



**Alameda County Employees' Retirement Association
BOARD OF RETIREMENT**

INVESTMENT COMMITTEE/BOARD MEETING

**THIS MEETING WILL BE CONDUCTED VIA TELECONFERENCE
SEE GOV'T CODE § 54953(e).**

ACERA MISSION:

To provide ACERA members and employers with flexible, cost-effective, participant-oriented benefits through prudent investment management and superior member services.

**Wednesday, December 14, 2022
9:30 a.m.**

ZOOM INSTRUCTIONS	COMMITTEE MEMBERS	
<p>The public can view the Teleconference and comment via audio during the meeting. To join this Teleconference, please click on the link below. https://zoom.us/join Webinar ID: 879 6337 8479 Passcode: 699406 1 (669) 900-6833 US For help joining a Zoom meeting, see: https://support.zoom.us/hc/en-us/articles/201362193</p>	TARRELL GAMBLE	APPOINTED
	CHAIR	
	GEORGE WOOD	ELECTED GENERAL
	VICE CHAIR	
	DALE AMARAL	ELECTED SAFETY
	OPHELIA BASGAL	APPOINTED
	KEITH CARSON	APPOINTED
	JAIME GODFREY	APPOINTED
LIZ KOPPENHAVER	ELECTED RETIRED	
HENRY LEVY	TREASURER	
KELLIE SIMON	ELECTED GENERAL	
NANCY REILLY	ALTERNATE RETIRED¹	
VACANT	ALTERNATE SAFETY²	

¹ The Alternate Retired Member votes in the absence of the Elected Retired Member, or, if the Elected Retired Member is present, then votes if both Elected General members, or the Safety Member and an Elected General member, are absent.

² The Alternate Safety Member votes in the absence of the Elected Safety, either of the two Elected General Members, or both the Retired and Alternate Retired members.

Note regarding accommodations: The Board of Retirement will provide reasonable accommodations for persons with special needs of accessibility who plan to attend Board meetings. Please contact ACERA at (510) 628-3000 to arrange for accommodation.

Note regarding public comments: Public comments are limited to four (4) minutes per person in total.

The order of agenda items is subject to change without notice. Board and Committee agendas and minutes, and all documents distributed to the Board or a Committee in connection with a public meeting (unless exempt from disclosure), are available online at www.acera.org.

INVESTMENT COMMITTEE/BOARD MEETING

NOTICE and AGENDA December 14, 2022

Call to Order: 9:30 a.m.

Roll Call

Public Input (The Chair allows public input on each agenda item at the time the item is discussed)

Action Items: Matters for discussion and possible motion by the Committee

1. Discussion of and Possible Motion to Recommend that the Board Approve an up to \$36 Million Investment in AG CSF2A (Annex) Dislocation Fund as part of ACERA's Private Equity Portfolio – Debt-Related/Special Situations³, Pending Completion of Legal and Investment Due Diligence and Successful Contract Negotiations

9:30 – 10:00

Walter Murphy, Angelo, Gordon & Co.
Brendan McCaffrey, Angelo, Gordon & Co.
Faraz Shooshani, Verus Advisory
Clint Kuboyama, ACERA
Betty Tse, ACERA

This item will be addressed in Open Session, but the Investment Committee may go into Closed Session per Cal. Gov. Code § 54956.81.

Information Items: These items are not presented for Committee action but consist of status updates and cyclical reports

1. Education Session on the International Investment Manager Structure Decision Making Process and Framework

Joe Abdou, Verus Advisory
Samantha Grant, Verus Advisory
Eileen Neill, Verus Advisory
Thomas Taylor, ACERA
Betty Tse, ACERA

2. Semiannual Performance Review for the Period Ending September 30, 2022 – Total Fund Review Highlighting Public Markets Asset Classes and Absolute Return

Eileen Neill, Verus Advisory
Clint Kuboyama, ACERA
Thomas Taylor, ACERA
Betty Tse, ACERA

³ Written materials and investment recommendations from the consultants, fund managers and ACERA Investment Staff relating to this alternative investment are exempt from public disclosure pursuant to CA Gov. Codes § 6254.26 and § 6255.

INVESTMENT COMMITTEE/BOARD MEETING

NOTICE and AGENDA December 14, 2022

3. Update on ESG Implementation

Eileen Neill, Verus Advisory
John Ta, ACERA
Julius Cuaresma, ACERA
Serafin Lim, ACERA
Betty Tse, ACERA

4. CA Gov. Code § 7514.7 Information Report

John Ta, ACERA
Betty Tse, ACERA

5. Status Update on the General Investment Consultant Search

Betty Tse, ACERA


Trustee Remarks

Future Discussion Items

None

Establishment of Next Meeting Date

January 11, 2023 at 9:30 a.m.



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DECEMBER 14, 2022

Investment Structure Process Education

ACERA



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Introduction

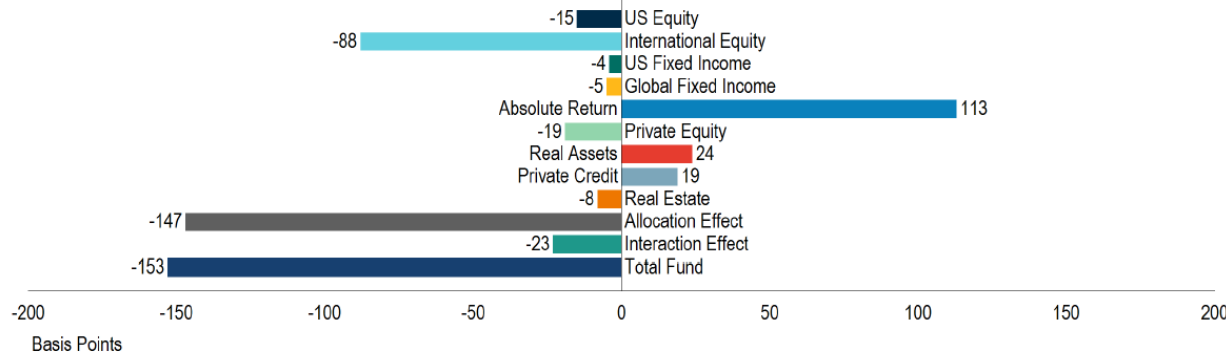
Investment structure process education goals

- Refresh Board knowledge and understanding of ACERA investment structure process
 - Review key process concepts and inputs
 - Analysis and process output
- Apply ACERA investment structure process to international equity structure to illustrate arrival at investment structure decisions
 - International equity asset class is area of focus for Staff and Verus as it has detracted Total Fund versus policy due to (1) manager issue selection skill and (2) manager regional /sector allocation skill

International equity program warrants review

Total Fund
Performance Attribution (One Year)

Period Ending: September 30, 2022



International equity asset class has experienced decline in value-added vs. benchmark in last 5 years

Asset class was major contributor to ACERA Total Fund 2022 Fiscal and One year underperformance vs. policy

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
US Equity	-18.22%	-17.63%	-0.59%	-0.15%	-0.21%	-0.02%	-0.38%
International Equity	-28.50%	-25.34%	-3.16%	-0.88%	-0.12%	-0.06%	-1.07%
US Fixed Income	-14.93%	-14.60%	-0.33%	-0.04%	-0.17%	-0.01%	-0.23%
Global Fixed Income	-24.72%	-22.14%	-2.57%	-0.05%	0.01%	0.01%	-0.03%
Absolute Return	9.82%	-6.35%	16.17%	1.13%	0.03%	-0.13%	1.04%
Private Equity	1.04%	3.47%	-2.43%	-0.19%	-0.34%	-0.01%	-0.54%
Real Assets	5.70%	0.12%	5.58%	0.24%	0.05%	0.06%	0.35%
Private Credit	4.64%	-0.82%	5.46%	0.19%	-0.17%	-0.09%	-0.07%
Real Estate	20.98%	22.09%	-1.11%	-0.08%	-0.54%	0.03%	-0.59%
Total	-12.78%	-11.25%	-1.53%	0.17%	-1.47%	-0.23%	-1.53%

Investment structure decision process overview

Strategic investment decision making

- Strategic investment decisions made by Board in rank order:
 - 1) **Asset allocation** drives 90+% of ACERA fund performance and risk experience
 - 2) **Investment structure** (asset class structure) impacts $\approx 7\%$ of ACERA fund performance and risk experience
 - 3) **Manager selection** provides $\approx 3\%$ of ACERA fund performance and risk experience
- Best practices for investment decision making is to employ disciplined processes using consistent inputs and following steps aligned with institutional industry standards
 - ACERA Board set new asset allocation policy in 2021 using historical process
 - Board hires managers based upon ACERA due diligence process articulated in ACERA policies
- What is process for setting investment structure?

ACERA investment structure principles

- ACERA general investment policy articulates principles regarding asset class structures
 - **U.S. Equity** Capture broad market with mostly passive index exposures in large cap and active managers in small cap
 - **International Equity** Passive (developed markets) and active managers are employed to invest broadly across developed and emerging markets
 - **Fixed Income** Invests globally in all market sectors employing active managers outside of U.S. Treasuries and sovereign government markets
 - **Private Markets** Overall objective is to invest broadly (*each market segment is governed by unique investment policy*) via solely active management strategies
 - **Absolute Return** Principally employs active Fund-of-Fund managers for broad access to strategies which are expected to have low equity risk correlation
- ACERA policy includes specific targets to individual public markets manager exposures reflective of industry best practices for asset class risk management
 - Philosophy is to maintain capital market exposures within public equities (i.e., large vs. small cap, value vs. growth, developed vs. emerging markets)

Investment structure decision making framework

- **Goal of investment structure decision is to select asset class structure which best meets or exceeds asset class benchmark**
- Framework is necessary to determine optimal mix of investment strategies and size of respective strategy exposures to achieve asset class investment objectives
- Investment structure decision framework is nearly identical to asset allocation decision framework, i.e., mean variance optimization with objective assumptions and constraints
 - Inputs include assumptions for expected return, expected risk and correlations.....EXCEPT
 - Investment structure decision focuses on single asset class
 - Assumptions are for individual managers/strategies
 - Assumptions are all excess relative to asset class benchmark
- Rest of framework is same as asset allocation decision process – evaluate alternative structures based upon risk-adjusted returns of each one.....EXCEPT
 - Risk-adjusted returns are ‘information ratios’ (excess return divided by tracking error)

Investment structure decision process summary

- 1) Determine strategies to be included in process in addition to current asset class strategies
- 2) Develop expected excess returns (“alpha”) for each strategy
 - passive strategy excess return = 0%
- 3) Develop expected excess risk (“tracking error”) for each strategy
 - Typically based upon actual historical excess risk
 - Passive strategy excess risk generally < 0.5%
- 4) Calculate correlations of managers’/strategies’ excess returns versus asset class benchmark
 - Ideal asset class structure is one where active managers complement each other through differing alpha sources
- 5) Incorporate constraints to capture asset class investment structure objectives
 - e.g., style and size neutrality versus benchmark
- 6) Select asset class investment structure with highest ‘information ratio’, best meets objectives, and reflects reasonable cost/fees compared to alternative structures

Investment structure
review example:

ACERA International Equity Structure

Individual strategy observations

- Asset class value added has declined last 3 years. Largest contributors were Mondrian and Capital Group as well as, to lesser degree, Templeton
- Verus reviewed all developed markets manager strategies in detail based upon key asset class risk and return drivers: style, size, and region
- Summary of results (*see Appendix for analysis details*):
 - **Mondrian:** lags strategy benchmark and is just even with style benchmark (*Net of fees*) since inception (*Nov. 2003*), which is now 20 years. Manager is on ACERA Watchlist.
 - In last 5- and 10-year periods, Mondrian has detracted value through both Style exposures (overweight and selection in Value stocks) and Developed Markets Region (particularly through stock selection in Europe/Middle East markets) which is roughly 75% of the portfolio
 - **Capital Group:** has produced mostly added value until three years ago
 - Severely underperformed both strategy benchmark and style benchmark in most recent fiscal year due in part to Russian exposures, but general stock and sector selection decisions in Developed Markets as well
 - **Templeton:** has consistently lagged strategy benchmark and style benchmark (*Gross and Net of fees*) for last 10 years. Manager is on ACERA Watchlist.
 - Versus peers, they rank in either the 3rd or 4th quartile over most time periods as well
 - **Bivium:** is ahead of benchmark (Net of fees) since inception (Oct. 2018)

Current policy targets

The Target Allocation is 25% to **International Equity** and the **Policy** is the MSCI ACWI ex-US IMI Index:

Strategy	Manager	Benchmark	Fund Allocation	Benchmark Allocation	Benchmark Target	Policy
Developed (Index)	BlackRock	MSCI World ex US	26.6%	26.6%	25.0%	
Active International Core	Bivium	MSCI ACWI ex US	5.1%	5.1%	5.0%	100.0% (MSCI ACWI ex US IMI)
Active International Growth	Capital Group	MSCI ACWI ex US Growth	22.2%	22.2%	25.0%	
Active International Value	Mondrian	MSCI ACWI ex US Value	26.8%	26.8%	25.0%	
Emerging Mkts	William Blair	MSCI EM	9.5%	9.5%	10%	
International Small Cap	Templeton	MSCI ACWI ex US SC	9.8%	9.8%	10%	

- ACERA international equity structure targets reflect style neutrality and market capitalization exposures to major regions and size

Investment structure decision framework considerations

- **Active/Passive allocation**

- What is optimal active risk exposure (i.e., tracking error risk)?

- **Total Tracking Error Risk**

- How does current asset class tracking error compare with alternative asset class structures?

- **Benchmark Risk**

- Does aggregation of individual mandate/manager benchmarks approximate asset class composite policy benchmark ?

- **Allocation Risk**

- Is actual investment structure meaningfully different than policy target structure?

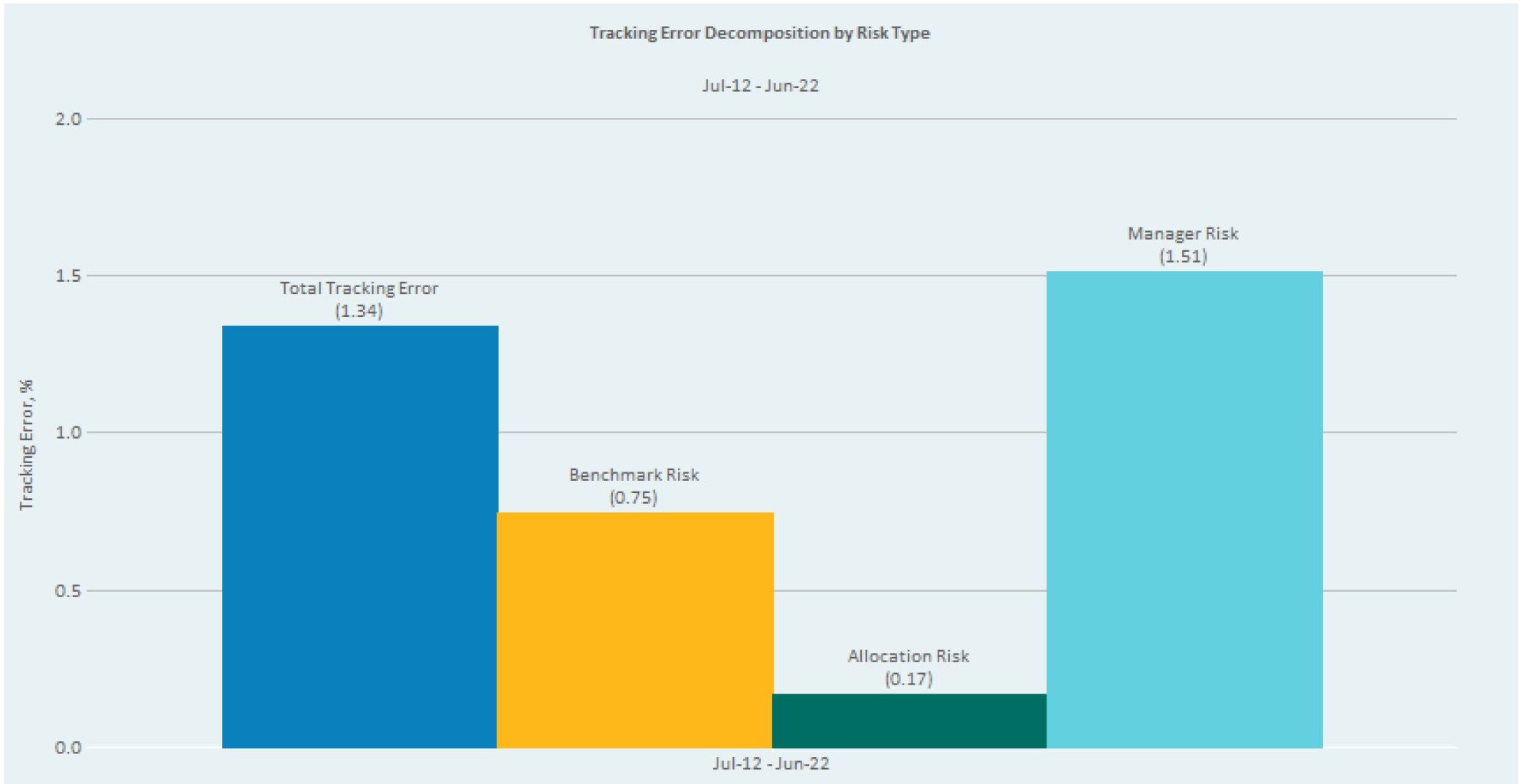
- **Manager Risk**

- Is the asset class active risk balanced and diversified across managers and approaches?

- **Factor exposure**

- Are there unintended factor exposures (risks, e.g. size, style, etc.) that need to be corrected?

International equity risk decomposition as of 6/30/2022 – Composite



Projected Alpha

	Historical (Since Inception to 09/2022)			Assumed for Projection			Current Allocation	Alt. 1	Alt. 2	Alt. 3
	Tracking Information			Tracking Information						
	Alpha	Error	Ratio	Alpha	Error	Ratio				
Bivium International Equity	245	328	0.75	100	328	0.31	9%	11%	10%	10%
BlackRock	33	1	N/A	0	0	0.00	27%	35%	41%	27%
Capital Group	179	491	0.36	100	491	0.20	22%	20%	14%	14%
Mondrian Investment Partners Limited	-105	456	-0.23	-25	456	-0.05	23%	0%	0%	0%
New Developed Mkts Intl Manager	28	309	0.09	100	309	0.32	0%	0%	0%	14%
William Blair Investment Management	371	729	0.51	150	729	0.21	10%	12%	12%	12%
New EME Mgr	436	663	0.66	150	663	0.23	0%	12%	12%	12%
Franklin Resources, Inc.	-121	449	-0.27	0	449	0.00	10%	0%	0%	0%
New ISC Manager	305	327	0.93	100	327	0.31	0%	10%	10%	10%
							100%	100%	100%	100%
Projected Alpha							40	77	71	86
Projected Tracking Error							164	231	211	231
Projected Information Ratio							0.24	0.33	0.34	0.37

Next steps

Next steps

- Verus undertakes investment structure decision process for international equity structure with input from both ACERA Staff and Investment Committee (“IC”)
- Process will follow framework laid out in prior slides.
 - Verus team will work with Verus manager research professionals and ACERA staff to identify alternative strategies to incorporate into process
- Verus will work with Staff and IC chair to determine timing for process and delivery of preliminary results and recommendations, if any, to IC
- Present preliminary results to IC and solicit feedback to incorporate into finalization process
- Present finalized results and recommendations to IC
- Staff implements any changes which results from Board-approved asset class investment structure

Appendix

Overview of key risk measures

Volatility measures

- **Standard deviation:** Oftentimes referred to as “risk” or “volatility”, it is a number used to tell how measurements for a group are spread out from the average (mean), or expected value.
- **Tracking error:** Tracking error is the standard deviation of the difference between the returns of an investment/manager and the benchmark. Basically the volatility of manager returns vs. the benchmark.

Risk adjusted return measures

- **Sharpe Ratio:** Evaluates the performance of a Fund based on the total risk of the portfolio. The incremental return generated by the Fund for the incremental risk undertake (versus a risk free rate i.e. T-Bills). Objective is to achieve high ratio and valid for use in peer Fund comparisons as well in asset allocation policy selection decision when comparing alternative policies.
- **Information Ratio:** Essentially the standard deviation of manager alpha (excess return performance). The incremental return generated by the manager for the incremental risk undertaken (versus the benchmark); hence, a valid measure of manager skill.

SHARPE RATIO

Return of the portfolio minus the risk free rate and then divided by the portfolio’s standard deviation

$$\frac{(\text{Return of the Portfolio} - \text{Risk free rate})}{\text{Portfolio Standard Deviations}}$$

INFORMATION RATIO

Return of the portfolio minus the return of the benchmark and then divided by the portfolio tracking error

$$\frac{(\text{Return of the Portfolio} - \text{Return of the Benchmark})}{\text{Portfolio Tracking Error}}$$

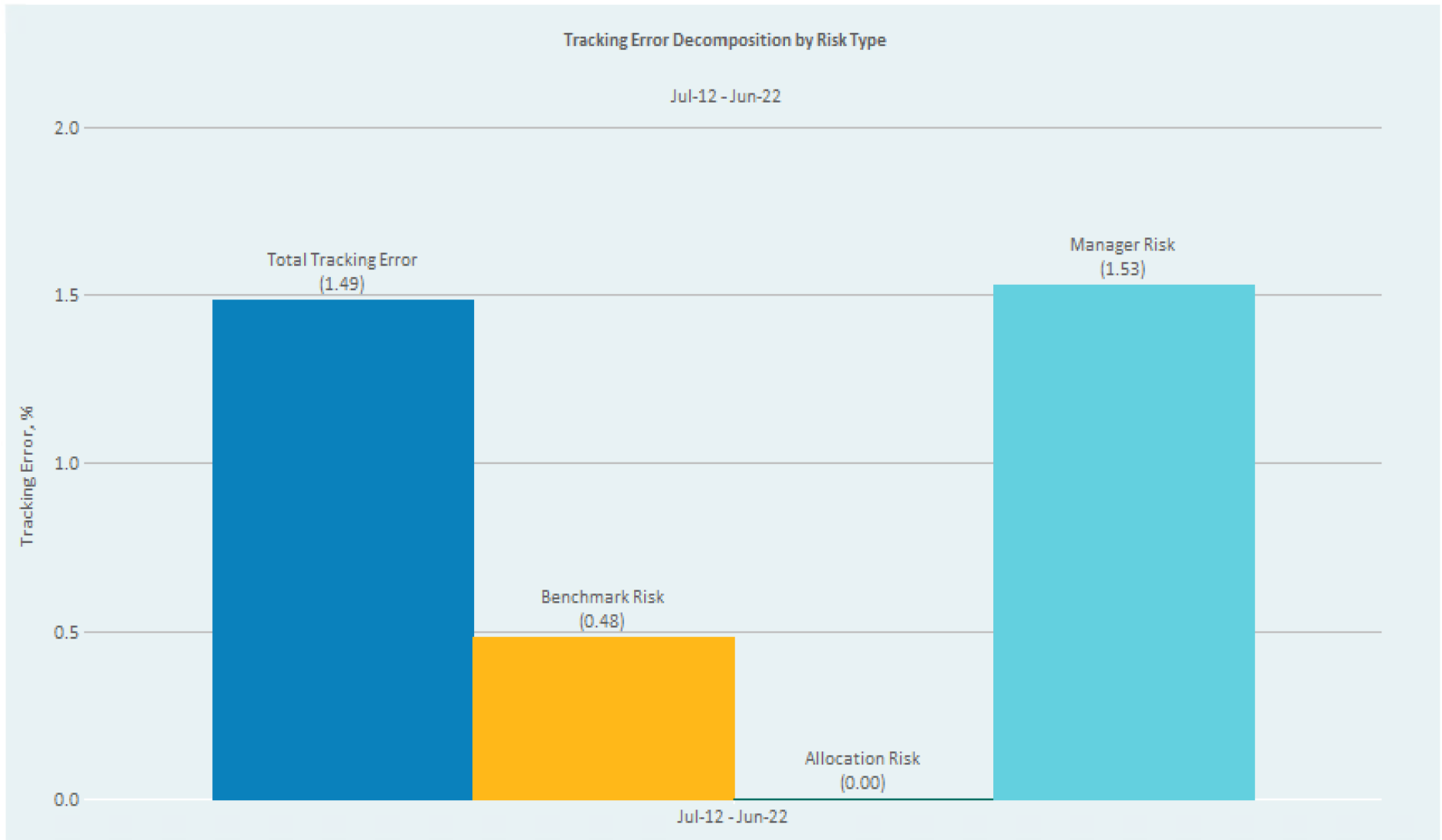
Alternative structures

Strategy	Manager	Benchmark	Current Targets	Alternative 1	Alternative 2	Alternative 3
Developed (Index)	BlackRock	MSCI World ex US	25%	35%	41%	27%
Active International Core	Bivium	MSCI ACWI ex US	5%	11%	10%	11%
Active International Growth	Capital Group	(Convert to MSCI EAFE)	25%	20%	15%	14%
Active International Value	Mondrian	MSCI ACWI ex US Value	25%	--	--	--
Active International Value	New Intl Manager	MSCI EAFE	--	--	--	14%
Emerging Mkts	William Blair	MSCI EM	10%	12%	12%	12%
Emerging Mkts	New EME Manager	MSCI EM	--	12%	12%	12%
International Small Cap	Templeton	MSCI ACWI ex US SC	10%	--	--	--
International Small Cap	New Intl Small Cap Manager	MSCI ACWI ex US SC	--	10%	10%	10%

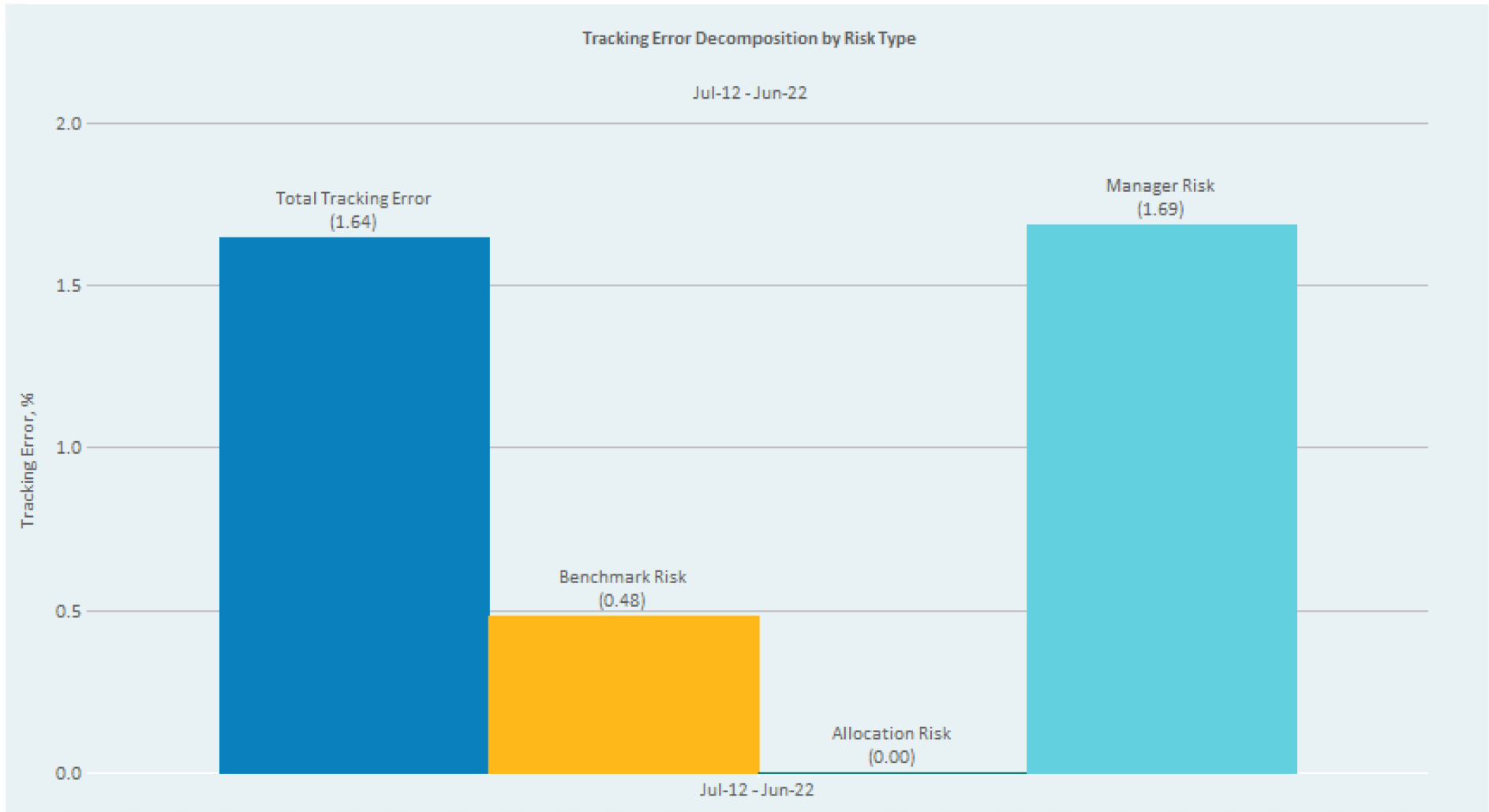
International equity risk decomposition as of 6/30/2022 – alternative 1



International equity risk decomposition as of 6/30/2022 – alternative 2



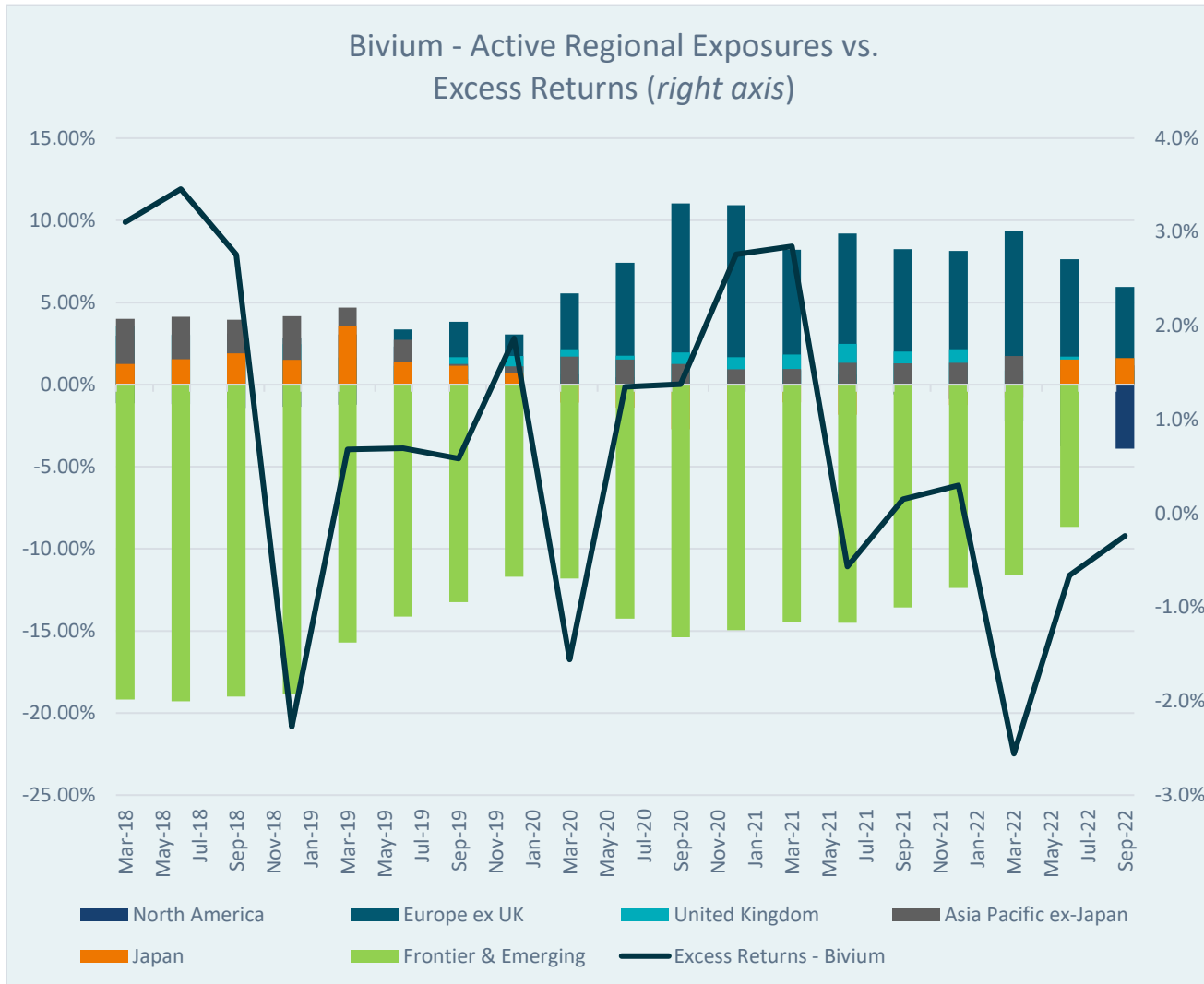
International equity risk decomposition as of 6/30/2022 – alternative 3



Manager level risk decomposition

Bivium –

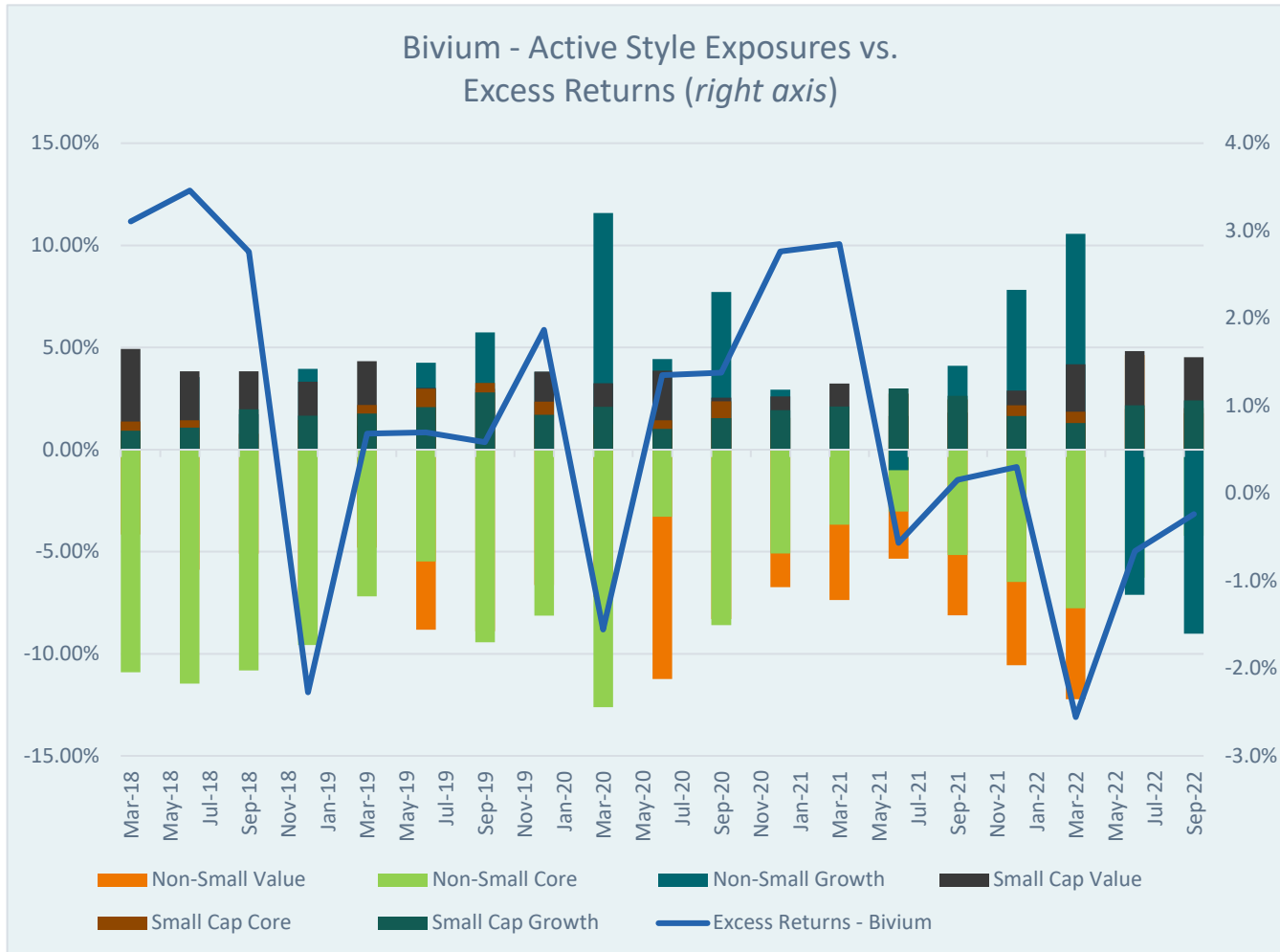
Active regional exposures



Region	Cumulative Value Added	Annualized Value Added
Total	4.09%	0.85%
North America	-0.06%	-0.01%
Europe ex UK	3.12%	0.65%
United Kingdom	-1.36%	-0.29%
Asia Pacific ex-Japan	0.31%	0.07%
Japan	-0.57%	-0.12%
Frontier & Emerging	2.33%	0.49%
Other	-0.11%	-0.02%
Cash	0.44%	0.09%

Bivium –

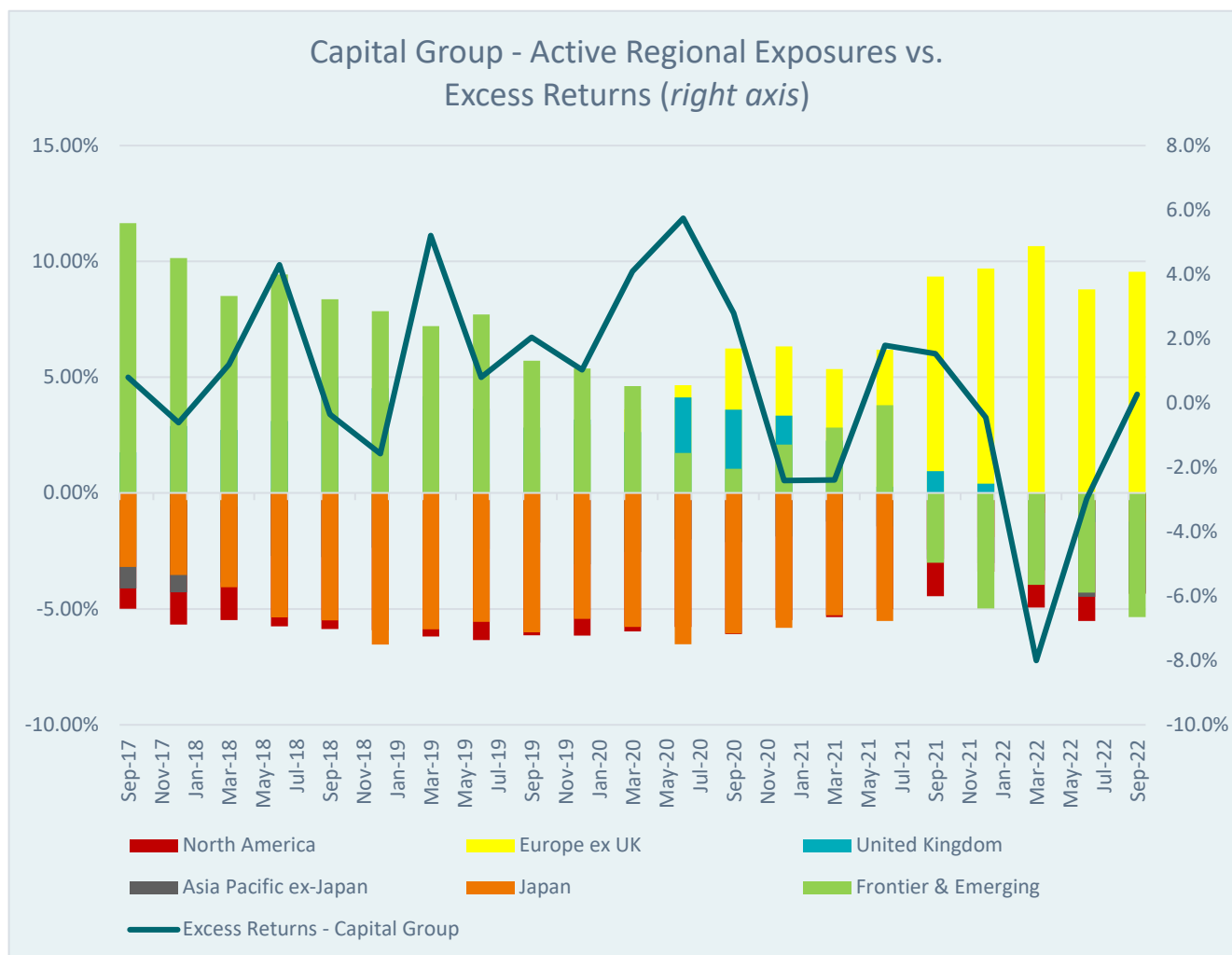
Active sector exposures



Style	Cumulative Value Added	Annualized Value Added
Total	3.79%	0.79%
Non-Small Value	-3.08%	-0.65%
Non-Small Core	2.73%	0.56%
Non-Small Growth	4.43%	0.91%
Small Cap Value	-0.15%	-0.03%
Small Cap Core	-0.02%	0.00%
Small Cap Growth	-0.58%	-0.12%
Other	0.04%	0.01%
Cash	0.44%	0.09%

Capital Group –

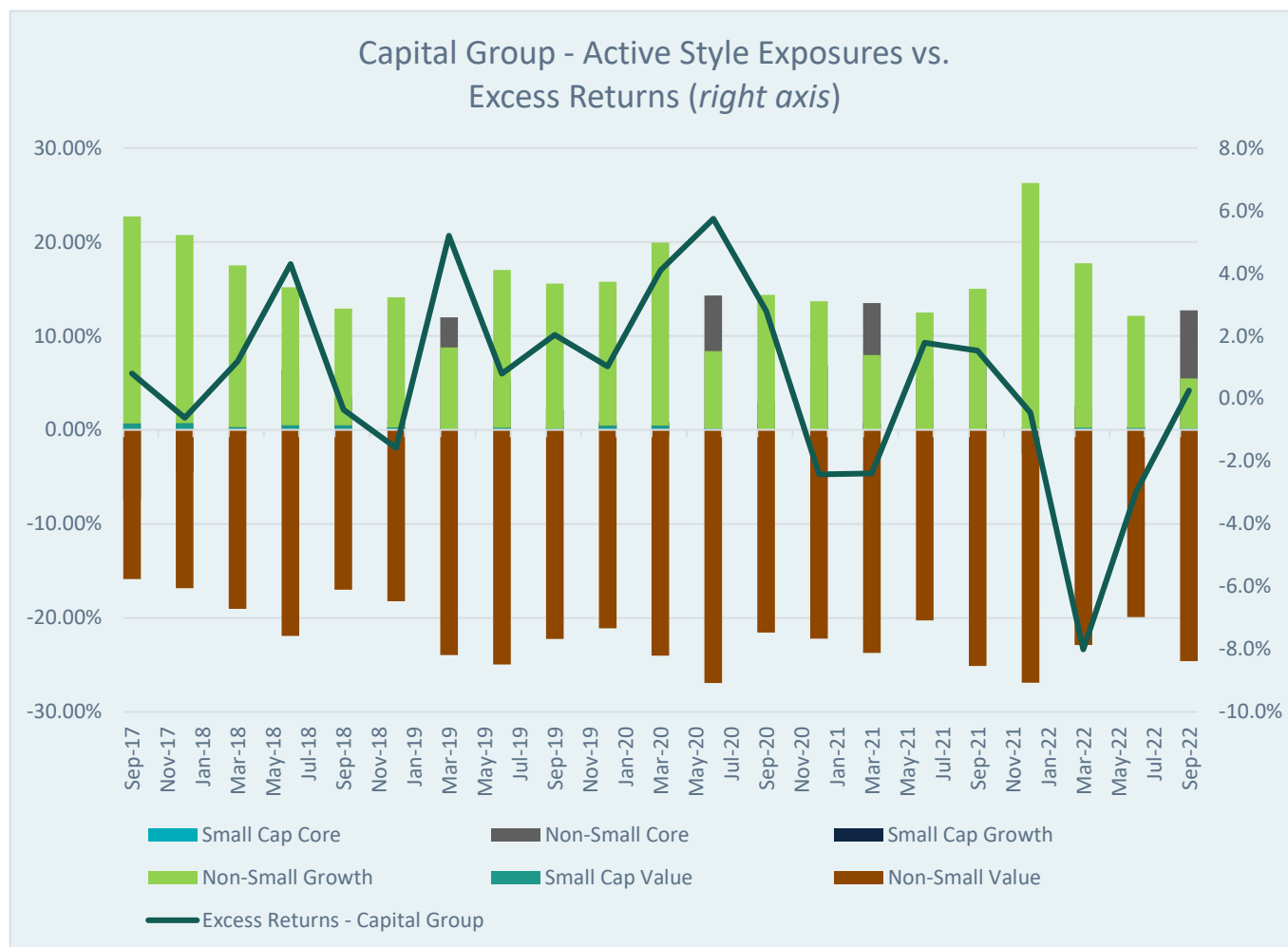
Active regional exposures



Region	Cumulative Value Added	Annualized Value Added
Total	8.33%	1.61%
North America	-1.30%	-0.26%
Europe ex UK	4.44%	0.87%
United Kingdom	1.31%	0.26%
Asia Pacific ex-Japan	-0.49%	-0.10%
Japan	0.86%	0.17%
Frontier & Emerging	3.33%	0.66%
Other	-0.08%	-0.02%
Cash	0.26%	0.05%

Capital Group –

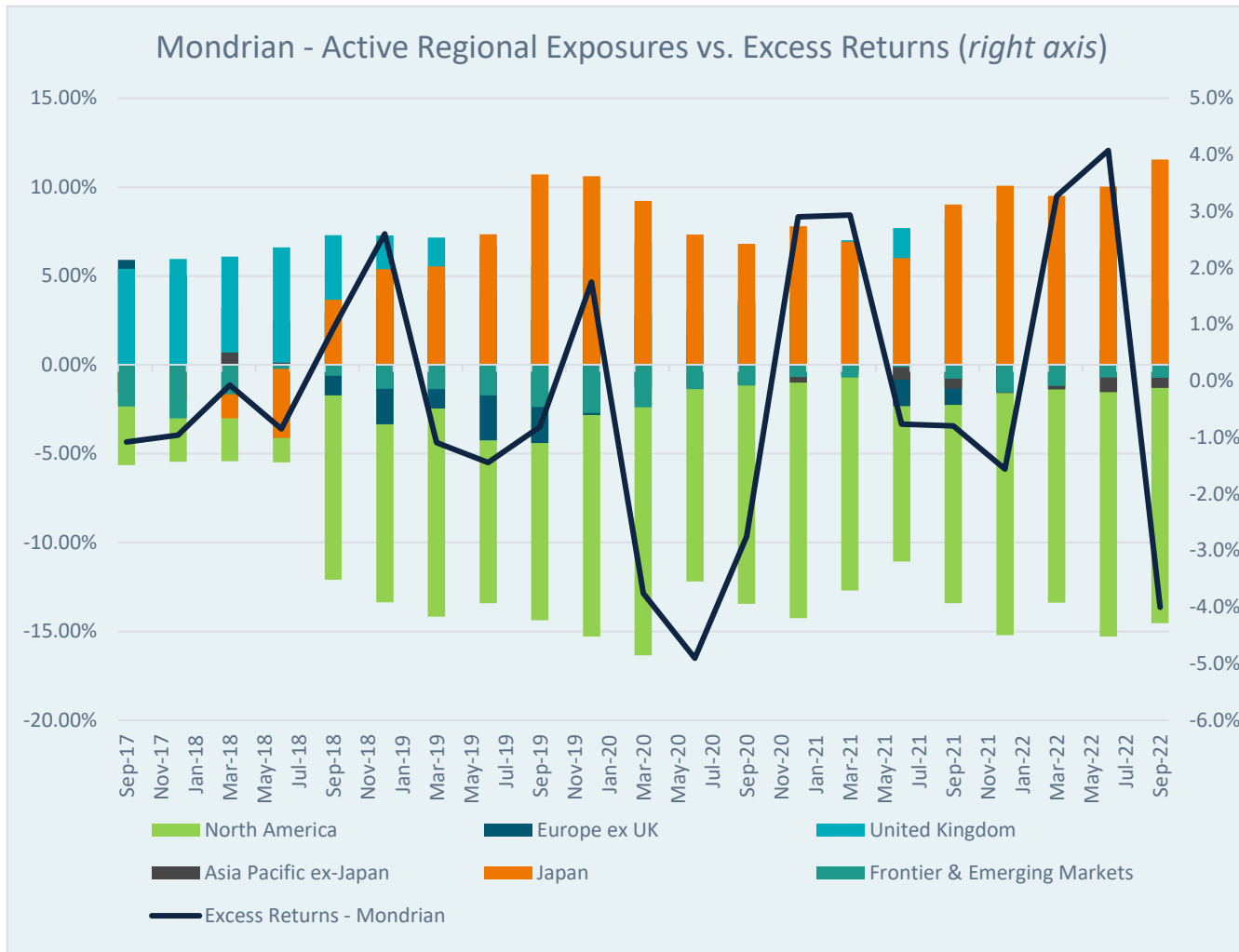
Active style exposures



Style	Cumulative Value Added	Annualized Value Added
Total	8.31%	1.61%
Non-Small Value	-0.31%	-0.06%
Non-Small Core	12.96%	2.47%
Non-Small Growth	-4.29%	-0.93%
Small Cap Core	-0.03%	-0.01%
Small Cap Growth	-0.13%	-0.03%
Other	0.06%	0.01%
Cash	0.26%	0.05%

Mondrian –

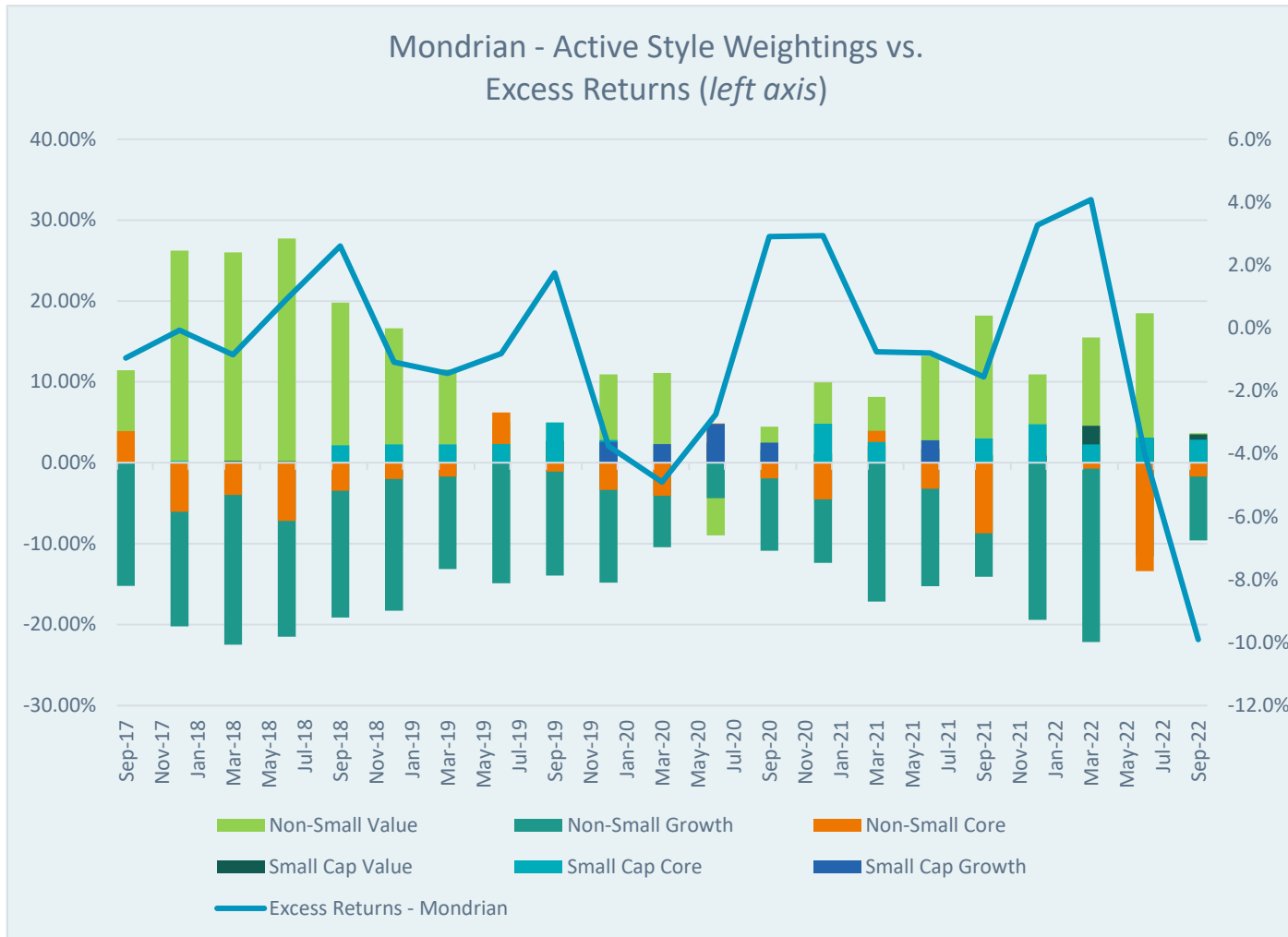
Active regional exposures



Region	Cumulative Value Added	Annualized Value Added
Total	-7.44%	-1.53%
North America	-6.37%	-1.31%
Europe ex UK	-0.67%	-0.13%
United Kingdom		
Asia Pacific ex-Japan	-2.28%	-0.46%
Japan		
Frontier & Emerging	3.03%	0.60%
Other	0.06%	0.01%
Cash	-0.23%	-0.05%

Mondrian –

Active style exposures



Style	Cumulative Value Added	Annualized Value Added
Total	-7.45%	-1.54%
Non-Small Value	-5.53%	-1.12%
Non-Small Core	-1.58%	-0.32%
Non-Small Growth	0.12%	0.02%
Small Cap Value	-0.58%	-0.12%
Small Cap Core	0.47%	0.09%
Small Cap Growth	-0.17%	-0.03%
Other	0.05%	0.01%
Cash	-0.23%	-0.05%



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PERIOD ENDING: SEPTEMBER 30, 2022

Total Fund Review

Alameda County Employees' Retirement Association

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U.S. economics summary

- U.S. real GDP fell in Q2 for a second consecutive quarter, down -0.6% annualized (+1.6% over the past full year). Forecasts suggest a potential growth turnaround in the third quarter; the Atlanta Fed GDPNow forecast indicated a growth rate of 2.8% and economists expected 0.9% as of October 14th.
- U.S. core CPI remained elevated in September, rising 0.6% during the month to a new 40-year high of 6.6% year-over-year. Headline inflation continued to show another more moderate monthly print of 0.4% but remained high at 8.2% year-over-year.
- Unemployment fell slightly from 3.6% in June to 3.5% in September, which did not reflect an increase in employment but rather the departure of some Americans from the job market altogether. Weekly initial jobless claims—a measure of the number of workers who filed for unemployment during any given week—moved higher during Q2 to 244,000 in early July but has since fallen to 193,000 in late September.
- The U.S. dollar has appreciated roughly 15% relative to major currencies. A stronger dollar may result in slowing U.S. exports as domestic goods become more expensive to foreign buyers, and lower inflation as American businesses and households are able to purchase foreign goods at cheaper prices.
- Coverage of COVID-19 has tended to focus on the health impacts in a binary way: either the infected individual recovers (and lives) or does not recover (and is deceased). There is a growing body of research by medical experts that suggests a significant portion of survivors face longer-term, often severe, health problems. These issues are known as “long COVID” and may be the primary cause for a severe shrinking of the U.S. labor force.

	Most Recent	12 Months Prior
Real GDP (YoY)	1.6% 9/30/22	12.5% 6/30/21
Inflation (CPI YoY, Core)	6.6% 9/30/22	4.0% 9/30/21
Inflation (CPI YoY, Headline)	8.2% 9/30/22	5.4% 9/30/21
Expected Inflation (5yr-5yr forward)	2.1% 9/30/22	2.2% 9/30/21
Fed Funds Target Range	3.00% – 3.25% 9/30/22	0.00% – 0.25% 9/30/21
10-Year Rate	3.83% 9/30/22	1.49% 9/30/21
U-3 Unemployment	3.5% 9/30/22	4.7% 9/30/21
U-6 Unemployment	6.7% 9/30/22	8.5% 9/30/21

International economics summary

- Economic growth expectations continue to weaken around the world, and recession appears possible in some developed countries. High inflation has placed central banks in a corner, requiring a choice between tightening (lower inflation with possible recession) or accommodation (stronger economic activity with possibly continued high inflation).
- Multi-decade high inflation continues to spread across Europe, as consumer prices in September rose 10% from the prior year. Food and energy were major drivers, although the core inflation number is also elevated at 4.8%. Inflation remains a challenge in Europe and the U.S., as prices have been relatively stable in the Asia-pacific region.
- Unemployment rates have been stable and tight in most markets, though this may now be seen as a problem as central bankers work to slow economies and weaken labor markets in order to fight inflation.
- The Russia Ukraine war may be taking a turn, as Ukraine’s counteroffensive gains steam. In a rare admission, Russia’s Defense Ministry spokesman Igor Konashenkov acknowledged recent defeats: “With numerically superior tank units in the direction of Zolata Balka and Oleksandrivka, the enemy managed to forge deep into our defenses.”
- Still dealing with the highest inflation seen in four-decades, the U.K. economy continues to struggle, especially as the Bank of England tightens economic conditions in the face of a recession. The situation worsened following newly elected Prime Minister Liz Truss’ new growth plan announcement, which introduced a large tax cut initiatives without additional funding sources secured.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	1.8% 6/30/22	8.2% 9/30/22	3.5% 9/30/22
Eurozone	4.1% 6/30/22	10.0% 9/30/22	6.6% 8/31/22
Japan	1.6% 6/30/22	2.8% 9/30/22	2.5% 8/31/22
BRICS Nations	1.9% 6/30/22	4.5% 9/30/22	5.2% 12/31/21
Brazil	3.2% 6/30/22	7.2% 9/30/22	8.9% 8/31/22
Russia	(4.1)% 6/30/22	13.7% 9/30/22	3.8% 8/31/22
India	13.5% 6/30/22	7.4% 9/30/22	6.4% 9/30/22
China	0.4% 6/30/22	2.8% 9/30/22	5.3% 8/31/22

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy. The Chinese unemployment rate represents the monthly surveyed urban unemployment rate in China.

Equity environment

— Equity markets saw further losses during Q3, extending the selloff deeper into bear market territory. Emerging market equities (MSCI Emerging Markets -11.6%) experienced the greatest drawdown, on an unhedged currency basis, followed by international developed (MSCI EAFE -9.4%) and domestic equities (S&P 500 -4.9%).

— Many markets now trade at valuation levels below their historical average. According to FactSet, the S&P 500 sat at a forward price/earnings of 15.4 as of September 30th, below the five-year average of 18.6 and 10-year average of 17.1. Interestingly, earnings expectations have been fairly resilient at 7.4% for calendar year 2022 and 7.9% for 2023.

— Investors with unhedged foreign currency exposure have seen extreme losses recently. A U.S. investor with an international developed equity investment

(MSCI EAFE) suffered a loss of -15.7% over the past year from currency movements. Investors in non-US equity (MSCI ACWI ex-US) saw a -12.0% loss. Currency risk is typically the second largest risk in institutional portfolios and is not expected to be compensated over the long term. We continue to believe that more forward-thinking currency solutions can materially improve portfolio outcomes.

— Value stocks underperformed growth stocks mildly during the quarter (Russell 1000 Value -5.6% vs Russell 1000 Growth -3.6%), and small capitalization stocks outperformed large capitalization stocks (Russell 2000 -2.2%, Russell 1000 -4.7%).

— Volatility remained elevated as the Cboe VIX Index rose further from 28.7% to 31.6%. Risk assets sold-off on concerns of Federal Reserve tightening and liquidity being broadly removed from the global financial system.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	(4.9%)		(15.5%)	
U.S. Small Cap (Russell 2000)	(2.2%)		(23.5%)	
U.S. Equity (Russell 3000)	(4.5%)		(17.6%)	
U.S. Large Value (Russell 1000 Value)	(5.6%)		(11.4%)	
US Large Growth (Russell 1000 Growth)	(3.6%)		(22.6%)	
Global Equity (MSCI ACWI)	(6.8%)	(4.6%)	(20.7%)	(15.9%)
International Large (MSCI EAFE)	(9.4%)	(2.8%)	(25.1%)	(9.4%)
China (MSCI China)	(22.5%)	(22.5%)	(35.3%)	(35.3%)
Emerging Markets (MSCI Emerging Markets)	(11.6%)	(8.2%)	(28.1%)	(22.5%)

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/22

Fixed income environment

- The 10-year U.S. Treasury yield rose materially from 2.89% to 3.83% as the Federal Reserve reaffirmed its aggressive stance and markets questioned whether interest rates might be held at higher levels for longer than previously anticipated.
- Credit performance was mixed over Q3 with lower duration exposures faring better than higher duration exposures. Fears of a looming recession remained as the Fed’s 75 basis point rate hikes in July and September reinforced its intention to fight inflation until the “job is done.” Leveraged loans performed the best, returning 1.2%, followed by high yield credit and investment grade credit which returned -0.6% and -4.9%, respectively.
- Default activity continued to pick up in the third quarter with seven companies defaulting on loans and bonds totaling \$16.5 billion. This was the highest quarterly total seen since the second quarter of 2020.

Activity represented a significant jump from the \$1.6 billion and \$10.4 billion shown in Q1 and Q2, respectively.

- The U.S. Yield Curve inverted during the quarter, with the 10-year 2-year spread falling from 0.1% to -0.4%. An inverted curve has historically suggested recession within two years or so.
- Throughout the third quarter, the Federal Reserve continued its path to reduce the balance sheet, beginning in June with the paced redemption of maturing securities. The initial June monthly redemption caps of \$30 billion for Treasuries and \$17.5 billion for agency MBS were increased to \$60 billion and \$35 billion in September. Markets have seemingly digested the reduction well, although the total drawdown has been relatively small so far, around \$200 billion against the peak size of \$8.97 trillion in April 2022.

	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	(4.8%)	(14.6%)
Core Plus Fixed Income (Bloomberg U.S. Universal)	(4.5%)	(14.9%)
U.S. Treasuries (Bloomberg U.S. Treasury)	(4.3%)	(12.9%)
U.S. Long Treasuries (Bloomberg U.S. Treasury)	(9.6%)	(26.7%)
U.S. High Yield (Bloomberg U.S. Corporate HY)	(0.6%)	(14.1%)
Bank Loans (S&P/LSTA Leveraged Loan)	(1.4%)	(2.5%)
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	(4.7%)	(20.6%)
Emerging Market Debt Hard (JPM EMBI Global Diversified)	(4.6%)	(24.3%)
Mortgage-Backed Securities (Bloomberg MBS)	(5.3%)	(9.0%)
T-Bills (FTSE 3-Month T-Bill)	0.5%	0.6%

Source: Bloomberg, as of 9/30/22

Public real assets environment

- REITs - REITs declined 11.6% during the 3rd quarter, reflecting continued global economic risk, an increased possibility of a recession on the horizon, and central banks globally pursuing higher rates in an effort to tame extremely high inflation. Investment activity, has declined due to the the impact of higher interest rates and increased construction costs.
- Listed Infrastructure – Listed infrastructure returned -6.0% YOY, and has recently accelerated underperformance, with QTD returns of -9.6%. This is reflective of continued risk-off sentiment in the space. Increasing rates, and the probability of a recession have weighed on pricing and returns, as has a strong dollar in terms of global returns. Ongoing concerns about gas supplies and energy prices also weighed on performance.
- Commodities – Despite a YOY gain of 10.7%, commodities fell 4.8% in Q3-2022, reflecting the impacts of increased recession risk, global central banks raising interest rates, and a stronger US dollar. Natural gas gained the most while lumber and gasoline futures declined significantly over the quarter.
- TIPS - The Bloomberg U.S. TIPS index returned -5.5% in the most recent quarter and is down 11.6% year-over-year. This is reflective of not only the Federal Reserve’s dramatic rate increases, but their continued messaging that they will continue to fight inflation with the tools at their disposal, and that, with a robust labor market, their key focus is the second part of their mandate, price stability.

	QTD Total Return	1 Year Total Return
REITs (FTSE EPRA/NAREIT Global)	(11.6%)	(22.4%)
Listed Infrastructure (S&P Global Infrastructure)	(9.6%)	(6.0)%
Commodities (Bloomberg Commodity Index)	(4.8%)	10.7%
TIPS (Bloomberg US TIPS)	(5.5%)	(11.6%)

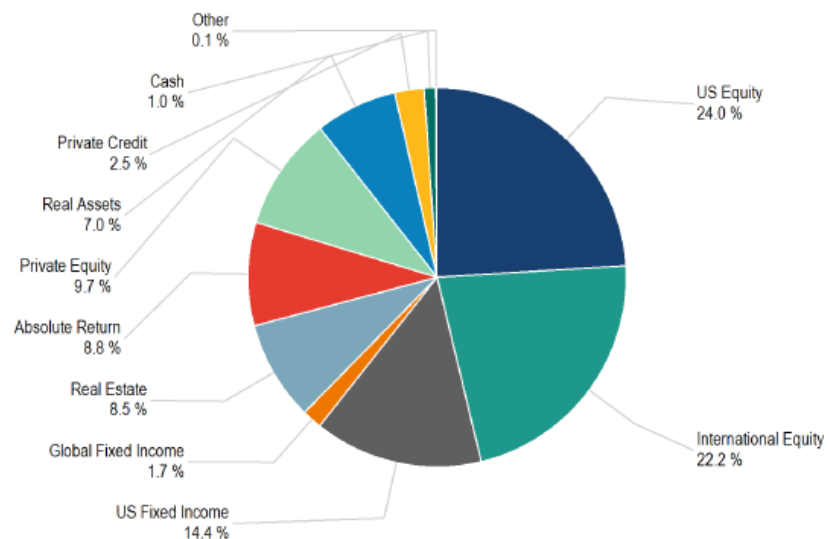
Economic environment updated (Q4-2022)

ECONOMIC INDICATOR	QTD TOTAL RETURN	1 YEAR TOTAL RETURN
Real GDP	2.8% ¹	1.8% ²
Inflation	5.4% ³	7.7% ⁴
Fed Funds Target Range	3.75% – 4.00%	0.00% – 0.25%
10-Year Rate	3.55%	1.45%
Unemployment	3.5% ⁵	4.2%
MARKETS	YTD TOTAL RETURN⁶	
S&P 500	(13.1%)	
Russell 3000	(14.2%)	
MSCI ACWI ex-US	(15.4%)	
Bloomberg US Aggregate	(12.6%)	
REITS	(21.7%)	
Commodities	27.7%	

1 – Annualized, Advance Estimate for Q4-2022 5 - Estimated
 2 – Annualized, Estimate for Q4-2021 – Q4-2022 6 – As of 11/30/22
 3 - Annualized, Advance Estimate for Q4-2022
 4 – Annualized, Estimate YOY

Total Fund review

Asset allocation



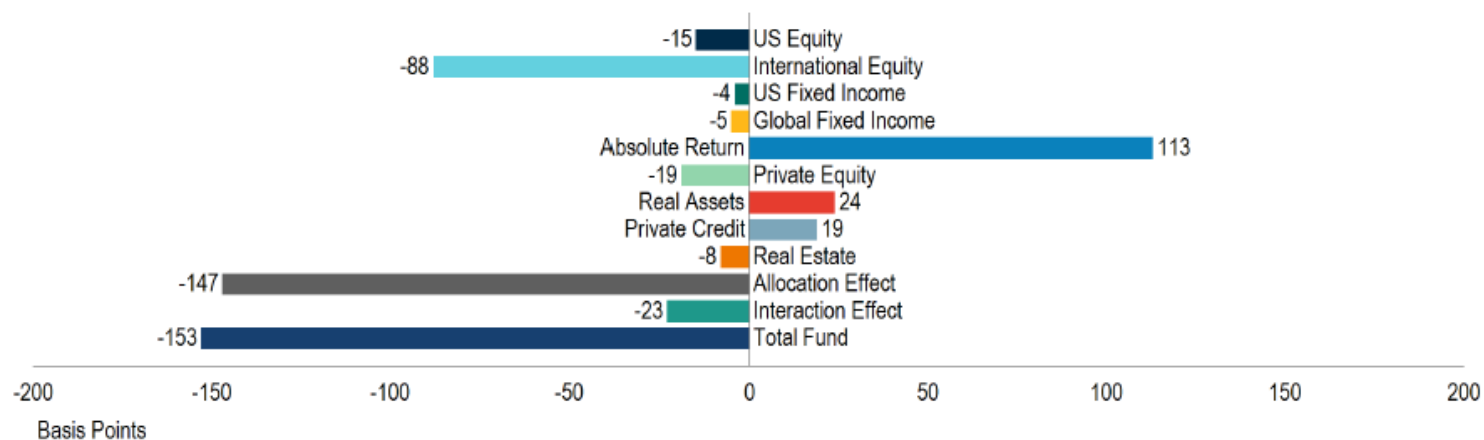
Public markets comprise 78% of ACERA's assets

Majority of public markets assets are invested in equities (54%)

	Current Balance (\$)	Current Allocation (%)	Policy (%)	Difference (%)	Within IPS Range?
US Equity	2,351,095,125	24.0	24.0	0.0	Yes
International Equity	2,176,731,971	22.2	24.0	-1.8	Yes
US Fixed Income	1,406,849,406	14.4	12.0	2.4	Yes
Global Fixed Income	165,167,013	1.7	2.0	-0.3	Yes
Real Estate	837,238,409	8.5	9.0	-0.5	Yes
Absolute Return	858,324,394	8.8	8.0	0.8	Yes
Private Equity	950,964,884	9.7	11.0	-1.3	Yes
Real Assets	690,435,112	7.0	6.0	1.0	Yes
Private Credit	243,538,139	2.5	4.0	-1.5	Yes
Cash	102,167,050	1.0	0.0	1.0	Yes
Other	11,142,995	0.1	0.0	0.1	Yes
Total	9,793,654,498	100.0	100.0		

Total Fund attribution

One Year as of 9/30/22



- Main source of value-add was Absolute Return
- Selection effect in International Equity was material detractor

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
US Equity	-18.22%	-17.63%	-0.59%	-0.15%	-0.21%	-0.02%	-0.38%
International Equity	-28.50%	-25.34%	-3.16%	-0.88%	-0.12%	-0.06%	-1.07%
US Fixed Income	-14.93%	-14.60%	-0.33%	-0.04%	-0.17%	-0.01%	-0.23%
Global Fixed Income	-24.72%	-22.14%	-2.57%	-0.05%	0.01%	0.01%	-0.03%
Absolute Return	9.82%	-6.35%	16.17%	1.13%	0.03%	-0.13%	1.04%
Private Equity	1.04%	3.47%	-2.43%	-0.19%	-0.34%	-0.01%	-0.54%
Real Assets	5.70%	0.12%	5.58%	0.24%	0.05%	0.06%	0.35%
Private Credit	4.64%	-0.82%	5.46%	0.19%	-0.17%	-0.09%	-0.07%
Real Estate	20.98%	22.09%	-1.11%	-0.08%	-0.54%	0.03%	-0.59%
Total	-12.78%	-11.25%	-1.53%	0.17%	-1.47%	-0.23%	-1.53%

Total Fund and composite performance

	Market Value (\$)	% of Portfolio	3 Mo (%)	6 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund	9,793,654,498	100.00	-4.97	-13.37	-12.85	5.24	5.47	7.49	7.60	9.18	Sep-85
<i>Policy Index</i>			-4.90	-13.65	-11.41	5.49	5.65	7.87	7.92	9.47	Sep-85
Total Fund w/o Overlay	9,782,511,503	99.89	-4.89	-13.23	-12.68	5.31	5.51	7.52	7.62	9.18	Sep-85
US Equity	2,351,095,125	24.01	-4.30	-20.36	-18.22	7.60	8.85	10.85	11.48	11.27	Sep-85
<i>Russell 3000</i>			-4.46	-20.42	-17.63	7.70	8.62	10.90	11.38	10.84	Sep-85
International Equity	2,176,731,971	22.23	-10.80	-22.37	-28.50	-0.88	0.11	4.63	4.48	7.18	Dec-90
<i>MSCI ACWI ex USA IMI Gross</i>			-9.58	-22.33	-25.34	-0.83	-0.32	3.86	3.66	5.46	Dec-90
Total Fixed Income	1,572,016,419	16.05	-4.80	-10.77	-16.04	-1.73	0.29	2.08	2.26	6.53	Sep-86
<i>Fixed Income Blend</i>			-5.14	-11.21	-16.72	-3.97	-0.80	0.47	0.61	5.54	Sep-86
US Fixed Income	1,406,849,406	14.36	-4.29	-9.39	-14.93	-1.67	0.82	2.11	2.65	6.48	Sep-86
<i>Bloomberg US Aggregate TR</i>			-4.75	-9.22	-14.60	-3.26	-0.27	0.54	0.89	5.40	Sep-86
Global Fixed Income	165,167,013	1.69	-8.93	-21.38	-24.72	-4.97	-3.15	0.58	0.11	5.30	Nov-01
<i>FTSE WGBI TR</i>			-7.61	-15.84	-22.14	-7.03	-3.07	-1.29	-1.76	2.81	Nov-01

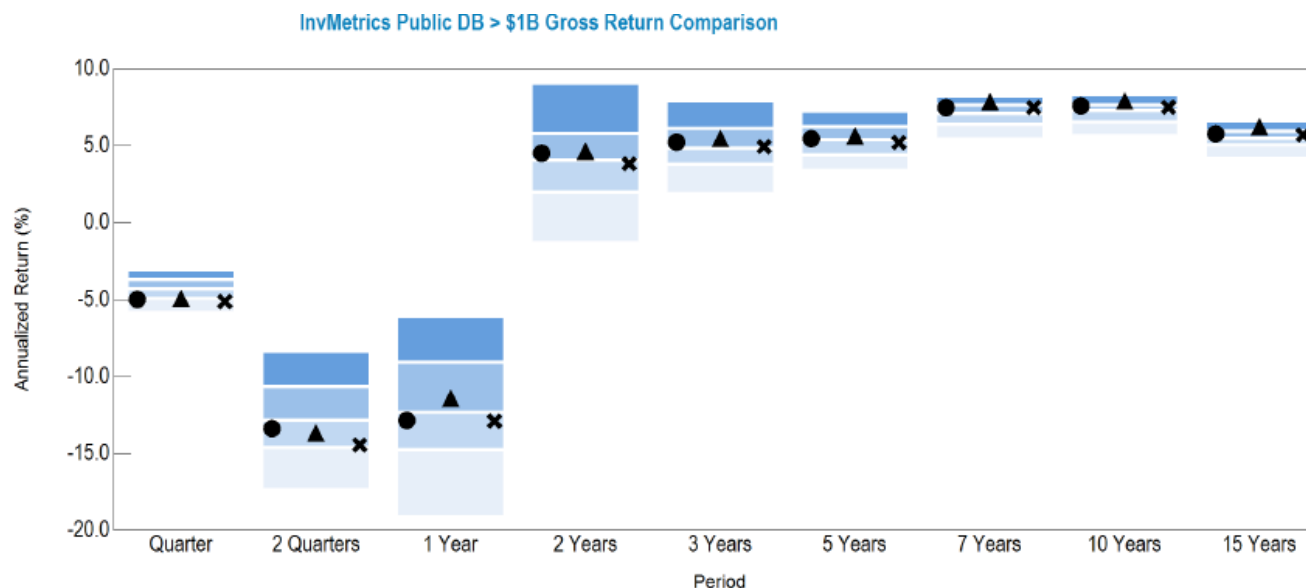
- ACERA has added value in fixed income markets over both short term (i.e., < 3yrs) and longer term periods
- In short term, international public equities have lagged respective benchmarks, but compare favorably in longer term periods

Total Fund and composite performance (continued)

	Market Value (\$)	% of Portfolio	3 Mo (%)	6 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Absolute Return	858,324,394	8.76	2.73	4.82	9.82	6.69	4.15	4.02	4.77	4.15	Sep-11
<i>Absolute Return Blend</i>			-0.17	-4.10	-6.35	4.21	3.11	3.57	3.75	3.80	Sep-11
Private Equity	950,964,884	9.71	-5.89	-6.62	1.04	18.40	17.13	14.93	16.31	7.10	Nov-08
<i>Private Equity Blend</i>			-5.46	-6.89	3.47	20.52	18.17	18.61	17.61	18.09	Nov-08
Real Assets	690,435,112	7.05	-4.37	-10.15	5.70	7.99	3.61	2.61	-2.30	-1.74	Sep-11
<i>Real Asset Blend</i>			-6.55	-15.95	0.12	5.48	4.44	5.87	5.38	5.35	Sep-11
Private Credit	243,538,139	2.49	1.91	1.92	4.64	--	--	--	--	5.71	Oct-19
<i>S&P/LSTA Leveraged Loan Index +1.75%</i>			1.80	-2.30	-0.82	4.00	4.78	5.47	5.34	4.22	Oct-19
Cash	102,167,050	1.04	0.24	0.35	0.35	0.60	1.01	0.92	0.66	2.94	Sep-85
<i>91 Day T-Bills</i>			0.46	0.57	0.62	0.49	1.08	0.90	0.64	3.03	Sep-85
Real Estate	837,238,409	8.55	1.22	5.57	20.98	12.52	10.59	10.48	11.69	7.54	Mar-86
<i>Real Estate Blend</i>			0.52	5.32	22.09	12.37	10.24	9.85	10.91	8.24	Mar-86
Overlay	11,142,995	0.11									

- ACERA has added value in private markets and Absolute Return over last 10 years and in shorter term periods as well.
- Real Assets have lagged their benchmark since inception, but performance has rebounded in more recent time periods

Peer universe comparison

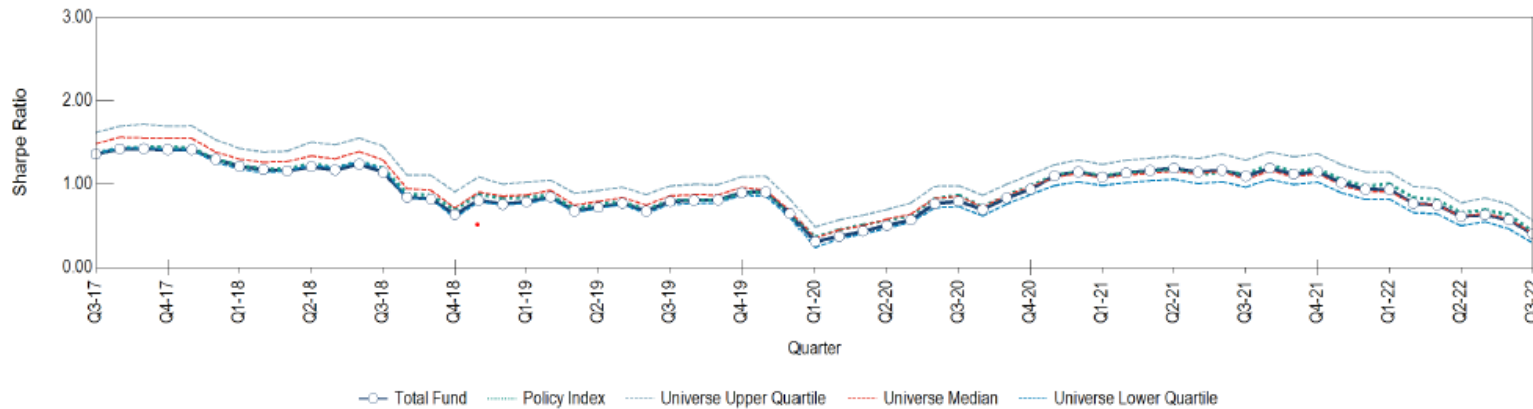


	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years	15 Years
5th Percentile	-3.09	-8.37	-6.11	9.04	7.89	7.24	8.22	8.31	6.62
25th Percentile	-3.67	-10.63	-9.05	5.82	6.17	6.27	7.70	7.69	5.98
Median	-4.28	-12.80	-12.27	4.08	4.86	5.41	7.11	7.32	5.50
75th Percentile	-4.90	-14.59	-14.75	2.01	3.84	4.44	6.41	6.57	5.10
95th Percentile	-5.82	-17.33	-19.11	-1.29	1.91	3.44	5.46	5.69	4.21
# of Portfolios	75	75	75	74	73	73	72	69	65
● Total Fund	-4.97 (79)	-13.37 (56)	-12.85 (54)	4.53 (44)	5.24 (42)	5.47 (47)	7.49 (35)	7.60 (32)	5.78 (31)
▲ Policy Index	-4.90 (76)	-13.65 (62)	-11.41 (46)	4.66 (42)	5.49 (39)	5.65 (40)	7.87 (19)	7.92 (11)	6.22 (10)
✕ Allocation Index	-5.11 (81)	-14.44 (74)	-12.89 (55)	3.84 (52)	4.95 (48)	5.21 (57)	7.49 (35)	7.51 (38)	5.70 (38)

- In most periods, ACERA compares well vs. peers (i.e., above median)

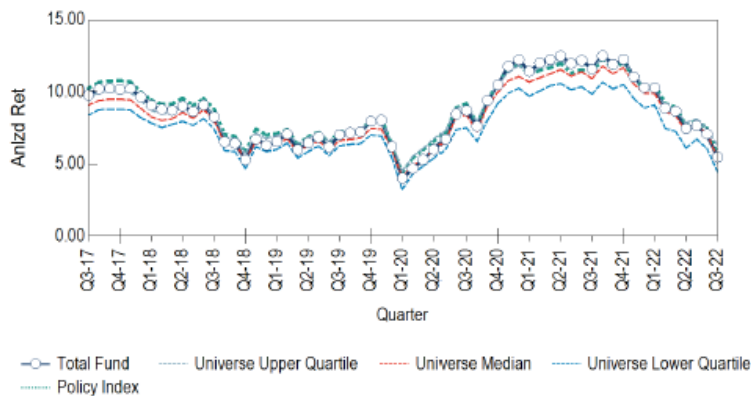
Risk-adjusted trend vs. peers

Rolling 5 Year Sharpe Ratio

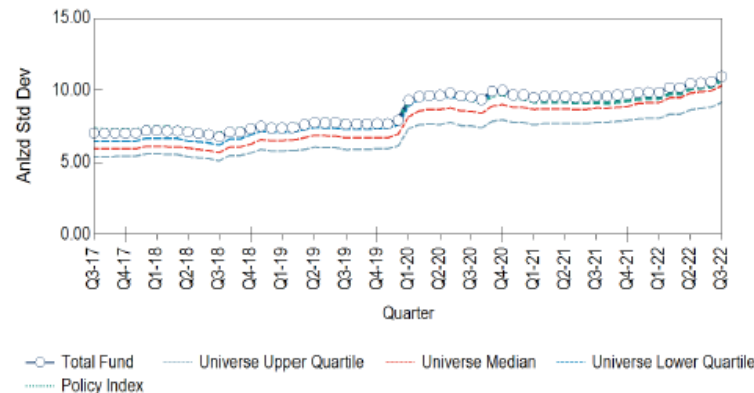


- ACERA's risk-adjusted return ratio (Sharpe) has been consistently at peer median.

Rolling 5 Year Annualized Return (%)



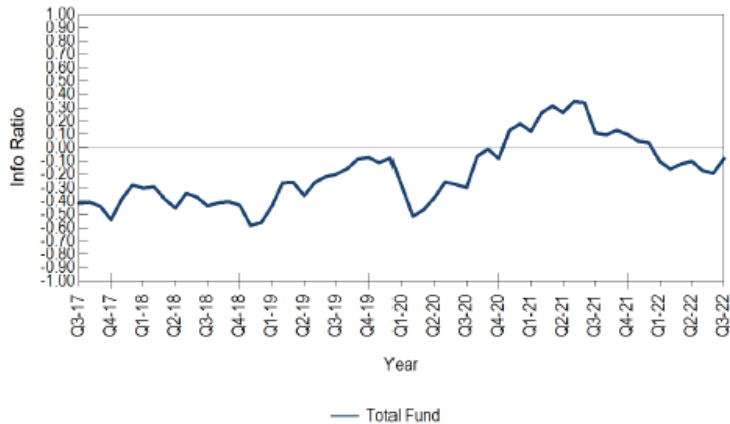
Rolling 5 Year Annualized Standard Deviation



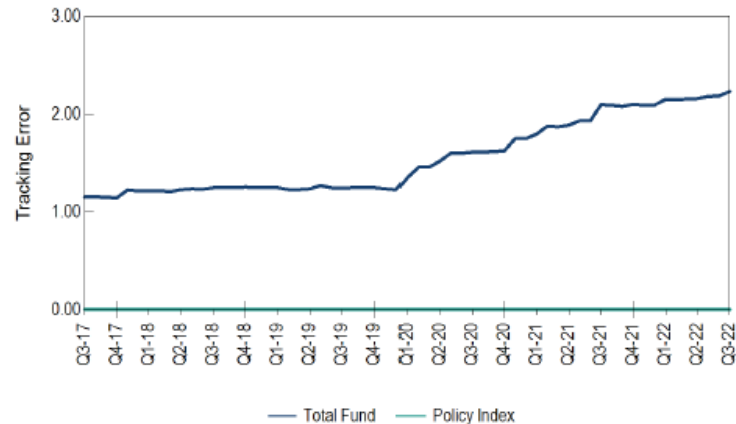
- Long-term returns have ranked in top quartile
- However, total fund volatility has also been higher vs. peers

Trend in risk-adjusted metrics

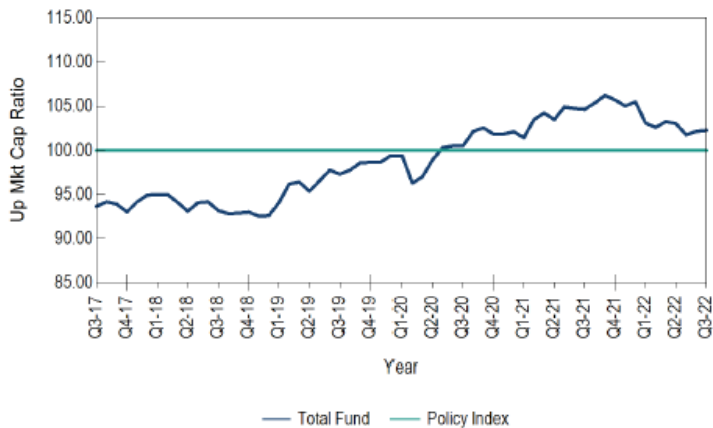
Rolling 5 Year Information Ratio



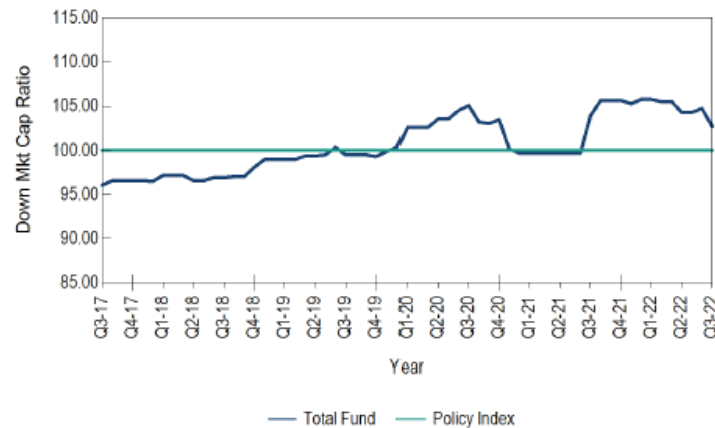
Rolling 5 Year Tracking Error



Rolling 5 Year Up Market Capture Ratio (%)



Rolling 5 Year Down Market Capture Ratio (%)



- Risk-adjusted active returns have been increasing over last several years at modestly higher levels of active risk, trailing off slightly after Q2-21.
- Up market capture has been mixed vs. down market capture.

Watch List

Manager	Date on Watchlist	Reason	Product Inception Date
Mondrian	9/30/22	Since inception return of 4.77% vs. benchmark (MSCI ACWI ex-US) return of 5.37% and MSCI ex-US Value return of 4.98%; 10-year gross-off-fees return (2.53%) places Mondrian in 86 th percentile of ACWI ex-US Large Cap Value Equity Universe. Firm has consistently been in bottom 2 deciles of that universe over cumulative time series.	November, 2003
Templeton	9/30/22	Since inception return of 2.69% vs benchmark (MSCI ACWI ex-US Small Cap) return of 2.93% and MSCI ACWI ex-US Value return of 2.74%.; 10-year return gross-of fees return (4.13%) places Templeton in the 97 th percentile of ACWI ex US Small Cap managers.	April, 2011

- Verus and staff recommend placement of Mondrian and Franklin Templeton on watchlist per the following criteria from the Board’s General Investment Guidelines, Policies, and Procedures: *Insufficient net of fee, longer-term returns (i.e. greater than 5-years) versus the benchmark and/or peer group*

Appendix

Glossary

Active Return (aka Excess Return) – The difference between the active manager’s return and the return on the manager’s benchmark index.

Active Risk (aka Tracking Error) – the volatility (standard deviation) of active return.

Attribution – A process by which sources of excess/active return (e.g. active decisions by investment management professionals) are decomposed into the following effects:

- **Allocation** – The amount of excess returns attributable to allocation decisions amongst various asset classes.
- **Selection** – The amount of excess return attributable to selection of individual investments/managers within asset classes.
- **Interaction** – The amount of excess return attributable to both allocation and selection decisions acting in concert with one another.

Sharpe Ratio - A measure of that explains the return of an investment compared to its risk. The Sharpe Ratio indicates excess portfolio return for each unit of risk over the risk free rate (usually short-term Treasuries or LIBOR) per unit of volatility. The higher the Sharpe Ratio, the greater its risk-adjusted return.

Standard Deviation - A measure of volatility, or risk. Measures risk by indicating how far from the average, or mean, return one is likely to fall in any given time period. The rules of statistics dictate that you will fall within 1 standard deviation of the mean 2/3 of the time and within 2 standard deviations 95% of the time. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Time Weighted Return – A measure of the compound rate of growth in a portfolio, which eliminates the distorting effects of growth rates created by inflows and outflows of money.

Glossary (cont.)

Upside Market Capture – A measure of the manager’s performance in up markets relative to the market itself. A value of 110 suggests the manager performs ten percent better than the market when the market is up during the selected time period. The return for the market for each quarter is considered an up market if it is greater than or equal to zero. The Upside Capture Ratio is calculated by dividing the return of the manager during the up market periods by the return of the market for the same period. Generally, the higher the UMC Ratio, the better (If the manager’s UMC Ratio is negative, it means that during that specific time period, the manager’s return for that period was actually negative).¹

Downside Market Capture - A measure of the manager’s performance in down markets relative to the market itself. A value of 90 suggests the manager’s loss is only nine tenths of the market’s loss during the selected time period. A market is considered down if the return for the benchmark is less than zero. The Downside Capture Ratio is calculated by dividing the return of the manager during the down market periods by the return of the market during the same periods. Generally, the lower the DMC Ratio, the better (If the manager’s DMC Ratio is negative, it means that during that specific time period, the manager’s return for that period was actually positive).¹

Glossary (cont.)

Information Ratio – the ratio of active return to active risk, i.e., how much excess return an active manager delivers per unit of tracking error. A common basis of comparison in manager searches.

Active Return = $(R_P - R_B)$  The return difference between the portfolio return and the benchmark return

Active Risk = $\sigma(R_P - R_B)$  The volatility of the Active Return

$$\text{Information Ratio} = \frac{\text{Active Return}}{\text{Active Risk}}$$

Rearranging the formula...

$$(\text{Information Ratio}) \times (\text{Active Risk}) = \text{Active Return}$$



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: SEPTEMBER 30, 2022

Investment Performance Review for

Alameda County Employees' Retirement Association

Non-Confidential

U.S. economics summary

- U.S. real GDP fell in Q2 for a second consecutive quarter, down -0.6% annualized (+1.6% over the past full year). Forecasts suggest a potential growth turnaround in the third quarter; the Atlanta Fed GDPNow forecast indicated a growth rate of 2.8% and economists expected 0.9% as of October 14th.
- U.S. core CPI remained elevated in September, rising 0.6% during the month to a new 40-year high of 6.6% year-over-year. Headline inflation continued to show another more moderate monthly print of 0.4% but remained high at 8.2% year-over-year.
- Unemployment fell slightly from 3.6% in June to 3.5% in September, which did not reflect an increase in employment but rather the departure of some Americans from the job market altogether. Weekly initial jobless claims—a measure of the number of workers who filed for unemployment during any

given week—moved higher during Q2 to 244,000 in early July but has since fallen to 193,000 in late September.

- The U.S. dollar has appreciated roughly 15% relative to major currencies. A stronger dollar may result in slowing U.S. exports as domestic goods become more expensive to foreign buyers, and lower inflation as American businesses and households are able to purchase foreign goods at cheaper prices.
- Coverage of COVID-19 has tended to focus on the health impacts in a binary way: either the infected individual recovers (and lives) or does not recover (and is deceased). There is a growing body of research by medical experts that suggests a significant portion of survivors face longer-term, often severe, health problems. These issues are known as “long COVID” and may be the primary cause for a severe shrinking of the U.S. labor force.

	Most Recent	12 Months Prior
Real GDP (YoY)	1.6% 9/30/22	12.5% 6/30/21
Inflation (CPI YoY, Core)	6.6% 9/30/22	4.0% 9/30/21
Inflation (CPI YoY, Headline)	8.2% 9/30/22	5.4% 9/30/21
Expected Inflation (5yr-5yr forward)	2.1% 9/30/22	2.2% 9/30/21
Fed Funds Target Range	3.00% – 3.25% 9/30/22	0.00% – 0.25% 9/30/21
10-Year Rate	3.83% 9/30/22	1.49% 9/30/21
U-3 Unemployment	3.5% 9/30/22	4.7% 9/30/21
U-6 Unemployment	6.7% 9/30/22	8.5% 9/30/21

International economics summary

- Economic growth expectations continue to weaken around the world, and recession appears possible in some developed countries. High inflation has placed central banks in a corner, requiring a choice between tightening (lower inflation with possible recession) or accommodation (stronger economic activity with possibly continued high inflation).
- Multi-decade high inflation continues to spread across Europe, as consumer prices in September rose 10% from the prior year. Food and energy were major drivers, although the core inflation number is also elevated at 4.8%. Inflation remains a challenge in Europe and the U.S., as prices have been relatively stable in the Asia-pacific region.
- Unemployment rates have been stable and tight in most markets, though this may now be seen as a problem as central bankers work to slow economies and weaken labor markets in order to fight inflation.
- The Russia Ukraine war may be taking a turn, as Ukraine’s counteroffensive gains steam. In a rare admission, Russia’s Defense Ministry spokesman Igor Konashenkov acknowledged recent defeats: “With numerically superior tank units in the direction of Zolata Balka and Oleksandrivka, the enemy managed to forge deep into our defenses.”
- Still dealing with the highest inflation seen in four-decades, the U.K. economy continues to struggle, especially as the Bank of England tightens economic conditions in the face of a recession. The situation worsened following newly elected Prime Minister Liz Truss’ new growth plan announcement, which introduced a large tax cut initiatives without additional funding sources secured.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	1.8% 6/30/22	8.2% 9/30/22	3.5% 9/30/22
Eurozone	4.1% 6/30/22	10.0% 9/30/22	6.6% 8/31/22
Japan	1.6% 6/30/22	2.8% 9/30/22	2.5% 8/31/22
BRICS Nations	1.9% 6/30/22	4.5% 9/30/22	5.2% 12/31/21
Brazil	3.2% 6/30/22	7.2% 9/30/22	8.9% 8/31/22
Russia	(4.1)% 6/30/22	13.7% 9/30/22	3.8% 8/31/22
India	13.5% 6/30/22	7.4% 9/30/22	6.4% 9/30/22
China	0.4% 6/30/22	2.8% 9/30/22	5.3% 8/31/22

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy. The Chinese unemployment rate represents the monthly surveyed urban unemployment rate in China.

Equity environment

— Equity markets saw further losses during Q3, extending the selloff deeper into bear market territory. Emerging market equities (MSCI Emerging Markets -11.6%) experienced the greatest drawdown, on an unhedged currency basis, followed by international developed (MSCI EAFE -9.4%) and domestic equities (S&P 500 -4.9%).

— Many markets now trade at valuation levels below their historical average. According to FactSet, the S&P 500 sat at a forward price/earnings of 15.4 as of September 30th, below the five-year average of 18.6 and 10-year average of 17.1. Interestingly, earnings expectations have been fairly resilient at 7.4% for calendar year 2022 and 7.9% for 2023.

— Investors with unhedged foreign currency exposure have seen extreme losses recently. A U.S. investor with an international developed equity investment

(MSCI EAFE) suffered a loss of -15.7% over the past year from currency movements. Investors in non-US equity (MSCI ACWI ex-US) saw a -12.0% loss. Currency risk is typically the second largest risk in institutional portfolios and is not expected to be compensated over the long term. We continue to believe that more forward-thinking currency solutions can materially improve portfolio outcomes.

— Value stocks underperformed growth stocks mildly during the quarter (Russell 1000 Value -5.6% vs Russell 1000 Growth -3.6%), and small capitalization stocks outperformed large capitalization stocks (Russell 2000 -2.2%, Russell 1000 -4.7%).

— Volatility remained elevated as the Cboe VIX Index rose further from 28.7% to 31.6%. Risk assets sold-off on concerns of Federal Reserve tightening and liquidity being broadly removed from the global financial system.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	(4.9%)		(15.5%)	
U.S. Small Cap (Russell 2000)	(2.2%)		(23.5%)	
U.S. Equity (Russell 3000)	(4.5%)		(17.6%)	
U.S. Large Value (Russell 1000 Value)	(5.6%)		(11.4%)	
US Large Growth (Russell 1000 Growth)	(3.6%)		(22.6%)	
Global Equity (MSCI ACWI)	(6.8%)	(4.6%)	(20.7%)	(15.9%)
International Large (MSCI EAFE)	(9.4%)	(2.8%)	(25.1%)	(9.4%)
China (MSCI China)	(22.5%)	(22.5%)	(35.3%)	(35.3%)
Emerging Markets (MSCI Emerging Markets)	(11.6%)	(8.2%)	(28.1%)	(22.5%)

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/22

Fixed income environment

- The 10-year U.S. Treasury yield rose materially from 2.89% to 3.83% as the Federal Reserve reaffirmed its aggressive stance and markets questioned whether interest rates might be held at higher levels for longer than previously anticipated.
- Credit performance was mixed over Q3 with lower duration exposures faring better than higher duration exposures. Fears of a looming recession remained as the Fed’s 75 basis point rate hikes in July and September reinforced its intention to fight inflation until the “job is done.” Leveraged loans performed the best, returning 1.2%, followed by high yield credit and investment grade credit which returned -0.6% and -4.9%, respectively.
- Default activity continued to pick up in the third quarter with seven companies defaulting on loans and bonds totaling \$16.5 billion. This was the highest quarterly total seen since the second quarter of 2020.

Activity represented a significant jump from the \$1.6 billion and \$10.4 billion shown in Q1 and Q2, respectively.

- The U.S. Yield Curve inverted during the quarter, with the 10-year 2-year spread falling from 0.1% to -0.4%. An inverted curve has historically suggested recession within two years or so.
- Throughout the third quarter, the Federal Reserve continued its path to reduce the balance sheet, beginning in June with the paced redemption of maturing securities. The initial June monthly redemption caps of \$30 billion for Treasuries and \$17.5 billion for agency MBS were increased to \$60 billion and \$35 billion in September. Markets have seemingly digested the reduction well, although the total drawdown has been relatively small so far, around \$200 billion against the peak size of \$8.97 trillion in April 2022.

	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	(4.8%)	(14.6%)
Core Plus Fixed Income (Bloomberg U.S. Universal)	(4.5%)	(14.9%)
U.S. Treasuries (Bloomberg U.S. Treasury)	(4.3%)	(12.9%)
U.S. Long Treasuries (Bloomberg U.S. Treasury)	(9.6%)	(26.7%)
U.S. High Yield (Bloomberg U.S. Corporate HY)	(0.6%)	(14.1%)
Bank Loans (S&P/LSTA Leveraged Loan)	(1.4%)	(2.5%)
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	(4.7%)	(20.6%)
Emerging Market Debt Hard (JPM EMBI Global Diversified)	(4.6%)	(24.3%)
Mortgage-Backed Securities (Bloomberg MBS)	(5.3%)	(9.0%)
T-Bills (FTSE 3-Month T-Bill)	0.5%	0.6%

Source: Bloomberg, as of 9/30/22

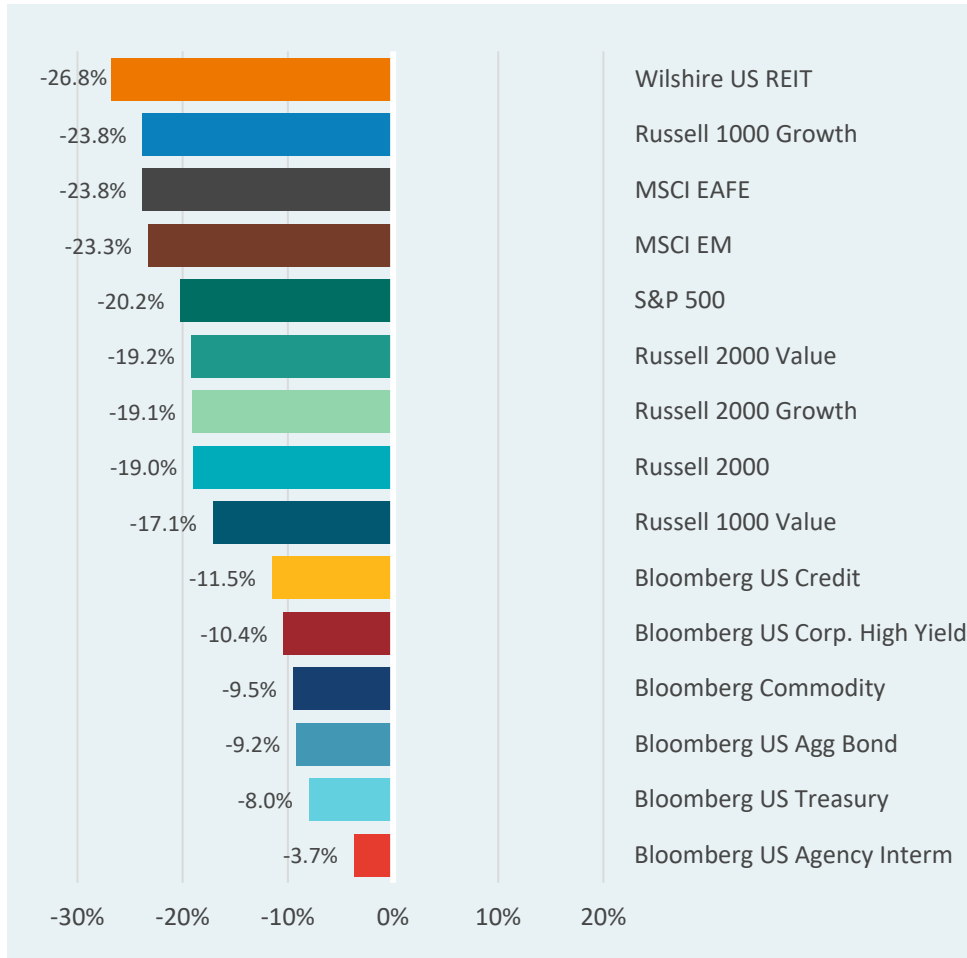
Public real assets environment

- REITs - REITs declined 11.6% during the 3rd quarter, reflecting continued global economic risk, an increased possibility of a recession on the horizon, and central banks globally pursuing higher rates in an effort to tame extremely high inflation. Investment activity, has declined due to the the impact of higher interest rates and increased construction costs.
- Listed Infrastructure – Listed infrastructure returned -6.0% YOY, and has recently accelerated underperformance, with QTD returns of -9.6%. This is reflective of continued risk-off sentiment in the space. Increasing rates, and the probability of a recession have weighed on pricing and returns, as has a strong dollar in terms of global returns. Ongoing concerns about gas supplies and energy prices also weighed on performance.
- Commodities – Despite a YOY gain of 10.7%, commodities fell 4.8% in Q3-2022, reflecting the impacts of increased recession risk, global central banks raising interest rates, and a stronger US dollar. Natural gas gained the most while lumber and gasoline futures declined significantly over the quarter.
- TIPS - The Bloomberg U.S. TIPS index returned -5.5% in the most recent quarter and is down 11.6% year-over-year. This is reflective of not only the Federal Reserve’s dramatic rate increases, but their continued messaging that they will continue to fight inflation with the tools at their disposal, and that, with a robust labor market, their key focus is the second part of their mandate, price stability.

	QTD Total Return	1 Year Total Return
REITs (FTSE EPRA/NAREIT Global)	(11.6%)	(22.4%)
Listed Infrastructure (S&P Global Infrastructure)	(9.6%)	(6.0)%
Commodities (Bloomberg Commodity Index)	(4.8%)	10.7%
TIPS (Bloomberg US TIPS)	(5.5%)	(11.6%)

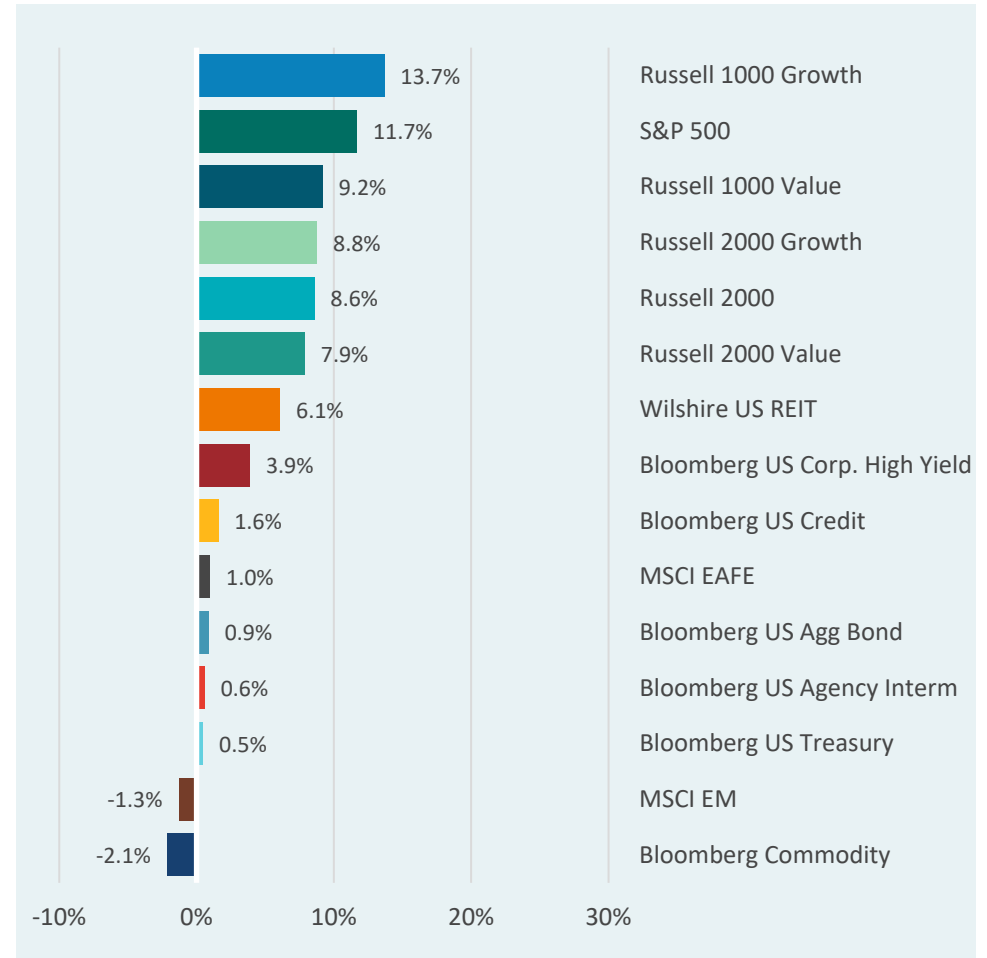
Major asset class returns

SIX MONTHS ENDING SEPTEMBER



Source: Bloomberg, as of 9/30/22

TEN YEARS ENDING SEPTEMBER



Source: Bloomberg, as of 9/30/22. Annualized returns

- The composite fund returned -5.0% for the third quarter of 2022 and ranked in the 79th percentile among public funds greater than \$1 billion (median of -4.3%). The fund lagged its policy index return of -4.9% during this time period. Longer term, the five (5.3%), and ten-year (7.3%) returns ranked in the 54th and 48th percentile of large public plans respectively.
- Third quarter results were enhanced by the following factors:
 1. The absolute return portfolio produced strong diversified alpha during the quarter gaining 2.7% as a composite versus -0.2% for the HFRI FoF Composite.
 2. Loomis Sayles lost -3.3% but beat the Bloomberg US Credit BAA by 160 bps. Loomis maintained a shorter-than-benchmark duration throughout the quarter which boosted performance as yields rose. High yield credit and the securitized allocation also helped produce excess returns for the quarter.
- Third quarter results were hindered by the following factors:
 1. TCW trailed the Russell 1000 Growth for a second quarter in a row losing -6.4% versus -3.6% for the index. Relative underperformance was primarily due to negative security selection within the information technology, consumer discretionary, and healthcare sectors.
 2. Mondrian lost -14.2% trailing the MSCI ACWI ex US Value (-10.3%) and ranked in the bottom decile of its peers. An overweight to China hurt relative returns as Chinese markets fell by over 22% during the quarter on lockdown and rising interest rate concerns.

Total Fund
 Manager Allocation Analysis (One Quarter)

Period Ending: September 30, 2022

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Absolute Return ¹	\$767,404,956	\$69,831,882	\$21,087,557	\$858,324,394
Alta	\$5,249	\$0	\$0	\$5,249
Applied Research Investments	\$23,700	\$0	-\$1,033	\$22,667
AQR	\$1,338,587	\$0	-\$76,329	\$1,262,258
Arga Investment Management	\$25,763,311	\$0	-\$2,774,481	\$22,988,831
Aristotle	\$140,312,108	-\$148,258	-\$7,383,876	\$132,779,973
Baird Advisors	\$1,208,410,255	-\$205,703	-\$54,932,603	\$1,153,271,949
Bivium Cash	\$240	\$0	\$1	\$241
BlackRock MSCI World ex-US Index Fd A	\$648,547,866	\$0	-\$58,992,278	\$589,555,588
BlackRock Russell 1000 Index Fund	\$2,027,496,480	-\$80,000,000	-\$85,041,192	\$1,862,455,289
Brandywine	\$181,514,668	-\$145,339	-\$16,202,315	\$165,167,013
Capital Group	\$540,783,945	-\$377,254	-\$52,026,429	\$488,380,262
Cash Account	\$55,581,463	\$46,354,372	\$231,215	\$102,167,050
Denali Advisors	\$23,907,879	\$0	-\$2,741,482	\$21,166,397
Dundas Partners	\$24,359,787	\$0	-\$1,975,415	\$22,384,373
Global Alpha Capital Management	\$9,463,869	\$0	-\$1,021,185	\$8,442,684
Huber	\$1,651	\$0	\$0	\$1,651
Kennedy	\$139,448,096	-\$305,975	-\$5,700,290	\$133,441,831
Loomis Sayles	\$332,135,533	-\$70,296,324	-\$8,261,751	\$253,577,457
Mondrian	\$653,520,865	-\$620,538	-\$92,263,353	\$560,636,974
Newton Emerging Mkt	\$232,705,104	\$0	-\$19,684,214	\$213,020,890
Next Century-SCG	\$16	-\$16	\$0	\$0
OakBrook	\$87	\$27	\$1	\$115
Overlay	\$11,406,799	\$10,000,000	-\$10,263,804	\$11,142,995
Promethos Capital	\$20,705,427	\$0	-\$1,792,063	\$18,913,364
Private Credit ¹	\$233,317,144	\$5,638,113	\$4,582,882	\$243,538,139
Private Equity	\$999,013,294	\$10,747,700	-\$58,796,110	\$950,964,884
Radin Capital Partners	\$9,522,347	\$0	-\$1,317,244	\$8,205,103
Redwood	\$5,530,229	\$0	-\$458,848	\$5,071,382
RVX Asset Management	\$6,100,099	\$0	-\$631,083	\$5,469,016
Real Assets ¹	\$768,925,947	-\$47,700,389	-\$30,790,447	\$690,435,112
Real Estate	\$833,543,670	-\$6,457,065	\$10,151,803	\$837,238,409
Sec. Lending	\$0	-\$159,790	\$159,790	\$0
TCW	\$115,174,734	-\$142,133	-\$7,229,560	\$107,803,041
Templeton	\$239,057,307	\$0	-\$27,858,201	\$211,199,105
Intl Transition	\$13,898	\$0	-\$820	\$13,078
William Blair Small Cap Growth	\$113,841,863	-\$246,792	\$1,012,665	\$114,607,736
Total	\$10,368,878,473	-\$64,233,482	-\$510,990,491	\$9,793,654,498

¹ Preliminary ending market value

Bivium

Manager Allocation Analysis (One Quarter)

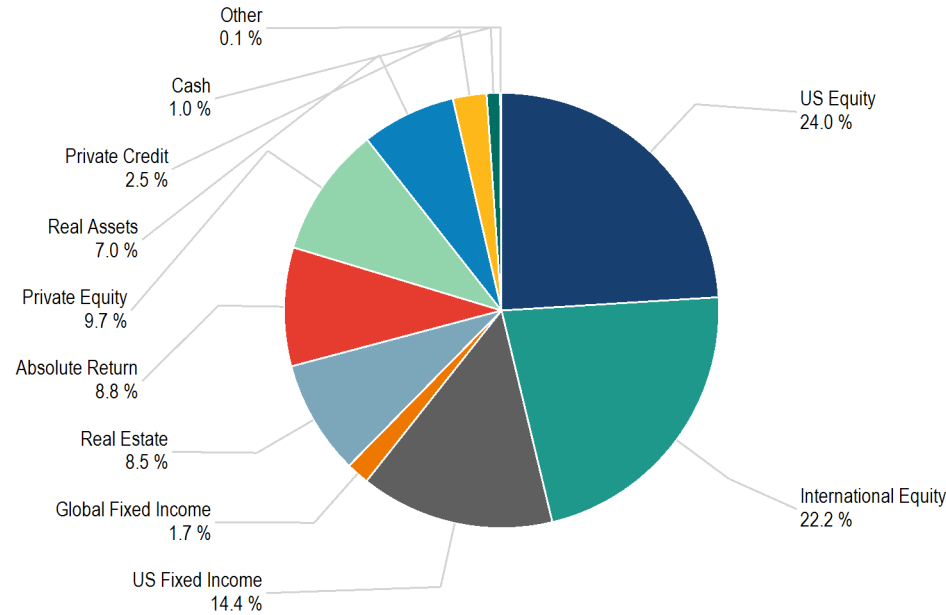
Period Ending: September 30, 2022

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Alta	\$5,249	\$0	\$0	\$5,249
Bivium Cash	\$240	\$0	\$1	\$241
Huber	\$1,651	\$0	\$0	\$1,651
OakBrook	\$87	\$27	\$1	\$115
Total	\$7,227	\$27	\$2	\$7,256

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Applied Research Investments	\$23,700	\$0	-\$1,033	\$22,667
Arga Investment Management	\$25,763,311	\$0	-\$2,774,481	\$22,988,831
Denali Advisors	\$23,907,879	\$0	-\$2,741,482	\$21,166,397
Dundas Partners	\$24,359,787	\$0	-\$1,975,415	\$22,384,373
Global Alpha Capital Management	\$9,463,869	\$0	-\$1,021,185	\$8,442,684
Promethos Capital	\$20,705,427	\$0	-\$1,792,063	\$18,913,364
Radin Capital Partners	\$9,522,347	\$0	-\$1,317,244	\$8,205,103
Redwood	\$5,530,229	\$0	-\$458,848	\$5,071,382
RVX Asset Management	\$6,100,099	\$0	-\$631,083	\$5,469,016
Total	\$125,376,650	\$0	-\$12,712,833	\$112,663,817

Total Fund
Asset Allocation Compliance

Period Ending: September 30, 2022



	Current Balance (\$)	Current Allocation (%)	Policy (%)	Difference (%)	Within IPS Range?
US Equity	2,351,095,125	24.0	24.0	0.0	Yes
International Equity	2,176,731,971	22.2	24.0	-1.8	Yes
US Fixed Income	1,406,849,406	14.4	12.0	2.4	Yes
Global Fixed Income	165,167,013	1.7	2.0	-0.3	Yes
Real Estate	837,238,409	8.5	9.0	-0.5	Yes
Absolute Return	858,324,394	8.8	8.0	0.8	Yes
Private Equity	950,964,884	9.7	11.0	-1.3	Yes
Real Assets	690,435,112	7.0	6.0	1.0	Yes
Private Credit	243,538,139	2.5	4.0	-1.5	Yes
Cash	102,167,050	1.0	0.0	1.0	Yes
Other	11,142,995	0.1	0.0	0.1	Yes
Total	9,793,654,498	100.0	100.0		

Total Fund Performance Summary

Period Ending: September 30, 2022

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Fund (Gross)	-4.97	79	-13.37	56	-12.85	54	5.24	42	5.47	47	7.49	35	7.60	32	9.18	Sep-85
Total Fund (Net)	-5.01	79	-13.43	57	-12.98	55	5.08	45	5.29	54	7.28	43	7.34	48	8.98	
<i>Policy Index¹</i>	-4.90	76	-13.65	62	-11.41	46	5.49	39	5.65	40	7.87	19	7.92	11	9.47	Sep-85
<i>Allocation Index</i>	-5.11	81	-14.44	74	-12.89	55	4.95	48	5.21	57	7.49	35	7.51	38	--	Sep-85
<i>InvMetrics Public DB > \$1B Gross Median</i>	-4.28		-12.80		-12.27		4.86		5.41		7.11		7.32		8.13	Sep-85
Total Fund w/o Overlay (Gross)	-4.89	--	-13.23	--	-12.68	--	5.31	--	5.51	--	7.52	--	7.62	--	9.18	Sep-85
Total Fund w/o Overlay (Net)	-4.93	--	-13.29	--	-12.81	--	5.15	--	5.34	--	7.31	--	7.36	--	8.99	
US Equity (Gross)	-4.30	33	-20.36	73	-18.22	69	7.60	36	8.85	18	10.85	30	11.48	27	11.27	Sep-85
US Equity (Net)	-4.33	35	-20.43	78	-18.34	70	7.45	43	8.67	25	10.62	46	11.21	43	--	
<i>Russell 3000</i>	-4.46	50	-20.42	77	-17.63	56	7.70	33	8.62	28	10.90	28	11.38	33	10.84	Sep-85
<i>InvMetrics All DB US Eq Gross Median</i>	-4.47		-19.91		-17.42		7.28		8.20		10.55		11.07		10.26	Sep-85
BlackRock Russell 1000 Index Fund (Gross)	-4.60	42	-20.50	82	-17.20	77	7.97	45	--	--	--	--	--	--	8.79	Apr-18
BlackRock Russell 1000 Index Fund (Net)	-4.61	42	-20.51	82	-17.21	77	7.96	46	--	--	--	--	--	--	8.78	
<i>Russell 1000</i>	-4.61	42	-20.51	82	-17.22	77	7.94	46	9.00	50	11.15	47	11.60	48	8.75	Apr-18
Large Cap Active Equity (Gross)	-5.73	--	-21.78	--	-24.94	--	2.97	--	5.25	--	8.29	--	9.76	--	7.10	Mar-00
Large Cap Active Equity (Net)	-5.83	--	-22.01	--	-25.32	--	2.51	--	4.75	--	7.81	--	9.31	--	6.66	
<i>Russell 1000</i>	-4.61	--	-20.51	--	-17.22	--	7.94	--	9.00	--	11.15	--	11.60	--	6.05	Mar-00
Aristotle (Gross)	-5.27	47	-16.69	59	-16.39	93	--	--	--	--	--	--	--	--	6.76	Oct-20
Aristotle (Net)	-5.37	49	-16.94	65	-16.82	94	--	--	--	--	--	--	--	--	6.29	
<i>Russell 1000 Value</i>	-5.62	55	-17.14	69	-11.36	69	4.36	84	5.29	80	8.15	79	9.17	81	10.58	Oct-20
TCW (Gross)	-6.28	91	-27.27	86	-33.34	86	6.56	75	10.29	58	11.12	76	11.80	79	7.42	Jun-99
TCW (Net)	-6.40	92	-27.47	86	-33.67	87	6.09	79	9.79	68	10.67	84	11.39	86	--	
<i>Russell 1000 Growth</i>	-3.60	37	-23.77	50	-22.59	41	10.67	19	12.16	19	13.74	16	13.70	19	6.21	Jun-99

Total Fund and asset class composites are ranked against InvestorForce universes. Managers are ranked against eVestment Alliance style universes. Ranking of 1 is a top ranking and a ranking of 100 is a bottom ranking. The InvestorForce Public DB > \$1B Gross universe consists of 46 members with a total market value of \$364.5 Billion. Effective 1/1/2017, only traditional asset class (public equity, public fixed income, public real estate) investment management fees will be included in the gross of fee return calculation.

1. See Policy Index and Benchmark History.

Total Fund Performance Summary

Period Ending: September 30, 2022

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Small Cap Equity (Gross)	-1.85	--	-19.02	--	-20.33	--	8.54	--	8.39	--	10.21	--	11.16	--	12.95	Jul-85
Small Cap Equity (Net)	-2.07	--	-19.38	--	-21.01	--	7.69	--	7.48	--	9.29	--	10.23	--	--	
<i>Russell 2000</i>	-2.19	--	-19.01	--	-23.50	--	4.29	--	3.55	--	7.51	--	8.55	--	8.89	Jul-85
Kennedy (Gross)	-4.09	43	-18.81	67	-14.25	53	7.71	33	4.11	57	8.14	52	10.17	33	10.45	Sep-10
Kennedy (Net)	-4.31	47	-19.16	72	-14.96	61	6.88	41	3.24	75	7.25	74	9.26	53	9.57	
<i>Russell 2000 Value</i>	-4.61	50	-19.18	72	-17.69	76	4.72	70	2.87	81	7.42	70	7.94	85	8.55	Sep-10
William Blair Small Cap Growth (Gross)	0.89	27	-19.28	38	-26.41	30	--	--	--	--	--	--	--	--	8.07	Oct-19
William Blair Small Cap Growth (Net)	0.67	32	-19.64	43	-27.06	34	--	--	--	--	--	--	--	--	7.27	
<i>Russell 2000 Growth</i>	0.24	36	-19.06	36	-29.27	54	2.93	90	3.60	96	7.12	96	8.81	94	2.03	Oct-19
International Equity (Gross)	-10.80	89	-22.37	71	-28.50	81	-0.88	52	0.11	30	4.63	20	4.48	30	7.18	Dec-90
International Equity (Net)	-10.88	90	-22.47	75	-28.74	83	-1.19	64	-0.21	41	4.28	28	4.11	44	--	
<i>MSCI ACWI ex USA IMI Gross¹</i>	-9.58	35	-22.33	69	-25.34	40	-0.83	52	-0.32	43	3.86	49	3.66	63	5.46	Dec-90
<i>InvMetrics All DB ex-US Eq Gross Median</i>	-9.93		-22.01		-26.10		-0.79		-0.48		3.81		3.97		5.90	Dec-90
Bivium Intl Equity (Gross)	-10.14	75	-22.69	61	-27.24	62	0.02	58	--	--	--	--	--	--	1.92	Oct-18
Bivium Intl Equity (Net)	-10.23	77	-22.77	63	-28.51	72	-0.86	78	--	--	--	--	--	--	1.18	
<i>MSCI ACWI ex USA Gross</i>	-9.80	65	-22.02	48	-24.79	38	-1.07	83	-0.34	73	3.78	71	3.48	88	1.16	Oct-18
BlackRock MSCI World ex-US Index Fd A (Gross)	-9.10	33	-22.24	43	-23.51	29	-0.76	51	--	--	--	--	--	--	0.79	May-19
BlackRock MSCI World ex-US Index Fd A (Net)	-9.10	33	-22.25	43	-23.53	29	-0.78	51	--	--	--	--	--	--	0.78	
<i>MSCI World ex US Gross</i>	-9.11	33	-22.24	43	-23.50	29	-0.72	50	0.11	40	3.73	48	4.14	69	0.84	May-19
Capital Group (Gross)	-9.63	83	-23.94	57	-35.41	83	-2.08	79	0.88	58	6.10	41	5.05	66	7.46	Dec-90
Capital Group (Net)	-9.69	83	-23.99	58	-35.50	83	-2.28	80	0.67	63	5.86	43	4.77	73	--	
<i>MSCI ACWI ex USA Gross</i>	-9.80	84	-22.02	40	-24.79	16	-1.07	66	-0.34	82	3.78	88	3.48	99	5.44	Dec-90
<i>MSCI ACWI ex USA Growth Gross</i>	-9.30	81	-23.45	51	-30.00	46	-1.08	66	0.51	68	4.44	83	4.31	96	--	Dec-90

1. See Policy Index and Benchmark History.

Total Fund Performance Summary

Period Ending: September 30, 2022

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Mondrian (Gross)	-14.12	96	-22.51	85	-24.22	81	-3.13	96	-2.09	90	2.05	90	2.53	86	5.09	Nov-03
Mondrian (Net)	-14.21	96	-22.66	87	-24.51	84	-3.50	98	-2.48	92	1.66	93	2.15	95	4.77	
MSCI ACWI ex USA Gross	-9.80	17	-22.02	72	-24.79	86	-1.07	71	-0.34	33	3.78	45	3.48	60	5.37	Nov-03
MSCI ACWI ex USA Value Gross	-10.29	33	-20.75	40	-19.46	27	-1.54	76	-1.51	80	2.87	66	2.47	87	4.98	Nov-03
Newton Emerging Mkt (Gross)	-8.45	34	-17.70	14	-31.45	77	7.90	5	--	--	--	--	--	--	7.91	May-19
Newton Emerging Mkt (Net)	-8.70	37	-17.93	16	-31.73	79	7.51	6	--	--	--	--	--	--	7.55	
MSCI Emerging Markets Gross	-11.42	72	-21.46	54	-27.80	54	-1.71	65	-1.44	64	4.26	68	1.42	82	-0.97	May-19
Templeton (Gross)	-11.64	95	-22.95	28	-32.01	50	-2.95	87	-2.12	86	2.44	92	4.13	97	3.36	Apr-11
Templeton (Net)	-11.81	95	-23.22	31	-32.47	51	-3.53	89	-2.73	89	1.80	95	3.43	99	2.69	
MSCI ACWI ex US Small Cap Gross	-8.25	40	-24.19	46	-28.57	41	0.80	55	-0.16	65	4.39	71	4.83	85	2.93	Apr-11
MSCI ACWI ex US Small Cap Value GD	-8.61	49	-22.46	26	-23.93	18	0.43	58	-0.75	69	4.22	75	4.75	86	2.74	Apr-11
Total Fixed Income (Gross)	-4.80	82	-10.77	80	-16.04	81	-1.73	41	0.29	51	2.08	24	2.26	21	6.53	Sep-86
Total Fixed Income (Net)	-4.84	82	-10.84	81	-16.17	82	-1.90	47	0.11	65	1.90	30	2.06	29	--	
Fixed Income Blend ¹	-5.14	83	-11.21	83	-16.72	85	-3.97	85	-0.80	91	0.47	91	0.61	92	5.54	Sep-86
InvMetrics All DB Total Fix Inc Gross Median	-3.65		-8.87		-13.43		-2.05		0.31		1.43		1.58		5.94	Sep-86
US Fixed Income (Gross)	-4.29	56	-9.39	59	-14.93	66	-1.67	42	0.82	35	2.11	26	2.65	11	6.48	Sep-86
US Fixed Income (Net)	-4.32	56	-9.45	62	-15.04	68	-1.82	47	0.67	44	1.95	31	2.48	15	--	
Bloomberg US Aggregate TR	-4.75	72	-9.22	54	-14.60	60	-3.26	77	-0.27	81	0.54	91	0.89	90	5.40	Sep-86
InvMetrics All DB US Fix Inc Gross Median	-4.14		-9.07		-13.99		-2.11		0.53		1.45		1.61		--	Sep-86
Baird Advisors (Gross)	-4.55	55	-9.16	53	-14.79	71	-2.59	39	0.30	40	1.35	18	1.89	10	4.07	Oct-01
Baird Advisors (Net)	-4.56	59	-9.19	56	-14.85	75	-2.66	44	0.22	50	1.27	28	1.81	12	3.98	
Bloomberg US Aggregate TR	-4.75	82	-9.22	58	-14.60	63	-3.26	93	-0.27	95	0.54	97	0.89	96	3.25	Oct-01
Loomis Sayles (Gross)	-3.16	11	-10.01	68	-15.27	66	0.20	5	1.89	8	3.60	1	4.11	1	7.08	Dec-00
Loomis Sayles (Net)	-3.28	11	-10.20	75	-15.59	74	-0.13	7	1.56	12	3.27	1	3.77	1	6.73	
Bloomberg US Credit BAA TR	-4.85	90	-12.41	99	-19.05	99	-3.66	98	0.13	90	1.90	31	1.92	46	5.05	Dec-00

1. See Policy Index and Benchmark History.

Total Fund Performance Summary

Period Ending: September 30, 2022

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Global Fixed Income (Gross)	-8.93	--	-21.38	--	-24.72	--	-4.97	--	-3.15	--	0.58	--	0.11	--	5.30	Nov-01
Global Fixed Income (Net)	-9.01	--	-21.51	--	-24.96	--	-5.27	--	-3.44	--	0.28	--	-0.19	--	4.99	
FTSE WGBI TR	-7.61	--	-15.84	--	-22.14	--	-7.03	--	-3.07	--	-1.29	--	-1.76	--	2.81	Nov-01
Brandywine (Gross)	-8.93	91	-21.38	94	-24.72	90	-4.97	75	-3.15	89	0.58	63	0.11	66	5.30	Nov-01
Brandywine (Net)	-9.01	91	-21.51	94	-24.96	90	-5.27	78	-3.44	89	0.28	68	-0.19	71	4.99	
Bloomberg Global Aggregate TR	-6.94	73	-14.63	66	-20.43	68	-5.74	83	-2.32	77	-0.65	83	-0.93	83	3.04	Nov-01
FTSE WGBI TR	-7.61	83	-15.84	77	-22.14	81	-7.03	94	-3.07	87	-1.29	92	-1.76	93	2.81	Nov-01
Absolute Return (Gross)*	2.73	8	4.82	7	9.82	3	6.69	19	4.15	47	4.02	50	4.77	47	4.15	Sep-11
Absolute Return (Net)*	2.73	8	4.82	7	9.82	3	6.69	19	4.15	47	4.02	50	4.77	47	4.15	
Absolute Return Blend ¹	-0.17	50	-4.10	42	-6.35	48	4.21	49	3.11	66	3.57	59	3.75	68	3.80	Sep-11
HFRI Fund of Funds Composite Index	-0.17	50	-4.10	42	-6.35	48	4.21	49	3.11	66	3.19	67	3.48	72	3.43	Sep-11
InvMetrics All DB Hedge Funds Gross Median	-0.24		-5.90		-6.76		4.09		3.88		3.96		4.56		4.55	Sep-11
Private Equity (Gross)**	-5.89	--	-6.62	--	1.04	--	18.40	--	17.13	--	14.93	--	16.31	--	7.10	Nov-08
Private Equity (Net)**	-5.89	--	-6.62	--	1.04	--	18.40	--	17.13	--	14.93	--	16.31	--	7.10	
Private Equity Blend ¹	-5.46	--	-6.89	--	3.47	--	20.52	--	18.17	--	18.61	--	17.61	--	18.09	Nov-08
Refinitiv CJA Global All Private Equity 1Q Lagged	-5.46	--	-6.89	--	3.47	--	20.52	--	18.17	--	15.70	--	15.73	--	12.48	Nov-08
Real Assets (Gross)***	-4.37	--	-10.15	--	5.70	--	7.99	--	3.61	--	2.61	--	-2.30	--	-1.74	Sep-11
Real Assets (Net)***	-4.40	--	-10.21	--	5.56	--	7.87	--	3.54	--	2.56	--	-2.33	--	-1.77	
Real Asset Blend ¹	-6.55	--	-15.95	--	0.12	--	5.48	--	4.44	--	5.87	--	5.38	--	5.35	Sep-11
Private Credit (Gross)****	1.91	--	1.92	--	4.64	--	--	--	--	--	--	--	--	--	5.71	Oct-19
Private Credit (Net)****	1.91	--	1.92	--	4.64	--	--	--	--	--	--	--	--	--	5.71	
S&P/LSTA Leveraged Loan Index +1.75%	1.80	--	-2.30	--	-0.82	--	4.00	--	4.78	--	5.47	--	5.34	--	4.22	Oct-19

1. See Policy Index and Benchmark History.

* As of 9/30 with the exception of Dyal and AG OWL. Dyal 6/30 market value rolled forward and includes any cash flows from Q3 to derive 9/30 market value. AG OWL is preliminary.

** Private Equity is one quarter lagged. 6/30 market values rolled forward and includes any cash flows from Q3 to derive 9/30 market value.

*** As of 9/30 with the exception of CIM Infrastructure II and Private Real Assets. CIM and Private Real Assets market values rolled forward and includes any cash flows from Q3 to derive 9/30 market value.

**** As of 9/30 with the exception of ARES Senior DL II. ARES Senior DL II market value rolled forward and includes any cash flows from Q3 to derive 9/30 market value.

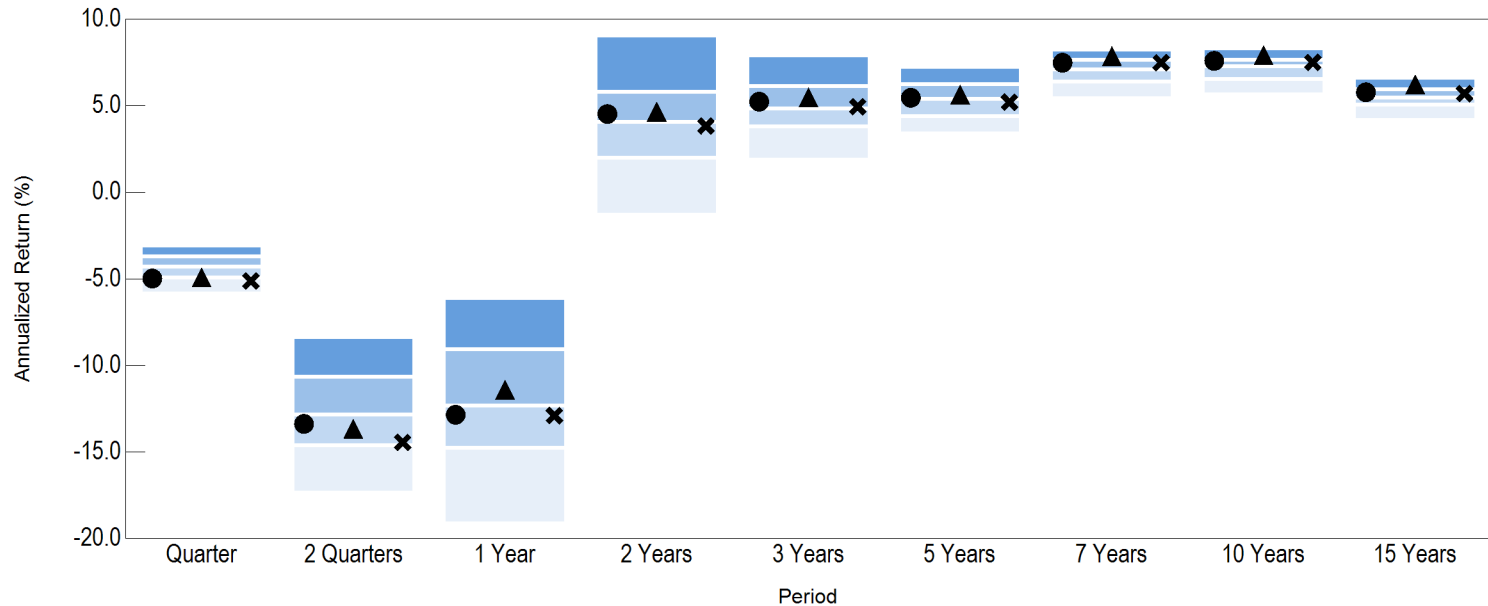
Total Fund Performance Summary

Period Ending: September 30, 2022

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Cash (Gross)	0.24	--	0.35	--	0.35	--	0.60	--	1.01	--	0.92	--	0.66	--	2.94	Sep-85
Cash (Net)	0.24	--	0.35	--	0.35	--	0.60	--	1.01	--	0.92	--	0.66	--	2.94	
91 Day T-Bills	0.46	--	0.57	--	0.62	--	0.49	--	1.08	--	0.90	--	0.64	--	3.03	Sep-85
Real Estate (Gross)	1.22	23	5.57	45	20.98	37	12.52	26	10.59	25	10.48	19	11.69	15	7.54	Mar-86
Real Estate (Net)	1.22	23	5.57	45	20.98	37	12.52	26	10.59	25	10.31	20	11.24	20	6.57	
Real Estate Blend ¹	0.52	49	5.32	47	22.09	29	12.37	29	10.24	30	9.85	29	10.91	26	8.24	Mar-86
NCREIF-ODCE	0.52	49	5.32	47	22.09	29	12.37	29	10.24	30	9.85	29	10.92	25	7.69	Mar-86
InvMetrics All DB Real Estate Pub+Priv Gross Median	0.45		4.98		19.39		11.26		9.42		9.28		10.22		--	Mar-86

1. See Policy Index and Benchmark History.

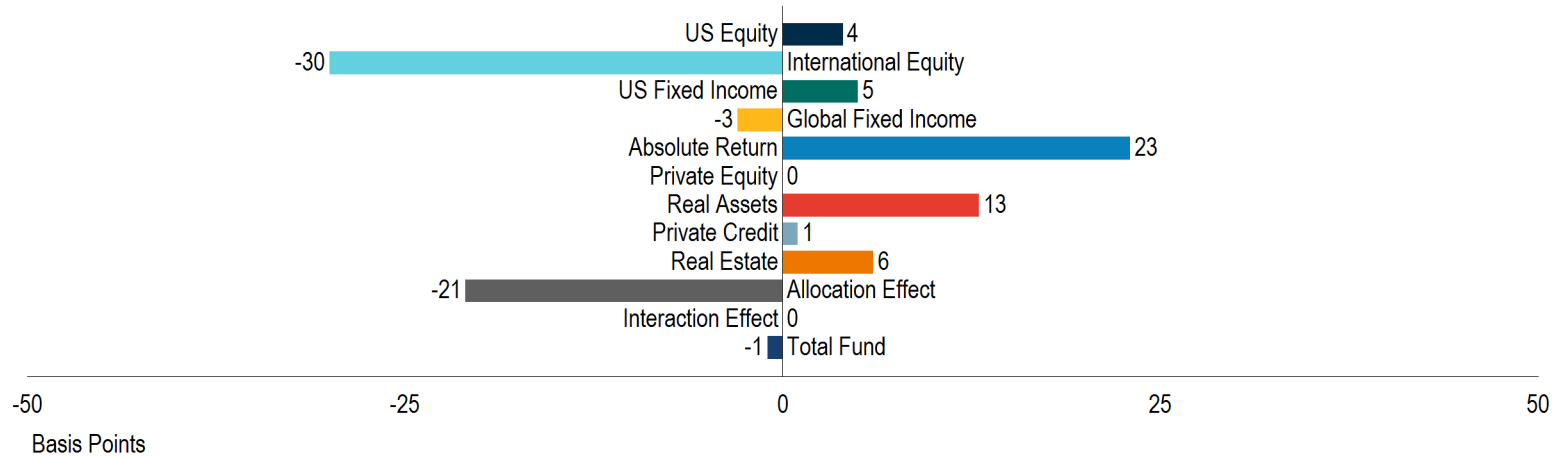
InvMetrics Public DB > \$1B Gross Return Comparison



	Return (Rank)								
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years	15 Years
5th Percentile	-3.09	-8.37	-6.11	9.04	7.89	7.24	8.22	8.31	6.62
25th Percentile	-3.67	-10.63	-9.05	5.82	6.17	6.27	7.70	7.69	5.98
Median	-4.28	-12.80	-12.27	4.08	4.86	5.41	7.11	7.32	5.50
75th Percentile	-4.90	-14.59	-14.75	2.01	3.84	4.44	6.41	6.57	5.10
95th Percentile	-5.82	-17.33	-19.11	-1.29	1.91	3.44	5.46	5.69	4.21
# of Portfolios	75	75	75	74	73	73	72	69	65
● Total Fund	-4.97 (79)	-13.37 (56)	-12.85 (54)	4.53 (44)	5.24 (42)	5.47 (47)	7.49 (35)	7.60 (32)	5.78 (31)
▲ Policy Index	-4.90 (76)	-13.65 (62)	-11.41 (46)	4.66 (42)	5.49 (39)	5.65 (40)	7.87 (19)	7.92 (11)	6.22 (10)
✕ Allocation Index	-5.11 (81)	-14.44 (74)	-12.89 (55)	3.84 (52)	4.95 (48)	5.21 (57)	7.49 (35)	7.51 (38)	5.70 (38)

Total Fund
Performance Attribution (One Quarter)

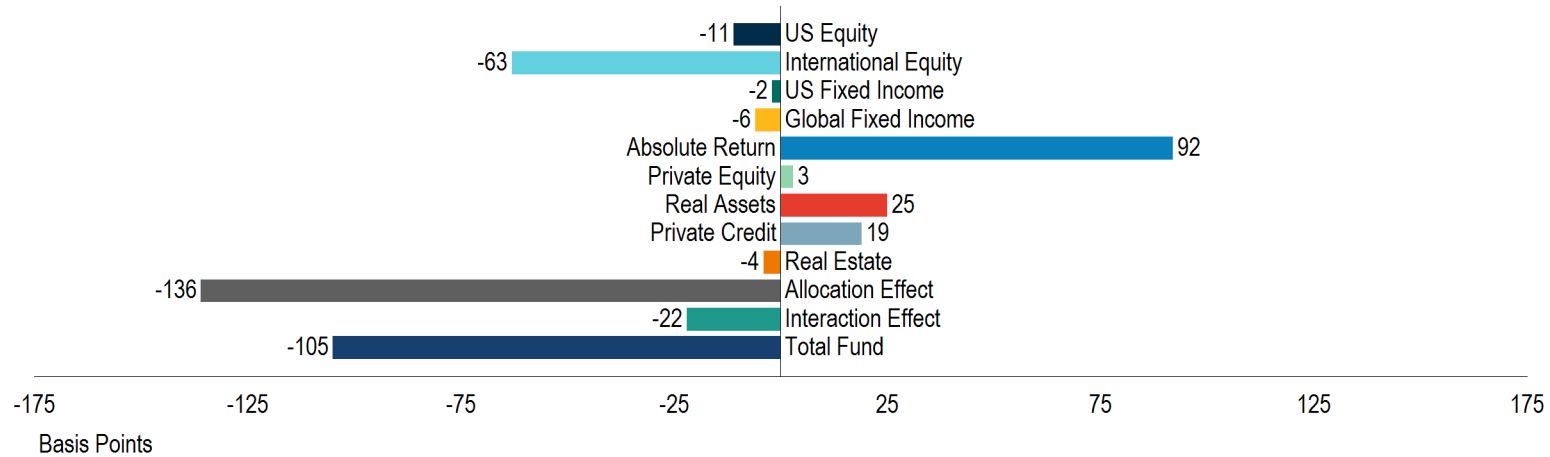
Period Ending: September 30, 2022



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
US Equity	-4.30%	-4.46%	0.17%	0.04%	-0.06%	0.00%	-0.01%
International Equity	-10.80%	-9.58%	-1.22%	-0.30%	0.02%	0.00%	-0.28%
US Fixed Income	-4.29%	-4.75%	0.46%	0.05%	-0.01%	0.01%	0.06%
Global Fixed Income	-8.93%	-7.61%	-1.32%	-0.03%	0.01%	0.00%	-0.02%
Absolute Return	2.73%	-0.17%	2.90%	0.23%	0.02%	0.01%	0.26%
Private Equity	-5.89%	-5.46%	-0.42%	0.00%	-0.01%	-0.03%	-0.04%
Real Assets	-4.37%	-6.55%	2.19%	0.13%	-0.02%	0.02%	0.12%
Private Credit	1.91%	1.80%	0.11%	0.01%	-0.11%	-0.01%	-0.10%
Real Estate	1.22%	0.52%	0.70%	0.06%	-0.06%	-0.01%	0.00%
Total	-4.91%	-4.90%	-0.01%	0.21%	-0.21%	0.00%	-0.01%

Total Fund
Performance Attribution (6 Months)

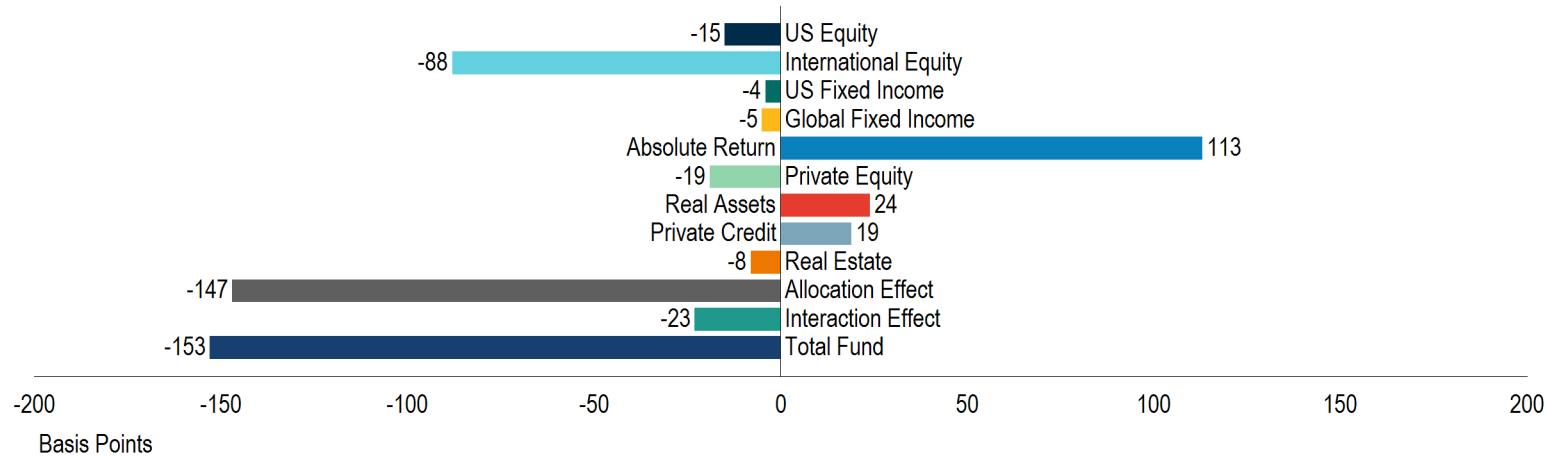
Period Ending: September 30, 2022



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
US Equity	-25.04%	-24.62%	-0.42%	-0.11%	-0.34%	-0.02%	-0.46%
International Equity	-28.90%	-26.60%	-2.31%	-0.63%	-0.06%	-0.04%	-0.72%
US Fixed Income	-14.77%	-14.61%	-0.16%	-0.02%	-0.02%	-0.01%	-0.05%
Global Fixed Income	-24.08%	-21.27%	-2.80%	-0.06%	0.01%	0.01%	-0.04%
Absolute Return	6.50%	-6.74%	13.24%	0.92%	-0.01%	-0.09%	0.81%
Private Equity	-2.10%	-1.95%	-0.15%	0.03%	-0.30%	-0.06%	-0.33%
Real Assets	0.21%	-5.11%	5.31%	0.25%	0.04%	0.05%	0.34%
Private Credit	3.31%	-1.98%	5.29%	0.19%	-0.24%	-0.08%	-0.14%
Real Estate	12.62%	13.08%	-0.46%	-0.04%	-0.43%	0.01%	-0.45%
Total	-16.02%	-14.97%	-1.05%	0.53%	-1.36%	-0.22%	-1.05%

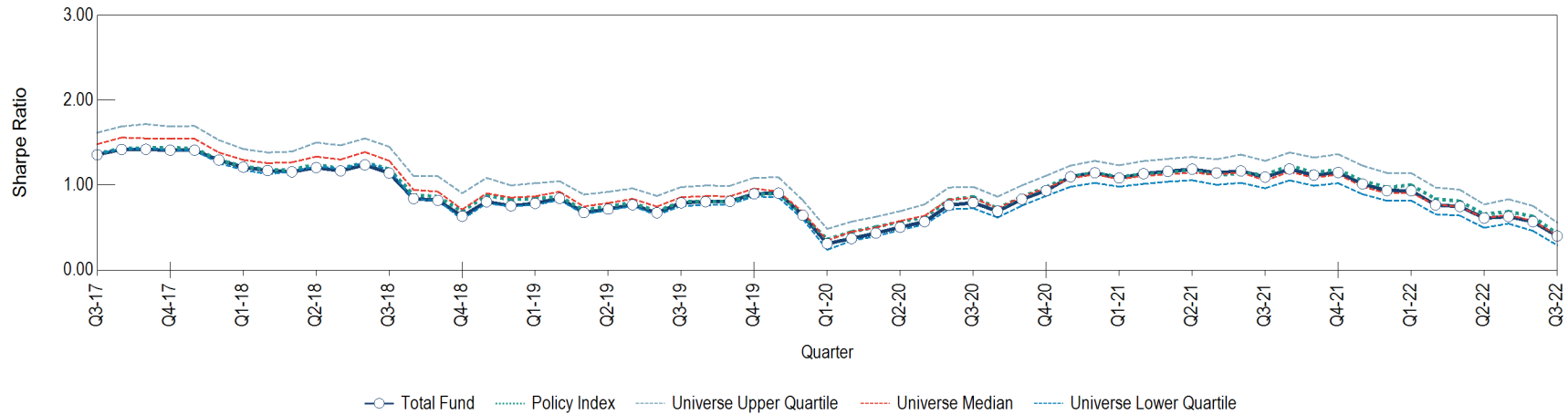
Total Fund
Performance Attribution (One Year)

Period Ending: September 30, 2022

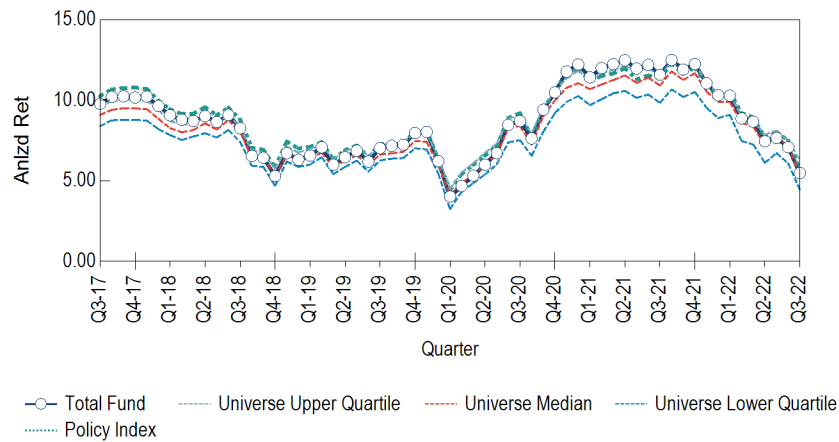


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
US Equity	-18.22%	-17.63%	-0.59%	-0.15%	-0.21%	-0.02%	-0.38%
International Equity	-28.50%	-25.34%	-3.16%	-0.88%	-0.12%	-0.06%	-1.07%
US Fixed Income	-14.93%	-14.60%	-0.33%	-0.04%	-0.17%	-0.01%	-0.23%
Global Fixed Income	-24.72%	-22.14%	-2.57%	-0.05%	0.01%	0.01%	-0.03%
Absolute Return	9.82%	-6.35%	16.17%	1.13%	0.03%	-0.13%	1.04%
Private Equity	1.04%	3.47%	-2.43%	-0.19%	-0.34%	-0.01%	-0.54%
Real Assets	5.70%	0.12%	5.58%	0.24%	0.05%	0.06%	0.35%
Private Credit	4.64%	-0.82%	5.46%	0.19%	-0.17%	-0.09%	-0.07%
Real Estate	20.98%	22.09%	-1.11%	-0.08%	-0.54%	0.03%	-0.59%
Total	-12.78%	-11.25%	-1.53%	0.17%	-1.47%	-0.23%	-1.53%

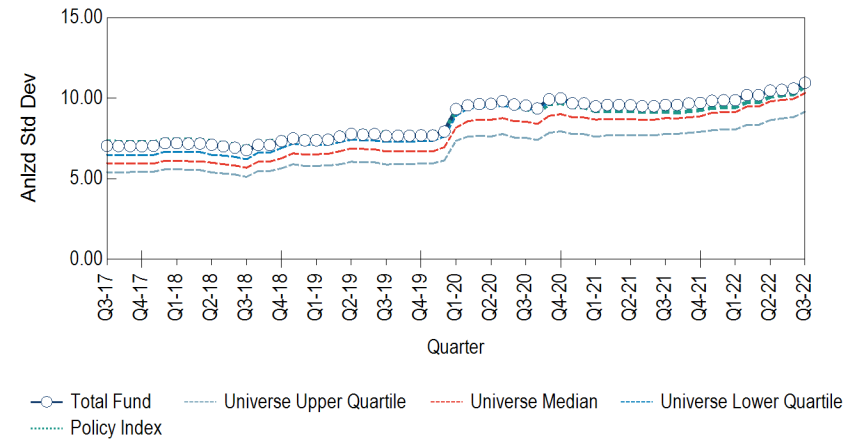
Rolling 5 Year Sharpe Ratio



Rolling 5 Year Annualized Return (%)



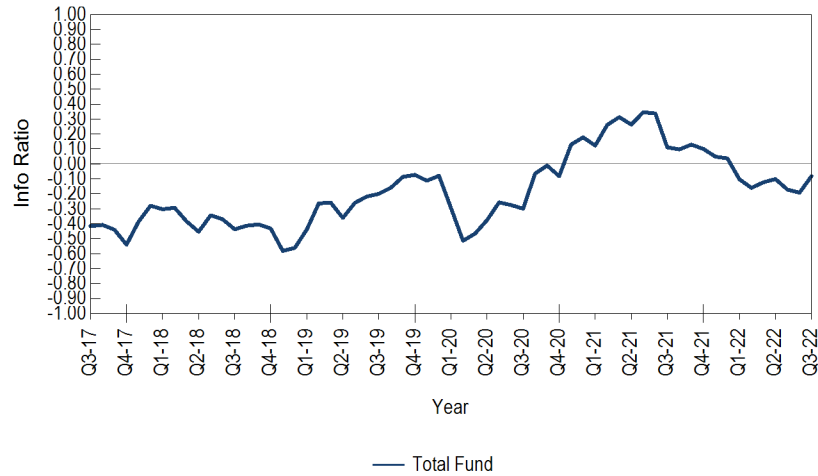
Rolling 5 Year Annualized Standard Deviation



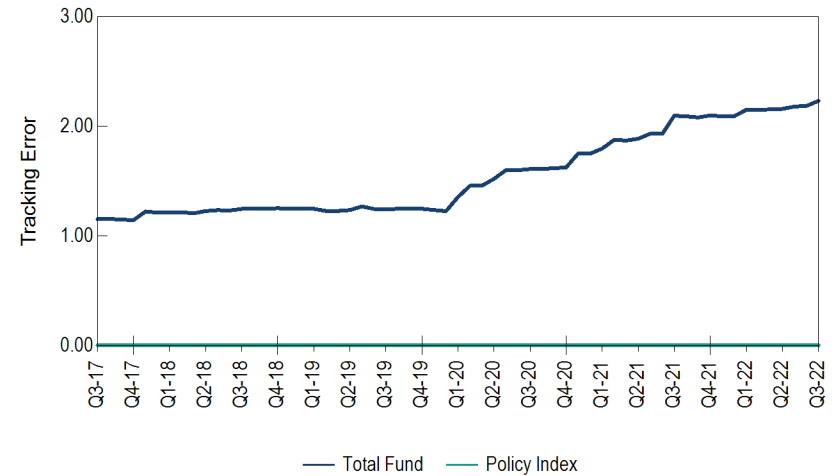
Total Fund
Rolling Risk Statistics (5 Years)

Period Ending: September 30, 2022

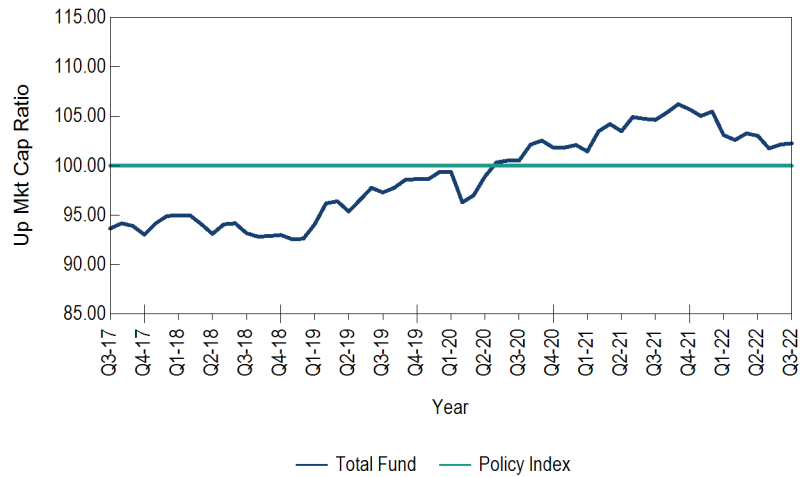
Rolling 5 Year Information Ratio



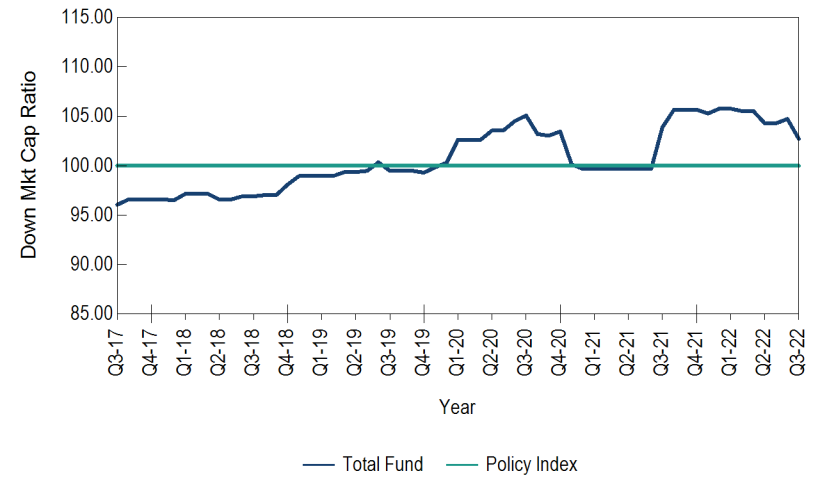
Rolling 5 Year Tracking Error



Rolling 5 Year Up Market Capture Ratio (%)

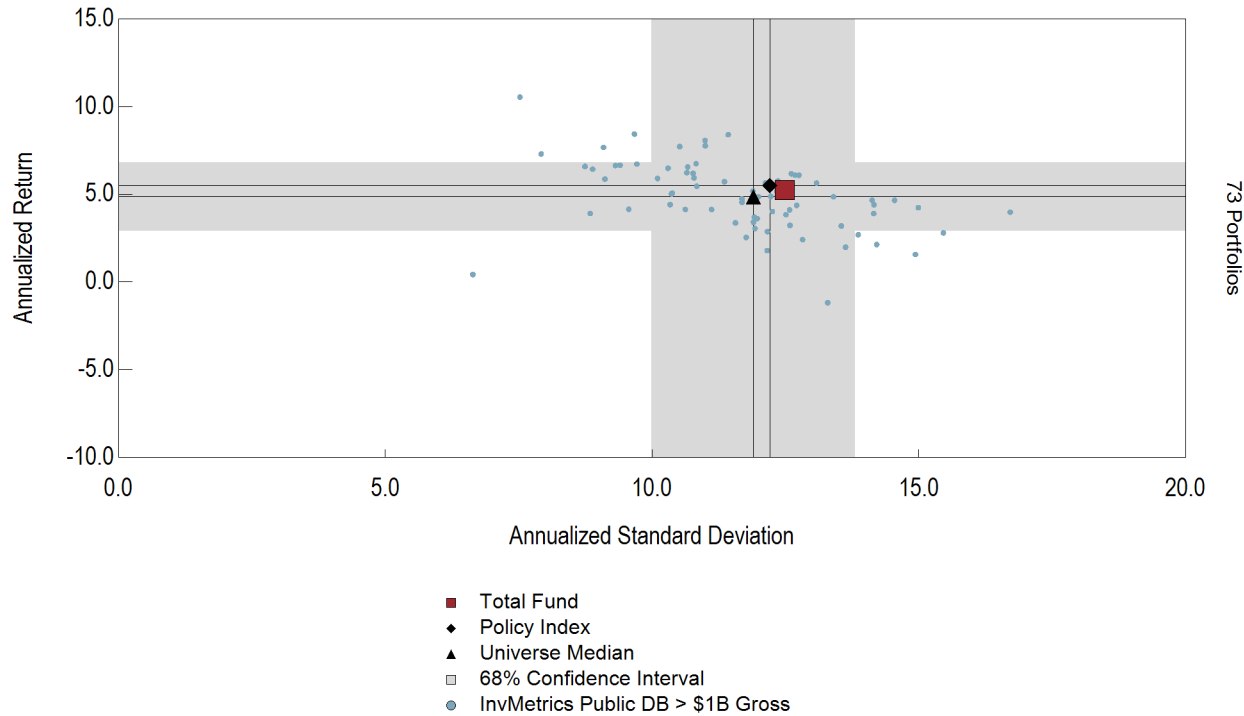


Rolling 5 Year Down Market Capture Ratio (%)



Total Fund
Risk vs. Return (3 Years)

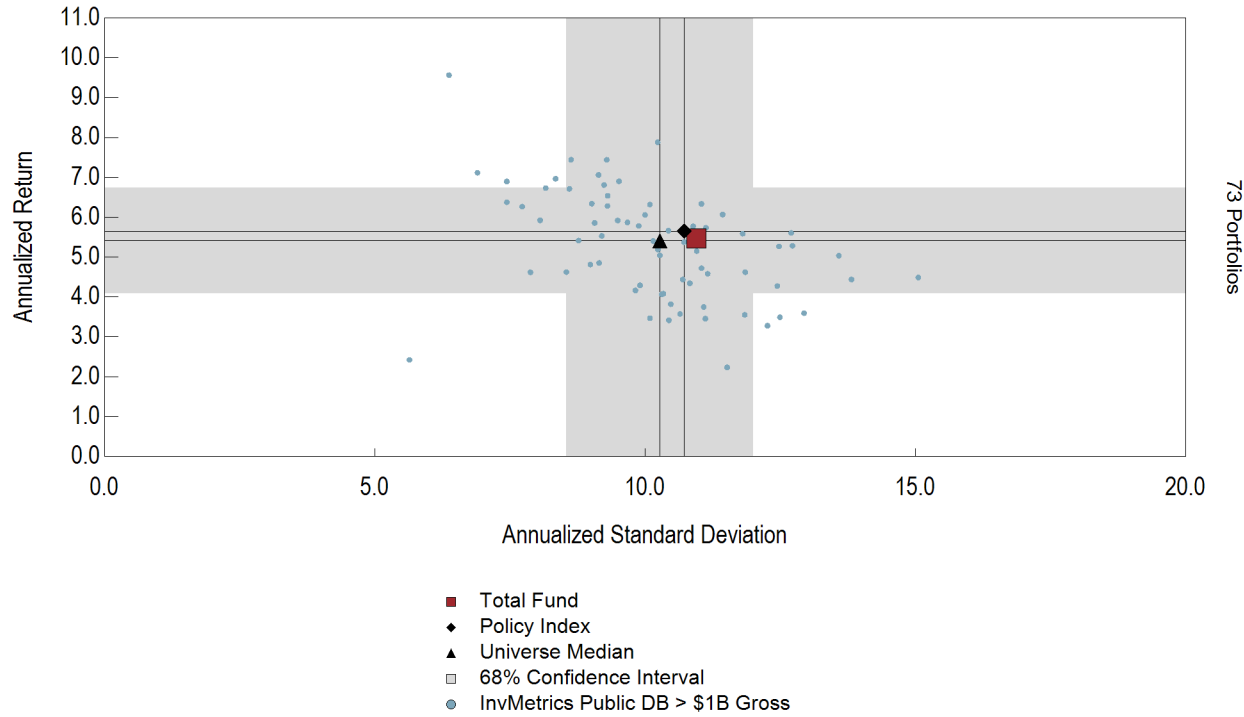
Period Ending: September 30, 2022



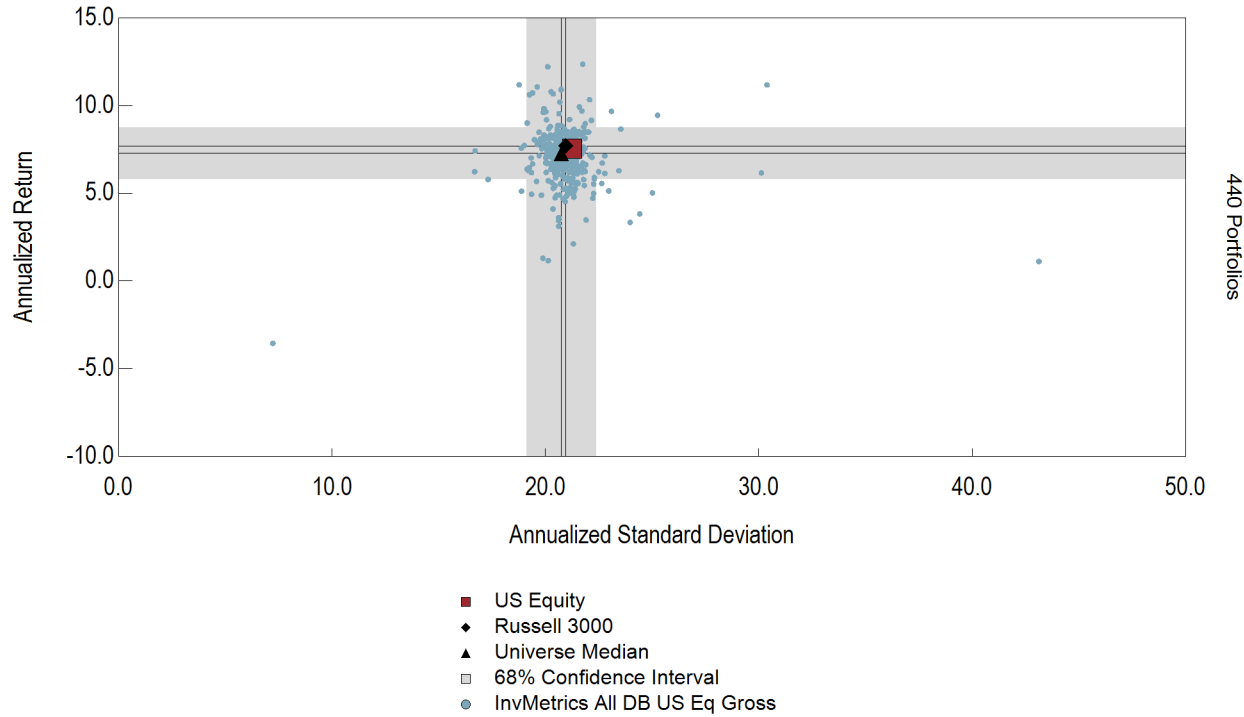
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	5.24%	42	12.48%	67	0.38	48	-0.09	94	2.70%	61
Policy Index	5.49%	39	12.21%	61	0.41	42	--	--	0.00%	1
Allocation Index	4.95%	48	12.72%	77	0.35	57	-0.64	99	0.84%	4
InvMetrics Public DB > \$1B Gross Median	4.86%	--	11.90%	--	0.38	--	0.42	--	2.31%	--

Total Fund
Risk vs. Return (5 Years)

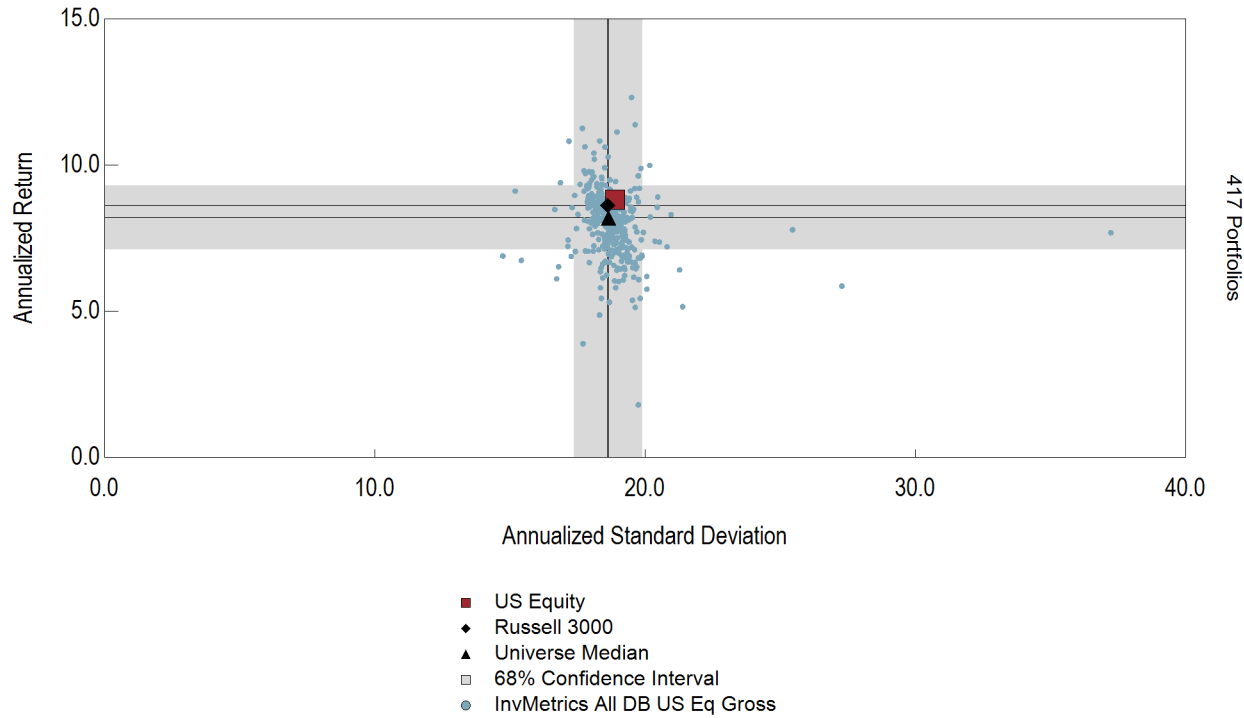
Period Ending: September 30, 2022



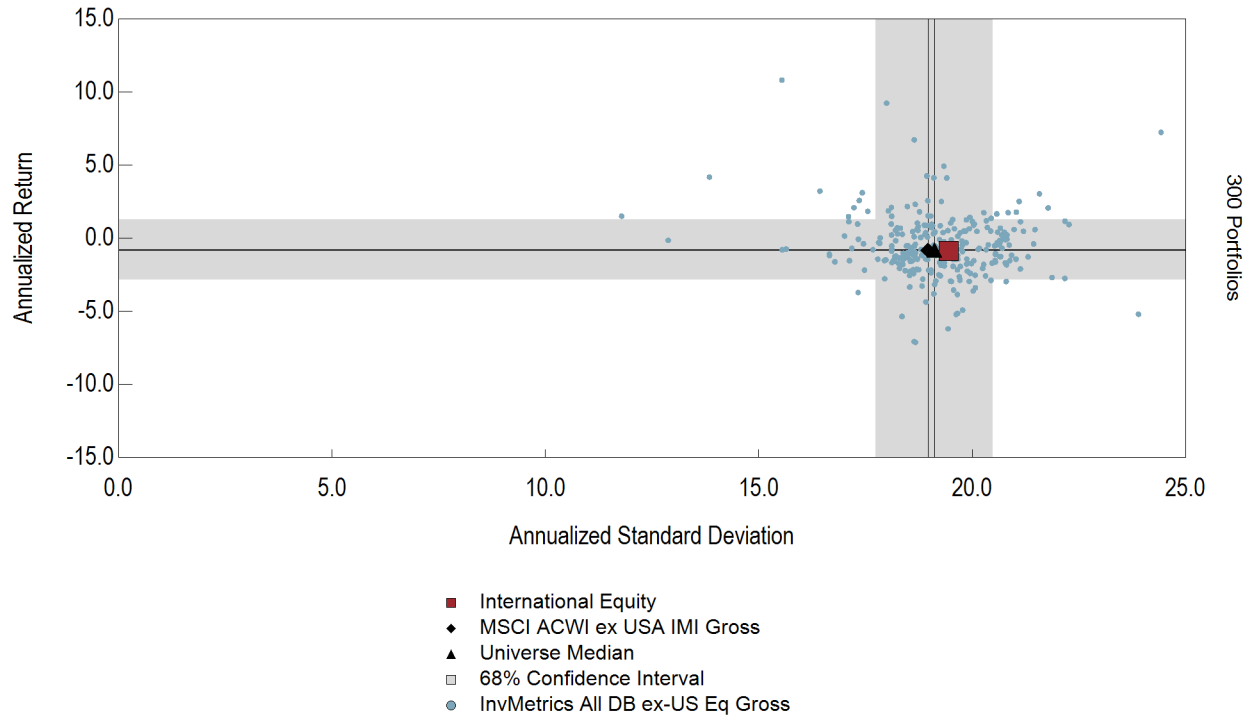
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	5.47%	47	10.95%	68	0.40	54	-0.08	89	2.23%	64
Policy Index	5.65%	40	10.72%	62	0.43	43	--	--	0.00%	1
Allocation Index	5.21%	57	11.19%	80	0.37	62	-0.58	99	0.75%	5
InvMetrics Public DB > \$1B Gross Median	5.41%	--	10.27%	--	0.41	--	0.29	--	1.92%	--



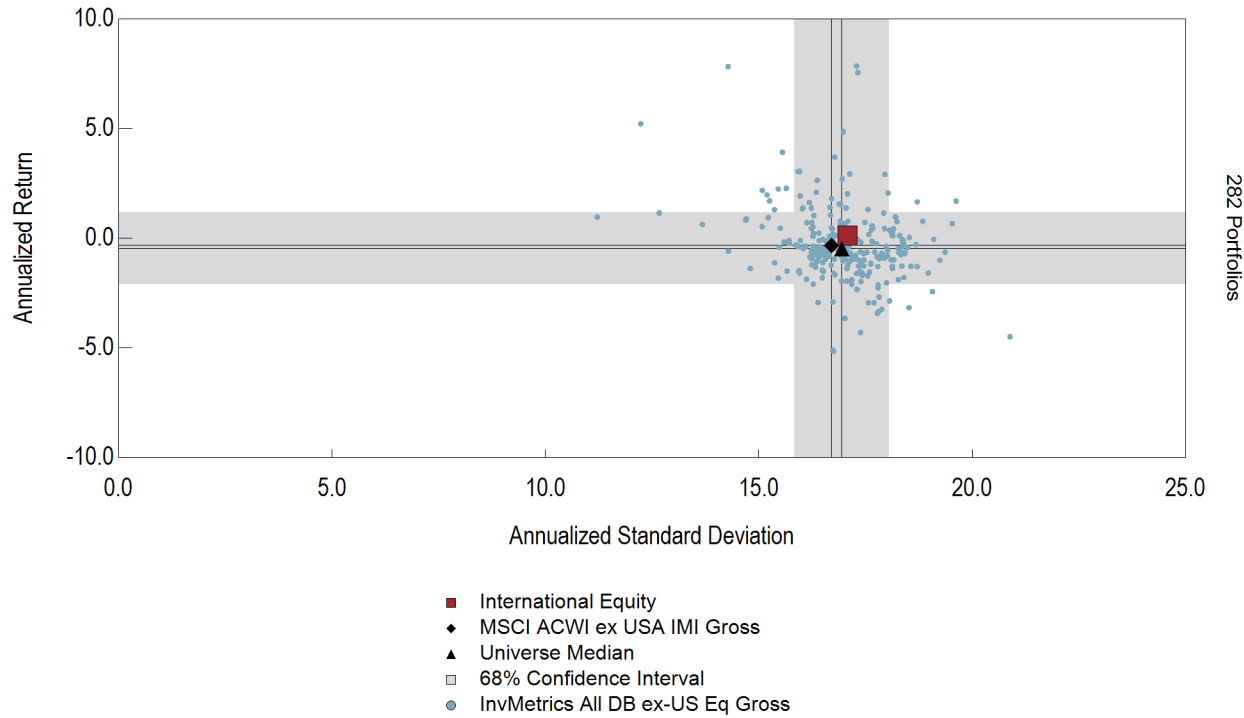
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
US Equity	7.54%	39	21.26%	76	0.33	48	-0.18	41	0.86%	10
Russell 3000	7.70%	33	20.96%	64	0.34	37	--	--	0.00%	1
InvMetrics All DB US Eq Gross Median	7.28%	--	20.74%	--	0.33	--	-0.27	--	2.49%	--



	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
US Equity	8.81%	20	18.89%	66	0.41	26	0.20	10	1.00%	11
Russell 3000	8.62%	28	18.62%	48	0.40	29	--	--	0.00%	1
InvMetrics All DB US Eq Gross Median	8.20%	--	18.64%	--	0.38	--	-0.34	--	2.18%	--



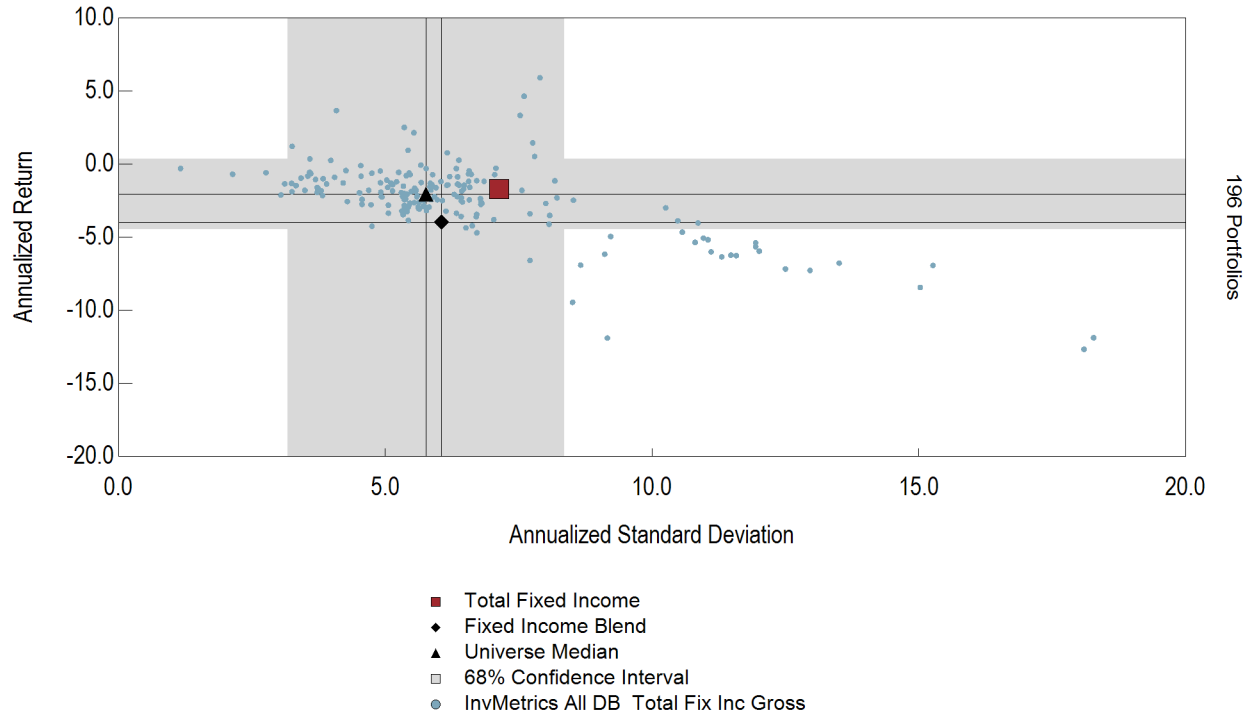
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
International Equity	-0.88%	52	19.45%	62	-0.07	51	-0.03	71	2.02%	9
MSCI ACWI ex USA IMI Gross	-0.83%	52	18.97%	44	-0.07	51	--	--	0.00%	1
InvMetrics All DB ex-US Eq Gross Median	-0.79%	--	19.11%	--	-0.07	--	0.15	--	3.27%	--



	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
International Equity	0.11%	30	17.08%	58	-0.06	30	0.24	24	1.79%	11
MSCI ACWI ex USA IMI Gross	-0.32%	43	16.70%	39	-0.08	44	--	--	0.00%	1
InvMetrics All DB ex-US Eq Gross Median	-0.48%	--	16.95%	--	-0.09	--	0.03	--	2.90%	--

Total Fixed Income
Risk vs. Return (3 Years)

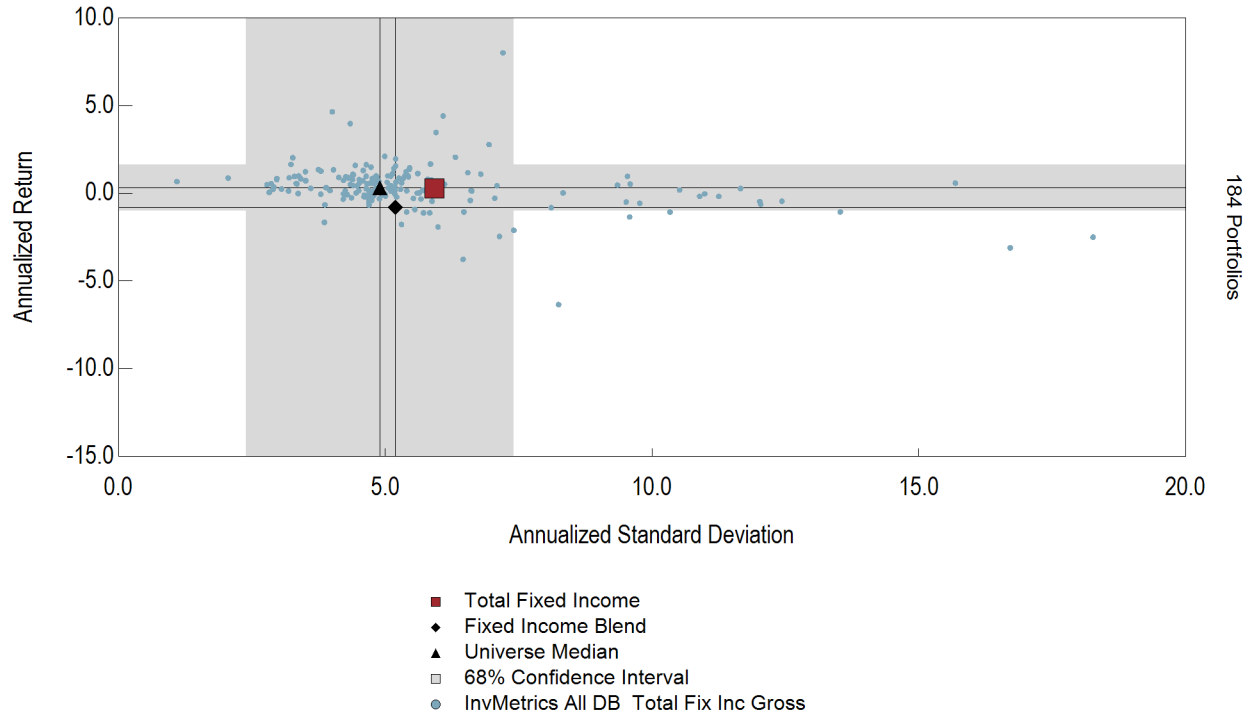
Period Ending: September 30, 2022



	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fixed Income	-1.73%	41	7.13%	80	-0.31	25	0.92	16	2.44%	51
Fixed Income Blend	-3.97%	85	6.05%	58	-0.74	95	--	--	0.00%	1
InvMetrics All DB Total Fix Inc Gross Median	-2.05%	--	5.76%	--	-0.47	--	0.47	--	2.43%	--

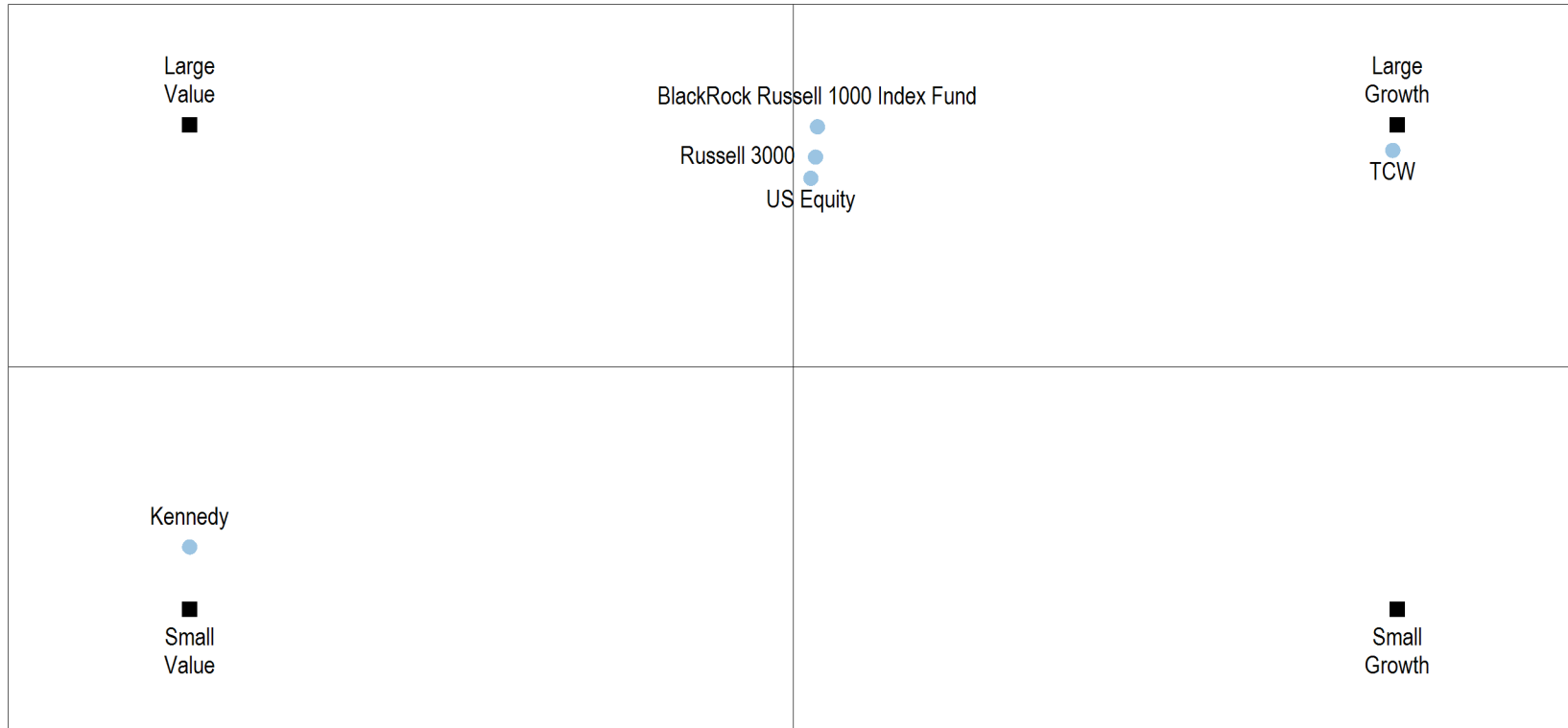
Total Fixed Income
Risk vs. Return (5 Years)

Period Ending: September 30, 2022

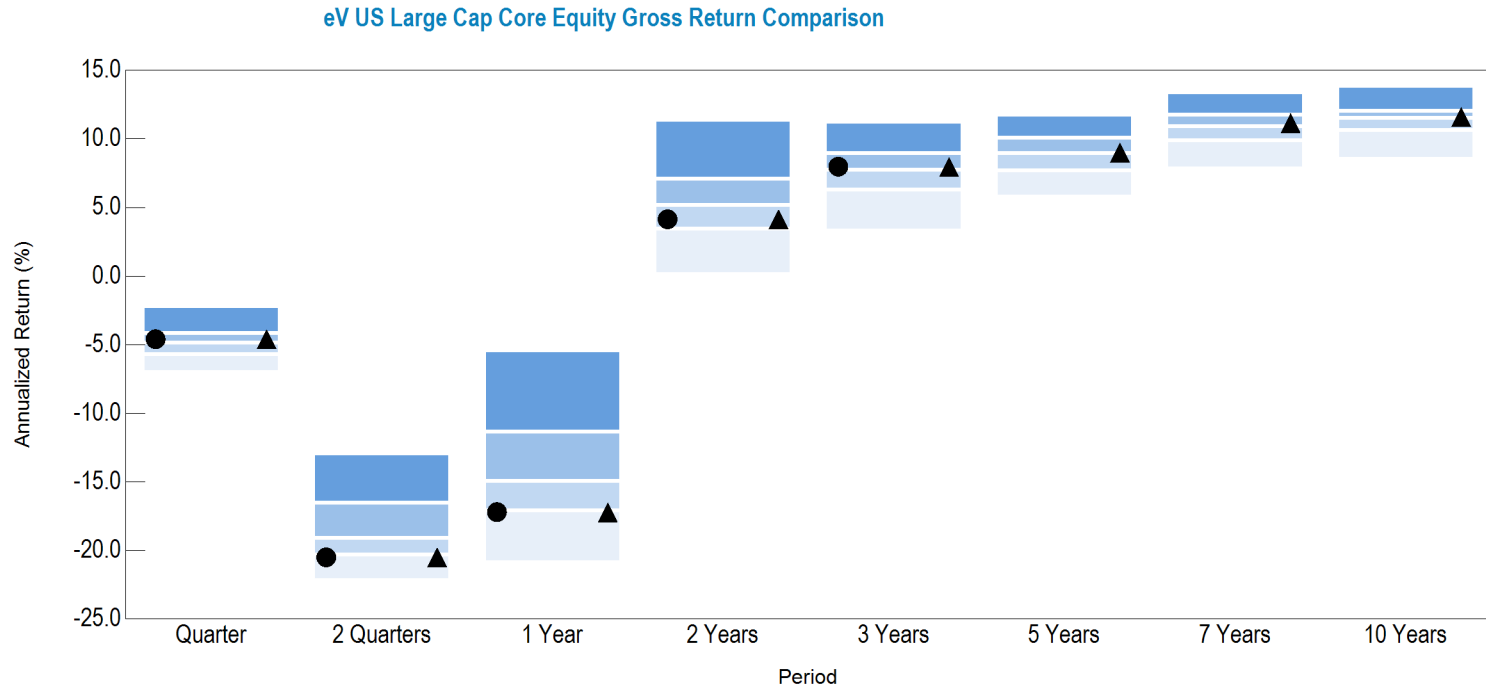


	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fixed Income	0.29%	51	5.91%	79	-0.13	49	0.49	29	2.22%	56
Fixed Income Blend	-0.80%	91	5.19%	62	-0.36	93	--	--	0.00%	1
InvMetrics All DB Total Fix Inc Gross Median	0.31%	--	4.90%	--	-0.14	--	0.32	--	2.09%	--

US Effective Style Map



	US Equity	BlackRock Russell 1000 Index Fund	TCW	Kennedy	Russell 3000
Risk Free	0.00	0.00	0.01	0.00	0.00
Large Growth	0.47	0.52	0.94	0.00	0.49
Large Value	0.42	0.48	0.00	0.13	0.45
Small Growth	0.04	0.00	0.05	0.00	0.03
Small Value	0.07	0.00	0.00	0.87	0.04



	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
Return (Rank)																
5th Percentile	-2.21		-12.94		-5.43		11.36		11.21		11.76		13.36		13.84	
25th Percentile	-4.14		-16.48		-11.30		7.14		8.98		10.09		11.80		12.06	
Median	-4.81		-19.04		-14.91		5.19		7.77		8.98		10.95		11.56	
75th Percentile	-5.65		-20.27		-17.04		3.47		6.31		7.73		9.92		10.67	
95th Percentile	-6.95		-22.13		-20.85		0.19		3.33		5.81		7.89		8.56	
# of Portfolios	333		333		333		330		324		310		282		243	
● BlackRock Russell 1000 Index Fund	-4.60	(42)	-20.50	(82)	-17.20	(77)	4.14	(64)	7.97	(45)	--	(--)	--	(--)	--	(--)
▲ Russell 1000	-4.61	(42)	-20.51	(82)	-17.22	(77)	4.12	(65)	7.94	(46)	9.00	(50)	11.15	(47)	11.60	(48)

Characteristics

	Portfolio	Russell 1000
Number of Holdings	1,017	1,016
Weighted Avg. Market Cap. (\$B)	425.1	425.7
Median Market Cap. (\$B)	12.4	12.4
Price To Earnings	17.8	18.0
Price To Book	3.7	3.7
Price To Sales	1.9	1.9
Return on Equity (%)	28.6	28.6
Yield (%)	1.8	1.8
Beta	1.0	1.0

Top Holdings

APPLE INC	6.3%
MICROSOFT CORP	5.2%
AMAZON.COM INC	3.0%
TESLA INC	2.0%
ALPHABET INC	1.7%
ALPHABET INC	1.6%
BERKSHIRE HATHAWAY INC	1.4%
UNITEDHEALTH GROUP INC	1.4%
JOHNSON & JOHNSON	1.3%
EXXON MOBIL CORP	1.1%

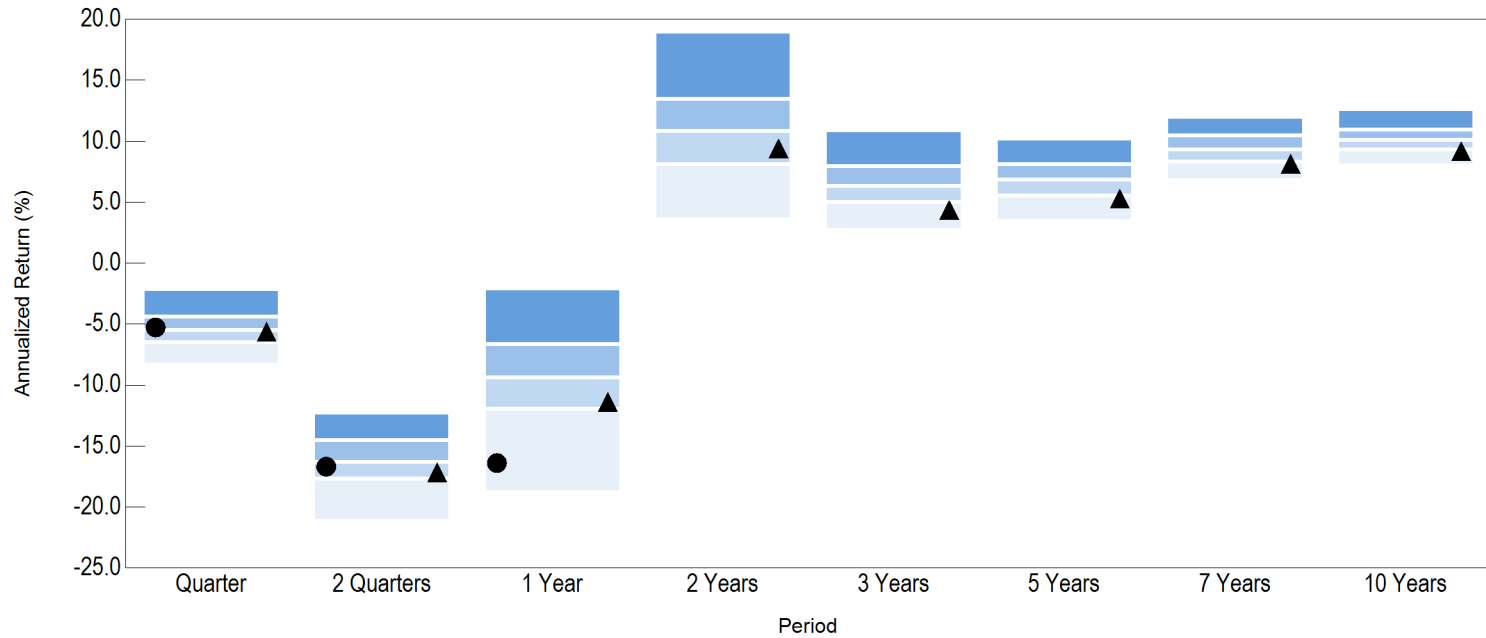
Best Performers

	Return %
SIGNIFY HEALTH INC CL A CL A (SGFY)	111.2%
FIRST SOLAR INC (FSLR)	94.1%
WOLFSPEED INC (WOLF)	62.9%
PENUMBRA INC (PEN)	52.3%
OAK STREET HEALTH INC (OSH)	49.1%
SAREPTA THERAPEUTICS INC (SRPT)	47.5%
TRADE DESK INC (THE) (TTD)	42.6%
NUTANIX INC (NTNX)	42.4%
ENPHASE ENERGY INC (ENPH)	42.1%
DICK'S SPORTING GOODS INC. (DKS)	39.4%

Worst Performers

	Return %
SOTERA HEALTH CO (SHC)	-65.2%
NOVAVAX INC (NVAX)	-64.6%
SPECTRUM BRANDS HOLDINGS INC (SPB)	-52.1%
WeWork Inc (WE)	-47.2%
SCOTTS MIRACLE-GRO CO (THE) (SMG)	-45.4%
APPLOVIN CORP	-43.4%
AZENTA INC (AZTA)	-40.6%
NCR CORP (NCR)	-38.9%
ENHABIT INC COM	-38.9%
HAYWARD HOLDINGS INC	-38.4%

eV US Large Cap Value Equity Gross Return Comparison



	Return (Rank)															
5th Percentile	-2.17	-12.27	-2.08	18.98	10.87	10.20	11.97	12.63								
25th Percentile	-4.37	-14.46	-6.61	13.48	8.00	8.14	10.49	10.96								
Median	-5.44	-16.24	-9.35	10.89	6.36	6.90	9.37	10.14								
75th Percentile	-6.44	-17.63	-11.92	8.13	5.05	5.55	8.37	9.37								
95th Percentile	-8.27	-21.11	-18.75	3.61	2.71	3.48	6.85	8.06								
# of Portfolios	340	340	340	335	330	319	305	290								
● Aristotle	-5.27	(47)	-16.69	(59)	-16.39	(93)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Russell 1000 Value	-5.62	(55)	-17.14	(69)	-11.36	(69)	9.39	(64)	4.36	(84)	5.29	(80)	8.15	(79)	9.17	(81)

Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	43	855
Weighted Avg. Market Cap. (\$B)	137.2	135.4
Median Market Cap. (\$B)	39.6	11.5
Price To Earnings	15.8	14.1
Price To Book	3.1	2.3
Price To Sales	2.4	1.6
Return on Equity (%)	25.9	17.0
Yield (%)	2.2	2.5
Beta		1.0

Top Holdings

MICROSOFT CORP	4.2%
CORTEVA INC	4.2%
DANAHER CORP	3.5%
COTERRA ENERGY INC	2.9%
AMGEN INC	2.9%
AMERIPRISE FINANCIAL INC	2.9%
XCEL ENERGY INC.	2.8%
MICROCHIP TECHNOLOGY INC	2.7%
COCA-COLA CO (THE)	2.7%
LENNAR CORP	2.7%

Best Performers

	Return %
PAYPAL HOLDINGS INC (PYPL)	23.2%
CULLEN/FROST BANKERS INC (CFR)	14.3%
XYLEM INC (XYL)	12.1%
AUTODESK INC (ADSK)	8.6%
MARTIN MARIETTA MATERIALS INC. (MLM)	7.8%
AMERIPRISE FINANCIAL INC (AMP)	6.5%
RPM INTERNATIONAL INC (RPM)	6.4%
LENNAR CORP (LEN)	6.2%
CORTEVA INC (CTVA)	5.8%
MICROCHIP TECHNOLOGY INC (MCHP)	5.5%

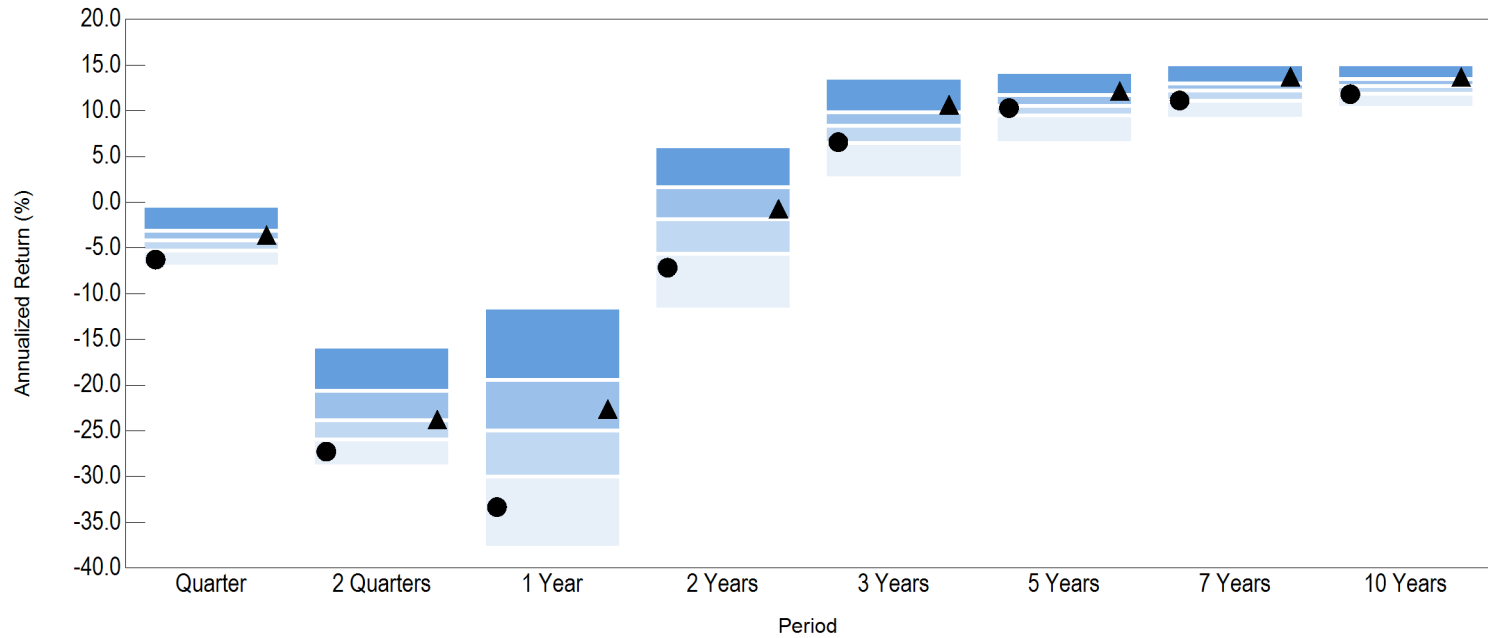
Worst Performers

	Return %
ELANCO ANIMAL HEALTH INC (ELAN)	-36.8%
ADOBE INC (ADBE)	-24.8%
CINCINNATI FINANCIAL CORP (CINF)	-24.2%
TYSON FOODS INC. (TSN)	-22.9%
SONY GROUP CORPORATION (SONY)	-21.7%
ALCON INC (ALC)	-16.8%
CIE GENERALE DES ETABLISSEMENTS MICHELIN SA, CLERMONT-FERRAND (MGDDY)	-16.5%
MITSUBISHI UFJ FINANCIAL GROUP (MUFG)	-15.7%
SUN COMMUNITIES INC. (SUI)	-14.5%
OSHKOSH CORP (OSK)	-14.1%

Aristotle Performance Attribution vs. Russell 1000 Value

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.12%	0.03%	-0.14%	-0.01%	1.85%	1.79%	4.69%	6.48%			
Materials	1.03%	0.48%	-0.09%	0.64%	4.00%	-7.79%	9.68%	4.28%			
Industrials	0.26%	0.25%	0.00%	0.00%	-1.93%	-4.55%	10.16%	10.02%			
Consumer Discretionary	-0.52%	-0.47%	0.05%	-0.10%	-11.23%	-3.16%	7.07%	5.53%			
Consumer Staples	-0.51%	-0.40%	-0.02%	-0.09%	-11.63%	-6.23%	9.21%	7.32%			
Health Care	-0.11%	-0.22%	0.07%	0.04%	-7.16%	-5.67%	11.34%	17.44%			
Financials	-0.42%	-0.40%	-0.08%	0.05%	-5.35%	-3.36%	17.07%	19.75%			
Information Technology	0.14%	0.20%	-0.23%	0.17%	-6.36%	-8.20%	17.52%	9.14%			
Communication Services	0.65%	--	0.65%	--	--	-13.44%	0.00%	8.86%			
Utilities	-0.17%	-0.19%	0.00%	0.02%	-8.81%	-5.71%	5.48%	6.03%			
Real Estate	-0.08%	-0.13%	0.05%	0.00%	-13.00%	-10.52%	5.08%	5.15%			
Cash	0.15%	0.00%	0.15%	0.00%	0.46%	--	2.69%	0.00%			
Portfolio	0.30%	=	-0.86%	+	0.43%	+	0.74%	-5.49%	-5.78%	100.00%	100.00%

eV US Large Cap Growth Equity Gross Return Comparison



	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-0.43		-15.83		-11.54		6.06		13.58		14.22		15.03		15.07	
25th Percentile	-3.07		-20.57		-19.37		1.71		9.87		11.75		13.03		13.52	
Median	-4.15		-23.78		-24.90		-1.80		8.40		10.59		12.22		12.71	
75th Percentile	-5.28		-25.89		-29.97		-5.61		6.53		9.51		11.15		11.92	
95th Percentile	-6.98		-28.84		-37.73		-11.66		2.63		6.52		9.14		10.37	
# of Portfolios	259		259		259		257		253		241		222		207	
● TCW	-6.28	(91)	-27.27	(86)	-33.34	(86)	-7.16	(83)	6.56	(75)	10.29	(58)	11.12	(76)	11.80	(79)
▲ Russell 1000 Growth	-3.60	(37)	-23.77	(50)	-22.59	(41)	-0.72	(43)	10.67	(19)	12.16	(19)	13.74	(16)	13.70	(19)

Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	32	518
Weighted Avg. Market Cap. (\$B)	348.2	708.7
Median Market Cap. (\$B)	100.9	14.7
Price To Earnings	36.6	25.0
Price To Book	7.2	9.1
Price To Sales	3.6	2.6
Return on Equity (%)	32.5	44.2
Yield (%)	0.6	1.1
Beta	1.0	1.0

Top Holdings

ALPHABET INC	7.2%
AMAZON.COM INC	6.7%
SERVICENOW INC	5.6%
VISA INC	5.1%
AMERICAN TOWER CORP	4.7%
MICROSOFT CORP	4.6%
S&P GLOBAL INC	4.4%
NVIDIA CORPORATION	4.1%
COSTCO WHOLESALE CORP	3.7%
SALESFORCE INC	3.6%

Best Performers

	Return %
TRADE DESK INC (THE) (TTD)	42.6%
ENPHASE ENERGY INC (ENPH)	42.1%
PAYPAL HOLDINGS INC (PYPL)	23.2%
SNOWFLAKE INC (SNOW)	22.2%
SCHWAB (CHARLES) CORP (SCHW)	14.1%
WASTE CONNECTIONS INC. (WCN)	9.2%
DEXCOM INC (DXCM)	8.1%
AMAZON.COM INC (AMZN)	6.4%
ULTA BEAUTY INC (ULTA)	4.1%
BOSTON SCIENTIFIC CORP (BSX)	3.9%

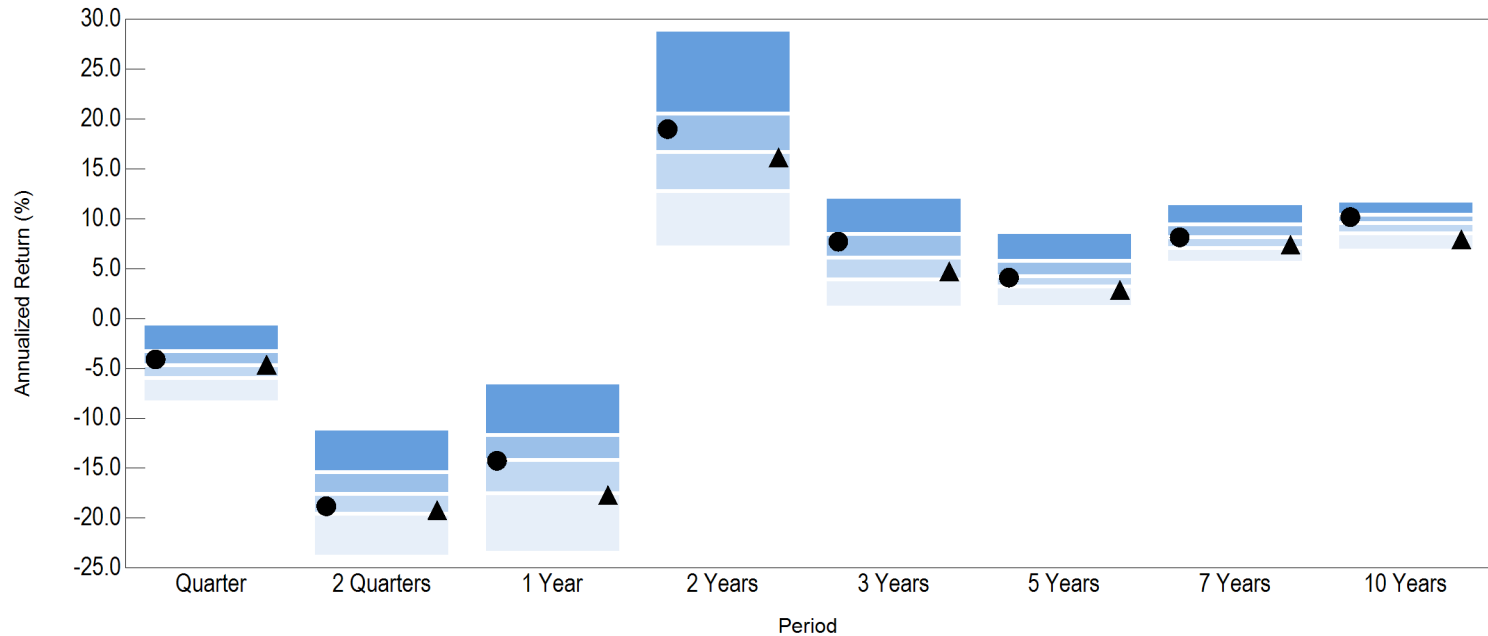
Worst Performers

	Return %
TRANSUNION (TRU)	-25.5%
ADOBE INC (ADBE)	-24.8%
SERVICENOW INC (NOW)	-20.6%
NVIDIA CORPORATION (NVDA)	-19.9%
NIKE INC (NKE)	-18.4%
TWILIO INC (TWLO)	-17.5%
IQVIA HOLDINGS INC (IQV)	-16.5%
AMERICAN TOWER CORP (AMT)	-16.0%
META PLATFORMS INC (META)	-15.9%
ZOETIS INC (ZTS)	-13.6%

TCW Performance Attribution vs. Russell 1000 Growth

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.09%	--	-0.09%	--	--	4.97%	0.00%	1.16%			
Materials	0.01%	--	0.01%	--	--	-4.11%	0.00%	1.39%			
Industrials	-0.39%	-0.52%	-0.05%	0.19%	-8.83%	-1.55%	4.58%	7.07%			
Consumer Discretionary	-0.94%	-0.81%	-0.26%	0.13%	0.85%	6.12%	12.95%	15.54%			
Consumer Staples	0.30%	0.35%	0.10%	-0.15%	-1.30%	-6.83%	3.45%	5.88%			
Health Care	-0.25%	-0.23%	0.02%	-0.04%	-7.91%	-4.82%	12.22%	12.37%			
Financials	0.11%	0.01%	0.10%	0.01%	-0.79%	-0.84%	6.89%	2.96%			
Information Technology	-0.95%	-1.04%	0.03%	0.06%	-7.47%	-5.27%	41.22%	43.68%			
Communication Services	-0.27%	-0.11%	-0.13%	-0.02%	-12.65%	-11.33%	10.21%	8.12%			
Utilities	0.00%	--	0.00%	--	--	-2.76%	0.00%	0.05%			
Real Estate	-0.48%	-0.08%	-0.25%	-0.15%	-16.00%	-11.49%	5.15%	1.78%			
Cash	0.22%	0.00%	0.22%	0.00%	0.46%	--	3.34%	0.00%			
Portfolio	-2.73%	=	-2.44%	+	-0.31%	+	0.02%	-6.34%	-3.61%	100.00%	100.00%

eV US Small Cap Value Equity Gross Return Comparison



Return (Rank)

5th Percentile	-0.52	-11.06	-6.46	28.92	12.16	8.67	11.55	11.80
25th Percentile	-3.23	-15.35	-11.62	20.59	8.53	5.80	9.51	10.44
Median	-4.63	-17.50	-14.14	16.75	6.11	4.29	8.20	9.60
75th Percentile	-5.92	-19.54	-17.48	12.83	3.96	3.24	7.13	8.56
95th Percentile	-8.38	-23.82	-23.45	7.15	1.14	1.18	5.61	6.84
# of Portfolios	206	206	206	204	202	191	184	173
● Kennedy	-4.09 (43)	-18.81 (67)	-14.25 (53)	18.99 (39)	7.71 (33)	4.11 (57)	8.14 (52)	10.17 (33)
▲ Russell 2000 Value	-4.61 (50)	-19.18 (72)	-17.69 (76)	16.16 (55)	4.72 (70)	2.87 (81)	7.42 (70)	7.94 (85)

Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	260	1,394
Weighted Avg. Market Cap. (\$B)	3.0	2.2
Median Market Cap. (\$B)	1.9	0.9
Price To Earnings	12.2	9.5
Price To Book	1.8	1.5
Price To Sales	1.2	1.0
Return on Equity (%)	9.3	5.9
Yield (%)	1.7	2.5
Beta	1.0	1.0

Top Holdings

FIRST INTERSTATE BANCSYSTEM INC	1.1%
BANNER CORP	1.0%
CASELLA WASTE SYSTEMS INC	1.0%
INTERNATIONAL BANCSHARES CORP	1.0%
FIRST INTERNET BANCORP	0.9%
BARRETT BUSINESS SERVICES INC	0.9%
HANCOCK WHITNEY CORP	0.8%
AMERICAN EQUITY INVESTMENT LIFE HOLDING CO	0.8%
PDC ENERGY INC	0.8%
WINTRUST FINANCIAL CORP.	0.8%

Best Performers

	Return %
APPLIED OPTOELECTRONICS INC (AAOI)	75.5%
YELLOW CORP (YELL)	73.0%
Cogent Biosciences Inc (COGT)	65.4%
BIOLIFE SOLUTIONS INC (BLFS)	64.7%
COWEN INC (COWN)	63.6%
ZEVIA PBC	53.7%
GERON CORP (GERN)	51.0%
HARMONIC INC (HLIT)	50.8%
EXTREME NETWORKS INC (EXTR)	46.5%
NAPCO SECURITY TECHNOLOGIES INC (NSSC)	41.2%

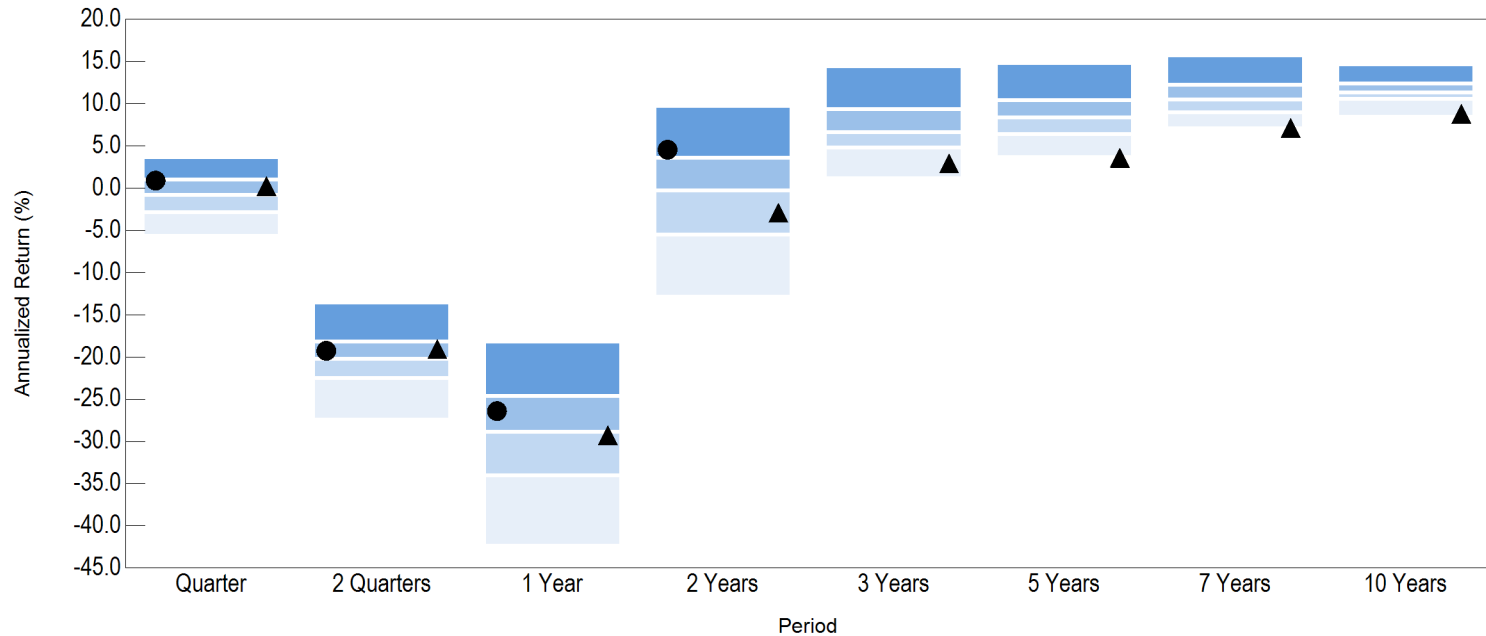
Worst Performers

	Return %
HALLMARK FINANCIAL SERVICES INC (HALL)	-56.6%
ARGO GROUP INTERNATIONAL HOLDINGS LTD (ARGO)	-46.9%
OPTIMIZERX CORP (OPRX)	-45.9%
GREAT LAKES DREDGE & DOCK CORP (GLDD)	-42.2%
ROCKY BRANDS INC (RCKY)	-41.0%
HELEN OF TROY LTD (HELE)	-40.6%
AMERICA'S CAR-MART INC (CRMT)	-39.3%
MERCURY SYSTEMS INC (MRCY)	-36.9%
FORMFACTOR INC (FORM)	-35.3%
HIMAX TECHNOLOGIES INC (HIMX)	-35.3%

Kennedy Performance Attribution vs. Russell 2000 Value

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.41%	-0.46%	0.27%	-0.22%	-2.59%	7.06%	7.04%	4.79%			
Materials	-0.10%	0.00%	-0.11%	0.00%	-9.41%	-9.44%	6.08%	3.81%			
Industrials	1.17%	0.94%	-0.10%	0.33%	0.27%	-7.13%	17.24%	12.86%			
Consumer Discretionary	-0.57%	-0.61%	0.00%	0.03%	-11.88%	-5.48%	8.93%	9.47%			
Consumer Staples	0.23%	0.20%	-0.06%	0.09%	-2.53%	-9.63%	4.07%	2.84%			
Health Care	-1.01%	-1.09%	-0.31%	0.39%	-6.77%	3.36%	6.85%	10.74%			
Financials	0.50%	0.77%	-0.12%	-0.15%	0.17%	-2.48%	23.48%	28.89%			
Information Technology	0.49%	0.29%	-0.02%	0.21%	-0.24%	-5.16%	10.28%	5.93%			
Communication Services	0.19%	-0.02%	0.20%	0.01%	-15.25%	-14.53%	1.21%	3.26%			
Utilities	0.10%	0.03%	0.07%	-0.01%	-8.89%	-9.42%	3.81%	5.40%			
Real Estate	0.22%	0.06%	0.17%	-0.01%	-10.87%	-11.36%	9.41%	12.00%			
Cash	0.08%	0.00%	0.08%	0.00%	0.46%	--	1.62%	0.00%			
Portfolio	0.88%	=	0.11%	+	0.08%	+	0.69%	-3.86%	-4.74%	100.00%	100.00%

eV US Small Cap Growth Equity Gross Return Comparison



	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	3.61	-13.56	-18.20	9.68	14.42	14.81	15.66	14.60								
25th Percentile	1.02	-18.14	-24.60	3.67	9.41	10.50	12.32	12.47								
Median	-0.76	-20.14	-28.80	-0.22	6.68	8.38	10.56	11.38								
75th Percentile	-2.84	-22.46	-34.00	-5.46	4.85	6.45	9.06	10.59								
95th Percentile	-5.61	-27.41	-42.34	-12.79	1.22	3.73	7.16	8.49								
# of Portfolios	151	151	151	151	148	146	137	125								
● William Blair Small Cap Growth	0.89 (27)	-19.28 (38)	-26.41 (30)	4.55 (21)	-- (--)	-- (--)	-- (--)	-- (--)								
▲ Russell 2000 Growth	0.24 (36)	-19.06 (36)	-29.27 (54)	-2.92 (67)	2.93 (90)	3.60 (96)	7.12 (96)	8.81 (94)								

Characteristics

	Portfolio	Russell 2000 Growth
Number of Holdings	3,383	1,121
Weighted Avg. Market Cap. (\$B)	229.4	3.0
Median Market Cap. (\$B)	9.2	1.2
Price To Earnings	15.0	15.4
Price To Book	2.9	3.5
Price To Sales	1.5	1.6
Return on Equity (%)	19.8	2.9
Yield (%)	2.4	0.8
Beta		1.0

Top Holdings

BWX TECHNOLOGIES INC	2.8%
VERRA MOBILITY CORP	2.6%
CASELLA WASTE SYSTEMS INC	2.5%
NATIONAL VISION HOLDINGS INC	2.5%
MERIT MEDICAL SYSTEMS INC	2.3%
BRINK'S CO (THE)	2.1%
ENERGY RECOVERY INC	1.9%
ALBANY INTERNATIONAL CORP.	1.9%
Denbury Inc.	1.9%
HEALTHEQUITY INC	1.8%

Best Performers

	Return %
STEM INC	86.3%
BTRS HOLDINGS INC	85.9%
WINGSTOP INC (WING)	68.0%
TREACE MEDICAL CONCEPTS INC	53.9%
PENUMBRA INC (PEN)	52.3%
COMPUTER SERVICES INC (CSVI)	51.6%
AXOGEN INC (AXGN)	45.5%
Denbury Inc. (DEN)	43.8%
CELSIUS HOLDINGS INC (CELH)	39.0%
VITAL FARMS INC (VITL)	36.8%

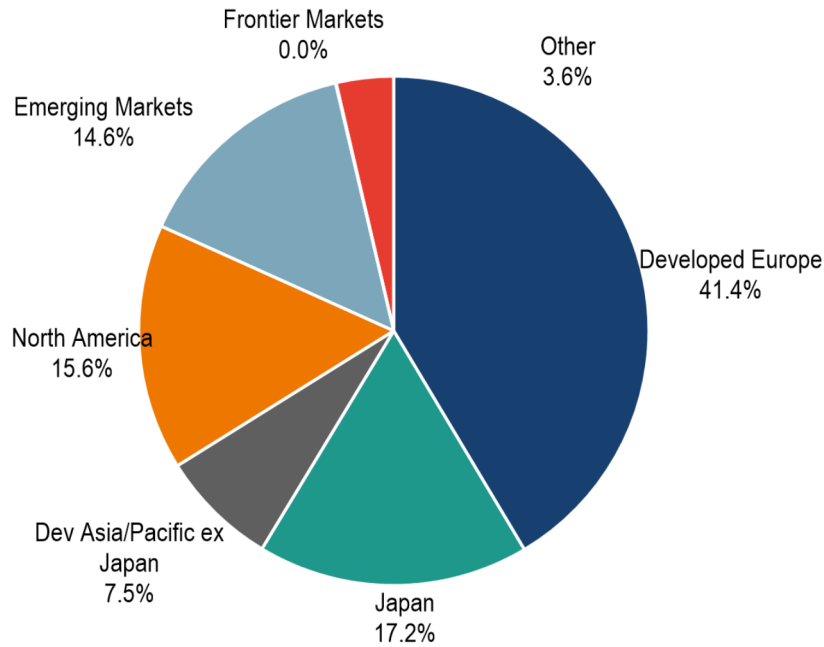
Worst Performers

	Return %
SITIME CORP (SITM)	-51.7%
UPLAND SOFTWARE INC (UPLD)	-44.0%
CODEXIS INC (CDXS)	-42.1%
AZENTA INC (AZTA)	-40.6%
CERTARA INC (CERT)	-38.1%
MERCURY SYSTEMS INC (MRCY)	-36.9%
CENTURY ALUMINUM CO (CENX)	-28.4%
ARTIVION INC (AORT)	-26.7%
GOGO INC (GOGO)	-25.1%
EURONET WORLDWIDE INC (EFTT)	-24.7%

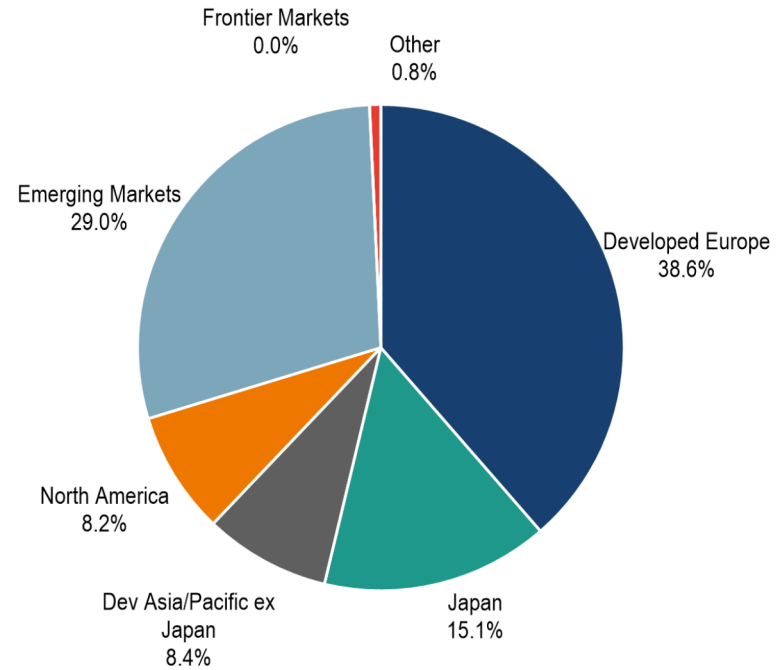
William Blair Small Cap Growth Performance Attribution vs. Russell 2000 Growth

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	1.03%	0.88%	0.03%	0.11%	18.32%	3.83%	6.89%	6.15%			
Materials	-0.24%	-0.76%	0.06%	0.46%	-18.74%	-1.98%	2.30%	4.40%			
Industrials	-0.70%	-0.57%	0.00%	-0.13%	-3.10%	-0.23%	21.31%	17.20%			
Consumer Discretionary	0.50%	0.53%	-0.04%	0.01%	6.39%	1.33%	9.44%	10.46%			
Consumer Staples	0.72%	0.71%	0.01%	0.00%	8.03%	-6.72%	4.75%	4.69%			
Health Care	-1.87%	-1.80%	0.04%	-0.11%	-0.28%	8.08%	24.88%	22.67%			
Financials	-0.08%	-0.34%	0.04%	0.23%	-6.20%	-0.65%	2.02%	5.93%			
Information Technology	0.71%	0.69%	0.04%	-0.03%	-0.38%	-4.20%	19.79%	21.42%			
Communication Services	-0.10%	-0.01%	-0.08%	-0.01%	-5.87%	-5.38%	3.66%	2.31%			
Utilities	0.07%	--	0.07%	--	--	-3.45%	0.00%	1.78%			
Real Estate	0.36%	0.30%	0.16%	-0.09%	-8.13%	-18.22%	2.03%	2.87%			
Cash	0.10%	0.00%	0.10%	0.00%	0.46%	--	2.93%	0.00%			
Portfolio	0.49%	=	-0.37%	+	0.43%	+	0.44%	0.70%	0.20%	100.00%	100.00%

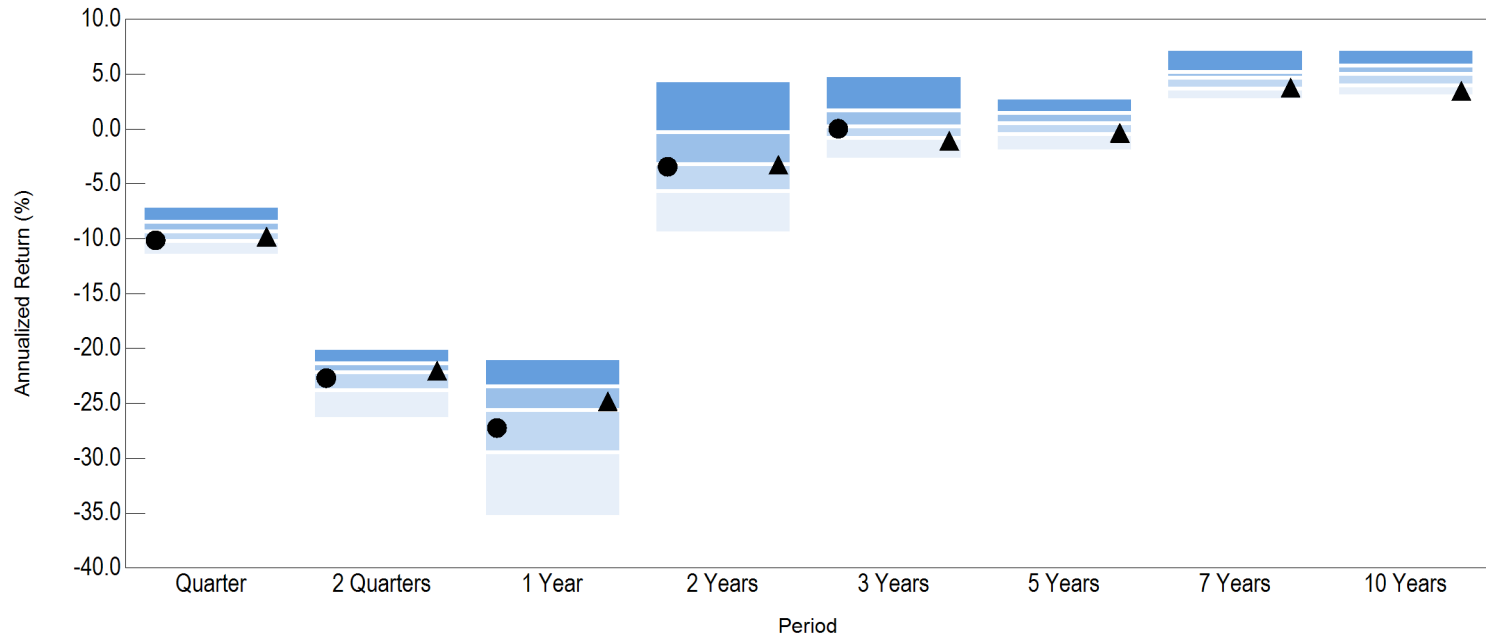
International Equity



MSCI ACWI ex US IMI



eV ACWI ex-US All Cap Core Eq Gross Return Comparison



	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
Return (Rank)																
5th Percentile	-7.01		-19.99		-20.91		4.40		4.90		2.85		7.27		7.28	
25th Percentile	-8.43		-21.30		-23.42		-0.26		1.73		1.49		5.23		5.82	
Median	-9.29		-22.11		-25.56		-3.15		0.26		0.56		4.69		5.04	
75th Percentile	-10.18		-23.75		-29.42		-5.63		-0.81		-0.43		3.69		4.00	
95th Percentile	-11.54		-26.42		-35.32		-9.48		-2.77		-2.03		2.64		3.00	
# of Portfolios	59		59		59		59		56		54		48		45	
● Bivium Intl Equity	-10.14	(75)	-22.69	(61)	-27.24	(62)	-3.43	(54)	0.02	(58)	--	(--)	--	(--)	--	(--)
▲ MSCI ACWI ex USA Gross	-9.80	(65)	-22.02	(48)	-24.79	(38)	-3.25	(53)	-1.07	(83)	-0.34	(73)	3.78	(71)	3.48	(88)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	432	2,270
Weighted Avg. Market Cap. (\$B)	38.6	71.1
Median Market Cap. (\$B)	6.2	7.8
Price To Earnings	9.4	11.4
Price To Book	2.3	2.4
Price To Sales	0.9	1.2
Return on Equity (%)	13.5	15.1
Yield (%)	3.9	3.7
Beta	1.1	1.0

Top Holdings

NOVO NORDISK 'B'	1.5%
SANDS CHINA LTD	1.4%
BAIDU INC	1.3%
ALIBABA GROUP HOLDING LTD	1.1%
DIAGEO PLC	1.1%
SAGE GROUP PLC	1.1%
SHELL PLC	1.0%
ROCHE HOLDING AG	1.0%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	0.9%
SONOVA HOLDING AG	0.9%

Best Performers

	Return %
ABACORE CAPITAL HOLDINGS INC	46.1%
EDF	42.9%
C&A MODAS S A	37.8%
PAGSEGURO DIGITAL LTD (PAGS)	29.2%
PETROLEO BRASILEIRO S.A.- PETROBRAS (PBR)	25.7%
PETROLEO BRASILEIRO S.A.- PETROBRAS	25.0%
PETROLEO BRASILEIRO S.A.- PETROBRAS	24.9%
SAMSONITE INTERNATIONAL SA	21.7%
POYA INTL. (TW:POY)	21.4%
EMECO HOLDINGS LTD	21.1%

Worst Performers

	Return %
SAIPEM SPA	-76.6%
CECONOMY AG	-57.8%
NORWAY ROYAL SALMON AS	-46.4%
POU SHENG INTERNATIONAL (HOLDINGS) LTD	-43.8%
FRESENIUS MEDICAL CARE AG &CO KGAA	-42.8%
CHINASOFT INTERNATIONAL LTD	-39.9%
BT GROUP PLC	-38.2%
IWG PLC	-38.1%
ENSIGN ENERGY SERVICES INC (ESI.)	-37.1%
CHINA LESSO GROUP HOLDINGS LTD	-36.9%

Bivium Intl Equity Performance Attribution vs. MSCI ACWI ex USA Gross

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.01%	-0.15%	-0.12%	0.27%	-7.73%	-6.10%	3.23%	6.03%			
Materials	-0.16%	-0.39%	-0.05%	0.29%	-11.69%	-7.81%	5.77%	8.03%			
Industrials	-0.28%	-0.12%	0.09%	-0.24%	-9.16%	-8.22%	15.77%	11.81%			
Consumer Discretionary	0.00%	0.08%	-0.07%	-0.01%	-11.61%	-13.03%	14.18%	11.73%			
Consumer Staples	-0.07%	-0.24%	-0.13%	0.30%	-8.78%	-6.35%	5.67%	8.94%			
Health Care	-0.21%	-0.21%	0.00%	0.01%	-12.94%	-10.89%	9.72%	9.80%			
Financials	-0.01%	-0.28%	-0.09%	0.36%	-9.26%	-7.90%	14.42%	20.29%			
Information Technology	0.03%	-0.23%	0.05%	0.22%	-12.94%	-12.18%	10.23%	11.01%			
Communication Services	0.27%	-0.34%	0.26%	0.34%	-20.55%	-16.47%	3.02%	6.50%			
Utilities	0.12%	0.12%	0.01%	-0.01%	-8.85%	-10.79%	1.68%	3.39%			
Real Estate	-0.02%	0.11%	-0.04%	-0.08%	-12.77%	-14.52%	3.00%	2.47%			
Cash	0.14%	0.00%	0.14%	0.00%	0.46%	--	2.66%	0.00%			
Unclassified	-0.64%	0.00%	-0.38%	-0.26%	-10.74%	--	10.63%	0.00%			
Portfolio	-0.83%	=	-1.66%	+	-0.35%	+	1.18%	-10.70%	-9.87%	100.00%	100.00%

Bivium Intl Equity Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	-19.06%	-15.01%	1.29%	0.11%	-0.01%	-0.05%	-0.06%	-0.06%	-0.17%
Belgium	-17.70%	-13.20%	0.77%	0.63%	-0.03%	0.00%	-0.01%	-0.01%	-0.05%
Czech Republic*	--	-18.34%	0.00%	0.05%	--	0.00%	0.00%	--	0.01%
Denmark	-11.18%	-12.23%	2.87%	1.72%	0.02%	-0.02%	-0.07%	0.01%	-0.06%
Finland	-2.38%	-7.02%	0.44%	0.62%	0.03%	-0.01%	0.01%	-0.01%	0.02%
France	-8.51%	-8.73%	9.06%	6.98%	0.00%	0.04%	-0.11%	0.00%	-0.06%
Germany	-19.78%	-12.49%	3.29%	4.85%	-0.38%	0.03%	0.11%	0.12%	-0.12%
Greece*	--	-7.40%	0.00%	0.08%	--	0.00%	0.00%	--	0.00%
Hungary*	--	-14.94%	0.00%	0.05%	--	0.00%	0.01%	--	0.00%
Ireland	-12.98%	-5.31%	0.37%	0.35%	-0.04%	0.00%	0.01%	0.00%	-0.03%
Italy	-4.71%	-8.27%	1.39%	1.42%	0.05%	0.00%	0.00%	0.00%	0.05%
Luxembourg	21.73%	-9.87%	0.06%	0.00%	0.00%	0.00%	0.00%	0.02%	0.02%
Netherlands	-9.30%	-10.61%	3.64%	2.56%	0.04%	0.00%	-0.07%	0.02%	-0.02%
Norway	-25.13%	-14.84%	0.87%	0.52%	-0.06%	-0.01%	-0.02%	-0.04%	-0.13%
Poland*	--	-24.35%	0.00%	0.18%	--	0.02%	0.01%	--	0.04%
Portugal	--	-10.81%	0.00%	0.15%	--	0.00%	0.01%	--	0.01%
Spain	-24.40%	-14.04%	1.14%	1.55%	-0.17%	0.01%	0.03%	0.05%	-0.08%
Sweden	-6.47%	-8.87%	2.98%	2.08%	0.05%	0.03%	-0.07%	0.02%	0.03%
Switzerland	-12.84%	-7.43%	7.19%	6.49%	-0.35%	0.00%	-0.01%	-0.04%	-0.41%
United Kingdom	-12.08%	-11.01%	10.81%	9.93%	-0.12%	0.02%	-0.05%	-0.01%	-0.17%

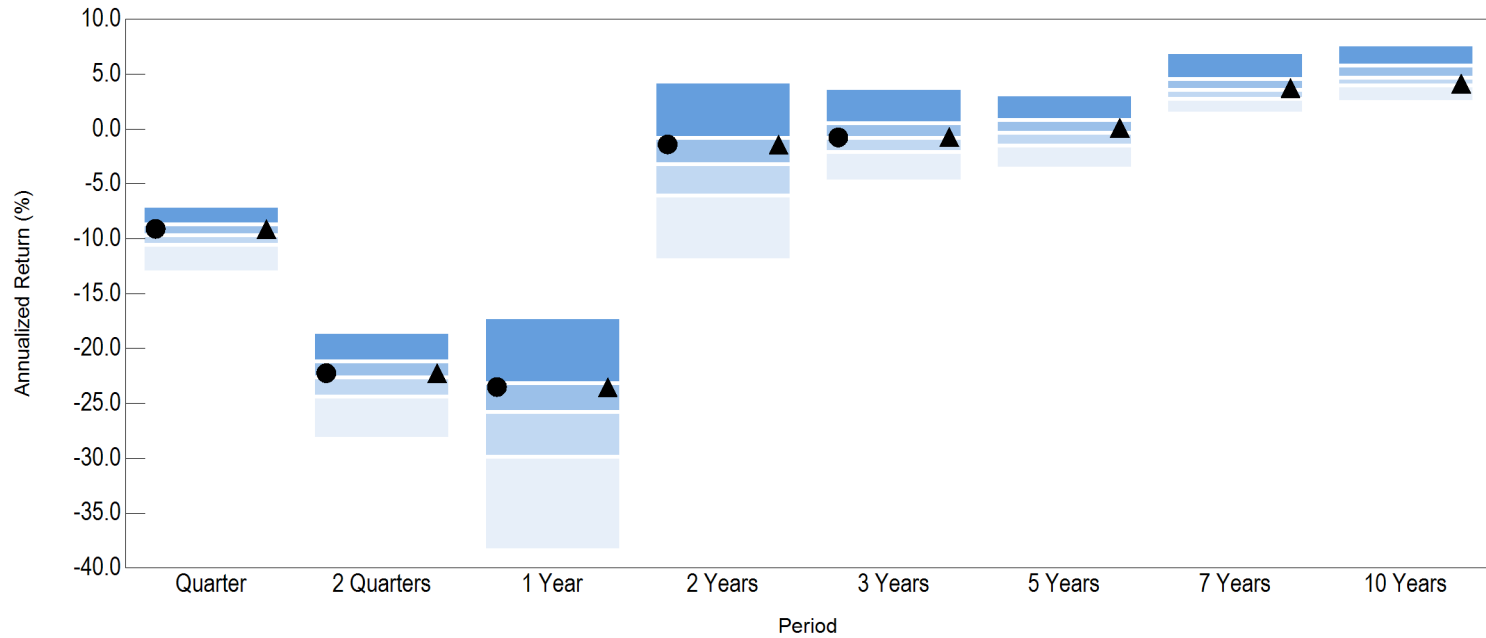
Bivium Intl Equity Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	-8.26%	-6.62%	1.92%	4.85%	-0.09%	-0.14%	0.19%	0.05%	0.02%
China*	-22.67%	-22.44%	5.21%	10.48%	-0.11%	0.89%	0.09%	0.06%	0.92%
Hong Kong	-15.09%	-16.94%	7.13%	2.08%	0.04%	-0.61%	0.00%	0.09%	-0.48%
India*	7.94%	6.60%	0.83%	3.79%	-0.07%	-0.43%	0.12%	0.05%	-0.32%
Indonesia*	-2.38%	7.96%	0.41%	0.54%	-0.06%	-0.02%	0.00%	0.01%	-0.06%
Japan	-6.57%	-7.58%	14.90%	13.86%	0.15%	0.03%	-0.07%	0.01%	0.12%
Korea*	-17.08%	-17.09%	2.76%	3.34%	-0.20%	0.02%	0.22%	0.03%	0.07%
Malaysia*	-5.01%	-7.31%	0.20%	0.43%	0.01%	-0.01%	0.01%	-0.01%	0.01%
New Zealand	-15.70%	-7.98%	0.70%	0.11%	-0.01%	0.03%	-0.05%	-0.05%	-0.07%
Philippines*	-12.09%	-13.55%	0.10%	0.21%	0.00%	0.00%	0.01%	0.00%	0.01%
Singapore	5.01%	-1.51%	1.71%	0.90%	0.06%	0.05%	-0.03%	0.06%	0.14%
Taiwan*	-10.17%	-13.99%	1.22%	4.31%	0.02%	0.10%	0.22%	-0.02%	0.33%
Thailand*	-7.45%	-2.85%	0.22%	0.56%	-0.04%	-0.03%	0.03%	0.02%	-0.02%
Americas									
Brazil*	17.40%	8.53%	1.18%	1.45%	0.11%	-0.05%	0.02%	-0.02%	0.07%
Canada	-15.30%	-7.80%	3.64%	8.10%	-0.65%	-0.13%	0.29%	0.36%	-0.14%
Chile*	10.86%	2.75%	0.12%	0.15%	0.01%	0.00%	0.00%	0.00%	0.01%
Colombia*	--	-18.30%	0.00%	0.05%	--	0.00%	0.00%	--	0.01%
Mexico*	--	-5.62%	0.00%	0.62%	--	0.01%	0.00%	--	0.01%
Peru*	--	-0.90%	0.00%	0.07%	--	0.00%	0.00%	--	0.00%
United States	-11.89%	-4.81%	7.63%	0.00%	0.00%	0.00%	0.00%	-0.54%	-0.54%

Bivium Intl Equity Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	-2.44%	0.00%	0.02%	--	0.00%	0.00%	--	0.00%
Israel	-3.30%	-3.34%	0.29%	0.47%	0.00%	0.00%	0.00%	0.00%	0.00%
Kuwait*	--	-5.65%	0.00%	0.24%	--	0.00%	0.00%	--	0.00%
Qatar*	--	0.94%	0.00%	0.31%	--	-0.02%	0.00%	--	-0.02%
Saudi Arabia*	--	-0.68%	0.00%	1.25%	--	-0.05%	0.00%	--	-0.05%
South Africa*	-13.14%	-12.25%	0.37%	1.05%	-0.01%	-0.01%	0.06%	0.01%	0.05%
Turkey*	--	16.40%	0.00%	0.08%	--	-0.03%	0.01%	--	-0.02%
United Arab Emirates*	6.66%	-2.53%	0.44%	0.38%	0.03%	0.00%	0.00%	0.01%	0.04%
Totals									
Americas	-9.92%	-5.26%	12.57%	10.43%	-0.85%	0.10%	0.32%	-0.17%	-0.60%
Europe	-11.89%	-10.20%	46.22%	40.30%	-0.74%	0.03%	-0.29%	-0.11%	-1.10%
Asia/Pacific	-10.71%	-11.12%	37.31%	45.46%	-0.27%	0.16%	0.73%	0.05%	0.67%
Other	-2.63%	-4.20%	1.10%	3.81%	0.07%	-0.10%	0.08%	-0.05%	0.00%
Cash	0.46%	--	2.81%	0.00%	0.00%	0.15%	0.00%	0.00%	0.15%
Total	-10.76%	-9.87%	100.00%	100.00%	-1.78%	0.34%	0.84%	-0.29%	-0.88%
Totals									
Developed	-10.94%	-9.16%	84.09%	70.32%	-1.94%	0.19%	0.02%	-0.38%	-2.11%
Emerging*	-11.95%	-11.57%	13.10%	29.68%	-0.66%	0.55%	0.82%	0.37%	1.08%
Cash	0.46%	--	2.81%	0.00%	0.00%	0.15%	0.00%	0.00%	0.15%

eV All EAFE Equity Gross Return Comparison



	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-7.05		-18.52		-17.18		4.27		3.71		3.15		6.98		7.69	
25th Percentile	-8.64		-21.16		-23.12		-0.79		0.56		0.83		4.59		5.82	
Median	-9.64		-22.60		-25.73		-3.15		-0.75		-0.32		3.62		4.73	
75th Percentile	-10.51		-24.37		-29.85		-6.01		-2.04		-1.45		2.80		4.00	
95th Percentile	-13.01		-28.20		-38.32		-11.95		-4.76		-3.60		1.42		2.47	
# of Portfolios	391		391		391		379		370		346		309		252	
● BlackRock MSCI World ex-US Index Fd A	-9.10	(33)	-22.24	(43)	-23.51	(29)	-1.40	(31)	-0.76	(51)	--	(--)	--	(--)	--	(--)
▲ MSCI World ex US Gross	-9.11	(33)	-22.24	(43)	-23.50	(29)	-1.40	(31)	-0.72	(50)	0.11	(40)	3.73	(48)	4.14	(69)

Characteristics

	Portfolio	MSCI World ex USA
Number of Holdings	889	886
Weighted Avg. Market Cap. (\$B)	65.0	65.1
Median Market Cap. (\$B)	10.5	10.6
Price To Earnings	12.2	12.1
Price To Book	2.3	2.3
Price To Sales	1.3	1.3
Return on Equity (%)	15.0	14.9
Yield (%)	3.6	3.7
Beta	1.0	1.0

Top Holdings

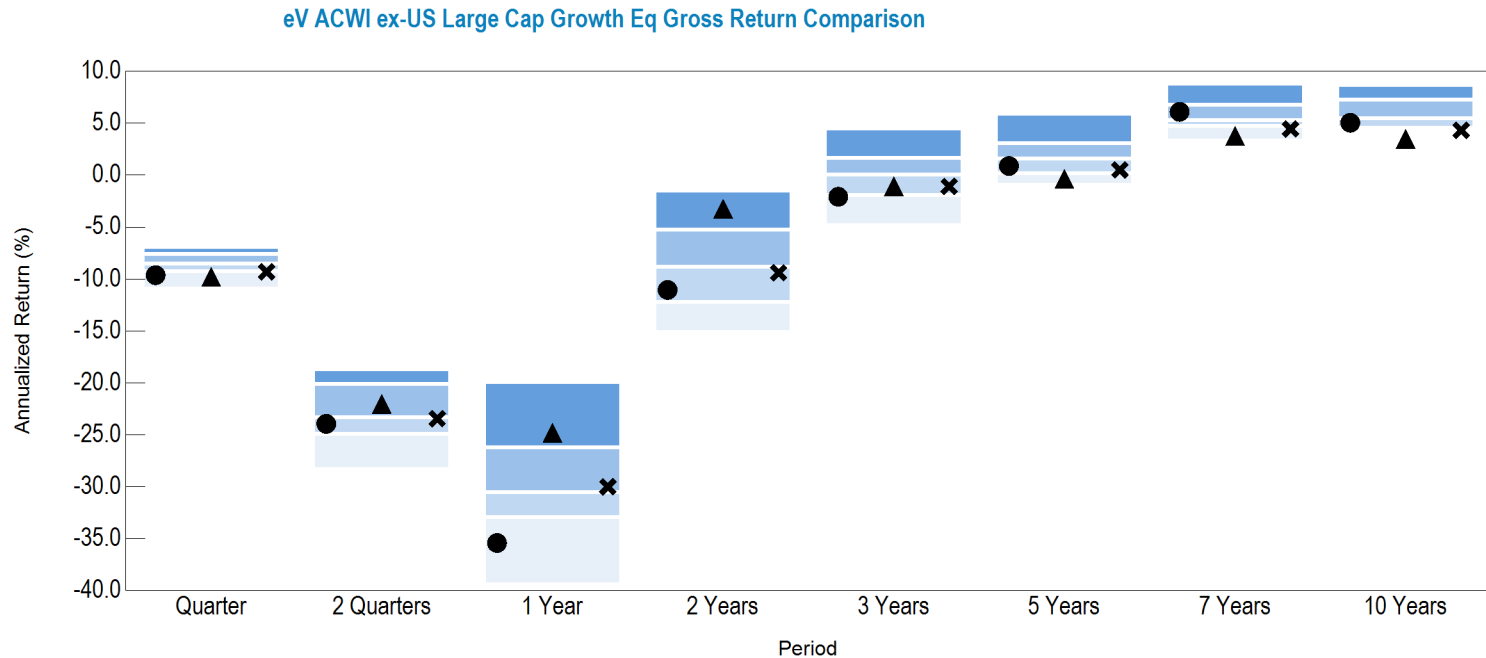
NESTLE SA, CHAM UND VEVEY	2.1%
ROCHE HOLDING AG	1.6%
SHELL PLC	1.4%
ASTRAZENECA PLC	1.3%
ASML HOLDING NV	1.3%
LVMH MOET HENNESSY LOUIS VUITTON SE	1.2%
NOVO NORDISK 'B'	1.2%
NOVARTIS AG	1.1%
TOYOTA MOTOR CORP	1.0%
ROYAL BANK OF CANADA	0.9%

Best Performers

	Return %
EDF	42.9%
MINERAL RESOURCES LTD	29.5%
AVEVA GROUP (UKIR:AVV)	29.3%
WISETECH GLOBAL LTD	28.6%
EISAI CO LTD	28.4%
SWIRE PACIFIC LTD	28.3%
CAMECO CORP (CCO.)	27.1%
NIBE INDUSTRIER AB, MARKARYD	20.3%
WIX.COM LTD (WIX)	19.3%
CYBERARK SOFTWARE LTD (CYBR)	17.2%

Worst Performers

	Return %
UNIPER SE	-74.1%
SINCH AB (PUBL)	-58.3%
GRIFOLS S A	-53.8%
KION GROUP GMBH	-53.1%
SALMAR ASA	-51.8%
GN STORE NORD (DK:GSN)	-49.5%
OCADO GROUP PLC	-44.5%
ZIM INTEGRATED SHIPPING SERVICES LTD COM NPV	-44.5%
MOWI ASA	-43.1%
FRESENIUS MEDICAL CARE AG & CO KGAA	-42.8%



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-6.93	-18.71	-19.92	-1.53	4.48	5.87	8.81	8.66
25th Percentile	-7.53	-20.04	-26.18	-5.19	1.71	3.11	6.80	7.32
Median	-8.45	-23.27	-30.49	-8.76	0.10	1.66	5.32	5.53
75th Percentile	-9.20	-24.90	-32.90	-12.16	-1.91	0.24	4.76	4.61
95th Percentile	-10.88	-28.28	-39.35	-15.06	-4.77	-0.89	3.38	4.34
# of Portfolios	42	42	42	40	37	34	29	21
● Capital Group	-9.63 (83)	-23.94 (57)	-35.41 (83)	-11.05 (73)	-2.08 (79)	0.88 (58)	6.10 (41)	5.05 (66)
▲ MSCI ACWI ex USA Gross	-9.80 (84)	-22.02 (40)	-24.79 (16)	-3.25 (9)	-1.07 (66)	-0.34 (82)	3.78 (88)	3.48 (99)
✕ MSCI ACWI ex USA Growth Gross	-9.30 (81)	-23.45 (51)	-30.00 (46)	-9.40 (60)	-1.08 (66)	0.51 (68)	4.44 (83)	4.31 (96)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	223	2,270
Weighted Avg. Market Cap. (\$B)	78.2	71.1
Median Market Cap. (\$B)	22.1	7.8
Price To Earnings	16.8	11.4
Price To Book	3.2	2.4
Price To Sales	2.2	1.2
Return on Equity (%)	16.9	15.1
Yield (%)	2.3	3.7
Beta	1.1	1.0

Top Holdings

ASML HOLDING NV	2.5%
ASTRAZENECA PLC	2.4%
NOVO NORDISK 'B'	2.3%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	2.2%
KEYENCE CORP	2.2%
YANDEX NV	2.1%
GENMAB A/S	2.1%
EVOLUTION AB (PUBL)	2.0%
AIA GROUP LTD	2.0%
LVMH MOET HENNESSY LOUIS VUITTON SE	1.9%

Best Performers

	Return %
TCS GROUP HOLDING PLC	913.8%
ROSNEFT OIL COMPANY	267.9%
ORRON ENERGY AB (PUBL)	163.7%
MERCADOLIBRE INC (MELI)	30.0%
AVEVA GROUP (UKIR:AVV)	29.3%
PAGSEGURO DIGITAL LTD (PAGS)	29.2%
CAMECO CORP (CCO.)	27.1%
ICICI BANK LTD (IBN)	18.9%
TFI INTERNATIONAL INC (TFII.)	13.8%
AJINOMOTO CO INC	13.6%

Worst Performers

	Return %
COUNTRY GARDEN SERVICES HOLDINGS COMPANY LIMITED	-66.9%
XPENG INC CLASS A SHARES COMMON STOCK USD.00001	-63.6%
ADR XPENG INC ADS (XPEV)	-62.4%
SINCH AB (PUBL)	-58.3%
OCADO GROUP PLC	-44.5%
KINGDEE INTERNATIONAL SOFTWARE GROUP CO LTD	-44.1%
KUAISHOU TECHNOLOGY COMMON STOCK USD.0000053	-41.7%
BT GROUP PLC	-38.2%
P/F BAKKAFROST HOLDING	-37.5%
LONGFOR GROUP HOLDINGS LTD	-36.6%

Capital Group Performance Attribution vs. MSCI ACWI ex USA Gross

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.16%	0.28%	-0.18%	0.05%	-1.57%	-6.09%	2.34%	6.04%			
Materials	0.07%	-0.19%	-0.06%	0.33%	-7.61%	-7.76%	5.87%	8.04%			
Industrials	0.04%	0.03%	0.01%	0.00%	-7.79%	-8.24%	12.36%	11.82%			
Consumer Discretionary	0.53%	0.72%	-0.03%	-0.16%	-8.27%	-13.02%	12.42%	11.68%			
Consumer Staples	-0.77%	-0.93%	-0.04%	0.20%	-16.37%	-6.32%	7.84%	8.95%			
Health Care	0.01%	0.20%	-0.05%	-0.14%	-9.11%	-11.07%	13.91%	9.78%			
Financials	0.15%	-0.66%	-0.16%	0.97%	-9.41%	-7.93%	10.66%	20.32%			
Information Technology	-0.25%	0.16%	-0.14%	-0.27%	-9.87%	-12.10%	20.58%	10.99%			
Communication Services	0.17%	-0.09%	0.15%	0.11%	-17.47%	-16.47%	4.69%	6.51%			
Utilities	0.06%	-0.04%	0.01%	0.09%	-11.80%	-10.80%	1.99%	3.39%			
Real Estate	-0.14%	-0.61%	0.08%	0.39%	-37.44%	-14.56%	1.16%	2.48%			
Cash	0.32%	0.00%	0.32%	0.00%	0.46%	--	6.18%	0.00%			
Portfolio	0.36%	=	-1.14%	+	-0.08%	+	1.58%	-9.52%	-9.87%	100.00%	100.00%

Capital Group Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	-12.24%	-15.01%	0.00%	0.11%	0.00%	0.01%	0.01%	0.00%	0.01%
Belgium	-14.63%	-13.20%	0.58%	0.63%	-0.01%	0.00%	0.00%	0.00%	0.00%
Czech Republic*	--	-18.34%	0.00%	0.05%	--	0.00%	0.00%	--	0.01%
Denmark	-9.39%	-12.23%	6.68%	1.72%	0.05%	-0.08%	-0.32%	0.16%	-0.18%
Finland	-6.23%	-7.02%	0.27%	0.62%	0.01%	-0.01%	0.02%	0.00%	0.01%
France	-7.84%	-8.73%	10.72%	6.98%	0.07%	0.08%	-0.23%	0.04%	-0.05%
Germany	-12.54%	-12.49%	2.90%	4.85%	0.00%	0.04%	0.11%	0.00%	0.15%
Greece*	--	-7.40%	0.00%	0.08%	--	0.00%	0.00%	--	0.00%
Hungary*	--	-14.94%	0.00%	0.05%	--	0.00%	0.01%	--	0.00%
Ireland	-13.13%	-5.31%	0.20%	0.35%	-0.05%	-0.01%	0.02%	0.02%	-0.01%
Italy	-15.12%	-8.27%	0.78%	1.42%	-0.10%	-0.02%	0.04%	0.05%	-0.03%
Luxembourg	-20.82%	-9.87%	0.57%	0.00%	0.00%	0.00%	-0.03%	-0.06%	-0.09%
Netherlands	-11.18%	-10.61%	7.07%	2.56%	-0.01%	-0.01%	-0.27%	-0.02%	-0.30%
Norway	-13.94%	-14.84%	0.89%	0.52%	0.01%	-0.01%	-0.03%	0.00%	-0.03%
Poland*	--	-24.35%	0.00%	0.18%	--	0.02%	0.01%	--	0.04%
Portugal	-15.45%	-10.81%	0.00%	0.15%	-0.01%	0.00%	0.01%	0.01%	0.01%
Spain	-9.68%	-14.04%	1.61%	1.55%	0.07%	0.00%	-0.01%	0.00%	0.06%
Sweden	-14.42%	-8.87%	2.88%	2.08%	-0.13%	0.03%	-0.05%	-0.05%	-0.19%
Switzerland	-8.71%	-7.43%	7.30%	6.49%	-0.07%	0.00%	-0.04%	-0.01%	-0.12%
United Kingdom	-13.30%	-11.01%	8.66%	9.93%	-0.31%	-0.02%	0.17%	0.04%	-0.12%

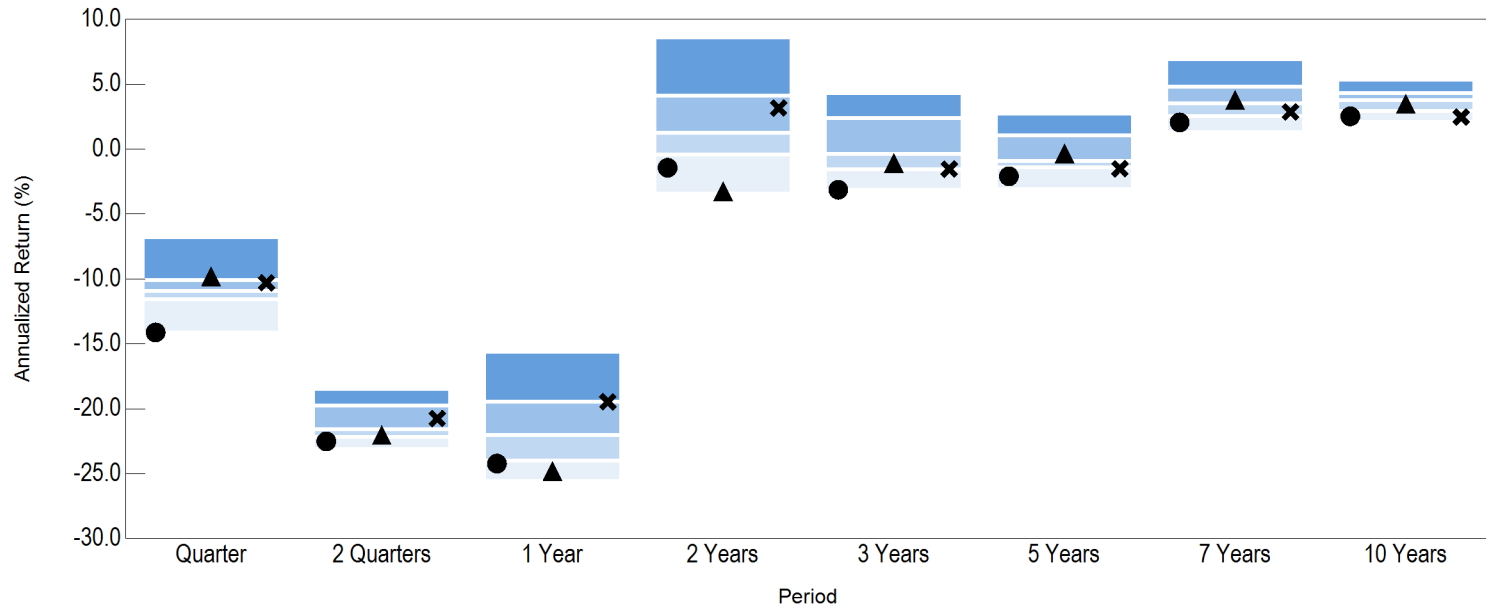
Capital Group Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	12.37%	-6.62%	0.35%	4.85%	0.61%	-0.21%	0.31%	-0.56%	0.15%
China*	-24.44%	-22.44%	4.97%	10.48%	-0.22%	0.93%	0.05%	0.11%	0.87%
Hong Kong	-24.92%	-16.94%	5.12%	2.08%	-0.16%	-0.37%	-0.01%	-0.23%	-0.78%
India*	9.16%	6.60%	1.77%	3.79%	-0.02%	-0.29%	0.12%	0.01%	-0.18%
Indonesia*	-7.04%	7.96%	0.07%	0.54%	-0.08%	-0.07%	0.01%	0.07%	-0.07%
Japan	-6.03%	-7.58%	14.18%	13.86%	0.23%	0.01%	-0.03%	0.01%	0.21%
Korea*	-15.95%	-17.09%	0.66%	3.34%	0.04%	0.09%	0.24%	-0.03%	0.34%
Malaysia*	--	-7.31%	0.00%	0.43%	--	-0.01%	0.02%	--	0.01%
New Zealand	--	-7.98%	0.00%	0.11%	--	-0.01%	0.01%	--	0.00%
Philippines*	--	-13.55%	0.00%	0.21%	--	0.01%	0.01%	--	0.02%
Singapore	10.28%	-1.51%	0.81%	0.90%	0.11%	-0.01%	0.00%	-0.01%	0.09%
Taiwan*	-18.18%	-13.99%	4.91%	4.31%	-0.28%	-0.02%	0.08%	-0.04%	-0.26%
Thailand*	-5.52%	-2.85%	0.15%	0.56%	-0.02%	-0.04%	0.03%	0.01%	-0.01%
Americas									
Argentina*	29.98%	19.87%	0.71%	0.00%	0.00%	0.17%	0.00%	0.07%	0.25%
Brazil*	0.31%	8.53%	3.70%	1.45%	-0.15%	0.38%	-0.01%	-0.23%	0.00%
Canada	3.94%	-7.80%	2.65%	8.10%	1.01%	-0.16%	0.31%	-0.68%	0.48%
Chile*	--	2.75%	0.00%	0.15%	--	-0.02%	0.00%	--	-0.01%
Colombia*	--	-18.30%	0.00%	0.05%	--	0.00%	0.00%	--	0.01%
Mexico*	-7.84%	-5.62%	0.31%	0.62%	-0.01%	0.00%	0.00%	0.01%	0.00%
Peru*	--	-0.90%	0.00%	0.07%	--	0.00%	0.00%	--	0.00%
United States	-7.12%	-4.81%	0.71%	0.00%	0.00%	0.00%	0.00%	-0.02%	-0.02%

Capital Group Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	-2.44%	0.00%	0.02%	--	0.00%	0.00%	--	0.00%
Israel	-2.19%	-3.34%	0.59%	0.47%	0.00%	0.00%	0.01%	0.00%	0.01%
Kuwait*	--	-5.65%	0.00%	0.24%	--	0.00%	0.00%	--	0.00%
Qatar*	--	0.94%	0.00%	0.31%	--	-0.02%	0.00%	--	-0.02%
Saudi Arabia*	--	-0.68%	0.00%	1.25%	--	-0.05%	0.00%	--	-0.05%
South Africa*	-22.53%	-12.25%	0.58%	1.05%	-0.12%	-0.01%	0.05%	0.05%	-0.03%
Turkey*	--	16.40%	0.00%	0.08%	--	-0.03%	0.01%	--	-0.02%
United Arab Emirates*	--	-2.53%	0.00%	0.38%	--	-0.01%	0.00%	--	-0.01%
Totals									
Americas	3.14%	-5.26%	8.09%	10.43%	0.64%	-0.11%	0.30%	-0.14%	0.69%
Europe	-10.85%	-10.20%	51.56%	40.30%	-0.33%	0.07%	-0.59%	-0.09%	-0.95%
Asia/Pacific	-12.34%	-11.12%	32.98%	45.46%	-0.94%	0.24%	0.84%	0.26%	0.39%
Other	-12.28%	-4.20%	1.17%	3.81%	-0.27%	-0.09%	0.07%	0.19%	-0.11%
Cash	0.46%	--	6.20%	0.00%	0.00%	0.32%	0.00%	0.00%	0.32%
Unclassified	--	--	0.00%	0.00%	--	0.00%	0.00%	--	0.00%
Total	-9.52%	-9.87%	100.00%	100.00%	-0.90%	0.42%	0.62%	0.21%	0.35%
Totals									
Developed	-9.84%	-9.16%	75.52%	70.32%	-0.76%	0.07%	0.00%	-0.06%	-0.75%
Emerging*	-11.10%	-11.57%	17.84%	29.68%	-0.24%	0.39%	0.65%	0.10%	0.89%
Frontier**	-31.62%	--	0.44%	0.00%	0.00%	0.00%	-0.03%	-0.09%	-0.12%
Cash	0.46%	--	6.20%	0.00%	0.00%	0.32%	0.00%	0.00%	0.32%

eV ACWI ex-US Large Cap Value Eq Gross Return Comparison



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-6.78	-18.50	-15.64	8.60	4.31	2.73	6.92	5.32
25th Percentile	-10.07	-19.71	-19.41	4.13	2.43	1.07	4.86	4.35
Median	-10.89	-21.55	-22.01	1.27	-0.34	-0.91	3.55	3.77
75th Percentile	-11.53	-22.13	-23.94	-0.39	-1.51	-1.39	2.57	2.95
95th Percentile	-14.09	-23.10	-25.53	-3.40	-3.10	-3.07	1.34	2.13
# of Portfolios	20	20	20	20	20	19	19	15
● Mondrian	-14.12 (96)	-22.51 (85)	-24.22 (81)	-1.44 (87)	-3.13 (96)	-2.09 (90)	2.05 (90)	2.53 (86)
▲ MSCI ACWI ex USA Gross	-9.80 (17)	-22.02 (72)	-24.79 (86)	-3.25 (95)	-1.07 (71)	-0.34 (33)	3.78 (45)	3.48 (60)
✕ MSCI ACWI ex USA Value Gross	-10.29 (33)	-20.75 (40)	-19.46 (27)	3.16 (32)	-1.54 (76)	-1.51 (80)	2.87 (66)	2.47 (87)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	62	2,270
Weighted Avg. Market Cap. (\$B)	38.9	71.1
Median Market Cap. (\$B)	20.3	7.8
Price To Earnings	10.3	11.4
Price To Book	1.5	2.4
Price To Sales	0.8	1.2
Return on Equity (%)	10.5	15.1
Yield (%)	4.4	3.7
Beta	1.0	1.0

Top Holdings

TAKEDA PHARMACEUTICAL CO LTD	4.1%
CK HUTCHISON HOLDINGS LTD	3.9%
BP PLC	3.4%
UNITED OVERSEAS BANK LTD	3.4%
LLOYDS BANKING GROUP PLC	3.3%
ENEL ENTE NAZIONALE PER L'ENERGIA ELETTRICA SPA, ROMA	3.2%
BANCO SANTANDER SA	3.2%
NOVARTIS AG	3.1%
SANOFI	3.1%
NIPPON TELEGRAPH & TELEPHONE CORP NTT	3.0%

Best Performers

	Return %
BP PLC	3.5%
ISUZU MOTORS LTD	1.9%
KAO CORP	1.2%
UNITED OVERSEAS BANK LTD	-1.2%
ABB LTD	-1.4%
ISS A/S	-1.5%
SHELL PLC	-2.3%
JARDINE MATHESON HOLDINGS LTD	-2.6%
NIPPON TELEGRAPH & TELEPHONE CORP NTT	-4.4%
TAKEDA PHARMACEUTICAL CO LTD	-5.1%

Worst Performers

	Return %
GSK PLC	-32.1%
KONINKLIJKE PHILIPS NV	-27.0%
ASSOCIATED BRITISH FOODS PLC	-26.7%
TELIA COMPANY AB	-24.6%
ESSITY AKTIEBOLAG	-23.7%
SANOFI	-23.7%
SNAM SPA	-22.2%
TOYOTA INDUSTRIES CORP	-22.1%
ENEL ENTE NAZIONALE PER L'ENERGIA ELETTRICA SPA, ROMA	-21.2%
SONY GROUP CORPORATION	-21.1%

Mondrian Performance Attribution vs. MSCI ACWI ex USA Gross

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.26%	0.45%	-0.07%	-0.12%	0.03%	-6.10%	4.25%	6.03%			
Materials	-0.09%	-0.97%	-0.13%	1.01%	-20.53%	-7.81%	2.16%	8.03%			
Industrials	-1.12%	-0.86%	0.14%	-0.40%	-13.77%	-8.22%	17.00%	11.81%			
Consumer Discretionary	0.02%	0.03%	0.07%	-0.07%	-14.60%	-13.03%	9.38%	11.73%			
Consumer Staples	-0.65%	-1.14%	-0.14%	0.63%	-20.67%	-6.35%	5.11%	8.94%			
Health Care	-1.62%	-0.63%	-0.10%	-0.89%	-17.70%	-10.89%	18.10%	9.80%			
Financials	0.15%	-0.01%	-0.13%	0.29%	-8.75%	-7.90%	11.63%	20.29%			
Information Technology	0.39%	0.19%	0.02%	0.18%	-9.86%	-12.18%	6.48%	11.01%			
Communication Services	-0.04%	0.29%	-0.09%	-0.24%	-14.77%	-16.47%	7.63%	6.50%			
Utilities	-1.13%	-0.20%	-0.05%	-0.87%	-17.90%	-10.79%	10.56%	3.39%			
Real Estate	0.22%	--	0.14%	--	--	-14.52%	0.00%	2.47%			
Cash	0.00%	--	--	--	--	--	0.00%	0.00%			
Unclassified	-0.91%	0.00%	-0.38%	-0.52%	-16.68%	--	7.69%	0.00%			
Portfolio	-4.52%	=	-2.86%	+	-0.73%	+	-0.93%	-14.39%	-9.87%	100.00%	100.00%

Mondrian Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	--	-15.01%	0.00%	0.11%	--	0.01%	0.01%	--	0.01%
Belgium	--	-13.20%	0.00%	0.63%	--	0.02%	0.04%	--	0.05%
Czech Republic*	--	-18.34%	0.00%	0.05%	--	0.00%	0.00%	--	0.01%
Denmark	-1.48%	-12.23%	0.74%	1.72%	0.20%	0.02%	0.05%	-0.11%	0.15%
Finland	--	-7.02%	0.00%	0.62%	--	-0.02%	0.04%	--	0.01%
France	-19.59%	-8.73%	7.74%	6.98%	-0.81%	0.02%	0.01%	-0.09%	-0.87%
Germany	-20.53%	-12.49%	2.35%	4.85%	-0.42%	0.05%	0.16%	0.21%	0.00%
Greece*	--	-7.40%	0.00%	0.08%	--	0.00%	0.00%	--	0.00%
Hungary*	--	-14.94%	0.00%	0.05%	--	0.00%	0.01%	--	0.00%
Ireland	--	-5.31%	0.00%	0.35%	--	-0.02%	0.02%	--	0.00%
Italy	-19.28%	-8.27%	8.15%	1.42%	-0.17%	0.17%	-0.35%	-0.79%	-1.13%
Netherlands	-26.74%	-10.61%	2.35%	2.56%	-0.44%	0.00%	0.03%	0.04%	-0.37%
Norway	--	-14.84%	0.00%	0.52%	--	0.01%	0.04%	--	0.05%
Poland*	--	-24.35%	0.00%	0.18%	--	0.02%	0.01%	--	0.04%
Portugal	--	-10.81%	0.00%	0.15%	--	0.00%	0.01%	--	0.01%
Spain	-16.88%	-14.04%	5.17%	1.55%	-0.05%	-0.13%	-0.20%	-0.11%	-0.48%
Sweden	-24.18%	-8.87%	4.19%	2.08%	-0.35%	0.07%	-0.11%	-0.35%	-0.73%
Switzerland	-9.06%	-7.43%	4.01%	6.49%	-0.11%	0.00%	0.07%	0.04%	0.00%
United Kingdom	-14.94%	-11.01%	20.70%	9.93%	-0.43%	0.19%	-0.79%	-0.46%	-1.49%

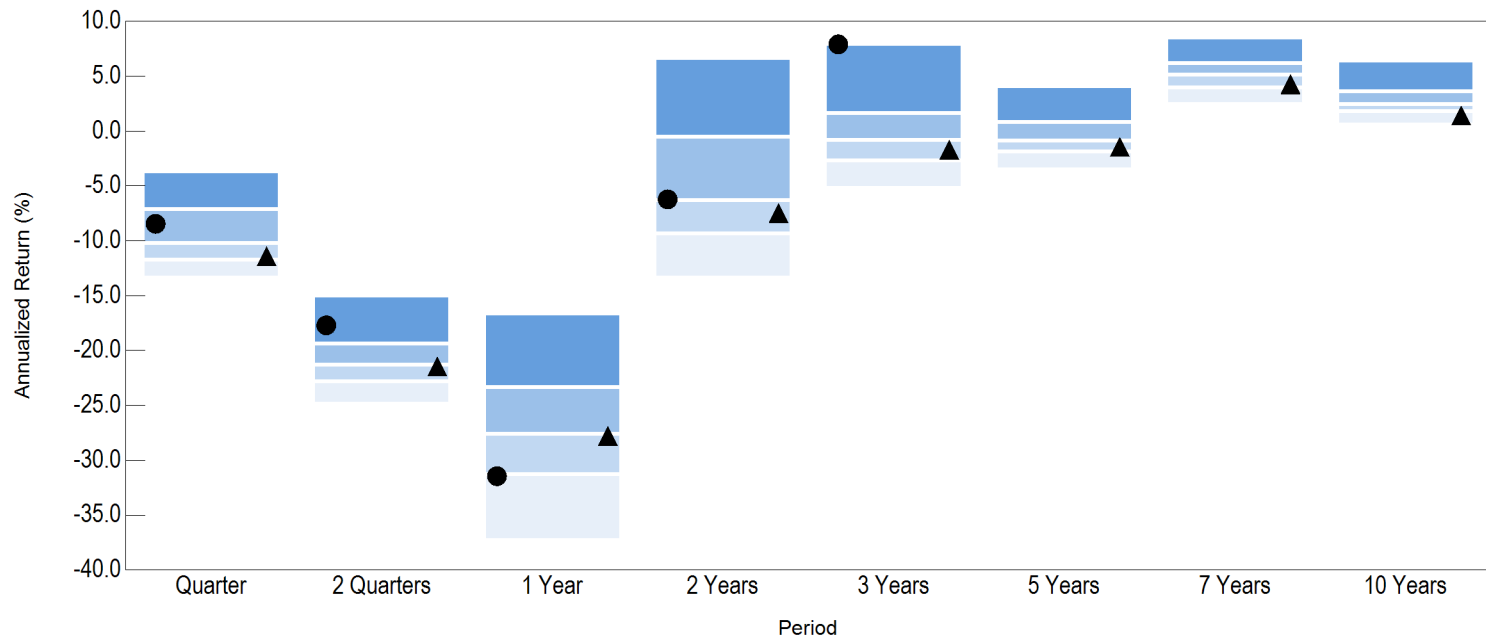
Mondrian Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	-12.67%	-6.62%	1.02%	4.85%	-0.31%	-0.18%	0.25%	0.25%	0.01%
China*	--	-22.44%	0.00%	10.48%	--	1.76%	0.09%	--	1.85%
Hong Kong	-16.81%	-16.94%	4.80%	2.08%	0.00%	-0.33%	0.00%	0.00%	-0.32%
India*	--	6.60%	0.00%	3.79%	--	-0.55%	0.12%	--	-0.43%
Indonesia*	--	7.96%	0.00%	0.54%	--	-0.08%	0.01%	--	-0.07%
Japan	-10.61%	-7.58%	34.67%	13.86%	-0.45%	0.66%	-1.18%	-0.67%	-1.64%
Korea*	--	-17.09%	0.00%	3.34%	--	0.11%	0.30%	--	0.41%
Malaysia*	--	-7.31%	0.00%	0.43%	--	-0.01%	0.02%	--	0.01%
New Zealand	--	-7.98%	0.00%	0.11%	--	-0.01%	0.01%	--	0.00%
Philippines*	--	-13.55%	0.00%	0.21%	--	0.01%	0.01%	--	0.02%
Singapore	-1.24%	-1.51%	3.37%	0.90%	0.01%	0.15%	-0.08%	0.01%	0.09%
Taiwan*	--	-13.99%	0.00%	4.31%	--	0.14%	0.25%	--	0.40%
Thailand*	--	-2.85%	0.00%	0.56%	--	-0.05%	0.04%	--	-0.01%
Americas									
Brazil*	--	8.53%	0.00%	1.45%	--	-0.25%	0.05%	--	-0.19%
Canada	--	-7.80%	0.00%	8.10%	--	-0.24%	0.49%	--	0.25%
Chile*	--	2.75%	0.00%	0.15%	--	-0.02%	0.00%	--	-0.01%
Colombia*	--	-18.30%	0.00%	0.05%	--	0.00%	0.00%	--	0.01%
Mexico*	--	-5.62%	0.00%	0.62%	--	0.01%	0.00%	--	0.01%
Peru*	--	-0.90%	0.00%	0.07%	--	0.00%	0.00%	--	0.00%

Mondrian Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	-2.44%	0.00%	0.02%	--	0.00%	0.00%	--	0.00%
Israel	--	-3.34%	0.00%	0.47%	--	-0.01%	0.01%	--	-0.01%
Kuwait*	--	-5.65%	0.00%	0.24%	--	0.00%	0.00%	--	0.00%
Qatar*	--	0.94%	0.00%	0.31%	--	-0.02%	0.00%	--	-0.02%
Saudi Arabia*	--	-0.68%	0.00%	1.25%	--	-0.05%	0.00%	--	-0.05%
South Africa*	--	-12.25%	0.00%	1.05%	--	-0.01%	0.09%	--	0.08%
Turkey*	--	16.40%	0.00%	0.08%	--	-0.03%	0.01%	--	-0.02%
United Arab Emirates*	--	-2.53%	0.00%	0.38%	--	-0.01%	0.00%	--	-0.01%
Totals									
Americas	--	-5.26%	0.00%	10.43%	--	-0.50%	0.55%	--	0.05%
Europe	-17.24%	-10.20%	55.38%	40.30%	-2.81%	0.09%	-0.94%	-1.05%	-4.72%
Asia/Pacific	-10.62%	-11.12%	43.85%	45.46%	0.46%	0.03%	-0.15%	-0.02%	0.32%
Other	--	-4.20%	0.00%	3.81%	--	-0.13%	0.11%	--	-0.02%
Cash	0.46%	--	0.76%	0.00%	0.00%	0.04%	0.00%	0.00%	0.04%
Total	-14.20%	-9.87%	100.00%	100.00%	-2.35%	-0.48%	-0.43%	-1.07%	-4.33%
Totals									
Developed	-14.31%	-9.16%	99.24%	70.32%	-3.77%	0.40%	-1.47%	-1.55%	-6.39%
Emerging*	--	-11.57%	0.00%	29.68%	--	0.98%	1.04%	--	2.02%
Cash	0.46%	--	0.76%	0.00%	0.00%	0.04%	0.00%	0.00%	0.04%

eV Emg Mkts Equity Gross Return Comparison



	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-3.72	-14.99	-16.67	6.60	7.89	4.04	8.52	6.38								
25th Percentile	-7.08	-19.31	-23.28	-0.51	1.66	0.83	6.22	3.65								
Median	-10.16	-21.25	-27.53	-6.26	-0.77	-0.83	5.15	2.46								
75th Percentile	-11.67	-22.77	-31.21	-9.29	-2.67	-1.83	4.03	1.84								
95th Percentile	-13.35	-24.81	-37.25	-13.33	-5.16	-3.46	2.48	0.61								
# of Portfolios	405	405	405	386	366	324	288	221								
● Newton Emerging Mkt	-8.45	(34)	-17.70	(14)	-31.45	(77)	-6.23	(50)	7.90	(5)	--	(--)	--	(--)	--	(--)
▲ MSCI Emerging Markets Gross	-11.42	(72)	-21.46	(54)	-27.80	(54)	-7.47	(61)	-1.71	(65)	-1.44	(64)	4.26	(68)	1.42	(82)

Characteristics

	Portfolio	MSCI Emerging Markets Gross
Number of Holdings	55	1,384
Weighted Avg. Market Cap. (\$B)	78.2	86.9
Median Market Cap. (\$B)	28.4	5.5
Price To Earnings	18.4	10.1
Price To Book	4.0	2.5
Price To Sales	3.3	1.0
Return on Equity (%)	20.8	14.6
Yield (%)	1.4	3.8
Beta	1.0	1.0

Top Holdings

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	4.9%
AIA GROUP LTD	4.0%
YUM CHINA HOLDINGS INC	3.9%
TATA CONSULTANCY SERVICES LTD	3.9%
PROSHARES ULTRA SEMICONDUCTORS	3.8%
H D F C BANK LTD	3.7%
TENCENT HOLDINGS LTD	3.7%
WALMART DE MEXICO 'V'	3.3%
HINDUSTAN UNILEVER LTD	3.2%
SHENZHEN INOVANCE TECHNOLOGY CO LTD	3.2%

Best Performers

	Return %
MYER HOLDINGS LTD	76.0%
OZ MINERALS LIMITED	36.2%
LIVENT CORP (LTHM)	35.1%
TITAN COMPANY LTD	30.9%
MERCADOLIBRE INC (MELI)	30.0%
ASIAN PAINTS (IN:API)	20.4%
ICICI BANK (IN:ICG)	19.1%
JUBILANT FOODWORKS LTD	18.3%
WEG SA	18.2%
HINDUSTAN UNILEVER LTD	17.4%

Worst Performers

	Return %
PHARMARON BEIJING CO LTD	-51.4%
KINGDEE INTERNATIONAL SOFTWARE GROUP CO LTD	-44.1%
LONGI GREEN ENERGY TECHNOLOGY CO LTD	-32.3%
ALIBABA GROUP HOLDING LTD	-30.4%
WUXI LEAD INTELLIGENT EQUIPMENT CO LTD	-29.5%
TENCENT HOLDINGS LTD	-24.9%
PING AN INSURANCE GROUP	-24.8%
PROSHARES ULTRA SEMICONDUCTORS (USD)	-24.5%
BY-HEALTH CO LTD	-23.4%
AIA GROUP LTD	-22.7%

Newton Emerging Mkt Performance Attribution vs. MSCI Emerging Markets Gross

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.29%	--	-0.45%	--	--	-2.28%	0.00%	4.99%			
Materials	1.17%	2.64%	-0.23%	-1.24%	23.67%	-7.31%	3.87%	8.40%			
Industrials	0.02%	0.09%	0.13%	-0.21%	-8.91%	-9.94%	10.63%	5.61%			
Consumer Discretionary	2.27%	2.28%	0.24%	-0.25%	-2.59%	-18.85%	12.19%	14.86%			
Consumer Staples	0.81%	0.18%	0.73%	-0.10%	-1.79%	-4.54%	16.36%	6.14%			
Health Care	-1.11%	-1.62%	0.02%	0.49%	-51.45%	-13.91%	3.10%	3.96%			
Financials	-0.52%	-0.81%	-0.20%	0.50%	-7.59%	-5.22%	17.82%	21.26%			
Information Technology	-0.36%	-0.05%	-0.10%	-0.20%	-14.80%	-15.43%	26.14%	19.09%			
Communication Services	0.36%	0.20%	0.07%	0.09%	-16.52%	-19.32%	9.89%	10.63%			
Utilities	-0.12%	--	-0.20%	--	--	-4.09%	0.00%	2.91%			
Real Estate	0.25%	--	0.22%	--	--	-19.76%	0.00%	2.13%			
Cash	0.00%	--	--	--	--	--	0.00%	0.00%			
Portfolio	2.48%	=	2.91%	+	0.22%	+	-0.65%	-9.09%	-11.57%	100.00%	100.00%

Newton Emerging Mkt Performance Attribution vs. MSCI Emerging Markets Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Czech Republic*	--	-18.34%	0.00%	0.16%	--	0.01%	0.01%	--	0.02%
Greece*	--	-7.40%	0.00%	0.25%	--	-0.02%	0.02%	--	0.00%
Hungary*	--	-14.94%	0.00%	0.16%	--	-0.01%	0.02%	--	0.01%
Luxembourg	7.52%	-11.57%	2.15%	0.00%	0.00%	0.00%	0.00%	0.34%	0.34%
Netherlands	-10.56%	-10.73%	2.19%	0.00%	0.00%	0.07%	-0.13%	0.01%	-0.05%
Poland*	--	-24.35%	0.00%	0.60%	--	0.05%	0.05%	--	0.10%

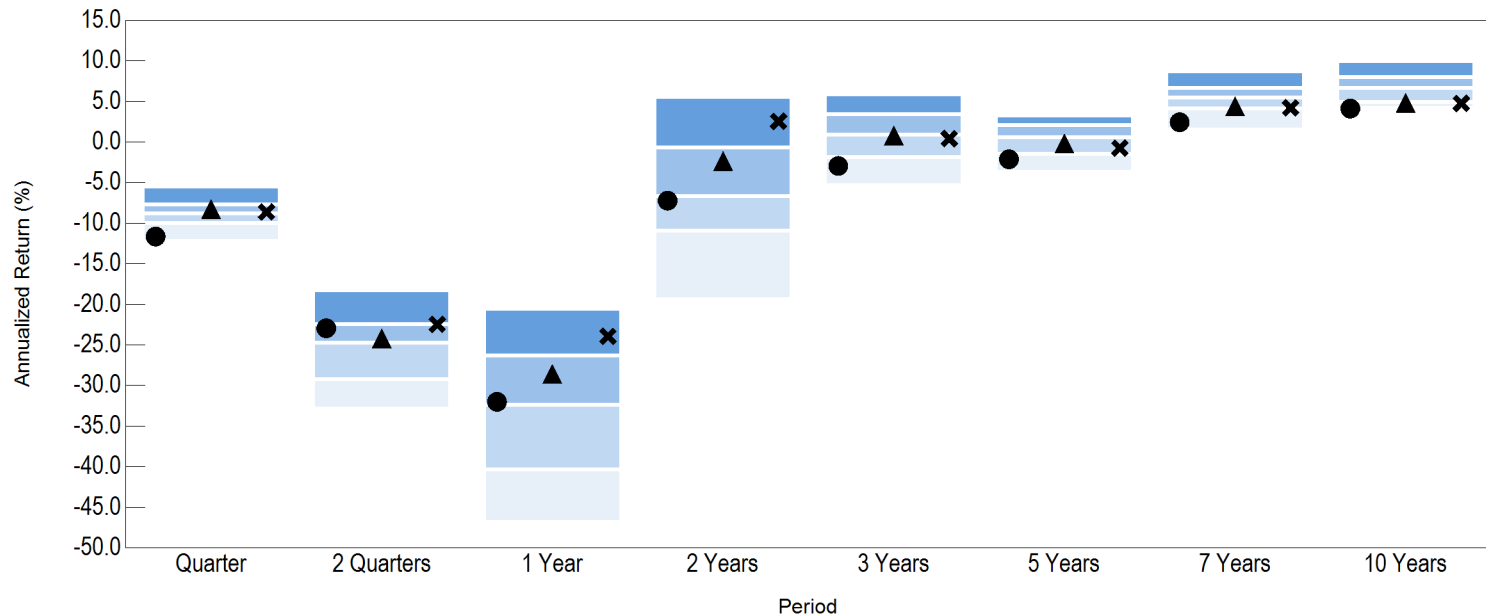
Newton Emerging Mkt Performance Attribution vs. MSCI Emerging Markets Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	36.21%	-6.62%	0.75%	0.00%	0.00%	0.06%	-0.07%	0.34%	0.33%
China*	-21.56%	-22.44%	37.71%	35.29%	0.95%	-0.33%	-0.71%	0.06%	-0.02%
Hong Kong	-25.19%	-16.97%	7.88%	0.00%	0.00%	-0.70%	0.00%	-0.65%	-1.35%
India*	5.30%	6.60%	23.68%	12.75%	-0.17%	1.95%	-0.34%	-0.15%	1.30%
Indonesia*	--	7.96%	0.00%	1.82%	--	-0.33%	0.04%	--	-0.29%
Japan	-12.51%	-7.58%	1.80%	0.00%	0.00%	0.12%	-0.10%	-0.09%	-0.08%
Korea*	-11.57%	-17.09%	5.07%	11.27%	0.69%	0.00%	0.53%	-0.38%	0.84%
Malaysia*	--	-7.31%	0.00%	1.47%	--	-0.09%	0.07%	--	-0.01%
Philippines*	--	-13.55%	0.00%	0.72%	--	0.00%	0.04%	--	0.04%
Singapore	-16.17%	-1.50%	1.23%	0.00%	0.00%	0.11%	0.00%	-0.21%	-0.10%
Taiwan*	-13.53%	-13.99%	6.14%	14.50%	0.07%	0.00%	0.49%	-0.04%	0.52%
Thailand*	--	-2.85%	0.00%	1.90%	--	-0.22%	0.12%	--	-0.10%
Americas									
Argentina*	29.98%	19.87%	1.01%	0.00%	0.00%	0.28%	0.00%	0.10%	0.39%
Brazil*	16.96%	8.53%	3.40%	4.88%	0.43%	-0.30%	0.05%	-0.13%	0.04%
Chile*	--	2.75%	0.00%	0.51%	--	-0.07%	0.01%	--	-0.05%
Colombia*	--	-18.30%	0.00%	0.16%	--	0.00%	0.01%	--	0.02%
Mexico*	2.52%	-5.62%	2.94%	2.09%	0.17%	0.02%	0.00%	0.07%	0.26%
Peru*	2.41%	-0.90%	1.10%	0.22%	0.01%	0.06%	0.00%	0.03%	0.10%
United States	35.08%	-4.81%	1.46%	0.00%	0.00%	0.05%	0.00%	0.58%	0.63%

Newton Emerging Mkt Performance Attribution vs. MSCI Emerging Markets Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	-2.44%	0.00%	0.07%	--	-0.01%	0.00%	--	0.00%
Kuwait*	--	-5.65%	0.00%	0.82%	--	-0.03%	0.01%	--	-0.02%
Qatar*	--	0.94%	0.00%	1.05%	--	-0.09%	0.00%	--	-0.09%
Saudi Arabia*	--	-0.68%	0.00%	4.23%	--	-0.32%	0.00%	--	-0.31%
South Africa*	-5.10%	-12.25%	1.29%	3.53%	0.28%	-0.10%	0.19%	-0.18%	0.19%
Turkey*	--	16.40%	0.00%	0.28%	--	-0.10%	0.04%	--	-0.07%
United Arab Emirates*	--	-2.53%	0.00%	1.27%	--	-0.07%	0.00%	--	-0.07%
Totals									
Americas	15.07%	3.58%	9.91%	7.85%	0.80%	0.29%	0.08%	0.21%	1.38%
Europe	-1.60%	-18.60%	4.34%	1.18%	0.15%	-0.10%	-0.04%	0.39%	0.41%
Asia/Pacific	-12.38%	-13.98%	84.28%	79.72%	1.05%	-0.11%	0.07%	0.06%	1.08%
Other	-5.10%	-4.32%	1.29%	11.24%	0.62%	-0.70%	0.24%	-0.55%	-0.38%
Cash	0.46%	--	0.18%	0.00%	0.00%	0.01%	0.00%	0.00%	0.01%
Total	-9.07%	-11.57%	100.00%	100.00%	2.62%	-0.59%	0.35%	0.11%	2.50%
Totals									
Developed	-9.69%	--	17.48%	0.00%	0.00%	0.00%	-0.30%	0.02%	-0.28%
Emerging*	-8.96%	-11.57%	82.35%	100.00%	2.56%	0.00%	0.66%	-0.45%	2.77%
Cash	0.46%	--	0.18%	0.00%	0.00%	0.01%	0.00%	0.00%	0.01%

eV ACWI ex-US Small Cap Equity Gross Return Comparison



	Return (Rank)															
	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-5.50	-18.30	-20.55	5.49	5.85	3.27	8.71	9.93								
25th Percentile	-7.67	-22.36	-26.24	-0.60	3.45	2.11	6.69	8.08								
Median	-8.75	-24.71	-32.32	-6.59	0.96	0.61	5.54	6.74								
75th Percentile	-9.90	-29.16	-40.28	-10.91	-1.82	-1.38	4.18	4.94								
95th Percentile	-12.14	-32.83	-46.75	-19.35	-5.30	-3.59	1.61	4.27								
# of Portfolios	58	58	58	54	51	42	39	26								
● Templeton	-11.64 (95)	-22.95 (28)	-32.01 (50)	-7.22 (53)	-2.95 (87)	-2.12 (86)	2.44 (92)	4.13 (97)								
▲ MSCI ACWI ex US Small Cap Gross	-8.25 (40)	-24.19 (46)	-28.57 (41)	-2.33 (33)	0.80 (55)	-0.16 (65)	4.39 (71)	4.83 (85)								
✕ MSCI ACWI ex US Small Cap Value GD	-8.61 (49)	-22.46 (26)	-23.93 (18)	2.55 (17)	0.43 (58)	-0.75 (69)	4.22 (75)	4.75 (86)								

Characteristics

	Portfolio	MSCI ACWI ex US Small Cap Gross
Number of Holdings	117	4,380
Weighted Avg. Market Cap. (\$B)	1.8	2.1
Median Market Cap. (\$B)	1.1	0.9
Price To Earnings	12.4	10.4
Price To Book	2.1	2.1
Price To Sales	1.0	0.9
Return on Equity (%)	13.7	12.1
Yield (%)	3.5	3.5
Beta	0.9	1.0

Top Holdings

SANLORENZO SPA	2.1%
M DIAS BRANCO INDUSTRIA ON	2.1%
BARCO NV, KORTRIJK	1.9%
MAN GROUP LIMITED	1.9%
MEITEC CORP	1.9%
TSUMURA & CO	1.8%
TECHNOGYM SPA	1.7%
ISHARES MSCI EAFE SMALL-CAP ETF	1.6%
TECHNOPRO HOLDINGS INC	1.6%
CANADIAN WESTERN BANK	1.6%

Best Performers

	Return %
M DIAS BRANCO INDUSTRIA ON (BR:MDB)	62.4%
JOHNSON HEALTH TECH. (TW:JHT)	28.1%
NAYAX LTD	26.7%
TOPKEY CORP	18.8%
EN-JAPAN INC	18.3%
SIEGFRIED HOLDING AG, ZOFINGEN	17.2%
ONESPAWORLD HOLDINGS LTD (OSW)	17.2%
IDOM INC	11.5%
SHIN ZU SHING (TW:SZS)	10.2%
BRUNCELLO CUCINELLI S.P.A.	9.2%

Worst Performers

	Return %
ZUR ROSE GROUP AG	-59.9%
VIVA BIOTECH HOLDINGS	-51.1%
SECO SPA COMSTK	-40.6%
XTEP INTERNATIONAL HOLDINGS LTD	-40.5%
SHANGHAI HAOHAI BIOLOGICAL TECHNOLOGY CO LTD	-37.7%
VALUE PARTNERS GROUP LTD	-37.2%
AT & S AUSTRIA TECHNOLOGIE & SYSTEMTECHNIK AG, LOBEN	-37.0%
ADESSO SE	-33.7%
FLOW TRADERS NV	-31.9%
MERIDA INDUSTRY (TW:MER)	-31.6%

Templeton Performance Attribution vs. MSCI ACWI ex US Small Cap Gross

	Total Effects	Attribution Effects				Returns		Sector Weights					
		Selection Effect	Allocation Effect	Currency Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark				
Energy	-0.17%	-0.20%	-0.16%	0.10%	0.10%	-6.90%	-0.33%	2.02%	3.90%				
Materials	-0.14%	-0.44%	-0.22%	0.30%	0.22%	-9.11%	-4.54%	5.70%	11.53%				
Industrials	0.09%	0.18%	0.03%	-0.15%	0.03%	-6.28%	-7.32%	22.65%	19.63%				
Consumer Discretionary	-1.29%	-0.43%	0.07%	-0.53%	-0.39%	-10.97%	-7.38%	21.78%	11.38%				
Consumer Staples	0.52%	0.47%	-0.02%	-0.11%	0.18%	-1.43%	-9.15%	8.79%	6.37%				
Health Care	-0.35%	-0.37%	-0.01%	0.05%	-0.01%	-15.43%	-10.93%	7.24%	7.01%				
Financials	-1.53%	-1.45%	0.01%	-0.03%	-0.06%	-20.23%	-6.78%	11.22%	10.78%				
Information Technology	-0.90%	-0.56%	-0.06%	-0.09%	-0.19%	-14.01%	-9.86%	14.94%	11.13%				
Communication Services	0.02%	-0.13%	0.02%	0.11%	0.02%	-13.52%	-12.61%	3.37%	3.88%				
Utilities	0.24%	--	0.04%	0.20%	--	--	-8.94%	0.00%	3.73%				
Real Estate	1.08%	--	0.55%	0.53%	--	--	-12.63%	0.00%	10.67%				
Cash	0.06%	0.00%	0.06%	0.00%	0.00%	0.46%	--	1.96%	0.00%				
Unclassified	-0.03%	0.00%	-0.03%	0.00%	0.00%	-10.64%	--	0.32%	0.00%				
Portfolio	-2.40%	=	-2.94%	+	0.27%	+	0.39%	+	-0.11%	-10.56%	-8.16%	100.00%	100.00%

Templeton Performance Attribution vs. MSCI ACWI ex US Small Cap Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	-29.23%	-7.62%	1.79%	0.65%	-0.15%	0.01%	-0.04%	-0.26%	-0.45%
Belgium	-12.59%	-15.16%	4.12%	1.05%	0.03%	-0.22%	-0.18%	0.08%	-0.28%
Czech Republic*	--	-4.93%	0.00%	0.01%	--	0.00%	0.00%	--	0.00%
Denmark	-14.62%	-9.90%	0.55%	1.21%	-0.06%	0.01%	0.04%	0.03%	0.02%
Finland	-18.28%	-14.62%	3.51%	1.02%	-0.04%	-0.16%	-0.13%	-0.10%	-0.43%
France	3.06%	-16.31%	0.27%	2.43%	0.50%	0.18%	0.12%	-0.45%	0.35%
Germany	-17.87%	-18.83%	4.34%	3.05%	0.03%	-0.14%	-0.07%	0.01%	-0.17%
Greece*	-7.62%	-7.74%	0.90%	0.16%	0.00%	0.01%	-0.05%	0.00%	-0.04%
Hungary*	--	-21.93%	0.00%	0.01%	--	0.00%	0.00%	--	0.00%
Ireland	--	-0.56%	0.00%	0.41%	--	-0.03%	0.03%	--	-0.01%
Italy	-11.46%	-14.49%	7.39%	1.91%	0.06%	-0.35%	-0.32%	0.18%	-0.43%
Luxembourg	-8.91%	-8.16%	1.30%	0.00%	0.00%	0.00%	-0.08%	-0.01%	-0.08%
Netherlands	-22.11%	-11.14%	2.15%	1.30%	-0.15%	-0.02%	-0.03%	-0.10%	-0.31%
Norway	-14.26%	-13.80%	2.15%	1.52%	-0.01%	-0.02%	-0.05%	0.00%	-0.08%
Poland*	--	-23.80%	0.00%	0.25%	--	0.03%	0.02%	--	0.05%
Portugal	--	-21.82%	0.00%	0.21%	--	0.03%	0.01%	--	0.04%
Spain	-21.01%	-15.21%	0.74%	1.29%	-0.08%	0.04%	0.03%	0.03%	0.03%
Sweden	-16.63%	-14.64%	3.98%	3.66%	-0.08%	-0.02%	-0.02%	-0.01%	-0.12%
Switzerland	-2.06%	-6.98%	3.35%	3.19%	0.15%	0.00%	0.00%	0.01%	0.16%
United Kingdom	-14.50%	-16.18%	11.13%	10.98%	0.14%	-0.01%	0.03%	0.00%	0.17%

Templeton Performance Attribution vs. MSCI ACWI ex US Small Cap Gross

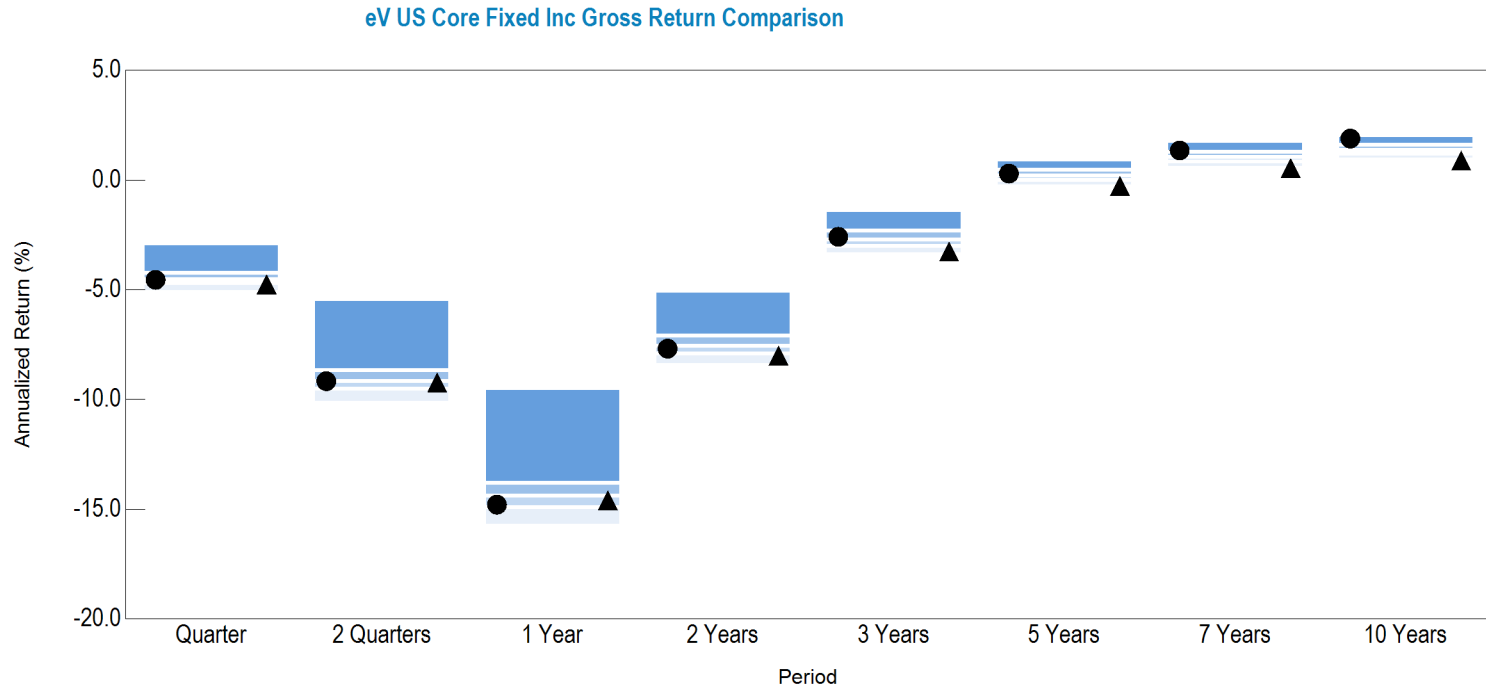
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	--	-2.43%	0.00%	6.59%	--	-0.45%	0.45%	--	0.00%
China*	-39.24%	-25.61%	2.98%	2.71%	-0.37%	-0.06%	0.00%	-0.04%	-0.47%
Hong Kong	-24.73%	-16.90%	2.70%	1.51%	-0.12%	-0.17%	0.00%	-0.09%	-0.38%
India*	--	11.67%	0.00%	5.54%	--	-0.97%	0.18%	--	-0.78%
Indonesia*	-7.20%	-1.19%	0.92%	0.69%	-0.04%	0.01%	0.00%	-0.01%	-0.05%
Japan	-2.89%	-4.39%	20.50%	20.50%	0.33%	0.00%	-0.02%	0.00%	0.31%
Korea*	-19.12%	-17.98%	2.42%	3.73%	-0.05%	0.09%	0.12%	0.02%	0.18%
Malaysia*	--	-5.42%	0.00%	0.78%	--	-0.02%	0.04%	--	0.02%
New Zealand	--	-3.85%	0.00%	0.74%	--	-0.06%	0.07%	--	0.01%
Philippines*	-2.68%	-5.20%	0.96%	0.21%	0.01%	0.03%	-0.05%	0.02%	0.00%
Singapore	--	-8.71%	0.00%	1.54%	--	0.05%	0.04%	--	0.10%
Taiwan*	-7.56%	-8.76%	10.77%	5.46%	0.07%	0.00%	-0.34%	0.07%	-0.20%
Thailand*	--	-8.73%	0.00%	1.06%	--	0.00%	0.07%	--	0.07%
Americas									
Brazil*	29.82%	7.95%	2.50%	1.52%	0.34%	0.14%	-0.06%	0.22%	0.65%
Canada	-12.89%	-6.03%	4.60%	7.46%	-0.63%	-0.08%	0.25%	0.24%	-0.21%
Chile*	--	5.26%	0.00%	0.15%	--	-0.02%	0.00%	--	-0.01%
Colombia*	--	-35.09%	0.00%	0.06%	--	0.02%	0.00%	--	0.02%
Mexico*	--	1.63%	0.00%	0.51%	--	-0.02%	0.00%	--	-0.02%
Peru*	--	-14.27%	0.00%	0.02%	--	0.00%	0.00%	--	0.00%
United States	-10.64%	-4.81%	0.32%	0.00%	0.00%	-0.01%	0.00%	-0.02%	-0.03%

Templeton Performance Attribution vs. MSCI ACWI ex US Small Cap Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	2.93%	0.00%	0.05%	--	0.00%	0.00%	--	0.00%
Israel	-3.79%	-2.44%	1.65%	2.01%	-0.05%	-0.01%	0.02%	0.01%	-0.02%
Kuwait*	--	-10.29%	0.00%	0.32%	--	0.02%	0.00%	--	0.02%
Qatar*	--	-1.27%	0.00%	0.26%	--	0.00%	0.00%	--	0.00%
Saudi Arabia*	--	4.49%	0.00%	0.76%	--	-0.05%	0.00%	--	-0.05%
South Africa*	--	-5.67%	0.00%	1.05%	--	-0.07%	0.10%	--	0.03%
Turkey*	--	18.48%	0.00%	0.29%	--	-0.10%	0.04%	--	-0.06%
United Arab Emirates*	--	-0.67%	0.00%	0.18%	--	0.00%	0.00%	--	0.00%
Totals									
Americas	1.57%	-3.46%	7.42%	9.72%	0.39%	-0.10%	0.20%	-0.09%	0.40%
Europe	-14.36%	-14.38%	47.67%	34.30%	-0.10%	-0.75%	-0.69%	-0.04%	-1.58%
Asia/Pacific	-9.20%	-5.54%	41.25%	51.06%	-1.89%	-0.24%	0.55%	0.36%	-1.21%
Other	-3.79%	-1.17%	1.65%	4.92%	-0.28%	-0.16%	0.17%	0.19%	-0.09%
Cash	0.46%	--	2.02%	0.00%	0.00%	0.06%	0.00%	0.00%	0.06%
Total	-10.58%	-8.16%	100.00%	100.00%	-1.88%	-1.19%	0.23%	0.42%	-2.42%
Totals									
Developed	-11.40%	-9.21%	76.54%	74.21%	-1.90%	-0.02%	0.14%	-0.06%	-1.83%
Emerging*	-8.68%	-5.13%	21.44%	25.79%	-0.77%	-0.09%	0.09%	0.13%	-0.65%
Cash	0.46%	--	2.02%	0.00%	0.00%	0.06%	0.00%	0.00%	0.06%

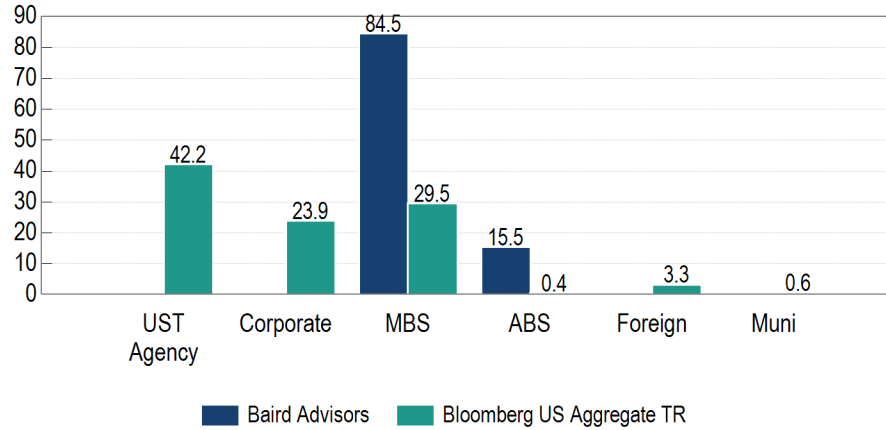
Core Fixed Income
Peer Universe Comparison

Period Ending: September 30, 2022

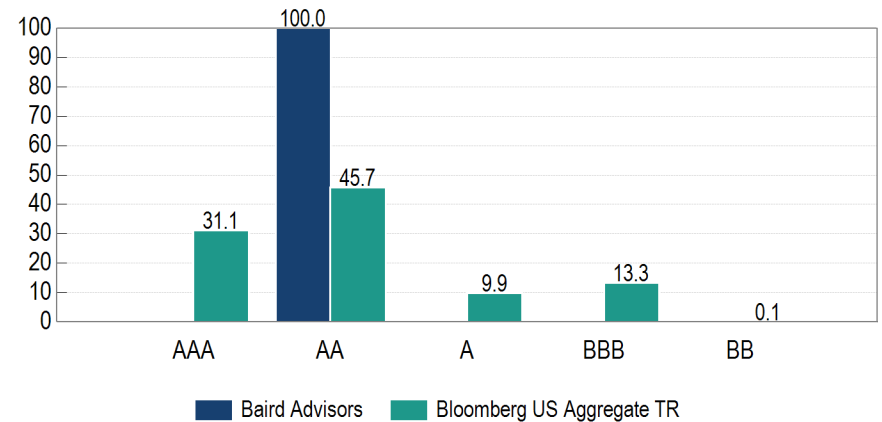


	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-2.90	-5.44	-9.50	-5.04	-1.37	0.93	1.78	2.03
25th Percentile	-4.22	-8.65	-13.79	-7.06	-2.28	0.49	1.30	1.61
Median	-4.50	-9.14	-14.35	-7.53	-2.70	0.22	1.06	1.39
75th Percentile	-4.69	-9.49	-14.88	-7.89	-2.97	0.02	0.86	1.21
95th Percentile	-5.08	-10.14	-15.74	-8.40	-3.36	-0.27	0.57	0.95
# of Portfolios	215	215	215	209	206	203	200	196
● Baird Advisors	-4.55 (55)	-9.16 (53)	-14.79 (71)	-7.68 (62)	-2.59 (39)	0.30 (40)	1.35 (18)	1.89 (10)
▲ Bloomberg US Aggregate TR	-4.75 (82)	-9.22 (58)	-14.60 (63)	-8.00 (82)	-3.26 (93)	-0.27 (95)	0.54 (97)	0.89 (96)

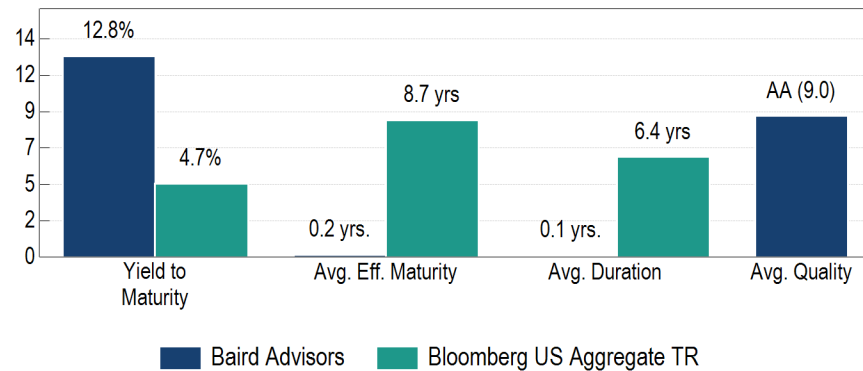
US Sector Allocation
Baird Advisors



Credit Quality Allocation
Baird Advisors



Characteristics
Baird Advisors

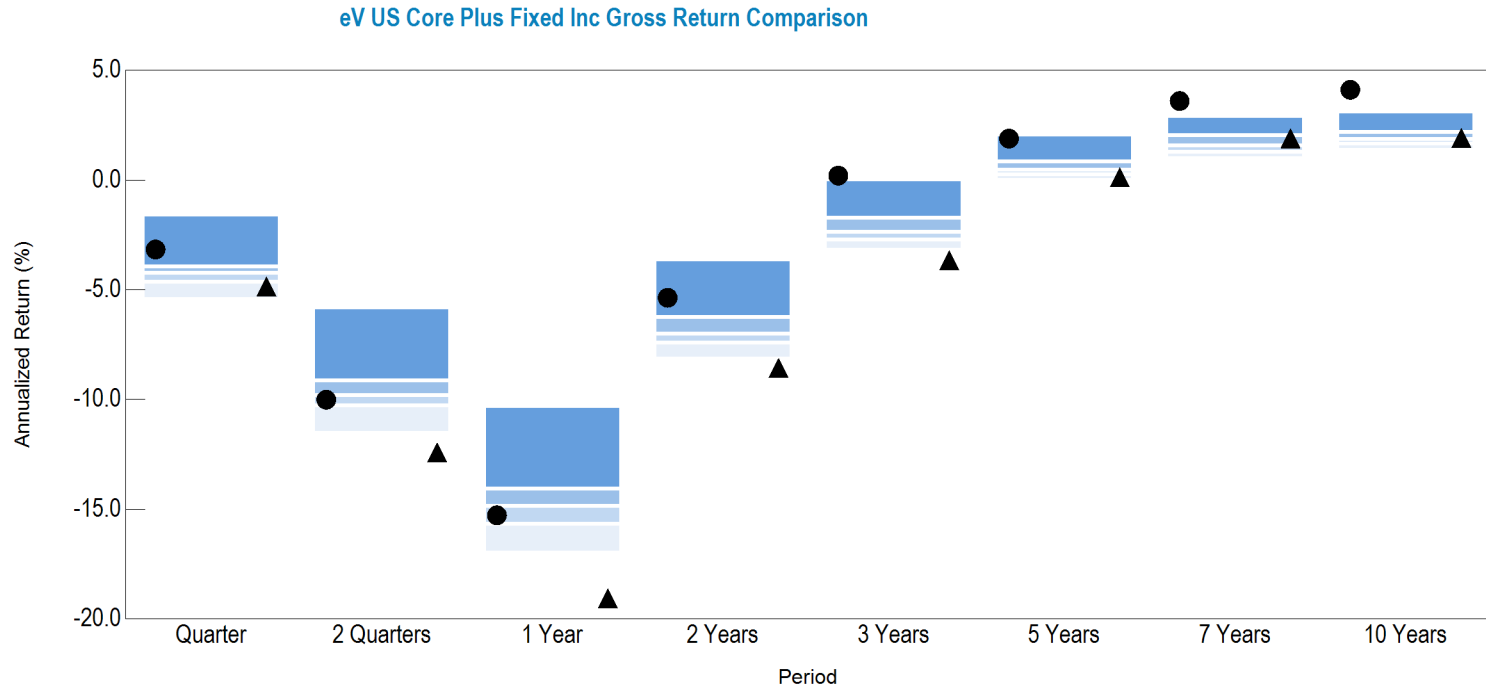


PERFORMANCE BY QUALITY

	<u>NUMBER OF ISSUES</u>	<u>FINAL MARKET VALUE (\$000)</u>	<u>FINAL MARKET VALUE %</u>	<u>QUARTERLY RETURN %</u>	<u>QUARTERLY CONTRIBUTION TO TOTAL RETURN %</u>
Cash & Equiv	1	13,839	1.2	0.58	0.01
Govt & Agency	161	590,475	51.2	-5.40	-2.76
AAA	41	108,408	9.4	-4.80	-0.45
AA	8	5,766	0.5	-7.70	-0.04
A	42	114,174	9.9	-3.70	-0.37
BAA	125	306,770	26.6	-3.60	-0.96
Below BAA	13	13,839	1.2	1.68	0.02
Other	0	-	0.0	0.00	0.00
Total Account	391	\$1,153,272	100.0	-4.55	-4.55

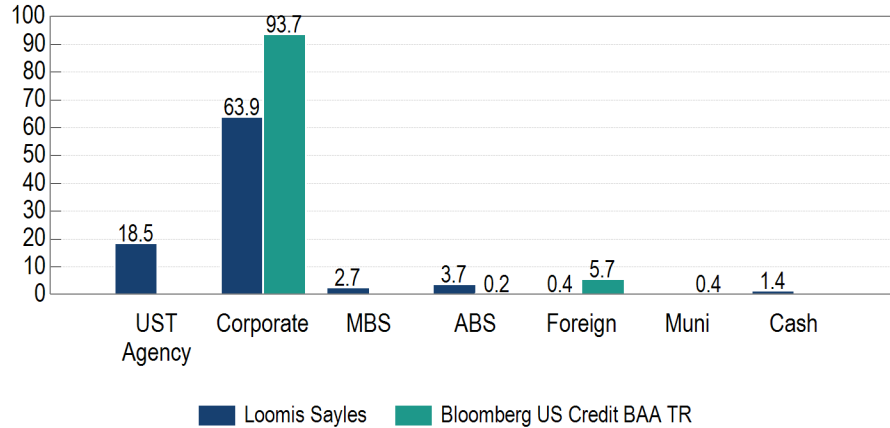
PERFORMANCE BY DURATION

	<u>NUMBER OF ISSUES</u>	<u>FINAL MARKET VALUE (\$000)</u>	<u>FINAL MARKET VALUE %</u>	<u>QUARTERLY RETURN %</u>	<u>QUARTERLY CONTRIBUTION TO TOTAL RETURN %</u>
Under 1 Year	17	47,284	4.1	0.50	0.02
1 - 3 Years	63	220,275	19.1	-1.40	-0.27
3 - 6 Years	192	459,002	39.8	-3.84	-1.53
Over 6 Years	119	426,711	37.0	-7.50	-2.78
Total Account	391	\$1,153,272	100.0	-4.55	-4.55

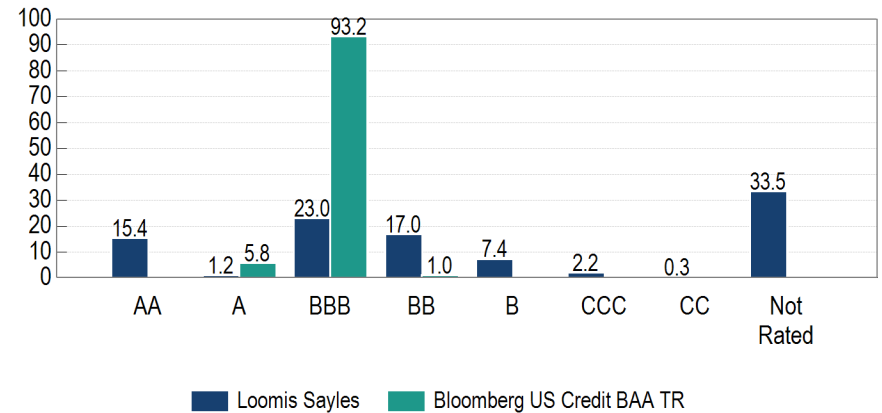


	Return (Rank)															
	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-1.57	-5.82	-10.30	-3.63	0.02	2.06	2.91	3.12								
25th Percentile	-3.91	-9.11	-14.05	-6.23	-1.71	0.87	2.06	2.22								
Median	-4.21	-9.78	-14.82	-6.99	-2.35	0.49	1.59	1.89								
75th Percentile	-4.61	-10.25	-15.65	-7.38	-2.71	0.29	1.32	1.68								
95th Percentile	-5.40	-11.51	-16.96	-8.11	-3.16	0.02	1.02	1.40								
# of Portfolios	122	122	122	122	120	115	110	105								
● Loomis Sayles	-3.16	(11)	-10.01	(68)	-15.27	(66)	-5.36	(14)	0.20	(5)	1.89	(8)	3.60	(1)	4.11	(1)
▲ Bloomberg US Credit BAA TR	-4.85	(90)	-12.41	(99)	-19.05	(99)	-8.57	(99)	-3.66	(98)	0.13	(90)	1.90	(31)	1.92	(46)

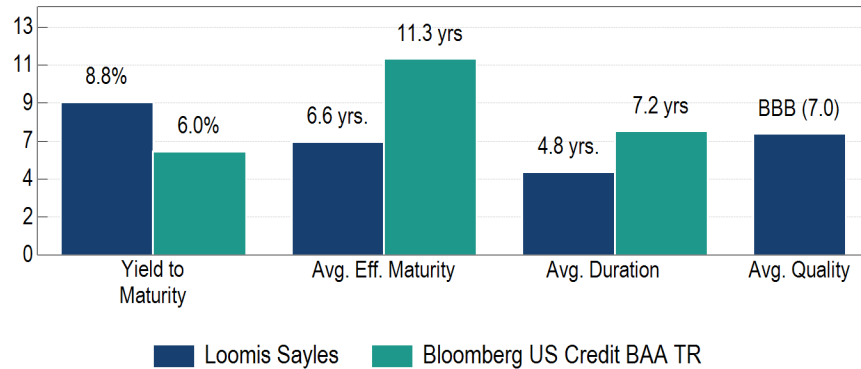
US Sector Allocation
Loomis Sayles



Credit Quality Allocation
Loomis Sayles



Characteristics
Loomis Sayles



Summary

Account Return	-3.06
Benchmark Return	-4.85
Excess Return	1.80
Sector Allocation	0.37
Security Selection	1.58
Trading	-0.14
Pricing Differences	-0.01
Compounding	0.00

Details

Scheme	Average Weight Account	Average Weight Benchmark	Return Account	Return Benchmark	Contribution to Return Account	Contribution to Return Benchmark	Sector Allocation Effect	Security Selection Effect	Total Effect	Excess Total Effect
Total	100.00	100.00	-2.92	-4.86	-2.92	-4.86	0.37	1.58	1.94	1.94
CASH	3.68	0.00	1.36	-4.86	0.05	0.00	0.00	0.11	0.11	0.11
AAA	18.30	0.00	-3.24	-4.86	-1.04	0.00	0.00	-0.03	-0.03	-0.03
AA	0.37	0.00	-0.07	-4.86	-0.03	0.00	0.00	-0.01	-0.01	-0.01
A	2.49	0.01	-3.71	-4.01	-0.12	0.00	-0.03	0.08	0.05	0.05
BAA	31.70	99.91	-4.14	-4.86	-1.38	-4.85	0.00	0.25	0.25	0.25
BA	20.92	0.08	-1.66	-3.33	-0.28	-0.01	0.39	0.26	0.65	0.65
B	9.58	0.00	0.59	-4.86	0.06	0.00	0.00	0.51	0.51	0.51
CAA	3.45	0.00	0.24	-4.86	0.01	0.00	0.00	0.19	0.19	0.19
CA	0.46	0.00	2.53	-4.86	0.01	0.00	0.00	0.04	0.04	0.04
C	0.42	0.00	-11.73	-4.86	-0.05	0.00	0.00	-0.03	-0.03	-0.03
NR	7.08	0.00	-1.14	-4.86	-0.11	0.00	0.00	0.25	0.25	0.25
Unclassified	1.53	0.00	-16.21	2.42	-0.04	0.00	0.00	-0.06	-0.06	-0.06

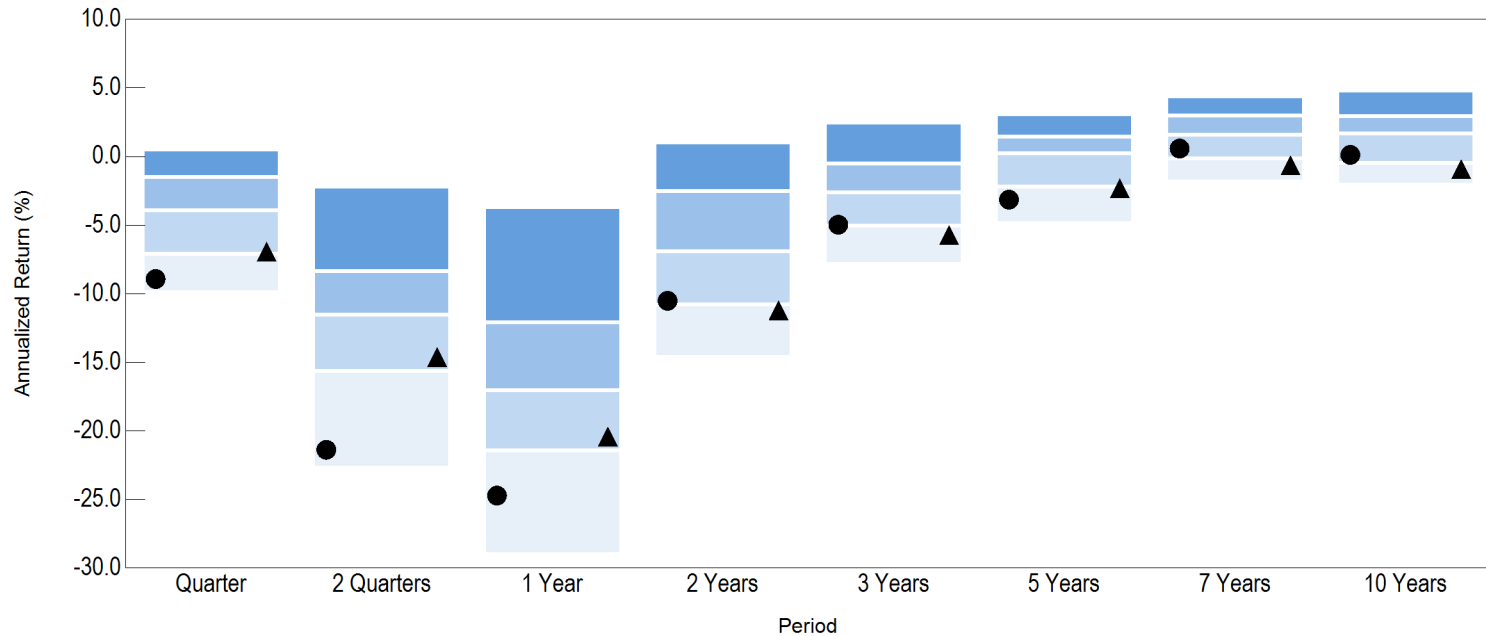
Summary	
Account Return	-3.06
Benchmark Return	-4.85
Excess Return	1.80
Sector Allocation	1.44
Security Selection	0.50
Trading	-0.14
Pricing Differences	-0.01
Compounding	0.00

Details

Scheme	Average Weight Account	Average Weight Benchmark	Return Account	Return Benchmark	Contribution to Return Account	Contribution to Return Benchmark	Sector Allocation Effect	Security Selection Effect	Total Effect	Excess Total Effect
Total	100.00	100.00	-2.92	-4.86	-2.92	-4.86	1.44	0.50	1.94	1.94
Less than 0.5	7.31	0.05	-0.36	3.83	-0.04	0.00	0.36	-0.24	0.12	0.12
0.5 - 1.0	2.54	0.81	-0.75	-0.07	-0.02	0.00	0.05	-0.02	0.03	0.03
1.0 - 1.5	9.51	3.94	0.44	-0.59	-0.03	-0.02	0.48	0.06	0.53	0.53
1.5 - 2.0	6.35	3.89	-1.94	-0.82	-0.07	-0.03	-0.11	-0.07	-0.18	-0.18
2.0 - 2.5	3.71	5.83	-1.82	-1.40	-0.06	-0.10	-0.11	0.00	-0.11	-0.11
2.5 - 3.0	4.27	4.52	-0.06	-1.71	-0.06	-0.06	0.05	0.02	0.07	0.07
3.0 - 3.5	5.23	5.22	-0.71	-2.13	-0.04	-0.12	0.00	0.08	0.07	0.07
3.5 - 4.0	6.64	4.81	0.14	-2.62	-0.04	-0.15	0.04	0.15	0.19	0.19
4.0 - 4.5	6.55	5.42	-2.50	-3.09	-0.21	-0.14	0.04	0.02	0.06	0.06
4.5 - 5.0	5.27	4.45	-0.58	-3.50	-0.02	-0.17	0.01	0.17	0.18	0.18
5.0 - 5.5	6.37	4.25	-3.14	-3.70	-0.17	-0.17	0.02	0.04	0.06	0.06
5.5 - 6.0	4.04	3.56	-3.99	-4.20	-0.16	-0.14	0.01	0.00	0.00	0.00
6.0 - 6.5	7.62	4.59	-2.81	-4.32	-0.32	-0.23	0.01	0.07	0.09	0.09
6.5 - 7.0	4.81	3.40	-3.25	-4.70	-0.11	-0.12	0.00	0.08	0.09	0.09
7.0 - 7.5	3.52	4.56	-4.96	-5.61	-0.18	-0.36	0.02	0.02	0.04	0.04
7.5 - 8.0	2.41	4.33	-4.19	-5.43	-0.03	-0.15	0.01	0.04	0.05	0.05
8.0 - 8.5	1.51	1.55	-5.34	-6.95	-0.11	-0.10	0.00	-0.03	-0.03	-0.03
8.5 - 9.0	0.53	1.36	-2.12	-6.40	0.06	-0.12	0.03	0.03	0.06	0.06
9.0 - 9.5	0.09	1.81	-5.64	-7.53	0.00	-0.14	0.05	0.00	0.05	0.05
9.5 - 10.0	0.09	1.87	-1.92	-6.93	-0.01	-0.11	0.03	0.00	0.03	0.03

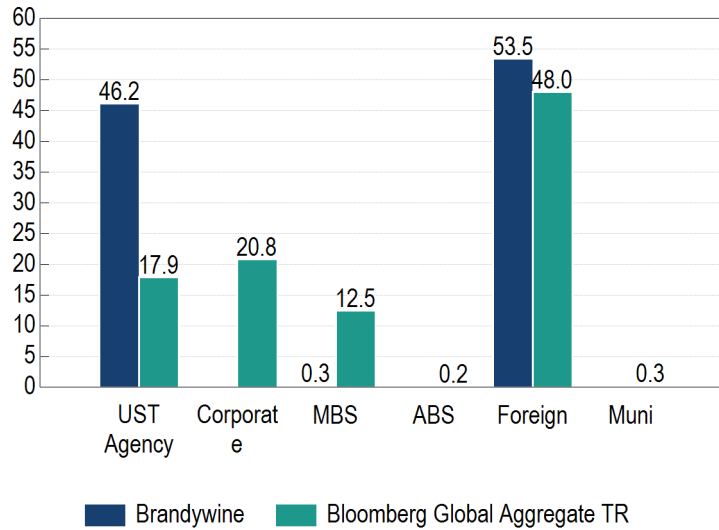
Scheme	Average Weight Account	Average Weight Benchmark	Return Account	Return Benchmark	Contribution to Return Account	Contribution to Return Benchmark	Sector Allocation Effect	Security Selection Effect	Total Effect	Excess Total Effect
10.0 - 10.5	0.53	1.27	-7.15	-7.30	-0.03	-0.09	0.02	0.01	0.03	0.03
10.5 - 11.0	0.23	1.45	-11.58	-6.73	-0.12	-0.09	0.00	-0.04	-0.04	-0.04
11.0 - 11.5	0.81	1.11	-4.85	-8.34	0.00	-0.11	0.03	0.03	0.06	0.06
11.5 - 12.0	0.84	1.36	-1.17	-8.58	-0.04	-0.18	0.04	0.05	0.09	0.09
12.0 - 12.5	0.57	2.14	-9.89	-8.29	-0.05	-0.29	0.10	0.00	0.10	0.10
12.5 - 13.0	0.65	2.95	1.17	-8.13	0.01	-0.33	0.14	0.01	0.16	0.16
13.0 - 13.5	0.13	3.55	9.98	-8.94	0.02	-0.40	0.17	0.02	0.20	0.20
13.5 - 14.0	0.07	3.54	-1.10	-8.08	-0.05	-0.25	0.08	-0.01	0.07	0.07
14.0 - 14.5	0.70	3.14	-6.24	-8.44	-0.16	-0.19	0.00	0.04	0.04	0.04
14.5 - 15.0	0.93	2.53	-0.04	-9.69	-0.11	-0.17	0.04	0.00	0.03	0.03
15.0 - 15.5	0.27	1.79	9.38	-9.42	0.04	-0.12	0.07	0.02	0.09	0.09
15.5 - 16.0	0.33	1.62	5.81	-9.48	0.02	-0.13	0.07	0.01	0.08	0.08
16.0 - 16.5	0.03	1.36	3.03	-9.86	0.02	-0.06	0.04	0.00	0.04	0.04
16.5 - 17.0	0.63	0.89	-4.32	-11.67	-0.26	-0.04	-0.22	0.20	-0.02	-0.02
17.0 - 17.5	1.73	0.58	-6.26	-9.02	-0.39	0.02	-0.14	-0.04	-0.19	-0.19
17.5 - 18.0	3.16	0.25	-0.88	-10.47	-0.16	0.00	0.03	-0.22	-0.19	-0.19
18.0 - 18.5	0.00	0.12	0.00	-6.38	0.00	0.01	-0.01	0.00	-0.01	-0.01
18.5 - 19.0	0.00	0.07	0.00	-7.21	0.00	0.00	0.00	0.00	0.00	0.00
19.0 - 19.5	0.00	0.03	0.00	-0.14	0.00	0.00	0.00	0.00	0.00	0.00
19.5 - 20.0	0.00	0.01	0.00	4.85	0.00	0.00	0.00	0.00	0.00	0.00
20.0 - 20.5	0.00	0.00	0.00	-1.90	0.00	0.00	0.00	0.00	0.00	0.00
21.0 - 21.5	0.00	0.00	0.00	-0.84	0.00	0.00	0.00	0.00	0.00	0.00
22.0 - 22.5	0.00	0.00	0.00	1.76	0.00	0.00	0.00	0.00	0.00	0.00
21.5 - 22.0	0.00	0.00	0.00	2.19	0.00	0.00	0.00	0.00	0.00	0.00
20.5 - 21.0	0.00	0.00	0.00	-0.46	0.00	0.00	0.00	0.00	0.00	0.00

eV All Global Fixed Inc Gross Return Comparison

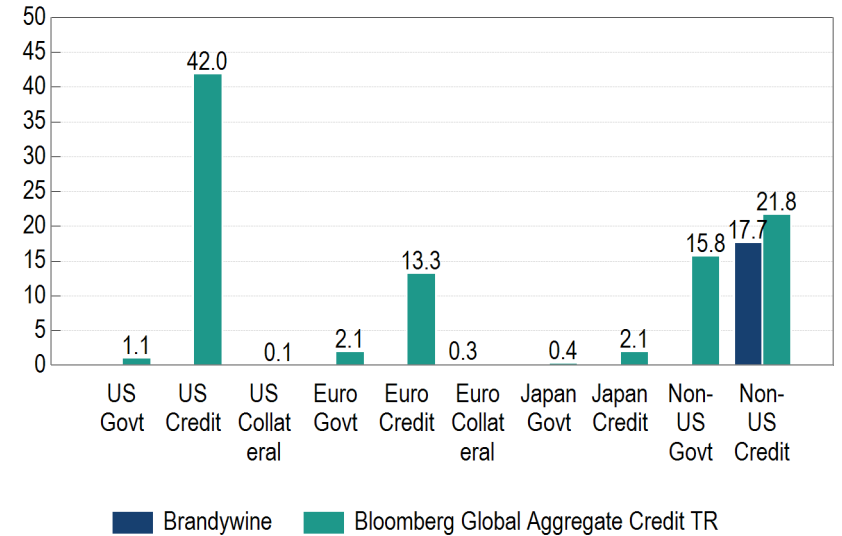


	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	0.48	-2.24	-3.73	0.98	2.46	3.04	4.36	4.77								
25th Percentile	-1.46	-8.34	-12.05	-2.51	-0.51	1.49	3.00	2.98								
Median	-3.90	-11.52	-17.02	-6.87	-2.61	0.25	1.63	1.72								
75th Percentile	-7.07	-15.61	-21.41	-10.75	-5.02	-2.17	-0.13	-0.44								
95th Percentile	-9.88	-22.67	-28.96	-14.60	-7.81	-4.83	-1.81	-2.02								
# of Portfolios	525	525	524	517	506	466	428	344								
● Brandywine	-8.93 (91)	-21.38 (94)	-24.72 (90)	-10.52 (73)	-4.97 (75)	-3.15 (89)	0.58 (63)	0.11 (66)								
▲ Bloomberg Global Aggregate TR	-6.94 (73)	-14.63 (66)	-20.43 (68)	-11.21 (79)	-5.74 (83)	-2.32 (77)	-0.65 (83)	-0.93 (83)								

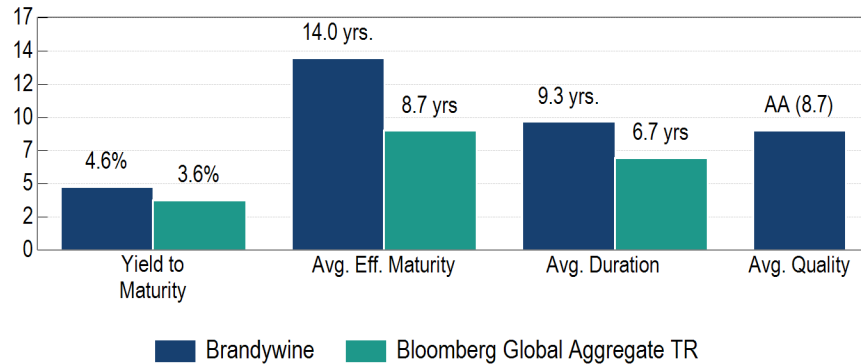
US Sector Allocation



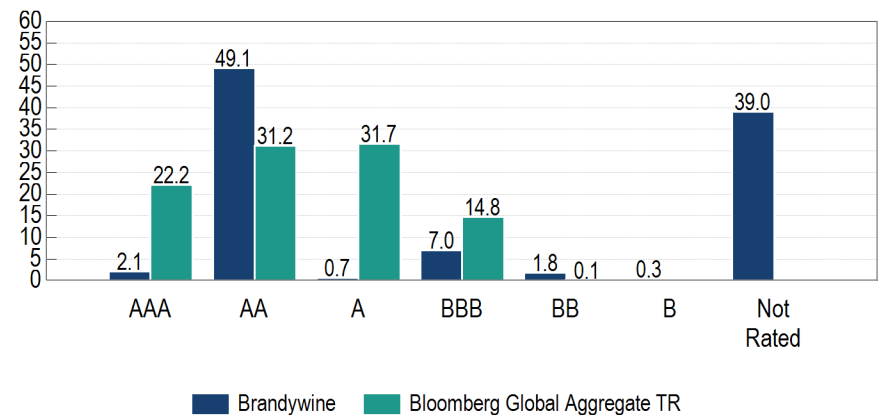
Global Sector Allocation



Characteristics
Brandywine



Credit Quality Allocation
Brandywine



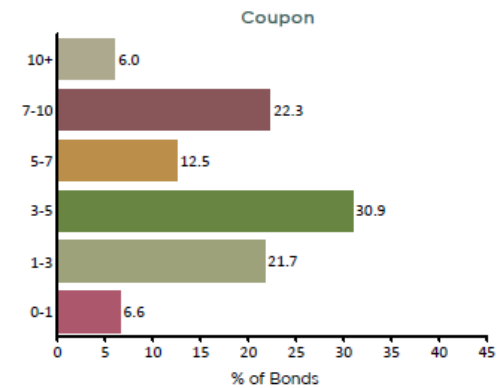
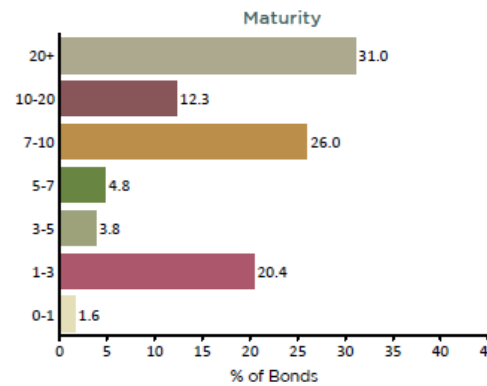
Brandywine

Portfolio Characteristics

Period Ending: September 30, 2022

Portfolio Characteristics

	Portfolio	Primary Benchmark
Yield to Maturity (%)	6.75	3.17
Yield to Worst (%)	6.85	3.17
Modified Duration	9.47	7.46
Effective Duration	9.55	7.53
Average Maturity	13.29	9.60
Average Market Price	82.90	-
Average Coupon (%)	4.69	1.80
Current Yield (%)	5.51	-
# of Issues	159	1,181



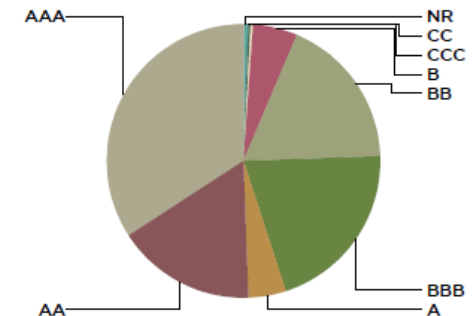
Sector Breakdown

	Market Value (%)	Duration Contribution (in Years)
Government Sovereign	82.79	7.14
Corporate Bond - High Yield	10.45	0.40
Corporate Bond - Investment Grade	1.23	0.04
Government Regional Agencies	2.77	0.02
Government Owned - No Guarantee	0.48	0.01
Mortgage Backed Securities	0.17	0.00
Cash	5.68	-
Derivatives	(3.56)	1.85
Total:	100.00	9.47

Portfolio Credit Quality (Blended Weighted Average Rating)

Combined Rating	%	Cumulative %
AAA	34.1	34.1
AA	16.4	50.5
A	4.7	55.2
BBB	20.5	75.6
BB	18.0	93.6
B	5.2	98.8
CCC	0.5	99.3
CC	0.2	99.5
NR	0.5	100.0

Average Quality: A



PRIMARY BENCHMARK is FTSE WGBI (USD)

All Averages are US DOLLAR - weighted by the net market value. Average Market Price includes accrued interest. The "Blended Weighted Average Rating" is determined as follows: in line with the methodology used by Barclays Global indices, the middle rating from the three major NRSROs (S & P, Moody's, and Fitch) will be assigned to each security. In the event that ratings are provided by only two agencies, the lowest rating will be assigned. If only one agency assigns a rating, that rating will be applied. If the security is not rated by one of the three major agencies, U.S. treasuries and certain U.S. agencies are given the U.S. issuer rating. Sovereign treasuries are given the sovereign issuer rating. All other unrated securities are given a rating equivalent to a defaulted bond. The equivalent numerical rating is assigned to each security based on the Security Level scale. A Portfolio Level scale is applied on the weighted average calculation to round for fractional numerical ratings and then converted to an alpha weighted average rating. Cash is included and received the highest rating.

Data included on this page show the aggregate holdings of the Brandywine Emerging Markets Debt Fund ("EMD Fund"), in which the portfolio is invested. Holdings in the EMD Fund are not subject to ACERA's Investment Guidelines. Please note that ACERA owns units of the EMD Fund, not the underlying holdings. Data and characteristics shown are for illustrative purposes only.

Derivatives market value represents the unrealized profit/loss of all derivatives in the portfolio.

Brandywine
Country & Currency Allocation

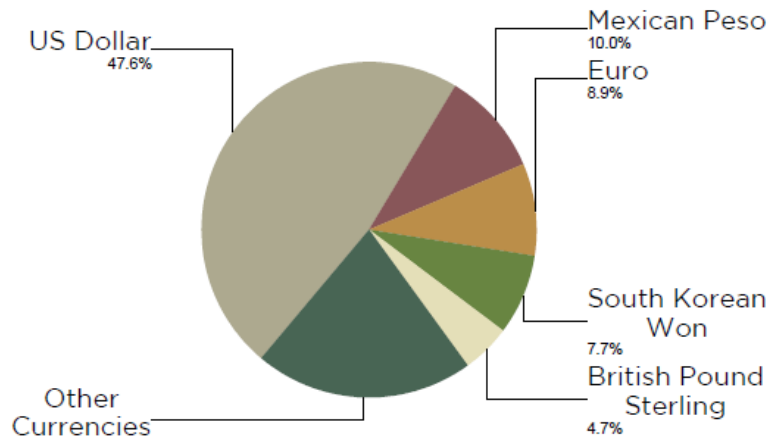
Period Ending: September 30, 2022

Country Allocation	9/30/2022			6/30/2022		Currency Allocation	9/30/2022			6/30/2022	
	Portfolio	Index	Active	Portfolio	Change		Portfolio	Index	Active	Portfolio	Change
*Mexico	11.85	0.72	11.14	9.72	2.13	US Dollar	10.01	44.66	(34.65)	16.78	(6.77)
South Korea	6.96	-	6.96	7.18	(0.22)	Japanese Yen	28.24	14.73	13.51	21.75	6.49
*Brazil	6.90	-	6.90	7.47	(0.58)	*Chilean Peso	5.07	-	5.07	6.42	(1.35)
*Colombia	5.43	-	5.43	2.40	3.03	Swedish Krona	5.18	0.22	4.96	5.05	0.13
*Peru	5.32	-	5.32	0.14	5.18	*Mexican Peso	5.16	0.72	4.45	3.65	1.52
United States	39.55	44.66	(5.11)	46.39	(6.84)	Euro	23.90	28.24	(4.34)	22.38	1.52
*South Africa	4.80	-	4.80	6.82	(2.02)	British Pound Sterling	(0.58)	3.56	(4.14)	(0.09)	(0.49)
*Poland	4.77	0.36	4.40	0.20	4.57	*Polish Zloty	4.12	0.36	3.75	6.58	(2.47)
Spain	0.17	4.29	(4.13)	0.17	(0.01)	*Hungarian Forint	3.60	-	3.60	3.54	0.06
*China	0.11	2.82	(2.71)	-	0.11	*Brazilian Real	3.48	-	3.48	1.96	1.52
*Czech Republic	1.56	-	1.56	1.87	(0.31)	**Chinese Yuan Renminbi	(0.42)	2.82	(3.24)	(0.69)	0.27
Australia	2.83	1.30	1.53	7.33	(4.49)	*South African Rand	3.10	-	3.10	2.00	1.10
*Malaysia	1.82	0.45	1.37	1.73	0.09	*Malaysian Ringgit	2.60	0.45	2.15	3.20	(0.61)
Canada	0.42	1.77	(1.35)	2.11	(1.69)	Canadian Dollar	-	1.77	(1.77)	-	-
*Hungary	1.25	-	1.25	-	1.25	*Peruvian Nuevo Sol	1.68	-	1.68	-	1.68
France	6.42	7.32	(0.90)	6.69	(0.27)	*Thai Baht	1.27	-	1.27	2.26	(0.99)
Israel	1.00	0.32	0.68	0.88	0.12	*Indonesian Rupiah	1.19	-	1.19	1.02	0.17
*Chile	0.51	-	0.51	0.57	(0.06)	Australian Dollar	0.11	1.30	(1.19)	0.19	(0.07)
Russian Federation	0.45	-	0.45	-	0.45	*Colombian Peso	1.04	-	1.04	1.31	(0.27)
Ireland	0.10	0.54	(0.45)	0.07	0.02	*Czech Koruna	0.78	-	0.78	2.46	(1.68)
Tanzania	0.25	-	0.25	0.12	0.13	Russian Ruble	0.46	-	0.46	-	0.46
*Uruguay	0.23	-	0.23	0.26	(0.04)	South Korean Won	0.44	-	0.44	0.23	0.20
*Zambia	0.21	-	0.21	0.30	(0.09)	*Philippine Peso	(0.42)	-	(0.42)	-	(0.42)
*Panama	0.20	-	0.20	0.20	-	Singapore Dollar	-	0.38	(0.38)	-	-
*Ukraine	0.18	-	0.18	0.24	(0.06)	Israeli Shekel	-	0.32	(0.32)	-	-
*Vietnam	0.15	-	0.15	0.14	0.01	Danish Krone	-	0.31	(0.31)	-	-
*Nigeria	0.10	-	0.10	0.09	0.01	Norwegian Krone	-	0.17	(0.17)	-	-
European Union	0.01	-	0.01	0.01	-						
Other Countries	-	35.45	(35.45)	0.69	(0.69)	Total:	100.00	100.00	-	100.00	-
Derivative P/L	(3.56)	-	(3.56)	(3.81)	0.24						
Total:	100.00	100.00	-	100.00	-						

*Emerging Markets are defined as any country and currency included in the JP Morgan Government Bond Index-Emerging Market or the JP Morgan Emerging Market Bond Index Global indices.

**For reporting purposes we have grouped both offshore (CNH) and onshore (CNY) Chinese Yuan Renminbi exposure in a single line item. Please refer to the holdings section of this report for additional details.

Source of Portfolio Duration by Currency Denomination



Modified Duration Contribution by Currency
(In Years)

Currency	9/30/2022				6/30/2022	
	0-3	>3-10	>10-20	>20+	Total	Total Change
US Dollar	0.05	0.40	1.43	2.64	4.51	1.77
*Mexican Peso	-	0.02	0.14	0.79	0.95	0.40
Euro	-	0.46	-	0.39	0.84	(0.07)
South Korean Won	-	0.40	-	0.32	0.72	(0.06)
British Pound Sterling	-	0.44	-	-	0.44	(0.01)
*Peruvian Nuevo Sol	-	0.23	0.17	-	0.40	0.40
*South African Rand	-	0.03	-	0.33	0.36	0.03
*Polish Zloty	0.00	0.35	-	-	0.36	0.35
*Brazilian Real	-	-	0.30	-	0.30	(0.01)
*Colombian Peso	-	0.25	-	0.02	0.26	0.19
*Czech Koruna	-	-	0.15	-	0.15	(0.03)
*Hungarian Forint	-	-	0.09	-	0.09	0.09
*Malaysian Ringgit	0.02	0.05	-	-	0.07	(0.00)
Australian Dollar	0.02	-	-	-	0.02	(0.01)
Total	0.09	2.62	2.27	4.49	9.47	3.05

Modified Duration Contribution by Country

vs. FTSE WGBI (USD)

(In Years)

Country	9/30/2022				6/30/2022		Total	Active Change
	0-3	>3-10	>10-20	>20+	Total	Index		
Japan	-	-	-	-	-	1.76	(1.76)	-
United States	0.01	0.17	1.42	2.63	4.23	2.71	1.52	1.81
*Mexico	0.01	0.06	0.14	0.80	1.00	0.03	0.96	0.39
South Korea	0.00	0.40	-	0.32	0.73	-	0.73	(0.06)
*Peru	-	0.23	0.17	-	0.40	-	0.40	0.40
Italy	-	-	-	-	-	0.40	(0.40)	-
*South Africa	-	0.04	-	0.33	0.37	-	0.37	0.04
*Brazil	0.00	0.05	0.30	0.00	0.36	-	0.36	(0.02)
*Poland	0.00	0.35	-	-	0.36	0.01	0.34	0.35
Spain	-	-	-	0.00	0.00	0.30	(0.29)	(0.00)
*Colombia	0.01	0.27	-	0.02	0.29	-	0.29	0.18
France	-	0.46	-	0.38	0.84	0.55	0.29	(0.07)
*China	-	0.01	-	-	0.01	0.16	(0.15)	0.01
*Czech Republic	-	-	0.15	-	0.15	-	0.15	(0.03)
Canada	-	0.02	-	-	0.02	0.13	(0.11)	0.01
*Hungary	-	-	0.09	-	0.09	-	0.09	0.09
Australia	0.02	0.00	-	-	0.03	0.09	(0.06)	(0.01)
United Kingdom	-	0.44	-	-	0.44	0.39	0.05	(0.01)
Ireland	-	0.00	-	-	0.00	0.04	(0.04)	0.00
*Malaysia	0.02	0.05	-	-	0.07	0.03	0.04	(0.00)
*Chile	0.00	0.01	-	-	0.02	-	0.02	(0.00)
Israel	0.00	0.03	-	-	0.04	0.02	0.02	0.00
*Panama	-	0.01	-	-	0.01	-	0.01	(0.00)
*Ukraine	-	-	0.01	-	0.01	-	0.01	0.00
*Zambia	-	0.01	-	-	0.01	-	0.01	(0.00)
Tanzania	-	0.01	-	-	0.01	-	0.01	0.00
*Uruguay	0.01	-	-	-	0.01	-	0.01	(0.00)
*Nigeria	-	0.00	-	-	0.00	-	0.00	0.00
*Vietnam	0.00	-	-	-	0.00	-	0.00	-
Other Countries	-	-	-	-	-	0.83	(0.83)	(0.02)
Total	0.09	2.62	2.27	4.49	9.47	7.47	2.01	3.05

*Emerging Markets are defined as any country and currency included in the JP Morgan Government Bond Index-Emerging Market or the JP Morgan Emerging Market Bond Index Global indices.

Total Plan Policy Index	As of:																
	7/1/21	1/1/21	7/1/19	10/1/17	7/1/16	1/1/13	10/1/11	4/1/11	1/1/09	7/1/06	4/1/03	6/1/01	10/1/97	1/1/96	10/1/94	1/1/92	1/1/80
91-day US T-Bill													1%	1%	1%	1%	2%
Bloomberg US Aggregate	9%	11.40%	11.40%	11.25%	11.25%	11.25%	15%	18%	18%	21%	23%	26%	33%	29%	32%	37%	30%
Bloomberg US High Yield	1.2%	1.6%	1.6%	1.5%	1.5%	1.5%	2.0%	2.4%	2.4%	3%	3%	3%					
Bloomberg Commodity	0.3%	0.25%	0.75%	0.75%	0.75%												
FTSE WGBI ex US	3.8%	3.00%	3.00%	2.25%	2.25%	2.25%	3%	3.6%	3.6%	4%	4%	5%					
CPI-U +3% (RR)						5.00%	5%										
MSCI ACWI ex US									23%	22%	22%	22%					
MSCI ACWI ex US IMI	24%	25%	25%	26%	26%	27%	25%	23%									
MSCI EAFE													10%	10%	10%	10%	
MSCI Emg Mkts Free ex Malaysia													3%				
MSCI World net																	10%
NCREIF								6%	6%	9%	9%	9%					
NCREIF ODCE	9%	8%	8%	8%	8%	6%	6%										
Russell 3000	24%	25%	25%	28%	28%	32%	34%	37%	37%	41%	39%	35%	42%	49%	47%	40%	
HFRI FoF Composite	8%	9%	9%	9%													
Refinitiv CJA Global All Private Equity 1Q Lagged	11%	8%	8%	9%													
Russell 3000 +1% (PE)					18.00%	15.00%	10%										
Russell 3000 +1.5% (PE)								10%	10%								
Russell 3000 +4% (AI)													2%				
S&P 500																	55%
S&P Global Infrastructure	3.6%	3%	1.75%	1.75%	1.75%												
S&P Global Large Mid Commodity & Resource	2.1%	1.75%	2.50%	2.50%	2.50%												
S&P/LSTA Leveraged Loan+1.75%	4%	4%	4%														
Wilshire RE													9%	11%	10%	12%	3%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

US Equity Benchmark	As of:	
	1/1/92	1/1/80
Russell 3000	100%	0%
S&P 500	0%	100%
	100.0%	100.0%

International Equity Benchmark	As of:				
	4/1/11	6/1/01	10/1/97	1/1/92	1/1/80
MSCI ACWI ex US		100%			
MSCI ACWI ex US IMI	100%				
MSCI EAFE			77%	100%	
MSCI Emg Mkts Free ex Malaysia			23%		
MSCI World net					100%
	100.0%	100.0%	100.0%	100.0%	100.0%

Fixed Income Benchmark	As of:			
	7/1/21	6/1/19	6/1/01	1/1/80
Bloomberg US Aggregate	75.00%	71.25%	75%	100%
Bloomberg US High Yield	10.00%	10.00%	10%	
FTSE WGBI ex US	15.00%	18.75%	15%	
	100.0%	100.0%	100.0%	100.0%

Absolute Return Benchmark	As of:	
	10/1/17	10/1/11
HFRI Fund of Funds Composite Index	100%	
LIBOR 1M +4%		100%
	100.0%	100.0%

Private Equity Benchmark	As of:	
	10/1/17	12/1/08
Refinitiv CJA Global All Private Equity 1Q Lagged	100%	
Russell 3000 +2.5%		100%
	100.0%	100.0%

Real Assets Benchmark	As of:		
	1/1/21	7/1/16	10/1/11
CPI-U +3%			100%
Bloomberg Commodity	5%	15%	
S&P Global Infrastructure	60%	35%	
S&P Global Large Mid Commodity & Resource	35%	50%	
	100.00%	100.00%	100.0%

Private Credit Benchmark	As of:
	11/1/19
S&P/LTSA Leveraged Loan Index +1.75%	100%
	100.0%

Real Estate Blend	As of:		
	10/1/11	6/1/01	4/1/86
NCREIF ODCE	100%		
NCREIF Property		100%	
Wilshire RE			100%
	0.0%	100.0%	100.0%

Glossary

Allocation Effect: An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

Alpha: The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$.

Benchmark R-squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

Beta: A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book-to-Market: The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation: A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

Excess Return: A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

Interaction Effect: An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

Portfolio Turnover: The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

Price-to-Earnings Ratio (P/E): Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

R-Squared: Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection Effect: An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$.

Sortino Ratio: Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

Standard Deviation: A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

Style Map: A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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Verus will make every reasonable effort to obtain and include accurate market values. However, if managers or custodians are unable to provide the reporting period's market values prior to the report issuance, Verus may use the last reported market value or make estimates based on the manager's stated or estimated returns and other information available at the time. These estimates may differ materially from the actual value. Hedge fund market values presented in this report are provided by the fund manager or custodian. Market values presented for private equity investments reflect the last reported NAV by the custodian or manager net of capital calls and distributions as of the end of the reporting period. These values are estimates and may differ materially from the investments actual value. Private equity managers report performance using an internal rate of return (IRR), which differs from the time-weighted rate of return (TWRR) calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

Verus receives universe data from InvMetrics, eVestment Alliance, and Morningstar. We believe this data to be robust and appropriate for peer comparison. Nevertheless, these universes may not be comprehensive of all peer investors/managers but rather of the investors/managers that comprise that database. The resulting universe composition is not static and will change over time. Returns are annualized when they cover more than one year. Investment managers may revise their data after report distribution. Verus will make the appropriate correction to the client account but may or may not disclose the change to the client based on the materiality of the change.



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: SEPTEMBER 30, 2022

Absolute Return Performance Report

Alameda County Employees' Retirement Association

Non-Confidential

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Hedge Fund Environment **PAGE 3**

ACERA Performance **PAGE 6**

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***Past performance is no guarantee of future results.** This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security or pursue a particular investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other “forward-looking statements.” No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Verus Advisory Inc. and Verus Investors, LLC (“Verus”) file a single form ADV under the United States Investment Advisors Act of 1940, as amended. Additional information about Verus Advisory, Inc. and Verus Investors, LLC is available on the SEC’s website at www.adviserinfo.sec.gov. Verus – also known as Verus Advisory™ or Verus Investors™.*

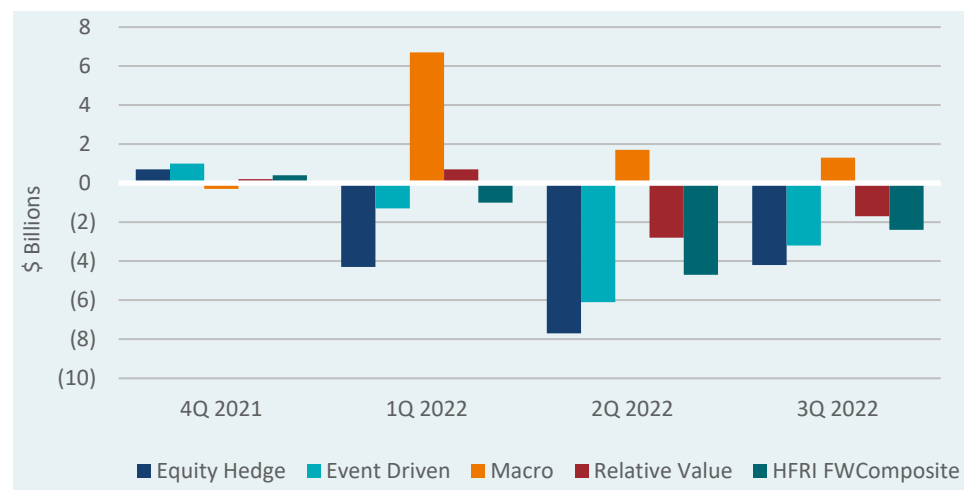
Hedge Fund Environment

Hedge fund market review

Hedge funds see wild swings in flows; worst quarter outflow since COVID

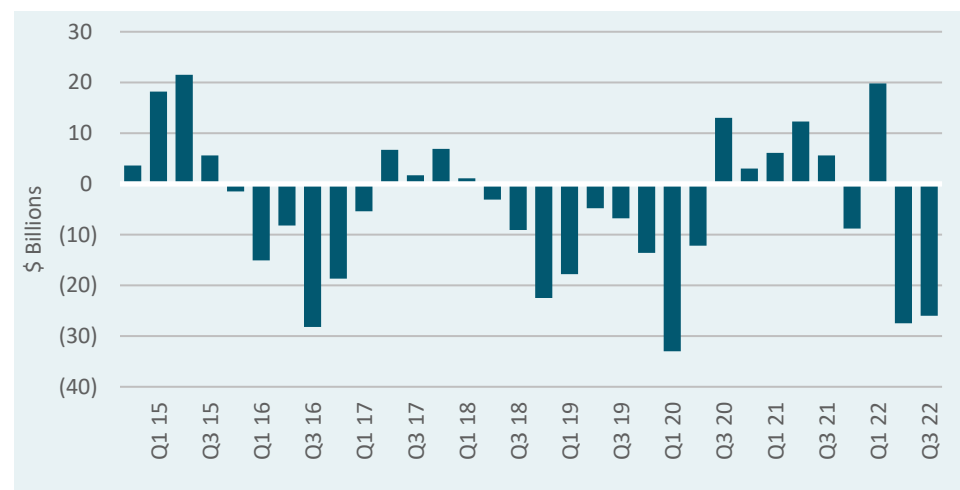
- Performance for Q2 (-4.7% for the HFRI Composite) was the worst quarterly return since Q1 2020/COVID (-11.5%), Q3 also saw negative -2.3% returns for the HFRI Composite. Interestingly, hedge funds provided much more downside protection during this quarter than during Q1 2020, despite similar equity market drawdowns: (-16.1% and -19.6% for the S&P 500).
- Investors withdrew an estimated \$28 billion from hedge funds during Q2 and \$26 billion in Q3, the most since Q1 2020/COVID when estimated redemptions were \$30+ billion. This comes on the heels of strong inflows in Q1 and the best period of inflows since 2013-2015, which suggests that most investors were using their hedge fund allocations as a source of liquidity rather than exiting the space.
- Within hedge funds, Macro strategies were the clear outperformer as systematic/CTA type strategies and discretionary/thematic funds were able to generate gains in both Q1 and Q2. Relative value strategies were fairly defensive, while Equity Hedge and Event Driven funds, on aggregate, performed as expected given their consistent beta profiles to equity and credit.

HFRI STRATEGY RETURNS, LAST 3 QUARTERS



Source: HFR

QUARTERLY NET FLOWS TO HEDGE FUNDS



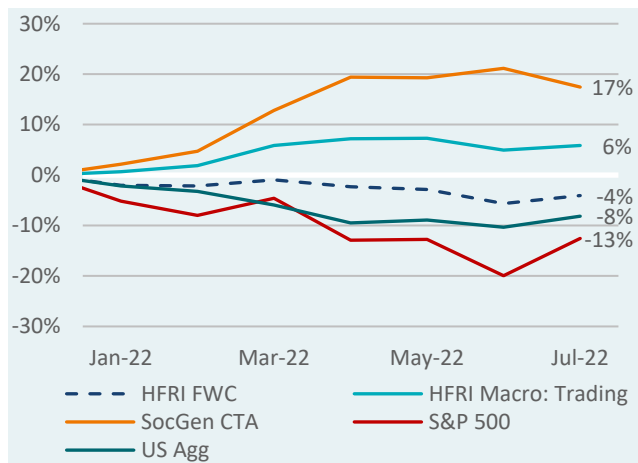
Source: HFR

Hedge fund market review

Macro funds deliver positive convexity in 2022, rotation in credit funds

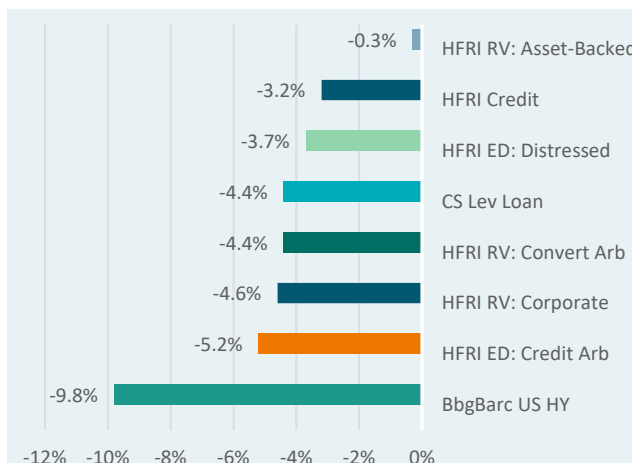
- Looking closer into Macro strategies outperformance in 2022, most of this can be attributed to the success of trend following CTA funds, which capitalized on positive trends in Commodities and negative trends in Stocks and Bonds.
- Actively traded macro funds, which include more tactical discretionary funds, also delivered strong returns given the market backdrop, primarily from short interest rate positions as the Fed remained committed to raising rates enough to bring down inflation.
- Credit hedge fund strategies succumbed to overwhelming risk-off moves in fixed income markets during the quarter. The HFRI Credit Index lost 3.2% for Q2 and another 2.2% in Q3, slightly outperforming loan markets as hedges helped offset spread widening.
- Strategies like Distressed and Convertible Arbitrage, which enjoyed strong performance immediately following the COVID crash in early 2020, have had a tough 2022 while more conservative strategies such as Structured Credit were able to offset losses with higher yields.

2022 YTD RETURNS FOR MACRO SUB-STRATEGIES



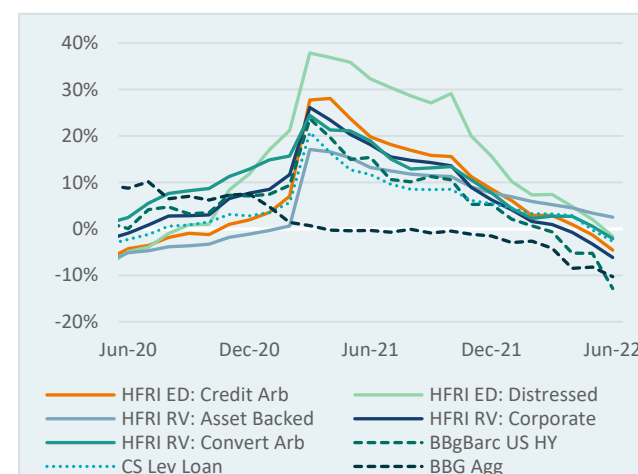
Source: HFR
Note: HFRI FWC is HFRI Fund Weighted Composite

2Q 2022 QUARTERLY RETURN FOR CREDIT FUNDS



Source: HFR

1 YEAR ROLLING RETURN FOR RV STRATEGIES



ACERA Performance

Allocations

Target

Sub-categories	Target Allocations	Min./Max. Ranges
AR Portfolio	8.0%	5% to 10.5%
▪ <i>Fund of Funds*</i>	6.4%	4% to 8%
▪ <i>Other Alternatives/Oppportunistic</i>	1.6%	0% to 4.0%

Current (as of 9/30/2022)

Sub-categories	Current Allocations	Min./Max. Ranges
AR Portfolio	8.7%	5% to 10.5%
▪ <i>Fund of Funds*</i>	6.9%	4% to 8%
▪ <i>Other Alternatives/Oppportunistic</i>	1.8%	0% to 4%

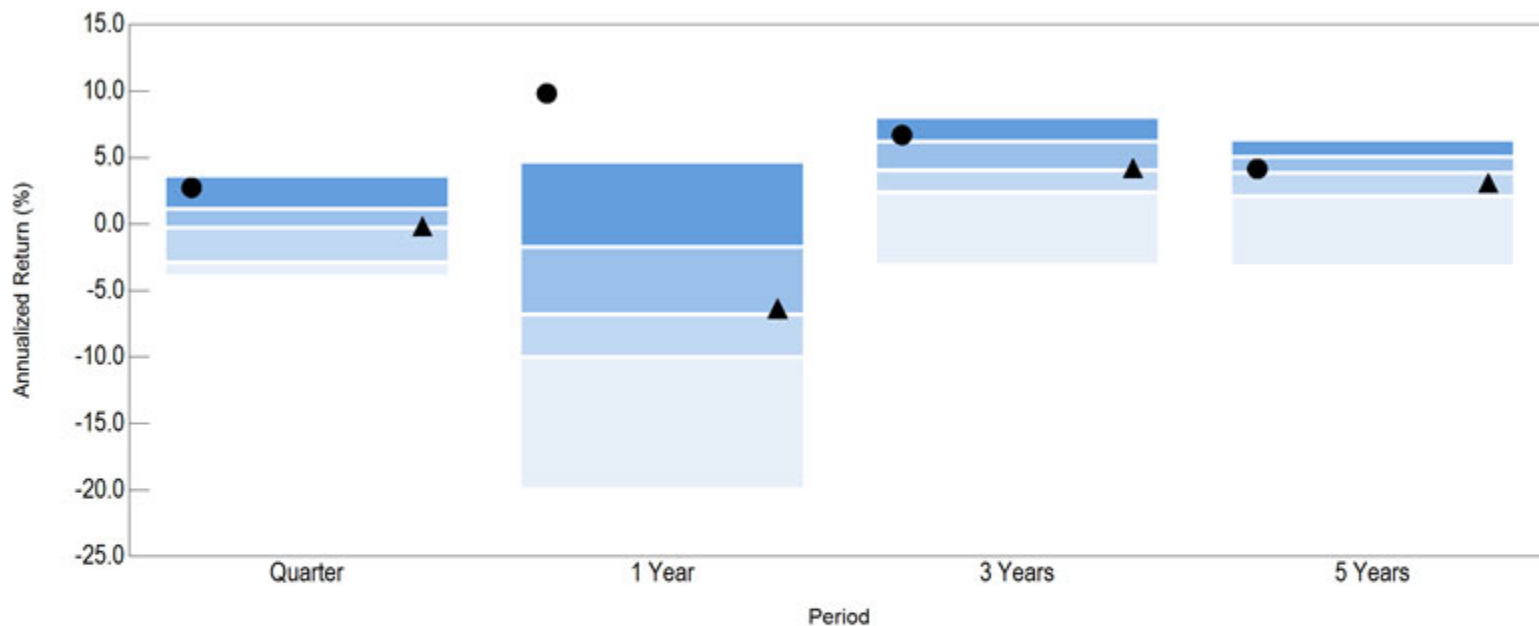
* Funding second Fund of One manager in two tranches August and September, once completed AR portfolio allocation will be 80% FOF/20% Other Alternatives.

Performance Summary

	Market Value (\$)	% of Portfolio	Ending September 30, 2022													
			3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	Inception (%)	Inception Date
Absolute Return*	858,324,394	100.0	2.7	6.5	6.5	9.8	6.7	4.1	4.8	15.0	-0.6	1.8	-2.2	3.3	4.1	Sep-11
<i>Absolute Return Blend</i>			-0.2	-6.7	-6.7	-6.3	4.2	3.1	3.8	6.2	10.9	8.4	-4.0	6.0	3.8	Sep-11

Relative Performance

InvMetrics All DB Hedge Funds Gross Return Comparison
Ending September 30, 2022



	Quarter		1 Year		3 Years		5 Years	
5th Percentile	3.6		4.7		8.1		6.3	
25th Percentile	1.2		-1.7		6.2		5.1	
Median	-0.2		-6.8		4.1		3.9	
75th Percentile	-2.8		-10.0		2.4		2.1	
95th Percentile	-3.9		-19.9		-3.1		-3.1	
# of Portfolios	133		124		122		108	
● Absolute Return	2.7	(8)	9.8	(3)	6.7	(19)	4.1	(47)
▲ Absolute Return Blend	-0.2	(50)	-6.3	(48)	4.2	(49)	3.1	(66)

Portfolio Statistics* (as of 9/30/2022)

	Benchmark HFRI FoF Composite	Absolute Return Portfolio	MSCI ACWI
Max Drawdown	-9.0	-10.5	-25.3
Sharpe Ratio	0.51	0.72	0.56
Beta	0.29	0.09	1.00
Correlation to MSCI ACWI	0.83	0.29	1.00
Annualized StDev	4.9	4.3	14.5

*Since inception of AR Portfolio (9/2011)

Portfolio performance and risk targets are:

AR portfolio returns to exceed benchmark

Correlation to global equities less than or equal to 0.5

Appendix

Glossary

Beta - A measure of systematic (undiversifiable) or market risk, the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Correlation – A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help optimize the benefits of diversification when constructing an investment portfolio.

Internal Rate of Return (IRR) – the interest rate which is the net present value of all the cash flows (both positive and negative) of an investment.

Maximum Drawdown – the maximum loss from a peak to a trough of a portfolio before a new peak attained. Maximum drawdown measures the downside risk over a specified time period.

Standard Deviation - A measure of volatility, or risk. Measures risk by indicating how far from the average, or mean, return one is likely to fall in any given time period. The rules of statistics dictate that you will fall within 1 standard deviation of the mean 2/3 of the time and within 2 standard deviations 95% of the time. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Glossary

Sharpe Ratio - A measure of that explains the return of an investment compared to its risk. The Sharpe Ratio indicates excess portfolio return for each unit of risk over the risk free rate (usually short-term Treasuries or LIBOR) per unit of volatility. The higher the Sharpe Ratio, the greater its risk-adjusted return.

Time Weighted Return – A measure of the compound rate of growth in a portfolio, which eliminates the distorting effects of growth rates created by inflows and outflows of money.



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To: Members of the Investment Committee

From: Julius Cuaresma, Investment Analyst *JCC*
John Ta, Investment Officer *[Signature]*

Date: December 14, 2022

Subject: Update on ESG Implementation

Recommendation:

Not applicable. This is an information item.

Background:

At the June 8, 2022 Investment Committee (IC) Meeting, Staff and Verus provided their first update on the Board-approved Environmental, Social, and Governance (ESG) Implementation Plan. This is the second update sharing certain key developments since the last reporting period.

Discussion:

Component 1: Adoption of ISS Public Fund Proxy Voting Policy, replacing ISS Benchmark Policy

Background: On April 11, 2022, ACERA implemented the ISS Public Fund Proxy Voting Policy; at that time, customized proxy voting was only available for ACERA's Separately Managed Accounts (SMA). Since over 20% of the Total Fund is in two Commingled Index BlackRock Funds (US, World ex-US), Staff and Verus engaged BlackRock in an effort to better align ACERA's investments in the BlackRock Funds with the Public Fund Proxy Voting Policy. During 2022, BlackRock began rolling out "Voting Choice," giving Allocators more Proxy Voting Policy choices for Commingled Index Funds.

Status Update: Full Completion. *On September 27, 2022,* Staff implemented the Public Fund Policy for ACERA's two Commingled Index BlackRock holdings.. This implementation represents a material improvement in ACERA's governance of its assets: through the adoption to Public Fund Policy for SMAs and Commingled Index Holdings, as of 9/30/22, over 50% of the Total Fund votes according to the Public Fund Policy.

Component 2: Develop ESG evaluation framework, integrate into ACERA's due diligence/monitoring process

Background: Since ACERA's 2021 ESG Policy adoption, Staff expanded its Evaluation Framework by including ESG considerations in RFPs (e.g., Absolute Return Fund of Hedge Fund, Emerging Markets Equity). Recommended Private Markets Managers now address ESG considerations throughout the due diligence process. Recently, Staff has included ESG considerations in the General Investment Consultant RFP.

Status Update: Full Completion. Though completed, Staff expects to further adjust the Evaluation Framework in light of the dynamic ESG landscape. In 2023, Staff will update its Manager Compliance Checklists so that Investment Managers under consideration by ACERA will be asked to complete the Annual ESG Risk Disclosure Report (please also refer to **Component 3** below).

Component 3-4: Conduct annual reviews of ACERA’s current managers, including Emerging Investment Managers (EIM), through the Annual ESG Risk Disclosure Report

Background: ESG implementation efforts continue to evolve vis-à-vis the monitoring, quantifying and standardizing of ESG risk and performance. Progress continues to be made by institutional investors such as ACERA.

Status Update: Near Completion. Staff has boiled down ESG into 10 questions as a solid foundation to build upon (Attachment #1 – Ten ESG Questions). These 10 questions elicit simple responses, i.e., primarily “Yes” or “No”. Staff has sent this ESG Questionnaire to incumbent ACERA Managers and plans to expand ESG due diligence by requiring responses from proposed investments. Since these responses are quantifiable and comparable, Staff is aggregating these Manager responses so as to provide a holistic view of ACERA’s ESG Risk and summarize in its June 2023 Annual ESG Risk Disclosure Report. Staff will also annually require incumbent Managers to confirm, read, and acknowledge receipt of ACERA’s 1) General Investment Guidelines, Policies, and Procedures; 2) ESG Policy; 3) Emerging Investment Manager Policy; 4) Proxy Voting Policies.

Conclusion:

As presented at prior ICM meetings, Staff will continue to provide updates to the Board-approved ESG Implementation Plan. Staff plans to present ACERA’s 1st Annual ESG Risk Disclosure Report at the June 2023 ICM and will recommend changes to the current Compliance Checklist at that time. These updates require multiple touchpoints intra-quarter, internally amongst Investments and Legal, and externally with our respective Consultants. Since the June 2022 ICM, Staff has also leveraged Institutional Limited Partners Association (ILPA) and Investment Diversity Advisory Council (IDAC), particularly with understanding to shape best practices. Together, Staff and these stakeholders continue to navigate the dynamic ESG investment and regulatory landscape.


Attachments:

#1 Ten ESG Questions, prepared by ACERA staff, reviewed by Legal

Attachment #1 – Ten ESG Questions

1. Is the firm a PRI signatory?
2. What is the firm's most recent PRI Strategy and Governance firm score? Score? If N/A, please explain why.
3. Is there a dedicated ESG oversight function at your firm?
4. Do you have a firm-wide policy on ESG/Responsible Investment?
5. Does your firm publish an annual sustainability report?
6. Does the firm have efforts in place to measure/reduce its carbon footprint?
7. Does firm track KPIs related to staff diversity initiatives?
8. Policies to promote diversity in recruiting, workforce, leadership, and/or board representation?
9. Policies in place to increase of gender/ethnic diversity of senior leadership and investment teams?
10. Does the firm have a global policy around proxy voting?



TO: Members of the Investment Committee
FROM: John Ta, Investment Officer 
DATE: December 14, 2022
SUBJECT: CA Gov. Code § 7514.7 Alternative Investment Vehicles Information Report

Recommendation:

Not Applicable – This is an information item.

Background:

California Government Code Section 7514.7 (“Section 7514.7”) requires that California public pension funds such as ACERA disclose certain information regarding the alternative investment vehicles (“AIVs”) in which they invest at least once annually in a meeting open to the public. Specifically, Section 7514.7 mandates the disclosure of certain fees and expenses, as well as performance data and other information required to be disclosed under the California Public Records Act. (See CA Gov. Code § 6254.26(b).)¹ The reporting is required for alternative investment contracts entered into on and after January 1, 2017. For contracts that pre-date January 1, 2017, the pension fund must undertake reasonable efforts to obtain the information. The intent of this statute is to increase transparency into the AIV fees and expenses paid by public pension plans.

Discussion:

Staff has created two disclosure charts, one to address the information required in Section 7514.7 (See **Attachment #1**) and another to address Section 6254.26 (b) (See **Attachment #2**). The charts reflect information for the calendar year ending December 31, 2021.

The Section 7514.7 Chart includes both the mandatory disclosure information for contracts entered into after January 1, 2017 (“Mandatory Funds”) and the voluntary disclosure information for contracts executed prior to January 1, 2017 (“Voluntary Funds.”) For earlier investment contracts, Staff has made considerable efforts to obtain the information either via contract amendment or information arrangement. For those legacy managers that agreed to provide the data, their information is listed under Voluntary Funds.

The Section 6254.26(b) Chart applies to all AIVs in which ACERA is invested, as the data contained in this Chart can be disclosed under the California Public Records Act.

Attachments:

- #1 Section 7514.7 Chart, prepared by ACERA Staff
- #2 Section 6254.26(b) Chart, prepared by ACERA Staff

¹ CA Govt. Code §6254.26 will be repealed and recodified as CA Govt. Code § 7928.710, effective January 1, 2023. The statute text will remain unchanged, but as of 1/1/2023 the statute will be found in Division 10 of the Govt. Code as part of a larger 2022 recodification/reorganization of the California Public Records Act (See AB473). There will be no substantive change in the law.

Attachment #1 - Section 7514.7 Chart*

Fund Name	Board Approval Date**	Fees and Expenses		Carried Interest Distributed ³ (FY 2021)	Aggregate Fees and Expenses Paid by Portfolio Companies ⁴ (FY 2021)	Gross IRR ⁵ (Since Inception)	Net IRR ⁶ (Since Inception)
		Paid Directly ¹ (FY 2021)****	Indirectly (from AIV) ² (FY 2021)*****				
Voluntary Funds (Pre-2017)							
Angeles Equity Partners I, L.P.	Aug-2016	\$0	\$386,992	\$0	\$305,075	33.0%	19.8%
CIM Infrastructure Fund II, L.P.	Dec-2015	\$0	\$487,262	\$0	\$568,365	19.1%	13.6%
CIM VI-2 (Urban REIT), LLC	Apr-2012	\$0	\$242,496	\$0	\$0	6.6%	5.3%
Global Strategy LLC	May-2013	\$0	\$654,168	\$0	\$0	8.3%***	4.6%***
Great Hill Equity Partners IV, L.P.	Oct-2008	\$0	\$327	\$0	\$0	36.3%	26.5%
Great Hill Equity Partners V, L.P.	Aug-2013	\$0	\$333,333	\$3,274,251	\$0	35.5%	25.5%
Heitman American Real Estate Trust, L.P.	Jan-2013	\$0	\$533,215	\$0	\$0	10.2%	9.4%
Jamestown Premier Property Fund, L.P.	Sep-2012	\$0	\$246,832	\$0	\$0	8.5%	8.2%
JLL Partners Fund VII, L.P.	Feb-2014	\$0	\$342,155	\$0	\$127,662	20.8%	16.9%
MetLife Core Property Fund, L.P.	Nov-2013	\$0	\$366,305	\$0	\$0	11.8%	11.3%
PRISA	Sep-2007	\$0	\$542,625	\$0	\$0	6.0%	5.0%
PRISA III	Mar-2013	\$0	\$735,856	\$0	\$0	16.1%	14.2%
Sycamore I, L.P.	Mar-2012	\$0	\$95,456	\$956,079	\$688	40.0%	28.0%
Sycamore II, L.P.	May-2014	\$0	\$225,966	\$0	\$41,846	11.0%	5.0%
UBS Trumbull Property Fund	Jul-2014	\$0	\$322,344	\$0	\$0	6.5%	5.5%
Warburg Pincus Energy, L.P.	Apr-2014	\$0	\$190,766	\$0	\$386	5.0%	1.7%
Warburg Pincus Private Equity XI, L.P.	Sep-2012	\$0	\$151,306	\$1,081,875	\$3,058	18.3%	13.2%
Warburg Pincus Private Equity XII, L.P.	Oct-2015	\$0	\$284,231	\$1,566,275	\$688	28.8%	22.6%
Mandatory Funds (2017-2020)							
ABRY Advanced Securities Fund IV, L.P.	Sep-2018	\$0	\$437,591	\$0	\$0	17.2%	9.2%
ABRY Senior Equity VI, L.P.	May-2021	\$0	\$67,133	\$0	\$0	N/A	N/A
AEW Partners Real Estate Fund IX, L.P.	Mar-2020	\$0	\$280,000	\$0	\$0	-1.8% [^]	-27.7% [^]
AEW Partners Real Estate Fund VIII, L.P.	Apr-2018	\$0	\$192,933	\$0	\$0	28.6%	21.0%
AG Credit Solutions Fund II, L.P.	Oct-2021	\$0	\$0	\$0	\$0	N/A	N/A
AG CSF1A (Annex) Dislocation, L.P.	Apr-2020	\$0	\$150,037	\$385,265	\$0	34.1% [^]	26.7% [^]
AG Realty Value Fund X, L.P.	Jul-2018	\$0	\$436,251	\$0	\$14,474	24.0%	23.6%
Altas Partners Holdings II, L.P.	Jun-2019	\$0	\$279,420	\$0	\$463	18.8% [^]	11.1% [^]
Ares Senior Direct Lending Fund II, L.P.	Sep-2021	\$0	\$0	\$0	\$0	N/A	N/A
Artemis Real Estate Partners Healthcare Fund II, L.P.	Jan-2021	\$0	\$68,483	\$0	\$0	N/A	N/A
Artemis Real Estate Partners Income and Growth Fund, L.P.	Nov-2019	\$0	\$355,148	\$0	\$0	11.0% [^]	7.8% [^]
Audax Private Equity Fund VI, L.P.	Aug-2018	\$0	\$0	\$0	\$267,723	71.5%	88.2%
BCP Fund II, L.P.	Oct-2017	\$0	\$802,857	\$467,801	\$0	31.6%	22.5%
BlackRock Direct Lending Fund IX, L.P.	Sep-2020	\$0	\$435,325	\$0	\$0	12.7% [^]	8.8% [^]
Blackstone Strategic Opportunity Fund L.P.	Dec-2017	\$0	\$1,131,736	\$1,082,752	\$0	7.2%	5.5%
Brookfield Super-Core Infrastructure Partners	Jul-2020	\$0	\$0	\$0	\$0	8.9% [^] ***	7.8% [^] ***
Canvas Ventures III, L.P.	Nov-2020	\$0	\$247,726	\$0	\$0	52.3% [^]	24.0% [^]
CapVest Equity Partners IV, L.P.	Jun-2018	\$0	\$790,519	\$0	\$0	154.0%	52.0%
CBRE Strategic Partners U.S. Value 9	May-2021	\$0	\$0	\$0	\$0	N/A	N/A
CD&R XI, L.P.	Sep-2020	\$0	\$394,397	\$0	\$85,873	57.6% [^]	23.5% [^]
CFM Institutional Systematic Diversified Fund LLC	May-2018	\$0	\$370,617	\$0	\$0	N/A	0.0%
EQT Infrastructure Fund IV, L.P.	Nov-2018	\$0	\$419,286	\$0	\$1,828	17.0%	14.0%
EQT Infrastructure V - USD	Oct-2020	\$0	\$494,074	\$0	\$0	6.0% [^]	-21.0% [^]
Genstar Capital Partners IX, L.P.	Feb-2019	\$0	\$388,307	\$335,361	\$0	66.1% [^]	42.1% [^]
Genstar Capital Partners X, L.P.	Mar-2021	\$0	\$0	\$0	\$0	N/A	N/A
Great Hill Equity Partners VI, L.P.	Jan-2017	\$0	\$804,839	\$140,285	\$0	51.3%	61.2%
Great Hill Equity Partners VII, L.P.	May-2019	\$0	\$299,984	\$0	\$0	84.9% [^]	N/A
Heitman Value Partners IV, L.P.	Jun-2017 / Mar-2018	\$0	\$176,826	\$0	\$0	21.8%	18.5%
HPS Specialty Loan Fund V, L.P.	Oct-2020	\$0	\$612,349	\$0	\$0	N/A	14.2% [^]
ISQ Global Infrastructure Fund II, L.P.	Dec-2017	\$0	\$456,394	\$8,105	\$0	20.1%	16.7%
Khosla Ventures Seed D, L.P.	Mar-2018	\$0	\$74,909	\$0	\$91	76.8%	59.0%
Khosla Ventures VI, L.P.	Mar-2018	\$0	\$139,112	\$0	\$888	41.8%	28.5%
KPS Special Situations Fund V, L.P.	Oct-2019	\$0	\$0	\$0	\$450,845	109.0% [^]	49.1% [^]
KPS Special Situations Mid-Cap Fund, L.P.	Oct-2019	\$0	\$23,171	\$14,206	\$55,707	52.5% [^]	27.0% [^]
LHP Strategic Alpha Fund, LLC	Nov-2015 / May-2018	\$0	\$1,826,528	\$0	\$0	7.8%***	7.1%***
Lion Industrial Trust	Mar-2018	\$0	\$1,210,210	\$0	\$0	20.5%	19.2%
Monroe Private Credit Fund IV, L.P.	Dec-2021	\$0	\$0	\$0	\$0	N/A	N/A
NEA 16, L.P.	Mar-2017	\$0	\$165,009	\$0	\$0	27.9%	20.4%
Owl Rock First Lien Fund, L.P.	Sept-2019	\$0	\$1,166,144	\$0	\$0	11.9% [^]	8.9% [^]
Peak Rock Capital Credit Fund II, L.P.	Sep-2017	\$0	\$42,077	\$0	\$2,094	23.6%	17.9%
Peak Rock Capital Fund II, L.P.	Sep-2017	\$0	\$0	\$2,932,158	\$371,850	56.2%	35.8%
Peak Rock Capital Fund III L.P.	Jan-2021	\$0	\$0	\$0	\$0	N/A	N/A
Quantum Energy Partners VII Co-Investment Fund, L.P.	Sep-2017	\$0	\$1,583	\$0	\$0	20.0%	20.0%
Quantum Energy Partners VII, L.P.	Sep-2017	\$0	\$556,081	\$0	\$1,309	28.0%	20.0%
SSGA Custom Real Assets Non-Lending Strategy	Nov-2018	\$805,069	\$0	\$0	\$0	8.2%	8.0%
Starwood Distressed Opportunity Fund XII	Jun-2021	\$0	\$0	\$0	\$0	N/A	N/A
Summit Partners Growth Equity XI, L.P.	Sept-2021	\$0	\$0	\$0	\$0	N/A	N/A
SVP Special Situations Fund V, L.P.	Mar-2021	\$0	\$0	\$0	\$0	N/A	N/A
Sycamore III, L.P.	Jan-2018	\$0	\$781,590	\$0	\$269,108	42.0%	16.0%
Taurus Mining Finance Fund No.2, L.P.	Feb-2019	\$0	\$167,420	\$0	\$0	42.1% [^]	26.3% [^]
Tiger Infrastructure Partners Fund III, L.P.	Dec-2021	\$0	\$0	\$0	\$0	N/A	N/A
Two Sigma Risk Premia Fund, L.P.	Oct-2019	\$0	\$1,278,965	\$0	\$0	3.6% [^] ***	2.7% [^] ***
Vision Ridge Sustainable Asset Fund III, L.P.	Mar-2021	\$0	\$0	\$0	\$0	N/A	N/A
Vista Foundation IV, L.P.	Dec-2019	\$0	\$691,981	\$0	\$8,019	N/A	N/A

* The information on this chart is prepared by ACERA. This chart has not been prepared, reviewed or approved by the listed Funds, General Partners, Fund Managers, or any of their affiliates.

** Date the Board approved the investment.

*** Returns expressed as annualized total return instead of IRR.

**** The total management fees and expenses are net offsets and rebates, where applicable.

[^] Calculated/Reported IRRs are typically not meaningful within the early stages of a fund's life due to a short time frame and lack of cash flows.

N/A: Not available or not applicable.

Footnotes for the information being requested for each Alternative Investment Vehicle:

1. The fees and expenses that the public investment fund pays directly to the alternative investment vehicle, the fund manager, or related parties.

2. The Investor's pro rata share of fees and expenses not included in footnote #1 that are paid from the alternative investment vehicle to the fund manager or related parties.

3. The Investor's pro rata share of carried interest distributed by the Partnership to the fund manager or related parties. For non private equity type vehicles, this category represents the performance fee charged in addition to a management fee.

4. The Investor's pro rata share of aggregate fees and expenses paid by all of the portfolio companies held by the alternative investment vehicle to fund manager or related parties. This aggregate sum may or may not offset (or partially offset) management fees.

5. Gross internal rate of return.

6. Net internal rate of return.

Attachment #2 - Section 6254.26(b) Chart*

Fund Name ¹	Address ¹	Vintage Year ¹	Commitment ²	Cash Contributions ³ (Since Inception)	Cash Distributions ⁴ (FY 2021)	Cash Distributions + NAV ⁵ (FY 2021)	NAV** (FY 2021)	Net IRR ⁶ (Since Inception)	Investment Multiple ⁷ (Since Inception)	Management Fees & Costs ⁸ (FY 2021)	Profit ⁹ (FY 2021)
ABRY Advanced Securities Fund II, L.P.	888 Boylston, Ste. 1600, Boston, MA 02199	2011	\$25,000,000	\$18,530,499	\$605,877	\$1,591,088	\$985,211	13.32%	1.66x	\$25,721	\$333,729
ABRY Advanced Securities Fund III, L.P.	888 Boylston, Ste. 1600, Boston, MA 02199	2014	\$20,000,000	\$23,629,962	\$1,584,456	\$20,719,307	\$19,134,851	0.10%	1.00x	\$406,141	\$1,889,803
ABRY Advanced Securities Fund IV, L.P.	888 Boylston, Ste. 1600, Boston, MA 02199	2018	\$33,000,000	\$17,953,335	\$1,762,200	\$19,692,747	\$17,930,547	9.20%	1.16x	\$470,014	\$2,035,041
ABRY Partners VII, L.P.	888 Boylston, Ste. 1600, Boston, MA 02199	2011	\$12,500,000	\$13,904,786	\$703,774	\$4,685,122	\$3,981,348	13.16%	1.65x	\$34,437	\$703,220
ABRY Partners VIII, L.P.	888 Boylston, Ste. 1600, Boston, MA 02199	2015	\$18,000,000	\$19,666,234	\$9,093,462	\$13,408,553	\$4,315,091	10.38%	1.43x	\$51,876	\$1,056,257
ABRY Senior Equity IV, L.P.	888 Boylston, Ste. 1600, Boston, MA 02199	2012	\$7,500,000	\$7,771,240	\$1,516,902	\$3,168,896	\$1,651,994	15.30%	1.72x	\$23,045	\$646,469
ABRY Senior Equity V, L.P.	888 Boylston, Ste. 1600, Boston, MA 02199	2017	\$8,250,000	\$8,250,566	\$933,421	\$9,889,424	\$8,956,003	19.29%	1.38x	\$29,251	\$2,047,058
ABRY Senior Equity VI, L.P.	888 Boylston, Ste. 1600, Boston, MA 02199	2021	\$27,000,000	\$0	\$0	\$0	\$0	N/A	N/A	\$103,589	-\$111,762
AEW Partners Fund IX, L.P.	2 Seaport Lane, Boston, MA 02210	2020	\$35,000,000	\$10,514,403	\$0	\$10,034,636	\$10,034,636	-20.35%	0.95x	\$387,865	-\$254,926
AEW Partners Fund VIII, L.P.	2 Seaport Lane, Boston, MA 02210	2018	\$25,000,000	\$23,989,589	\$23,422,418	\$33,534,582	\$10,112,164	21.38%	1.40x	\$221,831	\$6,796,828
AG Credit Solutions Fund II, L.P.	245 Park Avenue, 26th Floor, New York, NY 10167	2021	\$36,000,000	\$0	\$0	\$0	\$0	N/A	N/A	\$0	N/A
AG CSF1A (Annex) Dislocation, L.P.	245 Park Avenue, 26th Floor, New York, NY 10167	2020	\$26,250,000	\$23,813,595	\$26,071,836	\$26,071,836	\$0	26.86%	1.25x	\$217,396	\$1,559,539
AG Opportunistic Whole Loan Fund, L.P.	245 Park Avenue, 26th Floor, New York, NY 10167	2014	\$50,000,000	\$50,000,000	\$3,940,135	\$6,038,647	\$2,098,512	6.87%	1.25x	\$112,894	\$2,098,512
AG Realty Value Fund X, L.P.	245 Park Avenue, 26th Floor, New York, NY 10167	2019	\$35,000,000	\$29,750,000	\$6,205,237	\$34,218,390	\$28,013,153	19.19%	1.15x	\$963,825	\$5,538,217
Altas Partners Holdings II, L.P.	79 Wellington Street West, Suite 3500, Toronto, Ontario, CA M5K 1K7	2019	\$33,000,000	\$23,855,279	\$973,294	\$27,023,522	\$26,050,228	11.04%	1.13x	\$474,341	\$2,640,383
Angeles Equity Partners I, L.P.	11661 San Vicente Blvd STE 808, Los Angeles, CA 90049	2016	\$35,000,000	\$22,758,242	\$18,924,948	\$31,227,204	\$12,302,256	20.67%	1.56x	\$589,353	\$5,449,039
Ares Senior Direct Lending Fund II, L.P.	2000 Avenue of the Stars, 12th Floor, Los Angeles, CA 90067	2021	\$70,000,000	\$0	\$0	\$0	\$0	N/A	N/A	\$0	N/A
Artemis Real Estate Partners Healthcare Fund I, L.P.	5404 Wisconsin Ave., Chevy Chase, MD 20815	2017	\$25,000,000	\$25,000,000	\$16,907,930	\$34,155,929	\$17,247,999	10.96%	1.19x	\$544,826	\$3,206,032
Artemis Real Estate Partners Healthcare Fund II, L.P.	5404 Wisconsin Ave., Chevy Chase, MD 20815	2021	\$25,000,000	\$2,817,937	\$1,107,419	\$2,975,875	\$1,868,456	6.33%	1.06x	\$441,837	\$157,938
Artemis Real Estate Partners Income and Growth Fund, L.P.	5404 Wisconsin Ave., Chevy Chase, MD 20815	2019	\$35,000,000	\$17,489,567	\$3,956,877	\$18,918,210	\$14,961,333	7.30%	1.08x	\$575,986	\$2,073,830
Audax Private Equity Fund VI, L.P.	101 California Street, Suite 4750, San Francisco, CA 94111	2018	\$25,000,000	\$17,515,091	\$2,910,466	\$32,815,976	\$29,905,510	88.22%	1.91x	\$221,223	\$12,958,476
Avista Capital Partners II, L.P.	65 East 55th Street, 18th Floor, New York, NY 10022	2010	\$30,000,000	\$39,435,718	\$0	\$2,442,798	\$2,442,798	12.15%	1.48x	\$6,938	-\$159,935
Bernhard Capital Partners II, L.P.	400 Convention Street, Suite 1010, Baton Rouge, LA 70802	2018	\$44,000,000	\$24,261,265	\$9,284,695	\$29,756,798	\$20,472,103	22.48%	1.25x	\$929,471	\$4,430,555
BlackRock Direct Lending Fund IX, L.P.	2951 28th Street, Suite 1000, Santa Monica, CA 90405	2020	\$75,000,000	\$40,132,281	\$727,167	\$41,921,087	\$41,193,920	8.77%	1.04x	\$915,478	\$2,005,638
Blackstone Strategic Opportunity Fund, L.P.	345 Park Avenue, New York, NY 10154	2018	\$80,000,000	\$80,000,000	\$0	\$92,517,771	\$5,499,771	5.49%	1.16x	\$2,822,998	\$6,449,730
Bridgepoint Credit Opportunities III, L.P.	95 Wigmore Street, London, W1U 1FB	2017	\$38,501,820	\$28,678,893	\$2,028,094	\$29,939,968	\$27,911,874	5.09%	1.12x	\$3,728,617	\$1,173,822
Brookfield Super-Core Infrastructure Partners	Brookfield Place, Suite 300, 181 Bay Street, Toronto ON M5J2T3	2020	\$0	\$0	\$0	\$0	\$0	N/A	N/A	\$0	\$0
Canvas Ventures III, L.P.	32200 Alpine Road, Portola Valley, CA 94028	2020	\$10,000,000	\$3,627,318	\$0	\$4,072,768	\$4,072,768	23.90%	1.12x	\$373,538	\$952,404
CapVest Equity Partners IV, L.P.	8, Rue Lou Hemmer, Findel, Lu L-1748	8 2018	\$29,701,404	\$15,479,221	\$0	\$18,782,353	\$18,782,353	35.32%	1.21x	\$918,516	\$6,085,934
Catalyst Fund V, L.P.	181 Bay Street, Suite 4700, P.O. Box 792, Toronto, Ontario M5J 2T3, Canada	2015	\$50,000,000	\$42,043,681	\$1,523,427	\$35,075,071	\$33,551,644	7.54%	1.18x	\$1,029,660	\$10,982,199
CBRE Strategic Partners U.S. Value 9 CD&R XI, L.P.	200 Park Avenue, Suite 2001, New York, NY 10166	2021	\$40,000,000	\$10,658,503	\$206,927	\$9,934,913	\$9,727,986	-8.93%	0.93x	\$1,934,896	-\$723,590
Centerbridge Special Credit Partners, L.P.	375 Park Avenue, 18th Floor, New York, NY 10152	2020	\$35,000,000	\$10,798,390	\$428,821	\$12,169,187	\$11,740,366	70.26%	1.13x	\$669,255	\$1,483,455
CFM Institutional Systematic Diversified Fund LLC	375 Park Avenue, 12th Floor, New York, NY 10152	2009	\$35,000,000	\$33,291,096	\$0	\$522,056	\$522,056	13.32%	1.60x	\$8,401	-\$101,123
CIM Infrastructure Fund II, L.P.	23 rue de l'Universite, 75007 Paris, France	2018	\$170,000,000	\$170,000,000	\$0	\$109,735,671	\$109,735,671	-0.06%	1.00x	\$529,619	\$14,621,926
CIM VI-2 (Urban REIT), LLC	4700 Wilshire Boulevard, Los Angeles, CA 90010	2016	\$35,000,000	\$33,740,217	\$2,225,448	\$43,338,747	\$41,113,299	12.08%	1.31x	\$484,059	\$4,457,958
Dyal II US Investors LP	4700 Wilshire Boulevard, Los Angeles, CA 90010	2016	\$25,000,000	\$25,000,000	\$13,159,381	\$36,352,056	\$23,192,675	5.30%	1.45x	\$258,349	-\$426,235
EQT Infrastructure IV	325 North Saint Paul Street, Suite 4900, Dallas, Texas 75201	2014	\$40,000,000	\$40,750,719	\$5,307,400	\$44,404,844	\$39,097,804	7.82%	1.28x	\$855,206	\$12,655,350
EQT Infrastructure V	26A, Boulevard Royal, Luxembourg, Luxembourg L-2449	2019	\$40,000,000	\$31,438,609	\$1,688,484	\$38,689,578	\$37,001,094	14.14%	1.23x	\$971,288	\$4,961,798
EQT Infrastructure VI	26A, Boulevard Royal, Luxembourg, Luxembourg L-2449	2020	\$30,000,000	\$8,998,778	\$0	\$8,381,028	\$8,381,028	-20.81%	0.93x	\$616,501	-\$285,655
General Catalyst Group VI, L.P.	20 University RD., Suite 450, Cambridge, MA 02138	2012	\$10,000,000	\$9,850,000	\$17,191,311	\$62,113,167	\$44,921,856	35.97%	8.33x	\$188,189	\$18,557,390
Genstar Capital Partners IX, L.P.	4 Embarcadero Center, Suite 1900, San Francisco, CA 94111	2019	\$25,000,000	\$24,091,877	\$2,545,729	\$34,769,769	\$32,224,040	43.53%	1.47x	\$325,094	\$8,130,955
Genstar Capital Partners X, L.P.	4 Embarcadero Center, Suite 1900, San Francisco, CA 94111	2021	\$30,000,000	\$3,340,845	\$0	\$3,561,715	\$3,561,715	247.90%	1.07x	\$154,411	\$220,870
Global Strategy LLC	75 State Street, 31st Floor, Boston, MA 02109	2013	\$25,000,000	\$25,000,000	\$0	\$36,911,848	\$36,911,848	4.62%	1.48x	\$654,168	\$3,719,515
Great Hill Equity Partners IV, L.P.	One Liberty Square, Boston, MA 02109	2008	\$10,000,000	\$10,009,292	\$0	\$7,612,474	\$7,612,474	26.64%	3.14x	\$3,859	\$583,265
Great Hill Equity Partners V, L.P.	One Liberty Square, Boston, MA 02109	2014	\$25,000,000	\$25,000,000	\$11,185,311	\$25,980,011	\$14,794,700	25.32%	2.67x	\$349,866	\$5,471,851
Great Hill Equity Partners VI, L.P.	One Liberty Square, Boston, MA 02109	2017	\$50,000,000	\$46,374,162	\$35,505,614	\$114,309,568	\$78,803,954	61.44%	2.80x	\$1,091,805	\$45,318,200
Great Hill Equity Partners VII, L.P.	One Liberty Square, Boston, MA 02109	2019	\$60,000,000	\$33,923,719	\$16,573,329	\$55,261,036	\$38,687,707	N/A	1.65x	\$1,426,716	\$12,502,801
Heitman American Real Estate Trust, L.P.	191 North Wacker Drive, Suite 2500, Chicago, IL 60606	2013	\$40,000,000	\$40,000,000	\$13,042,154	\$74,941,157	\$61,899,003	8.85%	1.87x	\$2,087,241	\$11,948,349
Heitman Value Partners IV, L.P. (HVP IV)	191 North Wacker Drive, Suite 2500, Chicago, IL 60606	2018	\$30,000,000	\$27,487,534	\$9,032,285	\$32,642,302	\$23,610,017	28.02%	1.19x	\$1,892,063	\$5,681,751
HPS Specialty Loan Fund V, L.P.	40 West 57th Street, 33rd Floor, New York, NY 10019	2020	\$75,000,000	\$48,665,707	\$1,918,441	\$51,738,990	\$49,820,549	11.27%	1.06x	\$1,018,171	\$3,164,201
Insight Equity II, L.P.	1400 Civic Place, Suite 250, Southlake, TX 76092	2009	\$16,875,000	\$17,411,618	\$4,331,004	\$10,413,327	\$6,082,323	9.15%	1.65x	\$95,129	-\$1,189,684
Insight Equity Mezzanine, L.P.	1400 Civic Place, Suite 250, Southlake, TX 76092	2009	\$5,625,000	\$5,599,653	\$0	\$999,609	\$999,609	6.61%	1.37x	\$19,612	\$60,529
ISO Global Infrastructure Fund II, L.P.	410 Park Avenue, Suite 830, New York, NY 10022	2018	\$40,000,000	\$33,182,374	\$3,909,377	\$41,736,809	\$37,827,432	16.28%	1.35x	\$668,669	\$4,907,631
Jamestown Premier Property Fund	675 Ponce De Leon Ave. NE, 7th Floor, Atlanta, GA	2012	\$20,000,000	\$20,000,000	\$18,393,306	\$46,064,496	\$27,671,192	8.16%	1.50x	\$2,268,545	-\$389,365
JLL Partners Fund VII, L.P.	450 Lexington Avenue, 31st Floor, New York, NY 10017	2015	\$47,250,000	\$45,421,823	\$39,001,437	\$78,200,854	\$39,199,417	16.85%	1.80x	\$534,799	\$18,683,330
JP Morgan Strategic Property Fund	270 Park Avenue, New York, NY 10017	2007	\$50,000,000	\$50,000,000	\$19,451,979	\$101,830,949	\$82,378,970	5.27%	1.92x	\$715,512	\$14,387,893
Khosla Ventures III, L.P.	2128 Sand Hill Road, Menlo Park, CA 94025	2009	\$12,000,000	\$11,941,157	\$878,933	\$7,921,929	\$7,042,996	11.86%	2.19x	\$129,128	-\$16,690,664
Khosla Ventures IV, L.P.	2128 Sand Hill Road, Menlo Park, CA 94025	2011	\$15,000,000	\$14,715,000	\$17,125,195	\$57,341,620	\$40,216,425	28.21%	5.48x	\$219,733	\$19,812,256
Khosla Ventures Seed B, L.P.	2128 Sand Hill Road, Menlo Park, CA 94025	2012	\$5,000,000	\$4,985,000	\$7,715,073	\$25,263,369	\$17,548,296	26.64%	5.61x	\$78,786	\$9,912,817
Khosla Ventures Seed D, L.P.	2128 Sand Hill Road, Menlo Park, CA 94025	2018	\$3,000,000	\$2,514,000	\$0	\$6,100,924	\$6,100,924	53.05%	2.43x	\$80,415	\$3,503,888
Khosla Ventures Seed, L.P.	2128 Sand Hill Road, Menlo Park, CA 94025	2009	\$3,000,000	\$3,000,555	\$0	\$4,979,031	\$4,979,031	6.92%	1.87x	\$31,958	\$1,245,644
Khosla Ventures V, L.P.	2128 Sand Hill Road, Menlo Park, CA 94025	2014	\$10,000,000	\$9,650,000	\$9,917,594	\$38,301,854	\$28,384,260	31.29%	4.02x	\$190,396	\$21,746,498
Khosla Ventures VI, L.P.	2128 Sand Hill Road, Menlo Park, CA 94025	2018	\$7,000,000	\$6,146,000	\$0	\$9,635,283	\$9,635,283	26.27%	1.57x	\$149,759	\$3,026,980
KPS Special Situations Fund IV, L.P.	485 Lexington Ave., 31st Floor, New York, NY 10017	2014	\$14,580,000	\$13,066,885	\$10,230,981	\$21,133,829	\$10,902,848	24.98%	1.87x	\$7,881	\$6,776,843
KPS Special Situations Fund V, L.P.	485 Lexington Ave., 31st Floor, New York, NY 10017	2019	\$20,000,000	\$7,349,748	\$550,960	\$10,602,959	\$10,051,999	48.77%	1.44x	\$17,096	\$3,275,209
KPS Special Situations Mid-Cap Fund, L.P.	485 Lexington Ave., 31st Floor, New York, NY 10017	2019	\$5,000,000	\$1,987,775	\$265,692	\$2,688,765	\$2,423,073	27.02%	1.35x	\$27,224	\$2,423,073
LHP Strategic Alpha Fund, LLC	3801 PGA Blvd., Suite 500, Palm Beach Gardens, FL 33410	2015	\$278,000,000	\$278,000,000	\$0	\$385,112,490	\$385,112,490	7.39%	1.39x	\$2,121,856	\$49,376,865
Lindsay Goldberg III L.P.	630 Fifth Avenue, 30th Floor, New York, NY 10111	2008	\$45,000,000	\$43,845,270	\$418,745	\$513,925	\$95,180	8.09%	1.35x	\$22,452	-\$43,287
Lion Industrial Trust	230 Park Avenue, New York, NY 10169	2012	\$55,000,000	\$55,000,000	\$14,497,327	\$142,389,079	\$127,891,752	19.23%	2.49x	\$4,262,137	\$43,206,665
MetLife Core Property Fund, L.P.	One MetLife Way, Whippany, NJ 07981	2013	\$50,000,000	\$50,000,000	\$21,568,992	\$106,454,776	\$84,885,784	11.20%	1.80x	\$3,846,622	\$18,352,777
Monroe Private Credit Fund IV, L.P.	311 South Wacker Drive, 64th Floor, Chicago, IL 60606	2020	\$75,000,000	\$0	\$0	\$0	\$0	N/A	N/A	\$0	N/A
NEA 13, L.P.	5425 Wisconsin Avenue, Chevy Chase, MD 20815	2009	\$11,000,000	\$11,007,739	\$5,137,465	\$9,173,608	\$4,036,143	17.61%	2.75x	\$88,343	\$4,799,672
NEA 14, L.P.	5425 Wisconsin Avenue, Chevy Chase, MD 20815	2012	\$11,000,000	\$10,618,976	\$26,169,466	\$25,915,176	\$25,				

Attachment #2 - Section 6254.26(b) Chart*

Fund Name ¹	Address ¹	Vintage Year ¹	Commitment ²	Cash		Cash Distributions		Net IRR ⁶ (Since Inception)	Investment Multiple ⁷ (Since Inception)	Management Fees & Costs ⁸ (FY 2021)	Profit ⁹ (FY 2021)
				Contributions ³ (Since Inception)	Distributions ⁴ (FY 2021)	+ NAV ⁵ (FY 2021)	NAV** (FY 2021)				
PRISA	655 Broad St., Newark, NJ 07102	2007	\$50,000,000	\$50,000,000	\$24,210,558	\$87,639,374	\$63,428,816	4.30%	1.65x	\$760,111	\$6,576,868
PRISA III	655 Broad St., Newark, NJ 07102	2013	\$35,936,048	\$35,936,048	\$25,273,810	\$73,526,749	\$48,252,939	13.23%	1.96x	\$836,555	\$10,887,404
Quantum Energy Partners VII Co-Investment Fund, L.P.	1401 McKinney Street, Suite 2700, Houston, TX 77010	2017	\$3,181,818	\$1,551,446	\$639,954	\$2,528,820	\$1,888,866	19.37%	1.63x	\$12,005	\$326,887
Quantum Energy Partners VII, L.P.	1401 McKinney Street, Suite 2700, Houston, TX 77010	2017	\$31,818,182	\$23,200,084	\$6,542,123	\$36,284,996	\$29,742,873	19.38%	1.59x	\$686,726	\$11,157,144
SSGA Custom Real Assets Non-Lending Strategy	1 Iron Street, Boston, MA 02210	2019	\$341,556,035	\$494,556,035	\$0	\$585,179,966	\$585,179,966	9.84%	1.18x	\$805,069	\$72,053,962
Starwood Distressed Opportunity Fund XII	2340 Collins Avenue, Miami Beach, FL 33139	2021	\$50,000,000	\$0	\$0	\$0	\$0	N/A	N/A	N/A	N/A
Summit Partners Growth Equity XI, L.P.	222 Berkeley Street, 18th floor, Boston, MA 02116	2021	\$25,000,000	\$0	\$0	\$0	\$0	N/A	N/A	N/A	N/A
SVP Special Situations Fund V, L.P.	100 West Putnam Avenue, Greenwich, CT 06830	2021	\$27,000,000	\$6,750,000	\$0	\$7,377,330	\$7,377,330	36.88%	1.09x	\$88,489	\$627,330
Sycamore Partners II, L.P.	9 West 57th Street, 31st Floor, New York, NY 10019	2014	\$42,500,000	\$37,337,802	\$6,320,814	\$29,241,560	\$22,920,746	5.37%	1.19x	\$158,505	\$5,286,819
Sycamore Partners III, L.P.	9 West 57th Street, 31st Floor, New York, NY 10019	2018	\$44,000,000	\$29,556,914	\$3,646,271	\$30,404,474	\$26,758,203	15.72%	1.17x	\$1,092,357	\$6,801,125
Sycamore Partners, L.P.	9 West 57th Street, 31st Floor, New York, NY 10019	2011	\$30,000,000	\$39,508,199	\$11,795,418	\$42,976,652	\$31,181,234	28.80%	2.22x	\$107,103	\$15,558,855
Taurus Mining Finance Fund No.2	Suite 4101, Level 41, 1 Macquarie Place, Sydney NSW 2000, Australia	2019	\$30,000,000	\$20,821,207	\$7,107,851	\$12,727,867	\$5,620,016	20.36%	1.14x	\$199,527	\$799,984
Third Rock Ventures II, L.P.	29 Newbury St., Suite 301, Boston, MA 02116	2010	\$12,500,000	\$12,500,000	\$2,232,452	\$2,749,669	\$517,217	38.94%	3.61x	\$154,795	-\$149,702
Third Rock Ventures III, L.P.	29 Newbury St., Suite 301, Boston, MA 02116	2013	\$10,000,000	\$10,000,000	\$11,669,972	\$19,644,068	\$7,974,096	25.66%	2.70x	\$190,667	-\$656,555
Tiger Infrastructure Partners Fund III, L.P.	717 5th Ave, New York, NY 10022	2021	\$30,000,000	\$0	\$0	\$0	\$0	N/A	N/A	N/A	N/A
Two Sigma Risk Premia Fund, L.p.	100 Avenue of the Americas 16th Floor, New York, NY 10013	2019	\$100,000,000	\$100,000,000	\$0	\$107,035,799	\$107,035,799	3.34%	1.07x	\$2,860,040	\$13,594,563
UBS Trumbull Property Fund	10 State House Square, 15th Floor, Hartford, CT	2014	\$40,000,000	\$40,000,000	\$15,777,188	\$57,475,731	\$41,698,543	5.53%	1.44x	\$2,246,974	\$5,776,832
Vision Ridge Sustainable Asset Fund III, L.P.	12 E 20th Street, 2nd Floor, New York, NY 10003	2021	\$25,000,000	\$1,800,569	\$0	\$1,528,010	\$1,528,010	-96.41%	0.85x	\$272,559	-\$272,559
Vista Foundation IV, L.P.	401 Congress Avenue, Suite 3100, Austin, TX 78701	2020	\$35,000,000	\$13,770,114	\$42,355	\$13,378,684	\$13,336,329	-0.04%	0.97x	\$755,506	\$258,369
Warburg Pincus Energy, L.P.	450 Lexington Avenue, New York, NY 10017	2014	\$15,000,000	\$13,292,582	\$278,175	\$11,728,455	\$11,450,280	1.65%	1.07x	-\$216,501	\$4,935,816
Warburg Pincus Private Equity XI, L.P.	450 Lexington Avenue, New York, NY 10017	2012	\$75,000,000	\$75,876,966	\$11,570,625	\$52,655,033	\$41,084,408	13.06%	1.77x	\$247,653	\$5,056,259
Warburg Pincus Private Equity XII, L.P.	450 Lexington Avenue, New York, NY 10017	2015	\$43,000,000	\$42,419,500	\$14,127,822	\$79,340,131	\$65,212,309	22.52%	2.08x	\$361,791	\$24,704,289

*The information on this chart is prepared by ACERA. This chart has not been prepared, reviewed or approved by the fund managers.

**This column is calculated by taking the difference between the data in footnote #5 and footnote #4.

Footnotes:

1. The address, name and vintage year of each alternative investment vehicle.
2. The dollar amount of the commitment made to each alternative investment vehicle by public investment fund since inception.
3. The dollar amount of cash contributions made by the public investment fund to each alternative investment vehicle since inception.
4. The dollar amount, on a fiscal yearend basis, of cash distributions received by the public investment fund from each alternative investment vehicle.
5. The dollar amount, on a fiscal yearend basis, of cash distributions received by the public investment fund plus remaining value of partnership assets attributable to the public investment fund's investment in each alternative investment vehicle.
6. The net internal rate of return of each alternative investment vehicle since inception.
7. The investment multiple of each alternative investment vehicle since inception.
8. The dollar amount of the total management fees and costs paid on an annual fiscal yearend basis, by the public investment fund to each alternative investment vehicle.
9. The dollar amount of cash profit received by public investment funds from each alternative investment vehicle on a fiscal year-end basis. This item is understood to represent a net increase (or decrease) in capital from operations net of incentive allocations.




ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

475 14th Street, Suite 1000, Oakland, CA 94612 | Phone: 510-628-3000 | Fax: 510-268-9574 | www.acera.org

TO: Members of the Investment Committee

FROM: Betty Tse, Chief Investment Officer

DocuSigned by:

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DATE: December 14, 2022

SUBJECT: Status Update on the General Investment Consultant (GIC) Search

Recommendation:

Not applicable. This is an information item.

Background:

The Board authorized Staff to issue a Request for Proposal (RFP) for a General Investment Consultant (GIC) Search following the Proposed Search Timeline last September 2022. At the October 2022 Board Meeting, the Board adopted Search Criteria to the GIC Search, including the Proposed Minimum Qualifications and Evaluation Matrix to the named GIC Search.

Discussion:

In order to capture the attention of the best qualified candidates, Staff, with input from Cortex, have decided to extend the search timeline to provide the prospective consultant firms more time to respond to ACERA's RFP. Please see the attached proposed revised GIC Search timeline.

Conclusion:

It is important to note that Staff has made no changes to any other Board-approved documents (i.e. Proposed Minimum Qualifications and Evaluation Matrix) relevant to this GIC Search.

Attachment:

#1 Proposed Revised GIC Search Timeline

ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
REQUEST FOR PROPOSALS (RFP)
FOR
GENERAL INVESTMENT CONSULTANT SERVICES

TIMELINE

Date of RFP issuance	12/05/22
Deadline to submit written questions	12/14/22
Responses to written questions (posted on website)	12/23/22
Deadline to submit Intent to Bid (<i>optional</i>)	01/30/22
Deadline to submit Proposals electronically	02/10/23 at 5pm (PT)
Deadline to submit 2 Printed Proposals	02/10/23 at 5pm (PT)

Tentative dates:

On-site visits and finalist interviews	by (May/June)/23
Investment Committee Interview of Finalist Firms (in Oakland*)	06/14/23
Board approval of successful bidder	06/15/23
Notify firms of Board decision	06/16/23

* Interviews may be virtual meetings, depending on COVID-related restrictions



**INVESTMENT MANAGER,
CONSULTANT, AND CUSTODIAN FEES**
For Quarter Ending Sept 30, 2022

**INVESTMENT NET ASSET VALUE AND INVESTMENT MANAGER FEES
FOR THE QUARTER ENDED SEPT 30, 2022**

For the Quarter Ended Sept 30, 2022	NAV ² (\$) As of 3/31/22	Q1 - Total Fees (\$) bps of NAV	NAV ² (\$) As of 6/30/22	Q2 - Total Fees (\$) bps of NAV	NAV ² (\$) As of 9/30/22	Q3 - Total Fees (\$) bps of NAV
Name of Fund						
Domestic Equity¹						
Aristotle Capital	159,869,681	156,580	9.79	140,312,108	148,258	10.57
BlackRock R1000 Index Fund	2,433,029,727	50,588	0.21	2,027,496,480	46,475	0.23
Kennedy Capital	165,076,147	328,830	19.92	139,448,096	305,975	21.94
Trust Co. of the West	148,622,980	159,805	10.75	114,174,734	142,133	12.45
William Blair Small Cap Growth	142,621,924	274,032	19.21	113,841,863	246,792	21.68
Total Domestic Equity	3,049,220,459	969,834	3.18	2,535,273,281	889,634	3.51
International Equity¹						
BlackRock MSCI World ex-US	758,164,594	46,589	0.61	648,547,866	43,064	0.66
Bivium International Equity Capital Group	145,734,858	295,577	20.28	125,376,650	272,641	21.75
Franklin Templeton Inv.	642,532,107	308,927	4.81	540,783,945	176,436	3.26
Mondrian	274,127,530	428,468	15.63	239,057,307	401,623	16.80
Newton Emerging Market Equity Fund	724,928,077	632,736	8.73	653,520,865	604,279	9.25
Total International Equity	2,804,347,999	2,035,874	7.26	2,439,991,737	1,821,619	7.47
Fixed Income¹						
Baird Advisors	1,270,051,324	213,811	1.68	1,208,410,255	205,703	1.70
Loomis Sayles	410,531,459	328,864	8.01	332,135,533	296,324	8.92
Brandywine Global FI	210,427,817	156,490	7.44	181,514,668	145,339	8.01
Total Fixed Income	1,891,010,600	699,165	3.70	1,722,060,456	647,366	3.76
Real Estate^{4,5,6}						
Total Real Estate	773,256,430	2,000,175	25.87	837,925,282	2,088,272	24.92
Private Equity^{4,5,6}						
Total Private Equity	963,100,264	3,127,564	32.47	897,636,209	2,754,313	30.68
Absolute Return^{4,5,6}						
Total Absolute Return	782,519,904	1,596,382	20.40	767,404,956	1,374,540	17.91
Real Assets^{4,5,6}						
Total Real Assets	771,952,229	913,271	11.83	795,580,231	2,174,868	27.34
Private Credit^{4,5,6}						
Total Private Credit	209,007,186	626,059	29.95	214,960,434	694,689	32.32
Cash*						
	137,398,599			34,635,110		
TOTAL⁷	11,381,813,670	11,998,325	10.54	10,245,467,696	12,475,301	12.18

Notes:

*Cash total includes the Parametric Cash Overlay NAV

1. Domestic, International Equity, and Fixed Income managers' fees are based on staff validated manager invoices.

2. NAVs may use estimates at the time of this report's production.

3. Some accounts contain submanaged funds; the fees shown include all assets in the account.

4. Sometimes fees may be estimates. According to the Limited Partnership Agreements, management fees are based on committed amounts and/or assets under management.

5. Detailed records regarding these investments of public pension funds are exempt from disclosure under California Government Code Section 6254.26

6. As of 1Q 2021, the management fee totals no longer includes estimates for other expenses and carried interest allocations. This additional information will be reported in the annual 7514.7 Alternative Investment Vehicles Information Report presented each December.

7. Previous quarter's amounts may change as estimates are trued up to actual amounts. Each true up is made using the most recent information.

**CONSULTANT/CUSTODIAN FEES
FOR THE QUARTER ENDED SEPT 30, 2022**

	Q1 - Fees (\$)	Q2 - Fees (\$)	Q3 - Fees (\$)
Consultant			
Doug McCalla	12,433	13,725	13,079
Callan Associates	56,250	56,250	56,250
Verus Advisory, Inc.	185,000	193,750	193,750
Institutional Shareholders Services	13,575	13,575	15,675
Zeno Consulting Group	11,813	11,813	11,813
Sub-total Consultant	279,070	289,113	290,567
Custodian			
State Street Bank	136,388	136,388	137,075
TOTAL OF CONSULTANT / CUSTODIAN FEES ¹	415,458	425,501	427,642

Notes:

1. Previous quarter's amounts may change as estimates are true up to actual amounts. Each true up is made using the most recent information.

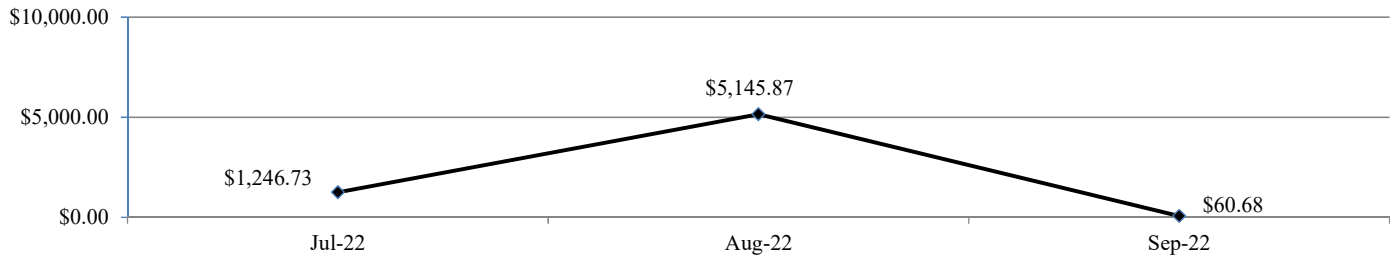


Alameda County Employees' Retirement Association Third Quarter 2022 Directed Brokerage Report

Quarterly Commentary

In 3Q22, the total recaptured dollar amount for ACERA's Directed Brokerage (DB) Program was \$6,453.28. Since inception¹, ACERA has recaptured \$2,104,038.30. For the quarter, William Blair directed the highest percentage (68.58%) of trading volume and also generated the largest recaptured directed commission dollar amount (\$3,871,70). CAPIS received 68.0% of ACERA's directed trades among the network of correspondent brokers. On average the program continues to operate in compliance with ACERA's DB Policy; however, participating active management now make up less than 20% and 25% of domestic equity and international equity asset classes, respectively.

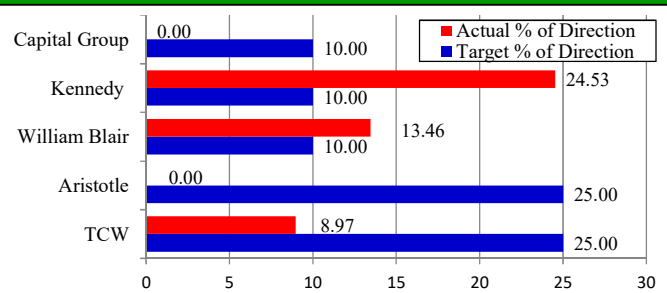
Monthly Recaptured



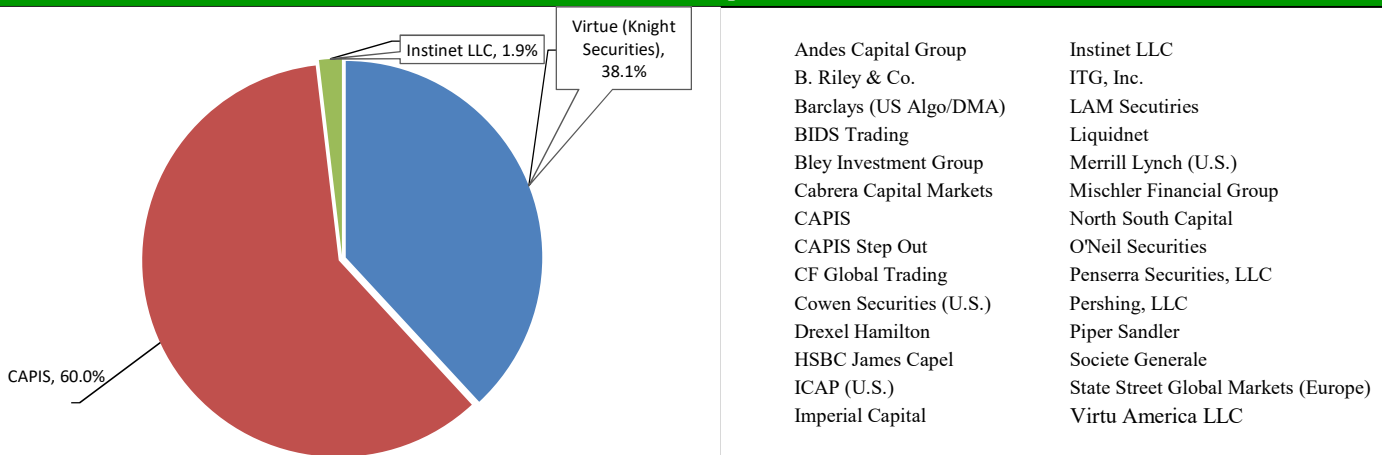
Directed Commission \$²

Manager	3Q2022	YTD
Capital Group	0.00	0.00
Kennedy	2,460.90	9,602.20
William Blair	3,871.70	8,555.60
Aristotle Capital	0.00	0.00
TCW	120.68	788.22
Total	\$6,453.28	\$18,946.02

Directed %³



Directed % to Correspondent Brokers⁴



- | | |
|--|---|
| <ul style="list-style-type: none"> Andes Capital Group B. Riley & Co. Barclays (US Algo/DMA) BIDS Trading Bley Investment Group Cabrera Capital Markets CAPIS CAPIS Step Out CF Global Trading Cowen Securities (U.S.) Drexel Hamilton HSBC James Capel ICAP (U.S.) Imperial Capital | <ul style="list-style-type: none"> Instinet LLC ITG, Inc. LAM Securities Liquidnet Merrill Lynch (U.S.) Mischler Financial Group North South Capital O'Neil Securities Penserra Securities, LLC Pershing, LLC Piper Sandler Societe Generale State Street Global Markets (Europe) Virtu America LLC |
|--|---|

Brokers are selected at the discretion of the Investment Managers, pursuant to Best Execution and ACERA's DB Policy.

1. ACERA's DB Program began in September 2006. Mondrian, Bivium do not participate in Commission Recapture; Blackrock, Newton, and Templeton are comingled accounts and do not participate.
 2. Data provided by CAPIS. Directed Commission \$ - Dollar amount of commissions from directed trades - this amount is split among ACERA (22.75% for 3Q2022), CAPIS, & the Correspondent Brokers.
 3. Data provided by Zeno Consulting Group (Zeno). Directed % - Calculated by dividing Manager's directed trading volume by its total trading volume and compared to its assigned target. Target percentages are ranges (e.g. up to 25% for TCW).
 4. Data provided by CAPIS.



ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

475 14th Street, Suite 1000, Oakland, CA 94612 800/838-1932 510/628-3000 fax: 510/268-9574 www.acera.org

TO: Members of the Investment Committee

FROM: Agnes Ducanes – Administrative Specialist II *A. Ducanes*

DATE: December 14, 2022

SUBJECT: Quarterly report on ACERA's Investment Products and Services
Introductions (IPSI) Program

In the third quarter of 2022, Staff received 14 investment products and services inquiries from prospective providers. We met with 10 managers who presented through the IPSI process.

The purpose of IPSI is to provide prospective vendors an opportunity to gain a better understanding of ACERA's investment objectives and for Staff to learn about the vendors' investment products/services through face-to-face meetings, teleconferences, or video conferences. Staff has designated the morning of the second Wednesday of every month as ACERA's IPSI day. Each introductory session is approximately 45 minutes.

Below please find a chart depicting the types of IPSI sessions that were held in the third quarter of 2022.

ASSET CLASS	Q1 '22	Q2 '22	Q3 '22	Q4'22	TOTAL
U.S. Equities	0	0	0	0	0
Int'l Equities	0	0	0	0	0
Fixed Income	0	0	0	0	0
Real Estate	0	0	0	0	0
Private Equities	0	0	5	0	5
Absolute Return	1	0	0	0	1
Real Assets	1	2	4	0	7
Private Credit	2	3	1	0	6
Other Services	0	0	0	0	0
TOTAL:	4	5	10	0	19



ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

475-14th Street, Suite 1000, Oakland, CA 94612 800/838-1932 510/628-3000 fax: 510/268-9574 www.acera.org

TO: Members of the Investment Committee
FROM: Noe Reynoso - Administrative Support Specialist *Noe Reynoso*
DATE: December 14, 2022
SUBJECT: Summary of Rebalancing and Cash Activities Completed in 3Q2022

Recommendation:

Not Applicable – This is an informational report.

Background/Discussion:

1. For the 3Q2022, there was no action required to rebalance the Total Fund for the quarter ending September 30, 2022. In accordance with ACERA's General Investment Guidelines, Policies and Procedures, Section V: Asset Allocation and Rebalancing, Schedule IA: Asset Allocation Targets and Schedule IC: Asset Allocation Portfolio Rebalancing, no rebalancing signals were received during the period.
2. Regarding significant cash-flows for 3Q2022, Staff implemented the following changes to manage excess cash, make the supplemental month-end retiree benefits and administrative payroll, and to meet the capital calls and provide operating funds:
 - a. **Month-end payroll and Total Fund Withdrawals:** Staff withdrew a net \$60.0 million (M) from the Total Fund to supplement for month-end payroll for the three-months ending September 30, 2022. Staff wired out \$25.0M in July, \$25.0M in August, and \$25.0M in September to ACERA's Wells Fargo Bank account. Fiscal Services wired in \$15.0M back to State Street Bank (#H11A) from Wells Fargo Bank as subsequent employer contributions (\$0.0M in July, \$0.0M in August, and \$15.0M in September). The reason for noting the incoming wires is not all employer contributions are received before the month-end and administrative payroll for that month. Year-to-date (2022) withdrawals total a net \$185.0M.
 - b. **Capital Calls, Distributions:** In general, ACERA made wire-payments of \$66.3M in aggregate to meet capital calls and fund investments for ACERA's privately placed investments. Distributions, which include cash and in-kind distributions and return of principal (mainly real estate distributions), totaled \$53.6M for the third quarter. This dollar amount does not include other incidental income from other programs¹.

¹ Securities Lending Income (\$133.4K), Securities Litigation Income (\$22,758.42) and Commission Recapture Income (\$3,588.14) totaled \$159.8K. (Dividend and interest income from the traditional managed accounts are reinvested and calculated separately, i.e., as part of the manager returns.)



c. Other Activity:

- I. To meet the cash flow needs noted above (a. and b.) Staff raised \$70.0M from the Loomis Sayles & Co. in July and \$80.0M from the BlackRock R1000 Passive fund in September. Staff, following standard procedures, withdrew funds from the most overweight asset classes at the time of the cash raise.
- II. Staff moved \$10.0M to Parametric, the cash over-layer account, from HI1A, the Unallocated Cash account in August to increase the available margin as the financial markets declined. Year-to-date, the Parametric Overlay account has been funded \$24.6M.
- III. Staff raised \$341.0M to fund the new Morgan Stanley Fund of Hedge Fund, Riverview Strategic Alpha in the third quarter in two tranches. The first tranche occurred in July in the amount of \$200.0M and the second tranche in August in the amount of \$130.0M (Total of \$330.0M). In order to fund the new investment, Staff fully redeemed CFM ISD in July for \$116.6M and Two Sigma Risk Premia in August for \$106.4M. Staff raised \$31.0M from Lighthouse in July and \$34.0M in August. Finally, Staff raised \$53.0M from our SSgA Liquid Pool in July. The remaining \$11.0M from this cash raise was left in HI1A, the Unallocated Cash account, for future cash needs.

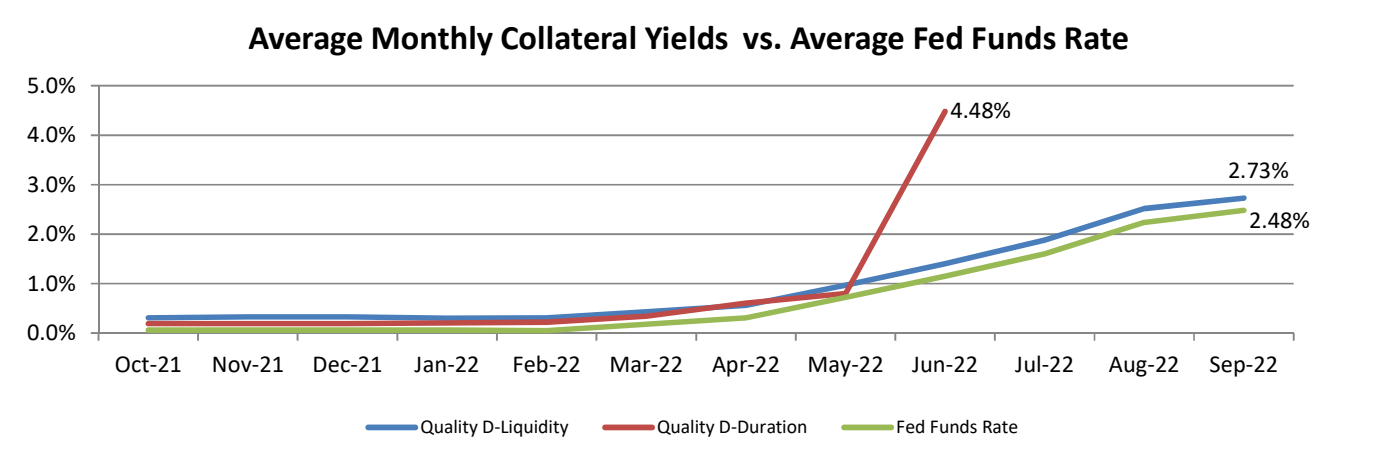
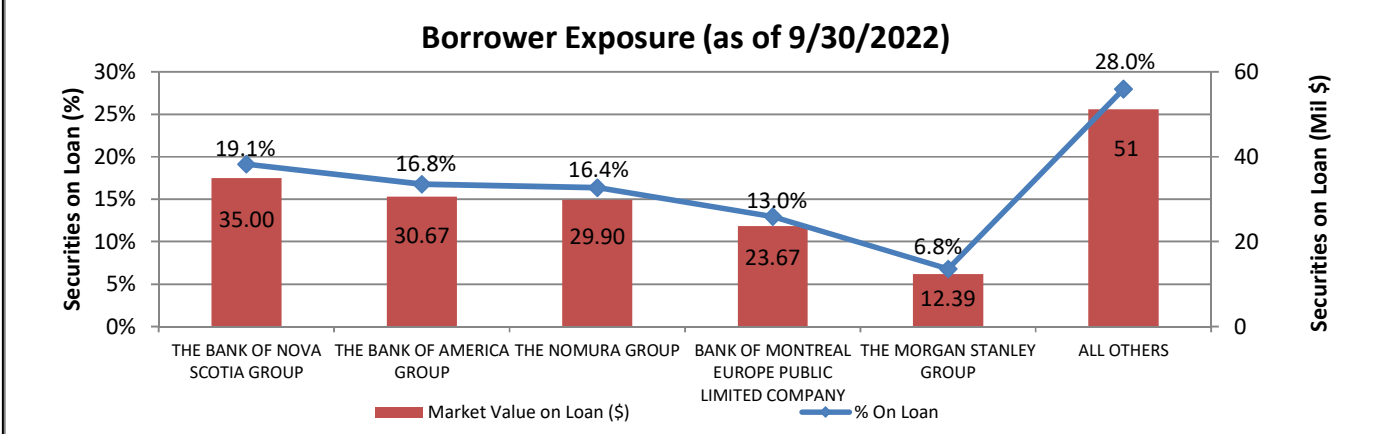
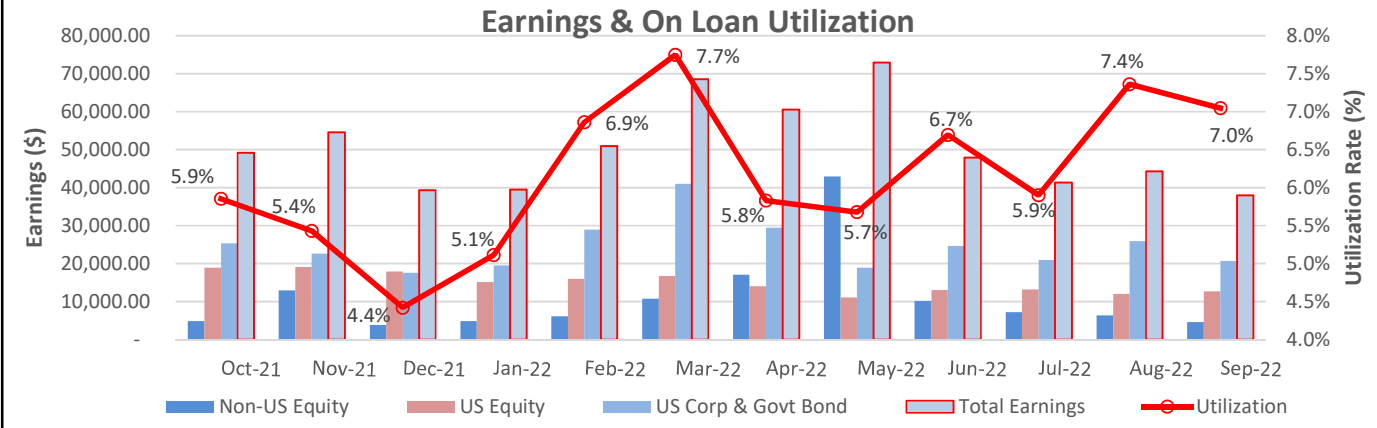
The Summary of Rebalancing and Cash Activities are reported to the Investment Committee on a quarterly basis.

Alameda County Employees' Retirement Association

3rd Quarter 2022 Securities Lending Report

Quarterly Summary

In 3Q2022, ACERA's earnings from Securities Lending activities were \$123,495.00. Fixed Income/Bonds generated the highest earnings of \$67,465.67. For the quarter ending September 30, 2022, the average value of securities on loan was \$177,143,907.33. The average lendable amount for the same period was \$2.6 billion. The Bank of Nova Scotia was the largest borrower of ACERA's securities with 19.1% or \$35.00 million.



Notes:

(1) Quality D Liquidity and Quality D Duration Funds are managed by an affiliate of State Street Bank (SSB); these funds are common pools in which many securities lending clients of SSB invest their cash collateral generated from their security lending activities. ACERA invests the cash collateral received from its security lending activities into Quality D Liquidity and Quality D Duration Funds. As of 9/30/2022, ACERA's NAV per unit of the Compass Fund (0.9999). Compass Fund is the new name for Quality D Liquidity. As of 9/30/2022, Compass Fund had 145,185,597.65 units; and Quality D Duration Funds matured and 100% of securities called.

(2) Data represents past performance and is not necessarily indicative of future results. *Securities Lending Report Provided by Staff*

(3) Data Source: my.statestreet.com and Securities Finance Business Intelligence *ICM 12/14/2022*



Updated Investment Committee Workplan for 2022

December 14, 2022

Action Items	Information Items
<p>January 12</p> <ol style="list-style-type: none"> 1. Discussion of and Possible Motion to Recommend to the Board to Adopt an up to \$60 Million Investment in Great Hill Partners Fund VIII as part of ACERA’s Private Equity Portfolio – Buyout, Pending Completion of Legal and Investment Due Diligence and Successful Contract Negotiations 2. Discussion and Possible Motion to Recommend that the Board Adopt an Implementation Plan for its ESG Policy <p>Adjournment into Closed Session</p> <p>Consider the Purchase of Particular, Specific Pension Fund Investments (Cal. Gov. Code § 54956.81) (3 fund-of-hedge-funds investments – (i) BlackRock ; (ii) GCM Grosvenor; and (iii) Morgan Stanley</p>	<ol style="list-style-type: none"> 1. Proposed Investment Committee Work Plan for 2022
<p>February 9</p>	<ol style="list-style-type: none"> 1. 2022 Capital Market Assumptions 2. Semiannual Performance Review for the Period Ending September 30, 2021 – Equities and Fixed Income 3. Semiannual Performance Review for the Period Ending September 30, 2021 – Absolute Return 4. Semiannual Performance Review for the Period Ending June 30, 2021 – Private Equity 5. Semiannual Performance Review for the Period Ending June 30, 2021 – Private Credit 6. Semiannual Performance Review for the Period Ending June 30, 2021 – Real Assets 7. Semiannual Performance Review for the Period Ending September 30, 2021 – Real Estate

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Updated Investment Committee Workplan for 2022

December 14, 2022

	Action Items	Information Items
March 9	<ol style="list-style-type: none"> 1. Discussion of and Possible Motion to Recommend to the Board to Adopt an up to \$43 million Investment in Altas Partners Holdings III as part of ACERA’s Private Equity Portfolio – Buyout,, Pending Completion of Legal and Investment Due Diligence and Successful Contract Negotiations 2. Discussion and Possible Motion to Recommend that the Board Approve an Additional Investment of up to \$50 million Investment in Clarion Partners Lion Industrial Trust (“LIT”), as part of ACERA’s Real Estate Portfolio – Core Plus, Pending Completion of Legal and Investment Due Diligence and Successful Contract Negotiations 	<ol style="list-style-type: none"> 8. Investment Committee Work Plan 2022 1. <i>Quarterly report of ACERA’s investment manager, consultant, and custodian bank fees for the fourth quarter of 2021</i> 2. <i>Quarterly report on ACERA’s rebalancing activities for the fourth quarter 2021</i> 3. <i>Quarterly report on ACERA’s securities lending activities for the fourth quarter of 2021</i> 4. <i>Quarterly report on ACERA’s Directed Brokerage (DB) Program for the fourth quarter of 2021</i> 5. <i>Quarterly report on Investment Products and Services Introductions (IPSI) for the fourth quarter of 2020</i> 6. <i>Investment Committee Work Plan 2022</i>
April 13	<ol style="list-style-type: none"> 1. Discussion and Possible Motion to Recommend that the Board Approve the Qualified List of Candidates for ACERA’s Emerging Markets Equity Manager Search – International Equities <p><u>Board Action Item:</u></p> <ol style="list-style-type: none"> 1. Proposed Findings Regarding State of Emergency Pursuant to Gov’t Code §54953(e) (3): Staff Recommendation: The Board finds that it has reconsidered the circumstances of the state of emergency and (1) the state of emergency continues to directly impact the ability of the members to meet safely in person, and 	<ol style="list-style-type: none"> 1. Discussion of Proposed Amendments to ACERA’s General Investment Guidelines, Policies and Procedures 2. Traditional Asset Allocation and Investment Strategy Review for the period ending December 31, 2021 – Public Markets 3. Update on Ares Senior Direct Lending Fund II in Response to the Public Comment Made at ACERA’s Board Meeting on March 17, 2022

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Updated Investment Committee Workplan for 2022

December 14, 2022

	Action Items	Information Items
	(2) state or local officials continue to impose or recommend measures to promote social distancing.	
May 19 (meeting moved to 3 rd Thursday due to SACRS Conference)	<ol style="list-style-type: none"> 1. Discussion and Possible Motion to Recommend that the Board Approve Amendments to ACERA’s General Investment Guidelines, Policies and Procedures 2. Discussion and Possible Motion to Recommend that the Board Approve an Additional Investment of up to \$50 million in PRISA III as part of ACERA’s Real Estate Portfolio – Value Added, Completion of Legal and Investment Due Diligence and Successful Contract Negotiations 	
June 8	<ol style="list-style-type: none"> 1. Discussion and Possible Motion to Recommend that the Board Approve an up to \$36 million Investment in Atalaya Special Opportunities Fund VIII as part of ACERA’s Private Equity Portfolio – Debt Related/Special Situations, Pending Completion of Legal and Investment Due Diligence and Successful Contract Negotiations 	<ol style="list-style-type: none"> 1. Semiannual Performance Review for the Period Ending December 31, 2021 – Private Equity 2. Semiannual Performance Review for the Period Ending December 31, 2021 – Private Credit 3. Semiannual Performance Review for the Period Ending December 31, 2021 – Real Assets 4. Status Report on ESG Implementation 5. <i>Quarterly report of ACERA’s investment manager, consultant, and custodian fees for the first quarter of 2022</i> 6. <i>Quarterly report on ACERA’s rebalancing activities for the first quarter of 2022</i> 7. <i>Quarterly report on ACERA’s securities lending activities for the first quarter of 2022</i> 8. <i>Quarterly report on ACERA’s Directed Brokerage (DB) Program for the first quarter of 2022</i>

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Updated Investment Committee Workplan for 2022

December 14, 2022

Action Items	Information Items
	<p>9. <i>Quarterly report on Investment Products and Services Introduction (IPSI) for the first quarter of 2022</i></p> <p>10. <i>Updated Investment Committee Work Plan 2022</i></p>
<p>July 13</p> <p><u>Board Action Item:</u></p> <p>Proposed Findings Regarding State of Emergency Pursuant to Gov't Code §54953(e) (3): Staff Recommendation: The Board finds that it has reconsidered the circumstances of the state of emergency and (1) the state of emergency continues to directly impact the ability of the members to meet safely in person, and (2) state or local officials continue to impose or recommend measures to promote social distancing</p> <p>1. Interview of the Finalists for ACERA's Emerging Markets Equity Manager Search – International Equities and Possible Motion by the Investment Committee to Recommend Finalist (s) to the Board</p>	<p>1. Total Fund Recessionary/Inflationary Impact Review 2022-2027</p>
<p>August 10</p>	<p>1. Semiannual Performance Review for the Period Ending March 31, 2022 – Real Estate</p> <p>2. Semiannual Performance Review for the Period Ending March 31, 2022 – Total Fund Review Highlighting Public Markets Asset Classes and Absolute Return</p>

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Updated Investment Committee Workplan for 2022

December 14, 2022

	Action Items	Information Items
		3. Status update for the Rebalancing Consultant Services 4. RFP for a General Investment Consultant
September 14	1. Discussion of and Possible Motion to Recommend to the Board to Approve an up to \$55 million Investment in Audax Private Equity Fund VII, L.P. as part of ACERA’s Private Equity Portfolio – Buyout, Pending Completion of Legal and Investment Due Diligence and Successful Contract Negotiations 2. Discussion of and Possible Motion to Authorize Staff to Issue a Request For Proposal (RFP) for a General Investment Consultant following the Proposed Search Timeline	1. Review of the Emerging Investment Manager (EIM) Policy 2. Report of the Meeting Date of the November 2022 Investment Committee Meeting 3. <i>Quarterly report of ACERA’s investment manager, consultant, and custodian bank fees for the second quarter of 2022</i> 4. <i>Quarterly report on ACERA’s rebalancing activities for the second quarter of 2022</i> 5. <i>Quarterly report on ACERA’s securities lending activities for the second quarter of 2022</i> 6. <i>Quarterly report on ACERA’s Directed Brokerage (DB) Program for the second quarter of 2022</i> 7. <i>Quarterly report on Investment Products and Services Introduction (IPSI) for the second quarter of 2022</i> 8. <i>Updated Investment Committee Work Plan for 2022</i>
October 12	<u>Board Action Item:</u> Proposed Findings Regarding State of Emergency Pursuant to Gov’t Code §54953(e) (3): Staff Recommendation: The Board	

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Updated Investment Committee Workplan for 2022

December 14, 2022

	Action Items	Information Items
	<p>finds that it has reconsidered the circumstances of the state of emergency and (1) the state of emergency continues to directly impact the ability of the members to meet safely in person, and (2) state or local officials continue to impose or recommend measures to promote social distancing</p> <ol style="list-style-type: none"> 1. Discussion of and Possible Motion to Recommend to the Board to Adopt Amendments to ACERA’s Emerging Investment Manager (EIM) Policy 2. Discussion of and Possible Motion to Recommend that the Board Adopt Search Criteria for ACERA’s General Investment Consultant (GIC) Search, including Proposed Minimum Qualifications and Evaluation Matrix 	
November 2 Meeting Canceled		
December 14	<ol style="list-style-type: none"> 1. Discussion of and Possible Motion to Recommend that the Board Approve an up to \$36 Million Investment in AG CSF2A (Annex) Dislocation Fund as part of ACERA’s Private Equity Portfolio – Debt-Related/Special Situations, Pending Completion of Legal and Investment Due Diligence and Successful Contract Negotiations <p>This item will be addressed in Open Session, but the Investment Committee may go into Closed Session per Cal. Gov. Code § 54956.81.</p>	<ol style="list-style-type: none"> 1. Education Session on the International Investment Manager Structure Decision Making Process and Framework 2. Semiannual Performance Review for the Period Ending September 30, 2022 – Total Fund and Public Markets including Absolute Return 3. Update on ESG Risk Disclosure Report 4. CA Gov. Code § 7514.7 Information Report 5. Status Update on the General Investment Consultant Search

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Updated Investment Committee Workplan for 2022

December 14, 2022

Action Items

Information Items

Action Items		Information Items
		<ol style="list-style-type: none">6. <i>Quarterly report of ACERA's investment manager, consultant, and custodian bank fees for the third quarter of 2022</i>7. <i>Quarterly report on ACERA's rebalancing activities for the third quarter 2022</i>8. <i>Quarterly report on ACERA's securities lending activities for the third quarter of 2022</i>9. <i>Quarterly report on ACERA's Directed Brokerage (DB) Program for the third quarter of 2022</i>10. <i>Quarterly report on Investment Products and Services Introductions (IPSI) for the third quarter of 2022</i>11. <i>Updated Investment Committee Work Plan 2022</i>

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