INVESTMENT INSIGHTS

Dynamically managing stock distributions to enhance value

Private Equity Distribution Management (PEDM)

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IN BRIEF

A private equity fund's general partner can exit an investment in a variety of ways. The general partner can sell the fund's interest to a strategic investor or to another private equity firm, which will generate cash proceeds. Other exit events, such as an acquisition by a public company or an initial public offering, may result in public stock ownership. In this scenario, the general partner can distribute the proceeds to the limited partners either as cash or as an in-kind distribution. An in-kind distribution, also known as a stock distribution, can be a highly efficient mechanism for returning capital, but it can also cause difficulty for limited partners as it requires them to have a process in place to retain the value created from the exit.

Stock distributions have historically provided challenges for limited partners, who statically manage distributions either by selling immediately after receiving a distribution or holding for a longer term. Because of the unique nature of each distribution, we believe that a dynamic process that has a foundation in quantitative analysis will provide the best outcome for limited partners. Through our years as distribution managers, we have identified several best practices that can inform sell or hold decisions:

- Construct a flexible loss limit framework.
- Determine the alignment of the general partner's interests—a one-time distribution of a general partner's entire holding may be a negative indicator.
- Take relative market capitalization into account—the largest companies tend to outperform.
- Be aware of variations in return profiles across sectors—for example, biotechnology distributions behave differently, due in large part to the binary nature of the drug-approval process.

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BACKGROUND ON DISTRIBUTIONS

The private equity cycle begins with investors known as limited partners (LPs) providing funding to a general partner (GP) who in turn invests in portfolio companies. The GP can exit the investment through a variety of ways: selling to a strategic buyer, selling to another private equity fund or through public market events, such as an acquisition by a public company or an initial public offering (IPO). An exit through a public market event may result in public stock ownership. In this case, the GP can return the proceeds, assuming all restrictions are met, via two methods:

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1. The GP can sell public equities into the market at its discretion and *return cash to LPs.*
2. Alternatively, the GP can *return the actual public equities to LPs* as a stock distribution.

If the GP returns capital through a stock distribution, the LPs must determine when to convert their public equity holdings into cash, completing the final step in the private equity cycle. In this scenario, GP returns may differ from LP returns, as the GP books profits based on the distribution price, while the LPs' true cash-on-cash return will depend on the price at which they can sell the distributed stock in the public market.

Why would a GP return capital to LPs in the form of stock rather than cash?

We discuss some of the most compelling reasons below:

REASONS A GP MIGHT RETURN CAPITAL TO LPs IN THE FORM OF STOCK RATHER THAN CASH

GP flexibility	LP optionality
Restrictions: Insiders in a company are restricted from selling certain volumes. Distributing stock can allow them to return larger amounts more quickly. **Maximizing price:** GPs can select the optimal time to distribute capital, often within a certain window, and act quickly on their decisions. Flexibility of this nature does not typically exist with block trades or secondary processes. **Liquidity:** GPs can return capital in larger quantities; in recent history, an average distribution has represented approximately three times average daily trading volume.	LPs can determine if and how they want to convert public equities into cash based on their unique circumstances. If LPs have a strong process for distribution management, they may be able to enhance private equity returns. Considerations include: • liquidity requirements • taxes • alternative investments available

How frequently and in what areas do stock distributions occur?

Stock distributions have always been a meaningful percentage of total distributions. In recent years, they have constituted approximately 40% of venture capital distributions, and while the percentage has historically been lower for corporate finance, it has still accounted for a significant amount of value. Distributions also occur across sectors but tend to be concentrated in technology and health care.

SPOTLIGHT ON LOCK-UPS AND POST LOCK-UP EXPIRATION ACTIVITY

SEC regulations

GPs can receive public stock in exchange for their private market investment upon the initial public offering of a company's stock. Under Securities and Exchange Commission regulation, however, the GP may not be able to sell these shares quickly on the open market. In order for restricted securities to be sold, a number of conditions must be met, perhaps most notably that the security is no longer in a lock-up period. The additional conditions vary depending on affiliate vs. non-affiliate status. Affiliates are typically "insiders," including company management and GPs if they can exercise control; "control" typically refers to a certain voting control or influence over management decisions. While not always the case, a helpful gauge to determine affiliate status is whether an individual is a company director, an officer or owns more than 10% of the company.

In addition to limitations on selling shares, affiliates are restricted from hedging the exposure when insider sales are prohibited. Typically, LPs are non-affiliates and fall outside these restrictions on hedging, though hedging may be cost- or capacity-constrained given an IPO's limited share float and the consequently high cost to borrow shares. To add further complexity, the LP will not know when the GP intends to distribute the securities and could therefore pay hedging costs over a long period of time before actually receiving the share distribution.

GP actions and price behavior

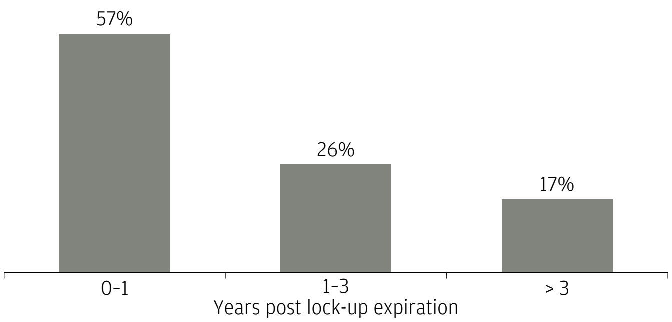
When a GP is deemed an affiliate for reasons such as board representation or substantial ownership interest, selling may be restricted to certain windows. At the same time, there are no rules in place indicating when a GP must sell or distribute

AFFILIATE RESTRICTIONS

- In the U.S., lock-up is generally six months; within this period, no sales are permitted.
- Post lock-up, an affiliate may sell if the company meets specific criteria, including but not limited to:
  - volume limitations
  - SEC filing requirements
  - possible trading windows

GP discretion: GPs can hold on to stock distributions for years after lock-up expiration, but most distributions take place within 12 months

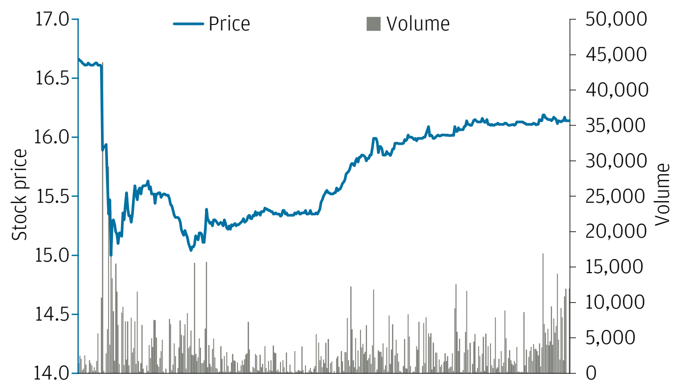
EXHIBIT 1: PERCENTAGE OF STOCK DISTRIBUTIONS RECEIVED AFTER LOCK-UP EXPIRATION



Source: FactSet, Private Equity Distribution Management; data as of June 30, 2015.

Distribution roller coaster: Prices typically dip sharply in the first few hours after a stock distribution as selling shareholders overwhelm the liquidity

EXHIBIT 2: DAY 1 POST-DISTRIBUTION TRADING PATTERN, MAY 13, 2016 (BARRACUDA NETWORKS)



Source: Private Equity Distribution Management.

the public equities to LPs. In other words, GPs can hold the securities for a significant period of time after lock-up restrictions have expired, though it is less common for them to do so.

Based on our historical data set, almost 60% of distributions have occurred within a year of the post lock-up expiration, with almost 40% of all distributions occurring in the first six months (**EXHIBIT 1**). Because the markets closely watch lock-up expiration dates, stock volatility tends to increase in the month before lock-up expiration in anticipation of a substantial increase in the number of sellers. Since the IPO market tends to be illiquid by its very nature and private equity investments often account for a much greater value than the float available from public ownership, the overhang of IPO securities prior to and at lock-up expiration can cause large price movements. Volatility often remains elevated following expiration as the market digests the actual liquidity impact vs. prior expectations. A GP may be willing to distribute into this post-lock-up expiration volatility for a variety of reasons, such as reducing exposure or capturing gains, particularly if the GP's shares have a very low cost basis.

EVALUATING STATIC SELLING PROCESSES

Immediate sellers

The natural reaction of an LP receiving a stock distribution might be to cash out and put the proceeds to work immediately, but that strategy has almost always guaranteed a negative return. For every year in our data set, from 1987 to 2015, average post-distribution performance in the first few business days was negative. The stock price at the close of business on Day 1 fell approximately 3%. And this average value likely overstates actual investor experience because it does not capture either intra-day price movements, which can be very volatile, or an investor's inability to transact efficiently in a potentially illiquid market.

An example of a typical Day 1 trading pattern will illustrate this point (**EXHIBIT 2**). A stock distribution we received prior to the market open in May 2016 experienced a loss of 2.1% over the course of the day. Intra-day, however, the stock swung from down more than 9% to up almost 3%, a range of approximately 12%. But the swing only tells part of the story as we need to consider the volume of transactions as well. Over 70% of the day's volume occurred at a loss greater than 2.1%, with the volume-weighted average loss at 3.9%, nearly double the quoted daily change.

Long-term holders

In our data set, average distribution performance is negative for every time period post-distribution until approximately one year. At that point, performance crosses into positive territory. Median performance, however, diverges from this pattern. Median performance actually deteriorates as the holding period extends and is meaningfully negative one year post distribution, at a loss of nearly 11%. Anecdotally, the majority of LPs we have

BUBBLE YEARS 1998–99

Our analysis includes snapshots both of our entire set of historical distributions (1987-2015) and illustrations that exclude 1998 and 1999. These outlier years can distort observable trends and are not representative of achievable outcomes in a typical business cycle.

To put it in context, the average performance of the top 10% of companies in all years excluding 1998–99 was 125%. In contrast, average performance of the top 10% of companies in both 1998 and 1999 exceeded 500%.

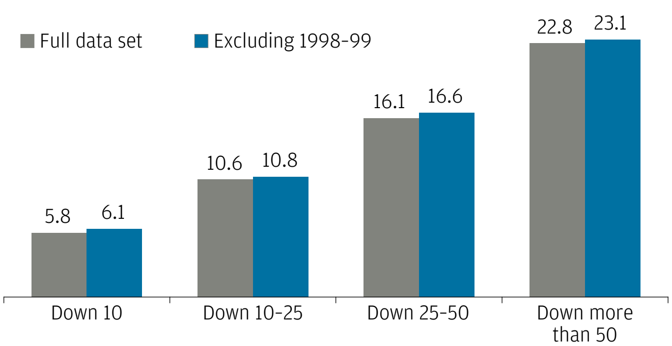
spoken to who are immediate sellers have experienced approximately 8% to 10% declines over time. The best performance we have seen from an immediate seller was -4.5%.

A contributing factor to this negative median performance is the negative skew seen in distribution performance. Approximately 58% of stock distributions have negative returns one year post distribution, compared with only 33% of companies in the S&P 500 over the same time period. The magnitude of this negative performance must also be considered. Over our 28-year sample of distributions, if LPs held a distribution for one year, they would have been almost four times more likely to lose 50% of the distribution value than to lose 10% (**EXHIBIT 3**).

Beyond losses actually incurred, investors must also consider the opportunity cost of holding a stock distribution. Private equity investors, who generally expect returns of 10% to 15%

Unfavorable skew: When distributions lose money in the first post-distribution year, they tend to lose a lot

EXHIBIT 3: DISTRIBUTION OF NEGATIVE RETURNS ONE YEAR POST DISTRIBUTION (%)



Source: FactSet, Private Equity Distribution Management; data as of January 22, 2016.

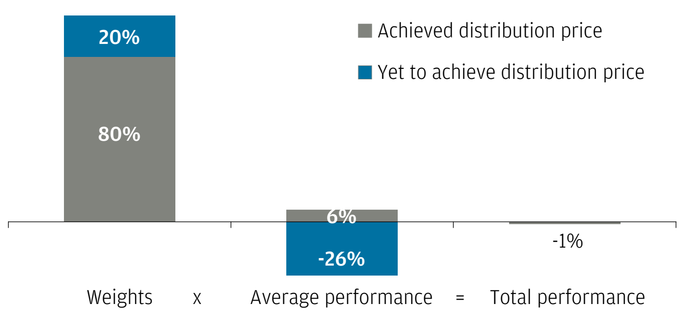
from the these investments, must factor this level of return into the sell or hold decision. Reinvesting the distributed capital in private equity is likely a better alternative than holding distributions over a long time horizon. Even if investors do not have the option to reinvest proceeds in private equity, diversified public equity returns could also be more attractive.

Using average statistics to determine a single sell date

Using average statistics to make hold or sell decisions appears to be a more sophisticated process, but the data show that, no matter how informed, the selection of any single holding period for all distributed securities will likely lead to negative overall performance. An example will help illustrate this point (**EXHIBIT 4**). Historically, approximately 80% of distributions have met or exceeded their distribution price at least once prior to 40 business days, or approximately two months, post distribution. If LPs determined that Business Day 40 was the optimal day to sell based on this information, they would still wind up with negative performance, on average.

Vanishing gains: 80% of stock distributions exceed their distribution price at least once by the 40th trading day, but only 45% continue to exceed the price on Day 40

EXHIBIT 4: SHARE PRICES OF DISTRIBUTED STOCK 40 DAYS POST DISTRIBUTION



Source: FactSet, Private Equity Distribution Management; data as of January 22, 2016.

The 80% supermajority is a misleading statistic. Many distributions are not able to hold their distribution price—therefore having met or exceeded distribution price prior to Business Day 40 does not indicate that the price will remain there on Day 40. In fact, in our data set, although 80% of companies achieve their distribution price at least once by Day 40, only 45% of them will remain there on the actual day. Those that cannot hold their distribution price weigh down overall returns, though it is the remaining 20% that have yet to achieve their distribution price that pull overall performance into negative territory. The graphic, which depicts an approximate 1% loss over 40 business days, equates to a loss of over 5% annualized.

IMPLEMENTING A DYNAMIC DISTRIBUTION MANAGEMENT PROCESS

Retaining or enhancing value through stock distributions

If history shows the difficulty of the LP's post-distribution challenge, statistics suggest that the astute LP has an opportunity to capture and even enhance private equity returns through distribution management. The extreme difference between mean and median performance underscores the large number of outliers in the distributed stock universe and the wide range of their returns. Indeed, while some stocks in our distribution universe have shed 99% of their value in their first year, others have gained more than 500%. A methodical and informed strategy designed to capture the upside and sidestep the risks can enable LPs to maintain the value of their private equity distributions or even generate increased returns. Though we cannot overemphasize that each distribution is unique, observations from our stock distribution database can help inform a dynamic process that optimizes distributed stock returns. We recommend a process that incorporates four factors into the sell or hold decision:

#1: Implementing a loss limit framework can provide significant downside protection

In order to capture the potential upside in distributed securities, LPs require a dynamic and disciplined approach to minimizing losses as well as maximizing gains. Loss limits can be a crucial part of the loss discipline for minimizing losses, as a substantial percentage of distributed share prices fall more than 25% or even 50% one year post-distribution. By curtailing the significant performance drag, LPs can protect gains elsewhere in their portfolios. In determining appropriate loss limits, LPs must take into account that the majority of distributions initially decline and subsequently recover some or all of the losses. LPs must also consider that very illiquid distributions may require different loss limits, as their initial decline is often exaggerated.

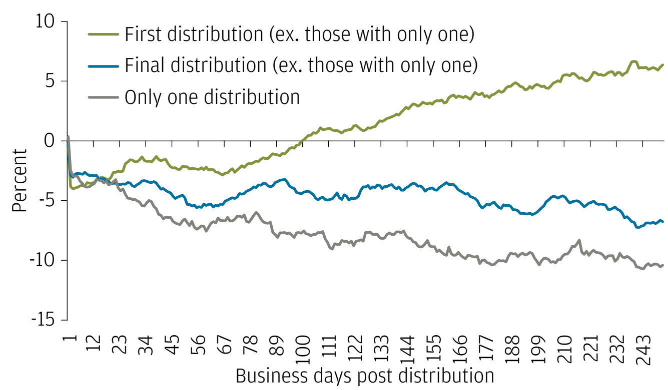
#2: GP alignment of interest has been a useful indicator

Distributions have underperformed when a GP fully exited a security in a one-time distribution vs. an initial distribution where the GP retained an interest. The stock market's interpretation of a GP's actions may help explain this trend. When a GP retains exposure to a portfolio company—and thus retains some alignment of interest—the market sees this as a positive indicator. On the other hand, when a GP fully exits the position in a single distribution, the market may interpret the action as a negative indicator since the GP presumably has the most intimate knowledge of the company.

This performance discrepancy extends to initial distributions vs. the last of a series of distributions. Stocks sold at the first distribution enjoy better returns one year after the distribution than stocks sold at the last distribution—and the magnitude of the spread is substantial. As **EXHIBIT 5** illustrates, after adjusting for those firms with only one distribution, the average performance spread approximately one year, or 250 business days, between first and final distribution is over 16% (over 13% when excluding 1998-99).

GP signaling: When a GP fully exits a position in one fell swoop, post-distribution performance is likely to be materially worse

EXHIBIT 5: AVERAGE POST LOCK-UP RETURNS, TRADING DAY 1 THROUGH TRADING DAY 250



Source: FactSet, Private Equity Distribution Management; data as of January 22, 2016.

#3: Relative market capitalization on distribution date has mattered

The top 10% of companies by market capitalization have significantly outperformed the remaining 90% one year post distribution, when comparing distributions received in the same calendar year. In other words, the largest companies of each year have performed better, on average. The performance spread has exceeded 5% when considering the full data set and is greater than 11% when excluding 1998-99. When considering median figures instead of averages, the performance spread widens to over 20% for both data sets. While we focus on spreads one year post distribution, the directional trend remains true for all post-distribution time periods.

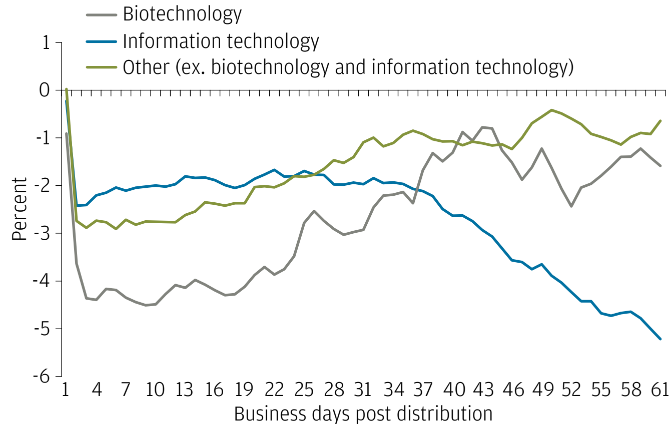
We acknowledge that it is impossible to know intra-year which distributions will be in the top 10% by market capitalization for that year; however, it is probable that investors will have a strong indication.

#4: Relative sector performance rankings have changed throughout the post-distribution period

The change in relative sector performance is best illustrated through biotechnology distributions. As they do with other sectors, GPs tend to distribute biotechnology securities after the stock price reflects a positive development for the company, such as a promising trial in the biotech case. However, unlike companies in other sectors, biotechnology firms are typically pre-revenue at IPO and are utilizing the IPO as a financing event, often to fund operations through the point when they can obtain Food and Drug Administration approval for a new product. As the companies are often still users of capital but have yet to produce a viable product, they generally experience unique trading patterns vs. other sectors and are more likely to experience a significant drawdown in the first few months post-distribution (**EXHIBIT 6**).

Sector idiosyncrasies: Sectors follow unique performance patterns

EXHIBIT 6: AVERAGE SECTOR PERFORMANCE IN THE FIRST POST-DISTRIBUTION YEAR



Source: FactSet, Private Equity Distribution Management; data as of January 22, 2016.

LPs may be inclined to hold these securities until the next positive development, which may or may not occur, as success in this sector is often binary. Those that do obtain approval, however, can produce very large returns, buoying the overall sector performance. Thus, the biotechnology sector's relative performance changes throughout the post-distribution period, with large variances among individual distributions, making it a particularly challenging sector for LPs.

There are other broad sector trends outside of biotechnology to consider. Distributions tend to be concentrated in certain sectors, such as information technology, which has constituted the majority of distributions historically (almost 60%). Additionally, on average, investors have been compensated to hold certain sectors, while others have produced negative performance for the entire year post distribution. For example, excluding the 1998-99 bubble years, investors have benefited most from distributions in the consumer sectors, while distributions in the telecommunications services sector have detracted most. It is important to note that the data applies to long time horizons. Over shorter periods, sectors can behave and have behaved very differently.

CONCLUSION

While, on average, stock distribution performance has been negative over most time frames, individual stock performance has ranged from essentially down 100% to up 500%, creating the risk that investors will either lose value created through their private equity platform or the opportunity to retain and enhance it. As we have shown, the circumstances of each distribution tend to be idiosyncratic, making a uniform solution difficult. We believe that LPs can optimize their distribution results by utilizing a dynamic approach that includes a robust and systematic evaluation of each distribution's fundamentals, overlaid by a quantitative analysis of opportunity costs and an awareness of distribution market patterns and trends.

ABOUT PEDM

Our Private Equity Distribution Management group manages stock distributions for our clients, including public and corporate pension funds, endowments and foundations. We seek to maximize returns in a timely manner across a market cycle, allowing LPs to reinvest the cash in private equity, where returns have historically been better than those of publicly traded distributed stocks.

We take a dynamic approach to distribution management that incorporates a quantitative framework with a qualitative overlay. PEDM has been managing distributions since 2002.

FOR MORE INFORMATION

Please contact your local J.P. Morgan Asset Management or Private Equity Group representative with any questions, or e-mail PEG_Questions@jpmorgan.com

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