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MEMORANDUM

TO: Members of the Investment Committee, CalPERS
FROM: Meketa Investment Group
DATE: June 20, 2023
RE: Annual Program Review, inclusive of Quarterly Private Equity Performance Review, as of March 31, 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 March 31, 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, showed diminished returns through the first quarter of 2023, with both the CalPERS' Portfolio and the Policy Benchmark generating negative returns for the trailing one-year period. Performance of the Portfolio and the Policy Benchmark across longer time periods has continued to decrease compared to prior-period reports. However, we note that the Portfolio's performance outpaced the Policy Benchmark for each of the time horizons shown below.

Private Equity Performance as of March 31, 2023[1]

	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
CalPERS PE Portfolio[2]	**-4.7**	**14.2**	**11.8**	**12.1**
Policy Benchmark[3]	*-16.9*	*5.9*	*7.2*	*11.6*
FTSE Global All Cap + 150 bp[4]	*-16.9*	*5.9*	*7.1*	*10.1*
Excess vs. Policy Benchmark	12.2	8.3	4.6	0.5
Excess vs. FTSE Global All Cap + 150 bps	12.2	8.3	4.7	2.0

[1] State Street's CalPERS Private Equity performance analysis for the period ended March 31, 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 March 31, 2023 are each reported with a one-quarter lag (i.e., values through December 31, 2022). 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 March 31, 2023 was $55.1 billion, a decrease of $2.4 billion (net of cash flows) compared to the March 31, 2022 NAV of $52.2 billion. The current NAV represents 12.2% of the Total Fund, compared to the 13.0% target. As we noted above, the Portfolio's NAV is calculated based upon December 31, 2022 values, while the overall CalPERS portfolio includes publicly traded assets valued as of March 31, 2023.

Performance by Strategy[1]

	NAV ($M)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Buyouts	40,217	-1.2	15.1	12.7	13.2
Credit	1,439	0.5	9.1	5.4	5.9
Growth/Expansion	10,548	-16.1	14.3	11.1	12.6
Opportunistic	2,008	-5.1	12.3	12.4	12.7
Venture	758	-24.8	11.6	12.6	8.6
Other[2]	81	NA	NA	NA	NA
CalPERS PE Portfolio	**55,051**	**-4.7**	**14.2**	**11.8**	**12.1**

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 March 2022 report, decreasing from 60.5% to -24.8%. However, we note that Venture is a small portion of the Portfolio at just over 1% 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	United States, Developed Asia	Emerging Markets
Vintages	2017, 2019, 2020	2006 – 2008, 2010, 2013 – 2015

The table above outlines areas of stronger or weaker relative performance of the Portfolio during the trailing 1-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	11,685	-0.5	14.1	12.6	11.3
Co-Investments / Direct	6,724	-0.6	10.2	10.0	12.1
Fund of Funds / Secondaries	1,575	-1.6	12.0	8.4	9.4
Funds	34,986	-6.5	14.6	12.1	12.4
Other[4]	81	NA	NA	NA	NA
CalPERS PE Portfolio	**55,051**	**-4.7**	**14.2**	**11.8**	**12.1**

The Portfolio's drop in performance has occurred broadly across investment structures, with the trailing one-year performance for each structure decreasing since the March 2022 report. Most notably, the Funds portfolio, as the largest exposure by structure, has posted the most negative return over the last year. 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.

June 20, 2023

Performance by Geography[1]

	NAV ($M)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
United States	40,839	-4.0	15.1	12.2	11.9
Developed International	12,471	-4.2	15.2	14.6	15.7
Emerging Markets	1,659	-17.6	1.2	1.5	6.6
Other[2]	81	NA	NA	NA	NA
CalPERS PE Portfolio	**55,051**	**-4.7**	**14.2**	**11.8**	**12.1**

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. While all regions experienced negative returns over the trailing one-year period, Emerging Markets had a more drastic downturn recently. 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 March 31, 2023, Staff completed an aggregate of $14.5 billion of new commitments, which includes $3.7 billion of investments under previously approved CIAs[3]. During this time, Staff completed 34 new fund commitments, three fund-like CIAs, and 13 discretionary co-investments. In addition to the $14.5 billion of commitments above, Staff completed $6.3 billion of new CIAs that are expected to draw capital over a multi-year time frame. Overall, during the 12 months ending March 31, 2023, Staff deployed approximately 38% 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.

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) – 1 fund was 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% - 1 fund was 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	40,217	73.1	65	55 - 80
Credit	1,439	2.6	0	0 - 10
Growth/Expansion	10,548	19.2	25	5 - 30
Opportunistic	2,008	3.6	4	0 - 10
Venture	758	1.4	6	0 - 12
Other[2]	81	0.1	NA	NA
Total Portfolio	**55,051**	**12.2**[3]	**13**[4]	**+/- 4**

Staffing and Resources

As of May 1, 2023, the Private Equity group had 45 approved positions, with 35 staff and 10 openings. This compares to 31 staff at the end of the last fiscal year. In December 2022, Anton Orlich was named Managing Investment Director, taking over from Greg Ruiz who resigned in November 2022. We have had several discussions with Mr. Orlich and the broader team about CalPERS' private equity strategy and implementation. In the past several months, Mr. Orlich and the Private Equity team have been working effectively to identify and execute high quality investments for the Portfolio.

[1] Source: State Street.
[2] Includes currency and stock holdings.
[3] PE portfolio NAV as a percent of total CalPERS portfolio as of 12/31/22.
[4] In November 2021, the Board approved a 13% target allocation (effective July 2022) for the Portfolio.

While we believe the staffing levels are sufficient to execute the current investment strategy, we note there are several open positions currently. Additionally, the Program will likely need further additions to staff as well as an expansion of skills to identify, execute, and monitor an increasingly complex portfolio.

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. As part of a comprehensive update, the Board approved several policy changes that provide Staff with additional flexibility to meet the private equity allocation target. We continue to monitor Staff's activities under the revised policy.

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

- → Increasing capital deployment – Staff has been committing $10 billion to $15 billion per year over the last two years. This compares to $3 billion to $5 billion of commitments 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, 38% of investment capital has been deployed through no-/low-fee co-investments and investments 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 fourth quarter of 2022.

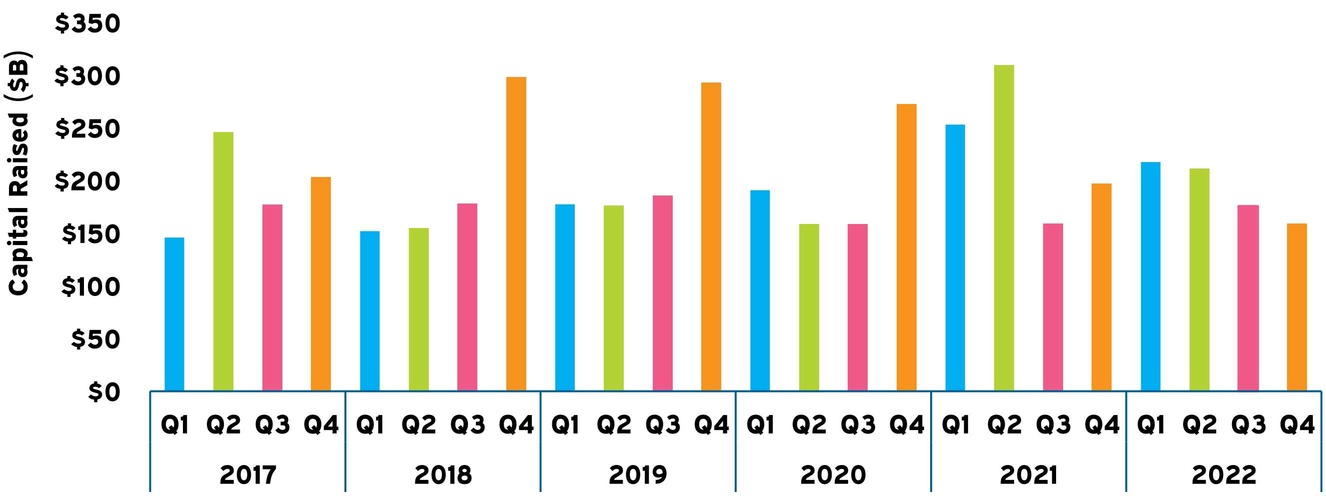
Please do not hesitate to contact us if you have questions or require additional information.

SH/LR/JM/SPM/JC/jls

Attachments

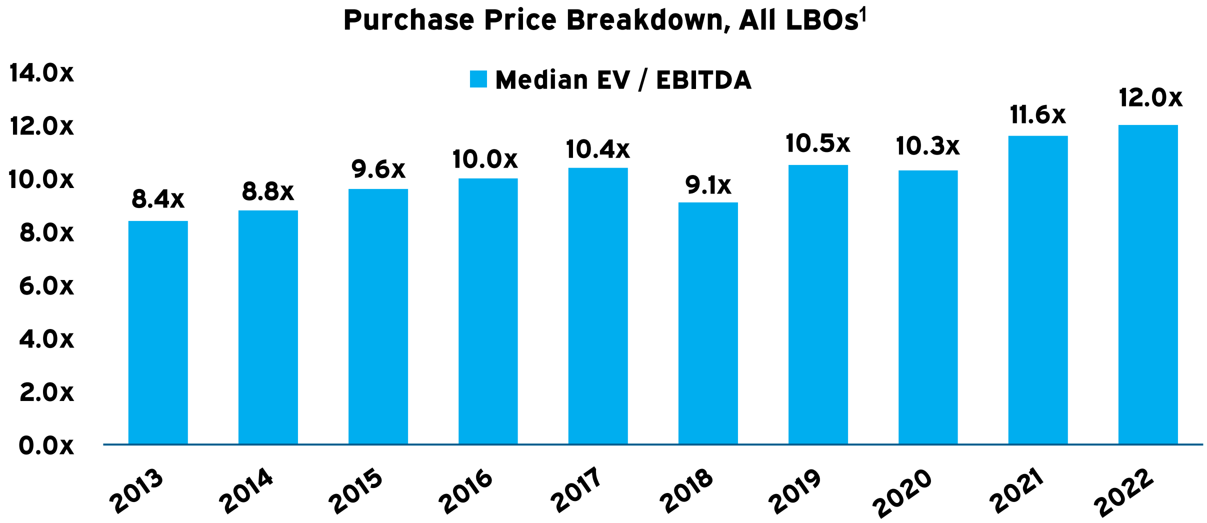
Private Equity Market Commentary – Q4 2022

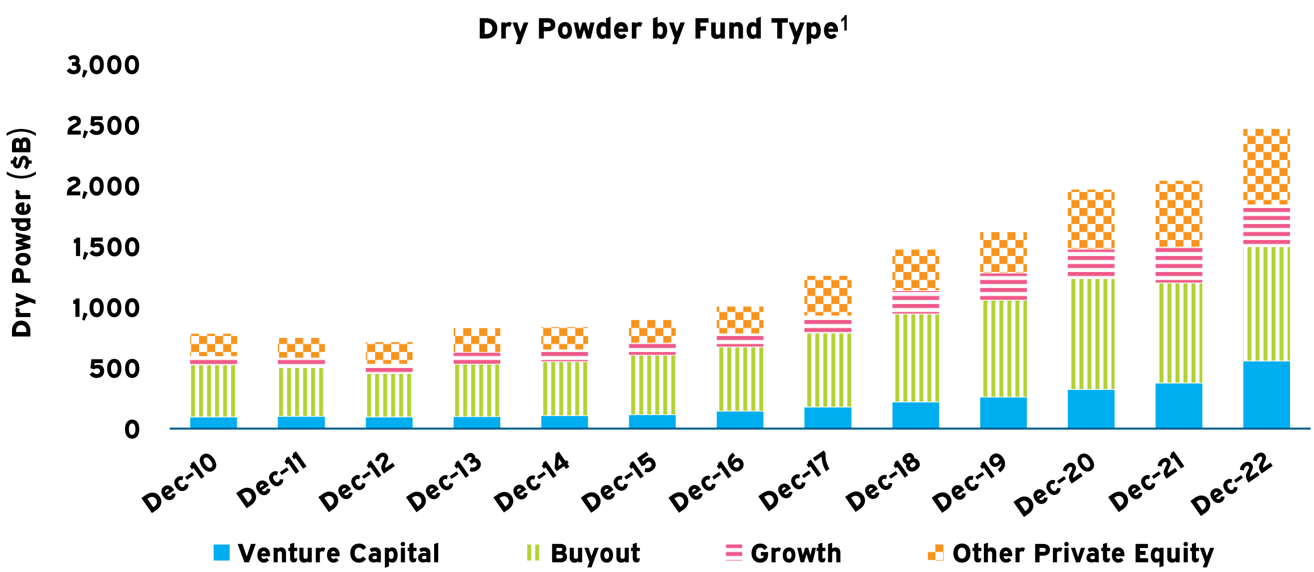
Global Fundraising[1]



Fundraising activity for private equity funds in the fourth quarter of 2022 decreased by 9% compared to the previous quarter, with $159.2 billion raised, and represents the lowest amount of capital raised for the fourth quarter over the last six years. While 2021 was an exceptional year for private equity markets, there have been signs of moderation of activity throughout 2022, especially in the second half of the year. On an annual basis, fundraising was down 17% in 2022 compared to 2021, with $764.0 billion raised. The post-COVID boost in fundraising activity has diminished, and evidence is growing of a sustained slowdown on the back of macroeconomic and geopolitical concerns resulting from the war in Ukraine, inflationary pressures, and rising interest rates. Additionally, the denominator effect on investors' portfolios is among the factors expected to continue driving softer fundraising in coming quarters. As public equity and fixed income markets declined in 2022, private equity allocations are proportionately higher as a percentage of investors' overall portfolios, given the delay in private equity valuations reflecting those of public markets. Therefore, some investors have found themselves relatively closer to long-term target allocations, which could curb their appetite for fresh allocations. That said, the fourth quarter saw some optimism return, as public markets managed a gentle rebound from the year's lows, making it the only up quarter of the year. Per Preqin, despite overall concerns 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 9,080 funds raising in the market as of year-end, 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 57% of private equity funds (and 45% of venture capital funds) closed having been in market for more than 18 months compared to an average of 30% (and 31% for venture capital) from 2017-2021.

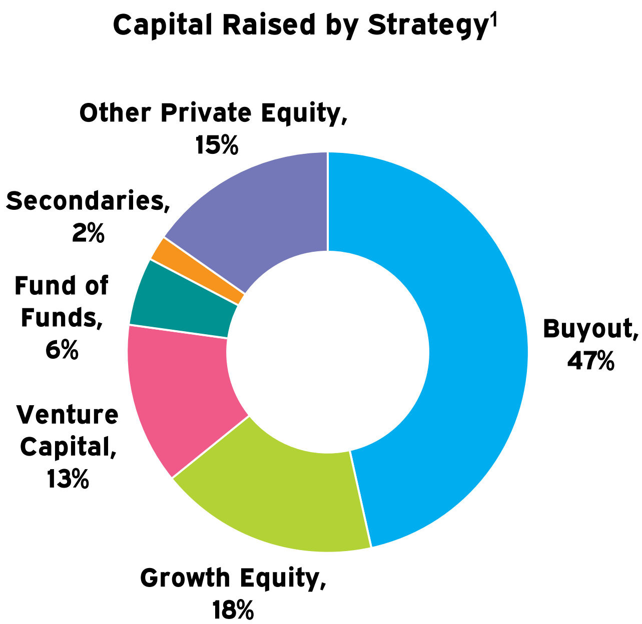
[1] Preqin.

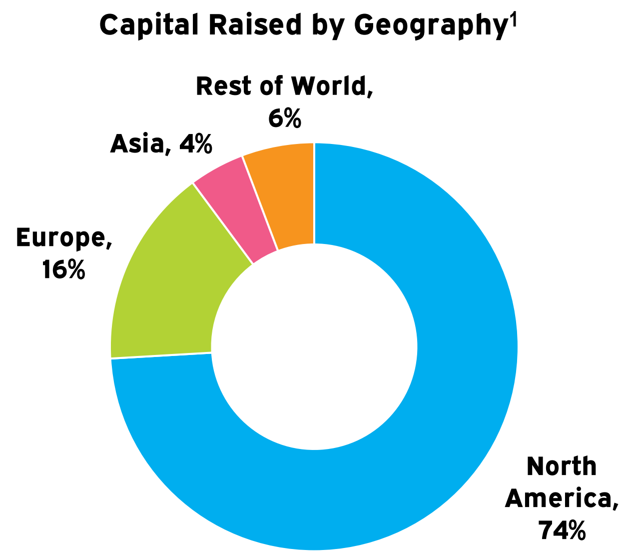




Relative to 2021, the median private equity purchase price multiple has increased from 11.6x EBITDA to 12.0x EBITDA in 2022. This represents a 3% increase from 2021 relative to the 13% increase observed in 2021 from 2020. Despite the continued rise of purchase price multiples on the year, there appear to be signs of downward pressure on private equity valuations as deal activity slowed in the second half of 2022 as a result of rising interest rates, the decrease in public market valuations, and an imbalance between expectations of buyers and sellers. Dry powder levels have increased by approximately 21% from Q4 2021 and remain at all-time highs. Dry powder will remain high as long as more capital is being raised than is being deployed, and in the near-term, investors may expect to continue to see high purchase prices as a result of the high levels of capital competing for deals. That said, private equity deal valuation multiples have also experienced downward pressure and started to lower with depressed valuations in the public markets as well as higher interest rates, which have increased borrowing costs.

[1] Source: Preqin. Data pulled on April 7, 2023.





Buyout (47% of all private equity capital raised) and Growth Equity (18%) funds represented the most popular private equity sub-strategies during the fourth quarter of 2022. Buyout funds increased from 43% of capital raised in Q3 2022 to 47% in the fourth quarter of 2022, and Growth Equity increased from 15% to 18% of capital raised. Venture Capital strategies, as a percentage of total capital raised, decreased by 14% from Q3 2022. Fund of Funds, Secondaries, and Other Private Equity, which includes co-investment and hybrid vehicles, increased from 15% to 23%, collectively, through the fourth quarter compared to the previous quarter.

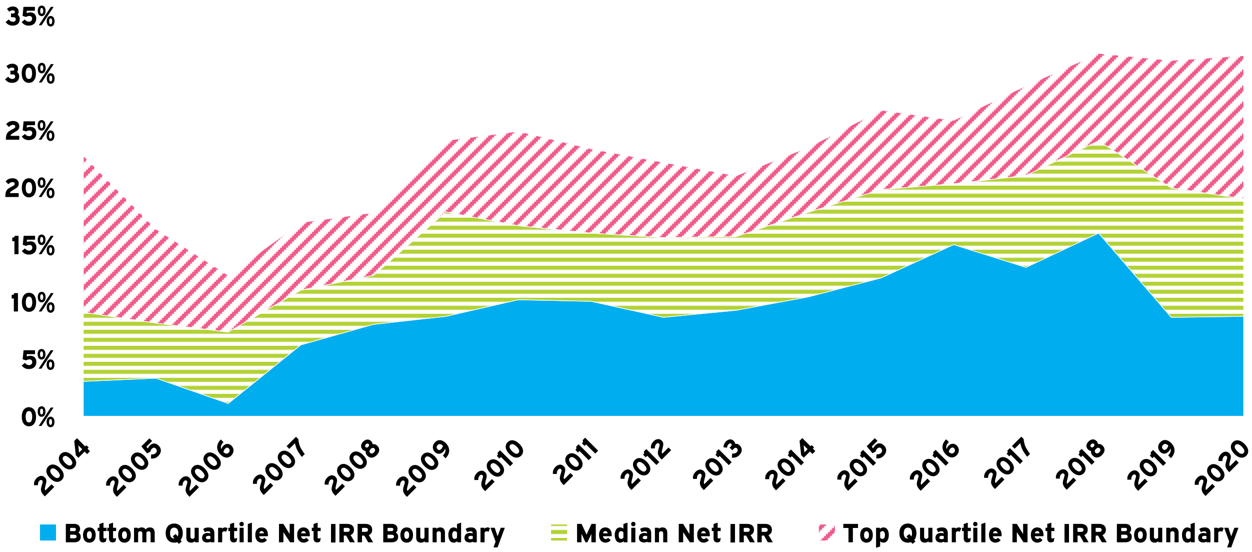
North America-focused vehicles continued to represent the majority of funds raised during the fourth quarter, representing 74% of total capital. This represents an increase from 66% in the prior quarter. Alternatively, as a percentage of total capital raised, commitments to Europe and Asia decreased by 2% and 10%, respectively, during the fourth quarter. As China-focused funds have made up the lion's share of funds raised in the region in recent years, the decrease in capital raised by Asia-focused funds highlights investors' risk aversion toward China in the wake of China's zero-COVID-19 policy, among other geopolitical and economic challenges. Overall, private equity investors continued to favor commitments to North America-focused funds, and investor appetite for Rest of World increased slightly over the quarter while commitments to Europe- and Asia-focused vehicles decreased.

[1] Source: Preqin.

Private Equity Performance by Horizon[1]

Horizon	Private Equity (%)	Buyout (%)	Venture Capital (%)	Growth Equity (%)
1 Year to 9/2022	3.5	5.1	(4.7)	(5.5)
3 Years to 9/2022	20.5	20.8	19.0	19.4
5 Years to 9/2022	18.2	18.2	17.0	18.6
10 Years to 9/2022	16.5	17.1	14.7	17.2

Private Equity Performance by Vintage Year[2]



As of September 30, 2022, private equity returns weakened significantly, generating a 3.5% IRR over the trailing 12 months through Q3 2022. This represents an ~11% drop from the trailing one-year returns as of Q2 2022, which shows that private equity returns are starting to reflect 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 Growth funds experiencing the largest drop of 10.4% from 4.9% one-year returns as of Q2 2022 to (5.5)% as of Q3 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 horizons on an absolute basis, with Buyout and Growth funds slightly outperforming Venture funds across longer time periods as of Q3 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 an 10.7% spread while 2020 vintage funds reported a 22.8% spread.

1 Source: Preqin Horizon IRRs as of 9/30/2022. Data as of 12/31/2022 not yet available.
2 Source: Preqin, Private Equity – All, Quartile Returns as of 12/31/2022. Data pulled on April 7, 2023.