

# Austin Firefighters Retirement Fund May 24, 2024 Board Meeting

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Agenda

## Agenda

- 1. Economic and Market Update
- 2. Executive Summary
- 3. 1Q24 Investment Report
- 4. Private Equity: Annual Pacing History Review
- 5. Private Equity Approach: Fund of Funds vs. Specialty Consultant
- 6. Roadmap
- 7. Appendix
  - Disclaimer, Glossary and Notes

## **Economic and Market Update**

Data as of March 31, 2024

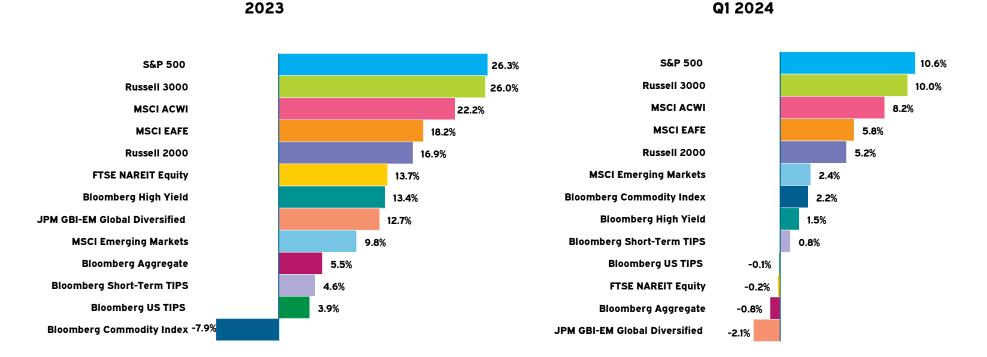


## Commentary

- → Resilient economic data drove global equities higher and pushed out the timing of the expected first Fed rate cut, weighing on bonds.
  - Major central banks have largely paused interest rate hikes with expectations that many will still cut rates, but the uneven pace of falling inflation and economic growth could desynchronize the pace of rate cuts.
  - In general, inflation pressures have eased in most countries from their pandemic peaks, but some uncertainty remains and levels are still above most central bank targets. Headline inflation in the US rose in March (3.2% to 3.5%) by more than expected, while core inflation was unchanged (3.8%) when it was predicted to decline to 3.7%. Notably, prices in China were up only slightly in March, as the impacts of the recent holiday faded.
  - US equity markets (Russell 3000 index) rose 10.0% in the first quarter after a very strong 2023 (+26.0%). The technology sector continued to perform well, with energy gaining on geopolitical tensions.
  - Non-US developed equity markets increased 5.8% in the quarter, helped by Japanese equities which hit multi-decade highs. A strengthening US dollar drove the weaker relative results for US investors with returns in local currency terms 4.2% higher (10.0% versus 5.8%).
  - Emerging market equities (+2.4%) had the weakest equity returns, depressed by China (-2.2%). While policy efforts to support mainland stock prices helped to stabilize Chinese equities, recent efforts by the US to discourage investments in China weighed on results. The stronger dollar also hurt performance in emerging markets for US investors with returns in local currency terms 2.1% higher.
  - Rising interest rates weighed on bonds with the broad US bond market declining 0.8% for the quarter.
- → Looking to the rest of this year, the paths of inflation and monetary policy, China's economic disorder and slowing economic growth, the many looming elections, and the wars in Ukraine and Israel will be key.

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## **Economic and Market Update**



#### Index Returns<sup>1</sup>

- → In the first quarter, global equity markets continued their strong performance from 2023 with the US leading the way.
- → Resilient economic data weighed on bond markets domestically and dashed hopes of a near-term cut in interest rates.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.



Domestic Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	3.2	10.6	29.9	11.5	15.1	13.0
Russell 3000	3.2	10.0	29.3	9.8	14.3	12.3
Russell 1000	3.2	10.3	29.9	10.5	14.8	12.7
Russell 1000 Growth	1.8	11.4	39.0	12.5	18.5	16.0
Russell 1000 Value	5.0	9.0	20.3	8.1	10.3	9.0
Russell MidCap	4.3	8.6	22.3	6.1	11.1	9.9
Russell MidCap Growth	2.4	9.5	26.3	4.6	11.8	11.4
Russell MidCap Value	5.2	8.2	20.4	6.8	9.9	8.6
Russell 2000	3.6	5.2	19.7	-0.1	8.1	7.6
Russell 2000 Growth	2.8	7.6	20.3	-2.7	7.4	7.9
Russell 2000 Value	4.4	2.9	18.8	2.2	8.2	6.9

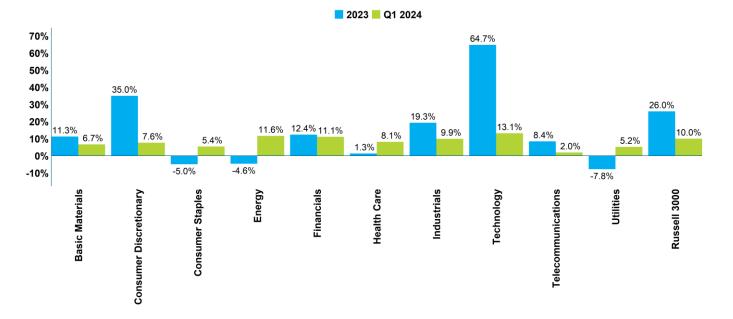
## Domestic Equity Returns<sup>1</sup>

## US Equities: The Russell 3000 increased an impressive 10.0% in the first quarter of the year.

- → US equities continued their ascent after a strong finish to 2023. The gains were driven by strong economic data and corporate earnings, despite signs of interest rates remaining higher for longer.
- → Growth stocks outperformed value stocks across the market cap spectrum. Technology stocks continued to be a key driver of results, with NVIDIA and Microsoft alone contributing nearly 30% of the quarter's gains.
- → Large cap stocks produced almost double the return of their small cap peers during the first quarter. The underperformance of small cap financials contributed to this dynamic as fear of further turmoil for regional banks resurfaced.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.





## Russell 3000 Sector Returns<sup>1</sup>

- $\rightarrow$  All sectors posted positive returns in the first quarter. The technology sector (13.1%) continued to lead the way due to the influence of the so-called "Magnificent Seven".
- $\rightarrow$  Technology was followed by energy (11.6%) and financials (11.1%), driven respectively by increased geopolitical tensions and the strong economic environment. Traditionally defensive sectors like consumer staples (5.4%) and utilities (5.2%) joined the rally but trailed other sectors.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.



Foreign Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	3.1	4.7	13.3	1.9	6.0	4.3
MSCI EAFE	3.3	5.8	15.3	4.8	7.3	4.8
MSCI EAFE (Local Currency)	4.0	10.0	18.8	9.4	9.4	7.7
MSCI EAFE Small Cap	3.7	2.4	10.4	-1.4	4.9	4.7
MSCI Emerging Markets	2.5	2.4	8.2	-5.1	2.2	2.9
MSCI Emerging Markets (Local Currency)	3.0	4.5	10.6	-2.4	4.4	5.7
MSCI EM ex. China	3.0	4.0	20.5	2.2	6.4	4.2
MSCI China	0.9	-2.2	-17.1	-18.9	-6.3	1.2

## Foreign Equity Returns<sup>1</sup>

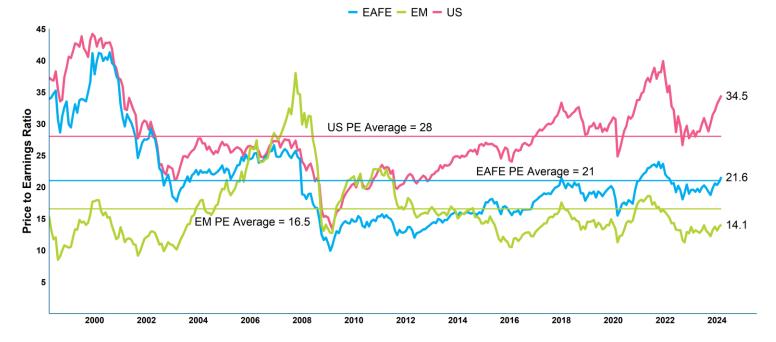
Foreign Equity: Developed international equities (MSCI EAFE) gained 5.8% during the quarter and emerging market equities (MSCI EM) rose 2.4%.

- → Developed international equity markets matched the US for the quarter in local terms but the appreciation of the dollar decreased returns for US investors by over 4.0% (5.8% versus 10.0%). Eurozone and UK equities had gains for the quarter, but Japan was the real standout performer, with the TOPIX returning 18.1% in local terms and the Nikkei breaking the 40,000 level for the first time.
- → Emerging market equities again trailed developed markets largely due to China falling 2.2%. Slowing growth, issues in the property sector, and recent efforts by the US to discourage investments into China all weighed on results. Outside of China, interest rate sensitive markets like Brazil were particularly impacted by expectations of delayed interest rate cuts by the Fed. Stripping out China, emerging markets returned 4.0% in the quarter.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.



## Equity Cyclically Adjusted P/E Ratios<sup>1</sup>



- $\rightarrow$  At the end of the first quarter, the US equity price-to-earnings ratio increased further above its 21st century average, as price appreciation exceeded earnings growth.
- → International market valuations also rose in the quarter and remain well below the US. In the case of developed markets, valuations are now slightly above the long-term average, while emerging market valuations remain well below its long-term average.

<sup>&</sup>lt;sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of March 2024. The average line is the long-term average of the US, EM, and EAFE PE values from April 1998 to the recent month-end respectively.

Fixed Income	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	1.0	-0.5	2.7	-2.1	0.7	1.8	5.1	6.0
Bloomberg Aggregate	0.9	-0.8	1.7	-2.5	0.4	1.5	4.8	6.2
Bloomberg US TIPS	0.8	-0.1	0.5	-0.5	2.5	2.2	4.6	6.8
Bloomberg Short-term TIPS	0.6	0.8	3.2	2.3	3.2	2.1	4.8	2.4
Bloomberg High Yield	1.2	1.5	11.2	2.2	4.2	4.4	7.7	3.7
JPM GBI-EM Global Diversified (USD)	0.0	-2.1	4.9	-1.6	0.1	-0.3	6.4	5.0

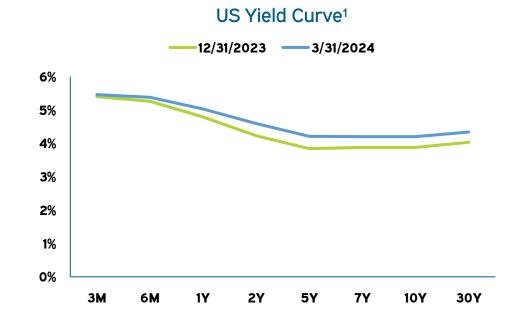
## Fixed Income Returns<sup>1</sup>

## Fixed Income: The Bloomberg Universal index fell 0.5% in the first quarter.

- → Strong economic growth and inflation readings above forecasts shifted interest rate expectations pushing back the anticipated start date of rate cuts as well as the number of cuts for 2024.
- → In this environment the broad US bond market (Bloomberg Aggregate) fell 0.8% with TIPS declining only slightly (0.1%).
- $\rightarrow$  High yield bonds (1.5%) led the way for the quarter as risk appetite continues to be robust and overall yields remain attractive despite the recent tightening of spreads to Treasury equivalents.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of March 31, 2024. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.

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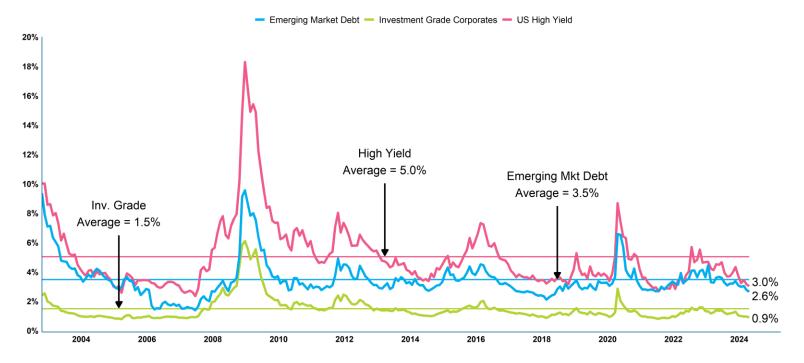


- → Overall interest rates moved higher over the quarter due to the strong economic data and the related shifts in monetary policy expectations.
- $\rightarrow$  The more policy sensitive two-year Treasury yield rose from 4.3% to 4.6% in the first quarter while the ten-year Treasury yield increased from 3.9% to 4.2%.
- → The yield curve remained inverted at quarter-end despite a recent flattening trend. The yield spread between the two-year and ten-year Treasury was -0.4% at the end of the quarter.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.



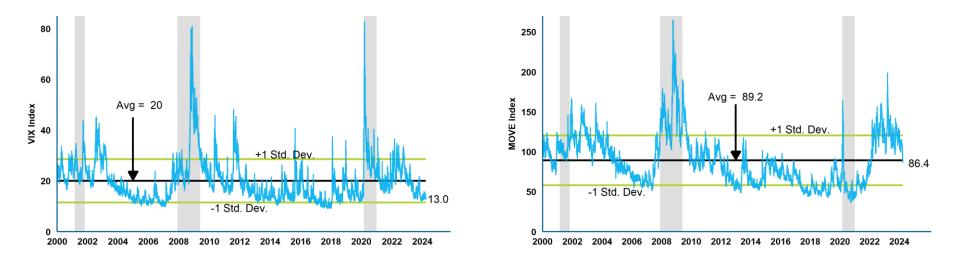
## Credit Spreads vs. US Treasury Bonds<sup>1</sup>



- → A positive economic outlook along with expectations of lower interest rates has led to an increased risk appetite. This has benefited credit, with spreads (the added yield above a comparable maturity Treasury) narrowing.
- $\rightarrow$  This trend continued in the first quarter particularly for riskier bonds. High yield spreads fell from 3.2% to 3.0% and emerging market spreads dropped from 3.0% to 2.6%. Spreads for investment grade corporate bonds fell only slightly over the quarter (1.0% to 0.9%).
- $\rightarrow$  All spreads remain below their respective long-run averages, particularly within high yield.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024. Average lines denote the average of the investment grade, high yield, and emerging market spread values from September 2002 to the recent month-end, respectively.



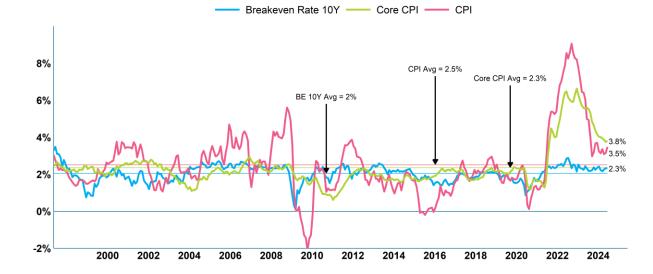


## Equity and Fixed Income Volatility<sup>1</sup>

- → Volatility in equities (VIX) finished the quarter close to one standard deviation below the long-term average as the focus shifted late last year to peaking policy rates and the potential for a soft landing.
- → Volatility in the bond market (MOVE) fell significantly over the quarter to a level below the long run average (86.4 versus 89.2). Declining volatility surrounding policy expectations and the more positive growth outlook both contributed to lower volatility in the bond market.

<sup>&</sup>lt;sup>1</sup> Equity Volatility – Source: FRED. Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of March 2024. The average line indicated is the average of the VIX and MOVE values between January 2000 and March 2024.



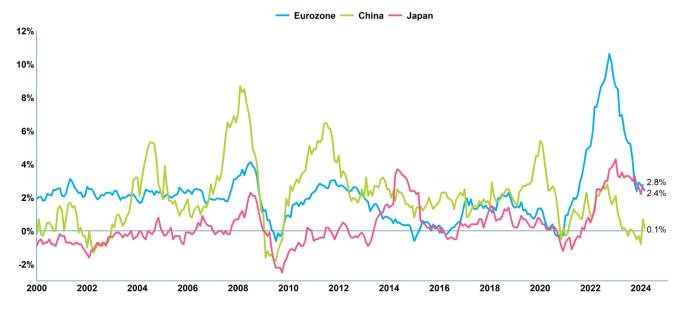


## US Ten-Year Breakeven Inflation and CPI<sup>1</sup>

- → Year-over-year headline inflation rose in March (3.2% to 3.5%) and came in slightly above expectations. Prices in service sectors, particularly shelter, remain a key driver of inflation staying above the Fed's 2% average target, with a recent rise in energy prices contributing too.
- $\rightarrow$  Month-over-month inflation rose 0.4% which was the same as February, but above expectations of a 0.3% reading.
- → Core inflation (excluding food and energy) remained at 3.8% but also came in above expectations. Core goods prices dropped, while core services including shelter and transportation prices continued to show persistence.
- $\rightarrow$  Inflation expectations (breakevens) have remained relatively stable despite the significant volatility in inflation.

<sup>&</sup>lt;sup>1</sup> Source: FRED. Data is as March 2024. The CPI and 10 Year Breakeven average lines denote the average values from February 1997 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.



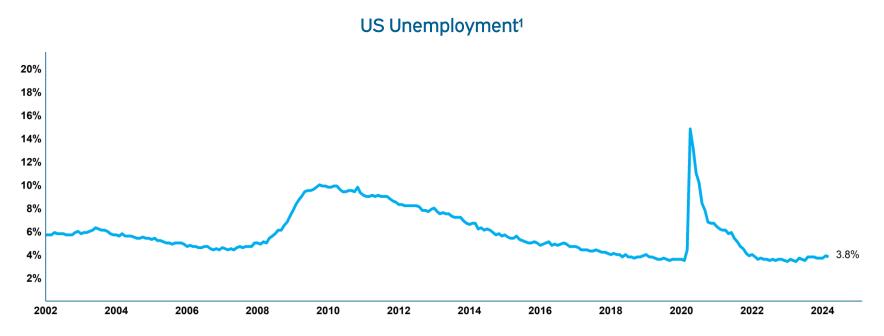


## Global Inflation (CPI Trailing Twelve Months)<sup>1</sup>

- ightarrow Outside the US, inflation is also easing across major economies from the recent peaks.
- → In the eurozone, prices experienced a dramatic decline last year but remain above the central bank's 2% target. In March, inflation fell further (2.6% to 2.4%), a level below the 3.5% year-over-year reading in the US.
- → Inflation in Japan has slowly declined from the early 2023 peak of 4.3%, but it remains near levels not seen in a decade. In the most recent reading, inflation rose from 2.4% to 2.8% largely due to the falling impact of government energy subsidies introduced at the same time last year.
- → The impacts from spending during the Lunar New Year holiday in China waned in March with inflation falling to just about 0%.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is March 31, 2024, except Japan which is as of February 28, 2024.

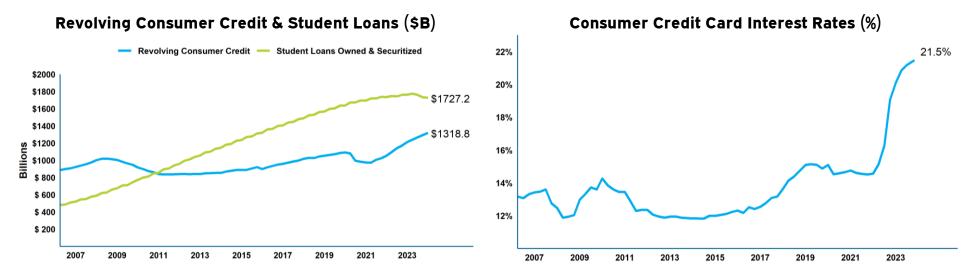




- → Overall, the US labor market remains healthy, with the unemployment rate low, wage growth now positive in real terms, and initial claims for unemployment staying subdued.
- $\rightarrow$  Each of the payroll readings over the quarter exceeded expectations. In March, the number of jobs added in the US was 303,000 compared to a 214,000 forecast. The healthcare (72,000), government (71,000), and construction (39,000) sectors added the most jobs.
- $\rightarrow$  The unemployment rate fell from 3.9% to 3.8%, while wage growth dropped slightly from 4.3% to 4.1% compared to a year prior, a level well off the 6.0% peak but above inflation levels.
- $\rightarrow$  Quit rates have declined, and layoffs are stable, with 1.4 job openings per unemployed worker.

<sup>&</sup>lt;sup>1</sup> Source: FRED. Data is as March 31, 2024.



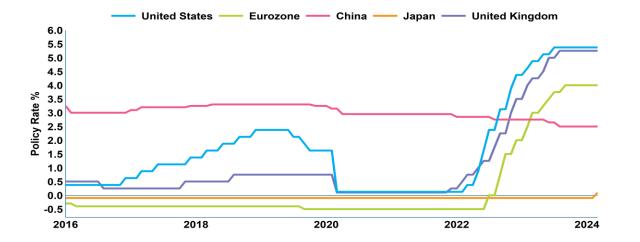


### US Consumer Under Stress?<sup>1</sup>

- → Despite the strong labor market and higher wages, pressures have started to build on the US consumer. This is an important consideration as consumer spending has been a key driver of economic growth.
- → Revolving consumer credit surged to new highs in 2023 even as credit card interest rates hit levels not seen before (the prior peak was around 19% in the 1980s). Recently, we have also seen payment delinquencies on credit cards and auto loans start to increase, particularly for younger people.
- → The return of student loan repayments after a three-year pandemic-related reprieve could add to pressures on consumers' budgets. This might be partially mitigated by recently initiated repayment and forgiveness programs.
- → As we look ahead, the strength of the US consumer will remain key as this sector makes up most of the domestic economy (GDP).

<sup>&</sup>lt;sup>1</sup> Source: FRED. Data is as of December 31, 2023. Revolving Consumer Credit data is seasonally adjusted to remove distortions during the holiday season.





## Policy Rates<sup>1</sup>

- → The Fed has been on hold since July 2023 when it raised rates to a range of 5.25%-5.50%. Markets are now pricing in fewer than two rate cuts this year down from close to seven late last year, as economic data has come in better than expectations and inflation persists. Market pricing for the first rate cut has also dramatically changed from an original expectation of a March cut to the probability priced below 50% for a rate cut at all remaining Fed meetings in 2024.
- → The European and UK central banks also recently paused their rate increases on slowing inflation. It appears that the ECB could be one of the first central banks to cut rates with expectations close to 90% for a June cut.
- $\rightarrow$  Given the return of inflation driven by wage growth the Bank of Japan (BOJ) recently ended the final negative interest rate policy, stopped purchasing ETFs, and moved away from its yield curve control.
- → The central bank in China has maintained interest rates at record low levels and continues to inject liquidity into the banking system, as weaker-than-expected economic data appears to indicate a widespread slowdown.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.





- 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022 2024
- ightarrow The dollar increased by close to 3% over the quarter versus a basket of major trading partners.
- → Strong economic data in the US may delay policy rate cuts this year, which could contribute to continued upward pressure on the dollar as other countries pivot to rate cuts.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data as of March 31, 2024.



## Summary

## Key Trends:

- → According to the IMF, global growth this year is expected to match the 2023 estimate at around 3.1% with most major economies predicted to avoid a recession. Continued strong economic growth does run the risk of inflation and interest rates staying higher for longer.
- → Key economic data in the US is still coming in above forecasts with expectations dramatically evolving for the timing and pace of interest rate cuts. If data remains strong the Federal Reserve may keep rates elevated increasing the risk of an economic slowdown.
- → Outside the US we could see other central banks start cutting rates ahead of the Fed, with the ECB particularly in focus. The risk of policy errors remains elevated as central banks try to further reduce inflation toward targets while not tipping their economies into recession.
- → US consumers could feel pressure as certain components of inflation (e.g., shelter) remain high, borrowing costs are elevated, and the job market may weaken.
- → A focus for US equities going forward will be whether earnings can remain resilient if growth slows. Also, the future paths of the large technology companies that have driven market gains will be important.
- → Equity valuations remain lower in emerging and developed markets, but risks remain, including China's economic uncertainty and on-going weakness in the real estate sector which could spill over into key trading partners' economies. Japan's recent tightening of monetary policy along with changes in corporate governance in the country could influence relative results.

## **Executive Summary**



#### **Executive Summary**

## 1Q 24 Executive Summary

Category	Results	Notes
Total Fund Performance	Positive	+3.0% (+ \$35.1mm net investment change)
Performance vs. Benchmarks	Underperformed	3.0% vs. 5.0% (static) and 5.5% (dynamic)
Performance vs. Peers	Underperformed	3.0% vs. 3.8% median (82 <sup>nd</sup> percentile)
Asset Allocation Attribution Effects	Positive	Overweight domestic equity and underweight real estate were additive
Active Public Managers vs. Benchmarks	Outperformed	8 of 11 active managers beat respective benchmarks (after fees)
Active Public Managers vs. Peer Groups	Outperformed	7 of 10² active managers beat peer group median (after fees)
Compliance with Targets	In Compliance	All exposure within policy ranges

<sup>&</sup>lt;sup>1</sup> InvMetrics Public DB >\$1B net.

<sup>&</sup>lt;sup>2</sup> Excludes Aberdeen EMD. No appropriate peer group for Aberdeen blended currency emerging market debt. Peer groups only exist for local currency or USD strategies.



**Executive Summary** 

## Peer Rankings

→ The Fund has outperformed peers over all long term trailing periods. We have noticed the Fund tends to lag over shorter, strong US equity driven quarters, presumably based on the asset allocation.

1Q24 (S&P 500 was +10.6%)											
As of 3/31/24	1Q 24	1 YR	3 YR	5 YR	10 YR						
Peer Ranking	82	90	70	56	42						
4Q23 (S&P 500 was +11.7%)											
As of 12/31/23	4Q 23	1 YR	3 YR	5 YR	10 YR						
Peer Ranking	64	93	55	46	25						
	3Q	23 -  -  (S&P 500	) was - <b>3.3</b> %)								
As of 9/30/23	3Q 23	1 YR	3 YR	5 YR	10 YR						
Peer Ranking	72	96	44	29	33						
	2Q)	23 -  -  (S&P 500	) was +8.7%)								
As of 6/30/23	2Q 23	1 YR	3 YR	5 YR	10 YR						
Peer Ranking	93	99	43	30	34						
	1Q2	23 -  -  (S&P 500	was +7.5%)								
As of 3/31/23	1Q 23	1 YR	3 YR	5 YR	10 YR						
Peer Ranking	84	72	67	36	25						



#### **Executive Summary**

## Peer Rankings (continued)

	4Q2	22 (S&P 500	was +7.6%)		
As of 12/31/22	4Q 22	1 YR	3 YR	5 YR	10 YR
Peer Ranking	75	54	23	28	30
	<b>3Q</b> 2	22 -  -  (S&P 500	was - <b>4.9</b> %)		
As of 9/30/22	3Q 22	1 YR	3 YR	5 YR	10 YR
Peer Ranking	88	59	34	34	29
	2Q2	22 -  -  (S&P 500	was <b>-16.1%</b> )		
As of 6/30/22	2Q 22	1 YR	3 YR	5 YR	10 YR
Peer Ranking	29	31	9	15	14
	102	22 (S&P 500	was - <b>4.6</b> %)		
As of 3/31/22	1Q 22	1 YR	3 YR	5 YR	10 YR
Peer Ranking	55	30	17	19	21
	4Q2	21 (S&P 500	was +11.0%)		
As of 12/31/21	4Q 21	1 YR	3 YR	5 YR	10 YR
Peer Ranking	79	10	24	12	20
	3Q2	21 (S&P 500	was +0.6%)		
As of 9/30/21	3Q 21	1 YR	3 YR	5 YR	10 YR
Peer Ranking	5	6	5	11	19



#### **Executive Summary**

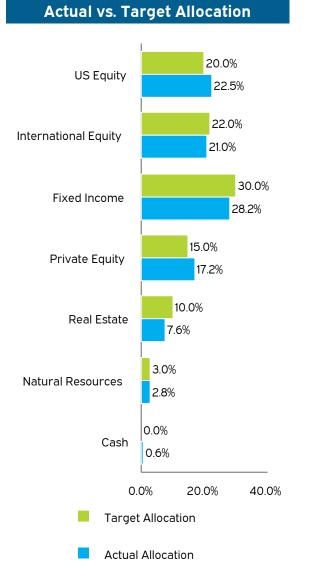
## Peer Rankings (continued)

2Q21 (S&P 500 was +8.5%)										
As of 6/30/21	2Q 21	1 YR	3 YR	5 YR	10 YR					
Peer Ranking	17	20	14	12	27					
	1Q2	21 (S&P 500	was +6.2%)							
As of 3/31/21	1Q 21	1 YR	3 YR	5 YR	10 YR					
Peer Ranking	28	66	35	25	41					
	402	20 (S&P 500	) was +12.1%)							
As of 12/31/20	4Q 20	1 YR	3 YR	5 YR	10 YR					
Peer Ranking	35	20	20	22	34					
		( -								
	3Q2	20 -  -  (S&P 500	) was +8.9%)							
As of 9/30/20	3Q 20	1 YR	3 YR	5 YR	10 YR					
Peer Ranking	22	44	34	25	41					
	202	0 (S&P 500	was +20 5%)							
As of 6/30/20	20 20	1 YR	3 YR	5 YR	10 YR					
Peer Ranking	99	62	54	38	54					
	1Q2	20 (S&P 500	was -19.6%)							
As of 3/31/20	1Q 20	1 YR	3 YR	5 YR	10 YR					
Peer Ranking	5	8	8	8	25					

## **1Q24 Investment Report**



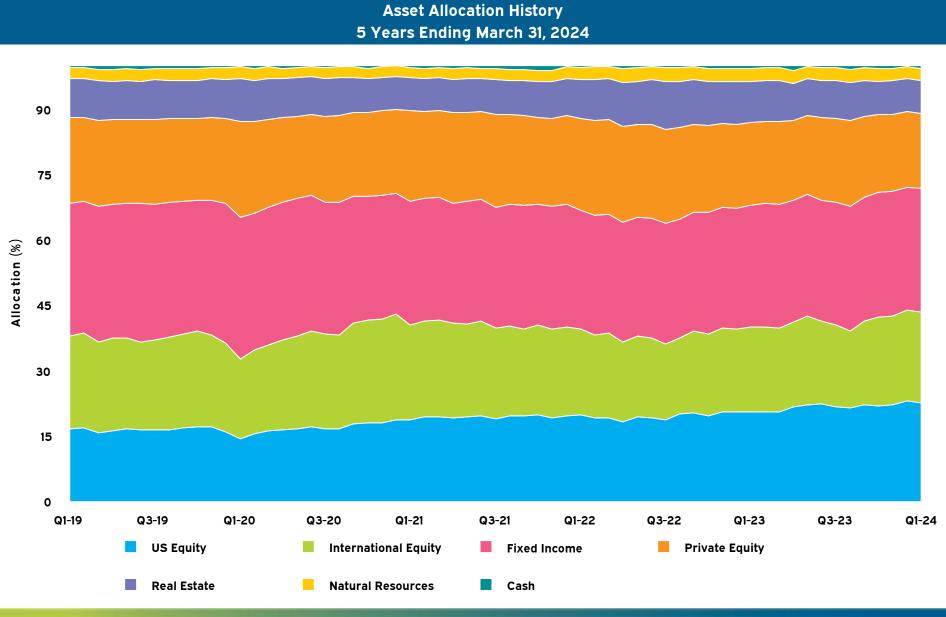
#### Total Fund | As of March 31, 2024



Allocation vs. Targets and Policy										
	Current Balance	Current Allocation(%)	Policy (%)	Policy Range(%)	Within IPS Range?					
US Equity	\$266,501,883	22.5	20.0	13.0 - 27.0	Yes					
International Equity	\$248,542,173	21.0	22.0	15.0 - 29.0	Yes					
Fixed Income	\$333,582,831	28.2	30.0	20.0 - 40.0	Yes					
Private Equity	\$203,267,716	17.2	15.0	5.0 - 25.0	Yes					
Real Estate	\$90,034,868	7.6	10.0	0.0 - 20.0	Yes					
Natural Resources	\$33,175,741	2.8	3.0	0.0 - 5.0	Yes					
Cash	\$6,993,988	0.6	0.0	0.0 - 5.0	Yes					
Total	\$1,182,099,201	100.0	100.0							

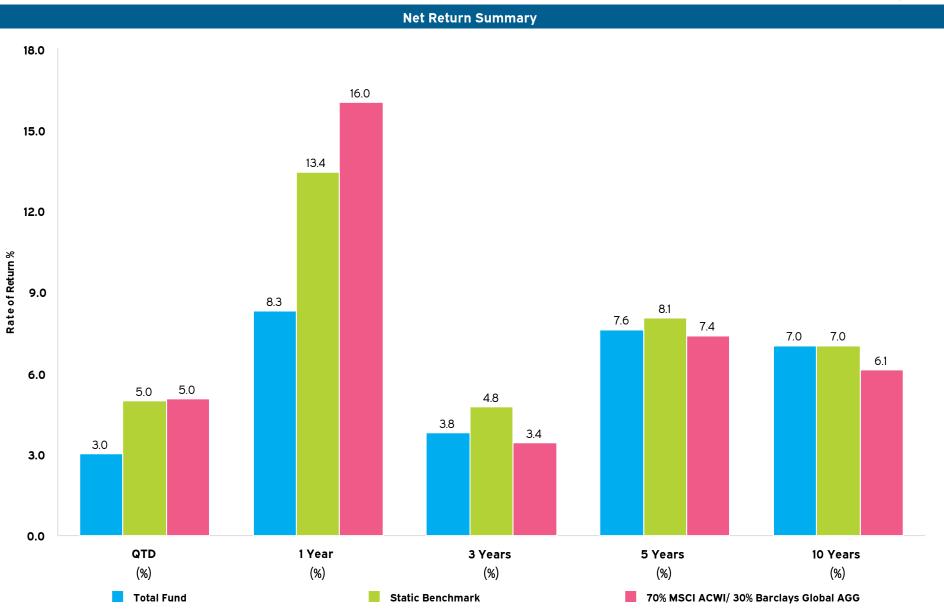


Total Trust | 5 Years Ending March 31, 2024





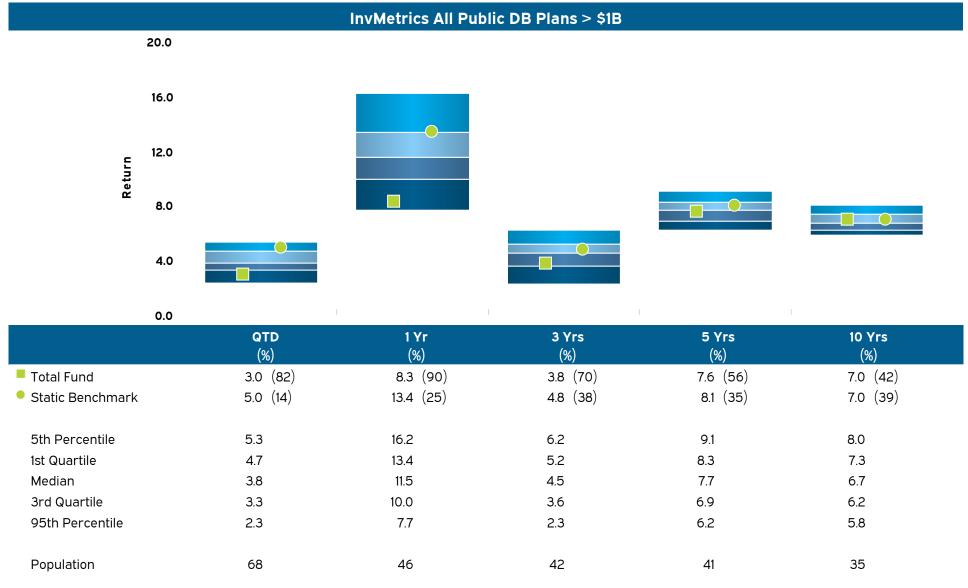
Total Fund Performance | As of March 31, 2024



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#### Plan Sponsor Peer Group Analysis | As of March 31, 2024

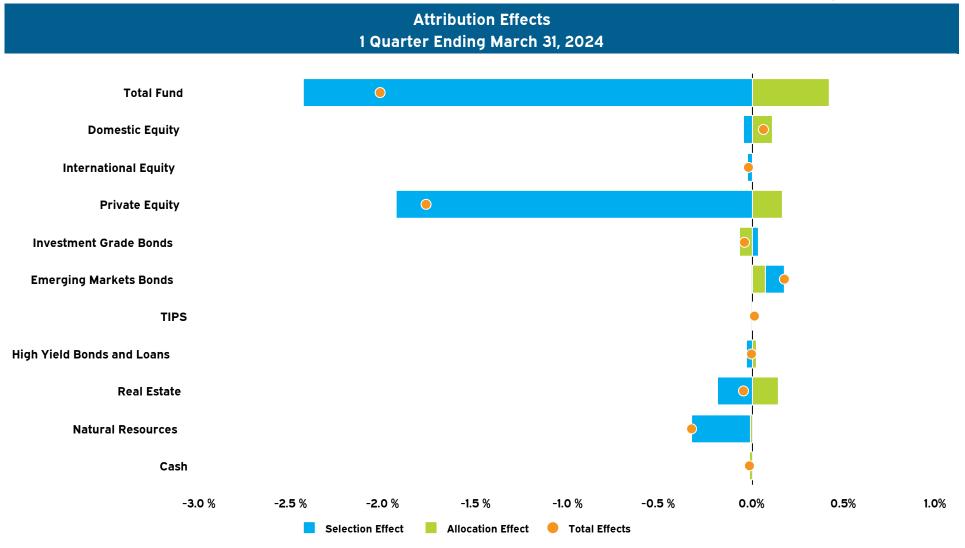


Parentheses contain percentile rankings.

Calculation based on monthly periodicity.



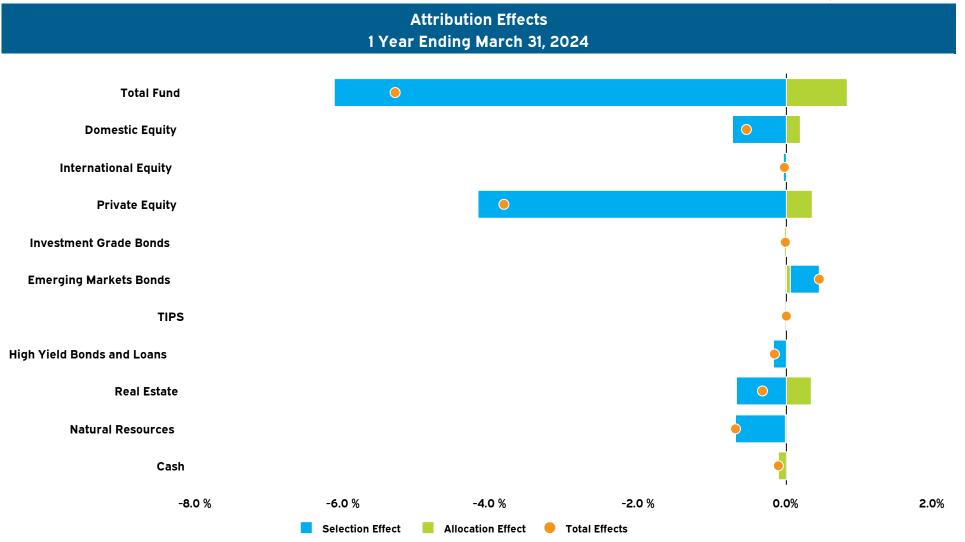
#### Total Plan Attribution | 1 Quarter Ending March 31, 2024



The performance calculation methodology in attribution tables is different from the standard time weighted returns (geometric linkage of monthly returns) found throughout the rest of the report. In attribution tables, the average weight of each asset class (over the specified time period) is multiplied by the time period performance of that asset class and summed. Values may not sum due to rounding.



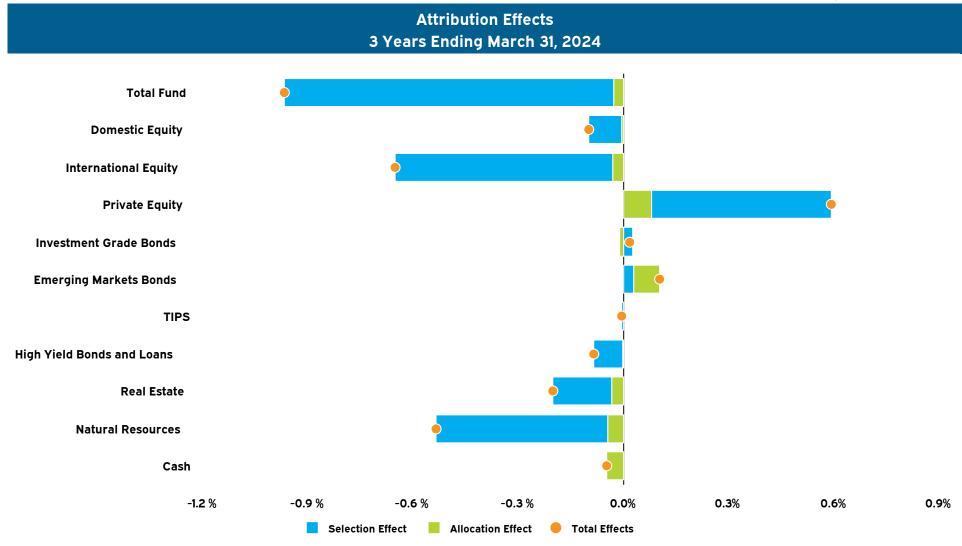
#### Total Plan Attribution | 1 Year Ending March 31, 2024



The performance calculation methodology in attribution tables is different from the standard time weighted returns (geometric linkage of monthly returns) found throughout the rest of the report. In attribution tables, the average weight of each asset class (over the specified time period) is multiplied by the time period performance of that asset class and summed. Values may not sum due to rounding.



Total Plan Attribution | 3 Years Ending March 31, 2024



The performance calculation methodology in attribution tables is different from the standard time weighted returns (geometric linkage of monthly returns) found throughout the rest of the report. In attribution tables, the average weight of each asset class (over the specified time period) is multiplied by the time period performance of that asset class and summed. Values may not sum due to rounding.



#### InvMetrics All Public DB Plans > \$1B | As of March 31, 2024





#### Asset Allocation & Performance | As of March 31, 2024

Asset Class Performance Summary (Net of Fees)											
	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	25 Yrs (%)	Inception (%)	Inception Date
Total Fund	1,182,099,201	100.0	3.0	8.3	3.8	7.6	7.0	7.5	6.4	7.0	Apr-97
Static Benchmark			5.0	13.4	4.8	8.1	7.0	7.2			
Dynamic Benchmark			5.5	14.7	4.8	8.0	6.9				
70% MSCI ACWI/30% Barclays Agg			5.5	16.5	4.2	7.9	6.7	7.3	6.1	6.5	
Domestic Equity	266,501,883	22.5	9.8	25.1	9.4	13.2	10.9	10.3	7.7	8.9	Apr-97
Russell 3000 Index			10.0	29.3	9.8	14.3	12.3	10.6	8.3	9.5	
International Equity	248,542,173	21.0	4.5	13.0	-1.1	5.5	4.4	6.7	5.3	5.7	Apr-97
Spliced International Equity Benchmark			4.7	13.3	1.9	6.0	4.3	7.1	5.3	5.4	
Private Equity	203,267,716	17.2	0.5	2.3	10.2	16.1	15.9			15.8	Jun-10
Private Equity Benchmark			11.6	24.6	7.9	13.9	11.8			14.3	
Fixed Income	333,582,831	28.2	0.4	5.1	-1.0	1.6	2.2	3.5	4.1	4.3	Apr-97
Blmbg. U.S. Aggregate Index			-0.8	1.7	-2.5	0.4	1.5	3.2	4.0	4.2	
Real Estate	90,034,868	7.6	-3.4	-13.9	1.6	2.1	5.7			2.8	Jan-08
NCREIF Property Index			-1.0	-7.2	3.6	3.8	6.4	7.8	8.3	5.4	
Natural Resources	33,175,741	2.8	0.0	-3.0	5.2	1.5	1.5			1.6	Mar-13
S&P North American Natural Res Sector Index (TR)			11.2	18.6	21.9	12.1	3.7	8.1	6.2	4.5	
Cash	6,993,988	0.6									

Static Benchmark consists of 20% Russell 3000, 22% MSCI ACWI ex US net, 13% Bloomberg Agg, 5% Bloomberg US TIPS, 2.5% ICE BofA US High Yield TR, 2.5% Credit Suisse Leveraged, 1.75% JPM GBI, 3.5% JPM EMBI, 1.75% JPM CEMBI 15% MSCI ACWI + 2% (Quarter Lagged), 5% NCREIF Property Index, 5% NCREIF ODCE Equal Weighted Net, 3% S&P North American Natural Resources TR.

Dynamic Benchmark consists of each asset class benchmark multiplied by actual asset class weight at the end of each preceding month.

The Spliced International Equity Benchmark consists of MSCI EAFE from 1/1/1997 to 12/31/1998. From 1/1/1999 to present it consists of MSCI ACWI ex US net.

The Private Equity Benchmark consists of the S&P 500 + 3% from 4/30/2010 to 3/31/2018. From 4/1/2018 to present it consists of MSCI ACWI + 2% (Quarter Lagged).



#### Asset Allocation & Performance | As of March 31, 2024

	Trailing Net Performance									
	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date	
Total Fund	1,182,099,201	100.0	3.0	8.3	3.8	7.6	7.0	7.0	Apr-97	
Static Benchmark			5.0	13.4	4.8	8.1	7.0			
Dynamic Benchmark			5.5	14.7	4.8	8.0	6.9			
70% MSCI ACWI/30% Barclays Agg			5.5	16.5	4.2	7.9	6.7	6.5		
InvMetrics All Public DB Plans > \$1B Median			3.8	11.5	4.5	7.7	6.7	7.4		
InvMetrics All Public DB Plans > \$1B Rank			82	90	70	56	42	77		
Domestic Equity	266,501,883	22.5	9.8	25.1	9.4	13.2	10.9	8.9	Apr-97	
Russell 3000 Index			10.0	29.3	9.8	14.3	12.3	9.5		
eV All US Equity Median			8.8	23.3	7.б	11.8	9.9	9.8		
eV All US Equity Rank			40	43	35	36	39	78		
SSgA S&P 500	116,684,232	9.9	10.5	29.9	11.5	15.0	13.0	10.0	Feb-04	
S&P 500 Index			10.6	29.9	11.5	15.0	13.0	10.1		
eV US Large Cap Equity Median			10.2	26.8	9.7	13.3	11.4	9.7		
eV US Large Cap Equity Rank			46	39	25	29	25	42		
Westwood Capital Large Cap Value	13,240,130	1.1	7.6	17.5	8.2	10.3	9.4	8.8	Oct-01	
Russell 1000 Value Index			9.0	20.3	8.1	10.3	9.0	8.3		
eV US Large Cap Value Equity Median			9.1	21.7	9.4	11.5	9.5	8.8		
eV US Large Cap Value Equity Rank			73	77	67	71	53	48		
Westfield Small/Mid Cap Growth	66,254,777	5.6	12.1	21.2	4.3	13.0	10.4	12.7	Nov-02	
Russell 2500 Growth Index			8.5	21.1	-0.8	9.4	9.6	11.3		
eV US Small-Mid Cap Growth Equity Median			7.3	17.9	0.3	10.4	9.8	11.1		
eV US Small-Mid Cap Growth Equity Rank			16	32	17	19	32	14		



	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Vaughan Nelson Small Cap Value	70,322,745	5.9	6.6	24.3	12.0	13.5		11.2	Jan-16
Russell 2000 Value Index			2.9	18.8	2.2	8.2	6.9	9.1	
eV US Small Cap Value Equity Median			4.9	19.7	5.3	10.1	7.8	9.8	
eV US Small Cap Value Equity Rank			27	20	4	9		23	
International Equity	248,542,173	21.0	4.5	13.0	-1.1	5.5	4.4	5.7	Apr-97
Spliced International Equity Benchmark			4.7	13.3	1.9	6.0	4.3	5.4	
SSgA MSCI EAFE Fund	124,711,148	10.5	5.9	15.7	5.1	7.6	5.1	6.1	Feb-13
MSCI EAFE (Net)			5.8	<i>15.3</i>	4.8	7.3	4.8	5.8	
eV EAFE Core Equity Median			5.3	14.4	3.4	7.2	5.0	6.1	
eV EAFE Core Equity Rank			44	36	25	37	45	52	
Baillie Gifford International Growth Fund	34,328,748	2.9	3.8	4.7	-10.2	5.7	5.8	9.4	May-09
MSCI AC World ex USA (Net)			4.7	13.3	1.9	6.0	4.3	7.0	
eV ACWI ex-US All Cap Growth Eq Median			6.2	11.8	-1.0	7.3	5.б	9.2	
eV ACWI ex-US All Cap Growth Eq Rank			83	98	96	71	49	32	
Highclere International Small Cap	30,607,804	2.6	1.1	9.2	-3.3	3.5	4.0	6.5	Dec-09
MSCI EAFE Small Cap (Net)			2.4	10.4	-1.4	4.9	4.7	7.0	
eV EAFE Small Cap Equity Median			3.8	10.7	0.1	5.9	5.0	7.4	
eV EAFE Small Cap Equity Rank			76	55	78	78	73	75	
DFA Emerging Markets Value	26,994,852	2.3	2.7	15.3	3.5	4.8	4.1	3.3	Dec-09
MSCI Emerging Markets Value (Net)			1.3	11.4	-0.9	2.1	2.2	2.2	
eV Emg Mkts All Cap Value Equity Median			2.4	12.6	1.0	4.7	3.8	3.8	
eV Emg Mkts All Cap Value Equity Rank			49	34	25	48	48	69	



#### Asset Allocation & Performance | As of March 31, 2024

	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	<b>3 Yrs</b> (%)	<b>5 Yrs</b> (%)	10 Yrs (%)	Inception (%)	Inception Date
TT Emerging Markets Equity	31,899,622	2.7	6.8	9.3	-8.4	1.2		1.2	Apr-19
MSCI Emerging Markets (Net)			2.4	8.2	-5.1	2.2	2.9	2.2	
eV Emg Mkts Equity Median			2.9	9.8	-3.5	3.6	3.7	3.6	
eV Emg Mkts Equity Rank			7	54	88	87		87	
Private Equity	203,267,716	17.2	0.5	2.3	10.2	16.1	15.9	15.8	Jun-10
Private Equity Benchmark			11.6	24.6	7.9	13.9	11.8	14.3	
57 Stars Global Opportunity 3	6,915,509	0.6							
Blue Bay Direct Lending	1,411,328	0.1							
Constitution Capital Partners	12,736,509	1.1							
Cross Creek Capital Partners II - B	10,956,759	0.9							
Cross Creek Capital Partners III	10,407,494	0.9							
Deutsche Bank SOF III	1,824,189	0.2							
Dover Street X, L.P.	34,797,329	2.9							
HarbourVest 2013 Direct	3,877,237	0.3							
HarbourVest Co-Investment Fund IV	8,109,902	0.7							
HighVista Private Equity V, L.P.	4,622,739	0.4							
HighVista Private Equity VI, L.P.	12,403,616	1.0							
LGT Crown Asia II	7,896,643	0.7							
LGT Crown Europe Small Buyouts III	3,020,629	0.3							
LGT Crown Global Opportunities VI	34,391,014	2.9							

HighVista Private Equity V & VI market values and performance are estiamated as of 12/31/2023.



#### Asset Allocation & Performance | As of March 31, 2024

	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
LGT Crown Global Secondaries II	97,814	0.0							
LGT Crown Global Secondaries III	2,030,962	0.2							
Partners Group Emerging Markets 2015	8,282,249	0.7							
Partners Group U.S. Distressed Private Equity 2009	188,469	0.0							
Private Advisors Co-Investment Fund III	1,361,374	0.1							
Private Equity Investors V	1,220,808	0.1							
StepStone Global Partners V	7,438,088	0.6							
StepStone Global Partners VI	14,589,335	1.2							
SVB Strategic Investors Fund IX, L.P.	14,687,719	1.2							
Fixed Income	333,582,831	28.2	0.4	5.1	-1.0	1.6	2.2	4.3	Apr-97
Blmbg. U.S. Aggregate Index			-0.8	1.7	-2.5	0.4	1.5	4.2	
SSgA Bond Fund	118,627,844	10.0	-0.7	1.7	-2.5	0.3	1.5	3.0	Jan-04
Blmbg. U.S. Aggregate Index			-0.8	1.7	-2.5	0.4	1.5	3.1	
eV US Core Fixed Inc Median			-0.5	2.2	-2.2	0.7	1.8	3.4	
eV US Core Fixed Inc Rank			85	81	79	87	81	84	
SSgA TIPS	56,656,518	4.8	0.0	0.3	-0.6	2.4		1.8	Aug-14
Blmbg. U.S. TIPS Index			-0.1	0.5	-0.5	2.5	2.2	1.9	
eV US TIPS / Inflation Fixed Inc Median			0.0	0.5	-0.4	2.6	2.1	1.9	
eV US TIPS / Inflation Fixed Inc Rank			59	57	64	60		70	

Private Advisors Co-Investment market value and performance is lagged as of 9/30/2023. Private Equity Investors V market value and performance is estimated as of 12/31/2023.



	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Loomis Sayles Core Plus Fixed Income	46,231,805	3.9	-0.1	2.2	-1.8	1.5		2.3	Jul-15
Blmbg. U.S. Aggregate Index			-0.8	1.7	-2.5	0.4	1.5	1.3	
eV US Core Plus Fixed Inc Median			-0.2	3.2	-2.0	1.1	2.1	2.0	
eV US Core Plus Fixed Inc Rank			45	79	35	23		25	
Aberdeen Emerging Markets Bond Fund	62,091,772	5.3	2.9	16.4	-0.6	1.1		2.5	Dec-14
JPM EMBI Global Diversified			2.0	11.3	-1.4	0.7	3.0	2.6	
50% JP Morgan EMBI / 25% JP Morgan GBI-EM / 25% JP Morgan CEMBI			1.0	9.1	-1.2	1.0			
Pyramis Tactical Bond Fund	26,487,075	2.2	-0.1	3.5	-0.4	2.5	3.4	3.6	Aug-13
Blmbg. U.S. Aggregate Index			-0.8	1.7	-2.5	0.4	1.5	1.6	
eV US Core Plus Fixed Inc Median			-0.2	3.2	-2.0	1.1	2.1	2.3	
eV US Core Plus Fixed Inc Rank			45	39	6	6	4	3	
Aristotle Pacific	23,487,817	2.0	2.8	13.1	6.5			5.7	Dec-19
Credit Suisse Leveraged Loan Index			2.5	12.4	5.8	5.3	4.6	5.5	
eV US Securitized Fixed Inc Median			0.6	4.6	-1.5	0.8	2.1	0.0	
eV US Securitized Fixed Inc Rank			18	6	1			1	
Real Estate	90,034,868	7.6	-3.4	-13.9	1.6	2.1	5.7	2.8	Jan-08
NCREIF Property Index			-1.0	-7.2	3.6	3.8	6.4	5.4	
Clarion Partners Lion Properties Fund	67,356,276	5.7	-2.9	-14.2	1.9	2.7	6.8	5.2	Apr-05
NCREIF Fund Index-ODCE (EW) (Net)			-2.4	-12.3	2.8	3.0	6.2	5.6	
Portfolio Advisors Real Estate Fund V	5,977,572	0.5							
Partners Group Global RE 2011	501,957	0.0							
Partners Group Distressed RE 2009	32,673	0.0							
Partners Group Real Estate Secondary 2017	11,866,369	1.0							



#### Asset Allocation & Performance | As of March 31, 2024

	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	<b>3 Yrs</b> (%)	<b>5 Yrs</b> (%)	10 Yrs (%)	Inception (%)	Inception Date
Crow Holdings Realty Partners X, L.P.	4,300,021	0.4							
Natural Resources	33,175,741	2.8	0.0	-3.0	5.2	1.5	1.5	1.6	Mar-13
S&P North American Natural Res Sector Index (TR)			11.2	18.6	21.9	12.1	3.7	4.5	
Aether Real Assets V	10,646,206	0.9							
Aether Real Assets IV	10,293,130	0.9							
Aether Real Assets III	10,040,724	0.8							
Aether Real Assets II	2,195,681	0.2							
Cash	6,993,988	0.6							
Cash	6,993,988	0.6							

Aether II, III, IV, V market values and performance are lagged as of 9/30/2023.



	C	alendar	Year Pe	rformanc	e					
	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Total Fund	8.4	-10.8	17.6	12.9	15.7	-2.0	17.0	7.1	1.3	4.8
Static Benchmark	13.6	-12.0	14.4	11.2	15.8	-3.6	16.4	9.6	-0.1	5.7
Dynamic Benchmark	14.5	-13.2	14.9	10.5	14.6	-3.1	16.1	8.4	0.4	5.4
70% MSCI ACWI/30% Barclays Agg	17.1	-16.6	12.2	14.3	21.2	-6.5	17.5	6.4	-1.3	4.8
Domestic Equity	22.1	-16.0	24.6	16.5	29.4	-7.9	21.8	9.9	0.2	10.0
Russell 3000 Index	26.0	-19.2	25.7	20.9	31.0	-5.2	21.1	12.7	0.5	12.6
SSgA S&P 500	26.2	-18.1	28.6	18.3	31.5	-4.4	21.8	12.0	1.4	13.7
S&P 500 Index	26.3	-18.1	28.7	18.4	31.5	-4.4	21.8	12.0	1.4	13.7
Westwood Capital Large Cap Value	8.4	-5.9	23.8	3.9	27.3	-5.7	20.4	10.9	-0.1	11.9
Russell 1000 Value Index	11.5	-7.5	25.2	2.8	26.5	-8.3	13.7	17.3	-3.8	13.5
Westfield Small/Mid Cap Growth	18.4	-23.4	16.2	34.2	35.2	-7.6	31.0	3.4	-4.1	7.8
Russell 2500 Growth Index	18.9	-26.2	5.0	40.5	32.7	-7.5	24.5	9.7	-0.2	7.1
Vaughan Nelson Small Cap Value	25.7	-9.8	31.0	9.6	25.0	-14.1	6.8	20.7		
Russell 2000 Value Index	14.6	-14.5	28.3	4.6	22.4	-12.9	7.8	31.7	-7.5	4.2
International Equity	16.6	-21.1	4.1	17.6	22.4	-15.9	34.0	5.0	-4.4	-4.4
Spliced International Equity Benchmark	15.6	-16.0	7.8	10.7	21.5	-14.2	27.2	4.5	-5.7	-3.9
SSgA MSCI EAFE Fund	18.6	-14.1	11.4	8.2	22.4	-13.5	25.3	1.3	-0.6	-4.7
MSCI EAFE (Net)	18.2	-14.5	11.3	7.8	22.0	-13.8	25.0	1.0	-0.8	-4.9
Baillie Gifford International Growth Fund	14.3	-34.4	-9.4	63.0	37.3	-17.3	45.5	1.4	-2.9	-6.4
MSCI AC World ex USA (Net)	15.6	-16.0	7.8	10.7	21.5	-14.2	27.2	4.5	-5.7	-3.9
Highclere International Small Cap	13.2	-24.2	8.3	10.2	23.5	-18.8	30.9	10.3	6.5	-4.4
MSCI EAFE Small Cap (Net)	13.2	-21.4	10.1	12.3	25.0	-17.9	33.0	2.2	9.6	-4.9



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
DFA Emerging Markets Value	16.5	-10.7	12.4	2.7	9.6	-11.9	33.8	19.8	-18.8	-4.4
MSCI Emerging Markets Value (Net)	14.2	-15.8	4.0	5.5	12.0	-10.7	28.1	14.9	-18.6	-4.1
TT Emerging Markets Equity	5.6	-26.9	-1.0	19.8						
MSCI Emerging Markets (Net)	9.8	-20.1	-2.5	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2
Private Equity	0.8	-1.7	57.0	20.4	16.1	15.8	17.7	9.4	12.7	23.3
Private Equity Benchmark	23.2	-19.0	29.9	12.6	3.4	5.4	25.4	15.3	4.4	17.1
57 Stars Global Opportunity 3										
Blue Bay Direct Lending										
Constitution Capital Partners										
Cross Creek Capital Partners II - B										
Cross Creek Capital Partners III										
Deutsche Bank SOF III										
Dover Street X, L.P.										
HarbourVest 2013 Direct										
HarbourVest Co-Investment Fund IV										
HighVista Private Equity V, L.P.										
HighVista Private Equity VI, L.P.										
LGT Crown Asia II										
LGT Crown Europe Small Buyouts III										
LGT Crown Global Opportunities VI										
LGT Crown Global Secondaries II										



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
LGT Crown Global Secondaries III										
Partners Group Emerging Markets 2015										
Partners Group U.S. Distressed Private Equity 2009										
Private Advisors Co-Investment Fund III										
StepStone Global Partners V										
StepStone Global Partners VI										
SVB Strategic Investors Fund IX, L.P.										
Private Equity Investors V										
Fixed Income	7.7	-12.7	0.0	8.3	10.5	-2.0	5.6	6.9	-2.1	3.1
Blmbg. U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0
SSgA Bond Fund	5.6	-13.2	-1.6	7.5	8.7	0.0	3.5	2.6	0.5	5.9
Blmbg, U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0
SSgA TIPS	3.9	-12.0	5.9	10.9	8.3	-1.3	3.0	4.6	-1.5	
Blmbg, U.S. TIPS Index	3.9	-11.8	6.0	11.0	8.4	-1.3	3.0	4.7	-1.4	3.6
Loomis Sayles Core Plus Fixed Income	6.4	-12.7	-1.1	11.3	9.4	-0.4	5.4	6.9		
Blmbg. U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0
Aberdeen Emerging Markets Bond Fund	13.8	-16.6	-4.0	5.0	15.1	-7.5	13.0	13.3	-2.7	
JPM EMBI Global Diversified	11.1	-17.8	-1.8	5.3	15.0	-4.3	10.3	10.2	1.2	7.4
Pyramis Tactical Bond Fund	7.0	-10.9	1.2	9.3	13.2	-0.9	5.9	10.4	-1.8	5.3
Blmbg. U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0
Aristotle Pacific	14.0	-0.6	5.2	2.6						
Credit Suisse Leveraged Loan Index	13.0	-1.1	5.4	2.8	8.2	1.1	4.2	9.9	-0.4	2.1



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Real Estate	-15.0	8.3	20.2	-0.6	5.6	8.6	7.5	7.8	13.1	10.5
NCREIF Property Index	-7.9	5.5	17.7	1.6	6.4	6.7	7.0	8.0	13.3	11.8
Clarion Partners Lion Properties Fund	-16.3	8.7	22.4	1.4	6.3	9.2	8.0	9.3	15.7	12.3
NCREIF Fund Index-ODCE (EW) (Net)	-13.3	7.6	21.9	0.8	5.2	7.3	6.9	8.4	14.2	11.4
Portfolio Advisors Real Estate Fund V										
Partners Group Global RE 2011										
Partners Group Distressed RE 2009										
Partners Group Real Estate Secondary 2017										
Crow Holdings Realty Partners X, L.P.										
Natural Resources	0.8	2.2	15.9	-9.9	-13.4	2.1	15.7	8.6	-6.3	6.7
S&P North American Natural Res Sector Index (TR)	3.7	34.1	39.9	-19.0	17.6	-21.1	1.2	30.9	-24.3	-9.8
Aether Real Assets V										
Aether Real Assets IV										
Aether Real Assets III										
Aether Real Assets II										
Cash										
Cash										



### MPT Stats By Group | As of March 31, 2024

	<b>Risk Return Statistics</b>	
		5 Yrs
	Total Fund	Static Benchmark
RETURN SUMMARY STATISTICS		
Maximum Return	6.3	7.5
Minimum Return	-6.7	-7.9
Return	7.6	8.1
Excess Return	5.8	6.3
Excess Performance	-0.4	0.0
RISK SUMMARY STATISTICS		
Beta	0.9	1.0
Down Capture	85.4	100.0
Up Capture	89.3	100.0
RISK/RETURN SUMMARY STATISTICS		
Standard Deviation	9.1	10.0
Sortino Ratio	1.0	0.9
Alpha	0.7	0.0
Sharpe Ratio	0.6	0.6
Excess Risk	9.2	10.0
Tracking Error	3.5	0.0
Information Ratio	-0.1	-
CORRELATION STATISTICS		
R-Squared	0.9	1.0
Actual Correlation	0.9	1.0



#### Financial Reconciliation | Quarter To Date Ending March 31, 2024

	Beginning Market Value	Contributions	Distributions	Net Cash Flow	Net Investment Change	Ending Market Value
57 Stars Global Opportunity 3	7,603,950	-	-323,373	-323,373	-365,068	6,915,509
Aberdeen Emerging Markets Bond Fund	60,268,738	-	-	-	1,823,034	62,091,772
Aether Real Assets II	2,334,573	-	-138,892	-138,892	-	2,195,681
Aether Real Assets III	9,942,456	98,268	-	98,268	-	10,040,724
Aether Real Assets IV	10,935,857	-	-642,727	-642,727	-	10,293,130
Aether Real Assets V	10,434,859	211,347	-	211,347	-	10,646,206
Aristotle Pacific	22,853,437	-	-	-	634,381	23,487,817
Baillie Gifford International Growth Fund	33,087,432	-	-	-	1,241,316	34,328,748
Blue Bay Direct Lending	1,450,240	-	-	-	-38,912	1,411,328
Cash	8,038,916	38,859,717	-39,904,645	-1,044,928	-	6,993,988
Clarion Partners Lion Properties Fund	70,093,043	-	-729,000	-892,656	-1,844,111	67,356,276
Constitution Capital Partners	14,867,075	-	-1,133,753	-1,133,753	-996,813	12,736,509
Cross Creek Capital Partners II - B	11,032,543	-	-	-	-75,784	10,956,759
Cross Creek Capital Partners III	11,030,295	-	-139,840	-139,840	-482,961	10,407,494
Crow Holdings Realty Partners X, L.P.	-	4,300,021	-	4,300,021	-	4,300,021
Deutsche Bank SOF III	1,847,180	-	-	-	-22,991	1,824,189
DFA Emerging Markets Value	26,293,547	-	-	-	701,305	26,994,852
Dover Street X, L.P.	32,854,997	1,206,000	-	1,206,000	736,332	34,797,329
HarbourVest 2013 Direct	3,673,270	-	-	-	203,967	3,877,237
HarbourVest Co-Investment Fund IV	7,514,732	-	-169,520	-169,520	764,690	8,109,902
Highclere International Small Cap	40,454,960	-	-10,000,000	-10,000,000	152,844	30,607,804
HighVista Private Equity V, L.P.	4,651,962	-	-	-	-29,223	4,622,739
HighVista Private Equity VI, L.P.	12,502,701	-	-	-	-99,085	12,403,616
LGT Crown Asia II	7,867,368	-	-176,182	-176,182	205,457	7,896,643
LGT Crown Europe Small Buyouts III	3,411,480	-	-334,970	-334,970	-55,881	3,020,629
LGT Crown Global Opportunities VI	35,527,712	120,000	-1,112,099	-992,099	-144,599	34,391,014
LGT Crown Global Secondaries II	97,161	433	-714	-281	934	97,814



### Financial Reconciliation | Quarter To Date Ending March 31, 2024

	Beginning Market Value	Contributions	Distributions	Net Cash Flow	Net Investment Change	Ending Market Value
LGT Crown Global Secondaries III	2,184,889	1,582	-178,651	-177,069	23,142	2,030,962
Loomis Sayles Core Plus Fixed Income	46,259,605	-	-	-	-27,800	46,231,805
Partners Group Distressed RE 2009	48,639	-	-	-	-15,966	32,673
Partners Group Emerging Markets 2015	8,587,593	-	-352,596	-352,596	47,252	8,282,249
Partners Group Global RE 2011	612,226	-	-24,184	-24,184	-86,084	501,957
Partners Group Real Estate Secondary 2017	12,447,355	-	-	-	-580,986	11,866,369
Partners Group U.S. Distressed Private Equity 2009	185,561	-	-	-	2,908	188,469
Portfolio Advisors Real Estate Fund V	6,364,141	-	-	-	-386,569	5,977,572
Private Advisors Co-Investment Fund III	1,552,604	-	-191,230	-191,230	-	1,361,374
Private Equity Investors V	1,225,244	-	-	-	-4,436	1,220,808
Pyramis Tactical Bond Fund	26,504,769	-	-	-	-17,694	26,487,075
SSgA Bond Fund	119,503,018	-	-8,244	-8,244	-866,930	118,627,844
SSgA MSCI EAFE Fund	108,293,527	10,000,000	-12,801	9,987,199	6,430,422	124,711,148
SSgA S&P 500	117,529,529	-	-13,003,339	-13,003,339	12,158,042	116,684,232
SSgA TIPS	56,664,578	-	-4,143	-4,143	-3,917	56,656,518
StepStone Global Partners V	7,530,663	-	-	-	-92,575	7,438,088
StepStone Global Partners VI	13,173,290	-	-	-	1,416,045	14,589,335
SVB Strategic Investors Fund IX, L.P.	14,583,154	-	-	-	104,565	14,687,719
TT Emerging Markets Equity	29,864,543	-	-	-	2,035,079	31,899,622
Vaughan Nelson Small Cap Value	65,858,063	-	-	-	4,464,681	70,322,745
Westfield Small/Mid Cap Growth	58,988,982	-	-	-	7,265,795	66,254,777
Westwood Capital Large Cap Value	12,288,128		-	_	952,002	13,240,130
Total	1,160,920,585	54,797,368	-68,580,902	-13,947,190	35,125,807	1,182,099,201



**Private Equity Assets** 

# Austin Firefighters Retirement Fund

### Private Equity Assets

Partnership	Focus	Туре	Vintage Year
Partners Group Distressed Private Equity 2009	Special Situations	Fund of Funds	2009
LGT Crown Global Secondaries II	Secondary Market	Fund of Funds	2009
Private Equity Investors V	Secondary Market	Fund of Funds	2009
Cross Creek Capital Partners II - B	Venture	Fund of Funds	2010
LGT Crown Asia II	Buyout	Fund of Funds	2011
StepStone Global Partners V	Venture	Fund of Funds	2011
57 Stars Global Opportunity 3	Diversified	Fund of Funds	2011
LGT Crown Europe Small Buyouts III	Buyout	Fund of Funds	2012
LGT Crown Global Secondaries III	Secondary Market	Fund of Funds	2012
Private Advisors Co-Investment Fund III	Co-investments	Fund of Funds	2013
HarbourVest 2013 Direct	Co-investments	Fund of Funds	2013
Cross Creek Capital Partners III	Venture	Fund of Funds	2013
Flag Private Equity V	Buyout	Fund of Funds	2012
StepStone Global Partners VI	Venture	Fund of Funds	2013
Constitution Capital Partners Ironsides III	Buyout	Fund of Funds	2014
Deutsche Bank Secondary Opportunities Fund III	Secondary Market	Fund of Funds	2014
Flag Private Equity VI	Buyout	Fund of Funds	2015
Blue Bay Direct Lending Fund II	Private Debt	Direct Fund	2015
Partners Group Emerging Markets 2015	Special Situations	Fund of Funds	2015
LGT Crown Global Opportunities VI	Diversified	Fund of Funds	2016
HarbourVest Co-Investment Fund IV	Co-investments	Fund of Funds	2017
SVB Strategic Investors Fund IX	Venture	Fund of Funds	2018
Dover Street X	Secondary Market	Fund of Funds	2020



#### **Private Equity Assets**

Partnership	Committed (\$mm)	Called (\$mm)	Distributed (\$mm)	Fair Value (\$mm)	nIRR <sup>ı</sup> (%)	Vintage Year	TVPI Multiple
Partners Group Distressed Private Equity 2009	7.0	6.2	8.8	\$0.2	10.4	2009	1.5x
LGT Crown Global Secondaries II <sup>2</sup>	3.0	2.5	4.3	\$0.1	17.7	2009	1.8x
Private Equity Investors V	3.0	3.0	1.4	\$1.2 <sup>9</sup>	-1.8	2009	0.9x
Cross Creek Capital Partners II – B	12.5	11.7	28.3	\$11.0	19.0	2010	3.4x
LGT Crown Asia II <sup>2</sup>	10.0	9.5	11.2	\$7.9	10.9	2011	2.0x
StepStone Global Partners V	7.5	6.9	18.7	\$7.4	23.4	2011	3.8x
57 Stars Global Opportunity 3	10.0	10.5	6.9	\$6.9	4.1	2011	1.3x
LGT Crown Europe Small Buyouts III <sup>2</sup>	8.4	7.8	11.7	\$3.0	15.7	2012	1.9x
LGT Crown Global Secondaries III <sup>2</sup>	10.0	7.7	10.0	\$2.0	12.0	2012	1.6x
Private Advisors Co-Investment Fund III	10.0	10.6	17.4	\$1.46	12.2⁵	2013	1.8x
HarbourVest 2013 Direct	10.0	9.7	16.9	\$3.9	17.6	2013	2.1x
Cross Creek Capital Partners III	7.5	6.9	9.4	\$10.4	19.5	2013	2.9x
HighVista Private Equity V	10.0	10.0	16.4	\$4.69	17.2⁵	2012	2.1x
StepStone Global Partners VI	7.5	6.8	10.8	\$14.6	21.5	2013	3.7x
Constitution Capital Partners Ironsides III	15.0	17.6	29.4	\$12.7	25.43 24.64	2014	2.4x
Deutsche Bank Secondary Opportunities Fund III	10.0	8.8	10.4	\$1.8	10.8	2014	1.4x
HighVista Private Equity VI	15.0	14.2	17.3	\$12.4°	21.8⁵	2015	2.1x
Blue Bay Direct Lending Fund II	20.0	19.4	21.7	\$1.4	7.4	2015	1.2x
Partners Group Emerging Markets 2015	10.0	8.8	5.6	\$8.2	8.1	2015	1.6x
LGT Crown Global Opportunities VI <sup>2</sup>	40.0	35.0	29.1	\$34.4	15.1	2016	1.8x
HarbourVest Co-Investment Fund IV	10.0	8.1	8.3	\$8.1	16.5	2017	2.0x
SVB Strategic Investors Fund IX	10.0	9.0	0.0	\$14.7	18.7	2018	1.6x
Dover Street X	40.0	29.8	10.2	\$34.8	27.4	2020	1.5x
Total	\$286.4	\$260.5	\$304.2	\$203.4			1.9x

<sup>&</sup>lt;sup>1</sup> All performance figures are reported directly from managers, net of fees, as of 12/31/2023, unless otherwise noted.

<sup>&</sup>lt;sup>2</sup> Performance figures are as of 3/31/2024.

<sup>&</sup>lt;sup>3</sup> Constitution Capital Ironsides Partnership Fund III, as of 12/31/2023.

<sup>&</sup>lt;sup>4</sup>Constitution Capital Ironsides Co-Investment Fund III, as of 12/31/2023.

<sup>&</sup>lt;sup>5</sup>Net IRR is as of 9/30/2023

<sup>&</sup>lt;sup>6</sup> Fair Value is as of 9/30/2023.

<sup>&</sup>lt;sup>9</sup> Fair Value is estimated as of 12/31/2023.



**Real Estate Assets** 



#### **Closed-Ends Funds**

Partnership	Focus	Туре	Vintage Year	TVPI Multiple
Partners Group U.S. Distressed 2009	U.S. Distressed	Fund of Funds	2009	1.3×
Partners Group Global RE 2011	Global	Fund of Funds	2011	1.3x
Portfolio Advisors Global Real Estate V	Global	Fund of Funds	2015	1.2x
Partners Group RE Secondary 2017	Global	Fund of Funds	2017	1.3×
Crow Holdings Realty Partners X	U.S.	Value Add	2023	NA
				1.3x

Partnership	Committed (mm)	Called (mm)	Distributed (mm)	Fair Value (mm)	nIRR' (%)
Partners Group U.S. Distressed 2009	\$12.0	\$11.2	\$15.1	\$0.1	7.2
Partners Group Global RE 2011	\$6.7	\$5.4	\$6.4	\$0.5	5.6
Portfolio Advisors Global Real Estate V	\$15.0	\$12.6	\$10.0	\$6.0	5.8
Partners Group RE Secondary 2017	\$15.0	\$9.2	\$0.2	\$11.9	6.7
Crow Holdings Realty Partners X	\$20.0	\$4.3	\$0.0	\$4.3	NA
Total	\$68.7	\$42.7	\$31.7	\$22.8	

<sup>&</sup>lt;sup>1</sup> Performance figures are reported directly from manager, net of fees, as of 12/31/2023.



# **Natural Resources Assets**



#### Natural Resources Assets

Partnership	Vintage Year	Committed (mm)	Called (mm)	Distributed (mm)	Fair Value (mm)	Net IRR <sup>,</sup> %	TVPI Multiple <sup>2</sup>
Aether Real Assets II	2012	\$7.5	\$7.6	\$5.0	\$2.2	-1.1	0.9x
Aether Real Assets III	2013	\$15.0	\$15.7	\$4.6	\$10.0	-1.4	0.9x
Aether Real Assets IV	2016	\$10.0	\$10.2	\$2.3	\$10.9	4.9	1.2x
Aether Real Assets V	2018	\$10.0	\$7.6	\$0.5	\$10.3	15.2	1.4x
Total		\$42.5	\$41.1	\$12.4	\$33.4		1.1x

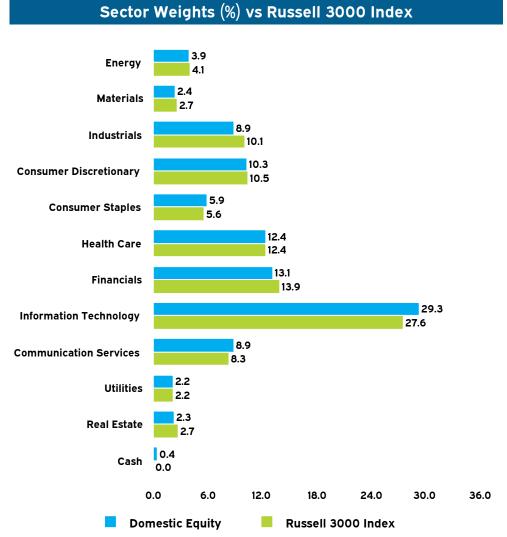
<sup>&</sup>lt;sup>1</sup> Performance figures are reported directly from manager, net of fees, as of 9/30/2023. <sup>2</sup> TVPI Multiple is as of 9/30/2023



#### Composite Domestic Equity Characteristics | As of March 31, 2024

Chara	acteristics	
	Portfolio	Benchmark
Number of Holdings	627	2,949
Wtd. Avg. Mkt. Cap \$B	786.7	689.3
Median Mkt. Cap \$B	25.4	2.2
Price To Earnings	25.8	24.8
Price To Book	4.7	4.4
Return on Equity (%)	11.4	10.6
Yield (%)	1.4	1.4
Beta (5 Years, Monthly)	1.0	1.0
R-Squared (5 Years, Monthly)	1.0	1.0

Top Holdings (%)	
Microsoft Corp	7.0
Apple Inc	5.6
NVIDIA Corporation	5.0
Amazon.com Inc	3.7
Meta Platforms Inc	2.4
Alphabet Inc Class A	2.0
Berkshire Hathaway Inc	1.7
Alphabet Inc Class C	1.7
Eli Lilly and Co	1.4
Broadcom Inc	1.3





#### Composite International Equity Characteristics | As of March 31, 2024

Characteristics						
	Portfolio	Benchmark				
Number of Holdings	4,360	2,231				
Wtd. Avg. Mkt. Cap \$B	69.4	102.1				
Median Mkt. Cap \$B	1.0	10.1				
Price To Earnings	13.0	15.5				
Price To Book	2.4	2.6				
Return on Equity (%)	2.1	1.9				
Yield (%)	3.3	3.1				
Beta (5 Years, Monthly)	1.1	1.0				
R-Squared (5 Years, Monthly)	1.0	1.0				

Energy		5.5	6.4 5					
Materials			9.0 7.4					
Industrials					3.6  3.8			
Consumer Discretionary				12.2 11.8				
Consumer Staples		5.3	7.4					
Health Care			7.6 9.2					
Financials							22.6 21.4	
Information Technology					3.6 3.4			
Communication Services		4.1 5.1						
Utilities	1.8	3 3.0						
Real Estate	2	2.7 .0						
Cash	1.0 0.0							
c	0.0	4.0	8.0	12.0	16.0	20.0	24.0	28.0
International	Equity			MSCI	AC Worl	d ex U	SA index	

Top Holdings (%)	
ASML Holding NV	1.7
Reliance Industries Ltd	1.5
Novo Nordisk A/S	0.9
Samsung Electronics Co Ltd	0.9
CASH	0.9
China Construction Bank Corp	0.9
Hon Hai Precision Industry Co Ltd	0.8
MercadoLibre Inc	0.8
Taiwan Semiconductor Manufacturing	0.7
Adyen N.V	0.7

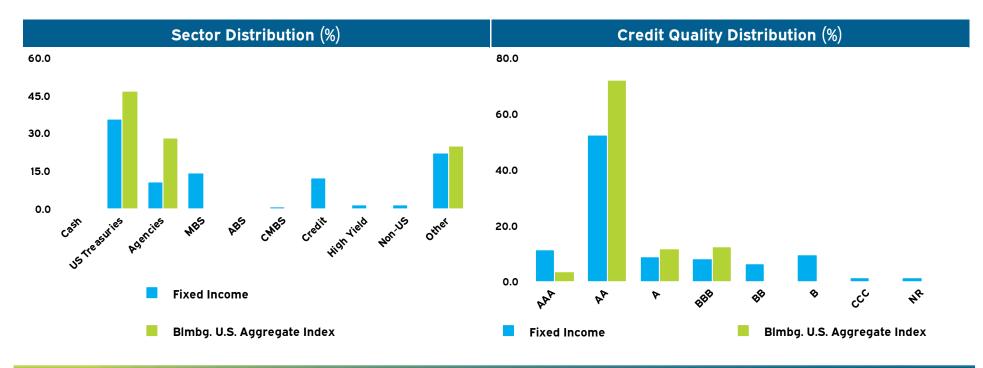
## Sector Weights (%) vs MSCI AC World ex USA index



#### Composite Fixed Income Characteristics | As of March 31, 2024

	Total Fund		
	\$	%	
SSgA Bond Fund	118,627,844	36	
SSgA TIPS	56,656,518	17	
Loomis Sayles Core Plus Fixed Income	46,231,805	14	
Aberdeen Emerging Markets Bond Fund	62,091,772	19	
Pyramis Tactical Bond Fund	26,487,075	8	
Aristotle Pacific	23,487,817	7	
Total Fixed Income	333,582,831	100	

Portfolio Characteristics					
	Portfolio				
Yield To Maturity (%)	5.9				
Average Duration	5.7				
Avg. Quality	А				
Weighted Average Maturity (Years)	9.0				



### **Austin Firefighters Retirement Fund**

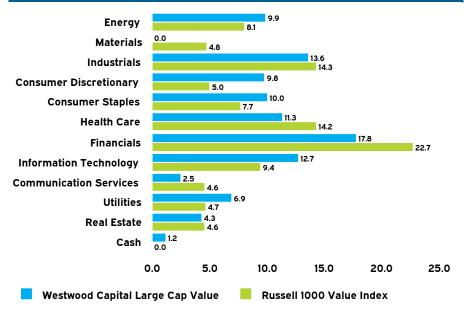
#### Manager Equity | As of March 31, 2024

Top Holdings			
Johnson & Johnson	3.8		
JPMorgan Chase & Co	3.7		
Microsoft Corp	3.6		
Goldman Sachs Group Inc (The)	3.0		
UnitedHealth Group Incorporated			
Honeywell International Inc			
VICI Properties Inc	2.7		
Domino's Pizza Inc	2.6		
Wells Fargo & Co	2.5		
FedEx Corp.	2.5		

Account Information					
Account Name	Westwood Capital Large Cap Value				
Account Structure	Separate Account				
Inception Date	10/01/2001				
Asset Class	US Equity				
Benchmark	Russell 1000 Value Index				
Peer Group	eV US Large Cap Value Equity				

#### **Equity Characteristics** vs Russell 1000 Value Index Portfolio Benchmark Number of Holdings 845 50 Wtd. Avg. Mkt. Cap \$B 322.9 158.8 Median Mkt. Cap \$B 121.1 13.5 P/E Ratio 20.0 18.8 Yield (%) 2.1 2.2 EPS Growth - 5 Yrs. (%) 9.9 9.8 Price to Book 3.2 2.6

#### Sector Weights (%)



% of Portfolio

Portfolio	o Per	form	nance	Sum	mary		
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Westwood Capital Large Cap Value	7.6	17.5	8.2	10.3	9.4	8.8	10/01/2001
Russell 1000 Value Index	9.0	20.3	8.1	10.3	9.0	8.3	10/01/2001

% of Portfolio

### **Austin Firefighters Retirement Fund**

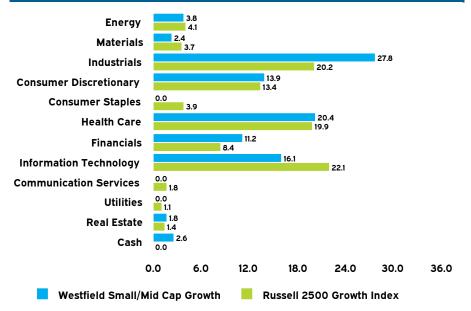
#### Manager Equity | As of March 31, 2024

Top Holdings	
Builders FirstSource Inc	3.6
Vertiv Holdings Co	3.3
Axon Enterprise Inc	3.0
Comfort Systems USA Inc	2.7
Ascendis Pharma AS	2.7
Lincoln Electric Holdings Inc	2.5
Avery Dennison Corp	2.4
Hubbell Inc	2.3
M/I Homes Inc	2.3
PTC Inc	2.2

Account Information					
Account Name	Westfield Small/Mid Cap Growth				
Account Structure	Separate Account				
Inception Date	11/01/2002				
Asset Class	US Equity				
Benchmark	Russell 2500 Growth Index				
Peer Group	eV US Small-Mid Cap Growth Equity				

Equity Characteristics vs Russell 2500 Growth Index				
	Portfolio	Benchmark		
Number of Holdings	67	1,256		
Wtd. Avg. Mkt. Cap \$B	12.9	8.7		
Median Mkt. Cap \$B	10.1	1.7		
P/E Ratio	26.7	24.0		
Yield (%)	0.6	0.6		
EPS Growth - 5 Yrs. (%)	21.0	19.9		
Price to Book	4.2	5.1		

#### Sector Weights (%)



Portfo	lio Pe	erfor	manc	e Sur	nmary	1	
	<b>QTD</b> (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Westfield Small/Mid Cap Growth	12.1	21.2	4.3	13.0	10.4	12.7	11/01/2002
Russell 2500 Growth Index	8.5	21.1	-0.8	9.4	9.6	11.3	11/01/2002

### **Austin Firefighters Retirement Fund**

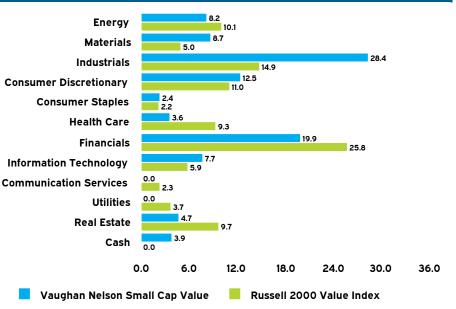
#### Manager Equity | As of March 31, 2024

Top Holdings	
Element Solutions Inc	3.1
Installed Building Products Inc	2.5
Insight Enterprises Inc	2.5
Kirby Corp	2.3
First American Financial Corp	2.2
Core & Main Inc	2.2
Janus International Group Inc	2.2
Western Alliance Bancorporation	2.1
Beacon Roofing Supply Inc	2.0
Comerica Incorporated	2.0

Account Information					
Account Name	Vaughan Nelson Small Cap Value				
Account Structure	Separate Account				
Inception Date	12/01/2015				
Asset Class	US Equity				
Benchmark	Russell 2000 Value Index				
Peer Group	eV US Small Cap Value Equity				

#### **Equity Characteristics** vs Russell 2000 Value Index Portfolio Benchmark Number of Holdings 1,419 68 Wtd. Avg. Mkt. Cap \$B 5.9 3.0 Median Mkt. Cap \$B 0.8 6.1 P/E Ratio 18.9 12.7 Yield (%) 1.8 2.2 EPS Growth - 5 Yrs. (%) 13.2 8.3 2.5 Price to Book 1.7

#### Sector Weights (%)



% of Portfolio

Portfol	io Pe	rforr	nanco	e Sum	nmary	,	
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Vaughan Nelson Small Cap Value	6.6	24.3	12.0	13.5	-	11.2	01/01/2016
Russell 2000 Value Index	2.9	18.8	2.2	8.2	6.9	9.1	01/01/2016

### Austin Firefighters Retirement Fund

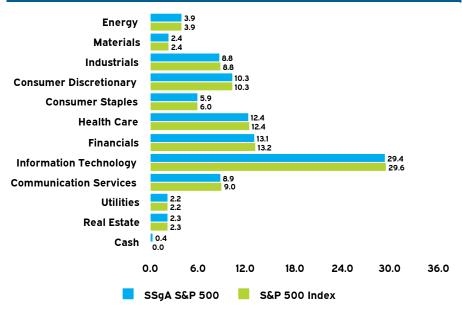
#### Manager Equity | As of March 31, 2024

Top Holdings	
Microsoft Corp	7.1
Apple Inc	5.6
NVIDIA Corporation	5.0
Amazon.com Inc	3.7
Meta Platforms Inc	2.4
Alphabet Inc Class A	2.0
Berkshire Hathaway Inc	1.7
Alphabet Inc Class C	1.7
Eli Lilly and Co	1.4
Broadcom Inc	1.3

Account Information					
Account Name	SSgA S&P 500				
Account Structure	Commingled Fund				
Inception Date	01/01/2004				
Asset Class	US Equity				
Benchmark	S&P 500 Index				
Peer Group	eV US Large Cap Equity				

Equity Characteristics vs S&P 500 Index					
Portfolio Benchmar					
Number of Holdings	504	503			
Wtd. Avg. Mkt. Cap \$B	790.8	794.7			
Median Mkt. Cap \$B	35.3	35.3			
P/E Ratio	25.9	25.9			
Yield (%)	1.4	1.4			
EPS Growth - 5 Yrs. (%)	15.2	15.2			
Price to Book	4.7	4.7			

#### Sector Weights (%)



Portfolio Performance Summary							
	<b>QTD</b> (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
SSgA S&P 500	10.5	29.9	11.5	15.0	13.0	10.0	02/01/2004
S&P 500 Index	10.6	29.9	11.5	15.0	13.0	10.1	02/01/2004

### Austin Firefighters Retirement Fund

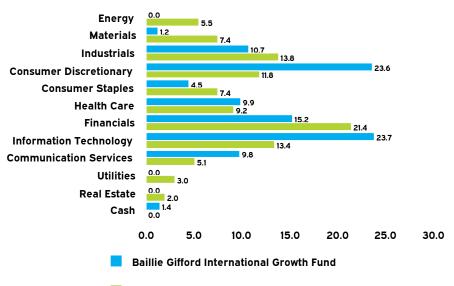
#### Manager Equity | As of March 31, 2024

Top Holdings		
ASML Holding NV	7.1	Acc
MercadoLibre Inc	6.1	
Spotify Technology SA	5.7	Acc
Adyen N.V	5.2	Ince
Ferrari NV	4.7	Ass
Taiwan Semiconductor Manufacturing	4.5	Ber
Atlas Copco AB	3.7	Pee
LOreal SA	3.2	
Tencent Holdings LTD	3.0	
arGEN-X SE	2.9	

Account Information			
Account Name	Baillie Gifford International Growth Fund		
Account Structure	Mutual Fund		
Inception Date	05/01/2009		
Asset Class	International Equity		
Benchmark	MSCI AC World ex USA (Net)		
Peer Group	eV ACWI ex-US All Cap Growth Eq		

Equity Characteristics vs MSCI AC World ex USA index				
	Portfolio	Benchmark		
Number of Holdings	57	2,231		
Wtd. Avg. Mkt. Cap \$B	110.7	102.1		
Median Mkt. Cap \$B	20.2	10.1		
P/E Ratio	37.9	15.5		
Yield (%)	0.7	3.1		
EPS Growth - 5 Yrs. (%)	25.7	9.4		
Price to Book	6.1	2.6		

### Sector Weights (%)



MSCI AC World ex USA index

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Baillie Gifford International Growth Fund	3.8	4.7	-10.2	5.7	5.8	9.4	05/01/2009
MSCI AC World ex USA (Net)	4.7	13.3	1.9	6.0	4.3	7.0	05/01/2009

% of Portfolio

### **Austin Firefighters Retirement Fund**

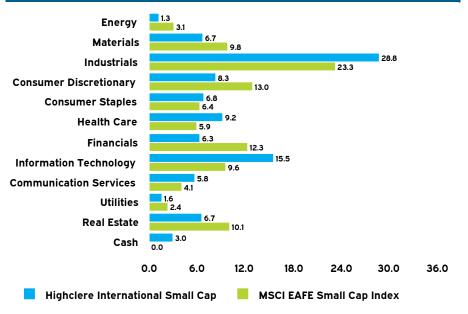
#### Manager Equity | As of March 31, 2024

Top Holdings			
Arjo AB	1.0		
Renishaw PLC	0.9		
Calbee Inc	0.9		
Shizuoka Financial Group Inc	0.9		
Eiken Chemical Co Ltd	0.9		
Orica Ltd	0.9		
SIGMAXYZ Holdings Inc	0.9		
Gamma Communications plc			
Alstom			
Vallourec SA	0.8		

Account Information				
Account Name	Highclere International Small Cap			
Account Structure	Commingled Fund			
Inception Date	12/01/2009			
Asset Class	International Equity			
Benchmark	MSCI EAFE Small Cap (Net)			
Peer Group	eV EAFE Small Cap Equity			

Equity Characteristics vs MSCI EAFE Small Cap Index					
Portfolio Benchmar					
Number of Holdings	194	2,159			
Wtd. Avg. Mkt. Cap \$B	1.8	3.0			
Median Mkt. Cap \$B	1.1	1.3			
P/E Ratio	17.0	14.5			
Yield (%)	3.2	3.2			
EPS Growth - 5 Yrs. (%)	2.5	7.4			
Price to Book	2.0	2.1			

#### Sector Weights (%)



#### **Portfolio Performance Summary** 1 Yr 3 Yrs 5 Yrs 10 Yrs Since QTD Inception (%) (%) (%) (%) (%) Inception Date Highclere International Small Cap 9.2 -3.3 3.5 4.0 1.1 6.5 12/01/2009 MSCI EAFE Small Cap (Net) 2.4 10.4 -1.4 4.9 4.7 7.0 12/01/2009

### Austin Firefighters Retirement Fund

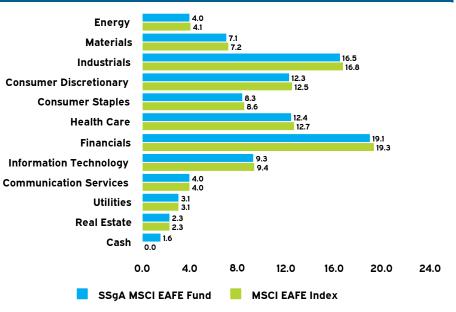
#### Manager Equity | As of March 31, 2024

Top Holdings	
Novo Nordisk A/S	2.4
ASML Holding NV	2.3
Generic Forward	1.6
Nestle SA, Cham Und Vevey	1.6
Toyota Motor Corp	1.5
LVMH Moet Hennessy Louis Vuitton SE	1.4
Shell Plc	1.2
Astrazeneca PLC	1.2
SAP SE	1.1
Novartis AG	1.1

Account Information			
Account Name	SSgA MSCI EAFE Fund		
Account Structure	Commingled Fund		
Inception Date	02/01/2013		
Asset Class	International Equity		
Benchmark	MSCI EAFE (Net)		
Peer Group	eV EAFE Core Equity		

Equity Characteristics vs MSCI EAFE Index									
Portfolio Benchmark									
Number of Holdings	793	768							
Wtd. Avg. Mkt. Cap \$B	95.8	99.2							
Median Mkt. Cap \$B	13.9	13.9							
P/E Ratio	15.7	15.6							
Yield (%)	3.1	3.1							
EPS Growth - 5 Yrs. (%)	8.6	8.5							
Price to Book	2.7	2.7							

#### Sector Weights (%)



% of Portfolio

Portfolio Performance Summary										
	<b>QTD</b> (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date			
SSgA MSCI EAFE Fund	5.9	15.7	5.1	7.6	5.1	6.1	02/01/2013			
MSCI EAFE (Net)	5.8	15.3	4.8	7.3	4.8	5.8	02/01/2013			

### **Austin Firefighters Retirement Fund**

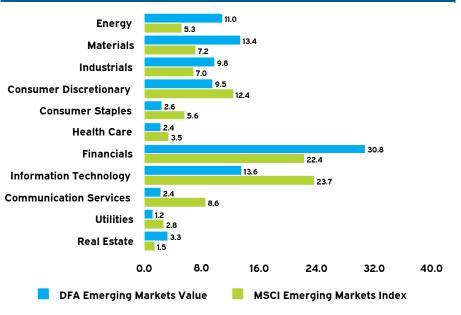
#### Manager Equity | As of March 31, 2024

Top Holdings	
Reliance Industries Ltd	3.6
China Construction Bank Corp	2.2
Samsung Electronics Co Ltd	2.0
Hon Hai Precision Industry Co Ltd	1.9
Alibaba Group Holding Ltd	1.5
Axis Bank Ltd	1.2
Petroleo Brasileiro Sa	1.2
Bank of China Ltd	1.1
Ping An Insurance Group	1.0
Industrial & Commercial Bank of China	0.9

Account Information						
DFA Emerging Markets Value						
Mutual Fund						
12/01/2009						
International Equity						
MSCI Emerging Markets Value (Net)						
eV Emg Mkts All Cap Value Equity						

#### **Equity Characteristics** vs MSCI Emerging Markets Index Portfolio Benchmark Number of Holdings 3,309 1,376 Wtd. Avg. Mkt. Cap \$B 121.5 39.1 Median Mkt. Cap \$B 0.5 7.2 P/E Ratio 9.4 14.8 Yield (%) 4.2 2.9 EPS Growth - 5 Yrs. (%) 10.4 11.8 Price to Book 1.7 2.6

#### Sector Weights (%)



% of Portfolio

Portfolio Performance Summary								
	<b>QTD</b> (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date	
DFA Emerging Markets Value	2.7	15.3	3.5	4.8	4.1	3.3	12/01/2009	
MSCI Emerging Markets (Net)	2.4	8.2	-5.1	2.2	2.9	3.1	12/01/2009	

### **Austin Firefighters Retirement Fund**

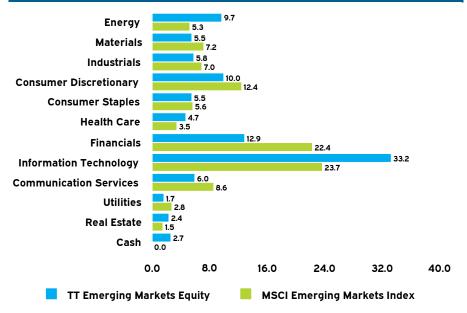
#### Manager Equity | As of March 31, 2024

Top Holdings		
Taiwan Semiconductor Manufacturing	10.4	
MercadoLibre Inc	4.9	
Samsung Electronics Co Ltd	4.1	
Samsung Electronics Co Ltd	3.6	ł
Ypf Sociedad Anonima Yacimientos Petroliferos Fiscales	3.5	
Tencent Holdings LTD	3.5	
SK Hynix Inc	2.8	
Delhivery Limited	2.5	1
Emaar Properties	2.4	
Capstone Copper Corp	2.3	
% of Portfolio	40.0	

Account Information						
Account Name	TT Emerging Markets Equity					
Account Structure	Commingled Fund					
Inception Date	03/25/2019					
Asset Class	International Equity					
Benchmark	MSCI Emerging Markets (Net)					
Peer Group	eV Emg Mkts Equity					

Equity Characteristics vs MSCI Emerging Markets Index								
	Portfolio	Benchmark						
Number of Holdings	85	1,376						
Wtd. Avg. Mkt. Cap \$B	161.2	121.5						
Median Mkt. Cap \$B	23.0	7.2						
P/E Ratio	16.6	14.8						
Yield (%)	1.3	2.9						
EPS Growth - 5 Yrs. (%)	31.4	11.8						
Price to Book	3.3	2.6						

### Sector Weights (%)



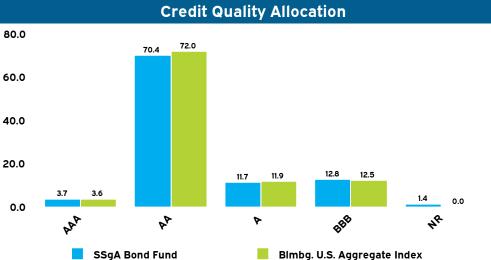
Portfolio Performance Summary									
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date		
TT Emerging Markets Equity	6.8	9.3	-8.4	1.2	-	1.2	04/01/2019		
MSCI Emerging Markets (Net)	2.4	8.2	-5.1	2.2	2.9	2.2	04/01/2019		

### Austin Firefighters Retirement Fund

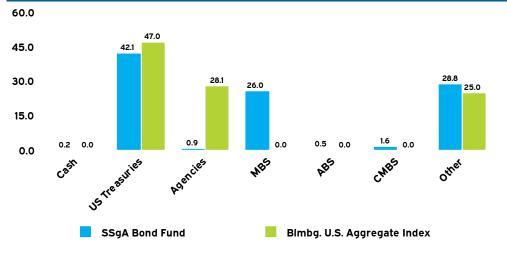
#### Manager Fixed Income | As of March 31, 2024

Account Information		
SSgA Bond Fund		80.0
Commingled Fund		
01/01/2004		60.0
US Fixed Income		
Blmbg. U.S. Aggregate Index		40.0
eV US Core Fixed Inc		
	SSgA Bond Fund Commingled Fund 01/01/2004 US Fixed Income Blmbg. U.S. Aggregate Index	SSgA Bond Fund Commingled Fund 01/01/2004 US Fixed Income BImbg. U.S. Aggregate Index

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
SSgA Bond Fund	-0.7	1.7	-2.5	0.3	1.5	3.0	01/01/2004
Blmbg. U.S. Aggregate Index	-0.8	1.7	-2.5	0.4	1.5	3.1	



**Sector Allocation** 



Portfolio Fixed Income Characteristics								
	Q1-24 Q4							
	Portfolio	Benchmark	Portfolio					
Yield To Maturity	4.9	4.9	4.5					
Average Duration	6.2	6.2	6.2					
Average Quality	AA	AA	AA					
Weighted Average Maturity	8.6	8.4	8.6					

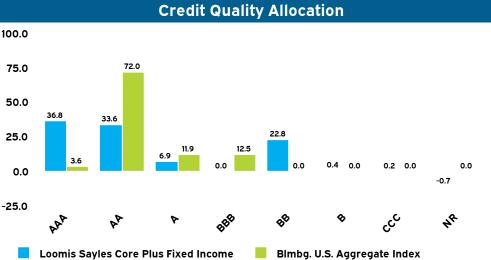
### **Austin Firefighters Retirement Fund**

#### Manager Fixed Income | As of March 31, 2024

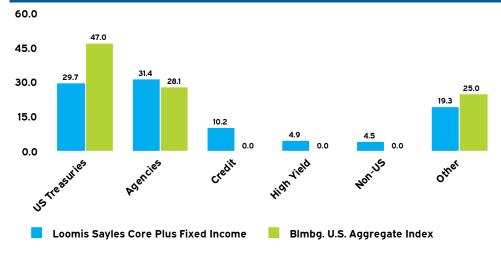
Account Information	
Loomis Sayles Core Plus Fixed Income	1
Commingled Fund	
06/01/2015	
US Fixed Income	
Blmbg. U.S. Aggregate Index	
eV US Core Plus Fixed Inc	
	Loomis Sayles Core Plus Fixed Income Commingled Fund 06/01/2015 US Fixed Income Blmbg. U.S. Aggregate Index

Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)		Since Inception	Inception Date
Loomis Sayles Core Plus Fixed Income	-0.1	2.2	-1.8	1.5	-	2.3	07/01/2015
Blmbg. U.S. Aggregate Index	-0.8	1.7	-2.5	0.4	1.5	1.3	



#### **Sector Allocation**



Portfolio Fixed Income Characteristics							
	G	1-24	Q4-23				
	Portfolio	Benchmark	Portfolio				
Yield To Maturity	5.6	4.9	6.0				
Average Duration	7.1	6.2	6.8				
Average Quality	AA	AA	А				
Weighted Average Maturity	9.6	8.4	8.7				

### Austin Firefighters Retirement Fund

#### Manager Fixed Income | As of March 31, 2024

Account Information						
Account Name	Aberdeen Emerging Markets Bond Fund					
Account Structure	Commingled Fund					
Inception Date	12/01/2014					
Asset Class	International Fixed Income					
Benchmark	JPM EMBI Global Diversified					
Peer Group						

# Portfolio Performance Summary

							Inception
	(%)	(%)	(%)	(%)	(%)	Inception	Date
Aberdeen Emerging Markets Bond Fund	2.9	16.4	-0.6	1.1	-	2.5	12/01/2014
JPM EMBI Global Diversified	2.0	11.3	-1.4	0.7	3.0	2.6	

#### **Credit Quality Allocation** 32.0 28.0 27.7 24.0 23.0 20.0 19.0 16.0 15.0 16.0 13.7 7.0 8.0 6.5 5.3 2.9 2.0 0.2 0.0 0.0 0.0 BEB<sup>+/Ba</sup>llBBIBaat 0.0 ccclcaa AAAAB BBIBS cc/cs Not Rated cash AAIAS \$ C Aberdeen Emerging Markets Bond Fund JPM EMBI Global Diversified

Sector Allocation

Portfolio Fixed Income Characteristics								
	G	1-24	Q4-23					
	Portfolio	Benchmark	Portfolio					
Yield To Maturity	8.3	8.3	9.8					
Average Duration	6.4	6.6	6.7					
Average Quality	BB	BB/Ba	BB					
Weighted Average Maturity	10.8	11.1	11.5					



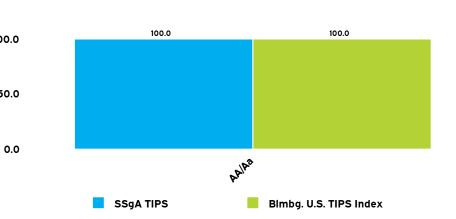
### Austin Firefighters Retirement Fund

#### Manager Fixed Income | As of March 31, 2024

	Account Information	
Account Name	SSgA TIPS	150.0
Account Structure	Commingled Fund	
Inception Date	07/01/2014	
Asset Class	US Fixed Income	100.0
Benchmark	Blmbg. U.S. TIPS Index	
Peer Group	eV US TIPS / Inflation Fixed Inc	50.0

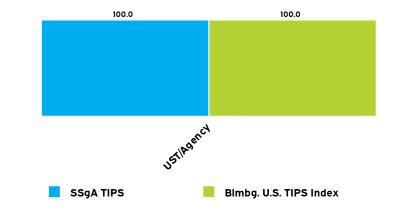
Portfolio Performance Summary								
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date	
SSgA TIPS	0.0	0.3	-0.6	2.4	-	1.8	08/01/2014	
Blmbg. U.S. TIPS Index	-0.1	0.5	-0.5	2.5	2.2	1.9		

#### **Credit Quality Allocation**



Sector Allocation

Portfolio Fixed Income Characteristics								
Q1-24 Q4-23								
	Portfolio	Benchmark	Portfolio	50.0				
Yield To Maturity	4.6	4.3	4.2					
Average Duration	4.6	6.7	5.9					
Average Quality	AA	AA	AA	0.0				
Weighted Average Maturity	7.4	7.3	7.1					



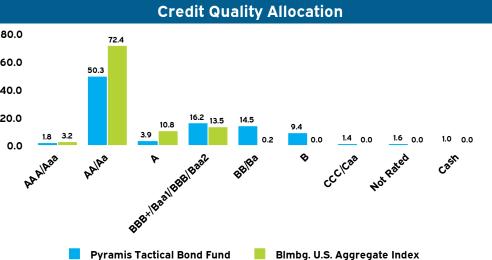
### **Austin Firefighters Retirement Fund**

#### Manager Fixed Income | As of March 31, 2024

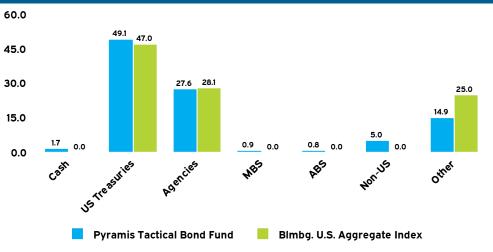
Account Information		
Pyramis Tactical Bond Fund		ł
Commingled Fund		e
08/01/2013		
US Fixed Income		4
Blmbg. U.S. Aggregate Index		2
eV US Core Plus Fixed Inc		
	Pyramis Tactical Bond Fund Commingled Fund 08/01/2013 US Fixed Income Blmbg. U.S. Aggregate Index	Pyramis Tactical Bond Fund Commingled Fund 08/01/2013 US Fixed Income Blmbg. U.S. Aggregate Index

Portfolio Performance Summary								
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date	
Pyramis Tactical Bond Fund	-0.1	3.5	-0.4	2.5	3.4	3.6	08/01/2013	
Blmbg. U.S. Aggregate Index	-0.8	1.7	-2.5	0.4	1.5	1.6		

Portfolio Fixed Income Characteristics			
	Q1-24		Q4-23
	Portfolio	Benchmark	Portfolio
Yield To Maturity	5.9	4.9	5.9
Average Duration	6.9	6.2	6.9
Average Quality	AA	AA	А
Weighted Average Maturity	13.3	8.4	13.3



**Sector Allocation** 



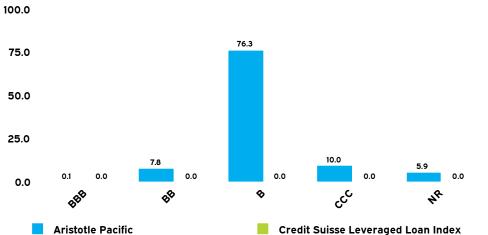
# MEKETA

# **Austin Firefighters Retirement Fund**

#### Manager Fixed Income | As of March 31, 2024

	Account Information	1
Account Name	Aristotle Pacific	10
Account Structure	Commingled Fund	
Inception Date	11/27/2019	7
Asset Class	US Fixed Income	
Benchmark	Credit Suisse Leveraged Loan Index	5
Peer Group	Bank Loan	

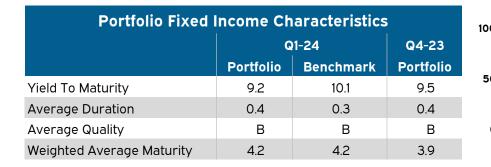
Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Aristotle Pacific	2.8	13.1	6.5	-	-	5.7	12/01/2019
Credit Suisse Leveraged Loan Index	2.5	12.4	5.8	5.3	4.6	5.5	

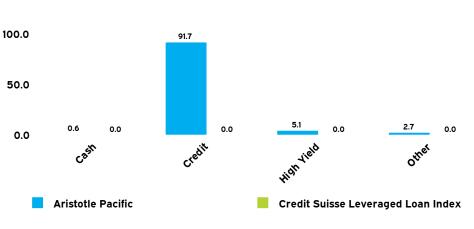


**Credit Quality Allocation** 

#### Sector Allocation

150.0





Credit Quality Allocations are not available for Credit Suisse Leveraged Loan Index.



#### Fee Schedule | As of March 31, 2024

Public Manager Annual Investment Expense Analysis					
	Market Value (\$)	% of Portfolio	Estimated Annual Fee (%)	Estimated Expense (\$)	
Westwood Capital Large Cap Value	13,240,130	1.56	0.50	66,201	
Westfield Small/Mid Cap Growth	66,254,777	7.81	0.68	450,532	
Vaughan Nelson Small Cap Value	70,322,745	8.29	0.81	567,259	
SSgA S&P 500	116,684,232	13.75	0.01	14,168	
Baillie Gifford International Growth Fund	34,328,748	4.05	0.61	205,972	
Highclere International Small Cap	30,607,804	3.61	1.17	358,882	
SSgA MSCI EAFE Fund	124,711,148	14.70	0.05	64,884	
DFA Emerging Markets Value	26,994,852	3.18	0.38	145,772	
TT Emerging Markets Equity	31,899,622	3.76	0.80	255,197	
SSgA Bond Fund	118,627,844	13.98	0.03	33,726	
Loomis Sayles Core Plus Fixed Income	46,231,805	5.45	0.29	135,580	
Aberdeen Emerging Markets Bond Fund	62,091,772	7.32	0.45	279,413	
SSgA TIPS	56,656,518	6.68	0.03	16,997	
Pyramis Tactical Bond Fund	26,487,075	3.12	0.34	90,056	
Aristotle Pacific	23,487,817	2.77	0.41	96,300	
Total	848,626,888	100.00	-	2,780,940	

Estimated fees are based off of public investments only and are calculated by multiplying manager fee schedules by each fund's market value as of the report date. Estimated fees do not take into consideration potential performance based fees, fur expenses or charges. Private market fees are reported annually in separate report.

Westfield has a performance based fee. The fee ranges from minimum of 0.20% to a maximum of 1.30% based on the relative performance over the trailing three years. Included here is the average actual fee paid over the past three years.

# **Private Equity Pacing History**



**Private Equity Pacing History** 

# Background

 $\rightarrow$  Annually we conduct a review on the historical pace of capital calls, distributions, etc.



#### **Private Equity Pacing History**

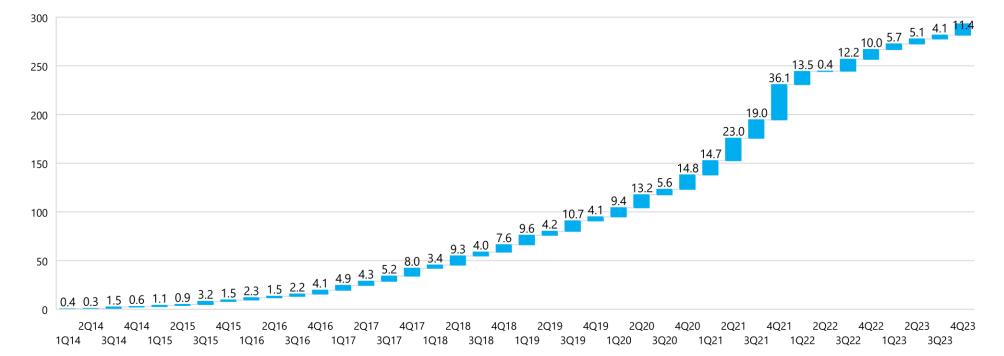


# **Capital Calls History**

 $\rightarrow$  As the private equity program has matured (i.e. fewer annual commitments) the pace of capital calls has slowed.



#### **Private Equity Pacing History**

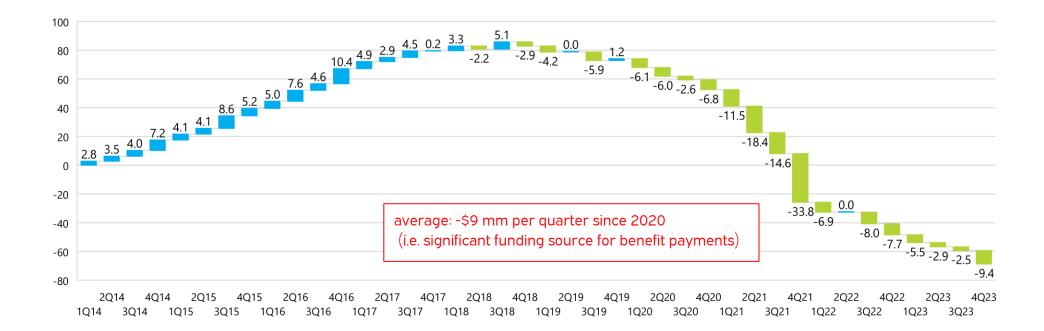


# **Distributions History**

 $\rightarrow$  The pace of distributions accelerated significantly between 2019 - 2022.



**Private Equity Pacing History** 



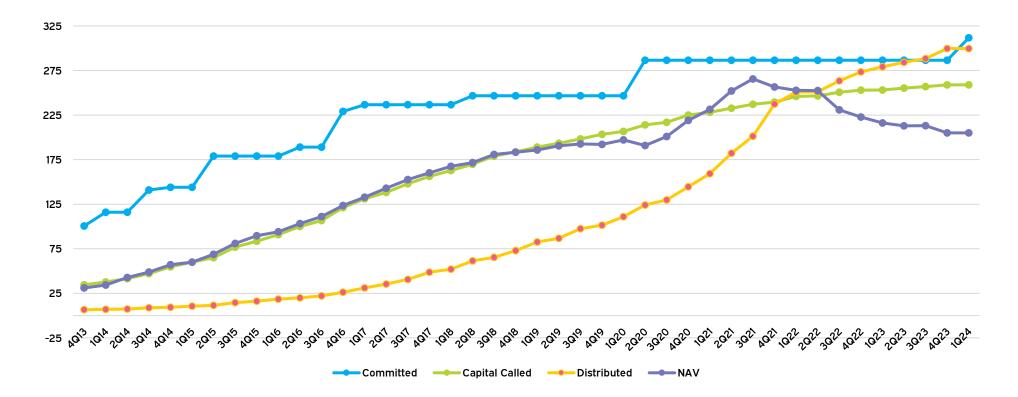
# Net Cash Flows Per-Quarter

 $\rightarrow$  The program reached self funding status in 2019.

 $\rightarrow$  Net clash flows have been quite material in the past 4 years despite a recent slow down in exit activity in 2023.



**Private Equity Pacing History** 

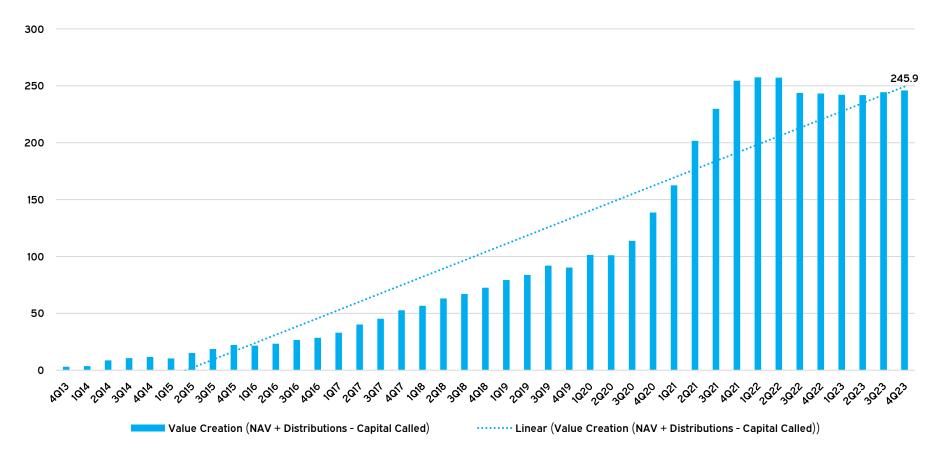


# Private Equity Total History (Cumulative)

- $\rightarrow$  The \$25 mm commitment to Constitution Capital Partners Fund VII can be seen in the top blue line (right side).
- → There has been a stabilization/downward trend in NAV as distributions have accelerated and appreciation levels have slowed given market conditions.



**Private Equity Pacing History** 



**Cumulative Value Creation** 

→ Value creation has been substantial. There has been a stabilization (flattening) in the past few years given slower pace of exits (i.e. fewer private equity companies being sold).



**Private Equity Pacing History** 





 $\rightarrow$  Uncalled committed level is currently around \$50 mm.

→ The historic average (which is skewed to the high side from the early years of the program when multiple commitments had to be made to gain exposure) is \$67 mm.



**Private Equity Pacing History** 

15% Target to Private Equity Fund of Funds					
Year	Туре	Amount			
Year 1 +/-	Global Primary Fund of Funds (1)	\$40-50 mm			
Year 2 +/-	Specialized Fund of Funds (1 to 2)	\$20 mm			
Year 3 +/-	Global Secondary Fund of Funds (1)	\$40-50 mm			
Years 4-6	Same cycle repeats				

# Historical Commitment Plan

# Actual Implementation

Year	Туре	Fund	Amount
2016	Global Primary Fund of Funds	LGT Crown Global Opportunities Fund VI	\$40 mm
2017	Specialized Fund of Funds	HarbourVest Co-investment Fund IV	\$10 mm
2018	Specialized Fund of Funds	SVB Strategic Investors Fund IX	\$10 mm
2020	Global Secondary Fund of Funds	HarbourVest Dover Street X	\$40 mm
2024	Specialized Fund of Funds	Constitution Capital Partners VII	\$25 mm

Private Equity Possible New Approach to Investing



Private Equity Program Update

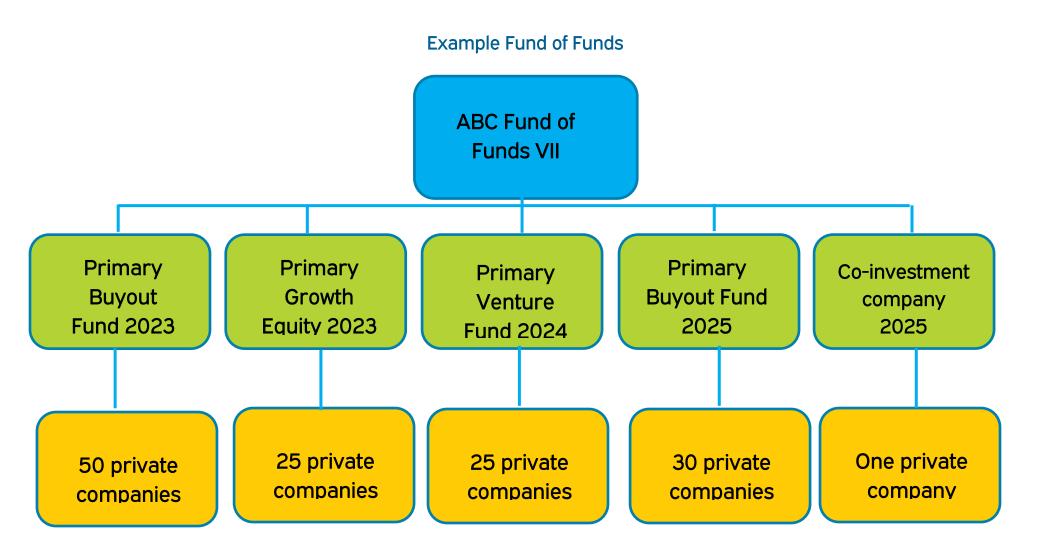
# Introduction

- $\rightarrow$  Austin Fire Fighters Relief and Retirement Fund has a 15% target to private equity.
- ightarrow Historically, the allocation has been implemented through commitments to funds of funds strategies.
- → Meketa was asked to review various program models, with respect to accessing private market going forward, and to compare cost structures.
- $\rightarrow$  This presentation includes the following:
  - A review of program models available to the Fund with important considerations relative to each model.
  - A plan for how to build out and enhance private market exposure once a model is selected.
  - A comparison of costs in a fund of funds approach vs one without fund of funds.

# MEKETA

# **Austin Firefighters Retirement Fund**

Private Equity Program Update





Private Equity Program Update

# Primary Funds versus Fund of Funds

 $\rightarrow$  Primary funds are commingled investment vehicles that make investments in private companies or assets.

 $\rightarrow$  Fund of Funds are commingled investment vehicles that invest in a portfolio of primary funds.

	Advantages	Disadvantages
Primary Funds	<ul> <li>Customizable portfolios (by strategy, geography, vintage).</li> <li>Lower cost structure.</li> <li>Influence or control over manager selection.</li> <li>Control of commitment pacing.</li> </ul>	<ul> <li>More governance or oversight may be warranted.</li> <li>Potentially higher administrative burden.</li> <li>Capital scale is required for a diversified portfolio.</li> <li>In some cases, accessing high quality managers may be a challenge.</li> </ul>
Fund of Funds	<ul> <li>In some cases, ease of oversight and administration.</li> <li>Capital scale is not required for a diversified portfolio.</li> </ul>	<ul> <li>Limited influence or control over portfolio construction or manager selection.</li> <li>Highest cost structure.</li> <li>Inability to adjust commitment pacing.</li> <li>12- to 14-year fund life.</li> </ul>
Hybrid	<ul> <li>Somewhat customizable portfolios.</li> <li>Somewhat lower cost structure than FoF alone.</li> <li>Some control over manager selection and pacing.</li> </ul>	<ul> <li>Potentially higher governance and administrative burden than FoF alone.</li> <li>Higher cost structure and less customization then through Primary program alone.</li> </ul>



Private Equity Program Update

# Which Approach is Right for My Institution?

Primary funds are most often selected by institutions that:	Fund of Funds are most often selected by institutions that:
<ul> <li>Have the ability to commit at least \$2 million per fund, to a minimum of three to five funds per year.</li> </ul>	<ul> <li>Do not have the capital scale to build a custom primary program.</li> <li>Are not comfortable making many fund selections per year, or are not</li> </ul>
<ul> <li>Have a board of trustees that is willing to nimbly select multiple managers per year, or outsource selection to a discretionary manager.</li> </ul>	<ul><li>able to outsource that function.</li><li>Value the convenience of a fund manager handling all program</li></ul>
<ul> <li>Possess robust and sophisticated back-office capabilities, or are willing to outsource program administration.</li> </ul>	<ul> <li>implementation and administration.</li> <li>Do not wish to have a large roster of fund investments to monitor.</li> </ul>
<ul> <li>Are willing to evaluate, select and monitor a large number of individual fund investments, or to outsource monitoring.</li> </ul>	

 $\rightarrow$  Institutions may also pursue a blend of the two models offered above, known as a "hybrid model".

→ The hybrid model offers a "core-satellite" approach through large commitments to diversified funds of funds and smaller targeted commitments to primary funds.



Private Equity Program Update

# Custom Primary Program: Overview

A custom program could be one approach to lower costs relative to the Fund's existing Fund of Funds approach. Such a program could be structured as follows:

- → The Fund would establish a contract with a qualified asset manager, similar in nature to the existing contract between the Fund and Meketa for general consulting services.
- $\rightarrow$  Unlike Fund of Funds or separate accounts, the contract could be altered, terminated, or have a customized duration.
- $\rightarrow$  The contract would outline:
  - All covered services and costs.
  - Guidelines, limitations, and considerations governing account management.
  - Could or could not grant the manager discretionary authority to make investments and other actions on Pension Fund's behalf related to building and managing a portfolio of Private Equity investments.
- $\rightarrow$  The Fund would have direct ownership of each primary fund commitment.
- → Quarterly performance reports provided to the Fund could include a separate comprehensive performance report specific to the Private Equity program, or the program could be a single line item within your existing performance reports.



Private Equity Program Update

# Custom Primary Program: Discretionary vs Non-Discretionary Model

	Discretionary Management	Non-Discretionary Advisory
Flexible Annual Commitment Budgeting	Yes	Yes
Custom Program Design and Exposures	Yes	Yes
Flexible, Severable Contract	Yes	Yes
Investment Decisions	Made by account manager	Made by Board
Legal Documentation	Executed by account manager	Executed by Board legal counsel
Cash Transfer Management	Executed by account manager	Executed by advisor or by Board
Performance Reporting	Executed by account manager	Executed by advisor
Cost Structure	All costs associated with program covered by contract with account manager.	Advisor costs. Legal documentation costs. Possible Fund staffing costs for cash transfer management.

 $\rightarrow$  Both models can offer lower fee structures than what is typically available through use of Fund of Funds.

- $\rightarrow$  The non-discretionary model delegates authority for Private Equity fund selection to the Fund's board or staff.
- $\rightarrow$  The discretionary model is operationally simple as all investment management, legal, operational, and administrative functions are outsourced to the account manager.

MEKETA

Private Equity Program Update

	Source	Actual PE FOF Mgmt. Fees	Cumulative amount committed	Fee to FOF manager as % of committed	Estimated likely fee ( to PE advisor
2018	Meketa Calculation	\$1,965,100	\$249 mm	0.79%	\$250K - \$500K
2019	Meketa Calculation	\$1,885,362	\$249 mm	0.76%	\$250K - \$500K
2020	Meketa Calculation	\$1,853,119	\$287 mm	0.65%	\$250K - \$500K
2021	surveyed PE FOF managers	\$1,880,824	\$287 mm	0.66%	\$250K - \$500K
2022	surveyed PE FOF managers	\$1,765,003	\$287 mm	0.62%	\$250K - \$500K
Total		\$9,349,408		0.69%	\$1.25 mm - \$2.5 mm

# Hypothetical Historical Fee Comparison<sup>1</sup>

- → We calculate Austin Fire has paid close to \$10 mm in management fees to PE Fund of Funds managers over the last five years. This analysis does not include any fund expenses or carried interest paid to the FoF managers. In total, those fees can be as much as 1x - 2x the management fees.
- $\rightarrow$  We estimate a private equity advisor would have likely charged Austin Fire \$250K \$500K per year.
- $\rightarrow$  Private equity advisors do not earn carried interest nor have fund expenses.

<sup>&</sup>lt;sup>1</sup> Last 5 years management fee paid to PE FOF managers is the sum of 2018-2022. Years 2018, 2019, 2020 are calculated by Meketa. Years 2021 and 2022 are sourced directly from the PE managers.



Private Equity Program Update

# Fee Comparison (Continued)

Actual fee's paid to AFRF Managers (mgmt. + performance fee)

	Source	Mgmt. Fees + Performance Fees	Cumulative amount committed	Fee to FOF manager as % of committed
2009	Partners Group DIS 2009	\$1,174,202	\$7.0 mm	16.8%
2009	Crown Global Secondaries II	\$503,640	\$3.0 mm	16.8%
2012	HighVista (Aberdeen) Fund V	\$ 1,088,603	\$10.0 mm	10.9%

 $\rightarrow$  The information above was sourced directly from the managers and includes both management fees and performance based fees earned.



Private Equity Program Update

# Summary

- $\rightarrow$  There is no one "right" approach.
- ightarrow Ultimately the best approach for a given Board requires a delicate cost/benefit analysis.
- → Historically, Austin Fire has used the Fund of Funds approach and it has worked well but fees to FOF managers are expensive.
- $\rightarrow$  A custom primary approach, through the use of a dedicated private equity advisor, could save in fees.
  - The fees savings would come on prospective investments.
  - Austin Fire would still be responsible for paying management fees to all the existing Fund of Funds' managers until each investment is liquidated.
  - Some Fund of Funds stop charging fees after 12+ years.
- → Depending on how the private equity advisor approach is implemented (discretionary or non-discretionary) it could put more burden on the Staff and Board (both to make more frequent decisions and more capital call activity).
- → The biggest factor in determining the success of either approach will be the performance of the funds selected (by either the FoF manager or the private equity advisor).

# Roadmap



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### **AUSTIN FIREFIGHTERS RETIREMENT FUND**

# PRELIMINARY ROAD MAP

#### May 2024 Investment Committee Meeting

- 1. Private equity pacing review
- 2. Private equity approach

#### August 2024 Investment Committee Meeting

- 1. Investment Policy Statement Operating Procedures
- 2. Annual private equity peer performance benchmarking
- 3. (as needed) follow up to private equity approach discussion

#### November 2024 Investment Committee Meeting

- 1. Annual fee benchmarking
- 2. Progress report on IPPE recommendations

#### February 2025 Investment Committee Meeting

1. Annual asset allocation review

#### Ongoing Future objective

1. TBD - Asset allocation/liability study

<sup>&</sup>lt;sup>1</sup> Dates and actions subject to change based on client needs and capital market conditions

# Appendix



# **Disclaimer, Glossary, and Notes**



**Disclaimer, Glossary, and Notes** 

WE HAVE PREPARED THIS REPORT FOR THE SOLE BENEFIT OF AUSTIN FIREFIGHTERS RETIREMENT FUND.

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

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM", "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

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



#### Disclaimer, Glossary, and Notes

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

**Duration:** Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

**Information Ratio:** This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. Portfolio Return- [Risk Free Rate+Beta\*(market return-Risk Free Rate)].

**Market Capitalization:** For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

**Prepayment Risk:** The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.



#### Disclaimer, Glossary, and Notes

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about is future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

**Quality Rating:** The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

**Standard Deviation:** A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

**Style:** The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.



#### **Disclaimer, Glossary, and Notes**

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a "basis book." For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

<u>5% (discount)</u> = 5 (yrs. to maturity) =

1% pro rata, plus 5.26% (current yield)

6.26% (yield to maturity)

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

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**NCREIF Property Index (NPI):** Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999. The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.