PitchBook

Basics of Cash Flow Management: Distributions

A time to reap

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Credits & contact

Analysts

JAMES GELFER Senior Strategist and Lead Analyst, VC
james.gelfer@pitchbook.com
ANDY WHITE Senior Data Analyst

Contact PitchBook

RESEARCH
reports@pitchbook.com

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Contributions: A time to sow

Key takeaways

- The average PE fund distribution tends to be relatively modest at about 5% of the fund size; however, the average largest distribution during a fund's life is 32% of the fund size—roughly double the 90th percentile in many periods—and 10% of funds will distribute more than half the fund's size in a single quarter.
- Distributions are most common during a fund's sixth and seventh year, with distributions occurring during roughly 60% of quarters in that period, but this can vary greatly for individual funds.
- We find that TVPI at the five-year mark serves as a helpful data point in predicting the ultimate level of distributions for a fund, with an R-squared value of 0.41 when regressed against DPI at Year 12. Conducting the same analysis with IRR instead of TVPI yields an R-squared value of just 0.20, underscoring the limited value of IRR early in the fund's life.
- PE fund distributions exhibit a high level of counter-cyclicality, with funds raised in the depths of economic downturns returning capital the most quickly. This is particularly interesting given our finding in the first installment of this series that capital calls are highly cyclical.

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Overview

In the first installment of our series, we examined historical PE fund cash flow data to assess typical drawdown patterns and how they have changed over time and in different market environments. Admittedly, when it comes to timing capital calls, LPs benefit from the fact that capital must be deployed within a predefined investment period. Contributions can never be perfectly timed, but there is a general pattern and methodology to how GPs deploy capital due to the relative rigidity of the investment period. Distributions, however, pose a greater challenge.

Timing is everything

The cadence of PE fund cash flows is akin to a farmer sowing seeds and harvesting crops: the planting of seeds is dictated by the calendar with potential for only slight deviations, while the timing and abundance of the harvest is more capricious depending on multiple variables such as weather, fertilizer use and market prices. Similarly, a GP's decision on when to make investments—and the concomitant capital calls—is largely dictated by the investment period defined in the limited partnership agreement (LPA), but the nature of these contracts affords the GP significantly more flexibility in determining when investments are harvested (i.e. timing of exits and distributions). As Leon Black once said, "It's almost biblical. There is a time to reap and there's a time to sow."[1]

While the full lifespan of a private market fund is also outlined in the LPA, which theoretically places a limit on the holding times of investments, the truth is that additional flexibility is given to GPs when the realities of the market come to bear. A buyer may present an offer that compels a GP to sell just two years into an expected four-year holding period. Turbulence in public equity markets could delay an IPO. A GP may see more potential in rolling a fast-growing company over into a new investment vehicle, rather than selling and having to source fresh investments.

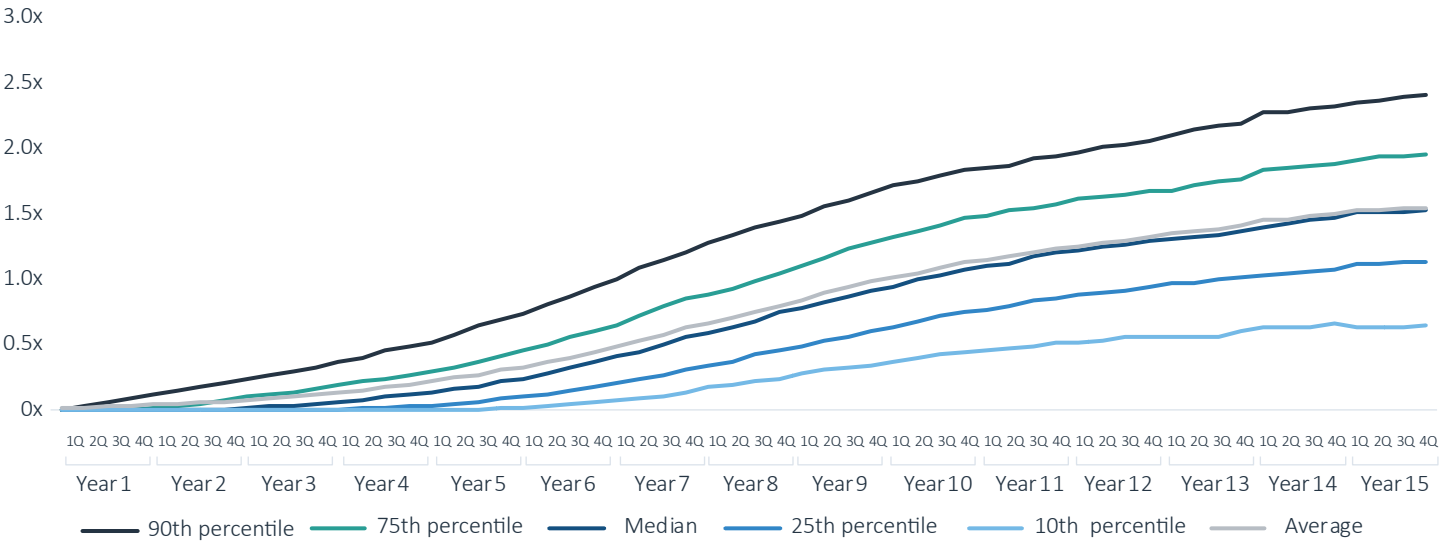
Textbooks claim that funds typically last 10 years, but that is now the exception and not the rule, with many funds lasting 15 years or more. This includes not only so-called zombie funds; many top-performing GPs have also extended holding times to 15+ years in some instances. The burgeoning secondary market is a growing tool that LPs can use to help manage portfolios in extreme

1: "A Time to Sell … and Borrow," Barrons, Randall W. Forsyth, May 4, 2013

circumstances, but these lengthening timelines still introduce unprecedented uncertainty into the timing of distributions. The result is that modeling distributions is a significantly more difficult task than predicting capital calls, even though simply viewing the data at the aggregate level can give a false sense of predictability.

Distributions appear deceptively smooth in aggregate

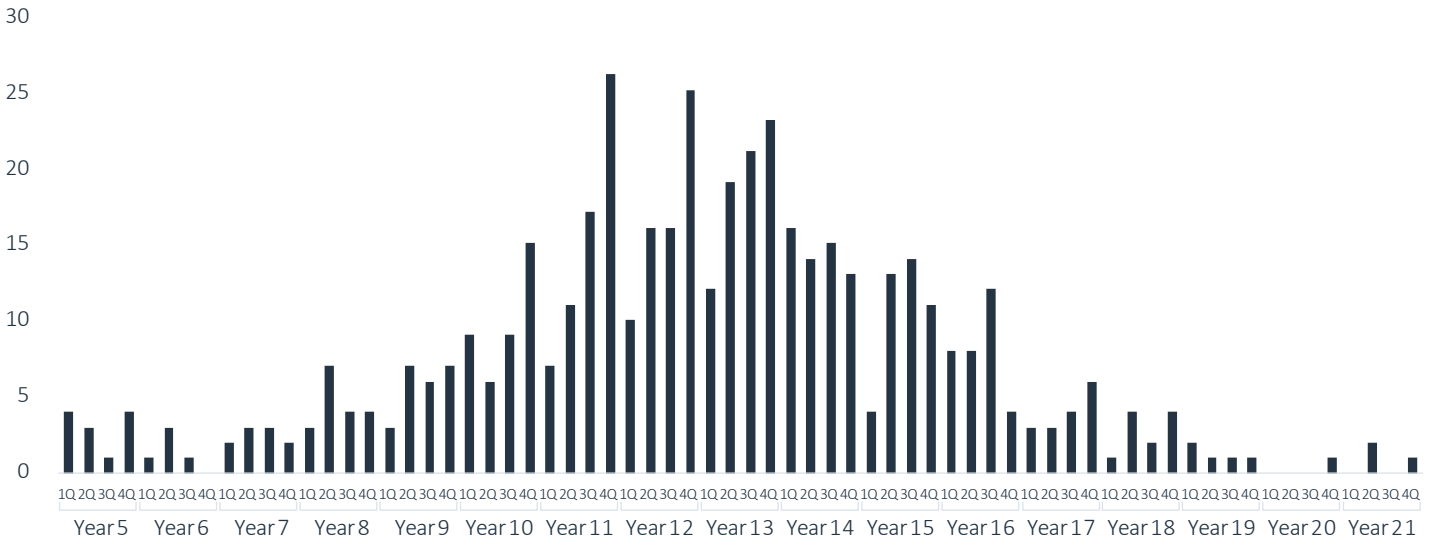
Range of DPI values for PE funds since inception



Source: PitchBook | **Geography**: Global
*As of December 31, 2018

Most funds take 12 years or more to fully liquidate

Number of PE funds to fully liquidate by quarter since inception

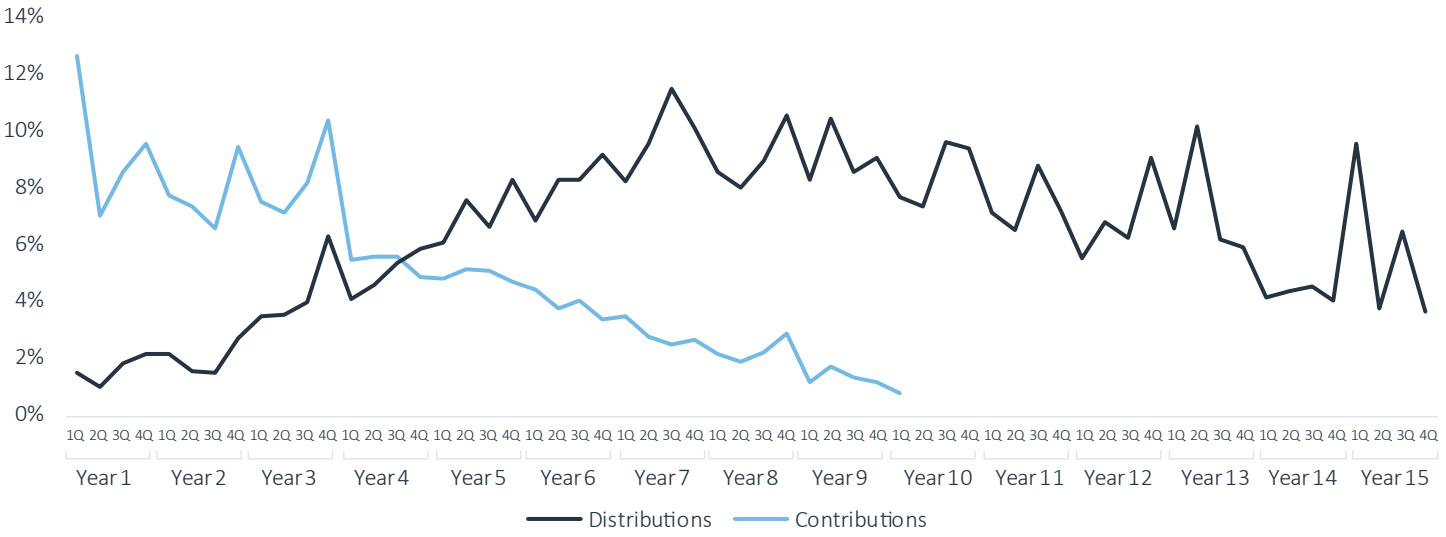


Source: PitchBook | **Geography**: Global
*As of December 31, 2018

The standard deviation of relative distribution sizes (i.e. the quarterly distribution size compared to total fund size) in a given quarter consistently hovers around 8% of the initial commitment size, which is similar to the level of variance observed in capital calls during the heart of the investment period. The difference with distributions, however, is that LPs in a fund often must endure this high level of uncertainty for nearly a decade, whereas the unpredictability of capital calls is frontloaded in the first three years of a fund's life.

Distributions are highly volatile throughout fund's life

Standard deviations of relative contribution and distribution sizes for PE funds since inception

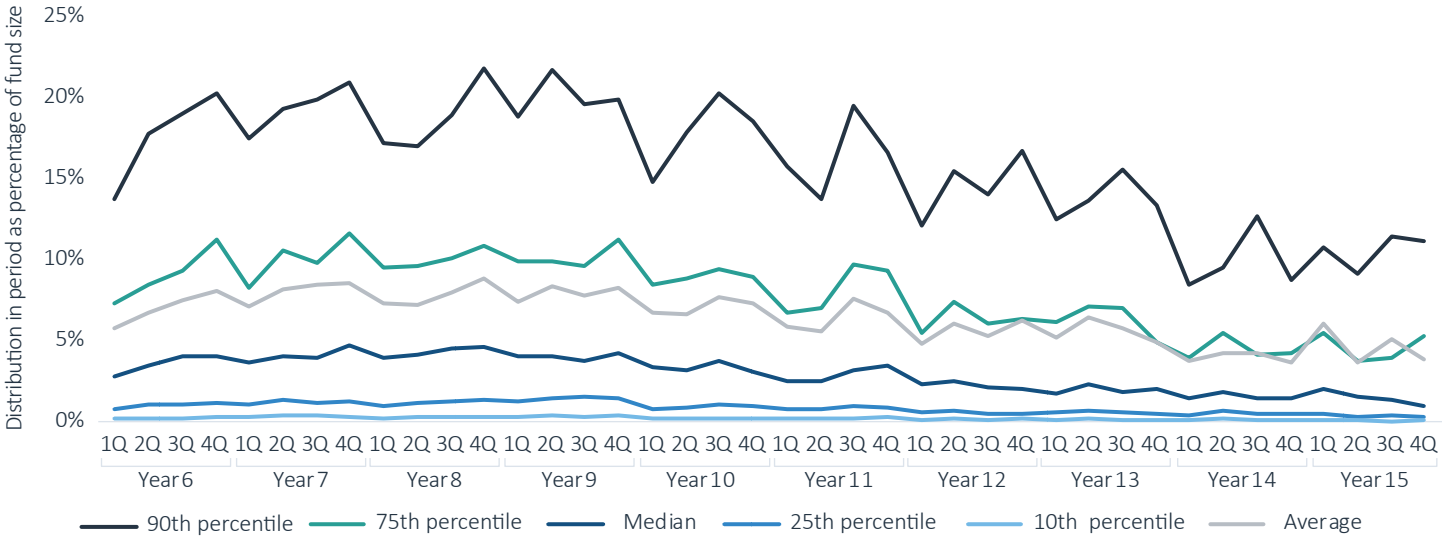


Source: PitchBook | **Geography**: Global
*As of December 31, 2018

Indeed, the sporadic nature of distributions is evident in the following chart, which shows the range of distribution sizes for quarters in which funds had a distribution. As can be seen, the average tends to be relatively modest at about 5% of the fund size; however, similar to contributions, simply assessing the average can be quite misleading. The top 90th percentile is often an order of magnitude larger than even the 75th percentile, but even that chasm doesn't adequately depict the extent to which outliers drive total distributions. To that end, the average largest distribution during a fund's life is 32% of the fund size—roughly double the 90th percentile in many periods—and 10% of funds will distribute more than half the fund's size in a single quarter. Conversely, the 25th and 10th percentiles barely register on the chart in most periods.

Most funds will see at least one distribution larger than the 90th percentile

Range of distribution sizes for PE funds since inception (excludes periods with no distributions)



Source: PitchBook | **Geography**: Global
*As of December 31, 2018

While this level of variance may seem extreme, the volatility of distributions becomes even more pronounced when broadening the scope to all periods during a fund's life, including those in which funds didn't distribute capital. Not only are the 10th and 25th percentiles nonexistent (because more than 25% of funds will not distribute capital in a given quarter), but the median never even reaches 1.0%. At the same time, the mean and 75th percentiles mirror each other throughout the average fund life, further emphasizing how outlier events drive distribution activity.

Outlier events drive distribution activity

Range of distribution sizes for PE funds since inception (includes periods with no distributions)

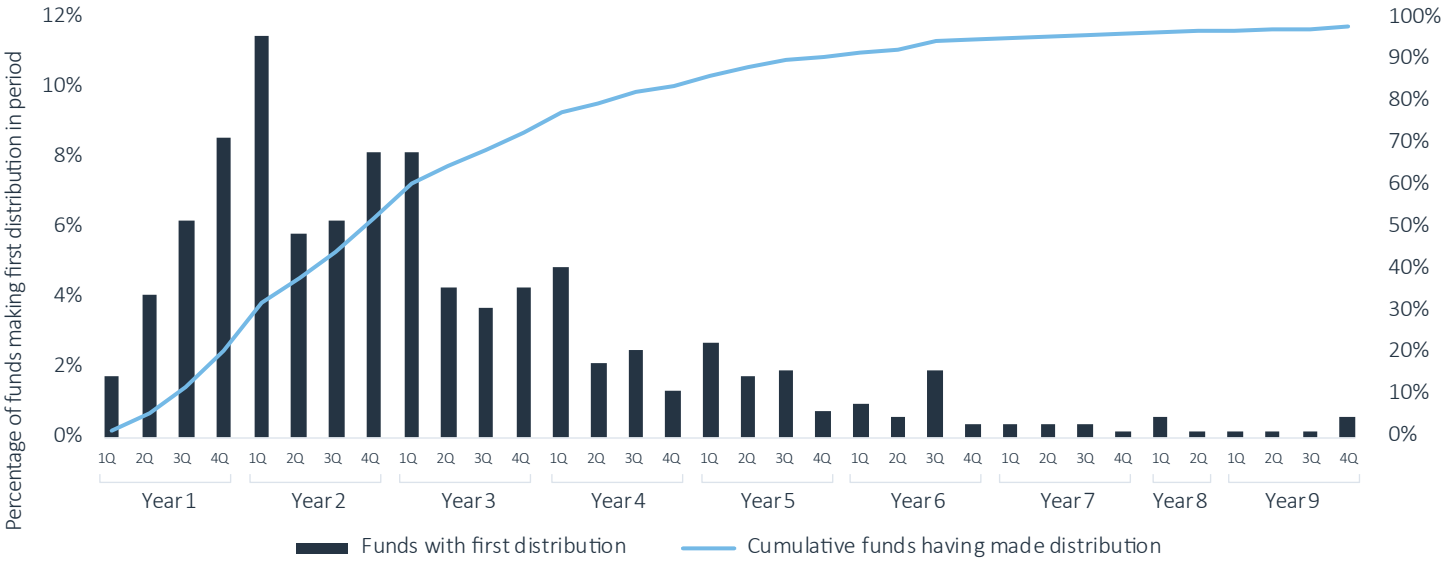
Source: PitchBook | **Geography**: Global
*As of December 31, 2018

The GPs' crystal ball

Given the extreme level of variance in distribution patterns between funds, the best place to go for insight into the probable path of distributions for any particular fund is at the source—the GP. Assessing a GP's track record can provide insight into likely holding times and exit routes, but discussions with the GP can also provide deeper insight into specific situations within the portfolio. As holding times extend, it is more important than ever that LPs understand how the GP plans to generate value for each investment and return capital to investors. About half of all funds, for example, will make their first distribution by the 1.5-year mark; however, about 25% of funds will go nearly 2.5 years before their first distribution, and 10% will go 3.5 years. This occurs for a variety of reasons, and LPs should be prepared for how they will reallocate that capital—whether they recycle it into the same vehicle, hold it in reserve to be deployed into a new fund or funnel it into a different asset class.

Half of funds make distribution in the first year and a half, but many take much longer

Percentage of PE funds making first distribution by time since inception



Source: PitchBook | **Geography**: Global
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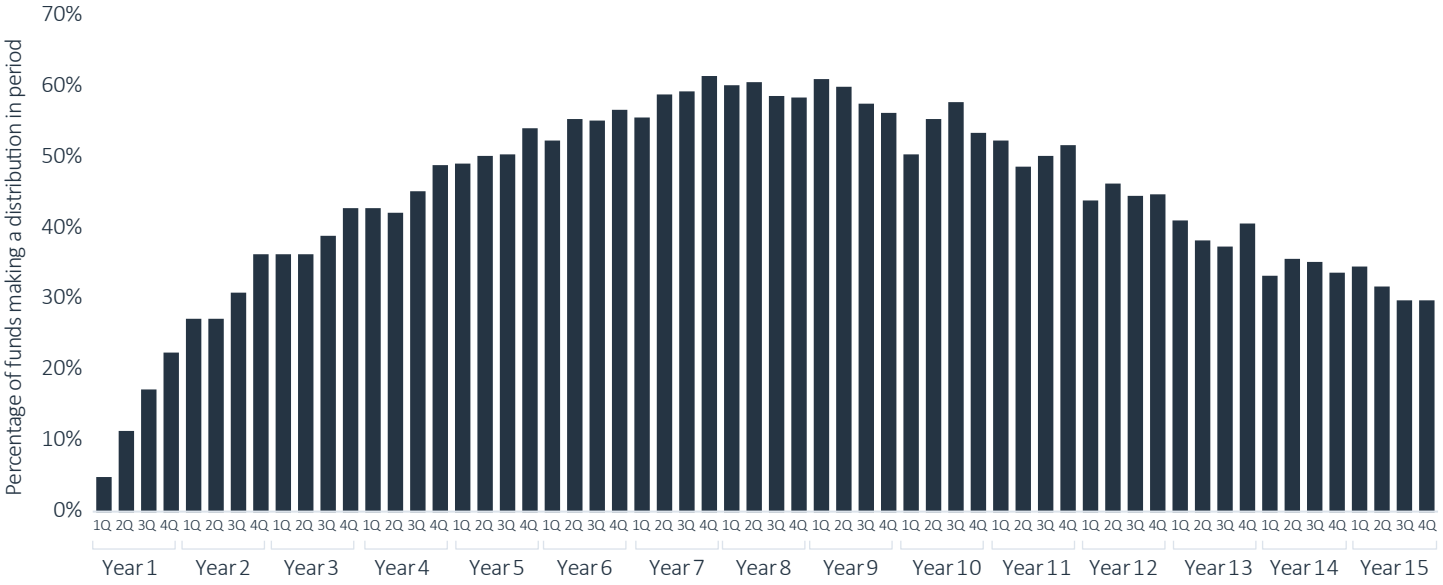
Understanding the GP's strategy can also provide insight into the likely frequency and size of distributions. We find that distributions are most common during a fund's sixth and seventh year, with distributions occurring during roughly 60% of quarters in that period, but this can vary greatly for individual funds. If the GP plans to utilize dividend payouts, for example, the LP can expect distributions to be initiated relatively early and occur more frequently throughout the fund's life. Furthermore, an outsized distribution is less likely than it would be if that capital was reinvested into the business, as dividends in effect extract value from the investment. Conversely, a small GP with a concentrated portfolio is likely to deliver chunky distributions as the result of full liquidity events that are relatively large in relation to the total fund size.

Distributions are most common through fund's sixth and seventh year

Percentage of PE funds making a distribution by time since inception



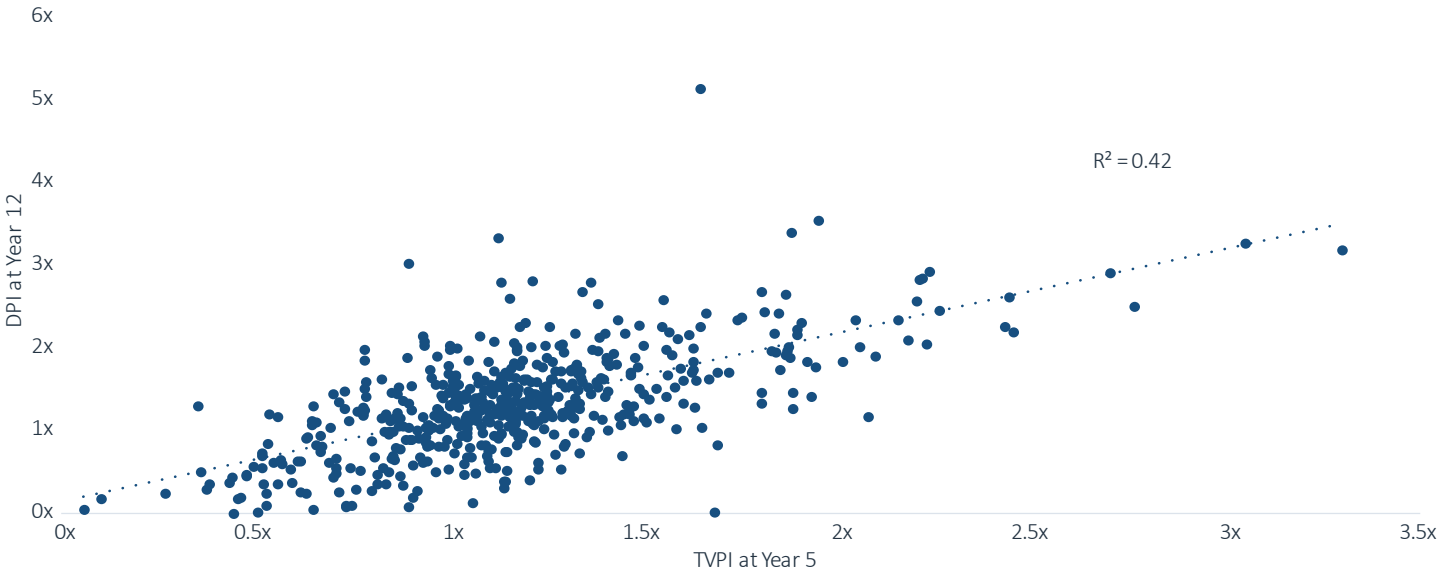
Source: PitchBook | **Geography**: Global
*As of December 31, 2018

The bigger picture

In addition to reading tealeaves and relying on prognostications from GPs, historical data provides some broad tendencies that can help to calibrate expectations for future distributions. The overall performance of the fund is naturally the biggest variable when it comes to modeling distributions. We find that the TVPI at the five-year mark serves as a helpful data point in predicting the ultimate level of distributions for a fund, with an R-squared value of 0.41 when regressed against DPI at Year 12. Conducting the same analysis with IRR instead of TVPI yields an R-squared value of just 0.20, underscoring the limited value of IRR early in the fund's life.

TVPI early in fund's life a strong predictor of future distributions

Plot of PE funds' TVPI at Year 5 & DPI at Year 12

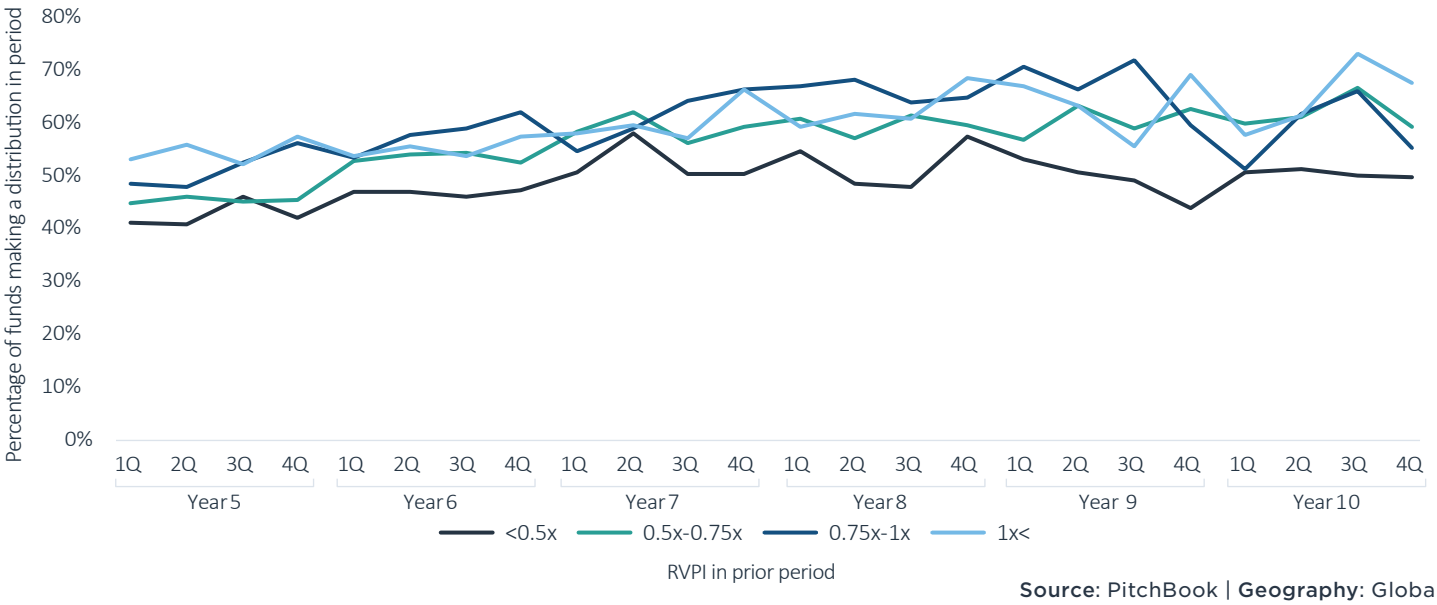


Source: PitchBook | **Geography**: Global
*As of December 31, 2018

While we expected a fund's RVPI to be a strong predictor of distributions, we found the R-squared value to be only 0.28 when regressing RVPI in the prior period with distributions from the next, examining each reporting period from Year 5 through the end of the fund's life. The correlation rises slightly in subsequent years, but the R-squared never rises above 0.35. Where we do find some predictive power in RVPI is at the tails of the sample range. First, the frequency of distributions begins to fall once RVPI dips below 0.5x, as does the relative size of distributions. Conversely, funds with an RVPI above 1.0x tend to provide larger distributions, particularly at the later stages of the fund's life.

Distributions become less frequent when RVPI dips below 0.5x

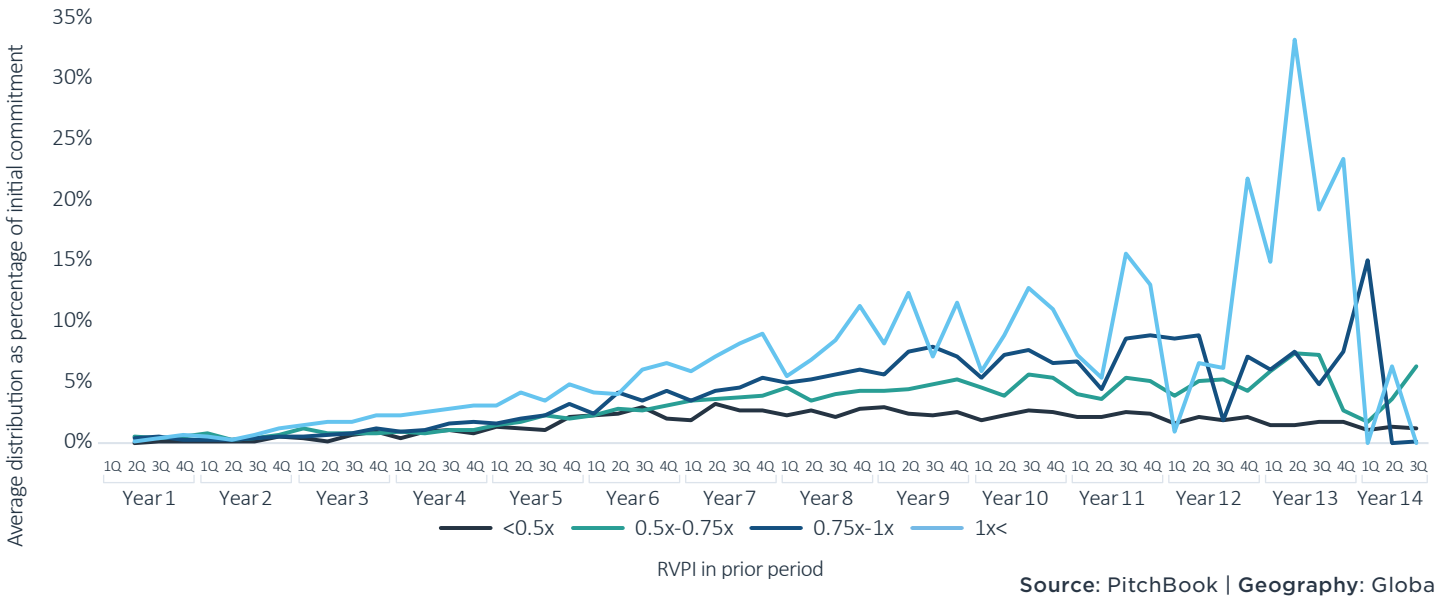
Percentage of PE funds with distribution in the quarter by prior period RVPI



Source: PitchBook | **Geography**: Global
*As of December 31, 2018

Distribution sizes highly correlated with RVPI

Average distribution size for PE funds in the quarter by prior period RVPI

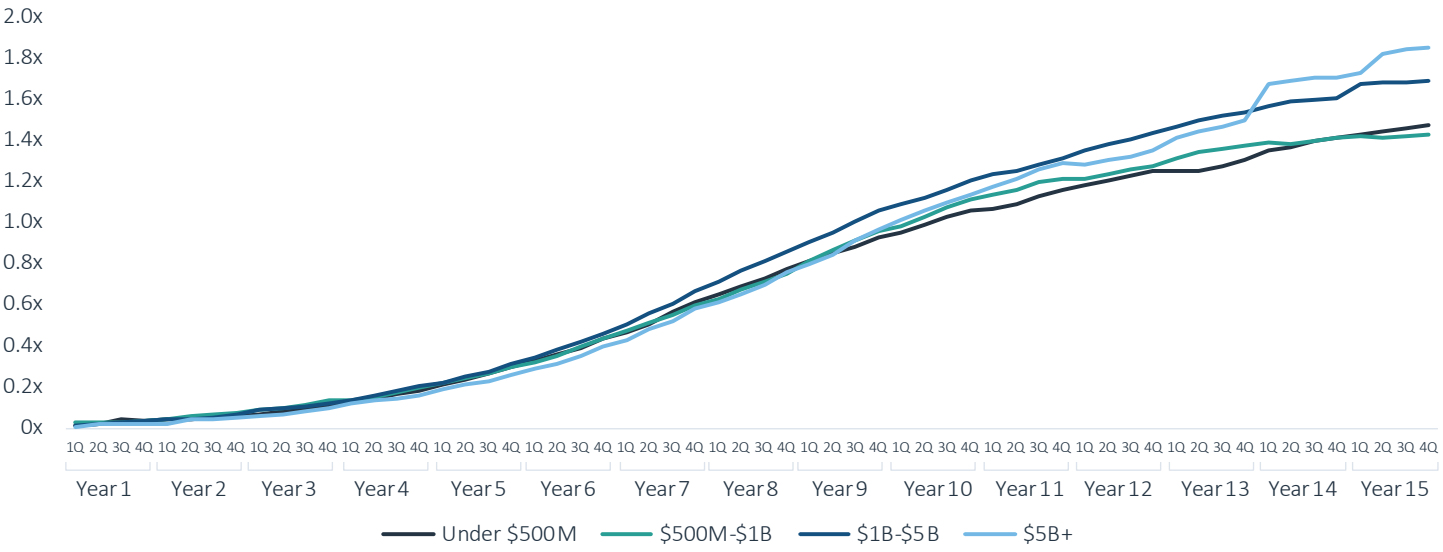


Source: PitchBook | **Geography**: Global
*As of December 31, 2018

Fund size also appears to play a role in the distribution profile. The pace of distributions for smaller funds begins to taper at Year 10 but sustains well past that point for larger funds, partly because they often have extended timelines and are frequently expected to persist for 15 years or more. This difference in timelines is important to keep in mind when comparing cash multiples, such as TVPI and DPI. To that end, a fund may post a superior TVPI or DPI metric compared to some of its peers, but how long it took that fund to return capital must be considered. Therefore, we recommend juxtaposing multiple metrics during analyses to get a complete picture of performance.

Larger funds more likely to have distributions beyond the Year 12 mark

Average DPI for PE funds by fund size since inception



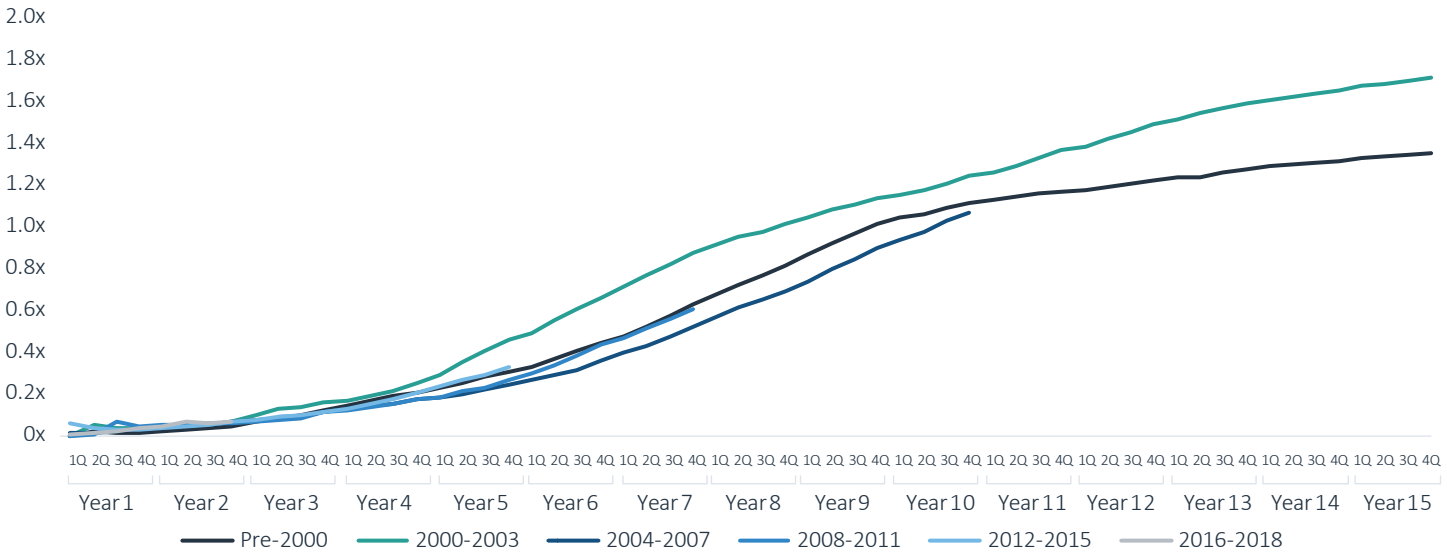
Source: PitchBook | **Geography**: Global
*As of December 31, 2018

In addition to fund-specific data points, investors should understand and appreciate the broader market forces at play. To start, the PE industry has undergone significant changes that have fundamentally changed the absolute return profile. Put bluntly, PE returns simply aren't as stellar as they were in the early days of the industry. This was naturally bound to occur as more competition entered the space, but this is also part of a global recalibration of long-term return assumptions as the global financial crisis (GFC) has led many investors to accept new market realities. In PE specifically, the average TVPI has slipped from roughly 2.0x in the early 2000s to around 1.6x for vintages in the early 2010s.[2] However, we find little evidence of structural changes in distribution profiles.

2: The most recent vintages (i.e. less than seven years old) exhibit low TVPIs due to the nascent nature of the funds and tend to be less meaningful.

Distribution profiles early in funds' lives exhibit little structural change

Average DPI for PE funds by vintage year since inception

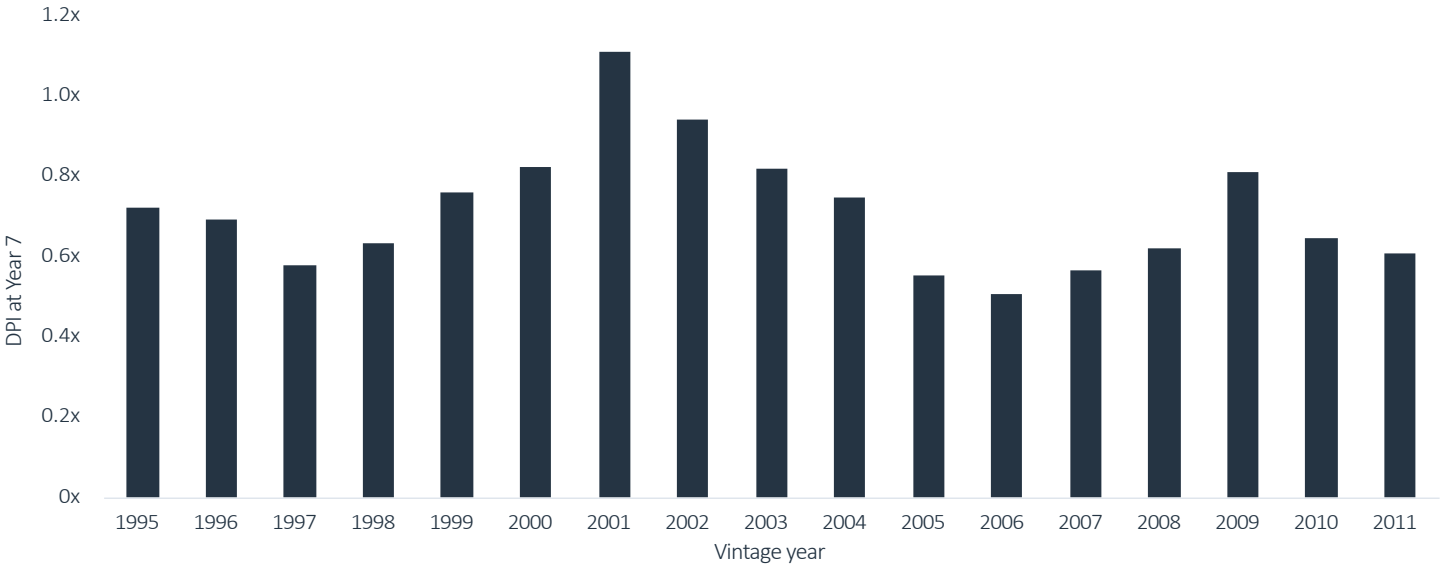


Source: PitchBook | **Geography**: Global
*As of December 31, 2018

Rather, we find PE fund distributions exhibit a high level of counter-cyclicality, with funds raised in the depths of economic downturns returning capital the most quickly. This is particularly interesting given our finding in Part I of this series that capital calls are highly cyclical. In other words, funds raised in the aftermath of an economic recession deploy capital more slowly but return it more quickly. Funds initiated during an expansion, on the other hand, invest rapidly but are slower to return capital. From a portfolio management perspective, this suggests that LPs are well advised to maintain diversity across vintage years and to not simply commit to new funds opportunistically when distributions are strong—which tends to come at the end of the market cycle.

Distributions oscillate with business cycle

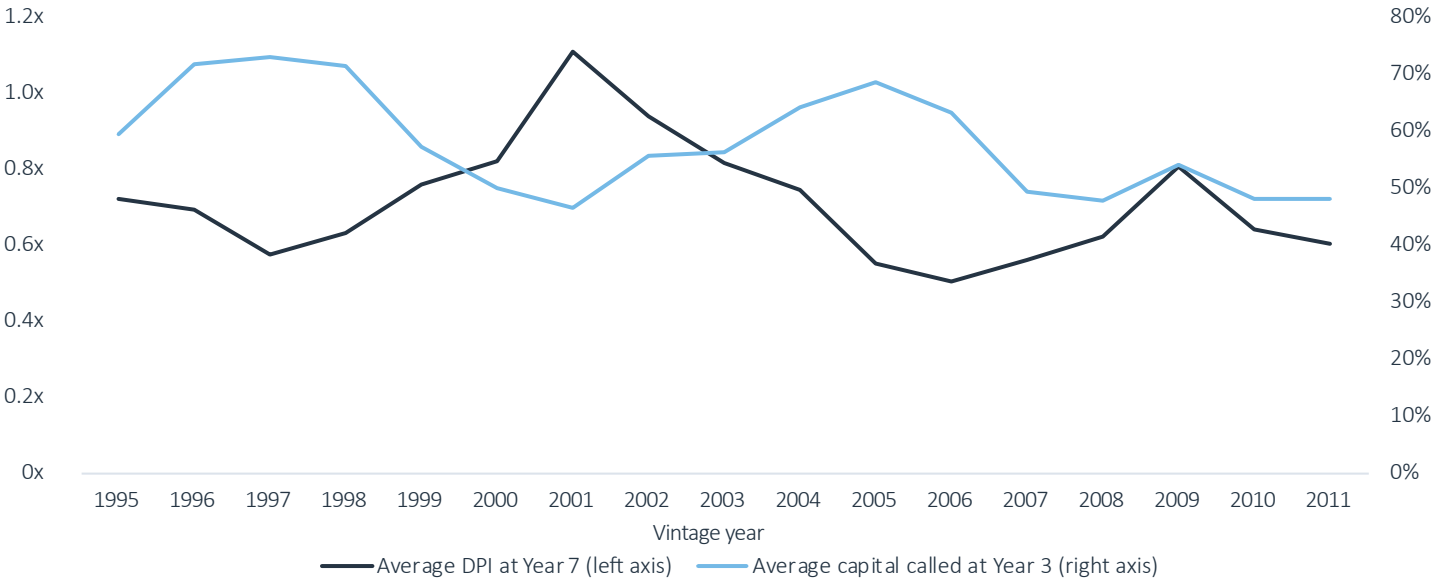
Average DPI for PE funds at Year-7 mark by vintage



Source: PitchBook | **Geography**: Global
*As of December 31, 2018

Pace of contributions negatively correlated with future distributions

Average DPI for PE funds at Year 7 & capital called at Year 3 by vintage



Source: PitchBook | **Geography**: Global
*As of December 31, 2018

That can be difficult to achieve, however, as net cash flows to LPs tend to decline and often turn negative during economic downturns. Furthermore, as we saw during the GFC, drawdowns in public portfolios can lead the illiquid allocation to seemingly increase via the so-called denominator effect, which can hamper the LP from making new fund commitments.

This is a particularly salient point in the current environment, in which LPs have enjoyed positive net cash flows for nearly a decade, providing a steady stream of capital to be reallocated to new vehicles. While we are not predicting the next recession, there will inevitably be one at some point. When it happens, history suggests that it will be an opportune time for LPs to commit to new funds. But with distributions likely to dry up, LPs with a long-term view and a diversified PE portfolio will be best positioned to capitalize. In the next edition, we'll examine how a PE portfolio can be constructed to enable effective cash flow management while affording the flexibility to opportunistically allocate to new funds.