



March 6, 2023


TO: Each Trustee,
Board of Investments

SUBJECT: Board of Investments Meeting on March 8, 2023 – Agenda item IX. A.

Following you will find supplemental information regarding the above-mentioned item. Please note the LACERA Staff presentation was inadvertently left out.

March 1, 2023

TO: Trustees – Board of Investments

FROM: Jude Pérez, Principal Investment Officer 

FOR: March 8, 2023 Board of Investments Meeting

SUBJECT: **LACERA QUARTERLY PERFORMANCE BOOK**

Attached is LACERA's quarterly performance book as of December 31, 2022. The report includes both performance and risk sections utilizing data from our platform providers, Solovis and MSCI BarraOne, respectively.

In addition to the standard report, a presentation (**ATTACHMENT 1**) covering the highlights of quarter- and year-end results as well as an overview of asset category-specific environmental, social, and governance and climate profile is included and will be reviewed with Trustees.

Noted and Reviewed:



Jonathan Grabel
Chief Investment Officer

Attachments



Los Angeles County Employees Retirement Association

Investments Division

TOTAL FUND

PERFORMANCE REPORT

For the quarter ended
December 31, 2022

A nighttime photograph of a cityscape. The central focus is a large, illuminated dome building, likely a state capitol, with its lights glowing against a dark, purple and blue twilight sky. To the right, a large, modern building with a grid of windows is visible, some of which are lit. The foreground shows a street with some trees and a few cars, with light trails from traffic. The overall scene is a mix of urban architecture and natural light from the setting or rising sun.

review

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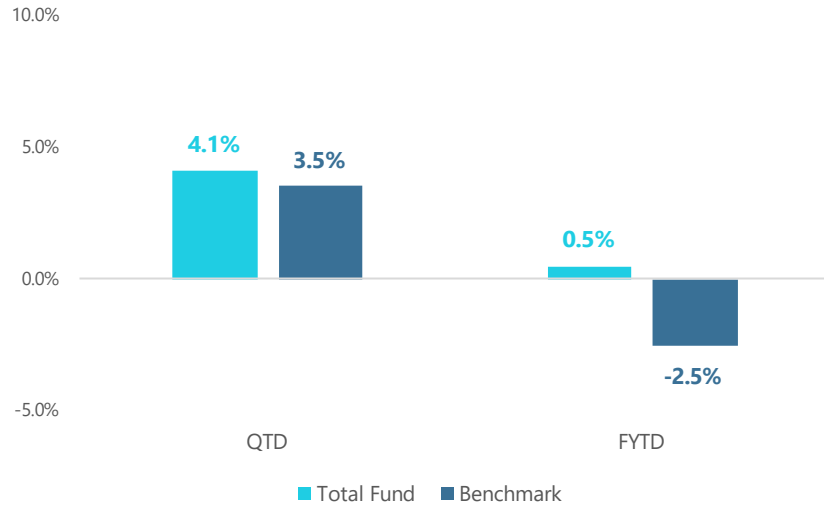
| | |
|-----------|--------------------------------|
| 01 | TOTAL FUND |
| 02 | GROWTH |
| 03 | CREDIT |
| 04 | REAL ASSETS & INFLATION HEDGES |
| 05 | RISK REDUCTION & MITIGATION |
| 06 | PRIVATE MARKETS |
| 07 | EMERGING MANAGER PROGRAM |
| 08 | RISK REPORTS |
| 09 | MANAGER SCORECARDS |
| 10 | APPENDIX |

total fund

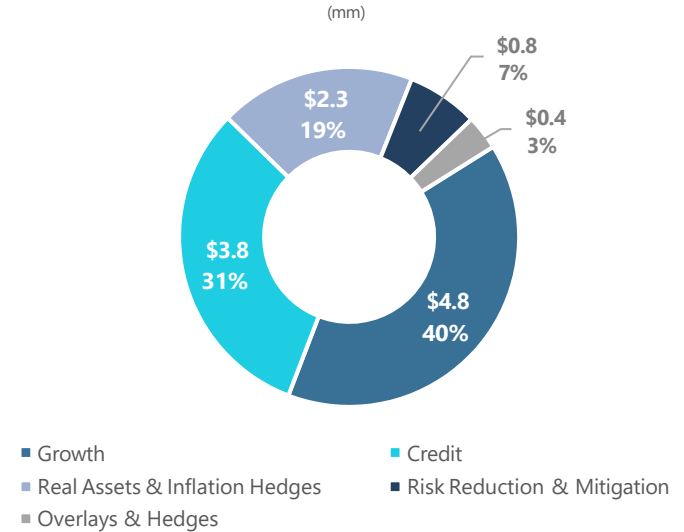
Quarterly Snapshot

for the quarter ended December 31, 2022

Performance (net)



Public Markets Fees¹



Ending Market Value

70,079

↑ **4%**
from prior quarter

Sharpe Ratio²

0.7

↓ **-5%**
from prior quarter

Batting Average³

56%

↑ **8%**
from prior quarter

Standard Deviation²

9.6

↑ **3%**
from prior quarter

Tracking Error²

2.6

↑ **8%**
from prior quarter

¹ Reflects estimated investment management fees. Additional details found in the appendix.

² 3 Year Annualized.

³ Percentage of managers that outperformed the benchmark for the quarter.

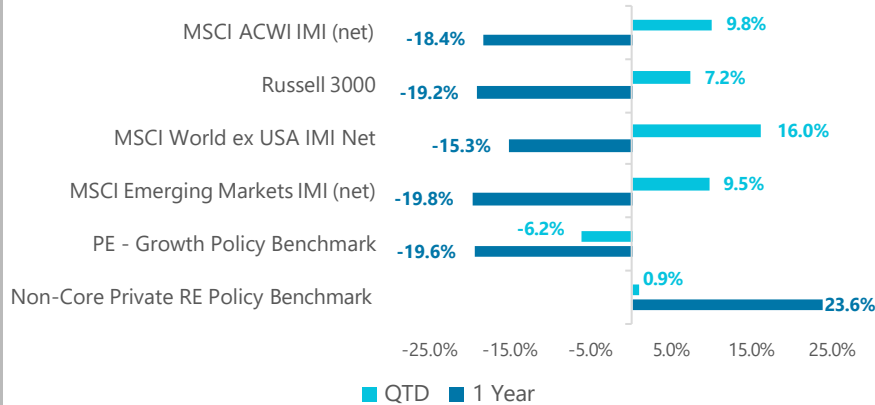
Market Environment

for the quarter ended December 31, 2022

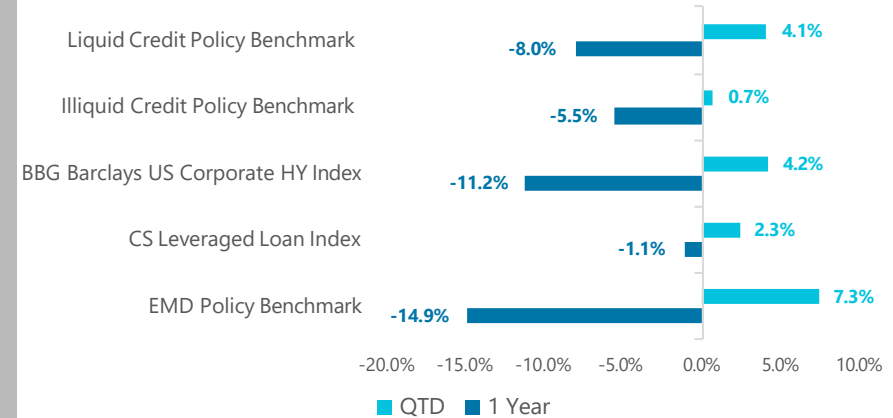


Los Angeles County Employees Retirement Association

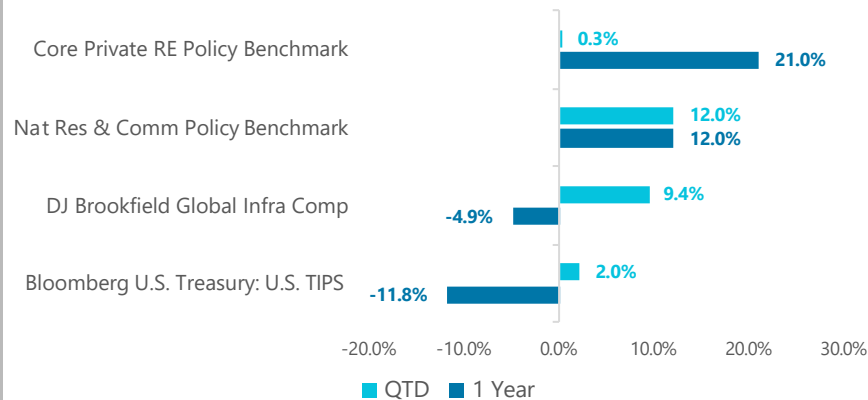
Growth



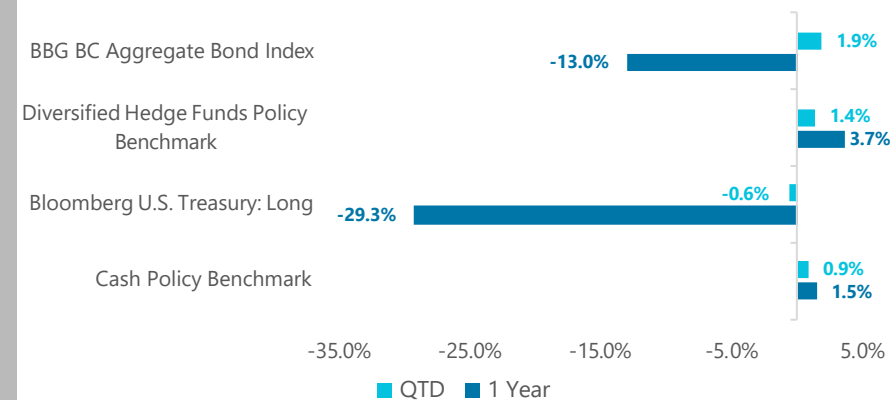
Credit



Real Assets & Inflation Hedges



Risk Reduction & Mitigation



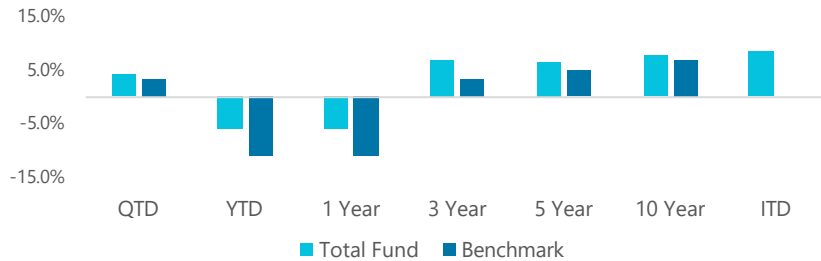
Summary

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

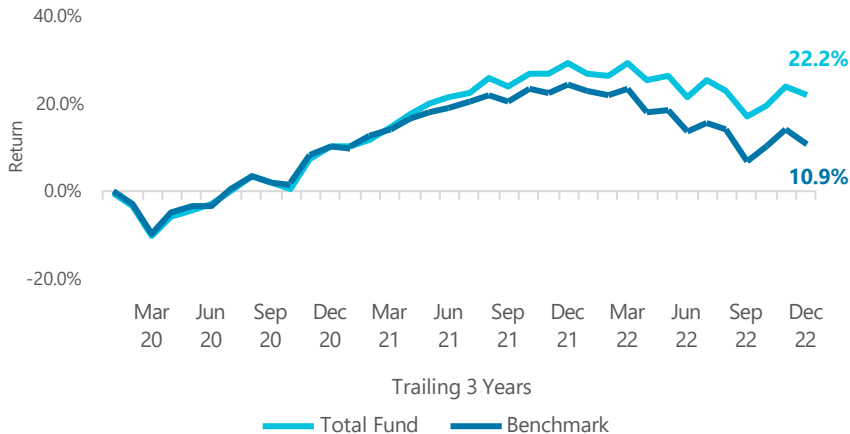
Performance (net)



| | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD |
|-------------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|
| Total Fund | 4.1% | -5.6% | -5.6% | 6.9% | 6.7% | 7.9% | 8.5% |
| Benchmark | 3.5% | -10.9% | -10.9% | 3.5% | 5.1% | 6.9% | -- |
| Excess | 0.6% | 5.2% | 5.2% | 3.4% | 1.6% | 1.0% | -- |

| | FY22 | FY21 | FY20 | FY19 | FY18 |
|-------------------|-------------|--------------|-------------|-------------|-------------|
| Total Fund | 0.1% | 25.2% | 1.8% | 6.4% | 9.0% |
| Benchmark | -4.6% | 23.1% | 2.0% | 8.6% | 7.8% |

Cumulative Return



Functional Category¹

| | QTD | FYTD | 1 Year | 3 Year |
|---|---------------|--------------|---------------|--------------|
| Growth | 6.0% | 0.8% | -9.7% | 10.0% |
| Growth Policy Benchmark | 4.0% | -4.8% | -17.0% | 5.2% |
| Excess | 2.1% | 5.6% | 7.3% | 4.8% |
| Credit | 2.2% | 1.6% | -5.5% | 2.8% |
| Credit Policy Benchmark | 1.9% | 1.0% | -7.4% | 0.3% |
| Excess | 0.3% | 0.6% | 1.9% | 2.5% |
| Real Assets & Inflation Hedges | 3.9% | 1.7% | 7.8% | 8.1% |
| RA & IH Policy Benchmark | 5.4% | 2.1% | 6.4% | 8.3% |
| Excess | -1.4% | -0.4% | 1.4% | -0.2% |
| Risk Reduction & Mitigation | 1.1% | -2.7% | -9.8% | -1.0% |
| RR & M Policy Benchmark | 1.1% | -2.9% | -11.0% | -1.9% |
| Excess | 0.0% | 0.3% | 1.2% | 0.9% |
| Overlays & Hedges | -10.6% | 1.5% | 178.0% | -- |

¹ Cash Overlay composite returns reflect non-notionalized returns.

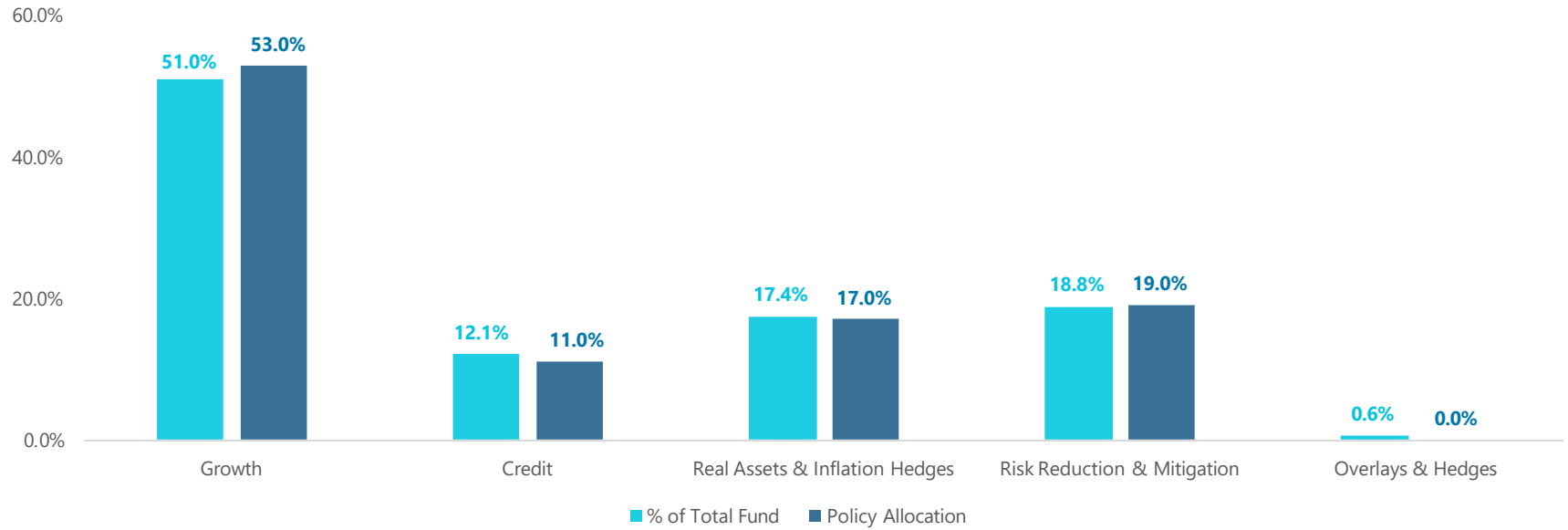
Peer Ranking (gross)

| | QTD | | 1 Year | | 3 Year | | 5 Year | | 10 Year | |
|-------------------|-------------|-----------|--------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| Total Fund | 4.2% | 52 | -5.4% | 13 | 7.3% | 19 | 7.0% | 24 | 8.2% | 29 |
| 60/40 Portfolio | 6.7% | 23 | -16.0% | 95 | 1.6% | 86 | 3.3% | 86 | 5.4% | 89 |
| S&P 500 Index | 7.6% | 10 | -18.1% | 100 | 7.7% | 13 | 9.4% | 4 | 12.6% | 4 |
| 5th Percentile | 9.4% | | 0.6% | | 9.6% | | 9.2% | | 9.8% | |
| 25th Percentile | 6.3% | | -6.3% | | 7.0% | | 7.0% | | 8.6% | |
| 50th Percentile | 4.5% | | -8.9% | | 6.1% | | 6.4% | | 7.8% | |
| 75th Percentile | 3.8% | | -12.0% | | 4.4% | | 5.2% | | 7.1% | |
| 95th Percentile | 2.9% | | -16.4% | | -1.6% | | 1.1% | | 3.2% | |

Asset Allocation

for the quarter ended December 31, 2022

Actual vs. Policy

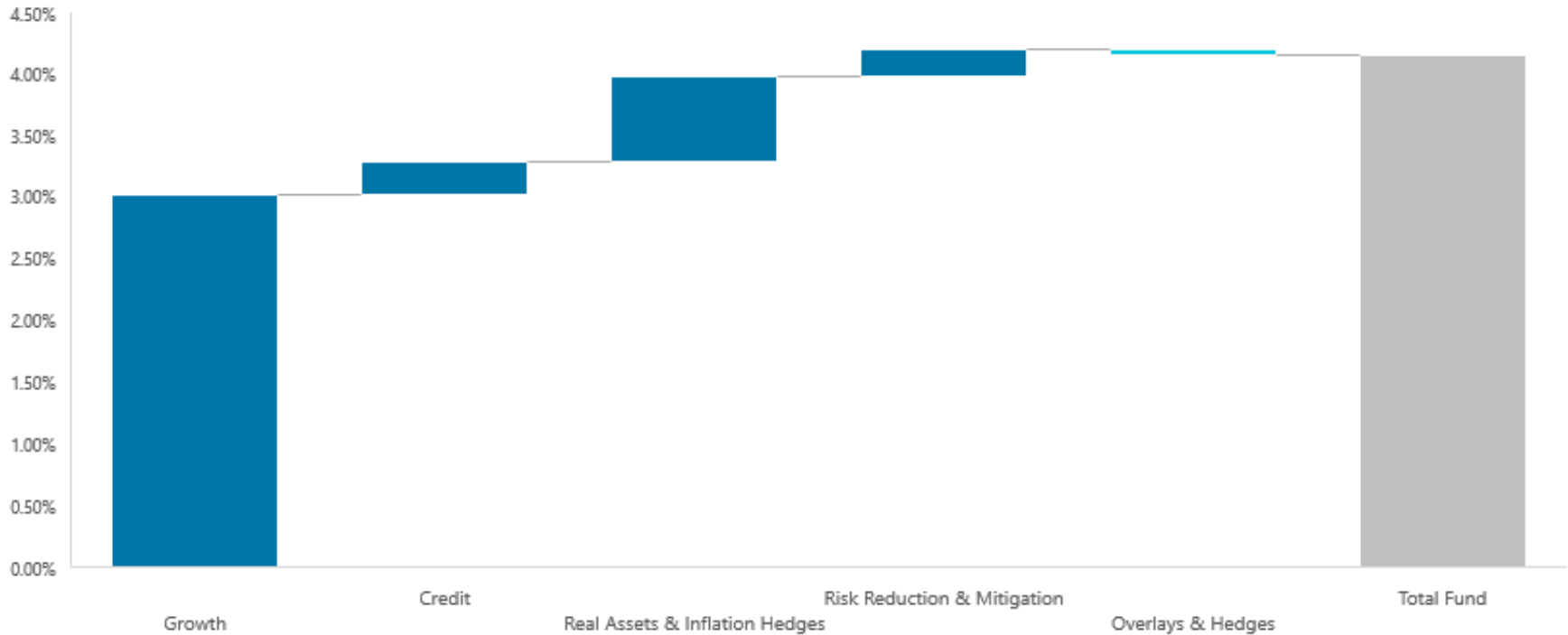


| | Ending Market Value (mm) | % of Total Fund | Policy Allocation | Over/Under (%) | Over/Under (mm) |
|--------------------------------|--------------------------|-----------------|-------------------|----------------|-----------------|
| Total Fund | 70,079 | 100.0% | 100.0% | | |
| Growth | 35,773 | 51.0% | 53.0% | -2.0% | -1,369 |
| Credit | 8,446 | 12.1% | 11.0% | 1.1% | 737 |
| Real Assets & Inflation Hedges | 12,222 | 17.4% | 17.0% | 0.4% | 309 |
| Risk Reduction & Mitigation | 13,202 | 18.8% | 19.0% | -0.2% | -113 |
| Overlays & Hedges | 436 | 0.6% | 0.0% | 0.6% | 436 |

Contribution to Return

for the quarter ended December 31, 2022

QTD Contribution to Return



| Functional Category | | Contributors | | Detractors | |
|--------------------------------|--------------|----------------------------|-------|-------------------------------|--------|
| Growth | 3.02% | BTC Passive Currency Hedge | 2.12% | BlackRock Long Treasury Bonds | -0.03% |
| Credit | 0.26% | SSGA MSCI ACWI IMI | 1.93% | Parametric GE Region | -0.02% |
| Real Assets & Inflation Hedges | 0.70% | JPMAM Strategic Beta US | 0.41% | Parametric RA & IH Overlay | -0.02% |
| Risk Reduction & Mitigation | 0.21% | DWS Infrastructure | 0.33% | Beach Point - Fund III | -0.01% |
| Overlays & Hedges | -0.05% | Parametric Growth Overlay | 0.25% | Napier Park | -0.01% |
| Total Fund | 4.15% | | | | |

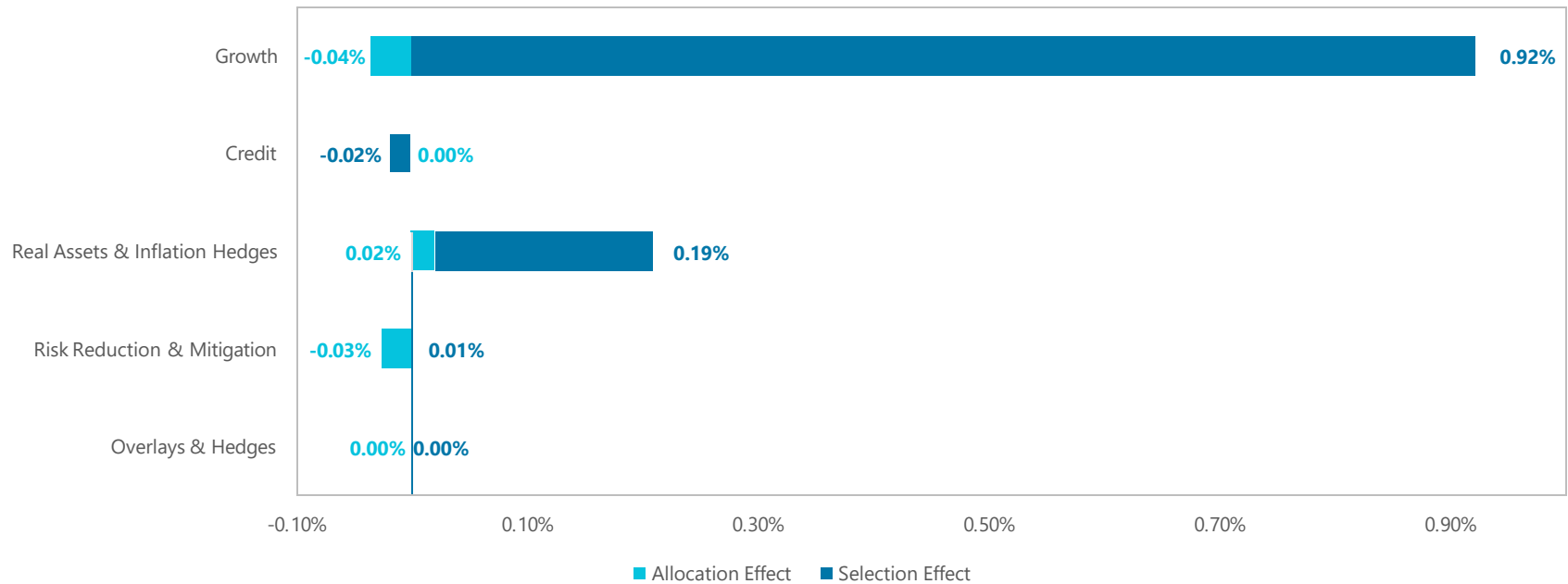
Return Attribution

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

QTD Performance Attribution¹



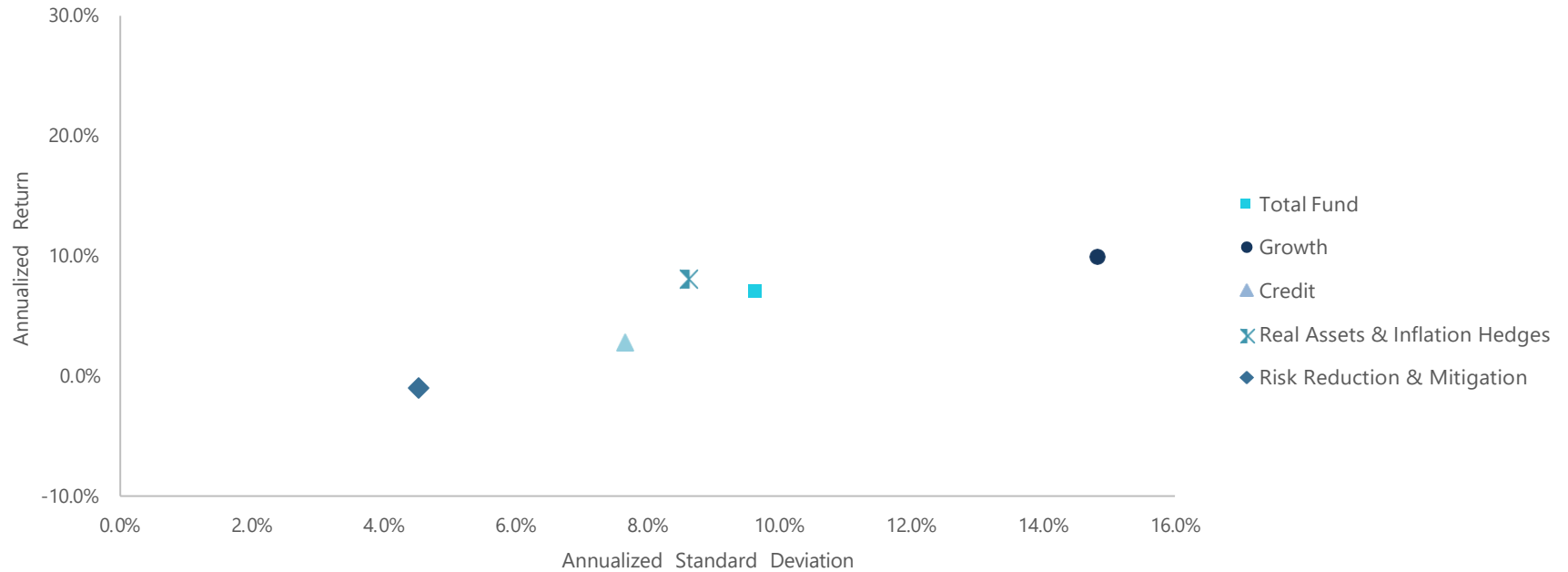
| | Ending Market Value (mm) | % of Total Fund | Policy Allocation | Portfolio Return | Benchmark Return | Allocation Effect | Selection Effect | Total Value Add |
|--------------------------------|--------------------------|-----------------|-------------------|------------------|------------------|-------------------|------------------|-----------------|
| Total Fund | 70,079 | 100.0% | 100.0% | 4.1% | 3.5% | -0.08% | 1.11% | 0.64% |
| Growth | 35,773 | 51.0% | 53.0% | 6.0% | 4.0% | -0.04% | 0.92% | 0.97% |
| Credit | 8,446 | 12.1% | 11.0% | 2.2% | 1.9% | 0.00% | -0.02% | 0.02% |
| Real Assets & Inflation Hedges | 12,222 | 17.4% | 17.0% | 3.9% | 5.4% | 0.02% | 0.19% | -0.24% |
| Risk Reduction & Mitigation | 13,202 | 18.8% | 19.0% | 1.1% | 1.1% | -0.03% | 0.01% | -0.03% |
| Overlays & Hedges | 436 | 0.6% | 0.0% | -10.6% | -- | -- | -- | -- |

¹ Total Value Add includes Interaction Effect.

Risk vs. Return

for the quarter ended December 31, 2022

3 Year (Annualized)



| | Annualized Return | Standard Deviation | Sharpe Ratio | Information Ratio | Beta | Tracking Error |
|--------------------------------|-------------------|--------------------|--------------|-------------------|-------------|----------------|
| Total Fund | 6.9% | 9.6% | 0.67 | 1.22 | 0.94 | 2.6% |
| Growth | 10.0% | 14.8% | 0.67 | 0.92 | 0.91 | 4.9% |
| Credit | 2.8% | 7.7% | 0.33 | 0.73 | 0.95 | 3.6% |
| Real Assets & Inflation Hedges | 8.1% | 8.6% | 0.88 | (0.02) | 0.90 | 2.6% |
| Risk Reduction & Mitigation | -1.0% | 4.5% | (0.35) | 1.06 | 0.93 | 0.9% |
| Overlays & Hedges | 140.4% | 62.4% | | | | |

Performance Detail

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Annualized Net Returns^{1,2}

| | % of Total Fund | Ending Market Value (mm) | Prior Quarter Ending MV (mm) | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD | Inception Date |
|---|-----------------|--------------------------|------------------------------|---------------|---------------|---------------|--------------|-------------|-------------|---------------|-----------------|
| Total Fund | 100.0% | 70,079 | 67,616 | 4.1% | -5.6% | -5.6% | 6.9% | 6.7% | 7.9% | 8.5% | Dec-1988 |
| Total Fund Policy Benchmark | | | | 3.5% | -10.9% | -10.9% | 3.5% | 5.1% | 6.9% | -- | |
| Growth | 51.0% | 35,773 | 33,535 | 6.0% | -9.7% | -9.7% | 10.0% | -- | -- | 11.3% | Apr-2019 |
| Growth Policy Benchmark | | | | 4.0% | -17.0% | -17.0% | 5.2% | -- | -- | 7.6% | |
| Global Equity | 31.3% | 21,969 | 19,936 | 10.0% | -17.5% | -17.5% | 4.5% | -- | -- | 7.0% | Apr-2019 |
| Global Equity Policy Benchmark | | | | 9.8% | -18.4% | -18.4% | 3.9% | -- | -- | 6.4% | |
| Private Equity - Growth | 18.2% | 12,733 | 12,522 | 0.0% | 5.7% | 5.7% | 22.8% | -- | -- | 19.8% | Jan-2019 |
| PE - Growth Policy Benchmark | | | | -6.2% | -19.6% | -19.6% | 5.7% | -- | -- | 4.9% | |
| Non-Core Private Real Estate | 1.5% | 1,071 | 1,077 | 1.9% | 20.5% | 20.5% | 15.3% | 12.6% | 11.9% | 4.8% | Jan-1996 |
| Non-Core Private RE Policy Benchmark | | | | 0.9% | 23.6% | 23.6% | 14.3% | 12.3% | 13.1% | 11.6% | |
| Credit | 12.1% | 8,446 | 7,883 | 2.2% | -5.5% | -5.5% | 2.8% | -- | -- | 3.6% | Apr-2019 |
| Credit Policy Benchmark | | | | 1.9% | -7.4% | -7.4% | 0.3% | -- | -- | 2.0% | |
| Liquid Credit | 6.7% | 4,709 | 4,533 | 3.9% | -8.4% | -8.4% | -- | -- | -- | -6.6% | Oct-2021 |
| Liquid Credit Policy Benchmark | | | | 4.1% | -8.0% | -8.0% | -- | -- | -- | -6.2% | |
| Illiquid Credit | 5.3% | 3,736 | 3,350 | -0.1% | -0.8% | -0.8% | 10.3% | -- | -- | 9.3% | Apr-2019 |
| Illiquid Credit Policy Benchmark | | | | 0.7% | -5.5% | -5.5% | 1.5% | -- | -- | 3.7% | |
| Real Assets & Inflation Hedges | 17.4% | 12,222 | 12,075 | 3.9% | 7.8% | 7.8% | 8.1% | -- | -- | 7.2% | Apr-2019 |
| RA & IH Policy Benchmark | | | | 5.4% | 6.4% | 6.4% | 8.3% | -- | -- | 8.0% | |
| Core Private Real Estate | 6.2% | 4,339 | 4,471 | 1.7% | 23.7% | 23.7% | 11.3% | 9.1% | 9.1% | 7.4% | Oct-1985 |
| Core Private RE Policy Benchmark | | | | 0.3% | 21.0% | 21.0% | 11.7% | 9.7% | 10.4% | 7.2% | |
| Natural Resources & Commodities | 3.2% | 2,210 | 2,476 | 4.4% | 12.3% | 12.3% | 11.8% | 6.3% | -0.6% | -0.9% | Jul-2007 |
| Nat Res & Comm Policy Benchmark | | | | 12.0% | 12.0% | 12.0% | 12.9% | 6.9% | -1.1% | -1.7% | |
| Infrastructure | 5.4% | 3,812 | 3,305 | 7.2% | -4.6% | -4.6% | 4.9% | -- | -- | 7.3% | Jun-2019 |
| DJ Brookfield Global Infra Comp | | | | 9.4% | -4.9% | -4.9% | 1.1% | -- | -- | 3.5% | |
| TIPS | 2.7% | 1,861 | 1,823 | 2.1% | -11.9% | -11.9% | 1.1% | -- | -- | 2.2% | May-2019 |
| Bloomberg U.S. Treasury: U.S. TIPS | | | | 2.0% | -11.8% | -11.8% | 1.2% | -- | -- | 2.3% | |
| Risk Reduction & Mitigation | 18.8% | 13,202 | 13,536 | 1.1% | -9.8% | -9.8% | -1.0% | -- | -- | 0.6% | Apr-2019 |
| RR & M Policy Benchmark | | | | 1.1% | -11.0% | -11.0% | -1.9% | -- | -- | -0.2% | |
| Investment Grade Bonds | 7.1% | 5,003 | 5,292 | 1.8% | -13.1% | -13.1% | -2.6% | 0.2% | 1.5% | 5.1% | Nov-1994 |
| BBG BC Aggregate Bond Index | | | | 1.9% | -13.0% | -13.0% | -2.7% | 0.0% | 1.1% | 4.6% | |
| Diversified Hedge Funds | 6.3% | 4,402 | 4,281 | 1.4% | 5.8% | 5.8% | 7.3% | -- | -- | 6.7% | Apr-2019 |
| Diversified Hedge Funds Policy Benchmark | | | | 1.4% | 3.7% | 3.7% | 3.2% | -- | -- | 3.5% | |
| Long-Term Government Bonds | 4.1% | 2,857 | 2,874 | -0.6% | -28.9% | -28.9% | -- | -- | -- | -25.6% | Nov-2021 |
| Bloomberg U.S. Treasury: Long | | | | -0.6% | -29.3% | -29.3% | -- | -- | -- | -26.8% | |
| Cash | 1.3% | 940 | 1,088 | 1.3% | 3.2% | 3.2% | 1.7% | 2.0% | 1.3% | 1.8% | Jun-2001 |
| Cash Policy Benchmark | | | | 0.9% | 1.5% | 1.5% | 0.7% | 1.3% | 0.8% | 1.4% | |
| Overlays & Hedges | 0.6% | 436 | 587 | -10.6% | 178.0% | 178.0% | -- | -- | -- | 140.4% | Oct-2021 |
| Cash Overlay | 0.8% | 591 | 424 | 39.4% | 79.5% | 79.5% | 1.3% | -- | -- | -1.1% | Aug-2019 |
| Total Overlay Policy BM | | | | 6.6% | -15.1% | -15.1% | 2.4% | -- | -- | 3.7% | |
| Currency Hedge | -0.2% | -155 | 163 | -3.2% | 4.7% | 4.7% | -- | -- | -- | 4.2% | Oct-2021 |
| 50% FX Hedge Custom Benchmark | | | | -3.2% | 4.7% | 4.7% | -- | -- | -- | 4.2% | |

¹ Diversified Hedge Funds returns are net-of-all fees and expenses.

² Cash Overlay composite returns reflect non-notionalized returns.

growth

Summary

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Performance (net)



| | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD |
|---------------|-------------|--------------|--------------|--------------|--------|---------|--------------|
| Growth | 6.0% | -9.7% | -9.7% | 10.0% | -- | -- | 11.3% |
| Benchmark | 4.0% | -17.0% | -17.0% | 5.2% | -- | -- | 7.6% |
| Excess | 2.1% | 7.3% | 7.3% | 4.8% | -- | -- | 3.7% |

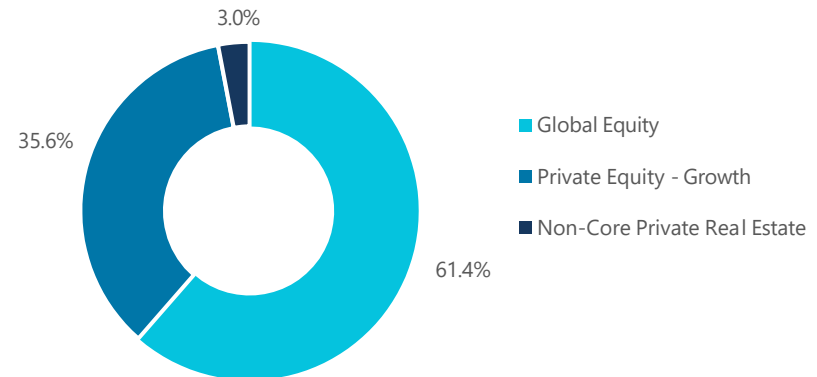
Cumulative Return



Functional Category

| | QTD | FYTD | 1 Year | 3 Year |
|--------------------------------------|--------------|--------------|---------------|--------------|
| Global Equity | 10.0% | 2.9% | -17.5% | 4.5% |
| Global Equity Policy Benchmark | 9.8% | 2.6% | -18.4% | 3.9% |
| Excess | 0.2% | 0.3% | 0.9% | 0.6% |
| Private Equity - Growth | 0.0% | -3.2% | 5.7% | 22.8% |
| PE - Growth Policy Benchmark | -6.2% | -20.6% | -19.6% | 5.7% |
| Excess | 6.2% | 17.4% | 25.2% | 17.1% |
| Non-Core Private Real Estate | 1.9% | 6.7% | 20.5% | 15.3% |
| Non-Core Private RE Policy Benchmark | 0.9% | 6.0% | 23.6% | 14.3% |
| Excess | 1.1% | 0.7% | -3.1% | 0.9% |

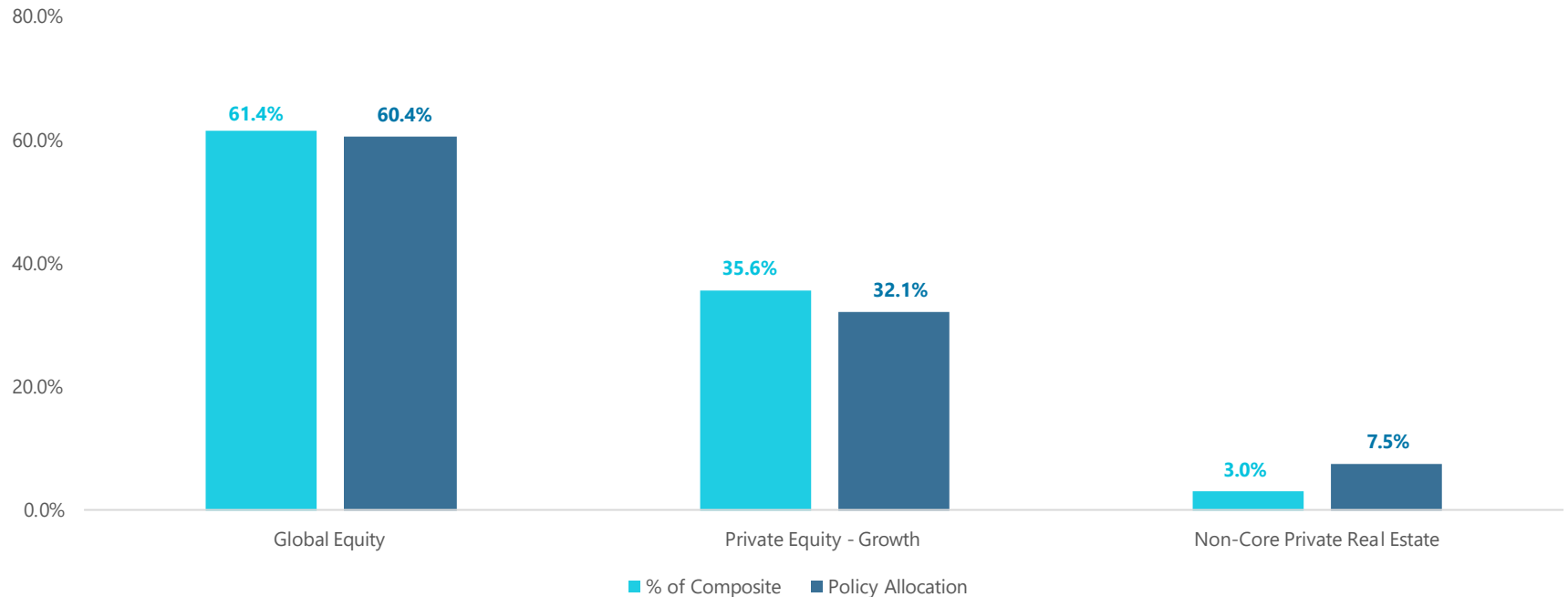
Exposure



Asset Allocation

for the quarter ended December 31, 2022

Actual vs. Policy

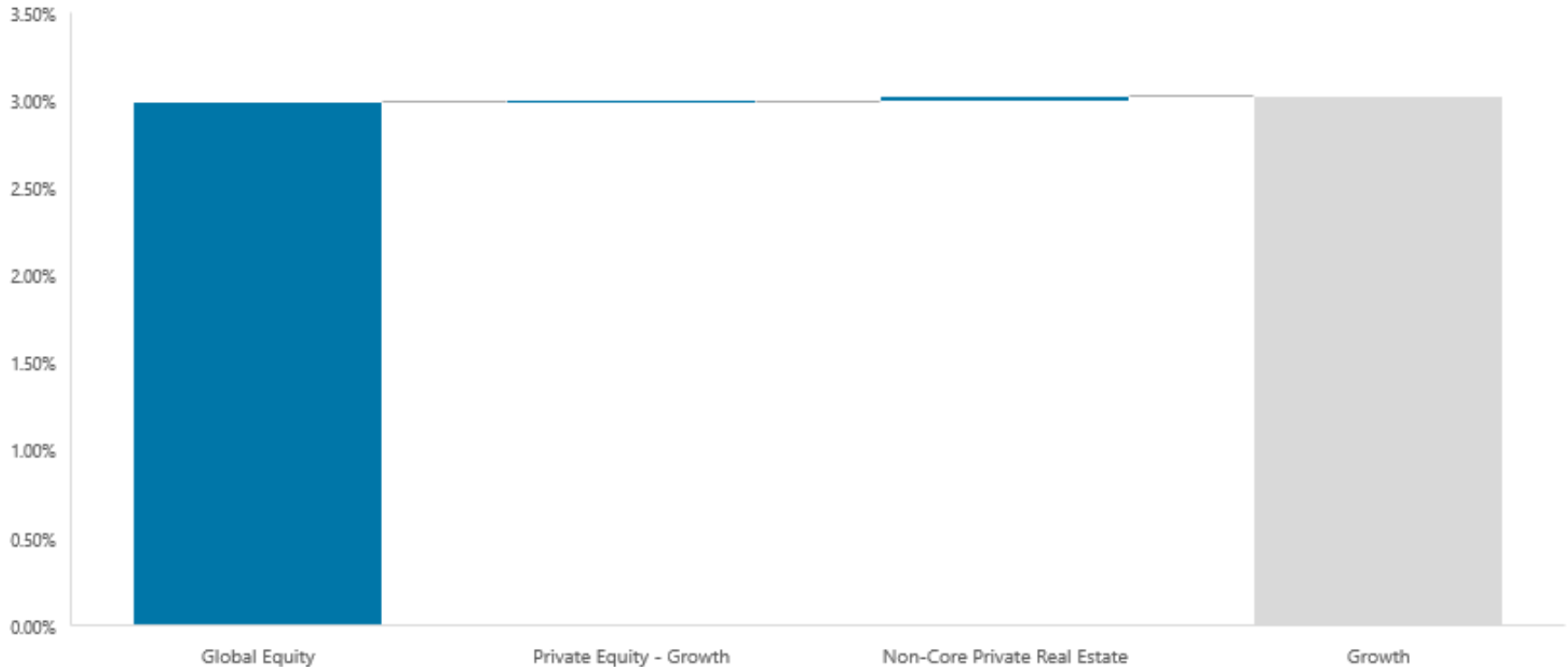


| | Ending Market Value (mm) | % of Composite | Policy Allocation | Over / Under (%) | Over / Under (mm) |
|------------------------------|--------------------------|----------------|-------------------|------------------|-------------------|
| Growth | 35,773 | 100.0% | 100.0% | | |
| Global Equity | 21,969 | 61.4% | 60.4% | 1.0% | 369 |
| Private Equity - Growth | 12,733 | 35.6% | 32.1% | 3.5% | 1,256 |
| Non-Core Private Real Estate | 1,071 | 3.0% | 7.5% | -4.5% | -1,626 |

Contribution to Return

for the quarter ended December 31, 2022

QTD Contribution to Return

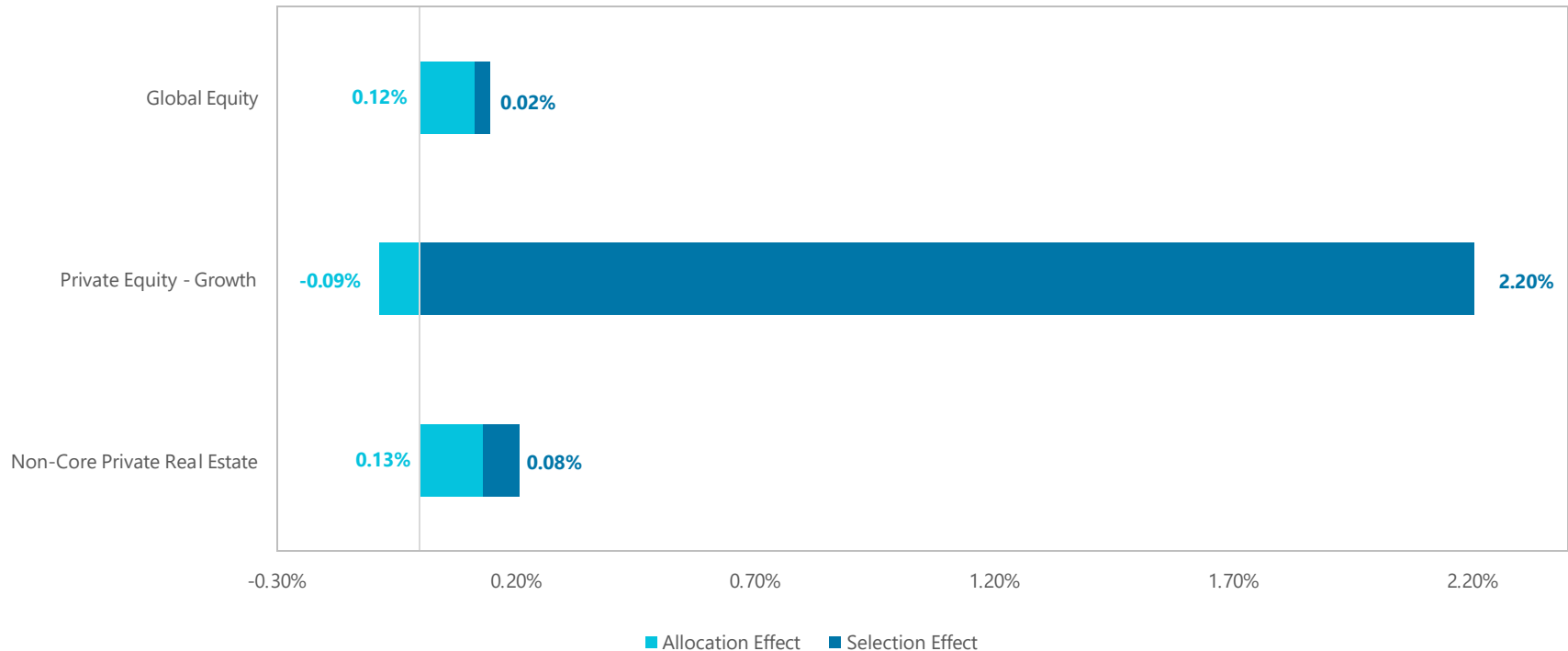


| Functional Category | Contributors | Detractors |
|------------------------------|---------------------------------|---------------------------------------|
| Global Equity | 2.99% SSGA MSCI ACWI IMI | 1.93% Parametric GE Region -0.02% |
| Private Equity - Growth | 0.01% JPMAM Strategic Beta US | 0.41% Parametric GE Market Cap -0.01% |
| Non-Core Private Real Estate | 0.03% BTC Euro Tilts | 0.12% |
| Growth | 3.02% Acadian Developed Markets | 0.11% |
| | JPMAM Strategic Beta Non-US | 0.10% |

Return Attribution

for the quarter ended December 31, 2022

QTD Performance Attribution¹



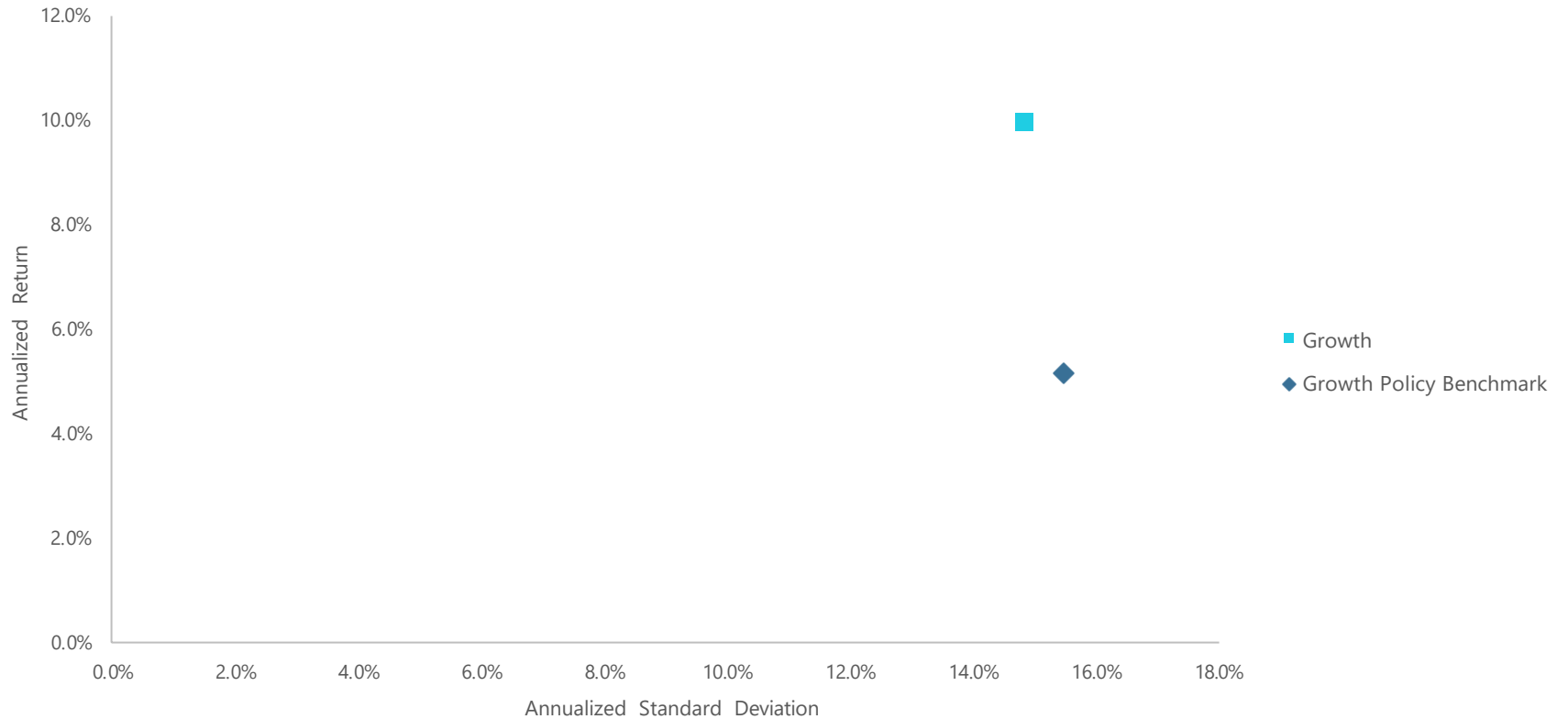
| | Ending Market Value (mm) | % of Composite | Policy Allocation | Portfolio Return | Benchmark Return | Allocation Effect | Selection Effect | Total Value Add |
|------------------------------|--------------------------|----------------|-------------------|------------------|------------------|-------------------|------------------|-----------------|
| Growth | 35,773 | 100.0% | 100.0% | 6.0% | 4.0% | 0.16% | 2.31% | 2.09% |
| Global Equity | 21,969 | 61.4% | 60.4% | 10.0% | 9.8% | 0.12% | 0.02% | 0.20% |
| Private Equity - Growth | 12,733 | 35.6% | 32.1% | 0.0% | -6.2% | -0.09% | 2.20% | 1.73% |
| Non-Core Private Real Estate | 1,071 | 3.0% | 7.5% | 1.9% | 0.9% | 0.13% | 0.08% | 0.16% |

¹ Total Value Add includes Interaction Effect.

Risk vs. Return

for the quarter ended December 31, 2022

3 Year (Annualized)



| | Annualized Return | Standard Deviation | Sharpe Ratio | Information Ratio | Beta | Tracking Error |
|-------------------------|-------------------|--------------------|--------------|-------------------|------|----------------|
| Growth | 10.0% | 14.8% | | | | |
| Growth Policy Benchmark | 5.2% | 15.5% | 0.67 | 0.92 | 0.91 | 4.9% |

Performance Detail

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Annualized Net Returns

| | % of Composite | Ending Market Value (mm) | Prior Quarter Ending MV (mm) | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD | Inception Date |
|--------------------------------------|----------------|--------------------------|------------------------------|--------------|---------------|---------------|--------------|--------------|--------------|--------------|-----------------|
| Growth | 100.0% | 35,773 | 33,535 | 6.0% | -9.7% | -9.7% | 10.0% | -- | -- | 11.3% | Apr-2019 |
| Growth Policy Benchmark | | | | 4.0% | -17.0% | -17.0% | 5.2% | -- | -- | 7.6% | |
| Global Equity | 61.4% | 21,969 | 19,936 | 10.0% | -17.5% | -17.5% | 4.5% | -- | -- | 7.0% | Apr-2019 |
| Global Equity Policy Benchmark | | | | 9.8% | -18.4% | -18.4% | 3.9% | -- | -- | 6.4% | |
| Passive | | | | | | | | | | | |
| SSGA MSCI ACWI IMI | 39.9% | 14,270 | 12,667 | 10.1% | -17.9% | -17.9% | 4.5% | -- | -- | 4.5% | Jan-2020 |
| Factor Based | | | | | | | | | | | |
| JPMAM Strategic Beta Non-US | 1.5% | 551 | 482 | 14.1% | -14.5% | -14.5% | -- | -- | -- | 4.5% | Aug-2020 |
| JPMAM Strategic Beta US | 11.2% | 3,998 | 3,717 | 7.6% | -18.0% | -18.0% | -- | -- | -- | 11.1% | Jul-2020 |
| Active | | | | | | | | | | | |
| Acadian Developed Markets | 1.6% | 560 | 488 | 14.7% | -15.0% | -15.0% | 4.3% | 3.0% | 7.5% | 4.3% | Apr-2006 |
| BTC Euro Tilts | 1.5% | 528 | 444 | 18.8% | -12.7% | -12.7% | 4.0% | 2.8% | 6.3% | 3.3% | Jan-2007 |
| Cevian Capital II - Activist | 1.1% | 398 | 364 | 9.5% | -3.6% | -3.6% | 9.0% | 5.6% | -- | 7.7% | Oct-2016 |
| CGT International Equity | 1.0% | 364 | 310 | 17.5% | -23.4% | -23.4% | 0.4% | 3.3% | 6.0% | 5.2% | Nov-1994 |
| Cornercap US Small Cap - EMP | 0.2% | 81 | 73 | 11.0% | -7.0% | -7.0% | 9.1% | -- | -- | 7.2% | Oct-2018 |
| Frontier US SMID Growth | 0.7% | 256 | 231 | 11.1% | -17.9% | -17.9% | 4.5% | 4.9% | 10.2% | 9.7% | Jun-2002 |
| Global Alpha | 0.5% | 166 | 144 | 15.1% | -19.2% | -19.2% | -0.8% | -- | -- | 4.2% | Nov-2018 |
| Jana JSI Fund V - Activist | 0.0% | 8 | 66 | -- | -- | -- | -- | -- | -- | -- | Oct-2016 |
| Lazard Emerging Markets | 1.0% | 368 | 322 | 14.5% | -22.6% | -22.6% | -1.0% | 0.3% | -- | 2.0% | Feb-2013 |
| Parametric GE Market Cap | 0.3% | 100 | 112 | -6.5% | -15.6% | -15.6% | -- | -- | -- | 0.9% | Oct-2021 |
| Parametric GE Region | 0.2% | 89 | 117 | -14.8% | -21.6% | -21.6% | -- | -- | -- | -19.6% | Dec-2021 |
| Systematic US Small Cap Value | 0.5% | 186 | 167 | 11.8% | -9.9% | -9.9% | 7.0% | -- | -- | 5.3% | Jul-2018 |
| Private Equity - Growth | 35.6% | 12,733 | 12,522 | 0.0% | 5.7% | 5.7% | 22.8% | -- | -- | 19.8% | Jan-2019 |
| PE - Growth Policy Benchmark | | | | -6.2% | -19.6% | -19.6% | 5.7% | -- | -- | 4.9% | |
| Non-Core Private Real Estate | 3.0% | 1,071 | 1,077 | 1.9% | 20.5% | 20.5% | 15.3% | 12.6% | 11.9% | 4.8% | Jan-1996 |
| Non-Core Private RE Policy Benchmark | | | | 0.9% | 23.6% | 23.6% | 14.3% | 12.3% | 13.1% | 11.6% | |

Growth Risk Summary

for the quarter ended December 31, 2022

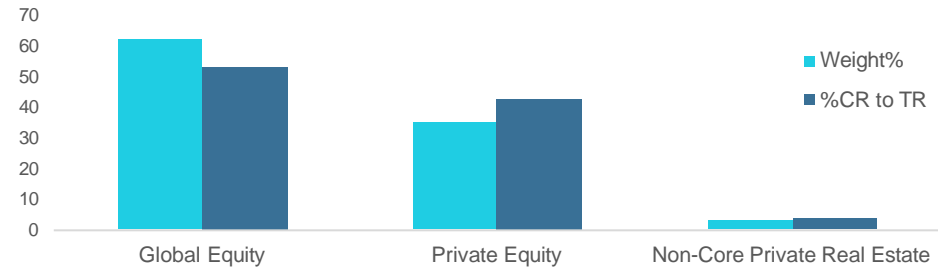
Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 20.85 |
| Benchmark Risk | 19.89 |
| Active Risk | 1.65 |
| Portfolio Beta | 1.05 |

Risk Decomposition

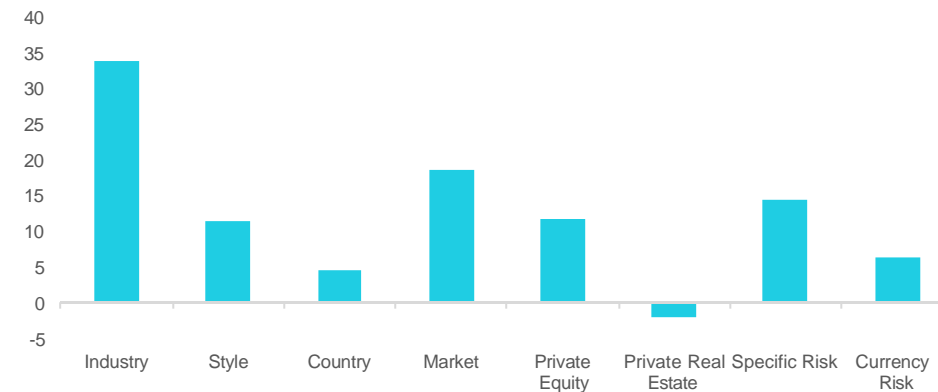
| Risk Source | Portfolio | | Active | |
|--------------------|-------------------|---------------|-------------------|---------------|
| | Risk Contribution | %Risk | Risk Contribution | %Risk |
| Total Risk | 20.85 | 100.00 | 1.65 | 100.00 |
| Local Market Risk | 19.79 | 94.94 | 1.54 | 93.50 |
| Common Factor Risk | 19.76 | 94.76 | 1.30 | 78.90 |
| Specific Risk | 0.04 | 0.17 | 0.24 | 14.61 |
| Currency Risk | 1.06 | 5.06 | 0.11 | 6.50 |

Contribution to Risk



| | Mkt Value (mm) | Weight% | Total Risk | Risk Contribution | %CR to TR |
|------------------------------|----------------|---------------|--------------|-------------------|---------------|
| Growth | 35,193 | 100.00 | 20.85 | 20.85 | 100.00 |
| Global Equity | 21,929 | 62.31 | 18.73 | 11.12 | 53.34 |
| Private Equity | 12,249 | 34.81 | 27.84 | 8.94 | 42.90 |
| Non-Core Private Real Estate | 1,015 | 2.88 | 43.72 | 0.78 | 3.76 |

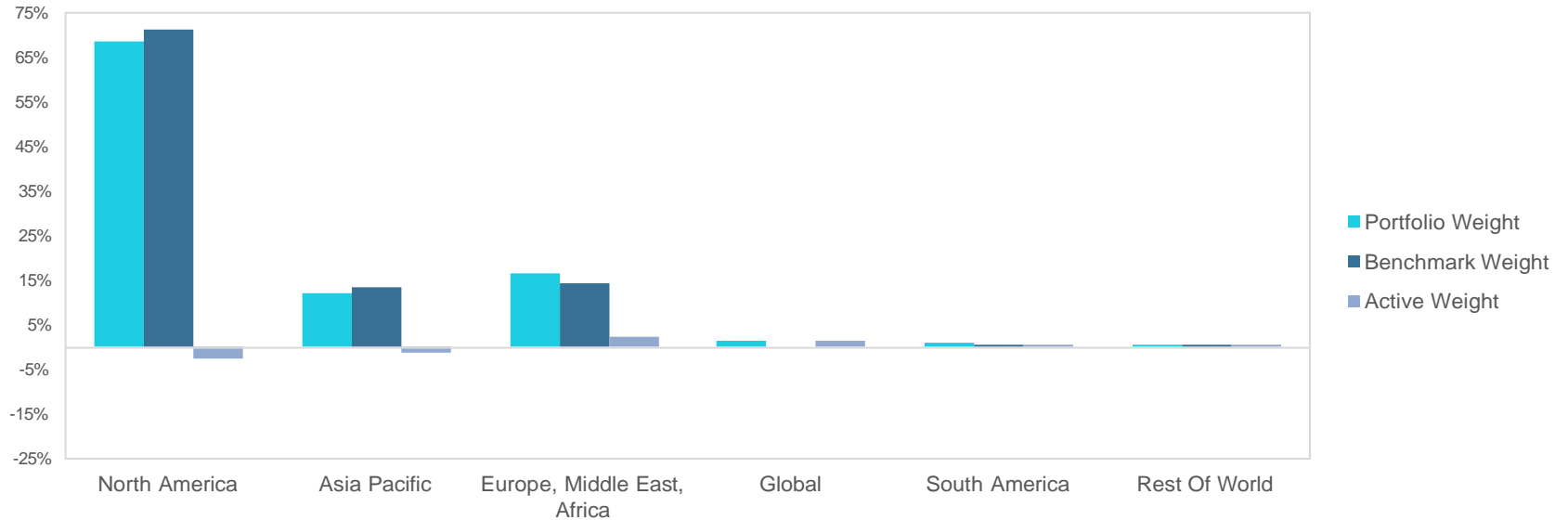
Active Risk from Common Factors



Growth Risk Summary

for the quarter ended December 31, 2022

Portfolio Allocation By Region

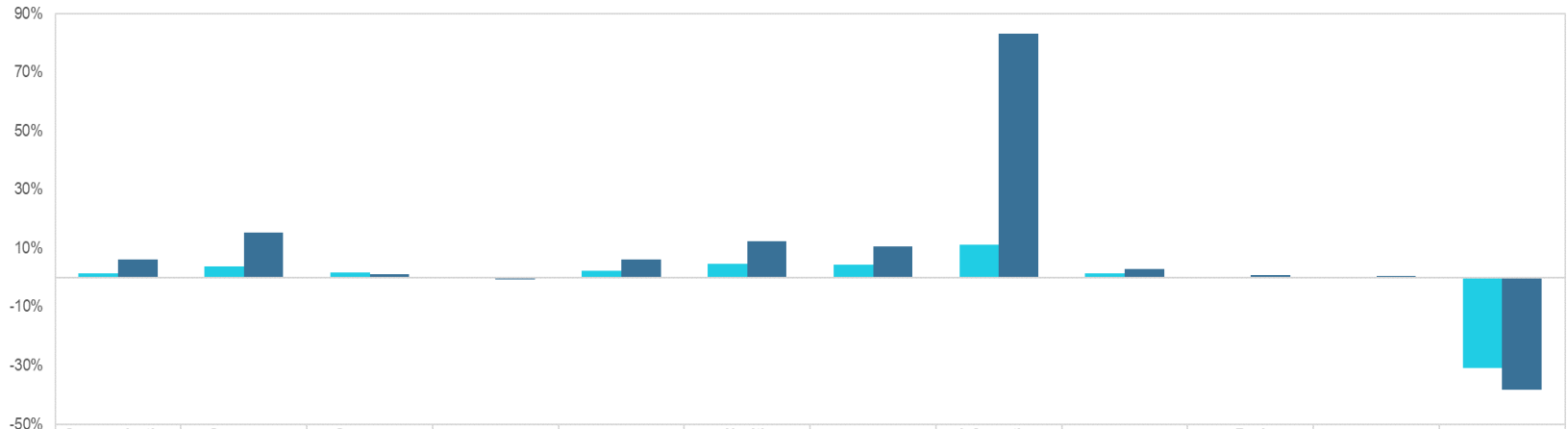


| Region | Weight% | | | Total Risk | Active Risk CR | % of Active TR | MC to Total Tracking Error |
|-----------------------------|----------------|----------------|--------------|--------------|----------------|----------------|----------------------------|
| | Portfolio | Benchmark | Active | | | | |
| Total Fund | 100.00% | 100.00% | 0.00% | 20.85 | 1.65 | 100.00 | 0.02 |
| North America | 68.49% | 71.24% | -2.75% | 23.03 | 1.30 | 78.91 | 0.04 |
| Asia Pacific | 12.24% | 13.56% | -1.31% | 16.52 | 0.18 | 10.71 | -0.04 |
| Europe, Middle East, Africa | 16.63% | 14.41% | 2.22% | 21.95 | 0.17 | 10.23 | 0.02 |
| Global | 1.15% | 0.00% | 1.15% | 20.97 | -0.02 | -1.27 | -0.02 |
| South America | 1.13% | 0.57% | 0.56% | 32.37 | 0.02 | 1.50 | 0.02 |
| Rest Of World | 0.36% | 0.22% | 0.14% | 16.23 | 0.00 | -0.09 | -0.03 |

Growth Risk Summary

for the quarter ended December 31, 2022

Portfolio Allocation By GICS Sector



| | Communication Services | Consumer Discretionary | Consumer Staples | Energy | Financials | Health Care | Industrials | Information Technology | Materials | Real Estate | Utilities | Others |
|--------------------------|------------------------|------------------------|------------------|--------|------------|-------------|-------------|------------------------|-----------|-------------|-----------|---------|
| Active Weight | 1.42% | 3.80% | 1.58% | 0.34% | 2.38% | 4.79% | 4.26% | 11.16% | 1.36% | -0.12% | -0.09% | -30.89% |
| Active Risk Contribution | 6.21% | 15.35% | 1.13% | -0.63% | 6.00% | 12.28% | 10.69% | 83.15% | 2.77% | 0.85% | 0.48% | -38.28% |

Growth – Global Equity

Acadian Developed Markets

for the quarter ended December 31, 2022

Strategy

Seeks to capture mispriced opportunities through systematic stock, sector, and country valuation models that are customized to each market. The strategy may be suited to investors looking to gain exposure in non-U.S. developed markets and diversify portfolio through active quantitative investment approach.

Inception Date: April 2006

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------------|-----------|-----------|
| Market Cap Wtd Average (mm) | 44,970.5 | 74,022.6 |
| No. Of Issues | 655.0 | 0.0 |
| Dividend Yield | 4.9 | 3.3 |
| Return on Equity | 26.3 | 18.3 |
| Price to Sales | 2.9 | 3.0 |
| Price to Book | 3.7 | 4.4 |
| PE Ratio | 9.3 | 14.7 |

Top Holdings (% of assets)

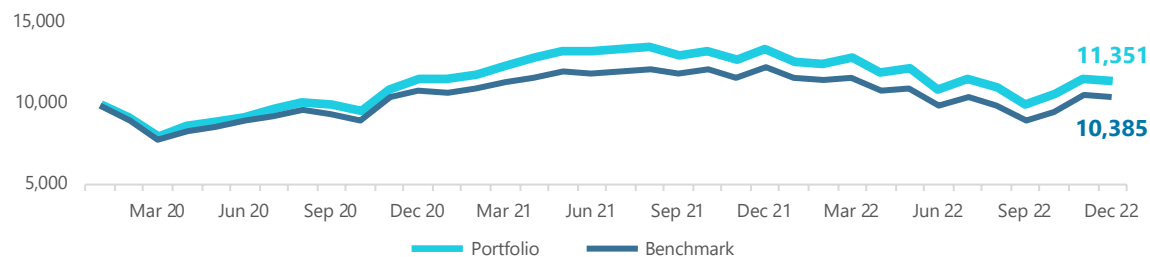
| | |
|-------------------------------|--------------|
| NOVO NORDISK A/S B | 3.5% |
| ROCHE HOLDING AG GENUSSSCHEIN | 2.9% |
| BHP GROUP LTD | 2.2% |
| WOLTERS KLUWER | 1.9% |
| JAPAN POST HOLDINGS CO LTD | 1.6% |
| Top 5 Holdings | 12.1% |

Performance (net)¹

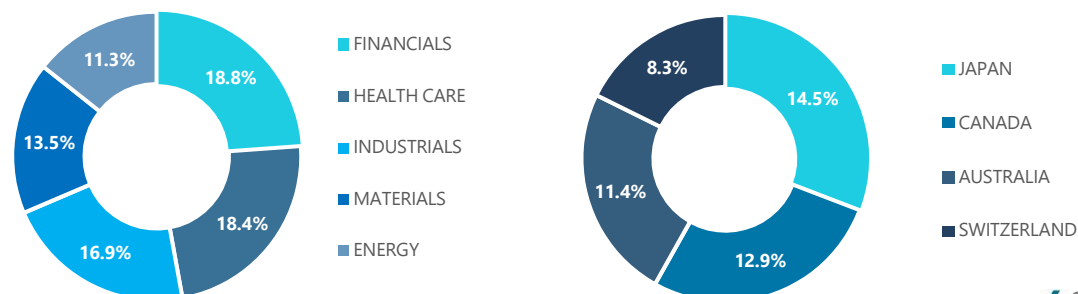
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|----------------------------------|--------------------------|--------------|---------------|-------------|-------------|
| Acadian Developed Markets | 560.2 | 14.7% | -15.0% | 4.3% | 3.0% |
| MSCI EAFE + Canada Net Index | | 16.2% | -14.3% | 1.3% | 1.8% |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: Intl/Global Equity Funds - Core | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--|--------------|-----------|---------------|-----------|-------------|-----------|-------------|-----------|
| Acadian Developed Markets | 14.8% | 17 | -14.7% | 36 | 4.7% | 33 | 3.4% | 50 |
| Median | 12.4% | | -16.1% | | 2.5% | | 3.3% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

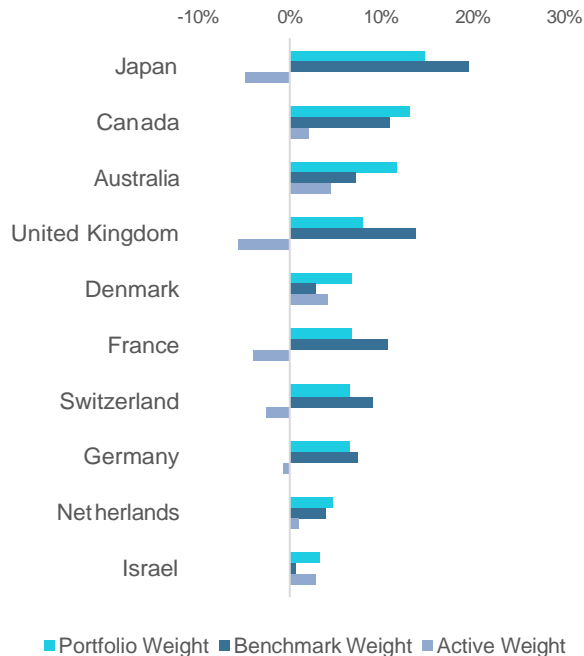
Acadian Developed Markets

for the quarter ended December 31, 2022

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 19.14 |
| Benchmark Risk | 18.33 |
| Active Risk | 4.73 |
| Portfolio Beta | 1.01 |

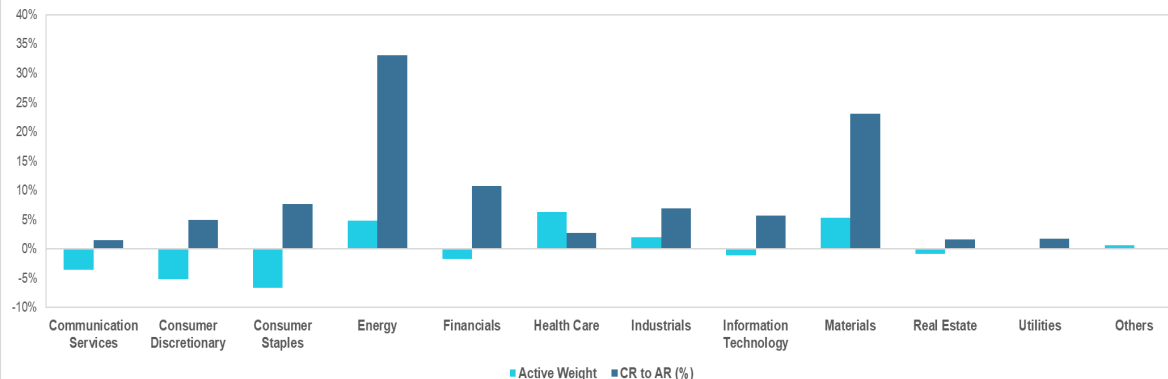
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|-------------------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| SOUTH32 LIMITED | 1.55% | 0.08% | 1.48% | 41.73 | 5.02 | 0.169 |
| EQUINOR ASA | 1.51% | 0.21% | 1.29% | 39.22 | 4.66 | 0.179 |
| MEG ENERGY CORP | 0.68% | 0.00% | 0.68% | 60.93 | 4.42 | 0.314 |
| BHP GROUP LTD | 2.26% | 0.98% | 1.28% | 35.47 | 4.04 | 0.157 |
| CRESCENT POINT ENERGY CORP | 0.50% | 0.00% | 0.50% | 63.93 | 3.49 | 0.336 |
| BIRCHCLIFF ENERGY LTD | 0.61% | 0.00% | 0.61% | 57.08 | 3.38 | 0.270 |
| WHITEHAVEN COAL LTD | 0.56% | 0.00% | 0.56% | 54.84 | 3.08 | 0.267 |
| ADARO ENERGY INDONESIA TBK PT | 0.71% | 0.00% | 0.71% | 45.43 | 2.95 | 0.205 |
| TOURMALINE OIL CORP | 0.73% | 0.10% | 0.63% | 43.60 | 2.80 | 0.217 |
| BLUESCOPE STEEL LTD | 1.00% | 0.03% | 0.97% | 39.56 | 2.46 | 0.129 |

Portfolio Risk by GICS Sector



Growth – Global Equity BTC Europe Alpha Tilts

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Strategy

Seeks to generate risk-controlled and consistent active returns by using a unique blend of bottom-up stock selection insights and broader top-down thematic insights. The strategy may be suited to investors looking to capture active return opportunities in European region.

Inception Date: January 2007

Risk Statistics (since inception)

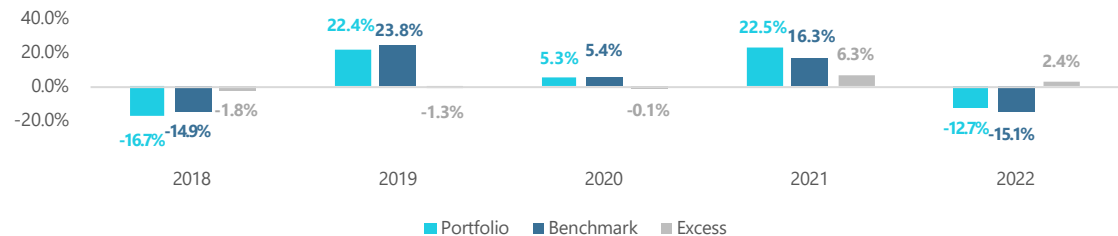
| | |
|------------------------------|-------|
| Standard Deviation | 19.3% |
| Benchmark Standard Deviation | 19.4% |
| Sharpe Ratio | 0.22 |
| Information Ratio | 0.54 |
| Beta | 0.99 |
| Tracking Error | 1.9% |

Performance (net)¹

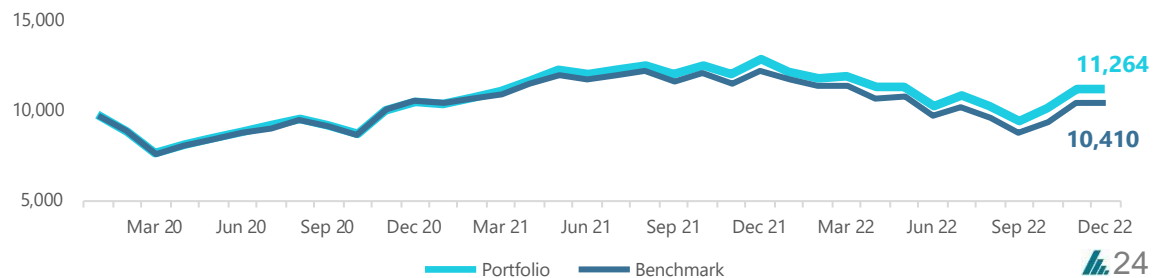
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|-------------------------|--------------------------|--------------|---------------|-------------|-------------|
| BTC Euro Tilts | 527.8 | 18.8% | -12.7% | 4.0% | 2.8% |
| MSCI EUROPE | | 19.3% | -15.1% | 1.3% | 1.9% |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: Intl Equity Developed Mkt Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--|--------------|-----------|---------------|-----------|-------------|-----------|-------------|-----------|
| BTC Euro Tilts | 19.0% | 12 | -12.3% | 33 | 4.5% | 11 | 3.2% | 19 |
| Median | 15.0% | | -14.2% | | 1.1% | | 1.8% | |

Calendar Year Returns



Growth of \$10,000



Note: Commingled fund account with no position-level transparency.
¹ Universe data is gross-of-fees.

Growth Risk Analysis – Global Equity

BTC Europe Alpha Tilts

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 19.83 |
| Benchmark Risk | 20.51 |
| Active Risk | 1.32 |
| Portfolio Beta | 0.97 |

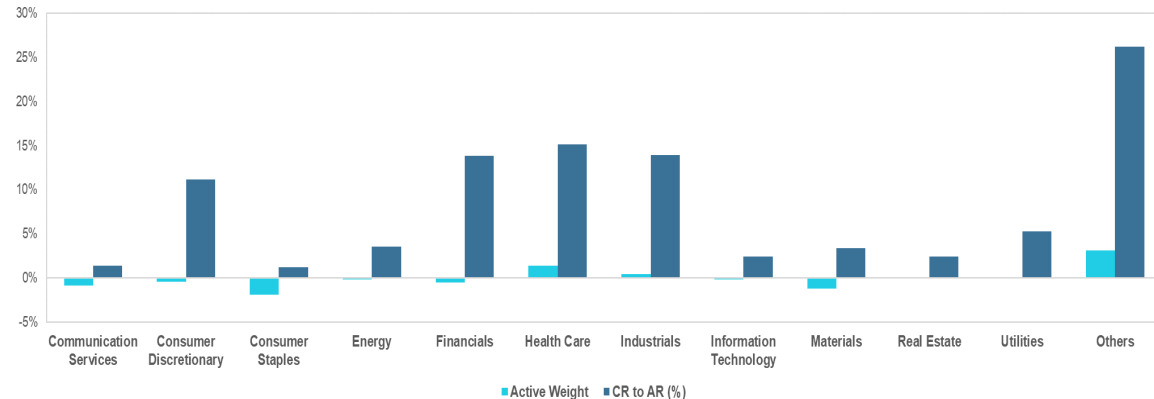
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|------------------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| NOVARTIS AG | 2.95% | 2.12% | 0.83% | 19.88 | 4.61 | -0.036 |
| PROSUS NV | 0.00% | 0.62% | -0.62% | 45.87 | 4.53 | -0.206 |
| BRITISH AMERICAN TOBACCO PLC | 1.85% | 0.92% | 0.94% | 23.88 | 4.04 | -0.052 |
| ENGIE | 1.38% | 0.28% | 1.10% | 33.06 | 3.32 | -0.069 |
| BP PLC | 2.40% | 1.17% | 1.23% | 32.80 | 3.10 | -0.076 |
| BEIERSDORF AG | 0.83% | 0.13% | 0.70% | 22.74 | 2.77 | -0.057 |
| RIO TINTO PLC | 0.08% | 0.85% | -0.77% | 35.72 | 2.50 | -0.152 |
| SANOFI SA | 1.64% | 1.19% | 0.46% | 24.11 | 2.36 | -0.041 |
| GSK PLC | 1.22% | 0.76% | 0.46% | 27.09 | 2.07 | -0.050 |
| ROCHE HOLDING AG | 0.45% | 0.11% | 0.33% | 24.36 | 1.93 | -0.033 |

Portfolio Risk by GICS Sector



Growth – Global Equity

Capital Group Developed Markets

for the quarter ended December 31, 2022

Strategy

Seeks to generate long-term capital appreciation through fundamental research and proprietary models for earnings estimates and valuations. The strategy may be suited to investors looking to gain exposures in non-U.S. developed markets with emphasis on bottom-up, fundamental investment analysis.

Inception Date: October 1987

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------------|-----------|-----------|
| Market Cap Wtd Average (mm) | 106,856.3 | 74,022.6 |
| No. Of Issues | 158.0 | 0.0 |
| Dividend Yield | 2.2 | 3.3 |
| Return on Equity | 21.2 | 18.3 |
| Price to Sales | 5.4 | 3.0 |
| Price to Book | 6.1 | 4.4 |
| PE Ratio | 23.0 | 14.7 |

Top Holdings (% of assets)

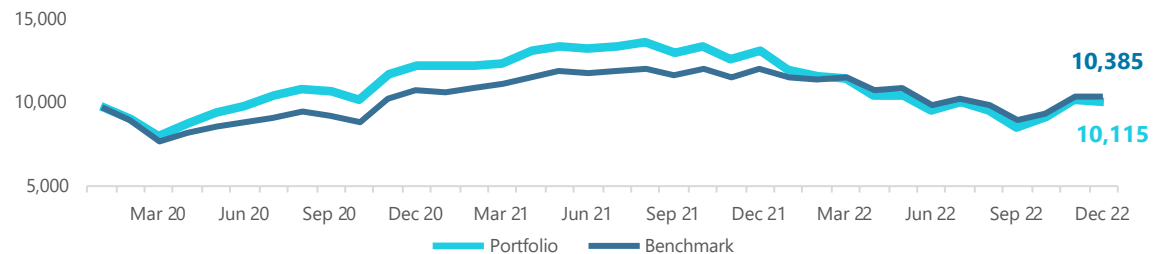
| | |
|------------------------------|--------------|
| ASML HOLDING NV | 4.3% |
| NOVO NORDISK A/S B | 4.0% |
| LVMH MOET HENNESSY LOUIS VUI | 3.1% |
| EVOLUTION AB | 2.7% |
| ASTRAZENECA PLC | 2.6% |
| Top 5 Holdings | 16.7% |

Performance (net)¹

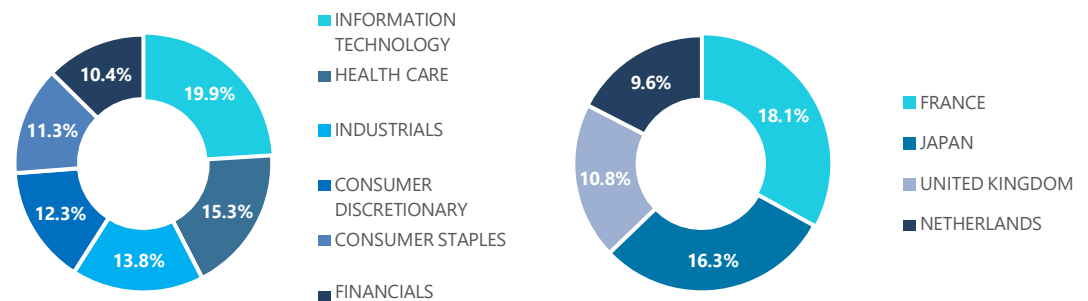
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--|--------------------------|--------------|---------------|-------------|-------------|
| Capital Group Developed Markets | 364.2 | 17.5% | -23.4% | 0.4% | 3.3% |
| EAFE Custom Benchmark | | 16.2% | -14.3% | 1.3% | 1.8% |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: Intl/Global Equity Funds - Core | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--|--------------|----------|---------------|-----------|-------------|-----------|-------------|-----------|
| Capital Group Developed Markets | 17.6% | 5 | -23.1% | 90 | 0.7% | 66 | 3.7% | 50 |
| Median | 14.4% | | -16.0% | | 2.5% | | 3.3% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity Capital Group Developed Markets

for the quarter ended December 31, 2022

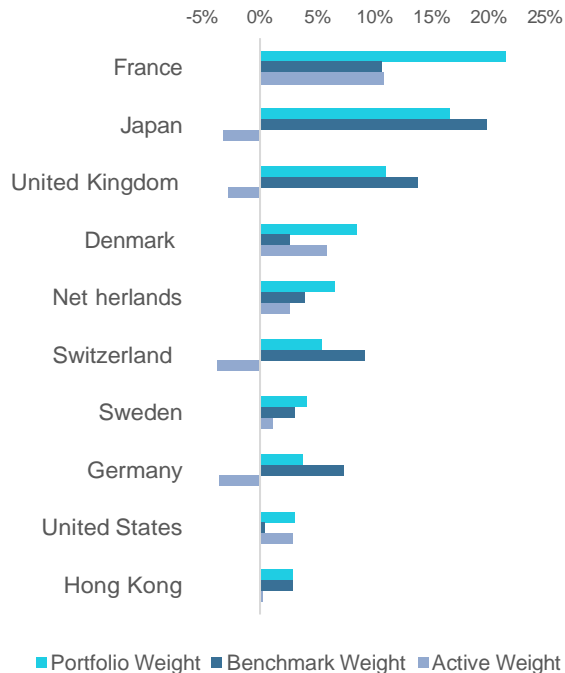


Los Angeles County Employees Retirement Association

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 19.30 |
| Benchmark Risk | 18.33 |
| Active Risk | 4.40 |
| Portfolio Beta | 1.03 |

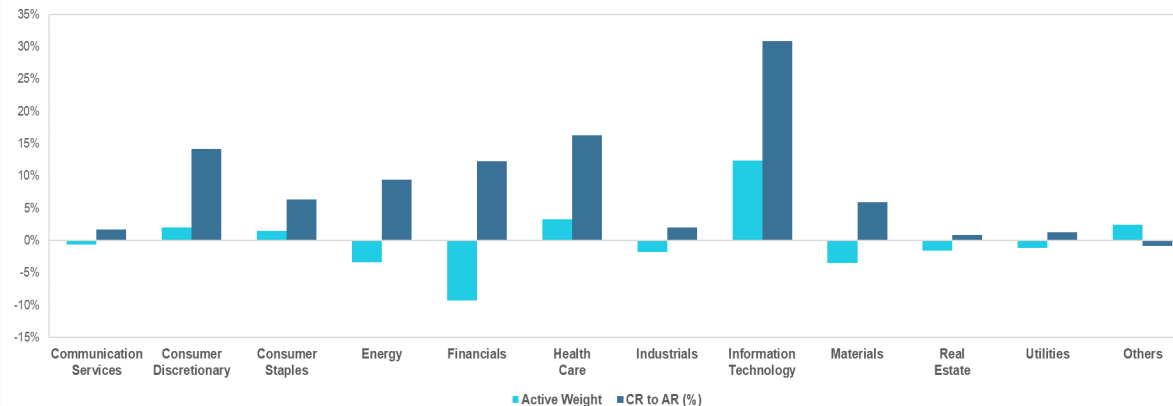
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|----------------------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| ASML HOLDING | 4.34% | 0.00% | 4.34% | 42.30 | 16.16 | 0.183 |
| EVOLUTION AB | 2.67% | 0.11% | 2.56% | 48.31 | 8.98 | 0.174 |
| GENMAB A/S | 2.23% | 0.17% | 2.06% | 32.69 | 5.45 | 0.136 |
| NOVO NORDISK A/S | 3.92% | 1.40% | 2.52% | 29.10 | 4.86 | 0.104 |
| OCADO GROUP PLC | 1.37% | 0.03% | 1.34% | 58.71 | 4.78 | 0.176 |
| SHELL PLC | 0.00% | 1.27% | -1.27% | 31.46 | 3.19 | -0.091 |
| HAMAMATSU PHOTONICS KK | 1.93% | 0.04% | 1.89% | 27.16 | 3.12 | 0.092 |
| KEYENCE CORP | 1.83% | 0.48% | 1.36% | 30.69 | 2.95 | 0.115 |
| TOKYO ELECTRON LTD | 1.16% | 0.28% | 0.89% | 39.38 | 2.53 | 0.145 |
| LVMH MOET HENNESSY LOUIS VUITTON | 3.13% | 1.26% | 1.87% | 27.59 | 2.44 | 0.077 |

Portfolio Risk by GICS Sector



Growth – Global Equity

Cevian Capital II

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Strategy

Seeks to generate long-term returns by researching and investing in European companies that have profitable businesses and significant improvement potential. The strategy may be suited to investors looking to increase portfolio diversification through differentiated investment approach and take advantage of return opportunities in Europe.

Inception Date: October 2016

Risk Statistics (since inception)

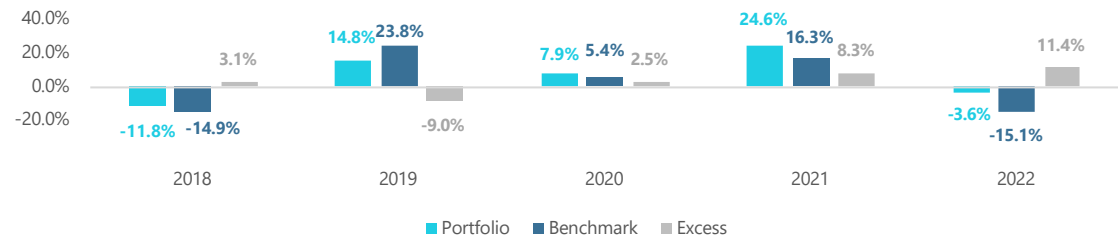
| | |
|------------------------------|-------|
| Standard Deviation | 16.7% |
| Benchmark Standard Deviation | 17.5% |
| Sharpe Ratio | 0.46 |
| Information Ratio | 0.25 |
| Beta | 0.80 |
| Tracking Error | 9.9% |

Performance (net)¹

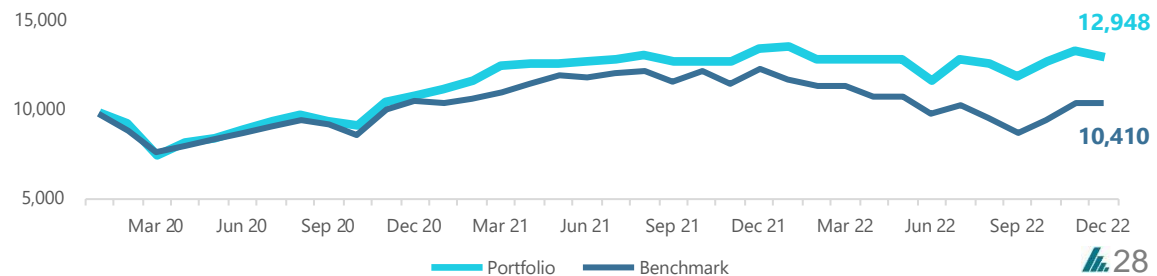
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|-------------------------------------|--------------------------|-------------|--------------|-------------|-------------|
| Cevian Capital II - Activist | 398.3 | 9.5% | -3.6% | 9.0% | 5.6% |
| MSCI EUROPE | | 19.3% | -15.1% | 1.3% | 1.9% |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: Europe Equity | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|-------------------------------------|-------------|-----------|--------------|----------|--------------|----------|-------------|----------|
| Cevian Capital II - Activist | 9.8% | 82 | -2.6% | 8 | 10.2% | 1 | 6.8% | 5 |
| Median | 15.0% | | -14.2% | | 1.1% | | 1.8% | |

Calendar Year Returns



Growth of \$10,000



Note: Commingled fund account with no position-level transparency.
¹ Universe data is gross-of-fees.

Growth Risk Analysis – Global Equity

Cevian Capital II

for the quarter ended December 31, 2022

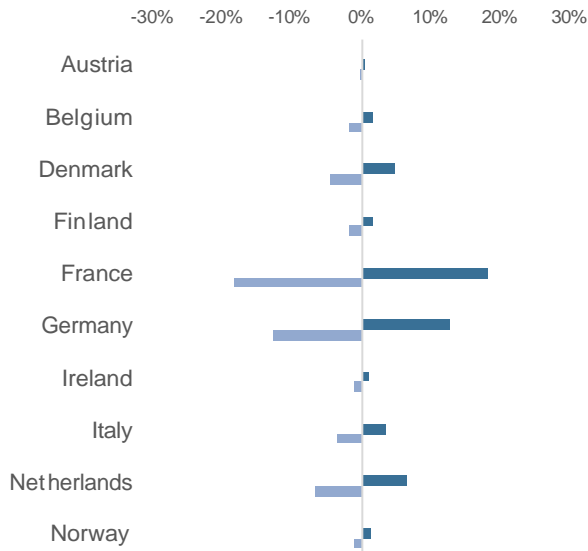


Los Angeles County Employees Retirement Association

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 21.18 |
| Benchmark Risk | 20.51 |
| Active Risk | 10.17 |
| Portfolio Beta | 0.91 |

Top Countries by Weight%



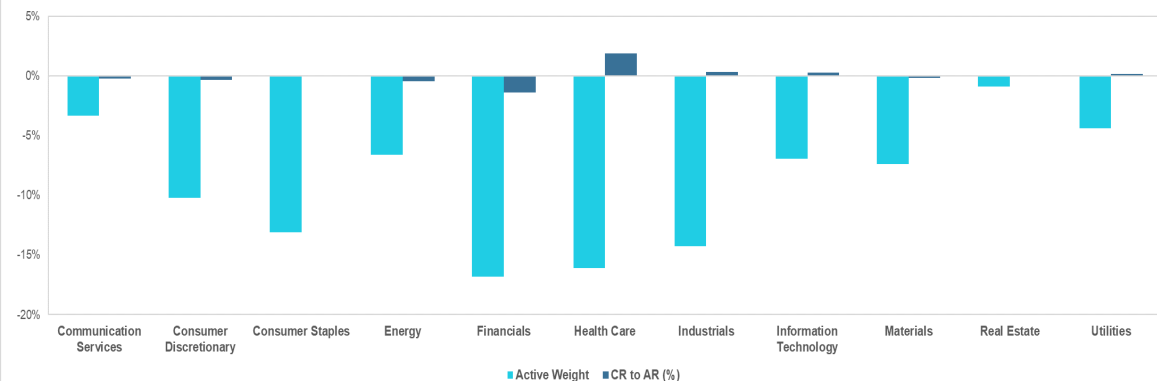
■ Portfolio Weight ■ Benchmark Weight ■ Active Weight

Note: Commingled fund account with no position-level transparency.

Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|-------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| ASTRAZENECA PLC | 0.00% | 2.27% | -2.27% | 26.37 | 0.59 | -0.063 |
| NOVO NORDISK A/S | 0.00% | 2.42% | -2.42% | 29.10 | 0.52 | -0.059 |
| ASML HOLDING NV | 0.00% | 2.37% | -2.37% | 42.30 | 0.34 | -0.052 |
| ROCHE HOLDING AG | 0.00% | 2.40% | -2.40% | 24.75 | 0.31 | -0.050 |
| NOVARTIS AG | 0.00% | 2.12% | -2.12% | 19.88 | 0.13 | -0.043 |
| GSK PLC | 0.00% | 0.76% | -0.76% | 27.09 | 0.13 | -0.055 |
| UNILEVER PLC | 0.00% | 1.39% | -1.39% | 21.90 | 0.11 | -0.045 |
| DIAGEO PLC | 0.00% | 1.09% | -1.09% | 23.26 | 0.10 | -0.047 |
| RELX PLC | 0.00% | 0.57% | -0.57% | 25.43 | 0.08 | -0.052 |
| NATIONAL GRID PLC | 0.00% | 0.48% | -0.48% | 25.49 | 0.08 | -0.054 |

Portfolio Risk by GICS Sector



Growth – Global Equity CornerCap US Small Cap

for the quarter ended December 31, 2022

Strategy

Seeks to exploit small cap market inefficiencies by using proprietary fundamental factors. The strategy may be suited to investors looking to increase U.S. small cap exposure and diversify portfolio through an active quantitative investment approach.

Inception Date: October 2018

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------------|-----------|-----------|
| Market Cap Wtd Average (mm) | 2,472.8 | 2,375.4 |
| No. Of Issues | 348.0 | 0.0 |
| Dividend Yield | 1.9 | 1.4 |
| Return on Equity | 13.7 | 11.9 |
| Price to Sales | 2.7 | 13.0 |
| Price to Book | 2.2 | 4.8 |
| PE Ratio | 14.3 | 29.0 |

Top Holdings (% of assets)

| | |
|---------------------------|------|
| MERIT MEDICAL SYSTEMS INC | 0.5% |
| MOOG INC CLASS A | 0.5% |
| PROPETRO HOLDING CORP | 0.5% |
| BOX INC CLASS A | 0.5% |
| ENLINK MIDSTREAM LLC | 0.5% |

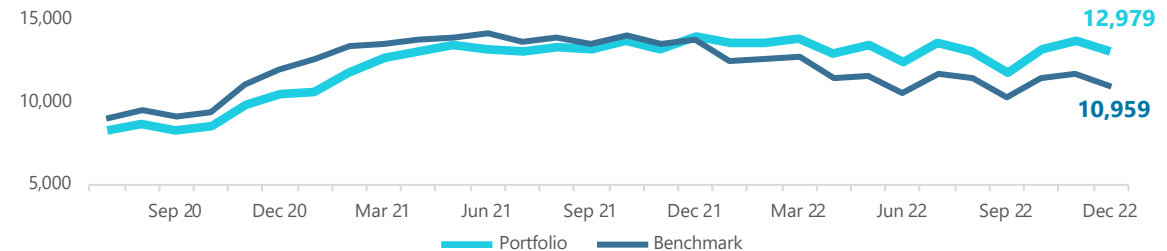
Top 5 Holdings **2.5%**

Performance (net)¹

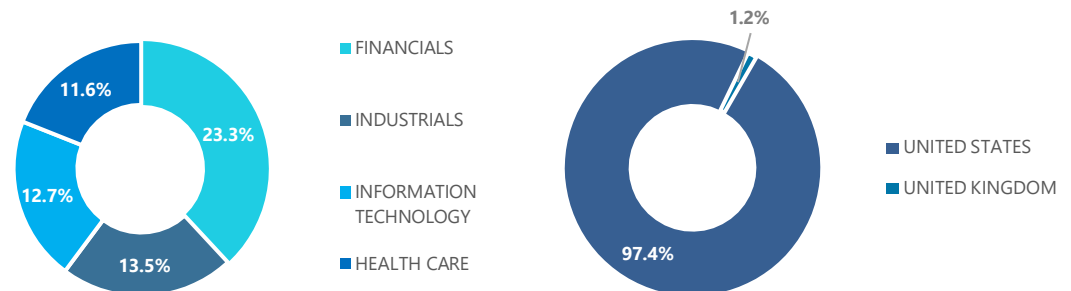
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|-------------------------------------|--------------------------|--------------|--------------|-------------|--------|
| Cornercap US Small Cap - EMP | 80.6 | 11.0% | -7.0% | 9.1% | -- |
| RUSSELL 2000 | | 6.2% | -20.4% | 3.1% | -- |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: US Equity Funds - Small Cap | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--|--------------|-----------|--------------|-----------|-------------|-----------|--------|------|
| Cornercap US Small Cap - EMP | 11.1% | 24 | -6.5% | 10 | 9.7% | 16 | -- | -- |
| Median | 9.9% | | -13.9% | | 6.6% | | -- | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

CornerCap US Small Cap

for the quarter ended December 31, 2022

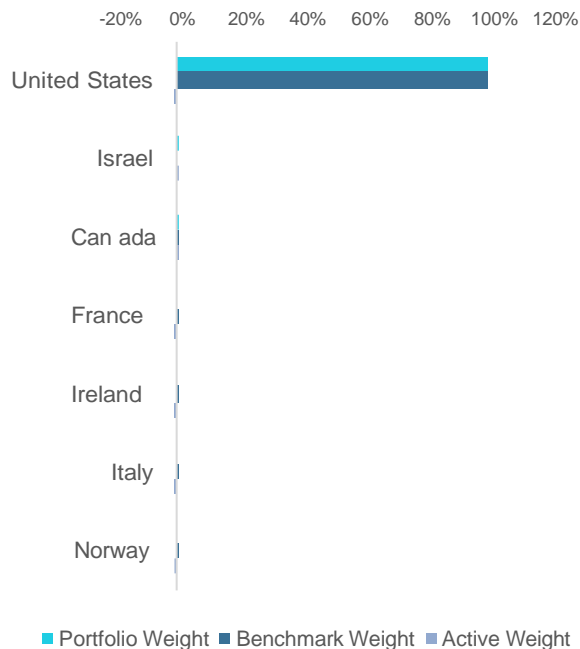


Los Angeles County Employees Retirement Association

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 23.74 |
| Benchmark Risk | 25.36 |
| Active Risk | 4.60 |
| Portfolio Beta | 0.92 |

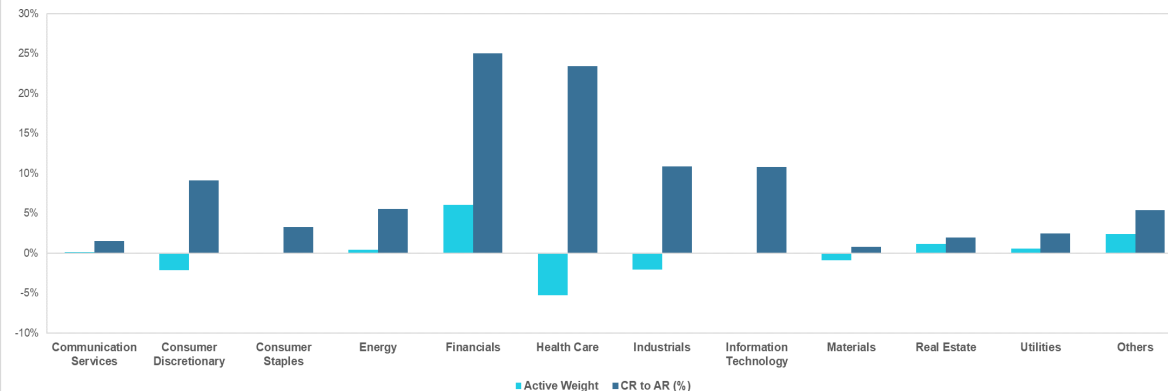
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|-----------------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| PROPETRO HOLDING CORP | 0.49% | 0.04% | 0.45% | 67.66 | 1.68 | 0.062 |
| APA CORP | 0.44% | 0.00% | 0.44% | 57.85 | 1.39 | 0.038 |
| TALOS ENERGY INC | 0.43% | 0.05% | 0.37% | 70.82 | 1.29 | 0.050 |
| MERCANTILE BANK CORP | 0.43% | 0.02% | 0.41% | 30.10 | 1.28 | 0.036 |
| PREFERRED BK LOS ANGELES CA | 0.45% | 0.04% | 0.41% | 28.64 | 1.24 | 0.032 |
| BERRY CORP | 0.39% | 0.03% | 0.36% | 58.04 | 1.18 | 0.042 |
| OCEANFIRST FINANCIAL CORP | 0.47% | 0.05% | 0.42% | 27.88 | 1.18 | 0.022 |
| CIVISTA BANCSHARES INC | 0.42% | 0.01% | 0.41% | 28.88 | 1.16 | 0.023 |
| PDC ENERGY INC | 0.38% | 0.00% | 0.38% | 57.03 | 1.15 | 0.029 |
| SHOCKWAVE MEDICAL INC | 0.00% | 0.32% | -0.32% | 54.30 | 1.14 | -0.273 |

Portfolio Risk by GICS Sector



Growth – Global Equity Frontier US SMID Growth

for the quarter ended December 31, 2022

Strategy

Seeks to invest in high quality companies at attractive valuations and sustainable secular growth through fundamental analysis. The strategy may be suited to investors looking to increase U.S. mid and small cap exposures and generate returns through stock selection and low turnover.

Inception Date: June 2002

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------------|-----------|-----------|
| Market Cap Wtd Average (mm) | 7,098.2 | 5,946.2 |
| No. Of Issues | 142.0 | 0.0 |
| Dividend Yield | 0.7 | 1.6 |
| Return on Equity | 12.5 | 15.5 |
| Price to Sales | 3.0 | 7.7 |
| Price to Book | 0.7 | 4.2 |
| PE Ratio | 21.5 | 21.8 |

Top Holdings (% of assets)

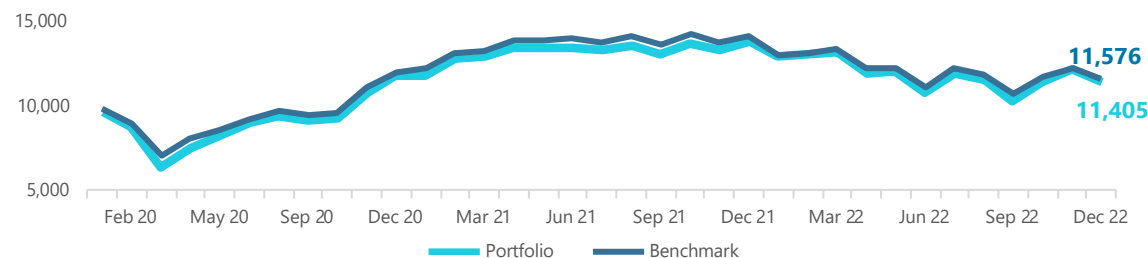
| | |
|------------------------------|-------------|
| BUILDERS FIRSTSOURCE INC | 2.3% |
| MRC GLOBAL INC | 1.9% |
| ARRAY TECHNOLOGIES INC | 1.8% |
| MACOM TECHNOLOGY SOLUTIONS H | 1.8% |
| INSULET CORP | 1.8% |
| Top 5 Holdings | 9.5% |

Performance (net)¹

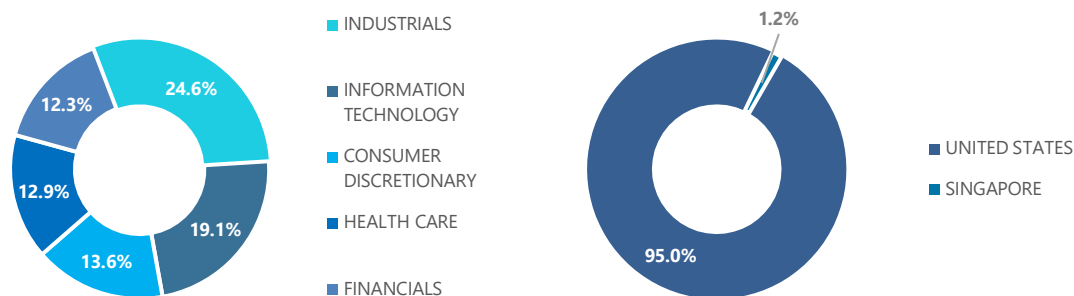
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--------------------------------|--------------------------|--------------|---------------|-------------|-------------|
| Frontier US SMID Growth | 256.2 | 11.1% | -17.9% | 4.5% | 4.9% |
| RUSSELL 2500 | | 7.4% | -18.4% | 5.0% | 5.9% |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: US Equity Funds - Small Cap | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--|--------------|-----------|---------------|-----------|-------------|-----------|-------------|-----------|
| Frontier US SMID Growth | 11.3% | 21 | -17.3% | 69 | 5.3% | 74 | 5.7% | 68 |
| Median | 9.9% | | -13.9% | | 6.6% | | 6.7% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

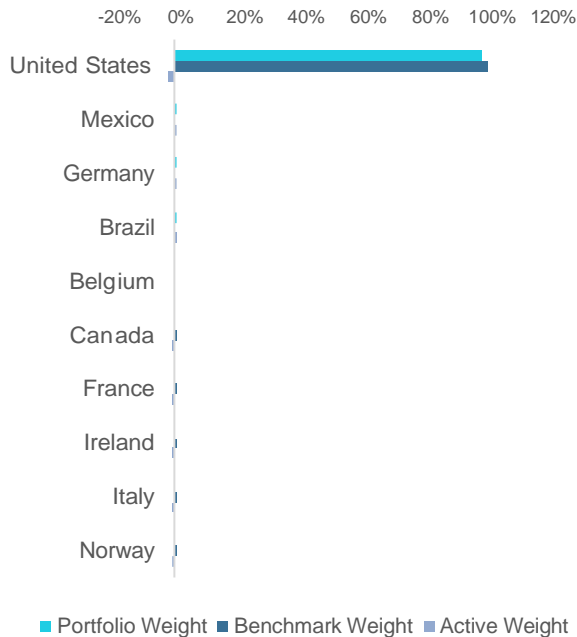
Frontier US SMID Growth

for the quarter ended December 31, 2022

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 27.52 |
| Benchmark Risk | 24.48 |
| Active Risk | 4.86 |
| Portfolio Beta | 1.11 |

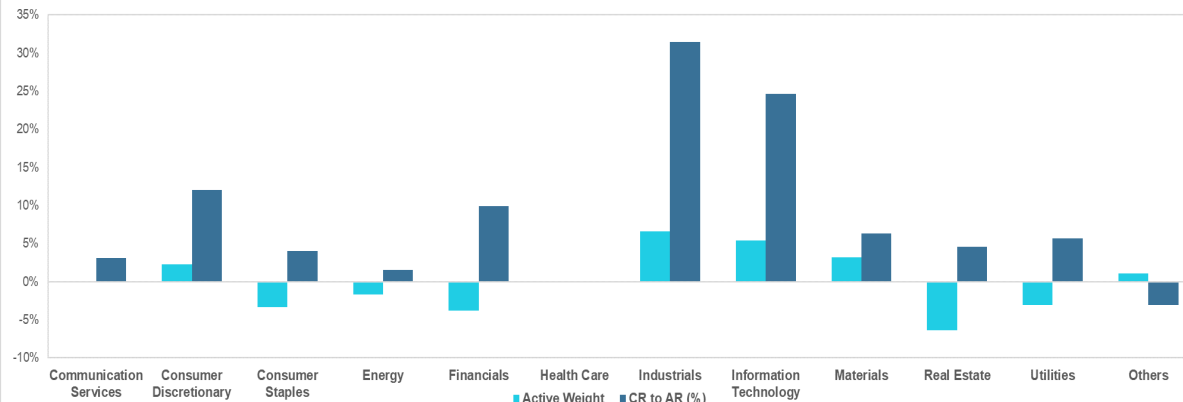
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|----------------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| ARRAY TECHNOLOGIES INC | 1.81% | 0.06% | 1.75% | 72.19 | 9.51 | 0.402 |
| WOLFSPEED INC | 1.36% | 0.16% | 1.20% | 59.99 | 5.15 | 0.347 |
| MRC GLOBAL INC | 1.91% | 0.02% | 1.89% | 54.25 | 4.51 | 0.255 |
| CAESARS ENTERTAINMENT INC | 1.29% | 0.00% | 1.29% | 54.78 | 3.81 | 0.282 |
| MACOM TECHNOLOGY SOLUTIONS | 1.80% | 0.06% | 1.74% | 38.90 | 3.63 | 0.240 |
| DANA INC | 1.33% | 0.04% | 1.29% | 48.81 | 3.57 | 0.273 |
| SITIME CORPORATION | 0.76% | 0.03% | 0.72% | 66.10 | 3.48 | 0.372 |
| BUILDERS FIRSTSOURCE INC | 2.26% | 0.18% | 2.08% | 42.18 | 3.38 | 0.218 |
| CONTROLADORA VUELA | 1.00% | 0.00% | 1.00% | 59.68 | 3.12 | 0.291 |
| ALBEMARLE CORP | 1.27% | 0.00% | 1.27% | 46.36 | 2.77 | 0.245 |

Portfolio Risk by GICS Sector



Growth – Global Equity

Global Alpha

for the quarter ended December 31, 2022

Strategy

Seeks to identify mispriced companies with high rates of growth, strong balance sheets, and high insider ownership using a bottom-up, research-based approach coupled with investment themes. The strategy may be suited to investors looking to increase exposure to international small cap stocks.

Inception Date: November 2018

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------------|-----------|-----------|
| Market Cap Wtd Average (mm) | 2,409.7 | 2,507.6 |
| No. Of Issues | 61.0 | 0.0 |
| Dividend Yield | 3.0 | 3.9 |
| Return on Equity | 12.1 | 13.3 |
| Price to Sales | 17.0 | 6.4 |
| Price to Book | 2.3 | 2.9 |
| PE Ratio | 15.8 | 14.2 |

Top Holdings (% of assets)

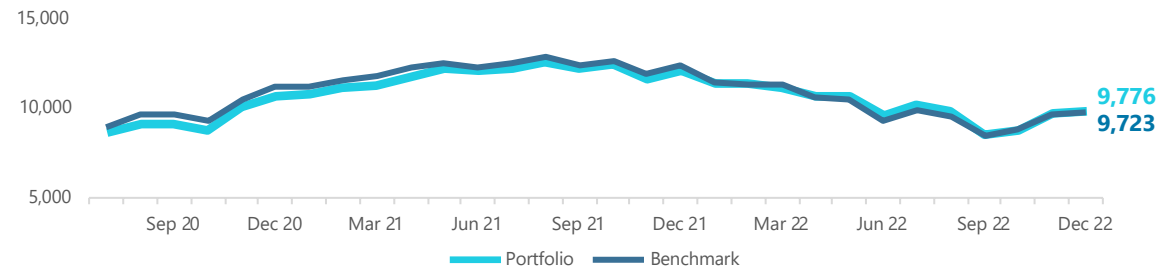
| | |
|-----------------------------|--------------|
| BIFFA PLC | 4.2% |
| RAFFLES MEDICAL GROUP LTD | 3.3% |
| SOPRA STERIA GROUP | 3.2% |
| L OCCITANE INTERNATIONAL SA | 3.1% |
| SEGA SAMMY HOLDINGS INC | 3.1% |
| Top 5 Holdings | 16.9% |

Performance (net)¹

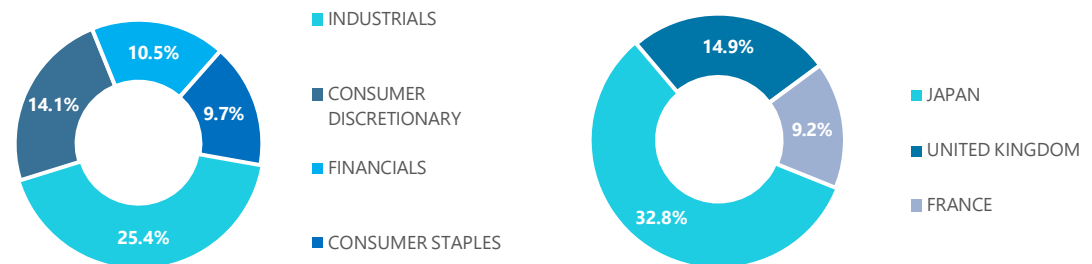
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|-------------------------|--------------------------|--------------|---------------|--------------|--------|
| Global Alpha | 165.5 | 15.1% | -19.2% | -0.8% | -- |
| MSCI EAFE SMALL CAP NET | | 15.8% | -21.4% | -0.9% | -- |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: International Equity Funds Core | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--|--------------|-----------|---------------|-----------|-------------|-----------|--------|------|
| Global Alpha | 15.3% | 12 | -18.6% | 68 | 0.0% | 78 | -- | -- |
| Median | 12.4% | | -16.0% | | 2.5% | | -- | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

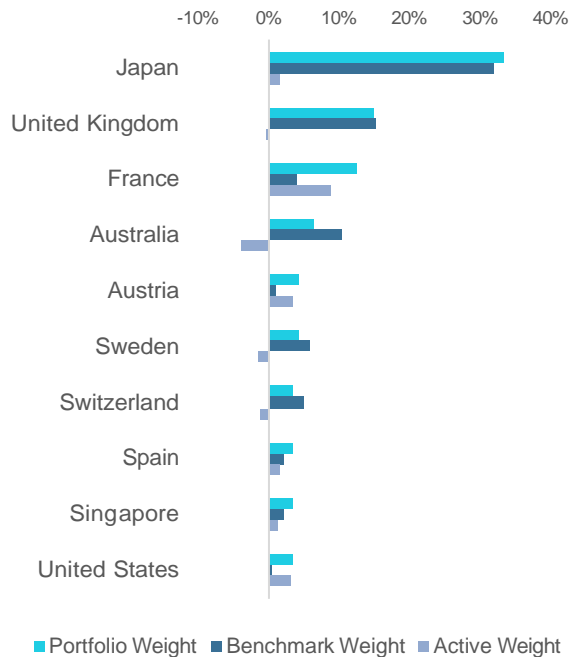
Global Alpha

for the quarter ended December 31, 2022

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 19.80 |
| Benchmark Risk | 20.41 |
| Active Risk | 4.15 |
| Portfolio Beta | 0.95 |

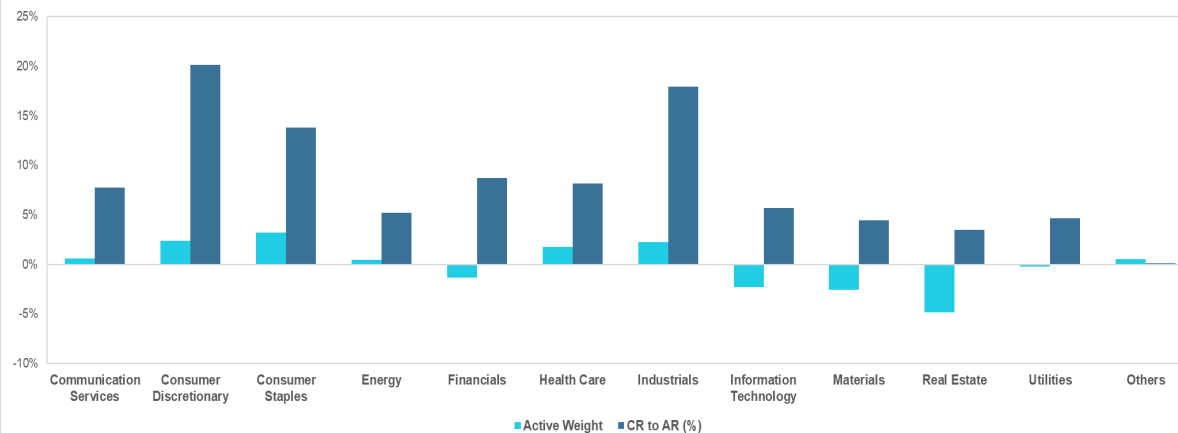
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|-------------------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| L'OCCITANE INTERNATIONAL SA | 3.10% | 0.00% | 3.10% | 38.15 | 8.46 | 0.063 |
| ASICS CORP | 3.08% | 0.15% | 2.94% | 42.30 | 8.31 | 0.067 |
| BIFFA PLC | 4.18% | 0.06% | 4.11% | 38.26 | 6.87 | 0.019 |
| SEGA SAMMY HOLDINGS INC | 3.09% | 0.10% | 2.99% | 32.53 | 6.53 | 0.040 |
| INTERNET INITIATIVE JAPAN INC | 2.59% | 0.08% | 2.51% | 35.50 | 5.68 | 0.044 |
| RAFFLES MEDICAL GROUP LTD | 3.32% | 0.04% | 3.28% | 29.42 | 4.96 | 0.012 |
| ORMAT TECHNOLOGIES INC | 2.95% | 0.00% | 2.95% | 34.32 | 4.67 | 0.015 |
| AIN HOLDINGS | 1.71% | 0.05% | 1.67% | 34.30 | 3.51 | 0.037 |
| DMG MORI CO LTD | 2.34% | 0.06% | 2.28% | 31.50 | 2.74 | -0.001 |
| ROTHSCHILD & CO | 2.95% | 0.00% | 2.95% | 30.99 | 2.65 | -0.013 |

Portfolio Risk by GICS Sector



Growth – Global Equity

JPMorgan Strategic Beta Non-US

for the quarter ended December 31, 2022

Strategy

Seeks to capture incremental alpha through investing in equity factors that are rule-based, transparent, and academically proven. This strategy may be suited to investors looking to gain equity factor exposures in non-U.S. markets at lower volatility and cost than active strategies.

Inception Date: August 2020

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------------|-----------|-----------|
| Market Cap Wtd Average (mm) | 70,086.8 | 67,342.0 |
| No. Of Issues | 1,813.0 | 0.0 |
| Dividend Yield | 3.6 | 3.1 |
| Return on Equity | 19.5 | 17.7 |
| Price to Sales | 3.1 | 3.9 |
| Price to Book | 3.8 | 4.1 |
| PE Ratio | 11.9 | 14.0 |

Top Holdings (% of assets)

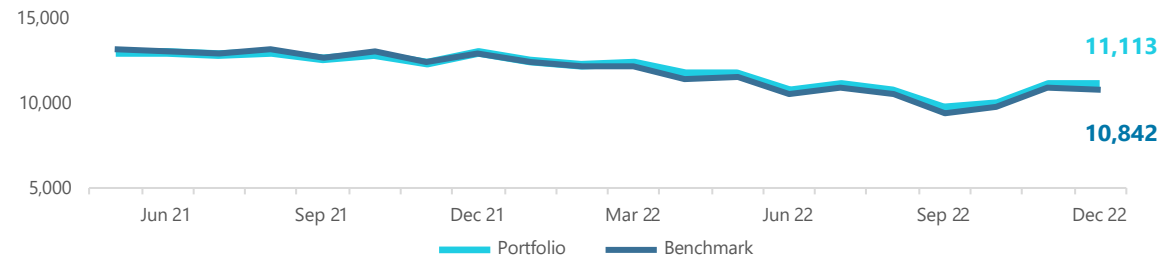
| | |
|------------------------------|-------------|
| ISHARES MSCI INDIA ETF | 3.9% |
| TAIWAN SEMICONDUCTOR MANUFAC | 1.3% |
| NESTLE SA REG | 1.2% |
| TENCENT HOLDINGS LTD | 1.0% |
| NOVO NORDISK A/S B | 0.9% |
| Top 5 Holdings | 8.4% |

Performance (net)¹

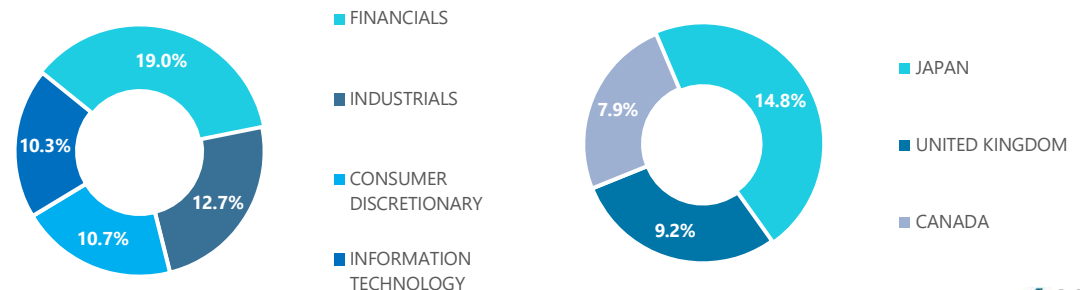
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|------------------------------------|--------------------------|--------------|---------------|--------|--------|
| JPMAM Strategic Beta Non-US | 550.5 | 14.1% | -14.5% | -- | -- |
| MSCI ACWI ex USA IMI Net | | 14.1% | -16.6% | -- | -- |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: International Equity | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|-------------------------------------|--------------|-----------|---------------|-----------|--------|------|--------|------|
| JPMAM Strategic Beta Non-US | 14.1% | 54 | -14.5% | 30 | -- | -- | -- | -- |
| Median | 14.3% | | -16.5% | | -- | -- | -- | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

JPMorgan Strategic Beta Non-US

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 17.95 |
| Benchmark Risk | 18.06 |
| Active Risk | 0.81 |
| Portfolio Beta | 0.99 |

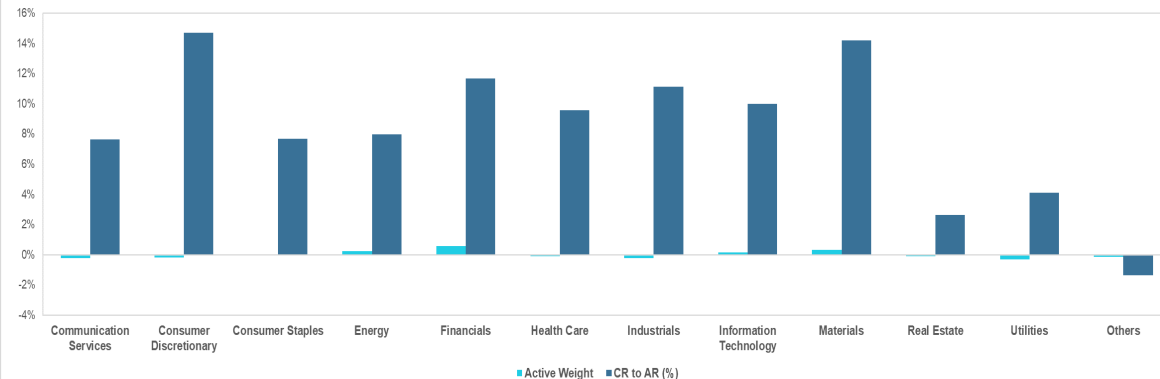
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|-----------------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| ALIBABA GROUP HOLDING LTD | 0.00% | 0.63% | -0.63% | 51.07 | 14.29 | -0.211 |
| ASML HOLDING | 0.01% | 0.84% | -0.84% | 42.30 | 4.78 | -0.073 |
| VALE SA | 0.28% | 0.00% | 0.28% | 49.35 | 3.89 | 0.086 |
| NETEASE INC | 0.00% | 0.11% | -0.11% | 44.56 | 1.93 | -0.168 |
| LI AUTO INC | 0.00% | 0.04% | -0.04% | 63.18 | 1.30 | -0.275 |
| KUAISHOU TECHNOLOGY | 0.02% | 0.06% | -0.04% | 63.13 | 1.25 | -0.289 |
| PDD HOLDINGS INC | 0.11% | 0.16% | -0.05% | 57.98 | 1.17 | -0.221 |
| BEIGENE LTD | 0.00% | 0.04% | -0.04% | 53.55 | 1.12 | -0.251 |
| WUXI BIOLOGICS CAYMAN INC | 0.07% | 0.11% | -0.04% | 56.00 | 1.04 | -0.250 |
| JD HEALTH INTERNATIONAL INC | 0.00% | 0.04% | -0.04% | 55.46 | 0.96 | -0.227 |

Portfolio Risk by GICS Sector



Growth – Global Equity

JPMorgan Strategic Beta US

for the quarter ended December 31, 2022

Strategy

Seeks to capture incremental alpha through investing in equity factors that are rule-based, transparent, and academically proven. This strategy may be suited to investors looking to gain equity factor exposures in the U.S. at lower volatility and cost than active strategies.

Inception Date: July 2020

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------------|-----------|-----------|
| Market Cap Wtd Average (mm) | 358,369.2 | 417,431.3 |
| No. Of Issues | 956.0 | 0.0 |
| Dividend Yield | 1.4 | 1.3 |
| Return on Equity | 29.5 | 29.9 |
| Price to Sales | 4.3 | 4.5 |
| Price to Book | 8.5 | 9.5 |
| PE Ratio | 18.2 | 20.5 |

Top Holdings (% of assets)

| | |
|------------------------|------|
| APPLE INC | 5.5% |
| MICROSOFT CORP | 4.5% |
| AMAZON.COM INC | 2.0% |
| ALPHABET INC CL A | 1.4% |
| UNITEDHEALTH GROUP INC | 1.3% |

Top 5 Holdings

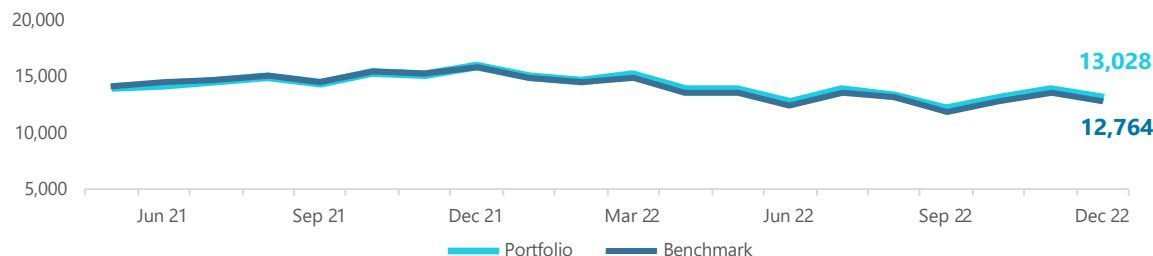
14.7%

Performance (net)¹

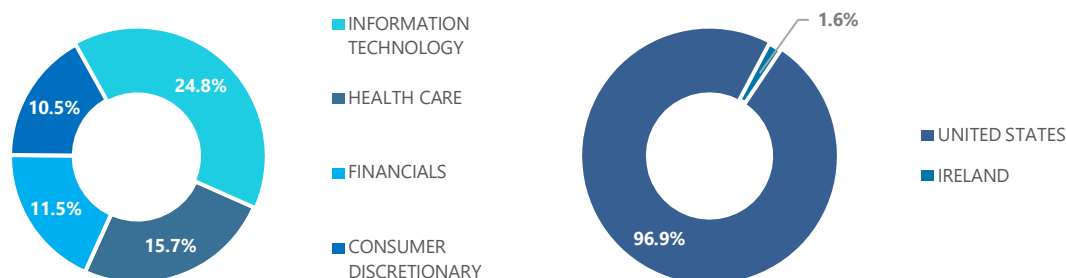
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--------------------------------|--------------------------|-------------|---------------|--------|--------|
| JPMAM Strategic Beta US | 3,997.8 | 7.6% | -18.0% | -- | -- |
| MSCI USA IMI Gross | | 7.2% | -19.2% | -- | -- |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: U.S. Equities Total Large Cap | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--|-------------|-----------|---------------|-----------|--------|------|--------|------|
| JPMAM Strategic Beta US | 7.6% | 51 | -17.9% | 46 | -- | -- | -- | -- |
| Median | 7.6% | | -18.1% | | -- | -- | -- | -- |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

JPMorgan Strategic Beta US

for the quarter ended December 31, 2022

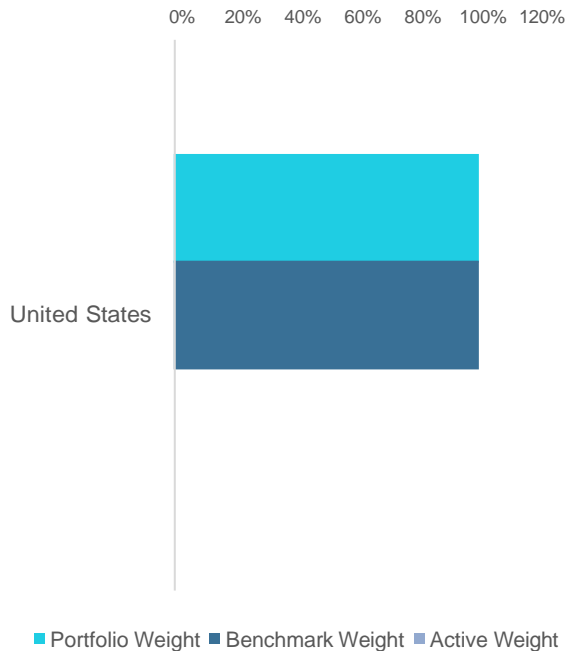


Los Angeles County Employees Retirement Association

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 20.40 |
| Benchmark Risk | 20.61 |
| Active Risk | 0.63 |
| Portfolio Beta | 0.99 |

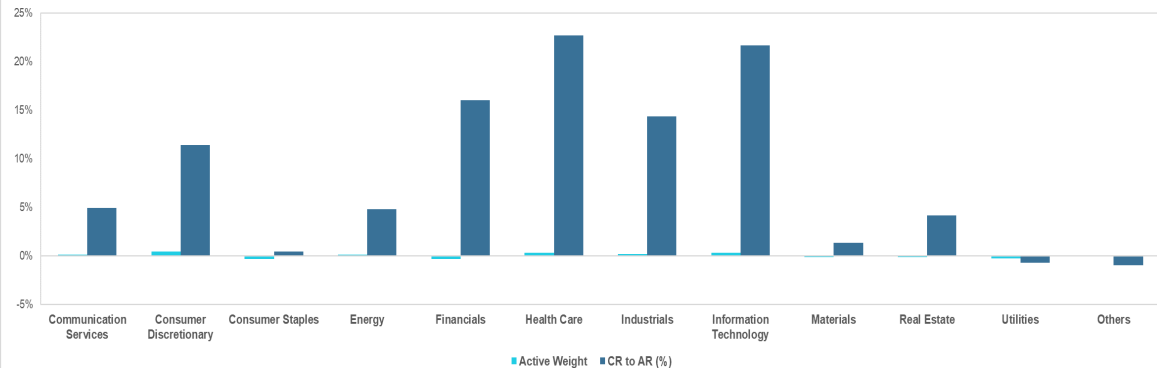
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|---------------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| JPMORGAN CHASE & CO | 0.01% | 1.04% | -1.03% | 27.95 | 8.55 | -0.122 |
| MONGODB INC | 0.00% | 0.04% | -0.04% | 67.54 | 1.61 | -0.357 |
| SNOWFLAKE INC | 0.05% | 0.08% | -0.04% | 57.62 | 1.46 | -0.306 |
| CLOUDFLARE INC | 0.00% | 0.03% | -0.03% | 67.96 | 1.16 | -0.343 |
| OKTA INC | 0.00% | 0.03% | -0.03% | 61.20 | 1.14 | -0.334 |
| WARNER BROS DISCOVERY INC | 0.02% | 0.06% | -0.03% | 55.81 | 1.06 | -0.267 |
| TWILIO INC | 0.00% | 0.02% | -0.02% | 60.21 | 0.98 | -0.346 |
| DATADOG INC | 0.02% | 0.05% | -0.03% | 54.27 | 0.94 | -0.272 |
| DOORDASH INC | 0.00% | 0.03% | -0.03% | 57.11 | 0.92 | -0.264 |
| HUBSPOT INC | 0.00% | 0.03% | -0.03% | 53.05 | 0.91 | -0.256 |

Portfolio Risk by GICS Sector



Growth – Global Equity Lazard Emerging Markets

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Strategy

Seeks to provide long-term capital appreciation by investing in companies trading at a discount to their estimated net asset value, sum of the parts valuation, and/or underlying investments/businesses. The strategy may be suited to investors looking to capture growth opportunities in emerging markets and increase portfolio diversification.

Inception Date: February 2013

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------------|-----------|-----------|
| Market Cap Wtd Average (mm) | 34,478.0 | 87,692.2 |
| No. Of Issues | 49.0 | 0.0 |
| Dividend Yield | 2.6 | 3.3 |
| Return on Equity | 11.9 | 12.1 |
| Price to Sales | 1.5 | 1.1 |
| Price to Book | 1.6 | 1.6 |
| PE Ratio | 13.3 | 11.5 |

Top Holdings (% of assets)

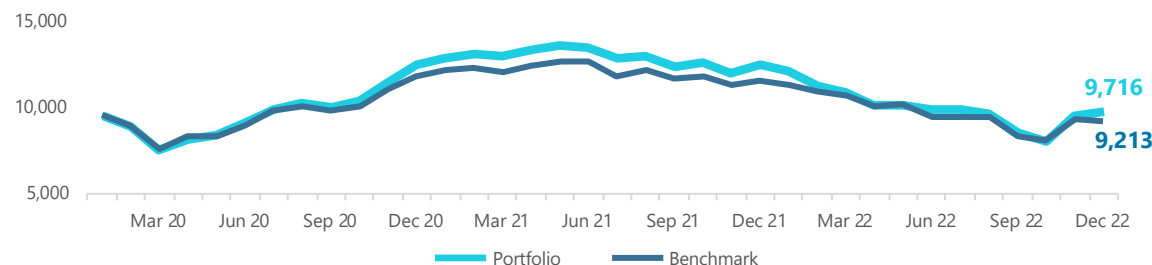
| | |
|--------------------------------|--------------|
| PROSUS NV | 9.8% |
| JPMORGAN EMERGING MARKETS INVE | 6.6% |
| CITIC SECURITIES CO LTD H | 5.8% |
| FIDELITY CHINA SPECIAL SITUATI | 5.8% |
| TEMPLETON EMERGING MARKETS INV | 5.7% |
| Top 5 Holdings | 33.8% |

Performance (net)¹

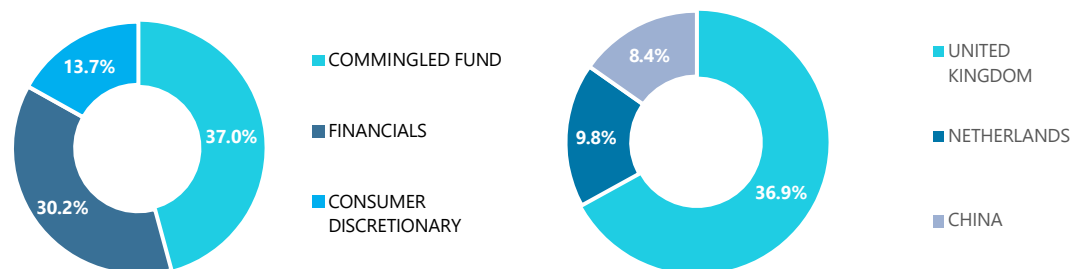
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--------------------------------|--------------------------|--------------|---------------|--------------|-------------|
| Lazard Emerging Markets | 368.0 | 14.5% | -22.6% | -1.0% | 0.3% |
| MSCI EMERGING MARKETS | | 9.7% | -20.1% | -2.7% | -1.4% |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: Intl Equity Emerging Mkt Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|---|--------------|----------|---------------|-----------|--------------|-----------|-------------|-----------|
| Lazard Emerging Markets | 14.6% | 7 | -22.1% | 71 | -0.3% | 50 | 1.0% | 28 |
| Median | 10.4% | | -20.1% | | -0.7% | | 0.0% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

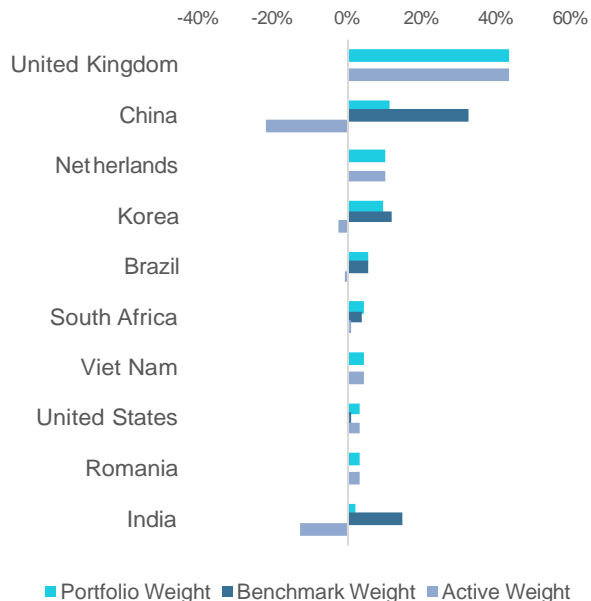
Lazard Emerging Markets

for the quarter ended December 31, 2022

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 20.92 |
| Benchmark Risk | 19.28 |
| Active Risk | 11.43 |
| Portfolio Beta | 0.91 |

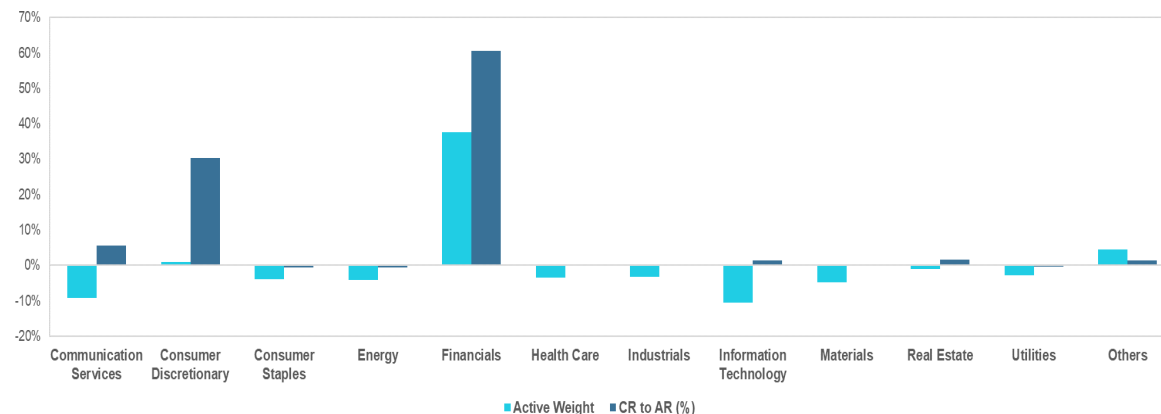
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|---------------------------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| PROSUS NV | 9.83% | 0.00% | 9.83% | 45.87 | 18.68 | 0.189 |
| FIDELITY CHINA SPECIAL SITUATIONS PLC | 5.83% | 0.00% | 5.83% | 42.89 | 10.51 | 0.178 |
| JPMORGAN EMERGING MK | 6.67% | 0.00% | 6.67% | 32.32 | 10.19 | 0.146 |
| TEMPLETON EMERG MK INVSTMNT TRUST | 5.69% | 0.00% | 5.69% | 31.09 | 8.10 | 0.134 |
| TENCENT HOLDINGS LTD | 0.18% | 4.24% | -4.06% | 43.81 | 5.17 | -0.174 |
| SCHRODER ASIA PAC | 2.77% | 0.00% | 2.77% | 30.49 | 3.72 | 0.125 |
| ASIA DRAGON TRUST PLC | 2.65% | 0.00% | 2.65% | 33.27 | 3.72 | 0.132 |
| NASPERS | 3.90% | 0.57% | 3.33% | 48.53 | 3.67 | 0.098 |
| FIDELITY EMERGING MARKETS LTD | 2.17% | 0.00% | 2.17% | 32.28 | 3.10 | 0.135 |
| ALIBABA GROUP HOLDING LTD | 0.16% | 2.59% | -2.43% | 51.07 | 3.04 | -0.171 |

Portfolio Risk by GICS Sector



Note: Weights represent country of domicile of closed-end fund and not country of underlying fund holdings.

Growth – Global Equity SSGA MSCI ACWI IMI

for the quarter ended December 31, 2022

Strategy

Seeks to provide global equity market exposure and passive index returns. This strategy may be suited to investors looking to gain passive, global equity exposures with low tracking error.

Inception Date: January 2020

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------------|-----------|-----------|
| Market Cap Wtd Average (mm) | 240,652.7 | 240,625.8 |
| No. Of Issues | 6,507.0 | 0.0 |
| Dividend Yield | 22.3 | 25.5 |
| Return on Equity | 23.8 | 23.7 |
| Price to Sales | 4.5 | 4.5 |
| Price to Book | 6.7 | 6.8 |
| PE Ratio | 17.3 | 17.5 |

Top Holdings (% of assets)

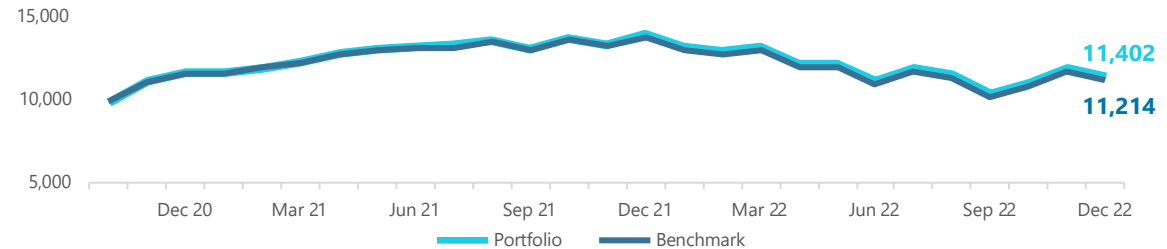
| | |
|-----------------------|-------------|
| APPLE INC | 3.2% |
| MICROSOFT CORP | 2.6% |
| AMAZON.COM INC | 1.2% |
| ALPHABET INC CL C | 0.8% |
| ALPHABET INC CL A | 0.8% |
| Top 5 Holdings | 8.6% |

Performance (net)¹

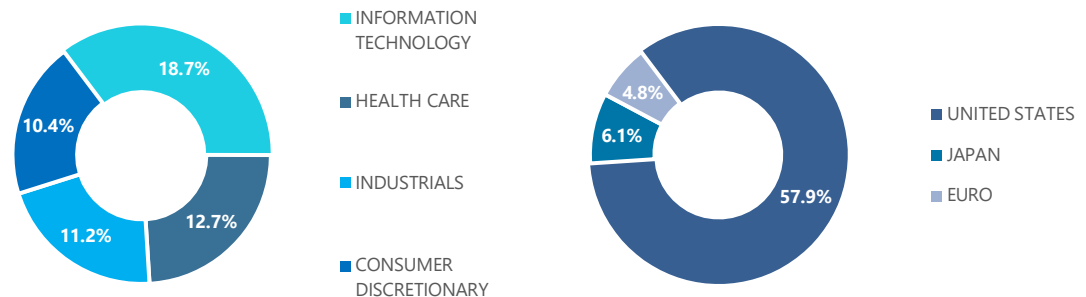
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|---------------------------|--------------------------|--------------|---------------|-------------|--------|
| SSGA MSCI ACWI IMI | 14,270.2 | 10.1% | -17.9% | 4.5% | -- |
| MSCI ACWI IMI Net | | 9.8% | -18.4% | 3.9% | -- |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: Global Equity Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|------------------------------------|--------------|-----------|---------------|-----------|-------------|-----------|--------|------|
| SSGA MSCI ACWI IMI | 10.1% | 51 | -17.9% | 73 | 4.5% | 34 | -- | -- |
| Median | 10.1% | | -14.0% | | 3.5% | | -- | -- |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

SSGA MSCI ACWI IMI

for the quarter ended December 31, 2022

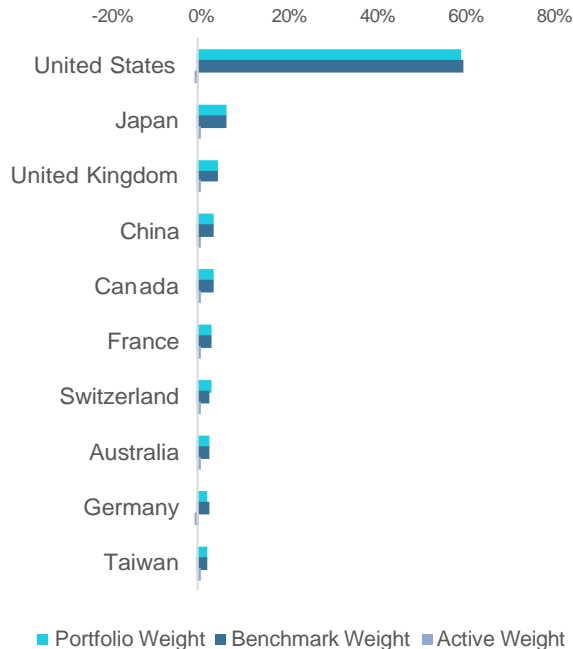


Los Angeles County Employees Retirement Association

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 18.88 |
| Benchmark Risk | 18.89 |
| Active Risk | 0.19 |
| Portfolio Beta | 1.00 |

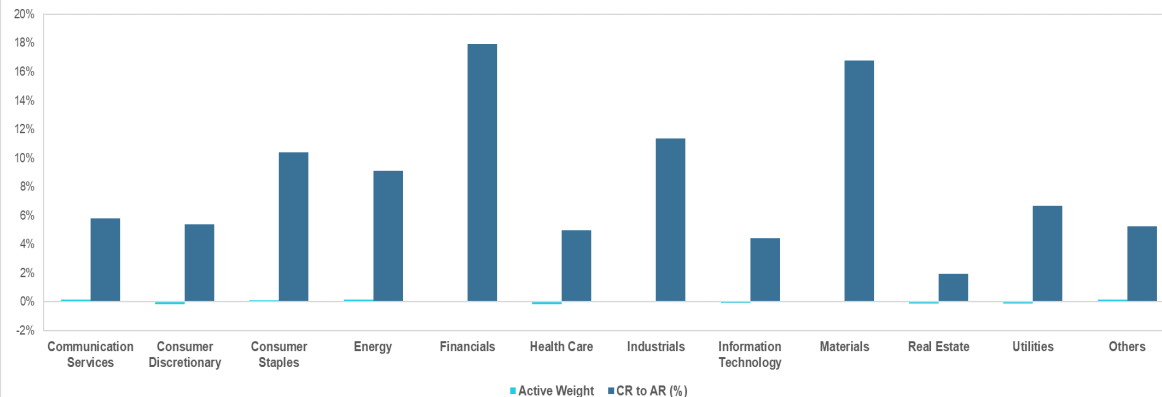
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|----------------------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| NK LUKOIL PAO | 0.05% | 0.00% | 0.05% | 71.21 | 4.84 | 0.193 |
| RELIANCE INDUSTRIES LTD | 0.00% | 0.15% | -0.14% | 29.41 | 4.64 | -0.068 |
| HOUSING DEVELOPMENT FINANCE CORP | 0.00% | 0.09% | -0.08% | 31.06 | 3.55 | -0.086 |
| ASML HOLDING | 0.33% | 0.00% | 0.33% | 42.30 | 2.49 | 0.006 |
| AL RAJHI BANK | 0.00% | 0.06% | -0.06% | 28.37 | 2.34 | -0.080 |
| ICICI BANK LTD | 0.00% | 0.09% | -0.09% | 29.17 | 2.27 | -0.058 |
| BAJAJ FINANCE LTD | 0.00% | 0.03% | -0.03% | 37.76 | 2.08 | -0.124 |
| AXIS BANK LTD | 0.00% | 0.04% | -0.04% | 35.36 | 1.98 | -0.102 |
| SAUDI NATIONAL BANK SJSC | 0.00% | 0.05% | -0.05% | 30.37 | 1.80 | -0.082 |
| ADANI ENTERPRISES LTD | 0.00% | 0.02% | -0.02% | 43.63 | 1.72 | -0.165 |

Portfolio Risk by GICS Sector



Growth – Global Equity Systematic US Small Cap Value

for the quarter ended December 31, 2022

Strategy

Seeks to identify high quality small cap companies capable of generating high rates of return with attractive valuations. The strategy may be suited for investors looking to increase U.S. small cap exposure with defensive characteristics.

Inception Date: July 2018

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------------|-----------|-----------|
| Market Cap Wtd Average (mm) | 3,971.1 | 2,735.4 |
| No. Of Issues | 152.0 | 0.0 |
| Dividend Yield | 3.5 | 1.4 |
| Return on Equity | 17.7 | 11.9 |
| Price to Sales | 1.9 | 13.0 |
| Price to Book | 2.3 | 4.8 |
| PE Ratio | 13.2 | 29.0 |

Top Holdings (% of assets)

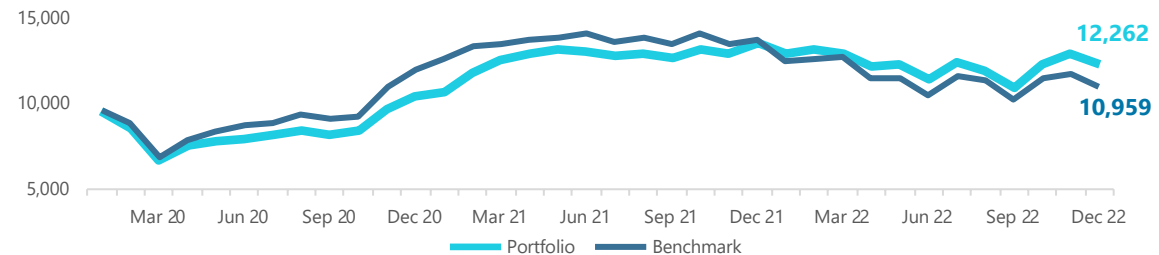
| | |
|------------------------------|--------------|
| FIRST CITIZENS BCSHS CL A | 3.0% |
| MAGNOLIA OIL + GAS CORP A | 2.1% |
| CROSS COUNTRY HEALTHCARE INC | 1.8% |
| EMCOR GROUP INC | 1.7% |
| NORTHWESTERN CORP | 1.6% |
| Top 5 Holdings | 10.1% |

Performance (net)¹

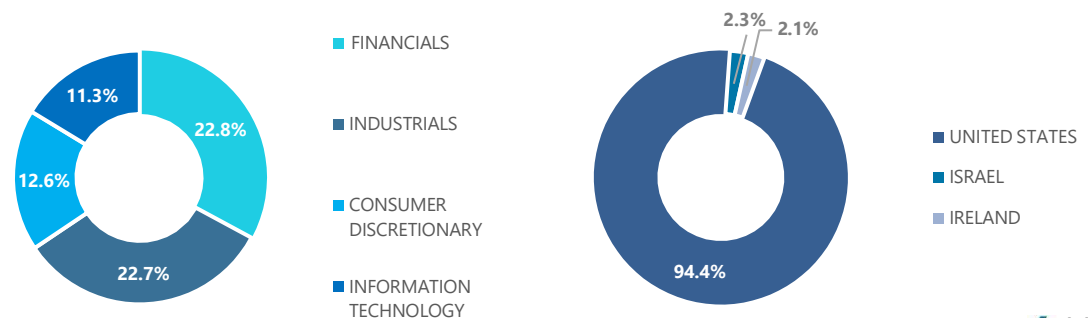
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--------------------------------------|--------------------------|--------------|--------------|-------------|--------|
| Systematic US Small Cap Value | 186.4 | 11.8% | -9.9% | 7.0% | -- |
| RUSSELL 2000 | | 6.2% | -20.4% | 3.1% | -- |
| Growth Policy Benchmark | | 4.0% | -17.0% | 5.2% | -- |

| Universe data: US Equity Funds - Small Cap | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--|--------------|-----------|--------------|-----------|-------------|-----------|--------|------|
| Systematic US Small Cap Value | 12.0% | 18 | -9.5% | 20 | 7.6% | 26 | -- | -- |
| Median | 9.9% | | -13.9% | | 6.6% | | -- | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

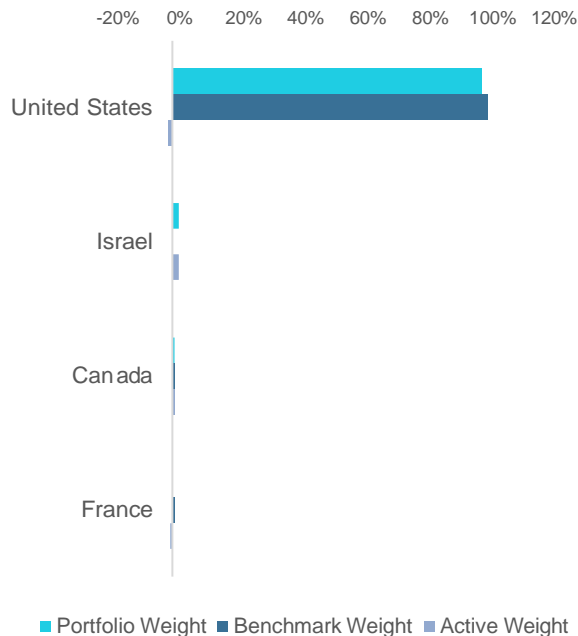
Growth Risk Analysis – Global Equity Systematic US Small Cap Value

for the quarter ended December 31, 2022

Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 22.49 |
| Benchmark Risk | 25.36 |
| Active Risk | 5.89 |
| Portfolio Beta | 0.87 |

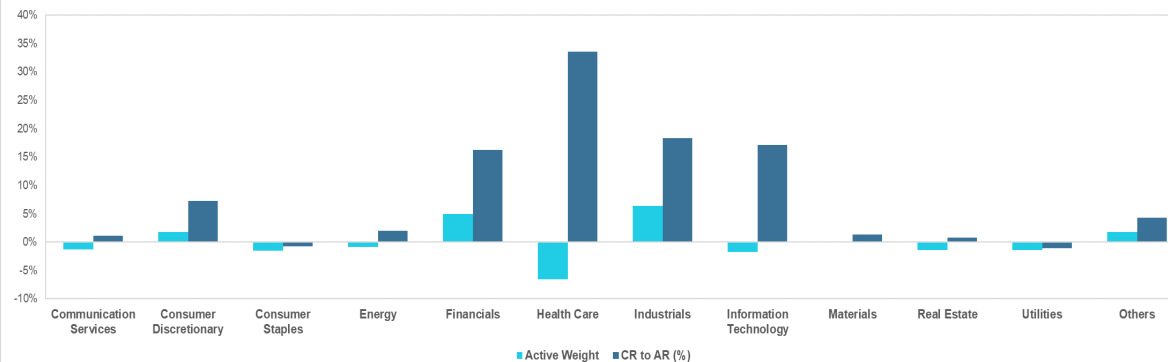
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

| Asset | Weight | | | Total Risk | %CR to Active TR | MC to Active TR |
|------------------------------------|-----------|-----------|--------|------------|------------------|-----------------|
| | Portfolio | Benchmark | Active | | | |
| FIRST CITIZENS BANCSHARES INC NRTH | 2.97% | 0.00% | 2.97% | 33.21 | 5.34 | -0.040 |
| NORTHWESTERN CORP | 1.64% | 0.15% | 1.49% | 23.94 | 2.94 | -0.030 |
| WASHINGTON FEDERAL INC | 1.33% | 0.10% | 1.23% | 30.41 | 2.48 | -0.027 |
| CROSS COUNTRY HEALTHCARE INC | 1.76% | 0.04% | 1.72% | 56.33 | 2.03 | -0.077 |
| WEBSTER FINANCIAL CORP | 1.33% | 0.00% | 1.33% | 33.76 | 1.98 | -0.058 |
| CURTISS-WRIGHT CORP | 1.23% | 0.00% | 1.23% | 26.37 | 1.98 | -0.052 |
| EMCOR GROUP INC | 1.67% | 0.31% | 1.36% | 25.76 | 1.89 | -0.064 |
| TRUSTCO BANK CORP N Y | 0.98% | 0.03% | 0.95% | 26.15 | 1.86 | -0.030 |
| EVEREST RE GROUP LTD | 1.15% | 0.00% | 1.15% | 28.44 | 1.85 | -0.052 |
| LAKELAND BANCORP INC | 0.92% | 0.05% | 0.87% | 27.44 | 1.79 | -0.026 |

Portfolio Risk by GICS Sector

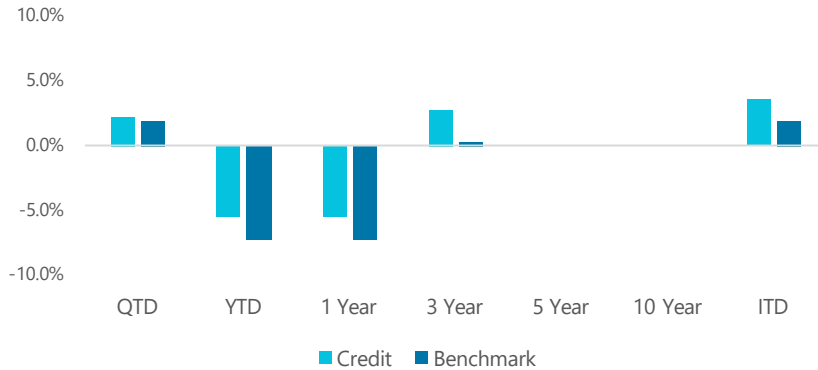


credit

Summary

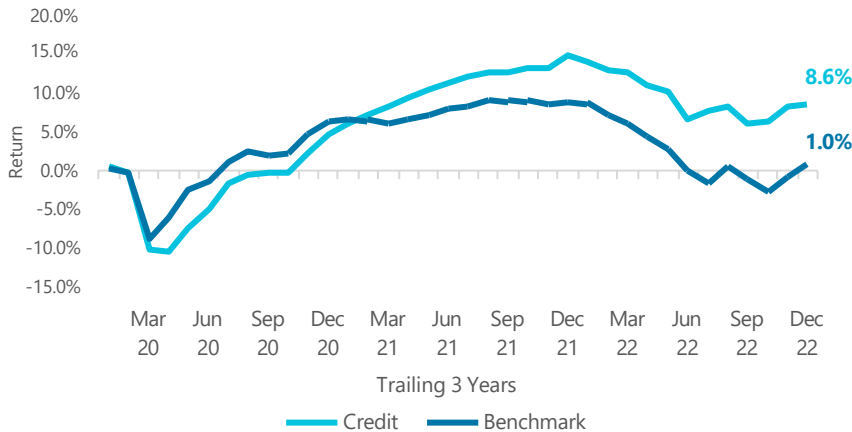
for the quarter ended December 31, 2022

Performance (net)



| | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD |
|---------------|-------------|--------------|--------------|-------------|--------|---------|-------------|
| Credit | 2.2% | -5.5% | -5.5% | 2.8% | -- | -- | 3.6% |
| Benchmark | 1.9% | -7.4% | -7.4% | 0.3% | -- | -- | 2.0% |
| Excess | 0.3% | 1.9% | 1.9% | 2.5% | -- | -- | 1.6% |

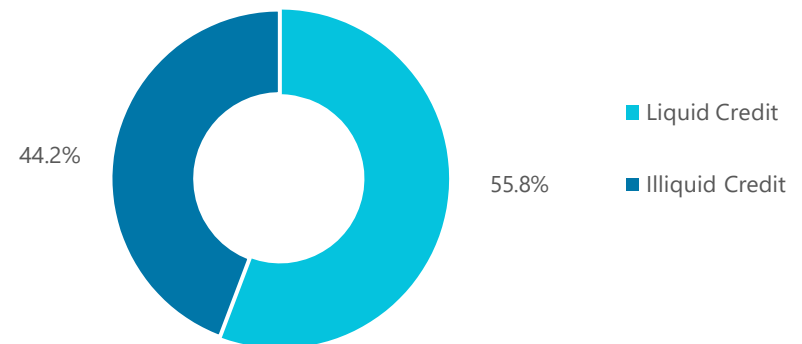
Cumulative Return



Functional Category

| | QTD | FYTD | 1 Year | 3 Year |
|----------------------------------|--------------|--------------|--------------|--------------|
| Liquid Credit | 3.9% | 2.8% | -8.4% | -- |
| Liquid Credit Policy Benchmark | 4.1% | 3.4% | -8.0% | -- |
| Excess | -0.2% | -0.7% | -0.5% | -- |
| Illiquid Credit | -0.1% | -0.1% | -0.8% | 10.3% |
| Illiquid Credit Policy Benchmark | 0.7% | -0.6% | -5.5% | 1.5% |
| Excess | -0.8% | 0.5% | 4.7% | 8.8% |

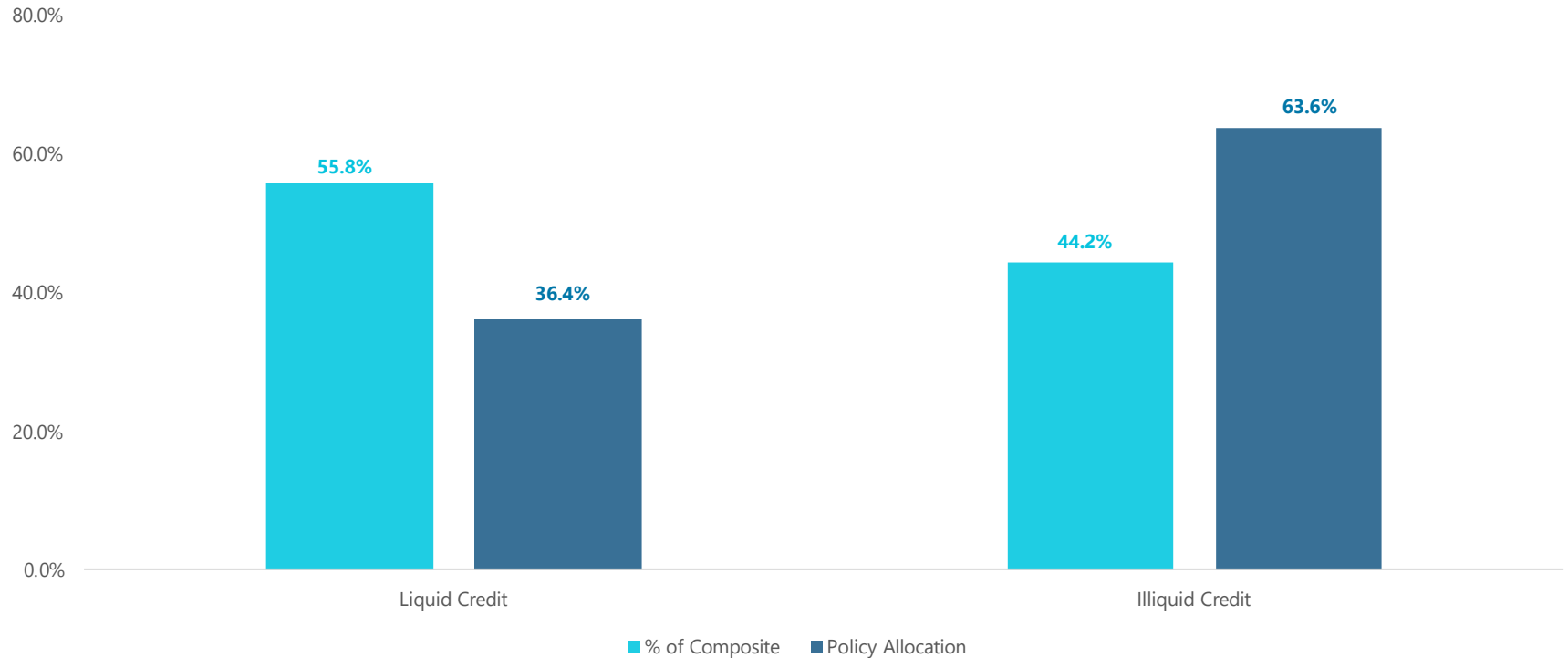
Exposure



Asset Allocation

for the quarter ended December 31, 2022

Actual vs. Policy



| | Ending Market Value (mm) | % of Composite | Policy Allocation | Over / Under (%) | Over / Under (mm) |
|-----------------|--------------------------|----------------|-------------------|------------------|-------------------|
| Credit | 8,446 | 100.0% | 100.0% | | |
| Liquid Credit | 4,709 | 55.8% | 36.4% | 19.4% | 1,638 |
| Illiquid Credit | 3,736 | 44.2% | 63.6% | -19.4% | -1,638 |

Contribution to Return

for the quarter ended December 31, 2022

QTD Contribution to Return



| Functional Category | Contributors | Detractors |
|---------------------|-------------------------------------|------------------------------|
| Liquid Credit | 0.26% Credit Suisse Bank Loans | 0.06% Beach Point - Fund III |
| Illiquid Credit | 0.00% abrdn | 0.05% Napier Park |
| Credit | 0.26% Ashmore Investment Management | |
| | BlackRock HY ETF | |
| | Pinebridge Investments | |

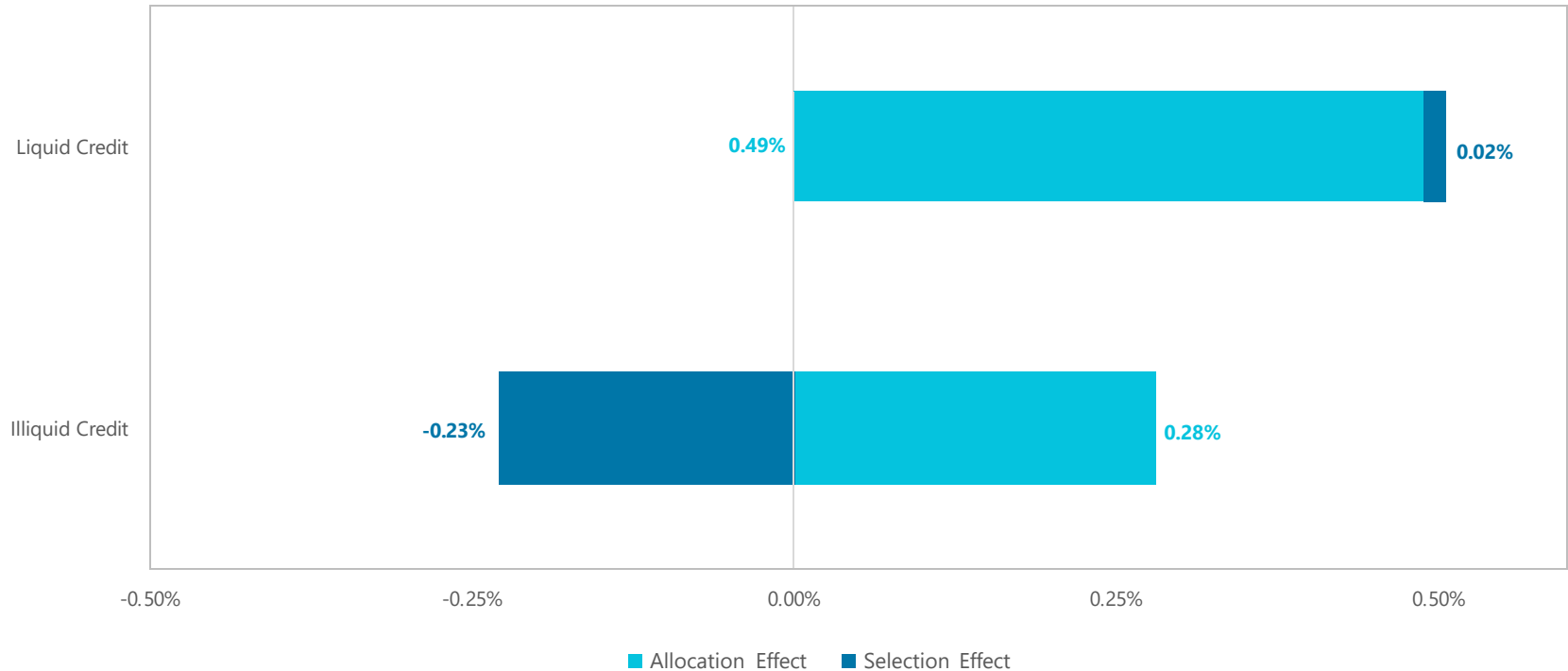
Return Attribution

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

QTD Performance Attribution¹



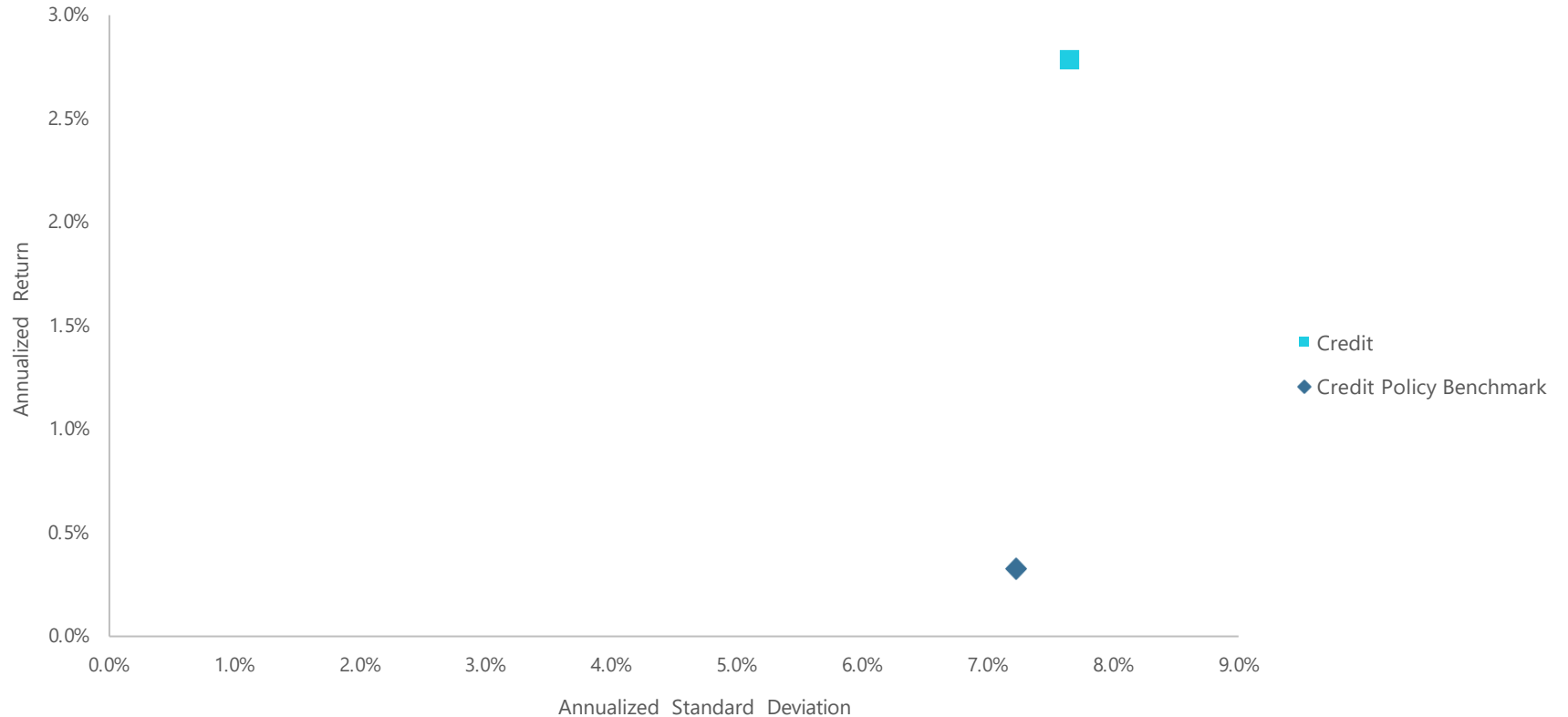
| | Ending Market Value (mm) | % of Composite | Policy Allocation | Portfolio Return | Benchmark Return | Allocation Effect | Selection Effect | Total Value Add |
|-----------------|--------------------------|----------------|-------------------|------------------|------------------|-------------------|------------------|-----------------|
| Credit | 8,446 | 100.0% | 100.0% | 2.2% | 1.9% | 0.77% | -0.21% | 0.28% |
| Liquid Credit | 4,709 | 55.8% | 36.4% | 3.9% | 4.1% | 0.49% | 0.02% | 0.37% |
| Illiquid Credit | 3,736 | 44.2% | 63.6% | -0.1% | 0.7% | 0.28% | -0.23% | -0.09% |

¹ Total Value Add includes Interaction Effect.

Risk vs. Return

for the quarter ended December 31, 2022

3 Year (Annualized)



| | Annualized Return | Standard Deviation | Sharpe Ratio | Information Ratio | Beta | Tracking Error |
|-------------------------|-------------------|--------------------|--------------|-------------------|------|----------------|
| Credit | 2.8% | 7.7% | | | | |
| Credit Policy Benchmark | 0.3% | 7.2% | 0.33 | 0.73 | 0.95 | 3.6% |

Performance Detail

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Annualized Net Returns

| | % of Composite | Ending Market Value (mm) | Prior Quarter Ending MV (mm) | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD | Inception Date |
|----------------------------------|----------------|--------------------------|------------------------------|--------------|--------------|--------------|--------------|--------|---------|--------------|-----------------|
| Credit | 100.0% | 8,446 | 7,883 | 2.2% | -5.5% | -5.5% | 2.8% | -- | -- | 3.6% | Apr-2019 |
| Credit Policy Benchmark | | | | 1.9% | -7.4% | -7.4% | 0.3% | -- | -- | 2.0% | |
| Liquid Credit | 55.8% | 4,709 | 4,533 | 3.9% | -8.4% | -8.4% | -- | -- | -- | -6.6% | Oct-2021 |
| Liquid Credit Policy Benchmark | | | | 4.1% | -8.0% | -8.0% | -- | -- | -- | -6.2% | |
| abrdn | 4.4% | 373 | 340 | 9.6% | -15.9% | -15.9% | -5.2% | -1.9% | -- | -0.9% | Jul-2017 |
| Ashmore Investment Management | 4.0% | 341 | 311 | 9.6% | -17.6% | -17.6% | -7.4% | -3.6% | -- | -2.4% | Jun-2017 |
| Bain Capital | 4.9% | 417 | 407 | 2.0% | -1.4% | -1.4% | 3.2% | 3.6% | -- | 3.5% | Jun-2014 |
| Beach Point | 3.3% | 281 | 269 | 4.3% | -11.5% | -11.5% | -0.7% | 2.1% | -- | 3.9% | Mar-2014 |
| BlackRock HY ETF | 6.9% | 579 | 553 | 4.7% | -10.9% | -10.9% | -- | -- | -- | -0.5% | Feb-2020 |
| Brigade Cap Mgmt | 7.4% | 624 | 616 | 1.3% | -12.0% | -12.0% | 1.0% | 2.2% | 3.7% | 5.6% | Jul-2010 |
| Credit Suisse Bank Loans | 13.7% | 1,154 | 1,115 | 3.5% | -0.4% | -0.4% | -- | -- | -- | 6.3% | Apr-2020 |
| Crescent Capital | 5.8% | 491 | 489 | 0.5% | -5.6% | -5.6% | 2.4% | 3.3% | -- | 3.1% | May-2014 |
| Pinebridge Investments | 5.3% | 450 | 432 | 4.2% | -11.4% | -11.4% | -- | -- | -- | -8.1% | Sep-2021 |
| Illiquid Credit | 44.2% | 3,736 | 3,350 | -0.1% | -0.8% | -0.8% | 10.3% | -- | -- | 9.3% | Apr-2019 |
| Illiquid Credit Policy Benchmark | | | | 0.7% | -5.5% | -5.5% | 1.5% | -- | -- | 3.7% | |
| Beach Point - Fund II | 0.1% | 13 | 16 | -- | -- | -- | -- | -- | -- | 5.1% | Jun-2014 |
| Beach Point - Fund III | 1.8% | 154 | 162 | -4.4% | -11.9% | -11.9% | 11.0% | 9.9% | -- | 10.0% | Jun-2017 |
| BlackRock/Tennenbaum | 7.7% | 647 | 640 | 1.2% | 5.5% | 5.5% | 7.0% | 7.1% | -- | 7.1% | Nov-2014 |
| Grosvenor OPCRD 2 HFOF | 0.3% | 23 | 29 | -- | -- | -- | -- | -- | -- | -- | Mar-2016 |
| Lake Cottage | 2.8% | 237 | 0 | -- | -- | -- | -- | -- | -- | -- | Nov-2022 |
| Lake Vineyard | 4.3% | 363 | 268 | 0.5% | -- | -- | -- | -- | -- | -1.1% | Apr-2022 |
| Magnetar | 10.7% | 904 | 826 | -0.2% | -1.1% | -1.1% | -- | -- | -- | 18.1% | Aug-2020 |
| Napier Park | 9.5% | 800 | 806 | -0.7% | -5.5% | -5.5% | -- | -- | -- | 14.9% | Apr-2020 |
| PIMCO Tac Opps | 3.2% | 273 | 275 | -0.9% | -6.4% | -6.4% | 5.5% | -- | -- | 5.3% | Nov-2018 |
| Private Equity - Credit | 2.6% | 215 | 216 | 4.2% | 12.8% | 12.8% | 17.4% | -- | -- | 13.7% | Jan-2019 |
| Real Estate - Credit | 1.0% | 83 | 112 | 3.2% | 11.1% | 11.1% | 10.0% | 9.7% | 8.8% | 9.0% | Oct-2011 |
| Stable Asset Management - IC | 0.3% | 23 | 0 | -- | -- | -- | -- | -- | -- | 0.0% | Nov-2022 |

Liquid Credit Risk Summary

for the quarter ended December 31, 2022

Risk Summary

| | Value |
|------------------------|-------------|
| Total Risk | 6.13 |
| Benchmark Risk | 5.61 |
| Active Risk | 0.72 |
| Portfolio Beta | 1.09 |
| Cont. to Eff. Duration | 2.77 |
| Convexity | 0.13 |
| Yield to Worst (%) | 8.69 |
| OAS to Sw ap (bp) | 454 |

Risk Decomposition

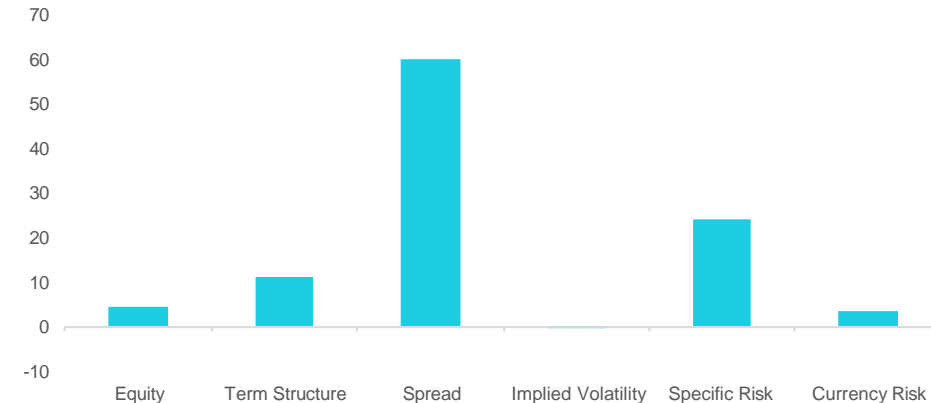
| Risk Source | Portfolio | | Active | |
|--------------------|-------------------|---------------|-------------------|---------------|
| | Risk Contribution | %Risk | Risk Contribution | %Risk |
| Total Risk | 6.13 | 100.00 | 0.72 | 100.00 |
| Local Market Risk | 5.87 | 95.78 | 0.70 | 96.39 |
| Common Factor Risk | 5.85 | 95.34 | 0.52 | 72.17 |
| Specific Risk | 0.03 | 0.43 | 0.18 | 24.22 |
| Currency Risk | 0.26 | 4.22 | 0.03 | 3.61 |

Contribution to Risk



| | Mkt Value (mm) | Weight% | Total Risk | Risk Contribution | %CR to TR |
|----------------------|----------------|---------------|-------------|-------------------|---------------|
| Liquid Credit | 4,577 | 100.00 | 6.13 | 6.13 | 100.00 |
| High Yield | 1,888 | 41.25 | 7.67 | 3.06 | 49.97 |
| Bank Loans | 1,975 | 43.15 | 4.51 | 1.70 | 27.78 |
| Emerging Market Debt | 714 | 15.61 | 10.01 | 1.36 | 22.25 |

Active Risk from Common Factors



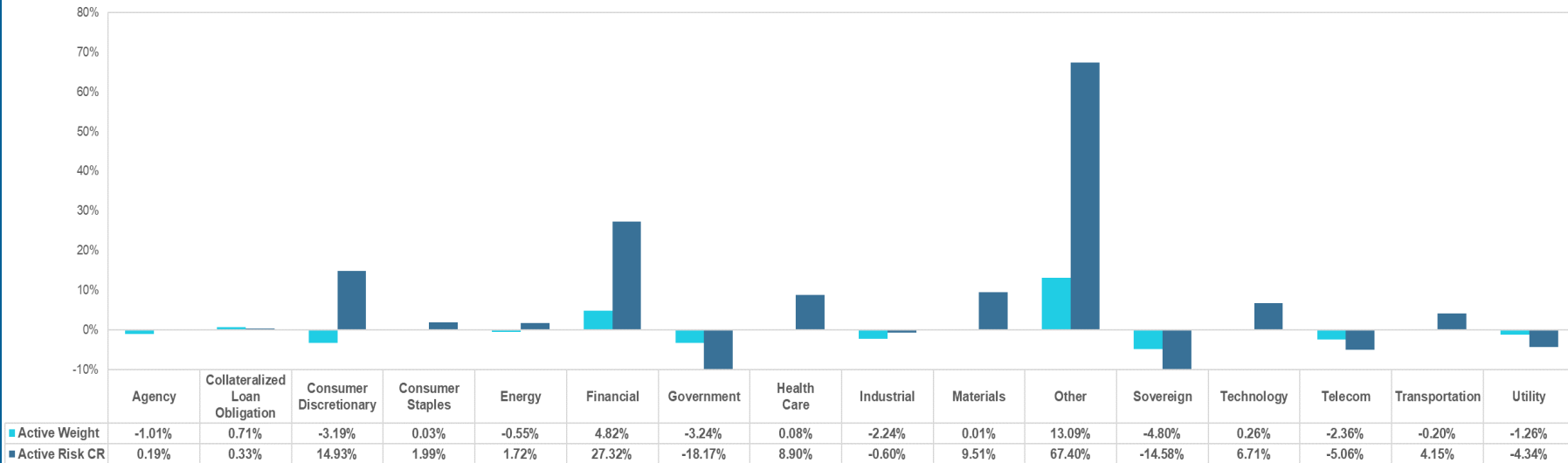
Liquid Credit Risk Summary

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

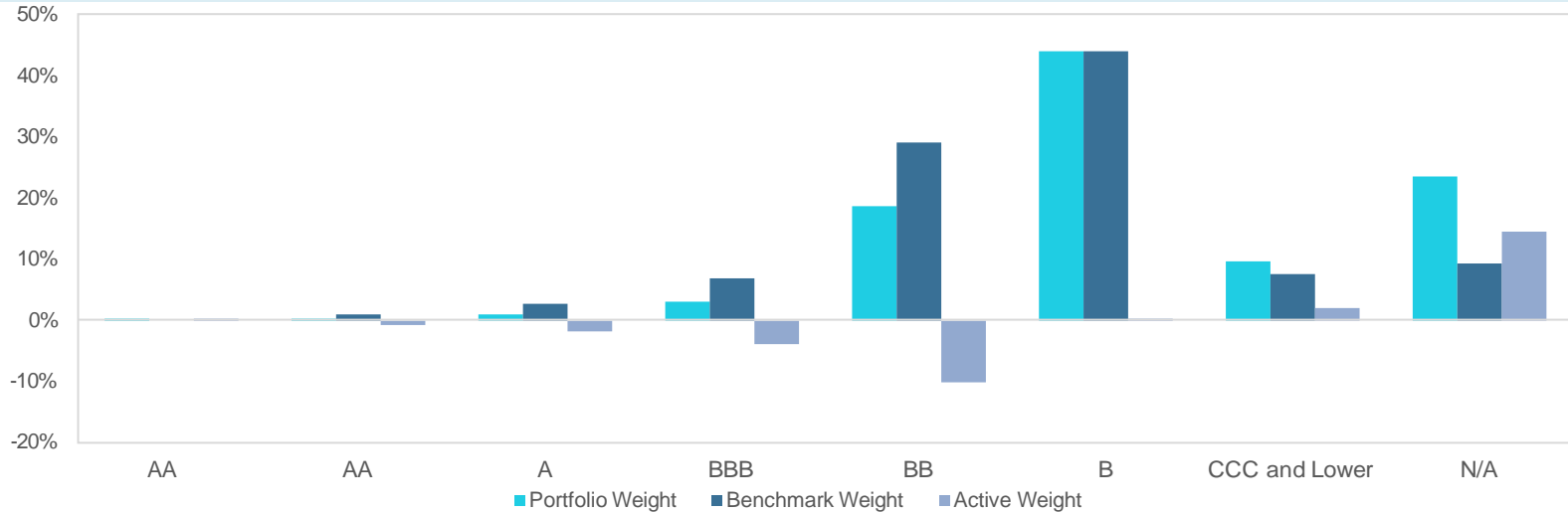
Portfolio Allocation By Bond Sector



Liquid Credit Risk Summary

for the quarter ended December 31, 2022

Portfolio Allocation By Moody's Rating



| Rating | Weight% | | | Total Risk | Active Risk CR | % of Active TR | CR to Effective Duration |
|---------------|----------------|----------------|--------------|-------------|----------------|----------------|--------------------------|
| | Portfolio | Benchmark | Active | | | | |
| Credit | 100.00% | 100.00% | 0.00% | 6.13 | 0.72 | 100.00% | 2.77 |
| AAA | 0.12% | 0.00% | 0.12% | 16.08 | 0.00 | -0.6% | 0.02 |
| AA | 0.28% | 0.97% | -0.69% | 11.50 | 0.03 | 3.6% | 0.03 |
| A | 0.76% | 2.55% | -1.78% | 11.82 | 0.05 | 7.1% | 0.10 |
| BBB | 2.96% | 6.99% | -4.03% | 7.57 | 0.07 | 10.0% | 0.19 |
| BB | 18.79% | 29.00% | -10.21% | 6.10 | 0.25 | 34.5% | 0.74 |
| B | 44.16% | 43.90% | 0.26% | 6.15 | 0.32 | 43.7% | 0.74 |
| CCC and Lower | 9.49% | 7.52% | 1.97% | 11.52 | 0.11 | 15.3% | 0.21 |
| N/A | 23.45% | 9.08% | 14.36% | 4.92 | -0.10 | -13.5% | 0.73 |

Credit – Liquid Credit abrdn

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Strategy

An emerging market debt strategy that invests in sovereigns, quasi-sovereigns, and corporate bonds denominated in US Dollar or local currencies.

Inception Date: July 2017

Risk Statistics (since inception)

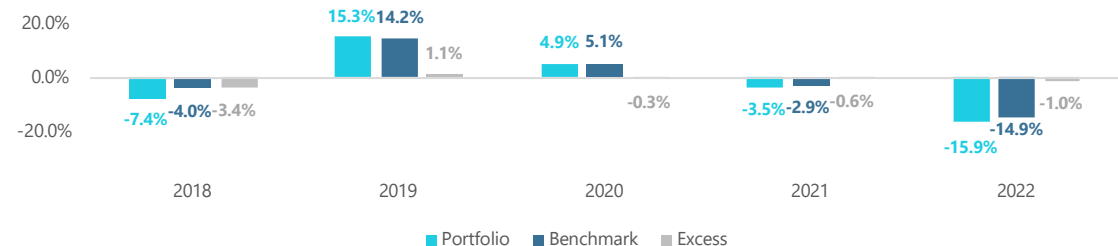
| | |
|------------------------------|-------|
| Standard Deviation | 11.3% |
| Benchmark Standard Deviation | 9.6% |
| Sharpe Ratio | -0.14 |
| Information Ratio | -0.29 |
| Beta | 1.16 |
| Tracking Error | 2.7% |

Performance (net)¹

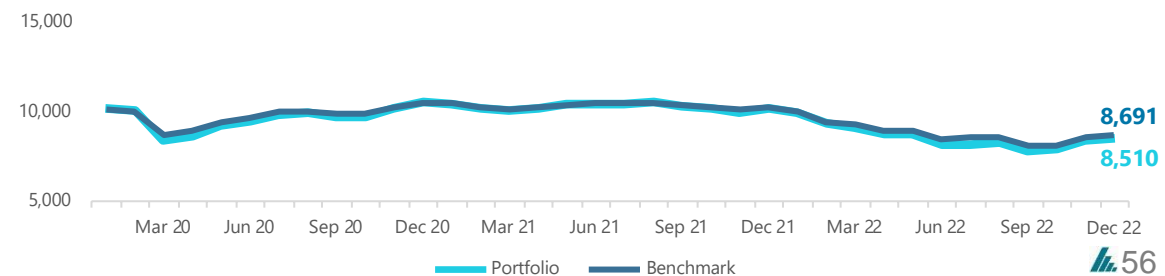
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|-------------------------|--------------------------|-------------|---------------|--------------|--------------|
| abrdn | 372.8 | 9.6% | -15.9% | -5.2% | -1.9% |
| EMD Custom Benchmark | | 7.3% | -14.9% | -4.6% | -1.0% |
| Credit Policy Benchmark | | 1.9% | -7.4% | 0.3% | -- |

| Universe data: US Fixed Income Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--------------------------------------|-------------|----------|---------------|-----------|--------------|-----------|--------------|-----------|
| abrdn | 9.7% | 3 | -15.6% | 87 | -4.9% | 91 | -1.5% | 95 |
| Median | 1.7% | | -8.1% | | -0.7% | | 1.0% | |

Calendar Year Returns



Growth of \$10,000



Note: Commingled fund account with no position-level transparency.

¹ Universe data is gross-of-fees.

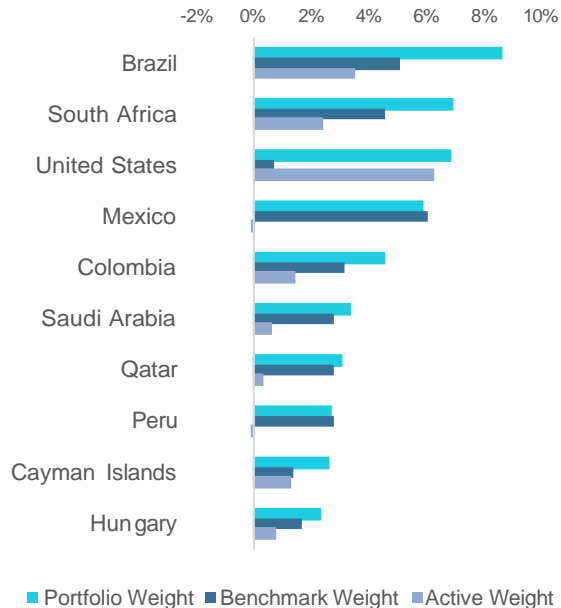
Credit Risk Analysis – Liquid Credit

abrdrn
for the quarter ended December 31, 2022

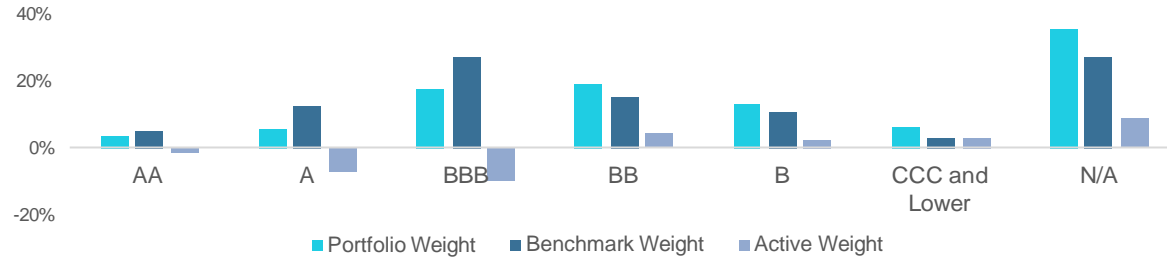
Portfolio Risk Summary

| | Value |
|------------------------|--------------|
| Total Risk | 10.36 |
| Benchmark Risk | 7.73 |
| Active Risk | 3.58 |
| Portfolio Beta | 1.29 |
| Cont. to Eff. Duration | 5.73 |
| Yield to Worst (%) | 9.49 |
| OAS to Sw ap (bp) | 382 |

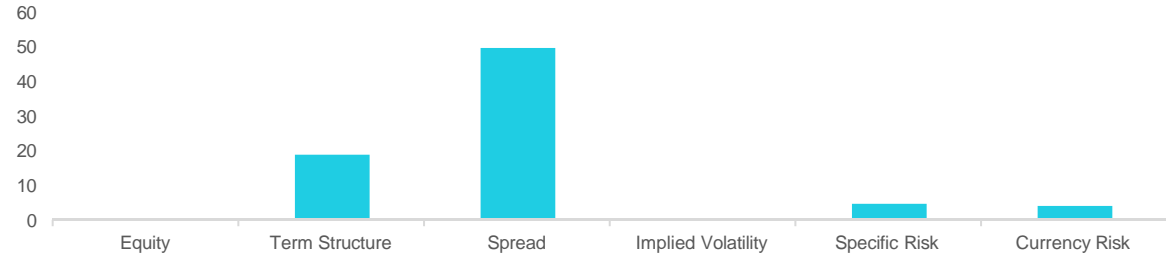
Top Countries by Weight%



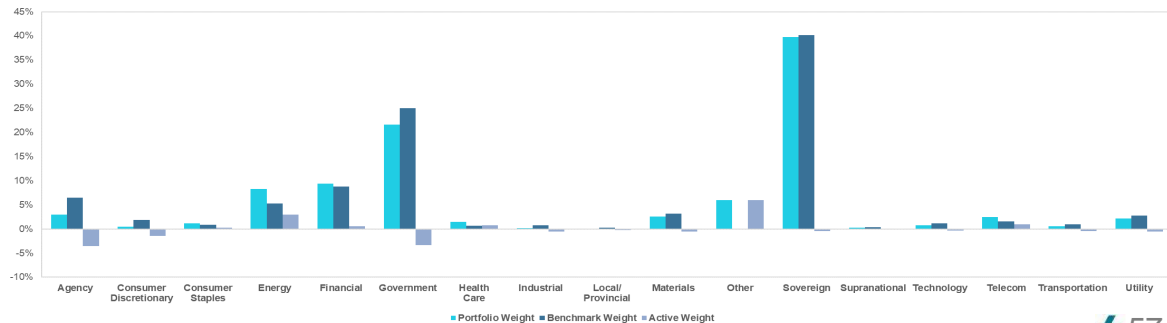
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit Ashmore

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Strategy

A value-driven emerging market debt strategy that applies a macro, top-down approach to build a well-diversified portfolio that adds value through asset rotation, security selection, and currency positioning utilizing a committee driven, systematic risk mitigating process.

Inception Date: June 2017

Risk Statistics (since inception)

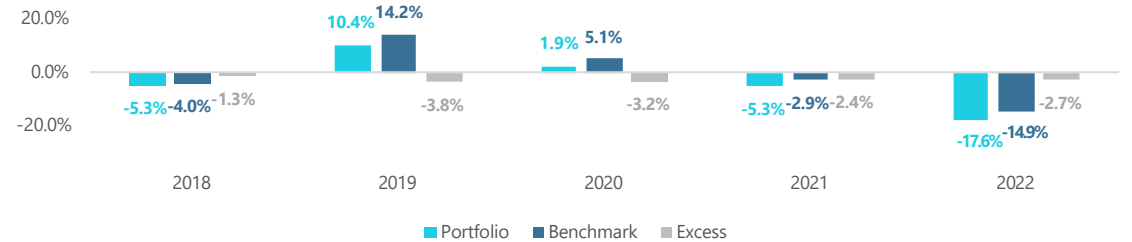
| | |
|------------------------------|-------|
| Standard Deviation | 13.4% |
| Benchmark Standard Deviation | 9.6% |
| Sharpe Ratio | -0.20 |
| Information Ratio | -0.47 |
| Beta | 1.37 |
| Tracking Error | 4.5% |

Performance (net)¹

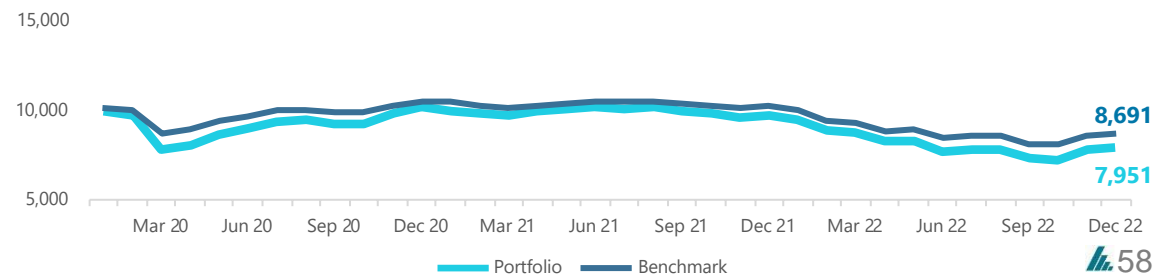
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--------------------------------------|--------------------------|-------------|---------------|--------------|--------------|
| Ashmore Investment Management | 341.2 | 9.6% | -17.6% | -7.4% | -3.6% |
| EMD Custom Benchmark | | 7.3% | -14.9% | -4.6% | -1.0% |
| Credit Policy Benchmark | | 1.9% | -7.4% | 0.3% | -- |

| Universe data: US Fixed Income Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--------------------------------------|-------------|----------|---------------|-----------|--------------|-----------|--------------|-----------|
| Ashmore Investment Management | 9.8% | 3 | -17.6% | 88 | -6.9% | 97 | -3.1% | 97 |
| Median | 1.7% | | -8.1% | | -0.7% | | 1.0% | |

Calendar Year Returns



Growth of \$10,000



Note: Commingled fund account with no position-level transparency.

¹ Universe data is gross-of-fees.

Credit Risk Analysis – Liquid Credit Ashmore

for the quarter ended December 31, 2022

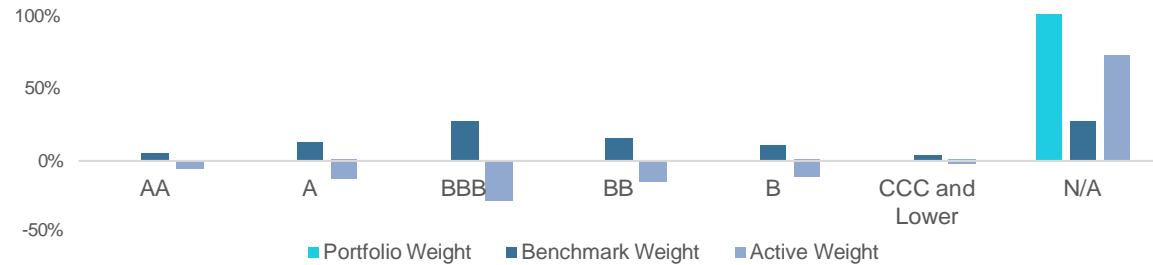
Portfolio Risk Summary

| | Value |
|------------------------|--------------|
| Total Risk | 10.56 |
| Benchmark Risk | 7.73 |
| Active Risk | 5.41 |
| Portfolio Beta | 1.19 |
| Cont. to Eff. Duration | 5.83 |
| Yield to Worst (%) | 0.00 |
| OAS to Sw ap (bp) | -432 |

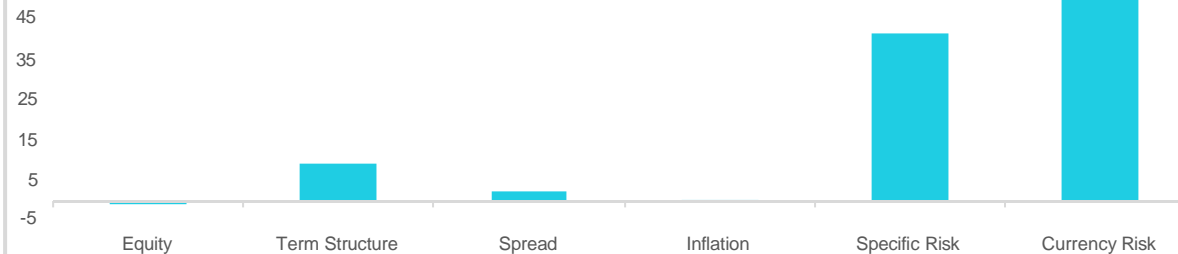
Top Countries by Weight%



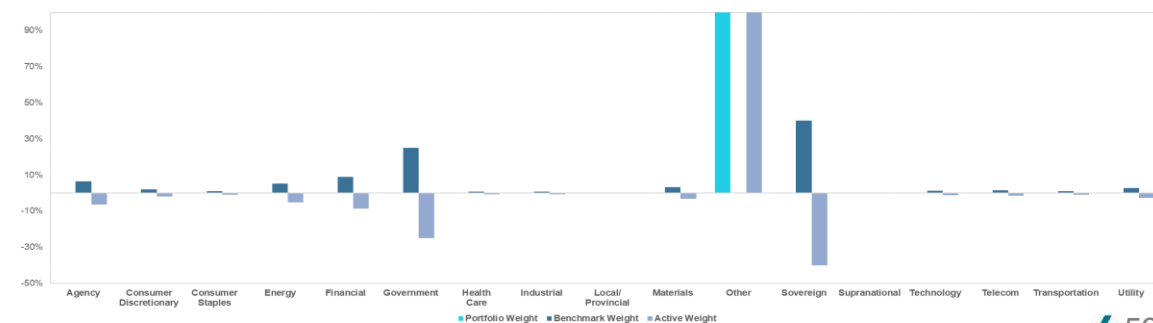
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit

Bain Capital

for the quarter ended December 31, 2022

Strategy

A long-only strategy designed to provide exposure to senior secured, floating-rate bank loans. The strategy takes a fundamental, active, and global approach to investing, capitalizing on opportunities in an inefficient asset class. The return objective is to outperform the Index through strong credit selection and active portfolio management.

Inception Date: June 2014

Portfolio Characteristics

| | Portfolio | Benchmark |
|--------------------|-----------|-----------|
| No. of Issues | 546.0 | 0.0 |
| Effective Duration | 0.2 | 4.0 |
| Convexity | 0.0 | 0.0 |
| Coupon Rate | 7.4 | 5.8 |
| Yield to Maturity | 8.1 | 8.7 |
| Current Yield | 7.8 | 6.7 |
| Rating – Moody's | B-2 | B-1 |
| Rating – S & P | B-2 | B+ |

Top Holdings (% of assets)

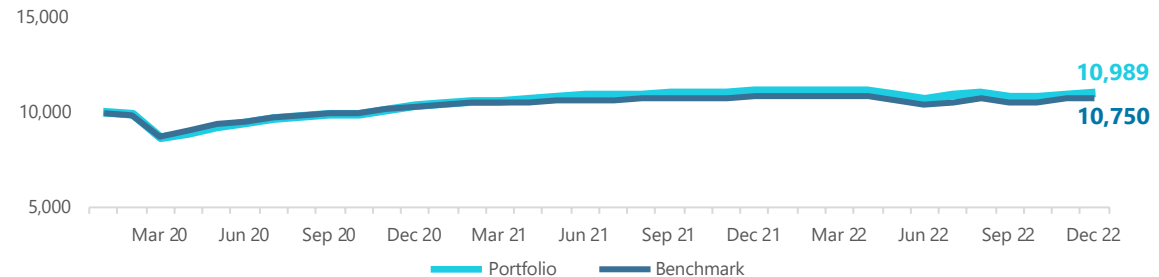
| | |
|-----------------------------|-------------|
| AQGEN ISLAND HOLDINGS, INC. | 0.9% |
| CPS GROUP HOLDINGS INC | 0.9% |
| NAVICURE INC | 0.7% |
| CHAMBER BIDCO LIMITED | 0.6% |
| TEI HOLDINGS INC | 0.5% |
| Top 5 Holdings | 3.7% |

Performance (net)¹

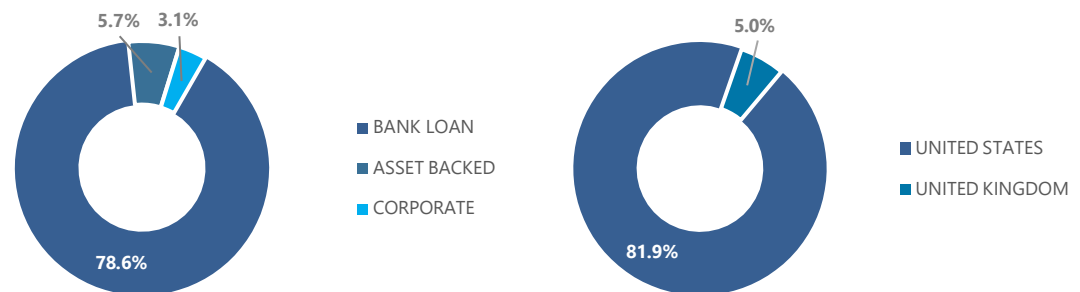
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|-----------------------------|--------------------------|-------------|--------------|-------------|-------------|
| Bain Capital | 416.7 | 2.0% | -1.4% | 3.2% | 3.6% |
| Bank Loans Custom Benchmark | | 2.3% | -1.1% | 2.4% | 3.5% |
| Credit Policy Benchmark | | 1.9% | -7.4% | 0.3% | -- |

| Universe data: U.S. Fixed Income Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--|-------------|-----------|--------------|-----------|-------------|-----------|-------------|-----------|
| Bain Capital | 2.1% | 36 | -0.8% | 32 | 3.8% | 20 | 4.2% | 14 |
| Median | 1.7% | | -8.1% | | -0.7% | | 1.0% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

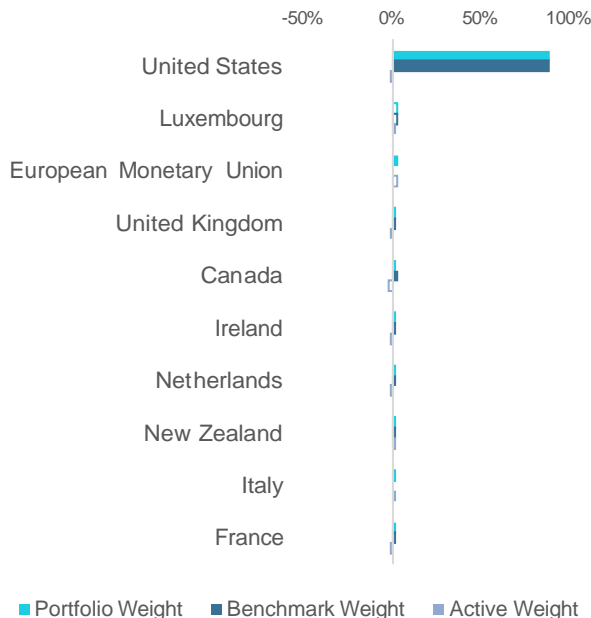
Credit Risk Analysis – Liquid Credit Bain Capital

for the quarter ended December 31, 2022

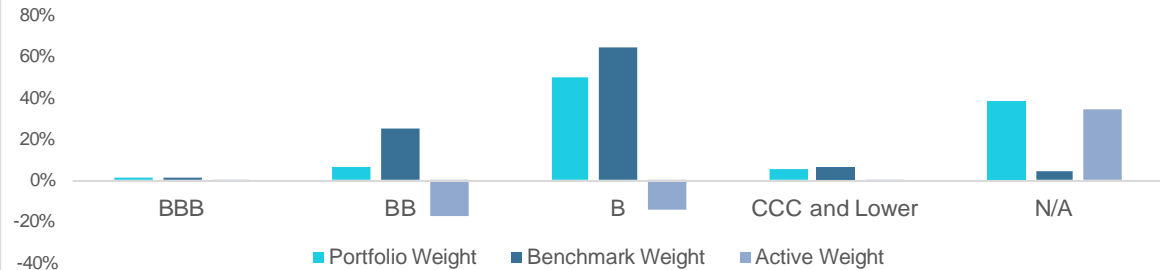
Portfolio Risk Summary

| | Value |
|------------------------|-------------|
| Total Risk | 3.38 |
| Benchmark Risk | 4.69 |
| Active Risk | 1.52 |
| Portfolio Beta | 0.71 |
| Cont. to Eff. Duration | 0.44 |
| Yield to Worst (%) | 7.34 |
| OAS to Sw ap (bp) | 474 |

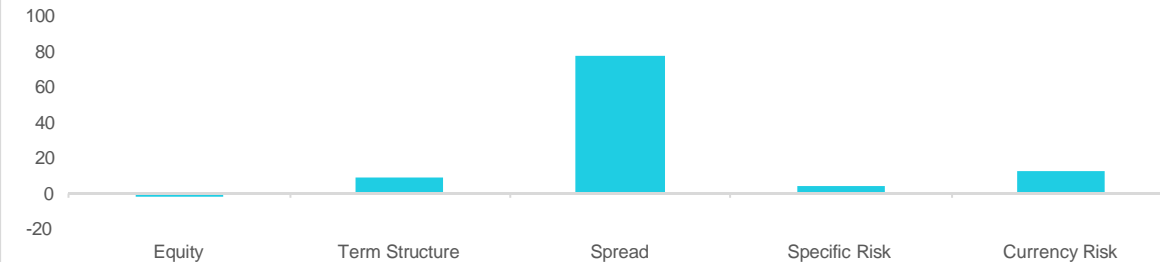
Top Countries by Weight%



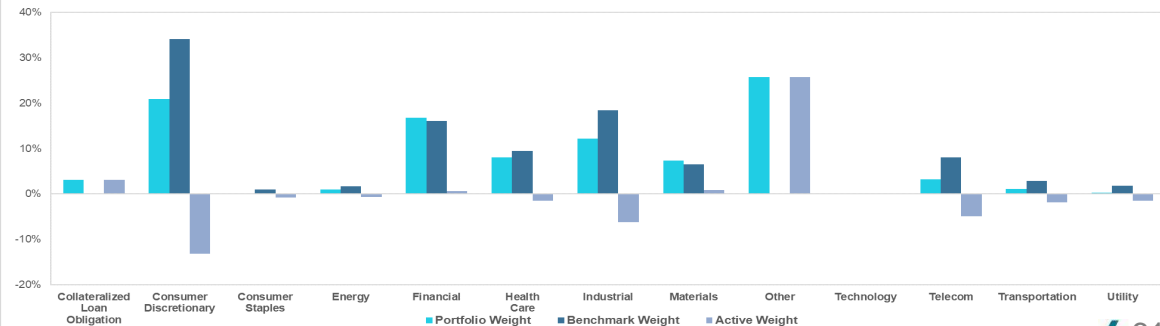
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit Beach Point

for the quarter ended December 31, 2022

Strategy

A fundamental, value oriented high yield bond strategy that utilizes legal skills to identify market anomalies in bond covenants and indentures. The primary investment goal is to generate superior returns while controlling risk to minimize the possibility of capital impairment.

Inception Date: March 2014

Portfolio Characteristics

| | Portfolio | Benchmark |
|--------------------|-----------|-----------|
| No. of Issues | 266.0 | 0.0 |
| Effective Duration | 3.9 | 4.0 |
| Convexity | 0.1 | 0.0 |
| Coupon Rate | 5.8 | 5.8 |
| Yield to Maturity | 9.2 | 8.7 |
| Current Yield | 6.9 | 6.7 |
| Rating – Moody's | B-2 | B-1 |
| Rating – S & P | B | B+ |

Top Holdings (% of assets)

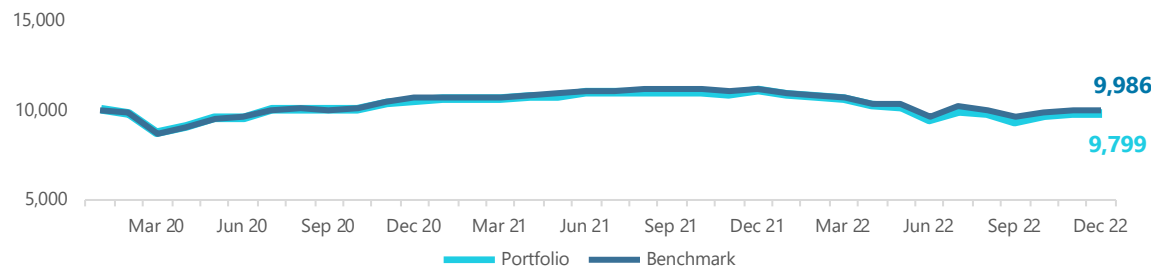
| | |
|--------------------------|-------------|
| AMERICAN GREETINGS CORP | 1.8% |
| DEALER TIRE LLC/DT ISSR | 1.5% |
| COMPASS GROUP DIVERSIFIE | 1.4% |
| ACRISURE LLC / FIN INC | 1.3% |
| MPH ACQUISITION HOLDINGS | 1.2% |
| Top 5 Holdings | 7.1% |

Performance (net)¹

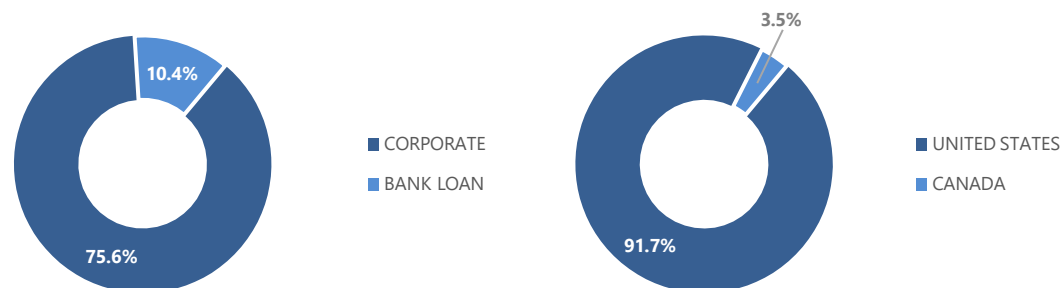
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|-----------------------------|--------------------------|-------------|---------------|--------------|-------------|
| Beach Point | 280.7 | 4.3% | -11.5% | -0.7% | 2.1% |
| Beachpoint Custom Benchmark | | 4.2% | -11.2% | 0.0% | 2.0% |
| Credit Policy Benchmark | | 1.9% | -7.4% | 0.3% | -- |

| Universe data: US Fixed Income Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--------------------------------------|-------------|-----------|---------------|-----------|--------------|-----------|-------------|-----------|
| Beach Point | 4.5% | 12 | -11.2% | 62 | -0.2% | 47 | 2.6% | 19 |
| Median | 1.2% | | -8.1% | | -0.7% | | 1.0% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Credit Risk Analysis – Liquid Credit Beach Point

for the quarter ended December 31, 2022

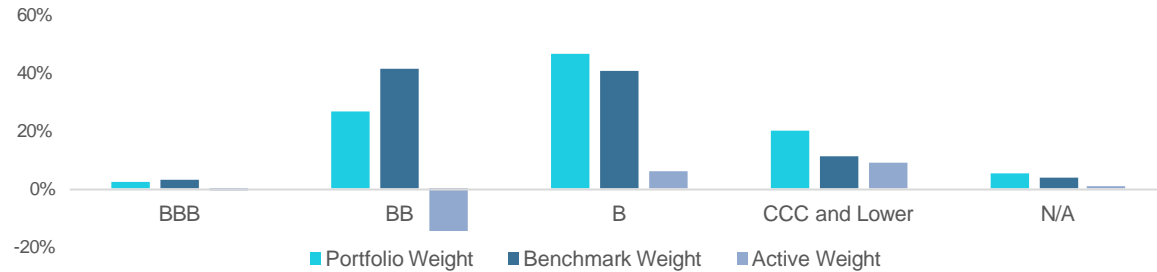
Portfolio Risk Summary

| | Value |
|------------------------|-------------|
| Total Risk | 8.05 |
| Benchmark Risk | 7.04 |
| Active Risk | 1.46 |
| Portfolio Beta | 1.13 |
| Cont. to Eff. Duration | 3.97 |
| Yield to Worst (%) | 8.70 |
| OAS to Sw ap (bp) | 456 |

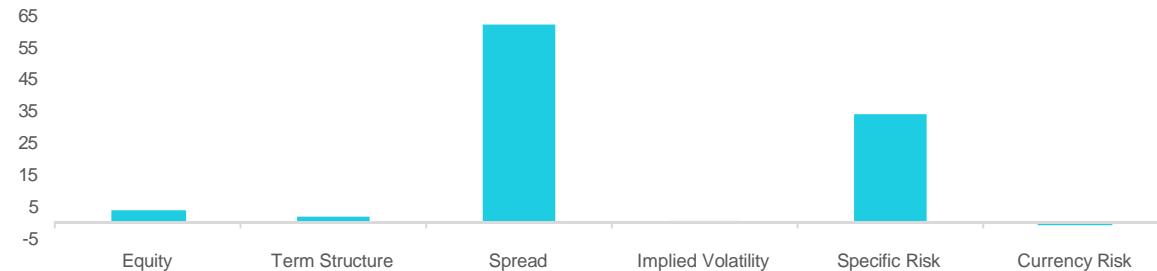
Top Countries by Weight%



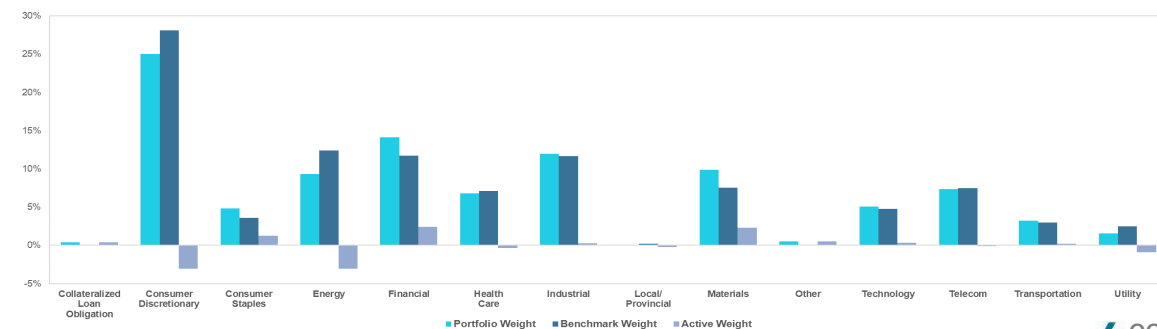
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit Brigade Capital

for the quarter ended December 31, 2022

Strategy

A strategy that focuses on identifying attractive companies within the high yield bond marketplace. The strategy invests in companies that have a lower likelihood of default or are better able to recover from economic downturns because of their substantial asset value relative to debt.

Inception Date: July 2010

Portfolio Characteristics

| | Portfolio | Benchmark |
|--------------------|-----------|-----------|
| No. of Issues | 337.0 | 0.0 |
| Effective Duration | 4.0 | 4.0 |
| Convexity | 0.3 | 0.0 |
| Coupon Rate | 6.6 | 5.8 |
| Yield to Maturity | 11.9 | 8.7 |
| Current Yield | 8.5 | 6.7 |
| Rating – Moody's | B-1 | B-1 |
| Rating – S & P | B+ | B+ |

Top Holdings (% of assets)

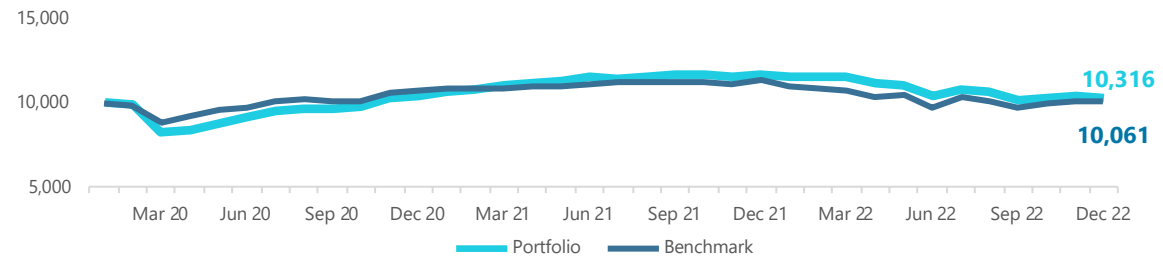
| | |
|---------------------------|-------------|
| EPIC Y GRADE SERVICES, LP | 2.0% |
| CORNERSTONE CHEMICAL CO | 2.0% |
| RAIN CII CARBON LLC/CII | 1.2% |
| BAFFINLAND IRON CORP/LP | 1.2% |
| LIFESCAN GLOBAL CORP | 1.1% |
| Top 5 Holdings | 7.4% |

Performance (net)¹

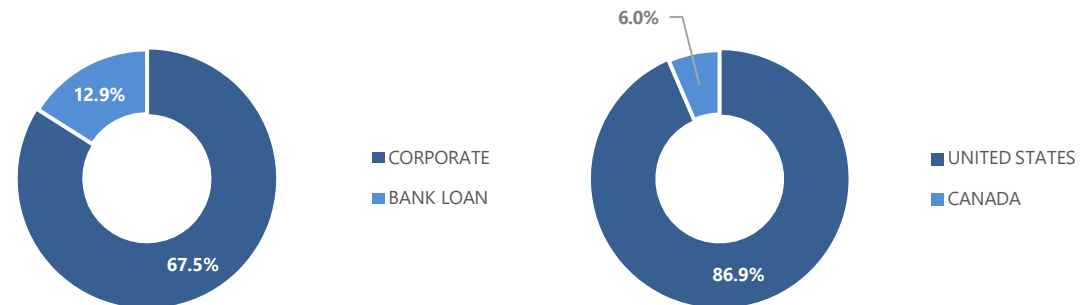
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--------------------------|--------------------------|-------------|---------------|-------------|-------------|
| Brigade Cap Mgmt | 624.1 | 1.3% | -12.0% | 1.0% | 2.2% |
| Brigade Custom Benchmark | | 4.2% | -11.2% | 0.2% | 2.3% |
| Credit Policy Benchmark | | 1.9% | -7.4% | 0.3% | -- |

| Universe data: US Fixed Income Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--------------------------------------|-------------|-----------|---------------|-----------|-------------|-----------|-------------|-----------|
| Brigade Cap Mgmt | 1.4% | 57 | -11.7% | 66 | 1.5% | 26 | 2.8% | 19 |
| Median | 1.7% | | -8.1% | | -0.7% | | 1.0% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

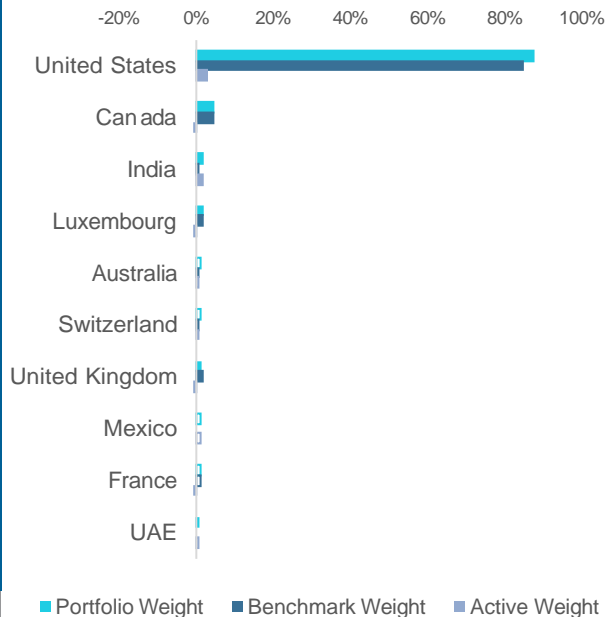
Credit Risk Analysis – Liquid Credit Brigade Capital

for the quarter ended December 31, 2022

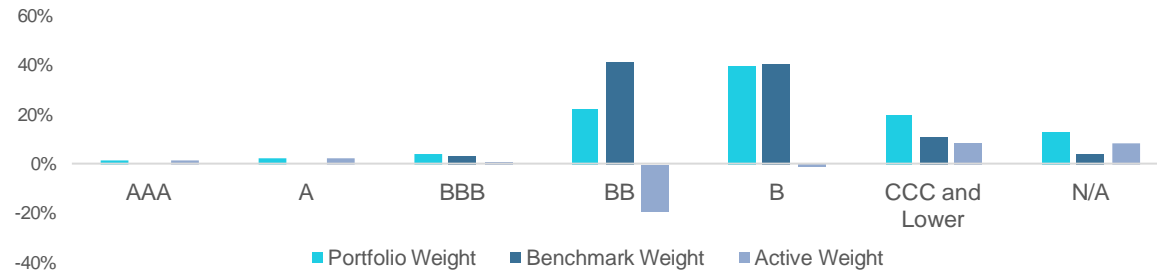
Portfolio Risk Summary

| | Value |
|------------------------|-------------|
| Total Risk | 8.77 |
| Benchmark Risk | 7.04 |
| Active Risk | 2.42 |
| Portfolio Beta | 1.22 |
| Cont. to Eff. Duration | 4.07 |
| Yield to Worst (%) | 9.65 |
| OAS to Sw ap (bp) | 554 |

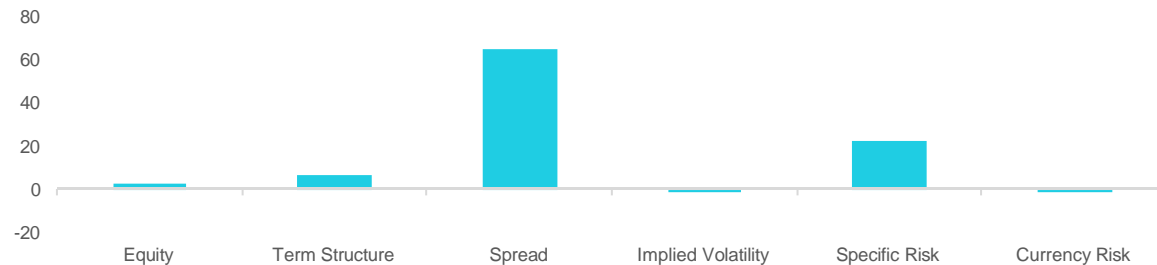
Top Countries by Weight%



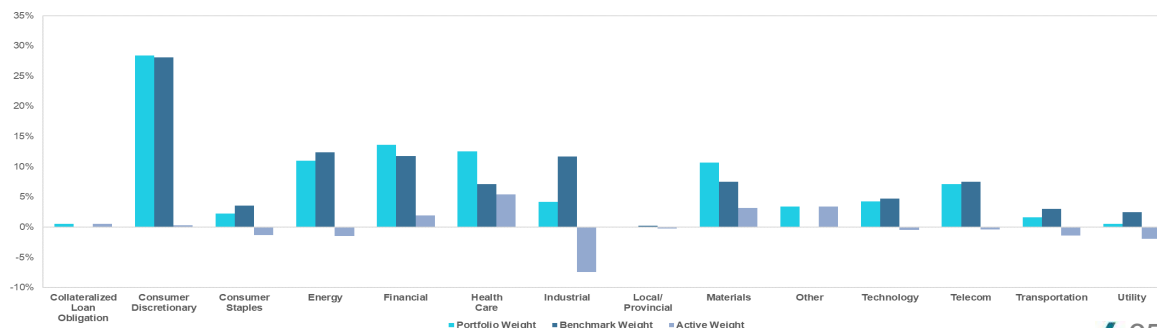
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit

Credit Suisse

for the quarter ended December 31, 2022

Strategy

A bank loan strategy that invests in senior floating rate loans whose primary performance objective is to generate alpha while mitigating loss, utilizing bottom-up, fundamental credit analysis emphasizing a relative value approach.

Inception Date: April 2020

Portfolio Characteristics

| | Portfolio | Benchmark |
|--------------------|-----------|-----------|
| No. of Issues | 506.0 | 0.0 |
| Effective Duration | 0.2 | 4.0 |
| Convexity | 0.0 | 0.0 |
| Coupon Rate | 7.9 | 5.8 |
| Yield to Maturity | 9.0 | 8.7 |
| Current Yield | 8.4 | 6.7 |
| Rating – Moody's | B-2 | B-1 |
| Rating – S & P | B | B+ |

Top Holdings (% of assets)

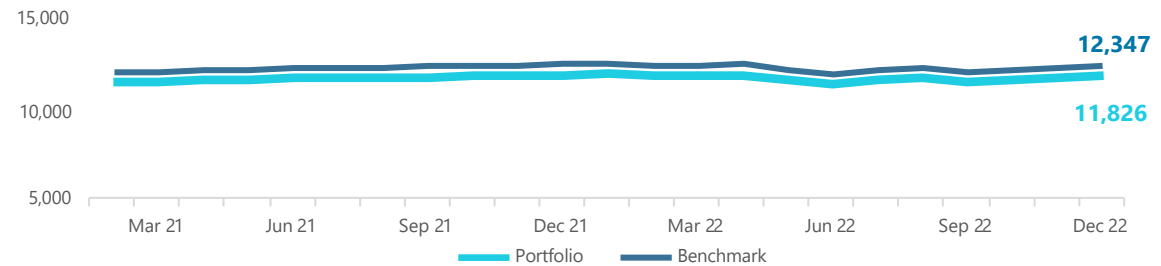
| | |
|-------------------------------|-------------|
| OPEN TEXT CORP | 1.1% |
| ABG INTERMEDIATE HOLDGS 2 LLC | 0.8% |
| HYLAND SOFTWARE INC | 0.8% |
| FINASTRA USA, INC. | 0.7% |
| NFP CORP | 0.7% |
| Top 5 Holdings | 4.2% |

Performance (net)¹

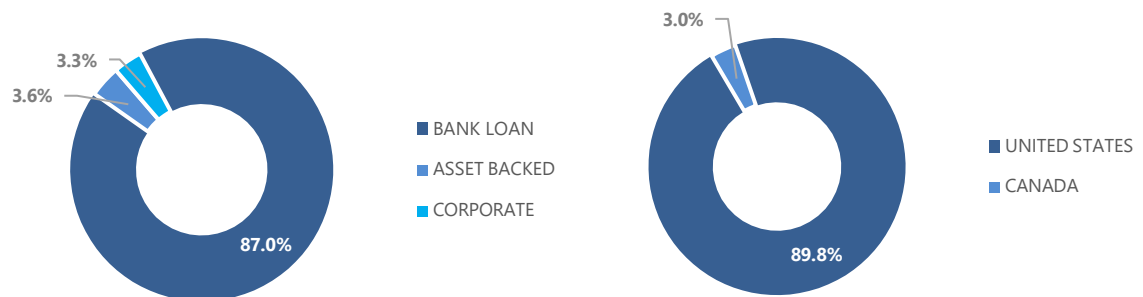
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|---------------------------------|--------------------------|-------------|--------------|--------|--------|
| Credit Suisse Bank Loans | 1,154.1 | 3.5% | -0.4% | -- | -- |
| CS Leveraged Loan Index | | 2.3% | -1.1% | -- | -- |
| Credit Policy Benchmark | | 1.9% | -7.4% | 0.3% | -- |

| Universe data: US Fixed Income Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--------------------------------------|-------------|-----------|--------------|-----------|--------|------|--------|------|
| Credit Suisse Bank Loans | 3.5% | 18 | -0.2% | 31 | -- | -- | -- | -- |
| Median | 1.7% | | -8.1% | | -- | -- | -- | -- |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Credit Risk Analysis – Liquid Credit

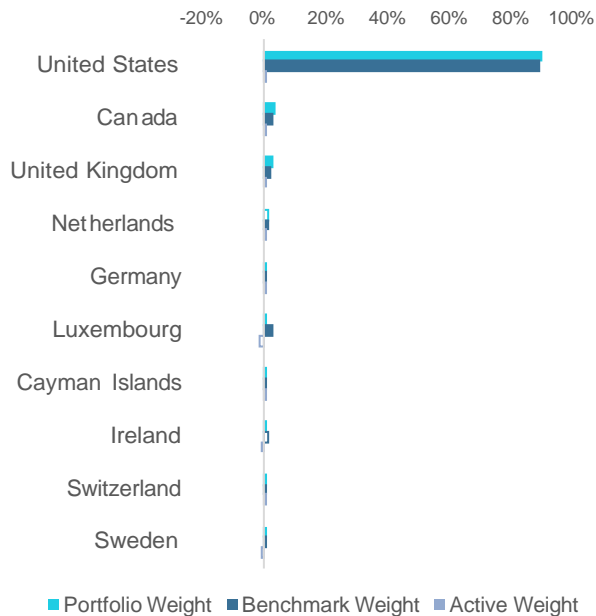
Credit Suisse

for the quarter ended December 31, 2022

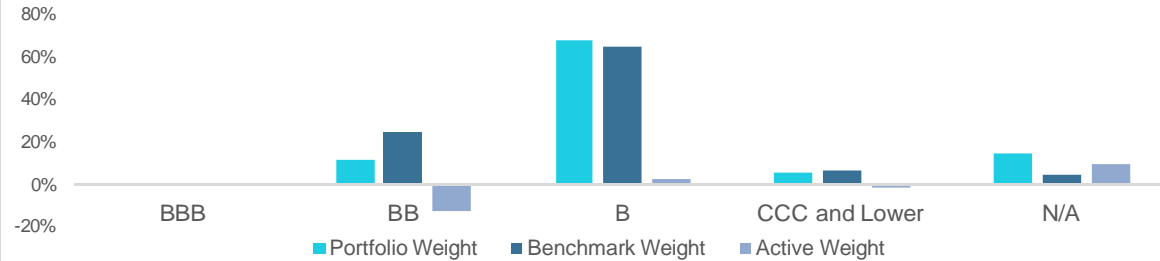
Portfolio Risk Summary

| | Value |
|------------------------|-------------|
| Total Risk | 4.24 |
| Benchmark Risk | 4.69 |
| Active Risk | 0.75 |
| Portfolio Beta | 0.90 |
| Cont. to Eff. Duration | 0.44 |
| Yield to Worst (%) | 5.83 |
| OAS to Sw ap (bp) | 474 |

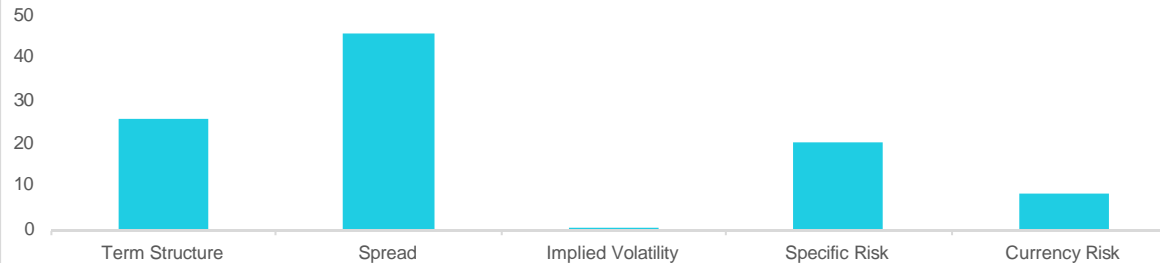
Top Countries by Weight%



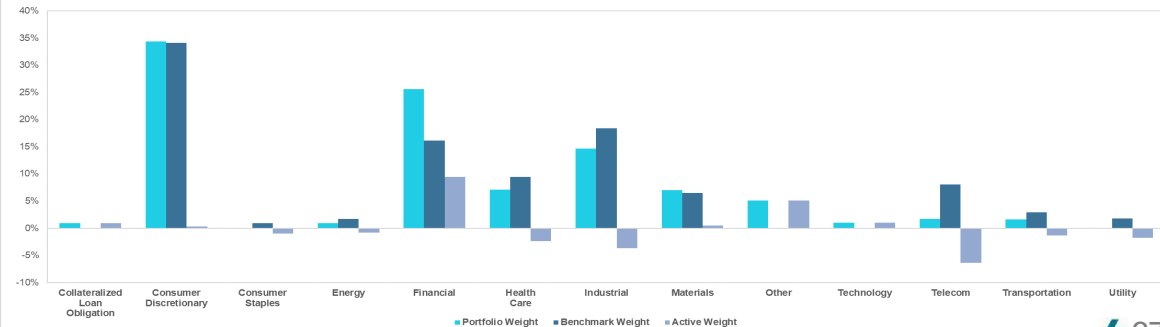
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit Crescent Capital

for the quarter ended December 31, 2022

Strategy

A bank loan strategy that invests in privately negotiated, below investment grade, secured corporate debt. The primary target is U.S. based middle market companies whose EBITDA falls between \$31M to \$100M. The strategy's bottom-up credit research process emphasizes high current income and principal preservation.

Inception Date: May 2014

Portfolio Characteristics

| | Portfolio | Benchmark |
|--------------------|-----------|-----------|
| No. of Issues | 136.0 | 0.0 |
| Effective Duration | 0.3 | 4.0 |
| Convexity | 0.0 | 0.0 |
| Coupon Rate | 9.2 | 5.8 |
| Yield to Maturity | 11.3 | 8.7 |
| Current Yield | 10.1 | 6.7 |
| Rating – Moody's | B-2 | B-1 |
| Rating – S & P | B- | B+ |

Top Holdings (% of assets)

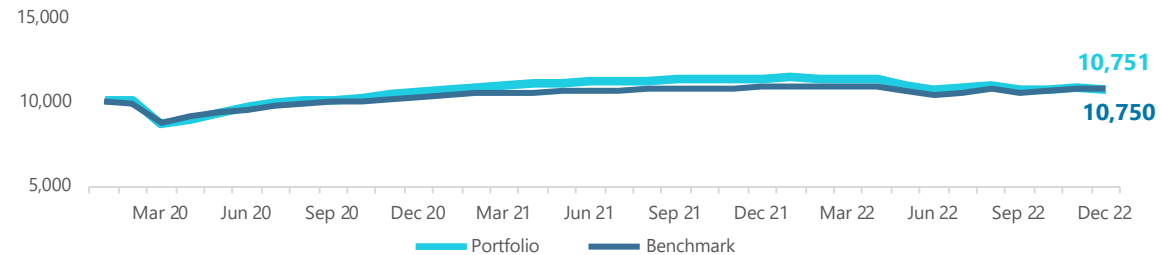
| | |
|-----------------------------|-------------|
| THE KNOT WORLDWIDE INC | 2.0% |
| MAGNATE WORLDWIDE LLC | 1.9% |
| EVERGREEN ACQCO 1 LP | 1.8% |
| CTC HOLDINGS LP | 1.7% |
| AIT WORLDWIDE LOGISTICS INC | 1.6% |
| Top 5 Holdings | 9.0% |

Performance (net)¹

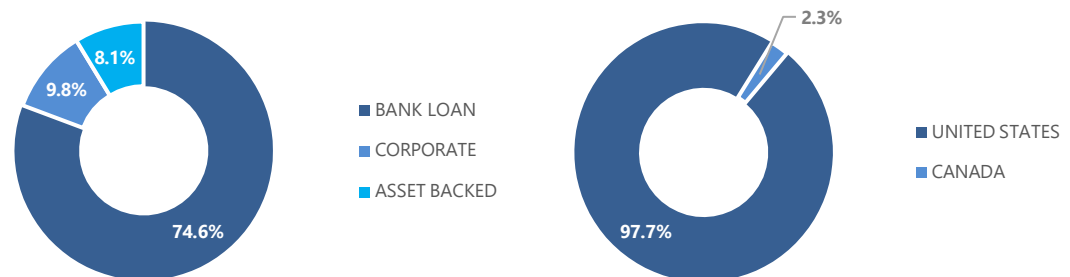
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|-----------------------------|--------------------------|-------------|--------------|-------------|-------------|
| Crescent Capital | 490.9 | 0.5% | -5.6% | 2.4% | 3.3% |
| Bank Loans Custom Benchmark | | 2.3% | -1.1% | 2.4% | 3.5% |
| Credit Policy Benchmark | | 1.9% | -7.4% | 0.3% | -- |

| Universe data: U.S. Fixed Income Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--|-------------|-----------|--------------|-----------|-------------|-----------|-------------|-----------|
| Crescent Capital | 0.6% | 75 | -5.2% | 43 | 2.9% | 21 | 3.8% | 14 |
| Median | 1.7% | | -8.1% | | -0.7% | | 1.0% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

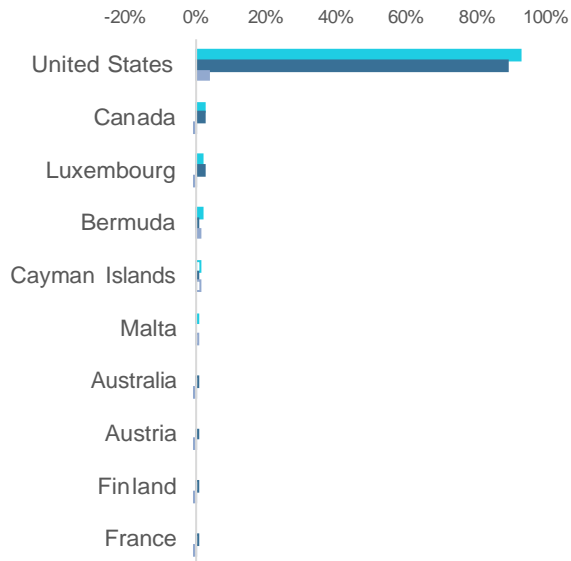
Credit Risk Analysis – Liquid Credit Crescent Capital

for the quarter ended December 31, 2022

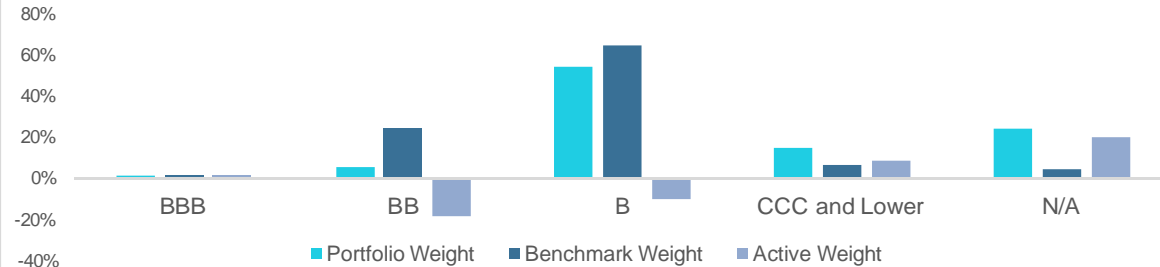
Portfolio Risk Summary

| | Value |
|------------------------|-------------|
| Total Risk | 6.16 |
| Benchmark Risk | 4.69 |
| Active Risk | 1.93 |
| Portfolio Beta | 1.28 |
| Cont. to Eff. Duration | 0.54 |
| Yield to Worst (%) | 7.29 |
| OAS to Sw ap (bp) | 600 |

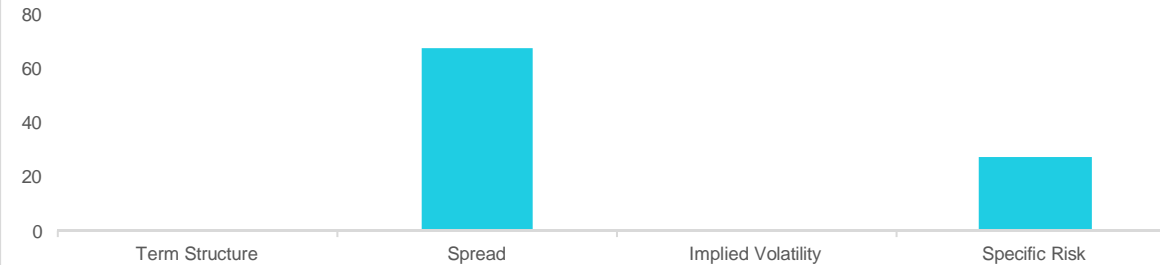
Top Countries by Weight%



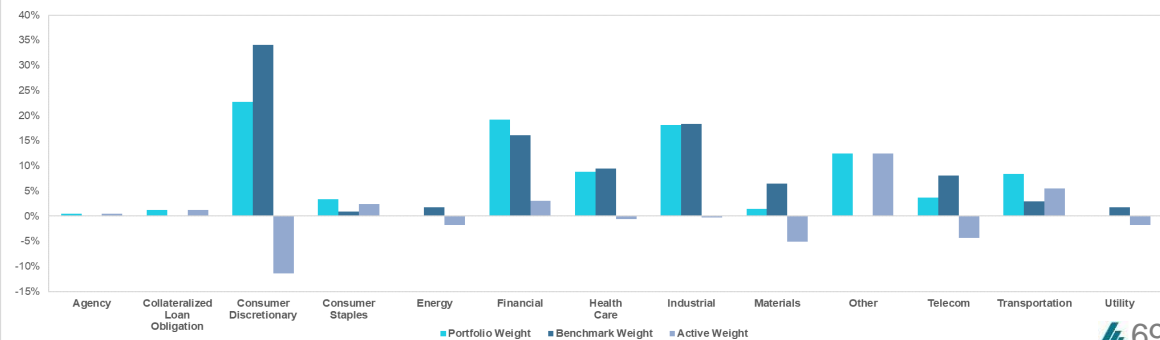
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit Pinebridge

for the quarter ended December 31, 2022

Strategy

Active manager of a broadly diversified portfolio primarily of U.S. dollar denominated high yield securities.

Inception Date: August 2021

Portfolio Characteristics

| | Portfolio | Benchmark |
|--------------------|-----------|-----------|
| No. of Issues | 224.0 | 0.0 |
| Effective Duration | 4.1 | 4.0 |
| Convexity | 0.0 | 0.0 |
| Coupon Rate | 5.6 | 5.8 |
| Yield to Maturity | 8.6 | 8.7 |
| Current Yield | 6.5 | 6.7 |
| Rating – Moody's | B-1 | B-1 |
| Rating – S & P | B+ | B+ |

Top Holdings (% of assets)

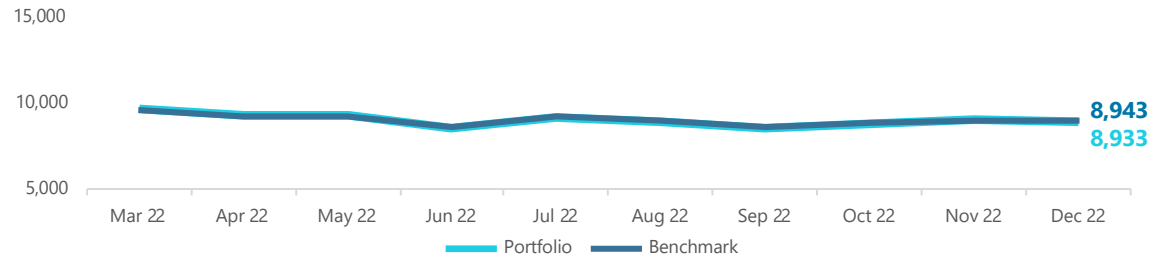
| | |
|--------------------------|-------------|
| AMERICAN AIRLINES INC | 1.2% |
| OCCIDENTAL PETROLEUM COR | 1.0% |
| ALTICE FINANCING SA | 0.9% |
| CCO HLDGS LLC/CAP CORP | 0.9% |
| HOLLY NRG PRTNR/FIN CORP | 0.7% |
| Top 5 Holdings | 4.7% |

Performance (net)¹

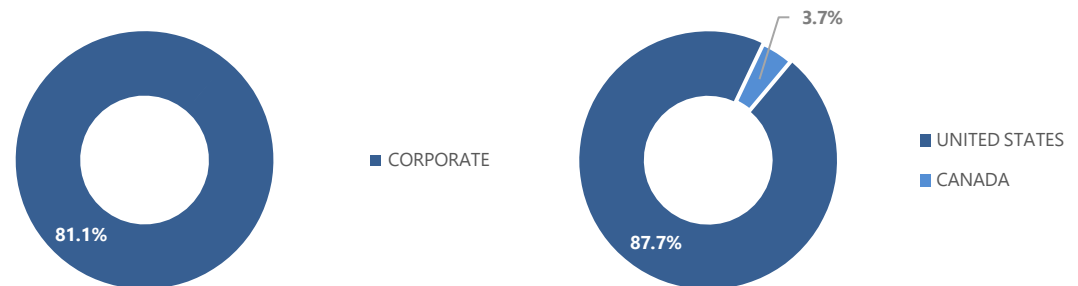
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|-------------------------------|--------------------------|-------------|---------------|--------|--------|
| Pinebridge Investments | 449.6 | 4.2% | -11.4% | -- | -- |
| BBG BARC US Corp HY Idx | | 4.2% | -11.2% | -- | -- |
| Credit Policy Benchmark | | 1.9% | -7.4% | 0.3% | -- |

| Universe data: US Fixed Income Pools | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--------------------------------------|-------------|-----------|---------------|-----------|--------|------|--------|------|
| Pinebridge Investments | 4.3% | 13 | -11.1% | 62 | -- | -- | -- | -- |
| Median | 1.7% | | -8.1% | | -- | -- | -- | -- |

Growth of \$10,000



Top Exposures (% of assets)



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

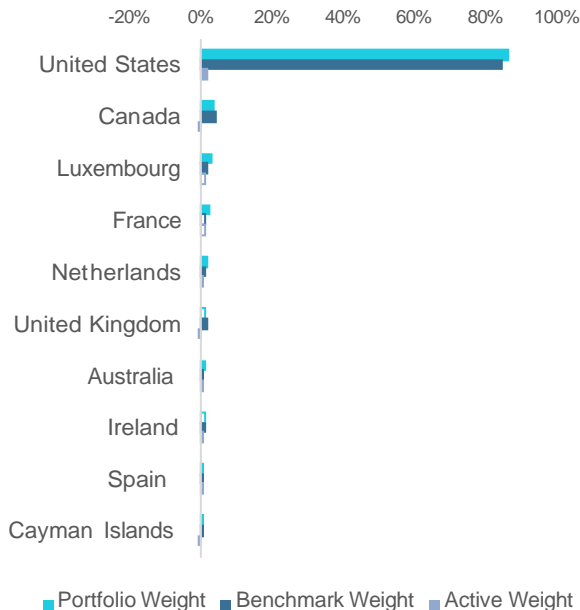
Credit Risk Analysis – Liquid Credit Pinebridge

for the quarter ended December 31, 2022

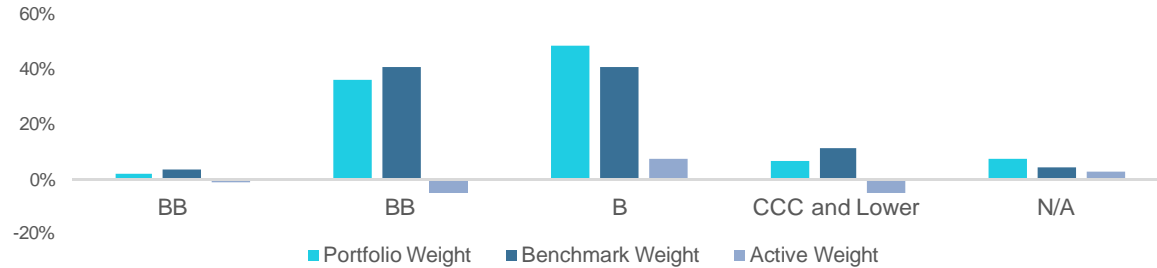
Portfolio Risk Summary

| | Value |
|------------------------|-------------|
| Total Risk | 7.06 |
| Benchmark Risk | 7.04 |
| Active Risk | 0.70 |
| Portfolio Beta | 1.00 |
| Cont. to Eff. Duration | 4.02 |
| Yield to Worst (%) | 8.31 |
| OAS to Sw ap (bp) | 398 |

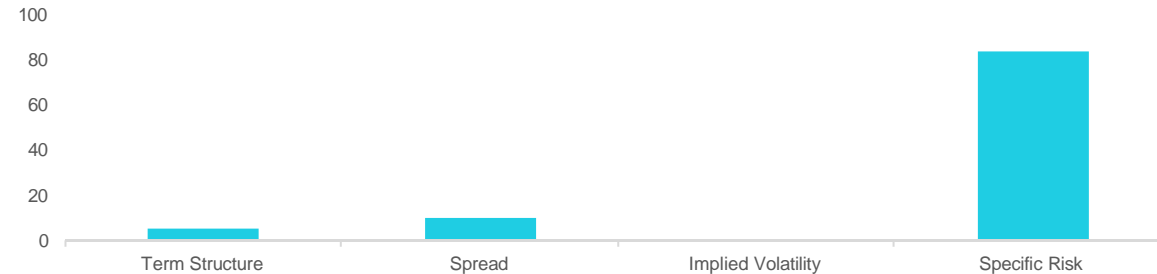
Top Countries by Weight%



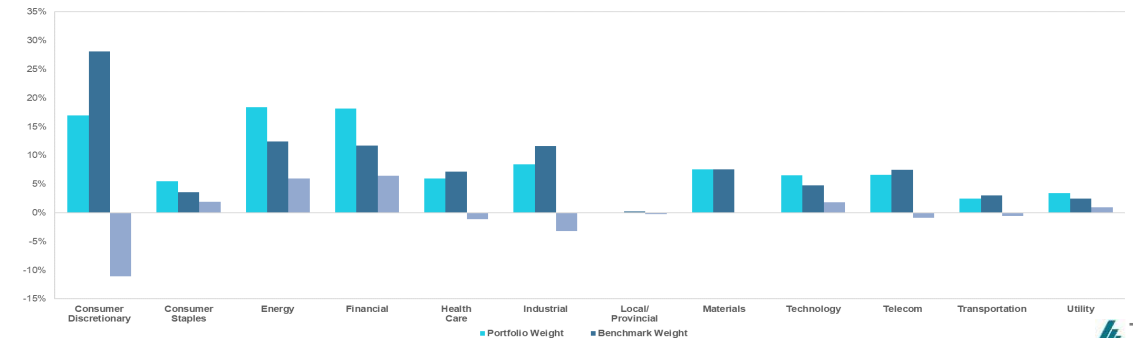
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector

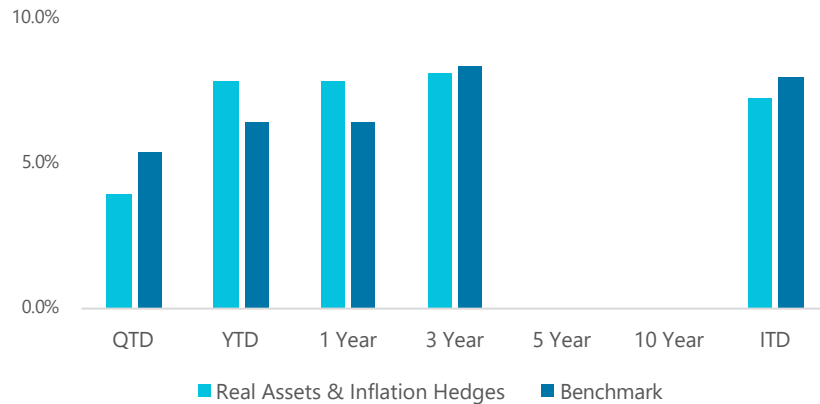


real assets & inflation hedges

Summary

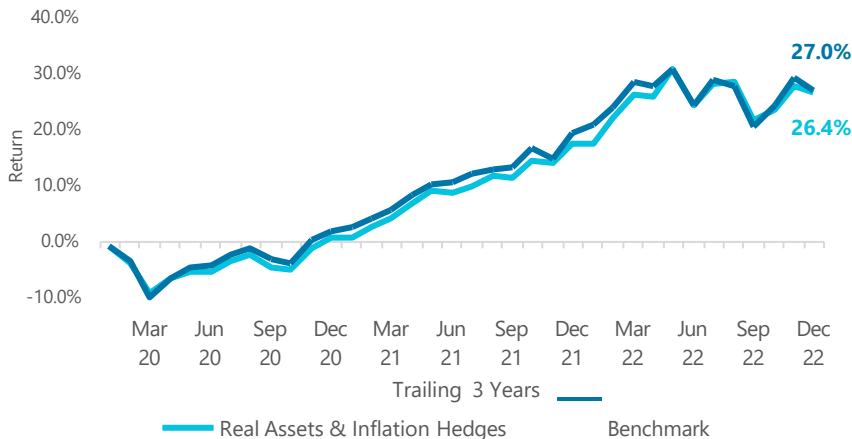
for the quarter ended December 31, 2022

Performance (net)



| | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD |
|---|-------------|-------------|-------------|-------------|--------|---------|-------------|
| Real Assets & Inflation Hedges | 3.9% | 7.8% | 7.8% | 8.1% | -- | -- | 7.2% |
| Benchmark | 5.4% | 6.4% | 6.4% | 8.3% | -- | -- | 8.0% |
| Excess | -1.4% | 1.4% | 1.4% | -0.2% | -- | -- | -0.8% |

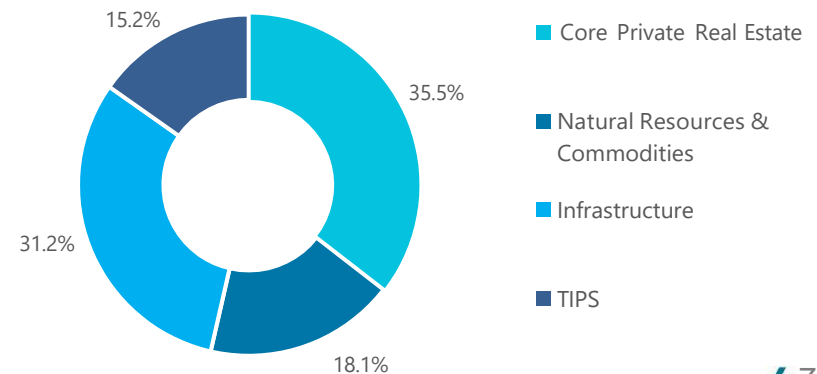
Cumulative Return



Functional Category

| | QTD | FYTD | 1 Year | 3 Year |
|--|-------------|--------------|---------------|--------------|
| Core Private Real Estate | 1.7% | 6.8% | 23.7% | 11.3% |
| Core Private RE Policy Benchmark | 0.3% | 4.9% | 21.0% | 11.7% |
| Excess | 1.4% | 1.9% | 2.8% | -0.4% |
| Natural Resources & Commodities | 4.4% | 0.8% | 12.3% | 11.8% |
| Nat Res & Comm Policy Benchmark | 12.0% | 7.0% | 12.0% | 12.9% |
| Excess | -7.6% | -6.1% | 0.2% | -1.1% |
| Infrastructure | 7.2% | -1.0% | -4.6% | 4.9% |
| DJ Brookfield Global Infra Comp | 9.4% | -1.8% | -4.9% | 1.1% |
| Excess | -2.2% | 0.8% | 0.3% | 3.8% |
| TIPS | 2.1% | -3.6% | -11.9% | 1.1% |
| Bloomberg U.S. Treasury: U.S. TIPS | 2.0% | -3.2% | -11.8% | 1.2% |
| Excess | 0.1% | -0.4% | 0.0% | -0.1% |

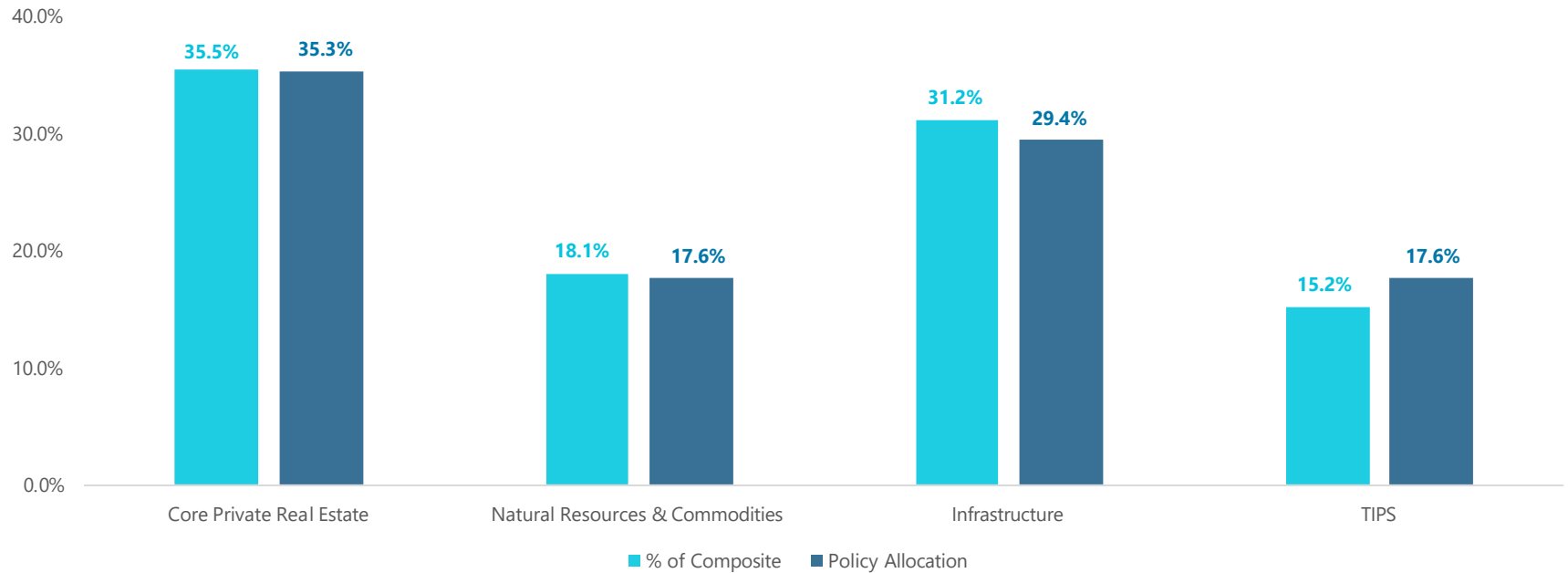
Exposure



Asset Allocation

for the quarter ended December 31, 2022

Actual vs. Policy

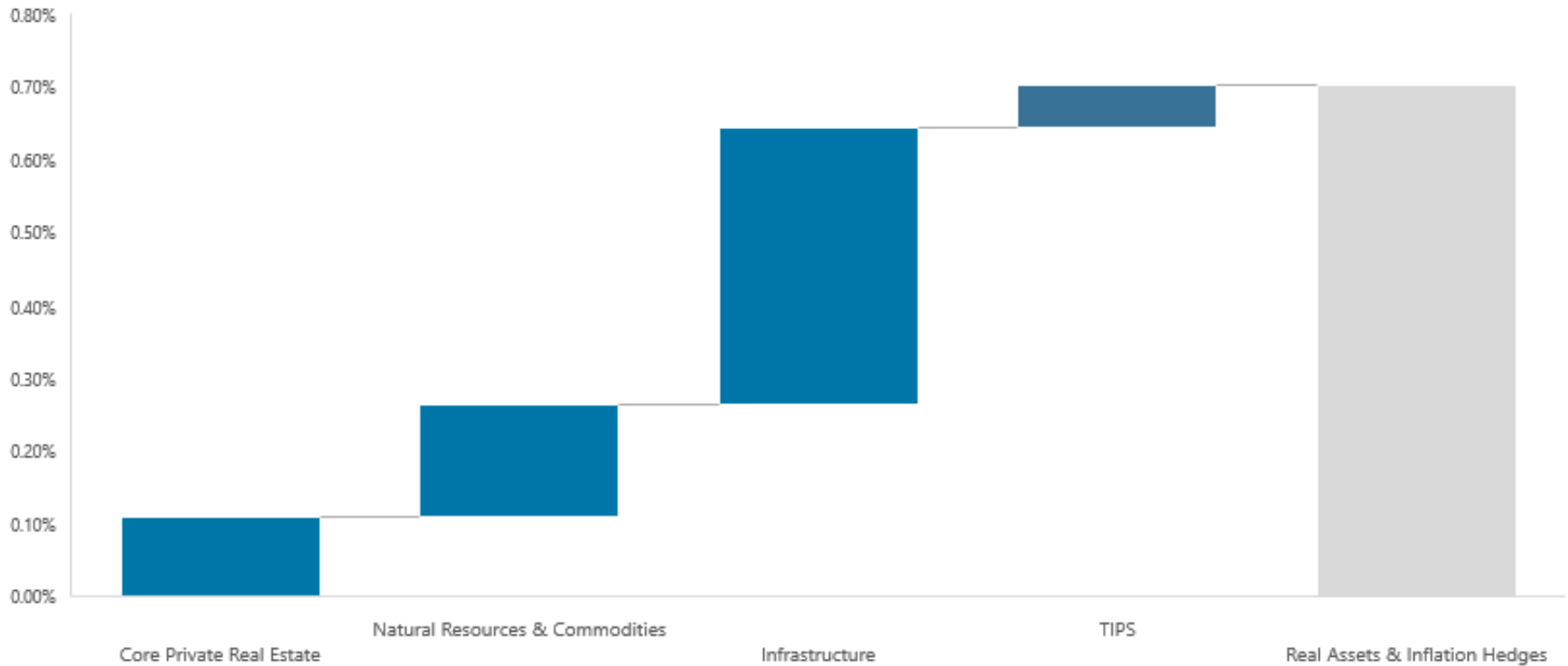


| | Ending Market Value (mm) | % of Composite | Policy Allocation | Over / Under (%) | Over / Under (mm) |
|---|--------------------------|----------------|-------------------|------------------|-------------------|
| Real Assets & Inflation Hedges | 12,222 | 100.0% | 100.0% | | |
| Core Private Real Estate | 4,339 | 35.5% | 35.3% | 0.2% | 25 |
| Natural Resources & Commodities | 2,210 | 18.1% | 17.6% | 0.4% | 54 |
| Infrastructure | 3,812 | 31.2% | 29.4% | 1.8% | 217 |
| TIPS | 1,861 | 15.2% | 17.6% | -2.4% | -296 |

Contribution to Return

for the quarter ended December 31, 2022

QTD Contribution to Return

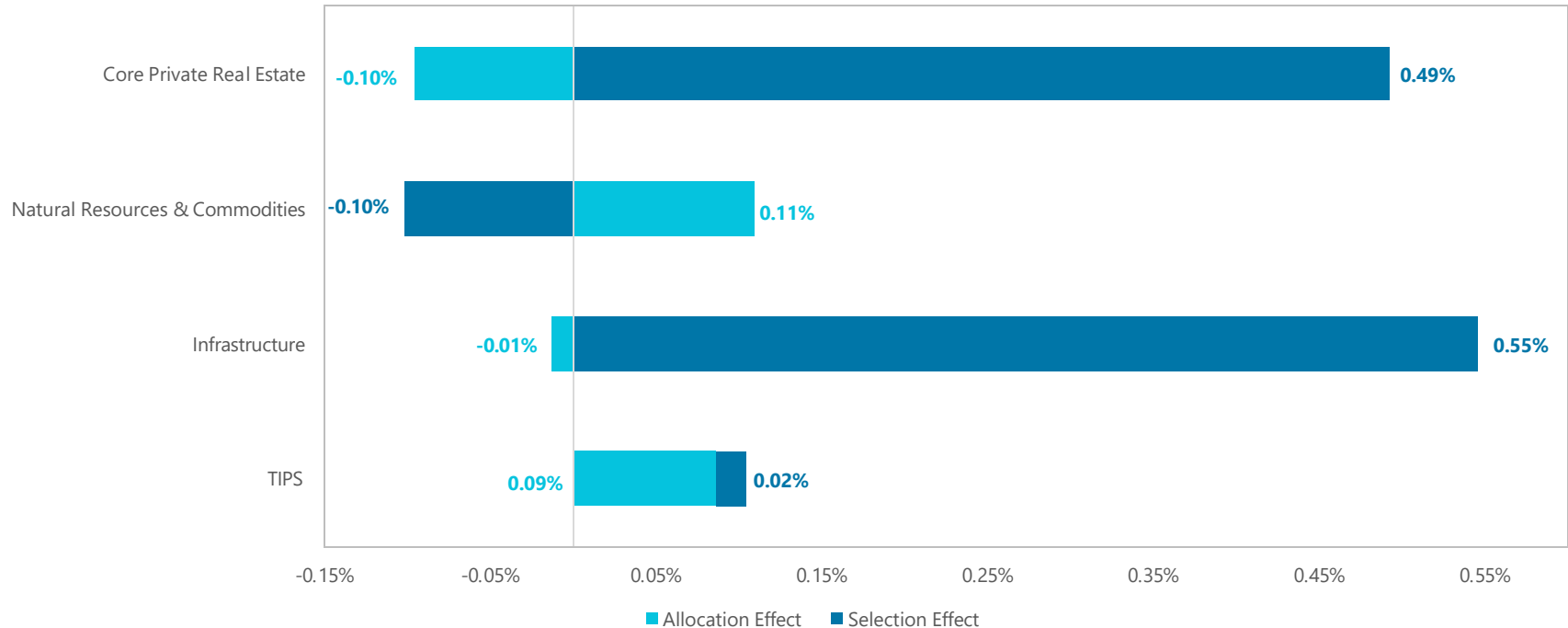


| Functional Category | Contributors | Detractors |
|---------------------------------|---------------------------------|------------|
| Core Private Real Estate | 0.11% DWS Infrastructure | 0.33% |
| Natural Resources & Commodities | 0.15% DWS Natural Resources | 0.13% |
| Infrastructure | 0.38% Real Estate - Real Assets | 0.11% |
| TIPS | 0.06% BlackRock TIPS | 0.06% |
| Real Assets & Inflation Hedges | 0.70% DIF Infrastructure VI | 0.02% |

Return Attribution

for the quarter ended December 31, 2022

QTD Performance Attribution¹



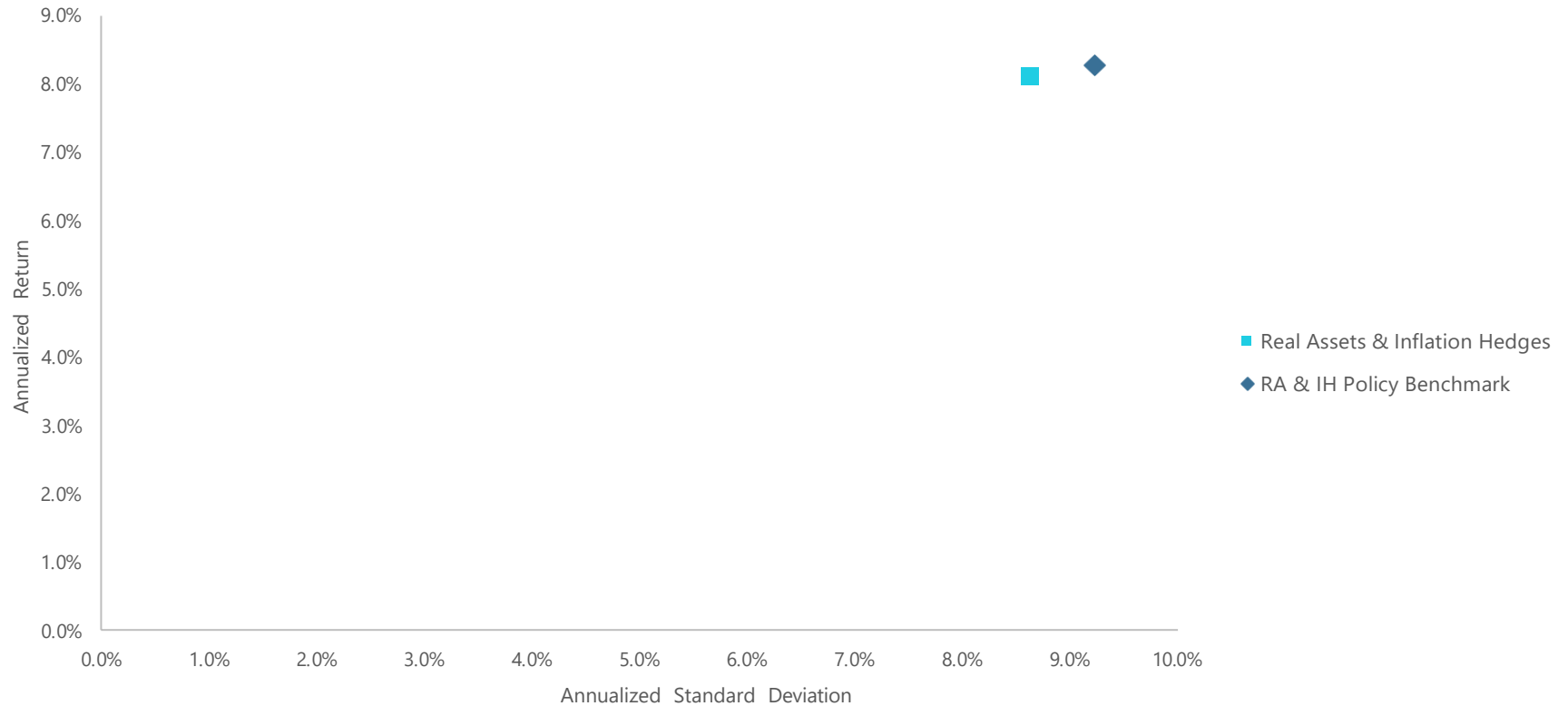
| | Ending Market Value (mm) | % of Composite | Policy Allocation | Portfolio Return | Benchmark Return | Allocation Effect | Selection Effect | Total Value Add |
|---|--------------------------|----------------|-------------------|------------------|------------------|-------------------|------------------|-----------------|
| Real Assets & Inflation Hedges | 12,222 | 100.0% | 100.0% | 3.9% | 5.4% | 0.09% | 0.95% | -1.44% |
| Core Private Real Estate | 4,339 | 35.5% | 35.3% | 1.7% | 0.3% | -0.10% | 0.49% | 0.41% |
| Natural Resources & Commodities | 2,210 | 18.1% | 17.6% | 4.4% | 12.0% | 0.11% | -0.10% | -1.33% |
| Infrastructure | 3,812 | 31.2% | 29.4% | 7.2% | 9.4% | -0.01% | 0.55% | -0.62% |
| TIPS | 1,861 | 15.2% | 17.6% | 2.1% | 2.0% | 0.09% | 0.02% | 0.10% |

¹ Total Value Add includes Interaction Effect.

Risk vs. Return

for the quarter ended December 31, 2022

3 Year (Annualized)



| | Annualized Return | Standard Deviation | Sharpe Ratio | Information Ratio | Beta | Tracking Error |
|---|-------------------|--------------------|--------------|-------------------|------|----------------|
| Real Assets & Inflation Hedges | 8.1% | 8.6% | | | | |
| RA & IH Policy Benchmark | 8.3% | 9.2% | 0.88 | (0.02) | 0.90 | 2.6% |

Performance Detail

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Annualized Net Returns¹

| | % of Composite | Ending Market Value (mm) | Prior Quarter Ending MV (mm) | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD | Inception Date |
|--|----------------|--------------------------|------------------------------|-------------|---------------|---------------|--------------|-------------|--------------|--------------|-----------------|
| Real Assets & Inflation Hedges | 100.0% | 12,222 | 12,075 | 3.9% | 7.8% | 7.8% | 8.1% | -- | -- | 7.2% | Apr-2019 |
| RA & IH Policy Benchmark | | | | 5.4% | 6.4% | 6.4% | 8.3% | -- | -- | 8.0% | |
| Core Private Real Estate | 35.5% | 4,339 | 4,471 | 1.7% | 23.7% | 23.7% | 11.3% | 9.1% | 9.1% | 7.4% | Oct-1985 |
| Core Private RE Policy Benchmark | | | | 0.3% | 21.0% | 21.0% | 11.7% | 9.7% | 10.4% | 7.2% | |
| Natural Resources & Commodities | 18.1% | 2,210 | 2,476 | 4.4% | 12.3% | 12.3% | 11.8% | 6.3% | -0.6% | -0.9% | Jul-2007 |
| Nat Res & Comm Policy Benchmark | | | | 12.0% | 12.0% | 12.0% | 12.9% | 6.9% | -1.1% | -1.7% | |
| Cibus Co-Invest V | 0.1% | 15 | 0 | -- | -- | -- | -- | -- | -- | 0.0% | Oct-2022 |
| Cibus Enterprise II | 0.0% | 4 | 4 | -4.9% | -- | -- | -- | -- | -- | -11.5% | Jun-2022 |
| Cibus Fund II | 0.1% | 16 | 17 | -6.1% | -- | -- | -- | -- | -- | -12.0% | Jun-2022 |
| Credit Suisse Commodity | 2.6% | 312 | 434 | 1.4% | 17.0% | 17.0% | 14.0% | 7.0% | -0.7% | -2.0% | Mar-2011 |
| DWS Natural Resources | 5.5% | 671 | 663 | 13.1% | 9.1% | 9.1% | 12.0% | -- | -- | 13.3% | Jun-2019 |
| HiTecVision New Energy | 0.5% | 67 | 59 | 13.7% | -- | -- | -- | -- | -- | 8.4% | Sep-2022 |
| Neuberger Berman/Gresham | 3.0% | 366 | 486 | 1.2% | 17.0% | 17.0% | 12.0% | 6.5% | -0.6% | -0.6% | Jul-2007 |
| Orion Mine Finance Fund III | 1.0% | 122 | 116 | 2.3% | 5.4% | 5.4% | -- | -- | -- | 6.4% | Sep-2021 |
| Orion Mining Royalty Fund I | 0.2% | 20 | 18 | -7.6% | -11.4% | -11.4% | -- | -- | -- | -1.2% | Sep-2021 |
| PIMCO Commodity Plus | 0.2% | 22 | 121 | -- | -- | -- | -- | -- | -- | -- | Jul-2007 |
| Private Equity - Real Assets | 0.7% | 82 | 82 | 1.8% | 11.0% | 11.0% | -5.6% | -- | -- | -8.7% | Jan-2019 |
| TIAA-CREF Global Agriculture I | 2.1% | 256 | 205 | -0.9% | 12.5% | 12.5% | -- | -- | -- | 12.5% | Dec-2021 |
| TIAA-CREF Global Agriculture II | 2.1% | 257 | 271 | 0.2% | 9.8% | 9.8% | -- | -- | -- | 9.8% | Dec-2021 |
| Infrastructure | 31.2% | 3,812 | 3,305 | 7.2% | -4.6% | -4.6% | 4.9% | -- | -- | 7.3% | Jun-2019 |
| DJ Brookfield Global Infra Comp | | | | 9.4% | -4.9% | -4.9% | 1.1% | -- | -- | 3.5% | |
| Antin Mid Cap | 0.3% | 38 | 25 | 12.5% | -10.9% | -10.9% | -- | -- | -- | -9.9% | Dec-2021 |
| Axiom Infrastructure | 2.1% | 254 | 194 | 1.9% | 2.4% | 2.4% | -- | -- | -- | 2.2% | Dec-2021 |
| Axiom Infrastructure Canada | 0.5% | 59 | 0 | 1.4% | -100.0% | -100.0% | -- | -- | -- | -100.0% | Nov-2021 |
| DIF CIF III | 0.3% | 40 | 5 | 2.2% | -- | -- | -- | -- | -- | 4.2% | Jun-2022 |
| DIF Infrastructure VI | 0.8% | 103 | 88 | 14.4% | 13.6% | 13.6% | -- | -- | -- | 23.0% | Mar-2021 |
| DWS Infrastructure | 22.8% | 2,782 | 2,606 | 8.5% | -6.3% | -6.3% | 4.6% | -- | -- | 7.0% | Jun-2019 |
| Grain Communications Opportunity III | 0.3% | 33 | 32 | 1.3% | -9.8% | -9.8% | -- | -- | -- | -100.0% | Feb-2021 |
| Grain Spectrum Holdings III | 0.4% | 48 | 48 | -0.1% | -0.6% | -0.6% | -- | -- | -- | -1.0% | Nov-2020 |
| KKR DCIF | 2.7% | 327 | 200 | 1.1% | -- | -- | -- | -- | -- | 1.9% | Apr-2022 |
| Pan-European Infrastructure Fund III | 0.5% | 65 | 58 | 8.7% | 7.1% | 7.1% | -- | -- | -- | 3.0% | Nov-2020 |
| Partners Grp Direct Infra 2020 | 0.5% | 63 | 48 | 5.2% | -- | -- | -- | -- | -- | 5.0% | Jan-2022 |
| TIPS | | | | | | | | | | | |
| Blackrock TIPS | 15.2% | 1,861 | 1,823 | 2.1% | -11.9% | -11.9% | 1.1% | -- | -- | 2.2% | May-2019 |
| Bloomberg U.S. Treasury: U.S. TIPS | | | | 2.0% | -11.8% | -11.8% | 1.2% | -- | -- | 2.3% | |

¹ Private natural resources and infrastructure funds reflect early-stage life cycle performance.

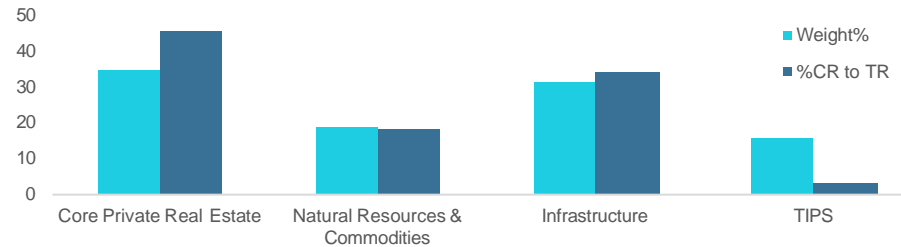
Real Assets & Inflation Hedges Risk Summary

for the quarter ended December 31, 2022

Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 15.42 |
| Benchmark Risk | 14.46 |
| Active Risk | 2.57 |
| Portfolio Beta | 1.05 |

Contribution to Risk

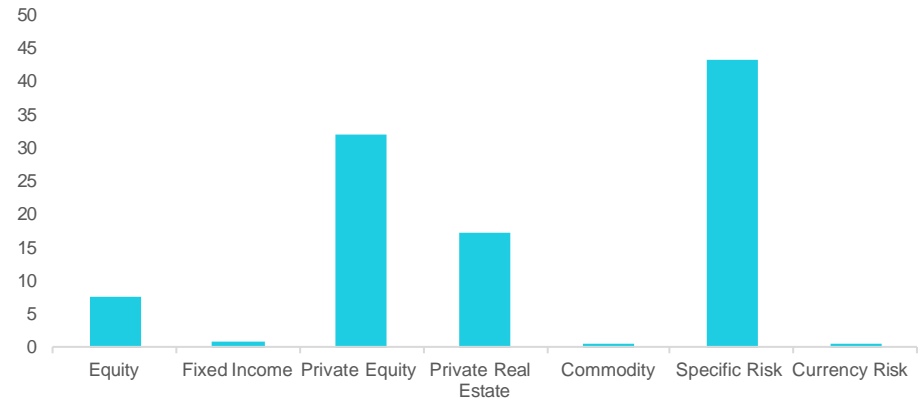


| | Mkt Value (mm) | Weight% | Total Risk | Risk Contribution | %CR to TR |
|---|----------------|---------------|--------------|-------------------|---------------|
| Real Assets & Inflation Hedges | 12,005 | 100.00 | 15.42 | 15.42 | 100.00 |
| Core Private Real Estate | 4,184 | 34.86 | 22.86 | 6.99 | 45.34 |
| Natural Resources & Commodities | 2,235 | 18.62 | 18.45 | 2.73 | 17.68 |
| Infrastructure | 3,723 | 31.01 | 18.55 | 5.23 | 33.93 |
| TIPS | 1,862 | 15.51 | 6.62 | 0.47 | 3.04 |

Risk Decomposition

| Risk Source | Portfolio | | Active | |
|--------------------|-------------------|---------------|-------------------|---------------|
| | Risk Contribution | %Risk | Risk Contribution | %Risk |
| Total Risk | 15.42 | 100.00 | 2.57 | 100.00 |
| Common Factor Risk | 14.44 | 93.67 | 1.45 | 56.59 |
| Specific Risk | 0.09 | 0.56 | 1.10 | 42.97 |
| Currency Risk | 0.89 | 5.77 | 0.01 | 0.45 |

Active Risk from Common Factors

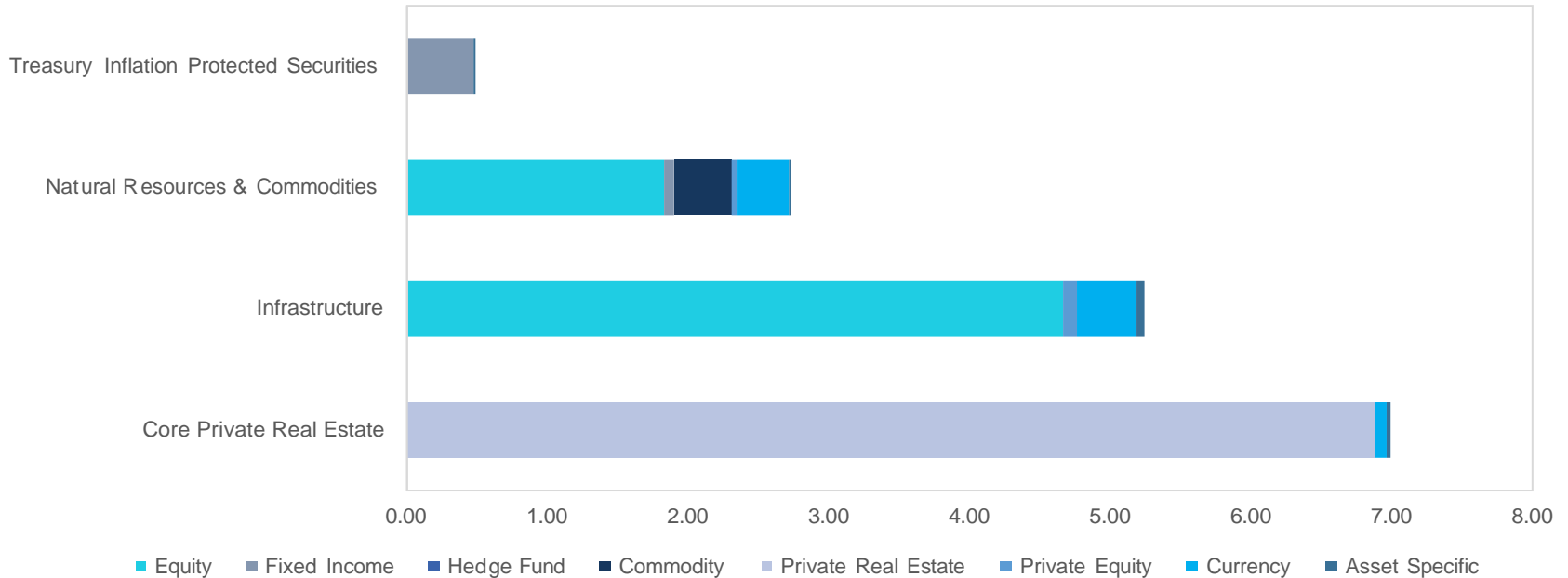


Real Assets & Inflation Hedges

Risk Summary

for the quarter ended December 31, 2022

Risk Contribution Breakdown by Risk Type

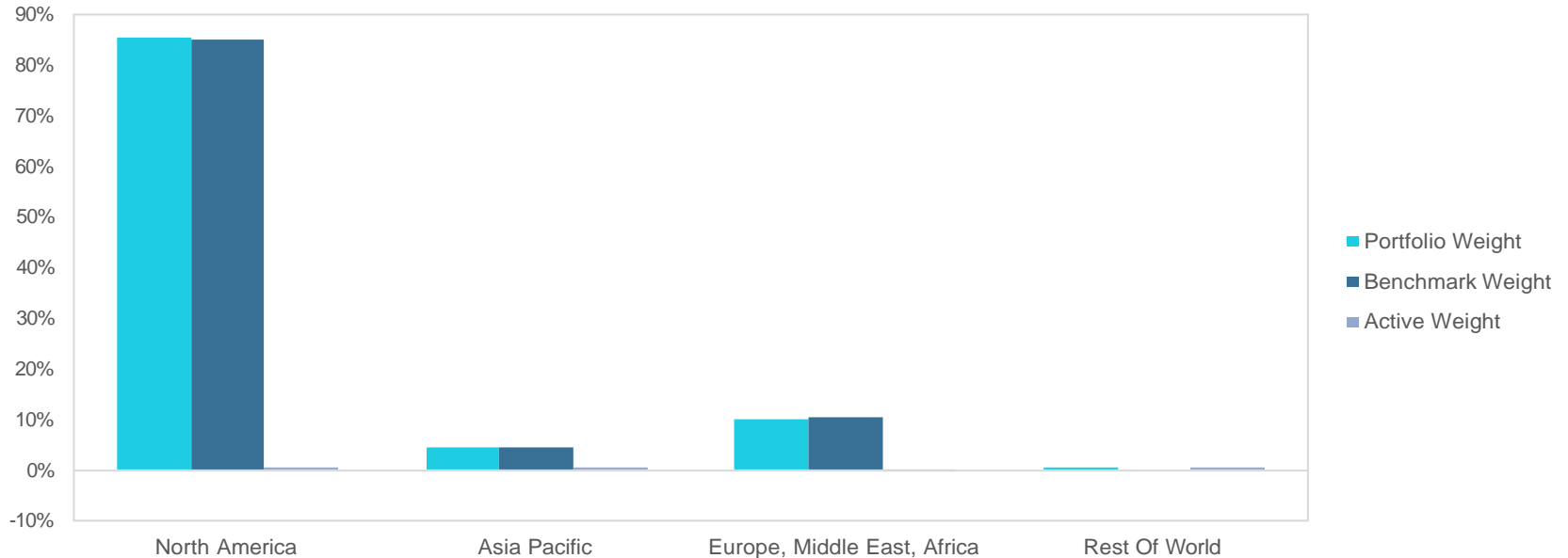


| Functional Category | Port Risk Contribution | Equity | Fixed Income | Commodity | Private Real Estate | Private Equity | Currency | Asset Specific |
|---|------------------------|-------------|--------------|-------------|---------------------|----------------|-------------|----------------|
| Total Fund | 15.42 | 6.48 | 0.55 | 0.40 | 6.87 | 0.14 | 0.89 | 0.09 |
| Core Private Real Estate | 6.99 | 0.00 | 0.00 | 0.00 | 6.87 | 0.00 | 0.08 | 0.04 |
| Infrastructure | 5.23 | 4.66 | 0.00 | 0.00 | 0.00 | 0.09 | 0.44 | 0.04 |
| Natural Resources and Commodities | 2.73 | 1.82 | 0.08 | 0.40 | 0.00 | 0.05 | 0.37 | 0.01 |
| Treasury Inflation Protected Securities | 0.47 | 0.00 | 0.47 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Real Assets & Inflation Hedges Risk Summary

for the quarter ended December 31, 2022

Portfolio Allocation By Region



| Region | Weight% | | | Total Risk | Active Risk CR | % of Active TR | MC to Total Tracking Error |
|-----------------------------|----------------|----------------|--------------|--------------|----------------|----------------|----------------------------|
| | Portfolio | Benchmark | Active | | | | |
| Total Fund | 100.00% | 100.00% | 0.00% | 15.42 | 2.57 | 100.00 | 0.03 |
| North America | 85.40% | 85.17% | 0.24% | 15.12 | 2.19 | 85.32 | 0.03 |
| Asia Pacific | 4.48% | 4.42% | 0.05% | 17.66 | 0.03 | 1.14 | 0.00 |
| Europe, Middle East, Africa | 9.98% | 10.41% | -0.43% | 23.74 | 0.33 | 12.94 | 0.03 |
| Rest Of World | 0.14% | 0.00% | 0.14% | 37.13 | 0.02 | 0.60 | 0.11 |

Real Assets & Inflation Hedges

Natural Resources & Commodities

Credit Suisse

for the quarter ended December 31, 2022

Strategy

Seeks to provide a hedge against inflation and exposure to commodities markets such as energy, agriculture and timber, and metals and mining.

Inception Date: March 2011

Risk Statistics (since inception)

| | |
|------------------------------|-------|
| Standard Deviation | 15.9% |
| Benchmark Standard Deviation | 16.2% |
| Sharpe Ratio | 0.44 |
| Information Ratio | 0.70 |
| Beta | 0.98 |
| Tracking Error | 1.0% |

Top Holdings (% of assets)

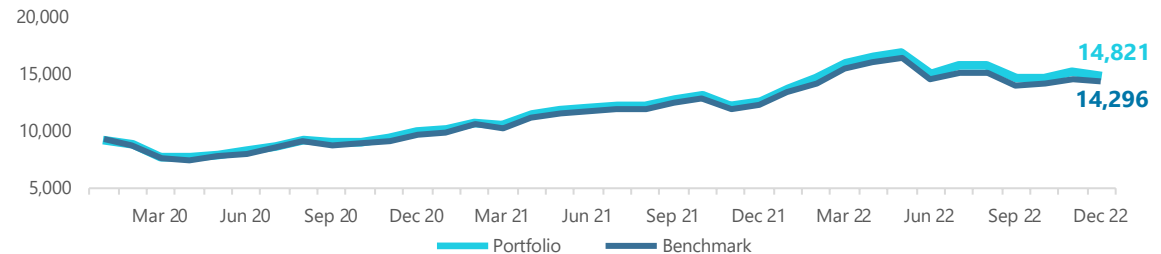
| | |
|--------------------------|--------------|
| US TREASURY FRN | 21.0% |
| GOLD 100 OZ FUTR FEB23 | 14.6% |
| US TREASURY FRN | 13.2% |
| US TREASURY FRN | 10.3% |
| FEDERAL FARM CREDIT BANK | 8.9% |
| Top 5 Holdings | 67.9% |

Performance (net)¹

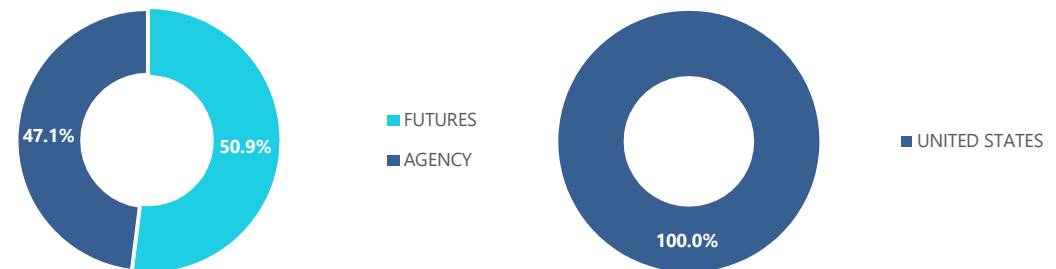
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--|--------------------------|-------------|--------------|--------------|-------------|
| Credit Suisse Commodity | 312.3 | 1.4% | 17.0% | 14.0% | 7.0% |
| Bloomberg Commodity Index Total Return | | 2.2% | 16.1% | 12.7% | 6.4% |
| RA & IH Policy Benchmark | | 5.4% | 6.4% | 8.3% | -- |

| Universe data: Commodity Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--------------------------------|-------------|-----------|--------------|-----------|--------------|-----------|-------------|-----------|
| Credit Suisse Commodity | 1.4% | 47 | 17.3% | 26 | 14.3% | 47 | 7.3% | 59 |
| Median | 1.2% | | 2.1% | | 13.1% | | 8.3% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Real Assets & Inflation Hedges Risk Analysis

Natural Resources & Commodities

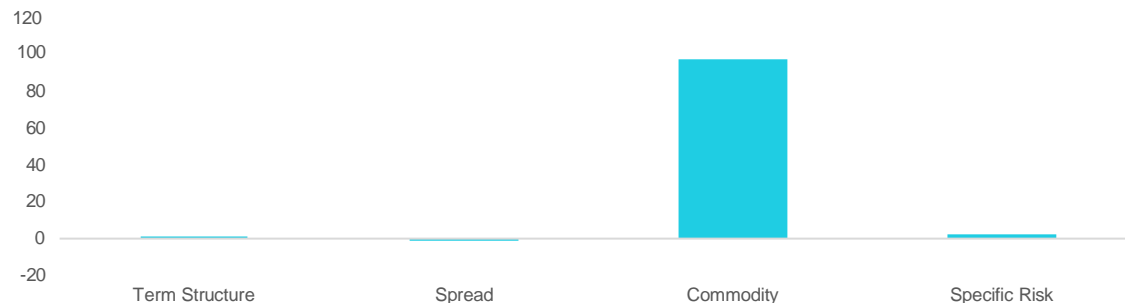
Credit Suisse

for the quarter ended December 31, 2022

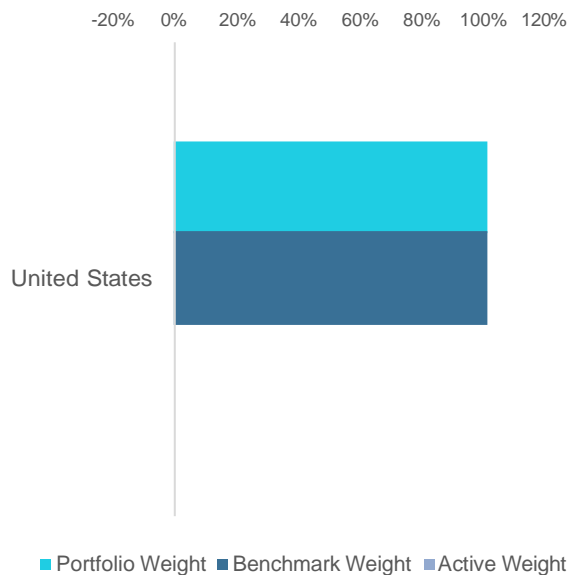
Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 15.56 |
| Benchmark Risk | 19.65 |
| Active Risk | 7.19 |
| Portfolio Beta | 0.75 |

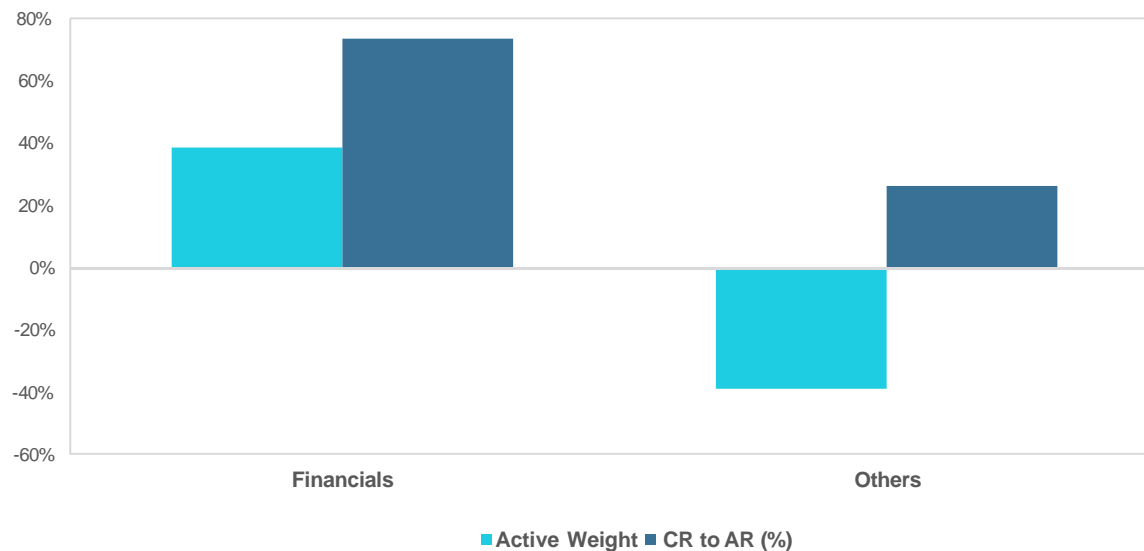
Active Risk from Common Factors



Top Countries by Weight%



Portfolio Risk by Sector



Real Assets & Inflation Hedges

Natural Resources & Commodities

DWS

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Strategy

Seeks to provide capital appreciation and a hedge to inflation. A diversified approach within infrastructure to gain exposure to infrastructure related to telecommunication, transportation, utilities, waste and energy.

Inception Date: June 2019

Risk Statistics (since inception)

| | |
|------------------------------|-------|
| Standard Deviation | 24.6% |
| Benchmark Standard Deviation | 24.6% |
| Sharpe Ratio | 0.60 |
| Information Ratio | -0.53 |
| Beta | 0.99 |
| Tracking Error | 4.1% |

Top Holdings (% of assets)

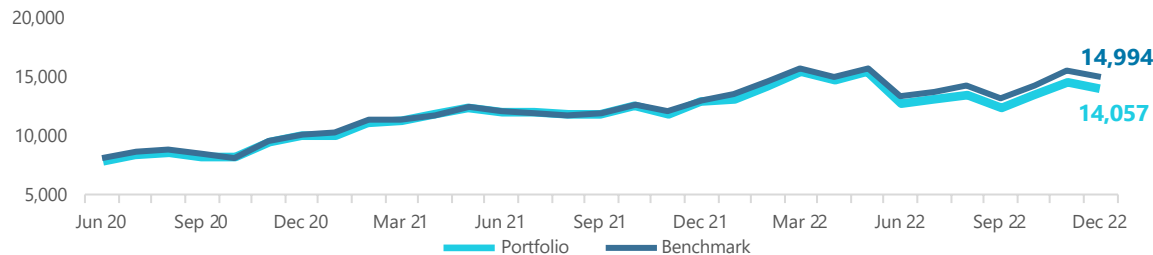
| | |
|------------------------|--------------|
| NUTRIEN LTD | 9.0% |
| SHELL PLC | 5.7% |
| CHEVRON CORP | 5.6% |
| AGNICO EAGLE MINES LTD | 4.9% |
| BUNGE LTD | 4.3% |
| Top 5 Holdings | 29.6% |

Performance (net)¹

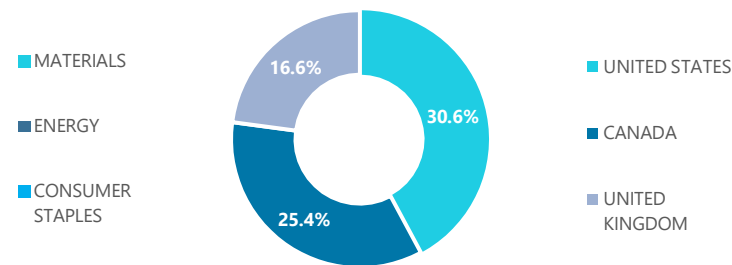
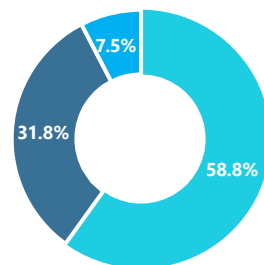
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--|--------------------------|--------------|-------------|--------------|--------|
| DWS Natural Resources | 671.1 | 13.1% | 9.1% | 12.0% | -- |
| S&P Glb LargeMidCap Commod & Resources | | 14.0% | 15.5% | 14.5% | -- |
| RA & IH Policy Benchmark | | 5.4% | 6.4% | 8.3% | -- |

| Universe data: Commodity Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--------------------------------|--------------|----------|-------------|-----------|--------------|-----------|--------|------|
| DWS Natural Resources | 13.2% | 8 | 9.3% | 44 | 12.2% | 53 | -- | -- |
| Median | 1.2% | | 2.1% | | 13.1% | | -- | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Real Assets & Inflation Hedges Risk Analysis

Natural Resources & Commodities

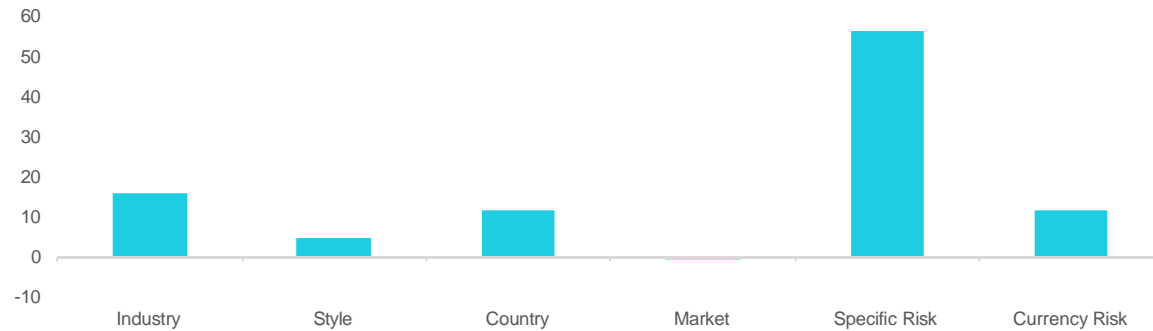
DWS

for the quarter ended December 31, 2022

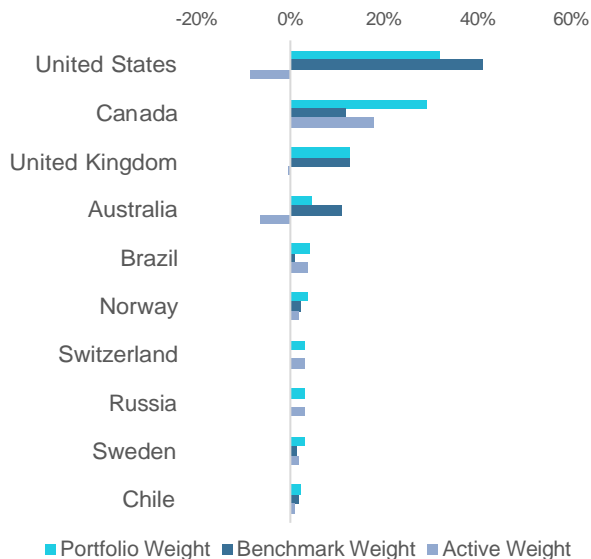
Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 24.91 |
| Benchmark Risk | 24.08 |
| Active Risk | 5.17 |
| Portfolio Beta | 1.01 |

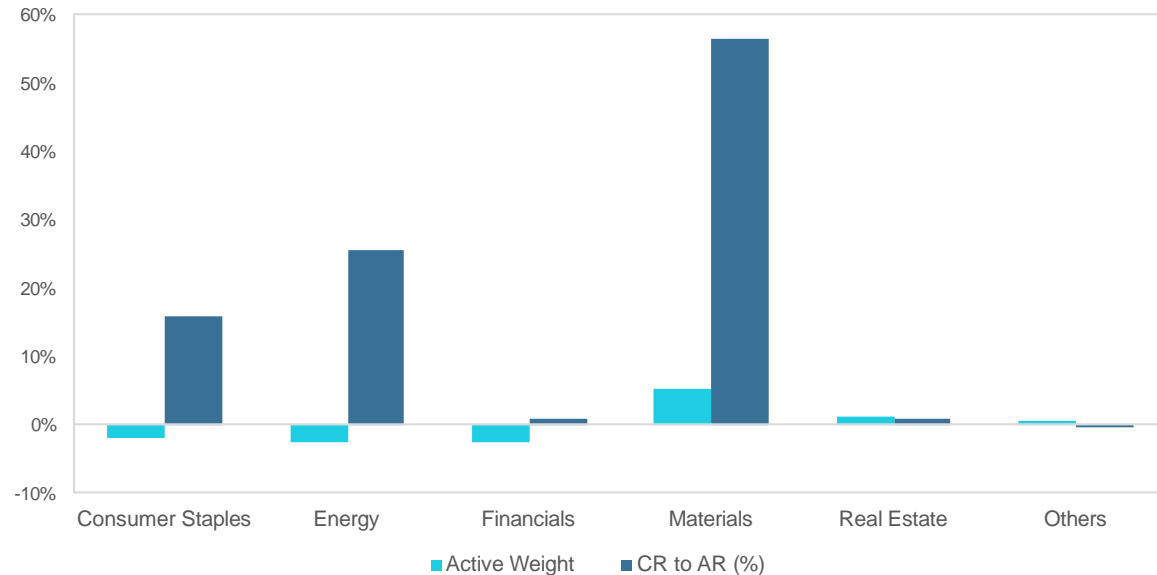
Active Risk from Common Factors



Top Countries by Weight%



Portfolio Risk by Sector



Real Assets & Inflation Hedges

Natural Resources & Commodities

Neuberger Berman / Gresham

for the quarter ended December 31, 2022

Strategy

Seeks to provide a hedge against inflation and exposure to commodities markets such as energy, agriculture and timber, and metals and mining. The collateral portfolio provides income with conservative fixed income exposure.

Inception Date: July 2007

Risk Statistics (since inception)

| | |
|------------------------------|-------|
| Standard Deviation | 18.4% |
| Benchmark Standard Deviation | 17.0% |
| Sharpe Ratio | 0.13 |
| Information Ratio | 0.49 |
| Beta | 1.05 |
| Tracking Error | 4.9% |

Top Holdings (% of assets)

| | |
|------------------------|-------|
| GOLD 100 OZ FUTR FEB23 | 11.1% |
| NATURAL GAS FUTR JAN23 | 8.2% |
| WTI CRUDE FUTURE JAN23 | 7.7% |
| SOYBEAN FUTURE JAN23 | 6.7% |
| BRENT CRUDE FUTR MAR23 | 5.5% |

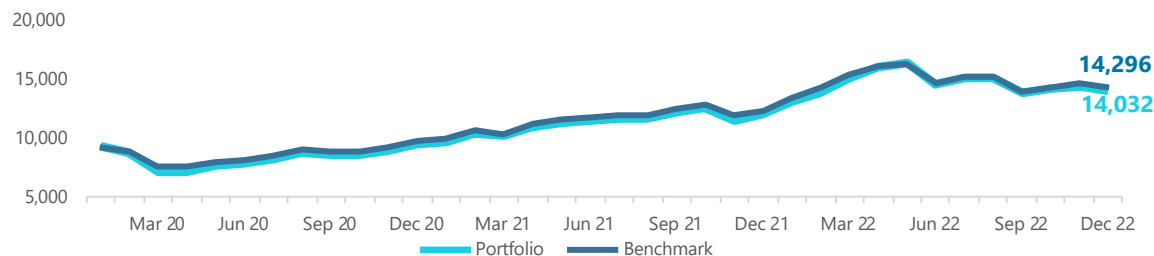
Top 5 Holdings **39.3%**

Performance (net)¹

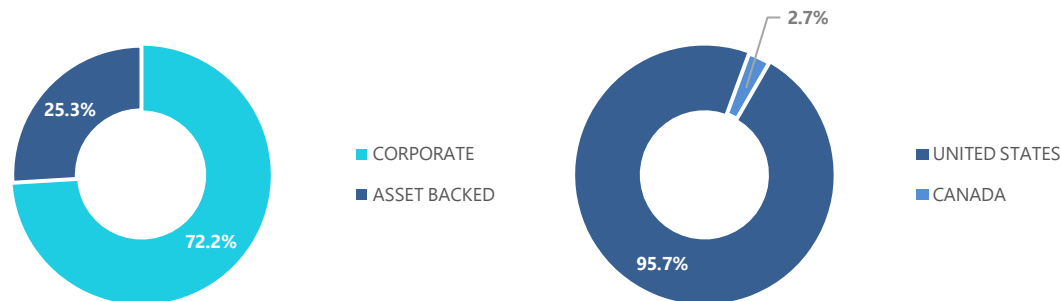
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--|--------------------------|-------------|--------------|--------------|-------------|
| Neuberger Berman/Gresham | 366.2 | 1.2% | 17.0% | 12.0% | 6.5% |
| Bloomberg Commodity Index Total Return | | 2.2% | 16.1% | 12.7% | 6.4% |
| RA & IH Policy Benchmark | | 5.4% | 6.4% | 8.3% | -- |

| Universe data: Commodities Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|----------------------------------|-------------|-----------|--------------|-----------|--------------|-----------|-------------|-----------|
| Neuberger Berman/Gresham | 1.3% | 49 | 17.4% | 25 | 12.4% | 53 | 6.9% | 62 |
| Median | 1.2% | | 2.1% | | 13.1% | | 8.3% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Real Assets & Inflation Hedges Risk Analysis

Natural Resources & Commodities

Neuberger Berman / Gresham

for the quarter ended December 31, 2022

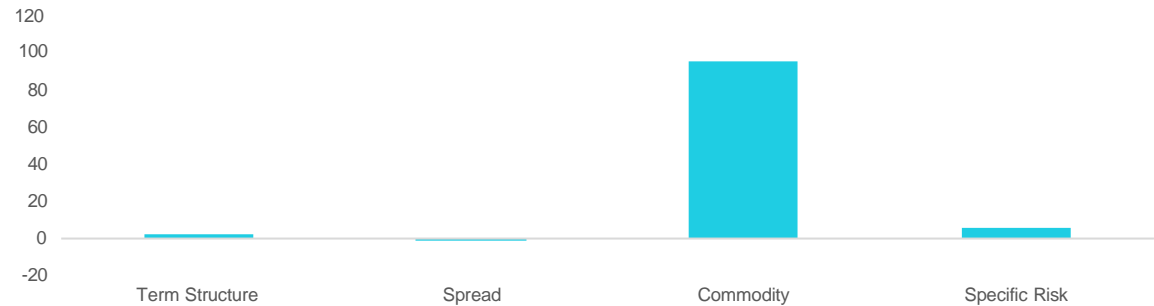


Los Angeles County Employees Retirement Association

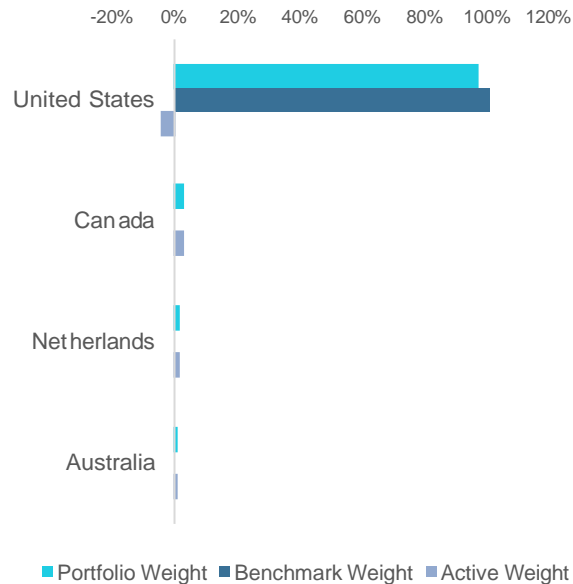
Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 14.94 |
| Benchmark Risk | 18.46 |
| Active Risk | 4.66 |
| Portfolio Beta | 0.80 |

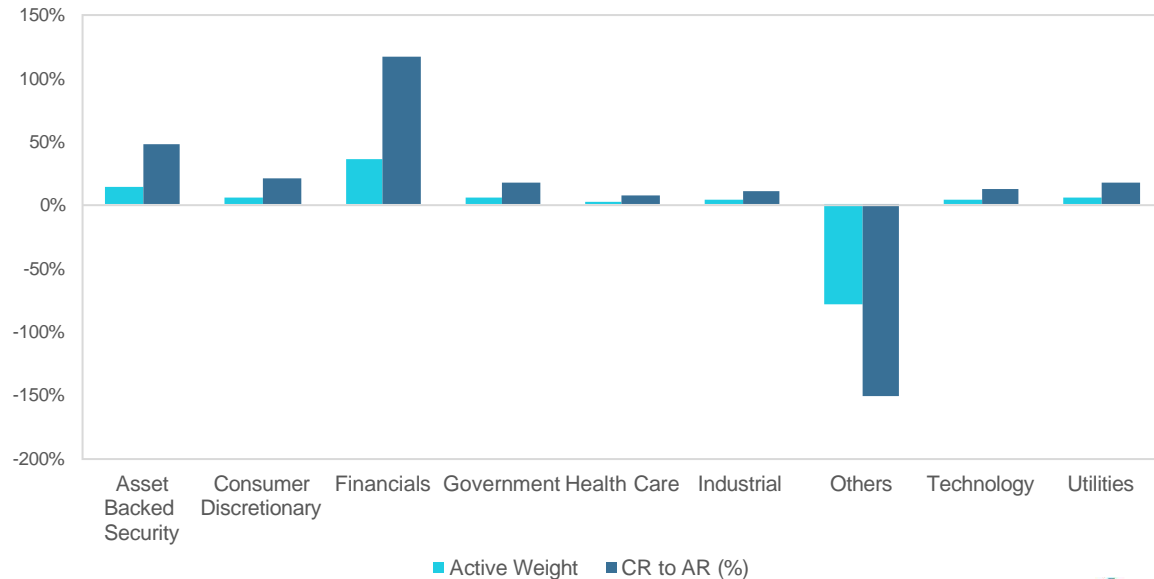
Active Risk from Common Factors



Top Countries by Weight%



Portfolio Risk by Sector



Real Assets & Inflation Hedges

Infrastructure

DWS

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Strategy

Seeks to provide capital appreciation and income with global infrastructure securities. The strategy takes a diversified approach within infrastructure to gain exposure to infrastructure related to telecommunication, transportation, utilities, waste and energy.

Inception Date: June 2019

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------------|-----------|-----------|
| Market Cap Wtd Average (mm) | 40,438.9 | 37,905.6 |
| No. Of Issues | 48.0 | 0.0 |
| Dividend Yield | 2.8 | 3.3 |
| Return on Equity | 16.7 | 16.3 |
| Price to Sales | 4.3 | 4.5 |
| Price to Book | 2.9 | 3.1 |
| PE Ratio | 23.8 | 22.2 |

Top Holdings (% of assets)

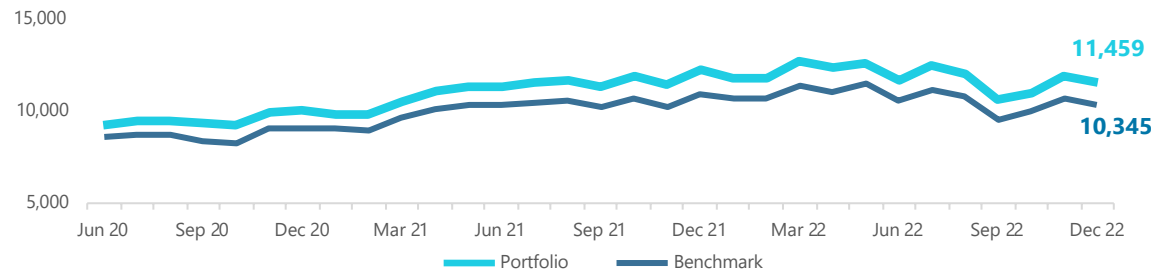
| | |
|-----------------------|--------------|
| AMERICAN TOWER CORP | 6.7% |
| ENBRIDGE INC | 5.9% |
| SEMPRA ENERGY | 5.4% |
| WILLIAMS COS INC | 5.2% |
| NATIONAL GRID PLC | 4.8% |
| Top 5 Holdings | 27.9% |

Performance (net)¹

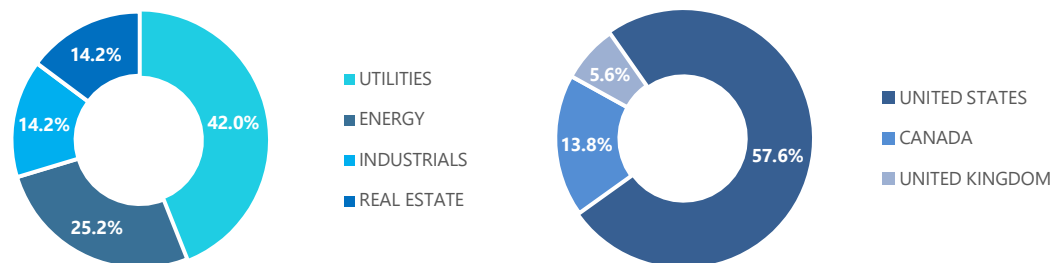
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|---------------------------------|--------------------------|-------------|--------------|-------------|--------|
| DWS Infrastructure | 2,781.6 | 8.5% | -6.3% | 4.6% | -- |
| DJ Brookfield Global Infra Comp | | 9.4% | -4.9% | 1.1% | -- |
| RA & IH Policy Benchmark | | 5.4% | 6.4% | 8.3% | -- |

| Universe data: Infrastructure | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|-------------------------------|-------------|------|--------------|------|--------|-------------|--------|------|
| DWS Infrastructure | 8.5% | -- | -6.2% | -- | -- | 4.85 | -- | -- |
| Median | 9.4% | | -4.9% | | 1.1% | | -- | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data for infrastructure is unavailable.

² Charts display top exposures and may not add up to 100%.

Real Assets & Inflation Hedges Risk Analysis

Infrastructure

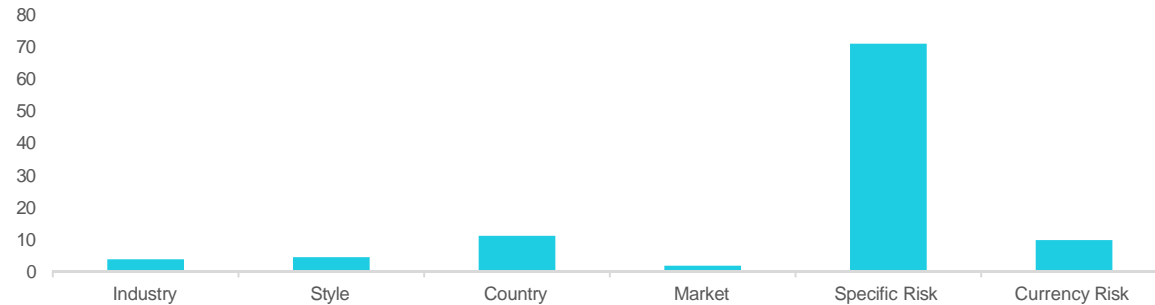
DWS

for the quarter ended December 31, 2022

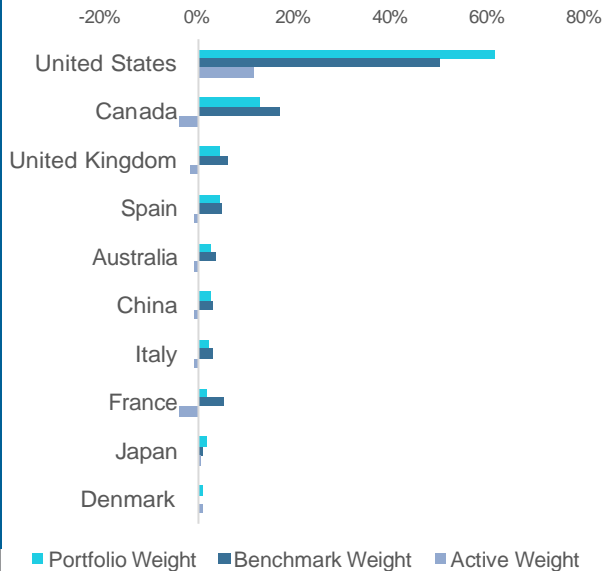
Portfolio Risk Summary

| | Value |
|-------------------|--------------|
| Total Risk | 18.29 |
| Benchmark Risk | 18.65 |
| Active Risk | 1.94 |
| Portfolio Beta | 0.98 |

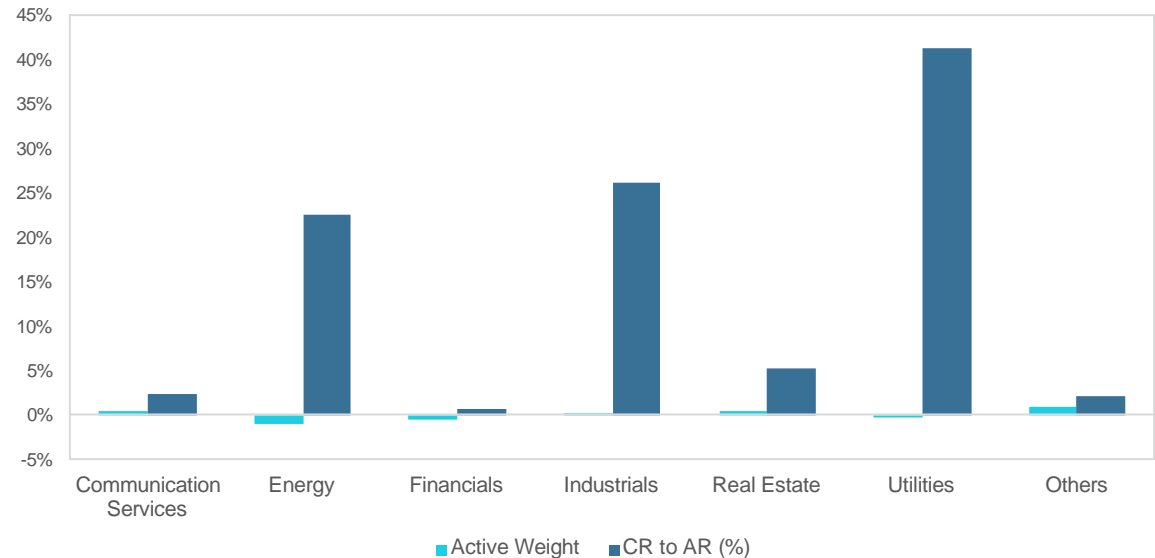
Active Risk from Common Factors



Top Countries by Weight%



Portfolio Risk by Sector



Real Assets & Inflation Hedges

TIPS

BlackRock

for the quarter ended December 31, 2022

Strategy

Seeks to provide income and a hedge against inflation with passive TIPS exposure.

Inception Date: May 2019

Risk Statistics (since inception)

| | |
|------------------------------|-------|
| Standard Deviation | 6.5% |
| Benchmark Standard Deviation | 6.5% |
| Sharpe Ratio | 0.21 |
| Information Ratio | -0.08 |
| Beta | 0.99 |
| Tracking Error | 0.8% |

Top Holdings (% of assets)

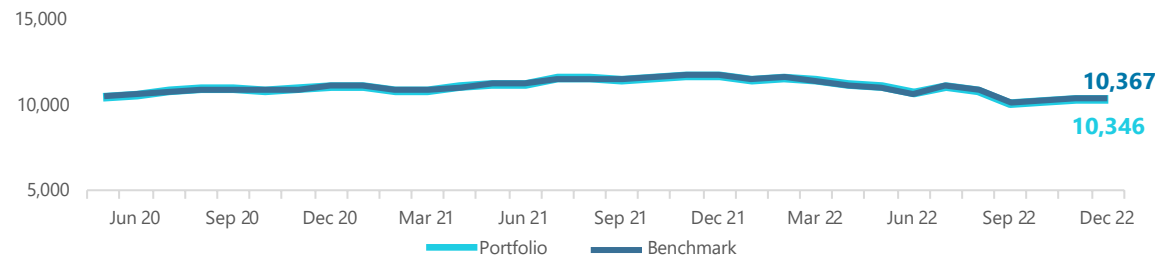
| | |
|-----------------------|--------------|
| TSY INFL IX N/B | 4.6% |
| TSY INFL IX N/B | 4.1% |
| TSY INFL IX N/B | 4.0% |
| TSY INFL IX N/B | 3.7% |
| TSY INFL IX N/B | 3.7% |
| Top 5 Holdings | 20.1% |

Performance (net)¹

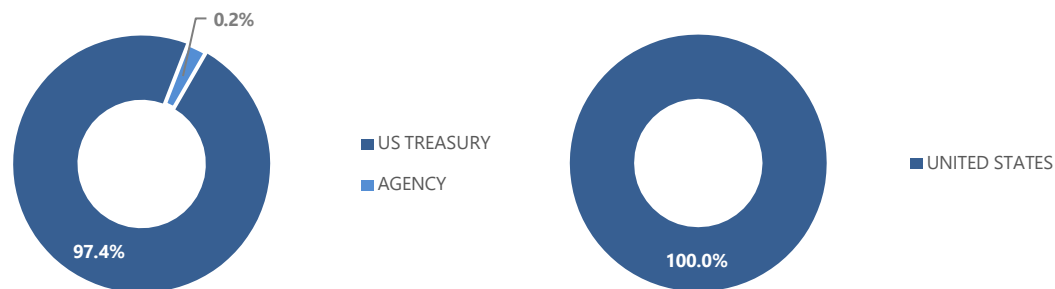
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--|--------------------------|-------------|---------------|-------------|--------|
| BlackRock TIPS | 1,860.9 | 2.1% | -11.9% | 1.1% | -- |
| Bloomberg U.S. Treasury: U.S. TIPS | | 2.0% | -11.8% | 1.2% | -- |
| Real Assets & Inflation Hedges Policy BM | | 5.4% | 6.4% | 8.3% | -- |

| Universe data: Inflation Linked Bond Funds | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--|-------------|------|---------------|------|-------------|------|--------|------|
| BlackRock TIPS | 2.1% | -- | -11.9% | -- | 1.2% | -- | -- | -- |
| Median | -- | -- | -- | -- | -- | -- | -- | -- |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data for TIPS is unavailable.

² Charts display top exposures and may not add up to 100%.

Real Assets & Inflation Hedges Risk Analysis

TIPS

BlackRock

for the quarter ended December 31, 2022

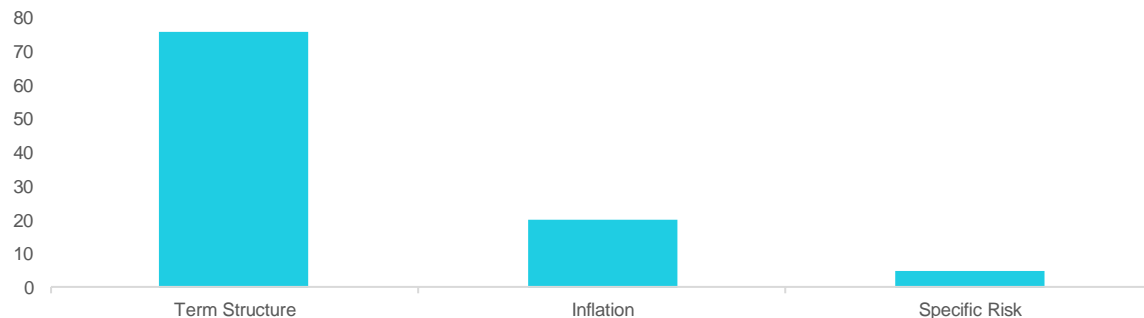


Los Angeles County Employees Retirement Association

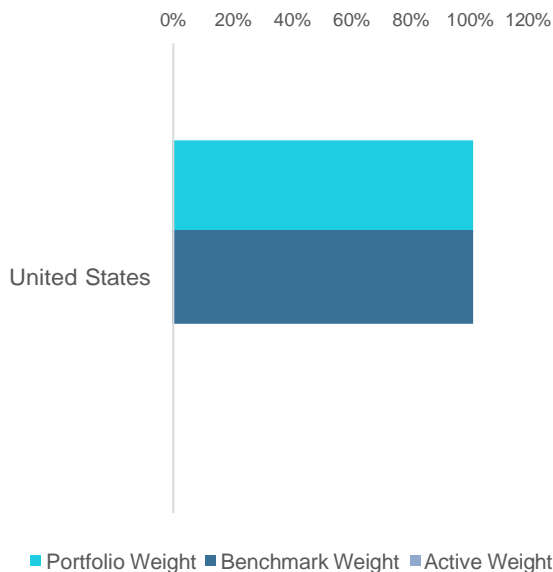
Portfolio Risk Summary

| | Value |
|-------------------|-------------|
| Total Risk | 6.62 |
| Benchmark Risk | 6.71 |
| Active Risk | 0.10 |
| Portfolio Beta | 0.99 |

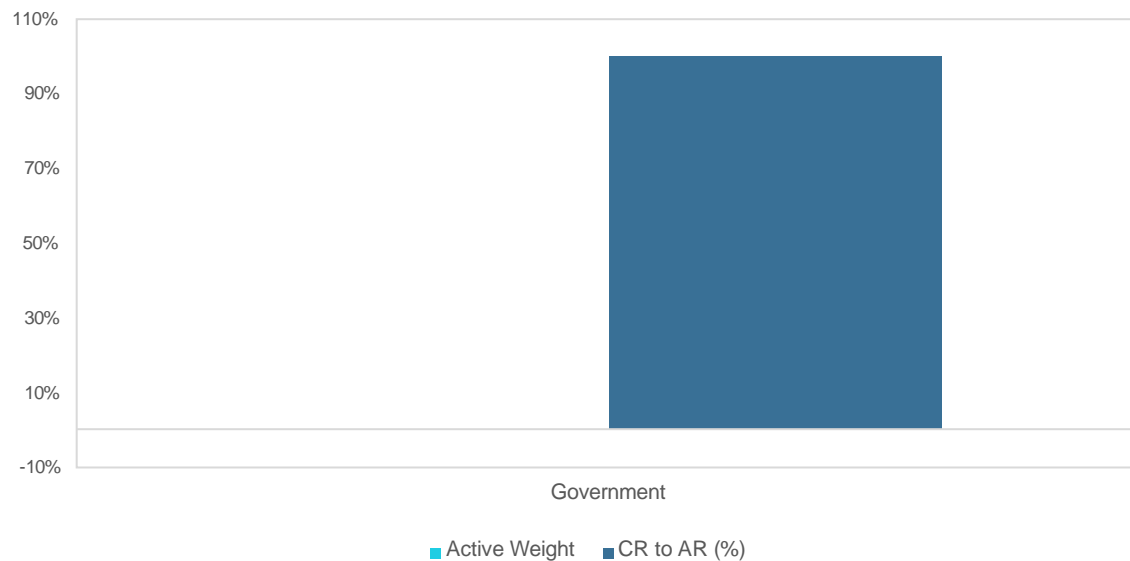
Active Risk from Common Factors



Top Countries by Weight%



Portfolio Risk by Sector

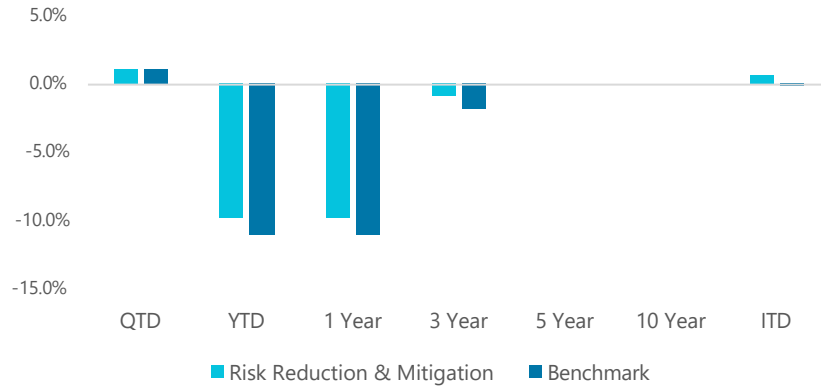


risk reduction & mitigation

Summary

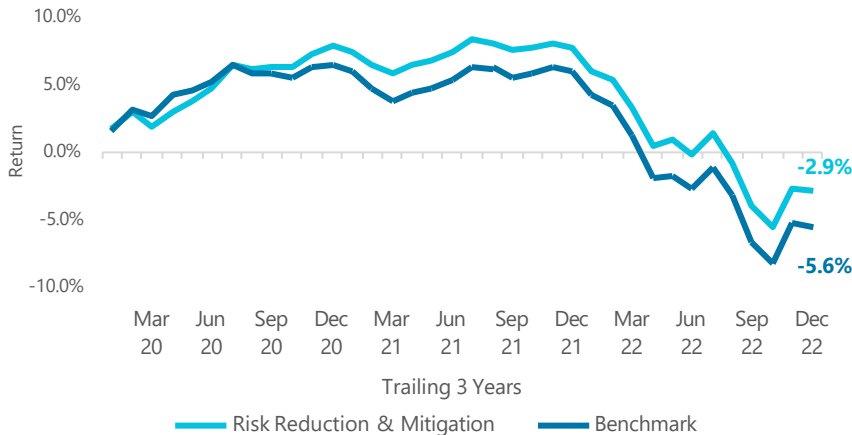
for the quarter ended December 31, 2022

Performance (net)



| | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD |
|--|-------------|--------------|--------------|--------------|--------|---------|-------------|
| Risk Reduction & Mitigation | 1.1% | -9.8% | -9.8% | -1.0% | -- | -- | 0.6% |
| Benchmark | 1.1% | -11.0% | -11.0% | -1.9% | -- | -- | -0.2% |
| Excess | 0.0% | 1.2% | 1.2% | 0.9% | -- | -- | 0.8% |

Cumulative Return

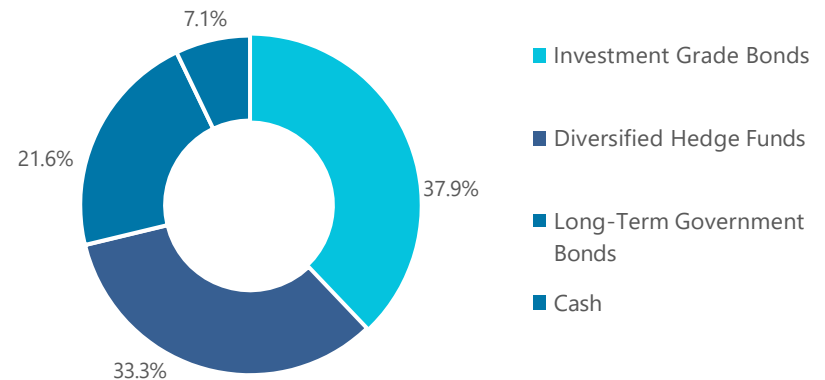


Functional Category¹

| | QTD | FYTD | 1 Year | 3 Year |
|--|--------------|---------------|---------------|--------------|
| Investment Grade Bonds | 1.8% | -3.0% | -13.1% | -2.6% |
| BBG BC Aggregate Bond Index | 1.9% | -3.0% | -13.0% | -2.7% |
| Excess | 0.0% | 0.0% | -0.1% | 0.1% |
| Diversified Hedge Funds | 1.4% | 2.7% | 5.8% | 7.3% |
| Diversified Hedge Funds Policy Benchmark | 1.4% | 2.3% | 3.7% | 3.2% |
| Excess | 0.1% | 0.4% | 2.1% | 4.1% |
| Long-Term Government Bonds | -0.6% | -10.7% | -28.9% | -- |
| Bloomberg U.S. Treasury: Long | -0.6% | -10.2% | -29.3% | -- |
| Excess | 0.0% | -0.6% | 0.3% | -- |
| Cash | 1.3% | 2.3% | 3.2% | 1.7% |
| Cash Policy Benchmark | 0.9% | 1.3% | 1.5% | 0.7% |
| Excess | 0.5% | 0.9% | 1.7% | 1.0% |

¹ Diversified Hedge Funds returns are net-of-all fees and expenses.

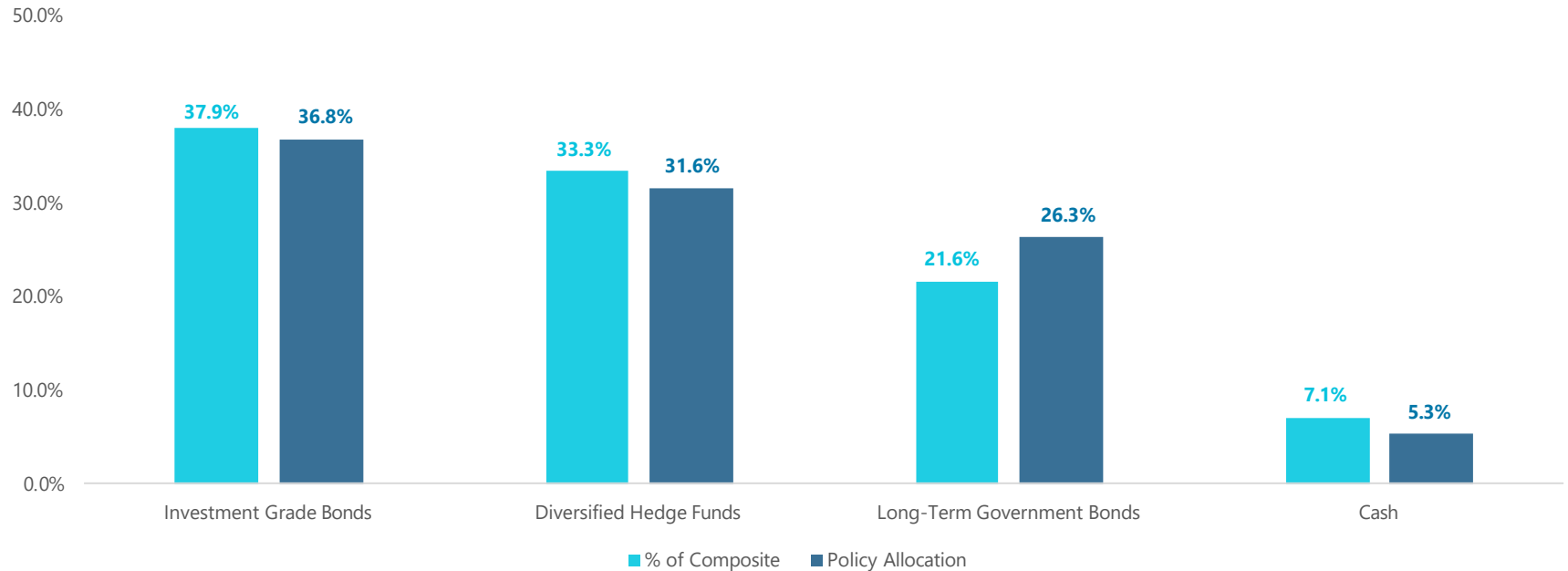
Exposure



Asset Allocation

for the quarter ended December 31, 2022

Actual vs. Policy

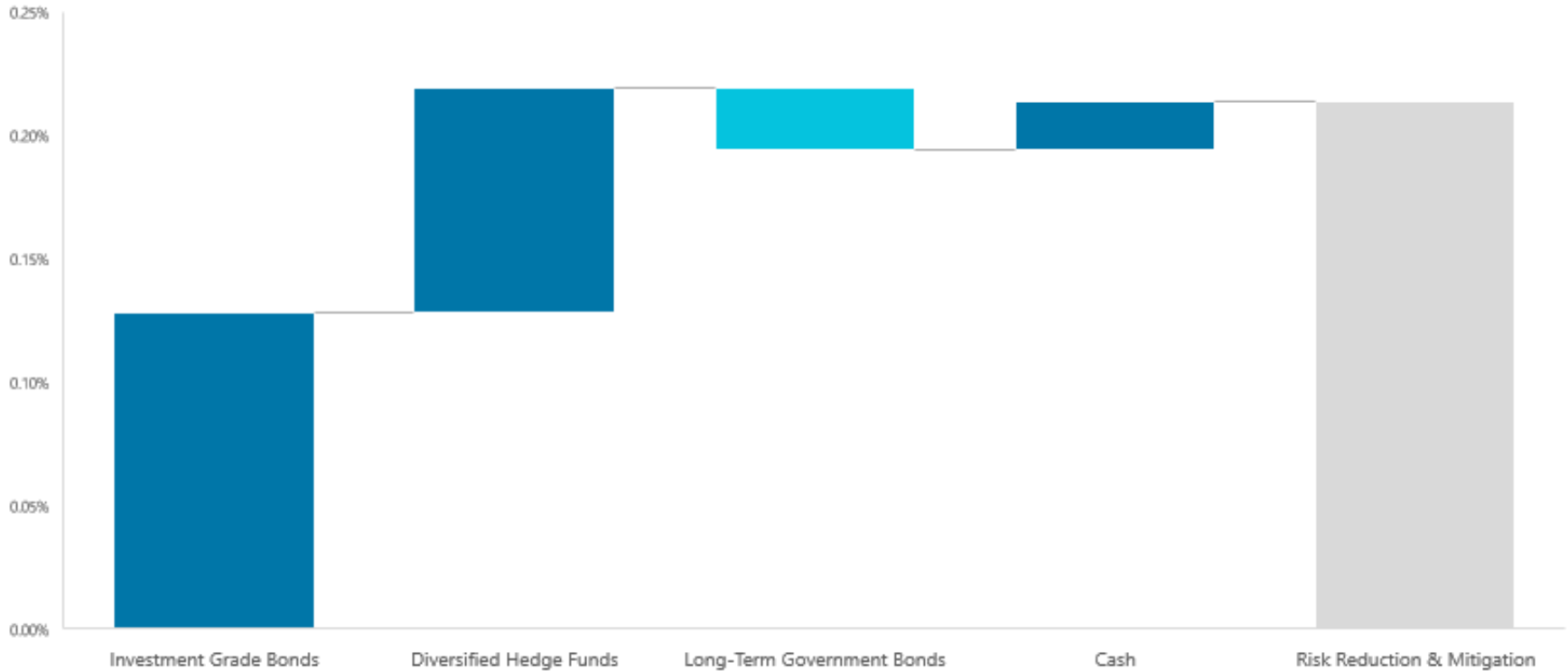


| | Ending Market Value (mm) | % of Composite | Policy Allocation | Over / Under (%) | Over / Under (mm) |
|--|--------------------------|----------------|-------------------|------------------|-------------------|
| Risk Reduction & Mitigation | 13,202 | 100.0% | 100.0% | | |
| Investment Grade Bonds | 5,003 | 37.9% | 36.8% | 1.1% | 139 |
| Diversified Hedge Funds | 4,402 | 33.3% | 31.6% | 1.8% | 233 |
| Long-Term Government Bonds | 2,857 | 21.6% | 26.3% | -4.7% | -618 |
| Cash | 940 | 7.1% | 5.3% | 1.9% | 246 |

Contribution to Return

for the quarter ended December 31, 2022

QTD Contribution to Return

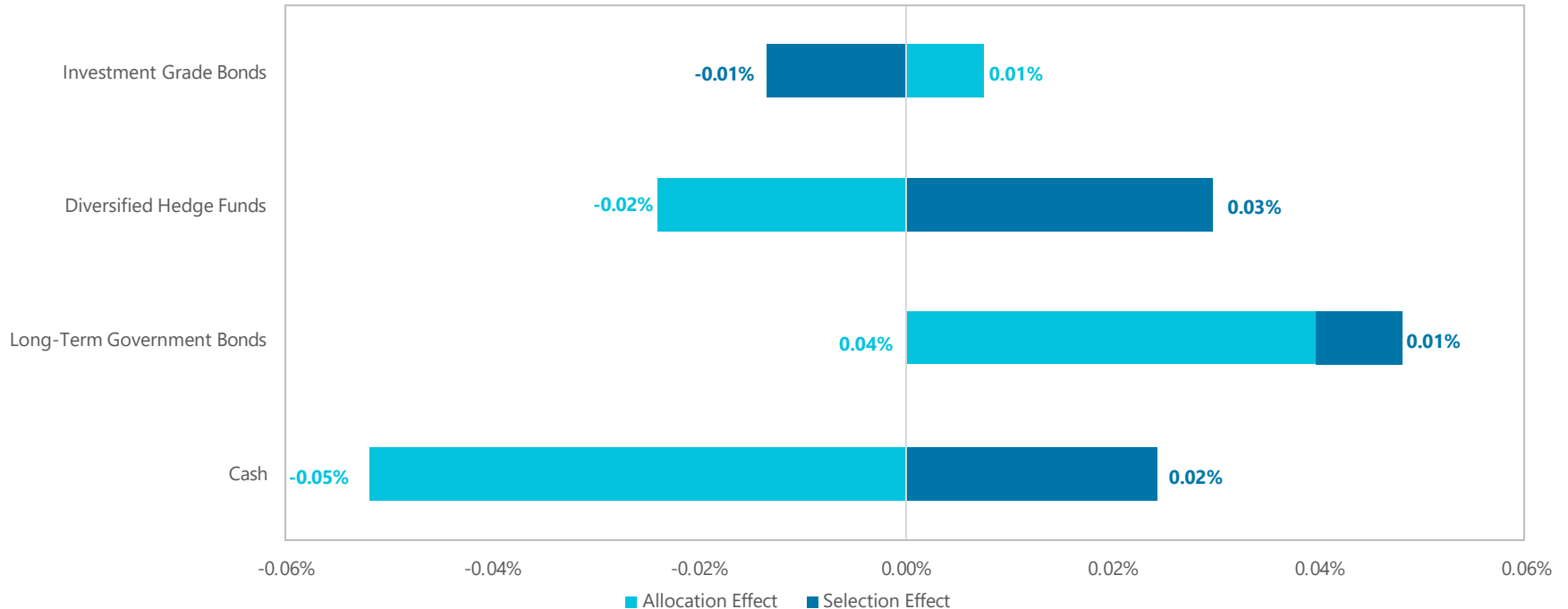


| Functional Category | Contributors | Detractors |
|-----------------------------|------------------------------|-------------------------------------|
| Investment Grade Bonds | 0.13% BTC US Debt Index Fund | 0.07% BlackRock Long Treasury Bonds |
| Diversified Hedge Funds | 0.09% HBK Multi-strategy | 0.03% AM Asia Strategies |
| Long-Term Government Bonds | -0.03% Allspring/Wells | 0.03% |
| Cash | 0.02% Capula GRV | 0.02% |
| Risk Reduction & Mitigation | 0.21% Pugh Capital Mgmt | 0.02% |

Return Attribution

for the quarter ended December 31, 2022

QTD Performance Attribution¹



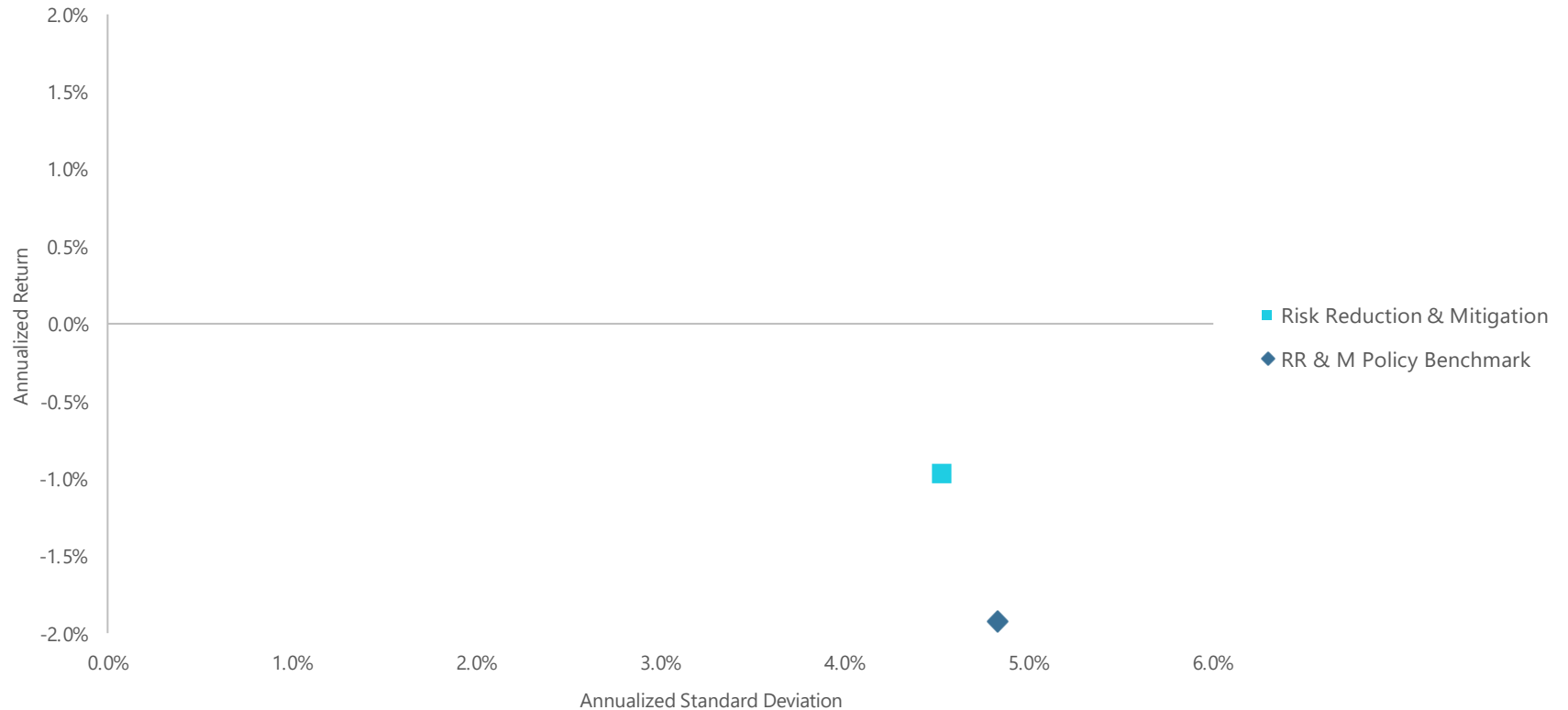
| | Ending Market Value (mm) | % of Composite | Policy Allocation | Portfolio Return | Benchmark Return | Allocation Effect | Selection Effect | Total Value Add |
|--|--------------------------|----------------|-------------------|------------------|------------------|-------------------|------------------|-----------------|
| Risk Reduction & Mitigation | 13,202 | 100.0% | 100.0% | 1.1% | 1.1% | -0.03% | 0.05% | 0.03% |
| Investment Grade Bonds | 5,003 | 37.9% | 36.8% | 1.8% | 1.9% | 0.01% | -0.01% | 0.00% |
| Diversified Hedge Funds | 4,402 | 33.3% | 31.6% | 1.4% | 1.4% | -0.02% | 0.03% | 0.01% |
| Long-Term Government Bonds | 2,857 | 21.6% | 26.3% | -0.6% | -0.6% | 0.04% | 0.01% | 0.04% |
| Cash | 940 | 7.1% | 5.3% | 1.3% | 0.9% | -0.05% | 0.02% | -0.02% |

¹ Total Value Add includes Interaction Effect.

Risk vs. Return

for the quarter ended December 31, 2022

3 Year (Annualized)



| | Annualized Return | Standard Deviation | Sharpe Ratio | Information Ratio | Beta | Tracking Error |
|--|-------------------|--------------------|--------------|-------------------|------|----------------|
| Risk Reduction & Mitigation | -1.0% | 4.5% | | | | |
| RR & M Policy Benchmark | -1.9% | 4.8% | (0.35) | 1.06 | 0.93 | 0.9% |

Performance Detail

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Annualized Net Returns¹

| | % of Composite | Ending Market Value (mm) | Prior Quarter Ending MV (mm) | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD | Inception Date |
|--|----------------|--------------------------|------------------------------|--------------|---------------|---------------|--------------|-------------|-------------|---------------|-----------------|
| Risk Reduction & Mitigation | 100.0% | 13,202 | 13,536 | 1.1% | -9.8% | -9.8% | -1.0% | -- | -- | 0.6% | Apr-2019 |
| RR & M Policy Benchmark | | | | 1.1% | -11.0% | -11.0% | -1.9% | -- | -- | -0.2% | |
| Investment Grade Bonds | 37.9% | 5,003 | 5,292 | 1.8% | -13.1% | -13.1% | -2.6% | 0.2% | 1.5% | 5.1% | Nov-1994 |
| BBG BC Aggregate Bond Index | | | | 1.9% | -13.0% | -13.0% | -2.7% | 0.0% | 1.1% | 4.6% | |
| Allspring/Wells | 9.5% | 1,252 | 1,605 | 2.1% | -13.0% | -13.0% | -2.1% | 0.4% | 1.4% | 3.8% | Mar-2004 |
| BTC US Debt Index Fund | 22.0% | 2,905 | 2,856 | 1.7% | -13.0% | -13.0% | -2.7% | 0.0% | 1.1% | 3.8% | Nov-1999 |
| MHLP | 0.1% | 11 | 11 | 1.2% | 4.8% | 4.8% | 5.2% | 6.7% | 5.3% | 5.4% | Apr-2005 |
| Pugh Capital Mgmt | 6.3% | 835 | 819 | 1.9% | -13.2% | -13.2% | -2.6% | 0.1% | 1.1% | 3.2% | Jul-2005 |
| Diversified Hedge Funds | 33.3% | 4,402 | 4,281 | 1.4% | 5.8% | 5.8% | 7.3% | -- | -- | 6.7% | Apr-2019 |
| Diversified Hedge Funds Policy Benchmark | | | | 1.4% | 3.7% | 3.7% | 3.2% | -- | -- | 3.5% | |
| AM Asia Strategies | 1.6% | 217 | 221 | -2.0% | -3.9% | -3.9% | -- | -- | -- | -2.6% | Jun-2021 |
| Brevan Howard Master Fund | 4.9% | 650 | 648 | 0.4% | 18.5% | 18.5% | -- | -- | -- | 9.4% | Apr-2021 |
| Capula GRV | 4.9% | 642 | 626 | 2.6% | 12.0% | 12.0% | 6.7% | -- | -- | 6.6% | Dec-2018 |
| Caxton Global Investments | 2.2% | 297 | 292 | 1.5% | 15.7% | 15.7% | -- | -- | -- | 10.1% | Feb-2021 |
| DK Institutional Partners | 3.7% | 486 | 487 | -0.1% | -1.3% | -1.3% | 5.2% | -- | -- | 4.7% | May-2018 |
| Grosvenor HFOF | 0.2% | 31 | 34 | -- | -- | -- | -- | -- | -- | -- | Nov-2011 |
| HBK Multi-strategy | 4.4% | 578 | 555 | 4.1% | 3.9% | 3.9% | 6.9% | -- | -- | 5.5% | Jun-2018 |
| Hudson Bay | 4.9% | 650 | 641 | 1.4% | 3.0% | 3.0% | -- | -- | -- | 10.7% | Jul-2020 |
| Polar | 3.5% | 467 | 462 | 1.2% | 1.0% | 1.0% | -- | -- | -- | 10.4% | May-2020 |
| Stable Asset Management | 2.9% | 384 | 315 | 1.8% | -0.4% | -0.4% | -- | -- | -- | -0.2% | Aug-2021 |
| Long-Term Government Bonds | 21.6% | 2,857 | 2,874 | -0.6% | -28.9% | -28.9% | -- | -- | -- | -25.6% | Nov-2021 |
| Bloomberg U.S. Treasury: Long | | | | -0.6% | -29.3% | -29.3% | -- | -- | -- | -26.8% | Nov-2021 |
| BlackRock Long Treasury Bonds | 21.6% | 2,857 | 2,874 | -0.6% | -28.9% | -28.9% | -- | -- | -- | -25.6% | Nov-2021 |
| Cash | 7.1% | 940 | 1,088 | 1.3% | 3.2% | 3.2% | 1.7% | 2.0% | 1.3% | 1.8% | Jun-2001 |
| Cash Policy Benchmark | | | | 0.9% | 1.5% | 1.5% | 0.7% | 1.3% | 0.8% | 1.4% | |

¹ Diversified Hedge Funds returns are net-of-all fees and expenses.

Risk Reduction & Mitigation

Risk Summary

for the quarter ended December 31, 2022

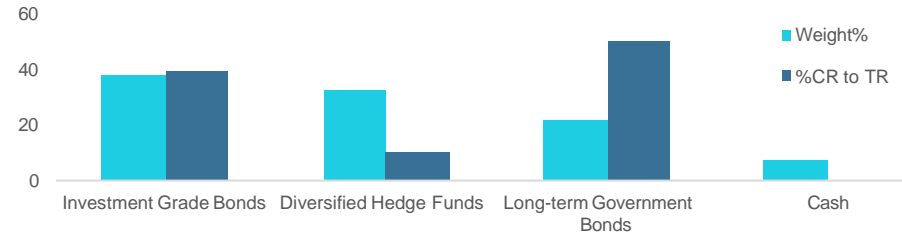
Risk Summary

| | Value |
|------------------------|-------------|
| Total Risk | 6.20 |
| Benchmark Risk | 6.17 |
| Active Risk | 1.21 |
| Portfolio Beta | 0.99 |
| Cont. to Eff. Duration | 6.46 |
| Convexity | 1.51 |
| Yield to Worst (%) | 4.29 |
| OAS to Sw ap (bp) | 55 |

Risk Decomposition

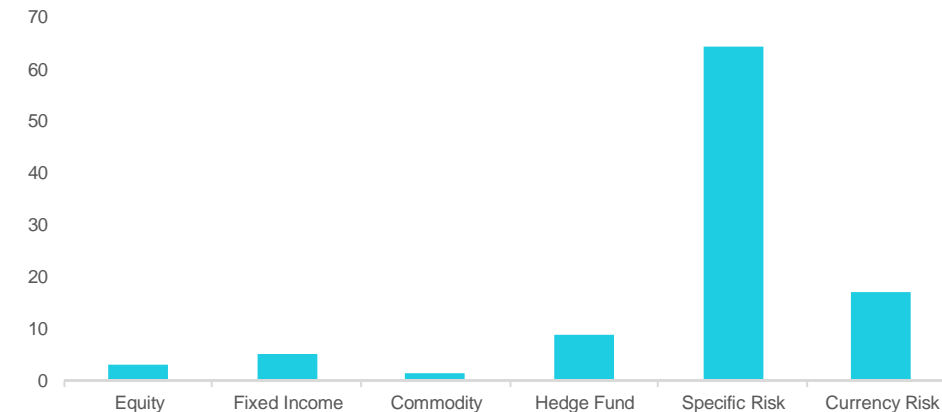
| Risk Source | Portfolio | | Active | |
|--------------------|-------------------|---------------|-------------------|---------------|
| | Risk Contribution | %Risk | Risk Contribution | %Risk |
| Total Risk | 6.20 | 100.00 | 1.21 | 100.00 |
| Local Market Risk | 6.05 | 97.55 | 1.00 | 82.83 |
| Common Factor Risk | 5.90 | 95.09 | 0.22 | 18.46 |
| Specific Risk | 0.15 | 2.46 | 0.78 | 64.37 |
| Currency Risk | 0.15 | 2.45 | 0.21 | 17.17 |

Contribution to Risk



| | Mkt Value (mm) | Weight% | Total Risk | Risk Contribution | %CR to TR |
|--|----------------|---------------|-------------|-------------------|---------------|
| Risk Reduction & Mitigation | 12,852 | 100.00 | 6.20 | 6.20 | 100.00 |
| Investment Grade Bonds | 4,868 | 37.88 | 6.64 | 2.44 | 39.29 |
| Diversified Hedge Funds | 4,187 | 32.58 | 3.85 | 0.65 | 10.46 |
| Long-term Government Bonds | 2,856 | 22.22 | 14.58 | 3.12 | 50.24 |
| Cash | 941 | 7.32 | 0.00 | 0.00 | 0.00 |

Active Risk from Common Factors



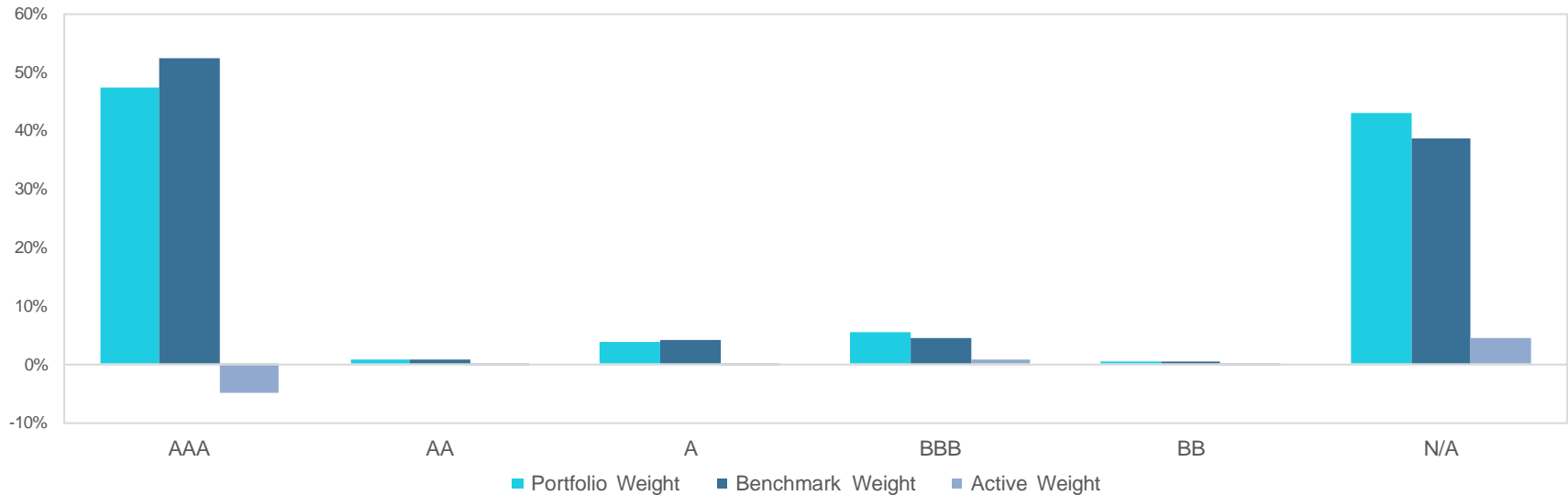
Risk Reduction & Mitigation Risk Summary

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Portfolio Allocation By Moody's Rating



| Rating | Weight% | | | Total Risk | Active Risk CR | % of Active TR | CR to Effective Duration |
|--|----------------|----------------|--------------|-------------|----------------|----------------|--------------------------|
| | Portfolio | Benchmark | Active | | | | |
| Risk Reduction & Mitigation | 100.00% | 100.00% | 0.00% | 6.20 | 1.21 | 100% | 6.46 |
| AAA | 47.14% | 52.15% | -5.01% | 10.22 | 0.04 | 4.9% | 5.07 |
| AA | 0.66% | 0.79% | -0.13% | 7.50 | 0.00 | 0.0% | 0.05 |
| A | 3.94% | 4.00% | -0.06% | 6.49 | 0.00 | 0.1% | 0.27 |
| BBB | 5.32% | 4.45% | 0.87% | 7.03 | 0.01 | 0.4% | 0.37 |
| BB | 0.12% | 0.14% | -0.03% | 8.12 | 0.00 | 0.0% | 0.01 |
| N/A | 42.82% | 38.46% | 4.36% | 3.16 | 1.17 | 94.6% | 0.69 |

Risk Reduction & Mitigation

Investment Grade Bonds

Allspring/Wells

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Strategy

A core fixed income strategy focusing on bottom-up quantitative and qualitative security selection and comprehensive risk management. Value is added primarily through security selection and sector rotation.

Inception Date: March 2004

Portfolio Characteristics

| | Portfolio | Benchmark |
|--------------------|-----------|-----------|
| No. of Issues | 875.0 | 0.0 |
| Effective Duration | 6.2 | 6.2 |
| Convexity | 0.7 | 0.8 |
| Coupon Rate | 3.2 | 2.7 |
| Yield to Maturity | 4.7 | 4.6 |
| Current Yield | 3.5 | 3.0 |
| Rating – Moody's | AA-2 | AA-2 |
| Rating – S & P | AA | AA |

Top Holdings (% of assets)

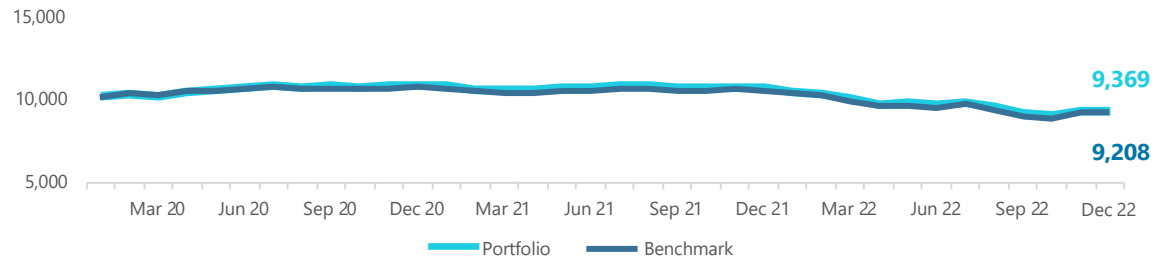
| | |
|-----------------------|--------------|
| US TREASURY N/B | 3.7% |
| US TREASURY N/B | 2.9% |
| US TREASURY N/B | 1.5% |
| US TREASURY N/B | 1.5% |
| US TREASURY N/B | 1.4% |
| Top 5 Holdings | 11.0% |

Performance (net)¹

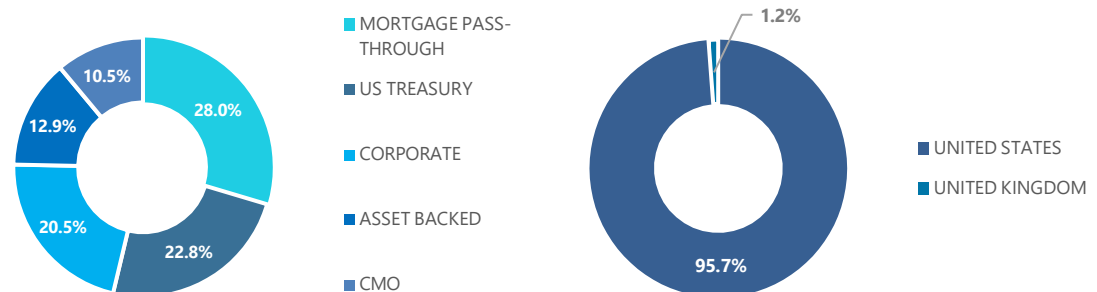
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|-------------------------|--------------------------|-------------|---------------|--------------|-------------|
| Allspring/Wells | 1,251.5 | 2.1% | -13.0% | -2.1% | 0.4% |
| BBG BARC Agg | | 1.9% | -13.0% | -2.7% | 0.0% |
| RR & M Policy Benchmark | | 1.1% | -11.0% | -1.9% | -- |

| Universe data: US Fixed Income Pools | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--------------------------------------|-------------|-----------|---------------|-----------|--------------|-----------|-------------|-----------|
| Allspring/Wells | 2.1% | 32 | -12.9% | 63 | -2.1% | 63 | 0.5% | 62 |
| Median | 1.7% | | -10.8% | | -1.3% | | 0.9% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Risk Reduction & Mitigation Risk Analysis

Investment Grade Bonds

Allspring/Wells

for the quarter ended December 31, 2022

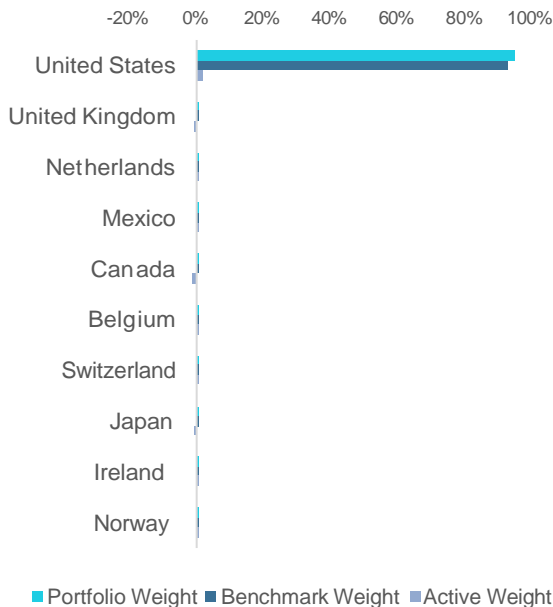


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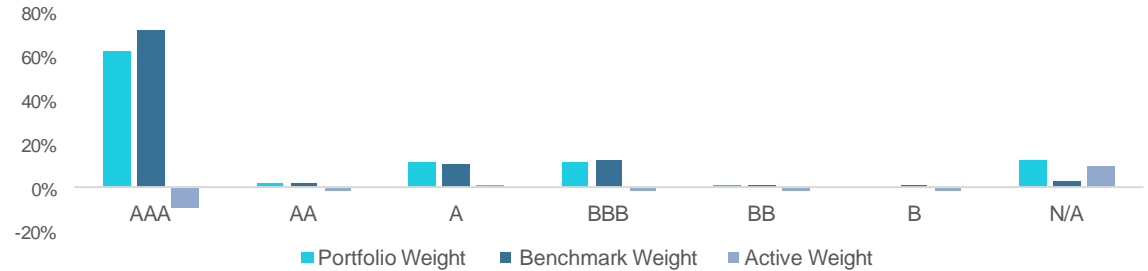
Portfolio Risk Summary

| | Value |
|------------------------|-------------|
| Total Risk | 6.89 |
| Benchmark Risk | 6.54 |
| Active Risk | 0.64 |
| Portfolio Beta | 1.05 |
| Cont. to Eff. Duration | 6.97 |
| Yield to Worst (%) | 4.58 |
| OAS to Sw ap (bp) | 70 |

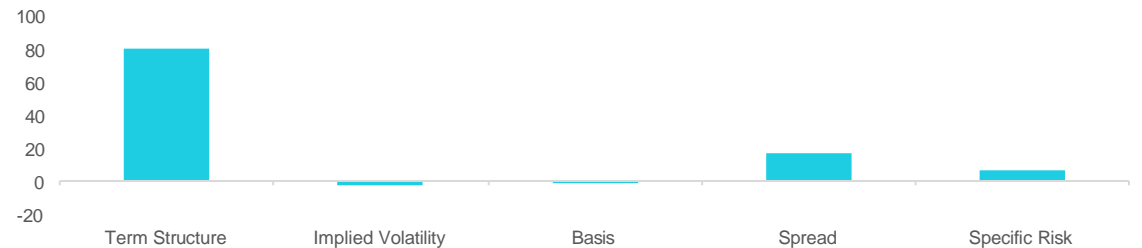
Top Countries by Weight%



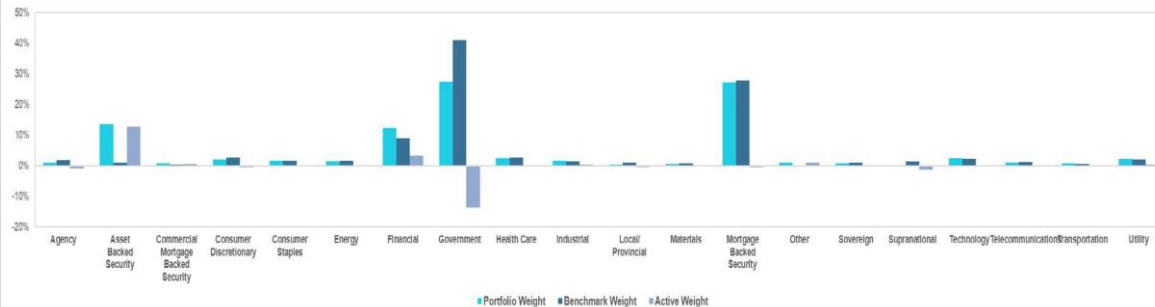
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Risk Reduction & Mitigation

Investment Grade Bonds

Pugh Capital

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Strategy

A core fixed income strategy that invests in investment-grade securities, with an emphasis on higher credit quality and mortgage-backed securities. The strategy seeks to add value relative to the Index by minimizing downside risk across the portfolio while adding incremental return through issue selection.

Inception Date: July 2005

Portfolio Characteristics

| | Portfolio | Benchmark |
|--------------------|-----------|-----------|
| No. of Issues | 274.0 | 0.0 |
| Effective Duration | 6.2 | 6.2 |
| Convexity | 0.6 | 0.8 |
| Coupon Rate | 3.2 | 2.7 |
| Yield to Maturity | 4.7 | 4.6 |
| Current Yield | 3.5 | 3.0 |
| Rating – Moody's | AA-2 | AA-2 |
| Rating – S & P | AA- | AA- |

Top Holdings (% of assets)

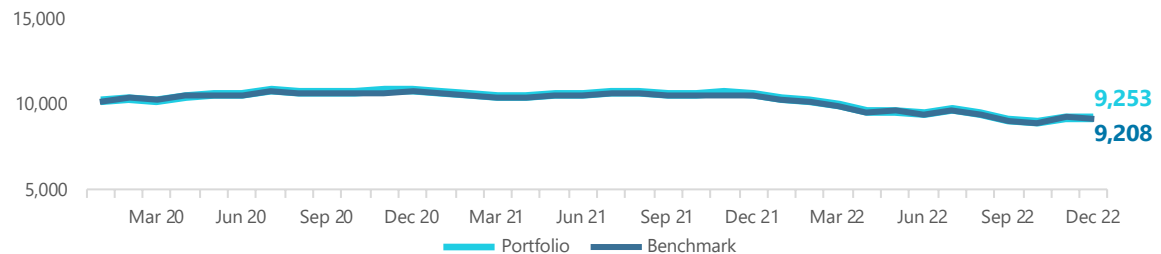
| | |
|-----------------------|--------------|
| US TREASURY N/B | 3.6% |
| US TREASURY N/B | 3.2% |
| US TREASURY N/B | 1.8% |
| US TREASURY N/B | 1.7% |
| US TREASURY N/B | 1.6% |
| Top 5 Holdings | 11.9% |

Performance (net)¹

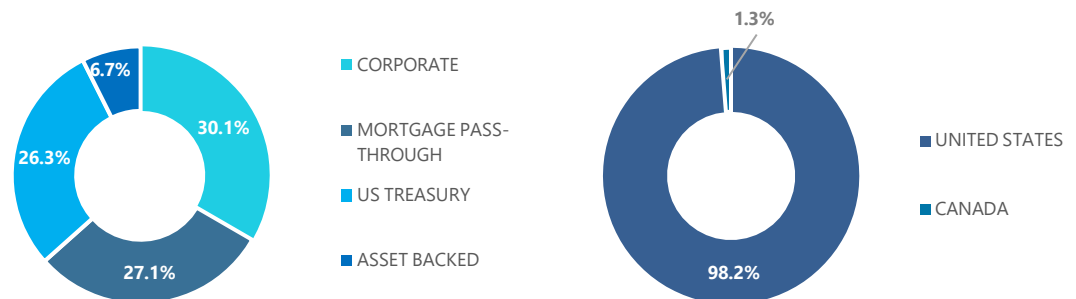
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--------------------------|--------------------------|-------------|---------------|--------------|-------------|
| Pugh Capital Mgmt | 835.2 | 1.9% | -13.2% | -2.6% | 0.1% |
| BBG BARC Agg | | 1.9% | -13.0% | -2.7% | 0.0% |
| RR & M Policy Benchmark | | 1.1% | -11.0% | -1.9% | -- |

| Universe data: US Fixed Income Pools | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--------------------------------------|-------------|-----------|---------------|-----------|--------------|-----------|-------------|-----------|
| Pugh Capital Mgmt | 2.0% | 34 | -13.1% | 64 | -2.4% | 70 | 0.2% | 69 |
| Median | 1.7% | | -10.8% | | -1.3% | | 0.9% | |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Risk Reduction & Mitigation Risk Analysis

Investment Grade Bonds

Pugh Capital

for the quarter ended December 31, 2022

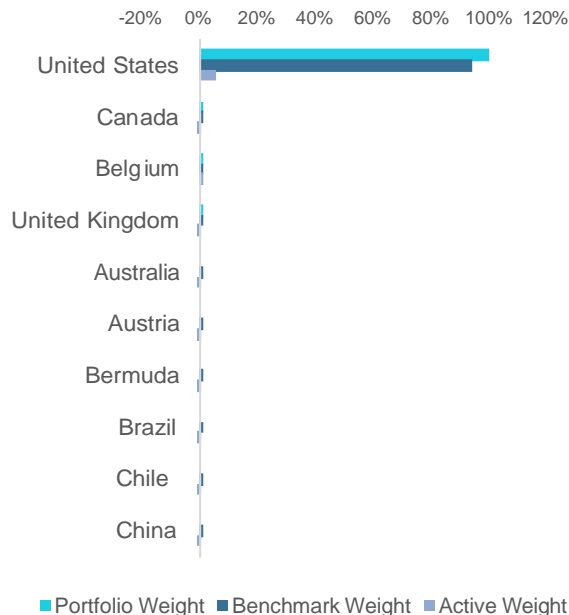


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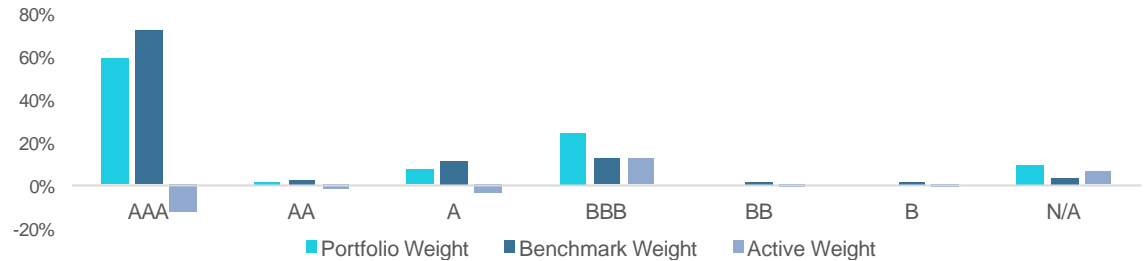
Portfolio Risk Summary

| | Value |
|------------------------|-------------|
| Total Risk | 6.76 |
| Benchmark Risk | 6.54 |
| Active Risk | 0.41 |
| Portfolio Beta | 1.03 |
| Cont. to Eff. Duration | 6.53 |
| Yield to Worst (%) | 4.60 |
| OAS to Sw ap (bp) | 67 |

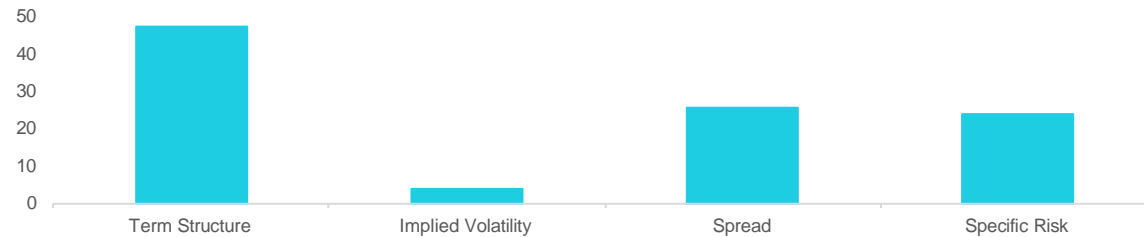
Top Countries by Weight%



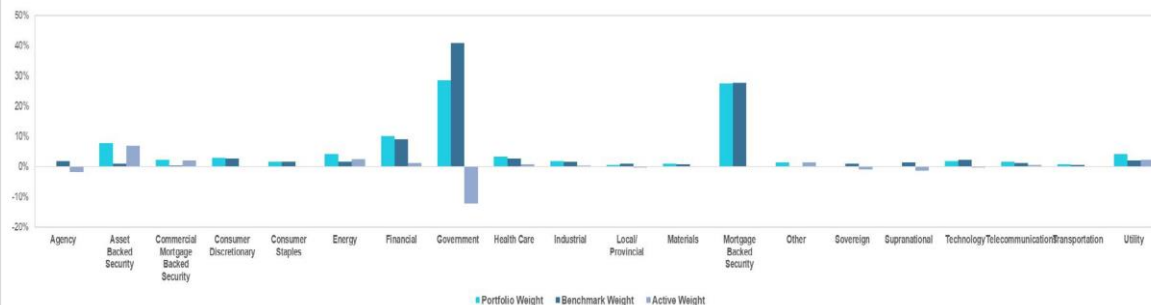
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Risk Reduction & Mitigation

Long-term Government Bonds

BlackRock

for the quarter ended December 31, 2022

Strategy

Seeks investment results that correspond generally to the price and yield performance of long duration U.S. government bonds.

Inception Date: Nov 2021

Portfolio Characteristics

| | |
|------------------------------|-------|
| Standard Deviation | 15.0% |
| Benchmark Standard Deviation | 15.0% |
| Sharpe Ratio | -1.93 |
| Information Ratio | -0.19 |
| Beta | 1.00 |
| Tracking Error | 1.5% |

Top Holdings (% of assets)

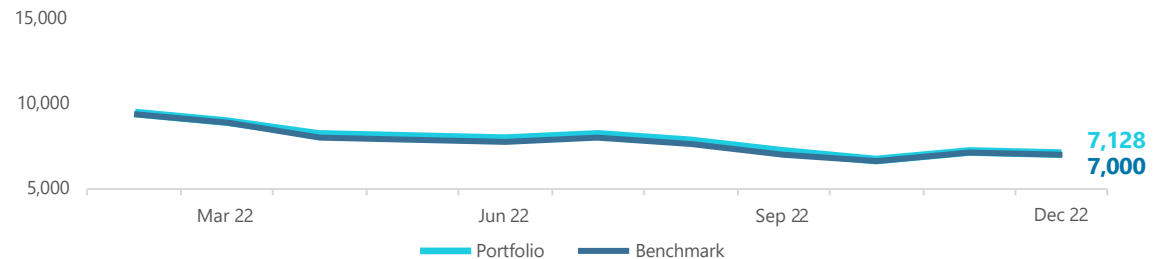
| | |
|-----------------------|--------------|
| US TREASURY N/B | 3.0% |
| US TREASURY N/B | 2.8% |
| US TREASURY N/B | 2.7% |
| US TREASURY N/B | 2.6% |
| US TREASURY N/B | 2.6% |
| Top 5 Holdings | 13.8% |

Performance (net)¹

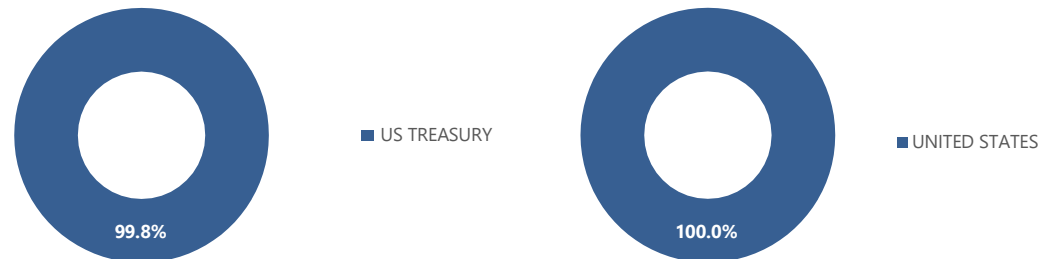
| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year |
|--------------------------------------|--------------------------|--------------|---------------|--------|--------|
| BlackRock Long Treasury Bonds | 2,856.8 | -0.6% | -28.9% | -- | -- |
| Bloomberg U.S. Treasury: Long | | -0.6% | -29.3% | -- | -- |
| RR & M Policy Benchmark | | 1.1% | -11.0% | -1.9% | -- |

| Universe data: US Fixed Income Pools | QTD | Rank | 1 Year | Rank | 3 Year | Rank | 5 Year | Rank |
|--------------------------------------|--------------|-----------|---------------|-----------|--------|------|--------|------|
| BlackRock Long Treasury Bonds | -0.6% | 94 | -28.9% | 92 | -- | -- | -- | -- |
| Median | 1.7% | | -10.8% | | -- | -- | -- | -- |

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Risk Reduction & Mitigation Risk Analysis

Long-term Government Bonds

BlackRock

for the quarter ended December 31, 2022

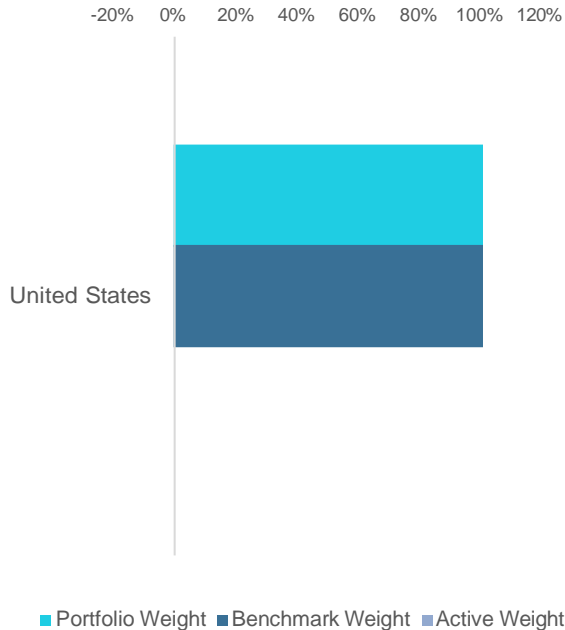


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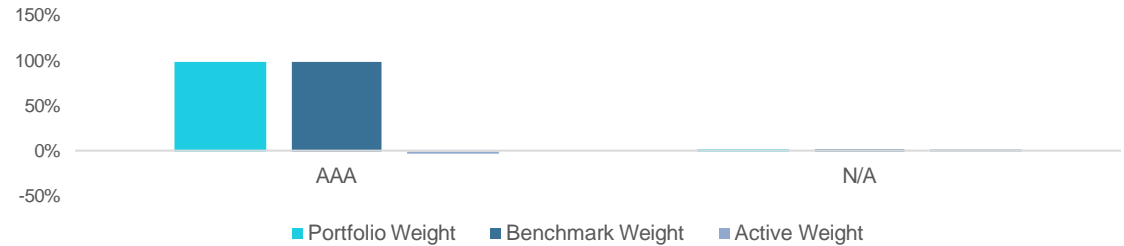
Portfolio Risk Summary

| | Value |
|------------------------|--------------|
| Total Risk | 14.58 |
| Benchmark Risk | 14.58 |
| Active Risk | 0.03 |
| Portfolio Beta | 1.00 |
| Cont. to Eff. Duration | 16.18 |
| Yield to Worst (%) | 4.07 |
| OAS to Sw ap (bp) | 45 |

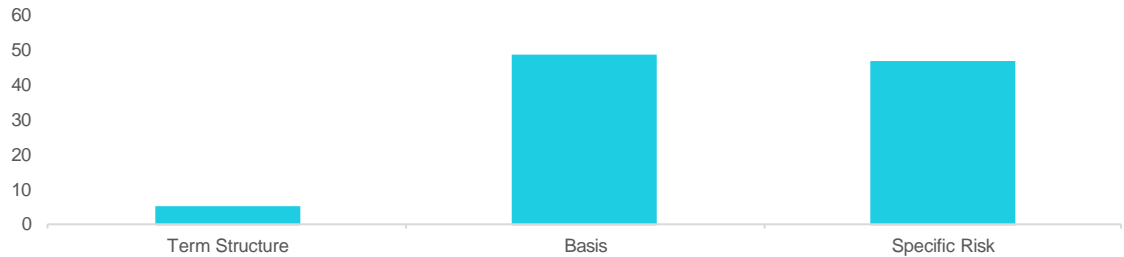
Top Countries by Weight%



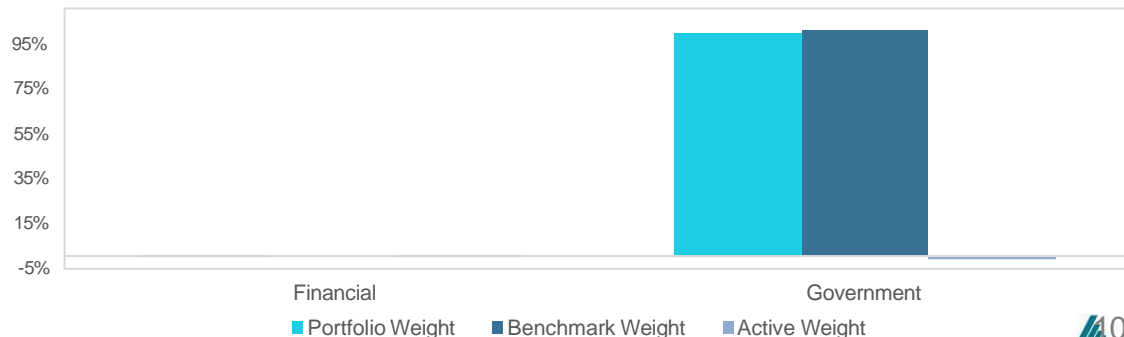
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector

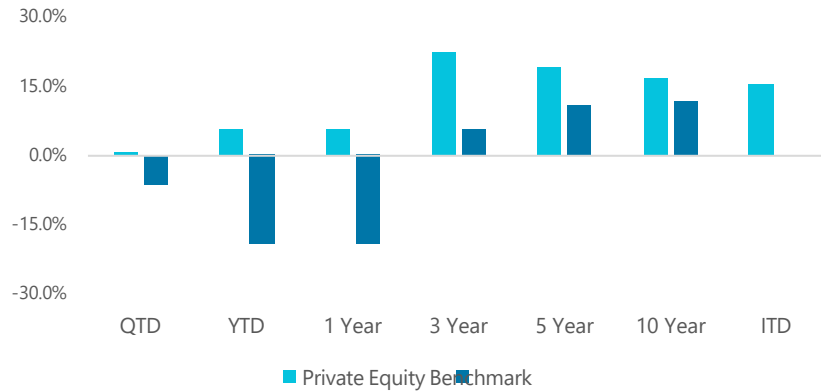


private markets

Summary Private Equity

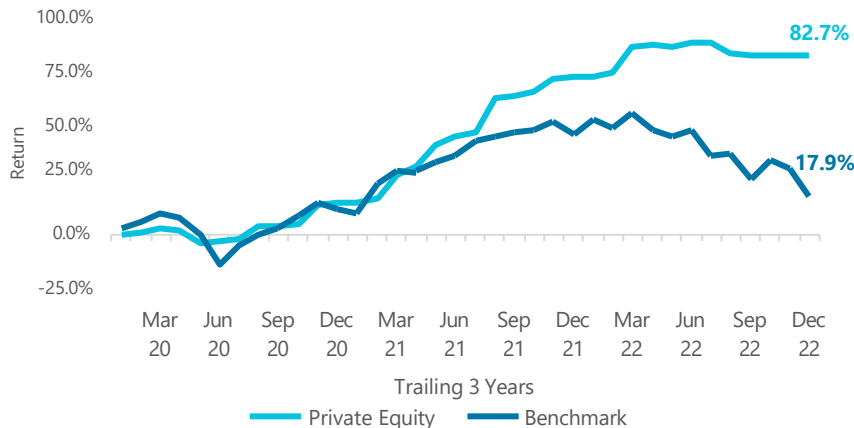
for the quarter ended December 31, 2022

Performance (net)



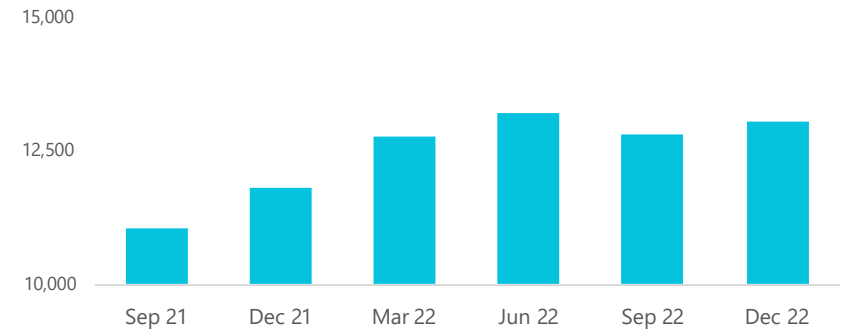
| | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD |
|-----------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| Private Equity | 0.1% | 5.8% | 5.8% | 22.3% | 19.2% | 17.0% | 15.4% |
| Benchmark | -6.1% | -19.3% | -19.3% | 5.6% | 10.7% | 12.0% | -- |
| Excess | 6.2% | 25.1% | 25.1% | 16.6% | 8.5% | 5.0% | -- |

Cumulative Return

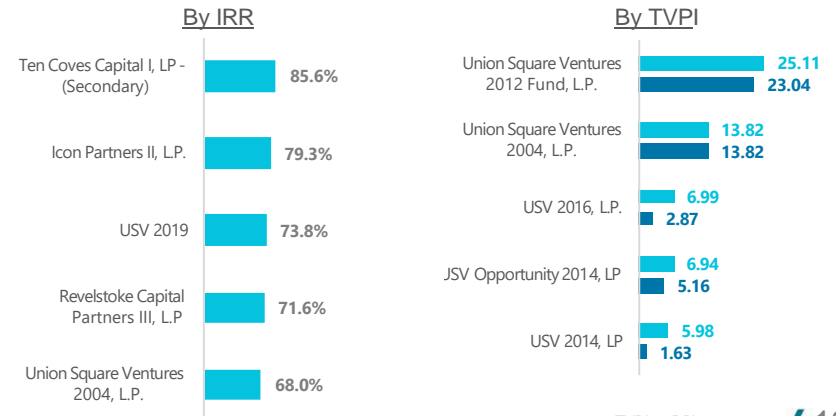


Asset Growth (mm)

| | QTD | 1 Year | 3 Year |
|----------------------------|---------------|---------------|---------------|
| Beginning Market Value | 12,821 | 11,793 | 6,563 |
| Net Cash Flow | 193 | 559 | 709 |
| Gain/Loss | 16 | 678 | 5,759 |
| Ending Market Value | 13,030 | 13,030 | 13,030 |



Top Performing Investments (since inception)



Historical Returns

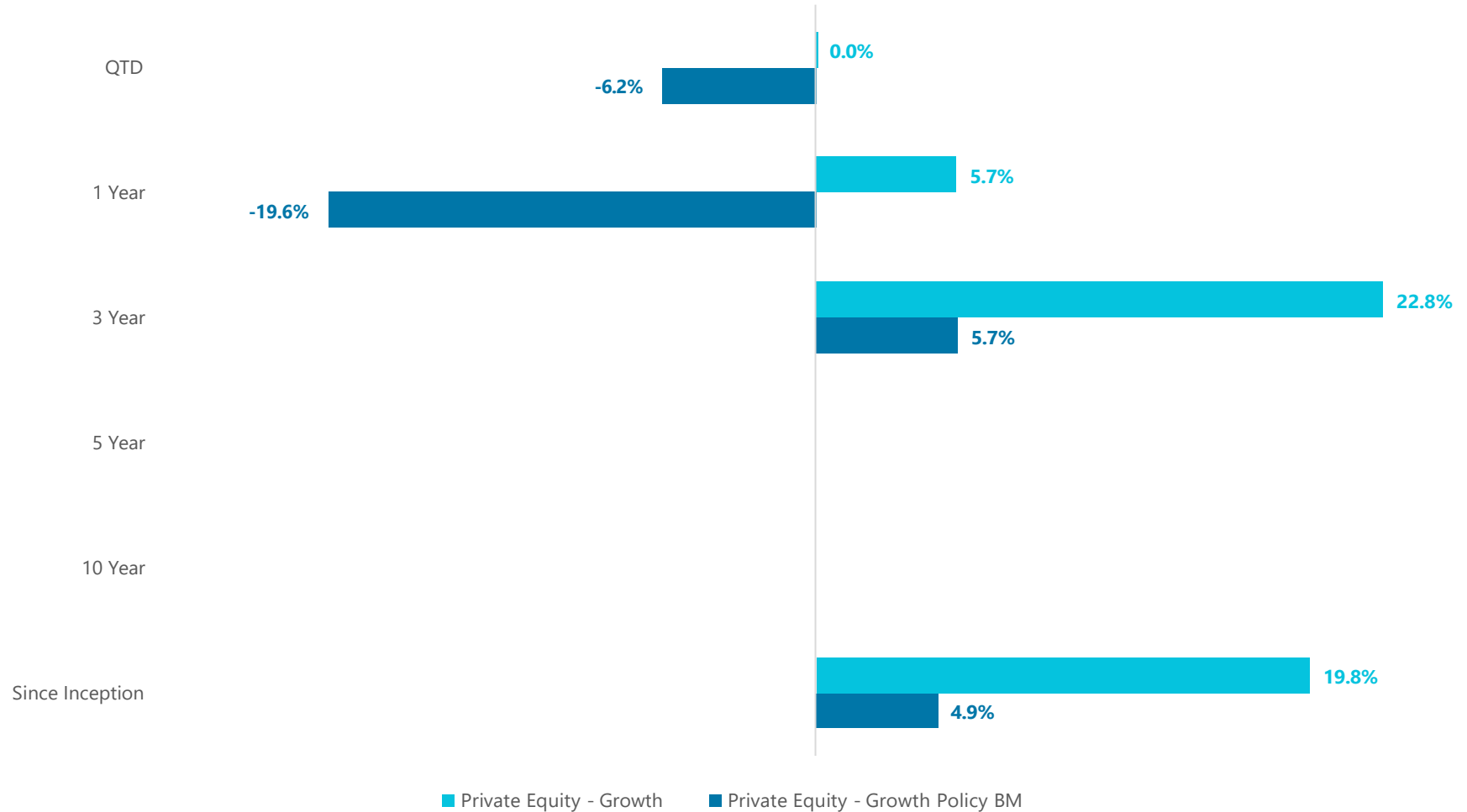
Private Equity – Growth

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Time-Weighted Returns (net)¹



Performance by Strategy

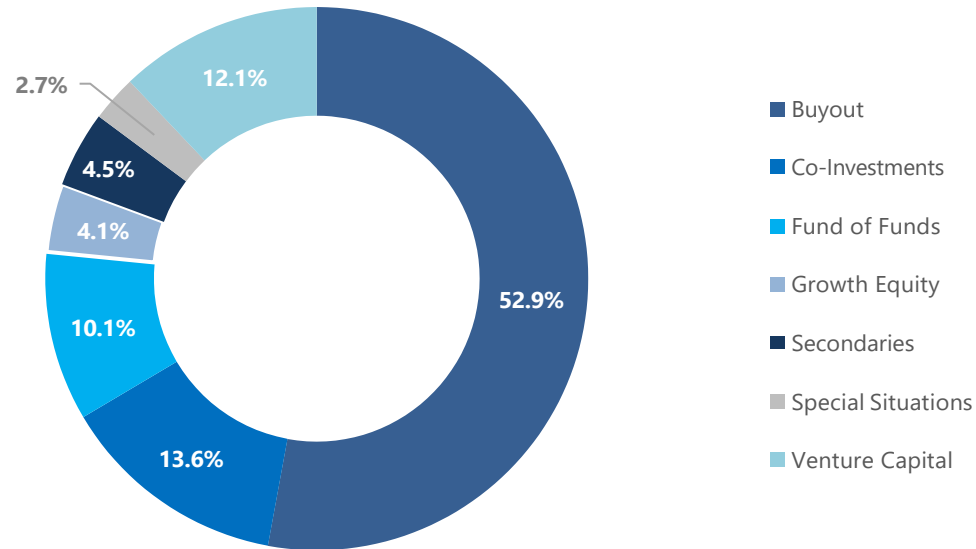
Private Equity – Growth

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Strategy^{1,2}



| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / Loss (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME |
|--------------------------------------|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|------------------------|------------------------|------------------------|-------------------------|---------------------|
| Buyout | 203 | 14,428.5 | 12,850.1 | 14,250.3 | 7,161.5 | 21,411.8 | 8,561.7 | 1.11x | 1.67x | 14.0% | 1.58 |
| Co-Investments | 10 | 1,356.4 | 2,113.2 | 1,011.9 | 1,840.7 | 2,852.6 | 739.4 | 0.48x | 1.35x | 18.1% | 1.31 |
| Fund of Funds | 12 | 1,440.9 | 1,330.1 | 1,533.1 | 1,367.1 | 2,900.2 | 1,570.1 | 1.15x | 2.18x | 14.7% | 1.62 |
| Growth Equity | 23 | 1,346.4 | 1,116.4 | 1,505.0 | 552.7 | 2,057.7 | 941.3 | 1.35x | 1.84x | 86.9% | 1.70 |
| Secondaries | 21 | 959.0 | 771.0 | 366.7 | 613.7 | 980.3 | 209.3 | 0.48x | 1.27x | 17.4% | 1.28 |
| Special Situations | 22 | 1,170.6 | 1,014.6 | 1,072.5 | 370.9 | 1,443.4 | 428.8 | 1.06x | 1.42x | 9.3% | 1.16 |
| Venture Capital | 105 | 2,253.4 | 1,934.9 | 2,584.3 | 1,635.9 | 4,220.2 | 2,285.3 | 1.34x | 2.18x | 21.8% | 2.04 |
| Total Private Equity - Growth | 396 | 22,955.1 | 21,130.3 | 22,323.7 | 13,542.4 | 35,866.2 | 14,735.9 | 1.06x | 1.70x | 16.4% | 1.69 |

¹ Based on best available cash flow adjusted market values.

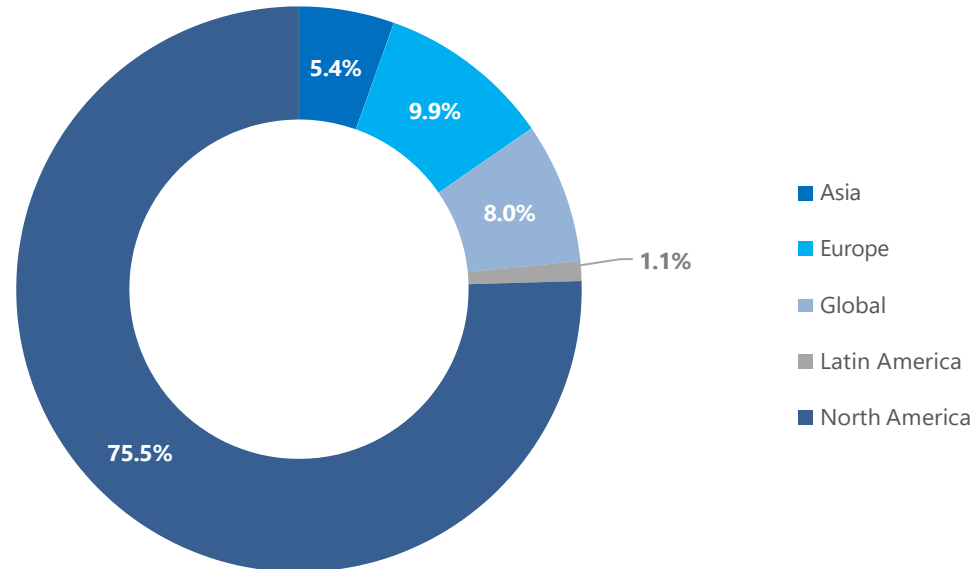
² Investment counts for Co-Investments and Fund of Funds do not include underlying funds.

Performance by Geography

Private Equity – Growth

for the quarter ended December 31, 2022

By Geography^{1,2}



| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / Loss (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME |
|--------------------------------------|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|------------------------|------------------------|------------------------|-------------------------|---------------------|
| Asia | 14 | 826.0 | 693.7 | 441.5 | 737.7 | 1,179.2 | 485.4 | 0.64x | 1.70x | 14.7% | 1.33 |
| Europe | 36 | 2,545.9 | 2,397.5 | 2,320.1 | 1,343.1 | 3,663.2 | 1,265.7 | 0.97x | 1.53x | 15.7% | 1.35 |
| Global | 27 | 2,162.8 | 1,300.0 | 809.0 | 1,088.3 | 1,897.2 | 597.3 | 0.62x | 1.46x | 15.8% | 1.34 |
| Latin America | 2 | 200.0 | 183.9 | 51.5 | 153.9 | 205.4 | 21.5 | 0.28x | 1.12x | 4.1% | 0.95 |
| North America | 317 | 17,220.4 | 16,555.2 | 18,701.7 | 10,219.4 | 28,921.1 | 12,365.9 | 1.13x | 1.75x | 16.4% | 1.73 |
| Total Private Equity - Growth | 396 | 22,955.1 | 21,130.3 | 22,323.7 | 13,542.4 | 35,866.2 | 14,735.9 | 1.06x | 1.70x | 16.4% | 1.69 |

¹ Based on best available cash flow adjusted market values.

² Investment counts for Co-Investments and Fund of Funds do not include underlying funds.

Performance by Vintage Year

Private Equity – Growth

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Vintage Year^{1,2,3}

| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / Loss (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME | Quartile Ranking |
|--------------------------------------|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|------------------------|------------------------|------------------------|-------------------------|---------------------|------------------|
| 1986 | 3 | 80.0 | 80.0 | 267.5 | 0.0 | 267.5 | 187.5 | 3.34x | 3.34x | 15.7% | -- | 1st |
| 1987 | 1 | 25.0 | 25.0 | 40.3 | 0.0 | 40.3 | 15.3 | 1.61x | 1.61x | 7.3% | -- | 3rd |
| 1988 | 2 | 200.0 | 216.6 | 466.9 | 0.0 | 466.9 | 250.3 | 2.16x | 2.16x | 15.5% | 89.91 | 2nd |
| 1989 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | N/A |
| 1990 | 1 | 7.5 | 7.5 | 16.7 | 0.0 | 16.7 | 9.2 | 2.22x | 2.22x | 13.0% | 9.13 | 3rd |
| 1991 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | N/A |
| 1992 | 10 | 116.0 | 111.0 | 242.5 | 0.0 | 242.5 | 131.6 | 2.19x | 2.19x | 29.1% | 3.78 | 1st |
| 1993 | 8 | 68.0 | 64.8 | 239.5 | 0.0 | 239.5 | 174.7 | 3.70x | 3.70x | 39.7% | 3.22 | 1st |
| 1994 | 5 | 56.9 | 58.8 | 237.6 | 0.0 | 237.6 | 178.8 | 4.04x | 4.04x | 54.1% | 2.82 | 1st |
| 1995 | 7 | 100.5 | 102.3 | 362.6 | 0.0 | 362.6 | 260.2 | 3.54x | 3.54x | 43.2% | 2.58 | 1st |
| 1996 | 12 | 222.9 | 225.2 | 608.8 | 0.0 | 608.8 | 383.6 | 2.70x | 2.70x | 37.5% | 2.15 | 1st |
| 1997 | 11 | 397.5 | 410.4 | 606.4 | 0.0 | 606.4 | 196.0 | 1.48x | 1.48x | 7.7% | 1.20 | 3rd |
| 1998 | 22 | 644.4 | 655.2 | 945.3 | 0.7 | 946.0 | 290.7 | 1.44x | 1.44x | 7.3% | 1.19 | 2nd |
| 1999 | 21 | 362.7 | 369.7 | 436.6 | 0.1 | 436.7 | 67.0 | 1.18x | 1.18x | 3.4% | 0.96 | 2nd |
| 2000 | 25 | 375.2 | 387.3 | 575.0 | 0.2 | 575.2 | 187.9 | 1.48x | 1.49x | 8.7% | 1.07 | 2nd |
| 2001 | 15 | 409.7 | 442.6 | 834.9 | 3.0 | 838.0 | 395.4 | 1.89x | 1.89x | 21.7% | 1.38 | 1st |
| 2002 | 8 | 220.4 | 230.3 | 537.4 | 0.0 | 537.4 | 307.1 | 2.33x | 2.33x | 19.0% | 1.64 | 2nd |
| 2003 | 8 | 309.1 | 339.2 | 701.6 | 0.3 | 701.9 | 362.7 | 2.07x | 2.07x | 21.3% | 1.60 | 1st |
| 2004 | 7 | 342.1 | 392.2 | 744.2 | 1.9 | 746.0 | 353.9 | 1.90x | 1.90x | 19.5% | 1.58 | 1st |
| 2005 | 15 | 503.2 | 506.2 | 1,039.9 | 2.6 | 1,042.5 | 536.3 | 2.05x | 2.06x | 13.4% | 1.64 | 1st |
| 2006 | 28 | 1,513.9 | 1,607.3 | 2,559.4 | 44.0 | 2,603.3 | 996.0 | 1.59x | 1.62x | 8.9% | 1.25 | 2nd |
| 2007 | 11 | 516.6 | 461.8 | 782.7 | 27.4 | 810.2 | 348.3 | 1.69x | 1.75x | 11.4% | 1.19 | 2nd |
| 2008 | 10 | 637.8 | 700.4 | 1,231.1 | 28.7 | 1,259.8 | 559.4 | 1.76x | 1.80x | 13.2% | 1.21 | 2nd |
| 2009 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | N/A |
| 2010 | 2 | 450.0 | 472.2 | 689.1 | 293.4 | 982.5 | 510.3 | 1.46x | 2.08x | 16.0% | 1.47 | 2nd |
| 2011 | 7 | 391.0 | 414.2 | 802.9 | 154.0 | 956.9 | 542.7 | 1.94x | 2.31x | 18.5% | 1.49 | 2nd |
| 2012 | 7 | 435.0 | 581.6 | 1,062.2 | 118.8 | 1,181.0 | 599.4 | 1.83x | 2.03x | 21.9% | 1.69 | 2nd |
| 2013 | 10 | 895.0 | 973.2 | 1,153.1 | 578.4 | 1,731.5 | 758.3 | 1.18x | 1.78x | 14.9% | 1.32 | 2nd |
| 2014 | 11 | 1,247.5 | 1,382.1 | 1,465.4 | 1,207.6 | 2,673.0 | 1,290.9 | 1.06x | 1.93x | 17.5% | 1.46 | 2nd |
| 2015 | 10 | 1,087.0 | 1,235.2 | 1,291.4 | 1,530.8 | 2,822.2 | 1,587.1 | 1.05x | 2.28x | 23.9% | 1.80 | 2nd |
| 2016 | 12 | 1,127.2 | 1,284.5 | 1,072.3 | 1,183.7 | 2,255.9 | 971.4 | 0.83x | 1.76x | 17.7% | 1.37 | 3rd |
| 2017 | 8 | 594.0 | 575.5 | 365.6 | 706.8 | 1,072.4 | 496.9 | 0.64x | 1.86x | 21.6% | 1.52 | 3rd |
| 2018 | 9 | 1,265.5 | 1,146.7 | 350.4 | 1,399.2 | 1,749.6 | 603.0 | 0.31x | 1.53x | 20.9% | 1.43 | 3rd |
| 2019 | 30 | 2,686.5 | 3,105.7 | 443.8 | 3,639.6 | 4,083.4 | 977.7 | 0.14x | 1.31x | 20.1% | 1.26 | 3rd |
| 2020 | 10 | 1,020.0 | 700.2 | 99.9 | 750.5 | 850.5 | 150.3 | 0.14x | 1.21x | 16.2% | 1.32 | 3rd |
| 2021 | 30 | 2,845.7 | 1,333.6 | 50.9 | 1,348.0 | 1,398.9 | 65.3 | 0.04x | 1.05x | 5.6% | 1.15 | 2nd |
| 2022 | 20 | 1,801.1 | 532.0 | 0.0 | 522.8 | 522.8 | (9.2) | 0.00x | 0.98x | -3.6% | 1.02 | 2nd |
| Total Private Equity - Growth | 396 | 22,955.1 | 21,130.3 | 22,323.7 | 13,542.4 | 35,866.2 | 14,735.9 | 1.06x | 1.70x | 16.4% | 1.69 | |

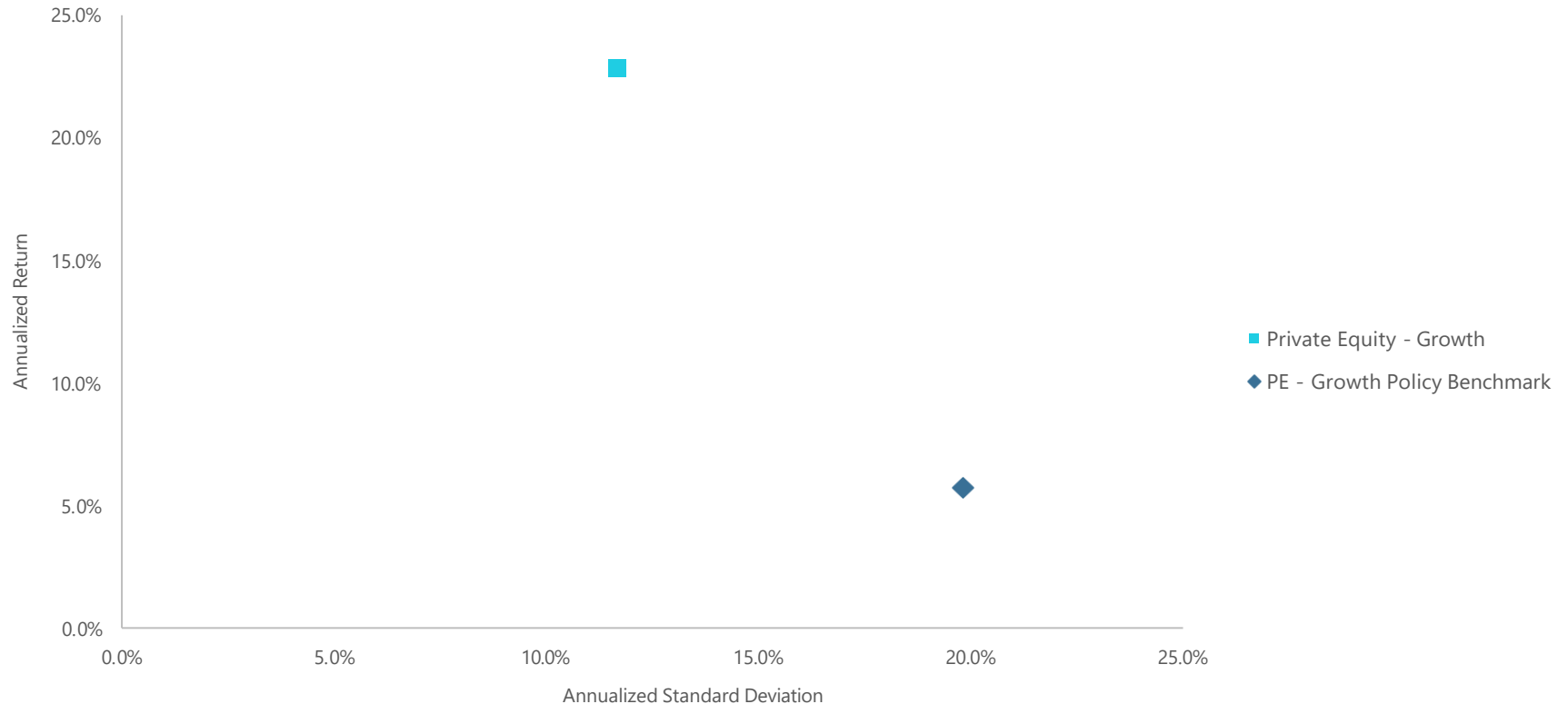
1. Based on best available cash flow adjusted market values.
2. Investment counts for Co-Investments and Fund of Funds do not include underlying funds.
3. Benchmark data used is latest available by Burgiss Private IQ. Quartile rankings are reported as not applicable (N/A) if commitment date is within 3 years of reporting date or if no commitments were made for the respective vintage year.

Risk vs. Return

Private Equity – Growth

for the quarter ended December 31, 2022

3 Year (Annualized)



| | Annualized Return | Standard Deviation | Sharpe Ratio | Information Ratio | Beta | Tracking Error |
|--------------------------------|-------------------|--------------------|--------------|-------------------|------|----------------|
| Private Equity - Growth | 22.8% | 11.7% | | | | |
| PE - Growth Policy Benchmark | 5.7% | 19.8% | 1.76 | 0.74 | 0.23 | 18.8% |

Annual Cash Flow Activity

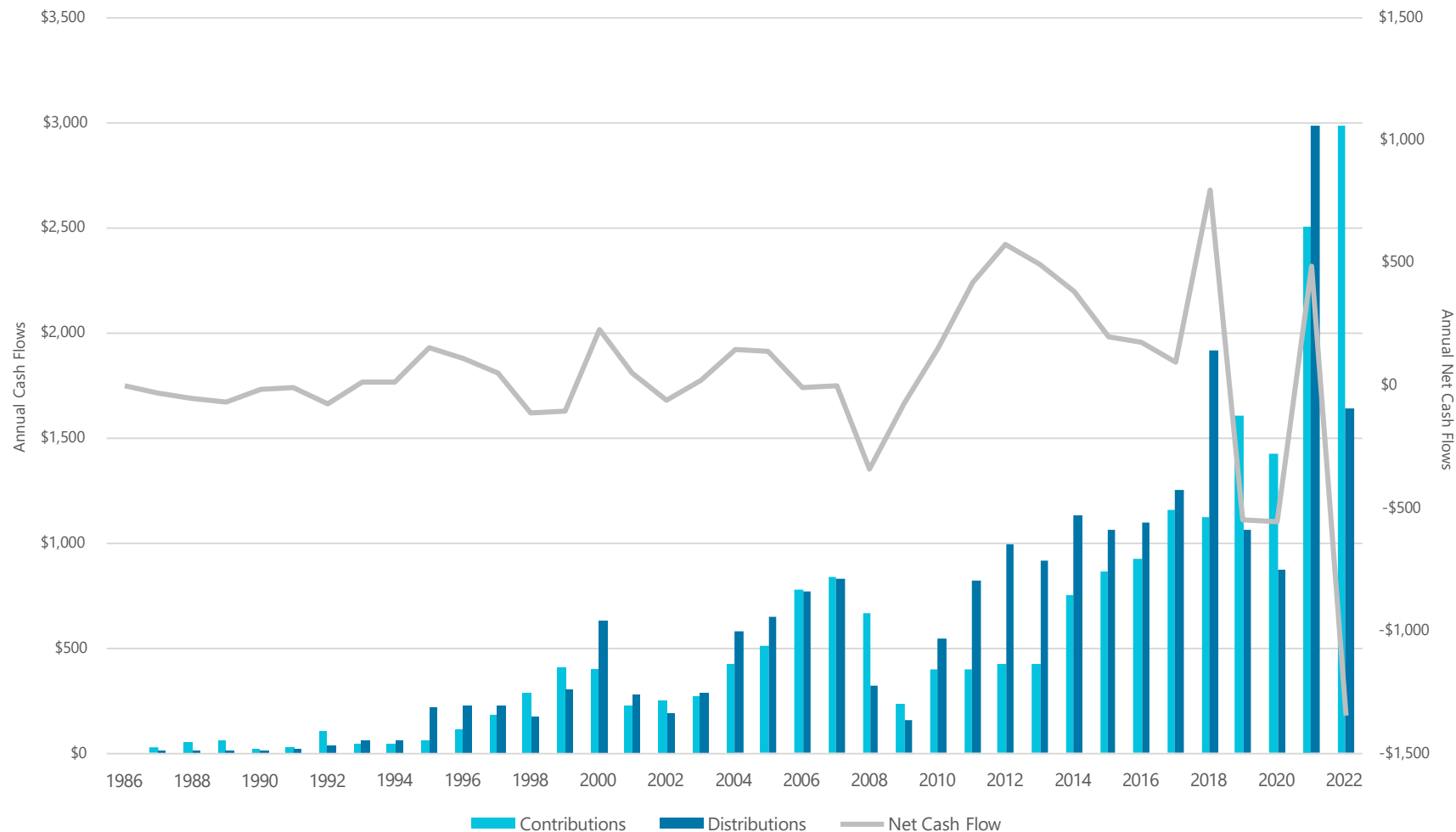
Private Equity

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Year (mm)



Summary

Real Estate

for the quarter ended December 31, 2022



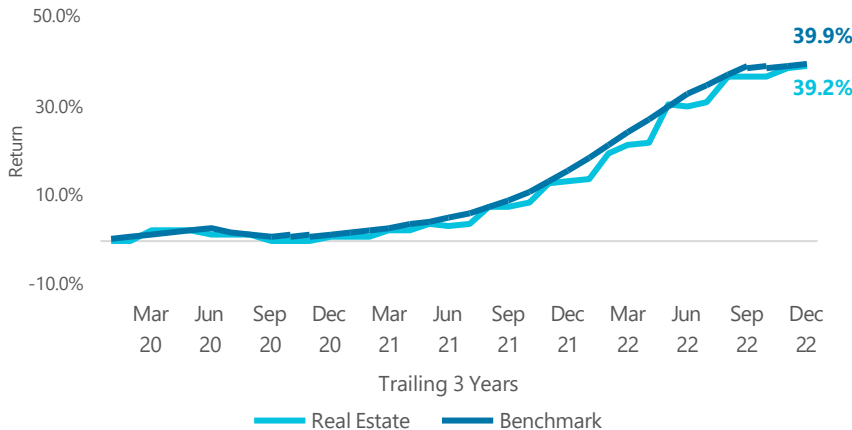
Los Angeles County Employees Retirement Association

Performance (net)



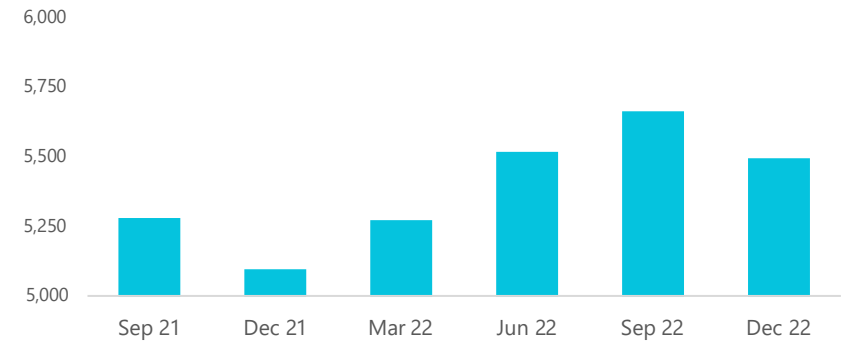
| | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD |
|--------------------|-------------|--------------|--------------|--------------|-------------|-------------|-------------|
| Real Estate | 1.7% | 22.8% | 22.8% | 11.7% | 9.5% | 9.5% | 8.2% |
| Benchmark | 0.4% | 20.9% | 20.9% | 11.9% | 9.8% | 10.3% | -- |
| Excess | 1.3% | 2.0% | 2.0% | -0.2% | -0.2% | -0.8% | -- |

Cumulative Return

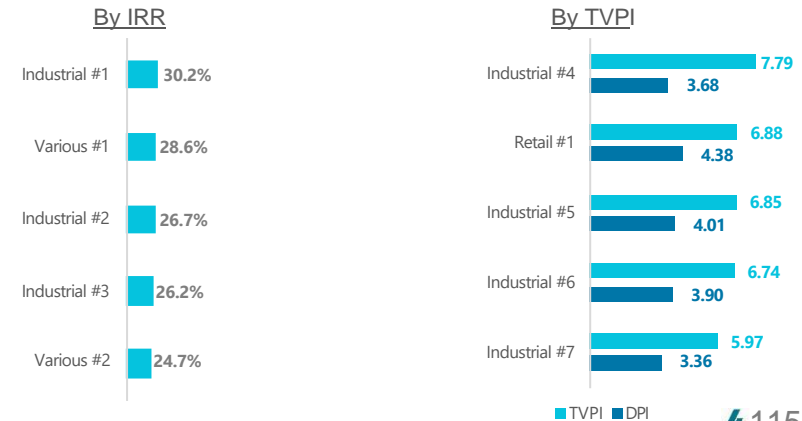


Asset Growth (mm)

| | QTD | 1 Year | 3 Year |
|----------------------------|--------------|--------------|--------------|
| Beginning Market Value | 5,660 | 5,098 | 6,126 |
| Net Cash Flow | -264 | -716 | -2,419 |
| Gain/Loss | 98 | 1,111 | 1,787 |
| Ending Market Value | 5,493 | 5,493 | 5,493 |



Top Performing Investments (since inception)¹



¹ Property names removed due to confidentiality reasons.

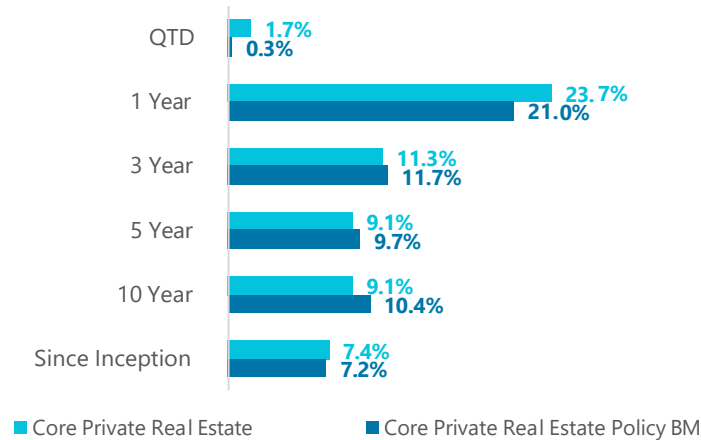
Historical Returns

Real Estate

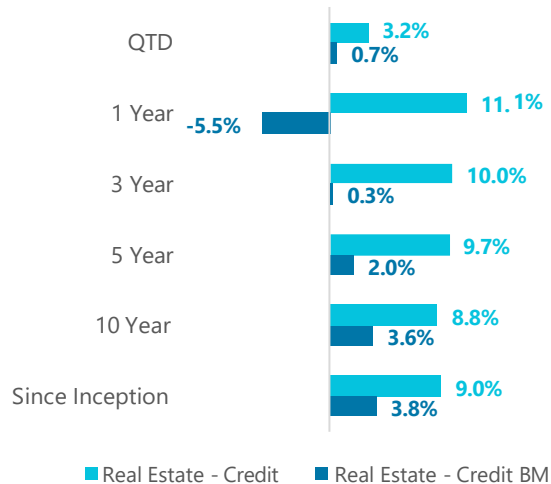
for the quarter ended December 31, 2022

Time-Weighted Returns (net)

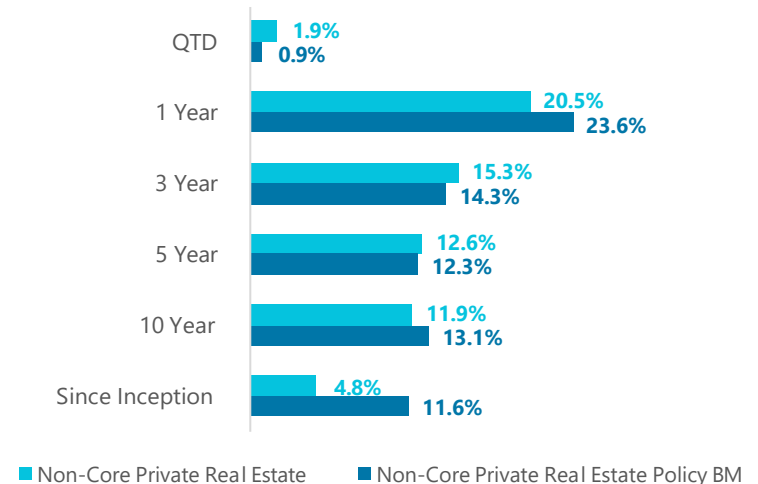
Core



Debt



Non-Core



Performance by Strategy

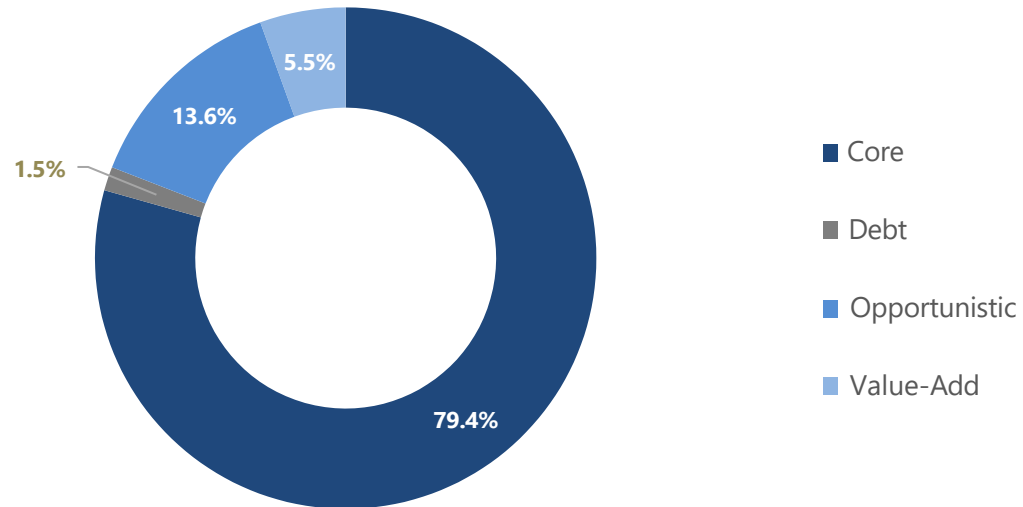
Real Estate

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Strategy^{1,2}



| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / (Loss) (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME |
|--------------------------|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|--------------------------|------------------------|------------------------|-------------------------|---------------------|
| Core | 79 | 431.7 | 7,409.9 | 6,794.4 | 4,352.3 | 11,146.7 | 3,736.8 | 0.92x | 1.50x | 8.9% | 1.19 |
| Debt | 7 | 0.0 | 157.0 | 109.7 | 84.5 | 194.2 | 37.2 | 0.70x | 1.24x | 8.3% | 1.17 |
| Opportunistic | 16 | 1,096.8 | 1,118.1 | 773.6 | 744.0 | 1,517.6 | 399.4 | 0.69x | 1.36x | 6.9% | 1.02 |
| Value-Add | 12 | 468.2 | 602.5 | 221.3 | 303.3 | 524.6 | (77.9) | 0.37x | 0.87x | -3.2% | 0.63 |
| Total Real Estate | 114 | 1,996.7 | 9,287.5 | 7,898.9 | 5,484.1 | 13,383.0 | 4,095.5 | 0.85x | 1.44x | 8.3% | 1.14 |

¹ Based on best available cash flow adjusted market values and includes only active investments and sold assets with balance sheet residuals.

² Commitment amounts reflect only commingled fund investments.

Performance by Property Type

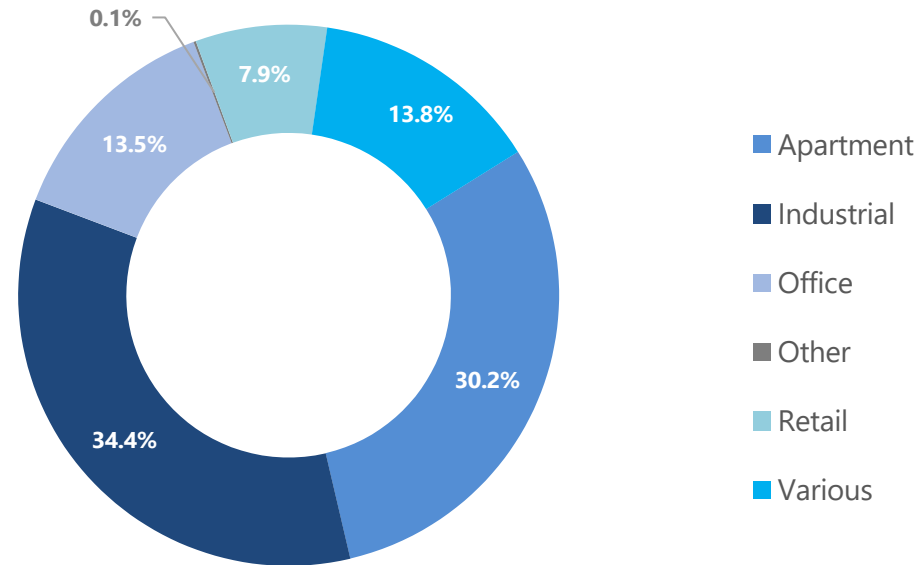
Real Estate

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Property Type^{1,2,3}



| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / (Loss) (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME |
|--------------------------|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|--------------------------|------------------------|------------------------|-------------------------|---------------------|
| Apartment | 36 | 384.0 | 3,082.3 | 2,558.7 | 1,657.9 | 4,216.6 | 1,134.2 | 0.83x | 1.37x | 8.5% | 1.17 |
| Industrial | 21 | 231.7 | 1,692.9 | 1,547.9 | 1,887.1 | 3,434.9 | 1,742.1 | 0.91x | 2.03x | 13.5% | 1.75 |
| Office | 19 | 0.0 | 2,006.0 | 1,884.9 | 741.9 | 2,626.9 | 620.9 | 0.94x | 1.31x | 6.3% | 1.09 |
| Other | 4 | 100.0 | 170.6 | 199.0 | 7.8 | 206.8 | 36.2 | 1.17x | 1.21x | 4.2% | 0.76 |
| Retail | 15 | 0.0 | 1,277.3 | 1,269.1 | 431.2 | 1,700.3 | 423.0 | 0.99x | 1.33x | 6.5% | 0.84 |
| Various | 19 | 1,281.0 | 1,058.5 | 439.4 | 758.2 | 1,197.5 | 139.1 | 0.42x | 1.13x | 2.6% | 0.83 |
| Total Real Estate | 114 | 1,996.7 | 9,287.5 | 7,898.9 | 5,484.1 | 13,383.0 | 4,095.5 | 0.85x | 1.44x | 8.3% | 1.14 |

¹ Based on best available cash flow adjusted market values and includes only active investments and sold assets with balance sheet residuals.

² Commitment amounts reflect only commingled fund investments.

³ Various refers to commingled fund investments with more than one property type; Other refers to hotel and fund level market values for the debt program.

Performance by Geography

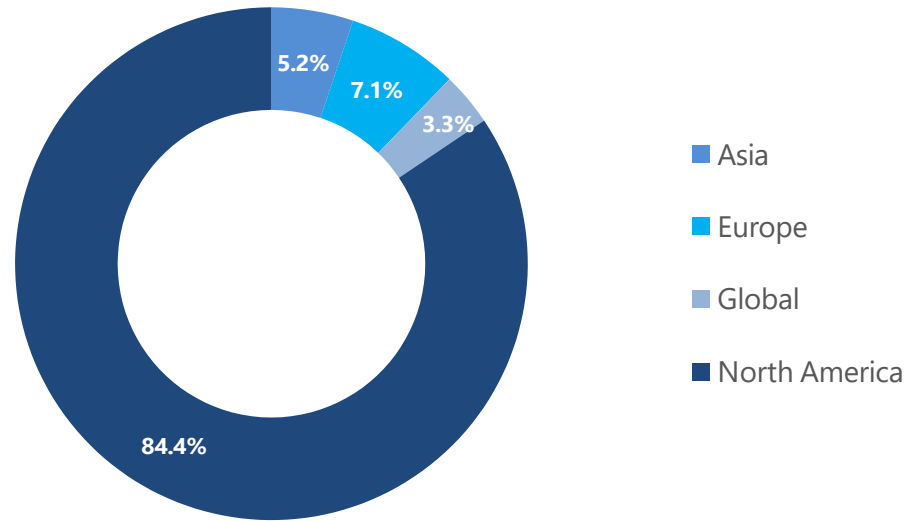
Real Estate

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Geography (non-US)^{1,2}



| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / (Loss) (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME |
|--------------------------|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|--------------------------|------------------------|------------------------|-------------------------|---------------------|
| Asia | 4 | 300.0 | 304.4 | 112.5 | 283.0 | 395.5 | 91.1 | 0.37x | 1.30x | 6.0% | 1.09 |
| Europe | 10 | 469.0 | 614.5 | 364.3 | 387.6 | 752.0 | 137.5 | 0.59x | 1.22x | 4.8% | 0.91 |
| Global | 5 | 468.8 | 267.1 | 212.2 | 183.2 | 395.4 | 128.3 | 0.79x | 1.48x | 12.2% | 1.13 |
| North America | 95 | 759.0 | 8,101.5 | 7,209.8 | 4,630.3 | 11,840.2 | 3,738.7 | 0.89x | 1.46x | 8.4% | 1.15 |
| Total Real Estate | 114 | 1,996.7 | 9,287.5 | 7,898.9 | 5,484.1 | 13,383.0 | 4,095.5 | 0.85x | 1.44x | 8.3% | 1.14 |

¹ Based on best available cash flow adjusted market values and includes only active investments and sold assets with balance sheet residuals.

² Commitment amounts reflect only commingled fund investments.

Performance by Geography

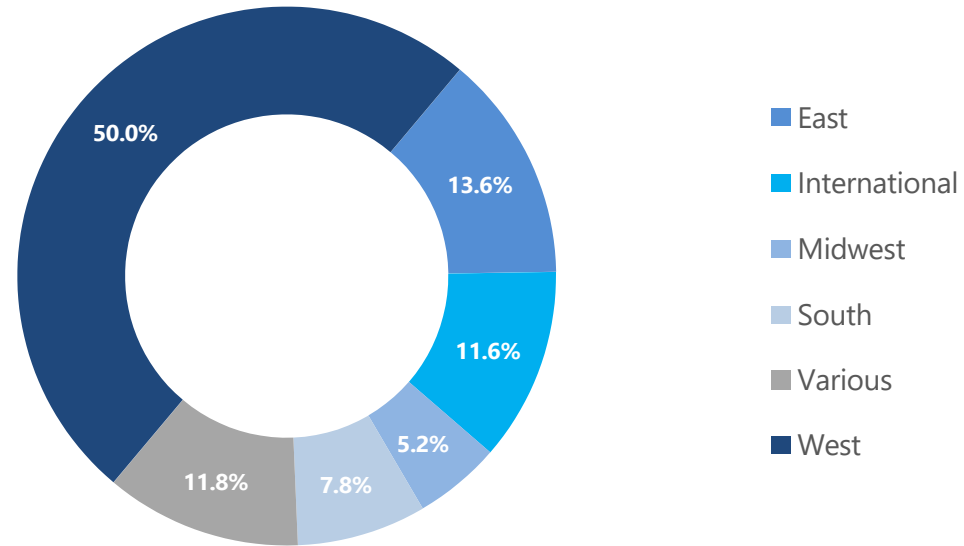
Real Estate

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Geography (US NCREIF)^{1,2}



| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / (Loss) (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME |
|--------------------------|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|--------------------------|------------------------|------------------------|-------------------------|---------------------|
| East | 26 | 0.0 | 2,472.7 | 2,284.4 | 748.0 | 3,032.4 | 559.6 | 0.92x | 1.23x | 5.9% | 0.90 |
| International | 13 | 715.6 | 878.6 | 476.9 | 636.4 | 1,113.3 | 234.7 | 0.54x | 1.27x | 5.4% | 0.97 |
| Midwest | 10 | 0.0 | 592.0 | 491.7 | 286.1 | 777.8 | 185.8 | 0.83x | 1.31x | 5.7% | 0.88 |
| South | 11 | 0.0 | 1,190.5 | 1,252.2 | 426.4 | 1,678.6 | 488.1 | 1.05x | 1.41x | 8.7% | 1.03 |
| Various | 11 | 897.1 | 686.8 | 347.0 | 645.5 | 992.5 | 305.7 | 0.51x | 1.45x | 7.2% | 1.04 |
| West | 43 | 384.0 | 3,466.9 | 3,046.8 | 2,741.7 | 5,788.6 | 2,321.6 | 0.88x | 1.67x | 9.8% | 1.47 |
| Total Real Estate | 114 | 1,996.7 | 9,287.5 | 7,898.9 | 5,484.1 | 13,383.0 | 4,095.5 | 0.85x | 1.44x | 8.3% | 1.14 |

¹ Based on best available cash flow adjusted market values and includes only active investments and sold assets with balance sheet residuals.

² Commitment amounts reflect only commingled fund investments.

Performance by Vintage Year

Real Estate

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Vintage Year^{1,2,3}

| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / (Loss) (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME | Quartile Ranking |
|--------------------------|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|--------------------------|------------------------|------------------------|-------------------------|---------------------|------------------|
| 1990 | 1 | 0.0 | 249.9 | 302.5 | 124.7 | 427.2 | 177.3 | 1.21x | 1.71x | 6.4% | 4.64 | N/A |
| 1991 | 3 | 0.0 | 32.9 | 124.2 | 91.3 | 215.5 | 182.6 | 3.78x | 6.56x | 12.3% | 13.81 | N/A |
| 1992 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | N/A |
| 1993 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | N/A |
| 1994 | 1 | 0.0 | 15.4 | 67.4 | 38.4 | 105.9 | 90.5 | 4.38x | 6.88x | 12.9% | 1.47 | N/A |
| 1995 | 1 | 0.0 | 67.0 | 111.4 | 102.4 | 213.8 | 146.7 | 1.66x | 3.19x | 11.7% | 1.24 | N/A |
| 1996 | 1 | 0.0 | 24.0 | 38.8 | 32.6 | 71.4 | 47.4 | 1.62x | 2.97x | 7.7% | 0.82 | N/A |
| 1997 | 1 | 0.0 | 18.4 | 67.6 | 75.4 | 143.0 | 124.7 | 3.68x | 7.79x | 15.9% | 2.16 | N/A |
| 1998 | 1 | 0.0 | 48.9 | 66.3 | 49.1 | 115.4 | 66.6 | 1.36x | 2.36x | 6.4% | 0.71 | N/A |
| 1999 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | N/A |
| 2000 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | N/A |
| 2001 | 1 | 0.0 | 143.5 | 77.3 | 93.4 | 170.6 | 27.2 | 0.54x | 1.19x | 4.6% | 0.74 | N/A |
| 2002 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | N/A |
| 2003 | 1 | 0.0 | 142.8 | 131.4 | 69.1 | 200.6 | 57.8 | 0.92x | 1.40x | 4.4% | 0.71 | N/A |
| 2004 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | N/A |
| 2005 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | N/A |
| 2006 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | N/A |
| 2007 | 3 | 36.6 | 454.6 | 401.9 | 1.2 | 403.1 | (51.5) | 0.88x | 0.89x | -5.4% | 0.54 | 4th |
| 2008 | 1 | 150.0 | 150.0 | 96.0 | 0.2 | 96.2 | (53.8) | 0.64x | 0.64x | -5.7% | 0.34 | 4th |
| 2009 | 1 | 18.5 | 22.3 | 28.5 | 0.4 | 28.8 | 6.5 | 1.27x | 1.29x | 8.2% | 0.84 | 3rd |
| 2010 | 1 | 100.0 | 97.1 | 152.0 | 6.3 | 158.3 | 61.2 | 1.57x | 1.63x | 9.7% | 0.92 | 3rd |
| 2011 | 4 | 17.1 | 217.7 | 116.0 | 26.0 | 142.0 | (75.7) | 0.53x | 0.65x | -39.0% | 0.30 | 4th |
| 2012 | 3 | 134.0 | 438.8 | 187.2 | 174.3 | 361.5 | (77.3) | 0.43x | 0.82x | -4.7% | 0.65 | 4th |
| 2013 | 7 | 100.0 | 471.3 | 581.8 | 118.2 | 700.0 | 228.7 | 1.23x | 1.49x | 9.0% | 1.03 | 3rd |
| 2014 | 15 | 260.1 | 990.8 | 810.8 | 699.3 | 1,510.1 | 519.3 | 0.82x | 1.52x | 9.0% | 1.20 | 3rd |
| 2015 | 9 | 0.0 | 953.6 | 750.0 | 782.8 | 1,532.8 | 579.3 | 0.79x | 1.61x | 13.5% | 1.51 | 2nd |
| 2016 | 7 | 150.0 | 484.6 | 218.5 | 571.8 | 790.3 | 305.7 | 0.45x | 1.63x | 13.8% | 1.47 | 2nd |
| 2017 | 12 | 178.4 | 1,341.0 | 917.7 | 903.5 | 1,821.2 | 480.1 | 0.68x | 1.36x | 11.1% | 1.24 | 3rd |
| 2018 | 10 | 150.0 | 377.7 | 190.7 | 275.4 | 466.1 | 88.4 | 0.50x | 1.23x | 8.3% | 1.15 | 4th |
| 2019 | 25 | 412.1 | 2,399.0 | 2,376.8 | 1,166.9 | 3,543.7 | 1,144.7 | 0.99x | 1.48x | 9.2% | 1.06 | 3rd |
| 2020 | 2 | 0.0 | 71.8 | 81.2 | 0.8 | 82.0 | 10.2 | 1.13x | 1.14x | 5.6% | 1.14 | 3rd |
| 2021 | 2 | 180.0 | 67.7 | 2.9 | 73.6 | 76.5 | 8.8 | 0.04x | 1.13x | 13.3% | 1.30 | 3rd |
| 2022 | 1 | 110.0 | 7.0 | 0.0 | 7.0 | 7.0 | 0.0 | 0.00x | 1.00x | 0.0% | 1.00 | 2nd |
| Total Real Estate | 114 | 1,996.7 | 9,287.5 | 7,898.9 | 5,484.1 | 13,383.0 | 4,095.5 | 0.85x | 1.44x | 8.3% | 1.14 | |

1. Based on best available cash flow adjusted market values.
2. Commitment amounts reflect only commingled fund investments.
3. Benchmark data used is latest available by Burgiss Private IQ. Quartile rankings exclude IMAs and Core Funds.

Leverage Exposure

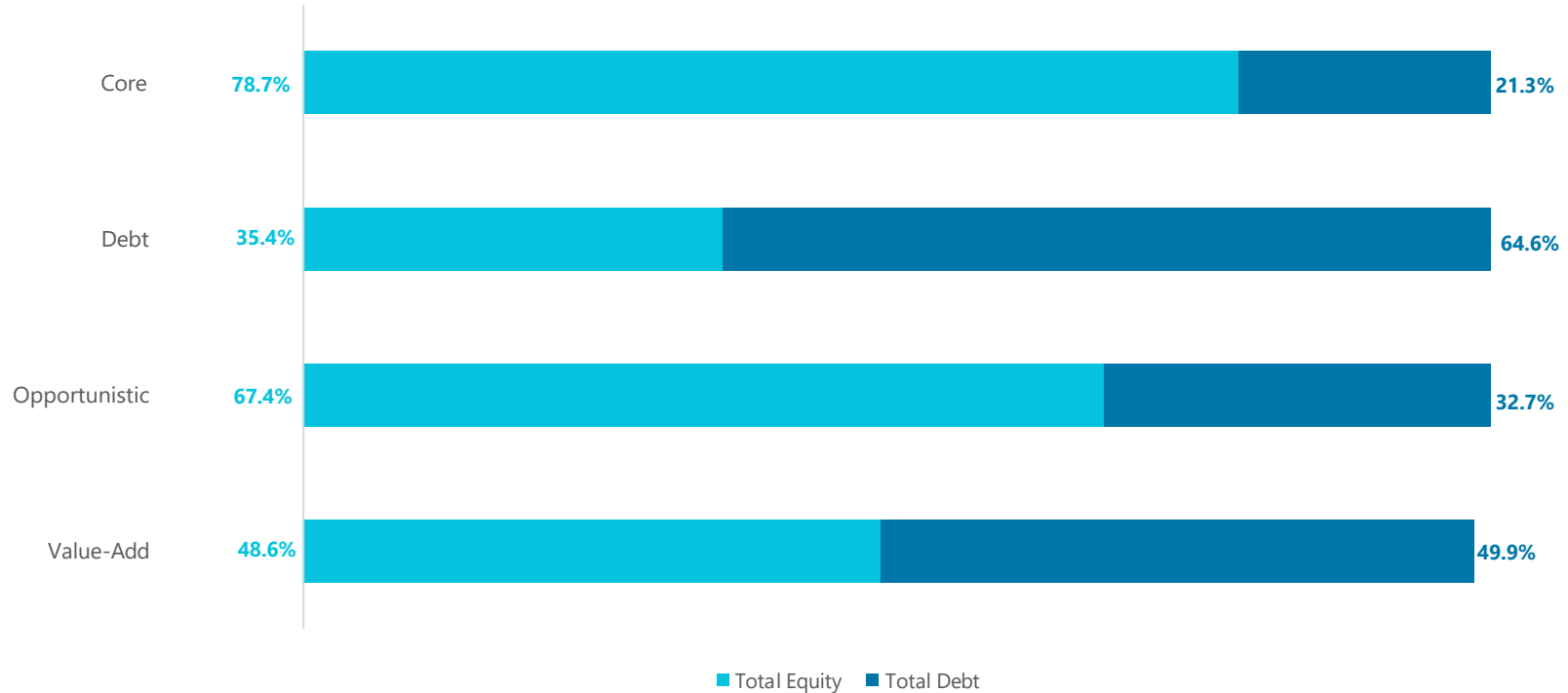
Real Estate

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Leverage Exposure^{1,2}



| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / (Loss) (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME | Total Debt-Fund Level (mm) | Total Equity-Fund Level (mm) | Total Debt-Fund Level (%) | Total Equity-Fund Level (%) |
|--------------------------|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|--------------------------|------------------------|------------------------|-------------------------|---------------------|----------------------------|------------------------------|---------------------------|-----------------------------|
| Core | 79 | 431.7 | 7,409.9 | 6,794.4 | 4,352.3 | 11,146.7 | 3,736.8 | 0.92x | 1.50x | 8.9% | 1.19 | 7,556.4 | 27,927.2 | 21.3% | 78.7% |
| Debt | 7 | 0.0 | 157.0 | 109.7 | 84.5 | 194.2 | 37.2 | 0.70x | 1.24x | 8.3% | 1.17 | 165.8 | 90.7 | 64.6% | 35.4% |
| Opportunistic | 16 | 1,096.8 | 1,118.1 | 773.6 | 744.0 | 1,517.6 | 399.4 | 0.69x | 1.36x | 6.9% | 1.02 | 5,748.1 | 11,852.1 | 32.7% | 67.4% |
| Value-Add | 12 | 468.2 | 602.5 | 221.3 | 303.3 | 524.6 | (77.9) | 0.37x | 0.87x | -3.2% | 0.63 | 74,261.5 | 72,286.2 | 49.9% | 48.6% |
| Total Real Estate | 114 | 1,996.7 | 9,287.5 | 7,898.9 | 5,484.1 | 13,383.0 | 4,095.5 | 0.85x | 1.44x | 8.3% | 1.14 | 87,731.7 | 112,156.3 | 43.4% | 55.5% |

¹ Based on best available cash flow adjusted market values and includes only active investments and sold assets with balance sheet residuals.

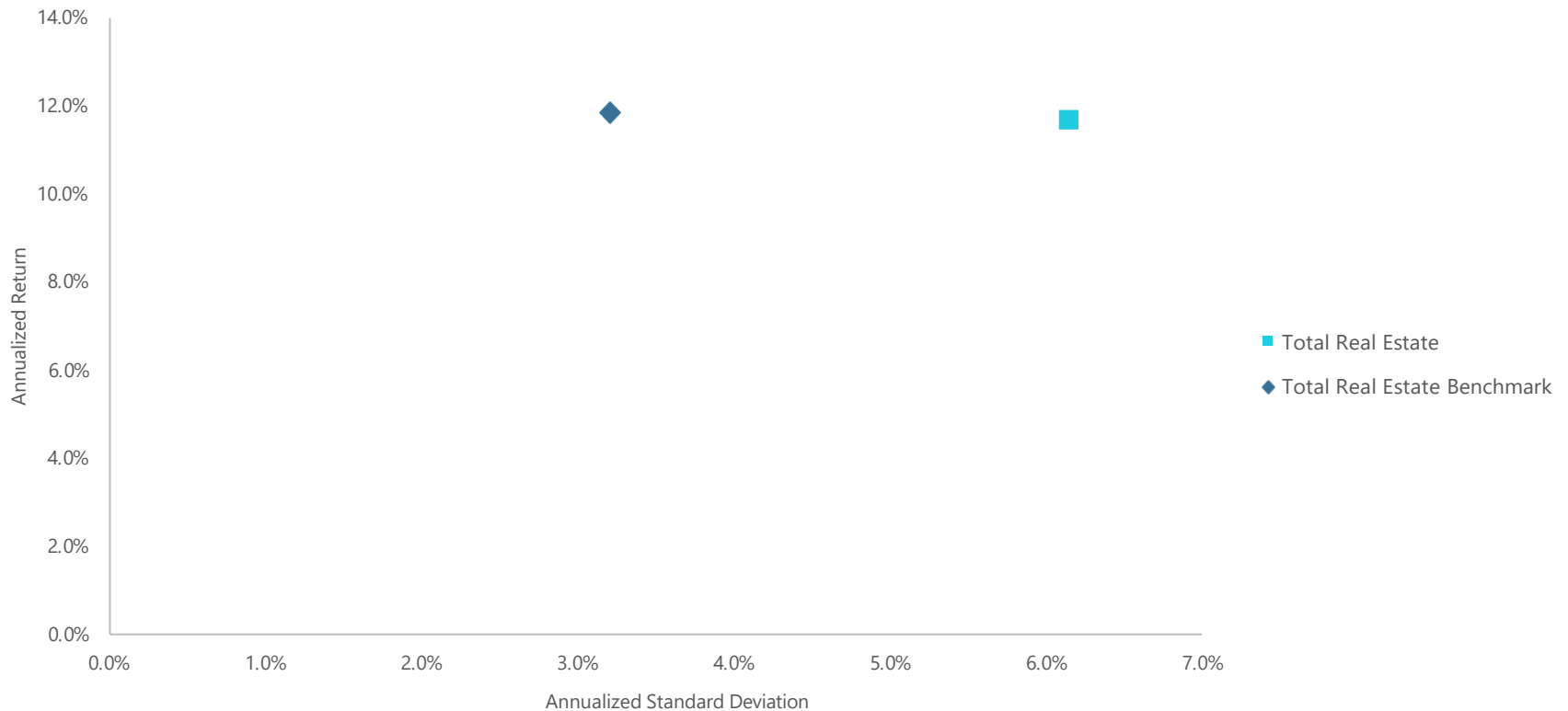
² Commitment amounts reflect only commingled fund investments.

Risk vs. Return

Real Estate

for the quarter ended December 31, 2022

3 Year (Annualized)



| | Annualized Return | Standard Deviation | Sharpe Ratio | Information Ratio | Beta | Tracking Error |
|-----------------------------|-------------------|--------------------|--------------|-------------------|------|----------------|
| Total Real Estate | 11.7% | 6.1% | | | | |
| Total Real Estate Benchmark | 11.9% | 3.2% | 1.72 | (0.04) | 0.95 | 18.3% |

Annual Cash Flow Activity

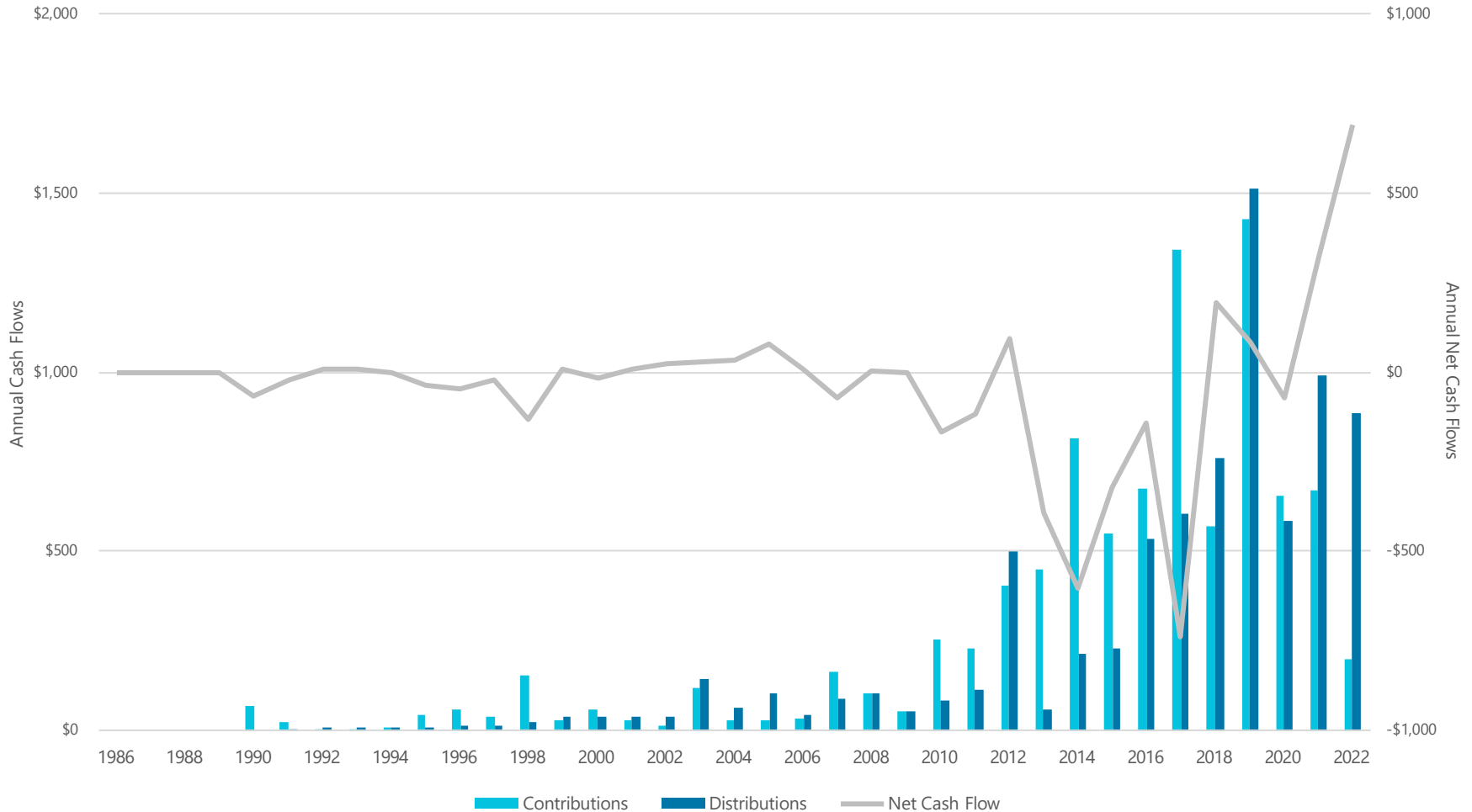
Real Estate

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Year (mm)



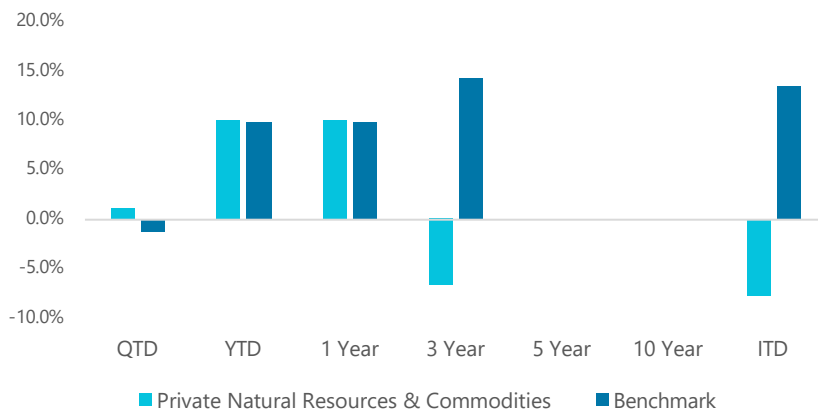
Summary

Private Real Assets ex. Real Estate
for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Performance (net)¹



| | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD |
|--|-------------|--------------|--------------|--------------|-----------|-----------|--------------|
| Private Natural Resources & Commodities | 1.0% | 10.0% | 10.0% | -6.7% | -- | -- | -7.8% |
| Benchmark | -1.3% | 9.7% | 9.7% | 14.2% | -- | -- | 13.4% |
| Excess | 2.3% | 0.3% | 0.3% | -20.9% | -- | -- | -21.2% |

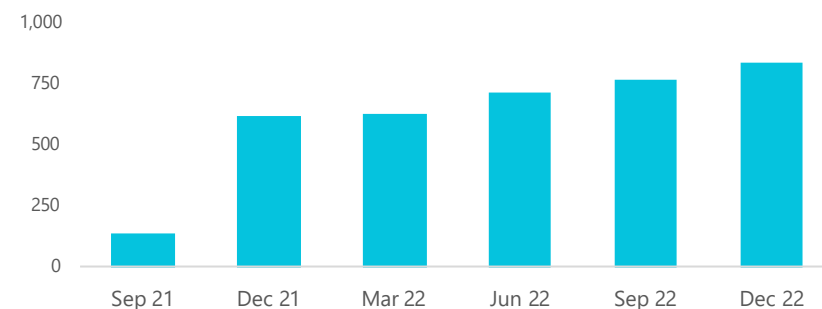
Cumulative Return¹



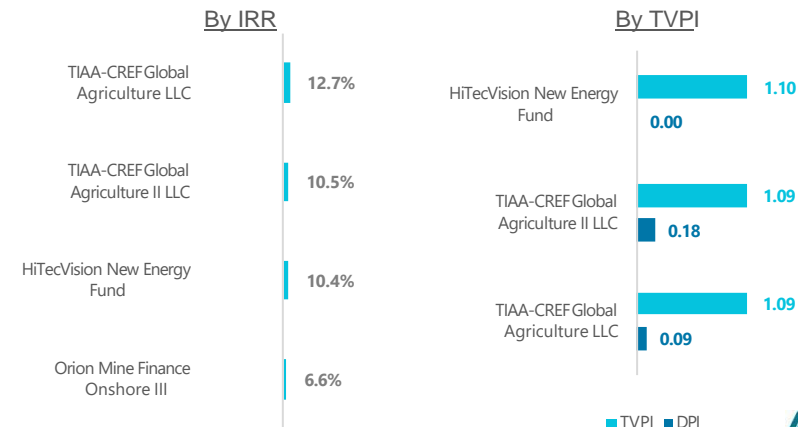
¹ Private natural resources & commodities funds reflect early-stage life cycle performance.

Asset Growth (mm)

| | QTD | 1 Year | 3 Year |
|----------------------------|------------|------------|------------|
| Beginning Market Value | 772 | 621 | 103 |
| Net Cash Flow | 59 | 153 | 693 |
| Gain/Loss | 8 | 64.5 | 42.4 |
| Ending Market Value | 839 | 839 | 839 |



Top Performing Investments (since inception)¹



■ TVPI ■ DPI

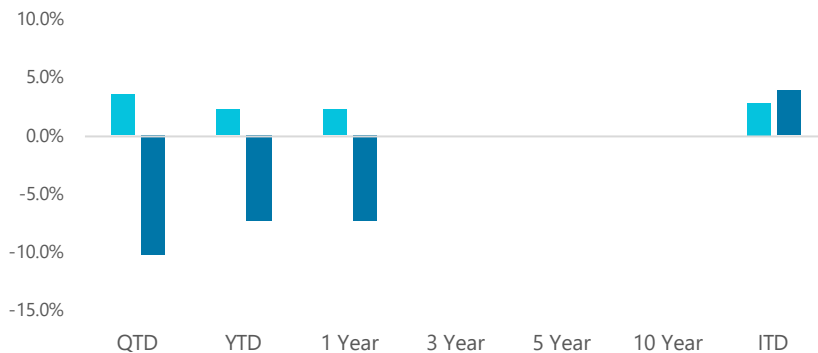
Summary

Private Real Assets ex. Real Estate
for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

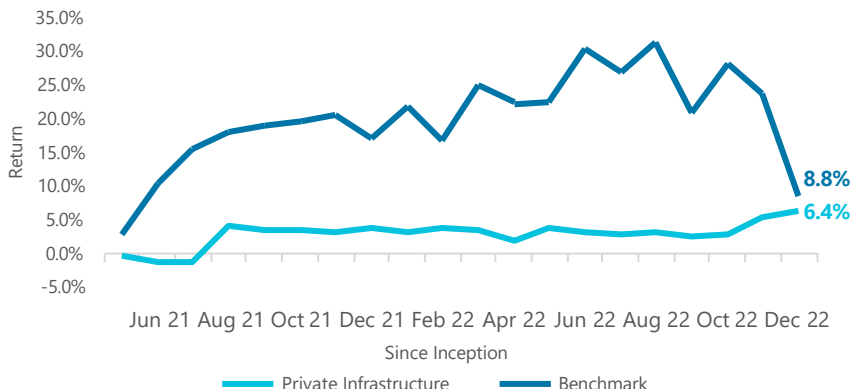
Performance (net)¹



■ Private Infrastructure ■ Benchmark

| | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD |
|-------------------------------|-------------|-------------|-------------|--------|--------|---------|-------------|
| Private Infrastructure | 3.6% | 2.3% | 2.3% | -- | -- | -- | 2.9% |
| Benchmark | -10.2% | -7.2% | -7.2% | -- | -- | -- | 4.0% |
| Excess | 13.8% | 9.6% | 9.6% | -- | -- | -- | -1.0% |

Cumulative Return¹

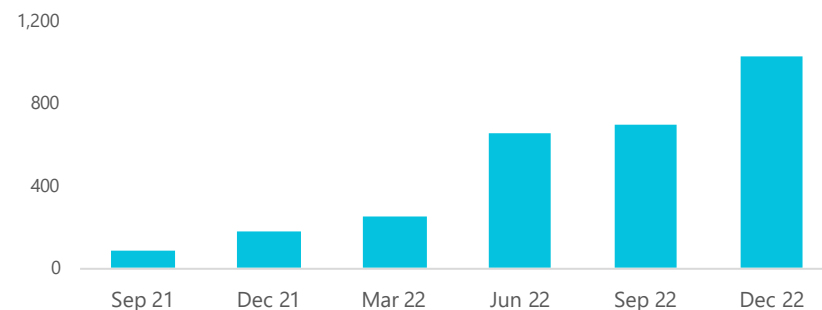


Since Inception

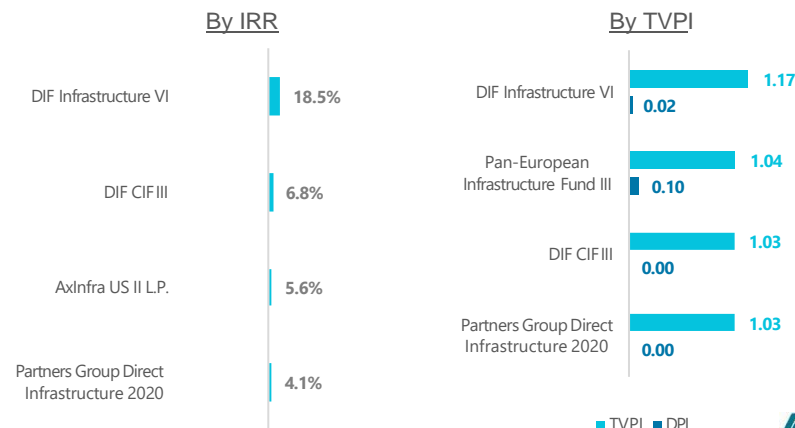
■ Private Infrastructure ■ Benchmark

Asset Growth (mm)

| | QTD | 1 Year | 3 Year |
|----------------------------|--------------|--------------|--------|
| Beginning Market Value | 699 | 180 | -- |
| Net Cash Flow | 297 | 823 | -- |
| Gain/Loss | 34 | 28 | -- |
| Ending Market Value | 1,030 | 1,030 | -- |



Top Performing Investments (since inception)¹



¹ Private infrastructure funds reflect early-stage life cycle performance.

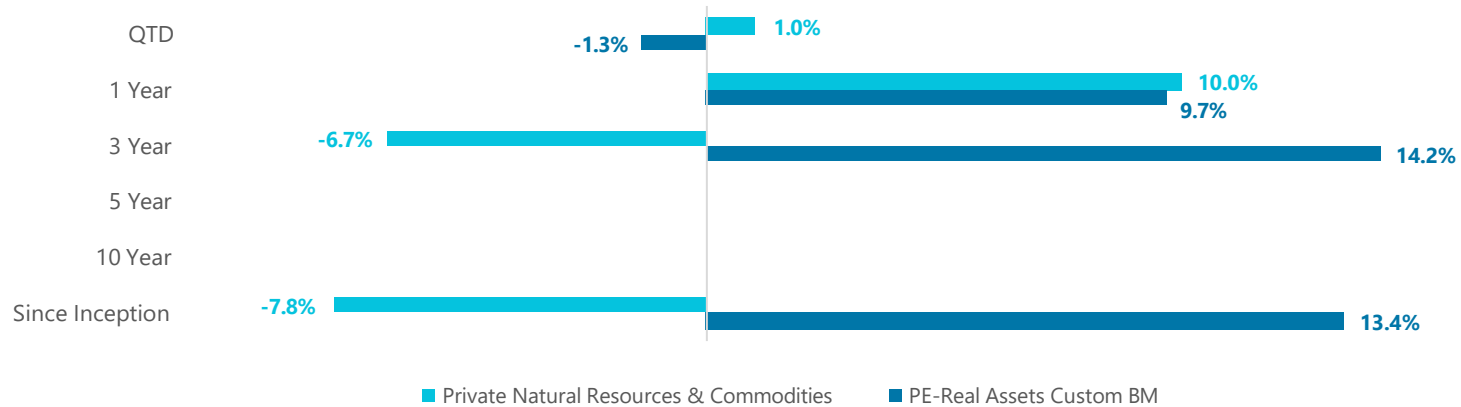
Historical Returns

Private Real Assets ex. Real Estate

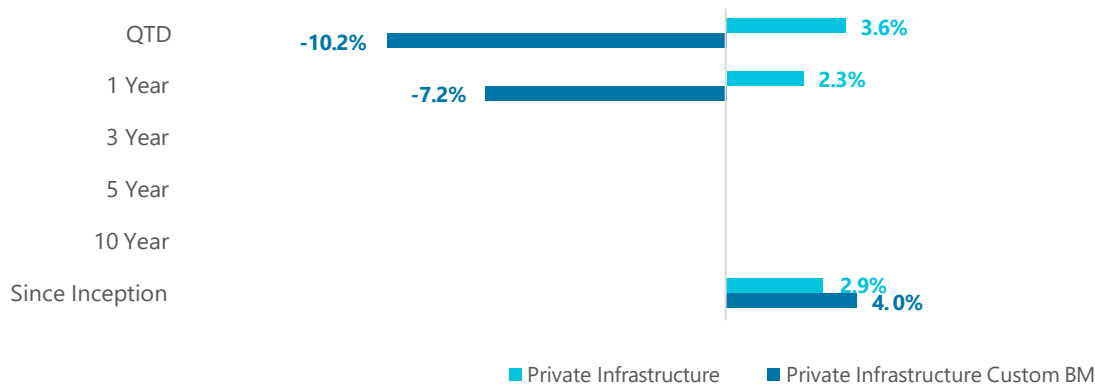
for the quarter ended December 31, 2022

Time-Weighted Returns (net)¹

Private Natural Resources & Commodities



Private Infrastructure



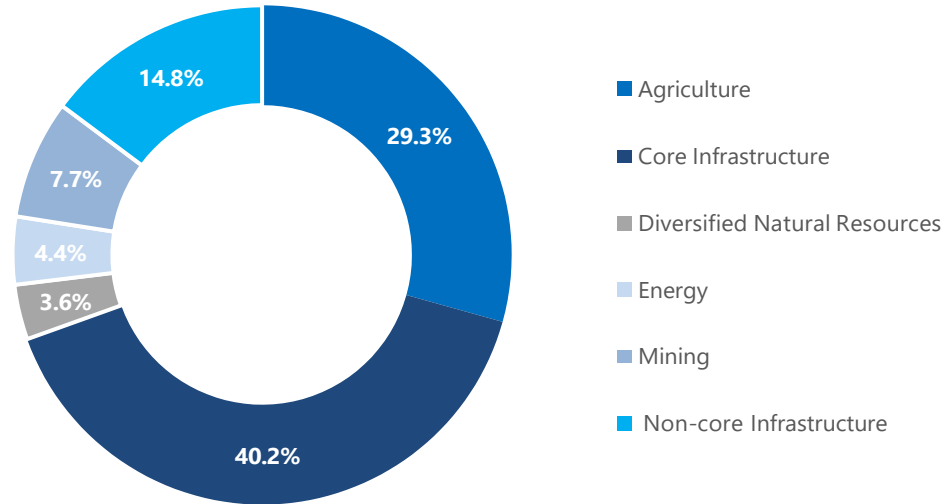
¹ Private natural resources and infrastructure funds reflect early-stage life cycle performance.

Performance by Strategy

Private Real Assets ex. Real Estate

for the quarter ended December 31, 2022

By Strategy¹



| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / Loss (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME |
|--|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|------------------------|------------------------|------------------------|-------------------------|---------------------|
| Agriculture | 5 | 650.0 | 574.5 | 73.6 | 547.7 | 621.3 | 46.9 | 0.13x | 1.08x | 10.4% | 1.00 |
| Core Infrastructure | 4 | 1,057.7 | 728.1 | 12.6 | 750.9 | 763.5 | 35.4 | 0.02x | 1.05x | 8.9% | 1.02 |
| Diversified Natural Resources | 1 | 133.4 | 60.7 | 0.0 | 66.8 | 66.8 | 6.1 | 0.00x | 1.10x | 10.4% | 1.01 |
| Energy | 2 | 200.0 | 205.0 | 116.9 | 82.0 | 198.9 | (6.1) | 0.57x | 0.97x | -1.0% | 0.75 |
| Mining | 2 | 250.0 | 141.9 | 5.9 | 144.2 | 150.0 | 8.2 | 0.04x | 1.06x | 6.1% | 0.95 |
| Non-core Infrastructure | 6 | 701.0 | 283.9 | 7.0 | 276.6 | 283.6 | (0.4) | 0.02x | 1.00x | -0.1% | 0.90 |
| Total Private Real Assets ex. Real Estate | 20 | 2,992.1 | 1,994.1 | 216.0 | 1,868.1 | 2,084.1 | 90.0 | 0.11x | 1.05x | 4.5% | 0.95 |

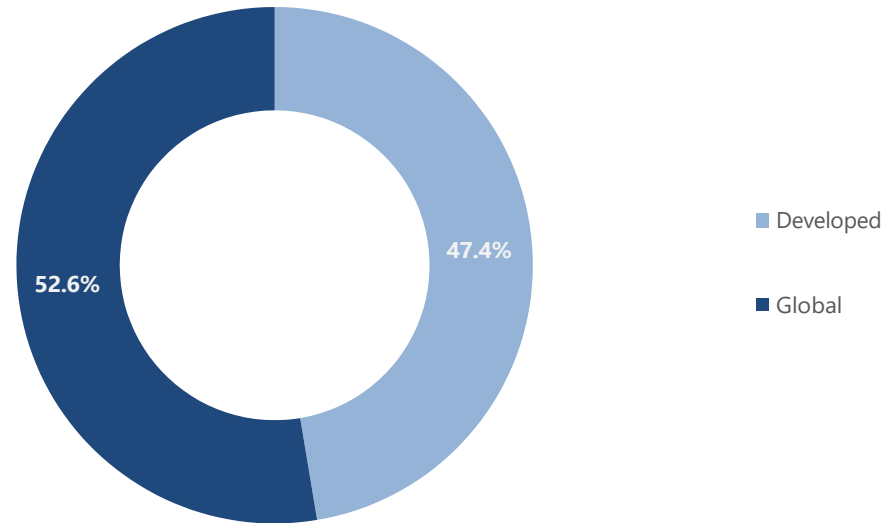
¹ Based on best available cash flow adjusted market values.

Performance by Geography

Private Real Assets ex. Real Estate

for the quarter ended December 31, 2022

By Geography¹



| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / Loss (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME |
|--|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|------------------------|------------------------|------------------------|-------------------------|---------------------|
| Developed | 11 | 1,386.7 | 1,031.5 | 180.9 | 884.9 | 1,065.8 | 34.3 | 0.18x | 1.03x | 2.6% | 0.91 |
| Global | 9 | 1,605.4 | 962.6 | 35.1 | 983.2 | 1,018.3 | 55.7 | 0.04x | 1.06x | 8.3% | 1.00 |
| Total Private Real Assets ex. Real Estate | 20 | 2,992.1 | 1,994.1 | 216.0 | 1,868.1 | 2,084.1 | 90.0 | 0.11x | 1.05x | 4.5% | 0.95 |

¹ Based on best available cash flow adjusted market values.

Performance by Vintage Year

Private Real Assets ex. Real Estate

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Vintage Year¹

| | Number of Investments | Commitments (mm) | Cumulative Contributions (mm) | Cumulative Distributions (mm) | Market Value (mm) | Total Value (mm) | Total Gain / Loss (mm) | Distributed to Paid-In | Total Value to Paid-In | Since Inception Net IRR | Since Inception PME |
|--|-----------------------|------------------|-------------------------------|-------------------------------|-------------------|------------------|------------------------|------------------------|------------------------|-------------------------|---------------------|
| 2004 | 1 | 50.0 | 50.0 | 91.4 | 0.0 | 91.4 | 41.4 | 1.83x | 1.83x | 31.1% | 1.40 |
| 2011 | 1 | 250.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2014 | 2 | 450.0 | 435.0 | 75.1 | 338.9 | 414.0 | (21.0) | 0.17x | 0.95x | -1.7% | 0.75 |
| 2020 | 3 | 326.8 | 207.8 | 8.7 | 216.1 | 224.8 | 17.0 | 0.04x | 1.08x | 6.9% | 0.94 |
| 2021 | 6 | 821.8 | 531.3 | 13.4 | 528.8 | 542.3 | 10.9 | 0.03x | 1.02x | 3.2% | 0.97 |
| 2022 | 7 | 1,093.5 | 513.0 | 3.4 | 528.4 | 531.7 | 18.7 | 0.01x | 1.04x | 7.1% | 1.00 |
| Total Private Real Assets ex. Real Estate | 20 | 2,992.1 | 1,994.1 | 216.0 | 1,868.1 | 2,084.1 | 90.0 | 0.11x | 1.05x | 4.5% | 0.95 |

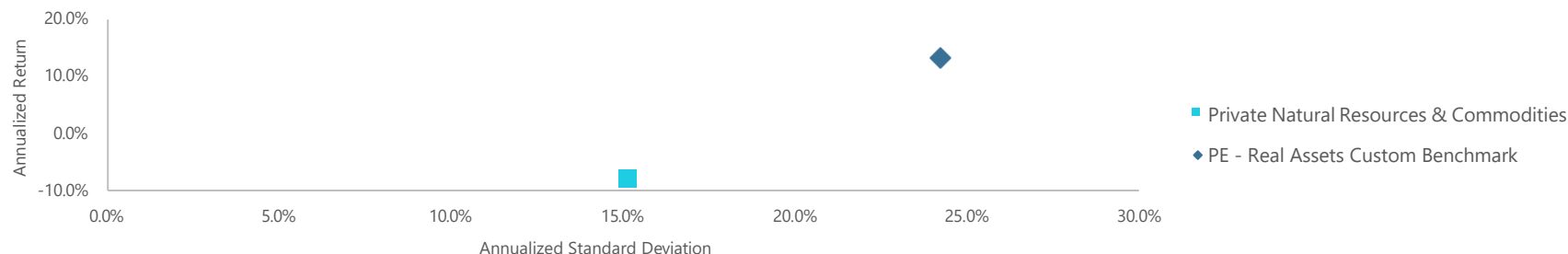
¹ Based on best available cash flow adjusted market values.

Risk vs. Return

Private Real Assets ex. Real Estate
for the quarter ended December 31, 2022

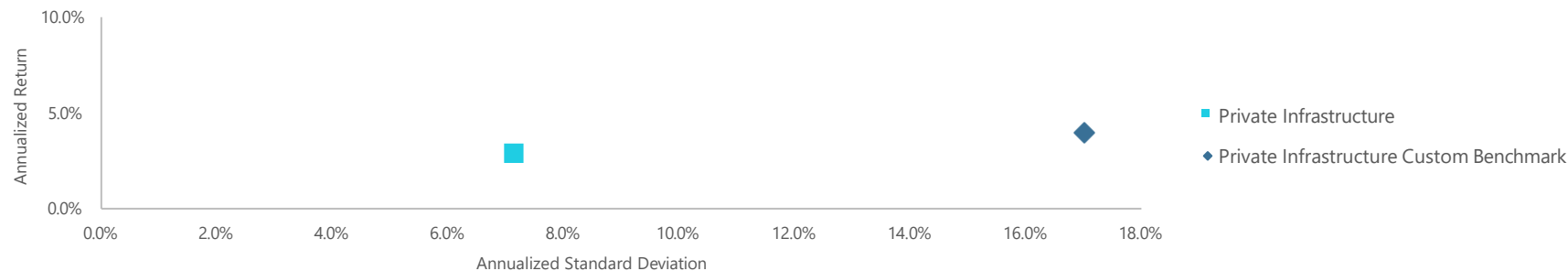
Since Inception (Annualized)

Private Natural Resources & Commodities



| | Annualized Return | Standard Deviation | Sharpe Ratio | Information Ratio | Beta | Tracking Error |
|--|-------------------|--------------------|--------------|-------------------|------|----------------|
| Private Natural Resources & Commodities | -7.8% | 15.1% | | | | |
| PE - Real Assets Custom Benchmark | 13.4% | 24.2% | (0.52) | (0.85) | 0.00 | 25.1% |

Private Infrastructure



| | Annualized Return | Standard Deviation | Sharpe Ratio | Information Ratio | Beta | Tracking Error |
|---|-------------------|--------------------|--------------|-------------------|------|----------------|
| Private Infrastructure | 2.9% | 7.2% | | | | |
| Private Infrastructure Custom Benchmark | 4.0% | 17.0% | 0.34 | (0.05) | 0.00 | 19.4% |

Annual Cash Flow Activity

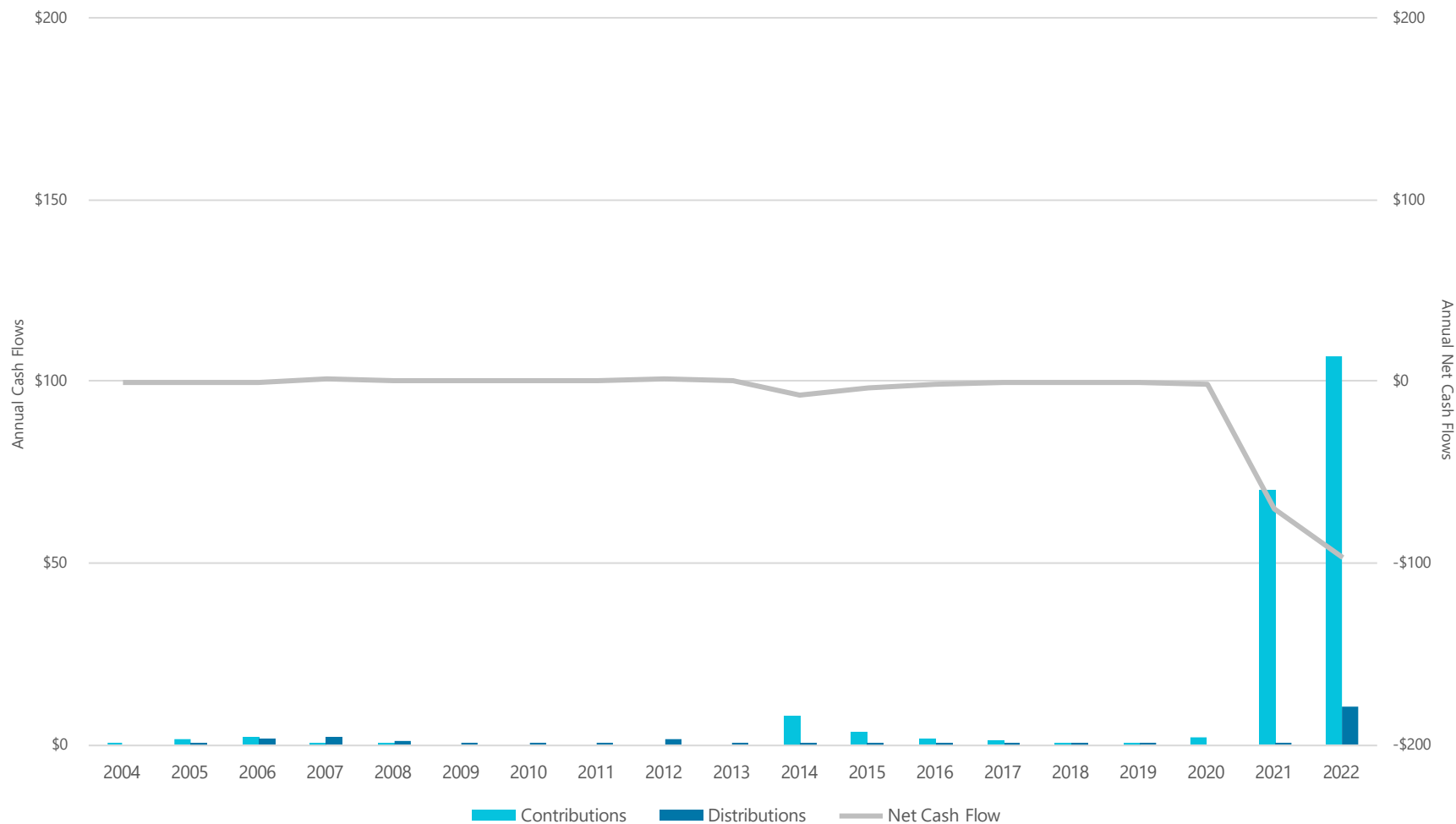
Private Real Assets ex. Real Estate

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Year (mm)



Summary

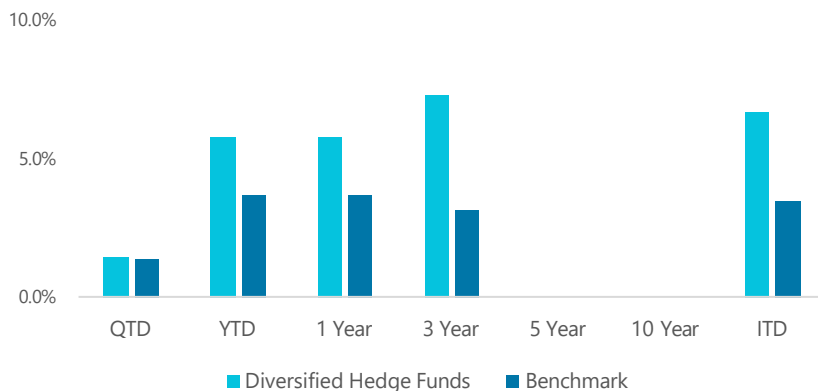
Diversified Hedge Funds

for the quarter ended December 31, 2022



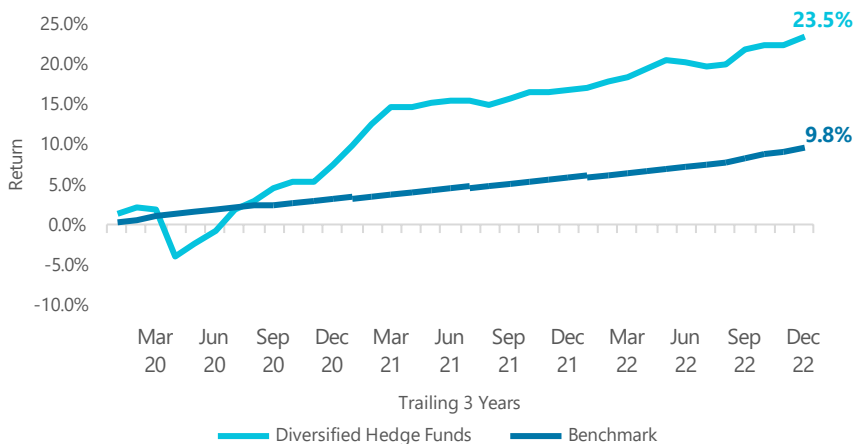
Los Angeles County Employees Retirement Association

Performance (net all)



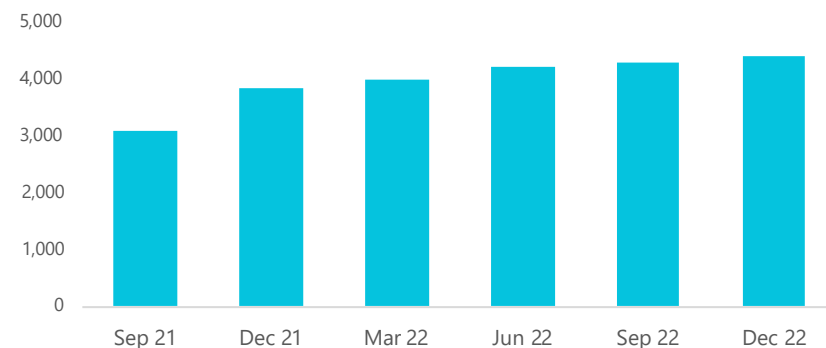
| | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD |
|--------------------------------|-------------|-------------|-------------|-------------|--------|---------|-------------|
| Diversified Hedge Funds | 1.4% | 5.8% | 5.8% | 7.3% | -- | -- | 6.7% |
| Benchmark | 1.4% | 3.7% | 3.7% | 3.2% | -- | -- | 3.5% |
| Excess | 0.1% | 2.1% | 2.1% | 4.1% | -- | -- | 3.2% |

Cumulative Return

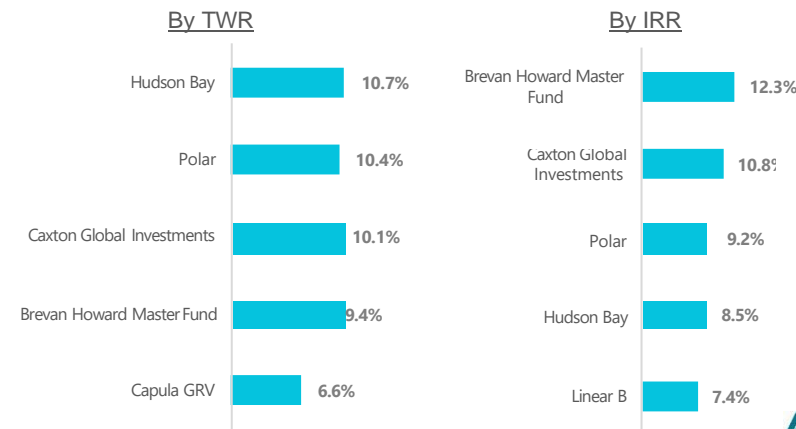


Asset Growth (mm)

| | QTD | 1 Year | 3 Year |
|----------------------------|--------------|--------------|--------------|
| Beginning Market Value | 4,281 | 3,835 | 1,618 |
| Net Cash Flow | 59 | 334 | 2,220 |
| Gain/Loss | 62 | 234 | 565 |
| Ending Market Value | 4,402 | 4,402 | 4,402 |



Top Performing Investments (since inception)

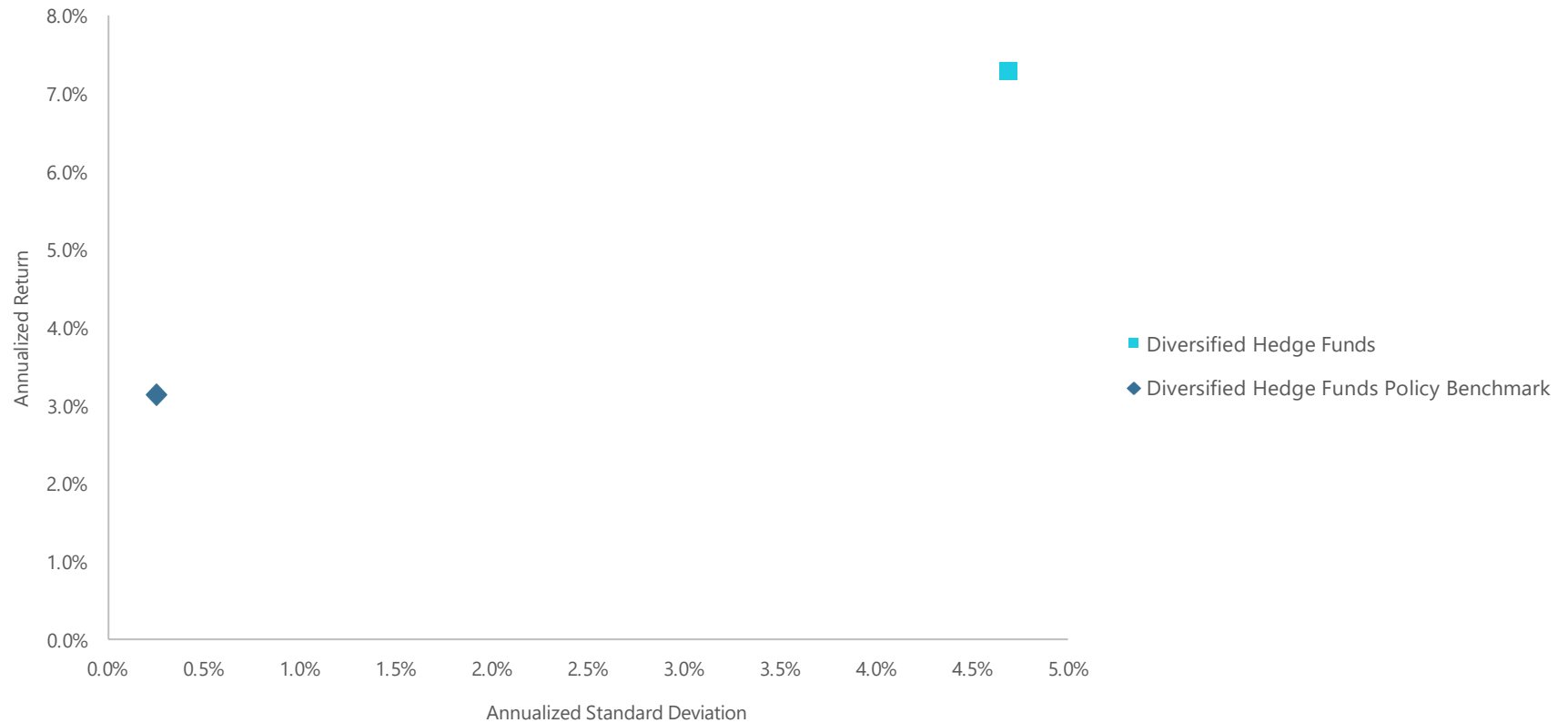


Risk vs. Return

Diversified Hedge Funds

for the quarter ended December 31, 2022

3 Year (Annualized)



| | Annualized Return | Standard Deviation | Sharpe Ratio | Information Ratio | Beta | Tracking Error |
|--|-------------------|--------------------|--------------|-------------------|--------|----------------|
| Diversified Hedge Funds | 7.3% | 4.7% | | | | |
| Diversified Hedge Funds Policy Benchmark | 3.2% | 0.3% | 1.37 | 0.85 | (6.84) | 4.8% |

Performance Detail

Diversified Hedge Funds

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Annualized Net All Returns

| | % of Composite | Ending Market Value (mm) | Prior Quarter Ending MV (mm) | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD | Inception Date |
|--|----------------|--------------------------|------------------------------|-------------|--------------|--------------|-------------|--------|---------|--------------|-----------------|
| Diversified Hedge Funds | 100.0% | 4,402 | 4,281 | 1.4% | 5.8% | 5.8% | 7.3% | -- | -- | 6.7% | Apr-2019 |
| Diversified Hedge Funds Policy Benchmark | | | | 1.4% | 3.7% | 3.7% | 3.2% | -- | -- | 3.5% | |
| LACERA HF Direct | 90.6% | 3,987 | 3,932 | 1.4% | 6.4% | 6.4% | 7.4% | -- | -- | 5.1% | May-2018 |
| Custom Hedge Fund Benchmark | | | | 1.4% | 3.7% | 3.7% | 3.2% | -- | -- | 4.2% | May-2018 |
| AM Asia Strategies | 4.9% | 217 | 221 | -2.0% | -3.9% | -3.9% | -- | -- | -- | -2.6% | Jun-2021 |
| Brevan Howard Master Fund | 14.8% | 650 | 648 | 0.4% | 18.5% | 18.5% | -- | -- | -- | 9.4% | Apr-2021 |
| Capula GRV | 14.6% | 642 | 626 | 2.6% | 12.0% | 12.0% | 6.7% | -- | -- | 6.6% | Dec-2018 |
| Caxton Global Investments | 6.7% | 297 | 292 | 1.5% | 15.7% | 15.7% | -- | -- | -- | 10.1% | Feb-2021 |
| DK Institutional Partners | 11.0% | 486 | 487 | -0.1% | -1.3% | -1.3% | 5.2% | -- | -- | 4.7% | May-2018 |
| HBK Multi-strategy | 13.1% | 578 | 555 | 4.1% | 3.9% | 3.9% | 6.9% | -- | -- | 5.5% | Jun-2018 |
| Hudson Bay | 14.8% | 650 | 641 | 1.4% | 3.0% | 3.0% | -- | -- | -- | 10.7% | Jul-2020 |
| Polar | 10.6% | 467 | 462 | 1.2% | 1.0% | 1.0% | -- | -- | -- | 10.4% | May-2020 |
| HF Emerging Managers Program | 8.7% | 384 | 315 | 1.8% | -0.4% | -0.4% | -- | -- | -- | -0.2% | Aug-2021 |
| Custom Hedge Fund Benchmark | | | | 1.4% | 3.7% | 3.7% | -- | -- | -- | 3.4% | |
| Stable Asset Management | 8.7% | 384 | 315 | 1.8% | -0.4% | -0.4% | -- | -- | -- | -0.2% | Aug-2021 |
| Stable Fund Investments | 8.7% | 384 | 315 | 1.9% | -0.2% | -0.2% | -- | -- | -- | -0.2% | Aug-2021 |
| Amundsen | 1.4% | 63 | 60 | 4.5% | -6.1% | -6.1% | -- | -- | -- | -2.2% | Sep-2021 |
| Clear Sky | 2.1% | 92 | 72 | 0.3% | -- | -- | -- | -- | -- | 2.6% | Apr-2022 |
| Linear B | 1.6% | 70 | 70 | 0.9% | 8.2% | 8.2% | -- | -- | -- | 6.1% | Aug-2021 |
| Quarry | 1.9% | 82 | 40 | -0.7% | -- | -- | -- | -- | -- | -0.7% | Sep-2022 |
| Sparta | 1.1% | 48 | 47 | 0.4% | -4.4% | -4.4% | -- | -- | -- | -3.7% | Sep-2021 |
| Trutino | 0.7% | 29 | 26 | 12.0% | 5.6% | 5.6% | -- | -- | -- | -1.4% | Aug-2021 |

emerging manager program

Emerging Manager Program

for the quarter ended December 31, 2022

Annualized Net Returns

| | Ending Market Value (mm) | QTD | 1 Year | 3 Year | 5 Year | ITD TWR | ITD MWR | Inception Date |
|---|--------------------------|-------|--------|--------|--------|---------|---------|----------------|
| Growth | | | | | | | | |
| Global Equity | | | | | | | | |
| Corner Cap | 80.6 | 11.0% | -7.0% | 9.1% | -- | 7.1% | 7.2% | Sep-2018 |
| Global Equity Policy Benchmark | | 9.8% | -18.4% | 3.9% | -- | 6.4% | 6.4% | |
| Private Equity | | | | | | | | |
| J.P. Morgan Emerging Managers Program | 85.3 | 0.2% | 1.6% | 31.5% | 24.3% | 26.6% | 22.8% | Jan-2010 |
| J.P. Morgan Emerging Managers Program II | 89.8 | 0.7% | -4.8% | 22.7% | 17.5% | 29.5% | 37.3% | Apr-2014 |
| J.P. Morgan Emerging Managers Program III | 111.2 | 1.6% | 4.8% | 36.4% | 31.5% | 32.3% | 35.6% | Jan-2017 |
| J.P. Morgan Emerging Managers Program IV | 203.2 | 1.0% | 8.5% | 14.5% | -- | 19.2% | 17.4% | Nov-2018 |
| Total Private Equity Custom Benchmark | | -6.1% | -19.3% | 5.6% | 10.7% | 13.2% | 13.2% | |
| Non-Core Private Real Estate | | | | | | | | |
| Cityview Bay Area Fund II | 81.7 | 1.9% | 7.2% | 4.6% | 5.8% | -- | 11.3% | Oct-2012 |
| Cityview Western Fund I, LP | 214.6 | 0.8% | 29.7% | 17.6% | 15.0% | -51.3% | 16.2% | Jun-2016 |
| CVBAF II Union City Co-Invest | 23.8 | 0.0% | 3.1% | 6.4% | 3.1% | 5.7% | 5.9% | Nov-2015 |
| Non-Core Private RE Policy Benchmark | | 0.9% | 23.6% | 14.3% | 12.3% | 11.6% | 11.6% | |
| Credit | | | | | | | | |
| Illiquid Credit | | | | | | | | |
| Stable Asset Management - IC | 22.6 | -- | -- | -- | -- | 0.0% | 0.0% | Nov-2022 |
| Illiquid Credit Policy Benchmark | | -- | -- | -- | -- | 0.2% | 0.2% | |
| Real Assets & Inflation Hedges | | | | | | | | |
| Core Private Real Estate | | | | | | | | |
| Cityview Core I.M.A | 208.2 | 0.1% | 4.8% | 1.9% | 5.7% | 5.2% | 5.3% | Jun-2014 |
| Core Private RE Policy Benchmark | | 0.3% | 21.0% | 11.7% | 9.7% | 7.2% | 7.2% | |
| Risk Reduction & Mitigation | | | | | | | | |
| Hedge Funds | | | | | | | | |
| Stable Asset Management | 384.2 | 1.8% | -0.4% | -- | -- | -0.2% | 0.4% | Aug-2021 |
| Custom Hedge Fund Benchmark | | 1.4% | -0.4% | -- | -- | 3.4% | 3.4% | |

risk reports

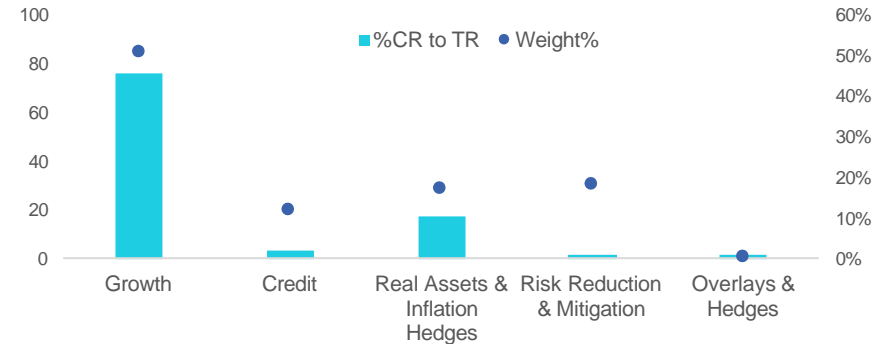
Summary

for the quarter ended December 31, 2022

Risk Summary

| | Value |
|--------------------|--------------|
| Total Risk | 13.83 |
| Benchmark Risk | 13.26 |
| Active Risk | 1.10 |
| Portfolio Beta | 1.04 |
| Effective Duration | 1.65 |

Contribution to Risk

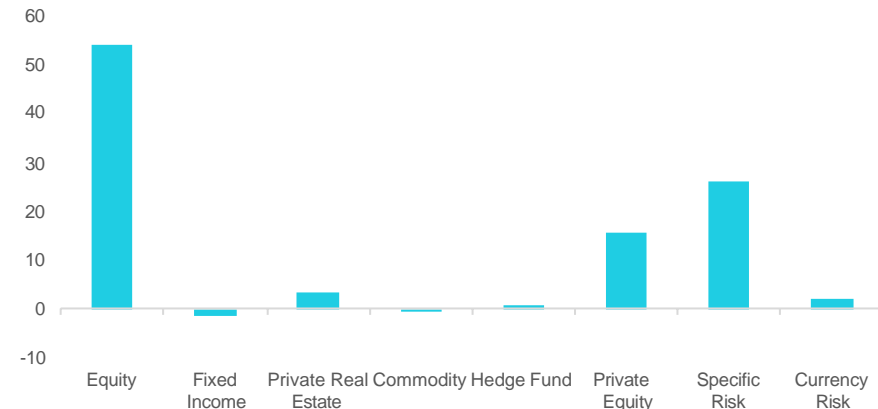


| | Mkt Value (mm) | Weight% | Total Risk | Risk Contribution | %CR to TR |
|--------------------------------|----------------|---------------|--------------|-------------------|---------------|
| Total Fund | 68,776 | 100.0% | 13.83 | 13.83 | 100.00 |
| Growth | 35,193 | 51.2% | 20.85 | 10.55 | 76.27 |
| Credit | 8,257 | 12.0% | 4.58 | 0.42 | 3.02 |
| Real Assets & Inflation Hedges | 12,005 | 17.5% | 15.42 | 2.45 | 17.70 |
| Risk Reduction & Mitigation | 12,852 | 18.7% | 6.20 | 0.22 | 1.62 |
| Overlays & Hedges | 469 | 0.7% | 56.58 | 0.19 | 1.39 |

Risk Decomposition

| Risk Source | Portfolio | | | Active | | |
|---------------------|-------------------|---------------|-------------|-------------------|---------------|-------------|
| | Risk Contribution | %Risk | Correlation | Risk Contribution | %Risk | Correlation |
| Total Risk | 13.83 | 100.00 | 1.00 | 1.10 | 100.00 | 1.00 |
| Local Market Risk | 13.16 | 95.15 | 1.00 | 1.08 | 97.99 | 0.99 |
| Common Factor Risk | 13.14 | 94.99 | 1.00 | 0.79 | 71.99 | 0.85 |
| Equity | 10.23 | 73.98 | 0.95 | 0.60 | 54.16 | 0.72 |
| Fixed Income | 0.64 | 4.60 | 0.41 | -0.02 | -1.39 | -0.11 |
| Private Real Estate | 1.40 | 10.13 | 0.69 | 0.04 | 3.46 | 0.24 |
| Commodity | 0.06 | 0.43 | 0.36 | 0.00 | -0.33 | -0.08 |
| Hedge Fund | 0.00 | 0.01 | 0.01 | 0.01 | 0.86 | 0.09 |
| Private Equity | 0.80 | 5.77 | 0.24 | 0.17 | 15.47 | 0.39 |
| Specific Risk | 0.02 | 0.16 | 0.04 | 0.29 | 26.00 | 0.51 |
| Currency Risk | 0.67 | 4.85 | 0.58 | 0.02 | 2.01 | 0.13 |

Active Risk from Risk Factors



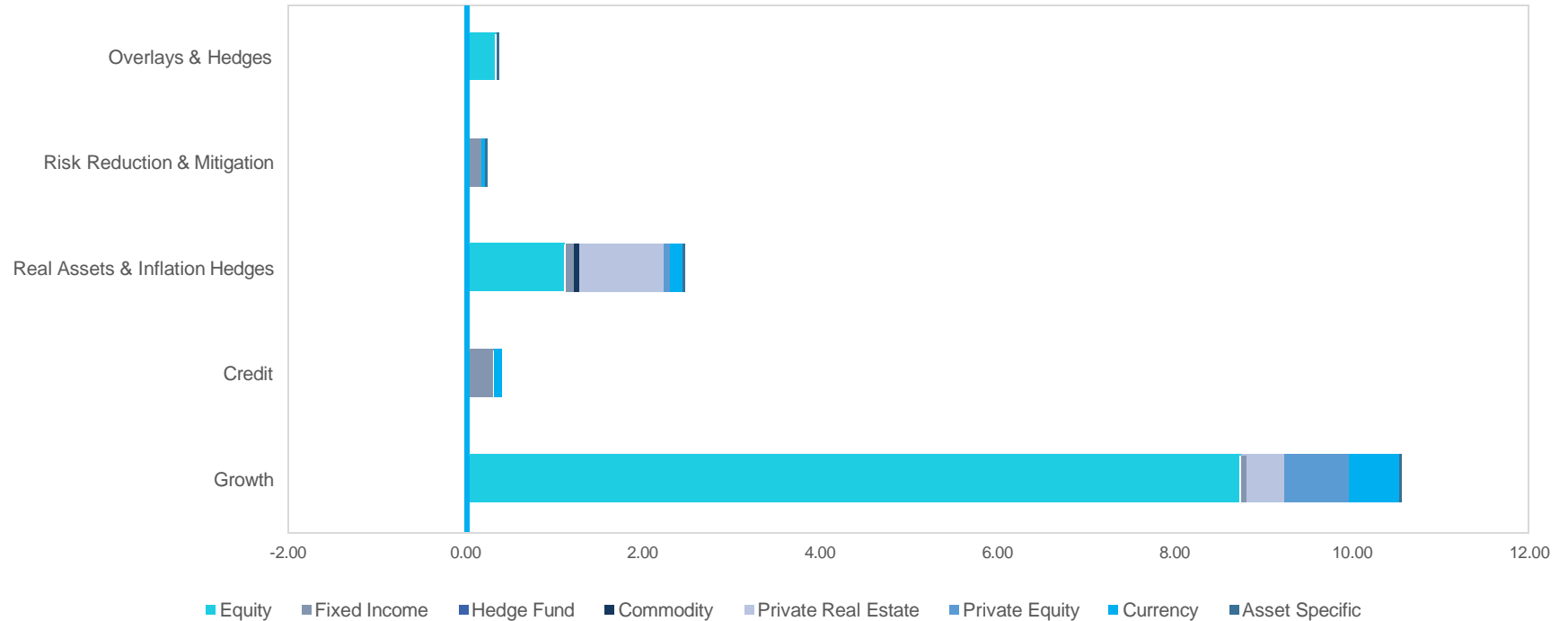
Risk Contribution Breakdown

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

By Risk Type

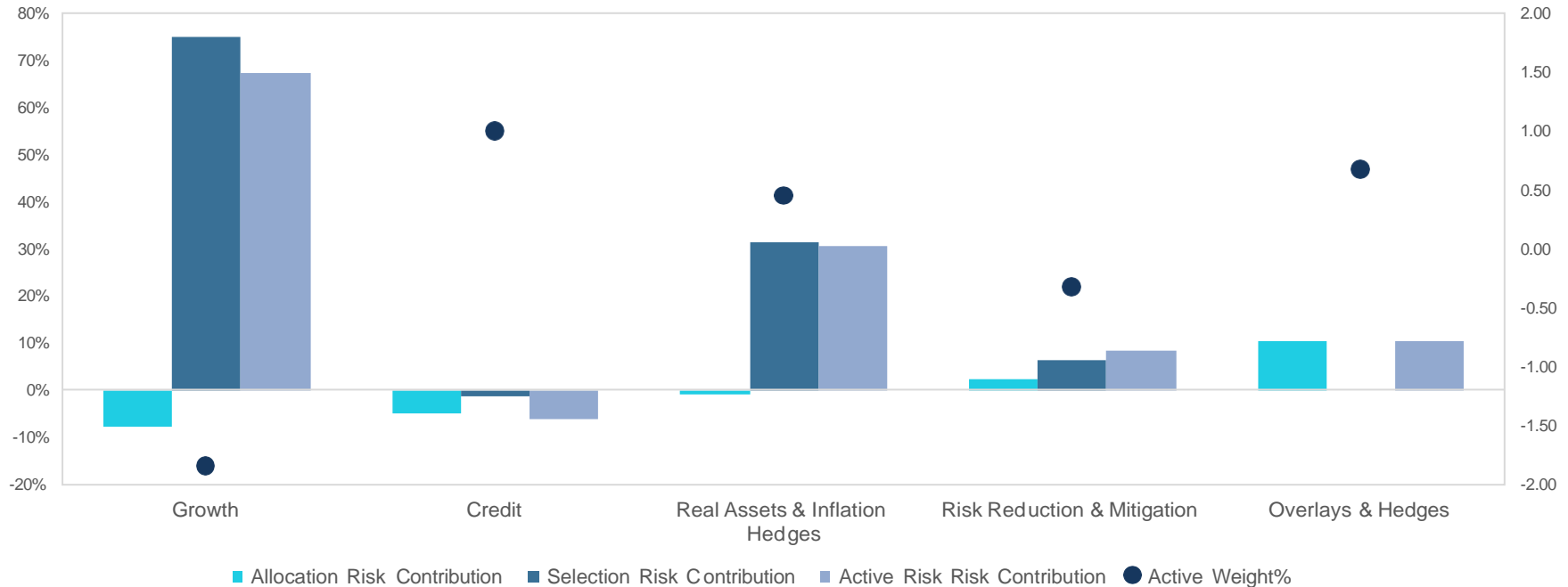


| Functional Category | Mkt Value | Weight% | Total Risk | %CR to Total Risk | Port Risk Contribution | Equity | Fixed Income | Commodity | Private Real Estate | Private Equity | Currency | Asset Specific |
|--------------------------------|---------------|---------------|--------------|-------------------|------------------------|--------------|--------------|-------------|---------------------|----------------|-------------|----------------|
| Total Fund | 68,774 | 100.0% | 13.83 | 100.00 | 13.83 | 10.23 | 0.65 | 0.06 | 1.40 | 0.80 | 0.67 | 0.02 |
| Growth | 35,193 | 51.2% | 20.85 | 76.27 | 10.55 | 8.76 | 0.04 | 0.00 | 0.43 | 0.74 | 0.56 | 0.02 |
| Credit | 8,257 | 12.0% | 4.58 | 3.02 | 0.42 | 0.00 | 0.36 | 0.00 | 0.01 | 0.00 | 0.04 | 0.00 |
| Real Assets & Inflation Hedges | 12,005 | 17.5% | 15.42 | 17.70 | 2.45 | 1.12 | 0.09 | 0.06 | 0.96 | 0.06 | 0.16 | 0.00 |
| Risk Reduction & Mitigation | 12,852 | 18.7% | 6.20 | 1.62 | 0.22 | 0.02 | 0.16 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 |
| Overlays & Hedges | 469 | 0.7% | 56.75 | 1.39 | 0.19 | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | -0.14 | 0.00 |

Allocation Selection

for the quarter ended December 31, 2022

Active Total Risk

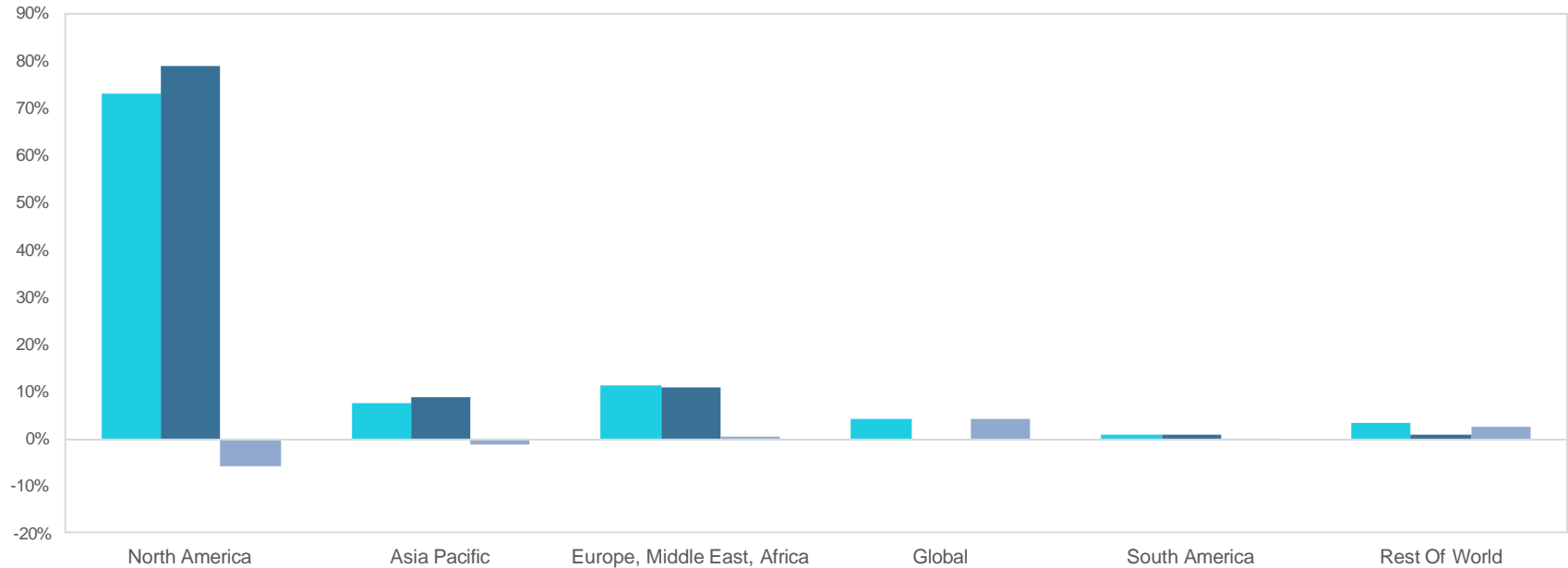


| Functional Category | Active Weight% | Allocation | | | Selection | | | Active Risk Contribution |
|--------------------------------|----------------|------------|-------------|-------------------|------------|-------------|-------------------|--------------------------|
| | | Volatility | Correlation | Risk Contribution | Volatility | Correlation | Risk Contribution | |
| Active Total Risk | | | | -0.01 | | | 1.11 | 1.10 |
| Growth | -1.83 | 7.12 | 0.60 | -0.08 | 1.65 | 0.89 | 0.75 | 0.67 |
| Credit | 1.01 | 9.63 | -0.51 | -0.05 | 1.82 | -0.06 | -0.01 | -0.06 |
| Real Assets & Inflation Hedges | 0.46 | 6.34 | -0.39 | -0.01 | 2.57 | 0.70 | 0.32 | 0.30 |
| Risk Reduction & Mitigation | -0.31 | 13.79 | -0.49 | 0.02 | 1.21 | 0.27 | 0.06 | 0.08 |
| Overlays & Hedges | 0.68 | 51.44 | 0.30 | 0.10 | 0.00 | 0.00 | 0.00 | 0.10 |

Portfolio Allocation

for the quarter ended December 31, 2022

By Region



■ Portfolio Weight ■ Benchmark Weight ■ Active Weight

| Region | Weight% | | | Total Risk | Active Risk Contribution | % of Active TR | MC to Total Tracking Error |
|-----------------------------|----------------|----------------|--------------|--------------|--------------------------|----------------|----------------------------|
| | Portfolio | Benchmark | Active | | | | |
| Total Fund | 100.00% | 100.00% | 0.00% | 13.83 | 1.10 | 100.00 | 0.01 |
| North America | 72.94% | 78.75% | -5.81% | 14.26 | 1.05 | 95.75 | 0.02 |
| Asia Pacific | 7.64% | 8.74% | -1.11% | 16.22 | 0.09 | 7.74 | -0.02 |
| Europe, Middle East, Africa | 11.43% | 10.88% | 0.55% | 21.29 | 0.20 | 18.39 | 0.03 |
| Global | 4.05% | 0.00% | 4.05% | 7.02 | -0.17 | -15.15 | -0.04 |
| South America | 0.81% | 0.85% | -0.04% | 26.69 | 0.04 | 4.01 | 0.00 |
| Rest Of World | 3.14% | 0.78% | 2.36% | 6.32 | -0.12 | -10.73 | -0.05 |

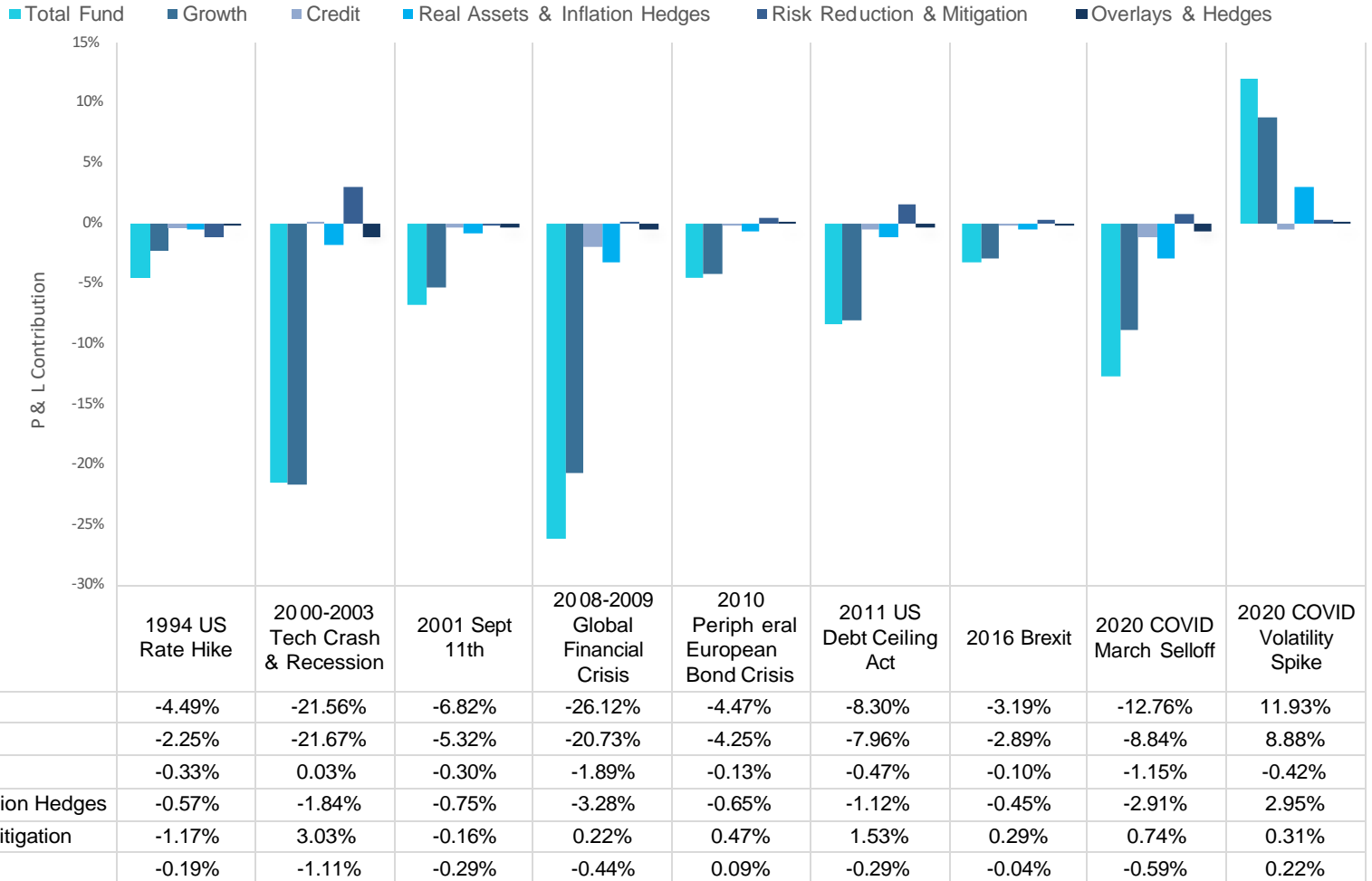
Stress Tests

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Scenarios by Asset Category



Stress Tests

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Scenario Descriptions

| Historical Scenario | Description |
|---|---|
| 1994 US Rate Hike | In combating inflation, the U.S. Federal Reserve raised its interest rate from 3.25% in February to 5.5% in November 1994. |
| 2000-2003 Tech Crash & Recession | Period of crisis and slow down for technological firms due to a rapid jump in stock prices when a speculative technology bubble began to burst. |
| 2001 Sept 11 | The U.S. stock market was closed for a week upon a series of coordinated suicide attacks upon the United States on September 11, 2001. |
| 2008-2009 Global Financial Crisis | Major financial crisis starting September 2008 with the failure of several large U.S.-based financial firms. Extended into 2009, when stock markets reached their low est. |
| 2010 Peripheral European Bond Crisis | During the Europe sovereign debt crisis, liquidity access for peripheral European countries was deeply affected by their widening budget deficits, higher borrowing costs, and failing banking systems. |
| 2011 US Debt Ceiling Act | Caused by political deadlock about appropriate level of government spending and its consequence on the national debt and deficit. Both debt and equity markets experienced significant volatility. |
| 2016 Brexit | The referendum by British voters to exit the European Union on 23 June 2016 roiled global markets, including currencies, causing the British pound to fall to its low est level in decades. |
| 2020 COVID March Selloff | Peak and Valley of the MSCI ACWI index when Covid became a Global Pandemic. |
| 2020 COVID Volatility Spike | Period it took for the Cboe Volatility Index (VIX) to revert to pre-pandemic levels. |

manager scorecards



Los Angeles County Employees Retirement Association

PUBLIC MARKETS MANAGER SCORECARD

4th Quarter 2022

| | | | Performance | Organization & Operations | ESG | Partnership | Fees & Terms | | |
|---|--|--------------------|-----------------------------|------------------------------------|-----------------------------|---------------------------------|-----------------------------|---|---|
| | | | 1 to 5 (with 5 the best) | S+, S, or S- (with S+ the best) | 1 to 5 (with 5 the best) | A, B, or C (with A the best) | 1 to 5 (with 5 the best) | | |
| Manager | Market Value (in \$ millions) | % of Total Fund | Risk-Adjusted Return | ER | SCORE | SCORE | SCORE | | |
| GROWTH | GLOBAL EQUITY | | | | | | | | |
| | Acadian Developed Markets | 560.2 | 0.8% | 5 | ● | S- | 3 | B | 3 |
| | BTC Euro Tilts | 527.8 | 0.8% | 5 | ● | S+ | 4 | B | 3 |
| | Capital Group Developed Markets | 364.2 | 0.5% | 3 | ● | S | 2 | B | 3 |
| | Cevian Capital II - Activist | 398.3 | 0.6% | 4 | ● | S | 4 | B | 1 |
| | Cornercap US SC - EMP | 80.6 | 0.1% | 5 | ● | S- | 1 | A | 3 |
| | Frontier US SMID Growth | 256.2 | 0.4% | 2 | ● | S | 2 | B | 1 |
| | Global Alpha | 165.5 | 0.2% | 2 | ● | S+ | 3 | A | 3 |
| | JPMAM Strategic Beta Non-U.S. | 550.5 | 0.8% | 3 | ● | S | 2 | B | 3 |
| | JPMAM Strategic Beta U.S. | 3,997.8 | 5.7% | 3 | ● | S | 2 | B | 3 |
| | Lazard Emerging Markets | 368.0 | 0.5% | 2 | ● | S- | 3 | B | 1 |
| | SSGA MSCI ACWI IMI | 14,270.2 | 20.4% | 3 | ● | S | — | B | 5 |
| Systematic US Small Cap Value | 186.4 | 0.3% | 4 | ● | S- | 2 | A | 3 | |
| CREDIT | HIGH YIELD | | | | | | | | |
| | Beach Point | 280.7 | 0.4% | 5 | ● | S | 3 | B | 3 |
| | Brigade Cap Mgmt | 624.1 | 0.9% | 4 | ● | S | 2 | B | 3 |
| | Pinebridge Investments | 449.6 | 0.6% | 3 | ● | S | 4 | B | 3 |
| | BANK LOANS | | | | | | | | |
| | Bain Capital Credit | 416.7 | 0.6% | 5 | ● | S | 2 | B | 1 |
| | Credit Suisse Bank Loans | 1,154.1 | 1.6% | 3 | ● | S- | 3 | B | 5 |
| | Crescent Capital | 490.9 | 0.7% | 3 | ● | S | 2 | B | 3 |
| EMERGING MARKET DEBT | | | | | | | | | |
| Aberdeen Asset Management | 372.8 | 0.5% | 1 | ● | S | 3 | B | 3 | |
| Ashmore Investment Management | 341.2 | 0.5% | 1 | ● | S | 3 | B | 3 | |
| REAL ASSETS & INFLATION HEDGES | NATURAL RESOURCES & COMMODITIES | | | | | | | | |
| | Credit Suisse Commodity | 312.3 | 0.4% | 3 | ● | S- | 1 | A | 3 |
| | DWS Natural Resources | 671.1 | 1.0% | 2 | ● | S | 2 | A | 5 |
| | Neuberger Berman/Gresham | 366.2 | 0.5% | 3 | ● | S | 1 | A | 1 |
| | INFRASTRUCTURE | | | | | | | | |
| | DWS Infrastructure | 2,781.6 | 4.0% | 5 | ● | S | 2 | A | 5 |
| TIPS | | | | | | | | | |
| Blackrock TIPS | 1,860.9 | 2.7% | 3 | ● | S+ | — | B | 5 | |

| | | Performance | Organization & Operations | ESG | Partnership | Fees & Terms |
|---------|----------------------------------|------------------------------------|---|------------------------------------|--|------------------------------------|
| | | 1 to 5 <i>(with 5 the best)</i> | S+, S, or S- <i>(with S+ the best)</i> | 1 to 5 <i>(with 5 the best)</i> | A, B, or C <i>(with A the best)</i> | 1 to 5 <i>(with 5 the best)</i> |
| | | SCORE | SCORE | SCORE | SCORE | SCORE |
| Manager | Market Value (in \$ millions) | % of Total Fund | Risk-Adjusted Return | ER | | |

| RISK REDUCTION & MITIGATION | INVESTMENT GRADE BONDS | | | | | | | | |
|-----------------------------|----------------------------|---------|------|---|----|----|---|---|---|
| | Allspring/Wells | 1,251.5 | 1.8% | 5 | ● | S | 3 | B | 5 |
| | BTC US Debt Index Fund | 2,905.3 | 4.1% | 4 | ● | S+ | — | B | 5 |
| | Pugh Capital Mgmt | 835.2 | 1.2% | 3 | ● | S | 1 | A | 3 |
| OVERLAYS & HEDGES | LONG-TERM GOVERNMENT BONDS | | | | | | | | |
| | BlackRock | 2,856.8 | 4.1% | * | ● | S+ | — | B | 5 |
| | CASH | | | | | | | | |
| SSGA Cash | 632.2 | 0.9% | * | ● | S+ | — | A | 5 | |
| OVERLAYS & HEDGES | OVERLAYS | | | | | | | | |
| | Parametric Cash Overlay | 591.0 | 0.8% | — | | S | — | A | 5 |
| | HEDGES | | | | | | | | |
| BTC Passive Currency Hedge | -155.3 | -0.2% | — | | S+ | — | B | 5 | |

| |
|------------------------------------|
| ● Exceeds 3-Year Net Excess Return |
| ● Meets 3-Year Net Excess Return |
| ● Below 3-Year Net Excess Return |

| For Organization and Partnership | |
|------------------------------------|--|
| ■ Downgrade from the prior quarter | |
| ■ Upgrade from the prior quarter | |

Footnotes

- Pillar methodologies in refinement and may evolve over time

Category Descriptions

Performance

- Quarterly score based on Sharpe and Information Ratios, which provide insight into a manager’s risk-adjusted performance and performance relative to its benchmark, respectively
- ‘*’ denotes a manager with an inception date of less than 3 years, resulting in a neutral score of 3
- Circle icons reflect trailing 3-year net excess returns against the manager’s benchmark above or below a specified range

Organization & Operations

- Includes factors such as organization, professional staff, diversity & inclusion, investment philosophy & process, risk management, legal & compliance framework
- ‘S’ stands for Satisfactory

ESG

- Evaluates the extent to which material ESG factors are identified, assessed, and incorporated into risk/return analysis and portfolio construction
- ‘—’ denotes passive index funds and cash where ESG scores are not relevant and/or reflect strategies that do not incorporate active decisions, including ESG considerations, in portfolio construction
- ‘+’ denotes mandates where ESG scores are currently under review

Partnership

- Blended score based on:
 - Value added services – e.g., providing education, distributing research, and performing analytics on portfolio
 - Client service – e.g., responsiveness, timeliness, competency, and approach
 - Size of LACERA’s investment relative to the firm’s assets under management

Fees & Terms

- Compared to a benchmark of median fees by asset category and/or investment structure

PRIVATE MARKETS MANAGER SCORECARD

4th Quarter 2022

| | | | Performance | Organization & Operations | ESG | Partnership | Fees & Terms |
|-----------------------------|----------------------------------|--------------------|-----------------------------|------------------------------------|-----------------------------|---------------------------------|-----------------------------|
| | | | 1 to 5 (with 5 the best) | S+, S, or S- (with S+ the best) | 1 to 5 (with 5 the best) | A, B, or C (with A the best) | 1 to 5 (with 5 the best) |
| | | | SCORE | SCORE | SCORE | SCORE | SCORE |
| Manager | Market Value (in \$ millions) | % of Total Fund | | | | | |
| GLOBAL/LARGE BUYOUT | | | | | | | |
| Advent International Group | 130.1 | 0.2% | 5 | S+ | 3 | C | 4 |
| Blackstone Management | 222.4 | 0.3% | 1 | S- | 4 | B | 5 |
| CVC Capital Partners | 479.5 | 0.7% | 5 | S | 4 | A | 4 |
| Green Equity Investors | 402.0 | 0.6% | 3 | S+ | 3 | A | 4 |
| Hellman & Friedman | 429.8 | 0.6% | 2 | S+ | 3 | B | 4 |
| MBK | 193.8 | 0.3% | 1 | S | 4 | A | 2 |
| Silver Lake Partners | 494.9 | 0.7% | 4 | S+ | 3 | A | 5 |
| Thoma Bravo LLC | 160.8 | 0.2% | * | S+ | 3 | B | 3 |
| Vista Equity Partners | 823.9 | 1.2% | 3 | S- | 3 | A | 2 |
| MID-MARKET BUYOUT | | | | | | | |
| Accel-KKR Capital Partners | 203.3 | 0.3% | 3 | S+ | 4 | A | 3 |
| BlackFin Capital Partners | 30.7 | 0.0% | 1 | S | 3 | B | 3 |
| Carlyle Group | 224.1 | 0.3% | 3 | S+ | 4 | B | 4 |
| Clearlake Capital | 497.7 | 0.7% | 5 | S+ | 4 | A | 4 |
| GHO Capital | 95.9 | 0.1% | * | S | 3 | A | 3 |
| Gilde Partners | 126.7 | 0.2% | 5 | S | 2 | A | 5 |
| Harvest Partners | 120.7 | 0.2% | 5 | S | 1 | C | 3 |
| Marlin Equity | 25.6 | 0.0% | 1 | S- | 2 | C | 3 |
| Novacap | 14.2 | 0.0% | * | S | 3 | B | 3 |
| Onex Partners | 304.9 | 0.4% | 2 | S | 4 | A | 5 |
| PAI | 138.4 | 0.2% | 5 | S | 2 | B | 4 |
| Revelstoke | 164.8 | 0.2% | 2 | S | 4 | A | 2 |
| Riverside Capital | 101.3 | 0.1% | 1 | S | 3 | B | 3 |
| Siris Capital Group | 161.5 | 0.2% | 3 | S | 3 | B | 4 |
| Sterling Partners | 135.0 | 0.2% | 5 | S | 3 | A | 4 |
| STG Partners | 46.0 | 0.1% | * | S | 3 | A | 3 |
| Triton | 111.1 | 0.2% | 4 | S- | 3 | C | 5 |
| TSG | -0.1 | 0.0% | * | S+ | 3 | C | 2 |
| Veritas Capital | 31.3 | 0.0% | * | S+ | 3 | B | 3 |
| Vinci Partners | 72.0 | 0.1% | 2 | S | 4 | B | 5 |
| Webster Equity Partners | 52.1 | 0.1% | * | S | 3 | B | 3 |
| Wynnchurch Capital | 46.8 | 0.1% | * | S+ | 3 | C | 3 |
| SMALL BUYOUT | | | | | | | |
| AE Industrial Partners | 117.9 | 0.2% | 5 | S+ | 3 | A | 3 |
| Atlantic Street Capital | 41.5 | 0.1% | 5 | S | 3 | A | 3 |
| Clarion | 24.6 | 0.0% | 4 | S+ | 2 | B | 4 |
| Excellere Partners | 116.3 | 0.2% | 2 | S- | 3 | A | 3 |
| Incline Equity Partners | 40.3 | 0.1% | 5 | S | 2 | C | 4 |
| Insignia Capital Partners | 234.4 | 0.3% | 3 | S | 1 | B | 5 |
| Juggernaut Capital Partners | 274.6 | 0.4% | 4 | S | 3 | A | 4 |
| Lightyear Capital | 209.3 | 0.3% | 3 | S | 2 | A | 5 |
| Livingbridge | 53.2 | 0.1% | 1 | S+ | 4 | A | 3 |
| Montefiore Investment | 13.6 | 0.0% | * | S+ | 4 | B | 4 |
| One Rock Capital Partners | 217.4 | 0.3% | 2 | S | 3 | A | 4 |
| Palladium Equity Partners | 84.2 | 0.1% | 1 | S- | 4 | C | 2 |

PRIVATE EQUITY



Los Angeles County Employees Retirement Association

PRIVATE MARKETS MANAGER SCORECARD

4th Quarter 2022

| | | | Performance | Organization & Operations | ESG | Partnership | Fees & Terms |
|--------------------------------|----------------------------------|--------------------|-----------------------------|------------------------------------|-----------------------------|---------------------------------|-----------------------------|
| | | | 1 to 5 (with 5 the best) | S+, S, or S- (with S+ the best) | 1 to 5 (with 5 the best) | A, B, or C (with A the best) | 1 to 5 (with 5 the best) |
| | | | SCORE | SCORE | SCORE | SCORE | SCORE |
| Manager | Market Value (in \$ millions) | % of Total Fund | | | | | |
| GROWTH EQUITY | | | | | | | |
| Australis Partners | 81.4 | 0.1% | 1 | S- | 4 | B | 5 |
| Great Hill Partners | -5.8 | 0.0% | * | S | 4 | A | 4 |
| JMI Equity | 4.4 | 0.0% | 3 | S | 3 | C | 2 |
| RedBird Capital Partners | 152.5 | 0.2% | 2 | S | 4 | A | 3 |
| Summit Partners | 81.8 | 0.1% | 4 | S | 4 | A | 4 |
| TA Associates | 133.3 | 0.2% | 5 | S | 4 | B | 4 |
| Technology Crossover Ventures | 4.3 | 0.0% | 5 | S | 2 | B | 3 |
| VENTURE CAPITAL | | | | | | | |
| BlueRun Ventures | 108.6 | 0.2% | 2 | S | 2 | A | 2 |
| Canaan Partners | 173.0 | 0.2% | 4 | S | 3 | A | 4 |
| GGV Capital | 500.5 | 0.7% | 2 | S | 3 | A | 3 |
| Institutional Venture Partners | 183.4 | 0.3% | 5 | S | 1 | C | 4 |
| Joy Capital | 83.8 | 0.1% | 1 | S- | 2 | B | 4 |
| Lilly Asia Ventures | 139.7 | 0.2% | 3 | S | 4 | B | 2 |
| Primary Ventures | 0.0 | 0.0% | * | S | 2 | C | 4 |
| Sinovation Ventures | 94.1 | 0.1% | 1 | S- | 2 | C | 2 |
| Storm Ventures LLC | 237.3 | 0.3% | 4 | S | 3 | A | 4 |
| Union Square | 134.5 | 0.2% | 5 | S- | 1 | B | 5 |
| SPECIAL SITUATIONS | | | | | | | |
| Alchemy Partners | 36.0 | 0.1% | 1 | S | 3 | B | 4 |
| Black Diamond | 145.4 | 0.2% | 1 | S | 3 | B | 4 |
| Centerbridge | 176.4 | 0.3% | 5 | S | 4 | A | 2 |
| FUND OF FUNDS | | | | | | | |
| Gateway | 899.9 | 1.3% | 5 | S | 3 | B | 4 |
| MS GTB Capital Partners | 286.4 | 0.4% | 1 | S | 4 | A | 2 |
| J.P. Morgan | 487.9 | 0.7% | 3 | S+ | + | B | 4 |

PRIVATE EQUITY
(continued)



Los Angeles County Employees Retirement Association

PRIVATE MARKETS MANAGER SCORECARD

4th Quarter 2022

| | | | Performance | Organization & Operations | ESG | Partnership | Fees & Terms |
|---|------------------|------|-----------------------------|---------------------------|-----------------------------|---------------------------------|-----------------------------|
| | | | 1 to 5 (with 5 the best) | S+, S, or S- | 1 to 5 (with 5 the best) | A, B, or C (with A the best) | 1 to 5 (with 5 the best) |
| | | | SCORE | SCORE | SCORE | SCORE | SCORE |
| Manager | (in \$ millions) | | | | | | |
| COMMINGLED FUNDS | | | | | | | |
| AERMONT Real Estate Fund IV | 26.0 | 0.0% | 2 | S | 4 | B | 3 |
| AEW Value Investors Asia III | 30.0 | 0.0% | 2 | S | 4 | B | 4 |
| AG Asia Realty Fund IV | 78.0 | 0.1% | * | S- | 3 | B | 3 |
| AG Europe Realty Fund II | 47.0 | 0.1% | 2 | S- | 3 | B | 3 |
| Bain Capital Real Estate Fund I | 76.0 | 0.1% | 5 | S | 3 | B | 3 |
| Bain Capital Real Estate Fund II | 39.0 | 0.1% | * | S | 3 | B | 3 |
| CapMan Nordic Real Estate Fund II | 43.0 | 0.1% | 3 | S | 4 | A | 3 |
| CapMan Nordic Real Estate Fund III | 24.0 | 0.0% | * | S | 4 | A | 3 |
| CityView Bay Area Fund II | 82.0 | 0.1% | 1 | S | 3 | B | 3 |
| CityView Western Fund I, L.P. | 215.0 | 0.3% | 4 | S | 3 | B | 3 |
| Core Property Index Fund | 130.0 | 0.2% | 4 | S | 2 | A | 5 |
| Europa Fund IV | 9.0 | 0.0% | 1 | S | 3 | A | 2 |
| Heitman Asia-Pacific Property Investors | 35.0 | 0.0% | 3 | S | 3 | B | 4 |
| Invesco Real Estate Asia Fund | 144.0 | 0.2% | 4 | S | 4 | B | 5 |
| Prologis European Logistics Fund (PELF) | 197.0 | 0.3% | 5 | S | 4 | A | 1 |
| RREEF Core Plus Industrial Fund (CPIF) | 307.0 | 0.4% | 5 | S- | 3 | B | 5 |
| Starwood Capital Hospitality Fund | 6.0 | 0.0% | 1 | S | 3 | C | 3 |
| TPG Real Estate Partners III | 45.0 | 0.1% | * | S | 3 | C | 3 |
| SEPARATE ACCOUNTS | | | | | | | |
| Cityview Core I.M.A. | 208.0 | 0.3% | 1 | S | 3 | B | 2 |
| Clarion I.M.A. | 534.0 | 0.8% | 5 | S | 3 | A | 4 |
| Clarion Takeover Core IMA | 360.0 | 0.5% | * | S | 3 | A | 4 |
| Clarion Takeover Value IMA | 16.0 | 0.0% | * | S | 3 | A | 3 |
| Heitman I.M.A. | 431.0 | 0.6% | 4 | S | 3 | B | 4 |
| RREEF Core/High Return I.M.A. III | 860.0 | 1.2% | 1 | S- | 3 | C | 5 |
| RREEF Takeover I.M.A. | 727.0 | 1.0% | 2 | S- | 3 | C | 4 |
| Stockbridge I.M.A. | 650.0 | 0.9% | 4 | S | 3 | B | 4 |
| Stockbridge High I.M.A. Vintage 2014 | 111.0 | 0.2% | * | S | 3 | B | 5 |
| Stockbridge Value I.M.A. Vintage 2014 | 25.0 | 0.0% | * | S | 3 | B | 3 |

REAL ESTATE



Los Angeles County Employees Retirement Association

PRIVATE MARKETS MANAGER SCORECARD

4th Quarter 2022

| | | | Performance | Organization & Operations | ESG | Partnership | Fees & Terms |
|--|----------------------------------|--------------------|-----------------------------|------------------------------------|-----------------------------|---------------------------------|-----------------------------|
| | | | 1 to 5 (with 5 the best) | S+, S, or S- (with S+ the best) | 1 to 5 (with 5 the best) | A, B, or C (with A the best) | 1 to 5 (with 5 the best) |
| | | | SCORE | SCORE | SCORE | SCORE | SCORE |
| Manager | Market Value (in \$ millions) | % of Total Fund | | | | | |
| NATURAL RESOURCES & COMMODITIES | | | | | | | |
| Cibus Enterprise II | 4.2 | 0.0% | * | S | 3 | B | 3 |
| Cibus Fund II | 15.7 | 0.0% | * | S | 3 | B | 3 |
| EMG | 82.0 | 0.1% | 3 | S | 3 | B | 1 |
| HiTecVision | 66.8 | 0.1% | * | S | 3 | A | 3 |
| Orion Mine Finance Onshore III | 122.3 | 0.2% | * | S | 4 | B | 4 |
| Orion Mineral Royalty Fund I | 21.9 | 0.0% | * | S | 4 | B | 4 |
| TIAA-CREF Global Agriculture | 255.9 | 0.4% | 5 | S+ | 4 | A | 5 |
| TIAA-CREF Global Agriculture II | 256.9 | 0.4% | 5 | S+ | 4 | A | 5 |
| INFRASTRUCTURE | | | | | | | |
| Antin Mid Cap | 38.0 | 0.1% | * | S | 3 | B | 2 |
| Axiom Infrastructure Canada II | 59.0 | 0.1% | * | S | 4 | A | 3 |
| Axiom Infrastructure US II | 254.4 | 0.4% | * | S | 4 | A | 3 |
| DIF CIF III | 29.3 | 0.0% | * | S | 3 | A | 4 |
| DIF Infrastructure VI | 103.0 | 0.1% | 5 | S | 3 | A | 2 |
| Grain Communications Opportunity Fund III | 33.2 | 0.0% | * | S- | 3 | C | 2 |
| Grain Spectrum Holdings III | 47.8 | 0.1% | 2 | S- | 3 | C | 2 |
| KKR Diversified Core Infrastructure Fund | 334.4 | 0.5% | * | S | 3 | A | 4 |
| Pan-European Infrastructure Fund III | 65.4 | 0.1% | 3 | S- | 3 | B | 3 |
| Partners Group Direct Infrastructure 2020 | 62.9 | 0.1% | * | S | 3 | A | 3 |

PRIVATE REAL ASSETS
(ex. Real Estate)

| | | Performance 1 to 5 (with 5 the best) | Organization & Operations S+, S, or S- (with S+ the best) | ESG 1 to 5 (with 5 the best) | Partnership A, B, or C (with A the best) | Fees & Terms 1 to 5 (with 5 the best) |
|----------------------------------|--------------------|--|---|------------------------------------|--|---|
| | | SCORE | SCORE | SCORE | SCORE | SCORE |
| Market Value (in \$ millions) | % of Total Fund | | | | | |
| 217.1 | 0.3% | 4 | S | 2 | A | 5 |
| 650.1 | 0.9% | 5 | S+ | 2 | A | 2 |
| 642.2 | 0.9% | 5 | S | 1 | A | 3 |
| 296.6 | 0.4% | 5 | S | 3 | B | 3 |
| 486.2 | 0.7% | 3 | S | 1 | B | 3 |
| 578.1 | 0.8% | 4 | S | 1 | B | 3 |
| 650.1 | 0.9% | 5 | S | 1 | B | 3 |
| 467.0 | 0.7% | 4 | S | 2 | B | 4 |
| 384.2 | 0.5% | * | S | 2 | A | 5 |
| 59.0 | 0.1% | 4 | S | 3 | B | 4 |
| 167.0 | 0.2% | 3 | S | 1 | B | 3 |
| 647.4 | 0.9% | 1 | S- | 2 | C | 4 |
| 124.7 | 0.2% | 5 | S | 1 | B | 2 |
| 904.5 | 1.3% | * | S | 2 | A | 3 |
| 800.4 | 1.1% | * | S | 2 | A | 3 |
| 90.4 | 0.1% | 5 | S | 2 | B | 2 |
| 272.8 | 0.4% | 1 | S- | 1 | C | 3 |
| 24.2 | 0.0% | 2 | S | 1 | B | 4 |
| 363.0 | 0.5% | * | S | 2 | A | 4 |
| 22.6 | 0.0% | * | S | 2 | A | 4 |
| 237.1 | 0.3% | * | S | 2 | B | 4 |

| |
|---|
| For Organization and Partnership |
| Downgrade from the prior quarter |
| Upgrade from the prior quarter |

Footnotes

- Pillar methodologies in refinement and may evolve over time

Category Descriptions

Performance

- Quarterly score based on risk-adjusted performance metrics over time
- '*' denotes a manager with an inception date of less than 3 years

Organization & Operations

- Includes factors such as organization, professional staff, investment philosophy & process, risk management, legal & compliance framework, diversity & inclusion
- 'S' stands for Satisfactory

ESG

- Evaluates the extent to which material ESG factors are identified, assessed, and incorporated into risk/return analysis and portfolio construction
- '+' denotes mandates where ESG scores are currently under review

Partnership

- Assesses the quality of investment manager relationships both quantitatively and qualitatively

Fees & Terms

- Compares various fees and terms within each asset category, strategy and/or investment structure

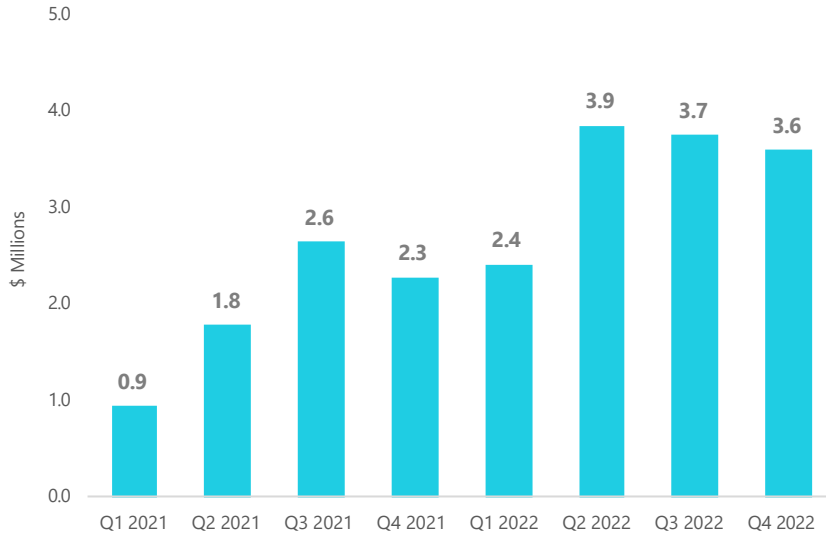
appendix

Summary

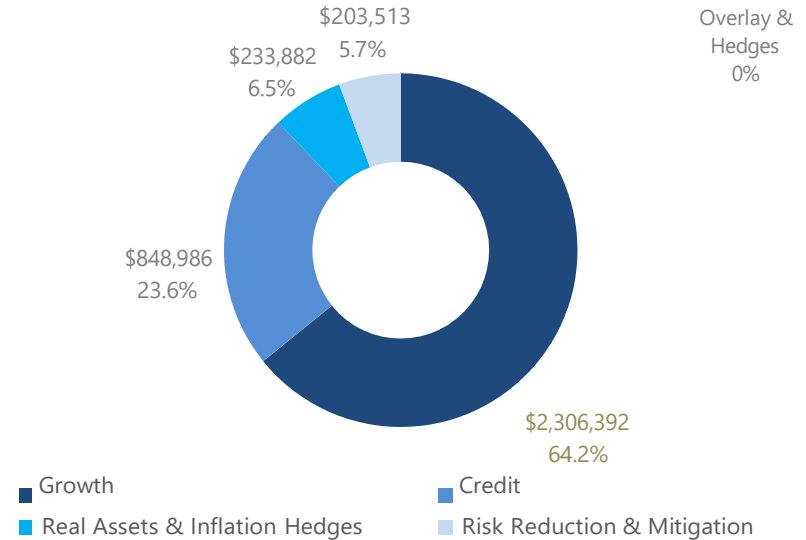
Securities Lending Income

for the quarter ended December 31, 2022

Earnings by Quarter



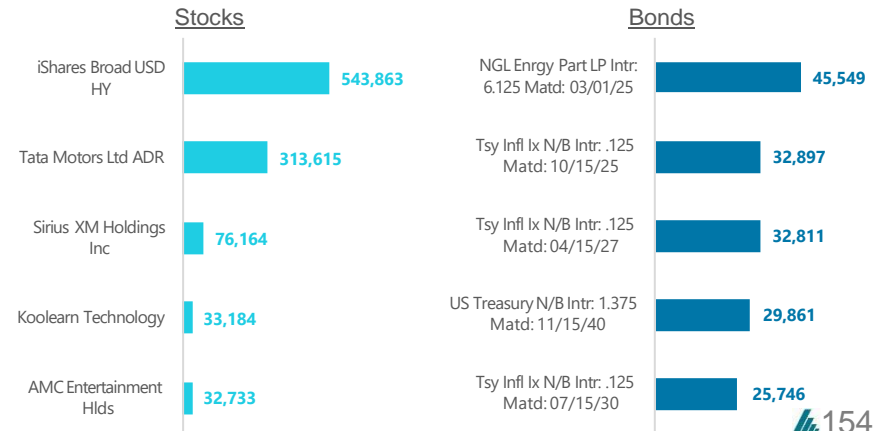
Earnings by Functional Category



Top Earning Funds

| Fund | % of Total Fund Earnings | Total Earnings | Cash Earnings | Non-Cash Earnings |
|---------------------------|--------------------------|----------------|---------------|-------------------|
| MSCI ACWI IMI | 49.2% | 1,841,290 | 1,108,691 | 732,599 |
| Blackrock HY ETF | 14.5% | 543,862 | 180,857 | 363,005 |
| JPMAM Strategic Beta U.S. | 6.3% | 237,362 | 150,424 | 86,938 |
| Blackrock TIPS | 5.3% | 197,423 | 132,243 | 65,180 |
| Brigade Cap Mgmt | 4.9% | 182,197 | 176,341 | 5,856 |

Top Earning Securities



Public Markets Manager Fees

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Growth

| | Average Market Value (\$ mm) | Fees ¹ | Annualized Effective Rate (bps) |
|-----------------------------|---------------------------------|--------------------|------------------------------------|
| Active | | | |
| Acadian Asset Management | \$547.1 | \$516,189 | 37.7 |
| BTC Europe Alpha Tilts | \$512.6 | \$452,213 | 35.3 |
| Capital Guardian | \$323.8 | \$280,788 | 34.7 |
| Cevian Capital | \$399.1 | \$1,079,603 | 108.2 |
| CornerCap | \$82.5 | \$108,696 | 52.7 |
| Frontier Capital Management | \$261.9 | \$491,025 | 75.0 |
| Global Alpha | \$159.1 | \$286,092 | 71.9 |
| Lazard Asset Management | \$344.3 | \$553,984 | 64.4 |
| Parametric GE Market Cap | \$873.4 | \$57,154 | 2.6 |
| Parametric GE Region | \$539.9 | \$35,333 | 2.6 |
| Systematic | \$190.2 | \$261,477 | 55.0 |
| Subtotal: | \$4,233.8 | \$4,122,555 | 38.9 |
| Factor-Based | | | |
| JPMAM Strategic Beta Non-US | \$534.8 | \$45,888 | 3.4 |
| JPMAM Strategic Beta US | \$4,090.5 | \$351,009 | 3.4 |
| Subtotal: | \$4,625.3 | \$396,897 | 3.4 |
| Passive | | | |
| SSGA MSCI ACWI IMI | \$14,291.4 | \$275,943 | 0.8 |
| Subtotal: | \$14,291.4 | \$275,943 | 0.8 |

¹ Reflects estimated investment management fees.

Public Markets Manager Fees

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Credit

| | Average Market Value (\$ mm) | Fees ¹ | Annualized Effective Rate (bps) |
|-------------------------------|---------------------------------|--------------------|------------------------------------|
| Liquid Credit | | | |
| Aberdeen Standard Investments | \$357.5 | \$345,960 | 38.7 |
| Ashmore Investment Management | \$341.2 | \$424,857 | 49.8 |
| Bain Capital | \$416.7 | \$570,879 | 54.8 |
| Beach Point Capital | \$279.9 | \$314,921 | 45.0 |
| Brigade Capital Management | \$626.8 | \$642,204 | 41.0 |
| Credit Suisse Bank Loan | \$1,145.0 | \$565,249 | 19.7 |
| Crescent Capital Group | \$490.6 | \$571,867 | 46.6 |
| Pinebridge | \$448.6 | \$370,069 | 33.0 |
| Subtotal: | \$4,106.4 | \$3,806,007 | 37.1 |

¹ Reflects estimated investment management fees.

Public Markets Manager Fees

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Real Assets & Inflation Hedges

| | Average Market Value (\$ mm) | Fees ¹ | Annualized Effective Rate (bps) |
|--|---------------------------------|--------------------|------------------------------------|
| Natural Resources & Commodities | | | |
| Credit Suisse | \$314.3 | \$211,062 | 26.9 |
| DWS Natural Resources | \$708.9 | \$329,082 | 18.6 |
| Neuberger Berman/Gresham | \$391.7 | \$362,701 | 37.0 |
| Subtotal: | \$1,414.9 | \$902,846 | 25.5 |
| Infrastructure | | | |
| DWS Infrastructure | \$2,813.3 | \$1,305,915 | 18.6 |
| Subtotal: | \$2,813.3 | \$1,305,915 | 18.6 |
| Treasury Inflation-Protected Securities | | | |
| BlackRock TIPS | \$1,857.7 | \$46,825 | 1.0 |
| Subtotal: | \$1,857.7 | \$46,825 | 1.0 |

¹ Reflects estimated investment management fees.

Public Markets Manager Fees

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Risk Reduction & Mitigation

| | Average Market Value (\$ mm) | Fees ¹ | Annualized Effective Rate (bps) |
|-----------------------------------|---------------------------------|-------------------|------------------------------------|
| Investment Grade Bonds | | | |
| Allspring/Wells | \$1,318.7 | \$342,336 | 10.4 |
| Pugh Capital Management | \$826.3 | \$279,018 | 13.5 |
| Subtotal:² | \$5,028.3 | \$683,127 | 5.4 |
| Long-Term Government Bonds | | | |
| BlackRock | \$2,815.3 | \$70,865 | 1.0 |
| Subtotal: | \$2,815.3 | \$70,865 | 1.0 |
| Cash | | | |
| SSGA Cash | \$678.4 | \$67,843 | 4.0 |
| Subtotal: | \$678.4 | \$67,843 | 4.0 |

¹ Reflects estimated investment management fees.

² Includes BTC US Debt Index account.

Public Markets Manager Fees

for the quarter ended December 31, 2022



Los Angeles County Employees Retirement Association

Overlays & Hedges

| | Average Market Value (\$ mm) | Fees ¹ | Annualized Effective Rate (bps) |
|--|---------------------------------|-------------------|------------------------------------|
| Overlays | | | |
| Parametric Cash Overlay | \$2,553.4 | \$167,096 | 2.6 |
| Subtotal: | \$2,553.4 | \$167,096 | 2.6 |
| Hedges | | | |
| BlackRock Developed Markets Currency Hedge | \$6,090.9 | \$230,287 | 1.5 |
| Subtotal: | \$6,090.9 | \$230,287 | 1.5 |

¹ Reflects estimated investment management fees.

Benchmark Definitions

Current Composition

| | Weight | Component |
|--------------------------------------|--------|--|
| Total Fund | | |
| Total Fund Policy Benchmark | | |
| | 53% | Growth Policy Benchmark |
| | 11% | Credit Policy Benchmark |
| | 17% | RA & IH Policy Benchmark |
| | 19% | RR & M Policy Benchmark |
| Growth | | |
| Growth Policy Benchmark | | |
| | 60% | Global Equity Policy Benchmark |
| | 32% | Private Equity – Growth Policy BM |
| | 8% | Non-Core Private RE Policy Benchmark |
| Global Equity Policy Benchmark | | |
| | 100% | MSCI ACWI IMI Net |
| Private Equity – Growth Policy BM | | |
| | 100% | MSCI ACWI IMI Net + 200 bps (3-month lagged) |
| Non-Core Private RE Policy Benchmark | | |
| | 100% | NFI ODCE + 225 bps (3-month lagged) |
| <hr/> | | |
| EAFE Custom Index | 100% | MSCI EAFE + Canada Net Index |

Benchmark Definitions

Current Composition

| | Weight | Component |
|----------------------------------|--------|--|
| Credit | | |
| Credit Policy Benchmark | | |
| | 36% | Liquid Credit Policy Benchmark |
| | 64% | Illiquid Credit Policy Benchmark |
| Liquid Credit Policy Benchmark | | |
| | 40% | Bloomberg U.S. Corporate High Yield |
| | 40% | CS Leveraged Loan Index |
| | 10% | JPMorgan EMBI Global Diversified Index |
| | 5% | JPM GBI-EM Global Diversified Index |
| | 5% | JPM CEMBI Broad Diversified |
| Illiquid Credit Policy Benchmark | | |
| | 100% | Liquid Credit Policy BM + 150 bps (1-month lagged) |
| Bank Loans Custom Benchmark | 100% | CS Leveraged Loan Index |
| Beachpoint Custom Benchmark | 100% | Bloomberg U.S. Corporate High Yield |
| Brigade Custom Index | 100% | Bloomberg U.S. Corporate High Yield |
| EMD Custom Benchmark | | |
| | 50% | JPMorgan EMBI Global Diversified Index |
| | 25% | JPM CEMBI Broad Diversified |
| | 25% | JPM GBI-EM Global Diversified Index |

Benchmark Definitions

Current Composition

| | Weight | Component |
|---|--------|--|
| Real Assets & Inflation Hedges | | |
| RA & IH Policy Benchmark | | |
| | 35% | Core Private RE Policy Benchmark |
| | 18% | Nat Res & Comm Policy Benchmark |
| | 29% | DJ Brookfield Global Infra Comp |
| | 18% | Bloomberg U.S. Treasury: U.S. TIPS |
| Core Private RE Policy Benchmark | | |
| | 100% | NFI ODCE (3-month lagged) |
| Nat Res & Comm Policy Benchmark | | |
| | 33% | Bloomberg Commodity Index Total Return |
| | 66% | S&P Global Natural Resources Index |
| <hr/> | | |
| Private Equity – Real Assets Custom BM | 100% | S&P Glb LargeMidCap Commod & Resources (3-month lagged) |
| Private Infrastructure Custom BM | 100% | DJ Brookfield Global Infra Comp (3-month lagged) |
| Risk Reduction & Mitigation | | |
| RR & M Policy Benchmark | | |
| | 37% | Bloomberg U.S. Aggregate |
| | 32% | Diversified Hedge Funds Policy Benchmark |
| | 26% | Bloomberg U.S. Treasury: Long |
| | 5% | FTSE 3-Month US Treasury Bill |
| Diversified Hedge Funds Policy Benchmark | | |
| | 100% | FTSE 3-Month US Treasury Bill + 250 bps (1-month lagged) |
| Cash Policy Benchmark | | |
| | 100% | FTSE 3-Month US Treasury Bill |
| <hr/> | | |
| Custom Hedge Fund BM | 100% | Diversified Hedge Funds Policy Benchmark |

A

ANNUAL RETURN

The total return of a security over a specified period, expressed as an annual rate of interest.

ACTIVE RISK

The expected standard deviation of the differential return between the portfolio and the benchmark. Active total risk arises from active management, and it is the result of active weights (deviations from the benchmark at the asset level) and therefore active exposures; for passively managed portfolios, it is referred to as “total tracking error.”

ACTIVE RISK CONTRIBUTION

Percent contribution to active total risk (or tracking error). The percent of active total risk that an individual asset or risk source contributes. For example, a % CR to Active Total Risk of 10% indicates that 10% of the portfolio’s active total risk is arising from the active position in that particular asset.

B

BASIS POINTS (BPS)

One one-hundredth of one percent. One hundred basis points equal one percent.

BETA

A measure of the volatility of a stock relative to the overall market. A beta of less than one indicates lower risk than the market; a beta of more than one indicates higher risk than the market.

D

DURATION

A measure of the price sensitivity of a bond portfolio to changes in interest rates.

DISTRIBUTED TO PAID-IN (DPI)

A measure of distributions received relative to contributed capital.

F

FUTURES CONTRACT

Agreement to buy or sell a specific amount of a commodity or financial instrument at a particular price and a stipulated future date.

H

HIGH YIELD BOND

A bond with a low investment quality and credit worthiness, usually with a rating of BB or less.

I

INFORMATION RATIO

The excess return (alpha) per unit of active risk (tracking error).

INTERNAL RATE OF RETURN (IRR)

A total rate of return that gives full weight to the size and timing of cash flows over the period measured and fully reflects unrealized gains and losses in addition to realized gains and losses, interest and dividend income.

K

KAPLAN & SCHOAR PUBLIC MARKET EQUIVALENT (KS-PME)

A ratio that benchmarks the performance of a fund against an appropriate public market index while accounting for the timing of a fund's cash flows.

M

MC TO TOTAL TRACKING ERROR

This value represents the change in the active risk of an asset's portfolio or group that would result from a one percent increase in the asset's effective position plus an equal short position in the benchmark.

S

SHARPE RATIO

Measures the performance of an investment compared to a risk-free asset, after adjusting for its risk. It is the difference between the returns of the investment and the risk-free return, divided by the standard deviation of the investment.

STANDARD DEVIATION

Statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution. The greater the degree of dispersion, the greater the risk.

T

TIME-WEIGHTED RATE OF RETURN (TWR)

A measure of the compound rate of growth in a portfolio. Often used to compare the returns of investment managers because it eliminates the distorting effects on growth rates created by inflows and outflows of money.

TOTAL RISK

The total (gross) risk to an asset (or portfolio), which is the standard deviation of the asset's total return distribution, expressed in percent. Total risk is forecasted using MSCI Barra's multiple factor models. The total risk for an asset depends on the asset's exposures to the risk factors, the factor variance/covariance matrix, and the forecast selection risk of the asset.

TOTAL RISK CONTRIBUTION

The percent of total risk that an individual asset or risk source contributes. For example, a % CR to Total Risk of 10% indicates that 10% of the portfolio's total risk is arising from the portfolio's position in that particular asset.

Y

TOTAL VALUE TO PAID-IN (TVPI)

A measure of total value created relative to capital invested.

TRACKING ERROR

The volatility of a manager's excess return. It is measured by subtracting the benchmark return from the manager's return and calculating the standard deviation.

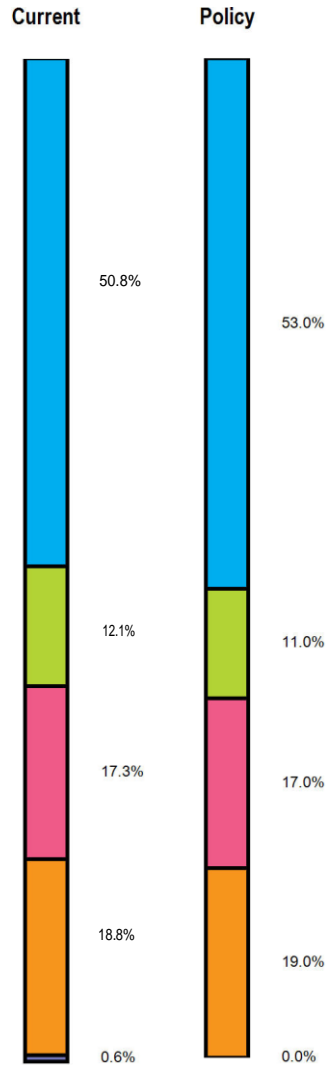
YIELD TO MATURITY

The return a bond earns on the price at which it was purchased if it were held to maturity. It assumes that coupon payments can be reinvested at the yield to maturity.

**Los Angeles County Employees
Retirement Association**

December 31, 2022

Fund Evaluation Report



| Allocation vs. Targets and Policy | | | | | | | |
|---|-------------------------|--------------------|---------------|--------------|----------------------|-------------------|--|
| | Current Balance | Current Allocation | Policy | Difference | Policy Range | Within IPS Range? | |
| Growth | \$35,773,280,500 | 50.8% | 53.0% | -2.2% | 45.0% - 61.0% | Yes | |
| Global Equity | \$21,969,396,862 | 31.2% | 32.0% | -0.8% | 25.0% - 39.0% | Yes | |
| Private Equity | \$12,732,565,040 | 18.1% | 17.0% | 1.1% | 12.0% - 20.0% | Yes | |
| Non-Core Private Real Estate | \$1,071,318,598 | 1.5% | 4.0% | -2.5% | 2.0% - 6.0% | No | |
| Credit | \$8,445,783,572 | 12.1% | 11.0% | 1.1% | 8.0% - 14.0% | Yes | |
| Liquid Credit ¹ | \$4,709,316,668 | 6.7% | 4.0% | 2.7% | 1.0% - 7.0% | Yes | |
| Illiquid Credit ² | \$3,736,447,308 | 5.3% | 7.0% | -1.7% | 4.0% - 10.0% | Yes | |
| Real Assets and Inflation Hedges | \$12,222,181,033 | 17.3% | 17.0% | 0.3% | 14.0% - 20.0% | Yes | |
| Core Real Estate | \$4,338,870,749 | 6.2% | 6.0% | 0.2% | 3.0% - 9.0% | Yes | |
| Natural Resources & Commodities | \$2,210,384,505 | 3.1% | 3.0% | 0.1% | 1.0% - 5.0% | Yes | |
| Infrastructure | \$3,811,989,221 | 5.4% | 5.0% | 0.4% | 2.0% - 6.0% | Yes | |
| TIPS | \$1,860,936,558 | 2.6% | 3.0% | -0.4% | 0.0% - 6.0% | Yes | |
| Risk Reduction and Mitigation | \$13,202,107,101 | 18.8% | 19.0% | -0.2% | 13.0% - 25.0% | Yes | |
| Investment Grade Bonds | \$5,002,871,602 | 7.1% | 7.0% | 0.1% | 1.0% - 13.0% | Yes | |
| Diversified Hedge Funds | \$4,402,389,500 | 6.2% | 6.0% | 0.2% | 2.0% - 8.0% | Yes | |
| Long-Term Government Bonds | \$2,856,797,172 | 4.1% | 5.0% | -0.9% | 0.0% - 10.0% | Yes | |
| Cash | \$940,087,768 | 1.3% | 1.0% | 0.3% | 0.0% - 3.0% | Yes | |
| Overlays and Hedges | \$435,685,997 | 0.6% | 0.0% | 0.6% | 0.0% - 1.0% | Yes | |
| Cash Overlay | \$591,018,438 | 0.8% | | | | | |
| Currency Hedge | -\$155,332,442 | -0.2% | | | | | |
| Total³ | \$70,079,038,203 | 100.0% | 100.0% | | | | |

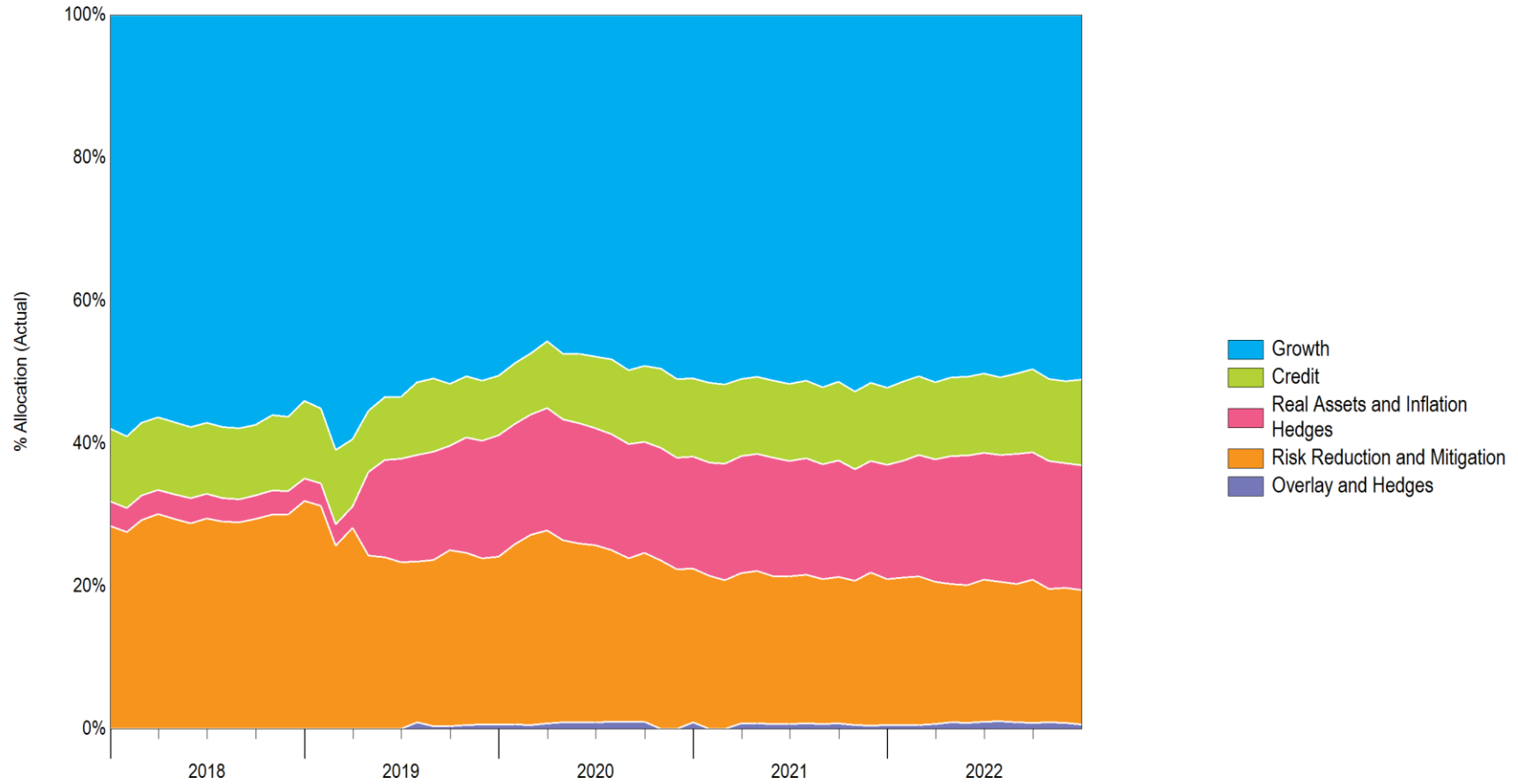
¹ Liquid Credit contains high yield, bank loans, and EM debt.

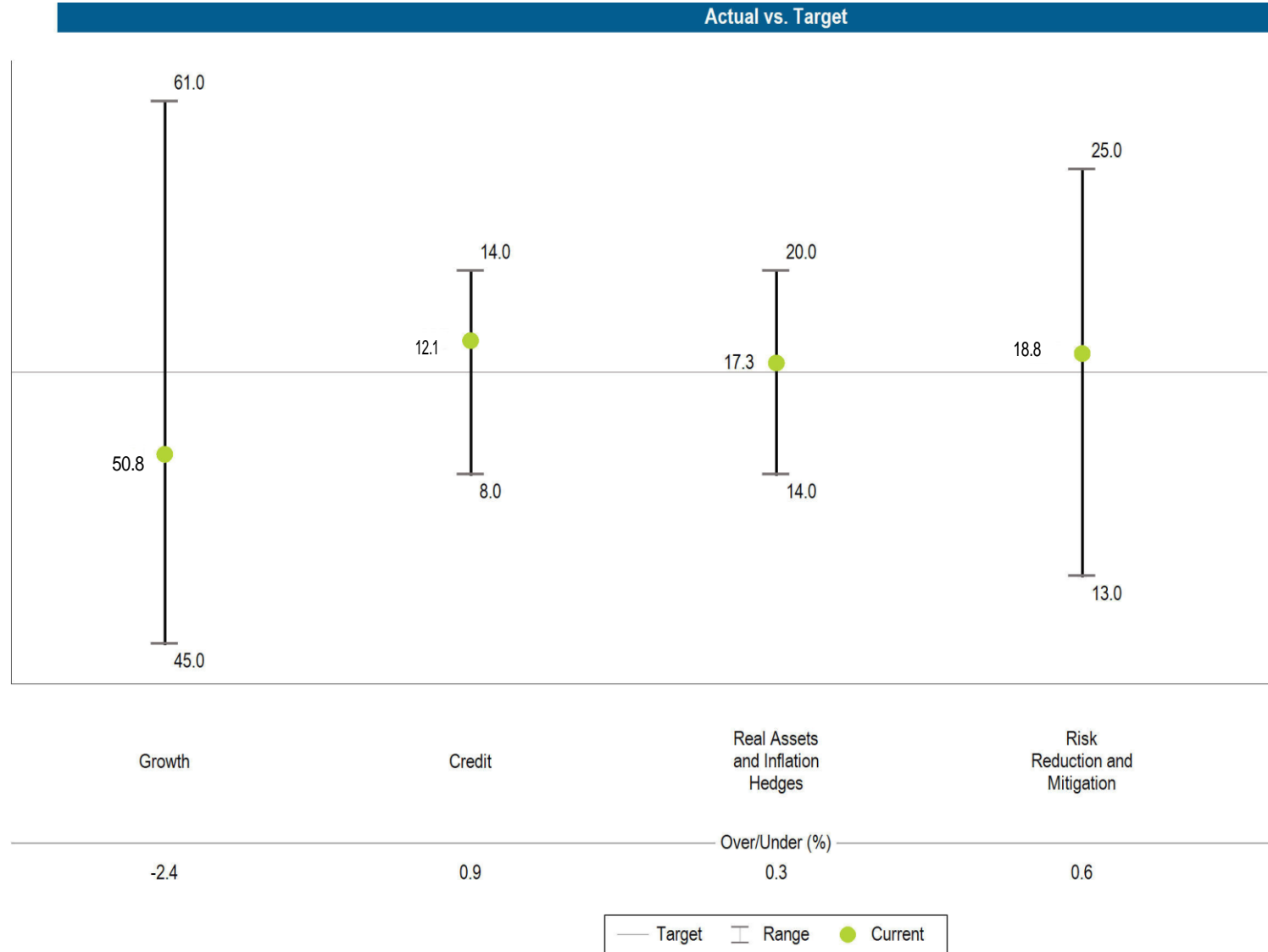
² Illiquid Credit contains credit hedge funds, real estate debt, private debt strategies and private equity-related debt.

³ Totals may not add up due to rounding.

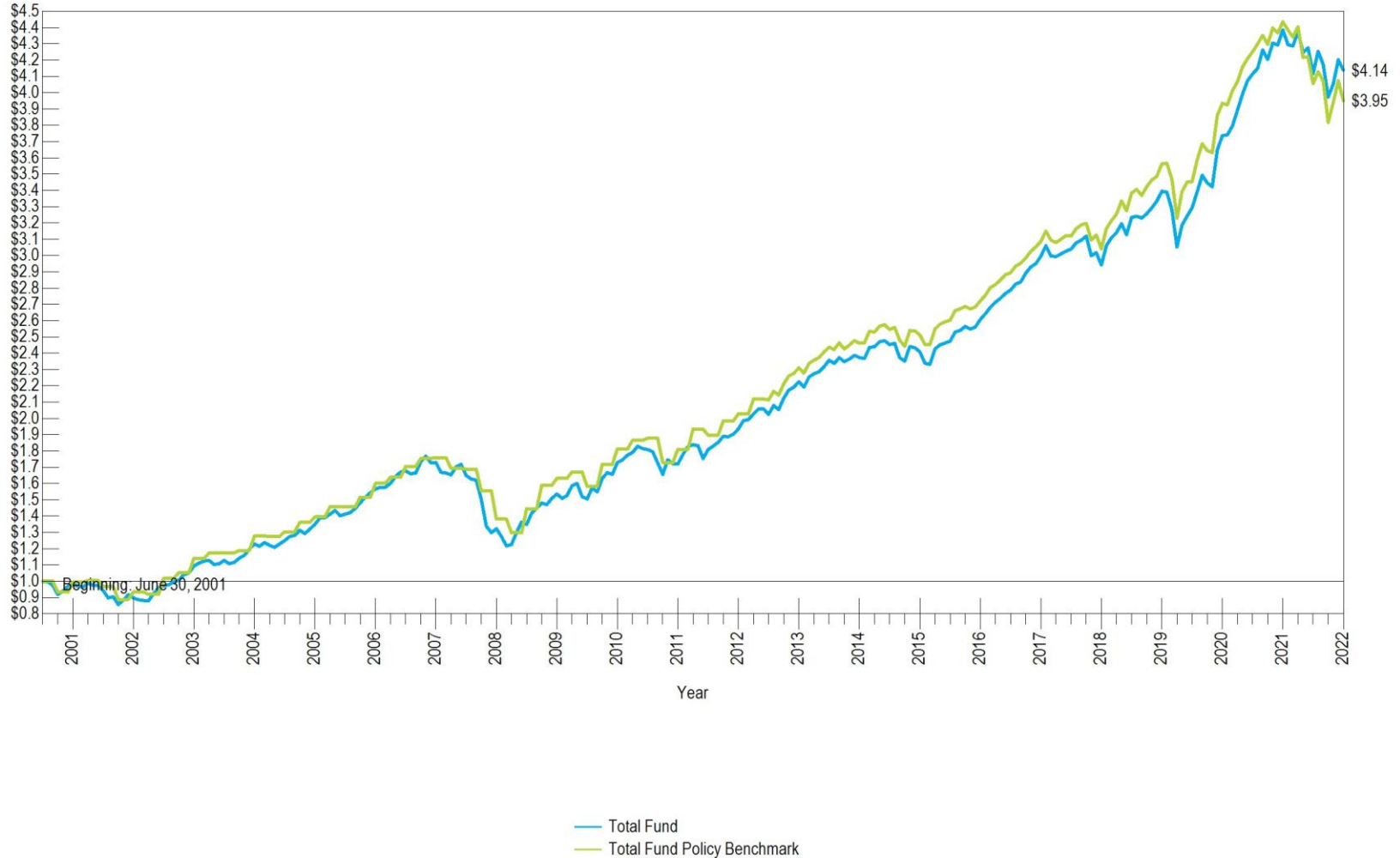
* The Functional Framework became effective April 1, 2019.

Asset Allocation History
5 Years Ending December 31, 2022





Growth of a Dollar



| Asset Class Performance Summary (Net) | | | | | | | | | |
|---|-----------------------|-------------------|--------------|--------------|-----------------------------------|--------------|--------------|--------------|---------------|
| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD ¹ (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
| Total Fund (Net) | 70,079,038,203 | 100.0 | -1.5 | 4.1 | 0.5 | -5.6 | 6.8 | 6.7 | 7.9 |
| <i>Total Fund Policy Benchmark</i> | | | <u>-3.0</u> | <u>3.5</u> | <u>-2.5</u> | <u>-10.9</u> | <u>3.5</u> | <u>5.1</u> | <u>6.9</u> |
| Excess Return | | | 1.5 | 0.6 | 3.0 | 5.3 | 3.3 | 1.6 | 1.0 |
| Growth (Net) | 35,773,280,500 | 51.0 | -2.2 | 6.0 | 0.8 | -9.7 | 10.0 | -- | -- |
| <i>Growth Custom Blended Benchmark</i> | | | <u>-5.3</u> | <u>4.0</u> | <u>-4.8</u> | <u>-17.0</u> | <u>5.2</u> | -- | -- |
| Excess Return | | | 3.1 | 2.0 | 5.6 | 7.3 | 4.8 | | |
| Credit (Net) | 8,445,783,572 | 12.1 | 0.2 | 2.2 | 1.6 | -5.5 | 2.8 | -- | -- |
| <i>Credit Custom Blended Benchmark</i> | | | <u>1.8</u> | <u>1.9</u> | <u>1.0</u> | <u>-7.4</u> | <u>0.3</u> | -- | -- |
| Excess Return | | | -1.6 | 0.3 | 0.6 | 1.9 | 2.5 | | |
| Real Assets and Inflation Hedges (Net) | 12,222,181,033 | 17.4 | -1.0 | 3.9 | 1.7 | 7.8 | 8.1 | -- | -- |
| <i>Real Assets & Inflation Hedges Custom BM</i> | | | <u>-1.6</u> | <u>5.4</u> | <u>2.1</u> | <u>6.4</u> | <u>8.3</u> | -- | -- |
| Excess Return | | | 0.6 | -1.5 | -0.4 | 1.4 | -0.2 | | |
| Risk Reduction and Mitigation (Net) | 13,202,107,101 | 18.8 | -0.1 | 1.1 | -2.7 | -9.8 | -1.0 | -- | -- |
| <i>Risk Reduction and Mitigation Custom Blended Benchmark</i> | | | <u>-0.4</u> | <u>1.1</u> | <u>-2.9</u> | <u>-11.0</u> | <u>-1.9</u> | -- | -- |
| Excess Return | | | 0.3 | 0.0 | 0.2 | 1.2 | 0.9 | | |
| Overlay and Hedges (Net) | 435,685,997 | 0.6 | -26.4 | -10.6 | 1.5 | 178.1 | -- | -- | -- |

¹ Fiscal Year begins July 1.

* See Glossary for all custom index definitions.

Trailing Performance

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|-----------------------|-------------------|-------------|-------------|----------------------|--------------|--------------|--------------|---------------|
| Total Fund (Net) | 70,079,038,203 | 100.0 | -1.5 | 4.1 | 0.5 | -5.6 | 6.8 | 6.7 | 7.9 |
| Total Fund (Gross) | | | -1.5 | 4.2 | 0.6 | -5.4 | 7.3 | 7.0 | 8.2 |
| <i>Total Fund Policy Benchmark</i> | | | <u>-3.0</u> | <u>3.5</u> | <u>-2.5</u> | <u>-10.9</u> | <u>3.5</u> | <u>5.1</u> | <u>6.9</u> |
| Excess Return (vs. Net) | | | 1.5 | 0.6 | 3.0 | 5.3 | 3.3 | 1.6 | 1.0 |
| Growth (Net)¹ | 35,773,280,500 | 51.0 | -2.2 | 6.0 | 0.8 | -9.7 | 10.0 | -- | -- |
| Growth (Gross) | | | -2.2 | 6.1 | 1.0 | -9.4 | 10.5 | -- | -- |
| <i>Growth Custom Blended Benchmark</i> | | | <u>-5.3</u> | <u>4.0</u> | <u>-4.8</u> | <u>-17.0</u> | <u>5.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 3.1 | 2.0 | 5.6 | 7.3 | 4.8 | | |
| Global Equity (Net) | 21,969,396,862 | 31.3 | -3.8 | 10.0 | 2.9 | -17.5 | 4.5 | 5.6 | 8.8 |
| Global Equity (Gross) | | | -3.8 | 10.0 | 2.9 | -17.4 | 4.7 | 5.7 | 8.9 |
| <i>Global Equity Custom BM</i> | | | <u>-3.8</u> | <u>9.8</u> | <u>2.6</u> | <u>-18.4</u> | <u>3.8</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | 0.2 | 0.3 | 0.9 | 0.7 | | |
| Acadian Developed Markets (Net) | 560,154,657 | 0.8 | -0.4 | 14.7 | 5.4 | -15.0 | 4.3 | 3.0 | 7.5 |
| Acadian Developed Markets (Gross) | | | -0.3 | 14.8 | 5.6 | -14.7 | 4.7 | 3.4 | 7.9 |
| <i>EAFE Custom Benchmark</i> | | | <u>-0.5</u> | <u>16.2</u> | <u>5.5</u> | <u>-14.3</u> | <u>1.3</u> | <u>1.8</u> | <u>4.6</u> |
| Excess Return (vs. Net) | | | 0.1 | -1.5 | -0.1 | -0.7 | 3.0 | 1.2 | 2.9 |
| BTC Euro Tilts (Net) | 527,751,991 | 0.8 | 0.1 | 18.8 | 9.3 | -12.7 | 4.1 | 2.8 | 6.3 |
| BTC Euro Tilts (Gross) | | | 0.1 | 19.0 | 9.5 | -12.3 | 4.5 | 3.2 | 6.8 |
| <i>MSCI EUROPE</i> | | | <u>0.0</u> | <u>19.3</u> | <u>7.2</u> | <u>-15.1</u> | <u>1.4</u> | <u>1.9</u> | <u>4.6</u> |
| Excess Return (vs. Net) | | | 0.1 | -0.5 | 2.1 | 2.4 | 2.7 | 0.9 | 1.7 |

¹ Includes accounts that are lagged by 3-months and latest available adjusted for cash flows.

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|-------------------------------------|----------------------|-------------------|-------------|-------------|----------------------|--------------|--------------|--------------|---------------|
| Capital Guardian (Net) | 364,176,433 | 0.5 | -1.4 | 17.5 | 6.2 | -23.4 | 0.4 | 3.3 | 6.0 |
| Capital Guardian (Gross) | | | -1.3 | 17.6 | 6.3 | -23.1 | 0.7 | 3.7 | 6.4 |
| <i>EAFE Custom Benchmark</i> | | | <u>-0.5</u> | <u>16.2</u> | <u>5.5</u> | <u>-14.3</u> | <u>1.3</u> | <u>1.8</u> | <u>4.6</u> |
| Excess Return (vs. Net) | | | -0.9 | 1.3 | 0.7 | -9.1 | -0.9 | 1.5 | 1.4 |
| Cevian Capital (Net) | 398,346,642 | 0.6 | -2.2 | 9.5 | 11.0 | -3.6 | 9.0 | 5.6 | -- |
| Cevian Capital (Gross) | | | -2.1 | 9.8 | 11.6 | -2.6 | 10.1 | 6.8 | -- |
| <i>MSCI EUROPE</i> | | | <u>0.0</u> | <u>19.3</u> | <u>7.2</u> | <u>-15.1</u> | <u>1.4</u> | <u>1.9</u> | -- |
| Excess Return (vs. Net) | | | -2.2 | -9.8 | 3.8 | 11.5 | 7.6 | 3.7 | |
| CornerCap (Net) | 80,616,765 | 0.1 | -4.7 | 11.0 | 5.2 | -7.0 | 9.1 | -- | -- |
| CornerCap (Gross) | | | -4.7 | 11.1 | 5.5 | -6.5 | 9.7 | -- | -- |
| <i>Russell 2000</i> | | | <u>-6.5</u> | <u>6.2</u> | <u>3.9</u> | <u>-20.4</u> | <u>3.1</u> | -- | -- |
| Excess Return (vs. Net) | | | 1.8 | 4.8 | 1.3 | 13.4 | 6.0 | | |
| Frontier Capital Management (Net) | 256,220,515 | 0.4 | -6.4 | 11.1 | 6.0 | -17.9 | 4.5 | 5.0 | 10.2 |
| Frontier Capital Management (Gross) | | | -6.4 | 11.3 | 6.4 | -17.3 | 5.2 | 5.7 | 11.1 |
| <i>Russell 2500</i> | | | <u>-5.9</u> | <u>7.4</u> | <u>4.4</u> | <u>-18.4</u> | <u>5.0</u> | <u>5.9</u> | <u>10.0</u> |
| Excess Return (vs. Net) | | | -0.5 | 3.7 | 1.6 | 0.5 | -0.5 | -0.9 | 0.2 |

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| | Market Value (M) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---------------------------------------|---------------------|-------------------|-------------|-------------|----------------------|--------------|--------------|--------------|---------------|
| Global Alpha IE EMP (Net) | 165,539,625 | 0.2 | 1.1 | 15.1 | 2.1 | -19.2 | -0.7 | -- | -- |
| Global Alpha IE EMP (Gross) | | | 1.1 | 15.3 | 2.5 | -18.6 | 0.0 | -- | -- |
| <i>MSCI EAFE Small Cap</i> | | | <u>1.1</u> | <u>15.8</u> | <u>4.4</u> | <u>-21.4</u> | <u>-0.9</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | -0.7 | -2.3 | 2.2 | 0.2 | | |
| JPMAM Strategic BETA NON-U.S. (Net) | 550,529,749 | 0.8 | -0.9 | 14.1 | 3.4 | -14.5 | -- | -- | -- |
| JPMAM Strategic BETA NON-U.S. (Gross) | | | -0.9 | 14.1 | 3.4 | -14.5 | -- | -- | -- |
| <i>MSCI ACWI ex USA IMI</i> | | | <u>-0.6</u> | <u>14.1</u> | <u>3.1</u> | <u>-16.6</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.3 | 0.0 | 0.3 | 2.1 | | | |
| JPMAM Strategic BETA U.S. (Net) | 3,997,750,770 | 5.7 | -5.9 | 7.6 | 2.5 | -17.9 | -- | -- | -- |
| JPMAM Strategic BETA U.S. (Gross) | | | -5.9 | 7.6 | 2.5 | -17.9 | -- | -- | -- |
| <i>MSCI USA IMI Gross</i> | | | <u>-5.9</u> | <u>7.2</u> | <u>2.4</u> | <u>-19.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | 0.4 | 0.1 | 1.3 | | | |
| Lazard Emerging Markets (Net) | 368,015,753 | 0.5 | 2.1 | 14.5 | -1.7 | -22.6 | -1.0 | 0.3 | -- |
| Lazard Emerging Markets (Gross) | | | 2.2 | 14.6 | -1.4 | -22.1 | -0.3 | 1.0 | -- |
| <i>MSCI Emerging Markets</i> | | | <u>-1.4</u> | <u>9.7</u> | <u>-3.0</u> | <u>-20.1</u> | <u>-2.7</u> | <u>-1.4</u> | -- |
| Excess Return (vs. Net) | | | 3.5 | 4.8 | 1.3 | -2.5 | 1.7 | 1.7 | |

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| | Market Value | % of | 1 Mo | QTD | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|----------------|------|-------------|------------|----------------|--------------|------------|-----------|------------|
| Parametric GE Market Cap (Net) | 100,392,418 | 0.1 | 1.1 | -6.5 | -15.6 | -15.6 | -- | -- | -- |
| Parametric GE Market Cap (Gross) | | | 1.2 | -6.5 | -15.5 | -15.4 | -- | -- | -- |
| Parametric GE Region (Net) | 88,773,455 | 0.1 | -1.3 | -14.8 | 13.2 | -21.6 | -- | -- | -- |
| Parametric GE Region (Gross) | | | -1.3 | -14.8 | 13.3 | -21.4 | -- | -- | -- |
| SSGA MSCI ACWI IMI (Net) | 14,270,201,674 | 20.4 | -3.8 | 10.1 | 2.6 | -17.9 | 4.5 | -- | -- |
| SSGA MSCI ACWI IMI (Gross) | | | -3.8 | 10.1 | 2.7 | -17.9 | 4.5 | -- | -- |
| <i>MSCI ACWI IMI Net (DAILY)</i> | | | <u>-3.8</u> | <u>9.8</u> | <u>2.6</u> | <u>-18.4</u> | <u>3.9</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | 0.3 | 0.0 | 0.5 | 0.6 | | |
| Systematic Financial Management (Net) | 186,369,294 | 0.3 | -5.4 | 11.8 | 7.4 | -9.9 | 7.0 | -- | -- |
| Systematic Financial Management (Gross) | | | -5.4 | 12.0 | 7.7 | -9.5 | 7.6 | -- | -- |
| <i>Russell 2000</i> | | | <u>-6.5</u> | <u>6.2</u> | <u>3.9</u> | <u>-20.4</u> | <u>3.1</u> | -- | -- |
| Excess Return (vs. Net) | | | 1.1 | 5.6 | 3.5 | 10.5 | 3.9 | | |

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|-----------------------|-------------------|-------------|-------------|----------------------|--------------|--------------|--------------|---------------|
| Private Equity - Growth (Net) | 12,732,565,040 | 18.2 | 0.3 | 0.0 | -3.2 | 5.6 | 22.8 | -- | -- |
| Private Equity - Growth (Gross) | | | 0.4 | 0.2 | -2.8 | 6.5 | 24.1 | -- | -- |
| <i>Private Equity - Growth Custom BM</i> | | | <u>-9.5</u> | <u>-6.2</u> | <u>-20.6</u> | <u>-19.6</u> | <u>5.7</u> | -- | -- |
| Excess Return (vs. Net) | | | 9.8 | 6.2 | 17.4 | 25.2 | 17.1 | | |
| Non-Core Private Real Estate (Net) | 1,071,318,598 | 1.5 | 0.4 | 1.9 | 6.7 | 20.5 | 15.3 | 12.6 | 11.9 |
| Non-Core Private Real Estate (Gross) | | | 0.5 | 2.1 | 7.0 | 21.0 | 16.4 | 14.2 | 14.1 |
| <i>Non-Core Private RE Policy BM</i> | | | <u>0.3</u> | <u>0.9</u> | <u>6.0</u> | <u>23.6</u> | <u>14.4</u> | <u>12.3</u> | <u>13.1</u> |
| Excess Return (vs. Net) | | | 0.1 | 1.0 | 0.7 | -3.1 | 0.9 | 0.3 | -1.2 |
| Credit (Net)¹ | 8,445,783,572 | 12.1 | 0.2 | 2.2 | 1.6 | -5.5 | 2.8 | -- | -- |
| Credit (Gross) | | | 0.3 | 2.2 | 1.6 | -5.3 | 3.2 | -- | -- |
| <i>Credit Custom Blended Benchmark</i> | | | <u>1.8</u> | <u>1.9</u> | <u>1.0</u> | <u>-7.4</u> | <u>0.3</u> | -- | -- |
| Excess Return (vs. Net) | | | -1.6 | 0.3 | 0.6 | 1.9 | 2.5 | | |
| Liquid Credit (Net) | 4,709,316,668 | 6.7 | -0.2 | 3.9 | 2.8 | -8.4 | -- | -- | -- |
| Liquid Credit (Gross) | | | -0.1 | 4.0 | 2.9 | -8.1 | -- | -- | -- |
| <i>Liquid Credit Custom BM</i> | | | <u>0.1</u> | <u>4.1</u> | <u>3.4</u> | <u>-8.0</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.3 | -0.2 | -0.6 | -0.4 | | | |

¹ Includes accounts that are lagged by 1-month, 3-months, and latest available adjusted for cash flows.

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|------------------------------------|----------------------|-------------------|-------------|------------|----------------------|--------------|--------------|--------------|---------------|
| High Yield (Net) | 1,933,617,689 | 2.8 | -1.1 | 3.4 | 1.9 | -11.5 | -0.1 | -- | -- |
| High Yield (Gross) | | | -1.1 | 3.5 | 2.0 | -11.2 | 0.2 | -- | -- |
| <i>BBgBarc US High Yield TR</i> | | | <u>-0.6</u> | <u>4.2</u> | <u>3.5</u> | <u>-11.2</u> | <u>0.0</u> | -- | -- |
| Excess Return (vs. Net) | | | -0.5 | -0.8 | -1.6 | -0.3 | -0.1 | | |
| Beach Point (Net) | 280,704,015 | 0.4 | -0.5 | 4.3 | 2.9 | -11.5 | -0.7 | 2.1 | -- |
| Beach Point (Gross) | | | -0.5 | 4.5 | 3.2 | -11.1 | -0.2 | 2.6 | -- |
| <i>Beach Point Custom BM</i> | | | <u>-0.6</u> | <u>4.2</u> | <u>3.5</u> | <u>-11.2</u> | <u>0.0</u> | <u>2.0</u> | -- |
| Excess Return (vs. Net) | | | 0.1 | 0.1 | -0.6 | -0.3 | -0.7 | 0.1 | |
| BlackRock HY ETF (Net) | 578,918,108 | 0.8 | -1.5 | 4.7 | 3.3 | -10.9 | -- | -- | -- |
| BlackRock HY ETF (Gross) | | | -1.5 | 4.7 | 3.3 | -10.9 | -- | -- | -- |
| <i>BBgBarc US High Yield TR</i> | | | <u>-0.6</u> | <u>4.2</u> | <u>3.5</u> | <u>-11.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.9 | 0.5 | -0.2 | 0.3 | | | |
| Brigade Capital Management (Net) | 624,145,743 | 0.9 | -1.3 | 1.3 | -1.2 | -12.0 | 1.1 | 2.2 | 3.8 |
| Brigade Capital Management (Gross) | | | -1.2 | 1.4 | -1.0 | -11.7 | 1.5 | 2.8 | 4.5 |
| <i>Brigade Custom Index</i> | | | <u>-0.6</u> | <u>4.2</u> | <u>3.5</u> | <u>-11.2</u> | <u>0.2</u> | <u>2.3</u> | <u>3.6</u> |
| Excess Return (vs. Net) | | | -0.7 | -2.9 | -4.7 | -0.8 | 0.9 | -0.1 | 0.2 |
| Pinebridge Investments (Net) | 449,588,899 | 0.6 | -0.6 | 4.2 | 4.1 | -11.4 | -- | -- | -- |
| Pinebridge Investments (Gross) | | | -0.6 | 4.3 | 4.2 | -11.1 | -- | -- | -- |
| <i>BBgBarc US High Yield TR</i> | | | <u>-0.6</u> | <u>4.2</u> | <u>3.5</u> | <u>-11.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | 0.0 | 0.6 | -0.2 | | | |

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| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|----------------------------------|----------------------|-------------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| Bank Loans (Net) | 2,061,646,948 | 2.9 | 0.2 | 2.4 | 3.1 | -1.9 | 4.4 | -- | -- |
| Bank Loans (Gross) | | | 0.2 | 2.5 | 3.3 | -1.6 | 4.8 | -- | -- |
| <i>CS Leveraged Loan Index</i> | | | <u>0.4</u> | <u>2.3</u> | <u>3.5</u> | <u>-1.1</u> | <u>2.3</u> | -- | -- |
| Excess Return (vs. Net) | | | -0.2 | 0.1 | -0.4 | -0.8 | 2.1 | | |
| Bain Capital (Net) | 416,718,964 | 0.6 | 0.1 | 2.0 | 2.2 | -1.4 | 3.2 | 3.6 | -- |
| Bain Capital (Gross) | | | 0.2 | 2.1 | 2.5 | -0.8 | 3.8 | 4.2 | -- |
| <i>Bank Loans Custom Index</i> | | | <u>0.4</u> | <u>2.3</u> | <u>3.5</u> | <u>-1.1</u> | <u>2.4</u> | <u>3.5</u> | -- |
| Excess Return (vs. Net) | | | -0.3 | -0.3 | -1.3 | -0.3 | 0.8 | 0.1 | |
| Credit Suisse Bank Loans (Net) | 1,154,073,205 | 1.6 | 0.4 | 3.5 | 4.7 | -0.4 | -- | -- | -- |
| Credit Suisse Bank Loans (Gross) | | | 0.4 | 3.5 | 4.8 | -0.2 | -- | -- | -- |
| <i>CS Leveraged Loan Index</i> | | | <u>0.4</u> | <u>2.3</u> | <u>3.5</u> | <u>-1.1</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | 1.2 | 1.2 | 0.7 | | | |
| Crescent Capital Group (Net) | 490,854,779 | 0.7 | -0.2 | 0.5 | 0.4 | -5.6 | 2.5 | 3.3 | -- |
| Crescent Capital Group (Gross) | | | -0.2 | 0.6 | 0.7 | -5.2 | 2.9 | 3.8 | -- |
| <i>Bank Loans Custom Index</i> | | | <u>0.4</u> | <u>2.3</u> | <u>3.5</u> | <u>-1.1</u> | <u>2.4</u> | <u>3.5</u> | -- |
| Excess Return (vs. Net) | | | -0.6 | -1.8 | -3.1 | -4.5 | 0.1 | -0.2 | |

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| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---------------------------------------|----------------------|-------------------|-------------|------------|----------------------|--------------|--------------|--------------|---------------|
| EM Debt (Net) | 714,052,031 | 1.0 | 1.2 | 9.6 | 4.1 | -16.7 | -6.3 | -2.7 | -- |
| EM Debt (Gross) | | | 1.3 | 9.7 | 4.4 | -16.4 | -5.8 | -2.3 | -- |
| <i>EMD Custom</i> | | | <u>1.1</u> | <u>7.3</u> | <u>2.9</u> | <u>-14.9</u> | <u>-4.6</u> | <u>-1.0</u> | -- |
| Excess Return (vs. Net) | | | 0.1 | 2.3 | 1.2 | -1.8 | -1.7 | -1.7 | |
| Aberdeen Asset Management (Net) | 372,812,975 | 0.5 | 0.9 | 9.6 | 4.8 | -15.9 | -5.2 | -1.9 | -- |
| Aberdeen Asset Management (Gross) | | | 1.0 | 9.7 | 5.0 | -15.6 | -4.9 | -1.5 | -- |
| <i>EMD Custom</i> | | | <u>1.1</u> | <u>7.3</u> | <u>2.9</u> | <u>-14.9</u> | <u>-4.6</u> | <u>-1.0</u> | -- |
| Excess Return (vs. Net) | | | -0.2 | 2.3 | 1.9 | -1.0 | -0.6 | -0.9 | |
| Ashmore Investment Management (Net) | 341,239,055 | 0.5 | 1.6 | 9.6 | 3.4 | -17.6 | -7.4 | -3.6 | -- |
| Ashmore Investment Management (Gross) | | | 1.6 | 9.8 | 3.6 | -17.2 | -6.8 | -3.1 | -- |
| <i>EMD Custom</i> | | | <u>1.1</u> | <u>7.3</u> | <u>2.9</u> | <u>-14.9</u> | <u>-4.6</u> | <u>-1.0</u> | -- |
| Excess Return (vs. Net) | | | 0.5 | 2.3 | 0.5 | -2.7 | -2.8 | -2.6 | |

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| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| Illiquid Credit (Net) | 3,736,447,308 | 5.3 | 0.8 | -0.1 | -0.1 | -0.8 | 10.3 | -- | -- |
| Illiquid Credit (Gross) | | | 0.8 | -0.1 | -0.3 | -0.7 | 10.9 | -- | -- |
| <i>Illiquid Credit Custom BM</i> | | | <u>2.8</u> | <u>0.7</u> | <u>-0.6</u> | <u>-5.5</u> | <u>1.5</u> | -- | -- |
| Excess Return (vs. Net) | | | -2.0 | -0.8 | 0.5 | 4.7 | 8.8 | | |
| Beach Point - Fund III (Net) | 154,484,725 | 0.2 | 0.5 | -4.4 | -7.3 | -11.9 | 11.0 | 9.9 | -- |
| Beach Point - Fund III (Gross) | | | 0.5 | -5.8 | -9.8 | -10.3 | 15.0 | 14.0 | -- |
| <i>Opportunistic Custom Index 1 Month Lag</i> | | | <u>1.6</u> | <u>0.2</u> | <u>-0.8</u> | <u>-4.8</u> | <u>1.9</u> | <u>2.9</u> | -- |
| Excess Return (vs. Net) | | | -1.1 | -4.6 | -6.5 | -7.1 | 9.1 | 7.0 | |
| Grosvenor OPCRD 2 HFOF (Net) | 22,876,487 | 0.0 | | | | | | | |
| Grosvenor OPCRD 2 HFOF (Gross) | | | | | | | | | |
| <i>Grosvenor Custom Benchmark</i> | | | <u>2.8</u> | <u>0.7</u> | <u>-0.6</u> | <u>-5.5</u> | <u>1.5</u> | <u>4.5</u> | -- |
| Excess Return (vs. Net) | | | | | | | | | |
| Lake Cottage (Net) | 237,110,000 | 0.3 | 0.0 | -- | -- | -- | -- | -- | -- |
| Lake Cottage (Gross) | | | 0.0 | -- | -- | -- | -- | -- | -- |
| <i>Illiquid Credit Custom BM</i> | | | <u>2.8</u> | -- | -- | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -2.8 | | | | | | |
| Lake Vineyard (Net) | 363,040,553 | 0.5 | 0.1 | 0.5 | -1.8 | -- | -- | -- | -- |
| Lake Vineyard (Gross) | | | 0.1 | 0.5 | -1.8 | -- | -- | -- | -- |
| <i>Illiquid Credit Custom BM</i> | | | <u>2.8</u> | <u>0.7</u> | <u>-0.6</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -2.7 | -0.2 | -1.2 | | | | |

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| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|-----------------------------------|----------------------|-------------------|-------------|-------------|----------------------|--------------|--------------|--------------|---------------|
| Magnetar Credit Fund (Net) | 904,460,903 | 1.3 | 0.2 | -0.2 | 0.0 | -1.1 | -- | -- | -- |
| Magnetar Credit Fund (Gross) | | | 0.2 | -0.2 | 0.0 | -1.1 | -- | -- | -- |
| <i>Illiquid Credit Custom BM</i> | | | <u>2.8</u> | <u>0.7</u> | <u>-0.6</u> | <u>-5.5</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -2.6 | -0.9 | 0.6 | 4.4 | | | |
| Napier Park (Net) | 800,426,250 | 1.1 | 1.8 | -0.7 | -0.5 | -5.5 | -- | -- | -- |
| Napier Park (Gross) | | | 1.8 | -0.7 | -0.5 | -5.5 | -- | -- | -- |
| <i>Illiquid Credit Custom BM</i> | | | <u>2.8</u> | <u>0.7</u> | <u>-0.6</u> | <u>-5.5</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -1.0 | -1.4 | 0.1 | 0.0 | | | |
| PIMCO Tac Opps (Net) | 272,834,325 | 0.4 | 2.3 | -0.9 | -3.3 | -6.4 | 5.5 | -- | -- |
| PIMCO Tac Opps (Gross) | | | 2.3 | -0.9 | -3.3 | -6.4 | 5.5 | -- | -- |
| <i>PIMCO Tac Opps Custom BM</i> | | | <u>2.8</u> | <u>0.7</u> | <u>-0.6</u> | <u>-5.5</u> | <u>-0.4</u> | -- | -- |
| Excess Return (vs. Net) | | | -0.5 | -1.6 | -2.7 | -0.9 | 5.9 | | |
| Private Equity - Credit (Net) | 215,444,042 | 0.3 | 0.0 | 4.2 | 2.3 | 12.8 | 17.4 | -- | -- |
| Private Equity - Credit (Gross) | | | 0.0 | 4.2 | 2.3 | 12.8 | 17.4 | -- | -- |
| <i>PE-Credit Custom Benchmark</i> | | | <u>-4.1</u> | <u>-4.2</u> | <u>-8.1</u> | <u>-12.4</u> | <u>-0.8</u> | -- | -- |
| Excess Return (vs. Net) | | | 4.1 | 8.4 | 10.4 | 25.2 | 18.2 | | |
| Real Estate - Credit (Net) | 83,190,284 | 0.1 | 0.0 | 3.2 | 4.1 | 11.1 | 10.0 | 9.7 | 8.8 |
| Real Estate - Credit (Gross) | | | 0.0 | 3.2 | 4.3 | 11.7 | 10.8 | 10.6 | 9.8 |
| <i>RE Credit BM</i> | | | <u>2.8</u> | <u>0.7</u> | <u>-0.6</u> | <u>-5.5</u> | <u>0.3</u> | <u>2.0</u> | <u>3.6</u> |
| Excess Return (vs. Net) | | | -2.8 | 2.5 | 4.7 | 16.6 | 9.7 | 7.7 | 5.2 |

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| Tennenbaum Capital (Net) | 647,415,283 | 0.9 | 0.9 | 1.2 | 2.8 | 5.4 | 7.0 | 7.1 | -- |
| Tennenbaum Capital (Gross) | | | 1.0 | 1.4 | 3.2 | 6.2 | 7.7 | 7.9 | -- |
| <i>CSFB Leveraged Loan Index 1 Month Lagged</i> | | | <u>1.1</u> | <u>-0.2</u> | <u>1.1</u> | <u>-0.8</u> | <u>2.8</u> | <u>3.3</u> | -- |
| Excess Return (vs. Net) | | | -0.2 | 1.4 | 1.7 | 6.2 | 4.2 | 3.8 | |
| IC EM Program (Net) | 22,630,995 | 0.0 | 0.0 | -- | -- | -- | -- | -- | -- |
| IC EM Program (Gross) | | | 0.0 | -- | -- | -- | -- | -- | -- |
| <i>Illiquid Credit Custom BM</i> | | | <u>2.8</u> | -- | -- | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -2.8 | | | | | | |
| Stable Asset Management - IC (Net) | 22,630,995 | 0.0 | 0.0 | -- | -- | -- | -- | -- | -- |
| Stable Asset Management - IC (Gross) | | | 0.0 | -- | -- | -- | -- | -- | -- |
| <i>Illiquid Credit Custom BM</i> | | | <u>2.8</u> | -- | -- | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -2.8 | | | | | | |
| Stable Fund Investments - IC (Net) | 22,630,995 | 0.0 | 0.0 | -- | -- | -- | -- | -- | -- |
| Stable Fund Investments - IC (Gross) | | | 0.0 | -- | -- | -- | -- | -- | -- |
| <i>Illiquid Credit Custom BM</i> | | | <u>2.8</u> | -- | -- | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -2.8 | | | | | | |
| HarbourView (Net) | 22,630,995 | 0.0 | 0.0 | -- | -- | -- | -- | -- | -- |
| HarbourView (Gross) | | | 0.0 | -- | -- | -- | -- | -- | -- |
| <i>Illiquid Credit Custom BM</i> | | | <u>2.8</u> | -- | -- | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -2.8 | | | | | | |

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| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|-----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| Real Assets and Inflation Hedges (Net)¹ | 12,222,181,033 | 17.4 | -1.0 | 3.9 | 1.7 | 7.8 | 8.1 | -- | -- |
| Real Assets and Inflation Hedges (Gross) | | | -1.0 | 4.1 | 1.9 | 8.2 | 8.5 | -- | -- |
| <i>Real Assets & Inflation Hedges Custom BM</i> | | | <u>-1.6</u> | <u>5.4</u> | <u>2.1</u> | <u>6.4</u> | <u>8.3</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.6 | -1.5 | -0.4 | 1.4 | -0.2 | | |
| Core Private Real Estate (Net) | 4,338,870,749 | 6.2 | 0.2 | 1.7 | 6.8 | 23.7 | 11.3 | 9.1 | 9.1 |
| Core Private Real Estate (Gross) | | | 0.2 | 2.0 | 7.2 | 24.6 | 12.0 | 9.8 | 9.8 |
| <i>Core Private Real Estate Custom BM</i> | | | <u>0.1</u> | <u>0.3</u> | <u>4.9</u> | <u>21.0</u> | <u>11.7</u> | <u>9.7</u> | <u>10.4</u> |
| Excess Return (vs. Net) | | | 0.1 | 1.4 | 1.9 | 2.7 | -0.4 | -0.6 | -1.3 |
| Natural Resources and Commodities (Net) | 2,210,384,505 | 3.2 | -2.1 | 4.4 | 0.8 | 12.3 | 11.8 | 6.3 | -0.6 |
| Natural Resources and Commodities (Gross) | | | -2.1 | 4.5 | 0.9 | 12.6 | 12.2 | 6.6 | -0.3 |
| <i>Natural Resources & Commodities Custom BM</i> | | | <u>-2.9</u> | <u>12.0</u> | <u>7.0</u> | <u>12.0</u> | <u>12.9</u> | <u>6.9</u> | <u>-1.1</u> |
| Excess Return (vs. Net) | | | 0.8 | -7.6 | -6.2 | 0.3 | -1.1 | -0.6 | 0.5 |
| Public Natural Resources and Commodities (Net) | 1,371,394,816 | 2.0 | -3.3 | 6.1 | 2.1 | 12.6 | -- | -- | -- |
| Public Natural Resources and Commodities (Gross) | | | -3.3 | 6.1 | 2.2 | 12.9 | -- | -- | -- |
| <i>Natural Resources & Commodities Custom BM</i> | | | <u>-2.9</u> | <u>12.0</u> | <u>7.0</u> | <u>12.0</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.4 | -5.9 | -4.9 | 0.6 | | | |
| Credit Suisse Commodity (Net) | 312,306,204 | 0.4 | -2.3 | 1.4 | -2.0 | 17.0 | 14.0 | 7.0 | -0.7 |
| Credit Suisse Commodity (Gross) | | | -2.3 | 1.5 | -1.9 | 17.3 | 14.3 | 7.3 | -0.5 |
| <i>Bloomberg Commodity Index TR USD</i> | | | <u>-2.4</u> | <u>2.2</u> | <u>-2.0</u> | <u>16.1</u> | <u>12.7</u> | <u>6.4</u> | <u>-1.3</u> |
| Excess Return (vs. Net) | | | 0.1 | -0.8 | 0.0 | 0.9 | 1.3 | 0.6 | 0.6 |

¹ Includes accounts that are lagged by 3-months and latest available adjusted for cash flows.
Private natural resources and infrastructure funds reflect early-stage life cycle performance.

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| | Market Value | % of | 1 Mo | QTD | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|--------------------|------------|-------------|-------------|----------------|-------------|-------------|------------|-------------|
| DWS Natural Resources (Net) | 671,051,260 | 1.0 | -4.1 | 13.1 | 9.4 | 9.1 | 12.0 | -- | -- |
| DWS Natural Resources (Gross) | | | -4.1 | 13.2 | 9.5 | 9.3 | 12.2 | -- | -- |
| <i>S&P Global Large/MidCap Commodities & Resources</i> | | | <u>-3.7</u> | <u>14.0</u> | <u>12.4</u> | <u>15.5</u> | <u>14.4</u> | -- | -- |
| Excess Return (vs. Net) | | | -0.4 | -0.9 | -3.0 | -6.4 | -2.4 | | |
| Neuberger Berman/ Gresham (Net) | 366,223,800 | 0.5 | -2.8 | 1.2 | -3.5 | 17.0 | 12.0 | 6.5 | -0.6 |
| Neuberger Berman/ Gresham (Gross) | | | -2.7 | 1.3 | -3.3 | 17.4 | 12.4 | 6.9 | -0.2 |
| <i>Bloomberg Commodity Index TR USD</i> | | | <u>-2.4</u> | <u>2.2</u> | <u>-2.0</u> | <u>16.1</u> | <u>12.7</u> | <u>6.4</u> | <u>-1.3</u> |
| Excess Return (vs. Net) | | | -0.4 | -1.0 | -1.5 | 0.9 | -0.7 | 0.1 | 0.7 |
| PIMCO Commodities (Net) | 21,813,552 | 0.0 | | | | | | | |
| PIMCO Commodities (Gross) | | | | | | | | | |
| <i>Bloomberg Commodity Index TR USD</i> | | | <u>-2.4</u> | <u>2.2</u> | <u>-2.0</u> | <u>16.1</u> | <u>12.7</u> | <u>6.4</u> | <u>-1.3</u> |
| Excess Return (vs. Net) | | | | | | | | | |
| Private Natural Resources and Commodities (Net) | 838,989,689 | 1.2 | 0.1 | 1.0 | -2.1 | 10.0 | -6.7 | -- | -- |
| Private Natural Resources and Commodities (Gross) | | | 0.2 | 1.0 | -2.0 | 10.7 | -5.1 | -- | -- |
| <i>PE - Real Assets Custom BM</i> | | | <u>-7.6</u> | <u>-1.3</u> | <u>-16.2</u> | <u>9.7</u> | <u>14.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 7.7 | 2.3 | 14.1 | 0.3 | -20.9 | | |
| Cibus Enterprise II (Net) | 4,182,868 | 0.0 | -4.9 | -4.9 | -11.5 | -- | -- | -- | -- |
| Cibus Enterprise II (Gross) | | | -4.9 | -4.9 | -11.5 | -- | -- | -- | -- |
| <i>PE - Real Assets Custom BM</i> | | | <u>-7.6</u> | <u>-1.3</u> | <u>-16.2</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 2.7 | -3.6 | 4.7 | | | | |

Private natural resources and infrastructure funds reflect early-stage life cycle performance.

Los Angeles County Employees Retirement Association | December 31, 2022

| | Market Value | % of | 1 Mo | QTD | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|-------------------------------------|--------------|------|-------------|-------------|----------------|------------|-----------|-----------|------------|
| Cibus Co-Invest V (Net) | 15,052,454 | 0.0 | 0.0 | -- | -- | -- | -- | -- | -- |
| Cibus Co-Invest V (Gross) | | | 0.0 | -- | -- | -- | -- | -- | -- |
| <i>PE - Real Assets Custom BM</i> | | | <u>-7.6</u> | -- | -- | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 7.6 | | | | | | |
| Cibus Fund II (Net) | 15,656,862 | 0.0 | -6.1 | -6.1 | -12.0 | -- | -- | -- | -- |
| Cibus Fund II (Gross) | | | -6.1 | -6.1 | -12.0 | -- | -- | -- | -- |
| <i>PE - Real Assets Custom BM</i> | | | <u>-7.6</u> | <u>-1.3</u> | <u>-16.2</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 1.5 | -4.8 | 4.2 | | | | |
| HiTecVision New Energy (Net) | 66,808,958 | 0.1 | 3.7 | 13.7 | -- | -- | -- | -- | -- |
| HiTecVision New Energy (Gross) | | | 3.7 | 13.7 | -- | -- | -- | -- | -- |
| <i>PE - Real Assets Custom BM</i> | | | <u>-7.6</u> | <u>-1.3</u> | -- | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 11.3 | 15.0 | | | | | |
| Orion Mine Finance Fund III (Net) | 122,255,021 | 0.2 | 0.0 | 2.3 | -1.2 | 5.4 | -- | -- | -- |
| Orion Mine Finance Fund III (Gross) | | | 0.0 | 2.3 | -1.2 | 5.4 | -- | -- | -- |
| <i>PE - Real Assets Custom BM</i> | | | <u>-7.6</u> | <u>-1.3</u> | <u>-16.2</u> | <u>9.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 7.6 | 3.6 | 15.0 | -4.3 | | | |
| Orion Mining Royalty Fund I (Net) | 20,229,818 | 0.0 | 0.0 | -7.6 | -12.4 | -11.4 | -- | -- | -- |
| Orion Mining Royalty Fund I (Gross) | | | 0.0 | -7.6 | -12.4 | -11.4 | -- | -- | -- |
| <i>PE - Real Assets Custom BM</i> | | | <u>-7.6</u> | <u>-1.3</u> | <u>-16.2</u> | <u>9.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 7.6 | -6.3 | 3.8 | -21.1 | | | |

Private natural resources and infrastructure funds reflect early-stage life cycle performance.

Los Angeles County Employees Retirement Association | December 31, 2022

| | Market Value (M) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| PE - Real Assets & Inflation Hedges (Net) | 81,982,636 | 0.1 | 0.0 | 1.8 | -0.2 | 11.0 | -5.6 | -- | -- |
| PE - Real Assets & Inflation Hedges (Gross) | | | 0.4 | 2.2 | 0.6 | 16.6 | -4.1 | -- | -- |
| <i>PE - Real Assets Custom BM</i> | | | <u>-7.6</u> | <u>-1.3</u> | <u>-16.2</u> | <u>9.7</u> | <u>14.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 7.6 | 3.1 | 16.0 | 1.3 | -19.8 | | |
| TIAA-CREF Global Agriculture (Net) | 255,887,540 | 0.4 | 0.0 | -0.9 | -3.7 | 12.5 | -- | -- | -- |
| TIAA-CREF Global Agriculture (Gross) | | | 0.0 | -0.9 | -3.7 | 12.5 | -- | -- | -- |
| <i>PE - Real Assets Custom BM</i> | | | <u>-7.6</u> | <u>-1.3</u> | <u>-16.2</u> | <u>9.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 7.6 | 0.4 | 12.5 | 2.8 | | | |
| TIAA-CREF Global Agriculture II (Net) | 256,933,531 | 0.4 | 0.0 | 0.2 | -2.2 | 9.8 | -- | -- | -- |
| TIAA-CREF Global Agriculture II (Gross) | | | 0.0 | 0.2 | -2.2 | 9.8 | -- | -- | -- |
| <i>PE - Real Assets Custom BM</i> | | | <u>-7.6</u> | <u>-1.3</u> | <u>-16.2</u> | <u>9.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 7.6 | 1.5 | 14.0 | 0.1 | | | |
| Infrastructure (Net) | 3,811,989,221 | 5.4 | -2.0 | 7.2 | -1.0 | -4.6 | 4.9 | -- | -- |
| Infrastructure (Gross) | | | -2.0 | 7.2 | -0.9 | -4.5 | 5.1 | -- | -- |
| <i>DJ Brookfield Global Infrastructure Comp TR</i> | | | <u>-3.2</u> | <u>9.7</u> | <u>-1.5</u> | <u>-4.2</u> | <u>1.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 1.2 | -2.5 | 0.5 | -0.4 | 3.7 | | |
| Public Infrastructure (Net) | 2,781,556,615 | 4.0 | -2.9 | 8.5 | -1.7 | -6.3 | 4.6 | -- | -- |
| Public Infrastructure (Gross) | | | -2.9 | 8.5 | -1.6 | -6.2 | 4.9 | -- | -- |
| <i>DJ Brookfield Global Infrastructure Comp TR</i> | | | <u>-3.2</u> | <u>9.7</u> | <u>-1.5</u> | <u>-4.2</u> | <u>1.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.3 | -1.2 | -0.2 | -2.1 | 3.4 | | |

Private natural resources and infrastructure funds reflect early-stage life cycle performance.

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| | Market Value (M) | % of Assets | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|----------------------|----------------|--------------|--------------|----------------------|-------------|--------------|--------------|---------------|
| DWS Infrastructure (Net) | 2,781,556,615 | 4.0 | -2.9 | 8.5 | -1.7 | -6.3 | 4.6 | -- | -- |
| DWS Infrastructure (Gross) | | | -2.9 | 8.5 | -1.6 | -6.2 | 4.8 | -- | -- |
| <i>DJ Brookfield Global Infrastructure Comp TR</i> | | | <u>-3.2</u> | <u>9.7</u> | <u>-1.5</u> | <u>-4.2</u> | <u>1.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.3 | -1.2 | -0.2 | -2.1 | 3.4 | | |
| Private Infrastructure (Net) | 1,030,432,606 | 1.5 | 0.8 | 3.6 | 2.9 | 2.3 | -- | -- | -- |
| Private Infrastructure (Gross) | | | 0.9 | 3.7 | 3.0 | 2.3 | -- | -- | -- |
| <i>Private Infrastructure Policy BM</i> | | | <u>-12.3</u> | <u>-10.2</u> | <u>-16.7</u> | <u>-7.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 13.1 | 13.8 | 19.6 | 9.5 | | | |
| Antin Mid Cap (Net) | 37,989,309 | 0.1 | 3.7 | 12.5 | 5.1 | -10.9 | -- | -- | -- |
| Antin Mid Cap (Gross) | | | 3.7 | 12.5 | 5.1 | -10.9 | -- | -- | -- |
| <i>DJ Brookfield Global Infrastructure Comp TR</i> | | | <u>-3.2</u> | <u>9.7</u> | <u>-1.5</u> | <u>-4.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 6.9 | 2.8 | 6.6 | -6.7 | | | |
| Axium Infrastructure (Net) | 254,444,519 | 0.4 | 0.0 | 1.9 | 3.3 | 2.4 | -- | -- | -- |
| Axium Infrastructure (Gross) | | | 0.2 | 2.1 | 3.7 | 3.1 | -- | -- | -- |
| <i>Private Infrastructure Policy BM</i> | | | <u>-12.3</u> | <u>-10.2</u> | <u>-16.7</u> | <u>-7.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 12.3 | 12.1 | 20.0 | 9.6 | | | |
| Axium Infrastructure Canada (Net) | 58,992,312 | 0.1 | 0.1 | 1.4 | 1.4 | -- | -- | -- | -- |
| Axium Infrastructure Canada (Gross) | | | 0.1 | 1.6 | 1.6 | -- | -- | -- | -- |
| <i>Private Infrastructure Policy BM</i> | | | <u>-12.3</u> | <u>-10.2</u> | <u>-16.7</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 12.4 | 11.6 | 18.1 | | | | |

Private natural resources and infrastructure funds reflect early-stage life cycle performance.

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| | Market Value | % of | 1 Mo | QTD | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|--------------|------|--------------|--------------|----------------|-------------|-----------|-----------|------------|
| DIF CIF III (Net) | 39,680,912 | 0.1 | 0.5 | 2.2 | 5.2 | -- | -- | -- | -- |
| DIF CIF III (Gross) | | | 0.5 | 2.2 | 5.2 | -- | -- | -- | -- |
| <i>Private Infrastructure Policy BM</i> | | | <u>-12.3</u> | <u>-10.2</u> | <u>-16.7</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 12.8 | 12.4 | 21.9 | | | | |
| DIF Infrastructure VI (Net) | 102,985,702 | 0.1 | 3.6 | 14.4 | 11.6 | 13.6 | -- | -- | -- |
| DIF Infrastructure VI (Gross) | | | 3.6 | 14.2 | 11.4 | 12.9 | -- | -- | -- |
| <i>Private Infrastructure Policy BM</i> | | | <u>-12.3</u> | <u>-10.2</u> | <u>-16.7</u> | <u>-7.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 15.9 | 24.6 | 28.3 | 20.8 | | | |
| Grain Communications Opportunity III (Net) | 33,248,608 | 0.0 | 0.0 | 1.3 | -2.4 | -9.8 | -- | -- | -- |
| Grain Communications Opportunity III (Gross) | | | 0.0 | 1.3 | -2.4 | -9.8 | -- | -- | -- |
| <i>Private Infrastructure Policy BM</i> | | | <u>-12.3</u> | <u>-10.2</u> | <u>-16.7</u> | <u>-7.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 12.3 | 11.5 | 14.3 | -2.6 | | | |
| Grain Spectrum Holdings III (Net) | 47,763,311 | 0.1 | 0.0 | -0.1 | -0.3 | -0.6 | -- | -- | -- |
| Grain Spectrum Holdings III (Gross) | | | 0.0 | -0.1 | -0.3 | -0.6 | -- | -- | -- |
| <i>Private Infrastructure Policy BM</i> | | | <u>-12.3</u> | <u>-10.2</u> | <u>-16.7</u> | <u>-7.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 12.3 | 10.1 | 16.4 | 6.6 | | | |
| KKR DCIF (Net) | 327,031,574 | 0.5 | 0.0 | 1.1 | 1.9 | -- | -- | -- | -- |
| KKR DCIF (Gross) | | | 0.0 | 1.1 | 1.9 | -- | -- | -- | -- |
| <i>Private Infrastructure Policy BM</i> | | | <u>-12.3</u> | <u>-10.2</u> | <u>-16.7</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 12.3 | 11.3 | 18.6 | | | | |

| | Market Value | % of | 1 Mo | QTD | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|----------------------|------------|--------------|--------------|----------------|--------------|------------|-----------|------------|
| Pan European Infrastructure Fund III (Net) | 65,352,632 | 0.1 | 3.7 | 8.7 | 4.9 | 7.1 | -- | -- | -- |
| Pan European Infrastructure Fund III (Gross) | | | 4.1 | 9.1 | 5.3 | 7.5 | -- | -- | -- |
| <i>Private Infrastructure Policy BM</i> | | | <u>-12.3</u> | <u>-10.2</u> | <u>-16.7</u> | <u>-7.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 16.0 | 18.9 | 21.6 | 14.3 | | | |
| Partners Grp Direct Infra 2020 (Net) | 62,943,726 | 0.1 | 0.0 | 5.2 | 2.7 | -- | -- | -- | -- |
| Partners Grp Direct Infra 2020 (Gross) | | | -0.1 | 5.1 | 2.5 | -- | -- | -- | -- |
| <i>Private Infrastructure Policy BM</i> | | | <u>-12.3</u> | <u>-10.2</u> | <u>-16.7</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 12.3 | 15.4 | 19.4 | | | | |
| TIPS (Net) | 1,860,936,558 | 2.7 | -0.4 | 2.1 | -3.6 | -11.9 | 1.1 | -- | -- |
| TIPS (Gross) | | | -0.4 | 2.1 | -3.6 | -11.9 | 1.2 | -- | -- |
| <i>BBgBarc US TIPS TR</i> | | | <u>-1.0</u> | <u>2.0</u> | <u>-3.2</u> | <u>-11.8</u> | <u>1.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.6 | 0.1 | -0.4 | -0.1 | -0.1 | | |
| Blackrock TIPS (Net) | 1,860,936,558 | 2.7 | -0.4 | 2.1 | -3.6 | -11.9 | 1.1 | -- | -- |
| Blackrock TIPS (Gross) | | | -0.4 | 2.1 | -3.6 | -11.9 | 1.1 | -- | -- |
| <i>BBgBarc US TIPS TR</i> | | | <u>-1.0</u> | <u>2.0</u> | <u>-3.2</u> | <u>-11.8</u> | <u>1.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.6 | 0.1 | -0.4 | -0.1 | -0.1 | | |

¹ Includes accounts that are lagged by 1-month.

Los Angeles County Employees Retirement Association | December 31, 2022

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|-----------------------|-------------------|-------------|------------|----------------------|--------------|--------------|--------------|---------------|
| Risk Reduction and Mitigation (Net) | 13,202,107,101 | 18.8 | -0.1 | 1.1 | -2.7 | -9.8 | -1.0 | -- | -- |
| Risk Reduction and Mitigation (Gross) | | | -0.1 | 1.1 | -2.7 | -9.8 | -0.9 | -- | -- |
| <i>Risk Reduction and Mitigation Custom Blended Benchmark</i> | | | <u>-0.4</u> | <u>1.1</u> | <u>-2.9</u> | <u>-11.0</u> | <u>-1.9</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.3 | 0.0 | 0.2 | 1.2 | 0.9 | | |
| Investment Grade Bonds (Net) | 5,002,871,602 | 7.1 | -0.4 | 1.8 | -3.0 | -13.1 | -2.6 | 0.2 | 1.5 |
| Investment Grade Bonds (Gross) | | | -0.4 | 1.9 | -3.0 | -13.0 | -2.5 | 0.2 | 1.6 |
| <i>BBgBarc US Aggregate TR</i> | | | <u>-0.5</u> | <u>1.9</u> | <u>-3.0</u> | <u>-13.0</u> | <u>-2.7</u> | <u>0.0</u> | <u>1.1</u> |
| Excess Return (vs. Net) | | | 0.1 | -0.1 | 0.0 | -0.1 | 0.1 | 0.2 | 0.4 |
| Allspring/Wells (Net) | 1,251,510,761 | 1.8 | 0.0 | 2.1 | -2.8 | -13.0 | -2.2 | 0.4 | 1.4 |
| Allspring/Wells (Gross) | | | 0.0 | 2.1 | -2.8 | -12.9 | -2.1 | 0.5 | 1.5 |
| <i>BBgBarc US Aggregate TR</i> | | | <u>-0.5</u> | <u>1.9</u> | <u>-3.0</u> | <u>-13.0</u> | <u>-2.7</u> | <u>0.0</u> | <u>1.1</u> |
| Excess Return (vs. Net) | | | 0.5 | 0.2 | 0.2 | 0.0 | 0.5 | 0.4 | 0.3 |
| BTC US Debt Index (Net) | 2,905,302,767 | 4.1 | -0.6 | 1.7 | -3.1 | -13.0 | -2.7 | 0.1 | 1.1 |
| BTC US Debt Index (Gross) | | | -0.6 | 1.7 | -3.1 | -13.0 | -2.7 | 0.1 | 1.2 |
| <i>BBgBarc US Aggregate TR</i> | | | <u>-0.5</u> | <u>1.9</u> | <u>-3.0</u> | <u>-13.0</u> | <u>-2.7</u> | <u>0.0</u> | <u>1.1</u> |
| Excess Return (vs. Net) | | | -0.1 | -0.2 | -0.1 | 0.0 | 0.0 | 0.1 | 0.0 |
| Member Home Loan Program (MHLP) (Net) | 10,899,917 | 0.0 | 0.4 | 1.2 | 2.4 | 4.8 | 5.2 | 6.7 | 5.3 |
| Member Home Loan Program (MHLP) (Gross) | | | 0.4 | 1.2 | 2.6 | 5.1 | 5.5 | 7.0 | 5.5 |

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| | Market Value (M) | % of Assets | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|----------------------|----------------|-------------|-------------|----------------------|--------------|--------------|--------------|---------------|
| Pugh Capital Management (Net) | 835,158,160 | 1.2 | -0.1 | 1.9 | -3.0 | -13.2 | -2.6 | 0.1 | 1.1 |
| Pugh Capital Management (Gross) | | | -0.1 | 2.0 | -2.9 | -13.1 | -2.4 | 0.2 | 1.3 |
| <i>BBgBarc US Aggregate TR</i> | | | <u>-0.5</u> | <u>1.9</u> | <u>-3.0</u> | <u>-13.0</u> | <u>-2.7</u> | <u>0.0</u> | <u>1.1</u> |
| Excess Return (vs. Net) | | | 0.4 | 0.0 | 0.0 | -0.2 | 0.1 | 0.1 | 0.0 |
| Long-Term Government Bonds (Net) | 2,856,797,172 | 4.1 | -1.1 | -0.6 | -10.7 | -28.9 | -- | -- | -- |
| Long-Term Government Bonds (Gross) | | | -1.1 | -0.6 | -10.7 | -28.9 | -- | -- | -- |
| <i>Bloomberg U.S. Treasury: Long</i> | | | <u>-1.7</u> | <u>-0.6</u> | <u>-10.2</u> | <u>-29.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.6 | 0.0 | -0.5 | 0.3 | | | |
| Blackrock Long Treasury Bonds (Net) | 2,856,797,172 | 4.1 | -1.1 | -0.6 | -10.7 | -28.9 | -- | -- | -- |
| Blackrock Long Treasury Bonds (Gross) | | | -1.1 | -0.6 | -10.7 | -28.9 | -- | -- | -- |
| <i>Bloomberg U.S. Treasury: Long</i> | | | <u>-1.7</u> | <u>-0.6</u> | <u>-10.2</u> | <u>-29.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.6 | 0.0 | -0.5 | 0.3 | | | |
| Diversified Hedge Fund Portfolio (Net) | 4,402,364,377 | 6.3 | 0.8 | 1.4 | 2.7 | 5.8 | 7.3 | -- | -- |
| Diversified Hedge Fund Portfolio (Gross) | | | 0.8 | 1.4 | 2.7 | 5.8 | 7.3 | -- | -- |
| <i>Diversified Hedge Funds Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | <u>3.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.3 | 0.0 | 0.4 | 2.1 | 4.1 | | |
| LACERA HF Direct (Net) | 3,987,451,195 | 5.7 | 0.8 | 1.4 | 3.1 | 6.4 | 7.4 | -- | -- |
| LACERA HF Direct (Gross) | | | 0.8 | 1.4 | 3.1 | 6.4 | 7.4 | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | <u>3.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.3 | 0.0 | 0.8 | 2.7 | 4.2 | | |

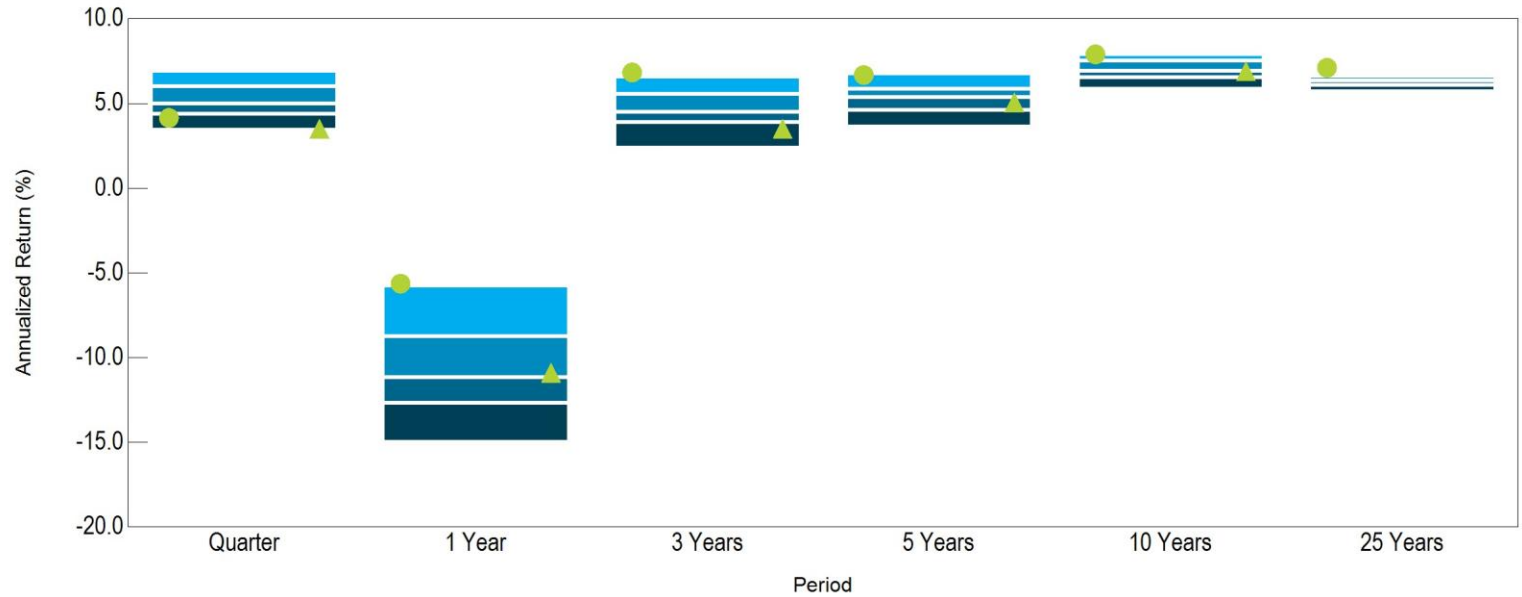
| | Market Value (M) | % of Assets | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|-----------------------------------|---------------------|----------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| AM Asia Strategies Fund (Net) | 217,076,850 | 0.3 | 5.9 | -2.0 | -1.3 | -3.9 | -- | -- | -- |
| AM Asia Strategies Fund (Gross) | | | 5.9 | -2.0 | -1.3 | -3.9 | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 5.4 | -3.4 | -3.6 | -7.6 | | | |
| Brevan Howard Master Fund (Net) | 650,101,100 | 0.9 | -1.1 | 0.4 | 4.0 | 18.5 | -- | -- | -- |
| Brevan Howard Master Fund (Gross) | | | -1.1 | 0.4 | 4.0 | 18.5 | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -1.6 | -1.0 | 1.7 | 14.8 | | | |
| Capula GRV (Net) | 642,237,220 | 0.9 | 0.7 | 2.6 | 5.7 | 12.0 | 6.7 | -- | -- |
| Capula GRV (Gross) | | | 0.7 | 2.6 | 5.7 | 12.0 | 6.7 | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | <u>3.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.2 | 1.2 | 3.4 | 8.3 | 3.5 | | |
| Caxton Global Investments (Net) | 296,606,250 | 0.4 | -0.4 | 1.5 | 2.5 | 15.7 | -- | -- | -- |
| Caxton Global Investments (Gross) | | | -0.4 | 1.5 | 2.5 | 15.7 | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.9 | 0.1 | 0.2 | 12.0 | | | |
| DK Institutional Partners (Net) | 486,247,950 | 0.7 | 0.8 | -0.1 | 0.0 | -1.3 | 5.2 | -- | -- |
| DK Institutional Partners (Gross) | | | 0.8 | -0.1 | 0.0 | -1.3 | 5.2 | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | <u>3.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.3 | -1.5 | -2.3 | -5.0 | 2.0 | | |

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|-----------------------------|----------------------|-------------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| HBK Multistrategy (Net) | 578,073,000 | 0.8 | 2.7 | 4.1 | 5.3 | 3.9 | 6.9 | -- | -- |
| HBK Multistrategy (Gross) | | | 2.7 | 4.1 | 5.3 | 3.9 | 6.9 | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | <u>3.2</u> | -- | -- |
| Excess Return (vs. Net) | | | 2.2 | 2.7 | 3.0 | 0.2 | 3.7 | | |
| Hudson Bay Fund (Net) | 650,093,950 | 0.9 | 0.5 | 1.4 | 2.9 | 3.0 | -- | -- | -- |
| Hudson Bay Fund (Gross) | | | 0.5 | 1.4 | 2.9 | 3.0 | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | 0.0 | 0.6 | -0.7 | | | |
| Polar (Net) | 467,014,875 | 0.7 | 0.7 | 1.2 | 1.7 | 1.0 | -- | -- | -- |
| Polar (Gross) | | | 0.7 | 1.2 | 1.7 | 1.0 | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.2 | -0.2 | -0.6 | -2.7 | | | |

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|----------------------|-------------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| Hedge Fund Emerging Managers Program (Net) | 384,235,834 | 0.5 | 0.3 | 1.8 | -0.5 | -0.4 | -- | -- | -- |
| Hedge Fund Emerging Managers Program (Gross) | | | 0.3 | 1.9 | -0.3 | -0.1 | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.2 | 0.4 | -2.8 | -4.1 | | | |
| Stable Asset Management (Net) | 384,235,834 | 0.5 | 0.3 | 1.8 | -0.5 | -0.4 | -- | -- | -- |
| Stable Asset Management (Gross) | | | 0.3 | 1.9 | -0.3 | -0.1 | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.2 | 0.4 | -2.8 | -4.1 | | | |
| Stable Fund Investments (Net) | 384,260,959 | 0.5 | 0.3 | 1.9 | -0.4 | -0.2 | -- | -- | -- |
| Stable Fund Investments (Gross) | | | 0.3 | 1.9 | -0.4 | -0.2 | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.5</u> | <u>1.4</u> | <u>2.3</u> | <u>3.7</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.2 | 0.5 | -2.7 | -3.9 | | | |
| Cash (Net) | 940,087,768 | 1.3 | 0.5 | 1.3 | 2.3 | 3.2 | 1.7 | 1.9 | 1.3 |
| Cash (Gross) | | | 0.5 | 1.3 | 2.3 | 3.2 | 1.7 | 2.0 | 1.3 |
| <i>Cash Custom BM</i> | | | <u>0.3</u> | <u>0.9</u> | <u>1.3</u> | <u>1.5</u> | <u>0.7</u> | <u>1.3</u> | <u>0.8</u> |
| Excess Return (vs. Net) | | | 0.2 | 0.4 | 1.0 | 1.7 | 1.0 | 0.6 | 0.5 |
| SSGA Cash (Net) | | | 0.0 | 0.5 | 1.1 | 1.3 | -- | -- | -- |
| SSGA Cash (Gross) | | | 0.0 | 0.6 | 1.2 | 1.4 | -- | -- | -- |
| <i>Cash Custom BM</i> | | | <u>0.3</u> | <u>0.9</u> | <u>1.3</u> | <u>1.5</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.3 | -0.4 | -0.2 | -0.2 | | | |

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|-----------------------------------|----------------------|-------------------|--------------|--------------|----------------------|--------------|--------------|--------------|---------------|
| Overlay and Hedges (Net) | 435,685,997 | 0.6 | -26.4 | -10.6 | 1.5 | 178.1 | -- | -- | -- |
| Overlay and Hedges (Gross) | | | -26.4 | -10.6 | 1.6 | 178.9 | -- | -- | -- |
| Cash Overlay (Net) | 591,018,438 | 0.8 | -10.6 | 39.4 | 12.5 | 79.5 | -- | -- | -- |
| Cash Overlay (Gross) | | | -10.6 | 39.4 | 12.6 | 79.7 | -- | -- | -- |
| Cash Overlay (Net) | 591,018,438 | 0.8 | -10.6 | 39.4 | 12.5 | 79.5 | -- | -- | -- |
| Cash Overlay (Gross) | | | -10.6 | 39.4 | 12.6 | 79.7 | -- | -- | -- |
| <i>Total Overlay Policy BM</i> | | | <u>-2.8</u> | <u>6.6</u> | <u>0.5</u> | <u>-14.6</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -7.8 | 32.8 | 12.0 | 94.1 | | | |
| Currency Hedge (Net) | -155,332,442 | -0.2 | 1.3 | -0.7 | 2.6 | 7.4 | -- | -- | -- |
| Currency Hedge (Gross) | | | 1.3 | -0.7 | 2.6 | 7.4 | -- | -- | -- |
| Currency Hedge (Net) | -155,332,442 | -0.2 | -1.3 | -3.2 | 0.0 | 4.7 | -- | -- | -- |
| Currency Hedge (Gross) | | | -1.3 | -3.2 | 0.0 | 4.7 | -- | -- | -- |

InvMetrics Public DB > \$1B Net Return Comparison
Ending December 31, 2022



| | Quarter | | 1 Year | | 3 Years | | 5 Years | | 10 Years | | 25 Years | |
|--------------------------------------|---------|------|--------|------|---------|------|---------|------|----------|------|----------|------|
| 5th Percentile | 6.9 | | -5.8 | | 6.6 | | 6.8 | | 7.9 | | 6.8 | |
| 25th Percentile | 6.0 | | -8.7 | | 5.6 | | 5.9 | | 7.5 | | 6.7 | |
| Median | 5.0 | | -11.1 | | 4.5 | | 5.4 | | 6.9 | | 6.4 | |
| 75th Percentile | 4.4 | | -12.7 | | 3.9 | | 4.6 | | 6.6 | | 6.1 | |
| 95th Percentile | 3.5 | | -15.0 | | 2.4 | | 3.7 | | 5.9 | | 5.7 | |
| # of Portfolios | 59 | | 59 | | 57 | | 57 | | 54 | | 31 | |
| ● Total Fund | 4.1 | (82) | -5.6 | (4) | 6.8 | (5) | 6.7 | (7) | 7.9 | (6) | 7.1 | (1) |
| ▲ Total Fund Policy Benchmark | 3.5 | (95) | -10.9 | (50) | 3.5 | (85) | 5.1 | (59) | 6.9 | (54) | -- | (--) |

Benchmark History
As of December 31, 2022

| Total Fund | | |
|------------|------------|--|
| 10/1/2021 | Present | 51% Growth Custom Blended Benchmark / 11% Credit Custom Blended Benchmark / 17% Real Assets & Inflation Hedges Custom BM / 21% Risk Reduction and Mitigation Custom Blended Benchmark |
| 10/1/2019 | 9/30/2021 | 35% Global Equity Custom BM / 10% PE-Credit Custom Benchmark / 2% Non-Core Private RE Policy BM / 3% Bloomberg U.S. High Yield / 4% Credit Suisse Leveraged Loans / 2% EMD Custom / 3% Illiquid Credit Custom BM / 7% Core Private Real Estate Custom BM / 4% Natural Resources & Commodities Custom BM / 3% DJ Brookfield Global Infrastructure Comp TR / 3% Bloomberg U.S. TIPS Index / 19% Bloomberg US Aggregate TR / 4% Diversified Hedge Funds Custom BM / 1% Citigroup 3-Month U.S. Treasury Bill Index |
| 1/1/2019 | 9/30/2019 | 41% Global Equity Custom BM / 10% PE-Credit Custom Benchmark / 1% Non-Core Private RE Policy BM / 4% Bloomberg U.S. High Yield / 3% Credit Suisse Leveraged Loans / 1% EMD Custom / 2% Illiquid Credit Custom BM / 8% Core Private Real Estate Custom BM / 3% Natural Resources & Commodities Custom BM / 2% DJ Brookfield Global Infrastructure Comp TR / 2% Bloomberg U.S. TIPS Index / 19% Bloomberg US Aggregate TR / 3% Diversified Hedge Funds Custom BM / 1% Citigroup 3-Month U.S. Treasury Bill Index |
| 10/1/2018 | 12/31/2018 | 22.7% Russell 3000 / 18.7% Custom MSCI ACWI IMI Net 50% Hedge / 27.8% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 5.0% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 7/1/2018 | 9/30/2018 | 23.1% Russell 3000 / 20.3% Custom MSCI ACWI IMI Net 50% Hedge / 26.6% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 4.2% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 1/1/2018 | 6/30/2018 | 22.4% Russell 3000 / 21.0% Custom MSCI ACWI IMI Net 50% Hedge / 26.6% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 4.2% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 10/1/2017 | 12/31/2017 | 23.5% Russell 3000 / 21.9% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 7/1/2017 | 9/30/2017 | 23.7% Russell 3000 / 21.7% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 4/1/2017 | 6/30/2017 | 24.1% Russell 3000 / 21.3% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 1/1/2017 | 3/31/2017 | 24.4% Russell 3000 / 21.0% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 10/1/2016 | 12/31/2016 | 23.8% Russell 3000 / 21.6% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 7/1/2016 | 9/30/2016 | 24.5% Russell 3000 / 21.4% Custom MSCI ACWI IMI Net 50% Hedge / 25.1% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.2% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 10/1/2015 | 6/30/2016 | 3% Bloomberg Commodity Index TR USD / 25.5% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 22.5% Bloomberg US Universal TR / 11% Private Equity Target / 23% Custom MSCI ACWI IMI Net 50% Hedge / 3% 3-month U.S. T-Bill Index + 5% (1M-lag) |

Los Angeles County Employees Retirement Association | December 31, 2022

| | | |
|-----------|------------|--|
| 4/1/2015 | 9/30/2015 | 3% Bloomberg Commodity Index TR USD / 25% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 22.5% Bloomberg US Universal TR / 11% Private Equity Target / 23.5% Custom MSCI ACWI IMI Net 50% Hedge / 3% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 1/1/2015 | 3/31/2015 | 3% Bloomberg Commodity Index TR USD / 25.5% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 22.5% Bloomberg US Universal TR / 11% Private Equity Target / 23% Custom MSCI ACWI IMI Net 50% Hedge / 3% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 10/1/2014 | 12/31/2014 | 3% Bloomberg Commodity Index TR USD / 25% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 23% Bloomberg US Universal TR / 11% Private Equity Target / 24% Custom MSCI ACWI IMI Net 50% Hedge / 2% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 1/1/2014 | 9/30/2014 | 3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 23% Bloomberg US Universal TR / 11% Private Equity Target / 25% Custom MSCI ACWI IMI Net 50% Hedge / 2% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 10/1/2013 | 12/31/2013 | 3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 24% Bloomberg US Universal TR / 10% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 4/1/2013 | 9/30/2013 | 3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 24% Bloomberg US Universal TR / 10% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 1/1/2013 | 3/31/2013 | 3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 24% Bloomberg US Universal TR / 10% Private Equity Target / 27% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 10/1/2012 | 12/31/2012 | 3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 24% Bloomberg US Universal TR / 10% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 1/1/2012 | 9/30/2012 | 3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 27% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 10/1/2011 | 12/31/2011 | 3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 28% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 4/1/2011 | 9/30/2011 | 3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 29% Custom MSCI ACWI IMI Net 50% Hedge |
| 1/1/2011 | 3/31/2011 | 3% Bloomberg Commodity Index TR USD / 22% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 30% Custom MSCI ACWI IMI Net 50% Hedge |
| 10/1/2010 | 12/31/2010 | 3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 29% Custom MSCI ACWI IMI Net 50% Hedge |
| 7/1/2010 | 9/30/2010 | 3% Bloomberg Commodity Index TR USD / 26% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge |
| 4/1/2010 | 6/30/2010 | 3% Bloomberg Commodity Index TR USD / 26% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 26% MSCI ACWI ex USA IMI |
| 1/1/2010 | 3/31/2010 | 3% Bloomberg Commodity Index TR USD / 29% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 23% MSCI ACWI ex USA IMI |
| 4/1/2009 | 12/31/2009 | 2% Bloomberg Commodity Index TR USD / 30% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 28% Bloomberg US Universal TR / 7% Private Equity Target / 21% MSCI ACWI ex USA IMI |
| 10/1/2008 | 3/31/2009 | 2% Bloomberg Commodity Index TR USD / 30% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 1.96% Bloomberg US High Yield BA/B TR / 26.04% Bloomberg US Aggregate TR / 7% Private Equity Target / 21% MSCI ACWI ex USA IMI |
| 3/1/2001 | 9/30/2008 | 100% LACERA TF Blended Benchmark |

Bank Loans Custom Index: Credit Suisse Leveraged Loan Index.

Beach Point Custom BM: BBg Barc US Corporate High Yield Index

Brigade Custom Index: BBg Barc US Corporate High Yield Index.

Cash Custom BM: FTSE 3-month Treasury Bill.

Core & Value-Added Real Estate Custom BM: NFI ODCE + 50 bps (3-month lag).

Custom Liquid Credit BM: 40% BBg Barc US Corporate High Yield Index / 40% Credit Suisse Leveraged Loans / 10% JP Morgan EMBI GD / 5% JP Morgan GBI – EM GD / 5% JP Morgan CEMBI BD.

Diversified Hedge Funds Custom BM: FTSE 3-Month U.S. Treasury Bill Index + 250 bps (1-month lag).

EAFE Custom Index: MSCI EAFE + Canada (Net).

EMD Custom: 50% JP Morgan EMBI + 25% JP Morgan GBI-EM GD + 25% JP Morgan CEMBI BD.

Global Equity Custom BM: MSCI ACWI IMI Index

Grosvenor Custom BM: 100% Illiquid Credit Custom BM.

Growth Custom Blended BM: ~74.5% Global Equity Custom BM/ 21.3% Private Equity- Growth Custom BM/ 4.3% Opportunistic Real Estate Custom BM.

Hedge Fund Custom Index: 100% Diversified Hedge Funds Custom BM.

Illiquid Credit Custom BM: Custom Liquid Credit BM + 150 bps (1-month lag).

MSCI EM IMI Custom Index: MSCI EM IMI (Net)

Natural Resources & Commodities Custom BM: 50% Bloomberg Commodity Index / 50% S&P Global Large MidCap Commodity and Resources Index.

Opportunistic Real Estate Custom BM: NFI ODCE + 300 bps (3-month lag).

PE – Credit Custom Benchmark: BBgBarc US Agg Index + 250bps (3-month lag).

Private Equity - Growth Custom BM: MSCI ACWI IMI Index + 200 bps (3-month lag).

PE – Real Assets Custom BM: S&P Global Large MidCap Commodity and Resources (3-month lag).

Real Assets and Inflation Hedges Custom Blended BM: ~41.2% Core & Value-Added Real Estate Custom BM/ 23.5% Natural Resources & Commodities Custom BM / 17.6% DJ Brookfield Global Infrastructure / 17.6% BBg Barc US TSY TIPS.

Risk Reduction and Mitigation Custom Blended BM: ~79.2% BBg Barc Agg / 16.7% Diversified Hedge Funds Custom BM / 4.2% FTSE 3-month Treasury Bill.

Securitized Custom Index: Barclays Securitized Bond Index + 400 bps.

Opportunistic Custom Index 1-Month Lag: 50% Barclays U.S. High Yield Index / 50% Credit Suisse Leveraged Loan Index (1-month lag).

50% FX Hedge Index: 50% MSCI World ex US IMI FX Hedged index 50% Zero Return.

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

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PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Total Fund Risk & Performance

Board of Investments Meeting
March 8, 2023

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Total Fund Risk

Risk Summary



Risk Summary

| | Value |
|--------------------|--------------|
| Total Risk | 13.83 |
| Benchmark Risk | 13.26 |
| Active Risk | 1.10 |
| Portfolio Beta | 1.04 |
| Effective Duration | 1.65 |

Risk Decomposition

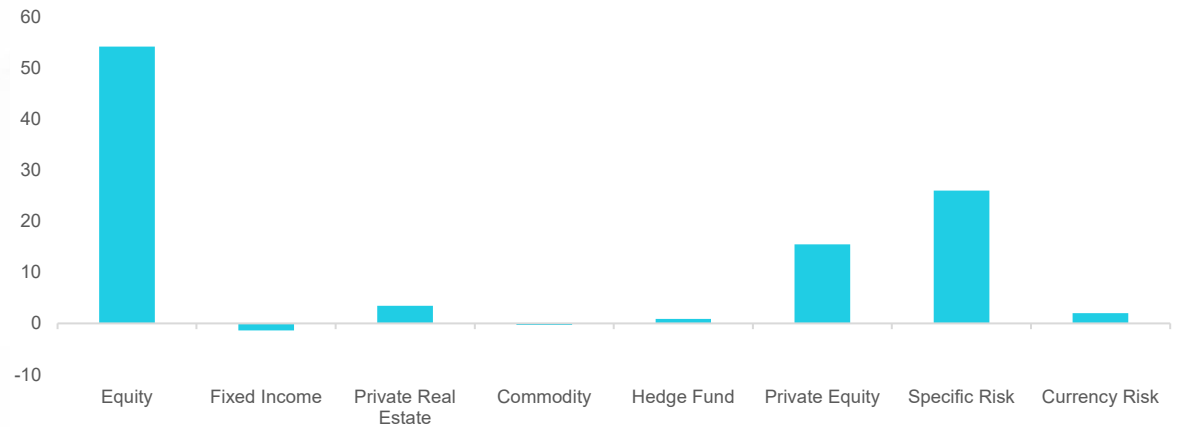
| Risk Source | Portfolio | | | Active | | |
|---------------------|-------------------|---------------|-------------|-------------------|---------------|-------------|
| | Risk Contribution | %Risk | Correlation | Risk Contribution | %Risk | Correlation |
| Total Risk | 13.83 | 100.00 | 1.00 | 1.10 | 100.00 | 1.00 |
| Local Market Risk | 13.16 | 95.15 | 1.00 | 1.08 | 97.99 | 0.99 |
| Common Factor Risk | 13.14 | 94.99 | 1.00 | 0.79 | 71.99 | 0.85 |
| Equity | 10.23 | 73.98 | 0.95 | 0.60 | 54.16 | 0.72 |
| Fixed Income | 0.64 | 4.60 | 0.41 | -0.02 | -1.39 | -0.11 |
| Private Real Estate | 1.40 | 10.13 | 0.69 | 0.04 | 3.46 | 0.24 |
| Commodity | 0.06 | 0.43 | 0.36 | 0.00 | -0.33 | -0.08 |
| Hedge Fund | 0.00 | 0.01 | 0.01 | 0.01 | 0.86 | 0.09 |
| Private Equity | 0.80 | 5.77 | 0.24 | 0.17 | 15.47 | 0.39 |
| Specific Risk | 0.02 | 0.16 | 0.04 | 0.29 | 26.00 | 0.51 |
| Currency Risk | 0.67 | 4.85 | 0.58 | 0.02 | 2.01 | 0.13 |

Contribution to Risk

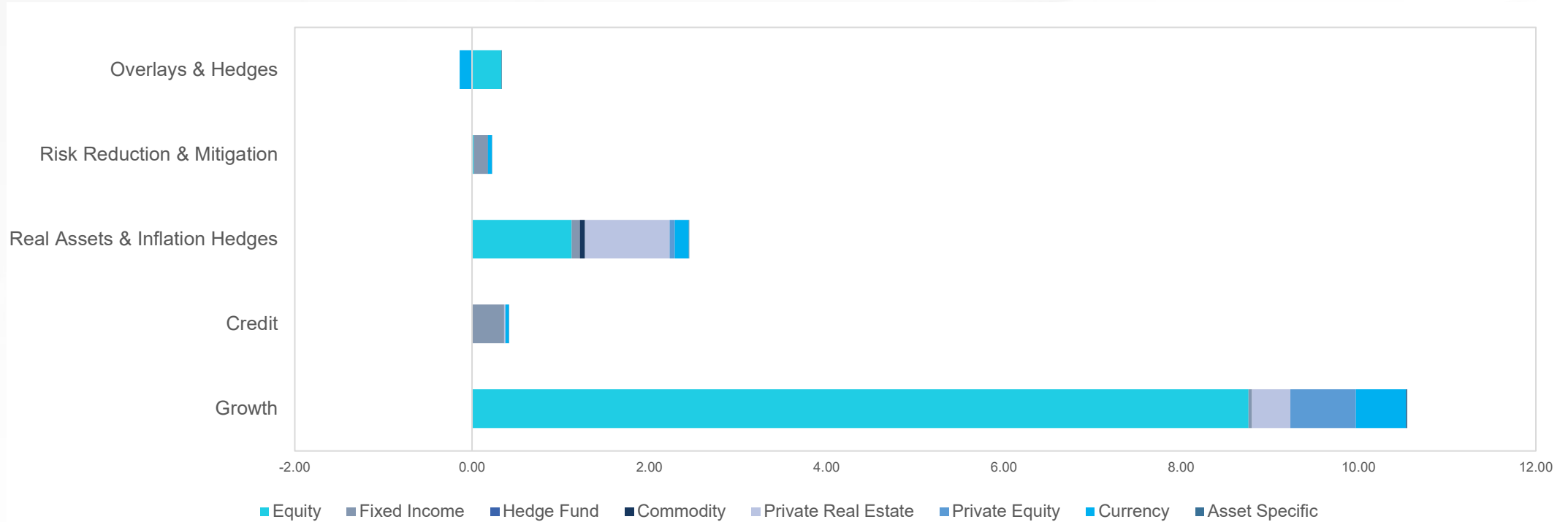


| | Mkt Value (mm) | Weight% | Total Risk | Risk Contribution | %CR to TR |
|--------------------------------|----------------|---------------|--------------|-------------------|---------------|
| Total Fund | 68,776 | 100.0% | 13.83 | 13.83 | 100.00 |
| Growth | 35,193 | 51.2% | 20.85 | 10.55 | 76.27 |
| Credit | 8,257 | 12.0% | 4.58 | 0.42 | 3.02 |
| Real Assets & Inflation Hedges | 12,005 | 17.5% | 15.42 | 2.45 | 17.70 |
| Risk Reduction & Mitigation | 12,852 | 18.7% | 6.20 | 0.22 | 1.62 |
| Overlays & Hedges | 469 | 0.7% | 56.58 | 0.19 | 1.39 |

Active Risk from Risk Factors

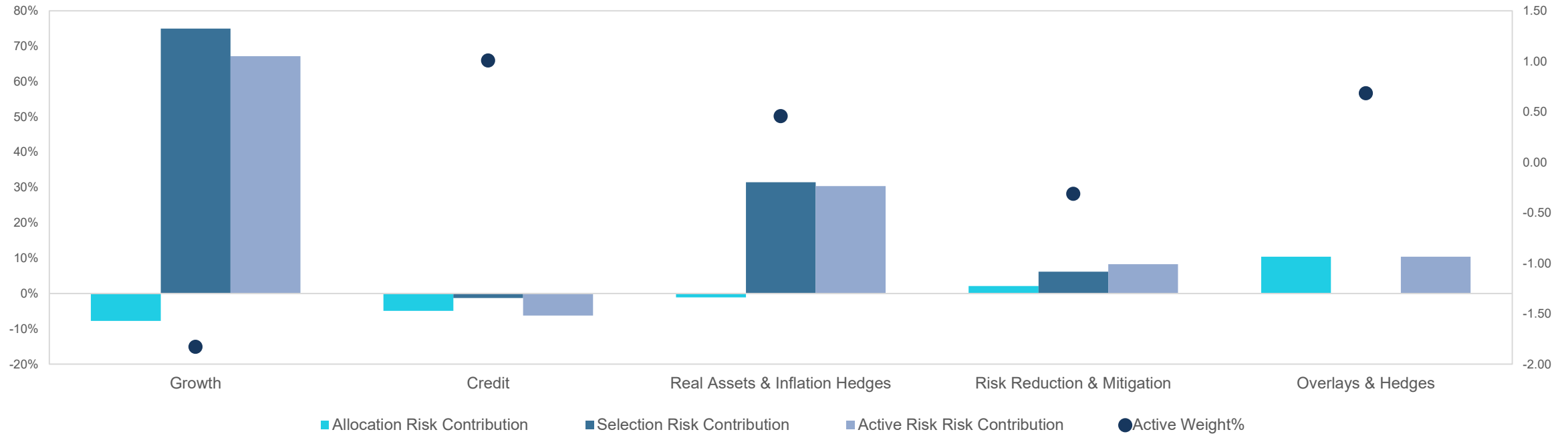


Risk Decomposition



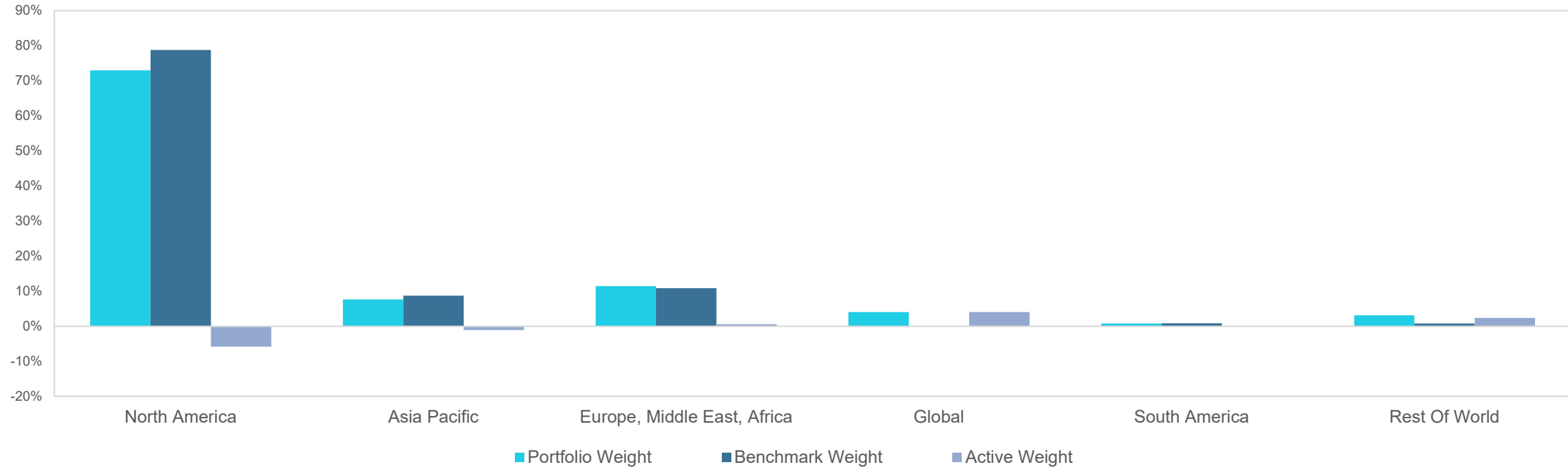
| Functional Category | Mkt Value | Weight% | Total Risk | %CR to Total Risk | Port Risk Contribution | Equity | Fixed Income | Commodity | Private Real Estate | Private Equity | Currency | Asset Specific |
|--------------------------------|---------------|---------------|--------------|-------------------|------------------------|--------------|--------------|-------------|---------------------|----------------|-------------|----------------|
| Total Fund | 68,774 | 100.0% | 13.83 | 100.00 | 13.83 | 10.23 | 0.65 | 0.06 | 1.40 | 0.80 | 0.67 | 0.02 |
| Growth | 35,193 | 51.2% | 20.85 | 76.27 | 10.55 | 8.76 | 0.04 | 0.00 | 0.43 | 0.74 | 0.56 | 0.02 |
| Credit | 8,257 | 12.0% | 4.58 | 3.02 | 0.42 | 0.00 | 0.36 | 0.00 | 0.01 | 0.00 | 0.04 | 0.00 |
| Real Assets & Inflation Hedges | 12,005 | 17.5% | 15.42 | 17.70 | 2.45 | 1.12 | 0.09 | 0.06 | 0.96 | 0.06 | 0.16 | 0.00 |
| Risk Reduction & Mitigation | 12,852 | 18.7% | 6.20 | 1.62 | 0.22 | 0.02 | 0.16 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 |
| Overlays & Hedges | 469 | 0.7% | 56.75 | 1.39 | 0.19 | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | -0.14 | 0.00 |

Risk Allocation Selection



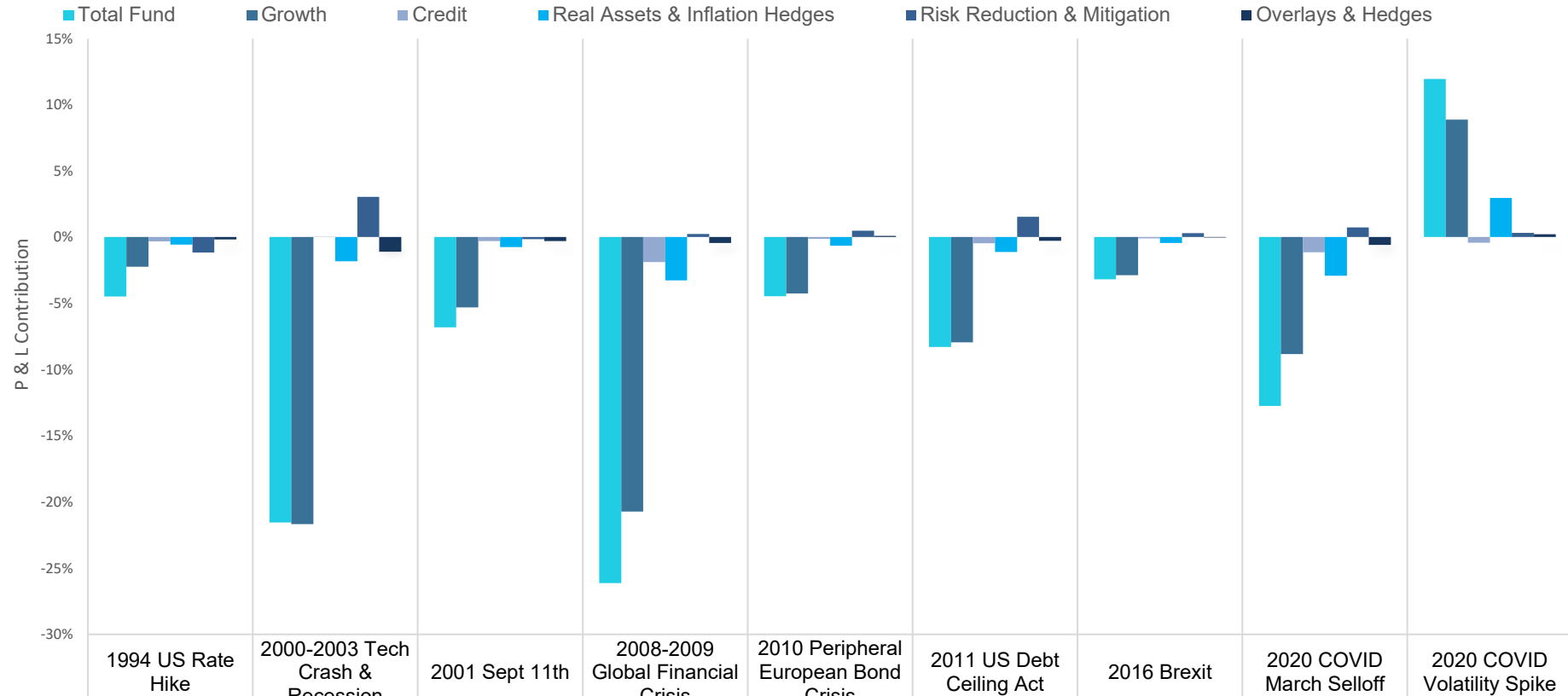
| Functional Category | Active Weight% | Allocation | | | Selection | | | Active |
|--------------------------------|----------------|------------|-------------|-------------------|------------|-------------|-------------------|-------------------|
| | | Volatility | Correlation | Risk Contribution | Volatility | Correlation | Risk Contribution | Risk Contribution |
| Active Total Risk | | | | -0.01 | | | 1.11 | 1.10 |
| Growth | -1.83 | 7.12 | 0.60 | -0.08 | 1.65 | 0.89 | 0.75 | 0.67 |
| Credit | 1.01 | 9.63 | -0.51 | -0.05 | 1.82 | -0.06 | -0.01 | -0.06 |
| Real Assets & Inflation Hedges | 0.46 | 6.34 | -0.39 | -0.01 | 2.57 | 0.70 | 0.32 | 0.30 |
| Risk Reduction & Mitigation | -0.31 | 13.79 | -0.49 | 0.02 | 1.21 | 0.27 | 0.06 | 0.08 |
| Overlays & Hedges | 0.68 | 51.44 | 0.30 | 0.10 | 0.00 | 0.00 | 0.00 | 0.10 |

Risk Regional Allocation



| Region | Weight% | | | Total Risk | Active Risk Contribution | % of Active TR | MC to Total Tracking Error |
|-----------------------------|----------------|----------------|--------------|--------------|--------------------------|----------------|----------------------------|
| | Portfolio | Benchmark | Active | | | | |
| Total Fund | 100.00% | 100.00% | 0.00% | 13.83 | 1.10 | 100.00 | 0.01 |
| North America | 72.94% | 78.75% | -5.81% | 14.26 | 1.05 | 95.75 | 0.02 |
| Asia Pacific | 7.64% | 8.74% | -1.11% | 16.22 | 0.09 | 7.74 | -0.02 |
| Europe, Middle East, Africa | 11.43% | 10.88% | 0.55% | 21.29 | 0.20 | 18.39 | 0.03 |
| Global | 4.05% | 0.00% | 4.05% | 7.02 | -0.17 | -15.15 | -0.04 |
| South America | 0.81% | 0.85% | -0.04% | 26.69 | 0.04 | 4.01 | 0.00 |
| Rest Of World | 3.14% | 0.78% | 2.36% | 6.32 | -0.12 | -10.73 | -0.05 |

Stress Tests by Asset Category



| | 1994 US Rate Hike | 2000-2003 Tech Crash & Recession | 2001 Sept 11th | 2008-2009 Global Financial Crisis | 2010 Peripheral European Bond Crisis | 2011 US Debt Ceiling Act | 2016 Brexit | 2020 COVID March Selloff | 2020 COVID Volatility Spike |
|--------------------------------|-------------------|----------------------------------|----------------|-----------------------------------|--------------------------------------|--------------------------|-------------|--------------------------|-----------------------------|
| Total Fund | -4.49% | -21.56% | -6.82% | -26.12% | -4.47% | -8.30% | -3.19% | -12.76% | 11.93% |
| Growth | -2.25% | -21.67% | -5.32% | -20.73% | -4.25% | -7.96% | -2.89% | -8.84% | 8.88% |
| Credit | -0.33% | 0.03% | -0.30% | -1.89% | -0.13% | -0.47% | -0.10% | -1.15% | -0.42% |
| Real Assets & Inflation Hedges | -0.57% | -1.84% | -0.75% | -3.28% | -0.65% | -1.12% | -0.45% | -2.91% | 2.95% |
| Risk Reduction & Mitigation | -1.17% | 3.03% | -0.16% | 0.22% | 0.47% | 1.53% | 0.29% | 0.74% | 0.31% |
| Overlays & Hedges | -0.19% | -1.11% | -0.29% | -0.44% | 0.09% | -0.29% | -0.04% | -0.59% | 0.22% |

Stress Tests Scenario Descriptions

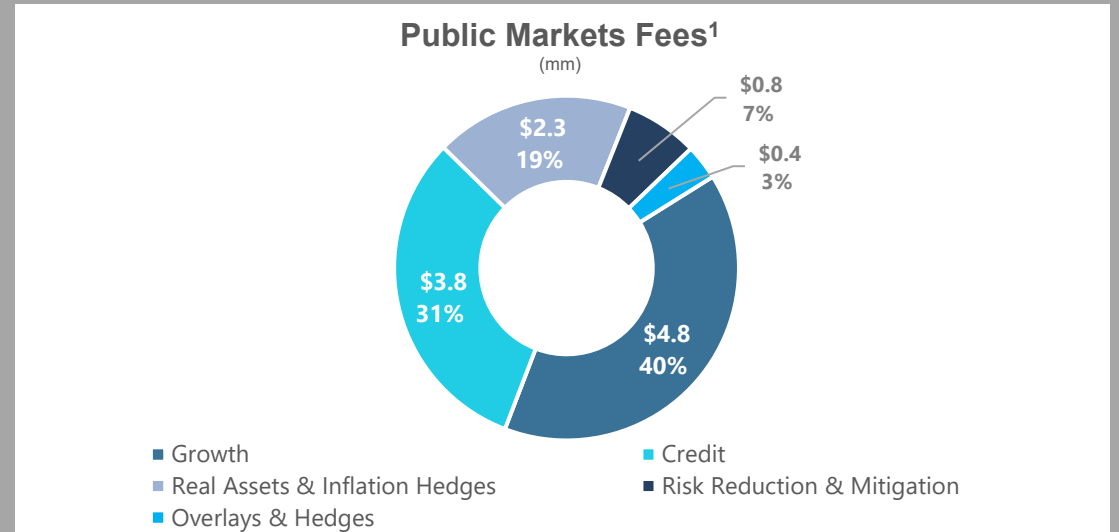
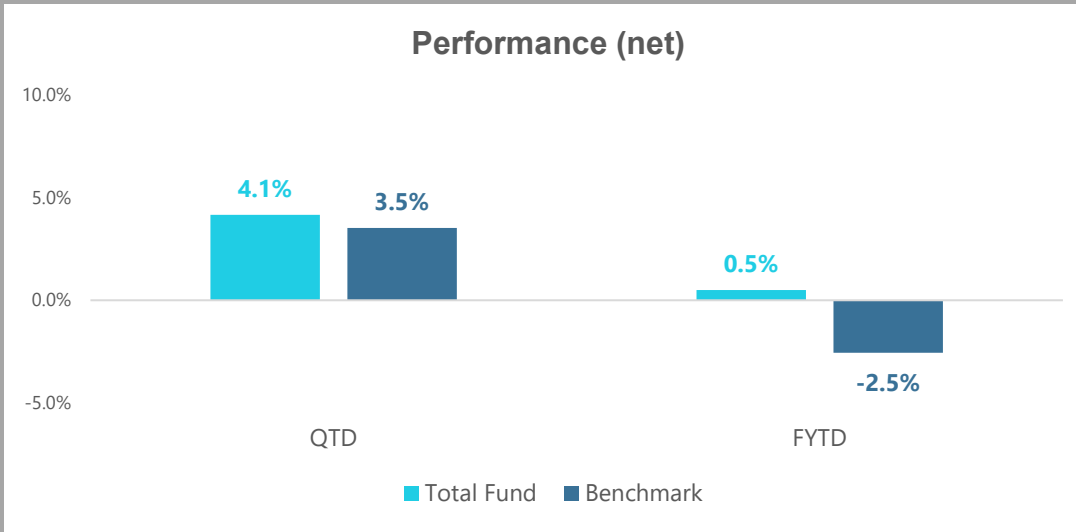


| Historical Scenario | Description |
|---|---|
| 1994 US Rate Hike | In combating inflation, the U.S. Federal Reserve raised its interest rate from 3.25% in February to 5.5% in November 1994. |
| 2000-2003 Tech Crash & Recession | Period of crisis and slowdown for technological firms due to a rapid jump in stock prices when a speculative technology bubble began to burst. |
| 2001 Sept 11 | The U.S. stock market was closed for a week upon a series of coordinated suicide attacks upon the United States on September 11, 2001. |
| 2008-2009 Global Financial Crisis | Major financial crisis starting September 2008 with the failure of several large U.S.-based financial firms. Extended into 2009, when stock markets reached their lowest. |
| 2010 Peripheral European Bond Crisis | During the Europe sovereign debt crisis, liquidity access for peripheral European countries was deeply affected by their widening budget deficits, higher borrowing costs, and failing banking systems. |
| 2011 US Debt Ceiling Act | Caused by political deadlock about appropriate level of government spending and its consequence on the national debt and deficit. Both debt and equity markets experienced significant volatility. |
| 2016 Brexit | The referendum by British voters to exit the European Union on 23 June 2016 roiled global markets, including currencies, causing the British pound to fall to its lowest level in decades. |
| 2020 COVID March Selloff | Peak and Valley of the MSCI ACWI index when Covid became a Global Pandemic. |
| 2020 COVID Volatility Spike | Period it took for the Cboe Volatility Index (VIX) to revert to pre-pandemic levels. |



Total Fund Performance

Quarterly Snapshot



| | | | | |
|---|--|--|---|---|
| <p>Ending Market Value</p> <p>70,079</p> <p>↑ 4% from prior quarter</p> | <p>Sharpe Ratio²</p> <p>0.7</p> <p>↓ -5% from prior quarter</p> | <p>Batting Average³</p> <p>56%</p> <p>↑ 8% from prior quarter</p> | <p>Standard Deviation²</p> <p>9.6</p> <p>↑ 3% from prior quarter</p> | <p>Tracking Error²</p> <p>2.6</p> <p>↑ 8% from prior quarter</p> |
|---|--|--|---|---|

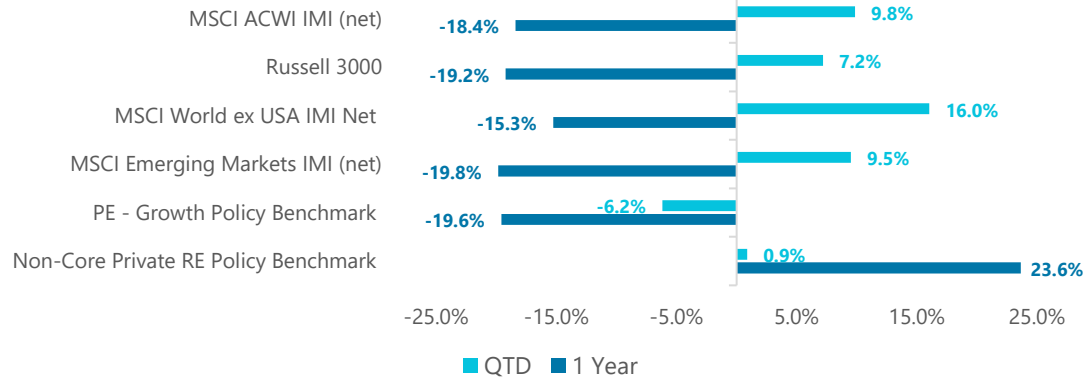
¹ Reflects estimated investment management fees

² 3 Year Annualized

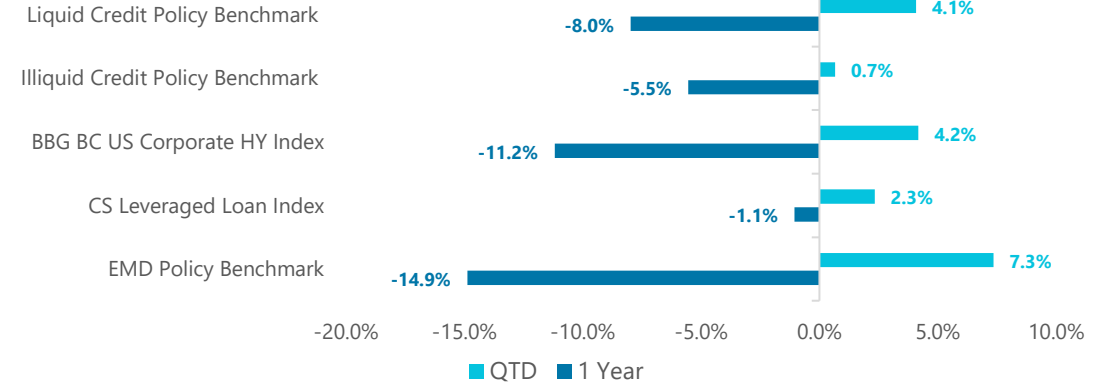
³ Percentage of managers that outperformed the benchmark for the quarter



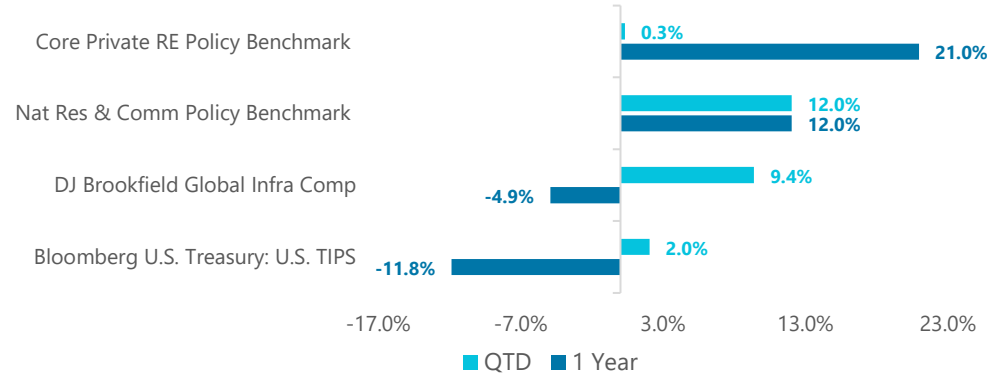
Growth



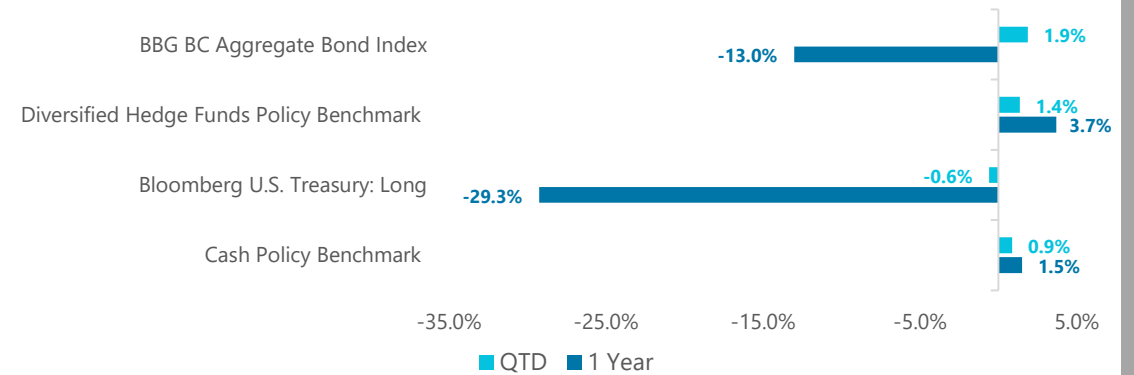
Credit



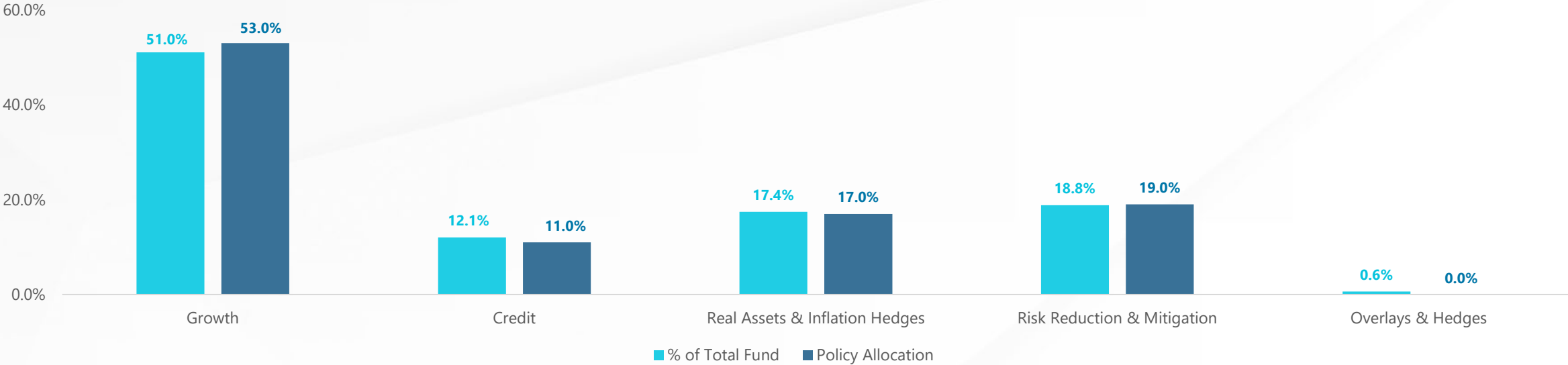
Real Assets & Inflation Hedges



Risk Reduction & Mitigation



Asset Allocation

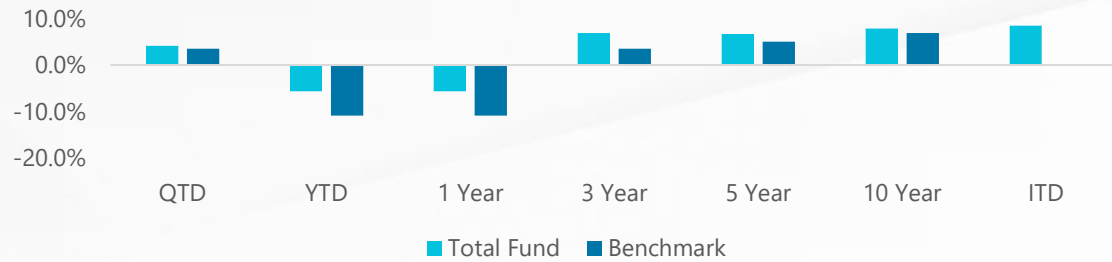


| | Ending Market Value (mm) | % of Total Fund | Policy Allocation | Over/Under (%) | Over/Under (mm) |
|--------------------------------|--------------------------|-----------------|-------------------|----------------|-----------------|
| Total Fund | 70,079 | 100.0% | 100.0% | | |
| Growth | 35,773 | 51.0% | 53.0% | -2.0% | -1,369 |
| Credit | 8,446 | 12.1% | 11.0% | 1.1% | 737 |
| Real Assets & Inflation Hedges | 12,222 | 17.4% | 17.0% | 0.4% | 309 |
| Risk Reduction & Mitigation | 13,202 | 18.8% | 19.0% | -0.2% | -113 |
| Overlays & Hedges | 436 | 0.6% | 0.0% | 0.6% | 436 |

Performance Summary

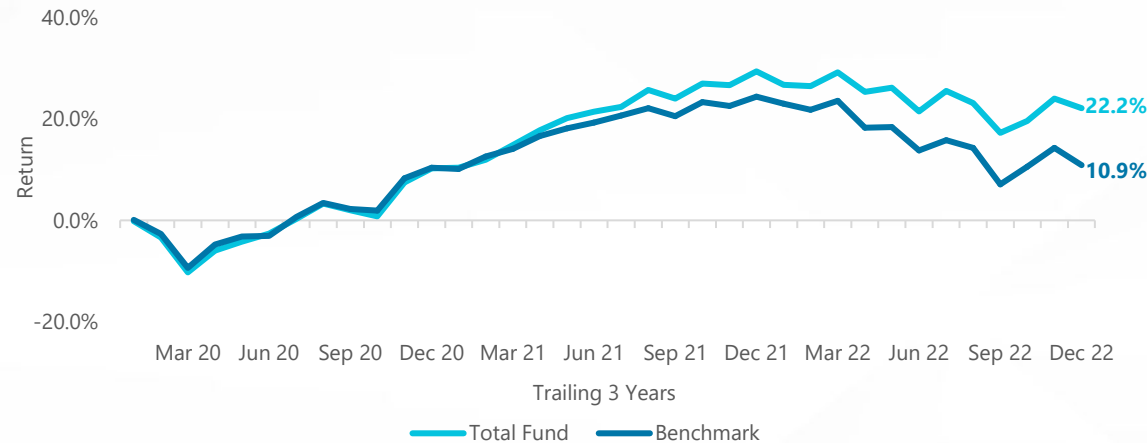


Performance (net)



| | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | ITD |
|-------------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|
| Total Fund | 4.1% | -5.6% | -5.6% | 6.9% | 6.7% | 7.9% | 8.5% |
| Benchmark | 3.5% | -10.9% | -10.9% | 3.5% | 5.1% | 6.9% | -- |
| Excess | 0.6% | 5.2% | 5.2% | 3.4% | 1.6% | 1.0% | -- |

Cumulative Return (net)



Functional Category¹

| | QTD | FYTD | 1 Year | 3 Year |
|---|---------------|--------------|---------------|--------------|
| Growth | 6.0% | 0.8% | -9.7% | 10.0% |
| Growth Policy Benchmark | 4.0% | -4.8% | -17.0% | 5.2% |
| Excess | 2.1% | 5.6% | 7.3% | 4.8% |
| Credit | 2.2% | 1.6% | -5.5% | 2.8% |
| Credit Policy Benchmark | 1.9% | 1.0% | -7.4% | 0.3% |
| Excess | 0.3% | 0.6% | 1.9% | 2.5% |
| Real Assets & Inflation Hedges | 3.9% | 1.7% | 7.8% | 8.1% |
| RA & IH Policy Benchmark | 5.4% | 2.1% | 6.4% | 8.3% |
| Excess | -1.4% | -0.4% | 1.4% | -0.2% |
| Risk Reduction & Mitigation | 1.1% | -2.7% | -9.8% | -1.0% |
| RR & M Policy Benchmark | 1.1% | -2.9% | -11.0% | -1.9% |
| Excess | 0.0% | 0.3% | 1.2% | 0.9% |
| Overlays & Hedges | -10.6% | 1.5% | 178.0% | -- |

¹ Overlay composite returns reflect non-notionalized returns.

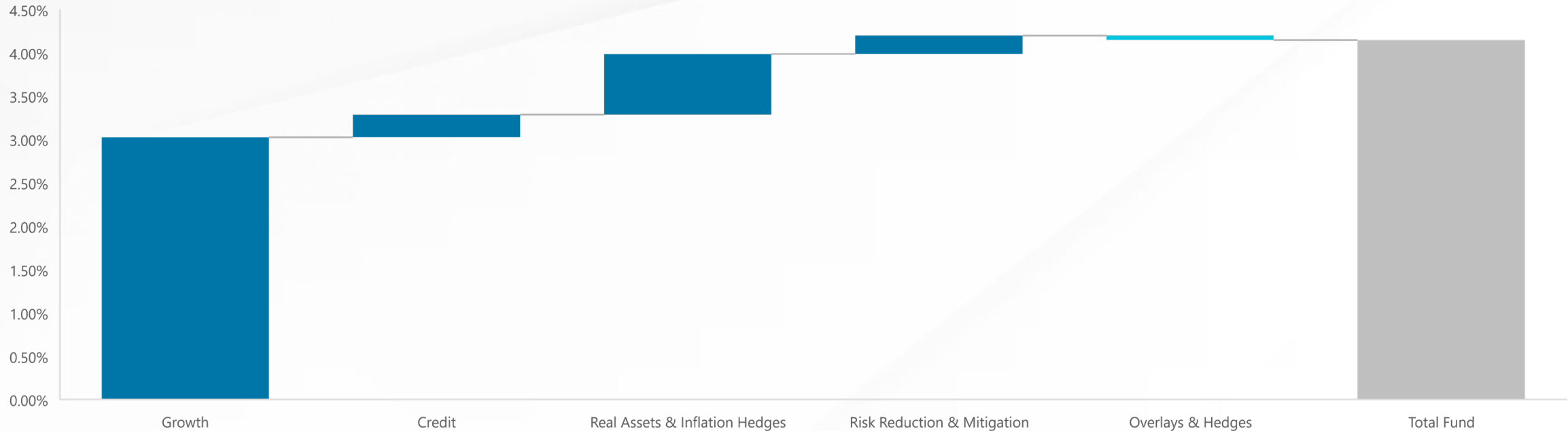
Peer Ranking (gross)

| | QTD | | 1 Year | | 3 Year | | 5 Year | | 10 Year | |
|-------------------|-------------|-----------|--------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| Total Fund | 4.2% | 52 | -5.4% | 13 | 7.3% | 19 | 7.0% | 24 | 8.2% | 29 |
| 60/40 Portfolio | 6.7% | 23 | -16.0% | 95 | 1.6% | 86 | 3.3% | 86 | 5.4% | 89 |
| S&P 500 Index | 7.6% | 10 | -18.1% | 100 | 7.7% | 13 | 9.4% | 4 | 12.6% | 4 |
| 5th Percentile | 9.4% | | 0.6% | | 9.6% | | 9.2% | | 9.8% | |
| 25th Percentile | 6.3% | | -6.3% | | 7.0% | | 7.0% | | 8.6% | |
| 50th Percentile | 4.5% | | -8.9% | | 6.1% | | 6.4% | | 7.8% | |
| 75th Percentile | 3.8% | | -12.0% | | 4.4% | | 5.2% | | 7.1% | |
| 95th Percentile | 2.9% | | -16.4% | | -1.6% | | 1.1% | | 3.2% | |

Contribution to Return



Quarter-to-date (QTD)

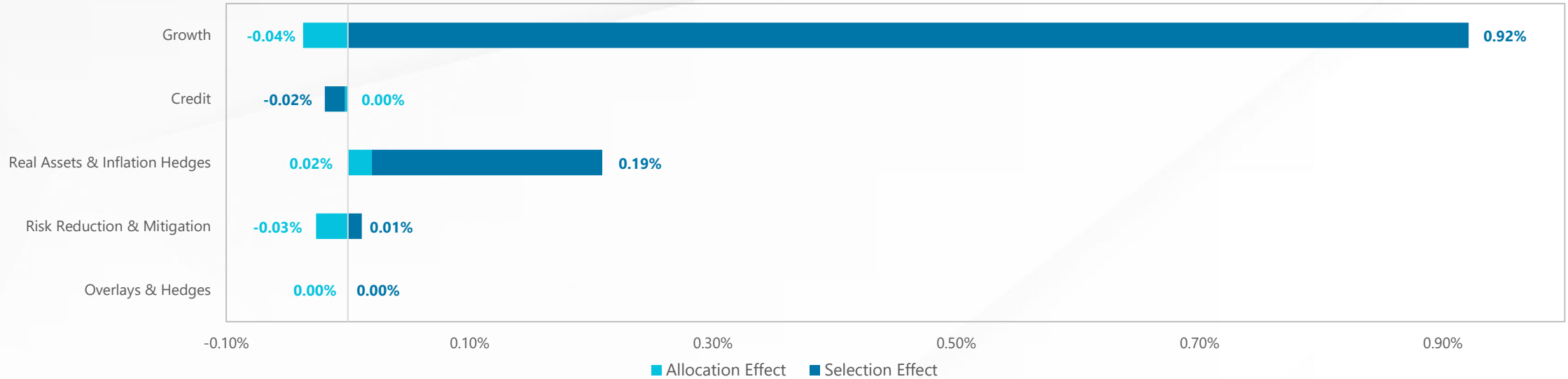


| Functional Category | | Contributors | | Detractors | |
|--------------------------------|--------------|----------------------------|-------|-------------------------------|--------|
| Growth | 3.02% | BTC Passive Currency Hedge | 2.12% | BlackRock Long Treasury Bonds | -0.03% |
| Credit | 0.26% | SSGA MSCI ACWI IMI | 1.93% | Parametric GE Region | -0.02% |
| Real Assets & Inflation Hedges | 0.70% | JPMAM Strategic Beta US | 0.41% | Parametric RA & IH Overlay | -0.02% |
| Risk Reduction & Mitigation | 0.21% | DWS Infrastructure | 0.33% | Beach Point - Fund III | -0.01% |
| Overlays & Hedges | -0.05% | Parametric Growth Overlay | 0.25% | Napier Park | -0.01% |
| Total Fund | 4.15% | | | | |

Return Attribution



Quarter-to-date (QTD)¹



| | Ending Market Value (mm) | % of Total Fund | Policy Allocation | Portfolio Return | Benchmark Return | Allocation Effect | Selection Effect | Total Value Add |
|--------------------------------|--------------------------|-----------------|-------------------|------------------|------------------|-------------------|------------------|-----------------|
| Total Fund | 70,079 | 100.0% | 100.0% | 4.1% | 3.5% | -0.08% | 1.11% | 0.64% |
| Growth | 35,773 | 51.0% | 53.0% | 6.0% | 4.0% | -0.04% | 0.92% | 0.97% |
| Credit | 8,446 | 12.1% | 11.0% | 2.2% | 1.9% | 0.00% | -0.02% | 0.02% |
| Real Assets & Inflation Hedges | 12,222 | 17.4% | 17.0% | 3.9% | 5.4% | 0.02% | 0.19% | -0.24% |
| Risk Reduction & Mitigation | 13,202 | 18.8% | 19.0% | 1.1% | 1.1% | -0.03% | 0.01% | -0.03% |
| Overlays & Hedges | 436 | 0.6% | 0.0% | -10.6% | -- | -- | -- | -- |

¹ Total Value Add includes Interaction Effect.



Total Fund ESG & Climate Profile



ESG factors may present financial risks and opportunities to generating economic returns.

- LACERA sources third-party vendor data to monitor fund exposures and inform ongoing assessments of external asset managers.
 - Evaluate ESG and climate profile at various levels of the Total Fund
 - Compare ESG and climate profile of similar mandates by strategy
 - Complement qualitative assessments of external managers' ESG integration processes
- Less data available for private market mandates but may be modelled or directly reported by some private market managers.

Table: Snapshots of Asset Classes and Mandates Where Data Is More Readily Available

| Functional Asset Category/Sub-Functional Asset Category | Overall ESG Score ¹ | Carbon Footprint ² | Climate Value at Risk (%) ³ |
|--|--------------------------------|-------------------------------|--|
| Growth/Global Public Equity | 6.6 | 159.9 | -10.2 |
| MSCI All-Country World Investible Market Index - Net | 6.6 | 165.9 | -10.1 |
| Functional Asset Category/Sub-Functional Asset Category | | | |
| Credit/High Yield Manager | 5.3 | 291.9 | -15.9 |
| Credit/High Yield Manager | 4.9 | 486.3 | -19.7 |
| Bloomberg Barclays U.S. Corporate High Yield Index | 5.1 | 306.7 | -16.3 |
| Functional Asset Category/Sub-Functional Asset Category | | | |
| Real Assets & Inflation Hedges/Infrastructure Manager | 7.2 | 681.7 | -16.0 |
| Dow Jones Brookfield Global Infrastructure Index | 7.3 | 436.3 | -14.0 |

Source: MSCI ESG Analytics

¹ Overall ESG Score reflects aggregated portfolio company ESG score.

² Carbon footprint measures Scope 1 and 2 emissions intensity in metric tons/USD million sales.

³ Climate Value at Risk - Potential economic value impact of climate-related physical risks and regulatory constraints, combined with upside of technology opportunities in modelling to limit global temperature rise to within 2C consistent with the Paris Agreement goals.