

MEMORANDUM

TO: Members of the Investment Committee, CalPERS
FROM: Meketa Investment Group
DATE: February 15, 2022
RE: Semi-Annual Private Equity Performance Review as of December 31, 2021

In our role as the Board Private Equity Consultant, Meketa Investment Group (“Meketa”) conducted a semi-annual performance review of the Private Equity Portfolio (“the Portfolio”) for the period ended December 31, 2021¹ based on data provided by State Street and selected reports from Staff. This memorandum provides the Portfolio performance data and information on key policy parameters, along with observations on staff activities during the time period.

Performance

Private Equity, as well as other asset classes, had strong performance in the second half of 2021, with both the CalPERS’ Portfolio and the Policy Benchmark generating very strong positive returns for the 1-year period. Performance of the Portfolio and the Policy Benchmark across longer time periods has also increased recently. Compared to our previous semi-annual report, the Portfolio’s performance now outpaces the Policy Benchmark for the three most recent time horizons below. We would note that recent public and private equity market performance has been particularly strong through the COVID-19 recovery but is unlikely to remain at such high levels given historic trends.

	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
CalPERS PE Portfolio²	39.3	17.3	16.5	13.9
<i>Policy Benchmark³</i>	31.4	14.6	15.9	16.1
<i>FTSE Global All Cap + 150 bp⁴</i>	31.4	14.6	15.4	14.2
Excess vs. Policy Benchmark	7.9	2.7	0.6	-2.2
Excess vs. FTSE Global All Cap + 150 bps	7.9	2.7	1.1	-0.3

¹ State Street’s CalPERS Private Equity performance analysis for the period ended December 31, 2021, reported with a 1-quarter lag.

² Source: State Street. CalPERS returns are reported as time-weighted.

³ The current Policy Benchmark is a Custom FTSE Global All Cap ex-Tobacco Net of Tax Index + 150 basis points, lagged by one quarter. Previous benchmark was blend FTSE US + FTSE AW ex US + 3% lagged 1 quarter from September 2011 to June 2018, Wilshire 2500 ex-tobacco +3% between July 2009 and September 2011, and the Custom Young Fund Index prior to July 2009.

⁴ Figures are one quarter lagged, time weighted. FTSE Global All Cap returns are based on the FTSE Global All Cap Index + 150 basis points through October 2011, the FTSE Global All Cap Net of Tax (US RIC) Index + 150 basis points through March 2015, and thereafter on the FTSE Global All Cap ex-Tobacco Net of Tax Index + 150 basis points.



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As we have noted in prior reports, private equity performance is reported with a significant delay compared to publicly traded assets. As such, the Portfolio and the Policy Benchmark performance as of December 31, 2021 are each reported with a one-quarter lag (i.e., values through September 30, 2021). Additionally, private equity asset values tend to be less volatile, both in up as well as down markets, compared to publicly traded asset values. In other words, private equity assets tend to fall less in declining public equity markets and increase more slowly in rapidly rising public equity markets. Please note that due to the timing of this report, the Preqin All PE Global benchmark (a peer index) as of September 30, 2021 was not yet available so is not included in the table above.

The Portfolio's NAV as of December 31, 2021, was \$49.0 billion, an increase of \$6.7 billion (net of cash flows) compared to the June 30, 2021 NAV of \$38.8 billion. The current NAV represents 9.8% of the Total Fund, compared to the 8% target (increased to 13% in November 2021). As we noted above, the Portfolio's NAV is calculated based upon September 30, 2021 values, while the overall CalPERS portfolio includes publicly traded assets valued as of December 31, 2021. We would expect that when December 31, 2021 private equity values are received, the Portfolio's NAV will have an additional uplift from September 30 values.

Strategy¹

	NAV (\$M)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Buyouts	35,967	40.1	17.1	17.5	14.6
Credit	2,228	26.8	6.8	6.6	9.3
Growth/Expansion	8,116	40.9	21.5	19.8	15.0
Opportunistic	2,086	42.2	19.4	15.4	13.7
Venture	495	31.9	19.4	12.9	9.1
Other ²	154	NA	NA	NA	NA
CalPERS PE Portfolio	49,046	39.3	17.3	16.5	13.9

While the total Portfolio one-year performance was slightly lower than our prior report (39.3% vs. 43.8% previously), the Portfolio has continued its strong recovery from the COVID-19 market downturn. Across longer time periods, the Portfolio's performance has continued to increase. Buyout is the key driver for the portfolio and its performance has improved, providing attractive returns overall. Opportunistic, Venture, and Growth/Expansion strategies have generated particularly strong returns in recent periods, while Credit continues to be a drag on performance across all time periods.

¹ Source: State Street. All trailing returns included in this report are time-weighted.

² Includes currency and stock holdings.



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Structure¹

	NAV (\$M)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Customized Investment Accounts	9,487	32.5	17.5	15.1	13.0
Co-Investments / Direct	4,515	36.3	14.2	18.3	12.4
Fund of Funds / Secondaries	1,898	30.2	10.8	10.2	10.2
Funds	32,991	42.3	18.2	17.4	14.7
Other ²	154	NA	NA	NA	NA
CalPERS PE Portfolio	49,046	39.3	17.3	16.5	13.9

As mentioned previously, the Portfolio's performance improvement has occurred broadly across the portfolio. The 3-, 5-, and 10-year performance for each strategy has improved compared to prior reports. The Funds portfolio is the largest portfolio by structure, and the key driver of overall performance. The CIA and Co-Investment portfolios are younger and will likely have some variation in performance until they develop more maturity. The Fund of Funds portfolio has underperformed across all time periods, in part due to their higher fee loads.

Performance by Geography³

	NAV (\$M)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
United States	35,018	40.7	17.3	16.4	13.9
Developed International	11,221	40.1	21.8	21.7	16.8
Emerging Markets	2,653	24.4	7.9	8.4	10.1
Other ⁴	154	NA	NA	NA	NA
CalPERS PE Portfolio	49,046	39.3	17.3	16.5	13.9

While the Portfolio has been primarily driven by the US investments, Developed International, primarily Europe, has been a strong contributor to returns over time. Certain managers in the region have provided strong performance over the years. Emerging Markets had a more limited uplift recently, and longer-term results are impacted by the prior use of fund of funds (with comparatively high fees) to gain exposure to the region.

¹ Source: State Street. All trailing returns included in this report are time-weighted.

² Includes currency and stock holdings.

³ Source: State Street.

⁴ Includes currency and stock holdings.



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Implementation

For the second half of 2021, Staff completed 34 commitments totaling \$7.5 billion¹, and 58 commitments totaling \$12.3 billion from January 2021 through December 2021. Staff completed 11 no/low fee co-investments in the second half of 2021 by leveraging CalPERS' size and scale. Additionally, Staff has looked to add exposure to Growth/Expansion and Mid-size Buyouts in order to complement the existing exposure in Large and Mega Buyouts.

Key Policy Parameters

The Portfolio is compliant with key parameters related to strategy diversification as demonstrated in the table below. As stated previously, in November 2021 the Portfolio's asset target was increased to 13% from 8%

Strategy	NAV ² (\$M)	Percent of Total NAV (%)	CalPERS Target (%)	Target Range (%)
Buyout	35,967	73.3	70	60-80
Credit	2,228	4.5	5	0-10
Growth/Expansion	8,116	16.5	15	5-20
Opportunistic	2,086	4.3	10	0-15
Venture	495	1.0	1	0-7
Other ³	154	0.3	NA	NA
Total Portfolio	49,046	9.8⁴	8⁵	+/- 4

Conclusion

The Portfolio has continued to show strong near-term performance recently, while longer-term performance figures have also improved. Portfolio returns now exceed the Policy Benchmark over the 1-, 3-, and 5-year time periods. Additionally, the Portfolio, as a percent of CalPERS' total portfolio, has increased from 6.3% in June 2020, to nearly 10% as of December 2021 and has reached nearly \$50 billion in size. Asset growth has been driven by both strong underlying performance and Staff's activities to enhance the Portfolio by sourcing attractive investments, all while being in a work-from-home status. Staff has been executing on their strategic plan, specifically:

¹ See Appendix for list of investments completed in the second half of 2021.

² Source: State Street.

³ Includes currency and stock holdings.

⁴ PE portfolio NAV as a percent of total CalPERS portfolio as of 9/30/21.

⁵ The Private Equity target was increased from 8% to 13% in November 2021.



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- Consistent capital deployment – Staff has been committing at or above \$10 billion per year over the last two years.
- Increase cost efficiency – No/low fee co-investments and Customized Investment Accounts are an important and growing portion of the Portfolio.
- Add diversification to the Portfolio – Staff has been adding more Growth Equity and Mid-Market Buyout strategies to complement the Portfolio’s Large and Mega Buyout exposure.
- Maintain and enhance relationships with high quality managers – Staff has been able to invest meaningful capital with highly sought managers.

While CalPERS faces challenges in building the Portfolio, it also has opportunities given its scale, experience, and large investment team. Staff’s continued focus on deploying capital through lower cost investment structures will help mitigate overall fees.

The Appendix includes a list of investments completed during the second half of 2021, as well as some data and commentary on the private equity asset class for the third quarter of 2021.

Please do not hesitate to contact us if you have questions or require additional information.

SH/JC/SPM/jls



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Attachment

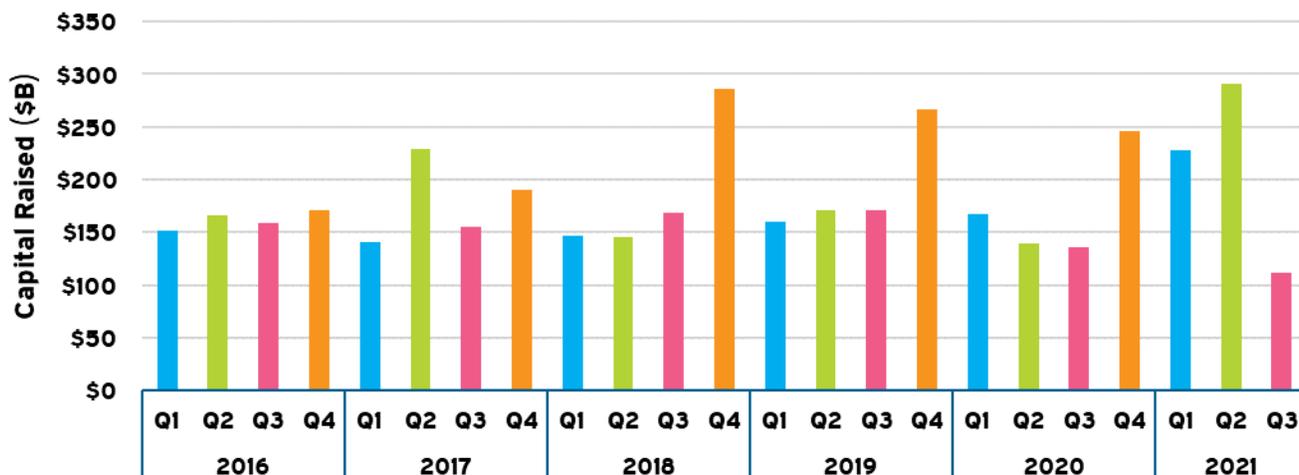
CalPERS Private Equity Completed Investments – H2 2021

Investment	Date Signed	Geography	Strategy	Commitment (\$M)
Trident IX	July 2021	Global	Buyout	500
KKR North America Fund XIII	July 2021	Global	Buyout	600
Insight Partners XII	July 2021	US	Growth Equity	600
Insight Partners XII - Buyout Annex	July 2021	US	Growth Equity	150
Grandval II (CIA)	July 2021	US	Growth Equity	250
Project Swaddle (Co-Investment)	July 2021	US	Buyout	12
GranTain Co-Invest (CIA)	July 2021	US	Growth Equity	200
Middlefield Road Private Opportunities (CIA)	July 2021	US	Growth Equity	800
Project Panther (Co-Investment)	July 2021	US	Buyout	75
Cedar Street Partners (CIA)	August 2021	US	Buyout	250
Springblue A	August 2021	Global	Venture	50
Springblue B	August 2021	Global	Venture	50
Providence Strategic Growth Encore	August 2021	US	Growth Equity	100
Advent Global Technology II	August 2021	Global	Buyout	150
WCAS Co-Invest (Co-Investment)	August 2021	US	Buyout	50
Project Laurel (Co-Investment)	August 2021	US	Buyout	7
H.I.G. Europe MM	September 2021	Europe	Buyout	119
Carlyle Partners VIII	September 2021	Global	Buyout	375
Project Stream (Co-Investment)	September 2021	US	Buyout	167
Sunrise Boulevard PE Partners (CIA)	September 2021	Global	Buyout	500
Summit Partners Growth Equity XI	September 2021	US	Growth Equity	400
Arsenal Capital VI	September 2021	US	Buyout	150
Arsenal Capital Growth	September 2021	US	Buyout	50
Project F1 (Co-Investment)	October 2021	US	Buyout	194
Greenleaf Co-Invest Partners (CIA)	October 2021	US	Buyout	375
Permira Growth Opportunities II	November 2021	Global	Growth Equity	155
Dragoneer Opportunities Fund VI	November 2021	Global	Growth Equity	50
Project Dogwood (Co-Investment)	November 2021	US	Growth Equity	50
Project Cherry (Co-Investment)	November 2021	Europe	Buyout	198
Project Shark (Co-Investment)	December 2021	US	Venture	55
Tiger Global Private Investment Partners XV	December 2021	Global	Growth Equity	300
Project Connect (Co-Investment)	December 2021	US	Buyout	110
Project Solitaire (Co-Investment)	December 2021	Global	Buyout	300
BRV Lotus Fund III	December 2021	Developed Asia	Growth Equity	100



Private Equity Market Commentary – Q3 2021

Global Fundraising¹

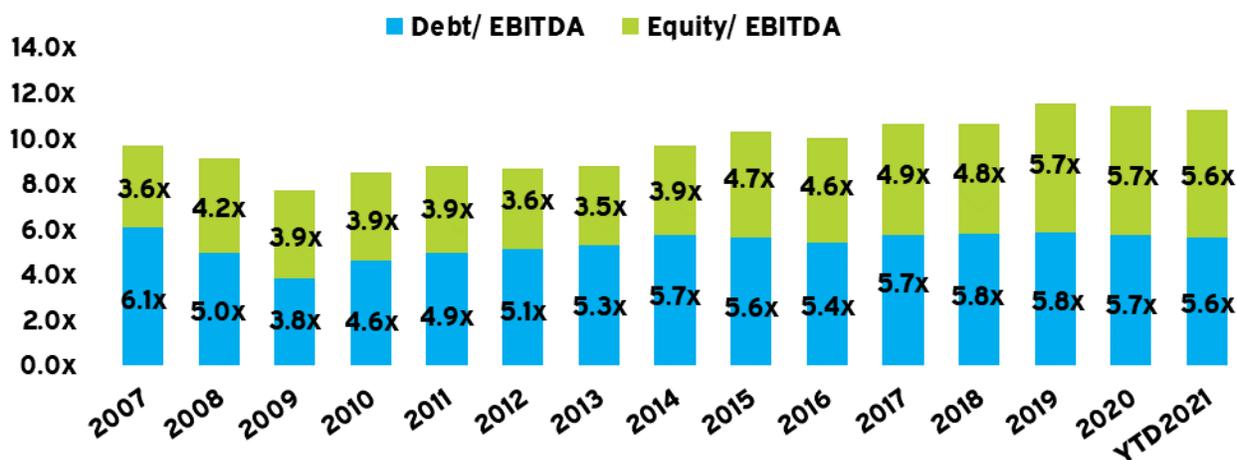


Fundraising activity for private equity funds significantly decreased in the third quarter of 2021, compared to the prior quarter, with \$112 billion raised, and marking the lowest fundraising total for a quarter over the last five years. Fundraising in the third quarter decreased 17.6% from the same period in 2020 and 61.5% from Q2 2021, suggesting that the post-pandemic rebound in activity may be starting to slow. The number of fund closings also decreased by 8.6%, to 435 funds, relative to Q3 2020, and decreased by 40% relative to the previous quarter. Despite signs of a possible moderation in the post-pandemic recovery in the global private equity industry, the asset class has demonstrated its resilience and capacity to innovate and respond to change. The fourth quarter will likely show stronger numbers due to seasonality that is typically observed. Fundraising continued to demonstrate signs of further capital consolidation with larger, more established managers increasing their market share and investors’ ongoing appetite for mega-buyout strategies. The average size of funds still in the market has been declining, indicating that smaller funds have been hardest hit by the current environment. That said, differentiation is increasingly important with the private equity industry more competitive than ever.

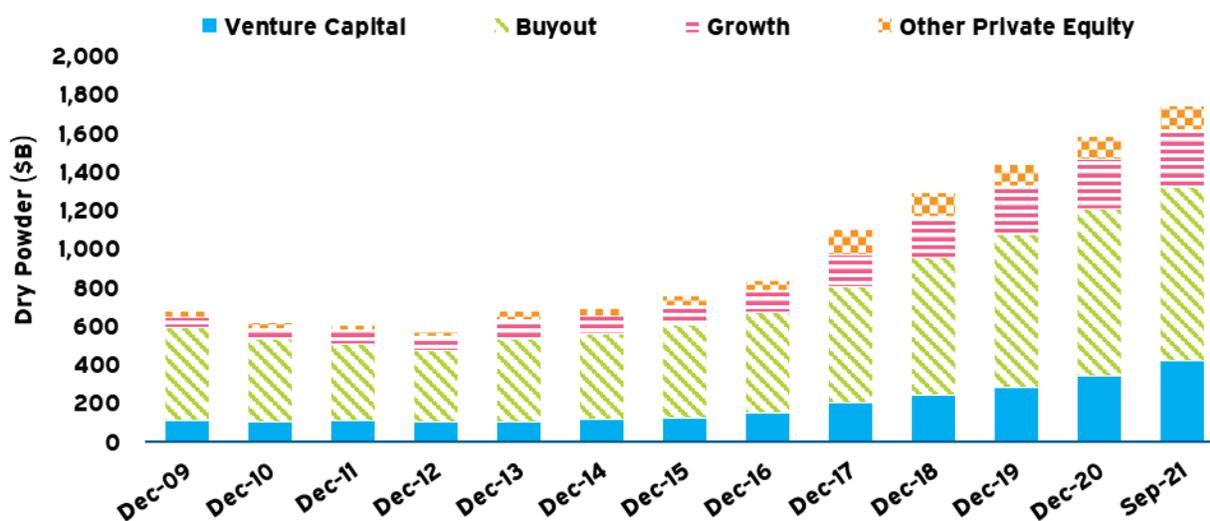
¹ Preqin.



Purchase Price Breakdown, All LBOs¹



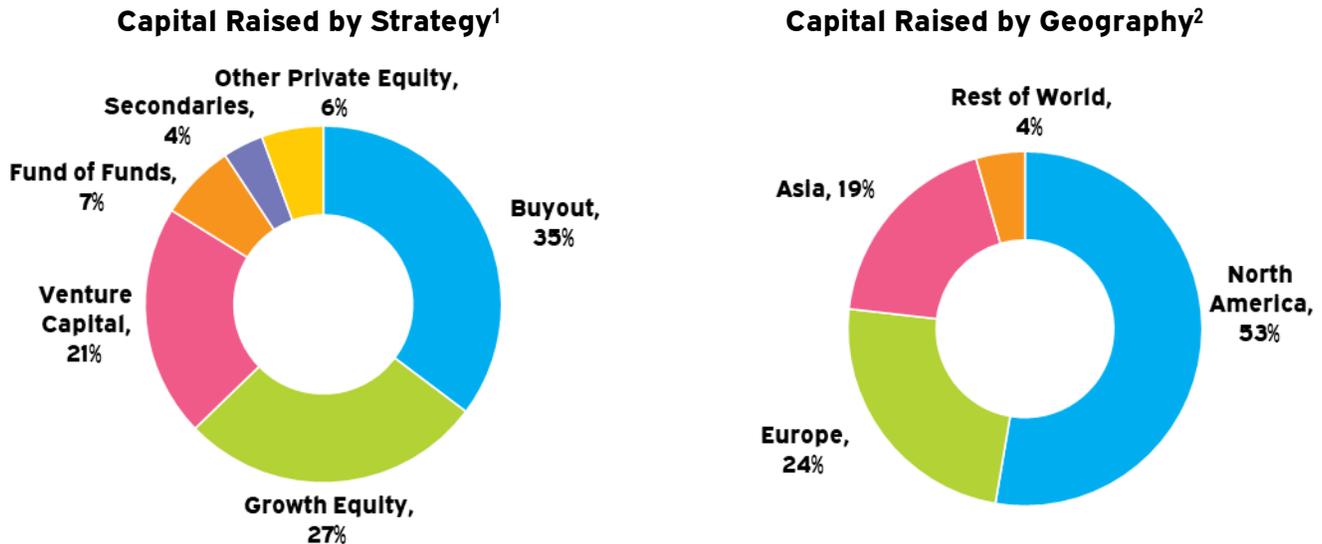
Dry Powder by Fund Type²



Relative to 2020, the private equity average purchase price multiple decreased slightly over the first three quarters of 2021, to 11.2x EBITDA. Equity contribution (relative to total purchase price) remains at approximately 50%, indicating that total purchase prices comprise roughly equal amounts of debt and equity. However, during the three months ended September 30, 2021, the average purchase price multiple increased to 12.3x EBITDA with 55% average equity contribution, supported by a continued record level of dry powder, which still surpasses the year-end level in 2020. Dry powder levels will remain high as long as more capital is being raised than is being deployed, and investors may expect to continue to see high purchase prices as a result of the high levels of capital competing for deals.

¹ S&P.

² Preqin.



Buyout funds continued to be the most popular private equity sub-strategy but decreased from 52% of all private equity capital raised in the second quarter of 2021 to 35% in the third quarter. Alternatively, Growth Equity strategies, as a percentage of total capital raised, significantly increased from Q2 2021, jumping from 7% to 27% in the third quarter. Venture Capital funds increased from 17% to 21% of private equity capital raised. Fund of Funds, Secondaries, and Other Private Equity, which includes co-investment and hybrid vehicles, stayed relatively consistent through the third quarter compared to the previous quarter.

North America-focused vehicles continued to represent the majority of funds raised during the third quarter, representing 53% of total capital. This is generally consistent with the 55% in the prior quarter but represents a further decline from 60% in the first quarter as private equity investors continue to re-emphasize commitments to Asia and Europe, which have combined to represent 43% of capital raised during the last two quarters. Overall, private equity investors continued to favor commitments to North America-focused funds, but investor appetite for Asia and Europe remains strong. However, in Asia specifically, the threat of heavy-handed government intervention in private companies has made it considerably more difficult for investors and managers to assess the risk of deploying long-term private capital into the region. Asia managed to secure an additional \$21 billion in fundraising via 51 funds in Q3 2021, but the outlook could be tempered going forward if current market developments persist.

¹ Preqin.

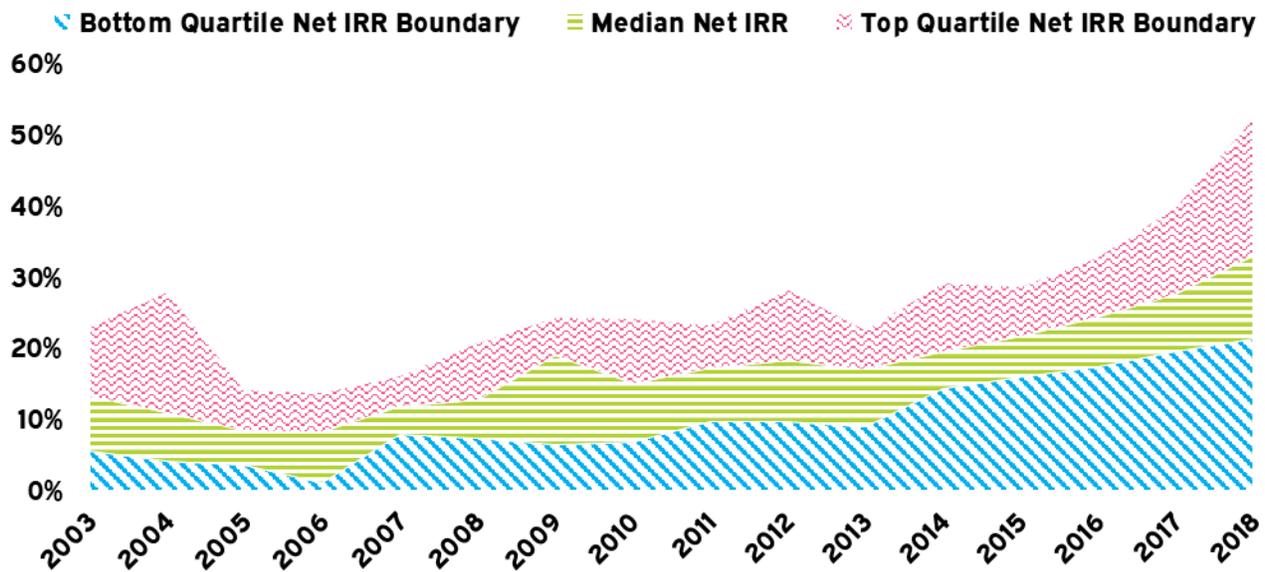
² Preqin.



Private Equity Performance by Horizon¹

Horizon	Private Equity (%)	Buyout (%)	Venture Capital (%)	Growth Equity (%)
1 Year to 6/2021	54.2	57.8	53.6	37.9
3 Years to 6/2021	24.0	25.5	25.2	18.8
5 Years to 6/2021	21.3	22.4	20.3	21.0
10 Years to 6/2021	16.7	17.7	15.3	16.8

Private Equity Performance by Vintage Year²



Recent private equity returns have been very strong, with Private Equity generating a 54.2% IRR over the past year, following the outbreak of the COVID-19 pandemic in Q1 2020 and write-downs across most portfolios at that time related to the associated uncertainty. In general, performance has been strong in each vintage year since the Global Financial Crisis. Buyout, Venture Capital, and Growth Equity funds have all generally performed well over the various horizons on an absolute basis, with Buyout funds outperforming Venture and Growth funds over multiple time horizons. The spread between first and third quartile performance in private equity has grown consistently since the Global Financial Crisis; 2007 vintage funds reported an 8.2% spread while 2018 vintage funds reported a 31.1% spread.

¹ Prequin Horizon IRRs as of 6/30/2021. Data as of 9/30/21 is not yet available.

² Prequin Global Quartile Returns as of 9/30/2021.