PRIVATE CAPITAL PERFORMANCE UPDATE:

Q2 2018

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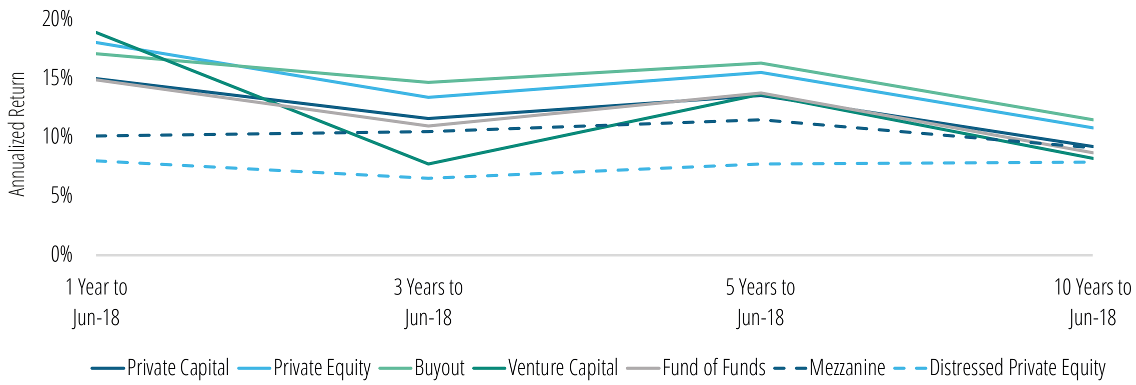
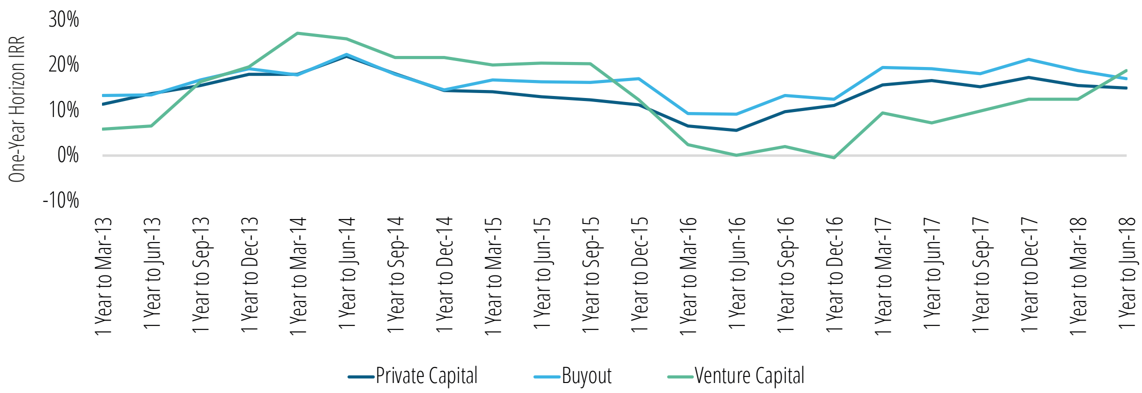
Fig. 1: Private Equity Horizon IRRs by Fund Type



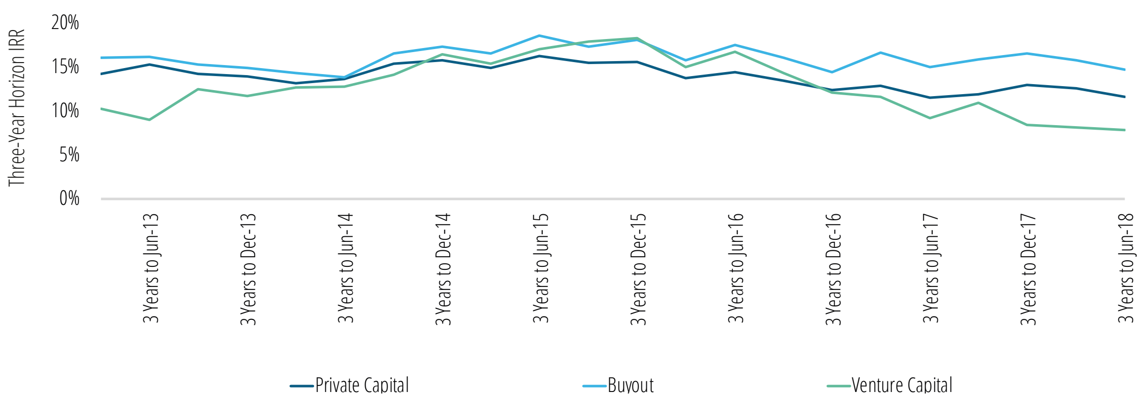
Source: Preqin Pro. Data as of 30 June 2018

Fig. 2: Rolling One-Year Horizon IRRs by Fund Type



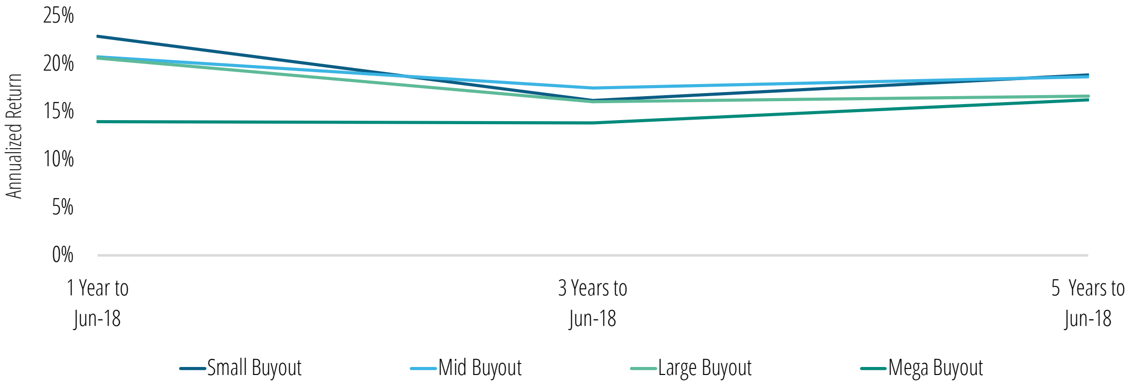
Source: Preqin Pro. Data as of 30 June 2018

Fig. 3: Rolling Three-Year Horizon IRRs by Fund Type



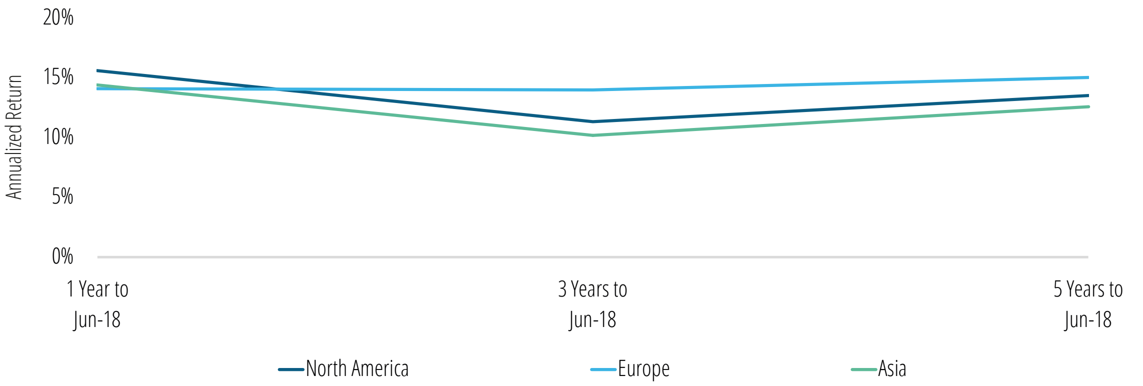
Source: Preqin Pro. Data as of 30 June 2018

Fig. 4: Buyout Fund Horizon IRRs by Size*



Source: Preqin Pro. Data as of 30 June 2018

Fig. 5: Private Capital Horizon IRRs by Fund Primary Geographic Focus



Source: Preqin Pro. Data as of 30 June 2018

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 10,000 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 $201-500mn, Large Buyout > $500mn
Vintage 1997-2004: Small Buyout ≤ $300mn, Mid Buyout $301-750mn, Large Buyout $751mn-2bn, Mega Buyout > $2bn
Vintage 2005-2018: Small Buyout ≤ $500mn, Mid Buyout $501-1,500mn, Large Buyout $1,501mn-4.5bn, Mega Buyout > $4.5bn

Fig. 6: Private Capital Assets under Management by Vintage Year

Vintage Year	Dry Powder ($bn)	Unrealized Value ($bn)
2000	3.3	1.7
2001	3.1	1.4
2002	2.8	0.7
2003	2.0	2.3
2004	2.4	3.6
2005	8.4	19.8
2006	15.3	72.7
2007	23.2	134.9
2008	16.4	169.9
2009	6.9	86.5
2010	13.9	150.8
2011	13.6	323.9
2012	22.4	396.2
2013	55.3	474.5
2014	106.7	621.6
2015	226.4	584.8
2016	453.8	409.7
2017	588.3	211.2
2018	521.8	61.2

Source: Preqin Pro. Data as of 30 June 2018

Fig. 7: Private Capital Assets under Management by Geographic Focus

Geographic Focus	Dry Powder ($bn)	Unrealized Value ($bn)
North America	1,158.6	1,961.5
Europe	484.1	826.6
Asia	375.6	734.3
Latin America	18.0	61.7
Diversified Multi-Regional	25.9	55.9
Australasia	17.9	31.7
Middle East & Israel	9.9	29.0
Africa	9.2	27.3

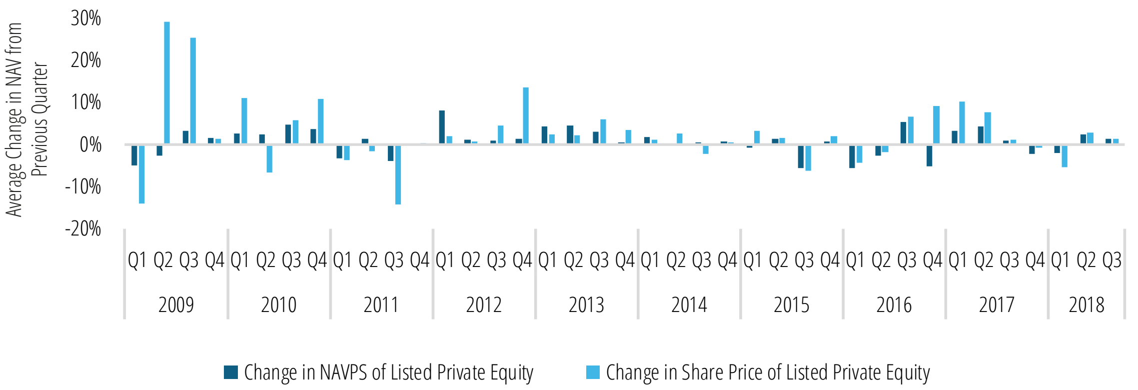
Source: Preqin Pro. Data as of 30 June 2018

Fig. 8: Private Capital Assets under Management by Fund Type

Fund Type	Dry Powder ($bn)	Unrealized Value ($bn)
Private Equity	1,213.3	2,197.6
Real Estate	322.6	586.2
Private Debt	307.1	462.4
Infrastructure	179.0	312.4
Natural Resources Only	77.2	169.2

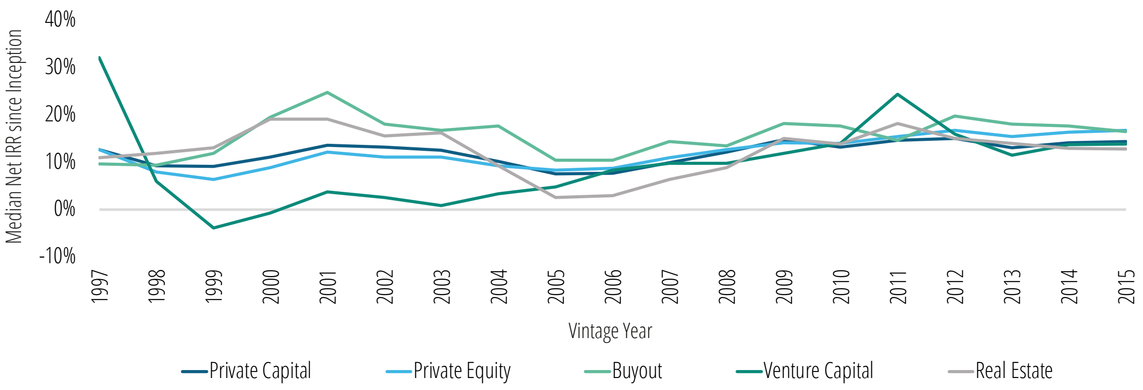
Source: Preqin Pro. Data as of 30 June 2018

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



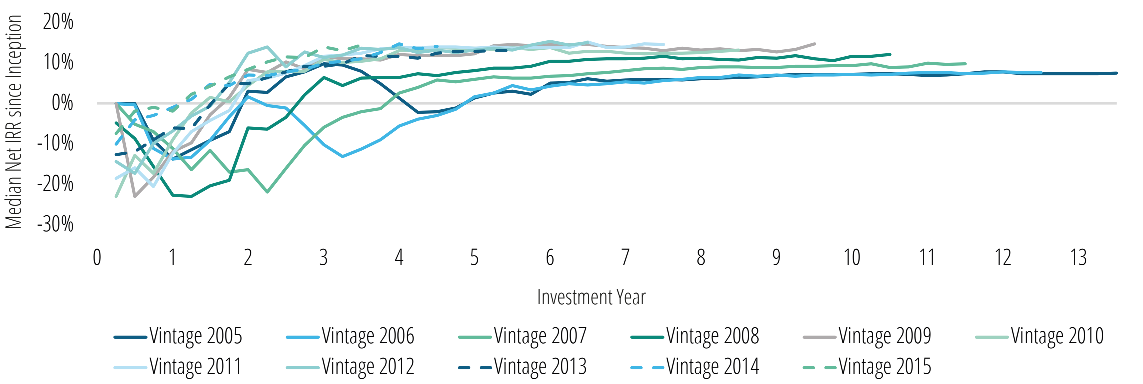
Source: Preqin Pro. Data as of 30 June 2018

Fig. 10: Private Capital Median Net IRRs by Fund Type



Source: Preqin Pro. Data as of 30 June 2018

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



Source: Preqin Pro. Data as of 30 June 2018

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.

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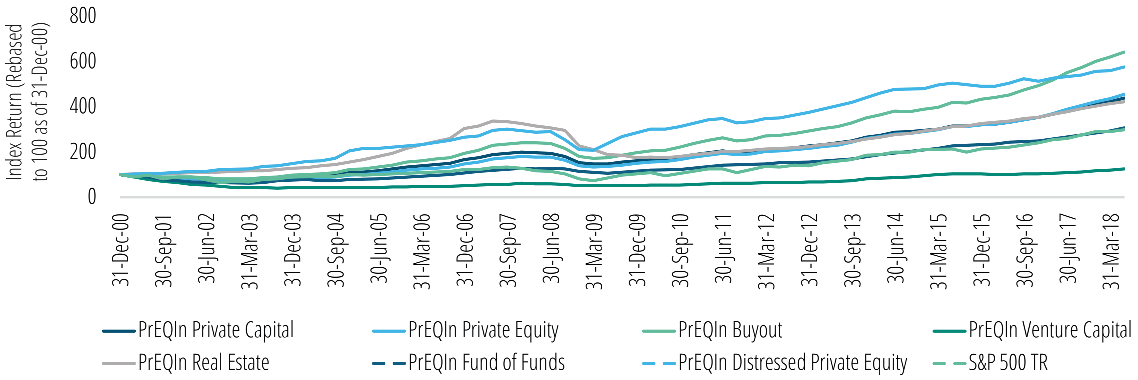
www.preqin.com/privateequity

Fig. 12: PrEQIn Quarterly Index: All Strategies vs. S&P 500 TR Index (Rebased to 100 as of 31 December 2000)



Source: Preqin Pro. Data as of 30 June 2018

Fig. 13: Consistent Top Performing Buyout Fund Managers

Firm	Headquarters	Total Funds Raised in Past 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
Veritas Capital	US	6,585	5	5	0	1.00
Brookfield Capital Partners	Canada	11,500	3	3	0	1.00
Egeria Capital Management	Netherlands	1,722	3	3	0	1.00
Main Capital Partners	Netherlands	431	3	3	0	1.00
Morgan Stanley Global Private Equity	US	2,718	5	4	1	1.20
Nautic Partners	US	1,441	4	3	1	1.25
Wynnchurch Capital Partners	US	1,840	4	3	1	1.25
FIMI	Israel	1,920	6	5	0	1.33
Chequers Capital	France	2,413	3	2	1	1.33
Industrial Growth Partners	US	1,400	3	2	1	1.33
MBK Partners	South Korea	8,870	3	2	1	1.33
The Growth Fund	Australia	645	3	2	1	1.33
Water Street Healthcare Partners	US	1,615	3	2	1	1.33
Vista Equity Partners	US	37,030	8	6	1	1.38
Flexpoint Ford	US	1,314	5	3	2	1.40
TA Associates	US	12,112	12	9	1	1.42
Hellman & Friedman	US	36,300	8	5	2	1.50
Inflexion Private Equity Partners	UK	6,331	6	4	1	1.50
Altor	Sweden	2,889	4	3	0	1.50
Platinum Equity	US	11,750	4	3	0	1.50
AUCTUS Management	Germany	503	4	2	2	1.50
Baird Capital Partners	US	783	4	2	2	1.50
Harvest Partners	US	3,916	4	2	2	1.50
ONCAP	Canada	1,883	4	2	2	1.50

Source: Preqin Pro. Data as of 30 June 2018

Fig. 14: Consistent Top Performing Growth Fund Managers

Firm	Headquarters	Total Funds Raised in Past 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	11,371	5	4	1	1.20
Synova Capital	UK	535	3	2	1	1.33
KJK Capital	Finland	313	3	2	1	1.33
Summit Partners	US	8,065	3	1	2	1.67
Frontier Capital	US	1,340	3	1	2	1.67
Insight Venture Partners	US	16,410	8	3	4	1.75
LLR Partners	US	2,150	4	1	3	1.75
Technology Crossover Ventures	US	4,730	5	2	2	1.80
JMI Equity	US	3,105	5	2	2	1.80
Spectrum Equity	US	3,055	6	2	3	1.83
CDH Investments	China	8,382	7	3	1	2.00
Banc Funds Company	US	536	9	2	5	2.00
PENM Partners	Vietnam	256	4	2	1	2.00
Argosy Private Equity	US	520	5	1	3	2.00
TPG	US	43,576	3	1	1	2.00
Genesis Capital	Hong Kong	1,125	3	0	3	2.00
Amundi Private Equity	France	556	3	0	3	2.00

Source: Preqin Pro. Data as of 30 June 2018

Fig. 15: Consistent Top Performing Venture Capital Fund Managers

Firm	Headquarters	Total Funds Raised in Past 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	1,178	3	3	0	1.00
Click Ventures	Hong Kong	15	3	3	0	1.00
Cottonwood Technology Fund	US	37	3	3	0	1.00
G Squared	US	500	3	3	0	1.00
Merus Capital	US	193	3	3	0	1.00
Avalon Ventures	US	402	6	5	1	1.17
OrbiMed Advisors	US	5,164	5	4	1	1.20
Sequoia Capital	US	22,547	5	4	1	1.20
CRCM Ventures	US	104	4	3	1	1.25
Pontifax	Israel	608	4	3	1	1.25
Matrix Partners	US	1,650	6	4	2	1.33
AJU IB Investment	South Korea	793	3	2	1	1.33
Forbion Capital Partners	Netherlands	1,003	3	2	1	1.33
Foresite Capital	US	1,518	3	2	1	1.33
Future Venture Capital	Japan	45	3	2	1	1.33
New Leaf Venture Partners	US	338	3	2	1	1.33
Peregrine Ventures	Israel	75	3	2	1	1.33
Third Rock Ventures	US	1,558	3	2	1	1.33
Battery Ventures	US	3,850	11	8	2	1.36
CRV	US	1,688	5	3	2	1.40
Vickers Venture Partners	Singapore	367	5	3	2	1.40

Source: Preqin Pro. Data as of 30 June 2018

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

Firm	Headquarters	Total Funds Raised in Past 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
ATP Private Equity Partners	Denmark	4,498	4	4	0	1.00
Twin Bridge Capital Partners	US	453	3	3	0	1.00
Bowside Capital	US	116	3	2	1	1.33
SwanCap Partners	Germany	2,402	3	2	1	1.33
Weathergage Capital	US	564	8	6	1	1.38
Bay Hills Capital	US	143	6	3	3	1.50
HQ Capital International	US	2,559	5	3	1	1.80
TrueBridge Capital Partners	US	1,725	6	3	1	1.83
Greenspring Associates	US	5,916	7	4	1	1.86
Private Advisors	US	2,396	8	3	3	1.88
Industry Ventures	US	3,197	9	4	3	1.89
Siguler Guff	US	7,731	20	10	2	1.95
LGT Capital Partners	Switzerland	17,228	15	5	6	2.00
Fort Washington Capital Partners	US	1,446	10	3	4	2.00
Gerber/Taylor Management	US	639	8	3	3	2.00
Nord Holding	Germany	1,088	7	3	2	2.00
North Sky Capital	US	361	7	3	2	2.00
Accolade Partners	US	800	5	3	0	2.00
Spur Capital Partners	US	374	5	3	0	2.00
Altamar Capital Partners	Spain	2,359	5	2	2	2.00
Darwin Ventures	US	216	3	1	1	2.00

Source: Preqin Pro. Data as of 30 June 2018

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 10,000 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 4,500 funds.

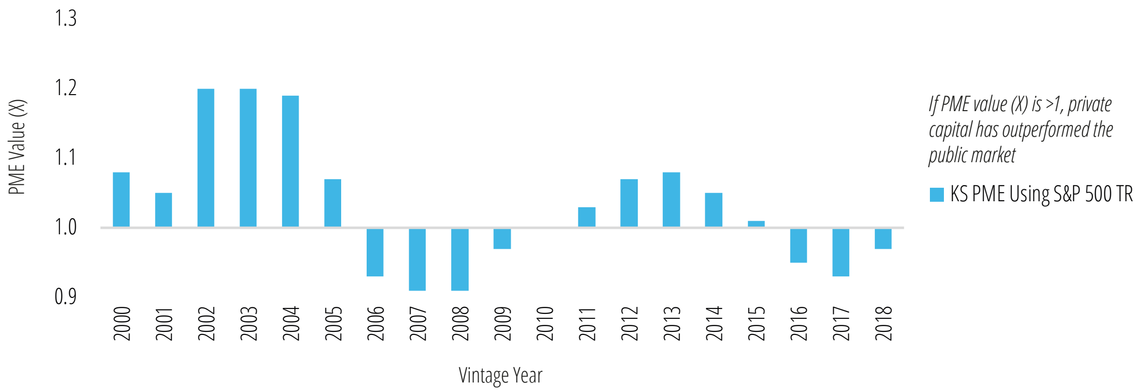
The table below provides an overview of the three PME methodologies Preqin now offers, along with their specific strengths and weaknesses. Having the ability to employ a number of different PME methodologies is highly desirable to an investor, but it is also important to maintain awareness that each 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	Calculated by discounting the private capital fund cash flows by the public market index value. The discounted distributions plus the current remaining value are divided by the discounted contributions to obtain the ratio.	The calculation looks at the ratio of outflows to inflows as opposed to generating an IRR, which is time dependent and easily manipulated. Easy to interpret.	Ignores the timings of cash flows.
LN PME (Long-Nickels)	Annualized Rate	Estimated PME IRR < Private Capital Fund IRR	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. IRR calculation uses same contributions and distributions as private capital fund, but with a different final period remaining value.	LN PME IRR is directly comparable to the private capital fund IRR, allowing an apples-to-apples comparison.	IRR sensitivity to early distributions. Large distributions could cause a negative PME final period remaining value, making PME IRR calculation computationally impossible.
Capital Dynamics PME+	Annualized Rate	Estimated PME IRR < Private Capital Fund IRR	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.	As for LN PME, with the added benefit of avoiding a final period negative remaining value, making PME IRR calculation possible in more cases.	PME+ does not match the cash flows perfectly.

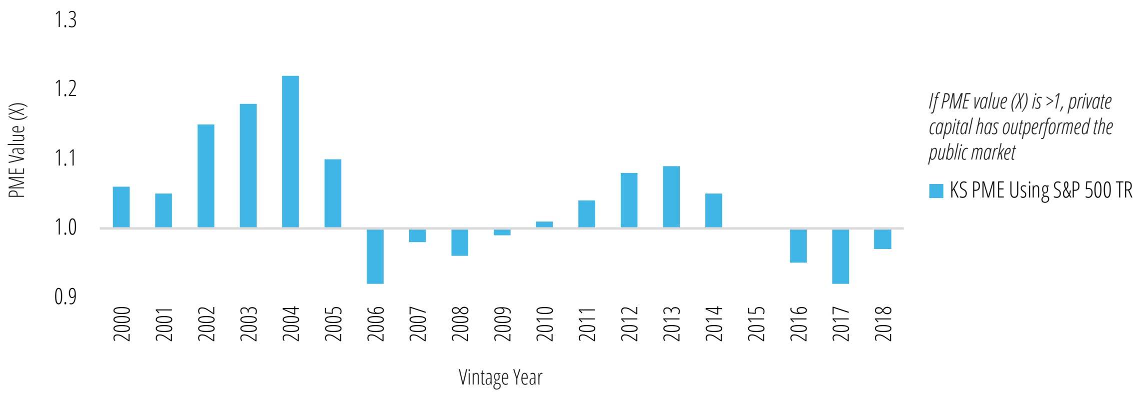
Source: Preqin Pro. Data as of 30 June 2018

Fig. 17: KS PME: Private Capital – Global



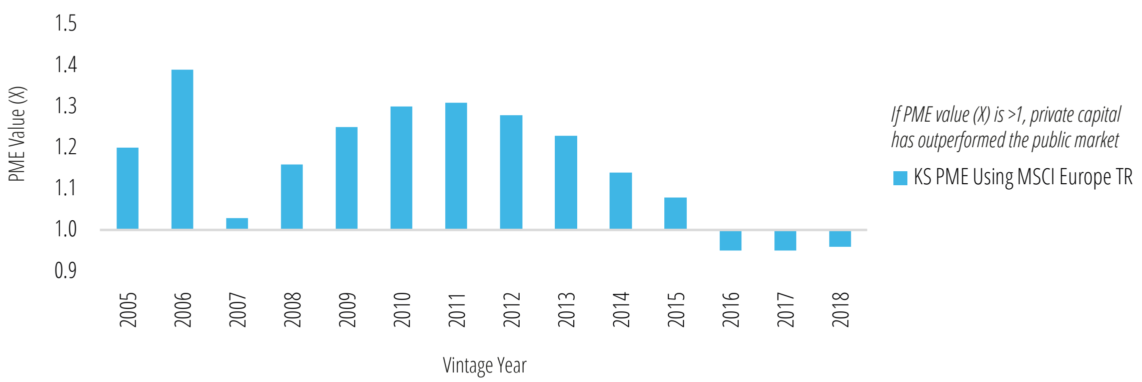
Source: Preqin Pro. Data as of 30 June 2018

Fig. 18: KS PME: Private Capital – North America



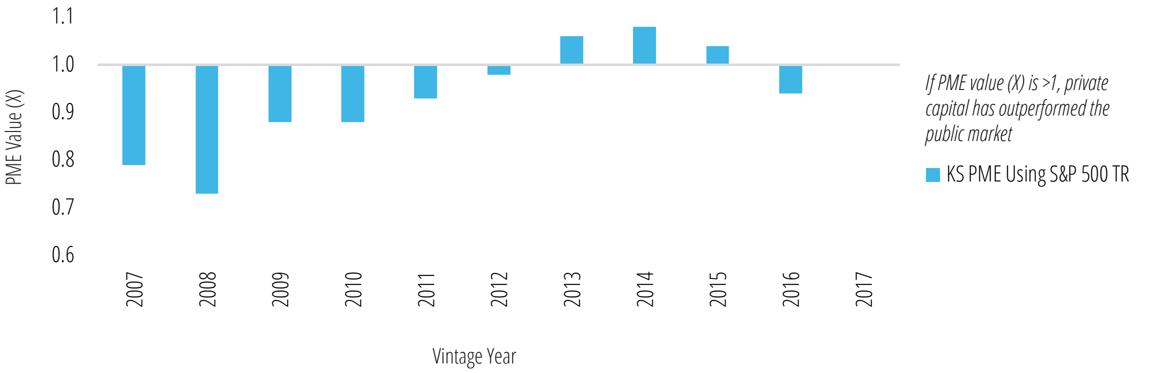
Source: Preqin Pro. Data as of 30 June 2018

Fig. 19: KS PME: Private Capital – Europe



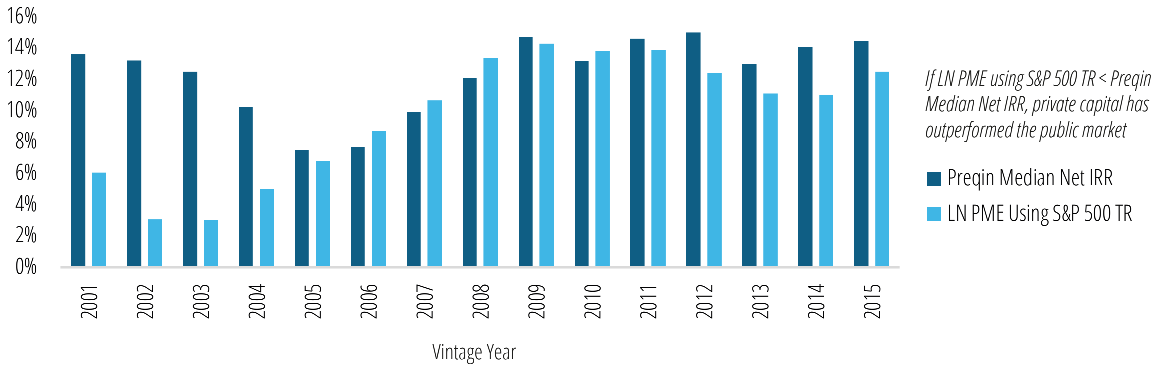
Source: Preqin Pro. Data as of 30 June 2018

Fig. 20: KS PME: Private Capital – Asia & Rest of World



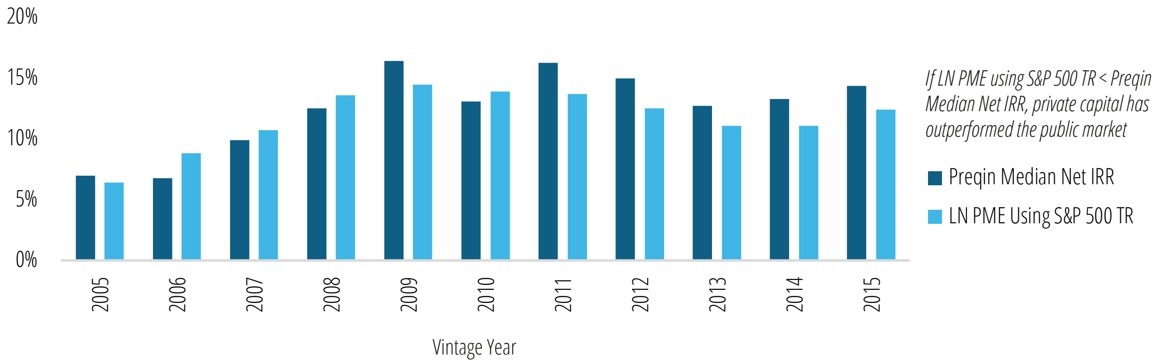
Source: Preqin Pro. Data as of 30 June 2018

Fig. 21: LN PME: Private Capital – Global



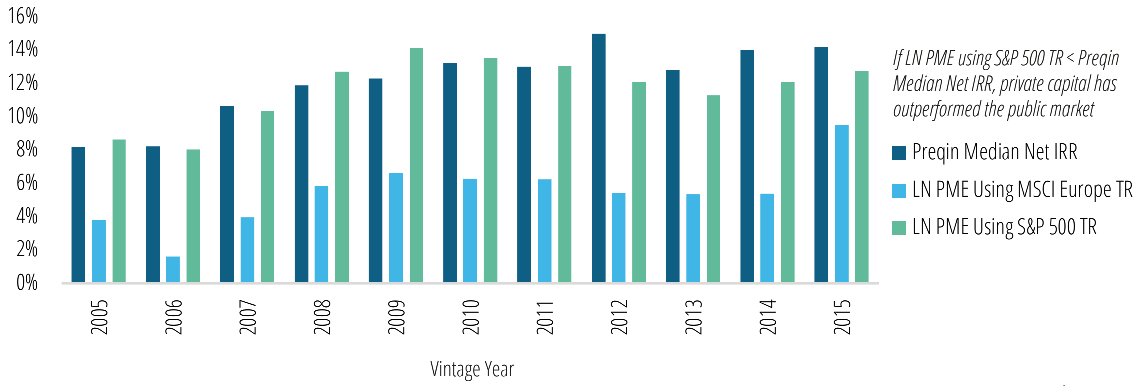
Source: Preqin Pro. Data as of 30 June 2018

Fig. 22: LN PME: Private Capital – North America



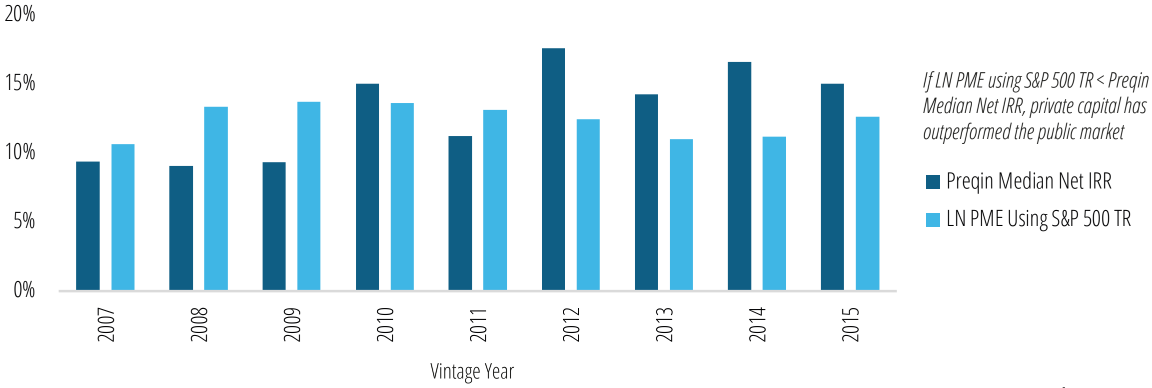
Source: Preqin Pro. Data as of 30 June 2018

Fig. 23: LN PME: Private Capital – Europe



Source: Preqin Pro. Data as of 30 June 2018

Fig. 24: LN PME: Private Capital – Asia & Rest of World

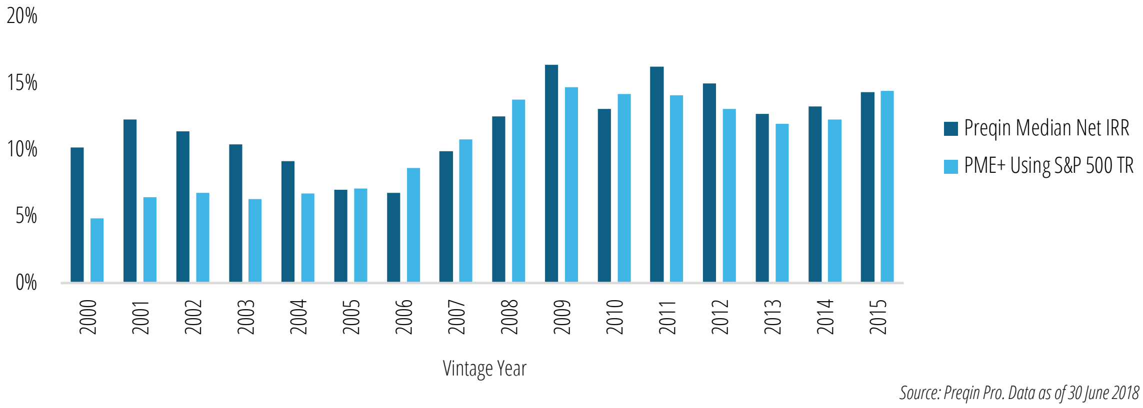


Source: Preqin Pro. Data as of 30 June 2018

Fig. 25: PME+: Private Capital – Global

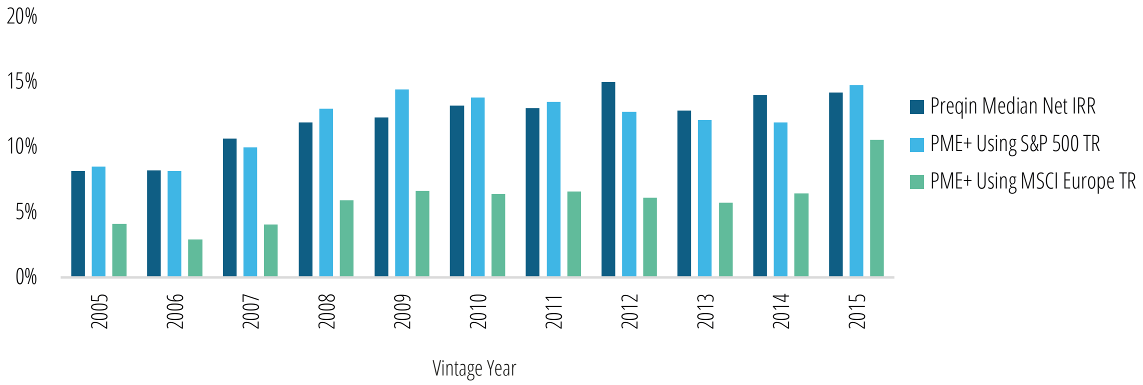
Source: Preqin Pro. Data as of 30 June 2018

Fig. 26: PME+: Private Capital – North America



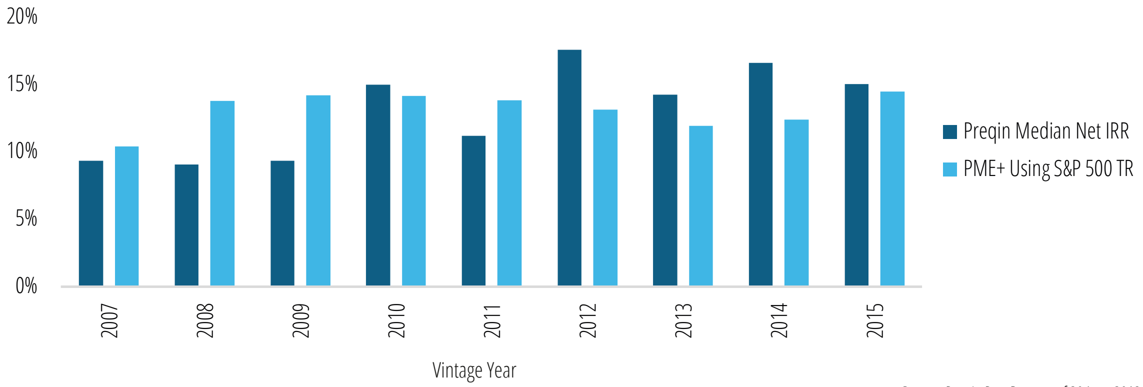
Source: Preqin Pro. Data as of 30 June 2018

Fig. 27: PME+: Private Capital – Europe



Source: Preqin Pro. Data as of 30 June 2018

Fig. 28: PME+: Private Capital – Asia & Rest of World



Source: Preqin Pro. Data as of 30 June 2018

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