

2017

 PitchBook®

# PE & VC Fund Performance Report

Data through  
4Q 2016

Sponsored by



**Donnelley**  
Financial Solutions

**VENUE**





## DEAL SOLUTIONS

# Donnelley Financial Solutions

## Unmatched Expertise on a Global Scale

Donnelley Financial Solutions provides software and services that enable clients to communicate with confidence in a complex regulatory environment. With 3,500 employees in 61 locations across 18 countries, we provide thousands of clients globally with innovative tools for content creation, management and distribution, as well as data analytics and multi-lingual translation services. Leveraging advanced technology, deep-domain expertise and 24/7 support, we deliver cost-effective solutions to meet the evolving needs of our clients.

Our Venue Deal Solutions suite addresses **every** step of the deal process, including:



**Venue Data Room: 24 hour dedicated, global project management support & real world service no one else delivers.** Venue Data Room offers a powerful feature-set and an intuitive design that allows clients to easily organize, manage, share and track their most confidential data – securely – within and beyond firewalls.



**Venue Deal Marketing, powered by Peloton,** creates interactive deal documents; enabling companies, investors, advisors, and strategic acquirers to communicate value like never before.



**Venue Contract Analytics, powered by eBrevia,** provides unprecedented speed and accuracy to contract review during all phases of deal diligence.



**Venue Deal Sourcing, powered by Axial,** is an all-in-one platform to streamline business development – from finding capital, to sourcing deals, to marketing and analytics.

For more information visit [venue.dfsc.com](http://venue.dfsc.com)



CORPORATE HEADQUARTERS  
35 West Wacker Drive  
Chicago, IL 60601  
U.S.A.

888.773.8379  
[www.dfsc.com](http://www.dfsc.com)  
[www.venue.dfsc.com](http://www.venue.dfsc.com)  
Copyright © 1995–2017 Donnelley Financial, LLC.  
All rights reserved.



Introduction	<b>4</b>
Methodology	<b>5</b>
PE & VC KS-PME Benchmarks	<b>6-7</b>
Case Study: PE J-curves	<b>8</b>
IRR by Fund Type	<b>9</b>
Quartiles & Benchmarks	<b>10</b>
PE IRRs	<b>11</b>
PE Fund Return Multiples	<b>12</b>
PE Fund Cashflows	<b>13</b>
VC IRRs	<b>14</b>
VC Fund Return Multiples	<b>15</b>
VC Fund Cashflows	<b>16</b>

## The PitchBook Platform

The data in this report comes from the PitchBook Platform—our data software for VC, PE and M&A. Contact [sales@pitchbook.com](mailto:sales@pitchbook.com) to request a free trial.

## Credits & Contact

### PitchBook Data, Inc.

**JOHN GABBERT** Founder, CEO  
**ADLEY BOWDEN** Vice President,  
 Market Development & Analysis

### Content

**JAMES GELFER** Senior Analyst  
**DYLAN E. COX** Analyst  
**NICO CORDEIRO** Analyst  
**CAMERON STANFILL** Analyst  
**DAN COOK** Manager, Data Analysis  
**BRYAN HANSON** Data Analyst  
**KORY HOANG** Data Analyst  
**JENNIFER SAM** Senior Graphic Designer

### Contact PitchBook

[pitchbook.com](http://pitchbook.com)

### RESEARCH

[reports@pitchbook.com](mailto:reports@pitchbook.com)

### EDITORIAL

[editorial@pitchbook.com](mailto:editorial@pitchbook.com)

### SALES

[sales@pitchbook.com](mailto:sales@pitchbook.com)

COPYRIGHT © 2017 by PitchBook Data, Inc. All rights reserved. No part of this publication may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, and information storage and retrieval systems—without the express written permission of PitchBook Data, Inc. Contents are based on information from sources believed to be reliable, but accuracy and completeness cannot be guaranteed. Nothing herein should be construed as any past, current or future recommendation to buy or sell any security or an offer to sell, or a solicitation of an offer to buy any security. This material does not purport to contain all of the information that a prospective investor may wish to consider and is not to be relied upon as such or used in substitution for the exercise of independent judgment.

# Introduction

## Key takeaways

- 2016 marked the fifth consecutive year of positive net cashflows for both private equity and venture capital; however, net cashflows decreased significantly from 2015 to 2016. With investment activity remaining robust in 2017 while the pace of exits continues to decelerate, we expect the downward trend in net cashflows to persist.
- PE as an asset class has delivered a strong one-year horizon IRR through 4Q 2016, fueled by robust distributions from 2006–2008 vintage funds.
- VC funds with \$250 million or more in commitments pulled down aggregate distributions for the asset class. In 2016, these large funds distributed the lowest amount of capital since 2012, as they have yet to exit many of the large portfolio companies that received massive financing rounds in recent years.
- Funds-of-funds often receive a high level of scrutiny because they add an extra layer of fees on top of the primary funds in which they invest. Despite this higher gross cost to limited partners, funds-of-funds delivered 9.37% net of fees over a 10-year horizon, outperforming all other private asset classes over the same period.

Longtime readers of our Benchmarking Report will likely notice that we've rebranded to the Fund Performance Report. While this may seem like a simple change in semantics, it represents the first step in our effort to enhance our offering of fund performance data to better serve industry professionals.

In the coming months, we will be introducing new PitchBook Benchmarks that will feature the full gamut of performance metrics—including IRRs, PME and cash multiples—with detailed breakouts by fund strategy, vintage, location and size. The PitchBook Benchmarks will include pooled performance data to assess aggregate industry performance, as well as vintage-specific decile and quartile benchmarks to gauge the performance of individual funds.

In addition to expanding our data offering, we are in the process of refining the methodology used for some of our performance metrics. The most notable change is that we are now using Morningstar indices in all PME calculations. For this report, the Morningstar Small Growth Total Return Index has been used in all PME calculations.

We hope this report is useful in your practice. As always, feel free to contact us at [reports@pitchbook.com](mailto:reports@pitchbook.com) with any questions or comments.



**JAMES GELFER**

Senior Analyst



# Methodology

PitchBook currently tracks more than 39,000 funds around the world and has returns data on more than 9,500 vehicles. In this edition of the quarterly Benchmarking Report, PitchBook examines data from over 6,900 funds. We are constantly adding historical performance data and may change the classification of certain funds as additional information becomes available; this explains any apparent discrepancies that may appear between reports.

All returns data in this report is net of fees through 4Q 2016, as reported by LPs.

## DEFINITIONS

### PE fund:

Unless otherwise noted, PE fund data includes buyout, co-investment, diversified PE, energy - alternative/renewables, energy - oil & gas, mezzanine, mezzanine captive, growth and restructuring/turnaround.

### Debt fund:

For this report, the debt fund classification includes general debt, direct lending, infrastructure debt, bridge financing, credit special situations, distressed debt, real estate debt and venture debt.

### Vintage year:

The vintage year is assigned by: 1) year of first investment; 2) if year of first investment is unknown, then year of final close; or 3) if firm publicly declares via press release or a notice on their website a fund to be of a particular vintage different than either of the first conditions, in which case the firm's classification takes precedence.

### Internal rate of return (IRR):

IRR represents the rate at which a series of positive and negative cashflows are discounted so that the net present value of cash flows equals zero. For fund-level IRRs, the cash flows are calculated using the entire value of a fund, with any remaining value in the fund treated as a distribution in the most recent reporting period. This explains why some vintages show high IRRs but low DPI values. All pooled IRR calculations are based solely on actual cashflows, with no changes made to account for remaining value.

### Horizon IRR:

Horizon IRR shows the IRR from a certain point in time. For example, the one-year horizon IRR figures in this report show the IRR performance for the one-year period from 4Q 2015 to 4Q 2016, while the three-year horizon IRR is for the period from 4Q 2013 to 4Q 2016.

### Pooled calculations:

All cashflows and NAVs for the sample are aggregated in the calculation. For calculation of IRRs, the ending NAV is treated as a cash outflow in the last reporting period.

### Distributions to paid-in (DPI):

A measurement of the capital that has been distributed back to LPs as a proportion of the total paid-in, or contributed, capital. DPI is also known as the cash-on-cash multiple or the realization multiple.

### Remaining value to paid-in (RVPI):

A measurement of the unrealized return of a fund as a proportion of the total paid-in, or contributed, capital.

### Total value to paid-in (TVPI):

A measurement of both the realized and unrealized value of a fund as a proportion of the total paid-in, or contributed, capital. Also known as the investment multiple, TVPI can be found by adding together the DPI and RVPI of a fund. In aggregated statistics, the median DPI and RVPI are summed to calculate the median TVPI.



**Donnelley**  
 Financial Solutions

Donnelley  
 Financial  
 Solutions  
 (NYSE: DFIN)

provides software and services that enable clients to communicate with confidence in a complex regulatory environment. With 3,500 employees in 61 locations across 18 countries, we provide thousands of clients globally with innovative tools for content creation, management and distribution, as well as data analytics and multi-lingual localization services. Leveraging advanced technology, deep-domain expertise and 24/7 support, we deliver cost-effective solutions to meet the evolving needs of our clients. For more information about Donnelley Financial Solutions, visit [dfsco.com](http://dfsco.com).

## VENUE

Our Venue® secure online workspace provides a powerful set of features and an intuitive design

that allows you to easily organize, manage, share and track all of your sensitive information. Venue® data rooms provide complete control, allowing you to manage who has access to your data room, which documents they see, and how they can interact with those documents.

Venue® gives you access to hands-on, start-to-finish service that's unique in the industry and that earns us a satisfaction rating of more than 97% from our demanding users. Get full Venue® room service or manage your room yourself, with our experienced in-house team ready 24/7/365. As part of Donnelley Financial Solutions, the global leader in managing time-sensitive, highly confidential documents, Venue provides the control you need with the security you demand.

# KS-PME Benchmarks

## An Introduction to PME Benchmarks

IRR and cash multiples have been the gold standard of benchmarking for decades, but one of their main drawbacks is that they cannot be directly compared to indices that are used in mainstream asset classes. Public-market equivalent benchmarks (PMEs) effectively address this problem, making it possible to directly compare alternative asset fund performance to the performance of indexed asset classes by using fund-level cash flows.

As there are multiple ways to calculate a PME, PitchBook has employed the Kaplan-Schoar PME method.

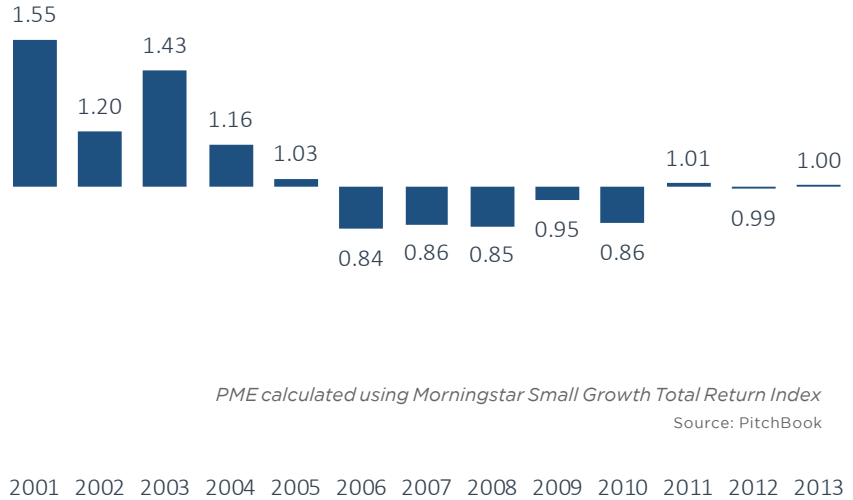
### Kaplan-Schoar (KS) Method:

$$PME_{KS-TVPI, T} = \frac{\frac{NAV_T}{I_T} + \sum_{t=0}^T \left( \frac{\text{distribution}_t}{I_t} \right)}{\sum_{t=0}^T \left( \frac{\text{contribution}_t}{I_t} \right)}$$

A white paper detailing the calculations and methodology behind the PME benchmarks can be found at [pitchbook.com](http://pitchbook.com). PitchBook News & Analysis also contains several articles with PME benchmarks and analysis. These can be read [here](#).

To find out how the PME benchmarks can be utilized to gauge performance of a specific fund or your fund portfolio, please contact us at [reports@pitchbook.com](mailto:reports@pitchbook.com).

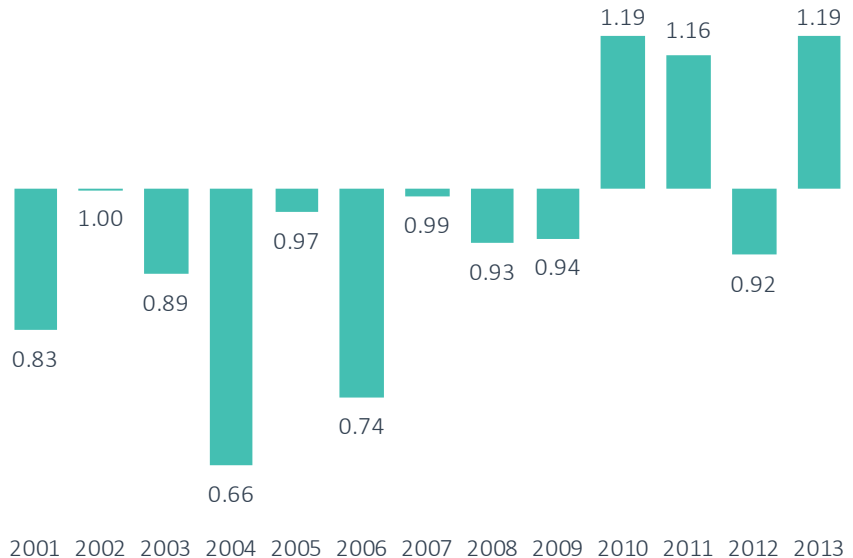
### PE KS-PME benchmark by vintage



PME calculated using Morningstar Small Growth Total Return Index  
 Source: PitchBook

When using a KS-PME, a value greater than 1.0 implies outperformance of the public index (net of all fees). For example, the current 1.03 value for 2005 vintage PE funds means investors in a typical vehicle from that year would be 3% better off having invested in PE than if they had invested in public equities over the same period.

### VC KS-PME benchmark by vintage

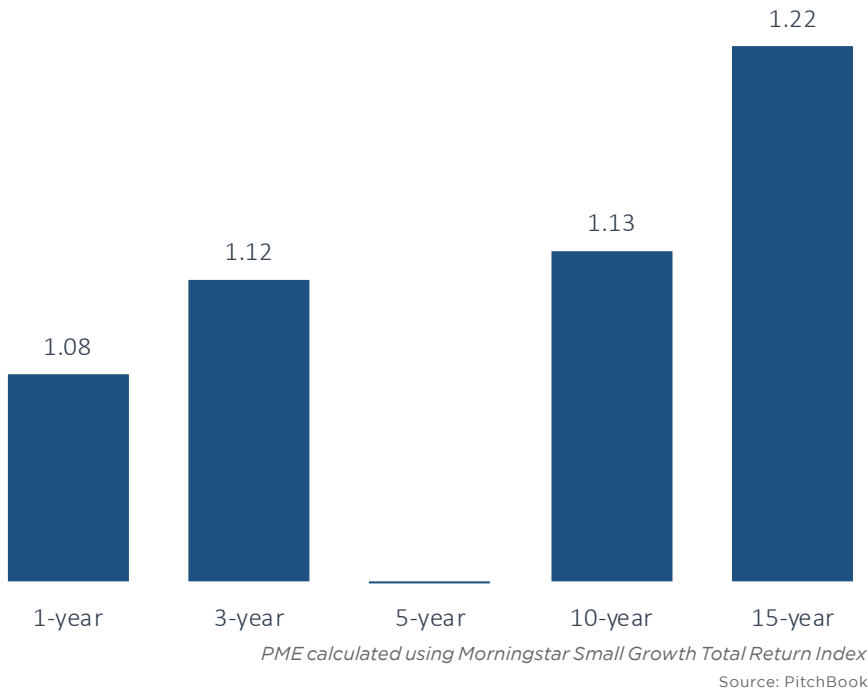


PME calculated using Morningstar Small Growth Total Return Index  
 Source: PitchBook

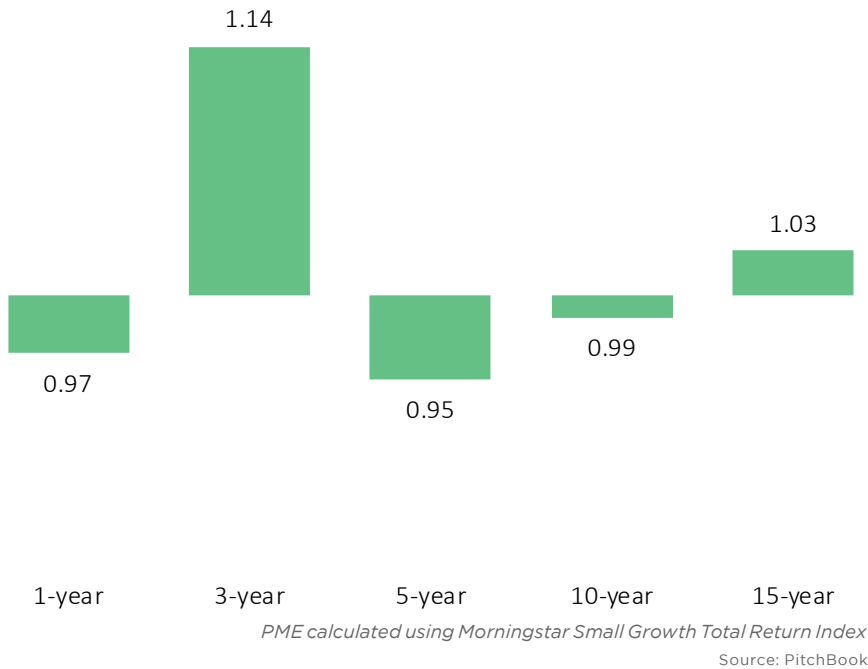
When using a KS-PME, a value less than 1.0 implies underperformance of the public index (net of all fees). For example, the 0.74 value for 2006 vintage VC funds means investors in a typical vehicle from that year would see only 74% of the value comparably achieved in the public markets.



Horizon PE KS-PME versus Morningstar Small Growth Total Return Index




Horizon VC KS-PME versus Morningstar Small Growth Total Return Index



This report  
 sums up the  
 big trends.

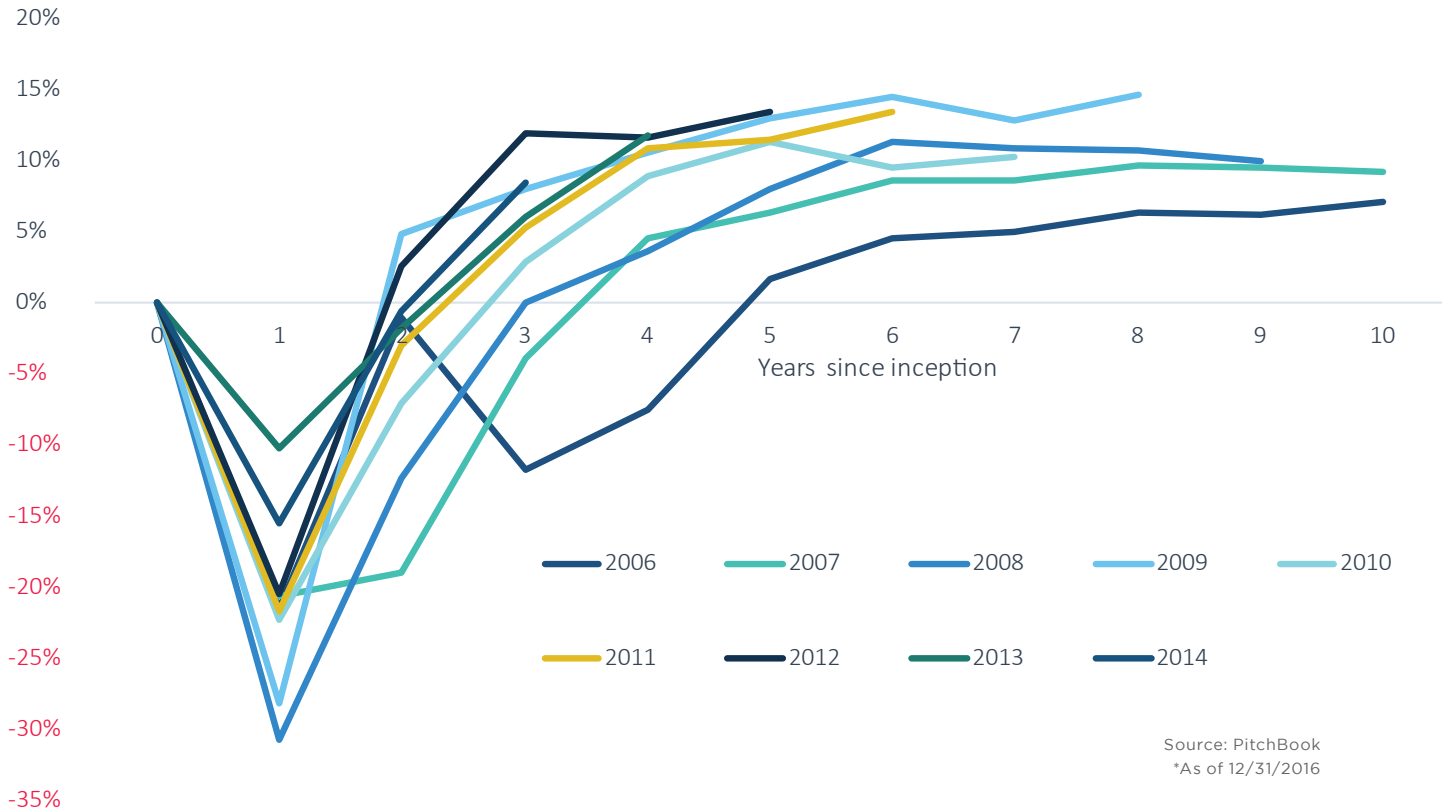
Dig into the  
 details on the  
 PitchBook  
 Platform.

Find out more  
 at [pitchbook.com](http://pitchbook.com)



# Case Study: PE J-curve

PE J-curve: IRRs over time by vintage



Source: PitchBook  
 \*As of 12/31/2016

In this case study, we examine PE fund J-curves by vintage over time. Although they are well known, it is still useful to detail the concept of J-curves in brief. Owing to the tendency of alternative investment funds to draw down capital early in their life to make investments before subsequently delivering positive cash flows later in their lifecycles, the IRR of these vehicles typically traces a curve somewhat reminiscent of the letter J. While the pace of early investments and the ability to realize quick exits are the key determinants of the shape of the J-curve, it can be impacted by other factors including the funds' fees as well as managerial tolerance of risk.

When looking at J-curves across different vintages, an evolution in the cashflow profile is evident in more recent vintages. Examining the

disparity at year one, massive initial drawdowns as funds commence their investment phases is to be expected. The fact that PE funds of the 2008 and 2009 vintages observed the most severe drawdowns makes intuitive sense given the more prolific buying of troubled or discounted businesses in the wake of the financial crisis, when these funds were in the midst of their investment period. Most other vintages see their IRRs fall to roughly -20% to -25% in that first year, including both even elder vintages—2006 and 2007—as well as those more recent.

Curiously, 2013 and 2014 vintages stand out for the relative mildness of their drawdowns in that first year, particularly as the pace of PE investment continued to accelerate as these funds were raised and began deploying capital. While it is possible

that these funds are simply taking longer to deploy capital, another explanation is that PE managers are becoming more strategic in how they call capital down and deliver it back to LPs.

One such tactic is the usage of subscription line loans, which general partners can use to initially fund deals and avoid making capital calls until later. Delaying the timing of capital calls from LPs improves the cashflow profile of the fund, effectively boosting the IRR. Dividend recaps and other strategies to quickly return capital to LPs without fully exiting a company have also become more prevalent in recent years, with easy access to affordable debt making these transactions more viable than they had been in the wake of the financial crisis.



# IRR by Fund Type

In our recent reports, IRRs over a 10-year horizon have been relatively consistent across private assets; however, in more recent reporting periods, VC and debt funds have dropped below other strategies as their 10-year horizon IRRs decreased to 7.56% and 7.79%, respectively. The latest 10-year horizon calculation dropped the 4Q reporting period, which was a strong quarter for VC returns and contributed significantly to a higher overall horizon. Now that the calculation has rolled forward, we have seen horizon IRRs drop accordingly.

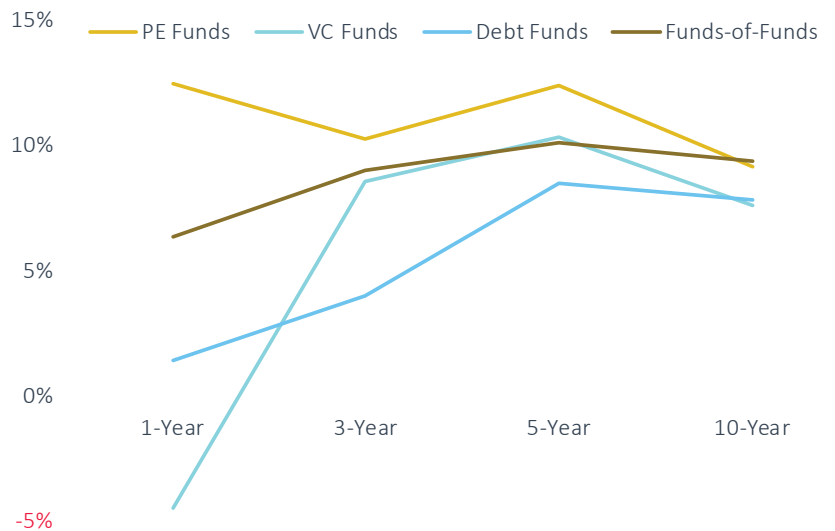
Despite record-level distributions from sub-\$250 million VC funds, larger VC funds have pulled down overall horizon IRRs. In 2016, these large funds distributed their lowest amount of capital since 2012, as there has been a recent dearth of exits for large portfolio companies. Another contributing factor is that over the last year some VCs have marked down some of their current holdings,

perhaps recalibrating from the high valuations that have been associated with recent financing rounds. Conversely, analyzing median IRRs by vintage, as opposed to horizon IRRs, we see that more recent VC funds are outperforming the rest. It is worth noting that even though the median IRRs on more recent vintages look attractive, most of these funds are still in their early stages and DPI values remain low. To achieve such returns VC funds must turn those paper gains into realized returns.

## Skilled manager selection exists

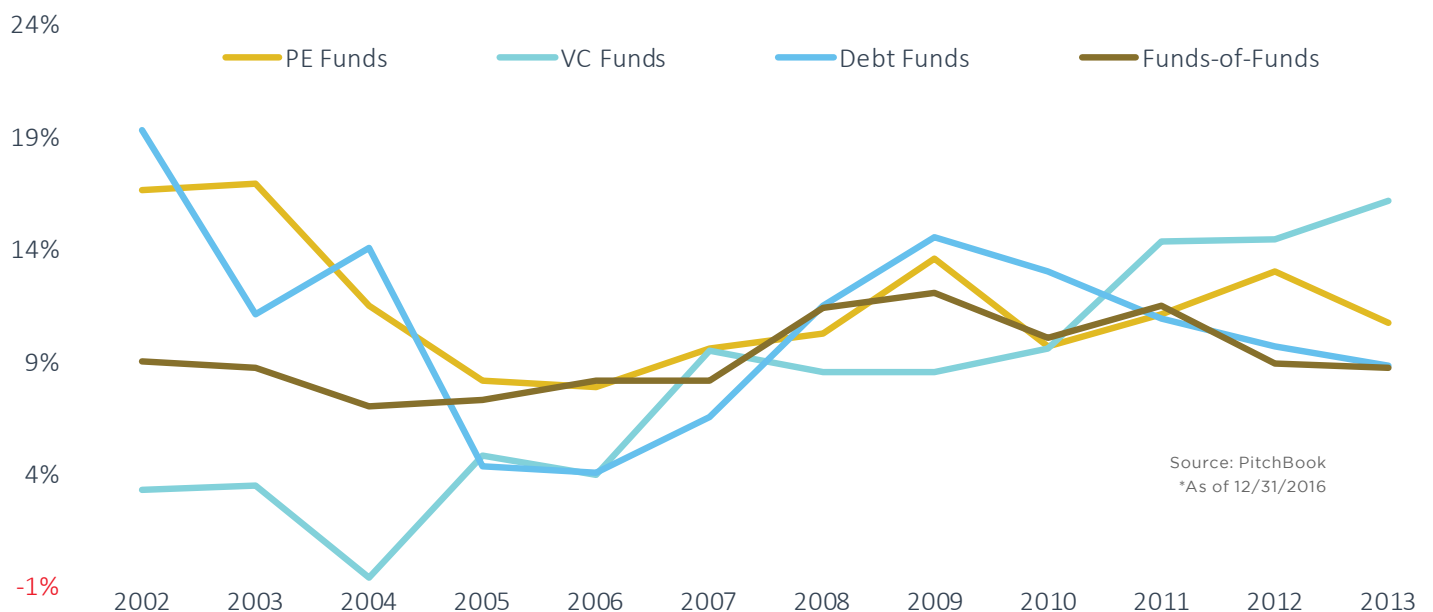
Funds-of-funds often receive a high level of scrutiny because they add an extra layer of fees on top of the primary funds in which they invest. Despite this higher gross cost to LPs, funds-of-funds have delivered 9.37% net of fees over a 10-year horizon, outperforming all other private asset classes over the same period. This provides credence that these fund selectors have some degree of expertise in manager selection.

Global horizon IRR by fund type



Source: PitchBook  
\*As of 12/31/2016

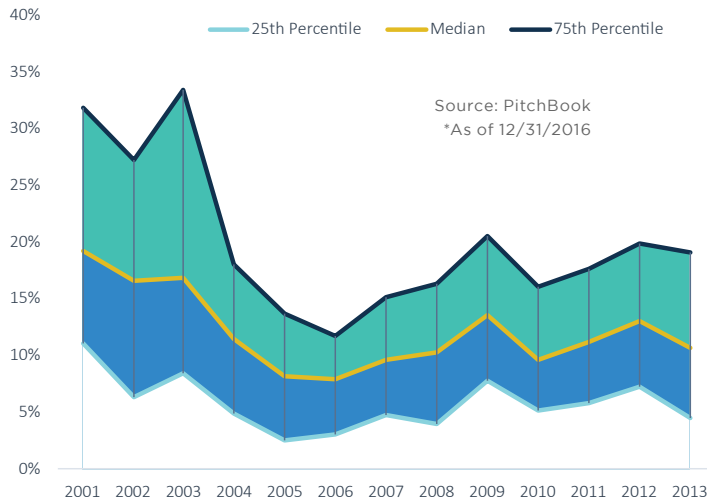
Global median IRR by fund type and vintage year



Source: PitchBook  
\*As of 12/31/2016

# Quartiles & Benchmarks

## Global PE IRR quartiles by vintage year



Vintage Year	2006	2007	2008	2009	2010	2011	2012	2013
Bottom	3.0%	4.7%	4.0%	7.8%	5.1%	5.9%	7.2%	4.4%
Median	7.9%	9.6%	10.3%	13.5%	9.7%	11.2%	13.0%	10.7%
Top	11.8%	15.1%	16.3%	20.5%	16.1%	17.6%	19.9%	19.1%

Source: PitchBook  
 \*As of 12/31/2016

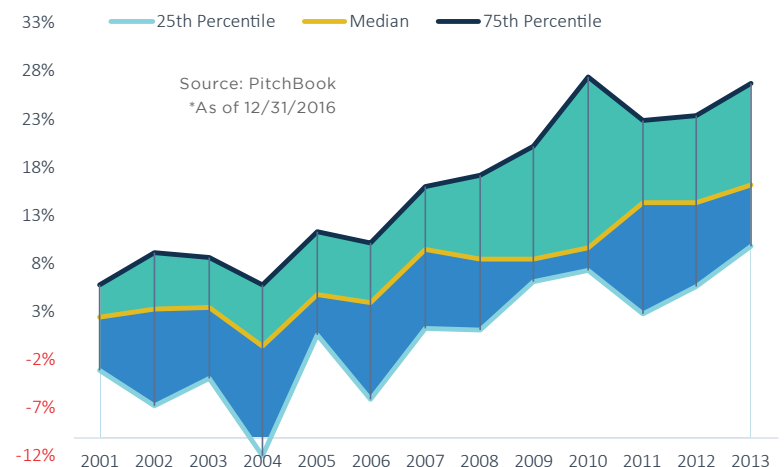
Similar to PE, median IRRs for VC funds with vintages 2004 and later have been trending up. It is important to note, however, that most of the reported returns in more recent vintages can be attributed to paper gains, as TVPI values are high but the DPI values are negligible. As such, IRRs for more recent vintages will depend heavily on future exit activity.

On a related note, the spread between the 75th and 25th percentiles has expanded significantly in recent vintages, starting with 2010. One clear long-term trend is an increase in both the top- and bottom-quartile hurdle rates. This development has been many years in the making, as the VC industry becomes more established and investment processes refined, manifested by fewer funds that are failing to make investors whole. The bottom-quartile hurdle rate for 2013 vintage funds now sits at 9.9%—the highest since at least 2001. However, the bottom-quartile hurdle rate for recent vintages should be viewed with skepticism given fluctuation as exits and write-downs are finalized as they move through their respective fund lifecycles.

Compared to our previous reports, IRRs for PE funds raised in more recent vintages continue to inch higher as more funds reach the capital distribution phase and valuations continue to rise. The gap between top and bottom performers, however, has widened substantially for funds raised in the wake of the financial crisis. 2006 vintage funds, for example, saw just an 8.8% spread between the cutoff for top- and bottom-quartile funds, while 2013 vintage funds exhibited a spread of 14.7% through 4Q 2016. We saw an even larger gap in the early 2000s, suggesting that certain market environments may be more conducive for the strongest managers to achieve significant alpha generation relative to peers.

Bottom-quartile IRRs for 2013 vintages rose substantially, from 1.7% in 3Q 2016 to 4.4% in 4Q 2016. Just a quarter prior to that (with data through 2Q 2016), bottom-quartile funds for 2013 vintages were still in negative IRR territory, demonstrating the rapidity with which firms can move along the J-curve once they begin to exit their initial investments.

## Global VC IRR quartiles by vintage year



Vintage Year	2006	2007	2008	2009	2010	2011	2012	2013
Bottom	-6.1%	1.3%	1.2%	6.2%	7.4%	2.8%	5.7%	9.9%
Median	4.0%	9.5%	8.6%	8.5%	9.6%	14.4%	14.4%	16.2%
Top	10.2%	16.0%	17.3%	20.2%	27.4%	22.9%	23.5%	26.8%

Source: PitchBook  
 \*As of 12/31/2016



# Private Equity IRRs

Following a slump in 2014 and 2015, one-year horizon IRRs have bounced back to 12.4% but remain low on a historical basis. This rebound in the 4Q 2016 reporting period was primarily driven by large distributions from 2006-2008 vintage mega-funds, including a \$6 billion distribution from CVC Capital Partner's European Equity V fund and a \$4.1 billion distribution from the Carlyle Group's Carlyle Partners V fund. While exits have been trending downward, it is likely that many of the portfolio companies exited last year were acquired between 2009 and 2011, when acquisition multiples were relatively low. Performance from funds in these vintages has been steadily improving, as their portfolio companies have benefited not only from operational improvements and growth strategies but also from being sold into a market with elevated purchase prices.

Despite stronger short-term IRRs, the 10-year rolling horizon IRR continued to trend downward, falling to 9.15% through the end of 2016. It is unlikely we'll see a reversal in this trend for several reasons, including the rapid evolution of the PE industry following the last financial crisis. PE firms are now subject to highly competitive bidding processes that have driven acquisition multiples to record highs, eroding the portion of IRR directly contributing to multiple expansion as we have discussed in previous [notes](#).

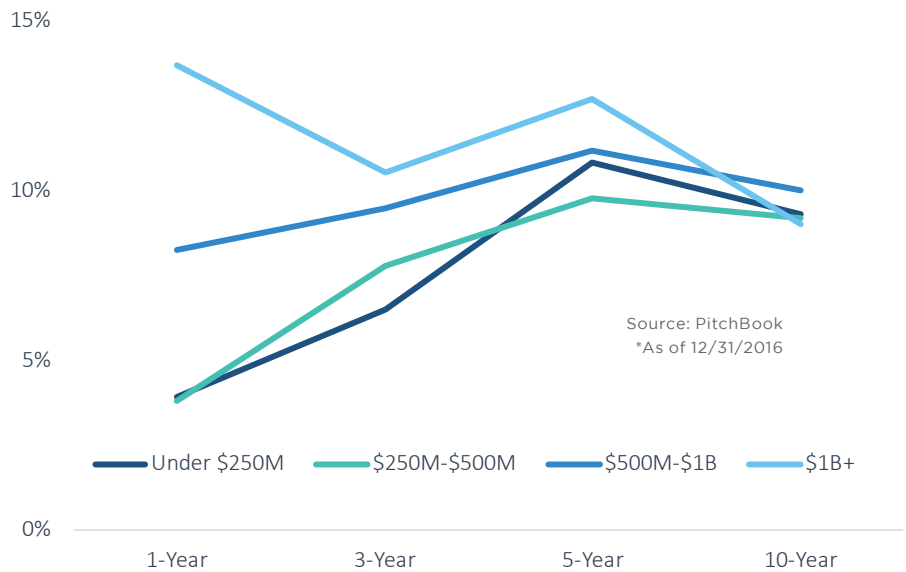
### Does fund size matter?

Over a 10-year horizon, we find that fund size does not play a significant role in determining IRRs, with the largest spread between fund sizes coming in at only 1%. Interestingly, distributions from funds with \$500 million or more in commitments have been on a downward trend since 2015, while smaller funds continue an

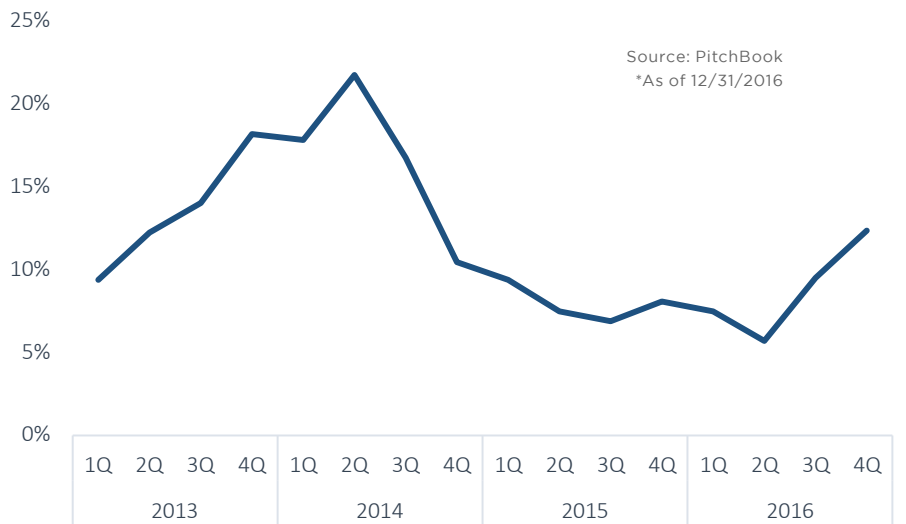
upward trajectory for distributions following the financial crisis. If both

these trends continue, we may see smaller fund IRRs pull away from their larger peers.

Global PE horizon IRR by size bucket



Rolling PE 1-year horizon IRR



Global PE horizon IRR by size bucket

Fund size	1-Year	3-Year	5-Year	10-Year
Under \$250M	3.9%	6.5%	10.9%	9.3%
\$250M-\$500M	3.8%	7.8%	9.8%	9.2%
\$500M-\$1B	8.2%	9.5%	11.2%	10.0%
\$1B+	13.7%	10.6%	12.7%	9.0%

Source: PitchBook. \*As of 12/31/2016

# PE Fund Return Multiples

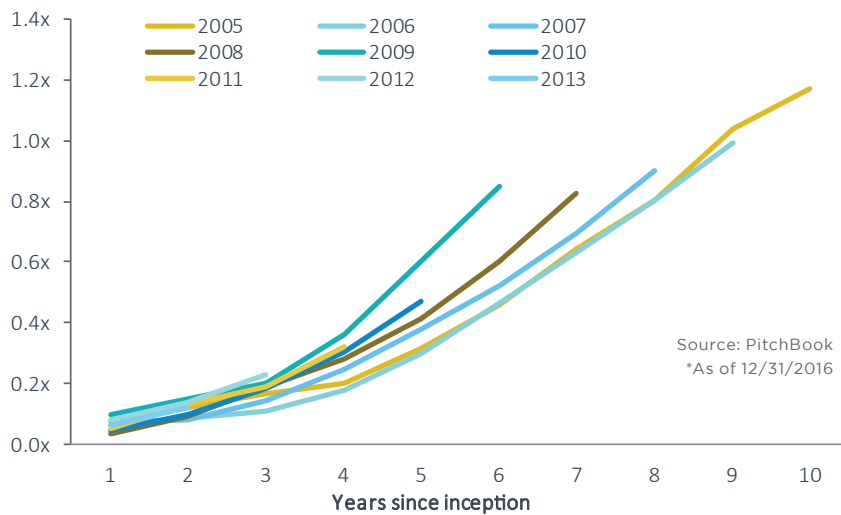
Having debuted immediately after the financial crisis, 2009 vintages had the luxury of investing into a depressed market and subsequently have been able to ride eight years (and counting) of economic expansion. Portfolio companies in these funds have benefited from a prolonged increase in valuations, as well as continually

affordable refinancing and moderate growth across most economies during that time. Thanks in part to strong fundamentals at the company level, the pace of capital being returned to investors has been accelerating in more recent vintages, with 2009 funds boasting a median DPI of 0.85x at their six-year mark—greater than any other vintage since 2002.

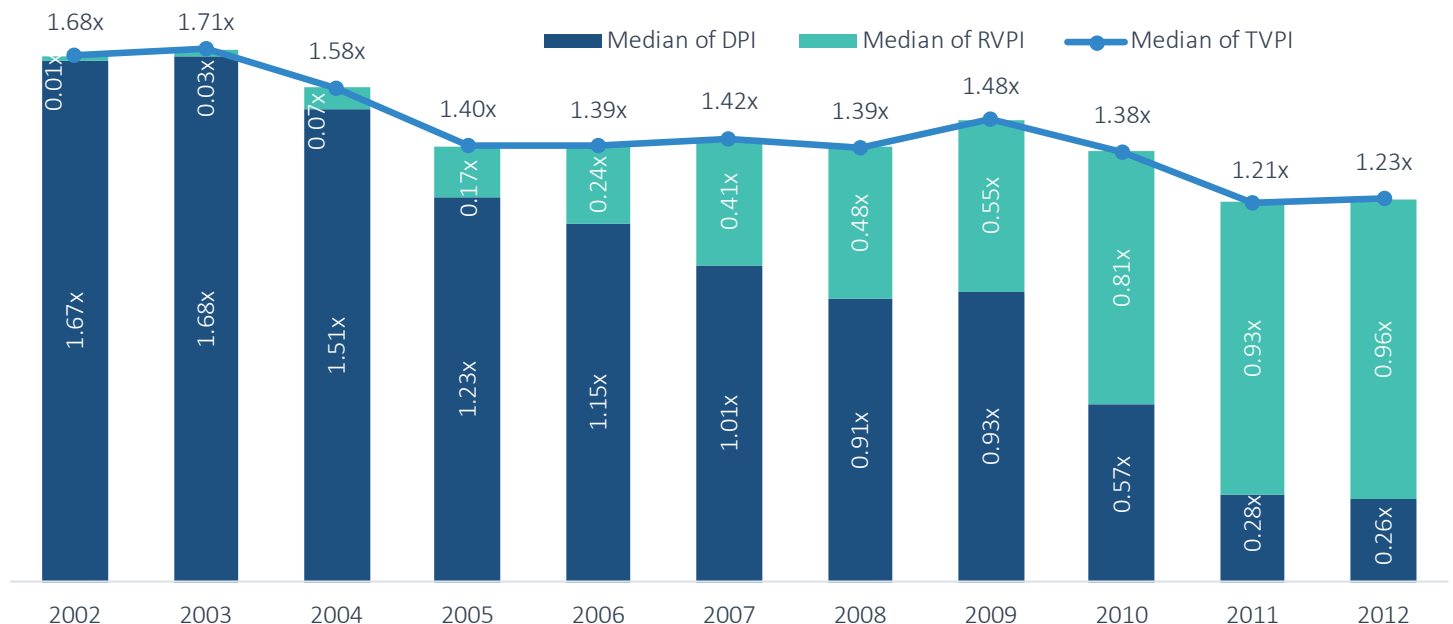
Median TVPI values remain highest for the 2001–2003 period, as those funds were largely able to liquidate holdings into the elevated pricing environment observed prior to the financial crisis. Many of these funds are also fully liquidated, whereas more recent funds still have the opportunity to create additional value. Despite this caveat, we do not expect cash-on-cash returns to reach the same levels for mid-2000 vintages, which were generally investing at higher valuations (from 2005 to 2008) and divesting at lower ones (from 2009 to 2012).

Each vintage from 2010 to 2013 still has a median RVPI of at least 0.8x, which is to be expected given the slowdown in PE-backed exits over the last year. Remaining NAV is heavily influenced by mark-to-market policies and actual liquidation values will depend heavily on the pricing and economic environment moving forward. Negative movements in either could spell trouble for GPs still holding on to assets late in the cycle.

Global average PE DPI multiples over time by vintage



Global median PE fund return multiples by vintage



Source: PitchBook  
 \*As of 12/31/2016



# PE Fund Cashflows

Globally, LPs have seen positive net cash flows (distributions minus contributions) from their PE investments every year since 2012. The spread between the two peaked in 2014, which saw \$360.4 billion in capital distributed back to LPs. Positive net cashflows have aided PE fundraising in the years since, as LPs have needed to increase their PE commitments to maintain target allocations. At the same time, many LPs have upped their target allocations to PE in a search for yield in this low-growth environment.

Though they did not turn negative in 2016, net cash flows to LPs decreased by 45% year-over-year, a symptom of the heightened investment activity observed in recent years, as well as waning exit activity. We expect the trend of decreasing net cash flows to continue into 2017 as investment activity has continued apace and fundraising through the first half of the year reached the highest level since 2007 while PE-backed exits have continued to slow despite

higher market prices and a mounting company inventory. It is worth noting, however, that cashflows are somewhat

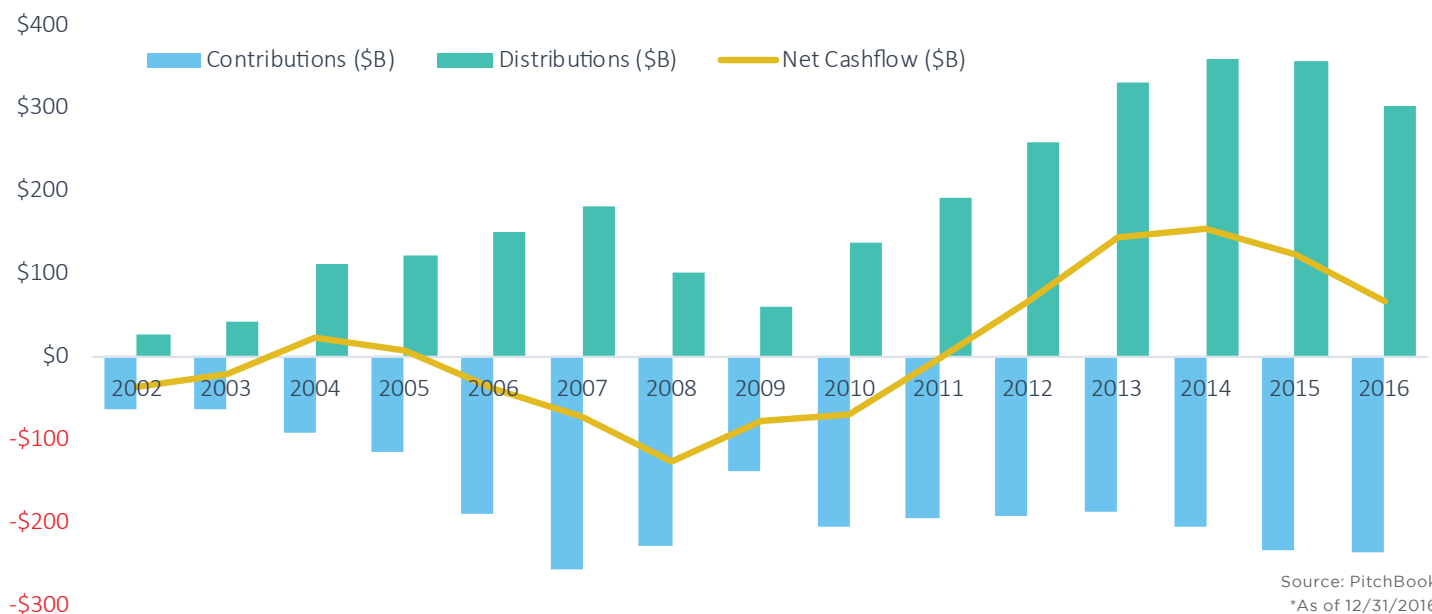
cyclical in nature, so the potential for negative net cashflows should not be viewed as a negative in and of itself.

## Global PE funds' net cashflows

YEAR	TOTAL CONTRIBUTIONS (\$B)	TOTAL DISTRIBUTIONS (\$B)	NET CASHFLOW (\$B)
2002	(64.13)	27.71	(36.42)
2003	(64.46)	42.40	(22.06)
2004	(90.51)	112.38	21.87
2005	(114.92)	122.14	7.23
2006	(189.34)	150.59	(38.75)
2007	(255.87)	182.27	(73.60)
2008	(228.09)	100.48	(127.60)
2009	(137.29)	60.58	(76.71)
2010	(204.96)	136.35	(68.61)
2011	(195.71)	191.84	(3.87)
2012	(193.09)	259.42	66.32
2013	(187.57)	330.71	143.14
2014	(204.91)	360.36	155.45
2015	(233.78)	356.19	122.41
2016	(236.47)	303.42	66.96

Source: PitchBook. \*As of 12/31/2016

## Global PE funds' annualized cashflow by year



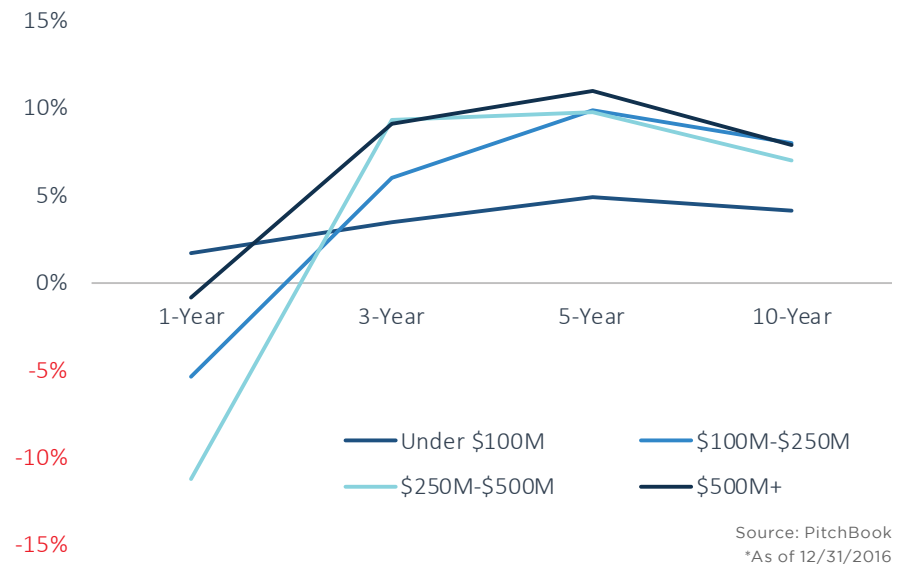
Source: PitchBook  
 \*As of 12/31/2016

# Venture Capital IRRs

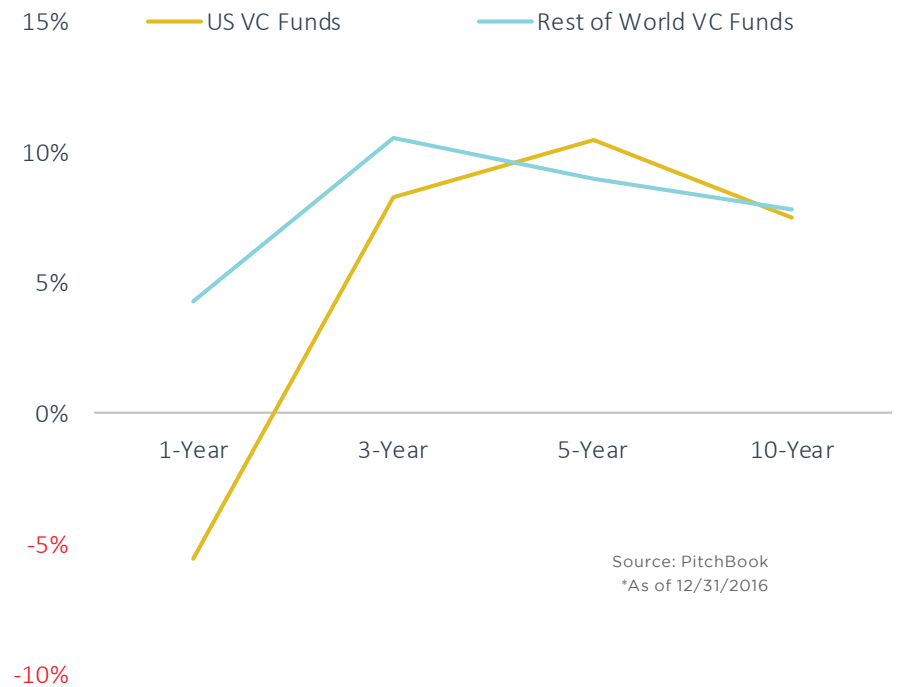
VC valuations have climbed to new heights in recent years, driven by larger late-stage rounds, which has prompted GPs to aim for even higher fundraising targets. Larger funds tend to invest at later stages, when VC-backed companies will have already seen significant growth and valuation increases, reducing some potential upside. The benefit, however, is that late-stage deals also have a lower risk profile. Additionally, according to PitchBook data, late-stage valuations have experienced a higher rate of growth relative to other stages, which can help to explain the trend we see in the chart. We also find that almost all the funds in the \$500+ million bucket are at least the third fund the respective GP has raised. While this seems intuitive, it is important to point out that funds raised by more experienced managers are reporting higher returns.

The standard truism about VC-backed companies—that extreme outperformance by a few outliers drives a majority of returns—seems to also apply to VC fund performance. Starting with 2007 vintages, the top decile has outpaced the top quartile by at least 8.5%, with 2013 vintages currently showing a 30% gap. This is a perfect representation of how the “home runs,” which are a key component of VC returns, drive outperformance of the top managers. Therefore, the large spike we’re showing in 2012 and 2013 vintages can largely be explained by the increased valuations from 2014 to 2016.

Global VC horizon IRR by size bucket



VC horizon IRR by region





# VC Fund Return Multiples

While the VC industry in aggregate continues to experience a slow exit environment, funds in more recent vintages (namely 2011 and 2012) have begun distributing capital at a faster rate than older vintages. This is driven

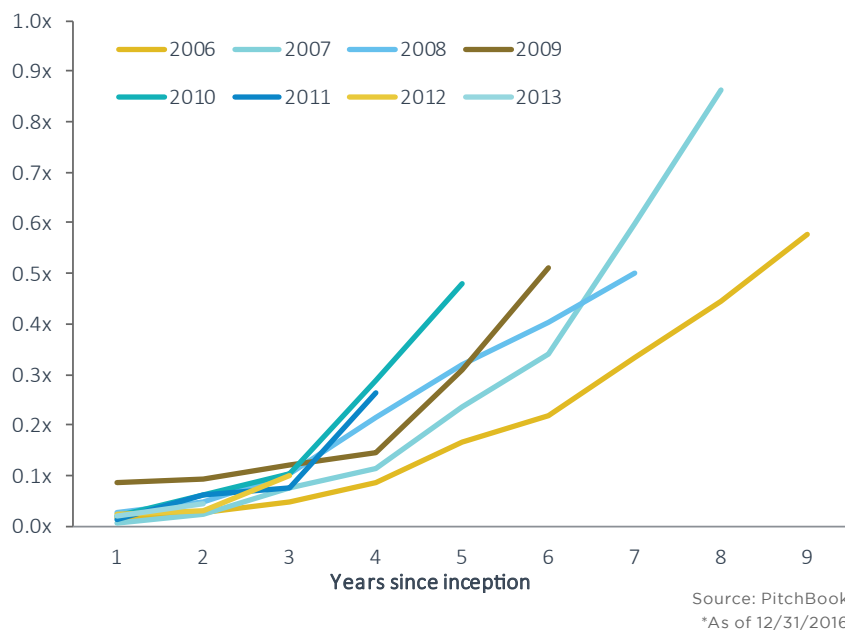
by a few outsized distributions from a select number of funds, including Orbimed's Private Investment V fund and Sofinnova's Ventures VIII fund, both of which now have DPIs in excess of 0.7x. This is also why we see a big

divergence between medians and averages, with the difference being as much as 0.3x for some of the newer vintages.

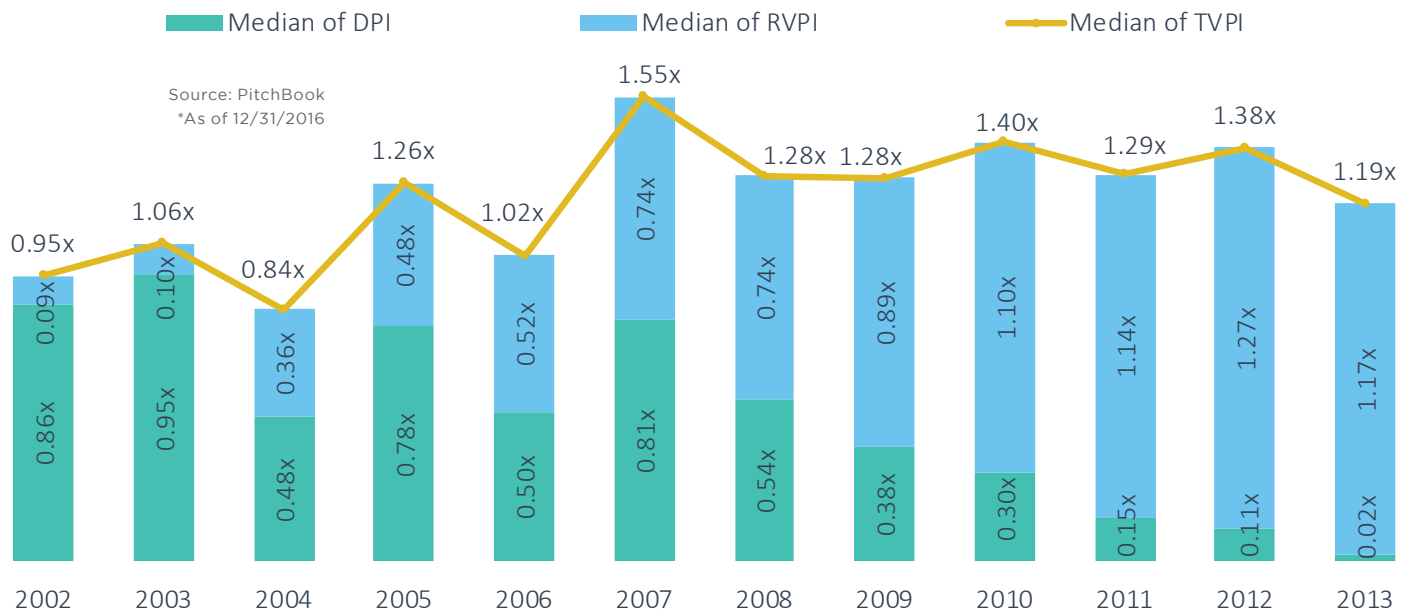
### Are they real?

TVPI values for vintages 2007 and beyond remain high compared to previous years, with particularly high TVPI values of 1.55x and 1.28x for 2007 and 2008 vintages, respectively. As we approach the 10-year mark for those vintages, we find that a large portion remains in RVPI, with 2008 vintage funds, for example, delivering a DPI of just 0.54x. Given ongoing discussion about overly optimistic paper valuations, VCs' ability to fully realize all of the remaining value in older funds is, at a minimum, a little uncertain. Therefore, the real test will be how these investments are valued when they finally achieve liquidity. The median fund from every vintage since 2002 has failed as of yet to distribute the amount of capital it has taken in from LPs, underscoring the wide variance in returns between different fund managers.

### Global average VC DPI multiples over time by vintage



### Global median VC fund return multiples by vintage



# VC Fund Cashflows

Global net cashflows remained positive for VC funds through the end of 2016 but distributions dropped by 39%, with only \$8.1 billion in net cash flows compared to \$26.3 billion in 2015. We have continued to see a much slower exit market through the first nine months of 2017, while capital invested has remained robust. Accordingly, we expect that net cash flows are likely to turn negative in 2017 for the first time since 2011. The question remains whether this is some mean reversion following several years of increasing net cash flows, or if this is indicative of a cyclical change in the VC landscape.

Interestingly, this period of positive net cashflows has largely coincided with healthy investment activity. GPs called down \$101 billion between 2011 and 2013, the greatest amount of any three-year period going back to 2003. At the same time, valuations have been rising across many stages of VC financing, which could make it difficult for VCs to achieve the same level of returns they have historically.

Despite very strong fundraising figures,

GPs called down only \$30.2 billion globally during 2016, a 17% decrease YoY and the second lowest in any year since the financial crisis. As LPs continue to increase asset allocations

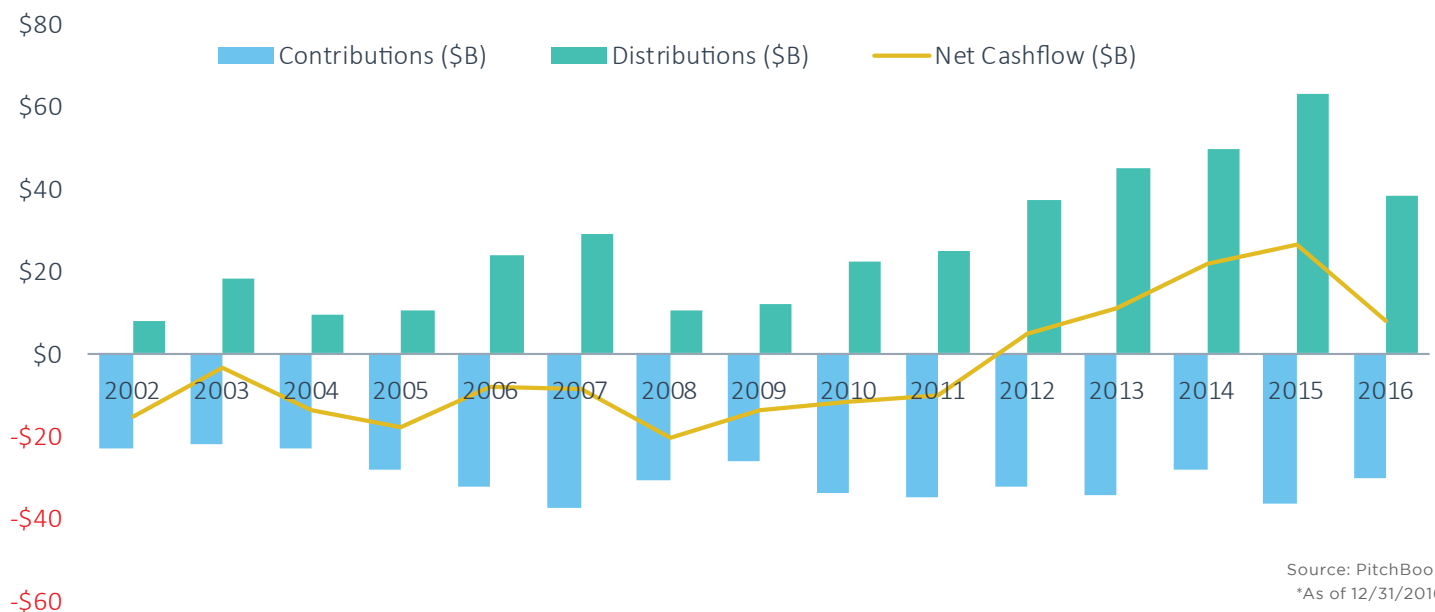
to private assets, including VC, pressure will build on GPs to put that money to use.

Global VC funds' net cashflows

YEAR	TOTAL CONTRIBUTIONS (\$B)	TOTAL DISTRIBUTIONS (\$B)	NET CASHFLOW (\$B)
2003	(21.69)	18.35	(3.34)
2004	(23.08)	9.25	(13.83)
2005	(27.97)	10.41	(17.57)
2006	(32.09)	23.88	(8.21)
2007	(37.35)	28.94	(8.41)
2008	(30.90)	10.57	(20.33)
2009	(25.82)	12.11	(13.70)
2010	(33.88)	22.24	(11.64)
2011	(34.85)	24.98	(9.87)
2012	(32.03)	37.08	5.05
2013	(34.25)	45.26	11.01
2014	(27.89)	49.60	21.71
2015	(36.57)	62.84	26.26
2016	(30.24)	38.29	8.06

Source: PitchBook. \*As of 12/31/2016

Global VC funds' annualized cash flow by year



Source: PitchBook  
 \*As of 12/31/2016

We do  
contact information,  
LP investment preferences,  
custom benchmarking,  
mandates,  
fund performance data.

You focus on  
building relationships.

See how the PitchBook Platform can help your private equity firm close your next deal.

[demo@pitchbook.com](mailto:demo@pitchbook.com)

 PitchBook

