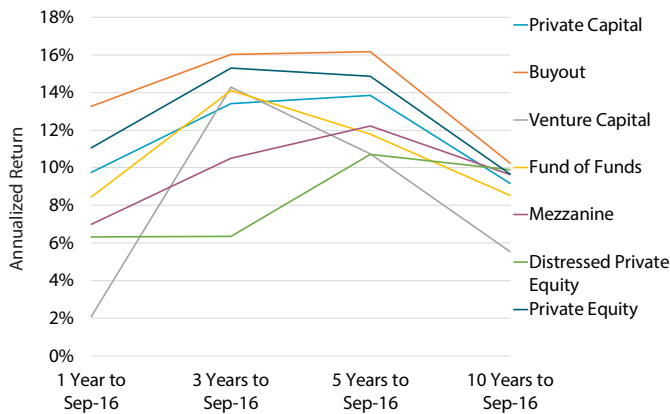


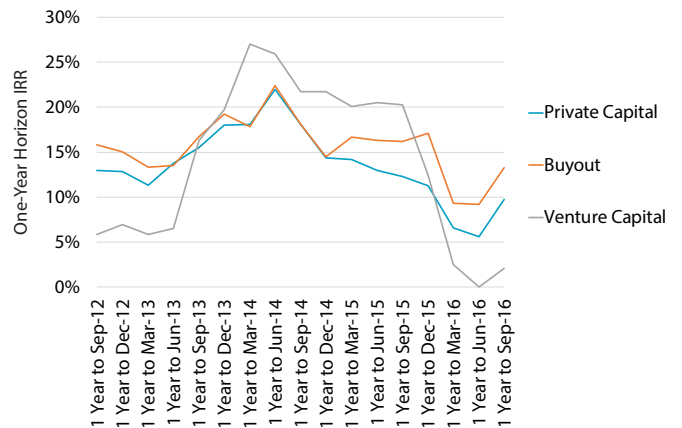
# PRIVATE CAPITAL PERFORMANCE UPDATE: Q3 2016

Fig. 1: Private Capital Horizon IRRs (As at 30 September 2016)



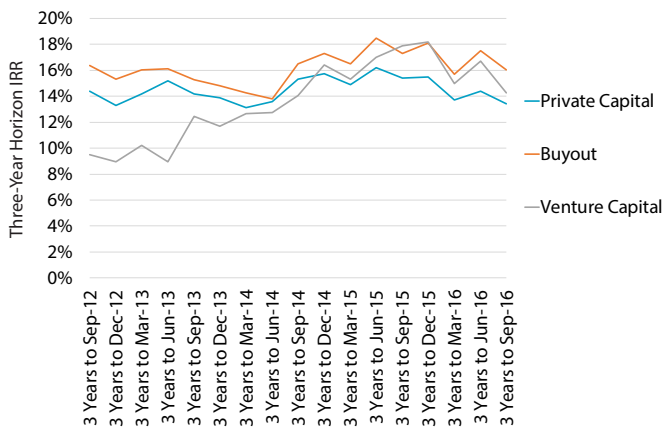
Source: Preqin Private Equity Online

Fig. 2: Private Capital Rolling One-Year Horizon IRRs



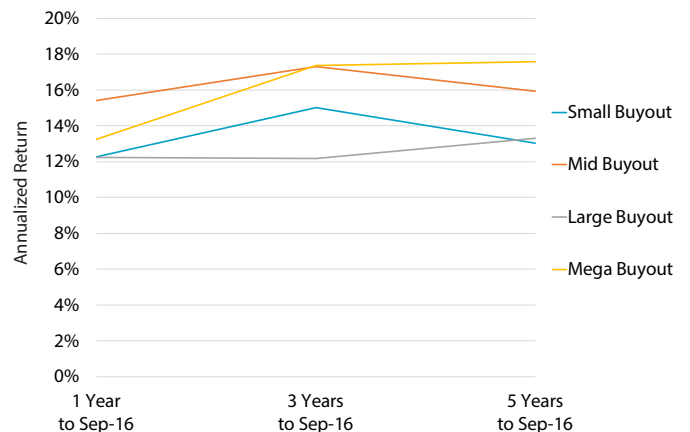
Source: Preqin Private Equity Online

Fig. 3: Private Capital Rolling Three-Year Horizon IRRs



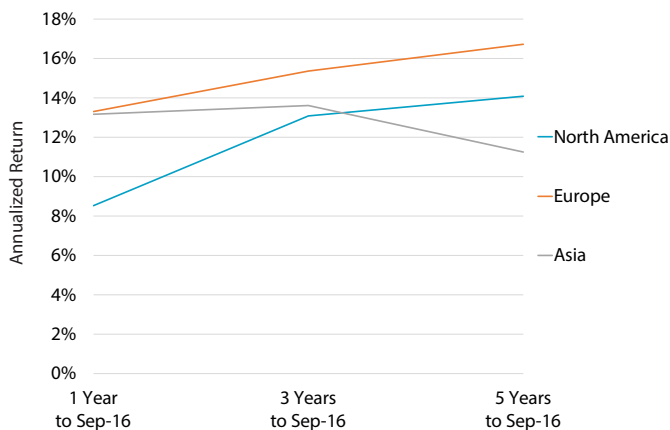
Source: Preqin Private Equity Online

Fig. 4: Buyout Fund Horizon IRRs by Size\* (As at 30 September 2016)



Source: Preqin Private Equity Online

Fig. 5: Private Capital Horizon IRRs by Fund Primary Geographic Focus (As at 30 September 2016)



Source: Preqin Private Equity Online

**DATA SOURCE:**

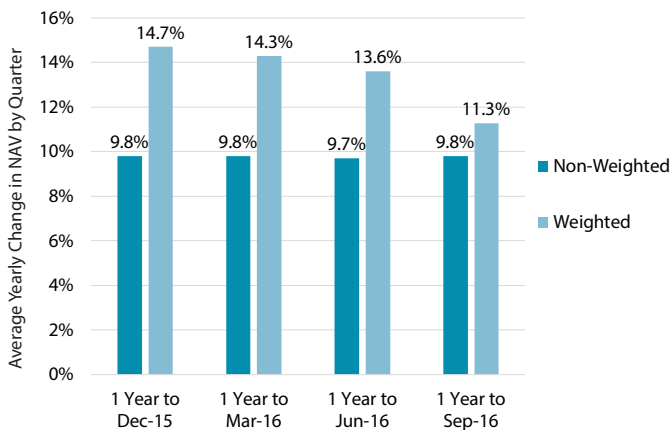
Preqin's Private Equity Online is the industry's most extensive source of net-to-LP private capital fund performance, with full metrics for over 8,900 named vehicles.

For more information, or to arrange a demonstration, please visit:

[www.preqin.com/privateequity](http://www.preqin.com/privateequity)

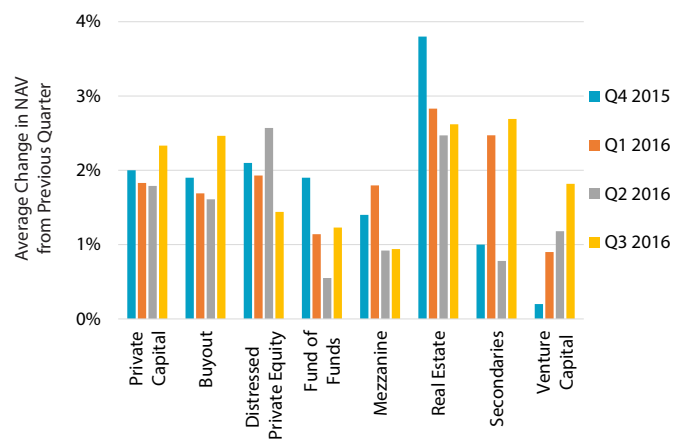
\*Size ranges:  
 Vintage 1992-1996: Small Buyout ≤ \$200mn, Mid Buyout \$201mn-\$500mn, Large Buyout > \$500mn  
 Vintage 1997-2004: Small Buyout ≤ \$300mn, Mid Buyout \$301mn-\$750mn, Large Buyout \$751mn-\$2bn, Mega Buyout > \$2bn  
 Vintage 2005-2016: Small Buyout ≤ \$500mn, Mid Buyout \$501mn-\$1,500mn, Large Buyout \$1,501mn-\$4.5bn, Mega Buyout > \$4.5bn

**Fig. 6: Private Capital Yearly Change in NAV**



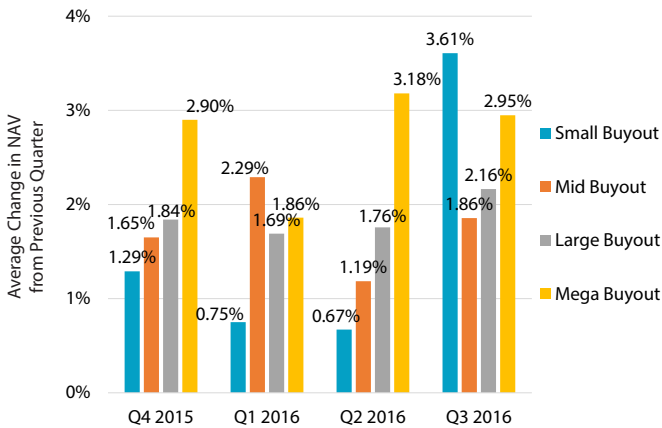
Source: Preqin Private Equity Online

**Fig. 7: Quarterly Change in NAV by Fund Type (Non-Weighted)**



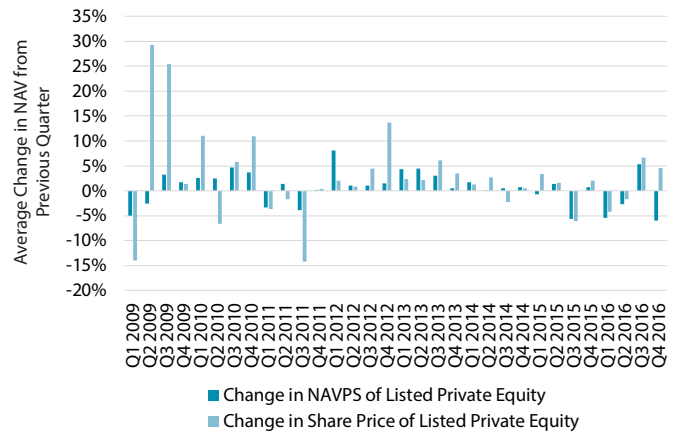
Source: Preqin Private Equity Online

**Fig. 8: Quarterly Change in NAV by Buyout Fund Size\***



Source: Preqin Private Equity Online

**Fig. 9: Change in NAVPS and Share Price of Listed Private Equity by Quarter**



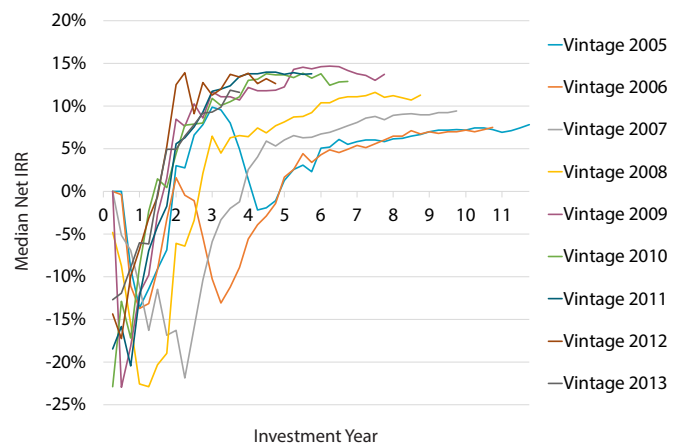
Source: Preqin Private Equity Online

**Fig. 10: Private Capital Median Net IRRs by Fund Type (As at 30 September 2016)**



Source: Preqin Private Equity Online

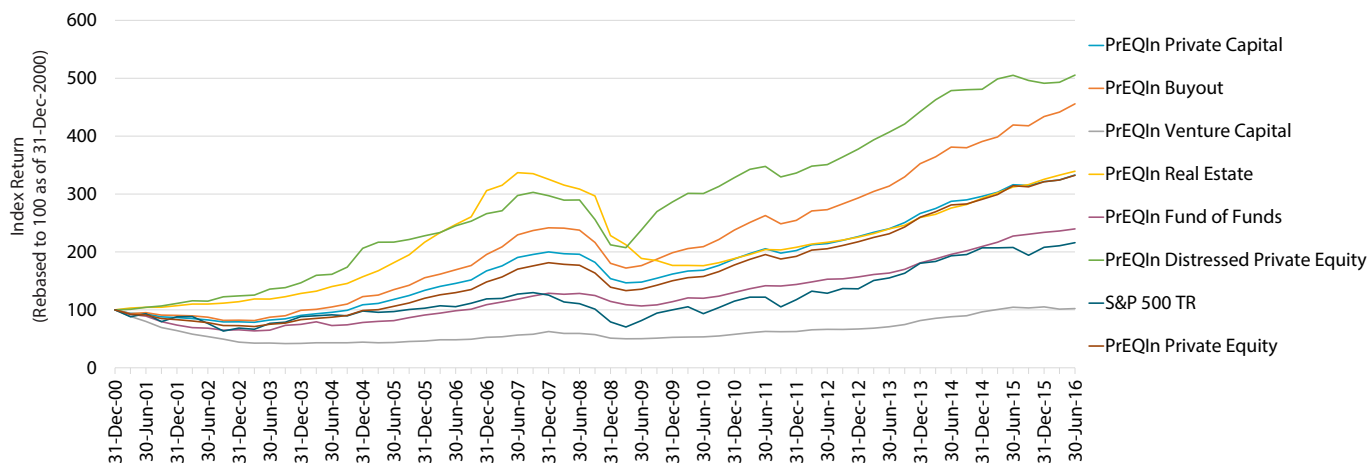
**Fig. 11: Private Capital – J-Curve: Annual Median Net IRRs by Vintage Year**



Source: Preqin Private Equity Online

\*Size ranges:  
 Vintage 1992-1996: Small Buyout ≤ \$200mn, Mid Buyout \$201mn-\$500mn, Large Buyout > \$500mn  
 Vintage 1997-2004: Small Buyout ≤ \$300mn, Mid Buyout \$301mn-\$750mn, Large Buyout \$751mn-\$2bn, Mega Buyout > \$2bn  
 Vintage 2005-2016: Small Buyout ≤ \$500mn, Mid Buyout \$501mn-\$1,500mn, Large Buyout \$1,501mn-\$4.5bn, Mega Buyout > \$4.5bn

Fig. 12: PrEQIn Quarterly Index: All Strategies



Source: Preqin Private Equity Online

Fig. 13: Consistent Top Performing Buyout Fund Managers

Firm	Location	Total Funds Raised in Last 10 Years (\$mn)	Overall No. of Funds with Quartile Ranking	No. of Funds in Top Quartile	No. of Funds in Second Quartile	Average Quartile Rank
Auctus Management	Germany	613	3	3	0	1.00
Clearview Capital	US	575	3	3	0	1.00
American Securities	US	10,961	5	4	1	1.20
FIMI	Israel	2,427	5	4	1	1.20
Waterland Private Equity Investments	Netherlands	4,591	5	4	1	1.20
Altor	Sweden	5,292	4	3	1	1.25
Inflexion	UK	3,292	4	3	1	1.25
Seidler Equity Partners	US	619	4	3	1	1.25
Veritas Capital	US	6,585	4	3	1	1.25
Altaris	US	938	3	2	1	1.33
Corpfin Capital	Spain	274	3	2	1	1.33
Crescent Capital Partners	Australia	1,384	3	2	1	1.33
DFW Capital Partners	US	577	3	2	1	1.33
Egeria Capital Management	Netherlands	1,565	3	2	1	1.33
Fortissimo Capital	Israel	847	3	2	1	1.33
Harvest Partners	US	4,516	3	2	1	1.33
Harwood Private Equity	UK	353	3	2	1	1.33
Industrial Growth Partners	US	1,400	3	2	1	1.33
Montefiore Investment	France	964	3	2	1	1.33
Nautic Partners	US	2,241	3	2	1	1.33

Source: Preqin Private Equity Online

Fig. 14: Consistent Top Performing Growth Fund Managers

Firm	Location	Total Funds Raised in Last 10 Years (\$mn)	Overall No. of Funds with Quartile Ranking	No. of Funds in Top Quartile	No. of Funds in Second Quartile	Average Quartile Rank
Trustbridge Partners	China	2,350	5	4	1	1.20
Ampersand Capital Partners	US	657	5	3	2	1.40
Enfoca Inversiones	Peru	574	5	2	3	1.60
Technology Crossover Ventures	US	7,747	5	2	3	1.60
Clairvest Group	Canada	1,278	4	1	3	1.75
LLR Partners	US	1,753	4	1	3	1.75

Source: Preqin Private Equity Online

Fig. 15: Consistent Top Performing Venture Capital Fund Managers

Firm	Location	Total Funds Raised in Last 10 Years (\$mn)	Overall No. of Funds with Quartile Ranking	No. of Funds in Top Quartile	No. of Funds in Second Quartile	Average Quartile Rank
Pittsford Ventures Management	US	200	6	6	0	1.00
OrbiMed Advisors	US	4,798	4	4	0	1.00
Benchmark Capital	US	1,497	3	3	0	1.00
General Catalyst Partners	US	2,064	3	3	0	1.00
Brentwood Venture Capital	US	-	6	4	2	1.33
Columbia Capital	US	1,188	6	4	2	1.33
AJU IB Investment	South Korea	456	3	2	1	1.33
Helmet Venture Managers	Finland	12	3	2	1	1.33
Partech Partners	France	1,244	3	2	1	1.33
Upfront Ventures	US	665	3	2	1	1.33
Battery Ventures	US	3,575	10	7	2	1.40
Matrix Partners	US	3,122	5	3	2	1.40
Kleiner Perkins Caufield & Byers	US	7,115	6	3	3	1.50
Lightspeed Venture Partners	US	4,676	4	3	0	1.50
Vickers Venture Partners	Singapore	211	4	3	0	1.50
Pappas Ventures	US	97	4	2	2	1.50
TA Associates	US	12,800	7	4	2	1.57
CDH Investments	China	10,159	5	3	1	1.60
Idinvest Partners	France	3,386	3	2	0	1.67
JK&B Capital	US	-	3	2	0	1.67

Source: Preqin Private Equity Online

Fig. 16: Consistent Top Performing Private Equity Fund of Funds Managers

Firm	Location	Total Funds Raised in Last 10 Years (\$mn)	Overall No. of Funds with Quartile Ranking	No. of Funds in Top Quartile	No. of Funds in Second Quartile	Average Quartile Rank
Industry Ventures	US	2,893	7	6	1	1.14
Greenspring Associates	US	3,218	6	5	1	1.17
Nordea Private Equity	Denmark	496	3	2	1	1.33
TrueBridge Capital Partners	US	1,585	5	4	0	1.40
Weathergag Capital	US	543	6	4	1	1.50
HQ Capital International	US	1,877	4	2	2	1.50
ATP Private Equity Partners	Denmark	5,691	5	3	1	1.60
Franklin Park	US	113	11	7	2	1.64
LGT Capital Partners	Switzerland	13,152	11	5	5	1.64
Darwin Ventures	US	150	3	2	0	1.67
Ke Nako Capital	South Africa	189	3	2	0	1.67
Bowside Capital	US	61	3	1	2	1.67
Spur Capital Partners	US	263	4	3	0	1.75
Wilshire Private Markets	US	1,017	13	5	7	1.77
Asia Alternatives Management	Hong Kong	3,924	20	10	5	1.85
Gerber/Taylor Management	US	445	7	3	3	1.86
North Sky Capital	US	501	8	4	2	1.88
Fort Washington Capital Partners	US	1,334	9	3	4	1.89

Source: Preqin Private Equity Online

# THE IMPORTANCE OF PME BENCHMARKING

Investors and fund managers alike frequently benchmark private equity returns against public markets in order to gauge the relative performance of their investments. For LPs, it is an important exercise undertaken to inform portfolio construction decisions and to evaluate the performance of one asset class against that of another. For fund managers, it forms a key aspect of fund marketing to help secure LP commitments.

Private equity returns, however, are not directly comparable with public market indices, due to the asset class's illiquid nature and irregular timing of cash flows. The industry has long used the analogy of 'comparing apples with oranges' when discussing the difficulties of evaluating the differences between private equity and public market performance.

The development of the public market equivalent (PME) measure of returns provides a more meaningful, like-for-like comparison. PME metrics benchmark the performance of a fund, or a group of funds, against an appropriate public market index while accounting for the timings of the fund cash flows. When PME values are generated for many funds, they can be used as an alternative measure of ranking fund performance, while controlling for broader market behaviour.

Preqin provides PME benchmarks and individual fund-level PME comparisons on its online databases, which already provide net-to-LP fund performance metrics for over 8,200 named private equity vehicles globally. The PME tool enables the comparison of private equity returns against six public market indices using

a choice of three PME methodologies: Kaplan-Schoar PME, Long-Nickels PME and PME+. All of the methodologies utilize the since-inception cash flow data Preqin holds for over 3,200 funds.

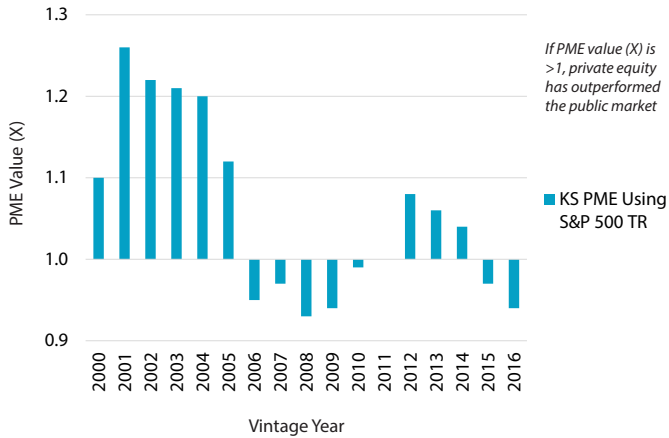
The table below provides an overview of the three PME methodologies Preqin now offers, along with their specific strengths and weaknesses. In this book, we also include the PERACS Alpha benchmark, a measure of the annualized rate of excess return/loss when comparing private equity returns to the MSCI World index. Having the ability to employ a number of different PME methodologies is highly desirable to an investor, but it is important to also maintain awareness that each is fundamentally an approximation until the funds are fully realized.

## PME Benchmarking Methods Offered by Preqin

Benchmark	Metric	Private Capital Outperformance if:	Description of Calculation	Strengths	Weaknesses
KS-PME (Kaplan-Schoar)	Ratio	Value above one	<p>Calculated by discounting the private capital fund cash flows by the public market index value.</p> <p>The discounted distributions plus the current remaining value are divided by the discounted contributions to obtain the ratio.</p>	<p>The calculation looks at the ratio of outflows vs. inflows as opposed to generating an IRR, which is time dependent and is easily manipulated.</p> <p>Easy to interpret.</p>	<p>Ignores the timings of cash flows.</p>
LN PME (Long-Nickels)	Annualized Rate	Estimated PME IRR < Private Capital Fund IRR	<p>Contributions to private capital fund are converted to an equal purchase of shares in the public index. Distributions represent liquidation of share in public index.</p> <p>IRR calculation uses same contributions and distributions as private capital fund, but with a different final period remaining value.</p>	<p>LN PME IRR is directly comparable to the private capital fund IRR, allowing an apples-to-apples comparison.</p>	<p>IRR sensitive to early distributions. Large distributions could cause a negative PME final period remaining value, making PME IRR calculation computationally impossible.</p>
Capital Dynamics PME+	Annualized Rate	Estimated PME IRR < Private Capital Fund IRR	<p>Uses a fixed scaling factor (lambda) to modify each distribution to ensure the PME final period remaining value is the same as the private capital fund remaining value. IRR calculation uses modified contributions and distributions but same final period remaining value.</p>	<p>As for LN PME, with the added benefit of avoiding a final period negative remaining value, making PME IRR calculation possible in more cases.</p>	<p>PME+ does not match the cash flows perfectly.</p>

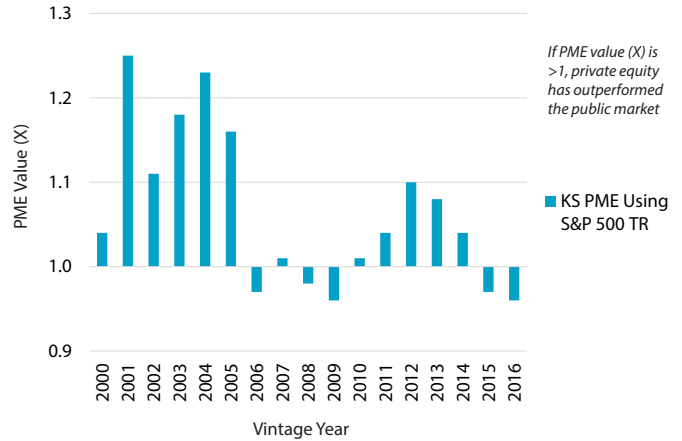
# THE IMPORTANCE OF PME BENCHMARKING

**Fig. 17: KS PME: Private Capital - All Regions (As at 30 September 2016)**



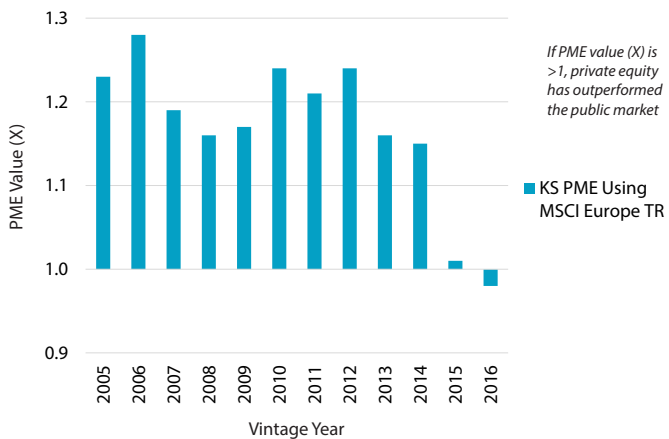
Source: Preqin Private Equity Online

**Fig. 18: KS PME: Private Capital - North America (As at 30 September 2016)**



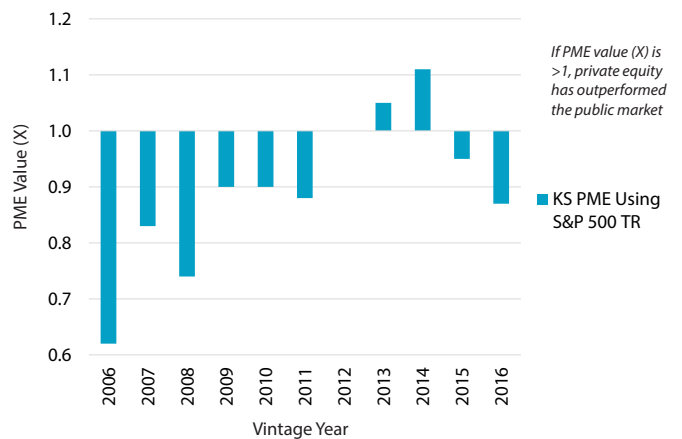
Source: Preqin Private Equity Online

**Fig. 19: KS PME: Private Capital - Europe (As at 30 September 2016)**



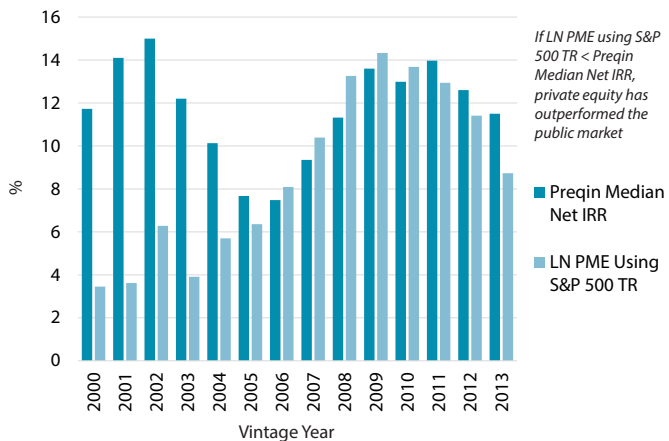
Source: Preqin Private Equity Online

**Fig. 20: KS PME: Private Capital - Asia & Rest of World (As at 30 September 2016)**



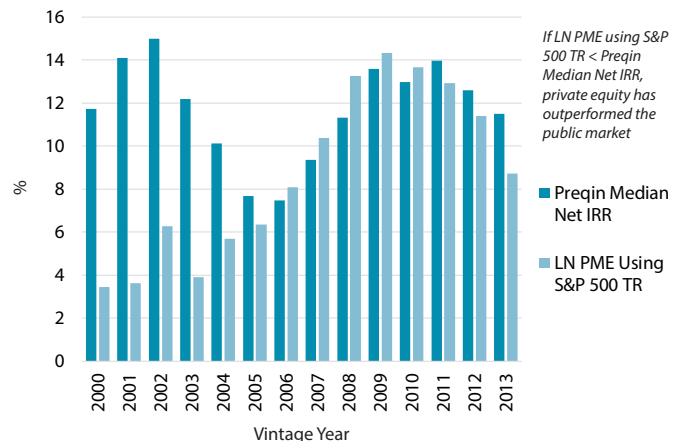
Source: Preqin Private Equity Online

**Fig. 21: LN PME: Private Capital - All Regions (As at 30 September 2016)**



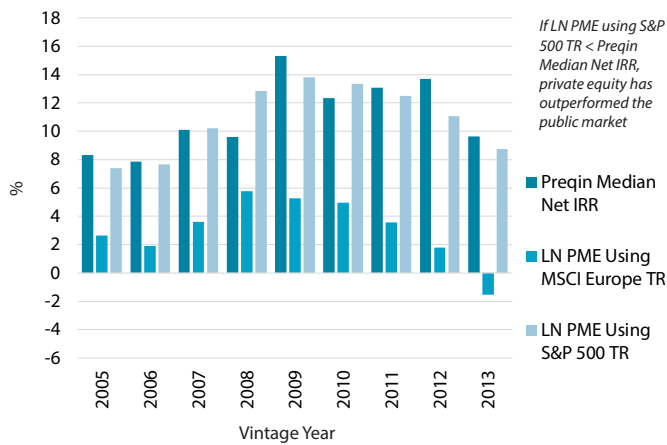
Source: Preqin Private Equity Online

**Fig. 22: LN PME: Private Capital - North America (As at 30 September 2016)**



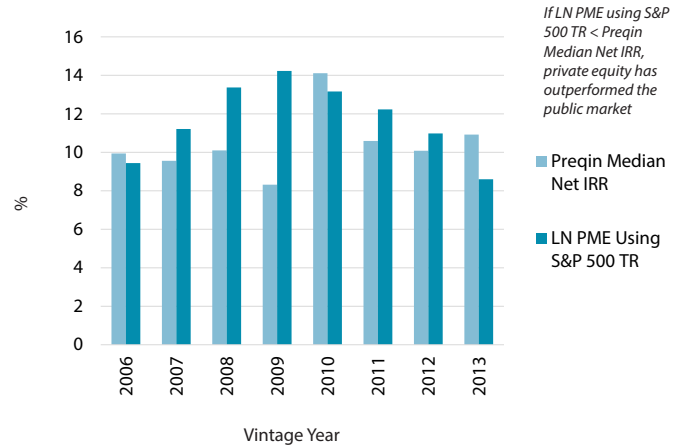
Source: Preqin Private Equity Online

**Fig. 23: LN PME: Private Capital - Europe**  
(As at 30 September 2016)



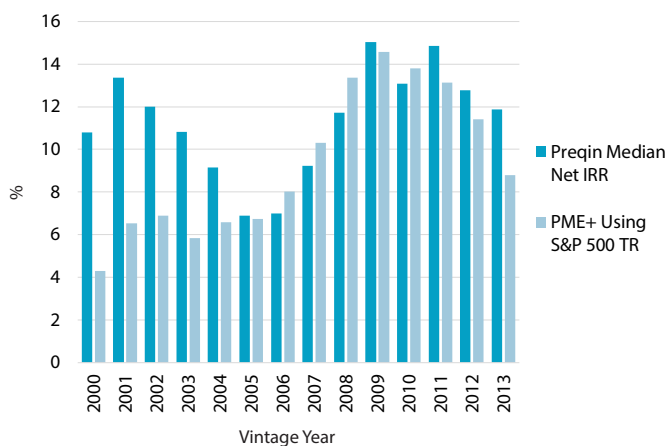
Source: Preqin Private Equity Online

**Fig. 24: LN PME: Private Capital - Asia & Rest of World**  
(As at 30 September 2016)



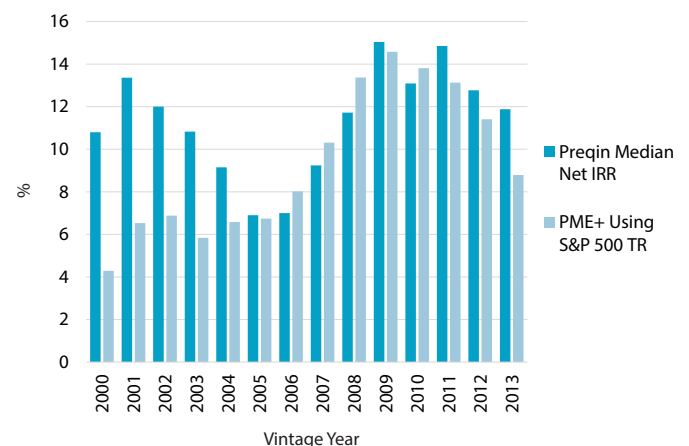
Source: Preqin Private Equity Online

**Fig. 25: PME+: Private Capital - All Regions**  
(As at 30 September 2016)



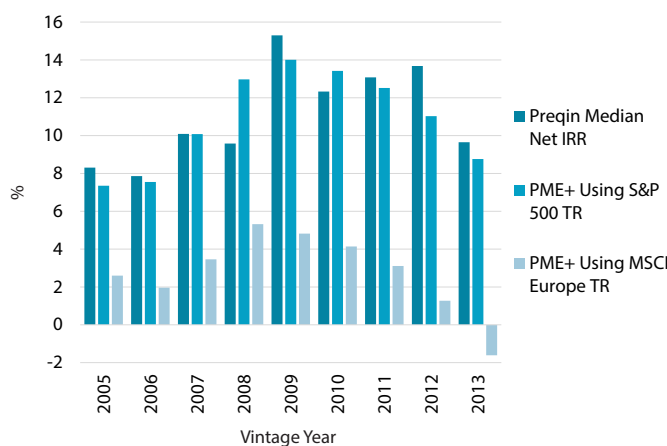
Source: Preqin Private Equity Online

**Fig. 26: PME+: Private Capital - North America**  
(As at 30 September 2016)



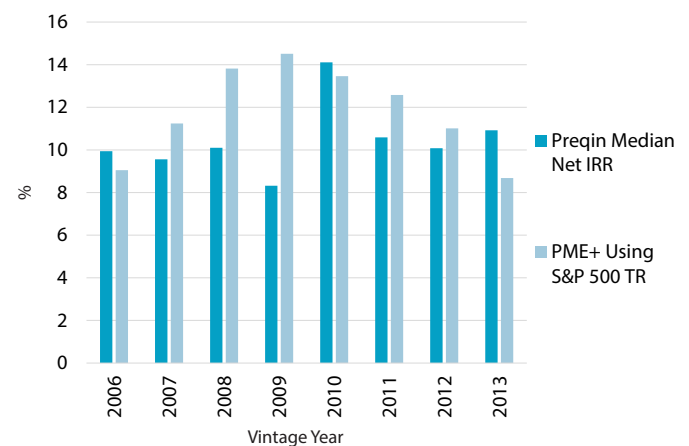
Source: Preqin Private Equity Online

**Fig. 27: PME+: Private Capital - Europe**  
(As at 30 September 2016)



Source: Preqin Private Equity Online

**Fig. 28: PME+: Private Capital - Asia & Rest of World**  
(As at 30 September 2016)



Source: Preqin Private Equity Online