

# An analysis of UK private equity fund performance against the public markets



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Being able to compare private equity and venture capital performance with other asset classes is of the utmost importance for institutional investors, as it enables them to make an informed decision about how best to utilise their capital. The irregular and discretionary nature of the timing of the cash flows of PE and VC mean that their performance is not directly comparable with, for instance, the buy and hold returns from publicly quoted equities. There have been a number of solutions developed to this problem, including the Public Market Equivalent (PME) approach, which effectively replicates private equity's irregular cash flows in the public market.

Building on a similar analysis produced by the BVCA last year, the PME approach is used to examine the performance of UK private equity funds relative to the FTSE All-share Total Return Index.

The underlying PE and VC fund data<sup>1</sup> is taken from the BVCA's 2013 Performance Measurement Survey (PMS)<sup>2</sup>. The PMS dataset contains PE funds invested in by UK General Partners (GPs), covering the period 1986 to 2013, and includes the daily cash flows and year-end valuations of funds. Data is directly provided to the BVCA by GP member firms on an annual basis.

## Key points

### All funds sample

- The industry has continued to generate strong returns for investors and has consistently outperformed the public market by a significant margin. The since-inception pooled IRR covering all of the 448 PE/VC funds in this analysis was 14.2% p.a. as of December 2013. This compares strongly with the Public Market Equivalent (PME) generated return which was 8.3%. The industry performance is a marginal improvement on results from a year before, when the grand total stood at 14.0%.

### 1996 vintage funds onwards

- Looking more closely at 1996 vintage funds onwards – where the majority are still active today – reveals several interesting insights. Collectively, this group has outperformed public indices nearly two times over, with returns of 13.4% over the period compared to 6.8% for the PME. There are, however, noteworthy differences in the underlying fund stages. Venture funds, taken in aggregate, have not performed as well as the public market. However, when compared to last year, venture capital has seen returns increase by 2% points and the gap narrow on public indices. Encouragingly, those funds which drew down capital after 2002 have performed relatively well, returning a since-inception IRR of 5.9%, and appear to be quickly catching up to the public market.
- Small MBO-focused funds – which typically invest up to £10 million in investee companies – are the dominant outperformers, with a PE-public market performance gap of the order of 8.5 percentage points in favour of PE. Buyout funds, investing in the mid-market and larger transactions, have also performed well, although their outperformance gap is relatively smaller.

### Pre-1996 vintage funds and stages

- As the majority of these funds have been fully liquidated and/or retain only minimal, immaterial residual value within the portfolio,

their since-inception returns quoted are in the main based upon realised cash flows and value. Returns, as of the year-end 2013, were healthy, with Generalist, Mid and especially Large MBO-orientated funds delivering superior performances. On the whole, while there was outperformance in favour of PE, the gap was relatively small. It is worth remembering, though, that the PE returns quoted are net of fees and charges.

### Multiples

- For this year's report, we have experimented with providing a public market comparison of private equity and venture capital based on fund multiples.
- The multiples give very similar findings to the PME and IRR. For the 1996 vintage funds onwards, the Total Value to Paid In (TVPI) capital finds that Small and Large MBOs give the joint greatest returns. However, when looking at Distributions to Paid In (DPI) capital, it is Mid MBOs that produce the greatest returns, followed by Large and then Small MBOs. When looking at vintage year, it is again 1994 which had the best returns.
- The grand total from the TVPI multiple shows a substantial outperformance of the public market, with a multiple of 153 compared to 118.
- The 1994 vintage was the greatest with a multiple that is 114 percentage points higher than the public markets.

### Subcategories

- The returns for most of the subcategories were relatively similar to last year's results, with none changing by more than 0.3 percentage points. All categories outperformed the public market apart from Technology. It is worth noting however, that Technology saw the largest increase of returns, with a gain of 2.5 percentage points.

## By investment stage and subcategory

		IRR (% p.a.)	PME (% p.a.)
Pre-1996 vintage funds	Number of funds	to Dec '13	to Dec '13
Early	17	9.5	11.6
Development	32	10.3	11.9
Mid MBO	30	13.9	13.7*
Large MBO	26	18.2	12.9*
Generalist	22	18.0	13.9*
<b>Subtotal</b>	<b>127</b>	<b>16.2</b>	<b>13.4*</b>
1996 vintage funds onwards			
Venture	106	2.4	7.5
Pre 2002 Venture	43	-1.3	6.7
2002 onwards venture	63	5.9	8.6
Small MBO	37	16.2	7.7
Mid MBO	132	12.6	6.0
Large MBO	46	14.9	7.0
<b>Subtotal</b>	<b>321</b>	<b>13.4</b>	<b>6.8</b>
<b>Grand Total</b>	<b>448</b>	<b>14.2</b>	<b>8.3</b>
Subcategories (all vintages)			
UK	306	13.6	8.9*
Non UK	142	14.5	7.6
Pan-European	134	15.9	7.9
Technology	105	3.1	8.3
Non-Technology	343	14.9	8.3

\* Denotes that the Public Market Equivalent went short, so the PME+ method was used

## By vintage year<sup>5</sup>

		IRR (% p.a.)	PME (% p.a.)
Vintage year	Number of funds	to Dec '13	to Dec '13
1986	7	10.5	11.7
1987	13	8.3	10.8
1988	19	13.4	13.8
1989	16	18.1	14.2*
1990	13	11.3	12.9
1991	14	23.4	15.9*
1992	7	20.3	14.4*
1993	10	15.1	12.0*
1994	19	34.3	11.5*
1995	9	23.1	9.3*
1996	13	17.6	5.2*
1997	24	15.0	3.3*
1998	16	12.9	0.9*
1999	24	9.5	3.6*
2000	26	16.6	6.3*
2001	30	25.1	11.1*
2002	19	24.7	11.4*
2003	18	20.4	8.1*
2004	10	24.2	7.2*
2005	26	11.1	5.3
2006	36	6.2	7.3
2007	37	9.7	8.4
2008	22	8.1	11.4
2009	20	9.2	12.7
<b>Total</b>	<b>448</b>	<b>14.2</b>	<b>8.3</b>
2010	13	23.3	12.3
2011	14	44.4	17.2
2012	10	-9.7	17.3
2013	4	-100.0	117.8
<b>Subtotal 2010-2013</b>	<b>41</b>	<b>29.2</b>	<b>15.1</b>

\* Denotes that the Public Market Equivalent went short, so the PME+ method was used

## By investment stage and subcategory

	Number of funds	TVPI	TVPI (PME)	DPI
<b>Pre-1996 vintage funds</b>				
Early	17	168	269	161
Development	32	166	259	165
Mid MBO	30	171	169*	171
Large MBO	26	191	161*	191
Generalist	22	268	217*	266
<b>Subtotal</b>	<b>127</b>	<b>197</b>	<b>176*</b>	<b>197</b>
<b>1996 vintage funds onwards</b>				
Venture	106	112	148	58
Pre 2002 Venture	43	94	155	74
2002 onwards venture	63	127	142	46
Small MBO	37	154	112	90
Mid MBO	132	151	113	109
Large MBO	46	154	116	93
<b>Subtotal</b>	<b>321</b>	<b>151</b>	<b>117</b>	<b>95</b>
<b>Grand Total</b>	<b>448</b>	<b>153</b>	<b>118</b>	<b>99</b>
<b>Subcategories (all vintages)</b>				
UK	306	152	135*	119
Non UK	142	153	118	95
Pan-European	134	154	115	99
Technology	105	116	160	62
Non-Technology	343	154	116	101

\* Denotes that the Public Market Equivalent went short, so the PME+ method was used

## By vintage year<sup>3</sup>

Vintage year	Number of funds	TVPI	TVPI (PME)	DPI
1986	7	177	281	177
1987	13	156	296	156
1988	19	188	222	185
1989	16	203	177*	201
1990	13	156	230	156
1991	14	186	156*	186
1992	7	193	163*	193
1993	10	195	173*	194
1994	19	262	148*	261
1995	9	191	135*	191
1996	13	177	121*	176
1997	24	164	113*	164
1998	16	168	104*	164
1999	24	153	119*	144
2000	26	190	131*	183
2001	30	191	140*	179
2002	19	174	136*	157
2003	18	175	132*	141
2004	10	200	132*	155
2005	26	157	122	101
2006	36	130	136	47
2007	37	137	131	48
2008	22	121	130	33
2009	20	121	130	27
<b>Total</b>	<b>448</b>	<b>153</b>	<b>118</b>	<b>99</b>
2010	13	153	125	47
2011	14	158	121	34
2012	10	93	112	3
2013	4	95	101	0
<b>Subtotal 2010-2013</b>	<b>41</b>	<b>140</b>	<b>119</b>	<b>29</b>

\* Denotes that the Public Market Equivalent went short, so the PME+ method was used

# A primer on the Public Market Equivalent (PME) and PME+ metrics

Investors into the private equity and venture capital asset class face a common challenge: the ability to benchmark the performance of their portfolio against that of the public market. For publicly quoted equities and bonds which have clearly defined and often liquid markets, the returns are easily accessible, frequently in real-time, and easily understood. The PE/VC asset class, however, is somewhat different, reflecting the irregularity in the timing and discretionary nature of the cash flows between the fund and LPs.

Money multiples and the annualised internal rate of return (IRR) are the two most commonly quoted measures of PE/VC performance. While both metrics have their distinct advantages in being easy to understand, they also have some drawbacks. Probably the most significant critique of multiples is that they do not take into account the timing of the fund's cash, thereby not taking into account the time value of money. For example, a 2x result tells investors that for every one GBP invested into PE/VC, they received back twice as much in return. However, the relative attractiveness of this investment would be markedly different if it had taken, say, 10 years to produce that return than if it had taken two years.

In the case of IRRs, while they explicitly take into consideration the irregular timing of the fund's cash flows, they are a non-linear denominator-based measure of PE/VC return. Thus, while comparing them to standard time-bound numerator-based measures (such as the passive or buy-and-hold estimates of return seen in the public markets) can prove valuable as a guide to the relative performance of PE/VC, the two measures should not be seen as fully compatible.

## What is the Public Market Equivalent (PME)?

In light of some issues surrounding the use of IRRs and multiples, Long and Nickels (1996)<sup>4</sup> devised the Public Market Equivalent (PME) metric. The PME is a returns measure in which investors can compare an IRR to the performance the public market would have generated over the exact same timing of a PE fund's cash flows. The PME is generated through creating a hypothetical investment vehicle which purchases and sells shares in the public market index in such a way that mimics the PE fund's irregular cash flows – i.e. investing in the index-shares when the fund makes a draw down and liquidating an apt amount of its holding when the fund distributes capital back to its LPs.

One of the key advantages of the PME is that it allows for a direct comparison against PE funds' IRRs. It is, however, not without its limitations. With cash flows remaining identical, the PME is largely dependent on the evolution of the Net Asset Value (NAV). However, the public market NAV could become negative in cases where the PE portfolio greatly outperforms the benchmark, effectively a sign that the PME has gone short and distributions exceed capital calls, or market prices have significantly fallen over time. This can potentially result in a largely nonsensical comparison of the performance of a long-only PE portfolio being compared against a short position in the public market.

## What is the 'PME+'?

One solution to the issue of short exposure is the 'PME+', a returns metric first proposed by Rouvinez (2003)<sup>5</sup>. The PME+ circumvents the 'going short' problem by selling a fixed proportion of the cash flows in contrast to the exact same amount as per in the PME. As such, the investor can avoid short exposure as they are restricted to not being able to sell more than the size of the public index position. In essence, the hypothetical PME+ vehicle retains the same end NAV as the PE fund but the public market's distributions are adjusted by a scaling factor. On the limitations side, PME+ does not, by definition, exactly replicate the PE cash flows in the public market and a portion of a distribution (positive cash flow) can be moved back by a number of years with a consequent effect on the comparative result.

## What are Multiples?

Multiples show the proportion of money paid out by an investment to the amount of money paid into an investment. There are two different types of multiples examined in this article, Distributions to Paid In (DPI) capital and Total Value to Paid In (TVPI) capital. DPI is the ratio of total distributions to total drawdowns of the fund. TVPI is the ratio of total drawdowns and current net asset value to total drawdowns. The strength of multiples is that they offer a quick and easy way to see how the fund has performed. However, as previously mentioned, a key weakness of the method is that it does not account for the time value of money. This means that if two funds had the same distributions and draw downs, but one fund generated the returns in a substantially shorter time frame, the funds would be rated as performing equally, despite the quicker returns being far more attractive to investors.

Multiples have also been calculated using cash flows from the PME cash flows. This enables multiples to be used to compare PE and VC returns to the public market. Only TVPI multiple comparisons have been expressed in this paper as by definition the DPI multiple of both private equity cash flows and the public market equivalent will be the same.

<sup>1</sup> 1986 vintage funds onwards were used in this exercise as FTSE All-Share Total Return Index data that includes dividend reinvestment were not available prior to December 1985.

<sup>2</sup> BVCA (2013), Performance Measurement Survey, available at: <http://www.bvca.co.uk/ResearchPublications/IndustryStatistics.aspx>

<sup>3</sup> Only funds which were at least four years old at the relevant year end are included for the computation of the 'Total' figures.

<sup>4</sup> Long, Austin M. and Nickels, Craig J., (1996), 'A Private Investment Benchmark', mimeo; paper presented to the AIMR Conference on Venture Capital Investing, February.

<sup>5</sup> Rouvinez, C., (2003), 'Private Equity Benchmarking with PME+', Venture Capital Journal, August, pages 34-38.



British Private Equity & Venture Capital Association (BVCA)  
5th Floor East, Chancery House, 55-64 Chancery Lane, London WC2A 1QS  
T +44 (0)20 7492 0400 [bvca@bvca.co.uk](mailto:bvca@bvca.co.uk) [www.bvca.co.uk](http://www.bvca.co.uk)

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