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# MEMORANDUM

**TO:** Members of the Investment Committee, CalSTRS
**FROM:** Meketa Investment Group
**DATE:** September 13, 2023
**RE:** Semi-Annual Private Equity Performance Review as of March 31, 2023 – OPEN SESSION

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 March 31, 2023, 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 improved slightly over the trailing six months ended March 31, 2023, but still posted a negative trailing 1-year return with both the CalSTRS' Portfolio and the Benchmarks generating negative returns for the period. Performance of the Portfolio and the Benchmarks across longer time periods has generally remained consistent on an absolute basis in the recent period compared to the prior period's report. The Program's performance exceeds the Custom State Street Index Benchmark for the 3-, 5-, and 10-year time periods and the Custom Benchmark for each time horizon below.

| | 1 Year (%) | 3 Year (%) | 5 Year (%) | 10 Year (%) | Since Inception (%) |
|---|---|---|---|---|---|
| **CalSTRS PE Program** | **-1.5** | **22.7** | **15.6** | **13.7** | **13.4** |
| *Custom State Street Index[1]* | *-1.1* | *22.3* | *14.9* | *13.4* | *13.9* |
| *Custom Benchmark[2]* | *-5.7* | *16.7* | *8.4* | *9.8* | *NA* |
| Excess vs. Custom State Street Index[3] | ↓ 0.3 | ↑ 0.4 | ↑ 0.7 | ↑ 0.2 | ↓ 0.4 |
| Excess vs. Custom Benchmark[3] | ↑ 4.2 | ↑ 6.0 | ↑ 7.2 | ↑ 3.9 | NA |

Given the long-term nature of the Private Equity Program, we believe the 1-year performance figures are not meaningful but do note slight underperformance relative to the Custom State Street Index Benchmark. As previously highlighted, private equity performance is reported with a significant delay compared to publicly traded assets.

[1] Reflects the customized PE Index methodology discussed in the updated Private Equity Investment Policy. Utilized to assess Program performance for periods less than 10 years. Calculated by State Street.
[2] Custom Benchmark as of July 2019 is MSCI ACWI IMI plus 1.5%. Calculated by State Street. Utilized to assess Program performance for periods of 10 years or more. The Custom Benchmark is customized for certain investment restrictions such as tobacco.
[3] Arrows indicate program outperformance or underperformance against the respective benchmark.

The spread relative to both Benchmarks has slightly narrowed over the last six months since the last semi-annual report, especially against the Custom Benchmark across all trailing time periods as public equities have rebounded. There is relatively little capital remaining in vintages prior to 2014, while performance of the more recent vintages (with the exception of 2022) have been strong and are driving current performance.

The Portfolio's NAV as of March 31, 2023, was $48.8 billion, an increase of $2.1 billion (net of cash flows), compared to the September 30, 2022 NAV of $45.6 billion. Overall, the Portfolio had lost $0.7 billion of value in the year since March 31, 2022. The current NAV represents 15.9% of the Total Fund, compared to the long-term target of 13%.

**Public Market Equivalent Analysis ("PME")[1]**

| | KS PME |
|---|---|
| **CalSTRS PE Program** | |
| *MSCI ACWI IMI[2]* | 1.36 |
| *MSCI ACWI IMI + 1.5%* | 1.29 |

The Kaplan-Schoar PME analysis methodology produces a ratio representing the over-/under-performance of a fund or portfolio relative to a comparable public market index in which a number above one signifies outperformance while a number below one signifies underperformance. As of March 31, 2023, the Private Equity Program has significantly outperformed the MSCI ACWI IMI (and MSCI ACWI IMI + 1.5%), generating approximately $1.36 ($1.29) in relative value for every $1.00 contributed to the Program.

**Strategy[3,4]**

| | 1 Year (%) | 3 Year (%) | 5 Year (%) | 10 Year (%) | Since Inception (%) |
|---|---|---|---|---|---|
| Buyouts | ↓ 0.3 | ↑ 24.4 | ↑ 16.8 | ↑ 14.4 | ↑ 13.0 |
| *SSGX – Custom Buyouts[5]* | *1.5* | *23.2* | *15.3* | *13.7* | *12.5* |
| Venture | ↑ -16.9 | ↓ 16.5 | ↓ 14.8 | ↓ 16.3 | ↓ 24.0 |
| *SSGX – Custom Venture Capital[3]* | *-18.2* | *24.6* | *19.8* | *17.4* | *35.1* |
| Debt Related | ↓ 3.2 | ↓ 14.5 | ↓ 7.1 | ↓ 8.2 | ↓ 10.0 |
| *SSGX – Custom Debt Related[3]* | *5.0* | *15.3* | *8.6* | *9.4* | *10.3* |
| Special Mandates | ↓ -6.0 | ↑ 23.6 | ↑ 14.0 | ↓ 9.3 | ↓ 6.6 |
| *SSGX –Special Mandates[6]* | *-0.8* | *21.1* | *13.0* | *12.1* | *11.1* |
| **CalSTRS PE Program** | **-1.5** | **22.7** | **15.6** | **13.7** | **13.4** |

1 Based on Kaplan-Schoar PME methodology. Analysis period covers August 1988 (first Program cash flow) through March 31, 2023.
2 Represents MSCI ACWI IMI returns since June 1994 spliced with MSCI World returns from inception of the Program through May 1994. Calculated by Meketa. Does not represent customized benchmark exclusive of certain industries.
3 Strategy classifications reflect the newly adopted categorizations and the Customized PE Index methodology discussed in the updated Private Equity Investment Policy. Multi-Strategy and Longer-Term Strategy performance is not included as performance is not yet meaningful.
4 Arrows indicate program outperformance or underperformance against benchmarks.
5 SSGX custom benchmark returns were calculated by State Street for each listed strategy.
6 SSGX – Buyouts Index (not customized) minus 200 basis points.

Following a decline through the first three quarters of 2022, coinciding with a downturn in most risk assets over the same period, the overall portfolio showed signs of improvement over the past six months. Over the trailing 1-year period, Special Mandates investments saw a modest pull-back while Venture experienced the largest drop with a 1-year decline in the double-digits. However, the Buyouts and Debt Related portfolios had positive performance over the trailing 12-month period.

On a relative basis, Buyouts (approximately three-fourths of the Program's assets) outperformed their custom benchmark over all time periods except the trailing 1-year. Special Mandates investments outperformed their custom benchmark over the most recent 3-year and 5-year periods but have underperformed in the trailing 1-year period as well as over the longer term. Venture and Debt Related strategies generally underperformed across trailing periods.

**Structure**

| | 1 Year (%) | 3 Year (%) | 5 Year (%) | 10 Year (%) | Since Inception (%) |
|---|---|---|---|---|---|
| Fund Investments | -1.9 | 23.0 | 15.2 | 13.4 | 13.6 |
| Co-Investments | 0.7 | 21.4 | 17.9 | 16.1 | 11.5 |
| **CalSTRS PE Program** | **-1.5** | **22.7** | **15.6** | **13.7** | **13.4** |

The Fund portfolio is the largest portfolio by structure, and the key driver of overall performance. The Co-Investment program has been a strong contributor to performance and has been steadily increasing as a percent of the total Program, growing from 18.9% one year ago to 20.9% currently.

**Performance by Geography**

| | 1 Year (%) | 3 Year (%) | 5 Year (%) | 10 Year (%) | Since Inception (%) |
|---|---|---|---|---|---|
| North America | ↑ -1.3 | ↓ 23.6 | ↓ 15.8 | ↓ 13.5 | ↓ 13.2 |
| *SSGX – US Funds*[1] | -3.6 | 23.8 | 16.1 | 14.6 | 13.4 |
| Non-North America | ↑ -1.7 | ↑ 19.8 | ↑ 14.8 | ↑ 14.4 | ↑ 14.3 |
| *SSGX – Non-US*[1] | -1.8 | 19.4 | 13.3 | 13.4 | 12.2 |
| **CalSTRS PE Program** | **-1.5** | **22.7** | **15.6** | **13.7** | **13.4** |

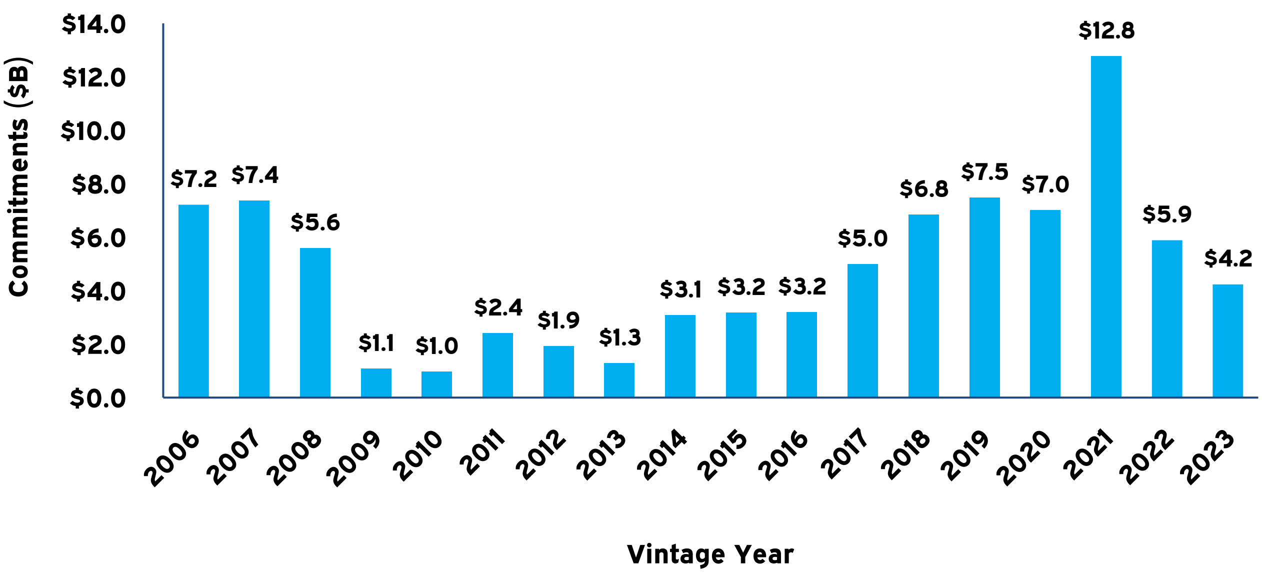
The Program has been primarily driven by the North America investments, representing the largest proportion of capital, which outperformed over the trailing 1-year period but slightly trailed the US fund benchmark over longer time periods despite strong absolute returns. Non-North America investments have been a strong contributor to absolute and relative returns over each time period.

[1] SSGX benchmark returns were calculated by State Street for each listed region. Matching SSGX benchmarks for Developed (Non-US) and Non-Developed market investments are not available.

## Implementation

For the first half of 2023, Staff completed 23 commitments totaling $2.7 billion,[1] and 40 commitments totaling $4.3 billion from July 2022 through June 2023. Staff continues to increase its emphasis on no/low fee co-investments by leveraging CalSTRS' size, scale and reputation.

The chart below shows CalSTRS' commitments by vintage year, with 2023 reflecting commitments completed through March 31, 2023.




Overall, CalSTRS has increased its commitments to the asset class significantly in recent years. Staff has sought to maintain diversification across a number of dimensions while maintaining a focus on high quality managers. The annual pacing target for 2023 has been reduced from prior years. Note that the year of commitment may not be consistent with vintage year depending on when fund capital was first called or invested.

[1] See Appendix for list of investments completed in the first half of 2023.

## Key Policy Parameters

The Portfolio is compliant with key parameters related to strategy diversification as demonstrated in the table below.

| Strategy[1,2] | NAV ($M) | Percent of Total NAV (%) | CalSTRS Interim Target (%) | Target Range (%) |
|---|---|---|---|---|
| Buyouts | 37,135 | 76.2 | 75 | 60-85 |
| Venture Capital | 4,028 | 8.3 | 10 | 0-15 |
| Debt Related | 2,851 | 5.8 | 6 | 5-20 |
| Longer-Term Strategy | 1,374 | 2.8 | 2 | 0-10 |
| Special Mandates | 2,108 | 4.3 | 4 | 0-8 |
| Multi-Strategy | 1,270 | 2.6 | 3 | 0-5 |
| **Total Program** | **48,766** | **15.9**[3] | **13**[4] | **NA** |

## Conclusion

The Private Equity portfolio's performance was positive over the prior six months but still negative over the trailing 1-year period as short-term performance has shown a cool off from the very strong returns seen during the 2020-2021 recovery from the COVID-19 pandemic lows. Net of cash flows, the portfolio exhibited approximately $2.1 billion of gains since our prior report, and $0.7 billion of losses since March 31, 2022. Private equity industry transaction volume has slowed and fundraising continues to moderate. The Program's annual commitment target has been reduced and Staff remains focused on high quality manager selection, while increasing their emphasis on no/low cost co-investments as part of the Collaborative Model.

CalSTRS faces challenges in building the Program, but 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. Changes to the private equity policy adopted in February 2022 expanded the range of investment opportunities and empowers CalSTRS staff to more fully pursue the Collaborative Model. While investment activity has remained consistent since the policy update, the adopted changes will allow CalSTRS staff to participate in a broader opportunity set going forward.

The Appendix includes a list of investments completed during the first half of 2023, as well as 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.

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[1] Strategy classifications reflect recently adopted categorizations. Updated interim targets and ranges were adopted in February 2022 and will be reflected in future reports.
[2] Commitments to secondary, private liquidation, co-investments, and other sub-strategies are allocated based on their strategy.
[3] Estimated PE exposure as of March 31, 2023.
[4] CalSTRS has a long-term target of 13% for Private Equity.

## Attachment

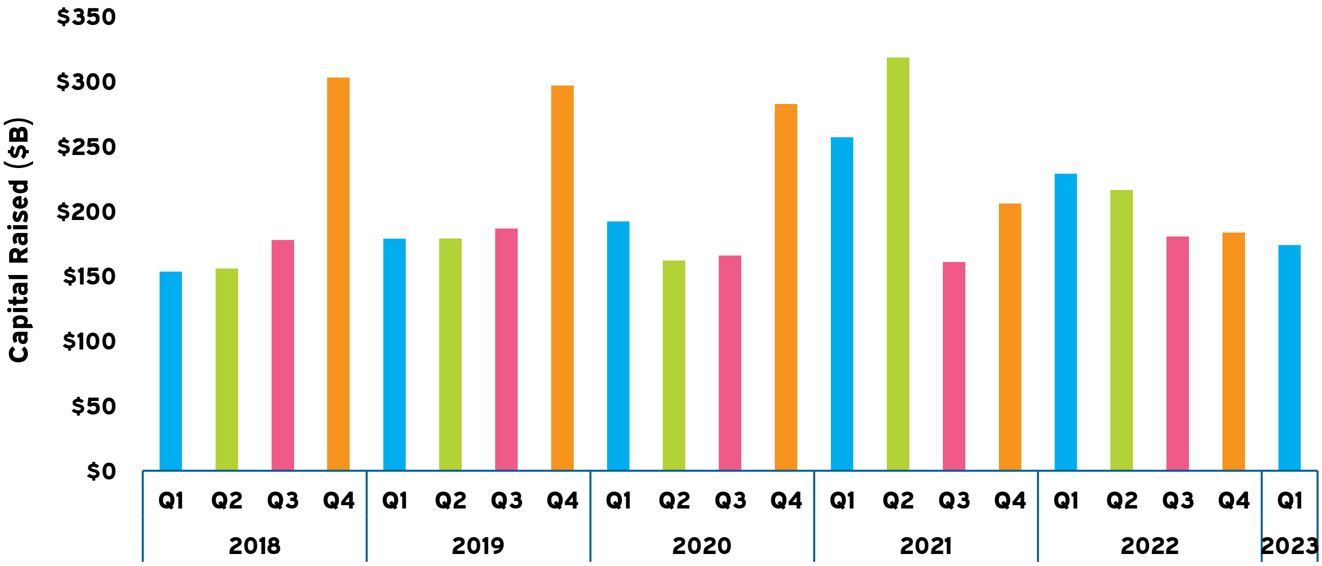
### CalSTRS Private Equity Completed Investments – H1 2023

| Investment | Date Signed | Geography | Strategy | Commitment[1] ($M) | Commit. / NAV (bps)[2] |
|---|---|---|---|---|---|
| Summit Europe IV | February 2023 | Europe | Buyout | 133 | 27 |
| IVP XVIII | February 2023 | North America | Venture Capital | 100 | 21 |
| AlpInvest C. Fund II (SSMA) - Extension | February 2023 | Global | Buyout | 200 | 41 |
| Tiger Global PIP XVI | February 2023 | Global | Venture Capital | 50 | 10 |
| Co-Investment | February 2023 | North America | Buyout | 150 | 31 |
| Co-Investment | February 2023 | North America | Multi-Strategy | 16 | 3 |
| Co-Investment | February 2023 | North America | Buyout | 100 | 21 |
| Bain Capital Asia V | March 2023 | Asia | Buyout | 150 | 31 |
| VIP V (Vitruvian) | March 2023 | Europe | Buyout | 217 | 44 |
| Clayton, Dublier & Rice XII | March 2023 | North America | Buyout | 350 | 72 |
| TA XV | March 2023 | Global | Buyout | 300 | 62 |
| Cinven VIII | March 2023 | Europe | Buyout | 164 | 34 |
| Co-Investment | March 2023 | North America | Buyout | 11 | 2 |
| Co-Investment | March 2023 | North America | Buyout | 2 | <1 |
| Co-Investment | March 2023 | North America | Buyout | 60 | 12 |
| Co-Investment | March 2023 | Europe | Buyout | 4 | 1 |
| Hellman & Friedman XI | May 2023 | Global | Buyout | 200 | 41 |
| CVC Asia VI | May 2023 | Asia | Buyout | 125 | 26 |
| Co-Investment | May 2023 | North America | Buyout | 3 | 1 |
| Blackstone Capital Partners IX | June 2023 | Global | Buyout | 250 | 51 |
| Co-Investment | June 2023 | North America | Buyout | 50 | 10 |
| Co-Investment | June 2023 | North America | Buyout | 50 | 10 |
| Co-Investment | June 2023 | Europe | Buyout | 2 | <1 |

[1] Co-Investments represent committed rather than approved amounts.
[2] Delegated authority limits are now stated as a percentage of PE NAV at the time of investment with a 2% limit for undiversified vehicles and 4% limit for diversified vehicles.

## 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.

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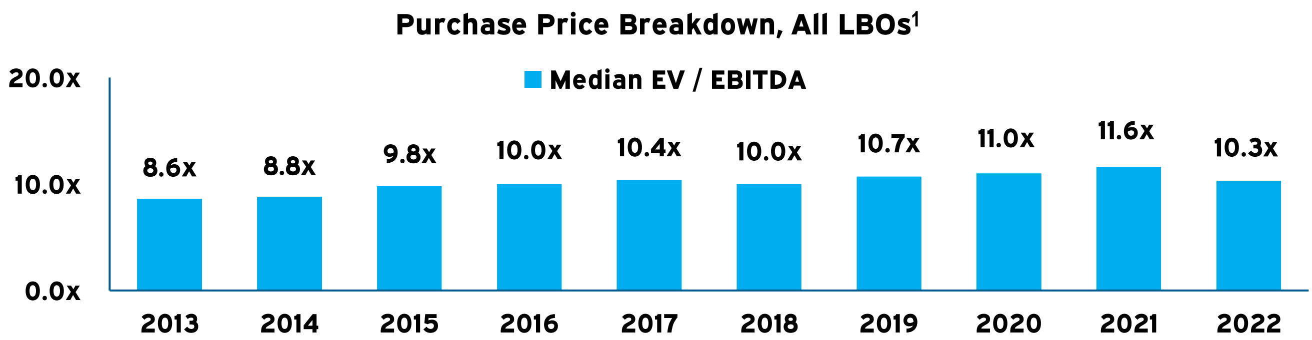
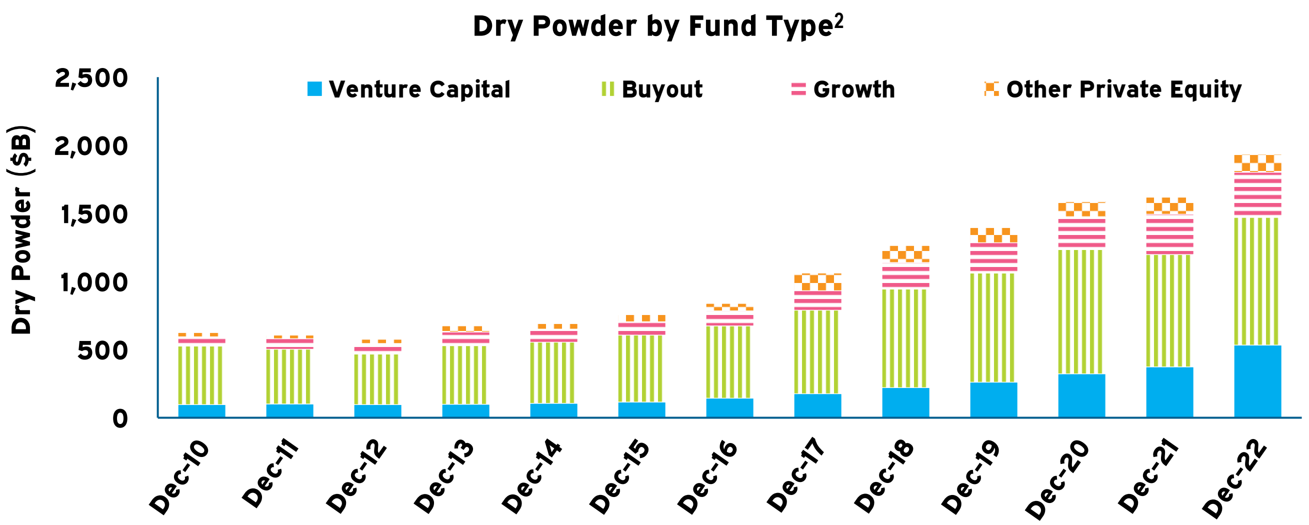
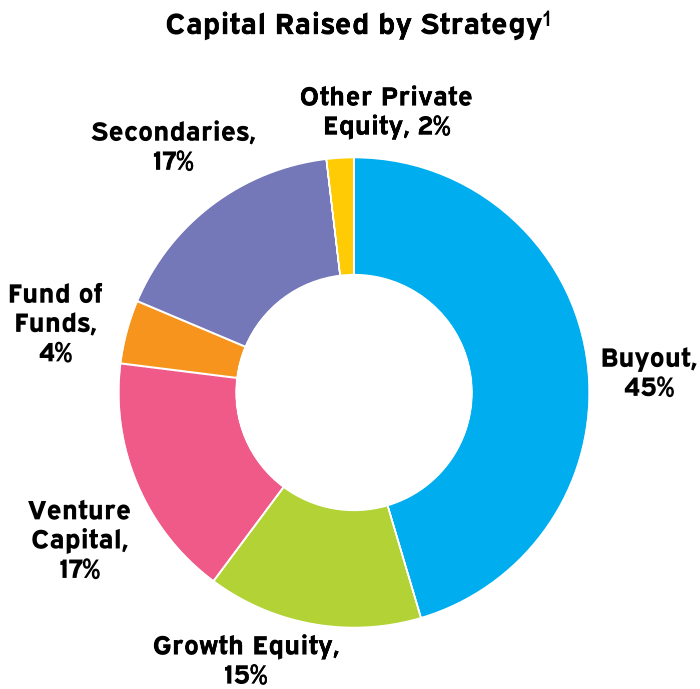
[1] Preqin.

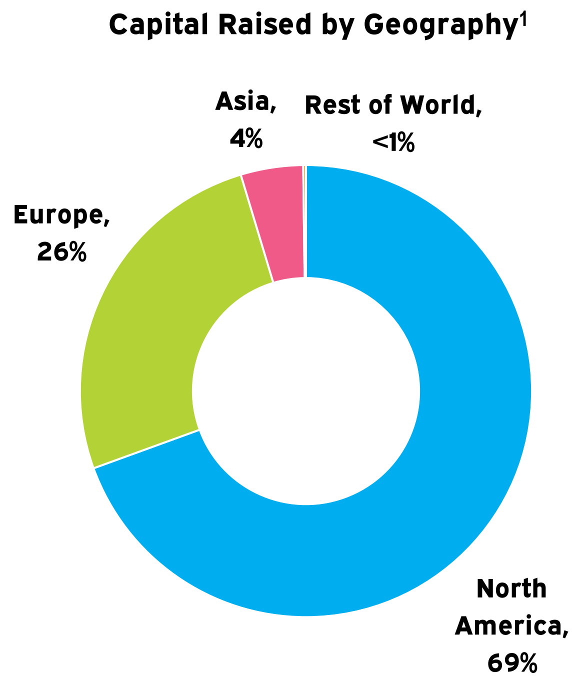



Relative to 2021, the median private equity purchase price multiple has decreased from 11.6x EBITDA to 10.3x EBITDA in 2022. This represents an 11% decrease from 2021 relative to the 5% increase observed in 2021 from 2020. The drop of purchase price multiples on the year shows signs of downward pressure 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.

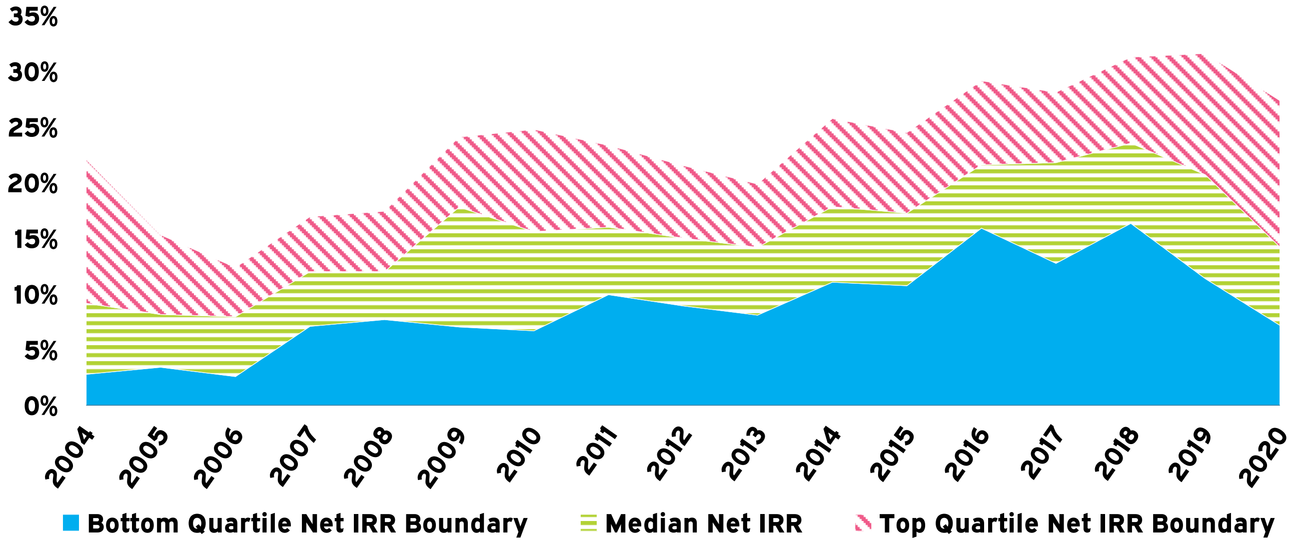
North America-focused vehicles continued to represent the majority of funds raised during the first quarter, representing 69% of total capital. This represents a decrease from 74% in the prior quarter. Alternatively, as a percentage of total capital raised, commitments to Europe increased by 10% during 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.

**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.