





PERIOD ENDING: December 31, 2023

Investment Performance Review for

San Mateo County Employees' Retirement Association

Table of Contents



VERUSINVESTMENTS.COM

SEATTLE 206.622.3700 CHICAGO 312.815.5228 PITTSBURGH 412.784.6678 LOS ANGELES 310.297.1777 SAN FRANCISCO 415.362.3484

Market Environment	ТАВ І	Diversifying	TAB IV
Total Fund	TAB II	Inflation Hedge	TAB V
Growth	TAB III	Appendix	TAB VI

4th quarter summary

THE ECONOMIC CLIMATE

- Real GDP increased at a 2.9% pace from a year ago in Q3 (4.9% quarter-over-quarter annualized rate). The economy has remained relatively strong while inflation now appears likely to fall closer to the Fed's 2% target in 2024. These expectations contributed to a dovish pivot from the Fed, a sharp drop in interest rates, and a notable market rally as the possibility of a soft landing has risen.
- Unemployment fell slightly from 3.8% to 3.7%, though the labor participation rate dropped sharply towards the end of the year. The labor market remains surprisingly resilient after roughly a full year of higher interest rates.

PORTFOLIO IMPACTS

- Consumer sentiment has been incredibly poor, and one of the greatest concerns for Americans is inflation. Although inflation has fallen considerably, prices of goods and services remain high, placing strain on budgets. Because inflation measures the rate of change of prices, rather than the level of prices, lower inflation has failed to ease the financial pressure that many households face.
- The Cboe VIX implied volatility index moved even lower during Q4, from 17.5 to 12.5. At the same time, bond market volatility was very high, as indicated by the "MOVE" Index. Uncertainty around inflation, the Federal Reserve's possible interest rate path and the extent of rate cuts, potential recession, and fears around the U.S. fiscal situation are likely contributing to market shakiness.

THE INVESTMENT CLIMATE

- An abrupt change in Federal Reserve communication regarding interest rate cuts during the quarter coincided with sharply lower bond yields, higher equity valuations, and further tightening of credit spreads.
- U.S. headline inflation fell during the quarter, from 3.7% to 3.3% year-over-year. Core CPI (ex-food & energy) declined from 4.1% to 3.9%. Low inflation numbers in October and November (0.0% and 0.1% month-over-month) were counterbalanced by a surprisingly high inflation number in December (0.3% month-over-month).

ASSET ALLOCATION ISSUES

- U.S. equities (S&P 500 +11.7%) led international developed equities (MSCI EAFE +10.4%) and emerging market equities (MSCI EM +7.9%) during the quarter. Domestic equities also led non-U.S. equities over the full year while emerging markets lagged. Wide sector performance differences contributed to U.S. leadership given a much heavier tech focus of the domestic market.
- Style factor performance was mixed during Q4. Small cap outperformed large cap by +2.0%. Value underperformed Growth by -3.2%. Over the full year, small caps underperformed large caps by -9.6% while value stocks underperformed growth by a whopping -31.2%. Besides an extreme period of value underperformance during 2020, calendar year 2023 was the worst 1-year rolling period in more than two decades.

Risk assets
rallied in Q4
following a
dovish pivot
from the
Federal
Reserve and
recent
economic data
suggesting a
greater chance
of a soft
landing



U.S. economics summary

- Real GDP increased at a 2.9% pace year-over-year in Q3 (4.9% quarter-over-quarter annualized rate). The economy has remained relatively strong while inflation appears more likely to fall closer to the Fed's target in 2024. These expectations contributed to a dovish pivot from the Federal Reserve in December, a sharp drop in interest rates, and a notable market rally as the possibility of a soft landing has risen.
- U.S. headline inflation fell during the quarter, from 3.7% to 3.3% year-overyear. Core CPI (ex-food & energy) declined further from 4.1% to 3.9%. Low inflation numbers in October and November (0.0% and 0.1% month-overmonth) were counterbalanced by a surprisingly high inflation number in December (0.3% month-over-month).
- Consumer spending has been stable, with real personal consumption expenditures up +2.7% year-over-year in November, the strongest growth figure since early 2022. However, strong spending appears to be at the expense

- of a low household savings rate (4.1% in November) and may be partly driven by necessity (higher prices of goods & services) rather than by a positive financial or economic outlook.
- The job market has shown mixed signals, increasing in total size during 2023 but arguably with some weakness around the edges. Unemployment rose during the year but fell slightly in Q4 from 3.8% to 3.7%. This historic mismatch between jobs available and workers available has been slowly closing.
- Consumer sentiment improved slightly but remains incredibly poor. Inflation is a central concern for Americans.
 Although inflation has fallen considerably, prices of goods and services remain high, placing strain on budgets. Because inflation measures the rate of change of prices, rather than the level of prices, lower inflation has failed to ease the financial pressure that many households face.

	Most Recent	12 Months Prior
Real GDP (YoY)	2.9 % 9/30/23	1.7% 9/30/22
Inflation (CPI YoY, Core)	3.9% 12/31/23	6.4% 12/31/22
Expected Inflation (5yr-5yr forward)	2.2% 12/31/23	2.3% 12/31/22
Fed Funds Target Range	5.25–5.50% 12/31/23	4.25–4.50% 12/31/22
10-Year Rate	3.88% 12/31/23	3.88% 12/31/22
U-3 Unemployment	3.7% 12/31/23	3.5% 12/31/22
U-6 Unemployment	7.1% 12/31/23	6.5% 12/31/22



International economics summary

- The ongoing threat of inflation, and central banks' tightrope act of working to battle that inflation without tipping economies into recession, was expected to be a key risk of 2024. However, in the fourth quarter inflation has fallen more quickly than expected, while economic growth has generally been more resilient. The global growth picture seems to have improved, all else equal, although growth is still expected to slow materially in the coming quarters.
- Conflicts within the Middle East have led to heightened geopolitical tensions, and broader escalation is a notable risk. While military action has been relatively confined, further conflict could have a material impact on global supply chains and energy markets. The war in Ukraine, which played a large part in initially driving inflation across developed economies, is still fresh in many investors' minds.
- Inflation fell significantly in the Eurozone and U.K., helping to take

- some pressure off the ECB and BOE (headline inflation receded to 3.4% and 4.0% across the Eurozone and U.K., respectively). Despite the easing of price pressures, interest rates sit at multi-decade highs at both central banks which does little to change expectations for stagnant and potentially even negative economic growth.
- China reported GDP growth of 5.2% in 2023, exceeding the 5% growth target set by the CCP. While the reported figure is slightly above the CCP's target, growth has disappointed investors and economists alike, especially following a nearly threeyear COVID-19 lockdown. The country continues to face a variety of challenges including incredibly dire demographic trends, geopolitical tension with the U.S., slowing growth, financial distress amongst the property sector and local government financing vehicles, a heavy national debt burden, and deflation.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.9 % 9/30/23	3.4% 12/31/23	3.7% 12/31/23
Eurozone	0.0% 9/30/23	2.9% 12/31/23	6.4% 11/30/23
Japan	1.5% 9/30/23	2.4% 12/31/23	2.4% 11/30/23
BRICS Nations	5.0% 9/30/23	1.5% 12/31/23	4.8% 12/31/22
Brazil	2.0% 9/30/23	4.6% 12/31/23	7.5% 11/30/23
Russia	5.5% 9/30/23	7.4% 12/31/23	2.9% 11/30/23
India	7.6% 9/30/23	5.7% 12/31/23	8.7% 12/31/23
China	5.2% 12/31/23	-0.3% 12/31/23	5.1% 12/31/23

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

- Domestic equities delivered a strong rally to finish Q4, driven by a combination of better-thanexpected Q3 earnings and signals of easing from the Federal Reserve. The S&P 500 Index gained +26.3% during 2023.
- U.S. equities (S&P 500 +11.7%) led international developed equities (MSCI EAFE +10.4%) and emerging market equities (MSCI EM +7.9%) during the quarter. Domestic equities also led non-U.S. equities over the full year, while emerging markets were laggards. Wide sector performance differences contributed to U.S. leadership, given the much heavier tech focus of the domestic market.
- The U.S. dollar fell sharply, as investors reassessed Federal Reserve policy and interest rates retraced lower. This move created a tailwind for investors with unhedged exposure to foreign currencies. On a trade-weighted

- basis, the value of the U.S. dollar fell -4.3%. However, over the full calendar year investors with unhedged currency exposure saw moderate losses, due to wide fluctuations of the dollar.
- Style factor investing delivered mixed performance for investors in Q4. Over the full year, style investing suffered substantially.
 Small cap underperformed by -9.6% while value stocks underperformed growth by a whopping -31.2%. Besides an extreme period during 2020, calendar year 2023 was the worst 1-year rolling period in more than two decades.
- The Cboe VIX implied volatility index moved even lower during the fourth quarter, from 17.5 to 12.5 in December. Priced volatility is incredibly low—at a level that has historically tended to coincide with very strong economic and market conditions.

	QTD TOTA	L RETURN	1 YEAR TOT	AL RETURN			
	(unhedged)	(hedged)	(unhedged)	(hedged)			
U.S. Large Cap (S&P 500)	11.	7%	26.	3%			
U.S. Small Cap (Russell 2000)	14.	0%	16.9%				
U.S. Equity (Russell 3000)	12.	1%	26.0%				
U.S. Large Value (Russell 1000 Value)	9.5	5%	11.5%				
US Large Growth (Russell 1000 Growth)	14.	2%	42.	7%			
Global Equity (MSCI ACWI)	11.0%	9.7%	22.2%	22.7%			
International Large (MSCI EAFE)	10.4%	6.0%	18.2%	19.9%			
Eurozone (EURO STOXX 50)	13.3%	9.3%	26.5%	25.6%			
U.K. (FTSE 100)	6.9%	2.5%	14.3%	8.8%			
Japan (TOPIX)	8.2%	3.6%	19.3%	35.7%			
Emerging Markets (MSCI Emerging Markets)	7.9%	5.7%	9.8%	10.1%			

Source: Russell Investments, MSCI, STOXX, FTSE, JPX, as of 12/31/23



Domestic equity

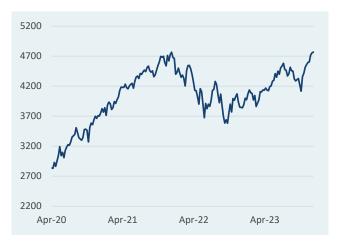
Domestic equities finished the fourth quarter with a strong rally, driven by a combination of better-than-expected Q3 earnings and signals of easing from the Federal Reserve. The S&P 500 Index delivered a gain of +26.3% over 2023, boosted by a +11.7% rise over the final quarter of the year. Shares in the U.S. outperformed international developed and emerging markets over the calendar year.

Third-quarter earnings surprised to the upside, driven by large earnings beats in the communication services and consumer discretionary sectors. Per FactSet, in Q3 earnings grew by 4.9% year-over-year, in contrast to initial expectations of a -0.3% decline at the beginning of the quarter.

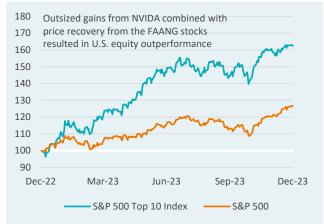
From a sector perspective gains were broad, outside of energy. Real estate and information technology outperformed—driven by easing rates on the long-end of the curve and strong demand within the accelerated computing and artificial intelligence space.

Going forward, domestic equities likely face a challenging environment to build off of the large gains seen in 2023. Valuations remain elevated as the S&P 500 Index approaches a new all-time high. At the same time, earnings growth has been modest, with Q4 earnings expected to come in at +1.3% per FactSet. Although the outlook remains challenged, growth catalysts such as stable inflation, monetary easing, and greater chance of a soft-landing present investors with upside opportunity.

S&P 500 PRICE INDEX

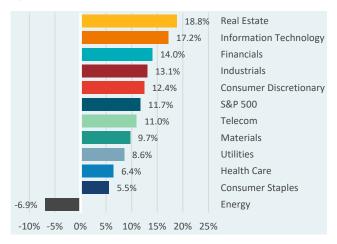


2023 PERFORMANCE (INDEX 100)



Source: Bloomberg, S&P, as of 12/31/23

Q4 2023 SECTOR PERFORMANCE



Source: Morningstar, as of 12/31/23



Source: Bloomberg, as of 12/31/23

7

Domestic equity size & style

Style factor investing delivered mixed performance for investors in the fourth quarter. Small cap outperformed large cap by +2.0% during Q4 (Russell 2000 vs. Russell 1000). Value underperformed Growth by -3.2% (Russell 1000 Value vs. Russell 1000 Growth). Over the full year, style investing suffered substantially. Small cap underperformed by -9.6% while value stocks underperformed growth by a whopping -31.2%. Besides an extreme period during 2020, calendar year 2023 was the worst 1-year rolling period in more than two decades.

The wide variability of style investing continues to be fueled by extreme sector volatility. For example, the information technology sector, which tends to be more concentrated in growth stocks, performed +57.8% in

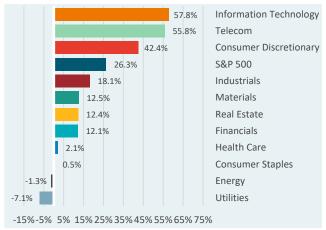
2023. Meanwhile, utilities and energy sectors, which tend to be more concentrated in value stocks, performed -7.1% and -1.3%, respectively. Mega cap growth stocks have propelled the U.S. market higher in 2023—a reversal from significant losses in 2022. Many market-leading stocks are concentrated in technology and telecom sectors, which have outperformed the overall index (+57.8% and +55.8%, respectively).

We believe sector variability and the way this has contributed to style factor volatility is further evidence that style investing should be a long-term decision. Short-term factor timing decisions should typically be pursued only in the rare occasion of obvious market mispricing and a foreseen catalyst for price correction.

VALUE VS. GROWTH 1-YR ROLLING



VALUE VS GROWTH (YOY)



Source: Morningstar, as of 12/31/23

1-YEAR SIZE & STYLE PERFORMANCE

	Value	Core	Growth		
Large Cap	11.5%	26.5%	42.7%		
Mid Cap	12.7%	17.2%	25.9%		
Small Cap	14.6%	16.9%	18.7%		
Small Cap	14.6%	16.9%	18.7%		

Source: FTSE, as of 12/31/23



Source: FTSE, as of 12/31/23

International developed equity

International developed equities also benefited from shifting expectations around Federal Reserve policy in the fourth quarter, with the MSCI EAFE Index delivering a +10.4% gain in unhedged currency terms. Fading dollar strength provided a large boost, as expectations for potential easing from the Federal Reserve contrasted against shifting policy from the ECB and BOE.

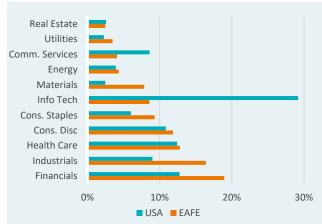
In terms of relative performance, international developed shares trailed the U.S., but outperformed emerging market equities. Sector weightings played the largest role, as gains from mega-cap technology names drove domestic performance, contrasting against the heavier financials and industrial sector composition of the MSCI EAFE index.

Despite macroeconomic challenges, international developed equities saw strong performance in 2023, up +18.2% in unhedged dollar terms. Japanese shares continued to benefit from zero-interest rate policy and shifting investment away from China and into Japan. European shares were lifted by better-than-expected global growth and the ability for companies to pass off higher prices — resulting in strong earnings.

INTERNATIONAL DEVELOPED EQUITY



MSCI EAFE VS. USA SECTOR WEIGHTING



Source: MSCI, as of 12/31/23

JAPAN TOPIX PRICE INDEX



Source: Tokyo Stock Exchange, as of 12/31/23



Source: MSCI, as of 12/31/23

9

Emerging market equity

Emerging markets saw a positive end to 2023, rising +7.9% in the fourth quarter – helping to notch a +9.8% gain for the index over the 2023 calendar year. While rebounding from losses seen last year (-20.1% decline in 2022), emerging market equities underperformed both domestic and international developed equities for the second straight year.

Most countries within the index saw positive returns in the last quarter of the year, fueled by the broader rally in risk assets as U.S. monetary policy expectations eased. China was the outlier, declining -4.2%.

Chinese shares remain the elephant in the room within emerging markets. The MSCI EM ex China Index outperformed the flagship index by more than 10% in 2023, which highlights the large drag that China has caused, given its nearly 30% country weight in the index. The country continues to face a variety of challenges including incredibly dire demographic trends, geopolitical tension with the U.S., slowing growth, financial distress amongst the property sector and local government financing vehicles, a heavy national debt burden, and deflation. Combined with further consolidation of power within the CCP, the cheap pricing of Chinese equities may be justified.

EMERGING MARKET EQUITY



Q4 2023 MSCI EM COUNTRY RETURNS (USD)



Source: Bloomberg, MSCI, as of 12/31/23

MSCI EM VS. EM EX CHINA (GROWTH \$100K)



Source: Bloomberg, MSCI, as of 12/31/23



Source: MSCI, as of 12/31/23

10

Fixed income environment

- The 10-year U.S. Treasury yield reversed its gains from the prior quarter, falling from 4.58% to 3.88% in Q4, as the market reassessed inflation conditions and the Federal Reserve's likely path. Further signs that inflation is moderating toward target, along with surprisingly upbeat economic news, likely contributed to the Federal Reserve's "dovish pivot" as it has been referred to. The 10year yield ended 2023 unchanged.
- During Q4, credit markets delivered strong results, led by lower-quality bonds such as high yield and bank loans. High yield gained +7.2% (Bbg U.S. Corporate High Yield), while bank loans rose +2.8% (S&P/LSTA Leveraged Loan). Longer duration investment grade corporate bonds (Bloomberg U.S. Long Corporate Credit) rose 14.0% during the quarter as both falling interest rates and narrower credit spreads acted as a tailwind.
- The U.S. yield curve has remained inverted for 1.5 years, which is

- among the most extended periods in modern history. This is indicated by the 10-year minus 2-year Treasury yield—ending the year at -35bps, up from -44bps in Q3. Unique attributes of the current economic environment suggest that this curve inversion may not coincide with a near-term recession.
- US interest rates remained steady during the quarter as inflation continued to moderate towards the Federal Reserve Bank's 2.0% target. Importantly, expectations for future rate cuts increased following the statement made by Chairman Powell that future rate hikes may not be required.
- With inflation and economic growth continuing to moderate during the quarter, market expectations for future rate cuts by the Federal Reserve increased. As a result, interest rates across the US Treasury curve declined meaningfully, with shorter-term rates declining more than longer-term rates.

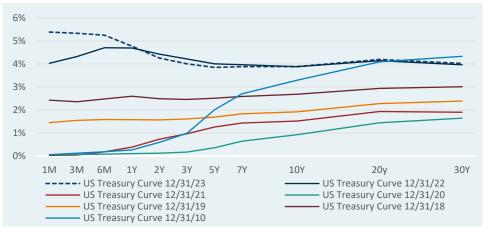
	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	6.8%	5.5%
Core Plus Fixed Income (Bloomberg U.S. Universal)	6.8%	6.2%
U.S. Treasuries (Bloomberg U.S. Treasury)	5.7%	4.1%
U.S. Treasuries: Long (Bloomberg U.S. Treasury 20+)	13.4%	2.7%
U.S. High Yield (Bloomberg U.S. Corporate HY)	7.2%	13.4%
Bank Loans (S&P/LSTA Leveraged Loan)	2.8%	13.3%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	8.1%	12.7%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	9.2%	11.1%
Mortgage-Backed Securities (Bloomberg MBS)	7.5%	5.0%

Source: Bloomberg, as of 12/31/23

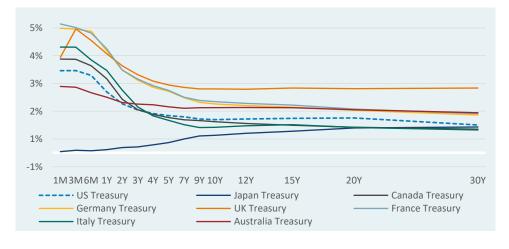


Yield environment

U.S. YIELD CURVE

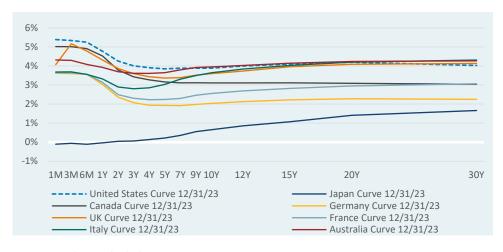


YIELD CURVE CHANGES OVER LAST FIVE YEARS

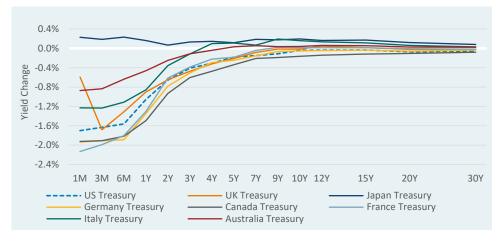


Source: Bloomberg, as of 12/31/23

GLOBAL GOVERNMENT YIELD CURVES



IMPLIED CHANGES OVER NEXT YEAR





Currency

The U.S. dollar fell sharply in the fourth quarter, as investors reassessed Federal Reserve policy and interest rates retraced lower. This move created a tailwind for investors with unhedged exposure to foreign currencies. On a trade-weighted basis, the value of the U.S. dollar fell - 4.3%. However, following wide fluctuations of the dollar during 2023, and the performance volatility that resulted, investors with unhedged foreign currency exposure saw moderate losses. For investors with unhedged international developed equity exposure, this delivered a loss of -1.7%. Unhedged exposure to emerging market currencies resulted in a loss of -0.2%.

As investors evaluate market movements and performance of 2023, it may be worth reflecting on the benefits which a more thoughtful

currency approach might deliver. A better approach may reduce the uncompensated risk of unhedged foreign currency exposure. Additionally, the MSCI Currency Factor Mix Index—a representation of a passive investment in the currency market, by investing in currencies with higher interest rates, currencies that are undervalued, and currencies that are showing positive price momentum—has shown a positive one-year rolling return over most periods with low volatility. This is what was delivered in 2023. During the year, an unhedged exposure to currency markets (assuming MSCI EAFE equity implementation) resulted in a loss of -1.7% and volatility of 7.5%. Meanwhile, an implementation to Currency Factor Mix delivered a gain of +1.4% and volatility of 2.5%.

EFFECT OF CURRENCY (1-YEAR ROLLING)



U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Bloomberg, as of 12/31/23

EMBEDDED CURRENCY VS CURRENCY FACTORS



Source: Bloomberg, MSCI, as of 12/31/23



Source: MSCI, as of 12/31/23

13

Detailed index returns

DOMESTIC EQUITY								FIXED INCOME							
	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year		Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index								Broad Index							
S&P 500	4.5	11.7	26.3	26.3	10.0	15.7	12.0	Bloomberg US TIPS	2.7	4.7	3.9	3.9	(1.0)	3.2	2.4
S&P 500 Equal Weighted	6.9	11.9	13.9	13.9	9.3	13.8	10.4	Bloomberg US Treasury Bills	0.5	1.4	5.1	5.1	2.1	1.9	1.3
DJ Industrial Average	4.9	13.1	16.2	16.2	9.4	12.5	11.1	Bloomberg US Agg Bond	3.8	6.8	5.5	5.5	(3.3)	1.1	1.8
Russell Top 200	4.1	11.7	29.9	29.9	10.0	16.5	12.7	Bloomberg US Universal	3.8	6.8	6.2	6.2	(3.0)	1.4	2.1
Russell 1000	4.9	12.0	26.5	26.5	9.0	15.5	11.8 Duration								
Russell 2000	12.2	14.0	16.9	16.9	2.2	10.0	7.2 Bloomberg US Treasury 1-3 Yr		1.2	2.6	4.3	4.3	(0.1)	1.3	1.0
Russell 3000	5.3	12.1	26.0	26.0	8.5	15.2	11.5	Bloomberg US Treasury Long	8.6	12.7	3.1	3.1	(11.4)	(1.2)	2.3
Russell Mid Cap	7.7	12.8	17.2	17.2	5.9	12.7	9.4	Bloomberg US Treasury	3.4	5.7	4.1	4.1	(3.8)	0.5	1.3
Style Index								Issuer							
Russell 1000 Growth	4.4	14.2	42.7	42.7	8.9	19.5	14.9	14.9 Bloomberg US MBS		7.5	5.0	5.0	(2.9)	0.3	1.4
Russell 1000 Value	5.5	9.5	11.5	11.5	8.9	10.9	8.4	Bloomberg US Corp. High Yield	3.7	7.2	13.4	13.4	2.0	5.4	4.6
Russell 2000 Growth	12.0	12.7	18.7	18.7	(3.5)	9.2	7.2 Bloomberg US Agency Interm		1.6	3.2	4.9	4.9	(1.1)	1.1	1.2
Russell 2000 Value	12.4	15.3	14.6	14.6	7.9	10.0	6.8	Bloomberg US Credit	4.2	8.2	8.2	8.2	(3.2)	2.4	2.8
INTERNATIONAL EQUITY	<u> </u>							OTHER							
Broad Index								Index							
MSCI ACWI	4.8	11.0	22.2	22.2	5.7	11.7	7.9	Bloomberg Commodity	(2.7)	(4.6)	(7.9)	(7.9)	10.8	7.2	(1.1)
MSCI ACWI ex US	5.0	9.8	15.6	15.6	1.5	7.1	3.8	Wilshire US REIT	10.2	16.3	16.1	16.1	7.5	7.6	7.7
MSCI EAFE	5.3	10.4	18.2	18.2	4.0	8.2	4.3	CS Leveraged Loans	1.6	2.9	13.0	13.0	5.6	5.6	4.4
MSCI EM	3.9	7.9	9.8	9.8	(5.1)	3.7	2.7	S&P Global Infrastructure	4.2	10.9	6.8	6.8	6.0	7.4	5.7
MSCI EAFE Small Cap	7.3	11.1	13.2	13.2	(0.7)	6.6	4.8	Alerian MLP	(3.4)	3.0	23.8	23.8	31.8	10.9	1.6
Style Index								Regional Index							
MSCI EAFE Growth	5.7	12.7	17.6	17.6	0.3	8.8	5.1	JPM EMBI Global Div	4.7	9.2	11.1	11.1	(3.6)	1.7	3.2
MSCI EAFE Value	4.9	8.2	19.0	19.0	7.6	7.1	3.2	JPM GBI-EM Global Div	3.2	8.1	12.7	12.7	(3.2)	1.1	0.1
Regional Index								Hedge Funds							
MSCI UK	4.5	6.9	14.1	14.1	8.8	6.9	2.5	HFRI Composite	2.6	3.6	7.5	7.5	4.3	7.0	4.5
MSCI Japan	4.4	8.2	20.3	20.3	0.7	6.9	5.0	HFRI FOF Composite	2.3	3.4	6.3	6.3	2.3	5.1	3.3
MSCI Euro	4.4	12.9	25.2	25.2	6.0	9.3	4.1	Currency (Spot)							
MSCI EM Asia	3.3	6.7	7.8	7.8	(6.9)	4.3	4.1	Euro	1.2	4.3	3.5	3.5	(3.4)	(0.7)	(2.2)
MSCI EM Latin American	8.3	17.6	32.7	32.7	9.9	6.1	2.1	Pound Sterling	0.7	4.4	6.0	6.0	(2.3)	0.0	(2.6)

Yen

5.9

(6.4) (6.4) (9.9)

(4.9)

(2.9)

Source: Morningstar, HFRI, as of 12/31/23



- The Total Fund, net of manager fees, returned 5.5% in the fourth quarter of 2023 and in the ranked 79th percentile among other public plans greater than \$1 billion (median of 6.6%). It matched the policy index return of 5.5%. The Total Fund ex Overlay returned 5.5% for the quarter. The Total Fund one-year return of 9.1% lagged the policy index return of 12.1% and ranked in the 89th percentile of its peer universe. The two-year return of 0.3% (27th percentile) beat the median large public plan (-0.3%) but lagged the policy index (0.7%).
- Fourth quarter results were enhanced by the following factors:
 - 1. The private Equity composite gained 1.8% beating the public market equivalent by 4% and ranked in the top 15th percentile of its peers, providing a tailwind to the Fund.
- Fourth quarter results were hindered by the following factors:
 - 1. PanAgora Defensive Equity trailed the Russell 1000 (7.8% vs 12.0%). PanAgora's low volatility strategy is more risk diversified than the index and hurt as relatively few large names continued to drive the Russell 1000 Returns.
 - 2. The Absolute Return portfolio and Real Estate were the only two asset classes that posted negative returns for the quarter. Absolute return trailed its benchmark by 5%, while Real Estate outperformed by 50 bps.



	Market Value	% of Portfolio	3 Mo Rank	YTD	Fiscal YTD	1 Yr Rank	2 Yrs Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs	Rank
Total Fund**	6,191,331,114	100.0	5.5 (79)	9.1 (89)	3.9 (78)	9.1 (89)	0.3 (27)	4.0 (66)	7.4 (86)	6.1	(58)
Policy Index			5.5 (80)	12.1 (38)	4.3 (61)	12.1 (38)	0.7 (21)	4.9 (37)	8.1 (58)	6.6	(38)
Simple Benchmark			7.2 (32)	11.2 (58)	4.1 (73)	11.2 (58)	-1.0 (75)	3.7 (77)	8.2 (54)	6.5	(39)
InvMetrics Public DB > \$1B Median			6.6	11.4	4.5	11.4	-0.3	4.5	8.3	6.3	
Total Fund ex Overlay	6,181,126,944	99.8	5.5 (80)	9.0 (89)	3.9 (78)	9.0 (89)	0.3 (28)	4.0 (66)	7.4 (87)	6.0	(62)
Policy Index			5.5 (80)	12.1 (38)	4.3 (61)	12.1 (38)	0.7 (21)	4.9 (37)	8.1 (58)	6.6	(38)
Simple Benchmark			7.2 (32)	11.2 (58)	4.1 (73)	11.2 (58)	-1.0 (75)	3.7 (77)	8.2 (54)	6.5	(39)
InvMetrics Public DB > \$1B Median			6.6	11.4	4.5	11.4	-0.3	4.5	8.3	6.3	
Growth Portfolio	3,660,387,619	59.1	7.8	14.8	5.5	14.8	-	-	-		
Blended Growth Index			8.1	20.3	7.4	20.3	1.5	6.7	11.3	-	
US Equity	1,446,260,098	23.4	11.1 (90)	19.3 (92)	7.4 (84)	19.3 (92)	1.6 (14)	8.6 (40)	13.5 (81)	10.3	(70)
Blended US Equity Index			12.1 (40)	26.0 (25)	8.4 (37)	26.0 (25)	0.9 (35)	8.5 (41)	15.2 (22)	11.3	(24)
Russell 3000 Index			12.1 (40)	26.0 (25)	8.4 (37)	26.0 (25)	0.9 (35)	8.5 (41)	15.2 (22)	11.5	(16)
BlackRock Russell 1000	872,511,657	14.1	12.0 (36)	26.6 (24)	8.5 (36)	26.6 (24)	1.2 (50)	9.0 (50)	15.5 (27)	-	
DE Shaw	201,161,917	3.2	9.8 (79)	20.8 (55)	7.5 (57)	20.8 (55)	0.5 (60)	7.0 (81)	13.5 (65)	11.4	(33)
PanAgora Defuseq	235,784,833	3.8	7.8 (94)	3.7 (100)	2.3 (99)	3.7 (100)	0.5 (60)	6.8 (84)	10.6 (92)	-	
Russell 1000 Index			12.0 (36)	26.5 (24)	8.4 (37)	26.5 (24)	1.2 (50)	9.0 (50)	15.5 (27)	11.8	(23)
eV US Large Cap Core Equity Median			11.5	21.7	7.9	21.7	1.1	8.9	14.3	11.0	
PGIM Quant Solutions	128,204,456	2.1	12.7	21.5	10.3	21.5	2.8	10.2	10.9	-	
Russell 2000 Index			14.0	16.9	8.2	16.9	-3.5	2.2	10.0	7.2	
eV US Small Cap Core Equity Median			12.4	17.0	7.1	17.0	-1.5	6.8	11.9	8.2	
International Equity with Record	1,127,604,172	18.2	8.5 (86)	16.0 (51)	4.1 (69)	16.0 (51)	-1.6 (49)	1.8 (40)	8.0 (37)	4.6	(27)
Blended International Equity Index			8.0 (95)	16.2 (48)	5.8 (24)	16.2 (48)	0.7 (12)	4.1 (11)	8.5 (27)	4.8	(19)
Baillie Gifford	270,565,920	4.4	11.3 (68)	10.5 (89)	0.1 (93)	10.5 (89)	-12.8 (81)	-7.6 (86)	7.1 (78)	4.4	(79)
MSCI ACWI ex US			9.8 (87)	16.2 (50)	5.8 (28)	16.2 (51)	-0.9 (12)	2.0 (13)	7.6 (74)	4.3	(82)
MSCI ACWI ex US Growth			11.2 (71)	14.4 (68)	3.1 (60)	14.4 (68)	-6.0 (41)	-2.4 (49)	7.8 (71)	4.9	(67)
Mondrian	278,078,183	4.5	9.1 (49)	19.1 (47)	6.4 (57)	19.1 (47)	2.1 (56)	3.7 (81)	5.8 (85)	3.4	(79)
MSCI AC World ex USA Value			8.5 (69)	18.1 (57)	8.6 (37)	18.1 (57)	4.3 (29)	6.5 (43)	7.0 (68)	3.5	(79)
MSCI AC World ex USA Index			9.8 (36)	16.2 (73)	5.8 (70)	16.2 (73)	-0.9 (87)	2.0 (91)	7.6 (60)	4.3	(39)
BlackRock MSCI ACWI EX-US IMI	579,988,174	9.4	9.7 (59)	15.7 (61)	5.8 (31)	15.7 (61)	-1.6 (40)	1.7 (52)	-	-	
MSCI AC World ex USA IMI (Net)			9.8 (55)	15.6 (62)	6.0 (30)	15.6 (62)	-1.8 (45)	1.5 (56)	7.2 (76)	4.0	(76)
Record Dynamic Currency Hedge	-3,696,254	-0.1	-146.9	-	-286.4	-	-	-	-	-	

San Mateo County Employees' Retirement Association Period Ending: December 31, 2023

	Market Value	% of Portfolio	3 Mo Rank	YTD	Fiscal YTD	1 Yr Rank	2 Yrs Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs I	Rank
Private Equity***	408,506,456	6.6	1.8 (15)	6.5 (37)	3.2 (33)	6.5 (37)	-2.4 (91)	6.3 (93)	19.0 (6)	17.7	(11)
Blended Private Equity Index			-2.1 (99)	23.5 (1)	5.9 (9)	23.5 (1)	2.7 (59)	12.4 (74)	12.2 (61)	13.2	(46)
Opportunistic Credit	678,016,893	11.0	4.0		5.0	-	-	-	-	-	
Opportunistic Credit Index			6.2	13.2	7.4	13.2	1.6	3.1	5.2	4.6	
Public Credit	520,515,393	8.4	5.3	10.4	6.1	10.4	1.5	3.4	5.0	5.3	
Blmbg. U.S. Corp: High Yield Index			7.2	13.4	7.7	13.4	0.4	2.0	5.4	4.6	
AG CSF ADF II	11,420,112	0.2	7.0	21.8	9.9	21.8	-	-	-	-	
AG CSF II	25,072,026	0.4	5.3	20.2	9.1	20.2	-	-	-	-	
Angelo Gordon Opportunistic	31,925	0.0	0.0	-13.4	-4.9	-13.4	-8.0	2.9	3.5	-	
Angelo Gordon Credit Solutions	9,017,780	0.1	4.7 (86)	12.2 (50)	7.1 (45)	12.2 (50)	3.1 (7)	9.3 (1)	-	-	
Beach Point Select	110,254,701	1.8	4.5 (88)	13.0 (32)	7.1 (47)	13.0 (32)	2.6 (16)	6.8 (2)	8.6 (1)	-	
Brigade Capital	116,233,485	1.9	3.1 (99)	11.6 (69)	5.1 (94)	11.6 (69)	-0.4 (81)	4.2 (8)	5.1 (50)	4.2	(54)
One William Street	63,031,032	1.0	2.5 (100)	-	5.1 (94)	-	-	-	-	-	
Blmbg. U.S. Corp: High Yield Index			7.2 (15)	13.4 (19)	7.7 (21)	13.4 (19)	0.4 (61)	2.0 (56)	5.4 (32)	4.6	(26)
eV US High Yield Fixed Inc Median			6.5	12.2	7.0	12.2	0.6	2.1	5.1	4.2	
PIMCO Diversified	128,343,591	2.1	7.8 (5)	10.3 (90)	6.6 (79)	10.3 (90)	-2.5 (100)	-1.6 (100)	2.8 (100)	-	
Blmbg. U.S. Corp: High Yield Index			7.2 (22)	13.4 (36)	7.7 (33)	13.4 (36)	0.4 (76)	2.0 (79)	5.4 (61)	4.6	(59)
Franklin Templeton	57,110,741	0.9	9.1 (20)	4.9 (91)	4.7 (63)	4.9 (91)	-2.4 (49)	-3.1 (64)	-2.8 (99)	-0.6	(91)
Blmbg. Global Multiverse			8.1 (34)	6.1 (80)	4.4 (70)	6.1 (80)	-5.6 (81)	-5.3 (81)	-0.1 (86)	0.5	(76)
eV All Global Fixed Inc Median			7.2	8.8	5.2	8.8	-2.5	-1.8	2.4	2.3	
Private Credit	157,501,499	2.5	0.1	4.2	1.6	4.2	3.9	5.2	6.0		
Credit Suisse Leveraged Loan Index 1 Qtr Lag			3.4	12.5	6.6	12.5	4.7	5.9	4.3	4.3	
Blackrock DL Feeder IX-U	39,215,778	0.6	0.0	7.2	3.0	7.2	5.7	6.3	-	-	
PIMCO Private Income	50,152,284	0.8	0.0	5.9	1.7	5.9	2.8	6.1	-	-	
TCP Direct Lending VIII	10,257,397	0.2	1.2	6.7	2.2	6.7	4.1	5.2	5.7	-	
White Oak Yield	28,721,354	0.5	0.0	3.3	0.5	3.3	3.2	4.1	5.0	-	
White Oak YSF V	29,154,686	0.5	0.0 (100)	-9.3 (100)	0.5 (100)	-9.3 (100)	0.9 (41)	1.4 (79)	-	-	
Credit Suisse Leveraged Loan Index 1 Qtr Lag			3.4 (99)	12.5 (45)	6.6 (69)	12.5 (45)	4.7 (1)	5.9 (2)	4.3 (81)	4.3	(43)
eV US High Yield Fixed Inc Median			6.5	12.2	7.0	12.2	0.6	2.1	5.1	4.2	

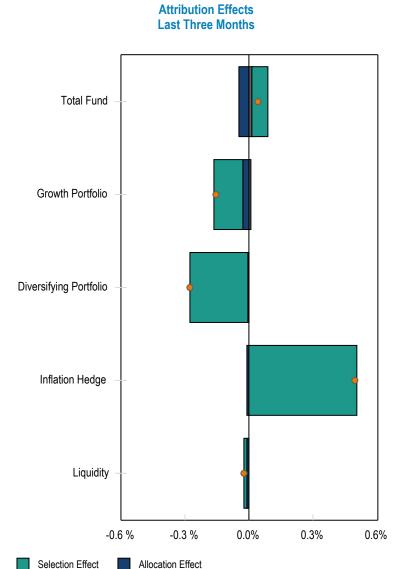
San Mateo County Employees' Retirement Association Period Ending: December 31, 2023

	Market Value	% of Portfolio	3 Mo Rank	YTD	Fiscal YTD	1 Yr Rank	2 Yrs Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs I	Rank
Diversifying Portfolio	1,133,943,824	18.3	4.9	5.0	3.5	5.0	-	-	-	-	
Blended Diversifying Index			6.4	6.2	3.3	6.2	-0.6	-0.3	2.6	3.0	
Core Fixed	797,804,077	12.9	8.4	6.5	3.9	6.5	-3.9	-3.0	1.2	2.1	
Blended Core Fixed Income Benchmark			8.3	4.6	2.5	4.6	-4.6	-3.6	0.9	1.7	
DoubleLine	238,832,346	3.9	6.6 (42)	6.7 (42)	3.2 (68)	6.7 (42)	-4.4 (92)	-3.3 (95)	-	-	
Blmbg. U.S. Aggregate Index			6.8 (39)	5.5 (61)	3.4 (58)	5.5 (61)	-4.2 (88)	-3.3 (96)	1.1 (51)	1.8	(57)
FIAM Bond	130,079,697	2.1	7.0 (26)	6.3 (21)	3.8 (21)	6.3 (21)	-3.7 (27)	-2.8 (21)	2.1 (5)	2.5	(7)
NISA Core Bond	242,034,658	3.9	6.8 (53)	5.7 (65)	3.4 (57)	5.7 (65)	-3.9 (34)	-3.1 (41)	-	-	
Blmbg. U.S. Aggregate Index			6.8 (52)	5.5 (72)	3.4 (63)	5.5 (72)	-4.2 (65)	-3.3 (69)	1.1 (84)	1.8	(76)
eV US Core Fixed Inc Median			6.8	5.9	3.5	5.9	-4.1	-3.1	1.4	2.0	
NISA Long Treasury	184,684,978	3.0	12.8	-	-0.5	-	-	-	-	-	
Blmbg. U.S. Treasury: Long			12.7	3.1	-0.6	3.1	-14.6	-11.4	-1.2	2.3	
Absolute Return	336,139,747	5.4	-2.6 (98)	1.5 (84)	2.1 (81)	1.5 (84)	4.3 (24)	3.6 (50)	0.1 (83)	1.3	(70)
Absolute Return Custom Index			2.4 (50)	9.2 (37)	4.7 (39)	9.2 (37)	7.4 (8)	6.3 (19)	5.9 (40)	5.4	(9)
Acadian MAAR Fund LLC	77,722,217	1.3	-5.2 (96)	-5.4 (93)	-3.3 (90)	-5.4 (93)	-2.8 (81)	-1.3 (84)	-	-	
CFM Systematic Global Macro	89,225,911	1.4	5.2 (32)	1.3 (76)	7.4 (21)	1.3 (76)	8.7 (15)	8.0 (24)	-	-	
Graham Quant Macro	81,982,928	1.3	-8.4 (99)	2.0 (74)	-0.9 (85)	2.0 (74)	8.7 (15)	4.9 (49)	-	-	
PIMCO MAARS Fund LP	87,208,692	1.4	-1.3 (86)	7.2 (45)	5.0 (38)	7.2 (45)	9.6 (12)	10.1 (20)	-	-	
Absolute Return Custom Index			2.4 (59)	9.2 (33)	4.7 (41)	9.2 (33)	7.4 (19)	6.3 (37)	5.9 (51)	5.4	(49)
eV Alt All Multi-Strategy Median			2.9	6.6	4.0	6.6	2.0	4.8	5.9	5.1	
Inflation Hedge	1,005,018,536	16.2	-0.4	-3.4	-1.5	-3.4	2.0	7.1	4.4	-	
Blended Inflation Hedge Index			-3.3	-4.4	-4.6	-4.4	0.3	7.4	5.9	5.2	
Real Estate	488,174,403	7.9	-4.3 (92)	-8.9 (85)	-6.0 (88)	-8.9 (85)	-1.1 (28)	4.5 (66)	4.0 (45)	7.2	(1)
NCREIF ODCE			-4.8 (100)	-12.0 (92)	-6.6 (100)	-12.0 (92)	-2.8 (36)	4.9 (65)	4.2 (44)	7.3	(1)
Harrison Street Core Property	91,671,877	1.5	-3.5	-5.9	-5.6	-5.9	1.9	4.5	-	-	
Invesco	248,704,950	4.0	-4.7	-12.4	-6.2	-12.4	-3.0	4.4	3.5	6.9	
Invesco US Val IV	432,108	0.0	0.0	-50.7	-28.0	-50.7	-46.7	-31.6	-17.9	-	
Invesco US Val V	23,710,068	0.4	-23.8	-26.5	-26.8	-26.5	-15.3	-2.1	-	-	
Invesco US Val VI	24,737,697	0.4	0.0	-1.6	-3.2	-1.6	-	-	-	_	
PGIM RE US Debt Fund	73,722,602	1.2	1.3	6.3	2.7	6.3	6.1	5.9	5.7	-	
NCREIF ODCE			-4.8	-12.0	-6.6	-12.0	-2.8	4.9	4.2	7.3	
Stockbridge Value IV	25,195,102	0.4	0.0	-4.5	-5.1	-4.5	9.0	-	-	-	
NCREIF ODCE			-4.8	-12.0	-6.6	-12.0	-2.8	4.9	4.2	7.3	



Total Fund Performance Summary (Net of Fees)

	Market Value	% of Portfolio	3 Mo Rank	YTD	Fiscal YTD	1 Yr Rank	2 Yrs Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs Rank
Private Real Asset***	339,484,033	5.5	4.0	4.3	3.8	4.3	9.6	15.6	6.5	-
Blended Private Real Asset Index			-4.5	9.3	-5.3	9.3	4.1	11.8	5.8	5.7
Blended Secondary CA Private RA Index			0.0	6.1	1.3	6.1	11.4	15.2	7.1	-
Public Real Assets	177,360,100	2.9	2.7	-0.1	2.0	-0.1	2.1	7.0	3.8	
Blended Public Real Asset Index			3.0	0.1	2.2	0.1	2.1	7.1	6.3	5.3
SSgA Custom Real Asset	177,360,100	2.9	2.7	-0.1	2.0	-0.1	2.1	7.0	6.2	-
SSgA Custom Real Asset Index			3.0	0.1	2.2	0.1	2.1	7.1	6.3	-
Liquidity	391,981,135	6.3	2.2	5.5	3.4	5.5				
Blended Liquidity Index			2.5	4.7	3.3	4.7	-	-	-	-
Cash Flow-Matched Liquidity	287,521,271	4.6	2.4	5.2	3.6	5.2			-	
Blmbg. 1-3 Year Gov/Credit Index			2.7	4.6	3.4	4.6	0.4	0.1	1.5	1.3
Blmbg. 1-3 Year Credit			3.0	5.3	3.8	5.3	0.8	0.5	2.0	1.7
Insight Investment*	278,615,082	4.5	2.5	5.4	3.7	5.4	-	-	-	-
Blmbg. 1-3 Year Credit			3.0	5.3	3.8	5.3	0.8	0.5	2.0	1.7
County Treasury Pool**	8,906,189	0.1	1.0	4.4	1.4	4.4	2.7	2.2	2.2	2.0
90 Day U.S. Treasury Bill			1.4	5.0	2.7	5.0	3.2	2.2	1.9	1.2
Cash & Cash Overlay	117,897,647	1.9	1.4	5.6	2.9	5.6	3.7	2.6	1.9	1.4
90 Day U.S. Treasury Bill			1.4	5.0	2.7	5.0	3.2	2.2	1.9	1.2
General Account	107,693,490	1.7	1.4	5.6	2.9	5.6	3.8	2.6	2.4	2.2
90 Day U.S. Treasury Bill			1.4	5.0	2.7	5.0	3.2	2.2	1.9	1.2



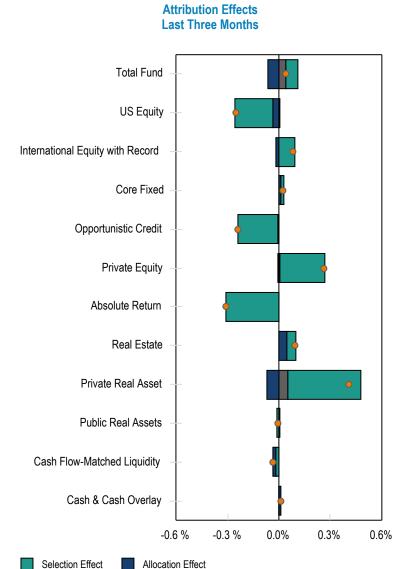
	Performance Attribution
	3 Mo
Wtd. Actual Return	5.5
Wtd. Index Return	5.5
Excess Return	0.0
Selection Effect	0.1
Allocation Effect	0.0
Interaction Effect	0.0

Attribution Summary Last Three Months

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Growth Portfolio	7.8	8.1	-0.2	-0.1	0.0	0.0	-0.2
Diversifying Portfolio	4.9	6.4	-1.5	-0.3	0.0	0.0	-0.3
Inflation Hedge	-0.4	-3.3	2.9	0.5	0.0	0.0	0.5
Liquidity	2.2	2.5	-0.3	0.0	0.0	0.0	0.0
Total Fund	5.5	5.5	0.0	0.1	0.0	0.0	0.0

Interaction Effect

Total Effects



	Performance Attribution
	3 Mo
Wtd. Actual Return	5.5
Wtd. Index Return	5.5
Excess Return	0.0
Selection Effect	0.1
Allocation Effect	-0.1
Interaction Effect	0.0

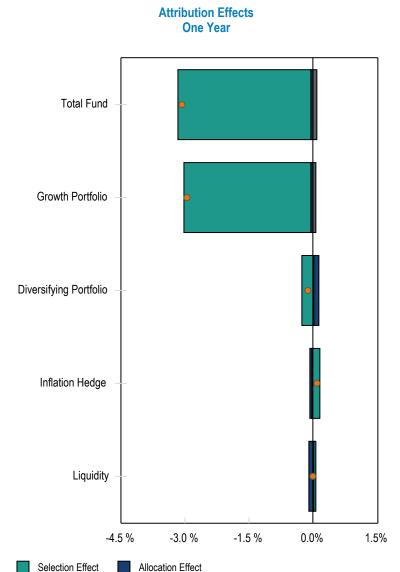
Attribution Summary Last Three Months

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
US Equity	11.1	12.1	-1.0	-0.2	0.0	0.0	-0.3
International Equity with Record	8.5	8.0	0.5	0.1	0.0	0.0	0.1
Core Fixed	8.4	8.3	0.1	0.0	0.0	0.0	0.0
Opportunistic Credit	4.0	6.2	-2.1	-0.2	0.0	0.0	-0.2
Private Equity	1.8	-2.1	3.9	0.3	0.0	0.0	0.3
Absolute Return	-2.6	2.4	-4.9	-0.3	0.0	0.0	-0.3
Real Estate	-4.3	-4.8	0.5	0.1	0.0	0.0	0.1
Private Real Asset	4.0	-4.5	8.5	0.4	-0.1	0.1	0.4
Public Real Assets	2.7	3.0	-0.3	0.0	0.0	0.0	0.0
Cash Flow-Matched Liquidity	2.4	2.7	-0.3	0.0	0.0	0.0	0.0
Cash & Cash Overlay	1.4	1.4	0.1	0.0	0.0	0.0	0.0
Total Fund	5.5	5.5	0.0	0.1	-0.1	0.0	0.0

Interaction Effect

Total Effects

San Mateo County Employees' Retirement Association Period Ending: December 31, 2023



	Performance Attribution
	1 Yr
Wtd. Actual Return	9.1
Wtd. Index Return	12.2
Excess Return	-3.1
Selection Effect	-3.1
Allocation Effect	-0.1
Interaction Effect	0.1

Attribution Summary One Year

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Growth Portfolio	14.8	20.3	-5.5	-3.0	0.0	0.1	-3.0
Diversifying Portfolio	5.0	6.2	-1.2	-0.3	0.1	0.0	-0.1
Inflation Hedge	-3.4	-4.4	1.0	0.2	0.0	0.0	0.1
Liquidity	5.5	4.7	0.8	0.0	-0.1	0.0	0.0
Total Fund	9.1	12.2	-3.1	-3.1	-0.1	0.1	-3.1



Interaction Effect

Total Effects

San Mateo County Employees' Retirement Association Period Ending: December 31, 2023



Performance Attribution				
	1 Yr			
Wtd. Actual Return	9.1			
Wtd. Index Return	12.2			
Excess Return	-3.1			
Selection Effect	-3.2			
Allocation Effect	-0.1			
Interaction Effect	0.2			

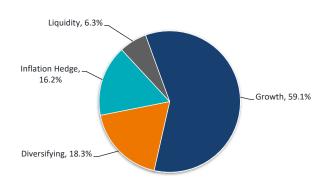
Attribution Summary One Year

	Actual Weight (%)	Policy Weight (%)	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
US Equity	21.6	22.0	19.3	26.0	-6.6	-1.3	0.0	0.0	-1.3
International Equity with Record	18.4	18.5	16.0	16.2	-0.2	0.0	0.0	0.0	0.0
Core Fixed	12.1	12.7	6.5	4.6	1.9	0.2	0.1	0.0	0.3
Opportunistic Credit	10.4	10.5	8.9	13.2	-4.3	-0.5	0.0	0.0	-0.5
Private Equity	6.5	7.0	6.5	23.5	-17.0	-1.2	-0.1	0.1	-1.2
Absolute Return	5.9	6.5	1.5	9.2	-7.7	-0.5	0.0	0.0	-0.5
Real Estate	8.8	9.0	-8.9	-12.0	3.1	0.3	0.0	0.0	0.4
Private Real Asset	5.0	4.8	4.3	9.3	-5.0	-0.2	0.0	0.0	-0.2
Public Real Assets	3.4	3.5	-0.1	0.1	-0.2	0.0	0.0	0.0	0.0
Cash Flow-Matched Liquidity	5.5	4.5	5.2	4.6	0.6	0.0	0.0	0.0	0.0
Cash & Cash Overlay	2.4	1.0	5.6	5.0	0.6	0.0	0.0	0.0	0.0
Total Fund	100.0	100.0	9.1	12.2	-3.1	-3.2	-0.1	0.2	-3.1

Total Effects

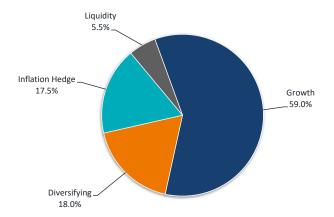
Interaction Effect

Current w/ Overlay



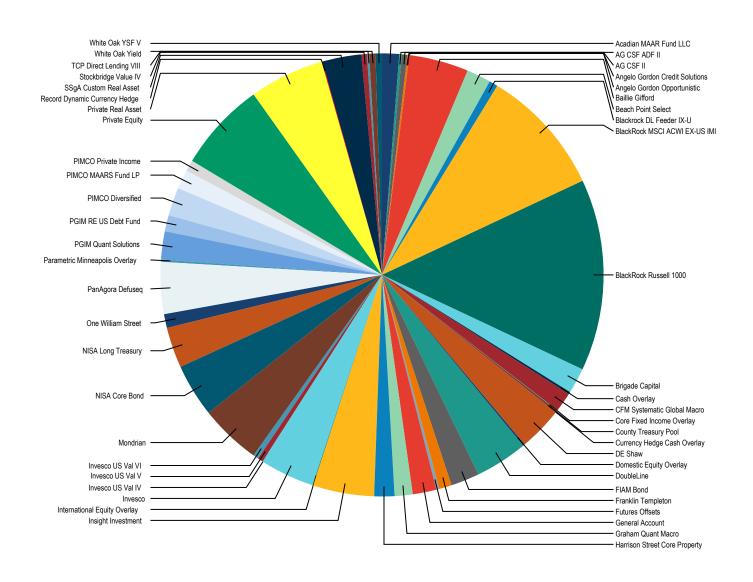
ASSET ALLOCATION	MARKET VALUE W/	W/ OVERLAY	W/O OVERLAY
Growth	3,658,176,911	59.1%	58.9%
Diversifying	1,133,943,824	18.3%	18.3%
Inflation Hedge	1,005,018,536	16.2%	16.2%
Liquidity	391,981,135	6.3%	6.6%
TOTAL	6,189,120,406	100.0%	100.0%

Target



ASSET ALLOCATION	W/ OVERLAY	TARGET	DIFF
Growth	59.1%	59.0%	0.1%
Diversifying	18.3%	18.0%	0.3%
Inflation Hedge	16.2%	17.5%	-1.3%
Liquidity	6.3%	5.5%	0.8%
TOTAL	100.0%	100.0%	0.0%







Total Fund Manager Allocation Analysis

Name	Market Value	% of Portfolio
BlackRock Russell 1000	\$872,511,657	14.1
DE Shaw	\$201,161,917	3.2
PanAgora Defuseq	\$235,784,833	3.8
PGIM Quant Solutions	\$128,204,456	2.1
Domestic Equity Overlay	\$8,597,235	0.1
Baillie Gifford	\$270,565,920	4.4
Mondrian	\$278,078,183	4.5
BlackRock MSCI ACWI EX-US IMI	\$579,988,174	9.4
International Equity Overlay	\$2,668,149	0.0
DoubleLine	\$238,832,346	3.9
FIAM Bond	\$130,079,697	2.1
NISA Core Bond	\$242,034,658	3.9
NISA Long Treasury	\$184,684,978	3.0
Core Fixed Income Overlay	\$2,172,398	0.0
AG CSF ADF II	\$11,420,112	0.2
AG CSF II	\$25,072,026	0.4
Angelo Gordon Opportunistic	\$31,925	0.0
Angelo Gordon Credit Solutions	\$9,017,780	0.1
Beach Point Select	\$110,254,701	1.8
Brigade Capital	\$116,233,485	1.9
PIMCO Diversified	\$128,343,591	2.1
Franklin Templeton	\$57,110,741	0.9
Blackrock DL Feeder IX-U	\$39,215,778	0.6
PIMCO Private Income	\$50,152,284	0.8
TCP Direct Lending VIII	\$10,257,397	0.2
White Oak Yield	\$28,721,354	0.5
White Oak YSF V	\$29,154,686	0.5
Private Equity	\$408,506,456	6.6



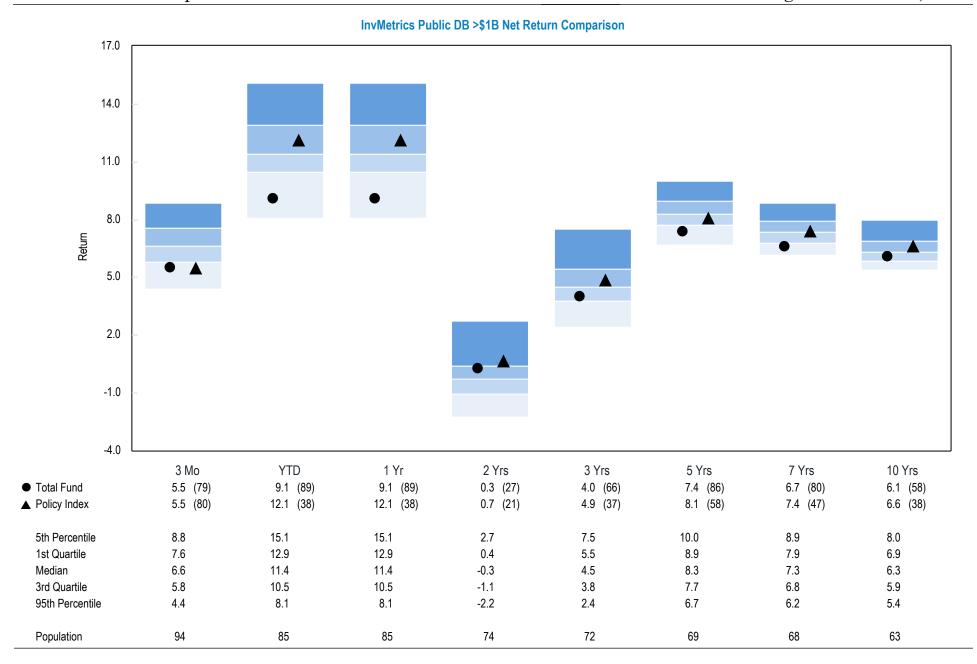
Total Fund Manager Allocation Analysis

Name	Market Value	% of Portfolio
Acadian MAAR Fund LLC	\$77,722,217	1.3
CFM Systematic Global Macro	\$89,225,911	1.4
Graham Quant Macro	\$81,982,928	1.3
PIMCO MAARS Fund LP	\$87,208,692	1.4
Harrison Street Core Property	\$91,671,877	1.5
Invesco	\$248,704,950	4.0
Invesco US Val IV	\$432,108	0.0
Invesco US Val V	\$23,710,068	0.4
Invesco US Val VI	\$24,737,697	0.4
PGIM RE US Debt Fund	\$73,722,602	1.2
Stockbridge Value IV	\$25,195,102	0.4
Private Real Asset	\$339,484,033	5.5
SSgA Custom Real Asset	\$177,360,100	2.9
Insight Investment	\$278,615,082	4.5
County Treasury Pool	\$8,906,189	0.1
General Account	\$107,693,490	1.7
Cash Overlay	\$10,204,170	0.2
Transition Account	-	0.0
Futures Offsets	-\$13,437,783	-0.2
Total Fund	\$6,191,331,114	100.0

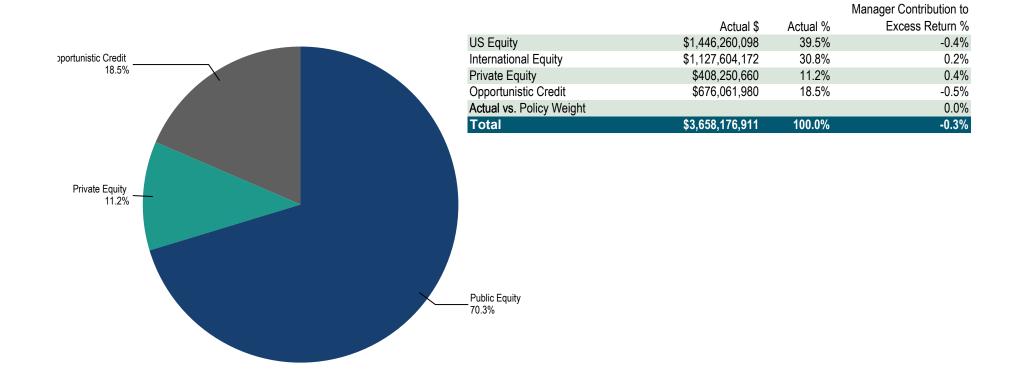


		Statistics Summ 3 Years	ary		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Total Fund	4.0 (66)	7.4 (11)	0.3 (54)	-0.4 (84)	2.1 (1)
Policy Index	4.9 (37)	8.4 (21)	0.4 (30)	-	0.0
Policy Index II	4.4 (54)	8.7 (32)	0.3 (49)	-0.8 (99)	0.5 (1)
InvMetrics Public DB > \$1B Median	4.5	9.5	0.3	-0.1	2.8
		Ota Carlos Carlos			
		Statistics Summa 5 Years	ary		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Total Fund	7.4 (86)	8.8 (15)	0.6 (37)	-0.3 (92)	2.2 (1)
Policy Index	8.1 (58)	9.2 (17)	0.7 (23)	-	0.0
Policy Index II	7.9 (69)	9.5 (24)	0.6 (37)	-0.4 (95)	0.5 (1)
InvMetrics Public DB > \$1B Median	8.3	10.8	0.6	0.1	3.1
		Statistics Summa 10 Years	ary		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Total Fund	6.1 (58)	7.6 (14)	0.7 (31)	-0.3 (78)	1.7 (1)
Policy Index	6.6 (38)	7.9 (21)	0.7 (24)	-	0.0
Policy Index II	-	-	-	-	-
InvMetrics Public DB > \$1B Median	6.3	8.9	0.6	-0.1	2.5





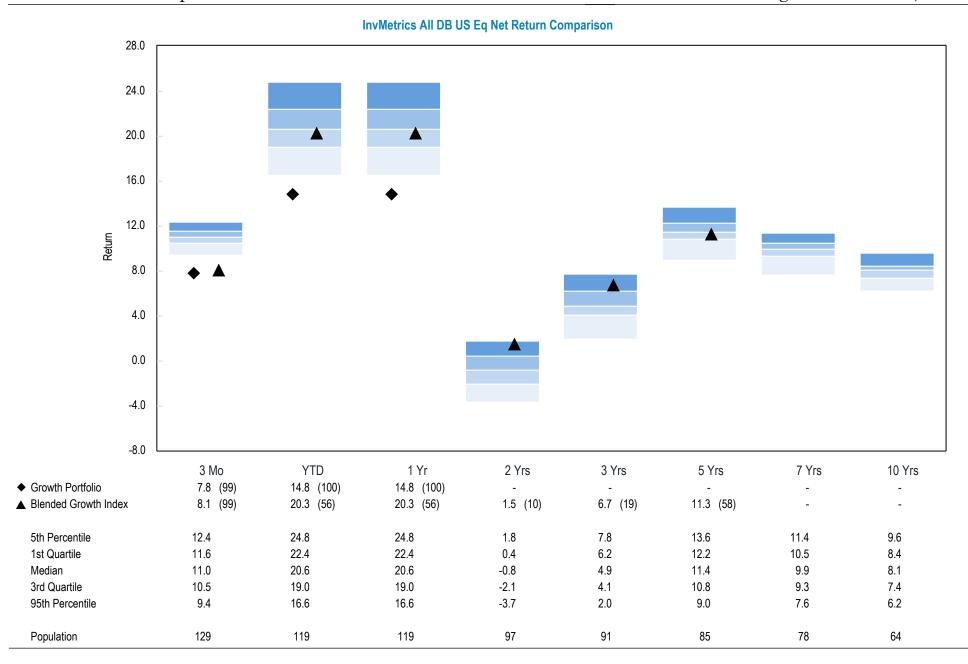




Statistics Summary 3 Years

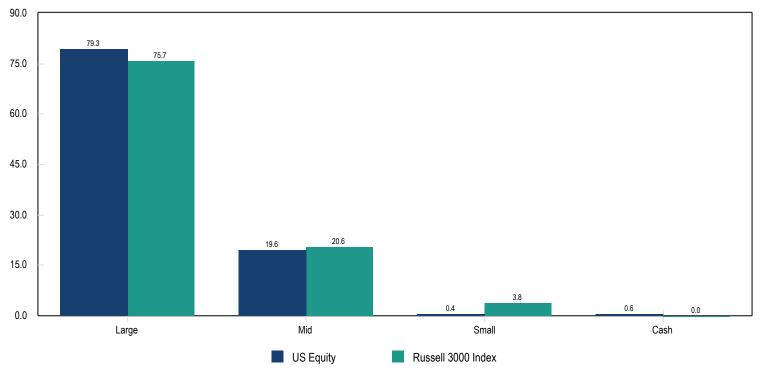
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Growth Portfolio	14.8	10.9	0.9	-2.7	1.8
Blended Growth Index	20.3	10.5	1.4	-	0.0
US Equity	19.3	14.2	1.0	-2.7	2.0
Blended US Equity Index	26.0	14.8	1.3	-	0.0
International Equity with Record	16.0	15.7	0.7	0.0	3.0
Blended International Equity Index	16.2	13.6	0.8	-	0.0
Private Equity	6.5	2.9	0.5	-1.2	13.8
Blended Private Equity Index	23.5	14.9	1.2	-	0.0
Opportunistic Credit	8.9	4.2	0.9	-1.9	2.0
Opportunistic Credit Index	13.2	4.9	1.6	-	0.0













Characteristics					
	Portfolio	Benchmark			
Number of Stocks	2,159	2,976			
Wtd. Avg. Mkt. Cap \$M	648,388.3	618,101.0			
Median Mkt. Cap \$M	3,476.8	2,174.7			
Price/Earnings ratio	23.3	22.8			
Current Yield (%)	1.5	1.5			
Beta (5 Years, Monthly)	0.9	1.0			
Price/Book ratio	4.3	4.1			
Return on Equity (%)	-2.3	-2.7			

Top Holdings		Best Performers		Worst Performers		
	(%)		Return (%)		Return (%)	
Apple Inc	6.4	Nkarta Inc	374.8	Ventyx Biosciences Inc	-92.9	
Microsoft Corp	6.3	Altimmune Inc	332.7	Aclaris Therapeutics Inc	-84.7	
Amazon.com Inc	3.1	Porch Group Inc	283.8	CareMax Inc	-76.5	
NVIDIA Corporation	2.7	Alx Oncology Holdings Inc	210.2	Allovir Inc	-68.4	
Alphabet Inc	1.9	Esperion Therapeutics Inc	205.1	Eagle Pharmaceuticals Inc	-66.8	
Meta Platforms Inc	1.8	C4 Therapeutics Inc	203.8	Atara Biotherapeutics Inc	-65.4	
Alphabet Inc	1.6	EyePoint Pharmaceuticals Inc	189.2	Babcock & Wilcox Enterprises Inc	-65.3	
Tesla Inc	1.6	Byrna Technologies Inc	185.3	Edgio Inc	-59.8	
Berkshire Hathaway Inc	1.5	Cytokinetics Inc	183.4	Aadi Bioscience Inc	-58.3	
Eli Lilly and Co	1.1	Scholar Rock Holding Corp	164.8	NanoString Technologies Inc	-56.5	

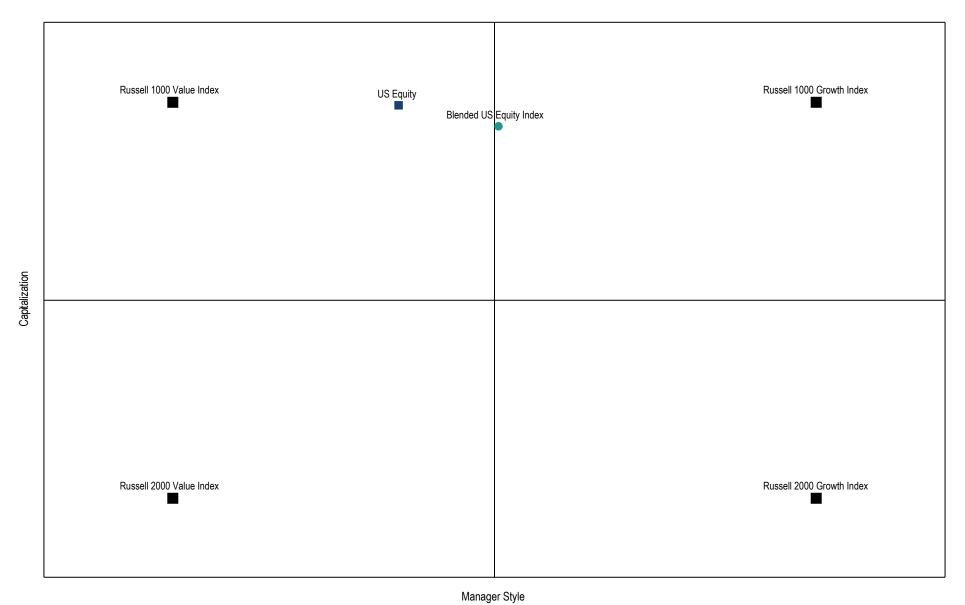


US Equity Performance Attribution vs. Russell 3000 Index

	Attribution Effects			Performance		Sector Weights		
	Total Effects	Selection Effect	Allocation Effect	Interaction Effect	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.0	0.0	0.0	0.0	-6.6	-6.5	4.6	4.8
Materials	0.0	0.0	0.0	0.0	10.3	10.6	2.6	2.7
Industrials	0.0	0.0	0.0	0.0	13.6	13.6	9.4	9.8
Consumer Discretionary	0.0	0.0	0.0	0.0	12.8	13.1	10.8	10.8
Consumer Staples	0.0	0.0	0.0	0.0	5.4	5.7	6.2	6.1
Health Care	-0.1	-0.1	0.0	0.0	6.5	7.1	13.2	13.3
Financials	-0.1	-0.1	0.0	0.0	14.7	15.1	13.1	13.3
Information Technology	0.0	0.0	0.0	0.0	17.1	17.0	26.6	25.8
Communication Services	0.0	0.0	0.0	0.0	11.0	10.9	8.5	8.2
Utilities	0.0	0.0	0.0	0.0	8.7	8.7	2.3	2.3
Real Estate	0.0	0.0	0.0	0.0	18.4	18.2	2.6	2.8
Other	0.0	0.0	0.0	0.0	11.6	0.0	0.0	0.0
Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	-0.1	-0.2	0.0	0.0	11.9	12.0	100.0	100.0



U.S. Effective Style Map



	Portfolio	Benchmark
Number of Stocks	1,012	1,010
Wtd. Avg. Mkt. Cap \$M	649,305.5	653,259.8
Median Mkt. Cap \$M	13,511.8	13,511.8
Price/Earnings ratio	23.4	23.3
Current Yield (%)	1.5	1.5
Beta (5 Years, Monthly)	1.0	1.0
Price/Book ratio	4.3	4.3
Return on Equity (%)	-2.5	-2.5

Top Holdings		Best Performers	3	Worst Performe	rs
	(%)		Return (%)		Return (%)
Apple Inc	6.4	COINBASE GLOBAL INC	131.6	ChargePoint Holdings Inc	-52.9
Microsoft Corp	6.3	Affirm Holdings Inc	131.0	Plug Power Inc	-40.8
Amazon.com Inc	3.1	Gap Inc	99.6	Maravai LifeSciences Holdings Inc	-34.5
NVIDIA Corporation	2.7	Spirit Aerosystems Holdings Inc	96.9	R1 RCM INC	-29.9
Alphabet Inc	1.9	Karuna Therapeutics Inc	87.2	Agilon Health Inc	-29.3
Meta Platforms Inc	1.8	Rocket Cos Inc	77.0	BILL Holdings Inc	-24.8
Alphabet Inc	1.6	Block Inc	74.8	Lucid Group Inc	-24.7
Tesla Inc	1.6	Macy's Inc	74.8	AMC Entertainment Holdings Inc	-23.4
Berkshire Hathaway Inc	1.5	SentinelOne Inc	62.8	Petco Health & Wellness Co Inc	-22.7
Fli Lilly and Co	1.1	Frontier Communications Parent Inc.	61.9	Hashro Inc.	-21.6



	Portfolio	Benchmark
Number of Stocks	249	1,010
Wtd. Avg. Mkt. Cap \$M	121,421.0	653,259.8
Median Mkt. Cap \$M	25,743.2	13,511.8
Price/Earnings ratio	20.3	23.3
Current Yield (%)	2.5	1.5
Beta (5 Years, Monthly)	0.8	1.0
Price/Book ratio	2.8	4.3
Return on Equity (%)	-15.5	-2.5

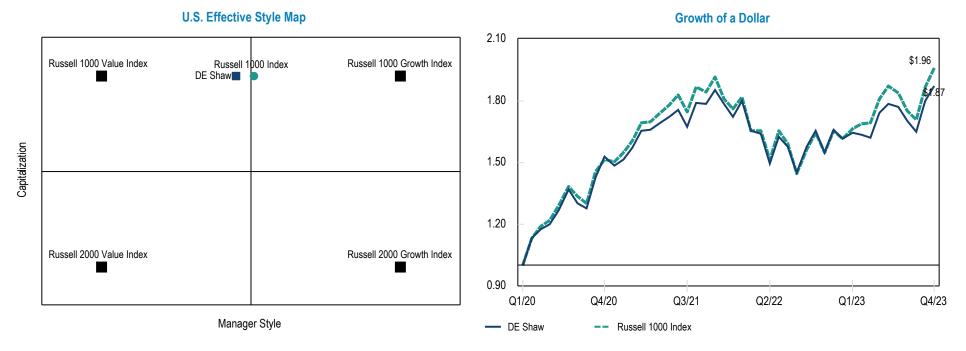
Top Holdings		Best Performers		Worst Perfo	ormers
	(%)		Return (%)		Return (%)
T-Mobile US Inc	2.0	American Tower Corp	33.7	Organon & Co	-14.8
Verizon Communications Inc	1.9	Extra Space Storage Inc	33.3	Hormel Foods Corp	-14.8
AT&T Inc	1.8	U.S. Bancorp	32.4	Exxon Mobil Corp	-14.2
Electronic Arts Inc	1.6	Olaplex Holdings Inc	30.3	Bristol-Myers Squibb Co	-10.7
Williams Cos Inc. (The)	1.5	The PNC Financial Services Group Inc	27.8	Chevron Corp	-10.6
Service Corp International	1.4	TFS Financial Corp	26.9	Chesapeake Energy Corp	-10.2
Conocophillips	1.3	Crown Castle Inc	26.9	Aon plc	-10.1
Home Depot Inc. (The)	1.3	The Allstate Corporation	26.5	WK Kellogg Co	-9.2
McDonald's Corp	1.3	Xylem Inc	26.0	McCormick & Co Inc	-8.4
Fox Corp	1.3	A. O. Smith Corp	25.2	Hershey Co (The)	-6.2



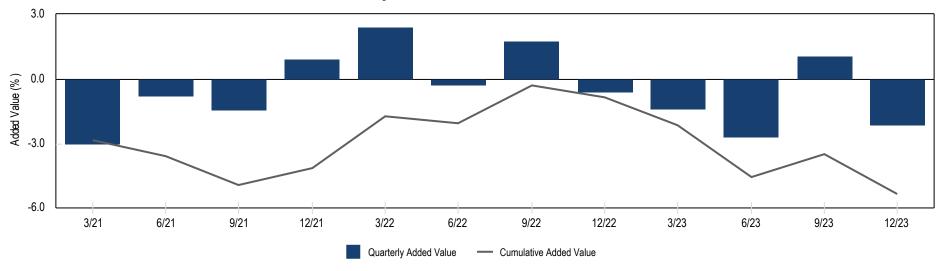
PanAgora Defuseq Performance Attribution vs. Russell 1000 Index

	Attribution Effects			Performance		Sector Weights		
	Total Effects	Selection Effect	Allocation Effect	Interaction Effect	Portfolio	Benchmark	Portfolio	Benchmark
Energy	-0.3	0.2	-0.5	0.1	-3.4	-6.6	7.3	4.6
Materials	-0.4	-0.1	-0.1	-0.2	7.0	10.3	9.1	2.6
Industrials	0.0	0.0	0.0	0.0	13.2	13.6	9.1	9.4
Consumer Discretionary	-0.1	-0.1	0.0	0.0	11.9	12.9	8.3	10.8
Consumer Staples	-0.8	-0.2	-0.4	-0.2	2.6	5.5	12.6	6.2
Health Care	0.1	0.0	0.1	0.0	6.2	6.5	11.6	13.2
Financials	-0.6	-0.7	-0.2	0.3	9.1	14.7	7.5	13.2
Information Technology	-1.4	-1.4	-0.9	0.9	11.8	17.1	9.0	26.5
Communication Services	-0.1	-0.1	0.0	0.0	10.3	10.9	10.4	8.5
Utilities	-0.5	0.0	-0.3	-0.1	7.5	8.7	12.2	2.3
Real Estate	-0.1	-0.1	0.0	0.0	15.2	18.4	2.9	2.7
Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total	-4.1	-2.6	-2.4	0.9	7.8	11.9	100.0	100.0





Quarterly and Cumulative Excess Performance





eV US Small Cap Core Equity Net Return Comparison 30.0 25.0 20.0 15.0 Return 10.0 5.0 0.0 -5.0 -10.0 3 Mo Fiscal YTD 1 Yr 2 Yrs 3 Yrs 5 Yrs 7 Yrs 10 Yrs 21.5 (21) 10.9 (68) 12.7 (44) 10.3 (17) 2.8 (11) 10.2 (18) 7.3 (76) PGIM Quant Solutions ▲ Russell 2000 Index 14.0 (21) 8.2 (38) 16.9 (51) -3.5 (68) 2.2 (87) 10.0 (83) 7.3 (76) 7.2 (77) 5th Percentile 15.6 12.8 26.7 5.4 12.2 16.4 12.7 11.4 1st Quartile 13.7 9.3 20.6 8.0 9.5 13.3 10.0 9.1 6.8 Median 12.4 7.1 17.0 -1.5 11.9 8.6 8.2 -4.2 3rd Quartile 5.1 11.1 13.3 3.7 10.4 7.4 7.2 95th Percentile 8.8 1.8 8.6 -7.6 -0.1 8.5 5.7 5.9 142 Population 191 189 187 180 178 169 160



	Portfolio	Benchmark
Number of Stocks	332	1,966
Wtd. Avg. Mkt. Cap \$M	3,051.3	3,219.0
Median Mkt. Cap \$M	2,158.5	958.4
Price/Earnings ratio	12.2	14.8
Current Yield (%)	1.3	1.5
Beta (5 Years, Monthly)	1.0	1.0
Price/Book ratio	2.3	2.4
Return on Equity (%)	5.8	-6.7

Top Holdings		Best Perform	iers	Worst Performers	i
	(%)		Return (%)		Return (%)
Super Micro Computer Inc	0.9	Nkarta Inc	374.8	Computer Programs and Systems Inc	-29.7
Acadia Pharmaceuticals Inc	0.8	Triumph Group Inc.	116.4	Designer Brands Inc	-29.5
Coca Cola Consolidated Inc	0.8	Diversified Healthcare Trust	93.9	Emergent BioSolutions Inc	-29.4
BGC Group Inc	0.8	Office Properties Income Trust	89.3	Green Dot Corp	-28.9
BellRing Brands Inc	0.8	Blueprint Medicines Corp	83.7	Pediatrix Medical Group Inc	-26.8
Amkor Technology Inc	0.8	Twist Bioscience Corp	81.9	Cinemark Holdings Inc	-23.2
Photronics Inc	0.8	Fate Therapeutics Inc	76.4	DMC Global Inc	-23.1
Hamilton Lane Inc	0.7	Macy's Inc	74.8	Axcelis Technologies Inc.	-20.5
GMS Inc	0.7	CareDx Inc	71.4	Belden Inc	-19.9
Commercial Metals Co	0.7	Pactiv Evergreen Inc	70.1	Amplify Energy Corp	-19.3

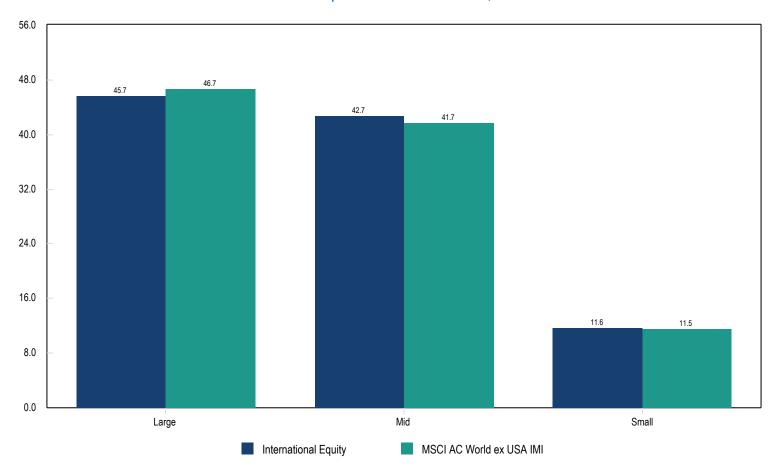


PGIM Quant Solutions Performance Attribution vs. Russell 2000 Index

	Attribution Effects				Performance		Sector Weights	
	Total Effects	Selection Effect	Allocation Effect	Interaction Effect	Portfolio	Benchmark	Portfolio	Benchmark
Energy	-0.1	0.0	-0.1	0.0	-6.2	-5.7	8.9	8.5
Materials	-0.2	-0.2	0.0	0.0	10.1	13.8	5.0	4.6
Industrials	-0.1	-0.1	0.0	0.0	12.8	13.4	16.9	17.1
Consumer Discretionary	0.1	0.1	0.0	0.0	18.3	17.2	11.0	10.6
Consumer Staples	0.3	0.2	0.0	0.0	18.6	12.3	4.1	3.6
Health Care	-0.4	-0.4	0.0	0.0	13.3	15.8	15.0	14.9
Financials	0.0	0.1	-0.1	0.0	22.1	21.4	15.4	16.1
Information Technology	-0.8	-0.8	0.0	0.0	7.5	13.8	12.9	13.3
Communication Services	-0.2	-0.1	0.0	0.0	5.2	9.7	3.2	2.4
Utilities	0.2	0.2	0.0	0.0	14.5	7.8	2.4	2.9
Real Estate	0.0	0.1	0.0	0.0	18.3	16.8	5.2	6.1
Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	-1.1	-0.9	-0.2	0.0	12.7	13.8	100.0	100.0



Market Capitalization as of December 31, 2023



	Portfolio	Benchmark
Number of Stocks	6,799	6,684
Wtd. Avg. Mkt. Cap \$M	78,123.9	78,110.0
Median Mkt. Cap \$M	1,674.2	1,671.7
Price/Earnings ratio	13.8	13.6
Current Yield (%)	3.0	3.1
Beta (5 Years, Monthly)	0.9	1.0
Price/Book ratio	2.4	2.5
Return on Equity (%)	4.6	4.6

Top Holdings		Best Performers		Worst Performers		
	(%)		Return (%)		Return (%)	
Taiwan Semiconductor Man.	1.9	PT Petrindo Jaya Kreasi Tbk	371.2	Misr Fertilizer Production Co	-97.3	
Novo Nordisk A/S	1.1	Inox Wind Ltd	158.3	Finnair OYJ	-92.0	
Samsung Electronics Co Ltd	1.1	Neuren Pharmaceuticals Ltd	138.7	EOFLOW Co Ltd	-82.1	
ASML Holding NV	1.1	Politeknik Metal Sanayi ve Ticaret AS	123.2	AIM Vaccine Co Ltd	-72.7	
Nestle SA, Cham Und Vevey	1.0	Haitong International Securities Group Ltd	113.3	PT Metro Healthcare Indonesia Tbk	-66.5	
Tencent Holdings LTD	0.9	Sinch AB (publ)	110.5	First Quantum Minerals Ltd	-65.3	
LVMH Moet Hennessy Louis V	0.8	Benefit One Inc	107.7	CAB Payments Holdings Limited	-62.7	
Shell Plc	0.7	Zengame Technology Holding Ltd	96.4	Margun Enerji uretim Sanayi ve Ticaret Anonim Sirket	-61.2	
Alibaba Group Holding Ltd	0.7	Prestige Estates Projects Ltd	95.2	Clariane SE	-56.0	
Toyota Motor Corp	0.7	CSPC Innovation Pharmaceutical Co Ltd	93.4	IZDEMIR Enerji Elektrik Uretim A S	-51.2	



International Equity Performance Attribution vs. MSCI AC World ex USA IMI

	Attribution Effects				Performance		Sector Weights	
	Total Effects	Selection Effect	Allocation Effect	Interaction Effect	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.2	0.1	0.1	0.0	4.7	2.2	4.8	5.8
Materials	-0.1	-0.1	-0.1	0.0	11.6	12.2	6.2	8.4
Industrials	0.0	-0.1	0.1	0.0	11.9	12.3	16.7	14.1
Consumer Discretionary	-0.3	-0.1	-0.1	0.0	4.9	6.0	14.5	11.9
Consumer Staples	0.1	0.1	0.0	0.0	7.4	5.9	8.8	8.1
Health Care	0.0	0.0	0.0	0.0	5.8	5.6	10.4	9.3
Financials	0.1	0.1	0.0	0.0	10.8	10.3	16.1	19.8
Information Technology	0.1	0.0	0.0	0.0	19.4	19.1	11.9	11.4
Communication Services	0.1	0.1	0.0	0.0	7.9	5.2	5.8	5.3
Utilities	0.0	0.0	0.0	0.0	14.0	13.1	3.0	3.1
Real Estate	0.0	0.0	0.0	0.0	12.4	12.6	1.7	3.0
Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total	0.2	0.4	-0.1	0.0	10.1	9.8	100.0	100.0



International Equity vs. MSCI AC World ex USA IMI

	We	ights	Perfor	mance		Attribution Effects			
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects	
Australia	3.6	4.7	15.2	14.0	0.1	0.0	0.0	0.0	
Austria	0.1	0.2	13.7	13.7	0.0	0.0	0.0	0.0	
Belgium	0.7	0.6	15.8	15.5	0.0	0.0	0.0	0.0	
Brazil	1.3	1.5	15.3	17.6	0.0	0.0	0.0	0.0	
Canada	5.8	7.5	13.2	10.8	0.2	0.0	0.0	0.1	
Chile	0.1	0.2	8.0	8.0	0.0	0.0	0.0	0.0	
China	5.8	6.8	-9.6	-5.9	-0.3	0.1	0.0	-0.1	
Colombia	0.0	0.0	17.0	17.0	0.0	0.0	0.0	0.0	
Czech Republic	0.0	0.0	4.1	4.1	0.0	0.0	0.0	0.0	
Denmark .	1.5	2.0	8.5	12.1	-0.1	0.0	0.0	-0.1	
Egypt	0.0	0.0	17.9	18.8	0.0	0.0	0.0	0.0	
Finland	0.4	0.7	10.1	10.1	0.0	0.0	0.0	0.0	
France	6.8	6.5	6.4	9.9	-0.2	0.0	0.0	-0.2	
Germany	5.9	5.0	13.7	13.0	0.0	0.0	0.0	0.1	
Greece	0.1	0.1	12.9	12.9	0.0	0.0	0.0	0.0	
Hong Kong	2.6	1.9	5.3	1.6	0.1	-0.1	0.0	0.0	
Hungary	0.0	0.1	17.5	17.5	0.0	0.0	0.0	0.0	
India	3.9	4.9	12.1	12.2	0.0	0.0	0.0	0.0	
Indonesia	0.3	0.6	0.4	1.3	0.0	0.0	0.0	0.0	
Ireland	0.7	0.9	24.5	25.3	0.0	0.0	0.0	0.0	
Israel	0.4	0.6	8.5	8.4	0.0	0.0	0.0	0.0	
Italy	2.4	1.5	13.9	13.4	0.0	0.0	0.0	0.0	
Japan	19.7	15.6	8.9	8.0	0.1	-0.1	0.0	0.1	
Korea	2.1	3.5	13.7	13.7	0.0	-0.1	0.0	-0.1	
Kuwait	0.1	0.2	-0.5	-0.5	0.0	0.0	0.0	0.0	
Malaysia	0.3	0.4	4.8	4.8	0.0	0.0	0.0	0.0	
Malta	0.0	0.0	4.3	4.3	0.0	0.0	0.0	0.0	
Mexico	0.7	0.7	17.8	19.3	0.0	0.0	0.0	0.0	
Netherlands	4.2	3.0	21.8	17.9	0.1	0.1	0.0	0.3	
New Zealand	0.5	0.2	6.6	9.9	0.0	0.0	0.0	0.0	
Norway	0.3	0.6	5.4	5.4	0.0	0.0	0.0	0.0	
Peru	0.0	0.0	28.0	28.0	0.0	0.0	0.0	0.0	
Philippines	0.1	0.2	5.4	5.5	0.0	0.0	0.0	0.0	



San Mateo County Employees' Retirement Association Period Ending: December 31, 2023

	We	ights	Perfor	mance		Attributio	on Effects	
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects
Poland	0.1	0.2	37.7	37.7	0.0	0.0	0.0	0.0
Portugal	0.5	0.1	12.9	11.9	0.0	0.0	0.0	0.0
Qatar	0.2	0.3	4.1	4.1	0.0	0.0	0.0	0.0
Russia	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0
Saudi Arabia	0.7	1.2	9.1	9.1	0.0	0.0	0.0	0.0
Singapore	1.9	1.0	3.9	5.2	0.0	0.0	0.0	-0.1
South Africa	0.5	0.8	12.2	12.2	0.0	0.0	0.0	0.0
Spain	1.7	1.6	12.0	12.3	0.0	0.0	0.0	0.0
Sweden	3.0	2.0	21.8	23.4	0.0	0.1	0.0	0.1
Switzerland	4.9	6.3	8.8	10.2	-0.1	0.0	0.0	-0.1
Taiwan	3.7	4.4	17.6	16.6	0.0	0.0	0.0	0.0
Thailand	0.5	0.6	2.5	3.3	0.0	0.0	0.0	0.0
Turkey	0.2	0.3	-16.0	-16.0	0.0	0.0	0.0	0.0
United Arab Emirates	0.2	0.4	-2.8	-2.8	0.0	0.0	0.0	0.0
United Kingdom	8.7	9.3	8.5	7.4	0.1	0.0	0.0	0.1
United States	0.7	0.1	6.0	8.8	0.0	0.0	0.0	0.0
Other	1.6	0.4	11.7	8.0	0.0	0.0	0.0	0.0
Cash	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	10.1	9.8	0.0	0.1	0.1	0.2



International Equity vs. MSCI AC World ex USA IMI

	Weights			mance		Attributi		
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Region Effects	Interaction Effects	Total Effects
Americas	8.7	10.0	13.3	12.4	0.1	0.0	0.0	0.0
Asia Pacific	45.0	44.9	7.6	7.8	-0.1	0.0	0.0	-0.1
EMEA	44.6	44.6	11.8	11.4	0.2	0.0	0.0	0.2
Other	1.6	0.4	11.7	8.0	0.0	0.0	0.0	0.0
Cash	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	10.1	9.8	0.2	-0.1	0.0	0.2



eV ACWI ex-US Growth Equity Net Return Comparison 36.0 28.0 20.0 12.0 Return 4.0 -4.0 -12.0 -20.0 3 Mo Fiscal YTD 1 Yr 2 Yrs 3 Yrs 5 Yrs 7 Yrs 10 Yrs 11.3 (67) 0.1 (93) 10.5 (89) -12.8 (81) 7.1 (78) 6.4 (87) 4.4 (79) Baillie Gifford -7.6 (86) 5.8 (28) ▲ MSCI ACWI ex US 9.8 (86) 16.2 (50) -0.9 (12) 2.0 (13) 7.6 (74) 6.8 (82) 4.3 (82) ◆ MSCI ACWI ex US Growth -2.4 (49) 11.2 (70) 3.1 (60) 14.4 (68) -6.0 (41) 7.8 (71) 7.5 (69) 4.9 (67) 5th Percentile 16.9 9.5 26.9 0.1 4.1 13.4 12.9 8.6 1st Quartile 14.2 6.0 19.4 -3.7 0.2 10.6 9.8 7.0 Median 12.2 3.7 16.2 -6.9 -2.5 8.7 8.3 5.4 13.3 7.1 3rd Quartile 10.8 1.9 -11.8 -5.6 7.4 4.5 95th Percentile 8.7 -0.3 6.8 -16.8 -11.9 5.6 5.7 3.7 Population 111 111 111 110 108 97 87 69



	Characteristics	
	Portfolio	Benchmark
Number of Stocks	79	2,312
Wtd. Avg. Mkt. Cap \$M	80,958.0	90,266.0
Median Mkt. Cap \$M	27,065.1	9,827.9
Price/Earnings ratio	20.2	13.6
Current Yield (%)	1.5	3.1
Beta (5 Years, Monthly)	1.1	1.0
Price/Book ratio	3.8	2.5
Return on Equity (%)	2.1	5.9

Top Holdings		Best Perf	formers	Worst Performers	Worst Performers		
	(%)		Return (%)		Return (%)		
Taiwan Semiconductor Man.	4.2	Adyen N.V	72.5	Li Ning Company Limited	-36.4		
ASML Holding NV	2.8	Shopify Inc	42.8	Burberry Group PLC	-21.6		
MercadoLibre Inc	2.5	Nemetschek SE	41.5	Ping An Insurance Group	-20.9		
United Overseas Bank Ltd	2.4	Ryanair Holdings PLC	37.2	Contemporary Amperex Technology Co Ltd	-17.2		
Shopify Inc	2.3	IMCD NV	37.0	Shiseido Co Ltd	-13.7		
Auto Trader Group plc	2.2	Recruit Holdings Co Ltd	36.9	Baidu Inc	-12.7		
Investor AB publ	2.1	Wise plc	33.1	Alibaba Group Holding Ltd	-10.2		
Prosus NV	2.1	Tokyo Electron Ltd	30.8	LONZA GROUP AG	-9.7		
Cie Financiere Richemont	1.9	Atlas Copco AB	28.1	Hong Kong Exchanges and Clearing Ltd	-8.1		
Sartorius AG	1.9	ASML Holding NV	27.5	DSV A/S	-6.2		



Baillie Gifford Performance Attribution vs. MSCI AC World ex USA Index

		Attribu	tion Effects		Perfo	ormance	Sector Weights	
	Total Effects	Selection Effect	Allocation Effect	Interaction Effect	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.4	0.4	0.3	-0.3	10.0	2.5	1.3	6.0
Materials	-0.1	0.6	-0.2	-0.6	20.8	12.7	1.0	7.9
Industrials	0.5	0.2	0.2	0.1	14.5	12.8	18.9	13.1
Consumer Discretionary	-1.0	-0.4	-0.4	-0.3	2.7	5.7	20.4	11.9
Consumer Staples	0.0	0.1	-0.3	0.1	7.5	5.7	14.6	8.4
Health Care	0.5	0.5	0.0	0.0	10.3	5.1	9.9	9.6
Financials	0.3	0.6	0.0	-0.3	13.0	10.2	11.8	21.2
Information Technology	0.5	0.2	0.3	0.0	21.3	19.9	14.4	11.3
Communication Services	0.4	0.4	-0.1	0.1	11.3	4.6	7.4	5.5
Utilities	-0.1	0.0	-0.1	0.0	0.0	13.6	0.0	3.1
Real Estate	0.0	0.0	0.0	0.0	0.0	11.2	0.0	2.0
Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total	1.4	2.7	-0.3	-1.0	11.2	9.8	100.0	100.0



Baillie Gifford vs. MSCI AC World ex USA Index

	\A/a	ights	Darfar		Attribution Effects				
	vve	ignis	Pertor	mance	Caladii			T : (: 1	
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects	
Australia	1.6	4.5	23.7	14.4	0.4	-0.1	-0.3	0.0	
Austria	0.0	0.1	0.0	9.6	0.0	0.0	0.0	0.0	
Belgium	1.6	0.5	16.1	15.7	0.0	0.1	0.0	0.1	
Brazil	1.7	1.5	10.3	18.0	-0.1	0.0	0.0	-0.1	
Canada	3.6	7.6	24.6	11.5	1.0	-0.1	-0.5	0.4	
Chile	0.0	0.1	0.0	6.5	0.0	0.0	0.0	0.0	
China	6.9	7.6	-18.7	-6.0	-1.0	0.1	0.1	-0.8	
Colombia	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	
Czech Republic	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	
Denmark	1.1	2.1	-6.2	12.3	-0.4	0.0	0.2	-0.2	
Egypt	0.0	0.0	0.0	22.5	0.0	0.0	0.0	0.0	
Finland	0.0	0.7	0.0	8.7	0.0	0.0	0.0	0.0	
France	4.7	7.1	1.1	10.0	-0.6	0.0	0.2	-0.4	
Germany	5.2	5.3	14.7	13.1	0.1	0.0	0.0	0.1	
Greece	0.0	0.1	0.0	13.3	0.0	0.0	0.0	0.0	
Hong Kong	3.2	2.0	14.7	2.2	0.2	-0.1	0.1	0.3	
Hungary	0.0	0.1	0.0	17.0	0.0	0.0	0.0	0.0	
India	3.4	4.5	11.8	12.1	0.0	0.0	0.0	0.0	
Indonesia	0.0	0.6	0.0	2.3	0.0	0.0	0.0	0.0	
Ireland	1.1	1.0	24.3	25.9	0.0	0.0	0.0	0.0	
Israel	0.0	0.4	0.0	9.4	0.0	0.0	0.0	0.0	
Italy	0.0	1.4	0.0	12.9	0.0	0.0	0.0	0.0	
Japan	17.3	14.7	11.0	8.2	0.4	0.0	0.1	0.4	
Korea	0.0	3.4	0.0	14.6	0.0	-0.2	0.0	-0.2	
Kuwait	0.0	0.2	0.0	-0.3	0.0	0.0	0.0	0.0	
Malaysia	0.0	0.4	0.0	4.6	0.0	0.0	0.0	0.0	
Mexico	1.0	0.7	15.8	19.2	0.0	0.0	0.0	0.0	
Netherlands	7.3	3.4	27.7	18.0	0.3	0.3	0.4	1.0	
New Zealand	1.6	0.2	5.6	12.5	0.0	0.0	-0.1	-0.1	
Norway	0.0	0.5	0.0	3.5	0.0	0.0	0.0	0.0	
Peru	0.0	0.0	0.0	28.0	0.0	0.0	0.0	0.0	
Philippines	0.0	0.2	0.0	6.5	0.0	0.0	0.0	0.0	
Poland	0.0	0.2	0.0	39.8	0.0	-0.1	0.0	-0.1	



San Mateo County Employees' Retirement Association Period Ending: December 31, 2023

	Wei	ights	Perfor	mance		Attributio	on Effects	
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects
Portugal	1.7	0.1	13.1	13.0	0.0	0.1	0.0	0.1
Qatar	0.0	0.3	0.0	4.7	0.0	0.0	0.0	0.0
Saudi Arabia	0.0	1.2	0.0	8.8	0.0	0.0	0.0	0.0
Singapore	2.7	1.0	3.3	4.5	0.0	-0.1	0.0	-0.1
South Africa	0.0	0.8	0.0	12.3	0.0	0.0	0.0	0.0
Spain	0.0	1.6	0.0	12.4	0.0	0.0	0.0	0.0
Sweden	6.5	1.9	20.1	22.0	0.0	0.6	-0.1	0.4
Switzerland	3.2	6.9	5.9	10.0	-0.3	0.0	0.1	-0.1
Taiwan	4.1	4.2	20.2	17.3	0.1	0.0	0.0	0.1
Thailand	0.0	0.5	0.0	3.9	0.0	0.0	0.0	0.0
Turkey	0.0	0.2	0.0	-11.9	0.0	0.0	0.0	0.0
United Arab Emirates	0.0	0.4	0.0	-3.1	0.0	0.1	0.0	0.1
United Kingdom	13.0	9.4	8.1	6.5	0.2	-0.1	0.1	0.1
United States	2.7	0.1	5.8	11.2	0.0	0.0	-0.1	-0.1
Other	4.3	0.3	19.8	6.0	0.0	-0.2	0.6	0.4
Cash	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	11.2	9.8	0.3	0.4	0.7	1.4



Baillie Gifford vs. MSCI AC World ex USA Index

	Weights			rmance		Attributi		
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Region Effects	Interaction Effects	Total Effects
Americas	9.1	10.1	15.3	13.0	0.2	0.0	0.0	0.2
Asia Pacific	40.9	43.6	7.0	7.6	-0.3	0.1	0.0	-0.2
EMEA	45.4	46.0	13.3	11.2	1.0	0.0	0.0	1.0
Other	4.3	0.3	19.8	6.0	0.0	-0.2	0.6	0.4
Cash	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	11.2	9.8	1.0	-0.2	0.5	1.4



Equity Only Summary Statistics

	Doutfolio	Danahmank
	Portfolio	Benchmark
Number of Stocks	60	1,370
Wtd. Avg. Mkt. Cap \$M	117,911.6	66,881.5
Median Mkt. Cap \$M	29,207.9	9,218.2
Price/Earnings ratio	11.5	9.9
Current Yield (%)	3.6	4.5
Beta (5 Years, Monthly)	1.0	1.0
Price/Book ratio	2.1	1.7
Return on Equity (%)	4.4	3.4

Top Holdings		Best Performe	rs	Worst Performers	Worst Performers		
	(%)		Return (%)		Return (%)		
Taiwan Semiconductor Man.	8.5	Mediatek Incorporation	45.2	Yum China Holdings Inc	-23.6		
Alibaba Group Holding Ltd	4.5	Itau Unibanco Holding SA	30.7	Xinyi Solar Holdings Ltd	-22.0		
Samsung Electronics Co Ltd	4.3	SK Hynix Inc	29.3	Ping An Insurance Group	-20.9		
H D F C Bank Ltd	3.9	Grupo Financiero Banorte	27.5	LONGi Green Energy Technology Co Ltd	-13.5		
Samsung Electronics Co Ltd	3.0	CSPC Pharmaceutical Group Ltd	26.9	China Merchants Bank Co Ltd	-13.1		
Axis Bank Ltd	2.6	Itausa S A	26.0	Tingyi (Cayman Islands) Holding Corp	-12.7		
PT Bank Rakyat Indonesia TBK	2.5	Barrick Gold Corp	25.0	Jiangsu Yanghe Brewery JSC Ltd	-12.5		
Hon Hai Precision Industry	2.5	WH Group Ltd	23.0	Baidu Inc	-11.4		
Credicorp Ltd	2.5	Vale SA	22.0	Alibaba Group Holding Ltd	-10.2		
Tencent Holdings LTD	2.4	CTBC Financial Holding Co Ltd	21.7	ADNOC Gas plc	-9.1		



Mondrian Performance Attribution vs. MSCI AC World ex USA Value

		Attribu	tion Effects		Perfo	ormance	Sector	r Weights
	Total Effects	Selection Effect	Allocation Effect	Interaction Effect	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.6	0.6	0.2	-0.2	8.4	2.7	6.8	10.5
Materials	-0.2	-0.2	-0.1	0.1	10.1	12.1	6.8	9.5
Industrials	-0.2	-0.2	0.3	-0.3	8.4	10.7	21.6	10.1
Consumer Discretionary	0.3	0.3	-0.2	0.1	6.9	3.2	13.2	9.3
Consumer Staples	0.4	0.4	0.0	-0.1	14.7	5.7	3.8	4.9
Health Care	-0.6	0.1	-0.9	0.2	1.5	-0.5	16.9	6.4
Financials	-0.3	-0.2	-0.3	0.1	9.1	9.6	10.8	31.1
Information Technology	0.2	-0.1	0.3	0.0	16.1	17.3	8.6	5.5
Communication Services	0.2	0.2	0.0	0.0	10.9	7.3	4.7	4.3
Utilities	0.3	0.1	0.1	0.0	15.9	13.1	6.7	5.2
Real Estate	-0.1	0.0	-0.1	0.0	0.0	10.5	0.0	3.2
Total	0.4	1.2	-0.7	0.0	8.8	8.3	100.0	100.0



Mondrian vs. MSCI AC World ex USA Value

	1//0	ights		mance Attribution Effects					
	vve	iyiitə	Perior	mance	Calcation			Total	
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects	
Australia	1.7	4.7	15.1	14.9	0.0	-0.2	0.0	-0.2	
Austria	0.0	0.2	0.0	8.5	0.0	0.0	0.0	0.0	
Belgium	0.0	0.4	0.0	16.9	0.0	0.0	0.0	0.0	
Brazil	0.0	1.5	0.0	20.3	0.0	-0.2	0.0	-0.2	
Canada	2.3	7.3	15.7	10.3	0.4	-0.1	-0.3	0.0	
Chile	0.0	0.2	0.0	9.4	0.0	0.0	0.0	0.0	
China	0.0	7.0	0.0	-4.6	0.0	0.9	0.0	0.9	
Colombia	0.0	0.0	0.0	17.9	0.0	0.0	0.0	0.0	
Czech Republic	0.0	0.1	0.0	7.6	0.0	0.0	0.0	0.0	
Denmark	0.0	0.3	0.0	7.3	0.0	0.0	0.0	0.0	
Egypt	0.0	0.0	0.0	23.7	0.0	0.0	0.0	0.0	
Finland	0.0	1.1	0.0	9.2	0.0	0.0	0.0	0.0	
France	9.8	6.4	2.2	7.2	-0.3	0.0	-0.2	-0.5	
Germany	10.2	6.1	14.0	11.7	0.1	0.1	0.1	0.4	
Greece	0.0	0.1	0.0	14.2	0.0	0.0	0.0	0.0	
Hong Kong	3.4	2.0	0.2	2.6	0.0	-0.1	0.0	-0.2	
Hungary	0.0	0.1	0.0	17.6	0.0	0.0	0.0	0.0	
India	0.0	4.4	0.0	13.6	0.0	-0.2	0.0	-0.2	
Indonesia	0.0	0.6	0.0	1.9	0.0	0.0	0.0	0.0	
Ireland	0.0	0.7	0.0	20.2	0.0	-0.1	0.0	-0.1	
Israel	0.0	0.5	0.0	2.1	0.0	0.0	0.0	0.0	
Italy	8.1	2.0	14.3	13.0	0.0	0.3	0.1	0.4	
Japan	34.3	15.7	8.6	3.7	0.8	-0.9	0.9	0.8	
Korea	0.0	3.6	0.0	15.1	0.0	-0.2	0.0	-0.2	
Kuwait	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	
Malaysia	0.0	0.4	0.0	5.6	0.0	0.0	0.0	0.0	
Mexico	0.0	0.7	0.0	20.3	0.0	-0.1	0.0	-0.1	
Netherlands	3.5	1.7	16.0	13.0	0.1	0.1	0.1	0.2	
New Zealand	0.0	0.1	0.0	14.6	0.0	0.0	0.0	0.0	
Norway	0.0	0.9	0.0	2.8	0.0	0.0	0.0	0.0	
Peru	0.0	0.1	0.0	35.6	0.0	0.0	0.0	0.0	
Philippines	0.0	0.2	0.0	0.4	0.0	0.0	0.0	0.0	
Poland	0.0	0.2	0.0	37.7	0.0	-0.1	0.0	-0.1	



Mondrian Equity Performance Attribution

	Weights		Perfor	mance	Attribution Effects			
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects
Portugal	0.0	0.1	0.0	17.2	0.0	0.0	0.0	0.0
Qatar	0.0	0.3	0.0	3.0	0.0	0.0	0.0	0.0
Saudi Arabia	0.0	1.1	0.0	6.6	0.0	0.0	0.0	0.0
Singapore	3.3	1.0	3.3	5.3	0.0	-0.1	0.0	-0.1
South Africa	0.0	0.9	0.0	10.0	0.0	0.0	0.0	0.0
Spain	4.3	2.4	11.5	10.3	0.0	0.0	0.0	0.1
Sweden	0.9	1.7	25.5	18.6	0.1	-0.1	-0.1	0.0
Switzerland	3.2	5.2	3.7	10.5	-0.4	0.0	0.1	-0.3
Taiwan	0.0	3.9	0.0	16.5	0.0	-0.3	0.0	-0.3
Thailand	0.0	0.5	0.0	4.9	0.0	0.0	0.0	0.0
Turkey	0.0	0.2	0.0	-9.3	0.0	0.0	0.0	0.0
United Arab Emirates	0.0	0.4	0.0	-0.7	0.0	0.0	0.0	0.0
United Kingdom	13.0	12.5	8.3	5.7	0.3	0.0	0.0	0.3
United States	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Other	1.9	0.3	-11.2	4.5	0.0	-0.1	-0.2	-0.4
Total	100.0	100.0	8.8	8.3	1.1	-1.1	0.5	0.4



Mondrian vs. MSCI AC World ex USA Value

	Weights		Perfor	Performance		Attribution Effects			
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Region Effects	Interaction Effects	Total Effects	
Americas	2.3	9.8	15.7	12.7	0.3	-0.3	-0.2	-0.3	
Asia Pacific	42.7	44.2	7.8	6.6	0.5	0.0	0.0	0.5	
EMEA	53.1	45.7	10.0	9.1	0.4	0.1	0.1	0.5	
Other	1.9	0.3	-11.2	4.5	0.0	-0.1	-0.2	-0.4	
Total	100.0	100.0	8.8	8.3	1.2	-0.3	-0.4	0.4	



BlackRock MSCI ACWI EX-US IMI Performance Attribution vs. MSCI AC World ex USA IMI (Net)

		Attribution Effects				ormance	Sector Weights	
	Total Effects	Selection Effect	Allocation Effect	Interaction Effect	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.0	0.0	0.0	0.0	2.8	2.2	5.6	5.8
Materials	-0.1	-0.1	0.0	0.0	11.5	12.2	8.3	8.4
Industrials	0.0	0.0	0.0	0.0	12.1	12.3	14.2	14.1
Consumer Discretionary	0.0	0.0	0.0	0.0	5.8	6.0	12.3	11.9
Consumer Staples	0.0	0.0	0.0	0.0	6.3	5.9	7.8	8.1
Health Care	0.1	0.1	0.0	0.0	6.2	5.6	8.6	9.3
Financials	0.1	0.1	0.0	0.0	10.5	10.3	19.6	19.8
Information Technology	0.0	0.0	0.0	0.0	19.1	19.1	11.8	11.4
Communication Services	0.0	0.0	0.0	0.0	5.1	5.2	5.5	5.3
Utilities	0.0	0.0	0.0	0.0	12.8	13.1	3.2	3.1
Real Estate	0.0	0.0	0.0	0.0	12.4	12.6	3.0	3.0
Total	0.1	0.1	0.1	0.0	10.0	9.8	100.0	100.0



	Portfolio	Benchmark
Number of Stocks	6,771	6,684
Wtd. Avg. Mkt. Cap \$M	76,831.5	78,110.0
Median Mkt. Cap \$M	1,665.4	1,671.7
Price/Earnings ratio	13.8	13.6
Current Yield (%)	3.0	3.1
Beta (3 Years, Monthly)	1.0	1.0
Price/Book ratio	2.4	2.5
Return on Equity (%)	4.6	4.6

Top Holdings	Top Holdings			Worst Performers	Worst Performers		
	(%)		Return (%)		Return (%)		
Taiwan Semiconductor Man.	1.7	PT Petrindo Jaya Kreasi Tbk	371.2	Misr Fertilizer Production Co	-97.3		
Novo Nordisk A/S	1.2	Inox Wind Ltd	158.3	Finnair OYJ	-92.0		
ASML Holding NV	1.1	Neuren Pharmaceuticals Ltd	138.7	EOFLOW Co Ltd	-82.1		
Samsung Electronics Co Ltd	1.0	Politeknik Metal Sanayi ve Ticaret AS	123.2	AIM Vaccine Co Ltd	-72.7		
Nestle SA, Cham Und Vevey	1.0	Haitong International Securities Group Ltd	113.3	PT Metro Healthcare Indonesia Tbk	-66.5		
Tencent Holdings LTD	0.9	Sinch AB (publ)	110.5	First Quantum Minerals Ltd	-65.3		
LVMH Moet Hennessy Louis V	8.0	Benefit One Inc	107.7	CAB Payments Holdings Limited	-62.7		
Shell Plc	0.8	Zengame Technology Holding Ltd	96.4	Margun Enerji uretim Sanayi ve Ticaret Anonim Sirket	-61.2		
Toyota Motor Corp	0.7	Prestige Estates Projects Ltd	95.2	Clariane SE	-56.0		
Novartis AG	0.7	CSPC Innovation Pharmaceutical Co Ltd	93.4	IZDEMIR Enerji Elektrik Uretim A S	-51.2		



BlackRock MSCI ACWI EX-US IMI vs. MSCI AC World ex USA IMI (Net)

	Weights		Perfor	mance		Attribution Effects			
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects	
Australia	4.9	4.7	14.0	14.0	0.0	0.0	0.0	0.0	
Austria	0.2	0.2	13.7	13.7	0.0	0.0	0.0	0.0	
Belgium	0.6	0.6	15.6	15.5	0.0	0.0	0.0	0.0	
Brazil	1.6	1.5	17.6	17.6	0.0	0.0	0.0	0.0	
Canada	7.9	7.5	10.8	10.8	0.0	0.0	0.0	0.0	
Chile	0.2	0.2	8.0	8.0	0.0	0.0	0.0	0.0	
China	7.1	6.8	-5.9	-5.9	0.0	-0.1	0.0	-0.1	
Colombia	0.0	0.0	17.0	17.0	0.0	0.0	0.0	0.0	
Czech Republic	0.0	0.0	4.1	4.1	0.0	0.0	0.0	0.0	
Denmark	2.0	2.0	12.0	12.1	0.0	0.0	0.0	0.0	
∃gypt	0.0	0.0	17.9	18.8	0.0	0.0	0.0	0.0	
Finland	0.7	0.7	10.1	10.1	0.0	0.0	0.0	0.0	
France	6.8	6.5	9.9	9.9	0.0	0.0	0.0	0.0	
Germany	4.9	5.0	13.0	13.0	0.0	0.0	0.0	0.0	
Greece	0.1	0.1	12.9	12.9	0.0	0.0	0.0	0.0	
Hong Kong	2.0	1.9	1.7	1.6	0.0	0.0	0.0	0.0	
Hungary	0.1	0.1	17.5	17.5	0.0	0.0	0.0	0.0	
ndia	5.3	4.9	12.1	12.2	0.0	0.0	0.0	0.0	
ndonesia	0.6	0.6	0.4	1.3	0.0	0.0	0.0	0.0	
reland	0.8	0.9	24.7	25.3	0.0	0.0	0.0	0.0	
srael	0.7	0.6	8.5	8.4	0.0	0.0	0.0	0.0	
taly	1.6	1.5	13.4	13.4	0.0	0.0	0.0	0.0	
Japan	16.3	15.6	8.0	8.0	0.0	0.0	0.0	0.0	
Korea	3.7	3.5	13.7	13.7	0.0	0.0	0.0	0.0	
Kuwait	0.3	0.2	-0.5	-0.5	0.0	0.0	0.0	0.0	
Malaysia	0.5	0.4	4.8	4.8	0.0	0.0	0.0	0.0	
Malta	0.0	0.0	4.3	4.3	0.0	0.0	0.0	0.0	
Mexico	0.7	0.7	19.0	19.3	0.0	0.0	0.0	0.0	
Netherlands	3.2	3.0	17.9	17.9	0.0	0.0	0.0	0.0	
New Zealand	0.2	0.2	9.9	9.9	0.0	0.0	0.0	0.0	
Norway	0.6	0.6	5.4	5.4	0.0	0.0	0.0	0.0	
Peru	0.0	0.0	28.0	28.0	0.0	0.0	0.0	0.0	
Philippines	0.2	0.2	5.4	5.5	0.0	0.0	0.0	0.0	



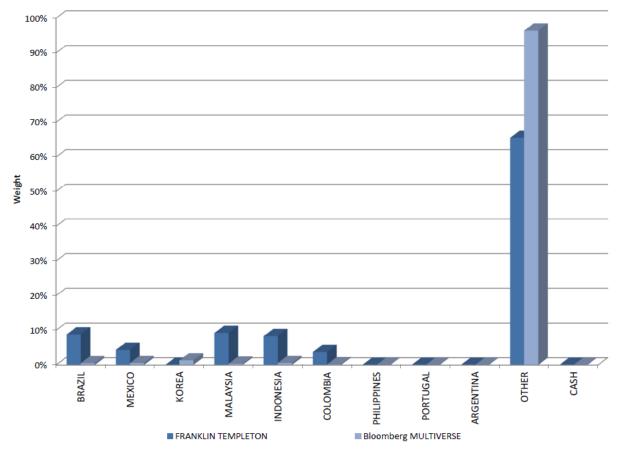
	Weights		Perfor	mance		Attributio	on Effects	
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects
Poland	0.2	0.2	37.7	37.7	0.0	0.0	0.0	0.0
Portugal	0.1	0.1	12.0	11.9	0.0	0.0	0.0	0.0
Qatar	0.3	0.3	4.1	4.1	0.0	0.0	0.0	0.0
Russia	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0
Saudi Arabia	1.2	1.2	9.1	9.1	0.0	0.0	0.0	0.0
Singapore	1.1	1.0	5.3	5.2	0.0	0.0	0.0	0.0
South Africa	0.9	0.8	12.2	12.2	0.0	0.0	0.0	0.0
Spain	1.7	1.6	12.3	12.3	0.0	0.0	0.0	0.0
Sweden	2.1	2.0	23.4	23.4	0.0	0.0	0.0	0.0
Switzerland	6.2	6.3	10.3	10.2	0.0	0.0	0.0	0.0
Taiwan	4.7	4.4	16.6	16.6	0.0	0.0	0.0	0.0
Thailand	8.0	0.6	2.5	3.3	0.0	0.0	0.0	0.0
Turkey	0.3	0.3	-16.0	-16.0	0.0	0.0	0.0	0.0
United Arab Emirates	0.4	0.4	-2.8	-2.8	0.0	0.0	0.0	0.0
United Kingdom	5.5	9.3	8.9	7.4	0.1	0.1	-0.1	0.2
United States	0.1	0.1	8.8	8.8	0.0	0.0	0.0	0.0
Other	0.4	0.4	7.8	8.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	10.0	9.8	0.1	0.0	-0.1	0.1



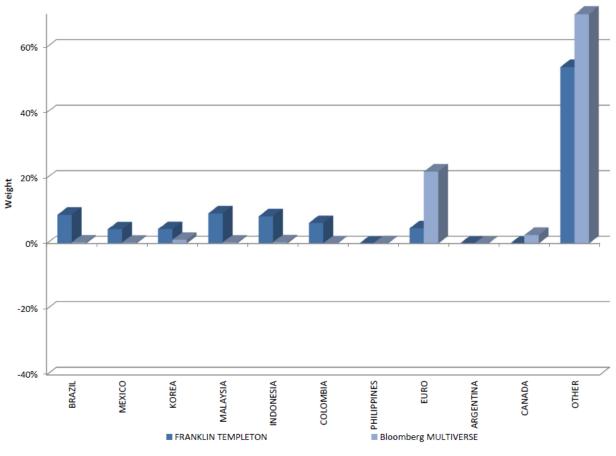
BlackRock MSCI ACWI EX-US IMI vs. MSCI AC World ex USA IMI (Net)

	Weights		Perfo	Performance		Attribution Effects			
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Region Effects	Interaction Effects	Total Effects	
Americas	10.5	10.0	12.4	12.4	0.0	0.0	0.0	0.0	
Asia Pacific	47.5	44.9	7.8	7.8	0.0	-0.1	0.0	-0.1	
EMEA	41.6	44.6	11.9	11.4	0.2	0.0	0.0	0.2	
Other	0.4	0.4	7.8	8.0	0.0	0.0	0.0	0.0	
Total	100.0	100.0	10.0	9.8	0.2	-0.1	0.0	0.1	

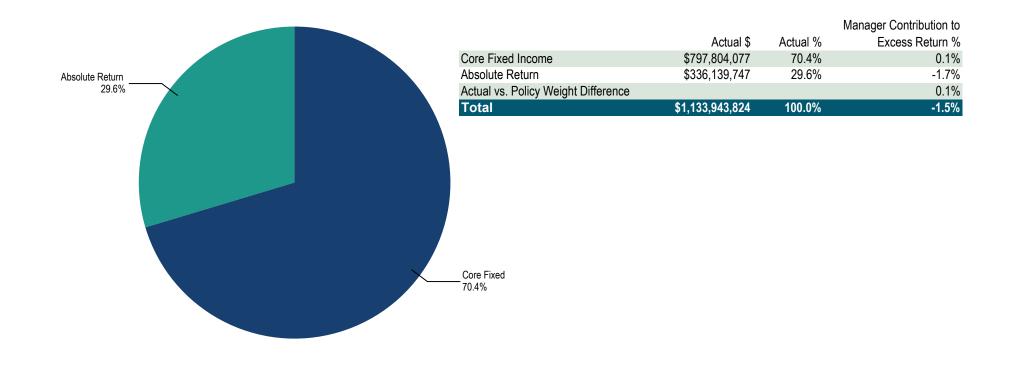




COUNTRY	MARKET VALUE	FRANKLIN TEMPLETON	Bloomberg MULTIVERSE	DIFF
BRAZIL	\$ 4,620	8.8%	0.5%	+8.3%
MEXICO	\$ 2,292	4.4%	0.6%	+3.8%
KOREA	\$ -	0.0%	1.3%	-1.3%
MALAYSIA	\$ 4,846	9.2%	0.4%	+8.8%
INDONESIA	\$ 4,372	8.3%	0.6%	+7.7%
COLOMBIA	\$ 1,979	3.8%	0.2%	+3.6%
PHILIPPINES	\$ -	0.0%	0.0%	0.0%
PORTUGAL	\$ -	0.0%	0.0%	0.0%
ARGENTINA	\$ -	0.0%	0.0%	0.0%
OTHER	\$ 34,403	65.5%	96.4%	-30.9%
CASH	\$ -	0.0%	0.0%	0.0%
	\$ 52,512	100.0%	100.0%	0.0%



CURRENCY	MARKET VALUE	FRANKLIN TEMPLETON	Bloomberg MULTIVERSE	DIFF
BRAZIL	\$ 4,620	8.8%	0.4%	+8.4%
MEXICO	\$ 2,292	4.4%	0.3%	+4.1%
KOREA	\$ 2,314	4.4%	1.1%	+3.3%
MALAYSIA	\$ 4,846	9.2%	0.3%	+8.9%
INDONESIA	\$ 4,372	8.3%	0.4%	+7.9%
COLOMBIA	\$ 3,308	6.3%	0.1%	+6.2%
PHILIPPINES	\$ -	0.0%	0.2%	-0.2%
EURO	\$ 2,445	4.7%	22.0%	-17.3%
ARGENTINA	\$ -	0.0%	0.0%	0.0%
CANADA	\$ -	0.0%	2.6%	-2.6%
OTHER	\$ 28,316	53.9%	72.6%	-18.6%
	\$ 52 512	100 0%	100.0%	0.0%

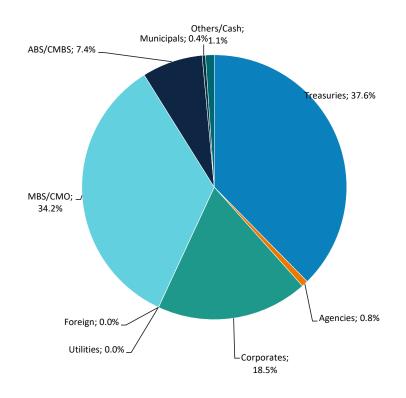




Statistics Summary 3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Diversifying Portfolio	5.0	5.4	0.0	-0.6	2.2
Blended Diversifying Index	6.2	6.7	0.2	-	0.0
Core Fixed	6.5	9.4	0.2	2.1	0.8
Blended Core Fixed Income Benchmark	4.6	10.0	0.0	-	0.0
Absolute Return	1.5	5.3	-0.6	-1.4	5.3
Absolute Return Custom Index	9.2	0.2	33.1	-	0.0





Sector	Account Weight	Bloomberg Aggregate Weight	Difference
Treasuries	37.6%	41.3%	-3.6%
Agencies	0.8%	4.8%	-4.0%
Corporates	18.5%	25.0%	-6.5%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS/CMO	34.2%	26.4%	7.8%
ABS/CMBS	7.4%	2.2%	5.2%
Municipals	0.4%	0.0%	0.4%
Others/Cash	1.1%	0.4%	0.7%
TOTAL	100.0%	100.0%	0.0%



Portfolio Characteristics	
	Portfolio
Total Number of Securities	
Total Market Value	\$ 795,631,678
Current Coupon	3.40
Yield to Maturity	3.99
Average Life	12.20
Duration	8.34
Quality	AA

Yield to Maturity	
Range	% Held
0.0 - 5.0	69.2
5.0 - 7.0	23.1
7.0 - 9.0	5.6
9.0 - 11.0	1.2
11.0 - 13.0	0.3
13.0+	0.4
Unclassified	0.2

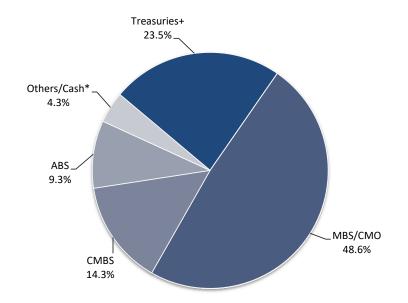
Average Life	
Range	% Held
0.0 - 1.0	1.9
1.0 - 3.0	12.2
3.0 - 5.0	14.0
5.0 - 10.0	33.0
10.0 - 20.0	18.3
20.0+	20.6
Unclassified	0.0

Duration	
Range	% Held
0.0 - 1.0	7.5
1.0 - 3.0	16.0
3.0 - 5.0	15.4
5.0 - 7.0	13.9
7.0 - 10.0	10.3
10.0+	36.9
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	59.4
Aaa (10)	19.6
Aa (9)	3.1
A (8)	7.3
Baa (7)	10.2
Below Baa (6-1)	0.5
Other	-0.1

Coupon	
Range	% Held
0.0 - 5.0	81.2
5.0 - 7.0	16.4
7.0 - 9.0	2.1
9.0 - 11.0	0.3
11.0 - 13.0	0.0
13.0+	0.0
Unclassified	0.1





		Bloomberg	
Sector	Account Weight	Aggregate Weight	Difference
Treasuries [†]	23.5%	41.3%	-17.7%
Agencies	0.0%	4.8%	-4.8%
Corporates	0.0%	25.0%	-25.0%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS/CMO	48.6%	26.4%	22.2%
CMBS	14.3%	0.0%	14.3%
ABS	9.3%	2.2%	7.1%
Municipals	0.0%	0.0%	0.0%
Others/Cash*	4.3%	0.4%	3.9%
TOTAL	100.0%	100.0%	0.0%

⁺ May include TIPS allocation.



^{*} Includes CLOs.

Portfolio Characteristics	
	Portfolio
Total Number of Securities	226
Total Market Value	\$ 238,832,346
Current Coupon	5.58
Yield to Maturity	5.78
Average Life	8.87
Duration	6.08
Quality	AA+

Bloomberg Agg	regate
	3.07
	4.53
	8.53
	6.11
	AA

Yield to Maturity	
Range	% Held
0.0 - 5.0	46.1
5.0 - 7.0	32.1
7.0 - 9.0	17.0
9.0 - 11.0	3.2
11.0 - 13.0	0.8
13.0+	0.9
Unclassified	0.0

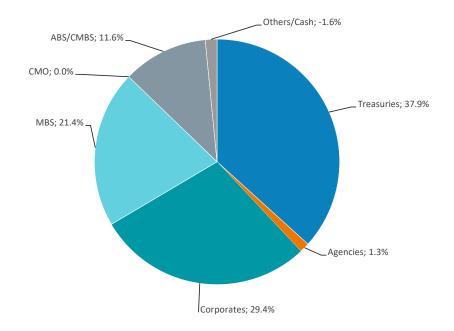
Average Life	
Range	% Held
0.0 - 1.0	2.6
1.0 - 3.0	17.2
3.0 - 5.0	13.9
5.0 - 10.0	43.0
10.0 - 20.0	16.0
20.0+	7.4
Unclassified	0.0

Duration	
Range	% Held
0.0 - 1.0	16.8
1.0 - 3.0	28.0
3.0 - 5.0	14.9
5.0 - 7.0	11.5
7.0 - 10.0	7.2
10.0+	21.6
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	35.5
Aaa (10)	42.8
Aa (9)	5.8
A (8)	6.6
Baa (7)	8.0
Below Baa (6-1)	1.7
Other	-0.3

Coupon	
Range	% Held
0.0 - 5.0	73.5
5.0 - 7.0	21.4
7.0 - 9.0	4.4
9.0 - 11.0	1.0
11.0 - 13.0	0.0
13.0+	0.0
Unclassified/Cash	-0.4





Sector	Account Weight	Bloomberg Aggregate Weight	Difference
Treasuries	37.9%	41.3%	-3.4%
Agencies	1.3%	4.8%	-3.5%
Corporates	29.4%	25.0%	4.4%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	21.4%	26.4%	-5.0%
CMO	0.0%	0.0%	0.0%
ABS/CMBS	11.6%	2.2%	9.5%
Municipals	0.0%	0.0%	0.0%
Others/Cash	-1.6%	0.4%	-2.0%
TOTAL	100.0%	100.0%	0.0%



Portfolio Characteristics	
	Portfolio
Total Number of Securities	407
Total Market Value	\$ 130,079,697
Current Coupon	3.88
Yield to Maturity	5.09
Average Life	9.03
Duration	6.25
Quality	AA

Bloomberg Aggr	egate
	3.07
	4.53
	8.53
	6.11
	AA

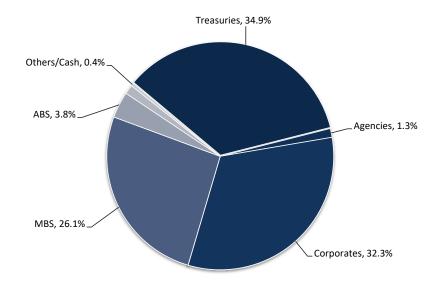
Yield to Maturity	
Range	% Held
0.0 - 5.0	60.3
5.0 - 7.0	34.9
7.0 - 9.0	2.4
9.0 - 11.0	1.4
11.0 - 13.0	0.1
13.0+	0.9
Unclassified	0.0

Average Life	
Range	% Held
0.0 - 1.0	-0.1
1.0 - 3.0	9.7
3.0 - 5.0	26.0
5.0 - 10.0	45.8
10.0 - 20.0	8.2
20.0+	10.4
Unclassified	0.0

Duration	
Range	% Held
0.0 - 1.0	8.5
1.0 - 3.0	11.8
3.0 - 5.0	21.3
5.0 - 7.0	28.4
7.0 - 10.0	15.7
10.0+	14.3
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	39.2
Aaa (10)	26.4
Aa (9)	3.2
A (8)	9.9
Baa (7)	21.0
Below Baa (6-1)	0.3
Other	0.0

Coupon	
Range	% Held
0.0 - 5.0	80.9
5.0 - 7.0	16.7
7.0 - 9.0	2.3
9.0 - 11.0	0.0
11.0 - 13.0	
13.0+	0.0
Unclassified	



Sector	Account Weight	Bloomberg Aggregate Weight	Difference
Treasuries	34.9%	41.3%	-6.3%
Agencies	1.3%	4.8%	-3.5%
Corporates	32.3%	25.0%	7.3%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	26.1%	26.4%	-0.3%
CMO	0.0%	0.0%	0.0%
ABS	3.8%	2.2%	1.6%
Municipals	1.3%	0.0%	1.3%
Others/Cash	0.4%	0.4%	0.0%
TOTAL	100.0%	100.0%	0.0%



Portfolio Characteristics	
	Portfolio
Total Number of Securities	550
Total Market Value	\$ 242,034,658
Current Coupon	3.57
Yield to Maturity	4.64
Average Life	9.09
Duration	6.20
Quality	Aa2

te
)7
' '
3
3
1
Α

Yield to Maturity	
Range	% Held
0.0 - 5.0	73.7
5.0 - 7.0	25.5
7.0 - 9.0	0.4
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	0.0
Unclassified*	0.4

Average Life	
Range	% Held
0.0 - 1.0	3.5
1.0 - 3.0	18.0
3.0 - 5.0	18.5
5.0 - 10.0	41.4
10.0 - 20.0	9.4
20.0+	9.3
Unclassified	0.0

Duration	
Range	% Held
< 1.0	3.5
1.0 - 3.0	18.6
3.0 - 5.0	24.5
5.0 - 7.0	19.0
7.0 - 10.0	17.8
10.0+	16.6
Unclassified	0.0

^{*}Unclassified includes a 0.65% cash position

Quality	
Range	% Held
Govt* (10)	62.9
Aaa (10)	7.8
Aa (9)	2.8
A (8)	12.1
Baa (7)	14.3
Below Baa (6-1)	0.0
Other	0.0

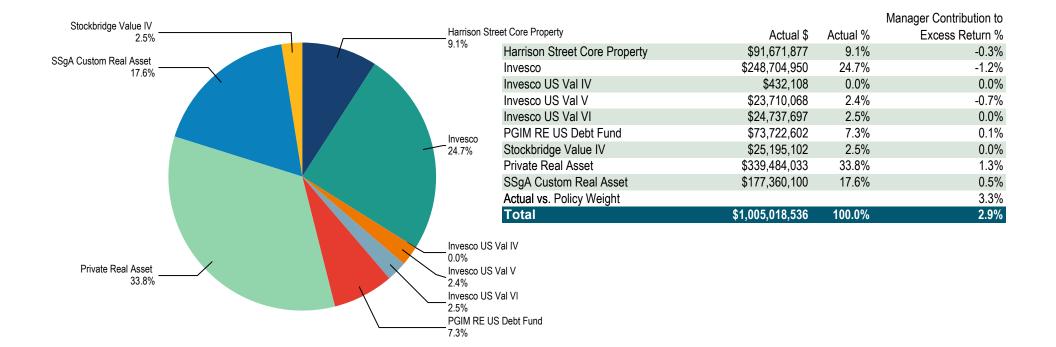
Coupon	
Range	% Held
0.0 - 5.0	74.8
5.0 - 7.0	23.7
7.0 - 9.0	1.1
9.0 - 10.0	0.0
10.0+	0.0
Unclassified	0.4

InvMetrics All DB Hedge Funds Net Return Comparison 20.0 15.0 10.0 5.0 Return 0.0 -5.0 -10.0 -15.0 -20.0 3 Mo 1 Yr 2 Yrs 3 Yrs 7 Yrs 10 Yrs Fiscal YTD 5 Yrs -2.6 (98) 2.1 (81) 1.5 (84) 4.3 (24) 3.6 (50) 0.1 (83) -1.0 (85) 1.3 (70) Absolute Return 2.4 (50) 4.7 (39) 9.2 (37) 7.4 (8) 6.3 (19) 5.9 (40) 5.8 (20) 5.4 (9) ▲ Absolute Return Custom Index 5th Percentile 7.7 9.8 16.3 9.3 9.1 9.5 8.0 5.9 1st Quartile 3.9 5.4 11.1 4.0 5.8 6.9 5.7 4.0 1.3 4.6 Median 2.4 4.3 7.7 3.3 5.4 3.3 3rd Quartile 4.4 -1.7 0.6 2.6 -4.5 1.8 1.9 0.7 95th Percentile -1.6 -5.1 -5.9 -16.0 -11.0 -6.4 -5.7 -4.5 53 Population 71 71 66 47 46 37 30



eV Alt All Multi-Strategy Net Return Comparison 26.0 20.0 14.0 8.0 Return 2.0 -4.0 -10.0 -16.0 3 Mo Fiscal YTD 1 Yr 2 Yrs 3 Yrs 5 Yrs 7 Yrs 10 Yrs Acadian MAAR Fund LLC -5.4 (93) -2.8 (81) -1.3 (84) -5.2 (96) -3.3 (90) ▲ CFM Systematic Global Macro 5.2 (32) 7.4 (21) 1.3 (76) 8.7 (15) 8.0 (24) -8.4 (99) -0.9 (85) 2.0 (74) 4.9 (49) ◆ Graham Quant Macro 8.7 (15) -1.3 (86) 5.0 (38) 7.2 (45) 9.6 (12) 10.1 (20) ■ PIMCO MAARS Fund LP 2.4 (59) 4.7 (41) 9.2 (33) 6.3 (37) 5.9 (51) ▼ Absolute Return Custom Index 7.4 (19) 5.8 (45) 5.4 (49) 5th Percentile 12.0 13.9 23.4 13.8 17.1 14.4 12.6 11.5 1st Quartile 5.8 6.5 10.5 5.6 7.7 9.3 7.3 7.3 Median 2.9 4.0 6.6 2.0 4.8 5.9 5.5 5.1 8.0 3rd Quartile 0.7 1.1 1.4 -1.5 3.6 3.0 2.9 95th Percentile -5.2 -6.0 -8.7 -10.5 -7.7 -3.3 -1.6 -2.6 Population 270 270 268 255 241 206 186 154







	3 Years				
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Inflation Hedge	7.1	5.4	0.9	-0.1	5.1
Blended Inflation Hedge Index	7.4	8.2	0.6	-	0.0
Real Estate	4.5	6.9	0.3	-0.2	3.1
NCREIF ODCE	4.9	9.4	0.3	-	0.0
Invesco	4.4	9.1	0.3	-0.3	1.8
NCREIF ODCE	4.9	9.4	0.3	-	0.0
Invesco US Val IV	-31.6	31.7	-1.0	-1.2	30.6
NCREIF ODCE	4.9	9.4	0.3	-	0.0
Invesco US Val V	-2.1	16.8	-0.2	-0.5	12.7
NCREIF ODCE	4.9	9.4	0.3	-	0.0
PGIM RE US Debt Fund	5.9	0.6	4.2	0.1	9.3
NCREIF ODCE	4.9	9.4	0.3	-	0.0
Private Real Asset	15.6	11.6	1.1	0.1	19.8
Blended Private Real Asset Index	11.8	16.9	0.6	-	0.0
Public Real Assets	7.0	12.4	0.4	-0.2	0.3
Blended Public Real Asset Index	7.1	12.3	0.4	-	0.0
SSgA Custom Real Asset	7.0	12.4	0.4	-0.2	0.3
SSgA Custom Real Asset Index	7.1	12.3	0.4	-	0.0

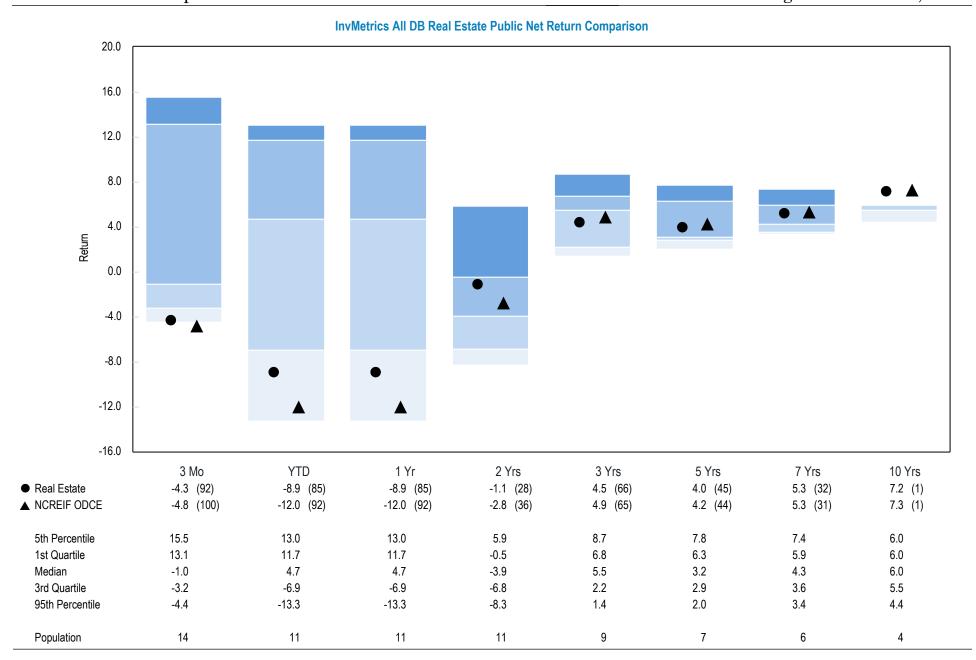
Statistics Summary



		5 Years			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Inflation Hedge	4.4	6.6	0.4	-0.4	4.4
Blended Inflation Hedge Index	5.9	7.7	0.5	-	0.0
Real Estate	4.0	5.7	0.4	-0.1	2.5
NCREIF ODCE	4.2	7.5	0.3	-	0.0
Invesco	3.5	7.5	0.2	-0.4	2.0
NCREIF ODCE	4.2	7.5	0.3	-	0.0
Invesco US Val IV	-17.9	25.5	-0.7	-0.8	24.6
NCREIF ODCE	4.2	7.5	0.3	-	0.0
PGIM RE US Debt Fund	5.7	1.5	2.4	0.1	7.3
NCREIF ODCE	4.2	7.5	0.3	-	0.0
Private Real Asset	6.5	11.7	0.4	0.0	20.1
Blended Private Real Asset Index	5.8	19.1	0.3	-	0.0
Public Real Assets	3.8	17.4	0.2	-0.6	3.4
Blended Public Real Asset Index	6.3	15.3	0.4	-	0.0
SSgA Custom Real Asset	6.2	15.2	0.4	-0.1	0.7
SSgA Custom Real Asset Index	6.3	15.3	0.4	-	0.0

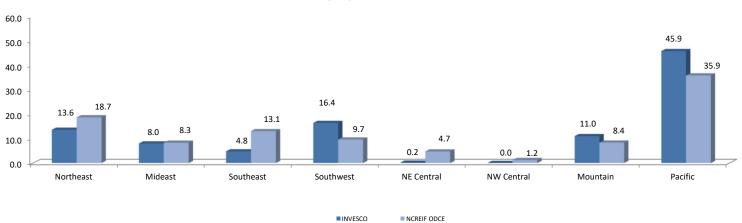
Statistics Summary



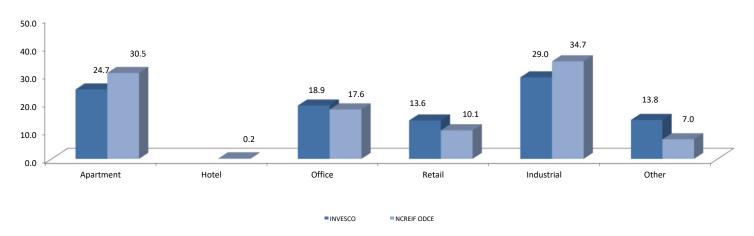








Property Diversification





		Statistics Summa 3 Years	ary		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
County Treasury Pool	2.2	1.7	0.0	0.0	1.7
90 Day U.S. Treasury Bill	2.2	0.6	-	-	0.0
Cash & Cash Overlay	2.6	0.7	2.1	2.1	0.2
90 Day U.S. Treasury Bill	2.2	0.6	-	-	0.0
General Account	2.6	0.7	3.7	3.7	0.1
90 Day U.S. Treasury Bill	2.2	0.6	-	-	0.0



Acadian Asset Management - MAARS Fund

Acadian Multi-Asset Absolute Return (MAARS) strategy was incepted in November 2017. MAARS targets a volatility of 6%-8% and a return of cash plus 5%. This is a multi-factorstrategy that aims to exploit behavioral inefficiencies within and across global markets and is designed to be diversifying, dynamic and defensive. It is market neutral, implemented using long and short positions across five primary asset classes (equity, fixed income, currency, commodities, and volatility) and over 100 underlying assets with a focus on liquid instruments. Return forecasts incorporate asset-specific and macroeconomic insights and are utilized to harvest active returns from within and across asset classes through market selection and directional positioning. The strategy integrates risk and return across asset classes. Avoidance of downside events is highlighted in the approach with a greater weighting in their models allocated to down market beneficiaries, such as quality factors, and asymmetric positioning which reduces positions when risk rises. Differentiated attributes of this are its approach and weighting to commodities and its volatility sleeve which can incorporate long volatility.

Angelo, Gordon & Co. - AG Opportunistic Whole Loan Fund

The Angelo Gordon Opportunistic Whole Loan (OWL) Fund was established to make investments primarily in a portfolio of non-performing loans (NPLs) and re-performing loans (RPLs). AG sees a lot of operational inefficiency in the market place. By acquiring these loans at a discounted price and replacing original servicers with better-focused special servicers, AG believes it can improve operational efficiency and generate attractive returns. In addition, OWL may also include investments in new residential mortgage loans and excess mortgage servicing rights. Opportunistic investments in commercial mortgage loans and other mortgage related investments may also be included in the Fund's portfolio. OWL is towards the end of its fund life and is continuing to sell down the fund's holdings and distribute proceeds to LPs.



Angelo, Gordon & Co. - Credit Solutions

The Angelo Gordon (AG) Credit Solutions Fund (CSF) expects to hold concentrated positions of 5-8% of NAV (averaging 30 positions over the life of the Fund with recycling). The Fund is targeting a net 15% IRR with a 5-7% current yield. The Fund should be 70% concentrated in the U.S. with the balance in Europe. Finally, while the opportunities can be sourced from both the public markets and the private markets, AG is finding compelling sources of return at this time through structuring new privately placed secured term loans out of public investments made by the firm. CSF will address corporate credit-based opportunities created in three main areas: 1) trading-based price dislocations that reduce creation multiples (price through the debt that must be repaid before value accrues to other stakeholders) while generating high current income; 2) opportunities in issuers tied to industries directly impacted by COVID-19 where the market's perception of the impact differs from the actual impact; and 3) corporate debt issuers that will be materially impacted by the pandemic and will need to restructure, but whose creation value is materially lower than the issuer's intrinsic value.

Angelo, Gordon & Co. - CSF (Annex) Dislocation II

The Angelo Gordon Annex Dislocation Fund II (ADFII)'s investment aim is to target senior securities of world-class businesses with irreplaceable assets and strong cash flow profiles which, because of market stress, can be purchased at a material discount to what they believe is a company's long-term intrinsic value. ADFII will invest opportunistically in securities or claims of companies in North America and Europe for which prices have, in Angelo Gordon's view, dislocated from long term fundamentals due to situational market volatility and stress.

Angelo, Gordon & Co. - Credit Solutions II

Like its predecessor funds, the Angelo Gordon (AG) Credit Solutions Fund II (CSF II) is an all-weather, solutions-based strategy that targets net returns of 14+% with 5-7% current yield. The Fund will invest in single-name opportunities where price movements and credit documents afford creative financing solutions. This could include companies with upcoming debt maturities, working capital issues, or inefficient capital structures that are inflating financing costs. In these cases, AG will seek to work with management and other creditors to structure a bespoke transaction that avoids bankruptcy and solves the issue for the company in exchange for debt securities with conservative attachment points and healthy yield. While the opportunities are likely to be sourced 75% from the public markets and 25% from the private markets, the "solutions" will likely be private products. During periods of dislocation, the Fund can pivot towards trading-oriented strategies where there is not a need for additional financing, such as sourcing debt in the secondary markets at discounts to intrinsic value. CSF II expects to hold concentrated positions of 5-8% of NAV (averaging 30 positions over the life of the Fund with recycling). The fund should be 70% concentrated in the U.S. with the balance in Europe.



Baillie Gifford - ACWI ex US Focus Equities

ACWI ex US Focus is a fundamental growth strategy. Research is organized primarily by regional teams, with each member of the ACWI ex US Focus Portfolio Construction Group representing a regional team. Four global sector groups also contribute research. Baillie Gifford conducts approximately 2000 company meetings annually both in Edinburgh and onsite. Companies are evaluated on their growth opportunity relative to the average company, their ability to execute on that opportunity, and the degree to which probability of future success is already valued by the market. Baillie Gifford's basic philosophy is that share prices ultimately follow earnings. They believe that the stock market has a recurring tendency to underappreciate the value of long-term compound growth. The process seeks to add value through use of proprietary fundamental research to identify companies exhibiting some combination of sustained above average growth, and attractive financial characteristics. The portfolio generally holds 60-90 stocks, with country and sector weights +/-10% relative to the index and stock weights +/-5% relative to the index.

Beach Point Capital Management, L.P. - Beach Point Select Fund

Beach Point Select Fund is a commingled fund vehicle within the firm's Opportunistic Credit strategy. This fund focuses on off-the-run, complex, and less-liquid securities. It is a best ideas portfolio of distressed debt, special situations, private/direct loans, catalyst-driven high yield bonds and bank loans, and credit-informed equities with a North American and European focus. The Select Fund differs from other funds and accounts in the Opportunistic Credit strategy by pursuing a more concentrated portfolio and emphasizing a higher percentage of less-liquid/private investments. Beach Point invests up and down the entire capital structure and it constructs portfolios with a bottom-up, research-driven approach that also takes into account top-down macro considerations. Its investment process includes idea generation, detailed credit analysis, relative value decision making and investment selection, portfolio construction and on-going monitoring. The ultimate goal of its investment process is to produce a well-diversified investment portfolio with limited downside risk and substantial upside potential.

BlackRock - MSCI ACWI ex US IMI Index

The ACWI ex US IMI Index Fund seeks to replicate the return of the MSCI ACWI ex US IMI Index. This index represents the developed equity markets outside of North America, including small cap equity. BlackRock monitors their funds daily to ensure that additions and deletions to the indexes, mergers and acquisitions, restructurings and other capitalization changes are made to the fund in such a way as to minimize tracking error and transactions costs.

BlackRock - Russell 1000 Index

The Russell 1000 Index Fund tracks large U.S. companies and achieve broad diversification with low costs by fully replicating the Russell 1000 Index. BlackRock monitors their funds daily to ensure that additions and deletions to the indexes, mergers and acquisitions, restructurings and other capitalization changes are made to the fund in such a way as to minimize tracking error and transactions costs.

BlackRock (formerly Tennenbaum Capital Partners) - Direct Lending Funds VIII and IX

TCP Direct Lending Fund VIII is a private investment fund managed by Tennenbaum Capital Partners ("TCP"). The Fund is designed to continue TCP's successful strategy of investing in privately-originated, performing senior secured debt primarily in North America-based companies with target enterprise values between \$100 million and \$1.5 billion. The Fund will include positions in 1st lien, 2nd lien and unitranche debt, with a preference for floating-rate debt, which TCP believes provides better flexibility to adapt to market conditions. TCP's direct lending strategy has generated attractive investment opportunities across market cycles, as evidenced by the Firm's prior direct lending track record. Fund VIII targets an unlevered annual yield of approximately 9-12%, with its return primarily driven by current income. SamCERA committed \$35 million to DLF VIII in June 2016 in its unlevered fund sleeve and \$35 million to the DLF IX in June 2019.



Brigade - Opportunistic Credit

Opportunistic Credit is a fundamental, bottom-up strategy focused on high yield corporate bonds and bank loans with tactical allocations to structured securities, convertibles, and other sectors of the bond markets as they become attractive on a relative value basis. While performing credits represent the majority, Brigade will invest up to 35% of the portfolio in distressed securities and restructuring situations if these types of opportunities are attractive on a risk-adjusted basis and the timing is right with respect to the credit cycle. The portfolio is comprised of mostly North American issuers, but they are not restricted geographically and expect to have a moderate allocation to Europe over time. Although the portfolio is generally long-only, Brigade has the ability to implement a limited amount of tactical macro hedges.

CFM - Systematic Global Macro

Capital Fund Management (CFM) Systematic Global Macro (SCM) is a directional strategy that takes long and short positions in liquid future and forwards across 130+ markets and across equities, bonds, currencies, and commodities. It is a new strategy that draws on model signals from existing strategies at the firm – Discus (diversified CTA), CFM ISTrends (trend following) and CFM ISTrend Equity Capped (defensive trend following) - and SamCERA is a seed investor with an attractive fee. SGM's objective is to provide absolute returns that are uncorrelated with traditional asset classes over a long time horizon with an annualized volatility target between 8% and 12%. SGM uses a diverse set of trading strategies that are based on factors (momentum, value, carry, macro and sentiment) across asset classes. These technical and fundamental factors operate at different time scales and can have varying degrees of influence on performance depending on market and economic conditions. An additional global macro defensive overlay is combined with these outputs in constructing the final portfolio. CFM uses a form of portfolio construction known as agnostic risk parity to ensure that the SGM portfolio is diversified on an out-of-sample basis. The goal of SGM is to generate consistent returns while limiting drawdowns.

DE Shaw – DE Shaw US Broad Market Core Alpha Extension Fund

The D. E. Shaw group believes that there exist some market inefficiencies that may be identified through quantitative analysis, advanced technology, and the insight of practitioners. Identifying these inefficiencies involves a process of hypothesis formulation, testing, and validation. Importantly, to avoid data-mining, the hypothesis formulation precedes the analysis of the historical data. D.E. Shaw's Structured Equity strategies rely largely on quantitative and computational investment techniques developed by the D. E. Shaw over the last two decades in the course of research conducted for purposes of managing the firm's hedge funds. D.E. Shaw's investment process involves a suite of quantitative models, each designed to capitalize on a distinct and uncorrelated set of market inefficiencies. Some of these models are technical in nature and involve price and volume inputs. Other models rely on fundamental data, such as figures gleaned from corporate balance sheets or income statements. Still others, again quantitative, anticipate or react to a particular corporate event or set of events. These models typically operate with forecast horizons of a few weeks to many months. The ability to trade on shorter-term signals distinguishes D.E. Shaw from many of its long only and 130/30 peers. Portfolio construction involves the use of a proprietary optimizer which runs dynamically throughout the trading day. The portfolio is broadly diversified with several hundred long and short positions. Over- and under-weighting of sectors and industries relative to the benchmark will be quite modest, with the intention that most of the alpha be generated by security selection. The US Broad Market Core Alpha Extension Fund is a 130/30 strategy which maintains a beta that is approximately neutral to the Russell 1000 Index.



DoubleLine – Securitized Income

The DoubleLine Securitized Income strategy is an actively managed, liquid, long only, intermediate-term fixed income product. The primary objective of the strategy is to seek and maximize current income and total return by utilizing a combination of Agency MBS and structured credit. The DoubleLine Structured Products team aims to offer clients investment grade exposure to both interest rate duration and credit spread to provide a more attractive total return profile compared to the benchmark. Securitized Income seeks to maximize income and total return by investing across the structured products universe, focusing on agency mortgage-backed securities (MBS) and investment grade securitized credit. DoubleLine takes a barbelled approach to investing in the securitized market, and they will separate rates from credit and will adjust the allocations to both at the based on the economic cycle and opportunities. Duration positioning is achieved through Agency MBS, Agency CMBS, and treasuries while credit exposure is attained through all areas of structured credit.

Fidelity (FIAM) - Broad Market Duration Separate Account

Pyramis' Broad Market Duration (BMD) investment strategy seeks to achieve absolute and risk-adjusted returns in excess of the BC U.S. Aggregate Index, focusing its investments in US Treasuries, agencies, investment grade corporate bonds, mortgage-backed and asset-backed securities. The BMD commingled pool can also hold small, opportunistic positions in out-of-benchmark securities, such as inflation-linked bonds. The investable universe includes all US dollar denominated, investment grade debt securities. The BMD investment approach emphasizes issuer and sector valuation and individual security selection. Through the integration of fundamental and quantitative research and trading, the BMD strategy is implemented in a team environment. Risk management technology is utilized to explicitly quantify benchmark exposures on a daily basis, and Pyramis uses the same analytical framework to assess both index and portfolio risk. Tracking error should range between 40 and 60 basis points per annum over the benchmark, and stringent portfolio construction risk control rules are strictly adhered to.

Franklin Templeton Investments – Global Fixed Income

Franklin Templeton manages the global bond mandate in an unconstrained fashion using a top-down, fundamental framework. In the short term and on a country-by-country basis there are often inefficiencies in global bond and currency markets, however, over the longer term the market will generally price to fundamentals. Thus, FT focuses on fundamental research to identify long-term opportunities and uses short-term market inefficiencies to build positions in such investments. The investment and portfolio construction process begin with the determination of the Fund's or institutional client's investment objectives, resulting in a set of risk-return parameters and exposure limits within which the portfolio is managed. Next the firm's global economic outlook for the industrialized countries is developed, with a focus on interest rate and exchange rate forecasts. The portfolio's interest rate outlook is a function of global general equilibrium macroeconomic analysis as well as country-specific research. Macroeconomic conditions in the G-3 economies are analyzed first, primarily with respect to how current and projected growth and inflation dynamics are expected to influence monetary policy. This analysis is then extended out to the rest of the industrialized countries (G-13) as well as emerging markets, which results in broad targets for cash, duration, currencies and the developed/emerging market mix. Using the firm's interest rate and exchange rate outlook, probability-weighted horizon returns for bonds of various countries are then calculated. This analysis is used to establish specific country weights and duration targets based on risk-adjusted expected total return measured in the portfolio's base currency. Analysis of emerging markets includes sovereign credit analysis along with greater emphasis on capital flows, inter-market dynamics and trends in the level of risk aversion in the market.



Graham – Quant Macro Fund

Graham Quant Macro ("GQM") is a directional, long and short strategy that utilizes fundamental and price-based indicators to establish return forecasts across global interest rates, foreign exchange, stock indices and commodities. The strategy incorporates a variety of submodels that generate macro fundamental forecasts, assess yield and earnings differentials, compare current valuations relative to historic fair value, and analyze directional price trends across markets. Quantitative risk management and portfolio construction techniques are used to diversify risk across the portfolio and enhance risk-adjusted returns. Historically, the average holding period has been approximately eight to ten weeks, although the sub-models will make daily adjustments to positions. The strategy is designed to have low correlation to traditional markets and other alternative strategies and has the potential to provide significant portfolio diversification benefits.

Harrison Street Core Property

Based in Chicago, Harrison Street's exclusive focus since inception in 2005 has been investing in non-core property sectors of the real estate market. The Harrison Street Core Fund is an open-end fund that invests primarily in stabilized education, healthcare, and self-storage real estate assets in the United States using modest leverage with an emphasis on generating current income. The focus on these alternative property types is intended to concentrate on areas of the real estate market that are less GDP sensitive with demand drivers that are more demographic driven such as aging populations, education growth and healthcare delivery. Each of these areas tend to be less tied to the business cycle, have fragmented ownership and more operationally intensive. The fund acts as a diversifier within real estate portfolios with sector exposures that are not a typical focus of other core ODCE funds.

INVESCO Realty Advisors – INVESCO Core Equity, LLC

SamCERA is a founding member of INVESCO's open-end Core Equity real estate fund and rolled its separate account properties into the fund. INVESCO Core Equity, LLC (the "Fund") is a perpetual life, open-end vehicle which invests in a diversified portfolio of institutional quality office, retail, industrial and multifamily residential real estate assets. The Fund buys core properties that are located within the United States, typically requiring an investment of \$10 million or more. The portfolio cannot be more than 30% leveraged.

INVESCO Realty Advisors – INVESCO US Val IV, V, & VI

Invesco has provided SamCERA with Core Real Estate exposure since 2004 through the Invesco Core Equity Fund. The Invesco real estate team manages around \$62B in assets with investments and offices around the globe. Invesco Value Fund's looks to acquire fundamentally sound but broken "core" assets that can be repositioned into institutional-quality, income producing properties. Investments are limited to direct equity interests in office, multi-family, retail and industrial properties across the US. The Fund is expected to be geographically concentrated in U.S. gateway cities and top 25 Metropolitan Statistical Areas (MSA's). Invesco Value Fund's provide a complement to the more conservative Invesco Core Fund and offers the potential of enhanced returns to the SamCERA Real Estate portfolio.

Insight Investments - Cash Flow Matched Liquidity

Insight is the fixed income sleeve of Mellon Capital. The strategy seeks to invest in short duration fixed income securities that match the negative cash flows of the Plan (similar to an LDI plan). Insight receives estimates of three years of cash flows from the actuarial report. Once a year, if market conditions allow, SamCERA will re-invest "year 3" net cash flows. Insight uses their credit analysis team for analyzing all credits or potential investments to the fund.



Mondrian Investment Partners – International Equity

Mondrian is a value-oriented, defensive manager whose investment philosophy is based on the principle that investments must be evaluated for their fundamental long-term value. The firm's philosophy involves three stated investment objectives: 1) provide a rate of return meaningfully greater than the client's domestic rate of inflation, 2) structure client portfolios that preserve capital during protracted international market declines, and 3) provide portfolio performance that is less volatile than benchmark indices and other international managers.

Mondrian applies typical value screening criteria to a universe of 1,500 stocks, from which 500 are selected for more detailed work. Through fundamental research, and the deliberations of the Investment Committee, the universe is further reduced to a list of 150 stocks. The investment team conducts detailed fundamental analysis on the remaining stocks, a process which includes applying the firm's dividend discount model consistently across all markets and industries. Mondrian also uses a purchasing power parity model to give an accurate currency comparison of the value of the stocks under consideration. The firm will only consider buying stocks in countries with good investor protection practices and relatively simple repatriation procedures. A computer-based optimization program is employed in the portfolio construction process. Mondrian's portfolio holds 80-125 issues.

NISA - Core Bond

NISA applies a risk-controlled approach to all of its fixed income portfolios. This approach does not permit large bets or positions that generate significant tracking error versus the benchmark. Instead, NISA invests in a large number of small, diversified, active positions which seek tight tracking error to the chosen benchmark. Benchmark weight is a significant consideration when constructing and managing portfolios. The investment strategy is comprised of strategic (top-down) and tactical (bottom-up) decisions. Strategic decisions include sector selection and yield curve positioning while tactical decisions include industry and security selection and trading activity. Review of both strategic and tactical decisions is continual. The amount of portfolio risk budget devoted to one aspect versus the other will change as market conditions warrant. In general, strategic decisions change relatively infrequently, while tactical decisions, especially security selection, will change fairly often as market conditions provide opportunities. Over a typical market cycle, the bottom-up is expected to contribute to 70% of value-added while top-down is roughly 30%.

NISA - Long Treasury

A passive implementation of long treasuries managed to the Bloomberg Long Treasury Index. This strategy seeks to replicate the characteristics of it's benchmark.

PanAgora Asset Management - Defensive U.S. Equity Low Volatility

PanAgora's Defensive Equity strategy seeks to harness the 'low-volatility premium' through a systematic, factor-based investment approach focused on achieving market-like returns with less risk. This is accomplished by leveraging PanAgora's proprietary Risk Parity portfolio construction methodology, which seeks to efficiently capture the equity premium associated with low volatility, while taking minimal unintended risks. Since the firm's inception, PanAgora has been using quantitative techniques to integrate fundamental insights with large amounts of dynamic market data. They score individual securities on a factor basis and also on a diversification basis, in the context of a broadly diversified portfolio. The portfolio construction process optimizes the portfolio around the intended factor exposure (volatility) while maintaining equal risk contribution across sectors (ex., overweight utilities and consumer staples, underweight financials and technology). Shorter term volatility and longer term correlation analysis is combined in the approach. The result for the US Defensive Equity strategy is a portfolio expected to have lower volatility (beta around 0.65-0.75), and similar returns relative to the capitalization-weighted benchmark over a full market cycle. PanAgora expects the strategy to participate in approximately 75% of up markets and 55% in down markets.



Parametric Overlay – Cash Overlay and Currency Hedge

Parametric's cash overlay program is an efficient way for SamCERA to maintain its target asset allocation in a systematic fashion through cash securitization at the fund and manager level transition/reallocation support and asset class rebalancing back to target within defined bands. The cash overlay program is invested synthetically using liquid futures with cash balances reviewed daily. A combination of large and small cap futures implementation is the proxy for private equity. SamCERA's investment guidelines initially allowed only for cash overlay. Rebalancing was added to the SamCERA program in January 2014. Cash overlay and rebalancing is expected to add 10-20 bps to the portfolio over time. The purpose of the currency is first and foremost to lower portfolio risk and secondarily to add incremental performance.

PIMCO Diversified

PIMCO's Diversified Income (DI) Fund is a multi-sector strategy that invests across a broad spectrum of global credit market sectors, including investment grade and high yield corporate debt, as well as emerging markets. The allocation among these will vary based on PIMCO's assessment of global trends and relative valuations. This active and dynamic approach allows for increased responsiveness in asset allocation to changing economic and market conditions while remaining anchored by PIMCO's investment process and longer-term orientation. The ability to invest globally helps to improve diversification and may allow investors to benefit from differences in business cycles across regions and credit quality trends across credit sectors. PIMCO's DI investment strategy seeks to provide high yield-like returns with lower volatility against a blended index (1/3 Bloomberg Barclays Global Agg Credit ex-EM; 1/3 BofA Merrill Lynch BB-B rated Developed Markets High Yield; 1/3 JPMorgan EMBI Global). The fund allows for a duration band of 3-8 years. The team focuses its investments into these groups: credit strategies (investment grade, high yield, emerging markets and non-core credits including MBS, municipals and other govt-related sectors); duration strategies (U.S. and non-U.S. duration) and currencies (tactical non-USD exposure).

PIMCO - MAARS

PIMCO MAARS is an alternative risk premia strategy that looks for risks associated with: (1) Supply and Demand Constraints, (2) Behavioral Biases, and (3) Asymmetric Risks (event risk). As reflected in the design of the MAARS strategies, PIMCO believes that alternative risk premia strategies are best implemented using a systematic approach that minimizes the discretionary inputs in day-to-day portfolio management. MAARS places a greater emphasis and weighting on global interest rates, currencies and commodities and a lesser emphasis on equities than many of its Alt Beta peers. Relative to Alt Beta peers, the strategy's rates and currency (FX) models are particularly robust, reflective of PIMCO's core competency and long history managing these asset classes using derivative instruments.

PIMCO Private Income Fund

PIMCO Private Income Fund (PIF) uses an opportunistic and flexible approach to global private credit. PIF provides a total return oriented global credit exposure utilizing both top-down sector relative value and bottom up security selection. The strategy invests across private residential, commercial, corporate and specialty finance markets. PIMCO's Private Income Fund (PIF) is targeting 8-12% net returns with income providing most of the fund's returns. The Private Income Investment Committee (IC) identifies market themes and direction for their relative value framework, and sector specialists provide recommendations to the PM team within that construct. PIF has the ability to invest throughout the capitalization structure. The fund can use a moderate amount of leverage to enhance portfolio returns (1.5 times with a hard cap of 2 times).



PGIM RE Debt

PGIM Real Estate US Debt Fund (PREDS) focuses on a loan origination strategy with a mix of 20% senior long duration loans on stable assets, 60% senior short/medium duration loans on stable and transitional assets, and 20% mezzanine mid/long duration debt. SamCERA was a founding investor in the PREDS strategy which invests in US commercial real estate debt in an open-ended vehicle with a return target of 7-8% (gross) coming from stable current income. The fund makes investments in first lien mortgages and mezzanine debt. First lien mortgages can be floating rate or fixed rate, but only floating rate loans will use leverage. Subordinate investments (mezzanine debt and preferred equity) will be limited by design. The fund can source and invest in secondary loans through a variety of Prudential real estate professionals, but the primary focus will be on direct origination through the real estate finance team.

PGIM Quantitative Solutions – Small-Cap Core

Quantitative Management Associates (QMA) utilizes a bottom-up quantitative framework in order provide a diversified exposure to core U.S. small-cap stocks, while attempting to produce consistent outperformance versus the benchmark with moderate tracking error levels. QMA uses an adaptive, systematic investment process to exploit opportunities created by mispriced securities to consistently add value over long time periods. Bottom-up stock selection drives exposure to key sources of alpha (valuation, growth, and quality). The QMA stock selection model adapts to changes in company growth rates and market environments by putting more emphasis on valuation for slowly growing companies, and more emphasis on future growth projections for companies with higher projected growth rates.

Record Dynamic Currency

Record is one of the world's largest and longest standing currency managers. The Record Dynamic Currency Hedging program uses a systematic process which exploits inefficiencies in the FX markets. The strategy focuses on currencies' tendency to trend, in an explicable, repeatable way.

State Street Global Advisors (SSgA) Custom Real Asset

SSgA Custom Real Asset portfolio uses a portfolio of liquid real assets to proxy private real assets. The portfolio is comprised of equal weightings of the Bloomberg Roll Select Commodity Index, S&P Global Mid-Large Cap Natural Resources Index, S&P Global Infrastructure Index, and Bloomberg Barclays TIPS Index. SSgA provides beta exposure through these underlying liquid components which can be customized to changing client needs (ex., TIPS was added in May 2020 with the other three parts of the portfolio reduced pro-rata). The portfolio is used to fund upcoming private real asset mandates.

Stockbridge Value IV

Stockbridge Value IV will implement a value-added strategy that will seek to own assets that are undervalued, underutilized, and/or not operating to their full potential. The manager will add value with their internal asset management team through active strategies including additional capital investment, leasing, recapitalization, renovation and/or development. The fund will target three to five year holding periods for investments, with disposition taking place after the completion of the value-add strategy. The fund will target 15 to 25 mid-sized investments, diversified by geography and property type. The strategy will target 21 markets in the United States in which the firm has boots on the ground coverage with dedicated acquisitions professionals and asset managers responsible for knowing each market extensively with a vast network of relationships.



Investment Strategy Summaries

San Mateo County Employees' Retirement Association Period Ending: December 31, 2023

White Oak - White Oak Yield Spectrum Fund/Fund V

The White Oak Yield Spectrum Fund's objective is to earn substantial current income by originating, extending, and/or investing in a diversified portfolio of primarily senior secured corporate credit and debt instruments consisting of term loans, asset-based loans and equipment leases and loans issued by small to middle-market companies located primarily in the United States and Canada. It focuses on providing self-originated deals for predominantly non-sponsored, privately-held borrowers.



Total Plan Policy Index	As of														
	7/1/23	3/1/23	10/1/22	7/1/22	2/1/21	1/1/21	7/1/20	4/1/20	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	4/1/18	10/1/17
10 Year Treasury +2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
60/40 MSCI World/Bloomberg Global Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
60/40 Russell 3000/Bloomberg US Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
91 Day T-Bills	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Opportunistic Index	11.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg US Govt/Credit 1-3 Yr. TR	4.5%	4.5%	4.5%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg Aggregate	9.5%	12.5%	13.5%	16.5%	18.0%	21.0%	21.0%	18.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%
Bloomberg BA Intermediate HY	0.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	8.0%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Bloomberg BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg Long Treasury	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg Multiverse	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg TIPS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Bloomberg Commodity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Citigroup non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CPI + 5% (RA)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Public Real Asset	3.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	0.0%
Blended Private Real Asset	5.0%	5.0%	4.0%	4.0%	4.0%	3.0%	3.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	8.0%
Libor +4% (HF)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
SOFR +4% (HF)	6.0%	7.0%	7.0%	7.0%	7.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	9.0%	9.5%	9.5%	9.5%	9.5%	9.0%	9.0%	9.0%	9.0%	7.6%	5.7%	3.8%	1.9%	0.0%	0.0%
MSCI ACWI ex-US IMI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI (Net)	9.0%	9.5%	9.5%	9.5%	9.5%	9.0%	9.0%	9.0%	9.0%	11.4%	13.3%	15.2%	17.1%	19.0%	19.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NCREIF ODCE	9.0%	9.0%	9.0%	9.0%	9.0%	10.0%	10.0%	9.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
NCREIF Property	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 1000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 2000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000	23.0%	21.0%	21.0%	21.0%	22.0%	21.0%	21.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	21.0%	21.0%
Russell 3000 +3% (PE)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%
Russell 3000 +3% 1Q Lag (PE)	7.0%	7.0%	7.0%	7.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	7.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	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%

Simple Benchmark	A	s of		
	7/1/23	3/1/23	10/1/22	7/1/22
MSCI ACWI IMI	59.0%	57.0%	57.0%	57.0%
Bloomberg US Aggregate	18.5%	19.5%	20.5%	23.5%
NFI ODCE	17.0%	18.0%	17.0%	17.0%
Bloomberg 1-3 Yr Govt/Credit Index	5.5%	5.5%	5.5%	2.5%
	100.0%	100.0%	100.0%	100.0%



0.0%

0.0%

40.0%

0.0%

0.0%

48.0%

0.0%

12.0%

0.0%

0.0%

1/1/16 1/1/14 10/1/10 5/1/07 6/1/00 34.0%

0.0%

0.0%

0.0%

0.0%

52.8%

0.0%

13.2%

0.0%

0.0%

31.3%

0.0%

0.0%

0.0%

55.2%

0.0%

13.5%

0.0%

0.0%

23.1%

0.0%

0.0%

0.0%

61.5%

0.0%

15.4%

0.0%

0.0%

0.0%

0.0%

32.3%

35.5%

0.0%

0.0%

9/1/16

0.0%

0.0%

41.7%

0.0%

0.0%

0.0%

0.0%

0.0%

58.3%

0.0%

0.0%

0.0%

41.7%

0.0%

0.0%

50.0%

0.0%

8.3%

0.0%

0.0%

1/1/19 10/1/18 10/1/17 2/1/17 10/1/16

0.0%

0.0%

47.5%

0.0%

0.0%

0.0%

0.0%

0.0%

52.5%

0.0%

0.0%

0.0%

45.2%

0.0%

0.0%

0.0%

0.0%

0.0%

54.8%

0.0%

0.0%

0.0%

40.4%

0.0%

0.0%

0.0%

0.0%

0.0%

59.6%

0.0%

0.0%

4.6%

0.0%

41.7%

0.0%

0.0%

0.0%

0.0%

53.7%

0.0%

6/1/00 1/1/96

0.0%

17/123 71/122 21/21 71/120 10/119 11/11	Public Equity Benchmark	As of:							
MSCI ACM ex-US No.			7/1/22	2/1/21	7/1/20	10/1/19	7/1/19	4/1/19	1/1/19
MSCI ACM or US INI 100% Hedged (Net) 22.0% 22.8% 22.5% 22.5% 18.5% 13.9% 9.3 MSCI ACM or US INI (Net) 0.0%	MSCI ACWI ex-US								0.0%
MISCI ACM text US IM No. 0.0%									9.3%
MISCI AZOW ex US MI (Net) 22.0% 23.8% 23.2% 23.1% 22.5% 27.8% 22.4% 37.07	3 (,								0.0%
MSCI EAFE									
Russell 1000									
Russell 2000 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%									
Russel 2000									
See See									
SaP 500									
100.0% 1									
Sequity Benchmark	S&P 500								
SH/H6		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
SH/H6	US Equity Benchmark	As of:							
Russell 1000			1/1/16	6/1/00	3/1/99	9/1/98	7/1/96	1/1/95	
Russell 2000 100 Value 0.0% 0.0% 1.2.9% 1.2.5% 0.0% 0.0% 1.2.8% 0.0% 0.0% 1.2.8% 0.0% 0.0% 1.2.8% 0.0%	Russell 1000								
Russell 2000									
Russell 2000 100.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%									
S. R. P. 500									
International Equity Benchmark As of: 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% MSCI ACWI ex US 0.00% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0									
Name	3 & F 300								
101/19		100.0 /6	100.076	100.076	100.076	100.076	100.076	100.078	
MSCI ACMI ex US 10.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	International Equity Benchmark	As of:							
MSCI ACWI ex US IMI 100% Hedged (Net) 50.0% 40.0% 30.0% 20.0% 10.0% 0.0% 0.0% 100.0% MSCI ACWI ex US IMI 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0	• •	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	10/1/17	1/1/14	6/1/00
MSCI ACWI ex US IMI 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0	MSCI ACWI ex US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
MSCI ACWI ex US IMI 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0	MSCI ACWI ex US IMI 100% Hedged (Net)	50.0%	40.0%	30.0%	20.0%	10.0%	0.0%	0.0%	100.0%
MSCI ACWI ex US IMI (Net) 50.0% 60.0% 70.0% 80.0% 90.0% 100.0% 0.0% 0.0% MSCI EAFE 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0									0.0%
MSCI EAFE									0.0%
100.0% 1									0.0%
Tri Tri									100.0%
Tri Tri									
Bloomberg U.S. Aggregate Index 76.0% 100.0%	Core Fixed Income Benchmark								
Bloomberg U.S. Treasury Long Index									
As of:									
Comportunistic Credit Benchmark	Bloomberg U.S. Treasury Long Index								
Tiliza T		100.0%	100.0%						
Tiliza T	Opportunistic Credit Benchmark	As of:							
Public Credit Benchmark	opportunities of our zonomium.		7/1/22						
Credit Suisse Leveraged Loan Index 1 Qtr Lag 27.0% 0.0% Bloomberg BA Intermediate HY 0.0% 100.0% Public Credit Benchmark As of: 7/1/23 1/1/14 12/1/09 Bloomberg US Corporate HY 100.0% 100.0% 100.0% Bloomberg BA Intermediate HY 0.0% 100.0% 0.0% Bloomberg Credit BAA 0.0% 0.0% 100.0% Private Credit Benchmark As of: 7/1/23 1/1/14 12/1/09 Credit Suisse Leveraged Loan Index 1 Qtr Lag 100.0% 0.0% 0.0% Bloomberg US Corporate HY 0.0% 0.0% 100.0% Ciffwater Direct Lending Index 0.0% 100.0% 0.0% Bloomberg Credit BAA 0.0% 100.0% 0.0%	Ricombera LIS Cornorate HV								
Bloomberg BA Intermediate HY									
100.0% 1									
Public Credit Benchmark	Bloomberg BA Intermediate 111								
Tri/123									
Bloomberg US Corporate HY	Public Credit Benchmark								
Bloomberg BA Intermediate HY									
Bloomberg Credit BAA 0.0% 0.0% 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% 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% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0%	• •								
100.0% 100.0% 100.0%	Bloomberg BA Intermediate HY								
Private Credit Benchmark As of: 7/I/23 1/I/14 12/I/09 Credit Suisse Leveraged Loan Index 1 Qtr Lag 100.0% 0.0% 0.0% Bloomberg US Corporate HY 0.0% 0.0% 100.0% Ciffwater Direct Lending Index 0.0% 100.0% 0.0% Bloomberg Credit BAA 0.0% 0.0% 100.0%	Bloomberg Credit BAA								
Tredit Suisse Leveraged Loan Index 1 Qtr Lag 100.0% 0.0% 0.0% Bloomberg US Corporate HY 0.0% 0.0% 100.0% Cliffwater Direct Lending Index 0.0% 100.0% 0.0% Bloomberg Credit BAA 0.0% 0.0% 100.0%		100.0%	100.0%	100.0%					
Tredit Suisse Leveraged Loan Index 1 Qtr Lag 100.0% 0.0% 0.0% Bloomberg US Corporate HY 0.0% 0.0% 100.0% Cliffwater Direct Lending Index 0.0% 100.0% 0.0% Bloomberg Credit BAA 0.0% 0.0% 100.0%	Private Credit Renchmark	As of:							
Credit Suisse Leveraged Loan Index 1 Qtr Lag 100.0% 0.0% 0.0% Bloomberg US Corporate HY 0.0% 100.0% 100.0% Gliffwater Direct Lending Index 0.0% 100.0% 0.0% Bloomberg Credit BAA 0.0% 0.0% 100.0%	FIIVALE CIEUL DEIICIIIIAIK		1/1/14	12/1/00					
Bloomberg US Corporate HY 0.0% 0.0% 100.0% Cliffwater Direct Lending Index 0.0% 100.0% 0.0% Bloomberg Credit BAA 0.0% 0.0% 100.0%									
Cliffwater Direct Lending Index 0.0% 100.0% 0.0% Bloomberg Credit BAA 0.0% 0.0% 100.0%	O		0.0%	0.0%					
Bloomberg Credit BAA 0.0% 0.0% 100.0%				400.00/					
	Bloomberg US Corporate HY	0.0%	0.0%						
100.0% 100.0% 100.0%	Credit Suisse Leveraged Loan Index 1 Qtr Lag Bloomberg US Corporate HY Cliffwater Direct Lending Index	0.0% 0.0%	0.0% 100.0%	0.0%					
	Bloomberg US Corporate HY	0.0% 0.0% 0.0%	0.0% 100.0% 0.0%	0.0% 100.0%					



0.0%

0.0%

0.0%

33.3%

0.0%

8.4%

0.0%

0.0%

0.0%

0.0%

33.3%

33.3%

8.4%

25.0%

0.0%

0.0%

Private Equity Benchmark	As of:								
D	4/1/18	10/1/10							
Russell 3000 +3% 1Q Lag	100.0%	0.0%							
Russell 3000 +3%	0.0% 100.0%	100.0% 100.0%							
Absolute Return Benchmark	As of:								
1.9	1/1/21	10/1/10							
Libor +4% SOFR +4%	0.00% 100.0%	100.00% 0.0%							
SUFR +4%	100.0%	0.0%							
Inflation Hadra Danahmank	As of:								
Inflation Hedge Benchmark	AS 01: 3/1/23	2/1/21	7/1/20	4/1/20	10/1/19	4/1/18	2/1/17	10/1/16	4/1/16
Bloomberg TIPS	0.00%	0.00%	0.00%	0.00%	5.88%	11.1%	12.5%	14.3%	14.3%
Bloomberg Commodity	0.00%	0.00%	0.00%	0.00%	0.00%	0.0%	0.0%	0.0%	21.4%
CPI + 5% (RA)	0.00%	0.00%	0.00%	0.00%	0.00%	0.0%	0.0%	0.0%	14.3%
Blended Public Real Asset	22.22%	23.53%	23.53%	35.29%	35.29%	33.3%	0.0%	0.0%	0.0%
Blended Private Real Asset	27.78%	23.53%	17.65%	11.77%	11.77%	11.1%	43.8%	35.7%	0.0%
NCREIF ODCE	50.00%	52.94%	58.82%	52.94%	47.06%	44.4%	43.8%	50.0%	50.0%
NCKEII OBCL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	1001070		1001070	1001070	1001070	100.070	1001070	1001070	.00.070
Public Real Asset Benchmark	As of:								
	5/1/20	10/1/16	1/1/14						
Bloomberg Roll Select Commodity	25.0%	34.0%	0.0%						
S&P Global Large-MidCap Commodity and Resources	25.0%	33.0%	0.0%						
S&P Global Infrastructure	25.0%	33.0%	0.0%						
CPI + 5%	0.0%	0.0%	100.0%						
Bloomberg TIPS	25.0%	0.0%	0.0%						
	100.0%	100.0%	100.0%						
D: 4 D 14 4D 1									
Private Real Asset Benchmark	As of:								
D	1/1/21	4/1/18	10/1/16	1/1/14					
Bloomberg Roll Select Commodity	0.00%	0.00%	34.00%	0.0%					
S&P Global Large-MidCap Commodity and Resources	0.00%	0.00%	33.00%	0.0%					
S&P Global Infrastructure	0.00%	0.00%	33.00%	0.0%					
50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	0.00%	100.00%	0.00%	0.0%					
75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	100.00%	0.00%	0.00%	0.0%					
CPI + 5%	0.00%	0.00%	0.00%	100.0%					
	100.0%	100.0%	100.0%	100.0%					
Private RA Secondary Benchmark	As of:								
	9/1/14								
Cambridge Associates Private Natural Resources 1 Qtr Lag	50.0%								
Cambridge Associates Private Infrastructure 1 Qtr Lag	50.0%								
	100.0%								
Real Estate Benchmark	As of:								
	1/1/09	6/1/00	7/1/96						
10 Year Treasury +2%	0.0%	0.0%	100.0%						
NCREIF ODCE	100.0%	0.0%	0.0%						
NCREIF Property	0.0%	100.0%	0.0%						
	100.0%	100.0%	100.0%						
Limitality Danahasank	A		_						
Liquidity Benchmark	As of: 10/1/22	7/1/22							
Ploomhora LIS Cout/Credit 1 3 Vr. TD	81.8%	60.0%							
Bloomberg US Govt/Credit 1-3 Yr. TR	01.076	00.0%							
91 Day T-Bills	18.2% 100.0%	40.0% 100.0%							



Baillie Gifford Benchmark	As of:	
	1/1/14	5/1/12
MSCI ACWI ex-US	100.0%	0.0%
MSCI EAFE	0.0%	100.0%
	100.0%	100.0%
Baillie Gifford Secondary Benchmark	As of:	
	1/1/14	5/1/12
MSCI ACWI ex-US Growth	100.0%	0.0%
MSCI EAFE Growth	0.0%	100.0%
	100.0%	100.0%
Brigade Secondary Benchmark	As of:	
	8/1/10	
Bloomberg High Yield	50.0%	
Credit Suisse Leveraged Loans	50.0%	
	100.0%	
PIMCO Diversified	As of:	
1 IIII G DIVOIGIII G	9/1/17	
JPMorgan EMBI Global	33.333%	
BofAMLBB-BRatedDvlpdMktsHYHdgdUSD	33.	
Global Agg Credit Ex EM USD hedged	33.334%	
	100.0%	
SSgA Custom Real Asset	As of:	
	5/1/20	11/1/16
Bloomberg Roll Select Commodity	25.00%	33.33%
S&P Global Large-MidCap Commodity and Resources	25.00%	33.33%
S&P Global Infrastructure	25.00%	33.34%
Bloomberg TIPS	25.00%	0.00%
	100.0%	100.0%



Policy Index & Benchmark History

San Mateo County Employees' Retirement Association Period Ending: December 31, 2023

Baillie Gifford	
First \$25 million:	0.60% per annum
Next \$75 million:	0.50% per annum
Next \$300 million:	0.40% per annum
Thereafter:	0.30% per annum
BlackRock-Russell 1000 Index Fund	
On All Assets:	0.01% per annum
BlackRock-MSCI ACWI ex US IMI Index Fund	
On All Assets:	0.045% per annum
<u>DoubleLine</u>	
On All Assets:	0.30% per annum
<u>NISA</u>	
First \$500 million:	0.15% per annum
Next \$1 billion:	0.125% per annum
Next \$1 billion:	0.105% per annum
Next \$1.5 billion	0.085% per annum
Thereafter:	0.065% per annum

Franklin Templeton Investment	
First \$50 million:	0.40% per annum
Next \$50 million:	0.30% per annum
Thereafter:	0.25% per annum
EIAM Dand	
FIAM Bond	0.050/
First \$50 million:	0.25% per annum
Next \$50 million:	0.20% per annum
Next \$100 million:	0.125% per annum
Thereafter:	0.10% per annum
PanAgora Asset Management	
First \$50 million:	0.25% per annum
Next \$50 million:	0.15% per annum
Thereafter:	0.10% per annum
Parametric Overlay	
First \$50 million:	0.12% per annum
Next \$100 million:	0.10% per annum
TI 0	0.05% per annum
Thereafter:	0.00 /0 por armam

PIMCO Diversified	
On All Assets:	0.75% per annum
PGIM Quantitative Solutions	
First \$100 million:	0.55% per annum
Next \$100 million:	0.53% per annum
Thereafter:	0.49% per annum
Mondrian Investment Partners	
First \$50 million:	1.00% per annum
Next \$150 million:	0.19% per annum
Thereafter:	0.33% per annum
Insight Investment	
First \$200 million:	0.09% per annum
Next \$300 million:	0.08% per annum
Thereafter:	0.06% per annum



Manager Compliance (Net)

Fund Name	Benchmark	Rule 1	Rule 2	Rule 3
Acadian US MGD V	Russell 1000 Index	-	-	-
DE Shaw	Russell 1000 Index	B	B	B
PanAgora Defuseq	Russell 1000 Index	B	B	B
PGIM Quant Solutions	Russell 2000 Index	✓	B	✓
Baillie Gifford	MSCI ACWI ex US	B	B	B
Mondrian	MSCI AC World ex USA Value	B	2	B
DoubleLine	Blmbg. U.S. Aggregate Index	-	-	-
FIAM Bond	Blmbg. U.S. Aggregate Index	✓	✓	✓
NISA Core Bond	Blmbg. U.S. Aggregate Index	-	-	-
NISA Long Treasury	Blmbg. U.S. Treasury: Long	-	-	-
AG CSF ADF II	Blmbg. U.S. Corp: High Yield Index	-	-	-
AG CSF II	Blmbg. U.S. Corp: High Yield Index	-	-	-
Angelo Gordon Opportunistic	Blmbg. U.S. Corp: High Yield Index	✓	-	✓
Angelo Gordon Credit Solutions	Blmbg. U.S. Corp: High Yield Index	-	-	-
Beach Point Select	Blmbg. U.S. Corp: High Yield Index	✓	V	✓
Brigade Capital	Blmbg. U.S. Corp: High Yield Index	B	✓	B
PIMCO Diversified	Blmbg. U.S. Corp: High Yield Index	-	B	-
Franklin Templeton	Blmbg. Global Multiverse	B	8	B
Acadian MAAR Fund LLC	Absolute Return Custom Index	-	-	-
CFM Systematic Global Macro	Absolute Return Custom Index	-	-	-
Graham Quant Macro	Absolute Return Custom Index	-	-	-
PIMCO MAARS Fund LP	Absolute Return Custom Index	-	-	-

Manager Compliance (Gross)

Fund Name	Benchmark	Rule 1	Rule 2	Rule 3
Acadian US MGD V	Russell 1000 Index	-	-	-
DE Shaw	Russell 1000 Index	B	B	B
PanAgora Defuseq	Russell 1000 Index	B	B	B
PGIM Quant Solutions	Russell 2000 Index	✓	B	✓
Baillie Gifford	MSCI ACWI ex US	B	B	B
Mondrian	MSCI AC World ex USA Value	B	B	B
DoubleLine	Blmbg. U.S. Aggregate Index	-	-	-
FIAM Bond	Blmbg. U.S. Aggregate Index	✓	✓	✓
NISA Core Bond	Blmbg. U.S. Aggregate Index	-	-	-
NISA Long Treasury	Blmbg. U.S. Treasury: Long	-	-	-
AG CSF ADF II	Blmbg. U.S. Corp: High Yield Index	-	-	-
AG CSF II	Blmbg. U.S. Corp: High Yield Index	-	-	-
Angelo Gordon Opportunistic	Blmbg. U.S. Corp: High Yield Index	✓	-	✓
Angelo Gordon Credit Solutions	Blmbg. U.S. Corp: High Yield Index	-	-	-
Beach Point Select	Blmbg. U.S. Corp: High Yield Index	✓	✓	✓
Brigade Capital	Blmbg. U.S. Corp: High Yield Index	P	2	B
PIMCO Diversified	Blmbg. U.S. Corp: High Yield Index	-	R	-
Franklin Templeton	Blmbg. Global Multiverse	P	B	B
Acadian MAAR Fund LLC	Absolute Return Custom Index	-	-	-
CFM Systematic Global Macro	Absolute Return Custom Index	-	-	-
Graham Quant Macro	Absolute Return Custom Index	-	-	-
PIMCO MAARS Fund LP	Absolute Return Custom Index	-	-	-

	Market Value	% of Portfolio	3 Mo Rank	Fiscal YTD	1 Yr Rank	2 Yrs Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs	Rank
Total Fund**	6,191,331,114	100.0	5.6 (79)	4.0 (78)	9.3 (87)	0.5 (30)	4.2 (63)	7.6 (82)	6.3	(57)
Policy Index			5.5 (81)	4.3 (65)	12.1 (40)	0.7 (25)	4.9 (43)	8.1 (62)	6.6	(48)
Simple Benchmark			7.2 (32)	4.1 (76)	11.2 (59)	-1.0 (76)	3.7 (73)	8.2 (60)	6.5	(52)
Total Fund ex Overlay	6,181,126,944	99.8	5.6 (80)	3.9 (78)	9.1 (89)	0.4 (33)	4.2 (65)	7.5 (83)	6.3	(61)
Policy Index			5.5 (81)	4.3 (65)	12.1 (40)	0.7 (25)	4.9 (43)	8.1 (62)	6.6	(48)
Simple Benchmark			7.2 (32)	4.1 (76)	11.2 (59)	-1.0 (76)	3.7 (73)	8.2 (60)	6.5	(52)
Growth Portfolio	3,660,387,619	59.1	7.9	5.5	15.0					
Blended Growth Index			8.1	7.4	20.3	1.5	6.7	11.3	-	
US Equity	1,446,260,098	23.4	11.1 (90)	7.5 (84)	19.5 (93)	1.8 (16)	8.7 (45)	13.7 (84)	10.5	(75)
Blended US Equity Index			12.1 (44)	8.4 (41)	26.0 (27)	0.9 (45)	8.5 (54)	15.2 (33)	11.3	(34)
Russell 3000 Index			12.1 (44)	8.4 (41)	26.0 (27)	0.9 (45)	8.5 (54)	15.2 (33)	11.5	(29)
BlackRock Russell 1000	872,511,657	14.1	12.0 (40)	8.5 (43)	26.6 (28)	1.2 (60)	9.0 (63)	15.5 (40)	-	
DE Shaw	201,161,917	3.2	9.9 (81)	7.7 (61)	21.2 (57)	0.8 (64)	7.3 (86)	13.8 (73)	12.0	(35)
PanAgora Defuseq	235,784,833	3.8	7.8 (95)	2.3 (99)	3.8 (100)	0.7 (67)	7.0 (88)	10.7 (94)	-	
Russell 1000 Index			12.0 (41)	8.4 (43)	26.5 (28)	1.2 (60)	9.0 (64)	15.5 (40)	11.8	(42)
PGIM Quant Solutions	128,204,456	2.1	12.8	10.6	22.1	3.4	10.8	11.5	-	
Russell 2000 Index			14.0	8.2	16.9	-3.5	2.2	10.0	7.2	
International Equity with Record	1,127,604,172	18.2	8.6 (88)	4.3 (76)	16.3 (59)	-1.3 (53)	2.1 (48)	7.9 (59)	4.8	(52)
Blended International Equity Index			8.0 (96)	5.8 (32)	16.2 (61)	0.7 (21)	4.1 (19)	8.5 (48)	4.8	(49)
Baillie Gifford	270,565,920	4.4	11.4 (72)	0.3 (95)	11.0 (90)	-12.4 (82)	-7.2 (87)	7.6 (85)	4.9	(90)
MSCI ACWI ex US			9.8 (89)	5.8 (30)	16.2 (58)	-0.9 (12)	2.0 (20)	7.6 (84)	4.3	(99)
MSCI ACWI ex US Growth			11.2 (73)	3.1 (63)	14.4 (74)	-6.0 (46)	-2.4 (55)	7.8 (82)	4.9	(89)
Mondrian	278,078,183	4.5	9.2 (50)	6.7 (62)	19.6 (49)	2.5 (61)	4.1 (85)	6.2 (90)	3.8	(81)
MSCI AC World ex USA Value			8.5 (74)	8.6 (38)	18.1 (63)	4.3 (42)	6.5 (49)	7.0 (79)	3.5	(82)
MSCI AC World ex USA Index			9.8 (38)	5.8 (77)	16.2 (79)	-0.9 (91)	2.0 (93)	7.6 (68)	4.3	(72)
BlackRock MSCI ACWI EX-US IMI	579,988,174	9.4	9.7 (63)	5.9 (34)	15.8 (65)	-1.5 (45)	1.8 (59)	-	-	
MSCI AC World ex USA IMI (Net)			9.8 (61)	6.0 (33)	15.6 (69)	-1.8 (47)	1.5 (63)	7.2 (89)	4.0	(96)
Record Dynamic Currency Hedge	-3,696,254	-0.1	-146.9	-286.7	-	-	-	-	-	

San Mateo County Employees' Retirement Association Period Ending: December 31, 2023

	Market Value	% of Portfolio	3 Mo Rank	Fiscal YTD	1 Yr Rank	2 Yrs Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs	Rank
Private Equity***	408,506,456	6.6	1.8 (16)	3.2 (33)	6.5 (41)	-2.4 (90)	6.3 (92)	19.0 (8)	17.7	(13)
Blended Private Equity Index			-2.1 (100)	5.9 (10)	23.5 (1)	2.7 (60)	12.4 (74)	12.2 (61)	13.2	(51)
Opportunistic Credit	678,016,893	11.0	4.0	5.0						
Opportunistic Credit Index			6.2	7.4	13.2	1.6	3.1	5.2	4.6	
Public Credit	520,515,393	8.4	5.3	6.1	10.4	1.5	3.4	5.0	5.6	
Blmbg. U.S. Corp: High Yield Index			7.2	7.7	13.4	0.4	2.0	5.4	4.6	
AG CSF ADF II	11,420,112	0.2	7.0	9.9	21.8	-	-	-	-	
AG CSF II	25,072,026	0.4	5.3	9.1	20.2	-	-	-	-	
Angelo Gordon Opportunistic	31,925	0.0	0.0	-4.9	-13.4	-8.0	2.9	3.5	-	
Angelo Gordon Credit Solutions	9,017,780	0.1	4.7 (87)	7.1 (61)	12.2 (66)	3.1 (13)	9.3 (1)	-	-	
Beach Point Select	110,254,701	1.8	4.5 (90)	7.1 (62)	13.0 (51)	2.6 (20)	6.8 (2)	8.6 (2)	-	
Brigade Capital	116,233,485	1.9	3.1 (100)	5.1 (96)	11.6 (79)	-0.4 (91)	4.2 (11)	5.1 (74)	4.4	(71)
One William Street	63,031,032	1.0	2.5 (100)	5.1 (96)	-	-	-	-	-	
Blmbg. U.S. Corp: High Yield Index			7.2 (23)	7.7 (33)	13.4 (36)	0.4 (76)	2.0 (79)	5.4 (61)	4.6	(58)
PIMCO Diversified	128,343,591	2.1	7.8 (5)	6.6 (79)	10.3 (90)	-2.5 (100)	-1.6 (100)	2.8 (100)	-	
Blended PIMCO Diversified Index			-	-	-	-	-	-	-	
Blmbg. U.S. Corp: High Yield Index			7.2 (22)	7.7 (33)	13.4 (36)	0.4 (76)	2.0 (79)	5.4 (61)	4.6	(59)
Franklin Templeton	57,110,741	0.9	9.1 (23)	4.7 (68)	4.9 (92)	-2.4 (50)	-3.1 (65)	-2.8 (99)	-0.6	(94)
Blmbg. Global Multiverse			8.1 (38)	4.4 (74)	6.1 (84)	-5.6 (81)	-5.3 (82)	-0.1 (89)	0.5	(79)
Private Credit	157,501,499	2.5	0.1	1.6	4.2	3.9	5.2	6.0		
Credit Suisse Leveraged Loan Index 1 Qtr Lag			3.4	6.6	12.5	4.7	5.9	4.3	4.3	
Blackrock DL Feeder IX-U	39,215,778	0.6	0.0	3.0	7.2	5.7	6.3	-	-	
PIMCO Private Income	50,152,284	0.8	0.0	1.7	5.9	2.8	6.1	-	-	
TCP Direct Lending VIII	10,257,397	0.2	1.2	2.2	6.7	4.1	5.2	5.7	-	
White Oak Yield	28,721,354	0.5	0.0	0.5	3.3	3.2	4.1	5.0	-	
White Oak YSF V	29,154,686	0.5	0.0 (100)	0.5 (100)	-9.3 (100)	0.9 (61)	1.4 (92)	-	-	
Credit Suisse Leveraged Loan Index 1 Qtr Lag			3.4 (99)	6.6 (78)	12.5 (62)	4.7 (3)	5.9 (3)	4.3 (95)	4.3	(75)

	Market Value	% of Portfolio	3 Mo Rank	Fiscal YTD	1 Yr Rank	2 Yrs Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs Rank
Diversifying Portfolio	1,133,943,824	18.3	4.9	3.6	5.2		-	-	-
Blended Diversifying Index			6.4	3.3	6.2	-0.6	-0.3	2.6	3.0
Core Fixed	797,804,077	12.9	8.4	4.0	6.7	-3.7	-2.8	1.4	2.3
Blended Core Fixed Income Benchmark			8.3	2.5	4.6	-4.6	-3.6	0.9	1.7
DoubleLine	238,832,346	3.9	6.7 (42)	3.4 (66)	7.0 (41)	-4.1 (93)	-3.0 (94)	-	-
Blmbg. U.S. Aggregate Index			6.8 (41)	3.4 (69)	5.5 (65)	-4.2 (93)	-3.3 (98)	1.1 (55)	1.8 (71)
FIAM Bond	130,079,697	2.1	7.1 (25)	3.9 (24)	6.5 (28)	-3.6 (36)	-2.6 (27)	2.2 (11)	2.6 (12)
NISA Core Bond	242,034,658	3.9	6.8 (53)	3.5 (66)	5.8 (73)	-3.7 (44)	-2.9 (56)	-	-
Blmbg. U.S. Aggregate Index			6.8 (56)	3.4 (79)	5.5 (85)	-4.2 (85)	-3.3 (89)	1.1 (96)	1.8 (97)
NISA Long Treasury	184,684,978	3.0	12.8	-0.5	-	-	-	-	-
Blmbg. U.S. Treasury: Long			12.7	-0.6	3.1	-14.6	-11.4	-1.2	2.3
Absolute Return	336,139,747	5.4	-2.6 (98)	2.1 (80)	1.5 (84)	4.3 (28)	3.6 (57)	0.1 (82)	1.3 (68)
Absolute Return Custom Index			2.4 (53)	4.7 (39)	9.2 (41)	7.4 (7)	6.3 (23)	5.9 (46)	5.4 (10)
Acadian MAAR Fund LLC	77,722,217	1.3	-5.2 (96)	-3.3 (93)	-5.4 (95)	-2.8 (84)	-1.3 (84)	-	-
CFM Systematic Global Macro	89,225,911	1.4	5.2 (39)	7.4 (18)	1.3 (81)	8.7 (16)	8.0 (28)	-	-
Graham Quant Macro	81,982,928	1.3	-8.4 (99)	-0.9 (88)	2.0 (80)	8.7 (15)	4.9 (48)	-	-
PIMCO MAARS Fund LP	87,208,692	1.4	-1.3 (90)	5.0 (40)	7.2 (53)	9.6 (14)	10.1 (22)	-	-
Absolute Return Custom Index			2.4 (67)	4.7 (43)	9.2 (44)	7.4 (20)	6.3 (38)	5.9 (60)	5.4 (33)
Inflation Hedge	1,005,018,536	16.2	-0.4	-1.4	-3.1	2.3	7.5	4.7	
Blended Inflation Hedge Index			-3.3	-4.6	-4.4	0.3	7.4	5.9	5.2
Real Estate	488,174,403	7.9	-4.1 (89)	-5.7 (80)	-8.4 (81)	-0.5 (17)	5.1 (56)	4.6 (47)	7.7 (1)
NCREIF ODCE			-4.8 (100)	-6.6 (100)	-12.0 (93)	-2.8 (25)	4.9 (57)	4.2 (49)	7.3 (1)
Harrison Street Core Property	91,671,877	1.5	-3.2	-5.1	-4.9	2.9	5.6	-	-
Invesco	248,704,950	4.0	-4.6	-6.1	-12.1	-2.7	4.7	3.8	7.3
Invesco US Val IV	432,108	0.0	0.0	-27.7	-50.1	-45.8	-30.7	-16.9	-
Invesco US Val V	23,710,068	0.4	-23.6	-26.5	-25.8	-14.5	-1.2	-	-
Invesco US Val VI	24,737,697	0.4	0.0	-3.0	-0.9	-	-	-	-
PGIM RE US Debt Fund	73,722,602	1.2	1.5	3.1	7.1	6.9	6.7	6.3	-
NCREIF ODCE			-4.8	-6.6	-12.0	-2.8	4.9	4.2	7.3
Stockbridge Value IV	25,195,102	0.4	0.0	-4.7	-3.5	10.7	-	-	-
NCREIF ODCE			-4.8	-6.6	-12.0	-2.8	4.9	4.2	7.3



Total Fund Performance Summary (Gross of Fees)

San Mateo County Employees' Retirement Association Period Ending: December 31, 2023

	Market Value	% of Portfolio	3 Mo Rank	Fiscal YTD	1 Yr Rank	2 Yrs Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs Rank
Private Real Asset***	339,484,033	5.5	4.0	3.8	4.3	9.6	15.6	6.5	•
Blended Private Real Asset Index			-4.5	-5.3	9.3	4.1	11.8	5.8	5.7
Blended Secondary CA Private RA Index			0.0	1.3	6.1	11.4	15.2	7.1	-
Public Real Assets	177,360,100	2.9	2.8	2.1	0.1	2.3	7.2	4.0	•
Blended Public Real Asset Index			3.0	2.2	0.1	2.1	7.1	6.3	5.3
SSgA Custom Real Asset	177,360,100	2.9	2.8	2.1	0.1	2.3	7.2	6.4	-
SSgA Custom Real Asset Index			3.0	2.2	0.1	2.1	7.1	6.3	-
Liquidity	391,981,135	6.3	2.2	3.5	5.6	3.5	2.5	1.9	•
Blended Liquidity Index			2.5	3.3	4.7	-	-	-	-
Cash Flow-Matched Liquidity	287,521,271	4.6	2.4	3.6	5.3				-
Blmbg. 1-3 Year Gov/Credit Index			2.7	3.4	4.6	0.4	0.1	1.5	1.3
Blmbg. 1-3 Year Credit			3.0	3.8	5.3	0.8	0.5	2.0	1.7
Insight Investment*	278,615,082	4.5	2.5	3.7	5.5	-	-	-	-
Blmbg. 1-3 Year Credit			3.0	3.8	5.3	0.8	0.5	2.0	1.7
County Treasury Pool**	8,906,189	0.1	1.0	1.4	4.4	2.7	2.2	2.2	2.0
90 Day U.S. Treasury Bill			1.4	2.7	5.0	3.2	2.2	1.9	1.2
Cash & Cash Overlay	117,897,647	1.9	1.5	2.9	5.7	3.8	2.7	2.0	1.5
90 Day U.S. Treasury Bill			1.4	2.7	5.0	3.2	2.2	1.9	1.2
General Account	107,693,490	1.7	1.5	3.0	5.7	3.8	2.7	2.4	2.2
90 Day U.S. Treasury Bill			1.4	2.7	5.0	3.2	2.2	1.9	1.2

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: Portfolio Return [Risk free Rate + Portfolio Beta x (Market Return 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, a correlation of 1 means the returns of 1 me

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: Portfolio Excess Return / 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.



Disclaimer

This report contains confidential and proprietary information and is subject to the terms and conditions of the Consulting Agreement. It is being provided for use solely by the customer. The report may not be sold or otherwise provided, in whole or in part, to any other person or entity without written permission from Verus Advisory, Inc., (hereinafter Verus) or as required by law or any regulatory authority. The information presented does not constitute a recommendation by Verus and cannot be used for advertising or sales promotion purposes. This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities or any other financial instruments or products.

The information presented has been prepared using data from third party sources that Verus believes to be reliable. While Verus exercised reasonable professional care in preparing the report, it cannot guarantee the accuracy of the information provided by third party sources. Therefore, Verus makes no representations or warranties as to the accuracy of the information presented. Verus takes no responsibility or liability (including damages) for any error, omission, or inaccuracy in the data supplied by any third party. Nothing contained herein is, or should be relied on as a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the investor should be prepared to bear.

The information presented may be deemed to contain forward-looking information. Examples of forward looking information include, but are not limited to, (a) projections of or statements regarding return on investment, future earnings, interest income, other income, growth prospects, capital structure and other financial terms, (b) statements of plans or objectives of management,(c) statements of future economic performance, and (d) statements of assumptions, such as economic conditions underlying other statements. Such forward-looking information can be identified by the use of forward looking terminology such as believes, expects, may, will, should, anticipates, or the negative of any of the foregoing or other variations thereon comparable terminology, or by discussion of strategy. No assurance can be given that the future results described by the forward-looking information will be achieved. Such statements are subject to risks, uncertainties, and other factors which could cause the actual results to differ materially from future results expressed or implied by such forward looking information. The findings, rankings, and opinions expressed herein are the intellectual property of Verus and are subject to change without notice. The information presented does not claim to be all-inclusive, nor does it contain all information that clients may desire for their purposes. The information presented should be read in conjunction with any other material provided by Verus, investment managers, and custodians.

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 no 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.

