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MEMORANDUM

TO: Members of the Investment Committee, CalPERS
FROM: Meketa Investment Group
DATE: September 18, 2023
RE: Quarterly Private Equity Performance Review, as of June 30, 2023

In our role as the Board Private Equity Consultant, Meketa Investment Group ("Meketa") conducted an annual performance review of the Private Equity Portfolio ("the Portfolio") for the period ended June 30, 2023[1] 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 and resources during the time period.

Performance

Private Equity, along with other asset classes, continued to show diminished returns through the second quarter of 2023, with both the CalPERS' Portfolio and the Policy Benchmark generating negative returns for the trailing one-year period for the third straight quarter. Performance of the Portfolio and the Policy Benchmark across longer time periods has stabilized compared to prior-period reports. We also note that the Portfolio's performance continued to outpace the Policy Benchmark, albeit by a smaller margin relative to prior-period reports, for each of the time horizons shown below.

Private Equity Performance as of June 30, 2023[1]

	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
CalPERS PE Portfolio[2]	**-2.3**	**19.5**	**11.8**	**11.8**
Policy Benchmark[3]	*-5.9*	*18.0*	*8.7*	*11.4*
FTSE Global All Cap + 150 bp[4]	*-5.9*	*18.0*	*8.7*	*10.1*
Excess vs. Policy Benchmark	⬆ 3.6	⬆ 1.5	⬆ 3.1	⬆ 0.4
Excess vs. FTSE Global All Cap + 150 bps	⬆ 3.6	⬆ 1.5	⬆ 3.1	⬆ 1.7

[1] State Street's CalPERS Private Equity performance analysis for the period ended June 30, 2023, 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.

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 June 30, 2023 are each reported with a one-quarter lag (i.e., values through March 31, 2023). 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.

The Portfolio's NAV as of June 30, 2023 was $59.7 billion, a slight increase of less than $0.1 billion (net of cash flows) compared to the June 30, 2022 NAV of $52.8 billion. The current NAV represents 12.9% of the Total Fund, compared to the 13.0% target. As we noted above, the Portfolio's NAV is calculated based upon March 31, 2023 values, while the overall CalPERS portfolio includes publicly traded assets valued as of June 30, 2023.

Performance by Strategy[1]

	NAV ($M)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Buyouts	42,572	1.1	21.5	12.7	13.1
Credit	1,333	2.0	14.7	5.1	5.2
Growth/Expansion	11,631	-12.8	15.6	10.6	12.2
Opportunistic	2,155	-6.8	16.3	12.3	12.6
Venture	963	-20.7	11.3	12.4	8.3
Other[2]	1,055	NA	NA	NA	NA
CalPERS PE Portfolio	**59,709**	**-2.3**	**19.5**	**11.8**	**11.8**

The table above highlights that Buyout strategies are the key driver for the Portfolio, representing nearly three-quarters of the NAV and providing attractive returns overall, especially over longer time periods. Growth/Expansion, Opportunistic, and Venture strategies each generated negative returns over the trailing one-year period. Venture experienced the largest drop in one-year performance since our June 2022 report, decreasing from 37.2% to -20.7%. However, we note that Venture is a small portion of the Portfolio at just over 1.5% of NAV.

[1] Source: State Street. All trailing returns included in this report are time-weighted.
[2] Includes currency and stock holdings.

One Year Relative Performance[1]	Relatively Stronger	Relatively Weaker
Strategy	Buyout, Credit	Venture Capital, Growth
Structure	Co-Invest/Direct, CIA[2]	Funds
Geography	Developed Asia, Europe	Emerging Markets
Vintages	2011, 2017, 2019, 2021	2006 – 2010, 2012-2016

The table above outlines areas of stronger or weaker relative performance of the Portfolio during the trailing one-year time-period. Areas where performance was near the average or not meaningful are not included in the table above.

Performance by Structure[3]

	NAV ($M)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Customized Investment Accounts	13,403	1.2	18.7	12.4	11.2
Co-Investments / Direct	6,942	2.0	20.8	10.1	11.5
Fund of Funds / Secondaries	1,658	-0.6	12.5	8.7	9.9
Funds	36,651	-4.1	20.1	12.0	12.1
Other[4]	1,055	NA	NA	NA	NA
CalPERS PE Portfolio	**59,709**	**-2.3**	**19.5**	**11.8**	**11.8**

The Portfolio's negative performance over the last year has been driven by Funds, the largest exposure by structure, while CIAs and Co-Investments/Direct Investments generated slightly positive returns for the trailing one-year period. The Fund of Funds portfolio has underperformed across all longer-term time periods, in part due to their higher fee loads.

[1] Source: State Street. All trailing returns included in this report are time-weighted.
[2] Customized Investment Account
[3] Source: State Street. All trailing returns included in this report are time-weighted.
[4] Includes currency and stock holdings.

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Performance by Geography[1]

	NAV ($M)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
United States	43,990	-3.1	20.8	12.1	11.6
Developed International	13,037	2.7	20.5	14.7	15.9
Emerging Markets	1,628	-15.6	2.4	0.7	6.3
Other[2]	1,055	NA	NA	NA	NA
CalPERS PE Portfolio	**59,709**	**-2.3**	**19.5**	**11.8**	**11.8**

While the Portfolio has been primarily driven by the US investments, Developed International investments (primarily in Europe) have been a strong contributor to returns over longer time periods and represented the only geography to experience positive returns over the trailing one-year period. Similar to the prior-period report, US and Emerging Markets investments experienced negative returns over the trailing one-year period. The longer-term underperformance in Emerging Markets is partially impacted by the prior use of Fund of Funds (with comparatively high fees) initially used to gain exposure to the region.

Implementation

For the trailing 12 months ending June 30, 2023, Staff completed an aggregate of $15.0 billion of new commitments, which includes $4.4 billion of investments under previously approved CIAs[3]. During this time, Staff completed 45 new fund commitments, three fund-like CIAs, and 12 discretionary co-investments. In addition to the $15.0 billion of commitments above, Staff completed $6.1 billion of new CIAs that are expected to draw capital over a multi-year time frame. Overall, during the 12 months ending June 30, 2023, Staff deployed approximately 41% of the capital in no-, or low-fee investment vehicles. From a strategy perspective, Staff has continued to add exposure to Growth/Expansion and Venture to complement the existing exposure in Large and Mega Buyouts.

As part of a comprehensive update, the Board approved several policy changes that provided Staff with additional flexibility to meet the private equity allocation target. These included: increasing delegated authority limits; expanding the range of co-investment sources; modifying the use of PPOs in co-investments; raising the limits on the percent ownership stake CalPERS can take in certain vehicles; and adjusting the private equity strategy ranges and long-term targets. These changes are being utilized to expand the investment opportunity set for CalPERS.

Since Board approval, we have been monitoring of the impact of these policy changes and we note that some investments were executed in compliance of the updated policy that represented expansion of authority from the prior policy. We do not have material concerns about any of the investments listed below or the expansion of policy limits that were utilized to consummate these investments.

[1] Source: State Street.
[2] Includes currency and stock holdings.
[3] Note that CIAs are typically drawn over multi year periods. Also, CIAs may not be being fully invested as CalPERS maintains opt out rights or otherwise not fully deployed.

PE MID delegated authority increase:

→ Funds (from $500 million to $1.25 billion) – 2 funds have been executed under the expanded delegation.

→ Co-investment (from $300 million to $1 billion) – 1 co-investment was executed under the expanded delegation.

→ CIA (from $1.3 billion to $2.0 billion) – 2 CIAs were executed under the expanded delegation.

CalPERS maximum limited partner share of a fund:

→ Increase from 25% to 35% - 3 funds have been executed under the expanded delegation.

Key Policy Parameters

The Portfolio is compliant with all 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% and became effective July 2022. Additionally, the strategy allocation targets and ranges were modified with the updated Total Fund Policy effective November 2022.

Strategy	NAV[1] ($M)	Percent of Total NAV (%)	CalPERS Target (%)	Target Range (%)
Buyout	42,572	71.3	65	55 - 80
Credit	1,333	2.2	0	0 - 10
Growth/Expansion	11,631	19.5	25	5 - 30
Opportunistic	2,155	3.6	4	0 - 10
Venture	963	1.6	6	0 - 12
Other[2]	1,055	1.8	NA	NA
Total Portfolio	**59,709**	**12.9**[3]	**13**[4]	**+/- 4**

Conclusion

The Portfolio has shown muted recent performance with a negative trailing one-year return. However, the Portfolio returns exceed the Policy Benchmark by significant margins over all time periods. Additionally, the Portfolio, as a percent of CalPERS' total portfolio, is near CalPERS' target of 13%. Despite the recent declines in values corresponding to a broader market downturn, the Portfolio's long-term asset growth has been driven by both strong underlying performance and Staff's activities to enhance the Portfolio by sourcing attractive investments with high conviction managers. The integration of the Growth and Innovation platform into Private Equity in late 2022 has helped efforts to increase

[1] Source: State Street.
[2] Includes currency and stock holdings.
[3] PE portfolio NAV as a percent of total CalPERS portfolio as of June 30, 2023.
[4] In November 2021, the Board approved a 13% target allocation (effective July 2022) for the Portfolio.

co-investment activity and add portfolio diversification through identification of high quality managers in mid-market buyout, growth equity, and venture strategies.

We note that the Staff has been executing on the Private Equity Strategic Plan, specifically:

→ Increasing capital deployment – Staff has been committing approximately $15 billion per year over the last two years, which is in line with investment targets communicated by Staff. This recent commitment pace compares to $3 billion to $5 billion per year in the 2016 to 2018 timeframe.

→ Increasing cost efficiency – No-/low-fee co-investments and CIAs are an important and growing portion of the Portfolio. In the last 12 months, 41% of investment capital has been deployed through no-/low-fee direct co-investments and co-investments executed under CIAs.

→ Adding diversification to the Portfolio – Staff has been adding more Venture, Growth Equity and Mid-Market Buyout strategies to complement the Portfolio's Large- and Mega-Buyout exposure.

→ Maintaining and enhancing relationships with high quality managers – Staff has been able to invest meaningful capital with highly sought out 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 some data and commentary on the private equity asset class for the first quarter of 2023.

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

SH/LR/SPM/jls

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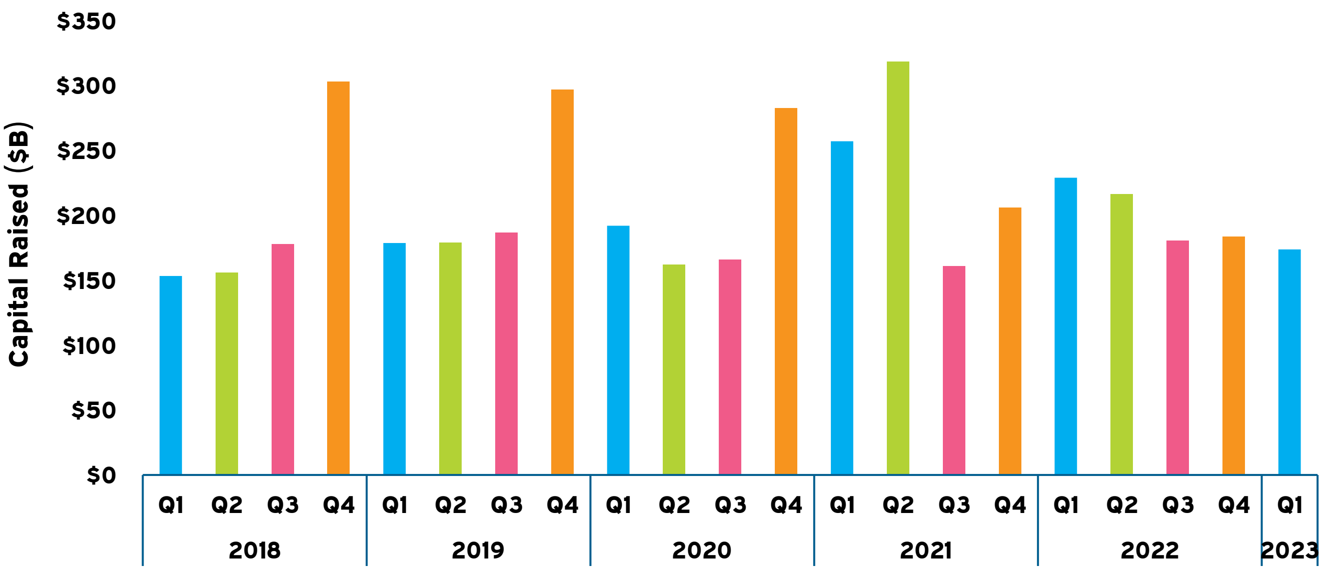
Attachments

Private Equity Market Commentary – Q1 2023

Global Fundraising[1]



Fundraising activity for private equity funds in the first quarter of 2023 decreased by 5% compared to the previous quarter, with $173.8 billion raised, and represents the lowest amount of capital raised for the first quarter since Q1 2018. The first quarter of 2023 showed continued signs of moderation in the private equity fundraising market as allocators digest higher interest rates and their effect on the longer-term private equity environment. Additionally, the denominator effect on investors' portfolios has remained a factor in driving softer fundraising totals. As public equity and fixed income markets declined in 2022, private equity allocations had become proportionately higher as a percentage of investors' overall portfolios, given the delay in private equity valuations reflecting those of public markets. Some investors have found themselves relatively closer to (or exceeding) long-term target allocations, which have curbed their appetite for fresh allocations. That said, global public equity markets have recovered thus far in 2023, supported by fading recessionary risks in developed markets. However, this came amid volatility following the collapse of Silicon Valley Bank ("SVB") and concerns over banking sector contagion. Per Preqin, despite overall uncertainty with public markets, most investors still plan to continue committing capital to private equity in 2023 even as the aggregate amount of fundraising is expected to remain weak. According to Preqin data, there were 6,644 funds raising in the market as of March 2023, with aggregate capital targeted of over $1.7 trillion. Both metrics are pushing record highs, and therefore, paint a picture of highly competitive fundraising. As a result, funds have been spending more time on the road than ever, with 52% of private equity funds (and 40% of venture capital funds) closed in Q1 2023 having been in market for more than 18 months compared to an average of 37% (and 35% for venture capital) from 2018-2022.

[1] Preqin.

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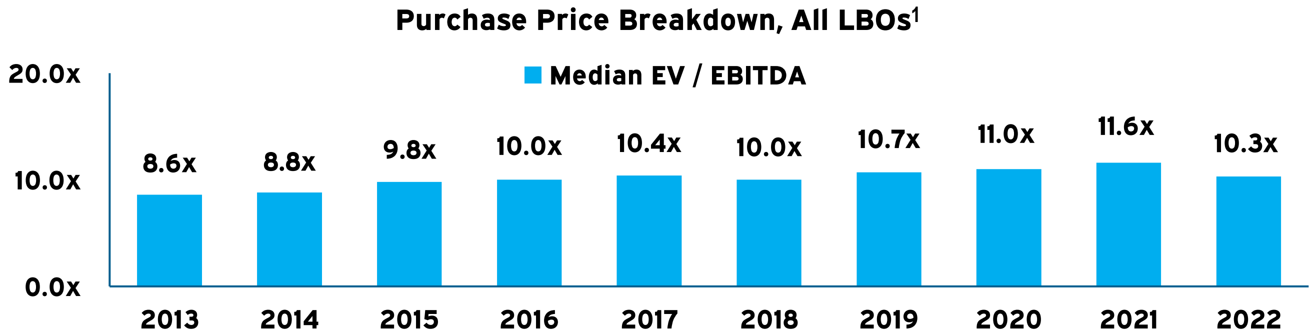
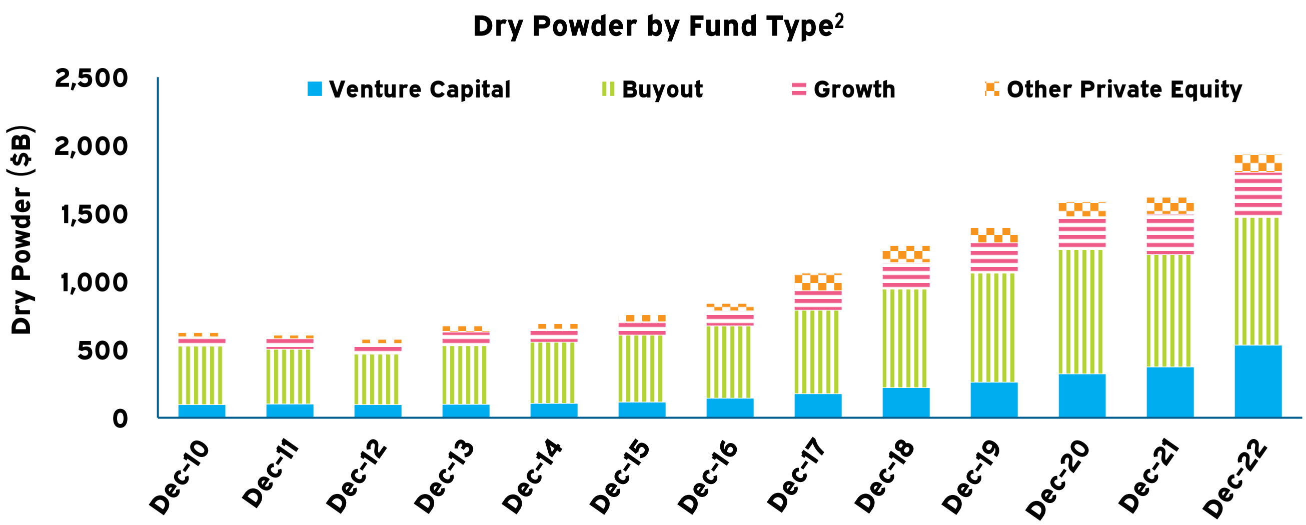
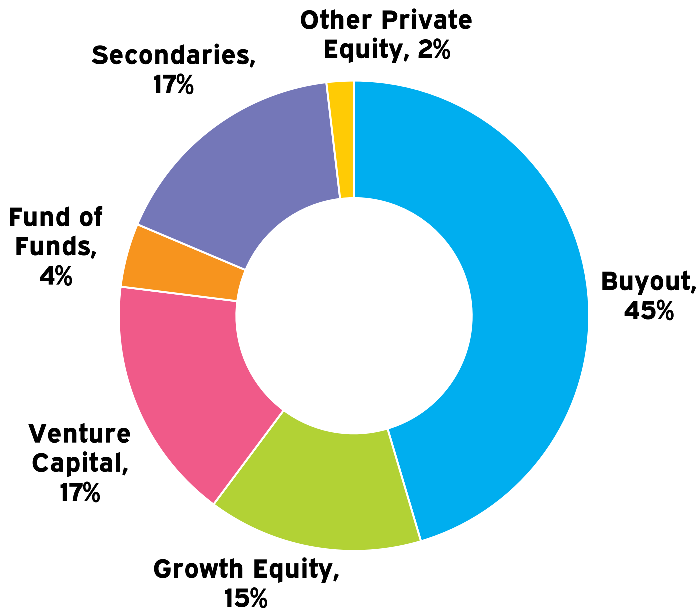
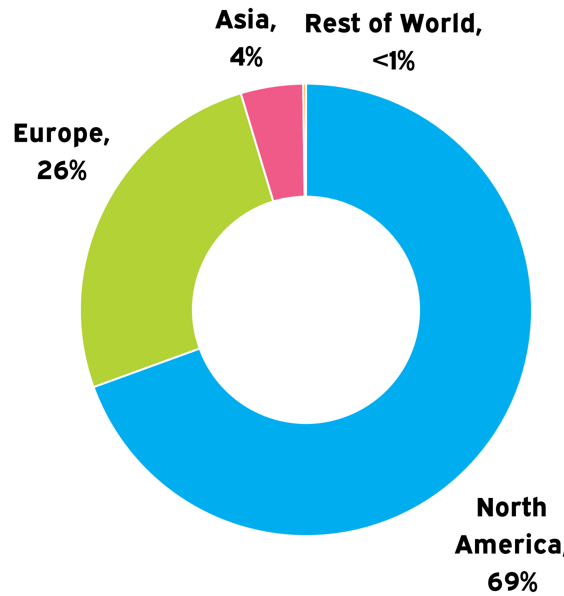




Relative to 2021, the median private equity purchase price multiple has decreased from 11.6x EBITDA to 10.3x EBITDA in 2022. This represents an 11% decrease from 2021 relative to the 5% increase observed in 2021 from 2020. The drop of purchase price multiples on the year shows signs of downward pressure on private equity valuations as deal activity slowed in the second half of 2022 resulting from rising interest rates, the decrease in public market valuations, and an imbalance between expectations of buyers and sellers. Furthermore, global private equity deal volume declined by 34% in the first quarter, compared with the same period last year. Average deal values also declined in line with lower valuation multiples, prompting global buyout deal value to decline by 54% to reach $113.7 billion. However, the quarter-on-quarter decline of 12% is less pronounced. Global private equity exit volume declined by 41% in the first quarter compared with the same quarter last year, but there was a much heavier 84% decline in exit value to $20.6 billion from $126.2 billion. Dry powder levels at year-end 2022 have increased by approximately 20% from Q4 2021 and remain at all-time highs. Despite macroeconomic worries, GPs still have ample dry powder to deploy, which helps support deal flow even if debt financing becomes more expensive and more restrictive. Despite dry powder levels, private equity deal valuation multiples have experienced downward pressure with mismatched expectations of valuations between buyers and sellers as well as increased borrowing costs.

[1] Preqin. Data pulled on July 19, 2023. Purchase prices for 2023 deals not yet available.
[2] Global Private Equity Dry Powder Split by Strategy. Provided by Preqin on July 13, 2023. There is a six-month lag with Preqin's dry powder analysis with December 31, 2022, being the latest figures, which were released in early July 2023.





Buyout (45% of all private equity capital raised), Venture Capital (17%), and Secondaries (17%) represented the most popular private equity sub-strategies during the first quarter of 2023. Buyout funds slightly decreased from 47% of capital raised in Q4 2022 to 45% in the first quarter of 2023, and Venture Capital increased from 13% to 17% of capital raised. Secondaries, as a percentage of total capital raised, increased the most of any strategy over Q1 2023 jumping from 2% of capital raised in Q4 2022 to 17% in Q1 2023. Over half of this total can be attributed to one large fund. The slight recovery in public markets has helped to better link public and private valuations making the supply of LP interests coming to market more likely to be transacted in the secondary market. This amount nearly matches the $35.5 billion raised in Secondaries in 2022 collectively. Fund of Funds and Other Private Equity, which includes co-investment and hybrid vehicles, decreased from 21% to 6%, collectively, through the first quarter compared to the previous quarter.

North America-focused vehicles continued to represent the majority of funds raised during the first quarter, representing 69% of total capital. This represents a decrease from 74% in the prior quarter. Alternatively, as a percentage of total capital raised, commitments to Europe increased by 10% during the first quarter. However, Europe only represented 15% of the total number of funds closed. Relative to Q4 2022, Asia-focused funds remained low, only representing 4% of total capital raised. As China-focused funds have made up the lion's share of funds raised in the region in recent years, the limited capital raised by Asia-focused funds highlights investors' risk aversion toward China among geopolitical and economic challenges. Overall, private equity investors continued to favor commitments to North America-focused funds. Investor appetite for Rest of World decreased from 6% of capital raised to <1%, and approximately $300 million of aggregate capital raised across 15 funds during the quarter.

[1] Source: Preqin.

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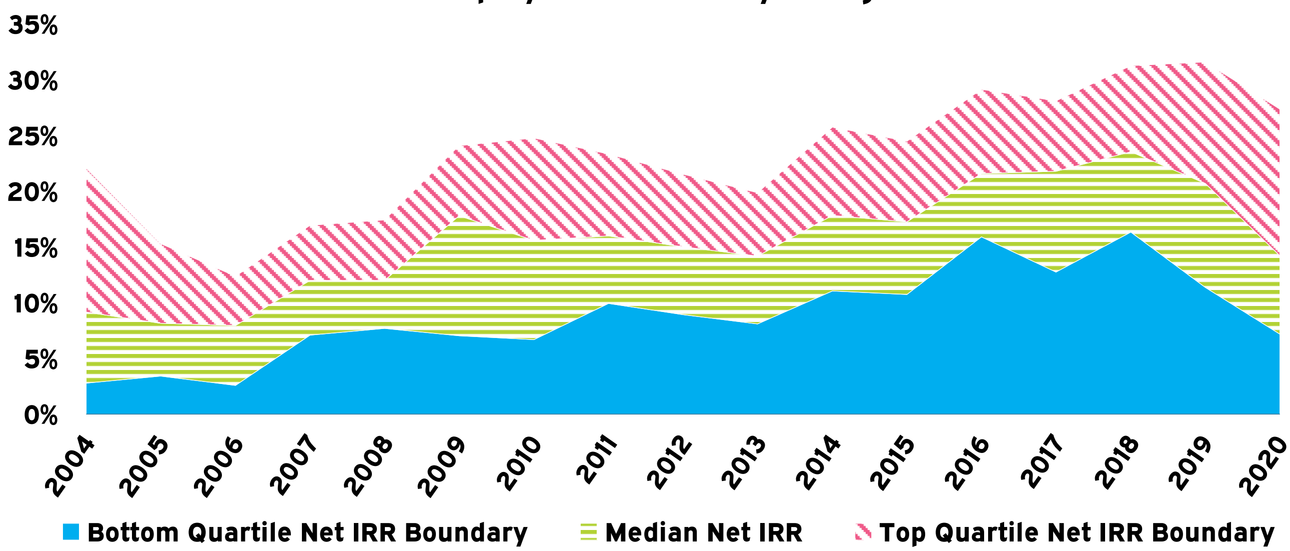
Private Equity Performance by Horizon[1]

Horizon	Private Equity (%)	Buyout (%)	Venture Capital (%)	Growth Equity (%)
1 Year to 12/2022	-0.2	2.1	(16.8)	(10.9)
3 Years to 12/2022	18.3	19.7	17.2	12.8
5 Years to 12/2022	17.5	18.5	16.1	15.8
10 Years to 12/2022	16.4	17.5	14.3	16.3

Private Equity Performance by Vintage Year[2]



As of December 31, 2022, private equity returns continued to decline from the prior quarter, generating a -0.2% IRR over the trailing 12 months through Q4 2022. This compares to the trailing 12-month return of 3.5% as of Q3 2022 and a one-year return of 34.8% at Q4 2021. Overall, private equity returns ultimately reflected the decline of valuations observed in the public markets throughout 2022 and the dampening effects of inflationary pressures, rising interest rates, and geopolitical concerns on performance. One-year returns have decreased significantly across each private equity strategy with Venture funds experiencing the largest drop from (4.7)% one-year returns as of Q3 2022 to (16.8)% as of Q4 2022. In general, however, performance has been strong in each vintage year since the Global Financial Crisis. Buyout, Venture, and Growth funds have all generally performed well over the various time horizons on an absolute basis, with Buyout funds slightly outperforming Venture and Growth funds across longer time periods as of Q4 2022. Lastly, the spread between first and third quartile performance in private equity has grown consistently since the Global Financial Crisis; 2007 vintage funds reported a 9.8% spread while 2020 vintage funds reported a 20.2% spread.

[1] Preqin Horizon IRRs as of 12/31/2022. Data as of 3/31/2023 not yet available.
[2] Preqin, Private Equity – All, Quartile Returns as of 3/31/2023. Data pulled on July 19, 2023.