





PERIOD ENDING: June 30, 2024

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

# 2<sup>nd</sup> quarter summary

#### THE ECONOMY

- U.S. inflation (CPI) fell to 3.0% YoY in June, following two consecutive months of flat prices (0.0% in May and -0.1% in June). The report reflected a slowing in shelter costs, which have been a primary hurdle for inflation reaching the 2% Federal Reserve target. If the slowing of shelter prices persists, inflation could fall rather quickly. Core inflation (ex-Food & Energy) was 3.3% year-over-year in June.
- The U.S. labor market remains strong, but recently some cracks of weakness have appeared. Unemployment jumped unexpectedly to 4.1% in June—a level not seen since 2021. Jobless claims have also been rising. This negative data could prove to be a continuation of the trend towards a more balanced labor market, though it will be important to monitor conditions closely.

#### **EQUITY**

- Emerging market equities outperformed during Q2, up +5.0%, despite significant ongoing underperformance of China. U.S. equities were close behind (S&P 500 +4.3%), setting a new all-time-high price level. In contrast, international developed equities were flat.
- Small cap and value style investing underperformed. Small cap lagged large cap by -6.9% while value underperformed growth by -10.5%. The style premia performance gap was even wider over the past year, as small cap underperformed large cap by -13.8% and value underperformed growth by -20.4%.

#### **FIXED INCOME**

- The 10-year U.S. Treasury yield increased slightly from 4.20% to 4.36% during Q2, resulting in near-zero or negative performance for high quality fixed income of a longer duration profile.
- Default activity in loans and credit reached a one-year low at the end of Q2. However, the gap between bank loan and high yield default activity has increased to a 10-year high, with total volume of distressed or defaults comprised of loans (80%) to bonds (20%) on pace for a record high.

#### **ASSET ALLOCATION ISSUES**

- Many goods and services prices have been falling in areas such as autos, energy, and transportation. This trend has occurred alongside signs of weakness in the job market and consumer spending, and has reignited hopes for lower inflation, which would ease pressures on household budgets and allow for interest rate cuts. It is possible that an economic soft landing may be occurring, which would suggest lower rates and further gains for risk assets.
- Market-priced volatility (Cboe VIX Index) remained very low, ending at 12.4% in June. This has raised eyebrows, given a variety of risks that domestic equities face, but low volatility is typical of strongly up trending equity environments. Markets continue to present a unique environment of low equity volatility but high fixed income volatility. This gap has closed somewhat, as bond market implied volatility has receded.

Risk assets delivered moderate returns in Q2, while fixed income was flat to mildly positive, depending on duration profile.

A soft landing appears possible for the U.S. economy.



## U.S. economics summary

- Real GDP growth was substantially higher than expected in Q2, rising 2.8% quarter-over-quarter (3.1% year-over-year), beating economist forecasts of a 2.0% increase on the quarter. The GDP release reflected an increase in consumer spending, as well as increased investment in inventories and capital goods. Residential fixed investment detracted from GDP growth, as did the trade deficit.
- U.S. inflation (CPI) fell to 3.0% YoY in June, following two consecutive months of flat prices (0.0% in May and -0.1% in June). The report reflected a slowing in shelter costs, which have been a primary hurdle for inflation reaching the 2% Federal Reserve target. If a slowing of shelter prices persists, inflation could fall rather quickly. Core inflation (e.g., Food & Energy) was 3.3% year-over-year in June.
- Inflation adjusted personal spending growth was 2.6% year-over-year in June, remaining in a 2-3% range for the past two years and suggesting more

- moderate economic expansion in line with pre-pandemic conditions. Purchases of goods have been weaker than services, perhaps partly a reflection of higher interest rates, which impact the affordability of big-ticket items such as autos and homes.
- The U.S. labor market remains strong, but in recent months some cracks of weakness have appeared.
   Unemployment jumped unexpectedly to 4.1% in June—a level not seen since 2021. Jobless claims have also been rising. This negative data could prove to be a continuation of the trend towards a more balanced labor market.
- Consumer sentiment deteriorated in Q2, moving back towards the lows of 2022. The University of Michigan Consumer Sentiment survey dropped from 79.4 to 66.4 on concerns over high goods and services prices and the impacts of inflation on personal income. Household expectations for lower interest rates in the future helped to buoy the index somewhat.

	Most Recent	12 Months Prior
Real GDP (YoY)	3.1% 6/30/24	2.4% 6/30/23
Inflation (CPI YoY, Core)	3.3% 6/30/24	3.1% 6/30/23
Expected Inflation (5yr-5yr forward)	2.3% 6/30/24	2.3% 6/30/23
Fed Funds Target Range	5.25–5.50% 6/30/24	5.00–5.25% 6/30/23
10-Year Rate	4.20% 6/30/24	3.80% 6/30/23
U-3 Unemployment	<b>4.1%</b> 6/30/24	3.6% 6/30/23
U-6 Unemployment	<b>7.4%</b> 6/30/24	6.9% 6/30/23



## International economics summary

- Global economic data continues to paint a picture of slower but positive growth—a move back to prepandemic rates of expansion in the United States and across emerging markets, but with concerning weakness in Europe and Japan.
   Moderating conditions have allowed for rate cut signaling from central banks, which will likely provide an incremental boost to activity in the near-term.
- Inflation has fallen to a 2-3% range for most developed countries. Big inflation trends have tended historically to rhyme across the developed world, as crises often impact prices of global goods and services in similar ways. Recently, pandemic effects such as global supply chain issues, government stimulus, and higher energy prices had resulted in a similar ebb and flow to prices across marketplaces.
- India's economy continues to face uncertainty for this upcoming quarter.

- In the last five out of six years, India's real GDP growth rate has fallen short of the Economic Survey projections, but they have seen growth in private investments and infrastructure spending. Annual retail inflation rose to 5.1% in June compared to 4.8% from the previous month, primarily due to food prices. The Reserve Bank of India paused rate hikes, with the goal of not obstructing growth, and bringing inflation to its target rate of 4%.
- China year-over-year inflation was just 0.2% in June, as the country struggles with deflationary pressures, given a real estate slump, a weak job market, and generally poor economic conditions. According to some reports, excess manufacturing capacity and government incentives for overinvestment have created a situation where supply is outstripping demand. A declining population significantly adds to uncertainty around these issues.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	3.1% 6/30/24	3.0% 6/30/24	<b>4.1%</b> 6/30/24
Eurozone	<b>0.4%</b> 3/31/24	2.5% 6/30/24	6.4% 5/31/24
Japan	(0.7%) 3/31/24	2.3% 6/30/24	2.8% 5/31/24
BRICS Nations	5.3% 3/31/24	1.9% 6/30/24	4.8% 12/31/22
Brazil	2.5% 3/31/24	<b>4.2%</b> 6/30/24	<b>7.1%</b> 5/31/24
Russia	<b>5.4%</b> 3/31/24	8.6% 6/30/24	<b>2.6%</b> 5/31/24
India	<b>7.8%</b> 3/31/24	5.1% 6/30/24	9.2% 6/30/24
China	<b>4.7%</b> 6/30/24	0.2% 6/30/24	5.0% 6/30/24

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

- Emerging market equities
   outperformed during Q2, up +5.0%
   (MSCI Emerging Markets), despite
   ongoing poor returns from China.
   U.S. equities were close behind
   (S&P 500 +4.3%), setting a new all time-high price level. In contrast,
   international developed equities
   were relatively rangebound (MSCI
   EAFE -0.4%).
- Blended S&P 500 year-over-year
   Q2 earnings growth was +9.3% as
   of July 12th. If total reported
   earnings growth ends at this +9.3%
   rate, it would mark the largest
   year-over-year earnings growth
   rate since Q1 of 2022.
- The U.S. dollar rose moderately in value during Q2, resulting in losses for U.S. investors with unhedged foreign currency exposure. Given that the Federal Reserve is expected to engage in similar rate cuts as other developed economies, it is unclear the extent to which the global rate cutting path will impact relative currency

- valuations. Unexpected central bank actions will likely have the greatest directional impact in the future.
- Small cap and value style investing drastically underperformed during Q1. Small cap lagged large cap by -6.9% (Russell 2000 -3.3% vs. Russell 1000 +3.6%), while value underperformed growth by -10.5% (Russell 1000 Value -2.2% vs. Russell 1000 Growth +8.3%). The style premia performance gap was even wider over the last year, as small cap underperformed large cap by -13.8% and value underperformed growth by -20.4%.
- Markets continue to present a unique environment of low equity volatility but high fixed income volatility. This gap has closed somewhat, as bond market implied volatility has moved a bit back towards normal levels since reaching a nearly all-time high 2023.

	QTD TOI	AL RETURN	1 YEAR TOTA	AL RETURN
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	4	.3%	24.6	5%
U.S. Small Cap (Russell 2000)	(3	3.3%)	10.3	<b>1</b> %
U.S. Equity (Russell 3000)	3.2%		23.1%	
U.S. Large Value (Russell 1000 Value)	(2.2%)		13.1%	
US Large Growth (Russell 1000 Growth)	8	3.3%	33.5	5%
Global Equity (MSCI ACWI)	2.9%	3.5%	19.4%	21.6%
International Large (MSCI EAFE)	(0.4%)	1.7%	11.5%	18.5%
Eurozone (EURO STOXX 50)	(2.8%)	(1.7%)	12.0%	16.3%
U.K. (FTSE 100)	3.8%	3.8%	12.1%	13.2%
Japan (TOPIX)	(4.3%)	3.0%	12.7%	32.5%
Emerging Markets (MSCI Emerging Markets)	5.0%	6.3%	12.5%	15.8%

Source: Russell Investments, MSCI, STOXX, FTSE, JPX, as of 6/30/24



## Domestic equity

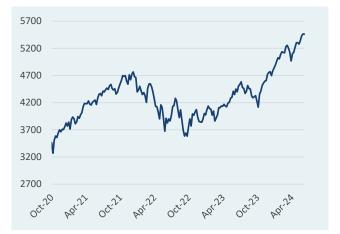
U.S. equities further outperformed international developed equities, but lagged emerging market shares, with the S&P 500 finishing up +4.3% during the quarter. The artificial intelligence boom provided a tailwind to earnings of chip manufacturers and has likely helped to lift valuations more broadly. Signs of cooling in the labor market, as well as surprisingly weak inflation figures, helped reignite investor hopes for an economic soft landing and interest rate cuts.

Blended S&P 500 year-over-year Q2 earnings growth was +9.3% as of July 12<sup>th</sup>. If total reported earnings growth ends at this +9.3% rate, it would mark the largest year-over-year earnings growth rate since Q1 of 2022. Communication Services (+18.4%) and Information Technology

(+16.4%) were the earnings leaders, while Materials (-11.8%) and Industrials (-3.7%) lagged.

Strong price gains have moved valuations towards the richer side of the historical range. This effect, alongside higher interest rates and more attractive bond yields, has resulted in a regime shift regarding the attractiveness of equity and fixed income. Expensive equity prices have pushed total U.S. equity yield to below 4%, at a time when holding cash yields materially more than 5% and core fixed income yields 5%. This new regime is captured in institutional capital market assumptions which now tend to reflect mild future domestic equity returns and robust fixed income returns.

#### S&P 500 PRICE INDEX



Source: Bloomberg, as of 6/30/24

#### **RELATIVE YIELD: EQUITY VS FIXED INCOME**



Source: Bloomberg, Standard & Poor's, Verus, as of 6/30/24

#### S&P 500 EPS GROWTH (YEAR-OVER-YEAR)



Source: Bloomberg, Factset, Verus, as of 7/19/24



# Domestic equity size & style

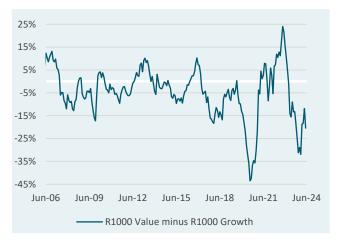
Small cap and value style investing drastically underperformed during Q1. Small cap lagged large cap by -6.9% (Russell 2000 -3.3% vs. Russell 1000 +3.6%), while value underperformed growth by -10.5% (Russell 1000 Value -2.2% vs. Russell 1000 Growth +8.3%). The style premia performance gap was even wider over the last year, as small cap underperformed large cap by -13.8% and value underperformed growth by -20.4%.

Much of the difference in style performance is driven by sector differences. Growth has a much greater exposure to mega cap technology companies, which continued to overshadow all other sectors in the second quarter. Nvidia extended its historic run, while Apple and Tesla bounced back from a poor first quarter. Technology and Communication companies led earnings

growth and this is expected to persist going forward. Per Factset, Communication Services and Technology companies within the S&P 500 are expected to provide earnings growth of 21% and 18.7%, respectively, leading all other sectors. This has translated into volatility between sectors, where Technology (+13.8%) and Communications (+9.4%) led the S&P 500 in Q2, while six out of eleven sectors declined in value over the quarter.

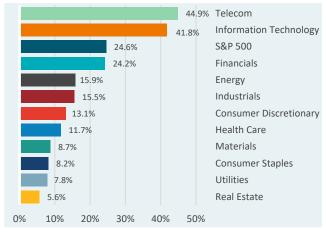
Unusually large disparities in style performance has been apparent, driven by sector trends and mega cap stock dominance. Market behavior continues to support our stance that short-term factor timing decisions should in most circumstances be pursued only in the rare occasion of obvious market mispricing and with a clear catalyst for price correction.

#### VALUE VS. GROWTH 1-YR ROLLING



Source: FTSE, Bloomberg, as of 6/30/24

#### S&P 500 SECTOR RETURNS (1 YEAR ROLLING)



Source: FTSE, Bloomberg, as of 6/30/24

#### 1-YEAR SIZE & STYLE PERFORMANCE

	Value	Core	Growth
Large Cap	13.1%	23.9%	33.5%
Mid Cap	12.0%	12.9%	15.1%
Small Cap	10.9%	10.1%	9.1%

Source: FTSE, Bloomberg, as of 6/30/24



## International developed equity

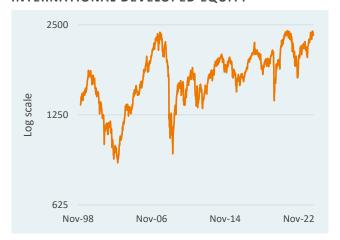
International developed shares had a weak second quarter, trailing domestic and emerging markets equities. The MSCI EAFE Index returned +1.7% in U.S. dollar terms, while losing value (-0.4%) if the exposure remained unhedged. The ECB cut rates for the first time in five years in June, with the intention of stimulating a set of economies that had been otherwise stagnant, especially in comparison to the U.S. economy. The dollar's advance was likely fueled by this ECB rate cut, which increased the interest rate differential between the U.S. dollar and the Euro, providing a headwind for unhedged investors.

Some of the discrepancy in performance between U.S. and international developed equities can be attributed to sector

differences. U.S. equities are heavily concentrated in technology companies, while developed markets have a more diversified sector breakdown, with Financials and Industrials – two sectors that tilt towards value – more heavily weighted in developed markets. This lower exposure to technology companies has not helped developed equity performance over the past couple of years, but if richly valued U.S. tech companies have a pullback, it would provide a material boost.

Markets will continue to watch the effect of adjustments to rate cut expectations, as European economies attempt to stimulate growth that has been lackluster this year without reigniting inflation.

#### INTERNATIONAL DEVELOPED EQUITY



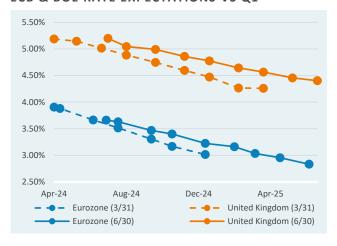
Source: MSCI, as of 6/30/24

#### MSCI EAFE VS. S&P 500 SECTOR DISTRIBUTION



Source: MSCI, S&P, as of 5/31/24

#### ECB & BOE RATE EXPECTATIONS VS 01



Source: Bloomberg, as of 6/30/24



# Emerging market equity

Emerging market equities were the highest performing equity market in portfolios (MSCI EM +5.0%), outpacing the domestic market (S&P 500 +4.3%) and international developed equities (MSCI EAFE -0.4%).

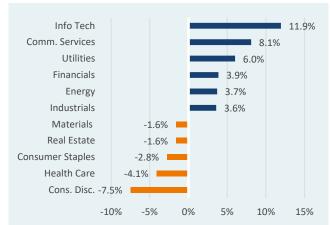
Sector differences played out in Emerging Markets, much as they did in the U.S., with Info Tech (+11.9%) being the best performing sector in the MSCI EM Index. This growth was bolstered by Taiwan Semiconductor Manufacturing Company (TSMC), who reported earnings growth of +36% in Q2. TSMC works directly with several domestic mega cap tech companies and makes up nearly 10% of the MSCI EM index.

Chinese equities continue to be cheap from a valuation perspective but face serious structural issues which could further act as a drag on performance. Real estate market shakiness has come back to the forefront of many investors' minds. A large inventory of real estate sits empty, China's population is in decline and that decline is expected to accelerate, and a large portion of the economic boom has only been possible through ongoing real estate construction. It is difficult to imagine how these woes are resolved without a serious downward resetting of prices which would be incredibly painful for Chinese citizens who, on average, hold a large portion of their wealth in real estate.

#### **EMERGING MARKET EQUITY**



#### MSCI EM Q2 2024 SECTOR RETURNS (USD)



Source: MSCI, J.P. Morgan, as of 6/30/24

#### SUBSTANTIAL CHINA UNDERPERFORMANCE



Source: MSCI, as of 6/30/24



Source: MSCI, as of 6/30/24

10

## Fixed income environment

- The 10-year U.S. Treasury yield initially increased in Q2, rising from 4.20% to a peak of 4.70% before gradually falling to 4.36%, resulting in an overall increase in yields with a downward trend going into Q3. These movements resulted in near-zero performance for short to intermediate duration high quality fixed income and negative performance for longer duration.
- By comparison, most credit indices saw positive returns. High yield gained +1.1% (Bbg U.S. Corporate High Yield), while bank loans rose +1.9% (S&P/LSTA Leveraged Loan). Longer duration investment grade corporate bonds declined by -1.6% (Bloomberg U.S. Long Corporate Credit) as sensitivity to rising yields in April overwhelmed gradual returns in the latter half of the quarter. This reflects a continued concern in the market over inflation and higher-for-longer Fed policy.
- The U.S. yield curve, indicated by the 10-year minus the 2-year Treasury

- yield, continues to remain inverted, marking over two years of continuous yield curve inversion (June 6th, 2022). The curve ended the quarter inverted by -35bps. While an inverted yield curve has been a common metric for predicting recessions, the recent continued economic resilience has increased public optimism of a potential soft-landing.
- Default activity in loans and credit reached a one-year low at the end of Q2. However, the gap between bank loan and high yield default activity has increased to a 10-year high, with total volume of distressed or defaults comprised of loans (80%) to bonds (20%) is on pace to be a record high proportion. During the period, a total of \$15.2 billion of bank loan and high yield bonds were impacted by default or distressed exchanges, down from \$20.6 billion in the prior quarter. Notably, default/distressed exchange volume averaged \$17.9 billion quarterly since 2020 and \$14 billion quarterly over the last 17.5 years.

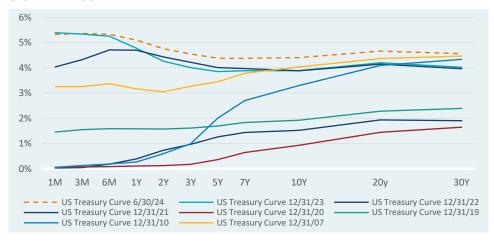
	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	0.1%	2.6%
Core Plus Fixed Income (Bloomberg U.S. Universal)	0.2%	3.5%
U.S. Treasuries (Bloomberg U.S. Treasury)	0.1%	1.5%
U.S. Treasuries: Long (Bloomberg U.S. Treasury 20+)	(2.2%)	(7.2%)
U.S. High Yield (Bloomberg U.S. Corporate HY)	1.1%	10.4%
Bank Loans (S&P/LSTA Leveraged Loan)	1.9%	11.1%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	-1.6%	0.7%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	0.3%	9.2%
Mortgage-Backed Securities (Bloomberg MBS)	0.1%	2.1%

Source: Bloomberg, as of 6/30/24

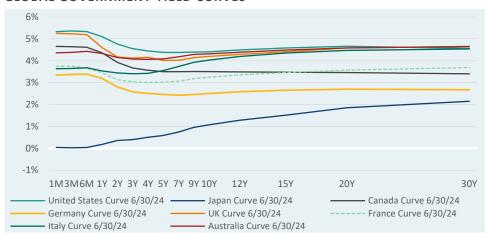


## Yield environment

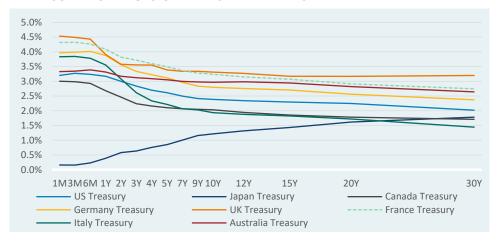
#### U.S. YIELD CURVE



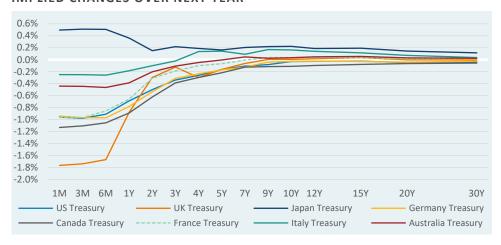
#### GLOBAL GOVERNMENT YIELD CURVES



#### YIELD CURVE CHANGES OVER LAST FIVE YEARS



#### **IMPLIED CHANGES OVER NEXT YEAR**



Source: Bloomberg, as of 6/30/24



# Currency

The U.S. dollar rose modestly in value during Q2, resulting in losses for investors with unhedged foreign currency exposure. Given that the Federal Reserve is expected to engage in similar sized rate cuts as other developed central banks, it is unclear the extent to which the *rate cutting path* will impact relative currency valuations. Unexpected central bank actions will likely have the greatest directional impact in the future.

Investors without a currency hedging program lost -1.2% from their international developed equity exposure (MSCI EAFE) during Q2 due to currency movements and -7.0% over the past year. Losses from unhedged Japanese currency exposure have once again been extreme (-7.3% over the quarter, -19.8% over the past year, based on the TOPIX Index), while unhedged European equity exposure losses due to currency were milder (-1.1% over the quarter, -4.3% over the past year, EURO Stoxx 50 Index).

A more thoughtful portfolio approach to currency exposure has provided the dual benefit of lower portfolio volatility and also higher returns—a rare proposition in markets. This approach involves reducing the uncompensated risk of unhedged foreign currency exposure, and instead of unhedged exposure, making 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. This approach, represented by the MSCI Currency Factor Mix Index—has offered a positive one-year rolling return over most periods with far lower volatility than the unhedged currency exposure that many investors hold. The past year is testament to this approach, this program would have far outperformed unhedged currency exposure, and with much less volatility.

#### **EFFECT OF CURRENCY (1-YEAR ROLLING)**



#### Source: MSCI, as of 6/30/24

#### U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Bloomberg, as of 6/30/24

#### **EMBEDDED CURRENCY VS CURRENCY FACTORS**



Source: Bloomberg, MSCI, as of 6/30/24



## Detailed index returns

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	3.6	4.3	15.3	24.6	10.0	15.0	12.9
S&P 500 Equal Weighted	(0.5)	(2.6)	5.1	11.8	4.8	10.9	10.0
DJ Industrial Average	1.2	(1.3)	4.8	16.0	6.4	10.3	11.3
Russell Top 200	4.5	5.7	17.2	27.4	10.9	16.4	13.8
Russell 1000	3.3	3.6	14.2	23.9	8.7	14.6	12.5
Russell 2000	(0.9)	(3.3)	1.7	10.1	(2.6)	6.9	7.0
Russell 3000	3.1	3.2	13.6	23.1	8.1	14.1	12.1
Russell Mid Cap	(0.7)	(3.3)	5.0	12.9	2.4	9.5	9.0
Style Index							
Russell 1000 Growth	6.7	8.3	20.7	33.5	11.3	19.3	16.3
Russell 1000 Value	(0.9)	(2.2)	6.6	13.1	5.5	9.0	8.2
Russell 2000 Growth	(0.2)	(2.9)	4.4	9.1	(4.9)	6.2	7.4
Russell 2000 Value	(1.7)	(3.6)	(3.6)	10.9	(0.5)	7.1	6.2

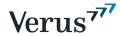
INTERNATIONAL EQUITY							
Broad Index							
MSCI ACWI	2.2	2.9	11.3	19.4	5.4	10.8	8.4
MSCI ACWI ex US	(0.1)	1.0	5.7	11.6	0.5	5.5	3.8
MSCI EAFE	(1.6)	(0.4)	5.3	11.5	2.9	6.5	4.3
MSCI EM	3.9	5.0	7.5	12.5	(5.1)	3.1	2.8
MSCI EAFE Small Cap	(3.0)	(1.8)	0.5	7.8	(3.4)	4.2	4.3
Style Index							
MSCI EAFE Growth	(0.4)	(8.0)	6.2	9.4	0.1	6.5	5.4
MSCI EAFE Value	(2.8)	0.0	4.5	13.7	5.5	6.1	3.0
Regional Index							
MSCI UK	(1.8)	3.7	6.9	12.5	6.9	5.7	2.7
MSCI Japan	(0.7)	(4.3)	6.3	13.1	2.3	6.6	5.5
MSCI Euro	(3.3)	(2.8)	5.4	10.1	3.6	7.2	4.1
MSCI EM Asia	5.0	7.4	11.0	15.1	(5.5)	4.6	4.5
MSCI EM Latin American	(6.1)	(12.2)	(15.7)	(5.6)	0.9	0.1	(0.3)

Source: Morningstar, HFRI, as of 6/30/24

#### FIXED INCOME

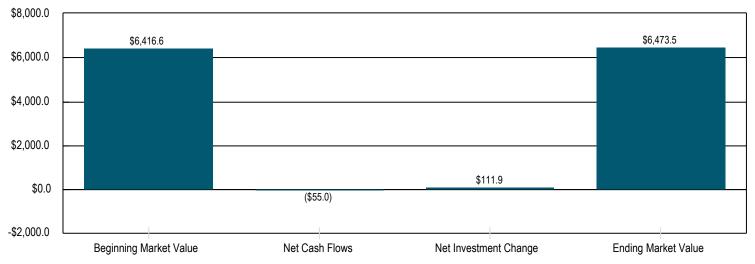
	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
Bloomberg US TIPS	0.8	0.8	0.7	2.7	(1.3)	2.1	1.9
Bloomberg US Treasury Bills	0.4	1.3	2.6	5.5	3.0	2.2	1.5
Bloomberg US Agg Bond	0.9	0.1	(0.7)	2.6	(3.0)	(0.2)	1.3
Bloomberg US Universal	0.9	0.2	(0.3)	3.5	(2.7)	0.1	1.6
Duration							
Bloomberg US Treasury 1-3 Yr	0.6	0.9	1.2	4.5	0.3	1.0	1.1
Bloomberg US Treasury Long	1.7	(1.8)	(5.0)	(5.6)	(10.5)	(4.3)	0.6
Bloomberg US Treasury	1.0	0.1	(0.9)	1.5	(3.3)	(0.7)	0.9
Issuer							
Bloomberg US MBS	1.2	0.1	(1.0)	2.1	(2.9)	(8.0)	0.9
Bloomberg US Corp. High Yield	0.9	1.1	2.6	10.4	1.6	3.9	4.3
Bloomberg US Agency Interm	0.7	0.8	1.0	4.5	(0.5)	0.6	1.2
Bloomberg US Credit	0.7	(0.0)	(0.5)	4.4	(2.9)	0.5	2.2

OTHER							
Index							
Bloomberg Commodity	(1.5)	2.9	5.1	5.0	5.7	7.2	(1.3)
Wilshire US REIT	3.0	(0.2)	(0.3)	8.6	0.3	4.0	5.9
CS Leveraged Loans	0.3	1.9	4.4	11.0	6.0	5.4	4.6
S&P Global Infrastructure	(2.9)	2.7	4.0	7.0	5.6	4.3	4.6
Alerian MLP	4.7	3.8	19.2	34.2	22.3	11.1	1.9
Regional Index							
JPM EMBI Global Div	0.6	0.3	2.3	9.2	(3.5)	0.6	3.2
JPM GBI-EM Global Div	(1.1)	(1.6)	0.7	0.7	(3.3)	(1.3)	(0.9)
Hedge Funds							
HFRI Composite	(0.2)	0.4	4.8	9.6	2.8	6.6	4.8
HFRI FOF Composite	0.1	0.4	4.6	8.4	2.0	4.8	3.5
Currency (Spot)							
Euro	(1.3)	(1.8)	(3.0)	(1.8)	(3.3)	(1.2)	(2.4)
Pound Sterling	(0.7)	0.3	(0.8)	(0.6)	(2.9)	(0.1)	(3.0)
Yen	(2.3)	(10.1)	(12.4)	(10.2)	(11.6)	(7.7)	(4.5)



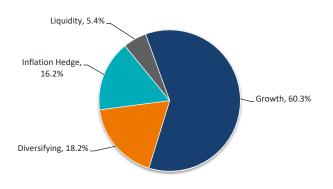
	Portfolio Reconciliation	
	3 Mo	1 Yr
Beginning Market Value	\$6,416,592,703	\$5,990,311,826
Net Cash Flows	-\$55,049,239	-\$75,521,729
Net Investment Change	\$111,920,676	\$558,674,043
Ending Market Value	\$6,473,464,140	\$6,473,464,140

#### Change in Market Value Last Three Months



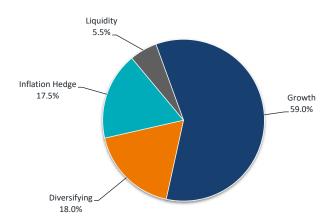


**Current w/ Overlay** 



ASSET ALLOCATION	MARKET VALUE W/	W/ OVERLAY	W/O OVERLAY
Growth	3,903,561,465	60.3%	58.9%
Diversifying	1,175,062,898	18.2%	18.3%
Inflation Hedge	1,048,454,364	16.2%	16.2%
Liquidity	346,385,413	5.4%	6.6%
TOTAL	6,473,464,140	100.0%	100.0%

Target



ASSET ALLOCATION	W/ OVERLAY	TARGET	DIFF
Growth	60.3%	59.0%	1.3%
Diversifying	18.2%	18.0%	0.2%
Inflation Hedge	16.2%	17.5%	-1.3%
Liquidity	5.4%	5.5%	-0.1%
TOTAL	100.0%	100.0%	0.0%



		Statistics Summa 3 Years	ary		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Total Fund	3.2 (47)	7.4 (17)	0.1 (49)	-0.6 (78)	2.1 (2)
Policy Index	4.4 (17)	8.6 (37)	0.2 (18)	-	0.0
Policy Index II	3.8 (32)	8.9 (46)	0.1 (33)	-1.1 (96)	0.5 (1)
InvMetrics Public DB > \$1B Median	3.0	9.0	0.1	-0.3	2.9
		Statistics Summa 5 Years	ry		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Total Fund	6.4 (79)	8.4 (22)	0.5 (44)	-0.4 (93)	2.3 (4)
Policy Index	7.4 (38)	9.0 (28)	0.6 (26)	-	0.0
Policy Index II	7.0 (56)	9.3 (34)	0.5 (36)	-0.6 (98)	0.5 (1)
InvMetrics Public DB > \$1B Median	7.2	10.1	0.5	0.0	3.0
		Statistics Summa 10 Years	ry		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Total Fund	6.1 (66)	7.5 (26)	0.6 (40)	-0.4 (80)	1.8 (1)
Policy Index	6.7 (32)	7.9 (38)	0.7 (27)	-	0.0
Policy Index II	<u>-</u>	<del>-</del>	<u>-</u>	-	-
InvMetrics Public DB > \$1B Median	6.3	8.3	0.6	-0.1	2.5



- The Total Fund, net of manager fees, returned 1.7% in the second quarter of 2024 and in the ranked 12<sup>th</sup> percentile among other public plans greater than \$1 billion (median of 1.0%). It lagged the policy index return of 2.2%. The Total Fund ex Overlay returned 1.7% for the quarter. The Total Fund one-year return of 9.2% lagged the policy index return of 11.7% and ranked in the 59<sup>th</sup> percentile of its peer universe. The three-year return of 3.2% (47<sup>th</sup> percentile) beat the median large public plan (3.0%) and lagged the policy index (4.4%).
- Second quarter results were enhanced by the following factors:
  - 1. Private Real assets had strong performance over the quarter beating the benchmark by 4.2% (gaining 6.1% for the quarter).
- Second quarter results were hindered by the following factors:
  - 1. PanAgora Defensive Equity trailed the Russell 1000 (0.2% vs 3.6%). PanAgora's low volatility strategy is more risk diversified than the index and hurt as relatively few large names (mostly not low vol candidates) continued to drive the Russell 1000 Returns.
  - 2. Baillie Gifford lost -0.7% trailing the MSCI ACWI ex US Growth (0.9%). Holdings in Adyen a payment software system along with two biotech companies provided a headwind to performance.

### 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
Total Fund**	6,473,464,140	100.0	1.7 (11)	5.2 (47)	9.2 (59)	9.2 (59)	7.2 (80)	3.2 (47)	6.4 (79)	6.1 (66)
Policy Index			2.2 (3)	7.1 (2)	11.7 (15)	11.7 (15)	9.1 (44)	4.4 (17)	7.4 (38)	6.7 (32)
Simple Benchmark			1.4 (28)	5.5 (32)	9.8 (48)	9.8 (48)	8.4 (58)	2.7 (69)	6.8 (62)	6.4 (45)
InvMetrics Public DB > \$1B			1.0	5.1	9.7	9.7	8.8	3.0	7.2	6.3
Total Fund ex Overlay	6,461,386,948	99.8	1.7 (11)	5.2 (48)	9.2 (61)	9.2 (61)	7.0 (84)	3.2 (47)	6.4 (81)	6.0 (70)
Policy Index			2.2 (3)	7.1 (2)	11.7 (15)	11.7 (15)	9.1 (44)	4.4 (17)	7.4 (38)	6.7 (32)
Simple Benchmark			1.4 (28)	5.5 (32)	9.8 (48)	9.8 (48)	8.4 (58)	2.7 (69)	6.8 (62)	6.4 (45)
InvMetrics Public DB > \$1B			1.0	5.1	9.7	9.7	8.8	3.0	7.2	6.3
Growth Portfolio	3,903,561,465	60.3	2.4	7.7	13.6	13.6	11.9			
Blended Growth Index			3.4	11.3	19.5	19.5	16.0	6.4	11.0	-
US Equity	1,565,957,445	24.2	2.8 (33)	12.3 (44)	20.7 (58)	20.7 (58)	18.2 (72)	8.2 (18)	12.4 (74)	11.0 (71)
Blended US Equity Index			3.2 (18)	13.6 (22)	23.1 (24)	23.1 (24)	21.0 (26)	8.1 (23)	14.1 (17)	12.1 (28)
Russell 3000 Index			3.2 (18)	13.6 (22)	23.1 (24)	23.1 (24)	21.0 (26)	8.1 (23)	14.1 (17)	12.1 (19)
BlackRock Russell 1000	932,835,406	14.4	3.6 (39)	14.2 (47)	23.9 (44)	23.9 (44)	21.6 (33)	8.7 (46)	14.6 (29)	-
DE Shaw	237,593,939	3.7	5.1 (12)	18.1 (13)	27.0 (22)	27.0 (22)	21.6 (33)	9.3 (39)	14.0 (43)	12.6 (22)
PanAgora Defuseq	250,421,372	3.9	0.2 (79)	6.1 (90)	8.5 (98)	8.5 (98)	7.6 (100)	5.2 (89)	7.7 (97)	-
Russell 1000 Index			3.6 (39)	14.2 (47)	23.9 (45)	23.9 (45)	21.6 (33)	8.7 (46)	14.6 (30)	12.5 (25)
eV US Large Cap Core Equity Median			3.0	13.8	22.7	22.7	20.0	8.3	13.5	11.6
PGIM Quant Solutions	131,410,678	2.0	-2.2 (32)	2.2 (52)	12.8 (33)	12.8 (33)	15.3 (22)	4.1 (23)	8.7 (59)	-
Russell 2000 Index			-3.3 (50)	1.7 (64)	10.1 (54)	10.1 (54)	11.2 (64)	-2.6 (88)	6.9 (85)	7.0 (79)
eV US Small Cap Core Equity Median			-3.3	2.3	10.5	10.5	12.3	1.5	9.2	8.0
International Equity	1,214,803,036	18.8	1.2 (16)	5.6 (43)	9.9 (63)	9.9 (63)	12.0 (63)	0.3 (51)	6.4 (39)	4.5 (33)
Blended International Equity Index			1.8 (10)	8.2 (9)	14.5 (7)	14.5 (7)	14.1 (17)	3.3 (10)	7.5 (11)	5.0 (14)
International Equity x Currency Overlay	1,207,293,966	18.6	0.7	4.4	9.0	9.0	11.2	-0.2	6.0	4.3
Blended International Equity Index			1.8	8.2	14.5	14.5	14.1	3.3	7.5	5.0
Baillie Gifford	289,666,489	4.5	-0.7 (50)	3.0 (61)	3.1 (88)	3.1 (88)	8.5 (85)	-8.8 (85)	3.9 (80)	4.2 (86)
MSCI ACWI ex US			1.2 (24)	6.0 (35)	12.2 (22)	12.2 (22)	12.7 (44)	1.0 (16)	6.1 (52)	4.3 (83)
MSCI ACWI ex US Growth			0.9 (28)	6.9 (29)	10.2 (30)	10.2 (30)	11.9 (55)	-2.3 (45)	5.8 (56)	5.1 (63)
Mondrian	288,233,212	4.5	1.3 (33)	3.5 (58)	10.1 (64)	10.1 (64)	10.8 (81)	1.3 (72)	4.4 (88)	2.9 (76)
MSCI AC World ex USA Value			1.6 (29)	5.2 (35)	14.2 (32)	14.2 (32)	13.6 (52)	4.3 (28)	6.0 (62)	3.4 (73)
MSCI AC World ex USA Index			1.2 (35)	6.0 (30)	12.2 (49)	12.2 (49)	12.7 (55)	1.0 (77)	6.1 (61)	4.3 (28)
BlackRock MSCI ACWI EX-US IMI	622,407,957	9.6	1.1 (36)	5.5 (45)	11.6 (44)	11.6 (44)	12.2 (62)	0.4 (51)	-	-
MSCI AC World ex USA IMI (Net)			0.9 (43)	5.3 (45)	11.6 (44)	11.6 (44)	12.0 (63)	0.2 (54)	5.6 (62)	3.9 (78)
Record Dynamic Currency Hedge	7,509,070	0.1								

### Total Fund Performance Summary (Net of Fees)

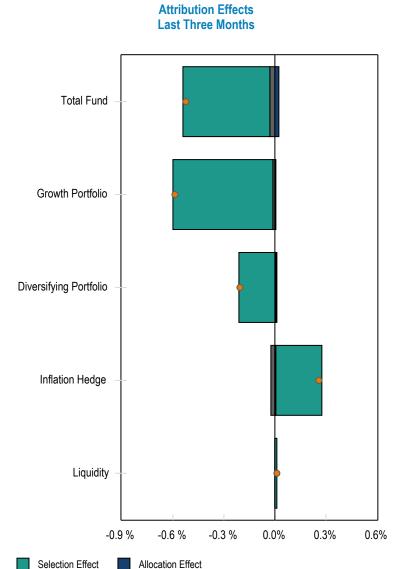
	Market Value	% of Portfolio	3 Mo Rank	YTD	Fiscal YTD	1 Yr Rank	2 Yrs Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs Rank
Private Equity***	443,372,351	6.8	7.3 (1)	5.6 (10)	9.0 (17)	9.0 (17)	0.9 (60)	3.4 (82)	19.2 (4)	17.7 (7)
Blended Private Equity Index			10.7 (1)	24.9 (1)	32.3 (1)	32.3 (1)	11.8 (1)	12.8 (12)	17.4 (10)	14.8 (23)
Opportunistic Credit	679,428,632	10.5	0.6	2.6	7.7	7.7	-	-		-
Opportunistic Credit Index			1.5	3.4	11.0	11.0	9.1	2.8	4.4	4.5
Public Credit	481,753,488	7.4	0.9	2.7	9.0	9.0	6.7	2.6	4.2	4.8
Blmbg. U.S. Corp: High Yield Index			1.1	2.6	10.4	10.4	9.7	1.6	3.9	4.3
Beach Point Select	113,779,078	1.8	0.8 (82)	3.2 (31)	10.5 (32)	10.5 (32)	7.3 (94)	4.7 (4)	7.7 (1)	-
Brigade Capital	109,119,894	1.7	0.4 (96)	2.7 (54)	8.0 (92)	8.0 (92)	5.0 (99)	1.7 (56)	4.4 (24)	3.9 (56)
One William Street	66,533,684	1.0	1.9 (4)	5.6 (2)	10.9 (23)	10.9 (23)	-	-	-	-
Blmbg. U.S. Corp: High Yield Index			1.1 (68)	2.6 (64)	10.4 (34)	10.4 (34)	9.7 (31)	1.6 (58)	3.9 (42)	4.3 (31)
eV US High Yield Fixed Inc Median			1.2	2.8	9.9	9.9	9.1	1.8	3.8	4.0
PIMCO Diversified	130,763,100	2.0	0.6 (95)	1.9 (94)	8.6 (89)	8.6 (89)	7.1 (97)	-1.0 (100)	1.3 (100)	-
Blmbg. U.S. Corp: High Yield Index			1.1 (75)	2.6 (75)	10.4 (51)	10.4 (51)	9.7 (50)	1.6 (80)	3.9 (71)	4.3 (62)
Eaton Vance Emerging Markets Debt Opportunities Fund	61,557,732	1.0	1.5 (3)	-	-	-	-	-	-	-
JPM EMB (JEMB) Hard Currency/Local Currency 50-50			-0.4 (42)	-0.3 (75)	4.9 (83)	4.9 (83)	6.9 (83)	-2.3 (73)	-0.1 (73)	1.1 (65)
eV Emg Mkts Fixed Inc - Blended Currency			-0.6	0.7	6.7	6.7	8.4	-1.6	0.6	1.5
Private Credit	197,675,144	3.1	-0.2	2.2	3.9	3.9	4.4	4.3	5.6	-
Credit Suisse Leveraged Loan Index 1 Qtr Lag			2.5	5.4	12.4	12.4	7.1	5.8	5.3	4.6
AG CSF ADF II	4,347,839	0.1	-1.7	0.5	10.4	10.4	-	-	-	-
AG CSF II	22,838,234	0.4	1.4	4.2	13.6	13.6	11.5	-	-	-
Angelo Gordon Credit Solutions	6,503,737	0.1	0.2 (97)	2.3 (77)	9.6 (65)	9.6 (65)	6.2 (97)	4.7 (4)	-	-
Blackrock DL Feeder IX-U	40,916,461	0.6	-1.2	-0.1	5.2	5.2	6.1	5.8	-	-
Comvest Credit Partners VII	2,250,000	0.0	-	-	-	-	-	-	-	-
PIMCO Private Income	50,048,650	0.8	0.0	2.8	5.6	5.6	4.4	4.3	7.0	-
TCP Direct Lending VIII	9,526,787	0.1	-0.6	1.3	4.3	4.3	5.4	4.6	5.3	-
White Oak Yield	29,743,963	0.5	0.0	2.5	3.9	3.9	3.4	4.1	4.8	-
White Oak YSF V	31,499,473	0.5	0.0 (98)	3.4 (26)	2.5 (100)	2.5 (100)	1.1 (100)	1.6 (59)	-	-
Credit Suisse Leveraged Loan Index 1 Qtr Lag eV US High Yield Fixed Inc Median			2.5 (2) 1.2	5.4 (3) 2.8	12.4 (7) 9.9	12.4 (7) 9.9	7.1 (94) 9.1	5.8 (1) 1.8	5.3 (11) 3.8	4.6 (21) 4.0

	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
Diversifying Portfolio	1,175,062,898	18.2	-0.7	0.6	4.2	4.2	1.4			
Blended Diversifying Index			0.4	0.3	3.6	3.6	2.8	0.0	1.7	2.7
Defensive Fixed Income	847,952,894	13.1	-0.3	-1.3	2.5	2.5	1.0	-3.2	-0.1	1.5
Blended Defensive Fixed Income Benchmark			-0.4	-1.7	0.7	0.7	-0.1	-3.6	-0.6	1.2
DoubleLine	260,342,409	4.0	0.3 (67)	0.5 (56)	3.7 (61)	3.7 (61)	1.5 (55)	-3.0 (81)	-	-
Blmbg. U.S. Aggregate Index			0.1 (91)	-0.7 (76)	2.6 (74)	2.6 (74)	0.8 (64)	-3.0 (81)	-0.2 (61)	1.3 (59)
eV US Securitized Fixed Inc Median			0.8	1.5	5.4	5.4	2.1	-1.2	0.5	1.9
FIAM Bond	150,022,582	2.3	0.2 (48)	-0.3 (53)	3.5 (36)	3.5 (36)	1.6 (27)	-2.5 (22)	0.7 (12)	2.0 (7)
NISA Core Bond	281,289,033	4.3	0.0 (88)	-0.6 (78)	2.8 (72)	2.8 (72)	1.1 (67)	-2.7 (40)	-	-
Blmbg. U.S. Aggregate Index			0.1 (83)	-0.7 (90)	2.6 (81)	2.6 (81)	0.8 (79)	-3.0 (72)	-0.2 (86)	1.3 (80)
eV US Core Fixed Inc Median			0.2	-0.3	3.2	3.2	1.3	-2.8	0.1	1.6
NISA Long Treasury	144,789,588	2.2	-1.8	-5.0	-5.4	-5.4	-	-	-	-
Blmbg. U.S. Treasury: Long			-1.8	-5.0	-5.6	-5.6	-6.2	-10.5	-4.3	0.6
Absolute Return	327,110,004	5.1	-1.8 (92)	5.1 (45)	7.3 (77)	7.3 (77)	2.3 (84)	4.4 (39)	1.4 (80)	1.8 (73)
Absolute Return Custom Index			2.1 (20)	4.5 (57)	9.4 (57)	9.4 (57)	8.7 (29)	7.2 (14)	6.2 (32)	5.6 (13)
CFM Systematic Global Macro	109,334,294	1.7	0.1 (69)	-0.1 (87)	7.3 (63)	7.3 (63)	1.1 (86)	4.0 (50)	-	-
Graham Quant Macro	108,430,411	1.7	-3.0 (87)	14.0 (7)	12.9 (30)	12.9 (30)	4.7 (68)	8.6 (23)	-	-
PIMCO MAARS Fund LP	109,345,299	1.7	-1.2 (81)	8.2 (26)	13.6 (28)	13.6 (28)	8.2 (40)	12.7 (11)	-	-
Absolute Return Custom Index			2.1 (37)	4.5 (57)	9.4 (49)	9.4 (49)	8.7 (36)	7.2 (30)	6.2 (51)	5.6 (48)
eV Alt All Multi-Strategy Median			1.3	5.1	9.2	9.2	6.9	4.0	6.2	5.4
Inflation Hedge	1,048,454,364	16.2	2.2	2.4	0.9	0.9	-0.8	4.8	3.7	
Blended Inflation Hedge Index			0.7	2.2	-2.5	-2.5	-4.0	4.3	5.1	4.8
Real Estate	470,174,791	7.3	-0.7 (54)	-2.0 (1)	-7.8 (23)	-7.8 (23)	-6.4 (28)	1.9 (11)	3.1 (13)	6.5 (4)
NCREIF ODCE			-0.4 (47)	-2.8 (27)	-9.3 (69)	-9.3 (69)	-9.6 (65)	1.9 (12)	3.2 (12)	6.4 (5)
Harrison Street Core Property	90,412,068	1.4	0.4	-1.4	-6.9	-6.9	-3.0	2.6	-	-
Invesco	226,779,760	3.5	-1.4	-4.8	-10.8	-10.8	-10.4	0.6	2.0	5.9
Invesco US Val IV	99,763	0.0	-6.4	-14.8	-50.7	-50.7	-54.7	-40.6	-24.6	-
Invesco US Val V	23,126,386	0.4	-1.5	-2.5	-28.6	-28.6	-17.9	-7.2	-0.4	-
Invesco US Val VI	23,772,890	0.4	0.0	13.5	-4.0	-4.0	-	-	-	-
PGIM RE US Debt Fund	73,088,020	1.1	1.7	3.2	6.0	6.0	6.5	6.0	5.7	-
NCREIF ODCE			-0.4	-2.8	-9.3	-9.3	-9.6	1.9	3.2	6.4
Stockbridge Value IV	26,225,091	0.4	-3.8	-3.8	-8.5	-8.5	-1.4	8.4	-	-
Stockbridge Value V	6,670,812	0.1	-	-	-	-	-	-	-	-
NCREIF ODCE			-0.4	-2.8	-9.3	-9.3	-9.6	1.9	3.2	6.4



### 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 Assets	364,036,471	5.6	6.4	8.2	12.3	12.3	6.4	12.1	10.6	
Blended Private Real Assets Index			1.9	10.6	4.7	4.7	1.0	7.8	7.2	6.3
Blended Secondary CA Private RA Index			2.5	3.8	7.5	7.5	7.5	13.2	8.3	-
Private Real Asset***	235,749,636	3.6	5.4	7.2	11.2	11.2	5.9	11.8	10.4	-
Brookfield Super-Core Infrastructure Partners	65,883,382	1.0	2.9	6.2	10.5	10.5	9.3	-	-	-
KKR Diversified Core Infrastructure Fund	62,403,453	1.0	2.6	4.3	7.4	7.4	-	-	-	-
Public Real Assets	214,243,103	3.3	1.6	2.8	4.9	4.9	2.0	4.2	1.8	
Blended Public Real Assets Index			1.7	2.8	5.1	5.1	2.2	4.3	4.4	5.1
SSgA Custom Real Assets	214,243,103	3.3	1.6	2.8	4.9	4.9	2.0	4.2	4.3	-
SSgA Custom Real Assets Index			1.7	2.8	5.1	5.1	2.2	4.3	4.4	-
Liquidity	346,385,413	5.4	1.2	2.1	5.6	5.6	4.3			
Blended Liquidity Index			1.0	1.6	5.0	5.0	3.2	-	-	-
Cash Flow-Matched Liquidity	266,337,188	4.1	1.1	2.0	5.6	5.6	3.9			
Bloomberg U.S. Gov/Credit 1-3 Year Index			1.0	1.4	4.9	4.9	2.7	0.6	1.2	1.4
Bloomberg U.S. Credit 1-3 Year Index			1.0	1.8	5.6	5.6	3.5	1.0	1.7	1.8
Insight Investment*	243,427,934	3.8	1.1	2.0	5.7	5.7	-	-	-	-
Bloomberg U.S. Credit 1-3 Year Index			1.0	1.8	5.6	5.6	3.5	1.0	1.7	1.8
County Treasury Pool**	22,909,254	0.4	1.4	1.7	3.2	3.2	3.4	2.6	2.3	2.1
90 Day U.S. Treasury Bill			1.3	2.6	5.4	5.4	4.5	3.0	2.2	1.5
Cash & Cash Overlay	112,239,865	1.7	1.4	2.8	5.7	5.7	5.0	3.4	2.3	1.7
90 Day U.S. Treasury Bill			1.3	2.6	5.4	5.4	4.5	3.0	2.2	1.5
General Account	100,162,685	1.5	1.4	2.8	5.8	5.8	5.0	3.5	2.6	2.5
90 Day U.S. Treasury Bill			1.3	2.6	5.4	5.4	4.5	3.0	2.2	1.5



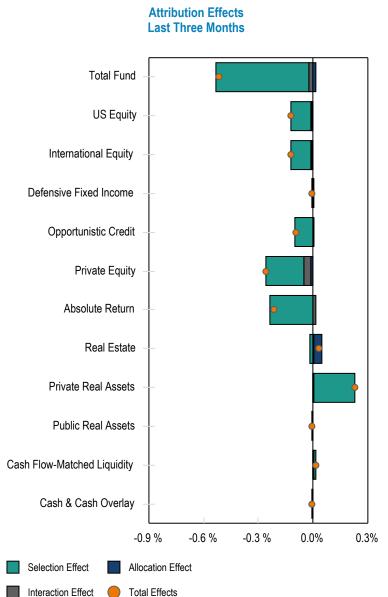
	Performance Attribution
	3 Mo
Wtd. Actual Return	1.7
Wtd. Index Return	2.2
Excess Return	-0.5
Selection Effect	-0.5
Allocation Effect	0.0
Interaction Effect	0.0

#### Attribution Summary Last Three Months

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Growth Portfolio	2.4	3.4	-1.0	-0.6	0.0	0.0	-0.6
Diversifying Portfolio	-0.7	0.4	-1.1	-0.2	0.0	0.0	-0.2
Inflation Hedge	2.2	0.7	1.5	0.3	0.0	0.0	0.3
Liquidity	1.2	1.0	0.2	0.0	0.0	0.0	0.0
Total Fund	1.7	2.2	-0.5	-0.5	0.0	0.0	-0.5

Interaction Effect

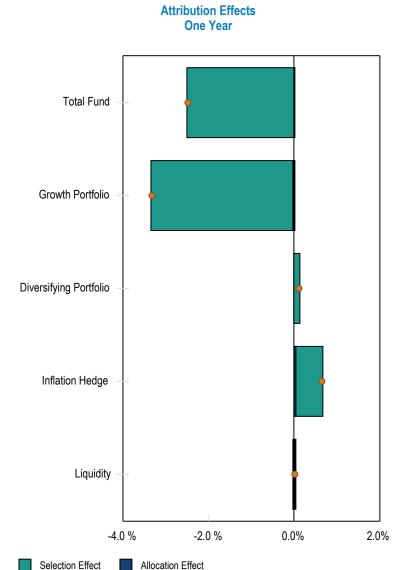
Total Effects



	Performance Attribution
	3 Mo
Wtd. Actual Return	1.7
Wtd. Index Return	2.2
Excess Return	-0.5
Selection Effect	-0.5
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
US Equity	2.8	3.2	-0.5	-0.1	0.0	0.0	-0.1
International Equity	1.2	1.8	-0.6	-0.1	0.0	0.0	-0.1
Defensive Fixed Income	-0.3	-0.4	0.0	0.0	0.0	0.0	0.0
Opportunistic Credit	0.6	1.5	-0.9	-0.1	0.0	0.0	-0.1
Private Equity	7.3	10.7	-3.4	-0.2	0.0	0.0	-0.3
Absolute Return	-1.8	2.1	-3.9	-0.2	0.0	0.0	-0.2
Real Estate	-0.7	-0.4	-0.2	0.0	0.0	0.0	0.0
Private Real Assets	6.4	1.9	4.5	0.2	0.0	0.0	0.2
Public Real Assets	1.6	1.7	0.0	0.0	0.0	0.0	0.0
Cash Flow-Matched Liquidity	1.1	1.0	0.2	0.0	0.0	0.0	0.0
Cash & Cash Overlay	1.4	1.3	0.0	0.0	0.0	0.0	0.0
Total Fund	1.7	2.2	-0.5	-0.5	0.0	0.0	-0.5



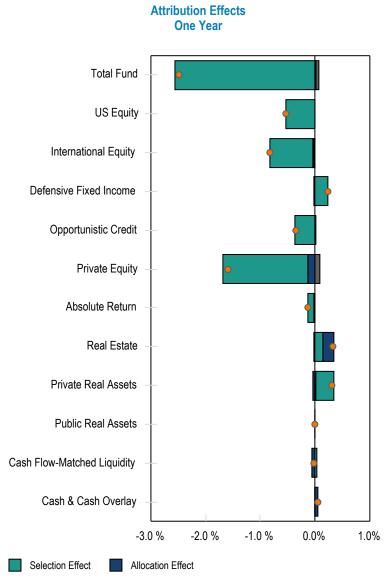
	Performance Attribution
	1 Yr
Wtd. Actual Return	9.2
Wtd. Index Return	11.7
Excess Return	-2.5
Selection Effect	-2.5
Allocation Effect	0.0
Interaction Effect	0.0

#### Attribution Summary One Year

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Growth Portfolio	13.6	19.5	-5.9	-3.3	0.0	0.0	-3.3
Diversifying Portfolio	4.2	3.6	0.6	0.1	0.0	0.0	0.1
Inflation Hedge	0.9	-2.5	3.4	0.6	0.0	0.0	0.7
Liquidity	5.6	5.0	0.6	0.0	0.0	0.0	0.0
Total Fund	9.2	11.7	-2.5	-2.5	0.0	0.0	-2.5

Interaction Effect

Total Effects



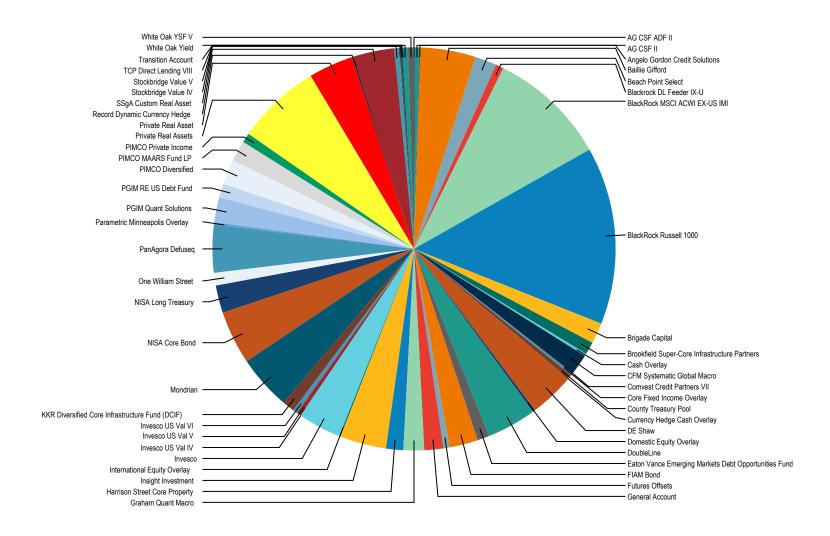
	Performance Attribution
	1 Yr
Wtd. Actual Return	9.2
Wtd. Index Return	11.7
Excess Return	-2.5
Selection Effect	-2.6
Allocation Effect	0.0
Interaction Effect	0.1

## 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	23.0	23.0	20.7	23.1	-2.4	-0.5	0.0	0.0	-0.5
International Equity	18.3	18.0	9.9	14.5	-4.5	-0.8	0.0	0.0	-0.8
Defensive Fixed Income	12.5	12.5	2.5	0.7	1.8	0.2	0.0	0.0	0.2
Opportunistic Credit	10.8	11.0	7.7	11.0	-3.3	-0.4	0.0	0.0	-0.3
Private Equity	6.6	7.0	9.0	32.3	-23.3	-1.6	-0.1	0.1	-1.6
Absolute Return	5.7	6.0	7.3	9.4	-2.1	-0.1	0.0	0.0	-0.1
Real Estate	8.0	9.0	-7.8	-9.3	1.4	0.1	0.2	0.0	0.3
Private Real Assets	5.4	5.0	12.3	4.7	7.5	0.3	0.0	0.0	0.3
Public Real Assets	3.0	3.0	4.9	5.1	-0.3	0.0	0.0	0.0	0.0
Cash Flow-Matched Liquidity	5.0	4.5	5.6	4.9	0.7	0.0	-0.1	0.0	0.0
Cash & Cash Overlay	1.7	1.0	5.7	5.4	0.3	0.0	0.0	0.0	0.0
Total Fund	100.0	100.0	9.2	11.7	-2.5	-2.6	0.0	0.1	-2.5

Total Effects

Interaction Effect



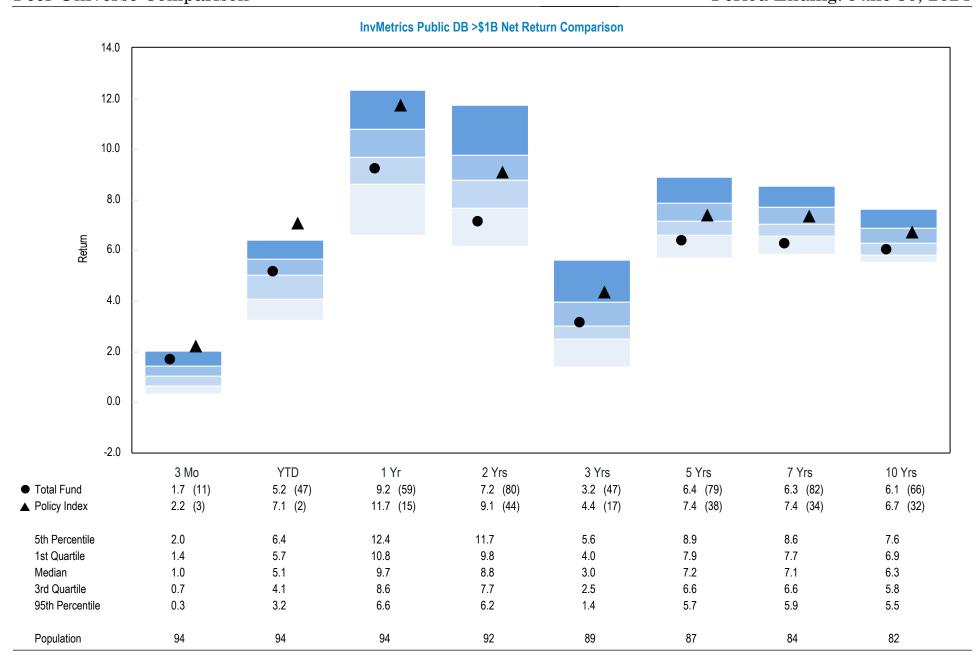


Name	Market Value	% of Portfolio
BlackRock Russell 1000	\$932,835,406	14.4
DE Shaw	\$237,593,939	3.7
PanAgora Defuseq	\$250,421,372	3.9
PGIM Quant Solutions	\$131,410,678	2.0
Domestic Equity Overlay	\$13,696,050	0.2
Baillie Gifford	\$289,666,489	4.5
Mondrian	\$288,233,212	4.5
BlackRock MSCI ACWI EX-US IMI	\$622,407,957	9.6
International Equity Overlay	\$6,986,308	0.1
DoubleLine	\$260,342,409	4.0
FIAM Bond	\$150,022,582	2.3
NISA Core Bond	\$281,289,033	4.3
NISA Long Treasury	\$144,789,588	2.2
Core Fixed Income Overlay	\$11,509,281	0.2
AG CSF ADF II	\$4,347,839	0.1
AG CSF II	\$22,838,234	0.4
Angelo Gordon Credit Solutions	\$6,503,737	0.1
Beach Point Select	\$113,779,078	1.8
Brigade Capital	\$109,119,894	1.7
PIMCO Diversified	\$130,763,100	2.0
Eaton Vance Emerging Markets Debt Opportunities Fund	\$61,557,732	1.0
Blackrock DL Feeder IX-U	\$40,916,461	0.6
Comvest Credit Partners VII	\$2,250,000	0.0
PIMCO Private Income	\$50,048,650	0.8
TCP Direct Lending VIII	\$9,526,787	0.1
White Oak Yield	\$29,743,963	0.5
White Oak YSF V	\$31,499,473	0.5
Private Equity	\$443,372,351	6.8

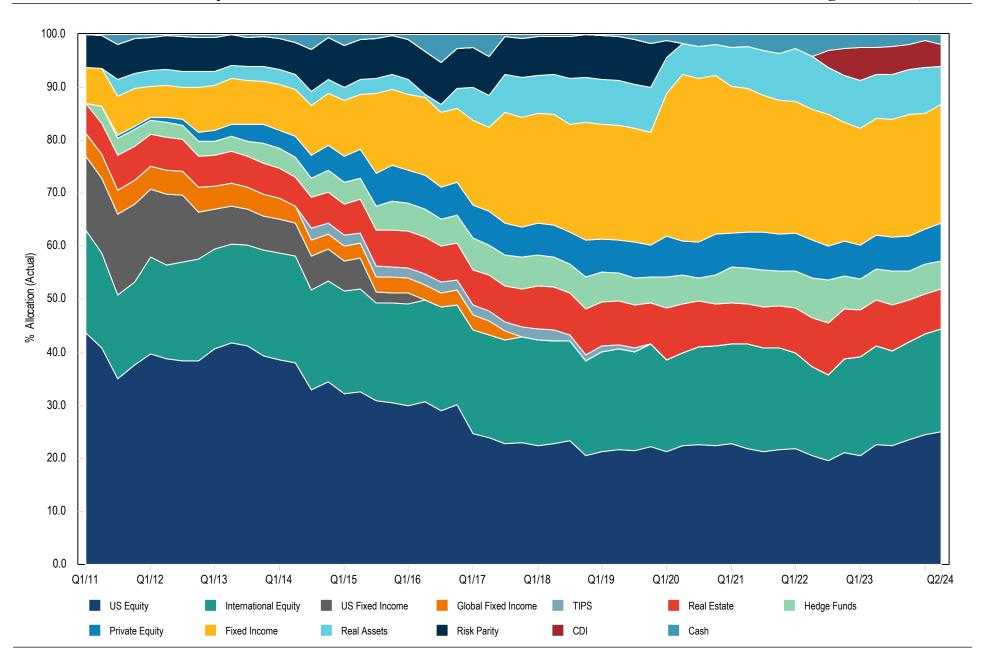


Name	Market Value	% of Portfolio
CFM Systematic Global Macro	\$109,334,294	1.7
Graham Quant Macro	\$108,430,411	1.7
PIMCO MAARS Fund LP	\$109,345,299	1.7
Harrison Street Core Property	\$90,412,068	1.4
Invesco	\$226,779,760	3.5
Invesco US Val IV	\$99,763	0.0
Invesco US Val V	\$23,126,386	0.4
Invesco US Val VI	\$23,772,890	0.4
PGIM RE US Debt Fund	\$73,088,020	1.1
Stockbridge Value IV	\$26,225,091	0.4
Stockbridge Value V	\$6,670,812	0.1
Private Real Assets	\$235,749,636	3.6
Brookfield Super-Core Infrastructure Partners	\$65,883,382	1.0
KKR Diversified Core Infrastructure Fund	\$62,403,453	1.0
SSgA Custom Real Asset	\$214,243,103	3.3
Insight Investment	\$243,427,934	3.8
County Treasury Pool	\$22,909,254	0.4
General Account	\$100,162,685	1.5
Cash Overlay	\$12,077,193	0.2
Transition Account	<del>-</del>	0.0
Futures Offsets	-\$32,191,639	-0.5
Total Fund	\$6,473,464,140	100.0

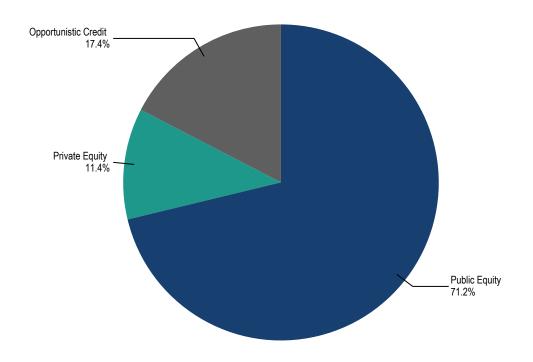












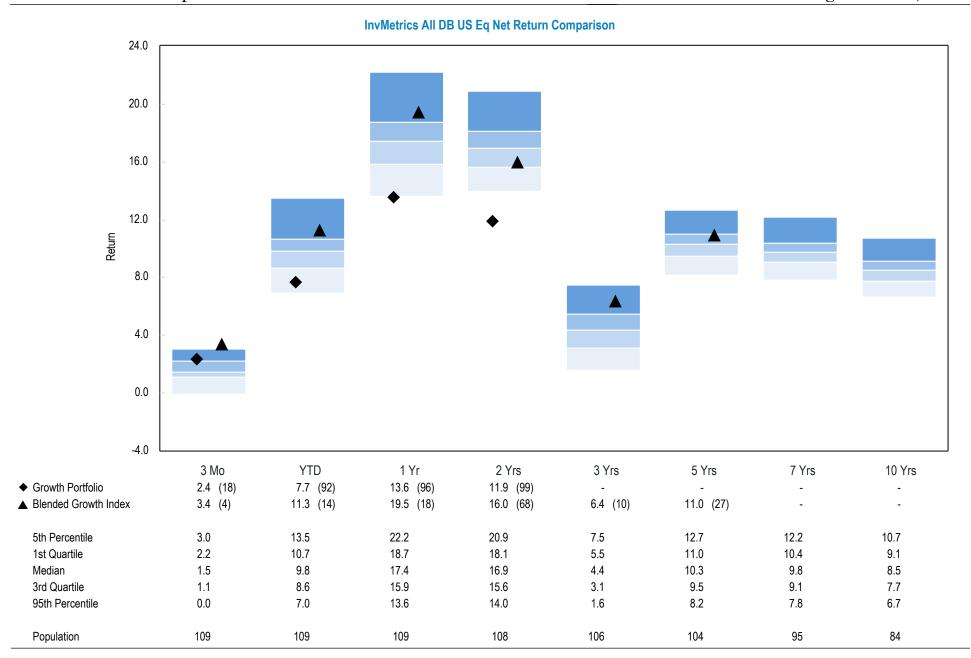
			Manager Contribution to
	Actual \$	Actual %	Excess Return %
US Equity	\$1,565,957,445	40.1%	-0.2%
International Equity	\$1,214,803,036	31.1%	-0.2%
Private Equity	\$443,372,351	11.4%	-0.4%
Opportunistic Credit	\$679,428,632	17.4%	-0.2%
Actual vs. Policy Weight Difference			-0.1%
Total	\$3,903,561,465	100.0%	-1.0%



## Statistics Summary 3 Years

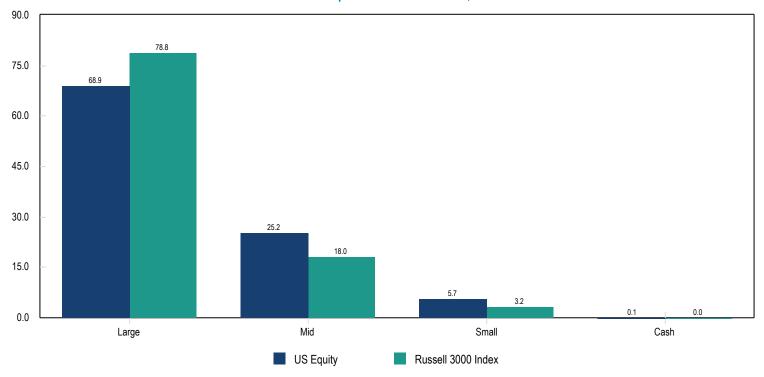
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Growth Portfolio	13.6	9.3	0.9	-2.7	1.9
Blended Growth Index	19.5	9.5	1.4	-	0.0
US Equity	20.7	13.9	1.1	-2.2	1.0
Blended US Equity Index	23.1	14.6	1.1	-	0.0
International Equity	9.9	12.5	0.4	-2.4	1.6
Blended International Equity Index	14.5	11.5	0.8	-	0.0
Private Equity	9.0	7.3	0.5	-1.3	15.4
Blended Private Equity Index	32.3	13.4	1.8	-	0.0
Opportunistic Credit	7.7	3.5	0.7	-2.1	1.4
Opportunistic Credit Index	11.0	4.3	1.2	-	0.0













	Characteristics	
	Portfolio	Benchmark
Number of Stocks	2,168	2,925
Wtd. Avg. Mkt. Cap \$M	709,791.0	876,937.9
Median Mkt. Cap \$M	3,567.2	2,138.4
Price/Earnings ratio	24.3	25.8
Current Yield (%)	1.6	1.4
Beta (5 Years, Monthly)	0.9	1.0
Price/Book ratio	4.1	4.6
Return on Equity (%)	7.0	8.5

Top Holdings		Best Performers		Worst Performers		
	(%)		Return (%)		Return (%)	
Microsoft Corp	5.4	AST SpaceMobile Inc	300.3	Marinus Pharmaceuticals Inc	-87.1	
Apple Inc	4.5	Emergent BioSolutions Inc	169.6	Inotiv Inc	-84.8	
NVIDIA Corporation	4.5	Insmed Inc	147.0	Cerence Inc	-82.0	
Amazon.com Inc	2.9	Innodata Inc	124.7	Zentalis Pharmaceuticals Inc	-74.0	
Meta Platforms Inc	1.8	TransMedics Group Inc	103.7	Virgin Galactic Holdings Inc	-71.5	
Alphabet Inc	1.6	Vital Farms Inc	101.2	MacroGenics Inc	-71.1	
Alphabet Inc	1.1	GameStop Corp.	97.2	Caribou Bioscience Inc	-68.1	
Tesla Inc	1.1	Enovix Corp	93.0	Conn's Inc	-67.0	
Eli Lilly and Co	1.1	Gannett Co Inc	88.9	RAPT Therapeutics Inc	-66.0	
Berkshire Hathaway Inc	1.0	Rackspace Technology Inc	88.6	Accolade Inc	-65.8	



#### **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	0.1	0.1	0.0	0.0	0.3	-2.2	4.7	4.1
Materials	-0.1	0.0	-0.1	0.0	-4.3	-5.1	4.0	2.7
Industrials	-0.1	0.0	0.0	0.0	-3.7	-3.4	10.4	10.1
Consumer Discretionary	0.0	0.0	0.0	0.0	-0.7	-0.5	11.0	10.5
Consumer Staples	-0.1	0.0	0.0	0.0	0.3	1.1	6.7	5.6
Health Care	0.0	0.0	0.0	0.0	-1.5	-1.4	11.8	12.4
Financials	0.1	0.0	0.1	0.0	-1.8	-2.1	12.9	13.9
Information Technology	-0.3	0.0	-0.3	0.0	12.3	12.3	24.0	27.6
Communication Services	-0.1	-0.1	0.0	0.0	7.6	9.2	8.1	8.3
Utilities	0.0	0.0	0.0	0.0	3.0	4.5	3.8	2.2
Real Estate	0.0	0.0	0.0	0.0	-1.0	-1.9	2.6	2.7
Other	0.0	0.0	0.0	0.0	4.4	0.0	0.1	0.0
Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	-0.5	-0.1	-0.4	0.0	2.7	3.2	100.0	100.0



**U.S. Effective Style Map** 





	Portfolio	Benchmark
Number of Stocks	1,013	1,004
Wtd. Avg. Mkt. Cap \$M	913,675.1	921,415.9
Median Mkt. Cap \$M	13,576.7	13,576.7
Price/Earnings ratio	26.5	26.4
Current Yield (%)	1.4	1.4
Beta (5 Years, Monthly)	1.0	1.0
Price/Book ratio	4.8	4.8
Return on Equity (%)	8.8	8.9

Top Holdings		Best Perforr	mers	Worst Performers	
	(%)		Return (%)		Return (%)
Microsoft Corp	6.6	GameStop Corp.	97.2	10x Genomics Inc	-48.2
Apple Inc	6.1	Alnylam Pharmaceuticals Inc	62.6	Trump Media & Technology Group Corp	-47.1
NVIDIA Corporation	5.9	Carvana Co	46.4	DoubleVerify Holdings Inc	-44.6
Amazon.com Inc	3.6	United Therapeutics Corp	38.7	UiPath Inc	-44.1
Meta Platforms Inc	2.2	Cirrus Logic Inc.	37.9	Walgreens Boots Alliance Inc	-43.5
Alphabet Inc	2.1	NVIDIA Corporation	36.7	Fortrea Holdings Inc	-41.9
Alphabet Inc	1.8	First Solar Inc	33.6	Five Below Inc	-39.9
Eli Lilly and Co	1.5	CAVA Group Inc	32.4	Leggett & Platt Inc	-39.9
Berkshire Hathaway Inc	1.5	Teradyne Inc	31.5	Unity Software Inc	-39.1
Broadcom Inc	1.5	Coca Cola Consolidated Inc	28.3	Exact Sciences Corporation	-38.8



	Portfolio	Benchmark
Number of Stocks	154	1,004
Wtd. Avg. Mkt. Cap \$M	154,366.1	921,415.9
Median Mkt. Cap \$M	30,924.6	13,576.7
Price/Earnings ratio	20.3	26.4
Current Yield (%)	2.8	1.4
Beta (5 Years, Monthly)	0.8	1.0
Price/Book ratio	2.9	4.8
Return on Equity (%)	3.5	8.9

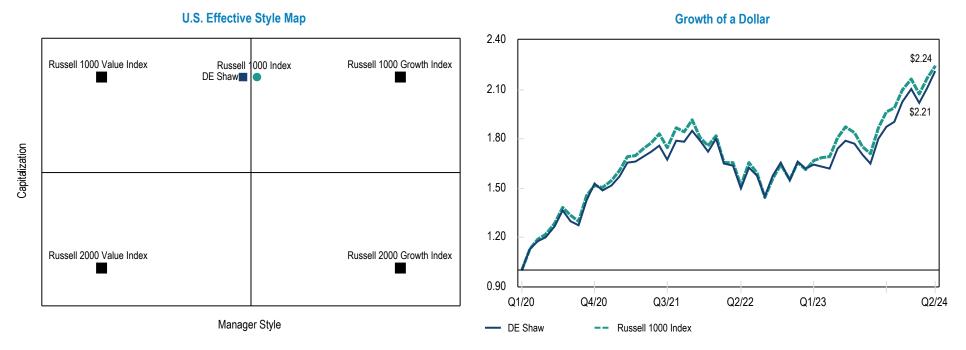
Top Holdings		Best Perform	mers	Worst Perfor	mers
	(%)		Return (%)		Return (%)
AT&T Inc	2.1	Tyler Technologies Inc	18.3	Apellis Pharmaceuticals Inc	-34.7
Microsoft Corp	2.0	DT Midstream Inc	17.5	Bristol-Myers Squibb Co	-22.5
T-Mobile US Inc	1.9	VERISK ANALYTICS INC	14.5	Zimmer Biomet Holdings Inc	-17.6
Amcor Plc	1.9	Texas Instruments Inc	12.5	MSC Industrial Direct Co Inc.	-17.6
Service Corp International	1.8	Boston Scientific Corp	12.4	IDEX Corp	-17.3
Sonoco Products Co	1.7	Essex Property Trust Inc.	12.2	Monster Beverage Corp	-15.7
McDonald's Corp	1.7	Vertex Pharmaceuticals Inc	12.1	Chemed Corp	-15.4
Verizon Communications Inc	1.6	Philip Morris International Inc	12.0	Nordson Corp	-15.3
Packaging Corp Of America	1.6	Camden Property Trust	11.9	Henry Schein Inc	-15.1
YUM Brands Inc	1.6	Fox Corp	11.9	Graco Inc.	-14.9



#### 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	0.4	0.3	-0.2	0.3	6.5	-2.1	7.2	3.9
Materials	-0.3	0.1	-0.6	0.2	-2.4	-5.2	9.3	2.6
Industrials	0.0	0.0	0.0	0.0	-3.2	-3.3	9.3	9.7
Consumer Discretionary	0.4	0.5	0.1	-0.1	4.3	-0.2	7.8	10.4
Consumer Staples	-0.6	-0.2	-0.2	-0.2	-1.9	1.1	13.0	5.7
Health Care	-0.3	-0.5	0.1	0.1	-4.9	-1.1	10.9	12.3
Financials	0.2	-0.1	0.3	0.0	-2.9	-2.1	8.9	13.8
Information Technology	-3.0	-3.8	-1.8	2.6	-0.5	12.8	8.7	28.3
Communication Services	-0.3	-0.4	0.0	0.0	5.2	9.3	9.4	8.7
Utilities	-0.2	-0.1	0.1	-0.3	2.3	4.8	12.6	2.1
Real Estate	0.1	0.1	0.0	0.0	2.9	-1.7	2.8	2.5
Total	-3.5	-3.9	-2.1	2.5	0.1	3.6	100.0	100.0





#### **Quarterly and Cumulative Excess Performance** 4.0 2.0 Added Value (%) 0.0 -2.0 -4.0 9/21 12/21 3/22 6/22 9/22 12/22 3/23 6/23 9/23 12/23 3/24 6/24 Quarterly Added Value — Cumulative Added Value



eV US Small Cap Core Equity Net Return Comparison 24.0 20.0 16.0 12.0 Return 8.0 4.0 0.0 -4.0 -8.0 3 Mo Fiscal YTD 1 Yr 2 Yrs 3 Yrs 5 Yrs 7 Yrs 10 Yrs -2.2 (32) 12.8 (33) 12.8 (33) 15.3 (22) 4.1 (23) 8.7 (59) 7.1 (82) PGIM Quant Solutions ▲ Russell 2000 Index -3.3 (50) 10.1 (54) 10.1 (54) 11.2 (64) -2.6 (88) 6.9 (85) 6.8 (83) 7.0 (79) 5th Percentile 0.9 17.4 17.4 20.4 6.8 14.0 13.5 12.2 1st Quartile -1.8 13.7 13.7 15.0 3.6 10.5 9.5 9.1 Median -3.3 10.5 10.5 12.3 1.5 9.2 8.4 8.0 3rd Quartile -4.4 6.6 6.6 9.7 -0.8 7.8 7.4 7.2 95th Percentile -6.6 2.6 2.6 6.1 -3.9 5.8 5.3 5.6 147 Population 194 193 193 183 181 174 164



	Portfolio	Benchmark
Number of Stocks	334	1,921
Wtd. Avg. Mkt. Cap \$M	4,026.8	4,440.8
Median Mkt. Cap \$M	2,200.4	889.5
Price/Earnings ratio	15.9	16.2
Current Yield (%)	1.4	1.5
Beta (5 Years, Monthly)	1.0	1.0
Price/Book ratio	2.4	2.5
Return on Equity (%)	3.0	1.2

Top Holdings		Best Perfor	mers	Worst Performe	rs
	(%)		Return (%)		Return (%)
Super Micro Computer Inc	1.1	Insmed Inc	147.0	Accolade Inc	-65.8
Onto Innovation Inc	1.0	TransMedics Group Inc	103.7	Fate Therapeutics Inc	-55.3
Commvault Systems Inc	1.0	Vital Farms Inc	101.2	Uniti Group Inc	-47.8
Coca Cola Consolidated Inc	0.9	ADMA Biologics Inc	69.4	Anywhere Real Estate Inc	-46.4
AppFolio Inc	0.9	Zeta Global Holdings Corp	61.5	Quanterix Corp	-43.9
Vital Farms Inc	0.9	Humacyte Inc	54.3	TTEC Holdings Inc	-42.9
ACI Worldwide Inc	0.8	Carpenter Technology Corp	53.8	Granite Point Mortgage Trust Inc	-37.7
Fluor Corp	0.8	Tutor Perini Corp	50.6	Editas Medicine Inc	-37.1
Amkor Technology Inc	0.8	Agios Pharmaceuticals Inc	47.5	JELD-WEN Holding Inc	-36.6
HealthEquity Inc	0.8	CareDx Inc	46.6	Dave & Buster's Entertainment Inc	-36.4

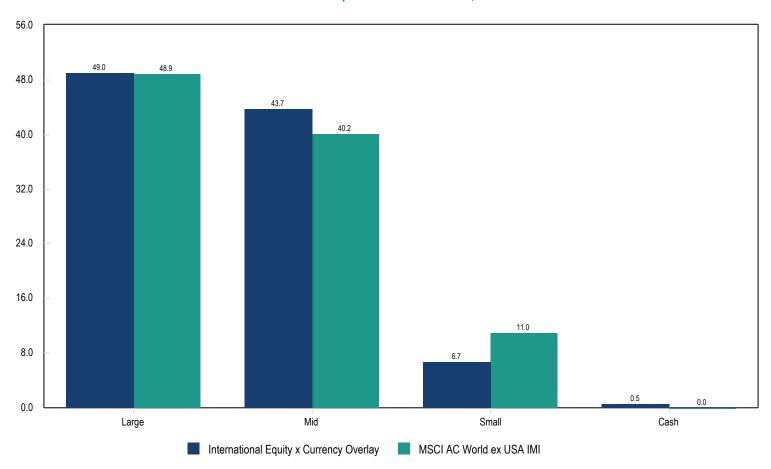


#### **PGIM Quant Solutions Performance Attribution vs. Russell 2000 Index**

	Attribution Effects			Performance		Sector Weights		
	Total Effects	Selection Effect	Allocation Effect	Interaction Effect	Portfolio	Benchmark	Portfolio	Benchmark
Energy	-0.4	-0.4	0.0	0.0	-8.6	-2.6	6.5	7.3
Materials	-0.3	-0.2	0.0	0.0	-9.3	-4.2	5.3	4.5
Industrials	-0.2	-0.2	0.0	0.0	-5.6	-4.3	17.8	17.6
Consumer Discretionary	-0.1	-0.1	0.0	0.0	-7.0	-6.1	10.2	10.8
Consumer Staples	0.4	0.3	0.0	0.1	11.0	2.3	4.0	3.3
Health Care	0.5	0.5	0.0	0.0	-1.3	-4.6	14.5	15.3
Financials	0.3	0.3	0.0	0.0	0.3	-1.8	16.3	15.9
Information Technology	0.7	0.7	0.0	0.0	2.0	-2.8	15.1	15.0
Communication Services	0.3	0.3	0.0	0.0	12.5	-0.6	2.0	2.1
Utilities	0.0	0.0	0.0	0.0	0.9	0.1	3.0	2.5
Real Estate	-0.2	-0.2	0.0	0.0	-7.2	-3.3	4.9	5.6
Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total	1.1	0.9	0.1	0.1	-2.2	-3.3	100.0	100.0



Market Capitalization as of June 30, 2024



# International Equity x Currency Overlay Equity Only Summary Statistics

	Characteristics	
	Portfolio	Benchmark
Number of Stocks	6,679	6,513
Wtd. Avg. Mkt. Cap \$M	98,522.4	96,871.4
Median Mkt. Cap \$M	1,971.3	1,969.6
Price/Earnings ratio	16.2	16.1
Current Yield (%)	2.9	3.0
Beta (5 Years, Monthly)	1.0	1.0
Price/Book ratio	2.6	2.5
Return on Equity (%)	3.2	2.8

Top Holding	gs .	Best Performers		Worst Performers	
	(%)		Return (%)		Return (%)
Taiwan Semiconductor Man.	2.0	SILICON2 Co Ltd	290.2	PT Berkah Beton Sadaya Tbk	-80.6
ASML Holding NV	1.6	Sam Yang Foods Co Ltd	210.8	Cettire Limited	-70.4
Taiwan Semiconductor Man.	1.3	Garden Reach Shipbuilders & Engineers Ltd	174.5	Energy Absolute Public Company Limited	-67.5
United Overseas Bank Ltd	1.1	Cochin Shipyard Limited	154.1	CM Hospitalar S A	-66.3
Novo Nordisk A/S	0.8	Puravankara Ltd	136.3	Alfen N.V.	-65.7
Tencent Holdings LTD	0.8	YC Corporation	132.0	Katilimevim Tasarruf Finansman Anonim Sirketi	-63.4
Banco Santander SA	0.8	TCL Electronics Holdings Ltd	123.9	Perion Network Ltd	-62.8
Alibaba Group Holding Ltd	0.8	ZIM Integrated Shipping Services Ltd	121.4	Maytronics Ltd	-61.9
Sony Group Corporation	0.8	LS ELECTRIC Co Ltd	120.5	Politeknik Metal Sanayi ve Ticaret AS	-61.4
Samsung Electronics Co Ltd	0.8	Amara Raja Energy & Mobility Limited	118.8	Beyond Securities Public Co Ltd	-61.3



## International Equity x Currency Overlay 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	0.0	0.0	0.0	0.0	1.8	1.6	4.8	5.3
Materials	0.0	0.0	0.0	0.0	-1.5	-1.2	6.5	8.0
Industrials	-0.4	-0.3	0.0	0.0	-2.1	0.0	16.3	14.9
Consumer Discretionary	0.2	0.2	0.0	0.0	-2.7	-4.3	12.0	11.8
Consumer Staples	0.0	0.0	0.0	0.0	-0.9	-1.3	8.6	7.3
Health Care	-0.2	-0.2	0.0	0.0	1.5	3.5	9.3	8.8
Financials	-0.1	-0.1	0.0	0.0	2.6	3.0	18.0	20.0
Information Technology	0.1	0.0	0.1	0.0	5.1	4.8	14.6	13.1
Communication Services	0.1	0.1	0.0	0.0	4.9	3.5	4.9	4.9
Utilities	0.0	0.0	0.0	0.0	3.8	2.8	3.2	3.0
Real Estate	0.1	0.0	0.1	0.0	-3.9	-4.0	1.5	2.9
Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total	-0.2	-0.2	0.1	0.0	0.9	1.1	100.0	100.0



# International Equity x Currency Overlay vs. MSCI AC World ex USA IMI

	Wei	ights	Perfor	mance	Attribution Effects			
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects
Australia	3.1	4.7	0.5	1.6	-0.1	0.0	0.0	0.0
Austria	0.3	0.2	1.4	6.1	0.0	0.0	0.0	0.0
Belgium	0.6	0.6	-1.8	0.2	0.0	0.0	0.0	0.0
Brazil	1.8	1.4	-13.9	-12.8	0.0	-0.1	0.0	-0.1
Canada	5.4	7.5	-3.5	-1.5	-0.2	0.1	0.0	-0.1
Chile	0.1	0.1	-7.4	0.6	0.0	0.0	0.0	0.0
China	5.4	5.5	3.0	6.7	-0.2	0.0	0.0	-0.2
Colombia	0.0	0.0	-4.6	-4.6	0.0	0.0	0.0	0.0
Czech Republic	0.0	0.0	8.9	8.9	0.0	0.0	0.0	0.0
Denmark	1.3	2.2	5.4	7.3	0.0	-0.1	0.0	-0.1
Egypt	0.0	0.0	1.7	1.7	0.0	0.0	0.0	0.0
Finland	0.3	0.6	3.6	3.5	0.0	0.0	0.0	0.0
France	6.1	6.5	-7.0	-6.0	-0.1	0.0	0.0	0.0
Germany	5.1	5.2	-4.2	-1.2	-0.2	0.0	0.0	-0.2
Greece	0.1	0.1	-1.4	-1.4	0.0	0.0	0.0	0.0
Hong Kong	2.3	1.6	0.2	3.6	-0.1	0.0	0.0	-0.1
Hungary	0.0	0.1	9.6	9.7	0.0	0.0	0.0	0.0
ndia	4.7	5.3	12.6	12.0	0.0	-0.1	0.0	0.0
Indonesia	0.5	0.5	-15.9	-11.6	0.0	0.0	0.0	0.0
reland	1.3	1.0	-1.4	-0.2	0.0	0.0	0.0	0.0
srael	0.3	0.7	-4.2	-4.4	0.0	0.0	0.0	0.0
taly	1.9	1.6	1.5	1.1	0.0	0.0	0.0	0.0
Japan	17.0	16.2	-3.8	-4.6	0.1	0.0	0.0	0.1
Korea	2.9	3.6	-0.4	-1.0	0.0	0.0	0.0	0.0
Kuwait	0.1	0.2	-3.6	-3.6	0.0	0.0	0.0	0.0
Malaysia	0.3	0.4	5.2	5.9	0.0	0.0	0.0	0.0
Malta	0.0	0.0	3.3	3.3	0.0	0.0	0.0	0.0
Mexico	1.1	0.7	-15.3	-16.2	0.0	-0.1	0.0	-0.1
Netherlands	4.8	3.6	0.6	-0.1	0.0	0.0	0.0	0.0
New Zealand	0.3	0.2	3.9	2.0	0.0	0.0	0.0	0.0
Norway	0.3	0.5	9.4	9.4	0.0	0.0	0.0	0.0
Peru	0.2	0.1	0.9	1.9	0.0	0.0	0.0	0.0
Philippines	0.1	0.2	-10.0	-10.0	0.0	0.0	0.0	0.0



# International Equity x Currency Overlay Equity Performance Attribution

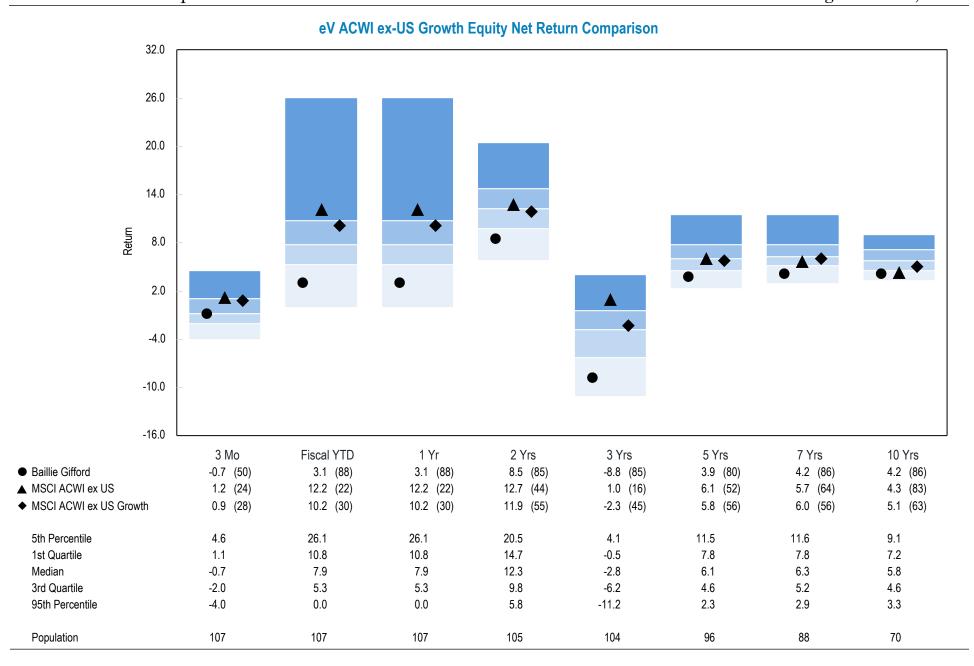
	We	ights	Perfor	mance		Attributio	on Effects	
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects
Poland	0.1	0.3	6.5	6.4	0.0	0.0	0.0	0.0
Portugal	0.4	0.1	2.7	8.5	0.0	0.0	0.0	0.0
Qatar	0.1	0.2	1.4	1.4	0.0	0.0	0.0	0.0
Russia	0.0	0.0	8.5	0.0	0.0	0.0	0.0	0.0
Saudi Arabia	0.8	1.2	-5.0	-5.1	0.0	0.0	0.0	0.0
Singapore	1.5	1.0	8.6	7.0	0.0	0.0	0.0	0.1
South Africa	0.4	0.7	13.2	13.2	0.0	0.0	0.0	0.0
Spain	1.6	1.6	-1.5	-0.2	0.0	0.0	0.0	0.0
Sweden	2.6	2.2	7.0	2.5	0.1	0.0	0.0	0.1
Switzerland	4.5	6.0	3.6	3.2	0.0	0.0	0.0	0.0
Taiwan	4.9	5.1	19.7	13.6	0.3	0.0	0.0	0.3
Thailand	0.3	0.5	-4.4	-5.4	0.0	0.0	0.0	0.0
Turkey	0.1	0.3	16.4	16.5	0.0	0.0	0.0	0.0
United Arab Emirates	0.3	0.3	-4.2	-2.6	0.0	0.0	0.0	0.0
United Kingdom	12.1	8.6	3.6	4.1	0.0	0.1	0.0	0.0
United States	0.4	0.1	4.4	1.1	0.0	0.0	0.0	0.0
Other	1.4	0.4	4.8	-8.3	0.1	-0.1	0.1	0.1
Cash	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	0.9	1.1	-0.2	-0.2	0.2	-0.2



# International Equity x Currency Overlay vs. MSCI AC World ex USA IMI

	Weights		Perfor	Performance		Attribution Effects			
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Region Effects	Interaction Effects	Total Effects	
Americas	9.1	10.0	-6.7	-4.1	-0.3	0.0	0.0	-0.2	
Asia Pacific	43.3	44.8	2.6	2.3	0.1	0.0	0.0	0.1	
EMEA	45.8	44.8	0.6	1.1	-0.2	0.0	0.0	-0.2	
Other	1.4	0.4	4.8	-8.3	0.1	-0.1	0.1	0.1	
Cash	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total	100.0	100.0	0.9	1.1	-0.3	-0.1	0.2	-0.2	







	Portfolio	Benchmark
Number of Stocks	83	2,159
Wtd. Avg. Mkt. Cap \$M	105,670.8	112,366.5
Median Mkt. Cap \$M	29,523.0	9,176.2
Price/Earnings ratio	20.9	16.3
Current Yield (%)	1.7	3.0
Beta (5 Years, Monthly)	1.1	1.0
Price/Book ratio	3.8	2.6
Return on Equity (%)	3.8	2.8

Top Holdings		Best Perform	mers	Worst Performers	
	(%)		Return (%)		Return (%)
Taiwan Semiconductor Man.	5.3	Hargreaves Lansdown PLC	53.9	Sartorius AG	-40.9
ASML Holding NV	3.7	Silergy Corp	39.0	Adyen N.V	-29.5
United Overseas Bank Ltd	2.5	Taiwan Semiconductor Man.	28.2	Wise plc	-26.6
Investor AB publ	2.4	Recruit Holdings Co Ltd	20.7	Burberry Group PLC	-24.1
Auto Trader Group plc	2.3	Spotify Technology SA	18.9	B3 S.ABrasil Bolsa Balcao	-22.4
MercadoLibre Inc	2.1	MakeMyTrip Ltd	18.4	Centre Testing International Group Co Ltd	-21.0
Tokyo Electron Ltd	2.1	HDFC Bank Limited	17.9	IMCD NV	-20.2
Experian Plc	2.1	Softcat PLC	15.1	Ryanair Holdings PLC	-20.0
Cie Financiere Richemont	2.0	Auto Trader Group plc	14.5	Li Ning Company Limited	-17.7
Atlas Copco AB	1.8	Prosus NV	13.5	Remy Cointreau SA	-17.3



#### 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	0.0	0.2	0.0	-0.2	5.4	1.5	1.4	5.5
Materials	0.0	-0.3	0.1	0.2	-5.9	-1.7	3.2	7.4
Industrials	-0.7	-0.4	-0.1	-0.2	-3.5	-0.5	19.9	13.8
Consumer Discretionary	0.7	0.7	-0.2	0.2	1.1	-4.7	14.8	11.8
Consumer Staples	-0.5	-0.2	-0.1	-0.2	-4.6	-1.5	12.9	7.4
Health Care	-1.0	-1.1	0.0	0.1	-8.2	3.7	8.5	9.2
Financials	-0.4	-0.4	-0.1	0.1	1.2	2.9	14.4	21.4
Information Technology	0.3	0.0	0.2	0.0	5.5	5.2	19.0	13.4
Communication Services	0.3	0.3	0.0	0.0	9.2	4.1	5.3	5.1
Utilities	0.0	0.0	0.0	0.0	0.0	2.6	0.0	3.0
Real Estate	0.1	0.0	0.1	0.0	0.0	-4.6	0.0	2.0
Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
Total	-1.3	-1.2	-0.2	0.1	-0.2	1.1	100.0	100.0



#### Baillie Gifford vs. MSCI AC World ex USA Index

	VA/a	ights	Daufar	mance	Attribution Effects				
	vve	ignis	Pertor	mance	Caladii			Total	
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects	
Australia	1.3	4.5	-0.5	2.0	-0.1	0.0	0.1	-0.1	
Austria	0.0	0.1	0.0	9.1	0.0	0.0	0.0	0.0	
Belgium	1.4	0.5	-3.5	-0.1	0.0	0.0	0.0	-0.1	
Brazil	2.3	1.4	-18.1	-12.3	-0.1	-0.1	-0.1	-0.3	
Canada	3.5	7.6	-13.0	-1.9	-0.8	0.1	0.5	-0.3	
Chile	0.0	0.1	0.0	-0.2	0.0	0.0	0.0	0.0	
China	3.6	6.0	-5.1	6.9	-0.7	-0.1	0.3	-0.6	
Colombia	0.0	0.0	0.0	-4.6	0.0	0.0	0.0	0.0	
Czech Republic	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	
Denmark	0.8	2.4	-5.6	7.4	-0.3	-0.1	0.2	-0.2	
Egypt	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	
Finland	0.0	0.6	0.0	3.4	0.0	0.0	0.0	0.0	
France	5.3	7.2	-10.3	-5.9	-0.3	0.1	0.1	-0.1	
Germany	2.6	5.6	-23.8	-0.7	-1.3	0.1	0.7	-0.6	
Greece	0.0	0.1	0.0	-1.2	0.0	0.0	0.0	0.0	
Hong Kong	3.7	1.7	-4.2	3.3	-0.1	0.0	-0.1	-0.2	
Hungary	0.0	0.1	0.0	9.1	0.0	0.0	0.0	0.0	
India	4.9	4.9	12.9	10.4	0.1	0.0	0.0	0.1	
Indonesia	0.0	0.5	0.0	-12.0	0.0	0.1	0.0	0.1	
Ireland	3.0	1.2	-2.3	-0.2	0.0	0.0	0.0	-0.1	
Israel	0.0	0.5	0.0	-4.6	0.0	0.0	0.0	0.0	
Italy	0.0	1.5	0.0	1.3	0.0	0.0	0.0	0.0	
Japan	16.5	15.3	-2.8	-4.4	0.2	-0.1	0.0	0.2	
Korea	0.0	3.5	0.0	-1.7	0.0	0.1	0.0	0.1	
Kuwait	0.0	0.2	0.0	-4.4	0.0	0.0	0.0	0.0	
Malaysia	0.0	0.4	0.0	4.4	0.0	0.0	0.0	0.0	
Mexico	2.1	0.7	-16.0	-15.9	0.0	-0.2	0.0	-0.2	
Netherlands	10.3	4.0	-4.2	0.1	-0.2	-0.1	-0.3	-0.5	
New Zealand	1.0	0.2	4.7	4.2	0.0	0.0	0.0	0.0	
Norway	0.0	0.4	0.0	7.6	0.0	0.0	0.0	0.0	
Peru	0.0	0.1	0.0	2.1	0.0	0.0	0.0	0.0	
Philippines	0.0	0.2	0.0	-10.4	0.0	0.0	0.0	0.0	
Poland	0.0	0.2	0.0	5.7	0.0	0.0	0.0	0.0	



	Wei	ights	Perfo	rmance		Attributio	on Effects	
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects
Portugal	1.2	0.1	1.8	10.0	0.0	0.1	-0.1	0.0
Qatar	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.0
Saudi Arabia	0.0	1.2	0.0	-5.9	0.0	0.1	0.0	0.1
Singapore	2.4	0.9	9.4	8.4	0.0	0.1	0.0	0.1
South Africa	0.0	0.7	0.0	12.8	0.0	-0.1	0.0	-0.1
Spain	0.0	1.7	0.0	-1.2	0.0	0.0	0.0	0.0
Sweden	6.1	2.0	10.4	2.4	0.2	0.1	0.3	0.5
Switzerland	3.9	6.5	-2.9	3.5	-0.4	-0.1	0.2	-0.3
Taiwan	4.8	4.9	29.0	15.2	0.7	0.0	0.0	0.7
Thailand	0.0	0.4	0.0	-4.9	0.0	0.0	0.0	0.0
Turkey	0.0	0.2	0.0	21.5	0.0	0.0	0.0	0.0
United Arab Emirates	0.0	0.3	0.0	-2.3	0.0	0.0	0.0	0.0
United Kingdom	13.3	8.7	1.8	4.3	-0.2	0.1	-0.1	-0.2
United States	1.5	0.1	5.0	2.4	0.0	0.0	0.0	0.1
Other	4.1	0.3	9.8	-13.2	0.1	-0.5	0.9	0.4
Cash	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	-0.2	1.1	-3.4	-0.4	2.5	-1.3



#### Baillie Gifford vs. MSCI AC World ex USA Index

	Weights		Perfor	Performance		Attribution Effects				
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Region Effects	Interaction Effects	Total Effects		
Americas	9.4	10.1	-12.1	-4.4	-0.8	0.0	0.1	-0.7		
Asia Pacific	38.0	43.3	3.9	2.5	0.6	-0.1	-0.1	0.5		
EMEA	47.9	46.3	-2.1	1.0	-1.4	0.0	-0.1	-1.5		
Other	4.1	0.3	9.8	-13.2	0.1	-0.5	0.9	0.4		
Cash	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total	100.0	100.0	-0.2	1.1	-1.5	-0.6	0.8	-1.3		



	Characteristics	
	Portfolio	Benchmark
Number of Stocks	131	1,242
Wtd. Avg. Mkt. Cap \$M	95,596.6	70,390.7
Median Mkt. Cap \$M	28,283.9	9,477.4
Price/Earnings ratio	12.9	12.1
Current Yield (%)	4.0	4.4
Beta (5 Years, Monthly)	1.0	1.0
Price/Book ratio	2.0	1.8
Return on Equity (%)	3.2	3.2

Top Holdings		Best Performers		Worst Performers	Worst Performers		
	(%)		Return (%)		Return (%)		
Taiwan Semiconductor Man.	3.2	Hon Hai Precision Industry	40.7	Xinyi Solar Holdings Ltd	-33.0		
Banco Santander SA	3.0	Koninklijke Philips NV	30.1	LONGi Green Energy Technology Co Ltd	-28.5		
Fujitsu Ltd	2.8	Samsung Fire & Marine Insurance Co Ltd	24.3	PT Bank Rakyat Indonesia (Persero) Tbk	-26.4		
Sony Group Corporation	2.7	Tencent Holdings LTD	23.9	Lg Chem Ltd	-23.0		
Enel Ente Nazionale	2.7	Taiwan Semiconductor Man.	22.8	Yum China Holdings Inc	-22.1		
Snam SPA	2.6	PetroChina Company Limited	22.5	Grupo Financiero Banorte	-21.8		
TC Energy Corp	2.4	Hitachi Ltd	21.8	Hypera SA	-20.7		
Allianz SE	2.4	Sandoz Group AG	21.6	Lg Chem Ltd	-20.5		
Fujifilm Holdings Corp	2.4	Axis Bank Ltd	20.8	Continental AG	-18.7		
Koninklijke Philips NV	2.3	HDFC Bank Limited	17.9	Secom Co Ltd	-18.5		



		Attribu	ition Effects		Perfo	ormance	Sector Weights	
	Total Effects	Selection Effect	Allocation Effect	Interaction Effect	Portfolio	Benchmark	Portfolio	Benchmark
	-0.1	-0.1	0.0	0.0	1.3	2.4	6.9	9.7
<b>;</b>	0.0	0.0	0.0	0.0	-0.4	0.2	6.5	8.4
ls	-0.7	-0.4	-0.1	-0.2	-4.7	-1.0	15.9	11.0
er Discretionary	0.0	0.0	-0.1	0.0	-4.7	-5.1	9.7	8.9
01 1	0.0	0.0	0.0	0.4	0.0	0.4	<b>7</b> A	4 -

	Total Effects	Selection Effect	Allocation Effect	Interaction Effect	Portfolio	Benchmark	Portfolio	Benchmark
Energy	-0.1	-0.1	0.0	0.0	1.3	2.4	6.9	9.7
Materials	0.0	0.0	0.0	0.0	-0.4	0.2	6.5	8.4
Industrials	-0.7	-0.4	-0.1	-0.2	-4.7	-1.0	15.9	11.0
Consumer Discretionary	0.0	0.0	-0.1	0.0	-4.7	-5.1	9.7	8.9
Consumer Staples	0.3	0.2	0.0	0.1	6.9	3.1	7.0	4.5
Health Care	0.3	0.1	0.1	0.1	5.6	3.7	11.4	6.8
Financials	-0.5	-0.3	-0.3	0.1	2.6	3.5	17.5	31.8
Information Technology	0.3	0.1	0.2	0.1	5.0	4.1	13.2	5.8
Communication Services	0.1	0.1	0.0	0.0	2.5	-0.3	4.3	4.4
Utilities	0.2	0.1	0.0	0.0	4.8	2.5	6.9	5.4
Real Estate	0.2	0.0	0.2	0.0	0.0	-5.8	0.0	3.4
Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
Total	0.2	-0.2	0.1	0.3	1.5	1.3	100.0	100.0

Mondrian Performance Attribution vs. MSCI AC World ex USA Value



#### Mondrian vs. MSCI AC World ex USA Value

	14/4	ights	Donfor	mance	Attribution Effects				
	vve	iyiitə	Perior	mance	Calactica			Tatal	
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects	
Australia	1.4	4.4	-6.6	1.1	-0.3	0.0	0.2	-0.1	
Austria	0.9	0.2	-0.7	8.1	0.0	0.0	-0.1	0.0	
Belgium	0.0	0.4	0.0	-3.1	0.0	0.0	0.0	0.0	
Brazil	2.2	1.4	-10.9	-8.0	0.0	-0.1	0.0	-0.1	
Canada	2.6	7.8	-3.3	-1.4	-0.1	0.1	0.1	0.1	
Chile	0.3	0.1	-16.7	4.2	0.0	0.0	0.0	-0.1	
China	7.2	6.1	0.9	8.5	-0.5	0.1	-0.1	-0.5	
Colombia	0.0	0.0	0.0	-1.5	0.0	0.0	0.0	0.0	
Czech Republic	0.0	0.0	0.0	8.4	0.0	0.0	0.0	0.0	
Denmark	0.0	0.4	0.0	5.7	0.0	0.0	0.0	0.0	
Egypt	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	
Finland	0.0	1.1	0.0	3.6	0.0	0.0	0.0	0.0	
France	5.9	6.7	-6.2	-3.7	-0.2	0.0	0.0	-0.1	
Germany	8.0	6.6	-1.7	-1.8	0.0	0.0	0.0	0.0	
Greece	0.0	0.2	0.0	-4.4	0.0	0.0	0.0	0.0	
Hong Kong	2.3	1.9	2.3	6.0	-0.1	0.0	0.0	-0.1	
Hungary	0.0	0.1	0.0	8.6	0.0	0.0	0.0	0.0	
India	2.7	5.2	14.2	10.1	0.2	-0.2	-0.1	-0.1	
Indonesia	1.0	0.5	-20.7	-15.5	0.0	-0.1	0.0	-0.1	
Ireland	0.0	0.4	0.0	4.3	0.0	0.0	0.0	0.0	
Israel	0.0	0.5	0.0	-1.4	0.0	0.0	0.0	0.0	
Italy	4.3	2.1	1.8	3.0	0.0	0.0	0.0	0.0	
Japan	19.1	15.7	-3.3	-3.4	0.0	-0.2	0.0	-0.1	
Korea	4.3	3.7	0.8	-0.2	0.0	0.0	0.0	0.0	
Kuwait	0.0	0.3	0.0	-7.3	0.0	0.0	0.0	0.0	
Malaysia	0.3	0.4	3.1	5.2	0.0	0.0	0.0	0.0	
Mexico	0.9	0.8	-12.4	-18.0	0.0	0.0	0.0	0.0	
Netherlands	1.9	2.1	30.1	-2.3	0.7	0.0	-0.1	0.6	
New Zealand	0.0	0.1	0.0	-7.7	0.0	0.0	0.0	0.0	
Norway	0.0	0.7	0.0	7.4	0.0	0.0	0.0	0.0	
Peru	0.7	0.1	0.7	2.7	0.0	0.0	0.0	0.0	
Philippines	0.0	0.2	0.0	-8.9	0.0	0.0	0.0	0.0	
Poland	0.0	0.3	0.0	5.7	0.0	0.0	0.0	0.0	



	Wei	ights	Perfor	mance		Attributio	on Effects	
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects
Portugal	0.3	0.1	1.8	6.6	0.0	0.0	0.0	0.0
Qatar	0.0	0.2	0.0	-0.1	0.0	0.0	0.0	0.0
Saudi Arabia	0.8	1.1	-4.7	-5.9	0.0	0.0	0.0	0.0
Singapore	1.9	0.9	9.4	4.3	0.0	0.0	0.0	0.1
South Africa	0.0	0.7	0.0	16.2	0.0	-0.1	0.0	-0.1
Spain	3.1	2.6	-3.1	-1.8	0.0	0.0	0.0	-0.1
Sweden	0.0	1.5	0.0	1.2	0.0	0.0	0.0	0.0
Switzerland	2.6	6.1	14.9	6.5	0.5	-0.2	-0.3	0.0
Taiwan	4.5	4.2	24.8	9.5	0.6	0.0	0.0	0.7
Thailand	0.0	0.4	0.0	-5.6	0.0	0.0	0.0	0.0
Turkey	0.0	0.2	0.0	21.7	0.0	0.0	0.0	0.0
United Arab Emirates	0.7	0.4	-5.9	1.2	0.0	0.0	0.0	0.0
United Kingdom	18.4	10.5	4.5	4.9	0.0	0.3	0.0	0.2
United States	0.0	0.0	0.0	-21.0	0.0	0.0	0.0	0.0
Other	1.0	0.4	-5.1	-14.0	0.0	-0.1	0.1	0.0
Cash	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	1.5	1.3	0.8	-0.3	-0.3	0.2



#### Mondrian vs. MSCI AC World ex USA Value

	Weights		Perfo	Performance		Attribution Effects				
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Region Effects	Interaction Effects	Total Effects		
Americas	6.7	10.3	-7.1	-3.5	-0.4	0.2	0.1	-0.1		
Asia Pacific	44.6	43.7	2.0	2.3	-0.1	0.0	0.0	-0.1		
EMEA	47.0	45.6	2.6	1.7	0.4	0.0	0.0	0.4		
Other	1.0	0.4	-5.1	-14.0	0.0	-0.1	0.1	0.0		
Cash	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total	100.0	100.0	1.5	1.3	-0.1	0.1	0.2	0.2		



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

		Attribu	tion Effects		Perfo	ormance	Sector Weights	
	Total Effects	Selection Effect	Allocation Effect	Interaction Effect	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.0	0.0	0.0	0.0	1.6	1.6	5.4	5.3
Materials	0.0	0.0	0.0	0.0	-1.2	-1.2	8.0	8.0
Industrials	0.0	0.0	0.0	0.0	0.1	0.0	14.8	14.9
Consumer Discretionary	0.0	0.0	0.0	0.0	-4.2	-4.3	11.8	11.8
Consumer Staples	0.0	0.0	0.0	0.0	-1.3	-1.3	7.3	7.3
Health Care	0.0	0.0	0.0	0.0	3.5	3.5	8.7	8.8
Financials	0.0	0.0	0.0	0.0	3.0	3.0	20.0	20.0
Information Technology	0.0	0.0	0.0	0.0	4.9	4.8	13.2	13.1
Communication Services	0.0	0.0	0.0	0.0	3.6	3.5	4.9	4.9
Utilities	0.0	0.0	0.0	0.0	2.9	2.8	3.0	3.0
Real Estate	0.0	0.0	0.0	0.0	-3.9	-4.0	2.9	2.9
Cash	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total	0.0	0.0	0.0	0.0	1.1	1.1	100.0	100.0



	Characteristics	
	Portfolio	Benchmark
Number of Stocks	6,630	6,513
Wtd. Avg. Mkt. Cap \$M	96,412.7	96,871.4
Median Mkt. Cap \$M	1,960.4	1,969.6
Price/Earnings ratio	16.2	16.1
Current Yield (%)	3.0	3.0
Beta (3 Years, Monthly)	1.0	1.0
Price/Book ratio	2.5	2.5
Return on Equity (%)	2.8	2.8

Top Holdings		Best Performers		Worst Performers		
	(%)		Return (%)		Return (%)	
Taiwan Semiconductor Man.	2.4	SILICON2 Co Ltd	290.2	PT Berkah Beton Sadaya Tbk	-80.6	
Novo Nordisk A/S	1.6	Sam Yang Foods Co Ltd	210.8	Cettire Limited	-70.4	
ASML Holding NV	1.4	Garden Reach Shipbuilders & Engineers Ltd	174.5	Energy Absolute Public Company Limited	-67.5	
Tencent Holdings LTD	1.0	Cochin Shipyard Limited	154.1	CM Hospitalar S A	-66.3	
Samsung Electronics Co Ltd	0.9	Puravankara Ltd	136.3	Alfen N.V.	-65.7	
Nestle SA, Cham Und Vevey	8.0	YC Corporation	132.0	Katilimevim Tasarruf Finansman Anonim Sirketi	-63.4	
Astrazeneca PLC	0.8	TCL Electronics Holdings Ltd	123.9	Perion Network Ltd	-62.8	
Shell Plc	0.8	ZIM Integrated Shipping Services Ltd	121.4	Maytronics Ltd	-61.9	
Toyota Motor Corp	0.7	LS ELECTRIC Co Ltd	120.5	Politeknik Metal Sanayi ve Ticaret AS	-61.4	
LVMH Moet Hennessy Louis V	0.7	Amara Raia Energy & Mobility Limited	118.8	Beyond Securities Public Co Ltd	-61.3	



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

	Wei	ights	Perfor	mance		Attribution Effects			
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects	
Australia	4.7	4.7	1.6	1.6	0.0	0.0	0.0	0.0	
Austria	0.2	0.2	6.0	6.1	0.0	0.0	0.0	0.0	
Belgium	0.5	0.6	0.2	0.2	0.0	0.0	0.0	0.0	
Brazil	1.4	1.4	-12.8	-12.8	0.0	0.0	0.0	0.0	
Canada	7.5	7.5	-1.5	-1.5	0.0	0.0	0.0	0.0	
Chile	0.1	0.1	0.6	0.6	0.0	0.0	0.0	0.0	
China	5.5	5.5	6.7	6.7	0.0	0.0	0.0	0.0	
Colombia	0.0	0.0	-4.6	-4.6	0.0	0.0	0.0	0.0	
Czech Republic	0.0	0.0	8.9	8.9	0.0	0.0	0.0	0.0	
Denmark	2.2	2.2	7.3	7.3	0.0	0.0	0.0	0.0	
Egypt	0.0	0.0	1.7	1.7	0.0	0.0	0.0	0.0	
Finland	0.6	0.6	3.6	3.5	0.0	0.0	0.0	0.0	
France	6.5	6.5	-6.0	-6.0	0.0	0.0	0.0	0.0	
Germany	5.0	5.2	-1.2	-1.2	0.0	0.0	0.0	0.0	
Greece	0.1	0.1	-1.4	-1.4	0.0	0.0	0.0	0.0	
Hong Kong	1.6	1.6	3.6	3.6	0.0	0.0	0.0	0.0	
Hungary	0.1	0.1	9.6	9.7	0.0	0.0	0.0	0.0	
India	5.5	5.3	12.2	12.0	0.0	0.0	0.0	0.0	
Indonesia	0.5	0.5	-11.6	-11.6	0.0	0.0	0.0	0.0	
reland	1.1	1.0	-0.1	-0.2	0.0	0.0	0.0	0.0	
Israel	0.7	0.7	-4.2	-4.4	0.0	0.0	0.0	0.0	
Italy	1.6	1.6	1.1	1.1	0.0	0.0	0.0	0.0	
Japan	16.2	16.2	-4.6	-4.6	0.0	0.0	0.0	0.0	
Korea	3.6	3.6	-1.0	-1.0	0.0	0.0	0.0	0.0	
Kuwait	0.2	0.2	-3.6	-3.6	0.0	0.0	0.0	0.0	
Malaysia	0.4	0.4	5.9	5.9	0.0	0.0	0.0	0.0	
Malta	0.0	0.0	3.3	3.3	0.0	0.0	0.0	0.0	
Mexico	0.7	0.7	-16.1	-16.2	0.0	0.0	0.0	0.0	
Netherlands	3.6	3.6	-0.1	-0.1	0.0	0.0	0.0	0.0	
New Zealand	0.2	0.2	1.9	2.0	0.0	0.0	0.0	0.0	
Norway	0.5	0.5	9.4	9.4	0.0	0.0	0.0	0.0	
Peru	0.1	0.1	1.9	1.9	0.0	0.0	0.0	0.0	
Philippines	0.2	0.2	-10.0	-10.0	0.0	0.0	0.0	0.0	



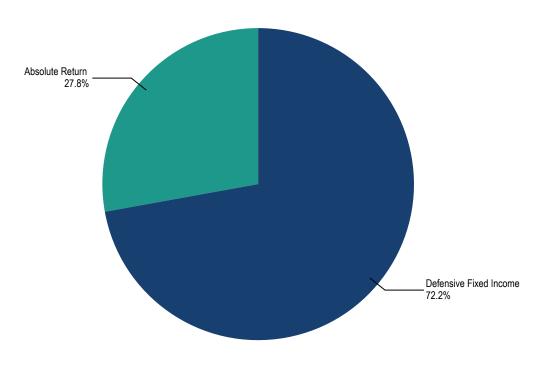
	We	ights	Perfor	mance		Attribution Effects			
	Portfolio	Benchmark	Portfolio	Benchmark	Selection Effects	Country Effects	Interaction Effects	Total Effects	
Poland	0.3	0.3	6.5	6.4	0.0	0.0	0.0	0.0	
Portugal	0.1	0.1	8.5	8.5	0.0	0.0	0.0	0.0	
Qatar	0.2	0.2	1.4	1.4	0.0	0.0	0.0	0.0	
Russia	0.0	0.0	8.5	0.0	0.0	0.0	0.0	0.0	
Saudi Arabia	1.2	1.2	-5.1	-5.1	0.0	0.0	0.0	0.0	
Singapore	1.0	1.0	6.9	7.0	0.0	0.0	0.0	0.0	
South Africa	0.8	0.7	13.2	13.2	0.0	0.0	0.0	0.0	
Spain	1.6	1.6	-0.2	-0.2	0.0	0.0	0.0	0.0	
Sweden	2.2	2.2	2.6	2.5	0.0	0.0	0.0	0.0	
Switzerland	5.6	6.0	3.2	3.2	0.0	0.0	0.0	0.0	
Taiwan	5.2	5.1	13.6	13.6	0.0	0.0	0.0	0.0	
Thailand	0.6	0.5	-4.4	-5.4	0.0	0.0	0.0	0.0	
Turkey	0.3	0.3	16.4	16.5	0.0	0.0	0.0	0.0	
United Arab Emirates	0.3	0.3	-2.6	-2.6	0.0	0.0	0.0	0.0	
United Kingdom	8.6	8.6	4.1	4.1	0.0	0.0	0.0	0.0	
United States	0.1	0.1	1.0	1.1	0.0	0.0	0.0	0.0	
Other	0.4	0.4	-8.3	-8.3	0.0	0.0	0.0	0.0	
Cash	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total	100.0	100.0	1.1	1.1	0.0	0.0	0.0	0.0	



## 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	10.1	10.0	-4.1	-4.1	0.0	0.0	0.0	0.0	
Asia Pacific	45.1	44.8	2.4	2.3	0.0	0.0	0.0	0.0	
EMEA	44.2	44.8	1.1	1.1	0.0	0.0	0.0	0.0	
Other	0.4	0.4	-8.3	-8.3	0.0	0.0	0.0	0.0	
Cash	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total	100.0	100.0	1.1	1.1	0.0	0.0	0.0	0.0	





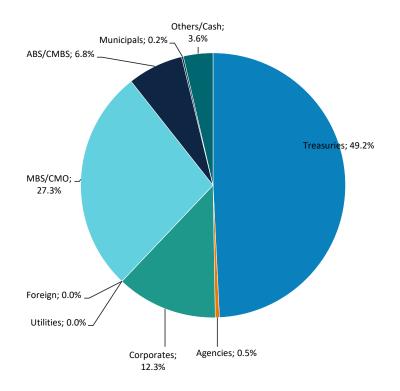
			Manager Contribution to
	Actual \$	Actual %	Excess Return %
Defensive Fixed Income	\$847,952,894	72.2%	0.0%
Absolute Return	\$327,110,004	27.8%	-1.2%
Actual vs. Policy Weight Difference			0.0%
Total	\$1,175,062,898	100.0%	-1.1%



# Statistics Summary 3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Diversifying Portfolio	4.2	5.6	-0.2	0.3	2.1
Blended Diversifying Index	3.6	6.7	-0.2	-	0.0
Defensive Fixed Income	2.5	9.4	-0.2	2.5	0.7
Blended Core Fixed Income Benchmark	0.7	9.9	-0.4	-	0.0
Absolute Return	7.3	6.0	0.3	-0.3	6.0
Absolute Return Custom Index	9.4	0.2	20.6	-	0.0





		Bloomberg Aggregate	
Sector	<b>Account Weight</b>	Weight	Difference
Treasuries	49.2%	43.2%	6.1%
Agencies	0.5%	0.9%	-0.4%
Corporates	12.3%	28.3%	-16.0%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS/CMO	27.3%	25.6%	1.7%
ABS/CMBS	6.8%	0.5%	6.3%
Municipals	0.2%	0.0%	0.2%
Others/Cash	3.6%	1.6%	2.0%
TOTAL	100.0%	100.0%	0.0%



Portfolio Characteristics		
	Portfolio	Bloomberg Aggreg
Total Number of Securities		
Total Market Value	\$ 836,443,612	
Current Coupon	3.88	3
Yield to Maturity	5.23	5
Average Life	11.75	3
Duration	8.25	
Quality	AA	

Yield to Maturity	
Range	% Held
0.0 - 5.0	51.8
5.0 - 7.0	41.2
7.0 - 9.0	5.9
9.0 - 11.0	0.6
11.0 - 13.0	0.2
13.0+	0.2
Unclassified	0.3

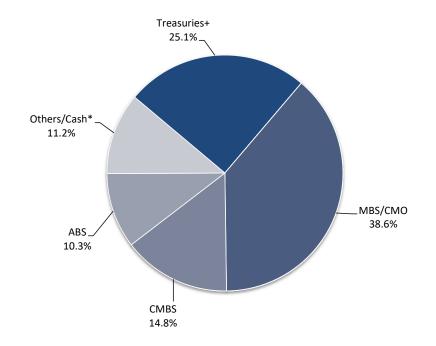
Average Life	
Range	% Held
0.0 - 1.0	8.2
1.0 - 3.0	24.8
3.0 - 5.0	14.3
5.0 - 10.0	20.1
10.0 - 20.0	14.7
20.0+	18.0
Unclassified	0.0

Duration	
Range	% Held
0.0 - 1.0	13.0
1.0 - 3.0	12.0
3.0 - 5.0	15.3
5.0 - 7.0	14.2
7.0 - 10.0	9.5
10.0+	36.1
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	52.9
Aaa (10)	17.9
Aa (9)	10.5
A (8)	7.3
Baa (7)	9.8
Below Baa (6-1)	0.3
Other	1.4

Coupon	
Range	% Held
0.0 - 5.0	77.4
5.0 - 7.0	17.8
7.0 - 9.0	3.0
9.0 - 11.0	0.2
11.0 - 13.0	0.0
13.0+	0.0
Unclassified	1.6





Sector	Account Weight	Bloomberg Aggregate Weight	Difference
Treasuries⁺	25.1%	43.2%	-18.1%
Agencies	0.0%	0.9%	-0.9%
Corporates	0.0%	28.3%	-28.3%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS/CMO	38.6%	25.6%	13.0%
CMBS	14.8%	0.0%	14.8%
ABS	10.3%	0.5%	9.8%
Municipals	0.0%	0.0%	0.0%
Others/Cash*	11.2%	1.6%	9.6%
TOTAL	100.0%	100.0%	0.0%

<sup>+</sup> May include TIPS allocation.



<sup>\*</sup> Includes CLOs.

Portfolio Characteristics		
	Portfolio	
Total Number of Securities	256	
Total Market Value	\$ 260,342,409	
Current Coupon	4.77	
Yield to Maturity	5.83	
Average Life	7.51	
Duration	6.44	
Quality	AA+	

Yield to Maturity	
Range	% Held
0.0 - 5.0	23.6
5.0 - 7.0	57.1
7.0 - 9.0	17.3
9.0 - 11.0	1.2
11.0 - 13.0	0.4
13.0+	0.4
Unclassified	0.0

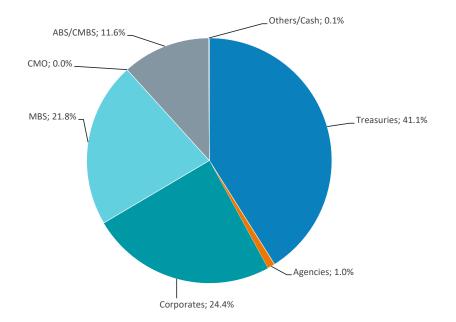
Average Life	
Range	% Held
0.0 - 1.0	23.6
1.0 - 3.0	57.1
3.0 - 5.0	17.3
5.0 - 10.0	1.2
10.0 - 20.0	0.4
20.0+	0.4
Unclassified	0.0

Duration	
Range	% Held
0.0 - 1.0	34.7
1.0 - 3.0	13.8
3.0 - 5.0	16.6
5.0 - 7.0	12.3
7.0 - 10.0	3.8
10.0+	18.9
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	35.7
Aaa (10)	35.5
Aa (9)	5.4
A (8)	8.0
Baa (7)	10.2
Below Baa (6-1)	0.7
Other	4.5

Coupon	
Range	% Held
0.0 - 5.0	64.4
5.0 - 7.0	22.4
7.0 - 9.0	8.0
9.0 - 11.0	0.8
11.0 - 13.0	0.0
13.0+	0.0
Unclassified/Cash	4.5





Sector	Account Weight	Bloomberg Aggregate Weight	Difference
Treasuries	41.1%	43.2%	-2.1%
Agencies	1.0%	0.9%	0.2%
Corporates	24.4%	28.3%	-3.9%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	21.8%	25.6%	-3.8%
CMO	0.0%	0.0%	0.0%
ABS/CMBS	11.6%	0.5%	11.2%
Municipals	0.0%	0.0%	0.0%
Others/Cash	0.1%	1.6%	-1.5%
TOTAL	100.0%	100.0%	0.0%



Portfolio Characteristics	
	Portfolio
Total Number of Securities	456
Total Market Value	\$ 150,022,582
Current Coupon	4.04
Yield to Maturity	5.30
Average Life	9.19
Duration	6.21
Quality	AA-

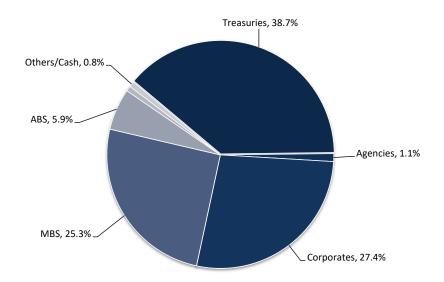
Yield to Maturity	
Range	% Held
0.0 - 5.0	51.9
5.0 - 7.0	43.0
7.0 - 9.0	3.4
9.0 - 11.0	1.1
11.0 - 13.0	0.5
13.0+	0.3
Unclassified	0.0

Average Life	
Range	% Held
0.0 - 1.0	2.2
1.0 - 3.0	8.3
3.0 - 5.0	20.2
5.0 - 10.0	50.8
10.0 - 20.0	6.7
20.0+	11.6
Unclassified	0.17

Duration	
Range	% Held
0.0 - 1.0	11.5
1.0 - 3.0	6.8
3.0 - 5.0	20.7
5.0 - 7.0	29.2
7.0 - 10.0	17.1
10.0+	14.6
Unclassified	0.00

Quality	
Range	% Held
Govt (10)	42.1
Aaa (10)	28.6
Aa (9)	3.0
A (8)	8.0
Baa (7)	17.8
Below Baa (6-1)	0.4
Other	0.00

Coupon	
Range	% Held
0.0 - 5.0	77.0
5.0 - 7.0	20.8
7.0 - 9.0	2.1
9.0 - 11.0	0.0
11.0 - 13.0	
13.0+	0.0
Unclassified	



		Bloomberg Aggregate	
Sector	<b>Account Weight</b>	Weight	Difference
Treasuries	38.7%	43.2%	-4.5%
Agencies	1.1%	0.9%	0.3%
Corporates	27.4%	28.3%	-0.9%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	25.3%	25.6%	-0.3%
CMO	0.0%	0.0%	0.0%
ABS	5.9%	0.5%	5.4%
Municipals	0.7%	0.0%	0.7%
Others/Cash	0.8%	1.6%	-0.8%
TOTAL	100.0%	100.0%	0.0%



Portfolio Characteristics	
	Portfolio
Total Number of Securities	604
Total Market Value	\$ 281,289,033
Current Coupon	3.69
Yield to Maturity	5.06
Average Life	9.05
Duration	6.04
Quality	Aa2

<b>Bloomberg Aggregate</b>
3.27
5.00
8.46
5.96
AA

Yield to Maturity	
Range	% Held
0.0 - 5.0	42.7
5.0 - 7.0	55.9
7.0 - 9.0	0.4
9.0 - 11.0	0.2
11.0 - 13.0	0.0
13.0+	0.0
Unclassified*	0.8

Average Life	
Range	% Held
0.0 - 1.0	2.3
1.0 - 3.0	20.7
3.0 - 5.0	18.9
5.0 - 10.0	37.6
10.0 - 20.0	11.4
20.0+	9.0
Unclassified	0.0

Duration	
Range	% Held
< 1.0	2.3
1.0 - 3.0	22.2
3.0 - 5.0	22.7
5.0 - 7.0	18.9
7.0 - 10.0	17.7
10.0+	16.2
Unclassified	0.0

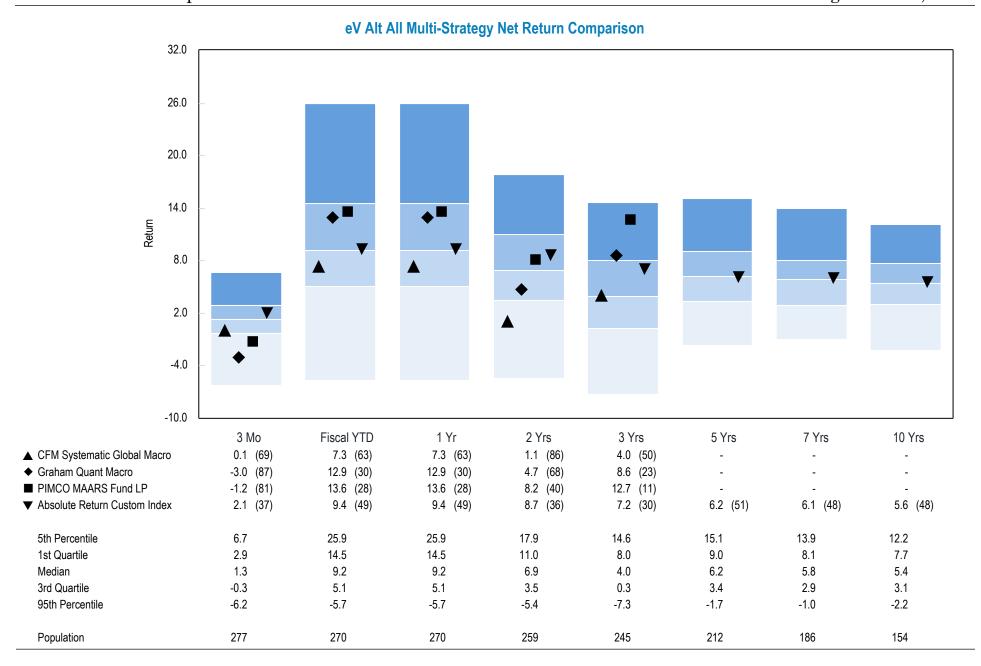
<sup>\*</sup>Unclassified includes a 0.65% cash position

Quality	
Range	% Held
Govt* (10)	39.8
Aaa (10)	8.4
Aa (9)	27.5
A (8)	11.8
Baa (7)	12.4
Below Baa (6-1)	0.0
Other	0.0

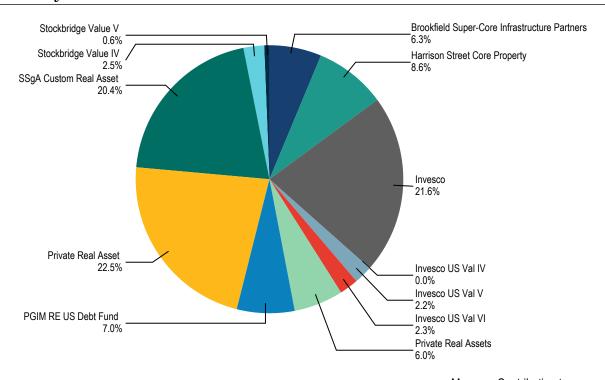
Coupon	
Range	% Held
0.0 - 5.0	73.3
5.0 - 7.0	25.2
7.0 - 9.0	0.7
9.0 - 10.0	0.0
10.0+	0.0
Unclassified	0.8

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 3 Mo 1 Yr 2 Yrs 3 Yrs 7 Yrs 10 Yrs Fiscal YTD 5 Yrs -0.4 (84) -1.8 (92) 7.3 (77) 7.3 (77) 2.3 (84) 4.4 (39) 1.4 (80) 1.8 (73) Absolute Return 2.1 (20) 9.4 (57) 9.4 (57) 8.7 (29) 7.2 (14) 6.2 (32) 6.1 (20) 5.6 (13) ▲ Absolute Return Custom Index 5th Percentile 3.8 16.9 16.9 12.4 8.4 9.1 8.0 7.1 1st Quartile 2.0 11.9 11.9 8.8 5.6 6.8 5.7 4.4 5.3 4.3 Median 1.4 10.0 10.0 8.0 3.0 3.3 2.2 3rd Quartile 0.0 7.6 7.6 4.7 0.0 1.8 1.5 95th Percentile -2.5 -4.8 -4.8 -12.8 -11.3 -7.1 -4.9 -5.8 38 54 54 52 Population 54 54 53 43









			Manager Contribution to
	Actual \$	Actual %	Excess Return %
Harrison Street Core Property	\$90,412,068	8.6%	0.1%
Invesco	\$226,779,760	21.6%	-0.2%
Invesco US Val IV	\$99,763	0.0%	0.0%
Invesco US Val V	\$23,126,386	2.2%	0.0%
Invesco US Val VI	\$23,772,890	2.3%	0.0%
PGIM RE US Debt Fund	\$73,088,020	7.0%	0.1%
Stockbridge Value IV	\$26,225,091	2.5%	-0.1%
Stockbridge Value V	\$6,670,812	0.6%	0.0%
Private Real Asset	\$235,749,636	22.5%	1.0%
Brookfield Super-Core Infrastructure Partners	\$65,883,382	6.3%	0.1%
KKR Diversified Core Infrastructure Fund	\$62,403,453	6.0%	0.0%
SSgA Custom Real Asset	\$214,243,103	20.4%	0.0%
Actual vs. Policy Weight Difference			0.5%
Total	\$1,048,454,365	100.0%	1.5%



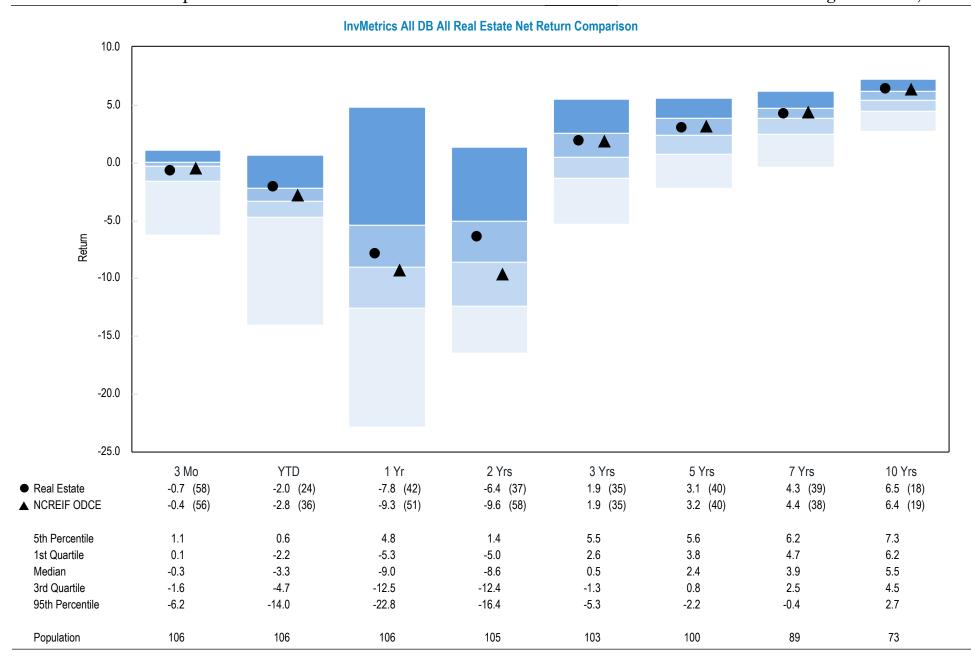
Statistics Summary
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Inflation Hedge	4.8	5.2	0.3	0.1	5.1
Blended Inflation Hedge Index	4.3	7.9	0.2	-	0.0
Real Estate	1.9	6.7	-0.1	-0.1	3.1
NCREIF ODCE	1.9	9.3	-0.1	-	0.0
Invesco	0.6	9.0	-0.2	-0.7	1.8
NCREIF ODCE	1.9	9.3	-0.1	-	0.0
Invesco US Val IV	-40.6	33.0	-1.4	-1.5	30.9
NCREIF ODCE	1.9	9.3	-0.1	-	0.0
Invesco US Val V	-7.2	15.6	-0.6	-0.7	11.9
NCREIF ODCE	1.9	9.3	-0.1	-	0.0
PGIM RE US Debt Fund	6.0	0.7	3.3	0.4	9.1
NCREIF ODCE	1.9	9.3	-0.1	-	0.0
Private Real Assets	12.1	9.3	0.9	0.2	17.5
Blended Private Real Assets Index	7.8	16.2	0.4	-	0.0
Public Real Assets	4.2	12.5	0.2	-0.2	0.3
Blended Public Real Assets Index	4.3	12.4	0.2	-	0.0
SSgA Custom Real Asset	4.2	12.5	0.2	-0.2	0.3
SSgA Custom Real Asset Index	4.3	12.4	0.2	-	0.0



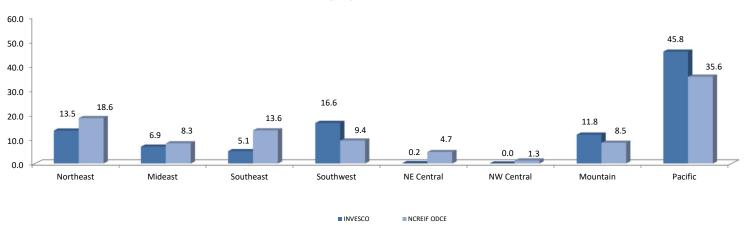
		Statistics Summary 5 Years			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Inflation Hedge	3.7	6.4	0.3	-0.3	4.8
Blended Inflation Hedge Index	5.1	7.6	0.4	-	0.0
Real Estate	3.1	5.8	0.2	-0.1	2.5
NCREIF ODCE	3.2	7.5	0.2	-	0.0
Invesco	2.0	7.7	0.0	-0.5	2.1
NCREIF ODCE	3.2	7.5	0.2	-	0.0
Invesco US Val IV	-24.6	26.9	-0.9	-1.1	25.1
NCREIF ODCE	3.2	7.5	0.2	-	0.0
PGIM RE US Debt Fund	5.7	1.3	2.6	0.3	7.4
NCREIF ODCE	3.2	7.5	0.2	-	0.0
Private Real Assets	10.6	10.5	0.8	0.1	20.6
Blended Private Real Assets Index	7.2	19.1	0.3	-	0.0
Public Real Assets	1.8	16.9	0.1	-0.7	3.3
Blended Public Real Assets Index	4.4	14.9	0.2	-	0.0
SSgA Custom Real Asset	4.3	14.8	0.2	-0.1	0.7
SSgA Custom Real Asset Index	4.4	14.9	0.2	-	0.0







# **Geographic Diversification**



# **Property Diversification**





		Statistics Summa 3 Years	ary		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
County Treasury Pool	2.6	1.8	-0.2	-0.2	1.8
90 Day U.S. Treasury Bill	3.0	0.7	-	-	0.0
Cash & Cash Overlay	3.4	0.7	2.1	2.1	0.2
90 Day U.S. Treasury Bill	3.0	0.7	-	-	0.0
General Account	3.5	0.7	3.5	3.5	0.1
90 Day U.S. Treasury Bill	3.0	0.7	-	-	0.0



# **Investment Strategy Summaries**

San Mateo County Employees' Retirement Association Period Ending: June 30, 2024

## 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. - 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.

## **Eaton Vance – Emerging Markets Debt Opportunities Fund**

Eaton Vance's Emerging Market Debt Opportunities (EMDO) strategy utilizes a combination approach to build a portfolio of fixed income securities that is highly diversified across geographies, issuers, credit quality, and currencies to achieve a higher expected return relative to the benchmark with similar volatility.

## 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 investment 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.



#### **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: June 30, 2024

# 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.



# Policy Index & Benchmark History

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
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%
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 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 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%
Blended Public Real Assets	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 Assets	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 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 (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%
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%
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%
	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				
	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%



# San Mateo County Employees' Retirement Association Period Ending: June 30, 2024

**3/1/99** 0.0%

0.0%

0.0%

32.3%

35.5%

8.0%

24.2%

0.0%

0.0%

0.0%

0.0%

33.3%

33.3%

8.4%

25.0%

0.0%

0.0%

0.0%

0.0%

0.0%

33.3%

33.3%

0.0%

25.0%

0.0%

8.4%

														16	uou	LATIC	umg	,. <i>o</i> u.
Dublia Fauitu Danahmark	A6																	
Public Equity Benchmark	As of:	7/4/00	0/4/04	7/4/00	40/4/40	7/4/40	4/4/40	4/4/40	40/4/40	40/4/47	0/4/47	40/4/40	0/4/40	4/4/40	414144	40/4/40	E1410=	0/4/00
MOOL AOMIL LIO	7/1/23	7/1/22	2/1/21	7/1/20	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	10/1/17	2/1/17	10/1/16	9/1/16	1/1/16	1/1/14	10/1/10	5/1/07	6/1/00
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%	34.0%	31.3%	23.1%
MSCI ACWI ex US IMI 100% Hedged (Net)	22.0%	23.8%	23.2%	23.1%	22.5%	18.5%	13.9%	9.3%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	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%	47.5%	45.2%	40.4%	41.7%	41.7%	40.0%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI (Net)	22.0%	23.8%	23.2%	23.1%	22.5%	27.8%	32.4%	37.0%	41.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	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%	50.0%	48.0%	52.8%	55.2%	61.5%
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%	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%	8.3%	12.0%	13.2%	13.5%	15.4%
Russell 3000	56.1%	52.5%	53.7%	53.9%	55.0%	53.7%	53.7%	53.7%	53.7%	52.5%	54.8%	59.6%	58.3%	0.0%	0.0%	0.0%	0.0%	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%	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%	100.0%	100.0%	100.0%
US Equity Benchmark	As of:																	
	9/1/16	1/1/16	6/1/00	3/1/99	9/1/98	7/1/96	1/1/95											
Russell 1000	0.0%	85.7%	80.0%	52.0%	50.0%	50.0%	69.0%											
Russell 1000 Value	0.0%	0.0%	0.0%	12.0%	12.5%	0.0%	0.0%											
Russell 2000	0.0%	14.3%	20.0%	36.0%	37.5%	37.5%	14.0%											
Russell 3000	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%											
S & P 500	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	17.0%											
3 & F 300	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%											
International Equity Benchmark	As of:																	
	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	10/1/17	1/1/14	6/1/00	1/1/96									
MSCI ACWI ex US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	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%	0.0%									
MSCI ACWI ex US IMI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%									
MSCI ACWI ex US IMI (Net)	50.0%	60.0%	70.0%	80.0%	90.0%	100.0%	0.0%	0.0%	0.0%									
MSCI EAFE	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%									
Defensive Fixed Income Benchmark	As of:																	
	7/1/23	7/1/22																
Bloomberg U.S. Aggregate Index	76.0%	100.0%																
Bloomberg U.S. Treasury Long Index	24.0%	0.0%																
biombong cio. Housany Long maox	100.0%	100.0%																
Opportunistic Credit Benchmark	As of:																	
Opportunistic Great Denominark		7/4/00																
Disambara IIC Comercia IIV	7/1/23	7/1/22																
Bloomberg US Corporate HY	73.0%	0.0%																
Credit Suisse Leveraged Loan Index 1 Qtr Lag	27.0%	0.0%																
Bloomberg BA Intermediate HY	0.0% 100.0%	100.0% 100.0%																
Public Credit Benchmark	As of:	41414.4	4014100															
	7/1/23	1/1/14	12/1/09															
Bloomberg US Corporate HY	100.0%	0.0%	100.0%															
Bloomberg BA Intermediate HY	0.0%	100.0%	0.0%															
Bloomberg Credit BAA	0.0% 100.0%	0.0% 100.0%	100.0%															
	100.0%	100.0%	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%															
Pleamberg LIC Corporate LIV	0.00/	0.00/	100 00/															

0.0%

0.0%

100.0%

0.0%

100.0%

0.0% 100.0% 100.0%



Bloomberg US Corporate HY

Bloomberg Credit BAA

Cliffwater Direct Lending Index

Private Equity Benchmark	As of:								
	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:								
	1/1/21	10/1/10							
Libor +4%	0.00%	100.00%							
SOFR +4%	100.0%	0.0%							
	100.0%	0.0%							
Inflation Hedge Benchmark	As of:								
illiation neage benchmark	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 Assets	22.22%	23.53%	23.53%	35.29%	35.29%	33.3%	0.0%	0.0%	0.0%
Blended Private Real Assets	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%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Public Real Assets Benchmark	As of:	40/4/40	414144						
Planmbara Pall Calant Commodity	5/1/20	10/1/16	1/1/14						
Bloomberg Roll Select Commodity	25.0% 25.0%	34.0% 33.0%	0.0%						
S&P Global Large-MidCap Commodity and Resources 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%						
Electrical of the C	100.0%	100.0%	100.0%						
Private Real Assets Benchmark	As of:								
	1/1/21	4/1/18	10/1/16	1/1/14					
Bloomberg Roll Select Commodity	<b>1/1/21</b> 0.00%	0.00%	34.00%	0.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources	1/1/21 0.00% 0.00%	0.00% 0.00%	34.00% 33.00%	0.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure	1/1/21 0.00% 0.00% 0.00%	0.00% 0.00% 0.00%	34.00% 33.00% 33.00%	0.0% 0.0% 0.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	1/1/21 0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00% 100.00%	34.00% 33.00% 33.00% 0.00%	0.0% 0.0% 0.0% 0.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	1/1/21 0.00% 0.00% 0.00% 0.00% 100.00%	0.00% 0.00% 0.00% 100.00% 0.00%	34.00% 33.00% 33.00% 0.00% 0.00%	0.0% 0.0% 0.0% 0.0% 0.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	1/1/21 0.00% 0.00% 0.00% 0.00% 100.00%	0.00% 0.00% 0.00% 100.00% 0.00%	34.00% 33.00% 33.00% 0.00% 0.00% 0.00%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	1/1/21 0.00% 0.00% 0.00% 0.00% 100.00%	0.00% 0.00% 0.00% 100.00% 0.00%	34.00% 33.00% 33.00% 0.00% 0.00%	0.0% 0.0% 0.0% 0.0% 0.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	1/1/21 0.00% 0.00% 0.00% 0.00% 100.00%	0.00% 0.00% 0.00% 100.00% 0.00%	34.00% 33.00% 33.00% 0.00% 0.00% 0.00%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%	1/1/21 0.00% 0.00% 0.00% 0.00% 100.00% 100.00%	0.00% 0.00% 0.00% 100.00% 0.00%	34.00% 33.00% 33.00% 0.00% 0.00% 0.00%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%	1/1/21 0.00% 0.00% 0.00% 0.00% 100.00% 100.00% As of:	0.00% 0.00% 0.00% 100.00% 0.00%	34.00% 33.00% 33.00% 0.00% 0.00% 0.00%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark	1/1/21 0.00% 0.00% 0.00% 0.00% 100.00% 100.00% 100.00% As of: 9/1/14 50.0%	0.00% 0.00% 0.00% 100.00% 0.00%	34.00% 33.00% 33.00% 0.00% 0.00% 0.00%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark Cambridge Associates Private Natural Resources 1 Qtr Lag	1/1/21 0.00% 0.00% 0.00% 0.00% 100.00% 100.00% 100.00% As of: 9/1/14 50.0%	0.00% 0.00% 0.00% 100.00% 0.00%	34.00% 33.00% 33.00% 0.00% 0.00% 0.00%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark  Cambridge Associates Private Natural Resources 1 Qtr Lag Cambridge Associates Private Infrastructure 1 Qtr Lag	1/1/21 0.00% 0.00% 0.00% 100.00% 100.00% 100.00% 50.00% 100.0%	0.00% 0.00% 0.00% 100.00% 0.00%	34.00% 33.00% 33.00% 0.00% 0.00% 0.00%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark Cambridge Associates Private Natural Resources 1 Qtr Lag	1/1/21 0.00% 0.00% 0.00% 100.00% 100.00% 100.00% As of: 9/1/14 50.0% 50.0% 100.0%	0.00% 0.00% 0.00% 100.00% 0.00% 0.00% 100.0%	34.00% 33.00% 33.00% 0.00% 0.00% 100.0%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark  Cambridge Associates Private Natural Resources 1 Qtr Lag Cambridge Associates Private Infrastructure 1 Qtr Lag Real Estate Benchmark	1/1/21 0.00% 0.00% 0.00% 100.00% 100.00% 100.00% 100.0% As of: 9/1/14 50.0% 100.0% As of: 1/1/09	0.00% 0.00% 0.00% 100.00% 0.00% 100.00%	34.00% 33.00% 33.00% 0.00% 0.00% 100.0%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark  Cambridge Associates Private Natural Resources 1 Qtr Lag Cambridge Associates Private Infrastructure 1 Qtr Lag  Real Estate Benchmark  10 Year Treasury +2%	1/1/21 0.00% 0.00% 0.00% 100.00% 100.00% 100.00% 100.0% As of: 9/1/14 50.0% 100.0% As of: 11/109 0.0%	0.00% 0.00% 100.00% 0.00% 0.00% 100.00%	34.00% 33.00% 33.00% 0.00% 0.00% 100.0%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark  Cambridge Associates Private Natural Resources 1 Qtr Lag Cambridge Associates Private Infrastructure 1 Qtr Lag  Real Estate Benchmark  10 Year Treasury +2% NCREIF ODCE	1/1/21 0.00% 0.00% 0.00% 100.00% 100.00% 100.00%  As of: 9/1/14 50.0% 100.0%  As of: 1/1/09 0.0%	0.00% 0.00% 100.00% 100.00% 0.00% 100.0% 6/1/00 0.0%	34.00% 33.00% 33.00% 0.00% 0.00% 100.0% 7/1/96 100.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark  Cambridge Associates Private Natural Resources 1 Qtr Lag Cambridge Associates Private Infrastructure 1 Qtr Lag  Real Estate Benchmark  10 Year Treasury +2%	1/1/21 0.00% 0.00% 0.00% 100.00% 100.00% 100.00% 100.0% As of: 9/1/14 50.0% 100.0% As of: 11/109 0.0%	0.00% 0.00% 100.00% 0.00% 0.00% 100.00%	34.00% 33.00% 33.00% 0.00% 0.00% 100.0%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark  Cambridge Associates Private Natural Resources 1 Qtr Lag Cambridge Associates Private Infrastructure 1 Qtr Lag  Real Estate Benchmark  10 Year Treasury +2% NCREIF ODCE	1/1/21 0.00% 0.00% 0.00% 100.00% 100.00% 100.0% As of: 9/1/14 50.0% 100.0% 100.0% As of: 1/1/09 0.0%	0.00% 0.00% 100.00% 0.00% 0.00% 100.0% 6/1/00 0.0% 100.0%	34.00% 33.00% 33.00% 0.00% 0.00% 100.0% 100.0%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark  Cambridge Associates Private Natural Resources 1 Qtr Lag Cambridge Associates Private Infrastructure 1 Qtr Lag  Real Estate Benchmark  10 Year Treasury +2% NCREIF ODCE	1/1/21 0.00% 0.00% 0.00% 100.00% 100.00% 100.00%  4s of: 9/1/14 50.0% 100.0%  As of: 1/1/109 0.0% 100.0% As of:	0.00% 0.00% 100.00% 0.00% 0.00% 100.0% 100.0%	34.00% 33.00% 33.00% 0.00% 0.00% 100.0% 100.0%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark  Cambridge Associates Private Natural Resources 1 Qtr Lag Cambridge Associates Private Infrastructure 1 Qtr Lag  Real Estate Benchmark  10 Year Treasury +2% NCREIF ODCE NCREIF Property  Liquidity Benchmark	1/1/21 0.00% 0.00% 0.00% 100.00% 100.00% 100.0%  As of: 9/1/14 50.0% 100.0%  As of: 1/1/09 0.0% 100.0%  As of: 1/1/09 0.0% As of: 1/1/09 0.0% As of: 100.0%	0.00% 0.00% 100.00% 0.00% 0.00% 100.0% 6/1/00 0.0% 100.0% 100.0%	34.00% 33.00% 33.00% 0.00% 0.00% 100.0% 100.0%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark  Cambridge Associates Private Natural Resources 1 Qtr Lag Cambridge Associates Private Infrastructure 1 Qtr Lag  Real Estate Benchmark  10 Year Treasury +2% NCREIF ODCE NCREIF Property  Liquidity Benchmark  Bloomberg US Govt/Credit 1-3 Yr. TR	1/1/21 0.00% 0.00% 0.00% 100.00% 100.00% 100.0%  As of: 9/1/14 50.0% 100.0%  As of: 1/1/09 0.0% 100.0%  As of: 1/1/09 0.0% 100.0% As of: 1/1/22 81.8%	0.00% 0.00% 100.00% 0.00% 0.00% 100.0% 6/1/00 0.0% 100.0% 100.0%	34.00% 33.00% 33.00% 0.00% 0.00% 100.0% 100.0%	0.0% 0.0% 0.0% 0.0% 0.0% 100.0%					
Bloomberg Roll Select Commodity S&P Global Large-MidCap Commodity and Resources S&P Global Infrastructure 50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL 75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL CPI + 5%  Private RA Secondary Benchmark  Cambridge Associates Private Natural Resources 1 Qtr Lag Cambridge Associates Private Infrastructure 1 Qtr Lag  Real Estate Benchmark  10 Year Treasury +2% NCREIF ODCE NCREIF Property  Liquidity Benchmark	1/1/21 0.00% 0.00% 0.00% 100.00% 100.00% 100.0%  As of: 9/1/14 50.0% 100.0%  As of: 1/1/09 0.0% 100.0%  As of: 1/1/09 0.0% As of: 1/1/09 0.0% As of: 100.0%	0.00% 0.00% 100.00% 0.00% 0.00% 100.0% 6/1/00 0.0% 100.0% 100.0%	34.00% 33.00% 33.00% 0.00% 0.00% 100.0% 100.0%	0.0% 0.0% 0.0% 0.0% 0.0% 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%
Deliverde Conservations Deviation and	A£.	
Brigade Secondary Benchmark	As of:	
Diagraph and High Viold	8/1/10	
Bloomberg High Yield	50.0% 50.0%	
Credit Suisse Leveraged Loans	100.0%	
	100.0 /6	
PIMCO Diversified	As of:	
	9/1/17	
JPMorgan EMBI Global	33.333%	
BofAMLBB-BRatedDvlpdMktsHYHdgdUSD	33.333%	
Global Agg Credit Ex EM USD hedged	33.334%	
	100.0%	
SSgA Custom Real Assets	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%



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

Eaton Vance	
On All Assets:	0.54% per annum
FIAM Bond	
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
Thereafter:	0.05% per annum
Plus monthly reporting fee of \$1500	·

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



# San Mateo County Employees' Retirement Association Period Ending: June 30, 2024

# 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>	B
PanAgora Defuseq	Russell 1000 Index	B	B	B
PGIM Quant Solutions	Russell 2000 Index	<b>✓</b>	B	<b>✓</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	<b>✓</b>	<b>✓</b>	<b>✓</b>
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 Credit Solutions	Blmbg. U.S. Corp: High Yield Index	-	-	-
Beach Point Select	Blmbg. U.S. Corp: High Yield Index	<b>✓</b>	<b>✓</b>	<b>✓</b>
Brigade Capital	Blmbg. U.S. Corp: High Yield Index	<b>✓</b>	<b>✓</b>	<b>✓</b>
PIMCO Diversified	Blmbg. U.S. Corp: High Yield Index	-	B	-
Eaton Vance Emerging Markets Debt Opportunities Fund	JPM EMB (JEMB) Hard Currency/Local Currency 50-50	-	-	-
CFM Systematic Global Macro	Absolute Return Custom Index	-	-	-
Graham Quant Macro	Absolute Return Custom Index	-	-	-
PIMCO MAARS Fund LP	Absolute Return Custom Index	-	-	-

# San Mateo County Employees' Retirement Association Period Ending: June 30, 2024

# 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>	B
PanAgora Defuseq	Russell 1000 Index	B	B	B
PGIM Quant Solutions	Russell 2000 Index	<b>✓</b>	B	<b>✓</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	✓	<b>✓</b>	<b>✓</b>
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 Credit Solutions	Blmbg. U.S. Corp: High Yield Index	-	-	-
Beach Point Select	Blmbg. U.S. Corp: High Yield Index	✓	<b>✓</b>	<b>✓</b>
Brigade Capital	Blmbg. U.S. Corp: High Yield Index	✓	<b>✓</b>	<b>✓</b>
PIMCO Diversified	Blmbg. U.S. Corp: High Yield Index	-	B	-
Eaton Vance Emerging Markets Debt Opportunities Fund	JPM EMB (JEMB) Hard Currency/Local Currency 50-50	-	-	-
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**	6,473,464,140	100.0	1.8 (8)	9.4 (60)	9.4 (60)	7.4 (80)	3.4 (46)	6.6 (80)	6.3	(70)
Policy Index			2.2 (2)	11.7 (18)	11.7 (18)	9.1 (47)	4.4 (17)	7.4 (50)	6.7	(47)
Simple Benchmark			1.4 (25)	9.8 (54)	9.8 (54)	8.4 (65)	2.7 (72)	6.8 (74)	6.4	(57)
Total Fund ex Overlay	6,461,386,948	99.8	1.8 (9)	9.4 (63)	9.4 (63)	7.2 (82)	3.3 (48)	6.6 (80)	6.2	(71)
Policy Index			2.2 (2)	11.7 (18)	11.7 (18)	9.1 (47)	4.4 (17)	7.4 (50)	6.7	(47)
Simple Benchmark			1.4 (25)	9.8 (54)	9.8 (54)	8.4 (65)	2.7 (72)	6.8 (74)	6.4	(57)
Growth Portfolio	3,903,561,465	60.3	2.4	13.7	13.7	12.0	-		-	
Blended Growth Index			3.4	19.5	19.5	16.0	6.4	11.0	-	
US Equity	1,565,957,445	24.2	2.8 (36)	20.8 (63)	20.8 (63)	18.3 (77)	8.4 (20)	12.6 (78)	11.2	(78)
Blended US Equity Index			3.2 (20)	23.1 (31)	23.1 (31)	21.0 (32)	8.1 (32)	14.1 (31)	12.1	(39)
Russell 3000 Index			3.2 (20)	23.1 (31)	23.1 (31)	21.0 (32)	8.1 (32)	14.1 (31)	12.1	(33)
BlackRock Russell 1000	932,835,406	14.4	3.6 (39)	23.9 (46)	23.9 (46)	21.6 (40)	8.8 (56)	14.6 (42)	-	
DE Shaw	237,593,939	3.7	5.2 (12)	27.4 (23)	27.4 (23)	21.9 (37)	9.6 (42)	14.3 (48)	13.2	(23)
PanAgora Defuseq	250,421,372	3.9	0.3 (79)	8.7 (98)	8.7 (98)	7.8 (99)	5.4 (93)	7.8 (98)	-	
Russell 1000 Index			3.6 (40)	23.9 (46)	23.9 (46)	21.6 (40)	8.7 (56)	14.6 (43)	12.5	(42)
PGIM Quant Solutions	131,410,678	2.0	-2.1 (28)	13.4 (28)	13.4 (28)	16.0 (18)	4.6 (17)	9.3 (48)	-	
Russell 2000 Index			-3.3 <i>(50)</i>	10.1 (54)	10.1 (54)	11.2 (64)	-2.6 (88)	6.9 (85)	7.0	(79)
International Equity	1,214,803,036	18.8	1.3 (16)	10.2 (76)	10.2 (76)	12.3 (72)	0.6 (53)	6.3 (59)	4.6	(59)
Blended International Equity Index			1.8 (10)	14.5 (11)	14.5 (11)	14.1 (26)	3.3 (14)	7.5 (22)	5.0	(39)
Baillie Gifford	289,666,489	4.5	-0.6 (54)	3.5 (90)	3.5 (90)	9.0 (89)	-8.4 (87)	4.3 (87)	4.6	(90)
MSCI ACWI ex US			1.2 (26)	12.2 (22)	12.2 (22)	12.7 (56)	1.0 (20)	6.1 (71)	4.3	(96)
MSCI ACWI ex US Growth			0.9 (29)	10.2 (36)	10.2 (36)	11.9 (67)	-2.3 (54)	5.8 (75)	5.1	(88)
Mondrian	288,233,212	4.5	1.3 (37)	10.6 (67)	10.6 (67)	11.3 (84)	1.7 (80)	4.8 (94)	3.2	(83)
MSCI AC World ex USA Value			1.6 (32)	14.2 (42)	14.2 (42)	13.6 (58)	4.3 (39)	6.0 (78)	3.4	(79)
MSCI AC World ex USA Index			1.2 (41)	12.2 (55)	12.2 (55)	12.7 (69)	1.0 (86)	6.1 (77)	4.3	(60)
BlackRock MSCI ACWI EX-US IMI	622,407,957	9.6	1.1 (40)	11.7 (46)	11.7 (46)	12.3 (73)	0.5 (64)	-	-	
MSCI AC World ex USA IMI (Net)			0.9 (44)	11.6 (48)	11.6 (48)	12.0 (75)	0.2 (67)	5.6 (80)	3.9	(94)
Record Dynamic Currency Hedge	7,509,070	0.1	233.6	-4,131.3	-4,131.3	-	-	-	-	

San Mateo County Employees' Retirement Association Period Ending: June 30, 2024

	Market Value	% of Portfolio	3 Mo Rank	Fiscal YTD	1 Yr Rank	2 Yrs Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs	
Private Equity***	443,372,351	6.8	7.3 (1)	9.0 (20)	9.0 (20)	0.9 (60)	3.4 (84)	19.2 (5)	17.7	(8)
Blended Private Equity Index			10.7 (1)	32.3 (1)	32.3 (1)	11.8 (1)	12.8 (13)	17.4 (13)	14.8	(24)
Opportunistic Credit	679,428,632	10.5	0.6	7.7	7.7	-	-	-	-	
Opportunistic Credit Index			1.5	11.0	11.0	9.1	2.8	4.4	4.5	
Public Credit	481,753,488	7.4	0.9	9.0	9.0	6.7	2.6	4.2	5.1	
Blmbg. U.S. Corp: High Yield Index			1.1	10.4	10.4	9.7	1.6	3.9	4.3	
Beach Point Select	113,779,078	1.8	0.8 (89)	10.5 (50)	10.5 (50)	7.3 (96)	4.7 (6)	7.7 (2)	-	
Brigade Capital	109,119,894	1.7	0.4 (96)	8.0 (96)	8.0 (96)	5.0 (100)	1.7 (77)	4.4 (44)	4.1	(76)
One William Street	66,533,684	1.0	1.9 (5)	10.9 (37)	10.9 (37)	-	-	-	-	
Blmbg. U.S. Corp: High Yield Index			1.1 (75)	10.4 (51)	10.4 (51)	9.7 (50)	1.6 (80)	3.9 (71)	4.3	(62)
PIMCO Diversified	130,763,100	2.0	0.6 (95)	8.6 (89)	8.6 (89)	7.1 (97)	-1.0 (100)	1.3 (100)	-	
Blmbg. U.S. Corp: High Yield Index			1.1 (75)	10.4 (51)	10.4 (51)	9.7 (50)	1.6 (80)	3.9 (71)	4.3	(62)
Eaton Vance Emerging Markets Debt Opportunities Fund	61,557,732	1.0	1.5 (3)	-	-	-	-	-	-	
JPM EMB (JEMB) Hard Currency/Local Currency 50-50			-0.4 (42)	4.9 (83)	4.9 (83)	6.9 (83)	-2.3 (73)	-0.1 (73)	1.1	(65)
Private Credit	197,675,144	3.1	-0.2	3.9	3.9	4.4	4.3	5.6		
Credit Suisse Leveraged Loan Index 1 Qtr Lag			2.5	12.4	12.4	7.1	5.8	5.3	4.6	
AG CSF ADF II	4,347,839	0.1	-1.7	10.4	10.4	-	-	-	-	
AG CSF II	22,838,234	0.4	1.4	13.6	13.6	11.5	-	-	-	
Angelo Gordon Credit Solutions	6,503,737	0.1	0.2 (97)	9.6 (65)	9.6 (65)	6.2 (97)	4.7 (4)	-	-	
Credit Suisse Leveraged Loan Index 1 Qtr Lag			2.5 (2)	12.4 (7)	12.4 (7)	7.1 (94)	5.8 (1)	5.3 (11)	4.6	(21)
Blackrock DL Feeder IX-U	40,916,461	0.6	-1.2	5.2	5.2	6.1	5.8	-	-	
Comvest Credit Partners VII	2,250,000	0.0	-	-	-	-	-	-	-	
PIMCO Private Income	50,048,650	0.8	0.0	5.6	5.6	4.4	4.3	7.0	-	
TCP Direct Lending VIII	9,526,787	0.1	-0.6	4.3	4.3	5.4	4.6	5.3	-	
White Oak Yield	29,743,963	0.5	0.0	3.9	3.9	3.4	4.1	4.8	-	
White Oak YSF V	31,499,473	0.5	0.0 (98)	2.5 (100)	2.5 (100)	1.1 (100)	1.6 (81)	-	-	
Credit Suisse Leveraged Loan Index 1 Qtr Lag			2.5 (1)	12.4 (11)	12.4 (11)	7.1 (97)	5.8 (3)	5.3 (15)	4.6	(47)

San Mateo County Employees' Retirement Association Period Ending: June 30, 2024

	Market Value	% of Portfolio	3 Mo Rank	Fiscal YTD	1 Yr Rank	2 Yrs Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs R	lank
Diversifying Portfolio	1,175,062,898	18.2	-0.7	4.3	4.3	1.5	-	-	-	
Blended Diversifying Index			0.4	3.6	3.6	2.8	0.0	1.7	2.7	
Defensive Fixed Income	847,952,894	13.1	-0.3	2.7	2.7	1.2	-3.0	0.1	1.7	
Blended Core Fixed Income Benchmark			-0.4	0.7	0.7	-0.1	-3.6	-0.6	1.2	
DoubleLine	260,342,409	4.0	0.4 (65)	4.0 (59)	4.0 (59)	1.8 (53)	-2.7 (81)	-	-	
Blmbg. U.S. Aggregate Index			0.1 (98)	2.6 (79)	2.6 (79)	0.8 (71)	-3.0 (94)	-0.2 (68)	1.3 (	(71)
FIAM Bond	150,022,582	2.3	0.2 (56)	3.7 (42)	3.7 (42)	1.8 (37)	-2.4 (33)	0.9 (19)	2.2 (	(15)
NISA Core Bond	281,289,033	4.3	0.1 (94)	3.0 (80)	3.0 (80)	1.3 (76)	-2.6 (57)	-	-	
Blmbg. U.S. Aggregate Index			0.1 (94)	2.6 (92)	2.6 (92)	0.8 (92)	-3.0 (89)	-0.2 (96)	1.3 (	(99)
NISA Long Treasury	144,789,588	2.2	-1.8	-5.4	-5.4	-	-	-	-	
Blmbg. U.S. Treasury: Long			-1.8	-5.6	-5.6	-6.2	-10.5	-4.3	0.6	
Absolute Return	327,110,004	5.1	-1.8 (92)	7.3 (77)	7.3 (77)	2.3 (84)	4.4 (42)	1.4 (80)	1.8 (	(74)
Absolute Return Custom Index			2.1 (25)	9.4 (60)	9.4 (60)	8.7 (41)	7.2 (15)	6.2 (41)	5.6 (	(14)
CFM Systematic Global Macro	109,334,294	1.7	0.1 (82)	7.3 (71)	7.3 (71)	1.1 (84)	4.0 (50)	-	-	
Graham Quant Macro	108,430,411	1.7	-3.0 (91)	12.9 (31)	12.9 (31)	4.7 (75)	8.6 (24)	-	-	
PIMCO MAARS Fund LP	109,345,299	1.7	-1.2 (87)	13.6 (27)	13.6 (27)	8.2 (52)	12.7 (14)	-	-	
Absolute Return Custom Index			2.1 (35)	9.4 (55)	9.4 (55)	8.7 (51)	7.2 (26)	6.2 (52)	5.6 (	(40)
Inflation Hedge	1,048,454,364	16.2	2.3	1.2	1.2	-0.5	5.2	4.1		
Blended Inflation Hedge Index			0.7	-2.5	-2.5	-4.0	4.3	5.1	4.8	
Real Estate	470,174,791	7.3	-0.5 (55)	-7.3 (22)	-7.3 (22)	-5.8 (27)	2.5 (25)	3.7 (24)	7.0 (	(10)
NCREIF ODCE			-0.4 (54)	-9.3 (79)	-9.3 (79)	-9.6 (77)	1.9 (43)	3.2 (45)	6.4 (	(18)
Harrison Street Core Property	90,412,068	1.4	0.6	-5.9	-5.9	-2.0	3.6	-	-	
Invesco	226,779,760	3.5	-1.3	-10.4	-10.4	-10.1	0.9	2.4	6.2	
Invesco US Val IV	99,763	0.0	-6.4	-50.2	-50.2	-54.0	-39.7	-23.7	-	
Invesco US Val V	23,126,386	0.4	-1.2	-27.9	-27.9	-17.1	-6.4	0.6	-	
Invesco US Val VI	23,772,890	0.4	0.0	-3.3	-3.3	-	-	-	-	
PGIM RE US Debt Fund	73,088,020	1.1	1.9	6.8	6.8	7.3	6.8	6.4	-	
NCREIF ODCE			-0.4	-9.3	-9.3	-9.6	1.9	3.2	6.4	
Stockbridge Value IV	26,225,091	0.4	-3.8	-7.6	-7.6	-0.1	10.7	-	-	
Stockbridge Value V	6,670,812	0.1	-	-	-	-	-	-	-	
NCREIF ODCE			-0.4	-9.3	-9.3	-9.6	1.9	3.2	6.4	



	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 Assets***	364,036,471	5.6	6.4	12.3	12.3	6.4	12.1	10.6	-
Blended Private Real Assets Index			1.9	4.7	4.7	1.0	7.8	7.2	6.3
Blended Secondary CA Private RA Index			2.5	7.5	7.5	7.5	13.2	8.3	-
Private Real Asset	235,749,636	3.6	5.4	11.2	11.2	5.9	11.8	10.4	-
Brookfield Super-Core Infrastructure Partners	65,883,382	1.0	2.9	10.5	10.5	9.3	-	-	-
KKR Diversified Core Infrastructure Fund (DCIF)	62,403,453	1.0	2.6	7.4	7.4	-	-	-	-
Public Real Assets	214,243,103	3.3	1.7	5.1	5.1	2.3	4.4	2.0	-
Blended Public Real Assets Index			1.7	5.1	5.1	2.2	4.3	4.4	5.1
SSgA Custom Real Assets	214,243,103	3.3	1.7	5.1	5.1	2.3	4.4	4.5	-
SSgA Custom Real Assets Index			1.7	5.1	5.1	2.2	4.3	4.4	-
Liquidity	346,385,413	5.4	1.2	5.7	5.7	4.4	3.1	2.2	-
Blended Liquidity Index			1.0	5.0	5.0	3.2	-	-	-
Cash Flow-Matched Liquidity	266,337,188	4.1	1.2	5.7	5.7	3.9	-		-
Bloomberg U.S. Gov/Credit 1-3 Year Index			1.0	4.9	4.9	2.7	0.6	1.2	1.4
Bloomberg U.S. Credit 1-3 Year Index			1.0	5.6	5.6	3.5	1.0	1.7	1.8
Insight Investment*	243,427,934	3.8	1.2	5.8	5.8	-	-	-	-
Bloomberg U.S. Credit 1-3 Year Index			1.0	5.6	5.6	3.5	1.0	1.7	1.8
County Treasury Pool**	22,909,254	0.4	1.4	3.2	3.2	3.4	2.6	2.3	2.1
90 Day U.S. Treasury Bill			1.3	5.4	5.4	4.5	3.0	2.2	1.5
Cash & Cash Overlay	112,239,865	1.7	1.4	5.8	5.8	5.1	3.6	2.4	1.7
90 Day U.S. Treasury Bill			1.3	5.4	5.4	4.5	3.0	2.2	1.5
General Account	100,162,685	1.5	1.4	5.9	5.9	5.1	3.5	2.6	2.5
90 Day U.S. Treasury Bill			1.3	5.4	5.4	4.5	3.0	2.2	1.5

# 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.

