we began to quantify the extent of the pullback in VC and PE distributions and are now digging deeper into our cash flow datasets to gather more insights on the state of LP liquidity in private markets across closed-end fund strategies, including in real estate, real assets, and private debt.[1] Our historical framework uses data on cash flows, fund dry powder, and NAVs to determine the extent that shifting tides have impacted LP capital flowing in and out of funds.

In our analysis we look at cash flow data across funds within each respective strategy, globally. Capital calls are pooled over rolling 12-month periods and taken as a percentage of aggregate dry powder at the beginning of the respective horizon. Distributions are similarly pooled and compared against aggregate NAVs. This provides us with the pace of cash flow occurring relative to the available source from which capital calls and distributions are drawn, and we can compare those amounts to create a net cash flow percentage. Even though nominal NAV is often much larger than outstanding dry powder, equal weighting the distribution and capital call percentages provides a consistent metric for historical comparison that is less impacted by the maturation of private markets. These figures tell us how much GPs have called down and distributed back to a hypothetical LP that has invested in funds in a given strategy with $1.0 in uncalled commitments and $1.0 in NAV.

In practical terms distribution rates and capital call rates are not directly comparable since the denominators are different. However, for our theoretical framework, looking at our cash flow metrics as if we have a dollar each of dry powder and NAV (equal weighting) makes the two percentages more directly comparable (50% called and 50% distributed is equivalent in percentage and nominal terms with the $1.0 assumption). Capital calls usually take place over three

12-month capital calls as a percentage of dry powder[2]

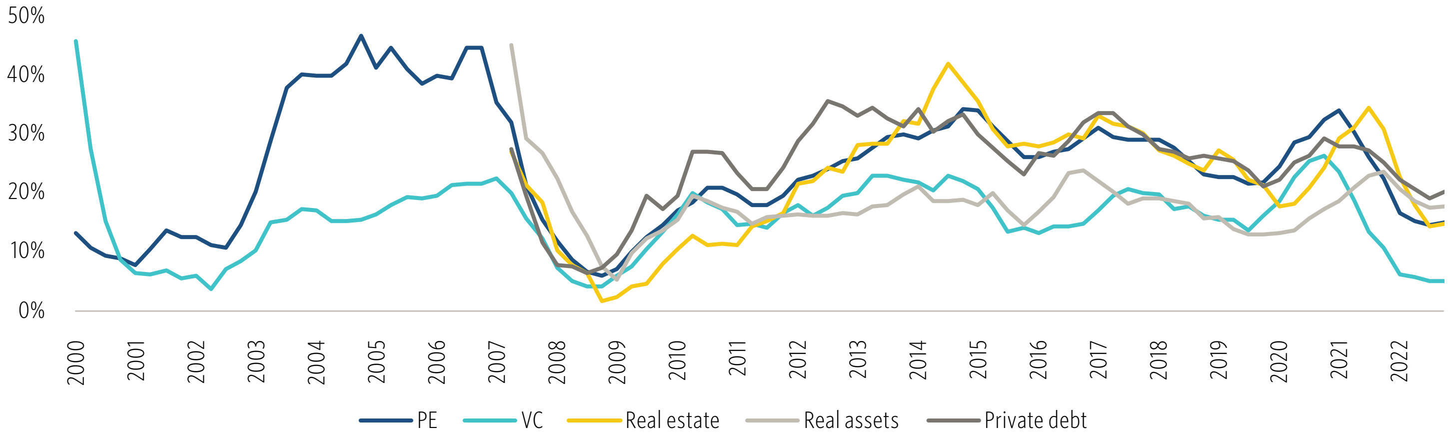


Source: PitchBook • Geography: Global • *As of September 30, 2023

1: Due to their unique cash flow characteristics, secondaries and funds-of-funds were excluded from the scope of this research.
2: To ensure robust data coverage, our time series for PE and VC begins in 2000, while real estate, real assets, and private debt begin in 2007.

to five years while distributions often stretch out over 10 or more years, which is why the equal-weight net cash flow percentages are typically negative. However, the key element is the net cash flow's direction of travel and the level relative to history to provide a gauge for the state of private capital's net liquidity.

12-month distributions as a percentage of NAV*



Source: PitchBook • Geography: Global • *As of September 30, 2023

Diving in deeper

As LPs think about their allocations to private markets going forward, it is helpful to consider the historical capital call and distribution rates over different time periods. Every portfolio is constructed uniquely, has different strategy mixes, and vintage year weights that may not reflect the same high-level industry makeup that our data encompasses, but these can be helpful starting points in thinking about the pace of capital calls and return of capital in various market environments. Depending on the scenario, cash flows will fluctuate quite substantially and across asset classes. Our appendix provides cash flow ranges across select time periods for each primary asset class.

Additionally, historical net cash flow rates differ by strategy due to their inherent characteristics, so we also create a more apples-to-apples view across asset classes by normalizing our data series through calculating z-scores. These z-scores consider each strategy's level of net cash flow relative to the historical average, while also taking into consideration the volatility of the cash flows over time. This enables us to make 1:1 comparisons of asset classes. Our summary table below provides the high-level "State of liquidity" across private capital.

State of liquidity across private fund strategies*

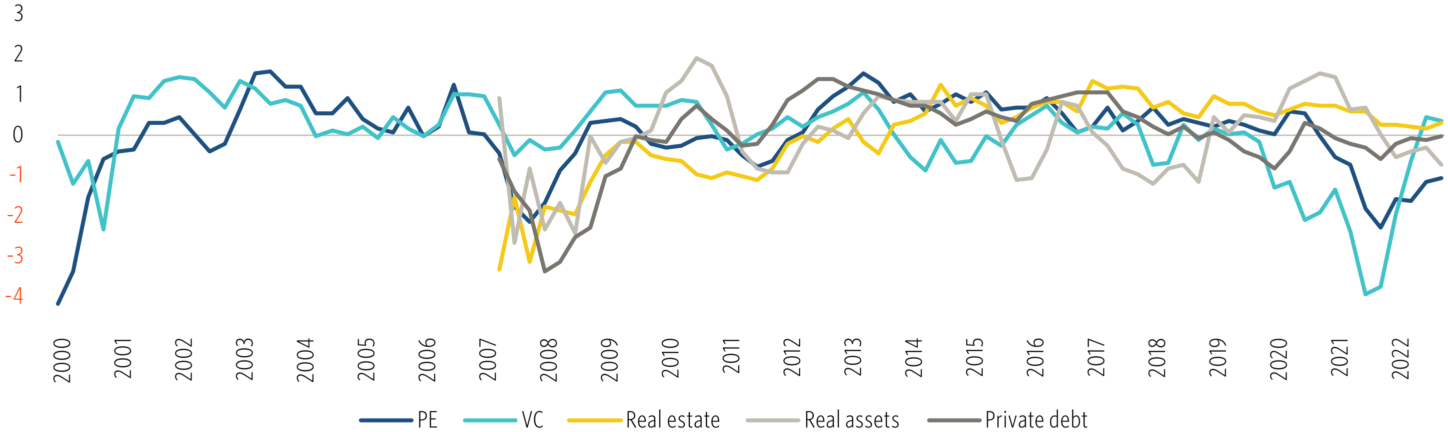
	PE	VC	Real estate	Real assets	Private debt
1-year distribution rate through Q3 2023	15.0%	4.9%	14.8%	17.6%	20.2%
Historical average	24.6%	15.7%	22.4%	17.9%	25.0%
Standard deviation	10.4%	6.7%	9.6%	5.3%	7.2%
Q3 2023 z-score	-0.9	-1.6	-0.8	-0.1	-0.7
1-year capital call rate through Q3 2023	35.3%	23.1%	28.7%	42.7%	36.4%
Historical average	35.3%	36.9%	41.0%	38.0%	40.8%
Standard deviation	9.8%	11.8%	12.2%	8.5%	10.1%
Q3 2023 z-score	0.0	-1.2	-1.0	+0.6	-0.4
1-year net cash flow rate through Q3 2023	-20.3%	-18.2%	-13.9%	-25.1%	-16.2%
Historical average	-10.7%	-21.2%	-18.5%	-20.0%	-15.8%
Standard deviation	8.9%	8.7%	15.1%	6.9%	16.0%
Q3 2023 z-score	-1.1	+0.4	+0.3	-0.7	0.0

Source: PitchBook • Geography: Global • *As of September 30, 2023

Note: To ensure robust data coverage, our time series for PE and VC begins in 2000, while real estate, real assets, and private debt begin in 2007.

At a high level, the results show that despite the pullback in distributions across many asset classes, the relative net cash flow difference depicts divergent trends. VC has actually normalized relative to history, reflecting a slow dealmaking environment reducing capital call rates in 2023 that were well below historical averages, similar to distributions. Real assets, meanwhile, has trended in the opposite direction as capital calls have outpaced distributions at a growing rate since 2021. PE screens as the least liquid by our equal-weight net cash flow measure, reflecting the fact that deal flow has remained fairly healthy even while exit opportunities have dwindled. Finally, private debt and real estate funds have seen relatively neutral net cash flows through Q3 2023, but for different reasons. Private debt capital call rates have trended near its historical average, and distributions

Z-scores of net cash flows across asset classes*



Source: PitchBook • Geography: Global • *As of September 30, 2023

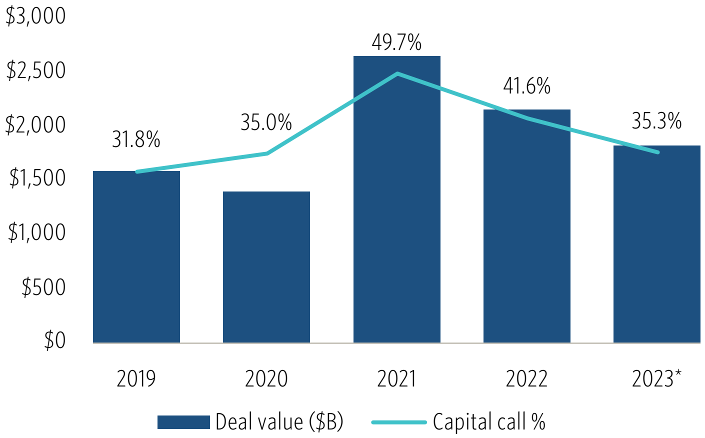
rates are lower than normal but were still above 20% of NAV through September last year. In real estate, the story is of falling rates for capital calls and distributions alike, with dealmaking facing headwinds from the higher interest rate environment and the slow repricing of commercial real estate assets.

Next, we dive into recent and historical trends within each respective asset class.

Private equity

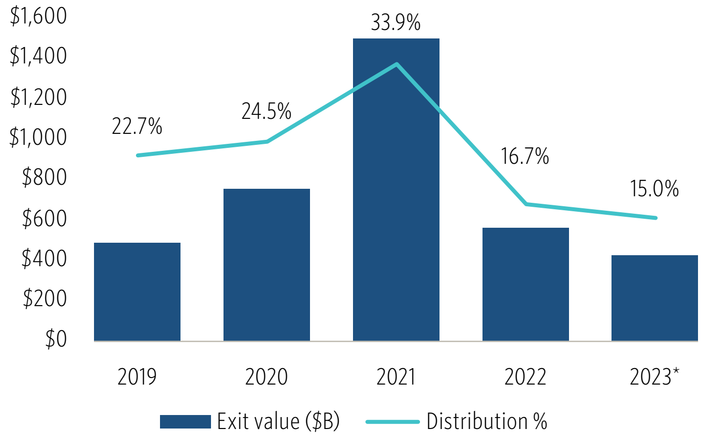
PE deal and exit activity saw meteoric rises in 2021. PE deal value skyrocketed 88.6% YoY between 2020 and 2021, reaching a peak of more than $2.6 trillion across more than 20,000 deals. Mirroring the trends in deal activity, PE exit value rose an eye-watering 98.1% YoY, hitting approximately $1.5 trillion. This pace of dealmaking and exits meant that capital calls and distributions also rose as GPs both called down capital faster to take advantage of opportunities flooding the market while also distributing a record amount of money back to LPs in open IPO and M&A markets.

PE deal value and capital call rates



Source: PitchBook • Geography: Global • *Deal value as of December 31, 2023, Capital call rates as of September 30, 2023

PE exit value and distribution rates

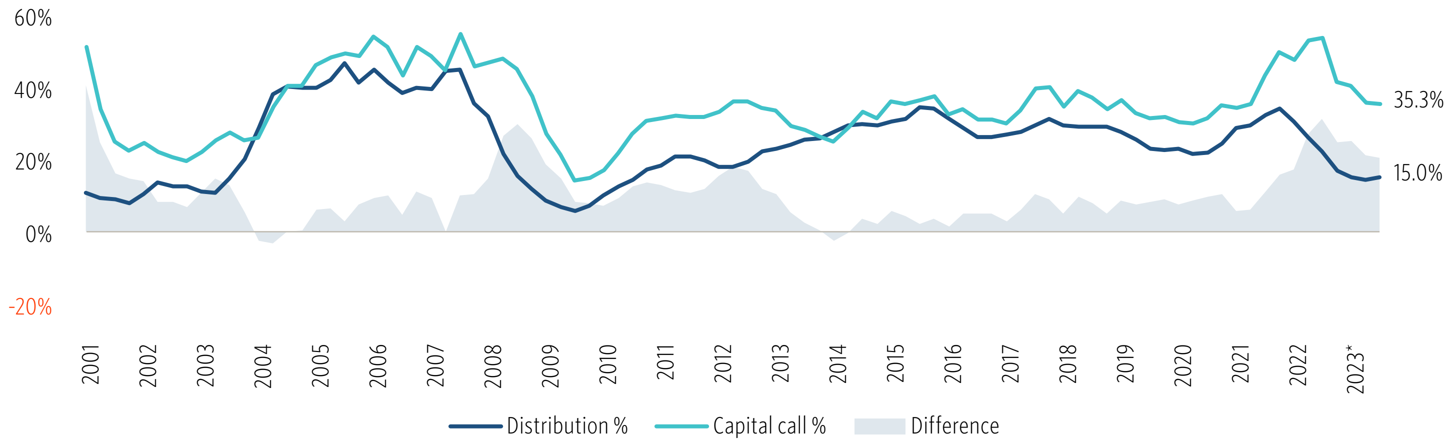


Source: PitchBook • Geography: Global • *Exit value as of December 31, 2023, Distribution rates as of September 30, 2023

With dealmaking flush, PE capital calls as a percentage of dry powder reached 49.7% in 2021, well above the 35.3% historical average for the asset class going back to 2000. PE funds as a whole delivered 33.9% of NAV back to LPs in distributions, also well above the historical average of 24.6%. However, the extravagance of 2021 reversed course in 2022 and continued into 2023. By 2023, both deal and exit activity had tumbled considerably. PE deal activity in 2023 came in at roughly $1.8 trillion, and capital call rates also fell to 35.3% as of Q3 last year. PE's 2023 exit value plummeted 71.3% to $429.8 billion from 2021's high, translating to just 15.0% in distribution rates.

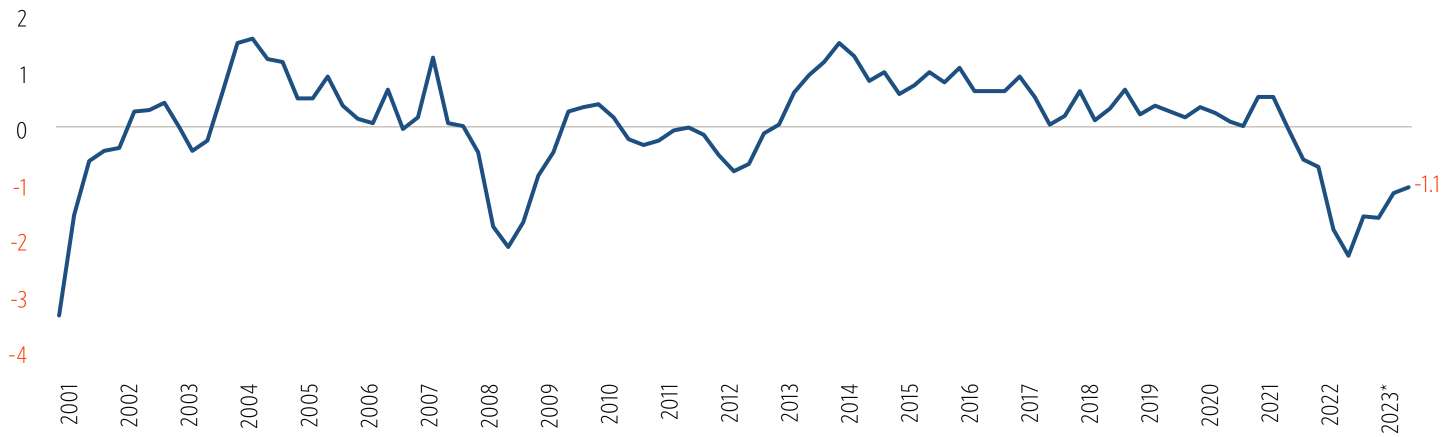
The poor exit environment has crimped LP fund liquidity. For the year ending in Q3 2023, distribution rates were the lowest they have been since 2009 during the height of the global financial crisis (GFC). However, it is interesting to note the differences between capital call and distribution rates in 2009 as compared to 2023.

PE capital call versus distribution rates*



Source: PitchBook • Geography: Global • *As of September 30, 2023

Z-scores of PE net cash flows*



Source: PitchBook • Geography: Global • *As of September 30, 2023

The dispersion between capital call rates and distributions in 2009 was 7.7%, while in 2023 this dispersion increased to 20.3% following the 2022 correction. That is, although distributions have hit their lowest levels since the GFC, capital calls in 2023 did not fall as sharply as they did in that same time period. As such, capital was being called down approximately twice as quickly in 2023 as it was in 2009. While deal value dropped compared to 2021 activity, 2023's deal value was still the third-highest it had ever been. Deals were still getting done, and as such, GPs continued pulling down commitments from LPs.

With the shifting deal environment, net cash flows have suffered with our z-score as of Q3 2023 standing at -1.1, but liquidity has been improving as capital call rates slowed over the year. This is a recovery from the -2.3 z-score that PE hit in Q3 2022 when GPs were calling down roughly 54 cents per dollar of dry powder and distributing only around 22 cents per dollar of remaining NAV back to LPs. Although PE's most recent net cash flows have not yet reached average levels, it does appear they are trending back toward them.

Venture capital

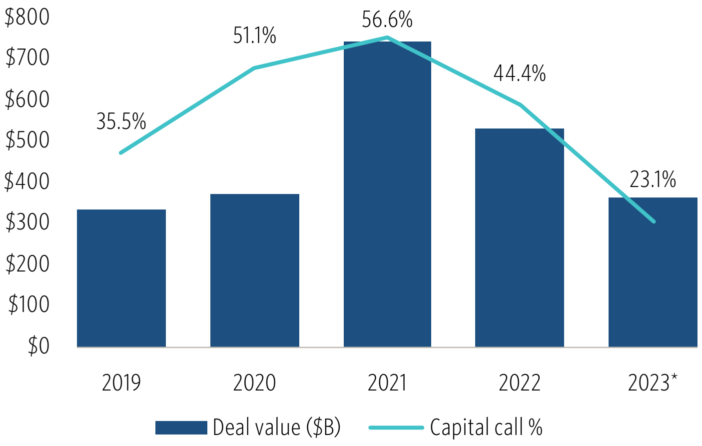
VC as an asset class is unique in a few distinct ways. One, VC fund lives tend to run longer than funds of other asset classes. While funds of other asset classes tend to reach net positive cash flows before year 10, VC funds often take longer to do the same. Secondly, VC fund returns are irregular in nature, generating sporadic spurts of distributions, unlike the steadier pace of returns in income-driven strategies. Both of these elements of VC fund cash flows are products of technology-focused investors managing the capital, whose excitement for the next new thing occasionally becomes exuberant.

Case in point, VC experienced a staggering rise through 2021, with deal value increasing 99.3% YoY as compared to 2020, hitting a zenith of $745.4 billion. VC exits also underwent astonishing growth in 2021, jumping 152.9% YoY, amounting to roughly $1.5 trillion, close to PE's exit value. Accordingly, capital calls as a percentage of dry powder for 2021 soared to 56.6%, the fastest rate that capital has been called down by VC firms since the dotcom era and far above the historical average of 36.9%. Following suit, distributions as a percentage of NAV also hit their highest rate since the internet bubble days.

Even with the massive write-ups in NAV, these soaring valuations did not translate to net cash flow rates substantially higher than average. In fact, the z-scores through this period ranged between -1.2 to -2.1, indicating that net cash flows during this time were well-below VC's historical net cash flow rate. This throws a proverbial wrench into the theory that net cash flow rates will trend higher as long as distributions are high, reflecting the fact that VCs were putting capital to work at a historic pace.

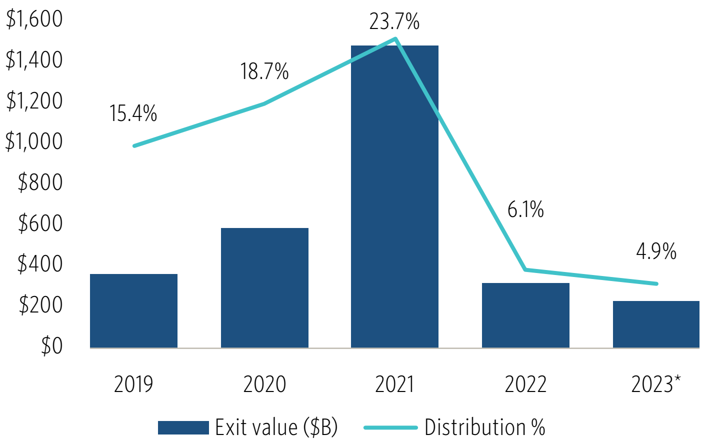
What went up came back down, and unfortunately for LPs, distributions came down hard. The exit environment turned over quickly toward the end of 2021 and early 2022, but VCs were still putting significant capital to work. 69 cents per dollar of dry powder available at the start of Q2 2021 was called down over the subsequent four quarters, while only 13.3% of NAV was realized. The net cash flow difference

VC deal value and capital call rates



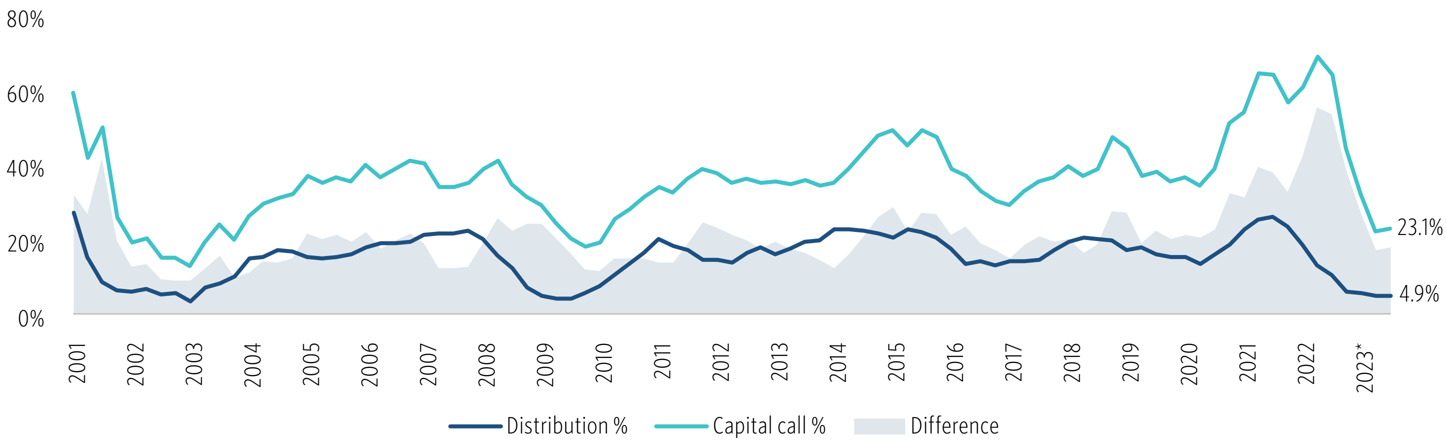
Source: PitchBook • Geography: Global • *Deal value as of December 31, 2023, Capital call rates as of September 30, 2023

VC exit value and distribution rates



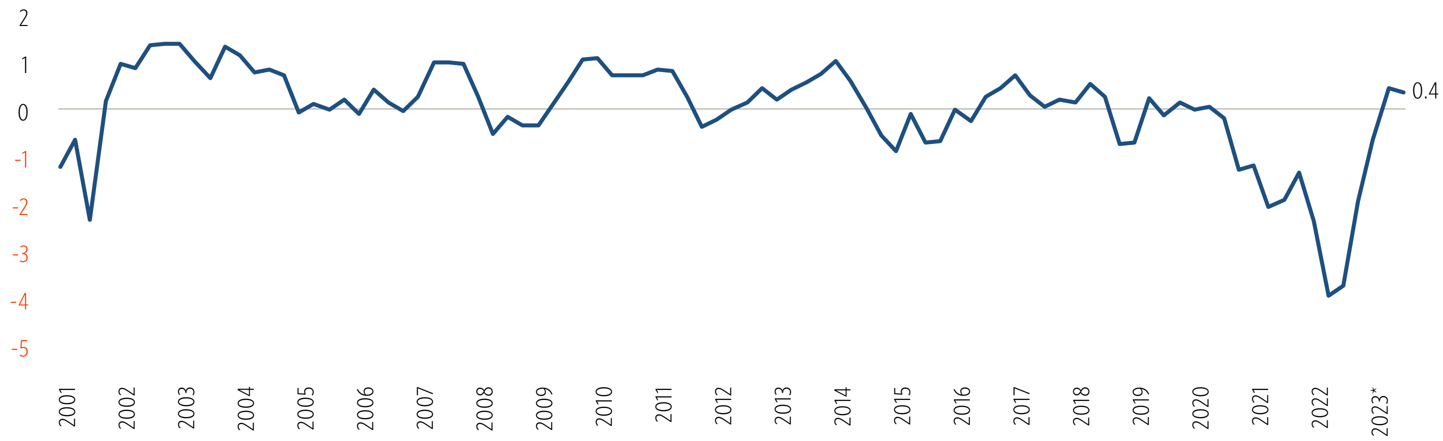
Source: PitchBook • Geography: Global • *Exit value as of December 31, 2023, Distribution rates as of September 30, 2023

VC capital call versus distribution rates



Source: PitchBook • Geography: Global • *As of September 30, 2023

Z-scores of VC net cash flows



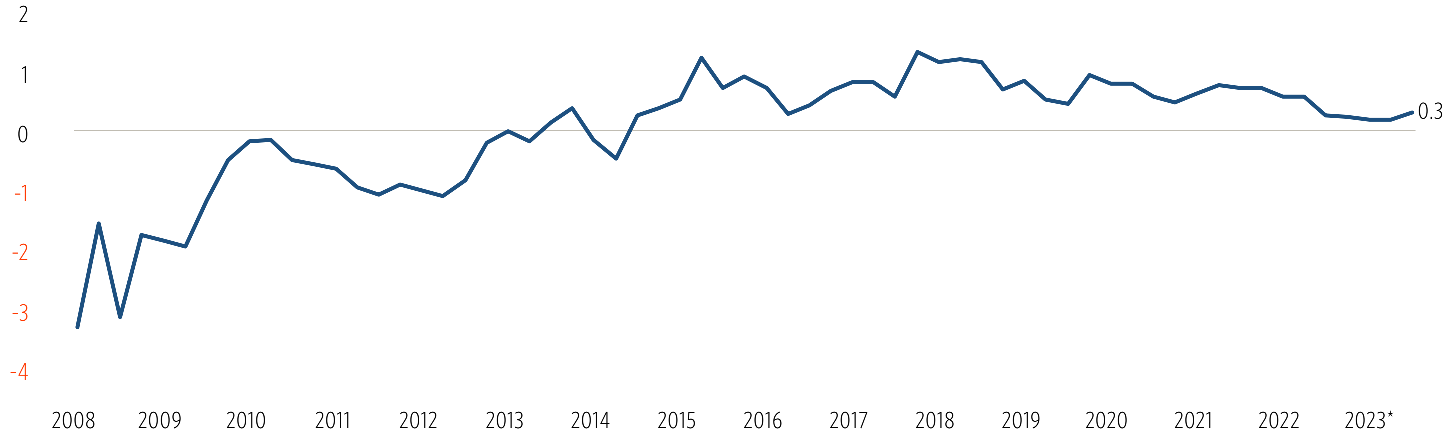
Source: PitchBook • Geography: Global • *As of September 30, 2023

was a four-standard-deviation move, and with public markets falling and NAVs largely remaining unrealized, the narrative of the denominator effect permeated LP discussions.

The hangover is still being felt, despite last year's rebound in public markets. In 2023, VC deal and exit value collapsed to $366.1 billion and $231.3 billion respectively, representing drops of 50.9% and 84.4% from 2021 figures. Capital call rates normalized while distributions have shrunk to an all-time low, a mere 4.9% of reported NAV for the year ending Q3 2023.

Despite VC's recent historically low distributions, VC was the only asset class besides real estate to reach above average net cash flow using our equal-weight framework for the year ending Q3 2023. Although the distribution yield of 4.9% was the lowest since Q3 2009, the subsequent fall in capital call rates has pushed recent VC net cash flows to just above their historical average, suggesting that VC funds are less cash flow negative than they had been through 2022. In fact, recent equal-weight net cash flows are closer to the asset class's historical net cash flow rate than when distributions were high through 2021.

Z-score of real estate net cash flows



Source: PitchBook • Geography: Global • *As of September 30, 2023

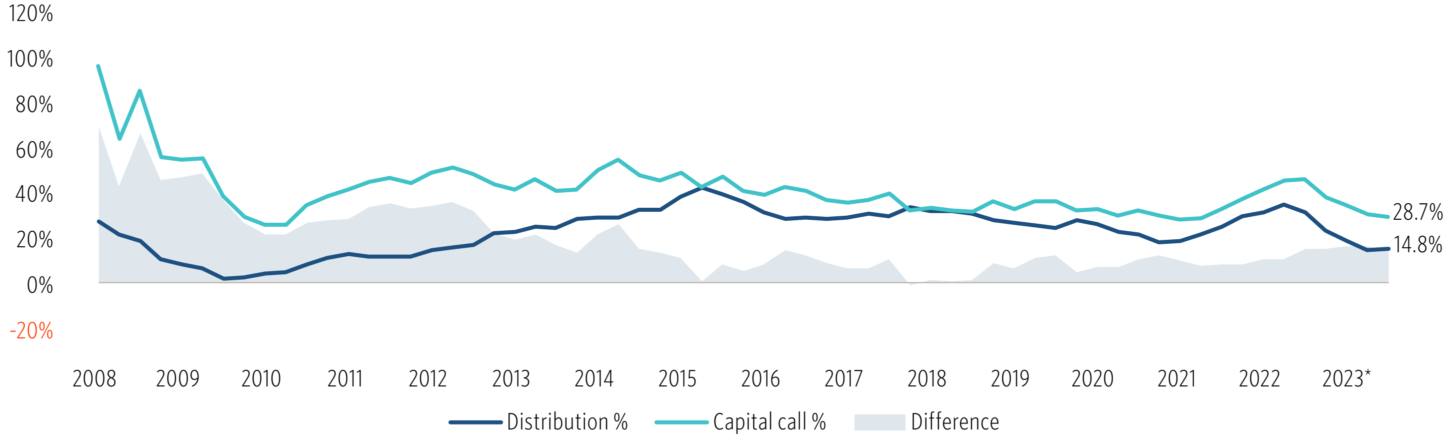
Real estate

As covered in our H1 2023 Real Estate Report, real estate funds have been facing significant headwinds since the zero-interest-rate environment of 2020 and 2021 ended. Rising interest rates have increased the cost of debt, which is putting strains on cash flows coming from properties. In addition, while public markets plunged through 2022 and public real estate valuations took a hit, private real estate managers were slow to reflect the tumult in their own valuations. With bid-ask spreads widening significantly, property transactions have dried up, crimping investment activity from existing dry powder and realizations back to LPs. Both capital call and distribution rates fell steeply from their historical average levels as of Q3 2023. Annual capital call rates were at 28.7% while distributions fell to 14.8%. However, Q3 2023 real estate net cash flows posted a z-score of 0.3, indicating that current net cash flows are in line with where they have been historically.

Looking back further, real estate historical averages for capital calls as a percentage of dry powder and distributions as a percentage of NAV are 41.0% and 22.4%, respectively. Because many real estate assets are income-driven, real estate is often able to deliver more frequent distributions on a more consistent basis relative to other strategies. Looking at historical capital call and distribution rates across real estate, the biggest delta between the two metrics—after hitting 45.3% in Q4 2008—occurred in the years immediately following the impact of the GFC. Post-crisis, 2011 posted a 32.5% net difference when capital call levels were at 43.7% and yield at just 11.2%.

However, what is surprising is that distribution rates recovered steadily and fairly quickly in the years following the crisis. By 2013, yield had rebounded to 28.1%, increasing even further to a 35.7%-peak in 2015, the highest real estate distribution rate seen since before the GFC. Capital calls between 2011 and 2015 remained at a consistent range between 40.5% and 45.0%, so as distributions improved, the gap between the metrics lessened relative to the years immediately following the GFC.

Real estate capital call versus distribution rates



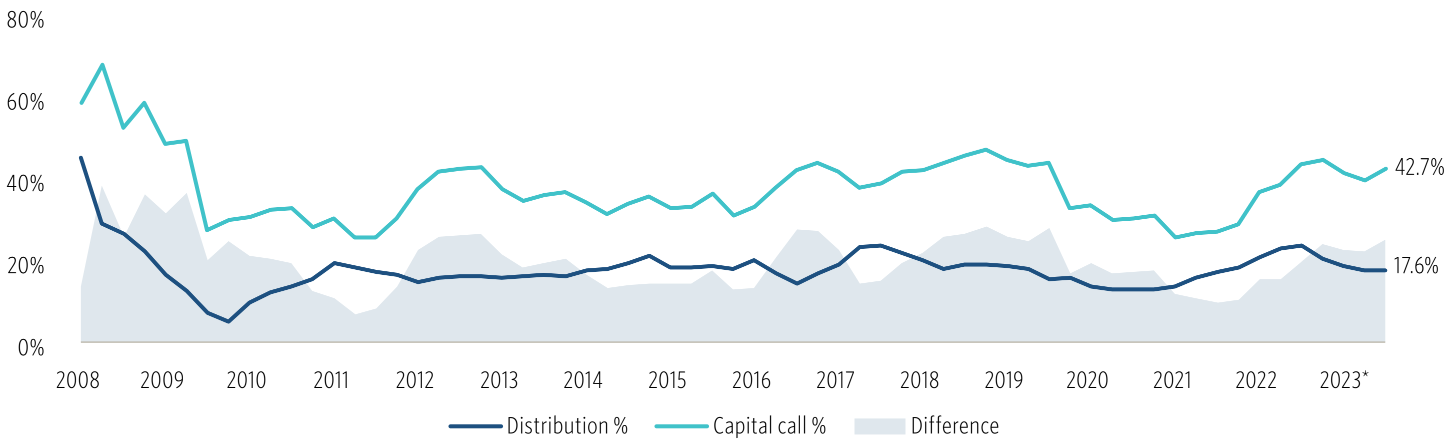
Source: PitchBook • Geography: Global • *As of September 30, 2023

Real assets

Unlike PE and VC where capital call rates peaked in 2021, capital calls in real assets actually experienced a slowdown starting in 2019, reaching 29.0% in 2021—the slowest capital call rate since 2010—before jumping to 44.6% in 2022 and 42.7% in Q3 2023. With global supply chains bottle necking and inflation rising, real assets opportunities have picked up just as the environment turned sour for PE, VC, and real estate. At the same time, digital infrastructure has continued to see significant investment, given the hype around AI, so investment activity across real assets funds has held up despite the overall pessimism in private markets the last few years. Distribution rates are slightly below average as of our latest reading in Q3 2023 but have not fallen to the same degree as seen in PE, VC, and real estate, supporting the narrative that realizations have held up well in these funds lately.

The steadiness of infrastructure distributions is an attractive feature of the asset class for LPs historically. Of the five primary asset classes, real assets have the lowest distribution volatility measure at just 5.3%. This is largely due to the nature

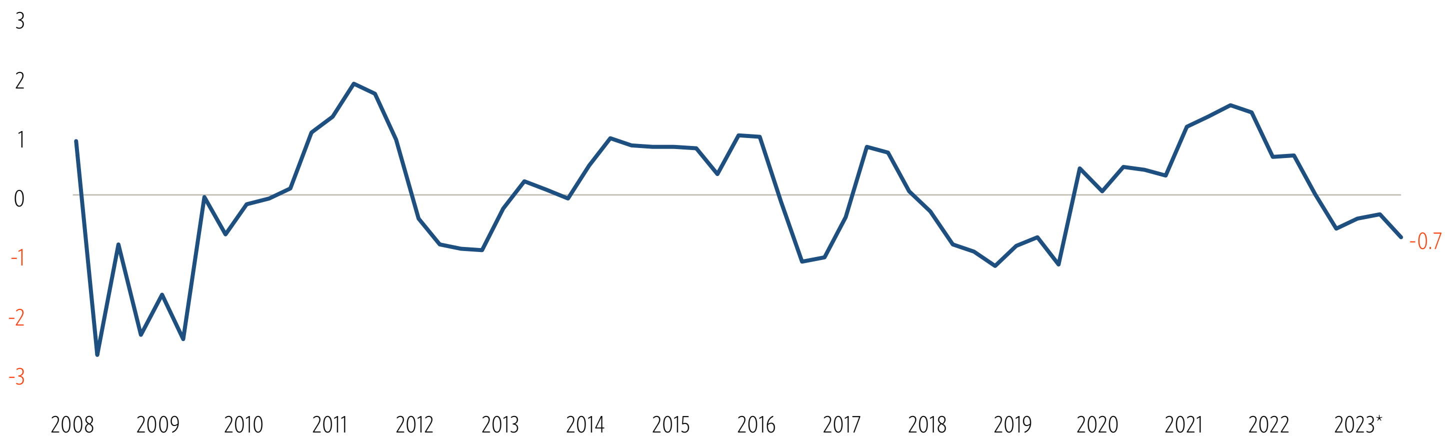
Real assets capital call versus distribution rates



Source: PitchBook • Geography: Global • *As of September 30, 2023

of infrastructure—the larger proportion of real asset funds—and specifically the weight of infrastructure core and core plus funds with income-generation focus. As covered in the data pack accompanying our Q3 2023 Real Assets report, between 2016 and 2021, core and core plus funds as a percentage of total infrastructure fundraising has ranged between 31.4% and 60.2%. In 2022, the percentage of core and core plus funds made up 28.7% of total fundraising as value-added and opportunistic funds grabbed a 63.6% share. Looking ahead, should the makeup of infrastructure funds skew more heavily toward value-add and opportunistic fund types, this may have an observable effect on pushing up real assets' distribution volatility.

Z-scores of real assets net cash flows



Source: PitchBook • Geography: Global • *As of September 30, 2023

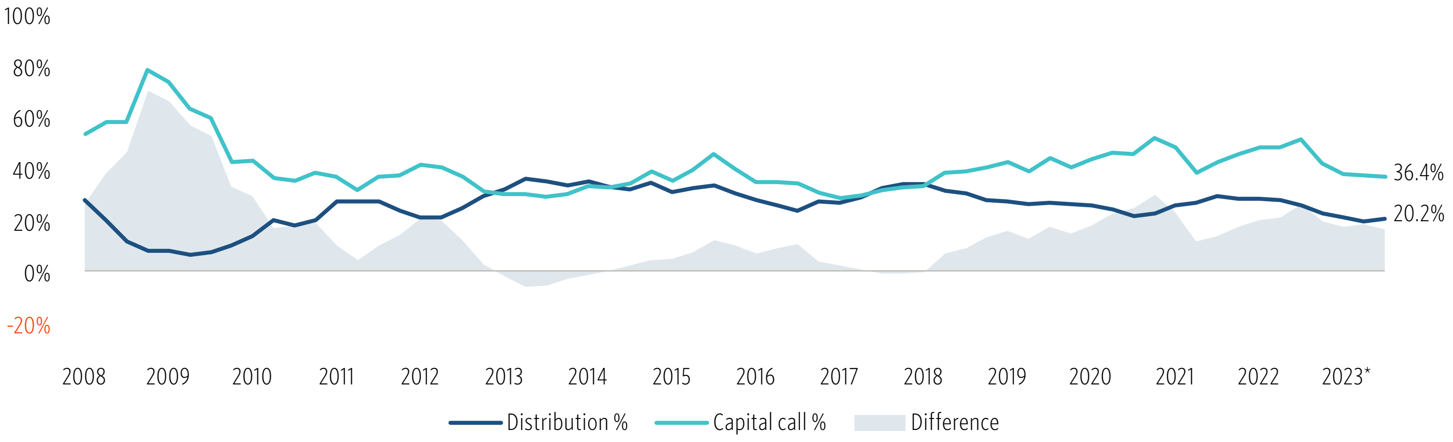
Further impacting the cash flows for the asset class were changes in dry powder levels. In 2022, dry powder dropped by $80.2 billion to a base of $305.7 billion, increasing the size of capital calls relative to the overhang available. By Q1 2023, dry powder levels descended to $273.4 billion, the lowest cumulative dry powder amount since 2014. This drop coincided with a precipitous decline in real assets fundraising through Q3 2023. Given that several large infrastructure programs had closed in years prior, much of 2023 fundraising underwent a simultaneous drought as fund managers had not yet raised and closed on new fund commitments. However, the drought was short-lived, as several large real asset funds have held final closes since Q3 2023, including the $30 billion Brookfield Infrastructure Fund V. As such, it will be interesting to see whether or not capital calls will trend back towards the historical average going forward.

Private debt

The growth of private debt has been a notable storyline of the past few years, with private lenders finding themselves in a higher rate environment with less competition from banks. That has translated to attractive entry yields, which should support LP distributions for those funds able to deploy capital into healthy portfolio companies. Even in the lower-rate world, distribution rates for debt funds have been attractive to LPs historically. On average debt funds have distributed 25.0% of NAV per year since 2007, the highest across the five asset classes studied.

Private debt also has had relatively low distribution volatility and the second-lowest capital call volatility of all the asset classes, suggesting that both distributions and capital calls tend to stay within a narrow range compared to other strategies. This is reflected in our equal-weight net cash flows, particularly during 2012 through 2017 when the gap between capital calls and distributions ranged from -11.8% to 6.1%. The widest the gap between the two metrics since 2009 was during 2020 when capital calls reached a peak of 51.7% and distributions fell to 22.3%, which was also the lowest distribution rate for a calendar year since 2010, resulting in a net cash flow percentage of -29.3%—likely due to the impact COVID-19 had on private debt. While debt is an asset class that usually generates steady returns at regular intervals due to its income-driven nature, the pandemic caused a halt across businesses and industries, such that debt payments could not be completed as scheduled. Debt funds may have called down capital more quickly than historical norms to support portfolio companies through this period, while distributions simultaneously dropped as these funds either extended debt maturities or portfolio companies fell into default.

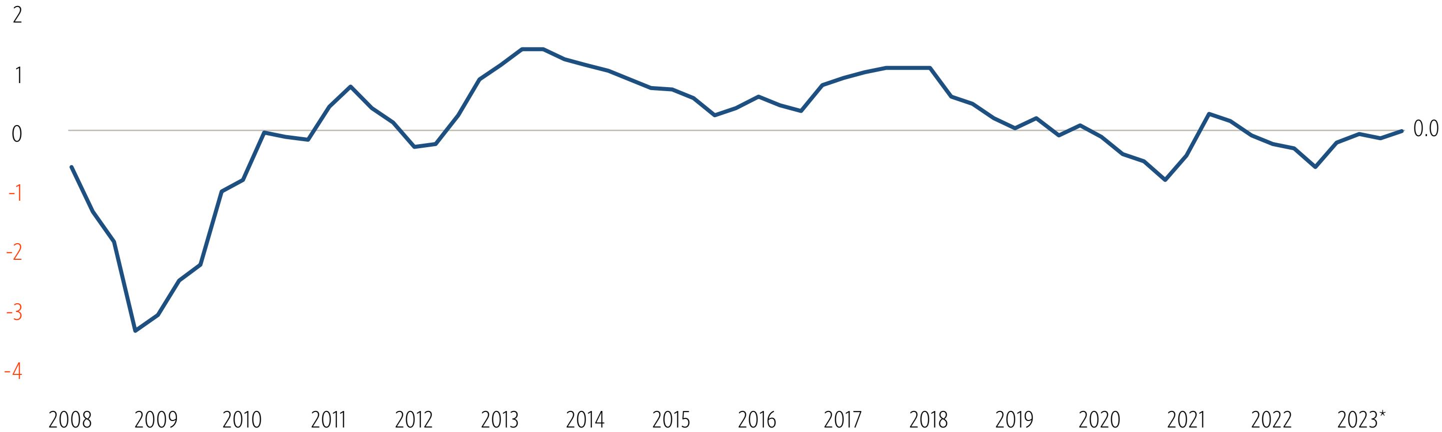
Private debt capital call versus distribution rates



Source: PitchBook • Geography: Global • *As of September 30, 2023

The Q3 2023 metrics are both trending below their respective averages, with capital call rates of 36.4% and distributions of 20.2%, signaling that capital calls are occurring more slowly and distributions are lower than they have been historically. Although distributions recovered slightly in 2021 to 27.9% after dropping during the pandemic, this recovery was short-lived as NAV realization rates fell back to 22.4% in 2022, and further in 2023. However, with potential interest rate cuts looming in 2024 and investment activity picking back up, there is the possibility that net cash flow rates could follow a downward trajectory again in the near future.

Z-scores of private debt net cash flows



Source: PitchBook • Geography: Global • *As of September 30, 2023

Appendix

Distribution and capital call rate ranges during select time periods*

		Post-dotcom	Pre-GFC	GFC	GFC recovery	COVID-19	Fed tightening
PE	Distributions	7.8% to 20.2%	35.4% to 46.6%	5.9% to 17.1%	18.0% to 34.3%	24.5% to 33.9%	14.4% to 15.1%
	Capital calls	19.4% to 27.4%	40.4% to 54.8%	14.2% to 37.7%	25.0% to 40.0%	34.4% to 49.7%	35.3% to 40.3%
VC	Distributions	3.7% to 10.3%	15.2% to 22.4%	4.2% to 16.5%	13.2% to 23.0%	18.7% to 26.3%	4.9% to 5.6%
	Capital calls	12.8% to 26.1%	32.1% to 41.0%	18.1% to 31.6%	29.5% to 49.5%	51.1% to 64.8%	22.4% to 32.4%
Real estate	Distributions			1.7% to 10.5%	11.2% to 41.9%	17.7% to 31.1%	14.3% to 18.0%
	Capital calls			25.3% to 55.5%	31.3% to 54.1%	27.6% to 41.1%	28.7% to 34.0%
Real assets	Distributions			5.2% to 22.5%	14.5% to 23.9%	13.1% to 21.0%	17.5% to 18.6%
	Capital calls			27.7% to 58.7%	30.5% to 47.3%	25.8% to 36.7%	39.8% to 42.7%
Private debt	Distributions			6.3% to 19.6%	20.6% to 35.7%	22.3% to 29.2%	19.2% to 20.7%
	Capital calls			35.0% to 77.7%	28.2% to 45.1%	37.9% to 51.7%	36.4% to 37.6%

Source: PitchBook • Geography: Global • *As of September 30, 2023