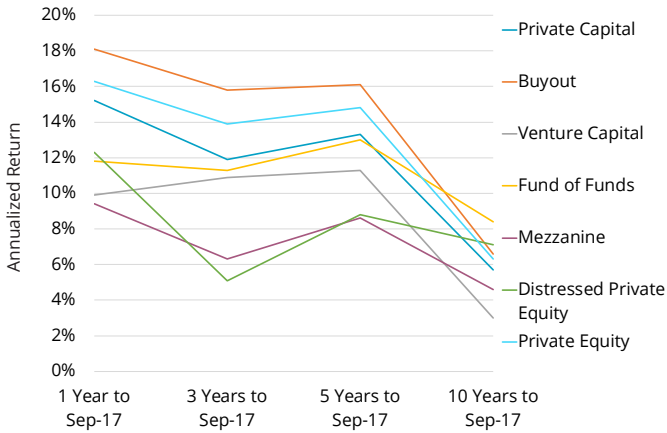


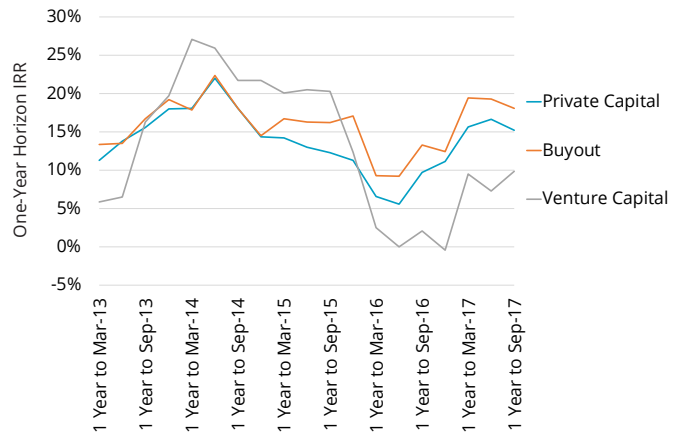
PRIVATE CAPITAL PERFORMANCE UPDATE: Q3 2017

Fig. 1: Private Capital Horizon IRRs (As at 30 September 2017)



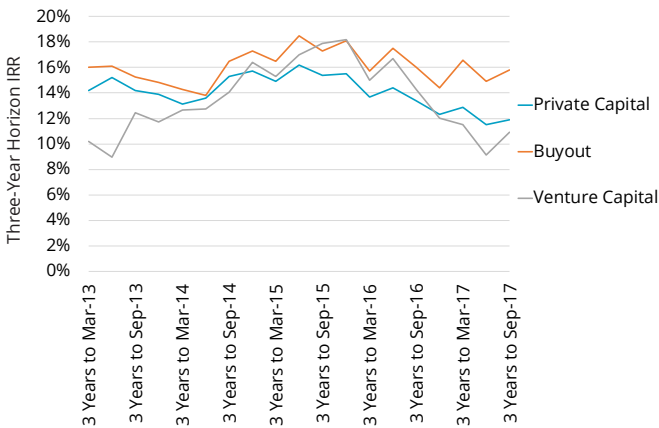
Source: Preqin

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



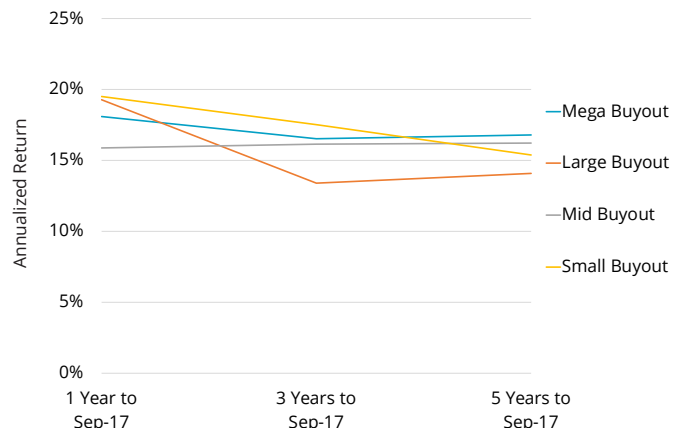
Source: Preqin

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



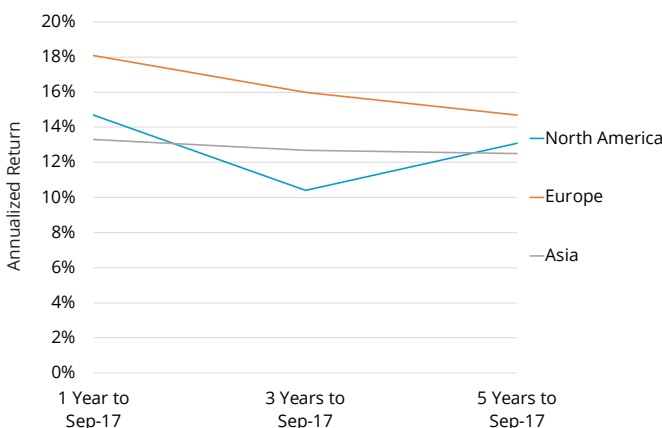
Source: Preqin

Fig. 4: Buyout Horizon IRRs by Fund Size* (As at 30 September 2017)



Source: Preqin

Fig. 5: Private Capital Horizon IRRs by Fund Primary Geographic Focus (As at 30 September 2017)



Source: Preqin

DATA SOURCE

Preqin's online platform is the industry's most extensive source of net-to-LP private capital fund performance, with full metrics for over 9,400 named vehicles.

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

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 2005-2018: Small Buyout ≤ \$500mn, Mid Buyout \$501mn-\$1,500mn, Large Buyout \$1,501mn-\$4.5bn, Mega Buyout > \$4.5bn

Fig. 6: Private Capital Assets under Management by Vintage Year (As at 30 September 2017)

Vintage Year	Dry Powder (\$bn)	Unrealized Value (\$bn)
2000	2.9	2.6
2001	1.1	2.1
2002	1.8	0.9
2003	0.9	2.5
2004	1.0	7.2
2005	5.1	20.5
2006	7.7	93.9
2007	9.1	125.3
2008	4.4	149.1
2009	4.0	67.5
2010	6.8	118.4
2011	13.6	249.3
2012	18.4	242.2
2013	39.4	221.3
2014	90.7	256.0
2015	174.1	193.5
2016	296.2	137.9
2017	349.2	45.5

Source: Preqin

Fig. 7: Private Capital Assets under Management by Geographic Focus (As at 30 September 2017)

Geographic Focus	Dry Powder (\$bn)	Unrealized Value (\$bn)
North America	1,001.8	1,814.2
Europe	409.9	750.8
Asia	310.4	571.7
Latin America	19.9	58.3
Diversified Multi-Regional	20.0	50.3
Australasia	14.6	29.6
Middle East & Israel	8.9	28.5
Africa	10.3	25.9

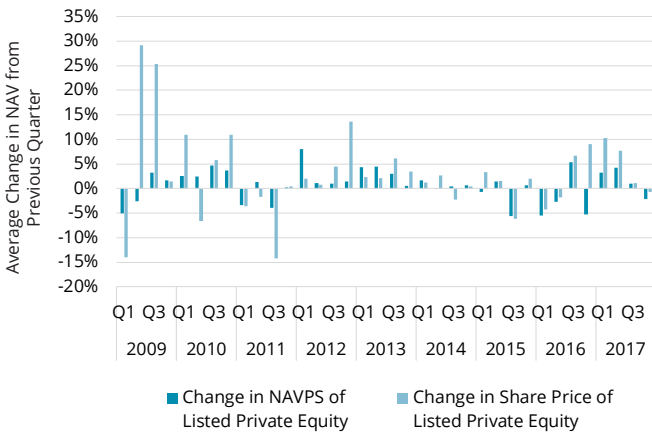
Source: Preqin

Fig. 8: Private Capital Assets under Management by Fund Type (As at 30 September 2017)

Fund Type	Dry Powder (\$bn)	Unrealized Value (\$bn)
Private Equity	1,052.7	1,937.9
Real Estate	272.4	538.7
Private Debt	243.3	420.2
Infrastructure	152.7	270.0
Natural Resources Only	74.5	162.3

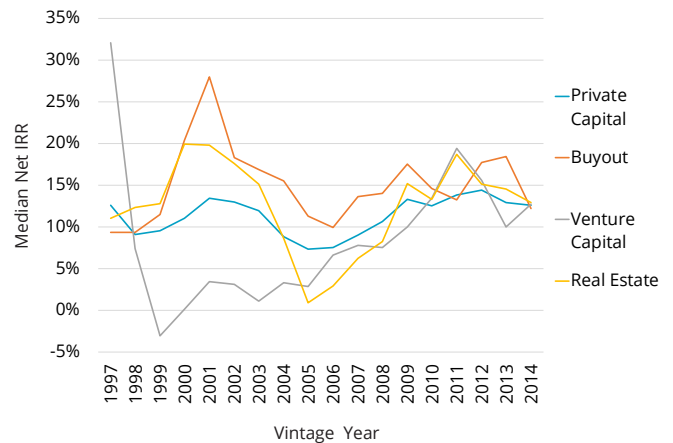
Source: Preqin

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



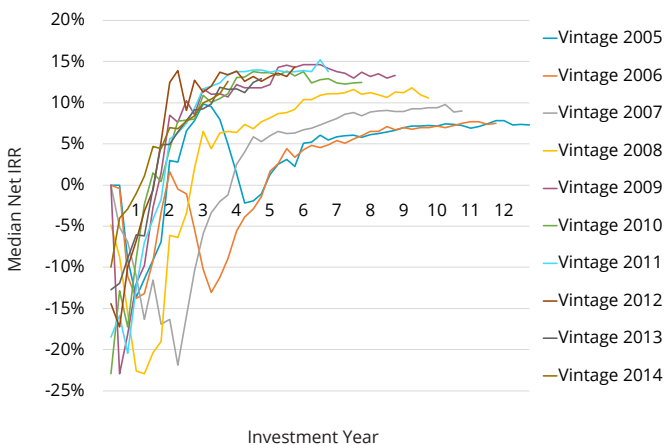
Source: Preqin Private Equity Online

Fig. 10: Private Capital Median Net IRRs by Fund Type (As at 30 September 2017)



Source: Preqin

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



Source: Preqin

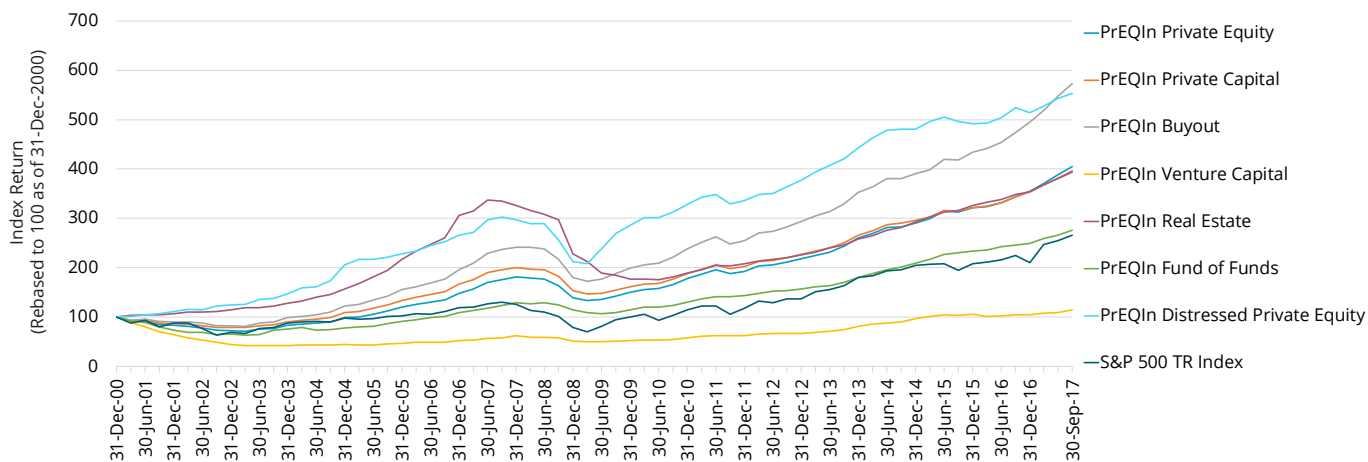
PREQIN'S PRIVATE EQUITY DATA PLATFORM

Preqin provides unrivalled data and intelligence on private equity and venture capital, including fundraising, fund managers, institutional investors, fund performance, deals and exits, service providers, fund terms and conditions and more.

✉: info@preqin.com

🌐: www.preqin.com/privateequity

Fig. 12: PrEQIn Quarterly Index: All Strategies



Source: Prequin

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
Inflexion Private Equity Partners	UK	3,292	5	5	0	1.00
Rhône Group	US	4,276	4	4	0	1.00
Brookfield Capital Partners	Canada	5,982	3	3	0	1.00
Clearview Capital	US	575	3	3	0	1.00
Main Capital Partners	Netherlands	431	3	3	0	1.00
Vista Equity Partners	US	26,917	6	5	1	1.17
FIMI	Israel	2,427	5	4	1	1.20
AUCTUS Management	Germany	503	4	3	1	1.25
Wynnchurch Capital Partners	US	1,840	4	3	1	1.25
Leonard Green & Partners	US	16,936	6	4	2	1.33
Waterland Private Equity Investments	Netherlands	6,951	6	4	2	1.33
DFW Capital Partners	US	577	3	2	1	1.33
Egeria Capital Management	Netherlands	2,509	3	2	1	1.33
Gilde Equity Management Benelux	Netherlands	633	3	2	1	1.33
Harvest Partners	US	3,700	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
TowerBrook Capital Partners	UK	7,364	3	2	1	1.33
Veritas Capital	US	6,585	5	3	2	1.40

Source: Prequin

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
Ampersand Capital Partners	US	895	5	5	0	1.00
Trustbridge Partners	China	3,440	5	5	0	1.00
KJK Capital	Finland	183	3	3	0	1.00
LLR Partners	US	2,698	4	2	2	1.50
Spectrum Equity	US	3,055	6	3	2	1.67
Frontier Capital	US	1,340	3	1	2	1.67
Lombard Investments	US	350	4	1	3	1.75
Enfoca Inversiones	Peru	1420	5	1	4	1.80
Technology Crossover Ventures	US	4730	5	1	4	1.80

Source: Prequin

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
Benchmark Capital	US	1,497	3	3	0	1.00
Third Rock Ventures	US	1,558	3	3	0	1.00
Cottonwood Technology Fund	US	37	3	3	0	1.00
Avalon Ventures	US	552	6	5	1	1.17
OrbiMed Advisors	US	5,349	5	4	1	1.20
Sequoia Capital	US	12,471	5	4	1	1.20
General Catalyst Partners	US	3,385	4	3	1	1.25
Vickers Venture Partners	Singapore	367	4	3	1	1.25
Matrix Partners	US	1,200	6	4	2	1.33
Forbion Capital Partners	Netherlands	585	3	2	1	1.33
DN Capital	UK	486	3	2	1	1.33
Pontifax AgTech	US	608	3	2	1	1.33
Foresite Capital	US	850	3	2	1	1.33
CRCM Ventures	US	98	3	2	1	1.33
Future Venture Capital	Japan	19	3	2	1	1.33
Battery Ventures	US	4,075	10	7	2	1.40
Summit Partners	US	10,465	10	6	4	1.40
Charles River Ventures	US	1,088	5	3	2	1.40
Kleiner Perkins Caufield & Byers	US	6,735	6	3	3	1.50
Scottish Equity Partners	UK	725	4	3	0	1.50
Pappas Capital	US	97	4	2	2	1.50
Greycroft Partners	US	999	4	2	2	1.50
Pappas Ventures	US	97	4	2	2	1.50

Source: Preqin

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
Storebrand Asset Management	Norway	1,612	9	6	3	1.33
Weathergace Capital	US	564	6	4	2	1.33
Nordea Private Equity	Denmark	334	3	2	1	1.33
Twin Bridge Capital Partners	US	1,662	3	2	1	1.33
Franklin Park	US	113	8	6	1	1.38
Greenspring Associates	US	4,697	7	5	1	1.43
Spur Capital Partners	US	288	4	3	0	1.50
BlackRock Private Equity Partners	US	4,349	4	2	2	1.50
Industry Ventures	US	2,892	8	5	2	1.63
Bay Hills Capital	US	201	6	3	2	1.67
Darwin Ventures	US	216	3	2	0	1.67
Bowside Capital	US	95	3	1	2	1.67
LGT Capital Partners	Switzerland	15,313	3	1	2	1.67
Schroder Adveq	Switzerland	3,872	3	1	2	1.67
JPMorgan Asset Management - Private Equity Group	US	9,347	11	5	4	1.73
Aberdeen Standard Investments	UK	3,171	4	2	1	1.75
Altamar Private Equity	Spain	2,114	4	2	1	1.75
Axiom Asia Private Capital	Singapore	3,450	4	2	1	1.75
HQ Capital International	US	2,243	4	2	1	1.75
Siguler Guff	US	8,263	9	6	0	1.78

Source: Preqin

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 which can inform portfolio construction decisions and help to evaluate the performance of one asset class against 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 9,400 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 4,100 funds.

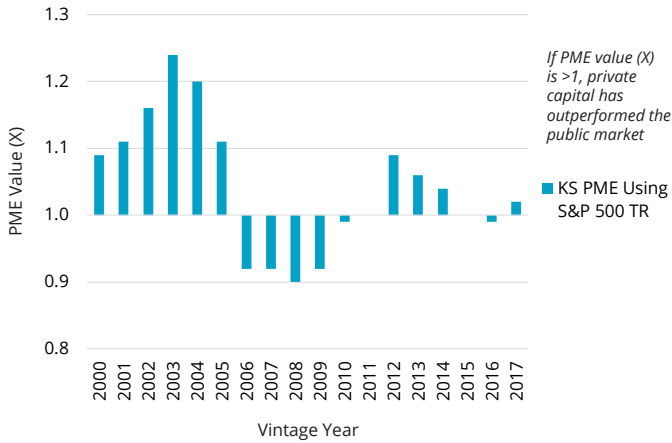
The table below provides an overview of the three PME methodologies Preqin now offers, along with their specific strengths and weaknesses. Having the ability to employ a number of different PME methodologies is highly desirable to an investor, but it is also important to maintain awareness that each 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 to inflows as opposed to generating an IRR, which is time dependent and 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>

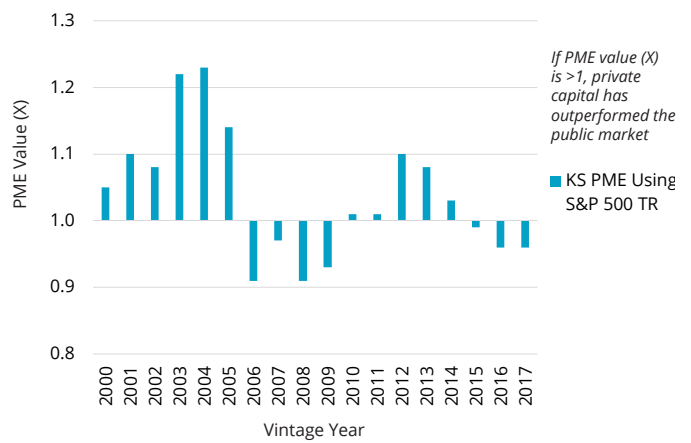
PME BENCHMARKS

Fig. 17: KS PME: Private Capital - All Regions (As at 30 September 2017)



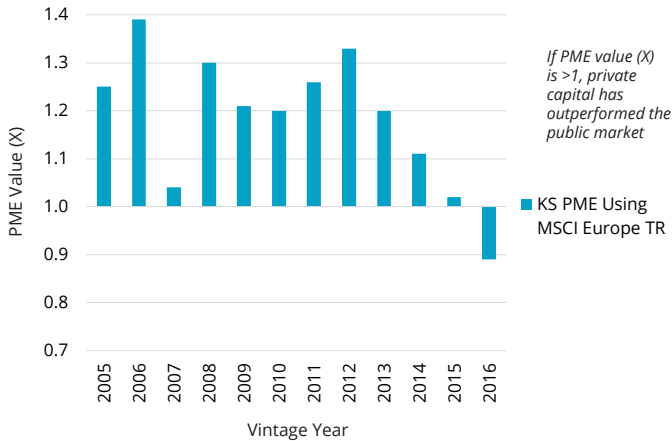
Source: Preqin

Fig. 18: KS PME: Private Capital - North America (As at 30 September 2017)



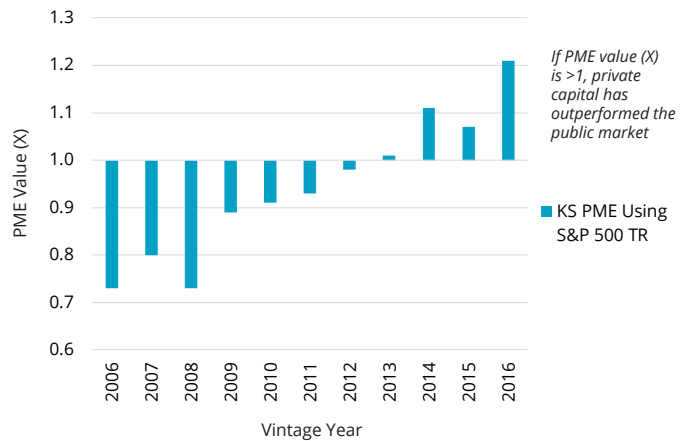
Source: Preqin

Fig. 19: KS PME: Private Capital - Europe (As at 30 September 2017)



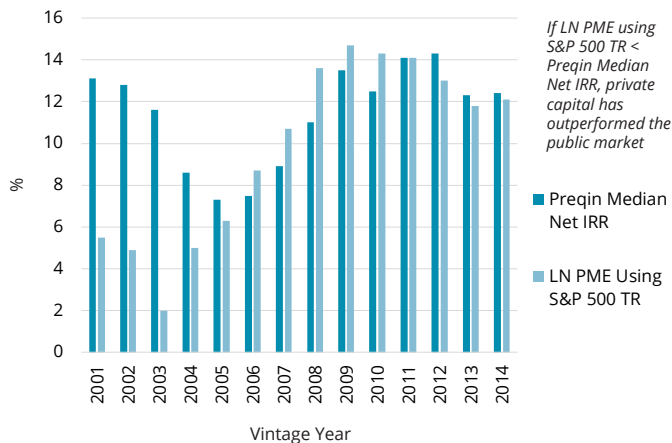
Source: Preqin

Fig. 20: KS PME: Private Capital - Asia & Rest of World (As at 30 September 2017)



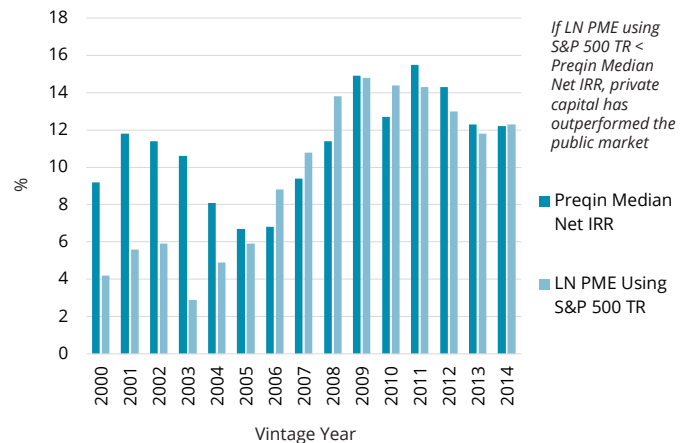
Source: Preqin

Fig. 21: LN PME: Private Capital - All Regions (As at 30 September 2017)



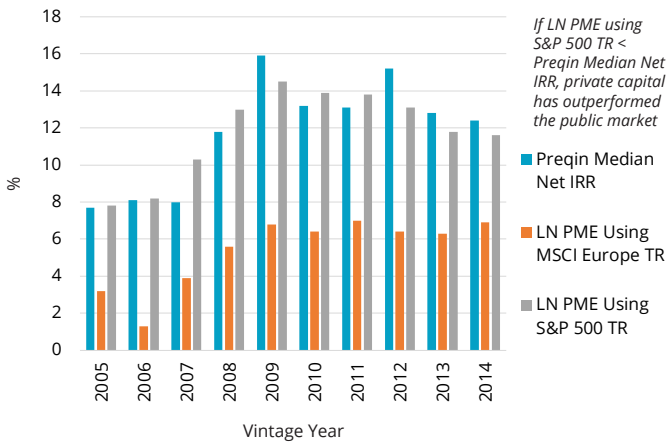
Source: Preqin

Fig. 22: LN PME: Private Capital - North America (As at 30 September 2017)



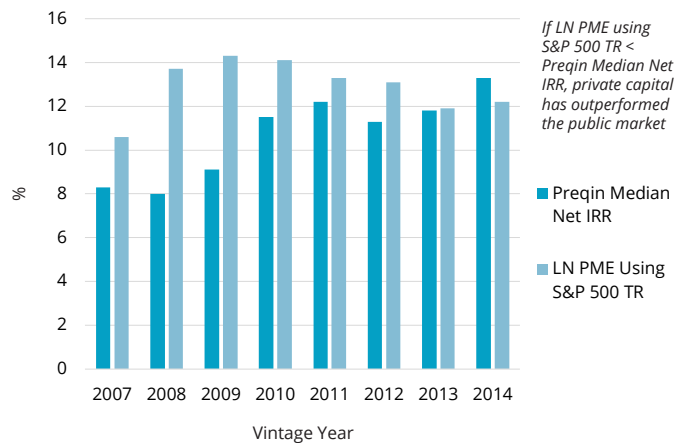
Source: Preqin

Fig. 23: LN PME: Private Capital - Europe (As at 30 September 2017)



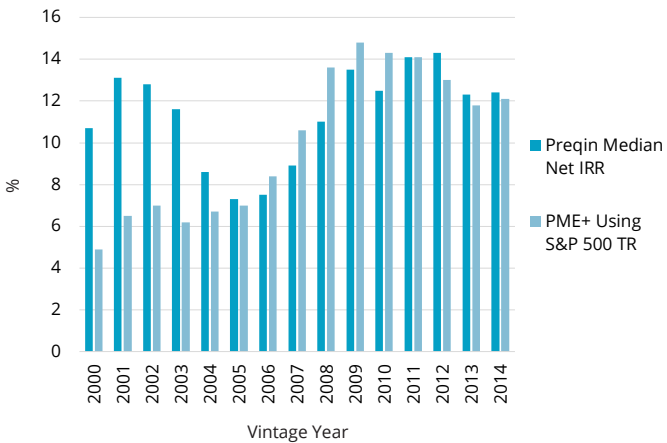
Source: Preqin

Fig. 24: LN PME: Private Capital - Asia & Rest of World (As at 30 September 2017)



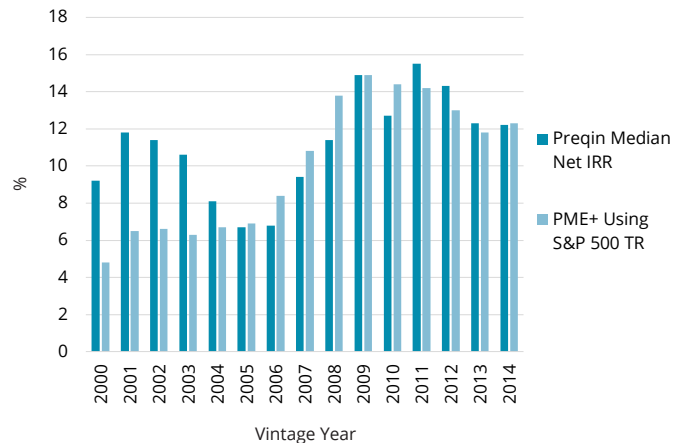
Source: Preqin

Fig. 25: PME+: Private Capital - All Regions (As at 30 September 2017)



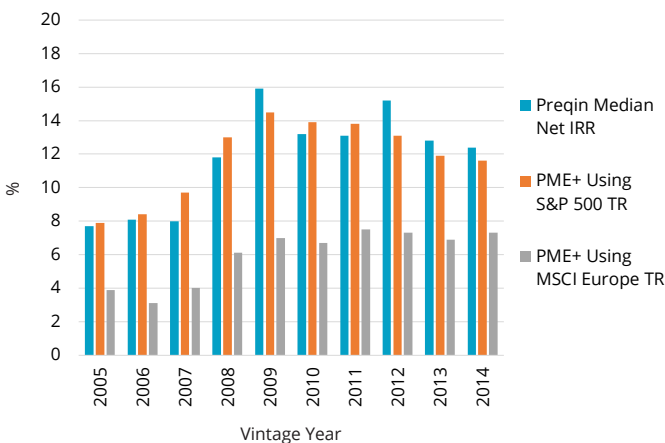
Source: Preqin

Fig. 26: PME+: Private Capital - North America (As at 30 September 2017)



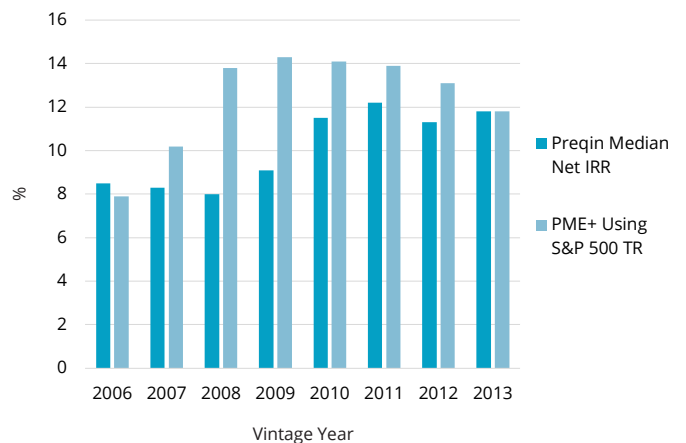
Source: Preqin

Fig. 27: PME+: Private Capital - Europe (As at 30 September 2017)



Source: Preqin

Fig. 28: PME+: Private Capital - Asia & Rest of World (As at 30 September 2017)



Source: Preqin