

Austin Firefighters Retirement Fund August 23, 2024 Board Meeting

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Agenda

Agenda

- 1. Economic and Market Update
- 2. Executive Summary
- 3. 2Q24 Investment Report
- 4. Private Equity Peer Performance Benchmarking
- **5.** Private Equity Program Structure
- 6. Roadmap
- 7. Appendix
 - Disclaimer, Glossary and Notes

Economic and Market Update As of June 30, 2024



Commentary

- → Softening economic data, increased hopes of interest rate cuts, and ongoing AI optimism drove most asset classes higher in the second quarter.
 - While the Fed remains data dependent, improvements in inflation and a cooling labor market may clear the way for several rate cuts this year.
 - Inflation pressures have eased in most countries from their pandemic peaks, but some uncertainty remains and levels are still above most central bank targets. In the second quarter, headline and core inflation measures in the US both fell, with most readings coming in below expectations.
 - The US equity markets (Russell 3000 index) added to its gains in the second quarter, rising 3.2%. Technology continued to drive results in the quarter due to AI demand and investment.
 - Non-US developed equity markets fell in the second quarter (-0.4%) on continued strength in the US dollar and political uncertainty in Europe.
 - Emerging market equities rallied (5.0%), for the quarter. Chinese stocks were up 7.1% as coordinated buying of Chinese exchange traded funds (ETFs) by state-backed financial services companies helped boost stock prices.
 - US interest rates rose over the quarter but finished off their highs. Income offset capital losses though, leading to the broad US bond market rising 0.1% in the second quarter.
- → Looking to the rest of this year, the paths of inflation and monetary policy, China's economic disorder and slowing economic growth, and the many looming elections will be key factors.





Index Returns¹

- → Declining inflation, resilient growth, and strong corporate earnings supported most asset classes in the second quarter.
- \rightarrow Mid-way through 2024, US stocks have significantly outperformed other asset classes on a year-to-date basis.

¹ Source: Bloomberg. Data is as of June 30, 2024.

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	June	Q2	YTD	1 YR	3 YR	5 YR	10 YR
Domestic Equity	(%)	(%)	(%)	(%)	(%)	(%)	(%)
S&P 500	3.6	4.3	15.3	24.6	10.0	15.1	12.9
Russell 3000	3.1	3.2	13.6	23.1	8.1	14.2	12.1
Russell 1000	3.3	3.6	14.2	23.9	8.8	14.6	12.5
Russell 1000 Growth	6.7	8.3	20.7	33.5	11.3	19.4	16.3
Russell 1000 Value	-0.9	-2.2	6.6	13.1	5.5	9.0	8.2
Russell MidCap	-0.7	-3.3	5.0	12.9	2.4	9.5	9.0
Russell MidCap Growth	1.7	-3.2	6.0	15.1	-0.1	9.9	10.5
Russell MidCap Value	-1.6	-3.4	4.5	12.0	3.7	8.5	7.6
Russell 2000	-0.9	-3.3	1.7	10.1	-2.6	6.9	7.0
Russell 2000 Growth	-0.2	-2.9	4.4	9.1	-4.9	6.2	7.4
Russell 2000 Value	-1.7	-3.6	-0.8	10.9	-0.5	7.1	6.2

Domestic Equity Returns¹

US Equities: The Russell 3000 rose 3.2% in the second quarter, bringing the year-to-date results to 13.6%.

- → US stocks continued their rise in June driven by on-going AI optimism. Nearly all the quarterly market gains in the S&P 500 were driven by large cap technology stocks, with the S&P 500 equal weighted index down 3.1% for the quarter.
- → US large cap stocks continue to outperform small cap stocks. This dynamic is driven by the large technology stocks like NVIDIA, Apple, and Alphabet and the underperformance of small cap biopharma companies and banks.
- \rightarrow Growth outperformed value for the quarter, with the most pronounced outperformance in the large cap space (8.3% versus -2.2%).

¹ Source: Bloomberg. Data is as of June 30, 2024.







Russell 3000 Sector Returns¹

- → Unlike first quarter performance, where all sectors gained, the second quarter saw mixed results across the major sectors.
- → Technology (+12.9%) continued to drive results fueled by on-going AI optimism. Utilities where a distant second increasing 3.5%, on expectations of increased demand from AI-related companies.
- → Many other sectors fell, including financials (-1.3%), health care (-1.4%), consumer staples (-2.7%), energy (-2.9%), materials (-4.7%), and industrials (-4.9%).
- \rightarrow All sectors have positive returns for the year-to-date period. Technology stocks (+27.8%) continue to lead the broader market, followed by financials (9.7%).

¹ Source: Bloomberg. Data is as of June 30, 2024.



Foreign Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US							
MOCHACINI EX. 00	-0.1	1.0	5.7	11.6	0.5	5.6	3.8
MSCI EAFE	-1.6	-0.4	5.3	11.5	2.9	6.5	4.3
MSCI EAFE (Local Currency)	-0.6	1.0	11.1	15.1	8.1	9.0	7.4
MSCI EAFE Small Cap	-3.0	-1.8	0.5	7.8	-3.4	4.2	4.3
MSCI Emerging Markets	3.9	5.0	7.5	12.5	-5.1	3.1	2.8
MSCI Emerging Markets (Local Currency)	4.3	6.2	11.0	15.5	-1.6	5.6	5.8
MSCI EM ex. China	6.1	4.2	8.4	18.5	1.4	6.7	3.9
MSCI China	-1.9	7.1	4.7	-1.6	-17.7	-4.3	1.4

Foreign Equity Returns¹

Foreign Equity: Developed international equities (MSCI EAFE) fell 0.4% in the second quarter, while emerging market equities (MSCI Emerging Markets) gained 5.0%.

- → For the second quarter, developed market equities declined driven by continued strength in the US dollar and regional political risks particularly in France. UK and Japanese equities made new all-time highs during the quarter, but this was not enough to offset losses in Europe.
- → Emerging market equities outpaced developed market equities during the quarter given strong results in China (7.1%). China equities moved into positive territory for the year (4.7%) due to government purchases of shares, improving economic data, and returning foreign investors.

¹ Source: Bloomberg. Data is as of June 30, 2024.







- \rightarrow At the end of the second quarter, the US equity price-to-earnings ratio remained elevated and above its 21st century average.
- → International equity market valuations remain well below the US. International developed market valuations have increased to slightly above their long-term average, while emerging market equities remain below their long-term average despite recent gains.

¹ 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 June 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.



								Current	
Fixed Income	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Yield (%)	Duration (Years)
Bloomberg Universal	0.9	0.2	-0.3	3.5	-2.7	0.1	1.6	5.3	6.0
Bloomberg Aggregate	0.9	0.1	-0.7	2.6	-3.0	-0.2	1.3	5.0	6.2
Bloomberg US TIPS	0.8	0.8	0.7	2.7	-1.3	2.1	1.9	4.8	6.6
Bloomberg Short-term TIPS	0.6	1.4	2.3	5.4	2.2	3.2	2.0	5.1	2.4
Bloomberg High Yield	0.9	1.1	2.6	10.4	1.6	3.9	4.3	7.9	3.7
JPM GBI-EM Global Diversified (USD)	-1.1	-1.6	-3.7	0.7	-3.3	-1.3	-0.9		

Fixed Income Returns¹

Fixed Income: The Bloomberg Universal index rose 0.2% in the second quarter, reducing the year-to-date decline to -0.3%.

- \rightarrow Bonds finished the quarter slightly up as May and June gains offset the April declines.
- → The broad US bond market (Bloomberg Aggregate) rose 0.1% in the second quarter, with the broad TIPS market gaining 0.8%. The less interest rate sensitive short-term TIPS index increased 1.4% for the quarter, leading to the best results.
- \rightarrow High yield bonds (1.1%) also rose, as risk appetite remains strong.

¹ Source: Bloomberg. Data is as of June 30, 2024. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively. JPM GBI-EM data is from J.P. Morgan. Current yield and duration data is not available.

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US Yield Curve¹

- → After rates significantly increased in April on strong inflation data, they then declined in May and June. Chair Powell confirming that the FOMC would not raise rates again this year as economic data appears to be returning to long-run trends led to rates declining from the April highs.
- → The more policy sensitive 2-year Treasury yield finished the quarter roughly 0.2% higher at 4.76% but well off its peak of over 5.0%. The 10-year Treasury rose by a similar amount during the quarter finishing at 4.39%; also, off its April peak of 4.68%.
- → The yield curve remained inverted at month-end, with the spread between the 2-year and 10-year Treasury at roughly -35 basis points.

¹ Source: Bloomberg. Data is as of June 30, 2024.



Credit Spreads vs. US Treasury Bonds¹



- → Despite rising rates, investor demand for risk exposure in credit markets remained strong in Q2 given measured weakness in the economic outlook and expectations of lower interest rates by year-end.
- → Spreads (the yield above a comparable maturity Treasury) stayed relatively steady over the quarter, near post-pandemic lows. All spreads remained below their respective long-run averages, particularly high yield.
- → Although spreads are relatively tight, yields remain at above-average levels compared to the last two decades, particularly for short-term issues.

¹ Source: Bloomberg. Data is as of June 30, 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 Volatility¹

- → Volatility in equities was around one standard deviation below its long-term average at the end of the quarter as continued strength in technology stocks and weakening economic data has moderated fear in the markets.
- → Volatility in bonds (MOVE) ended June higher than where it started the quarter (98.6 versus 86.4) and above its long-run average.

¹ 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 June 2024. The average line indicated is the average of the VIX and MOVE values between January 2000 and June 2024.



US Ten-Year Breakeven Inflation and CPI¹



- → Year-over-year headline inflation continued to fall in June (3.3% to 3.0%) and again came in below expectations. Over the quarter, inflation fell by a total of 0.5%.
- → Month-over-month inflation was negative for the first time since March 2020, largely because of price declines in energy and core goods.

¹ Source: FRED. Data is as June 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.

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Global Inflation (CPI Trailing Twelve Months)¹

- \rightarrow Outside the US, inflation is also easing from the recent peaks.
- → In the eurozone, inflation experienced a dramatic decline last year but remains above the central bank's 2% target. In June, inflation fell slightly from 2.6% to 2.5% year-over-year.
- → Inflation in Japan has slowly dropped from the early 2023 peak of 4.3%, but it remains near levels not seen in a decade. In the most recent reading (May), inflation rose modestly from 2.5% to 2.8% as fuel and utility prices increased.
- → China appears to have emerged from deflationary pressures, but inflation levels remain well below other major economies due to slowing economic growth. Annual inflation levels have been positive for the last five readings signaling improvement in domestic demand. The June year-over-year number came in at 0.2%, slightly lower than the prior reading of 0.3%.

¹ Source: Bloomberg. Data is June 30, 2024, except Japan which is as of May 31, 2024.





- ightarrow Overall, the US labor market remains healthy, but there have been some recent signs of softening.
- → The unemployment rate came in above expectations in June reaching 4.1%, a level not seen since early 2022. Over the second quarter unemployment increased 0.3%.
- \rightarrow Wage growth remains strong though (around 3.9% annually), and initial claims for unemployment are still subdued.
- → Despite significant downward revisions to job gains in April and May, in June the economy added 206,000 jobs (above expectations). The government added the most jobs (70,000), followed by the healthcare sector (49,000).

¹ Source: FRED. Data is as June 30, 2024.



US Consumer Under Stress?¹



- → Despite the strong labor market and higher wages, pressures are building 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.
- → It is worth noting though that many people locked in low-rate fixed mortgages before rates increased and many corporations issued debt at extremely low levels, reducing the sensitivity to higher rates.

¹ Source: FRED. Data is as of March 31, 2024. Revolving Consumer Credit data is seasonally adjusted to remove distortions during the holiday season.







→ In the US interest rates have remained at current levels (5.25%-5.50%) for a year now. The most recent "dot plot" (the Fed's expectation on the path of rates) showed a median expectation of roughly one rate cut this year. Markets are now pricing in two to three rate cuts in 2024 given the improving inflation data with the probability of a cut around 100% in September and slightly over 90% for December.

¹ Source: Bloomberg. Data is as of June 30, 2024. United States rate is the mid-point of the Federal Funds Target Rate range. Eurozone rate is the ECB Deposit Facility Announcement Rate. Japan rate is the Bank of Japan Unsecured Overnight Call Rate Expected. China rate is the China Central Bank 1-Year Medium Term Interest Rate. UK rate is the UK Bank of England Official Bank Rate.





- → Overall, the dollar rose in the second quarter (104.5 to 105.9) versus a basket of currencies of major trading partners.
- \rightarrow China and the ECB cutting policy rates, stronger relative growth, and the weakening of the Japanese yen, have all collectively helped strengthen the dollar.

¹ Source: Bloomberg. Data as of June 30, 2024.



Summary

Key Trends:

- → According to the International Monetary Fund's (IMF) April report, global growth this year is expected to match the 2023 estimate at around 3.2% 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 has largely weakened and come in below expectations, causing markets to expect between two and three rate cuts this year. Uncertainty remains though regarding the timing and pace of interest rate cuts in the coming year.
- → We have started to see some divergences in monetary policy with other central banks, such as the European Central Bank (ECB), starting to cut interest rates while the Fed remains on hold. This disparity will likely influence investment flows and currencies.
- → 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 ongoing weakness in the real estate sector. Japan's recent tightening of monetary policy along with changes in corporate governance in the country could influence relative results.

Executive Summary



Executive Summary

2Q 24 Executive Summary

Category	Results	Notes
Total Fund Performance	Negative	-0.4% (-\$4 mm net investment change)
Performance vs. Benchmarks	Underperformed	-0.4% vs. 2.2% (policy benchmark)
Performance vs. Peers	Underperformed	-0.4% vs. 1.1% median (89 th percentile)
Asset Allocation Attribution Effects	Positive	Underweight real estate helped
Active Public Managers vs. Benchmarks	Underperformed	5 of 11 active managers beat respective benchmarks (after fees)
Active Public Managers vs. Peer Groups	Mixed	5 of 10² active managers beat peer group median (after fees)
Compliance with Targets	In Compliance	All exposure within policy ranges

¹ InvMetrics Public DB >\$1B net.

² 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

Drivers of Performance



- \rightarrow Recently a number of positioning biases have worked against AFRF.
- \rightarrow Some of these very same positioning decisions (private equity) have driven long term results.
- → Others (small cap bias, overweight to fixed income, low US equity exposure) may be perfectly setup to be future drivers of outperformance.



Executive Summary



→ This chart compares the relative attractiveness of small cap US equities vs. large cap US equities on a valuation basis. A lower figure indicates that small cap is more attractive.

¹ Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) - Source: Russell Investments and Bloomberg. Prior months unavailable on Bloomberg are backfilled with last reported earnings. Earnings figures represent 12-month "as reported" earnings.



Executive Summary

Interest Rates Higher Today

→ The yield curve is much higher today than it was a few years ago. If the curve stays stable, or steepens (driven by Fed reducing Federal Funds Rate) than investors will earn sufficient yield on their bond holdings.



Source: Bloomberg. Data is as of December 31, 2023.



Executive Summary

Interest Rates Higher Today

→ The yield curve is much higher today than it was a few years ago. If the curve stays stable, or steepens (driven by Fed reducing Federal Funds Rate) than investors will earn sufficient yield on their bond holdings.



Source: Bloomberg. Data is as of December 31, 2023.



Executive Summary



Long-Term Outlook – 20-Year Annualized Expected Returns¹

→ This chart details Meketa's long-term forward-looking expectations for total returns across asset classes. Private equity and non-US equity have the highest long term return expectation.

¹ Source: Meketa Investment Group's 2024 Asset Study.

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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.

2Q24 (S&P 500 was +4.3%)									
As of 6/30/24	2Q 24	1 YR	3 YR	5 YR	10 YR				
Peer Ranking	89	57	65	41	37				
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				
	40	23 - - (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				
	30	23 - - (S&P 500	was - 3.3 %)						
As of 9/30/23	3Q 23	1 YR	3 YR	5 YR	10 YR				
Peer Ranking	72	96	44	29	33				
2Q23 (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				



Executive Summary

Peer Rankings (continued)

1Q23 (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				
4Q22 (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				
	30	22 - - (S&P 500	was - 4.9 %)						
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 - 16.1%)						
As of 6/30/22	2Q 22	1 YR	3 YR	5 YR	10 YR				
Peer Ranking	29	31	9	15	14				
	1Q2	22 (S&P 500	was - 4.6 %)						
As of 3/31/22	1Q 22	1 YR	3 YR	5 YR	10 YR				
Peer Ranking	55	30	17	19	21				
4Q21 (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				



Executive Summary

Peer Rankings (continued)

	3Q	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			
	20	21 - - (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			
		21 (S&P 500						
As of 3/31/21	1Q 21	1 YR	3 YR	5 YR	10 YR			
Peer Ranking	28	66	35	25	41			
As of 12/31/20	4Q 4Q 20	20 (S&P 500 1 YR) was +12.1%) 3 YR	5 YR	10 YR			
Peer Ranking	35	20	20	22	34			
3Q20 (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			
2Q20 (S&P 500 was +20.5%)								
As of 6/30/20	2Q 20	1 YR	3 YR	5 YR	10 YR			
Peer Ranking	99	62	54	38	54			

2Q24 Investment Report



Total Fund | As of June 30, 2024

US Equity	20.0% 22.8%				
International Equity	22.0% 21.7%				
Fixed Income	30.0% 28.9%				
Private Equity	15.0% 16.1%				
Real Estate	10.0% 7.4%				
Natural Resources	3.0% 2.5%				
Cash	0.0% 0.6%				
0.0	0% 20.0% 40.0%				
Target	Allocation				
Actual Allocation					

Actual vs. Target Allocation

Allocation vs. Targets and Policy								
	Current Balance	Current Allocation(%)	Policy (%)	Policy Range(%)	Within IPS Range?			
US Equity	\$264,047,525	22.8	20.0	13.0 - 27.0	Yes			
International Equity	\$251,252,694	21.7	22.0	15.0 - 29.0	Yes			
Fixed Income	\$334,621,344	28.9	30.0	20.0 - 40.0	Yes			
Private Equity	\$187,136,488	16.1	15.0	5.0 - 25.0	Yes			
Real Estate	\$85,393,447	7.4	10.0	0.0 - 20.0	Yes			
Natural Resources	\$29,368,624	2.5	3.0	0.0 - 5.0	Yes			
Cash	\$7,136,552	0.6	0.0	0.0 - 5.0	Yes			
Total	\$1,158,956,674	100.0	100.0					



Total Trust | 5 Years Ending June 30, 2024



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Total Fund Performance | As of June 30, 2024





Plan Sponsor Peer Group Analysis | As of June 30, 2024



Calculation based on monthly periodicity.



Total Plan Attribution | 1 Quarter Ending June 30, 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 June 30, 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 June 30, 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.

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InvMetrics All Public DB Plans > \$1B | As of June 30, 2024





Asset Allocation & Performance | As of June 30, 2024

	Asset Class Performance Summary (Net of Fees)											
	Market Value \$	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	25 Yrs (%)	Inception (%)	Inception Date
Total Fund	1,158,956,674	100.0	-0.4	2.2	5.8	1.4	6.8	6.6	7.5	6.4	6.9	Apr-97
Static Benchmark			2.2	7.3	12.3	3.8	7.6	6.8	7.2			
Dynamic Benchmark			2.5	8.1	13.5	3.9	7.5	6.7				
70% MSCI ACWI/30% Barclays Agg			2.0	7.6	14.2	3.0	7.6	6.5	7.3	6.1	6.5	
Domestic Equity	264,047,525	22.8	-1.0	8.6	16.4	6.5	12.1	10.4	10.3	7.7	8.8	Apr-97
Russell 3000 Index			3.2	13.6	23.1	8.1	14.1	12.1	10.6	8.3	9.5	
International Equity	251,252,694	21.7	1.1	5.7	11.2	-2.5	5.3	4.2	6.7	5.3	5.7	Apr-97
Spliced International Equity Benchmark			1.0	5.7	11.6	0.5	5.5	3.8	7.1	5.3	5.4	
Private Equity	187,136,488	16.1	-1.3	-1.4	-0.4	5.0	14.9	15.0			15.3	Jun-10
Private Equity Benchmark			<i>8</i> .7	21.3	25.6	9.1	13.1	12.1			14.7	
Fixed Income	334,621,344	28.9	0.3	0.7	4.9	-1.7	1.1	2.0	3.5	4.1	4.3	Apr-97
Blmbg. U.S. Aggregate Index			0.1	-0.7	2.6	-3.0	-0.2	1.3	3.2	4.0	4.2	
Real Estate	85,393,447	7.4	-3.9	-7.2	-12.0	-1.2	1.0	5.2			2.5	Jan-08
NCREIF Property Index			-0.3	-1.2	-5.5	2.3	3.4	6.1	7.8	8.3	5.3	
Natural Resources	29,368,624	2.5	2.1	-10.1	-10.6	0.3	-1.4	0.2			0.6	Mar-13
S&P North American Natural Res Sector Index (TR)			-1.4	9.6	17.0	17.1	12.1	2.2	8.1	6.2	4.3	
Cash	7,136,552	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).



	Trailing Net Performance										
	Market Value \$	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date	
Total Fund	1,158,956,674	100.0	-0.4	2.2	5.8	1.4	6.8	6.6	6.9	Apr-97	
Static Benchmark			2.2	7.3	12.3	3.8	7.6	б.8			
Dynamic Benchmark			2.5	8.1	13.5	3.9	7.5	6.7			
70% MSCI ACWI/30% Barclays Agg			2.0	7.6	14.2	3.0	7.6	6.5	6.5		
InvMetrics All Public DB Plans > \$1B Median			1.1	2.9	б.7	3.1	5.6	5.0	7.7		
InvMetrics All Public DB Plans > \$1B Rank			89	64	57	65	41	37	61		
Domestic Equity	264,047,525	22.8	-1.0	8.6	16.4	6.5	12.1	10.4	8.8	Apr-97	
Russell 3000 Index			3.2	13.6	23.1	8.1	14.1	12.1	9.5		
eV All US Equity Median			-1.3	6.9	15.0	5.1	10.5	9.4	9.7		
eV All US Equity Rank			48	42	43	39	37	39	79		
SSgA S&P 500	121,680,840	10.5	4.3	15.3	24.5	10.0	15.0	12.8	10.1	Feb-04	
S&P 500 Index			4.3	<i>15.3</i>	24.6	10.0	15.0	12.9	10.1		
eV US Large Cap Equity Median			1.2	11.2	20.3	7.6	12.8	11.0	9.7		
eV US Large Cap Equity Rank			27	33	36	20	27	27	39		
Westwood Capital Large Cap Value	13,110,645	1.1	-1.1	6.4	11.5	5.8	9.0	8.9	8.7	Oct-01	
Russell 1000 Value Index			-2.2	6.6	13.1	5.5	9.0	8.2	8.1		
eV US Large Cap Value Equity Median			-1.4	7.5	15.2	6.9	10.4	8.9	8.6		
eV US Large Cap Value Equity Rank			43	62	80	69	75	51	48		
Westfield Small/Mid Cap Growth	61,187,807	5.3	-7.8	3.9	8.1	-0.3	10.4	9.3	12.2	Nov-02	
Russell 2500 Growth Index			-4.2	3.9	9.0	-4.1	7.6	8.8	10.9		
eV US Small-Mid Cap Growth Equity Median			-3.0	3.1	8.1	-3.5	8.4	9.2	10.8		
eV US Small-Mid Cap Growth Equity Rank			98	45	51	27	21	50	14		



		<u> </u>					-			
	Market Value \$	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Vaughan Nelson Small Cap Value	68,068,232	5.9	-3.4	2.9	12.7	8.1	12.1		10.4	Jan-16
Russell 2000 Value Index			-3.6	-0.8	10.9	-0.5	7.1	6.2	8.3	
eV US Small Cap Value Equity Median			-3.3	1.5	11.7	2.9	8.6	7.0	8.9	
eV US Small Cap Value Equity Rank			51	34	43	8	13		22	
International Equity	251,252,694	21.7	1.1	5.7	11.2	-2.5	5.3	4.2	5.7	Apr-97
Spliced International Equity Benchmark			1.0	5.7	11.6	0.5	5.5	3.8	5.4	
SSgA MSCI EAFE Fund	124,303,503	10.7	-0.3	5.5	11.8	3.2	6.8	4.6	5.9	Feb-13
MSCI EAFE (Net)			-0.4	5.3	11.5	2.9	6.5	4.3	5.6	
eV EAFE Core Equity Median			-0.4	4.8	10.9	1.5	6.4	4.6	6.0	
eV EAFE Core Equity Rank			48	40	39	27	43	47	53	
Baillie Gifford International Growth Fund	34,469,059	3.0	0.4	4.2	5.1	-11.9	5.1	5.7	9.3	May-09
MSCI AC World ex USA (Net)			1.0	5.7	11.6	0.5	5.5	3.8	6.9	
eV ACWI ex-US All Cap Growth Eq Median			0.3	5.5	8.7	-3.3	6.3	5.4	9.1	
eV ACWI ex-US All Cap Growth Eq Rank			49	64	91	96	72	47	39	
Highclere International Small Cap	30,107,170	2.6	-1.6	-0.6	7.7	-5.2	2.8	3.4	6.3	Dec-09
MSCI EAFE Small Cap (Net)			-1.8	0.5	7.8	-3.4	4.2	4.3	6.7	
eV EAFE Small Cap Equity Median			-1.2	2.3	8.б	-2.9	5.1	4.6	7.0	
eV EAFE Small Cap Equity Rank			60	75	57	73	76	78	75	
DFA Emerging Markets Value	28,581,909	2.5	5.9	8.7	16.7	3.1	5.9	3.9	3.6	Dec-09
MSCI Emerging Markets Value (Net)			5.1	6.5	14.1	-1.1	2.9	2.0	2.5	
eV Emg Mkts All Cap Value Equity Median			2.6	5.б	12.7	0.0	5.0	3.6	3.8	
eV Emg Mkts All Cap Value Equity Rank			8	14	17	13	32	37	64	



	Market Value \$	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
TT Emerging Markets Equity	33,791,053	2.9	5.9	13.1	14.0	-9.3	2.3		2.3	Apr-19
MSCI Emerging Markets (Net)			5.0	7.5	12.5	-5.1	3.1	2.8	3.1	
eV Emg Mkts Equity Median			4.4	7.2	12.3	-3.5	4.4	3.5	4.5	
eV Emg Mkts Equity Rank			23	9	38	89	78		81	
Private Equity	187,136,488	16.1	-1.3	-1.4	-0.4	5.0	14.9	15.0	15.3	Jun-10
Private Equity Benchmark			<i>8</i> .7	21.3	25.6	9.1	13.1	12.1	14.7	
57 Stars Global Opportunity 3	6,572,406	0.6								
Blue Bay Direct Lending	1,509,509	0.1								
Constitution Capital Partners	1,659,061	0.1								
Cross Creek Capital Partners II - B	10,349,427	0.9								
Cross Creek Capital Partners III	10,430,126	0.9								
Deutsche Bank SOF III	1,834,565	0.2								
Dover Street X, L.P.	35,303,386	3.0								
HarbourVest 2013 Direct	3,846,766	0.3								
HarbourVest Co-Investment Fund IV	7,828,503	0.7								
HighVista Private Equity V, L.P.	4,306,172	0.4								
HighVista Private Equity VI, L.P.	12,126,475	1.0								
LGT Crown Asia II	6,873,941	0.6								
LGT Crown Europe Small Buyouts III	2,734,978	0.2								
LGT Crown Global Opportunities VI	34,391,807	3.0								



	Market Value \$	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
LGT Crown Global Secondaries II	90,649	0.0								
LGT Crown Global Secondaries III	1,909,359	0.2								
Partners Group Emerging Markets 2015	8,126,479	0.7								
Partners Group U.S. Distressed Private Equity 2009	186,538	0.0								
Private Advisors Co-Investment Fund III	796,309	0.1								
Private Equity Investors V	1,359,422	0.1								
StepStone Global Partners V	6,763,620	0.6								
StepStone Global Partners VI	11,634,071	1.0								
SVB Strategic Investors Fund IX, L.P.	16,502,921	1.4								
Fixed Income	334,621,344	28.9	0.3	0.7	4.9	-1.7	1.1	2.0	4.3	Apr-97
Blmbg. U.S. Aggregate Index			0.1	-0.7	2.6	-3.0	-0.2	1.3	4.2	
SSgA Bond Fund	118,780,817	10.2	0.1	-0.6	2.7	-3.0	-0.2	1.3	3.0	Jan-04
Blmbg. U.S. Aggregate Index			0.1	-0.7	2.6	-3.0	-0.2	1.3	3.1	
eV US Core Fixed Inc Median			0.2	-0.3	3.2	-2.8	0.1	1.6	3.3	
eV US Core Fixed Inc Rank			70	81	81	75	87	82	82	
SSgA TIPS	57,138,071	4.9	0.8	0.8	2.7	-1.4	2.0		1.8	Aug-14
Blmbg. U.S. TIPS Index			0.8	0.7	2.7	-1.3	2.1	1.9	1.9	
eV US TIPS / Inflation Fixed Inc Median			0.9	0.9	3.0	-1.2	2.1	1.9	1.9	
eV US TIPS / Inflation Fixed Inc Rank			54	56	62	63	59		73	



	Market Value \$	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Loomis Sayles Core Plus Fixed Income	46,148,404	4.0	-0.3	-0.4	2.7	-2.6	0.9		2.2	Jul-15
Blmbg. U.S. Aggregate Index			0.1	-0.7	2.6	-3.0	-0.2	1.3	1.3	
eV US Core Plus Fixed Inc Median			0.3	0.2	4.0	-2.6	0.6	1.9	2.0	
eV US Core Plus Fixed Inc Rank			98	80	89	49	30		32	
Aberdeen Emerging Markets Bond Fund	62,183,904	5.4	0.0	2.9	11.7	-1.9	0.4		2.4	Dec-14
JPM EMBI Global Diversified			0.3	2.3	9.2	-2.6	0.0	2.6	2.6	
50% JP Morgan EMBI / 25% JP Morgan GBI-EM / 25% JP Morgan CEMBI			0.1	1.1	7.0	-2.3	0.2			
Pyramis Tactical Bond Fund	26,504,769	2.3	0.0	-0.1	3.7	-1.3	1.9	3.2	3.5	Aug-13
Blmbg. U.S. Aggregate Index			0.1	-0.7	2.6	-3.0	-0.2	1.3	1.6	
eV US Core Plus Fixed Inc Median			0.3	0.2	4.0	-2.6	0.6	1.9	2.3	
eV US Core Plus Fixed Inc Rank			91	70	68	11	10	5	4	
Aristotle Pacific	23,865,379	2.1	1.6	4.4	11.2	6.5			5.7	Dec-19
Credit Suisse Leveraged Loan Index			1.9	4.4	11.0	6.0	5.4	4.6	5.6	
eV US Securitized Fixed Inc Median			0.8	1.4	5.2	-1.2	0.5	1.9	0.1	
eV US Securitized Fixed Inc Rank			30	22	12	1			1	
Real Estate	85,393,447	7.4	-3.9	-7.2	-12.0	-1.2	1.0	5.2	2.5	Jan-08
NCREIF Property Index			-0.3	-1.2	-5.5	2.3	3.4	6.1	5.3	
Clarion Partners Lion Properties Fund	65,180,657	5.6	-2.0	-4.8	-10.3	-0.5	2.1	6.3	5.0	Apr-05
NCREIF Fund Index-ODCE (EW) (Net)			-0.8	-3.2	-10.3	1.1	2.6	5.8	5.5	
Portfolio Advisors Real Estate Fund V	5,298,577	0.5								
Partners Group Global RE 2011	504,397	0.0								
Partners Group Distressed RE 2009	32,144	0.0								
Partners Group Real Estate Secondary 2017	11,364,251	1.0								



	Market Value \$	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Crow Holdings Realty Partners X, L.P.	3,013,420	0.3								
Natural Resources	29,368,624	2.5	2.1	-10.1	-10.6	0.3	-1.4	0.2	0.6	Mar-13
S&P North American Natural Res Sector Index (TR)			-1.4	9.6	17.0	17.1	12.1	2.2	4.3	
Aether Real Assets V	8,781,159	0.8								
Aether Real Assets IV	9,346,739	0.8								
Aether Real Assets III	9,209,219	0.8								
Aether Real Assets II	2,031,507	0.2								
Cash	7,136,552	0.6								
Cash	7,136,552	0.6								



Calendar Year Performance											
	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 June 30, 2024

	Risk Return Statistics	
		5 Yrs
	Total Fund	Static Benchmark
RETURN SUMMARY STATISTICS		
Maximum Return	6.3	7.5
Minimum Return	-6.7	-7.9
Return	6.8	7.6
Excess Return	4.9	5.7
Excess Performance	-0.7	0.0
RISK SUMMARY STATISTICS		
Beta	0.9	1.0
Down Capture	86.3	100.0
Up Capture	87.9	100.0
RISK/RETURN SUMMARY STATISTICS		
Standard Deviation	9.0	9.9
Sortino Ratio	0.8	0.9
Alpha	0.4	0.0
Sharpe Ratio	0.5	0.6
Excess Risk	9.1	9.9
Tracking Error	3.6	0.0
Information Ratio	-0.2	-
CORRELATION STATISTICS		
R-Squared	0.9	1.0
Actual Correlation	0.9	1.0



Financial Reconciliation | Quarter To Date Ending June 30, 2024

	Beginning Market Value	Contributions	Distributions	Net Cash Flow	Net Investment Change	Ending Market Value
57 Stars Global Opportunity 3	6,993,293	-	-104,233	-104,233	-316,654	6,572,406
Aberdeen Emerging Markets Bond Fund	62,091,772	-	-	-	92,132	62,183,904
Aether Real Assets II	1,892,615	-	-	-	138,892	2,031,507
Aether Real Assets III	9,657,447	-	-349,960	-349,960	-98,268	9,209,219
Aether Real Assets IV	9,096,175	-	-155,621	-155,621	406,185	9,346,739
Aether Real Assets V	8,579,690	48,502	-	48,502	152,967	8,781,159
Aristotle Pacific	23,487,817	-	-	-	377,561	23,865,379
Baillie Gifford International Growth Fund	34,328,748	-	-	-	140,311	34,469,059
Blue Bay Direct Lending	1,411,328	-	-	-	98,181	1,509,509
Cash	6,993,988	22,139,828	-21,997,263	142,564	-	7,136,552
Clarion Partners Lion Properties Fund	67,356,276	-	-858,762	-1,015,067	-1,160,552	65,180,657
Constitution Capital Partners	12,736,509	-	-8,989,738	-8,989,738	-2,087,710	1,659,061
Cross Creek Capital Partners II - B	10,956,759	-	-429,096	-429,096	-178,236	10,349,427
Cross Creek Capital Partners III	10,407,494	-	-132,620	-132,620	155,252	10,430,126
Crow Holdings Realty Partners X, L.P.	4,300,021	-	-	-	-1,286,601	3,013,420
Deutsche Bank SOF III	1,824,189	-	-	-	10,376	1,834,565
DFA Emerging Markets Value	26,994,852	-	-	-	1,587,058	28,581,909
Dover Street X, L.P.	34,797,329	606,000	-	606,000	-99,943	35,303,386
HarbourVest 2013 Direct	3,877,237	-	-	-	-30,471	3,846,766
HarbourVest Co-Investment Fund IV	8,109,902	-	-	-	-281,399	7,828,503
Highclere International Small Cap	30,607,804	-	-	-	-500,634	30,107,170
HighVista Private Equity V, L.P.	4,512,775	-	-96,804	-96,804	-109,799	4,306,172
HighVista Private Equity VI, L.P.	12,303,662	-	-	-	-177,187	12,126,475
LGT Crown Asia II	7,896,643	3,771	-496,539	-496,539	-526,163	6,873,941
LGT Crown Europe Small Buyouts III	3,020,629	-	-351,437	-351,437	65,785	2,734,978
LGT Crown Global Opportunities VI	34,391,014	120,000	-1,407,666	-1,287,666	1,288,459	34,391,807
LGT Crown Global Secondaries II	97,814	297	-14,626	-14,329	7,164	90,649



Financial Reconciliation | Quarter To Date Ending June 30, 2024

	Beginning Market Value	Contributions	Distributions	Net Cash Flow	Net Investment Change	Ending Market Value
LGT Crown Global Secondaries III	2,030,962	30,000	-195,883	-165,883	44,280	1,909,359
Loomis Sayles Core Plus Fixed Income	46,231,805	-	-	-	-83,401	46,148,404
Partners Group Distressed RE 2009	32,673	-	-	-	-529	32,144
Partners Group Emerging Markets 2015	8,282,249	-	-253,853	-253,853	98,083	8,126,479
Partners Group Global RE 2011	501,957	-	-	-	2,440	504,397
Partners Group Real Estate Secondary 2017	11,866,369	-	-340,141	-340,141	-161,977	11,364,251
Partners Group U.S. Distressed Private Equity 2009	188,469	-	-	-	-1,931	186,538
Portfolio Advisors Real Estate Fund V	5,989,625	-	-	-	-691,048	5,298,577
Private Advisors Co-Investment Fund III	802,463	-	-	-	-6,154	796,309
Private Equity Investors V	1,370,458	-	-	-	-11,036	1,359,422
Pyramis Tactical Bond Fund	26,487,075	-	-	-	17,694	26,504,769
SSgA Bond Fund	118,627,844	-	-	-	152,973	118,780,817
SSgA MSCI EAFE Fund	124,711,148	-	-	-	-407,645	124,303,503
SSgA S&P 500	116,684,232	-	-	-	4,996,608	121,680,840
SSgA TIPS	56,656,518	-	-	-	481,553	57,138,071
StepStone Global Partners V	7,438,088	-	-506,250	-506,250	-168,218	6,763,620
StepStone Global Partners VI	13,652,491	-	-1,350,000	-1,350,000	-668,420	11,634,071
SVB Strategic Investors Fund IX, L.P.	14,687,719	1,410,000	-	1,410,000	405,202	16,502,921
TT Emerging Markets Equity	31,899,622	-	-	-	1,891,431	33,791,053
Vaughan Nelson Small Cap Value	70,322,745	-	-	-	-2,254,512	68,068,232
Westfield Small/Mid Cap Growth	66,254,777	-	-	-	-5,066,969	61,187,807
Westwood Capital Large Cap Value	13,240,130		-	_	-129,484	13,110,645
Total	1,176,683,201	24,358,398	-38,030,493	-13,832,171	-3,894,356	1,158,956,674



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 ^ı (%)	Vintage Year	TVPI Multiple
Partners Group Distressed Private Equity 2009	7.0	6.2	8.8	\$0.2	10.0	2009	1.5x
LGT Crown Global Secondaries II ²	3.0	2.5	4.3	\$0.1	17.7	2009	1.8×
Private Equity Investors V ³	3.0	3.0	1.4	\$1.4	-0.94	2009	0.9x
Cross Creek Capital Partners II – B	12.5	11.7	28.7	\$10.3	18.9	2010	3.4x
LGT Crown Asia II ²	10.0	9.5	11.7	\$6.9	10.7	2011	2.0x
StepStone Global Partners V	7.5	6.8	19.3	\$6.8	23.2	2011	3.8x
57 Stars Global Opportunity 3	10.0	10.6	7.0	\$6.6	3.9	2011	1.3x
LGT Crown Europe Small Buyouts III ²	8.4	7.2	11.1	\$2.6	15.6	2012	1.9x
LGT Crown Global Secondaries III ²	10.0	7.7	10.2	\$1.9	12.0	2012	1.6x
Private Advisors Co-Investment Fund III	10.0	10.6	17.4	\$0.8	11.8	2013	1.8x
HarbourVest 2013 Direct	10.0	9.7	16.9	\$3.8	17.5	2013	2.1x
Cross Creek Capital Partners III	7.5	6.9	9.5	\$10.4	19.3	2013	2.9x
HighVista Private Equity V	10.0	10.0	16.5	\$4.3	16.4	2012	2.1x
StepStone Global Partners VI	7.5	6.8	12.2	\$13.6	20.8	2013	3.7x
Constitution Capital Partners Ironsides III	15.0	19.8	39.7	\$1.7	23.5 20.9	2014	2.4x
Deutsche Bank Secondary Opportunities Fund III	10.0	8.8	10.4	\$1.8	10.7	2014	1.4x
HighVista Private Equity VI	15.0	14.2	17.3	\$12.1	18.2	2015	2.1x
Blue Bay Direct Lending Fund II	20.0	19.4	21.7	\$1.5	7.5	2015	1.2x
Partners Group Emerging Markets 2015	10.0	8.8	5.9	\$8.1	7.9	2015	1.6x
LGT Crown Global Opportunities VI ²	40.0	35.2	30.3	\$34.4	15.1	2016	1.8x
HarbourVest Co-Investment Fund IV	10.0	8.1	8.3	\$7.8	15.8	2017	2.0x
SVB Strategic Investors Fund IX	10.0	8.9	0.0	\$16.5	18.7 ³	2018	1.6x
Dover Street X	40.0	30.8	11.0	\$35.3	24.7	2020	1.5x
Total	\$286.4	\$263.2	\$319.6	\$188.9			2.0x

¹ All performance figures are reported directly from managers, net of fees, as of 3/31/2024, unless otherwise noted.

² Performance figures are as of 6/30/2024.

³ Performance figures are 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	1.4×
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	NM
				1.2x

Partnership	Committed (mm)	Called (mm)	Distributed (mm)	Fair Value (mm)	nIRR' (%)
Partners Group U.S. Distressed 2009	\$12.0	\$11.2	\$15.1	\$0.0	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	\$5.3	5.8
Partners Group RE Secondary 2017	\$15.0	\$9.2	\$0.5	\$11.4	6.0
Crow Holdings Realty Partners X	\$20.0	\$4.3	\$0.0	\$3.0	NM
Total	\$68.7	\$42.7	\$32.0	\$20.2	

¹ Performance figures are reported directly from manager, net of fees, as of 3/31/2024.



Natural Resources Assets



Natural Resources Assets

Partnership	Vintage Year	Committed (mm)	Called (mm)	Distributed (mm)	Fair Value (mm)	Net IRR' %	TVPI Multiple ²
Aether Real Assets II	2012	\$7.5	\$7.7	\$5.0	\$2.0	-1.4	0.9x
Aether Real Assets III	2013	\$15.0	\$16.0	\$4.7	\$9.2	-1.9	0.9x
Aether Real Assets IV	2016	\$10.0	\$10.2	\$2.5	\$9.3	3.1	1.2x
Aether Real Assets V	2018	\$10.0	\$8.0	\$0.5	\$8.8	5.7	1.2x
Total		\$42.5	\$41.9	\$12.7	\$29.4		1.0x

¹ Performance figures are reported directly from manager, net of fees, as of 3/31/2024. ² TVPI Multiple is as of 3/31/2024

Austin Firefighters Retirement Fund

Composite Domestic Equity Characteristics | As of June 30, 2024

Characteristics					
	Portfolio	Benchmark			
Number of Holdings	627	2,925			
Wtd. Avg. Mkt. Cap \$B	991.3	876.9			
Median Mkt. Cap \$B	24.8	2.1			
Price To Earnings	27.0	25.8			
Price To Book	4.9	4.6			
Return on Equity (%)	9.4	8.5			
Yield (%)	1.4	1.4			
Beta (5 Years, Monthly)	1.0	1.0			
R-Squared (5 Years, Monthly)	1.0	1.0			

Beta (5 Years, Monthly)	1.0	1.0	Consu
R-Squared (5 Years, Monthly)	1.0	1.0	
Тор Но	ldings (%)		
Microsoft Corp		7.2	Information
NVIDIA Corporation		6.6	
Apple Inc		6.6	Communicat
Amazon.com Inc		3.8	
Meta Platforms Inc		2.4	
Alphabet Inc Class A		2.3	
Alphabet Inc Class C		1.9	
Berkshire Hathaway Inc		1.6	
Eli Lilly and Co		1.6	
Broadcom Inc		1.5	





Composite International Equity Characteristics | As of June 30, 2024

Characteristics				
	Portfolio	Benchmark		
Number of Holdings	4,268	2,159		
Wtd. Avg. Mkt. Cap \$B	95.5	112.4		
Median Mkt. Cap \$B	1.3	9.2		
Price To Earnings	18.5	16.3		
Price To Book	3.0	2.6		
Return on Equity (%)	2.7	2.8		
Yield (%)	2.6	3.0		
Beta (5 Years, Monthly)	1.1	1.0		
R-Squared (5 Years, Monthly)	1.0	1.0		

Top Holdings (%)	
ASML Holding NV	3.1
Generic Future	2.1
Novo Nordisk A/S	1.8
CASH	1.5
Taiwan Semiconductor Manufacturing	1.4
MercadoLibre Inc	1.3
Spotify Technology SA	1.1
Ferrari NV	1.1
Nestle SA, Cham Und Vevey	1.1
Atlas Copco AB	1.0





Composite Fixed Income Characteristics | As of June 30, 2024

	Total Fund		
	\$	%	
SSgA Bond Fund	118,780,817	35	
SSgA TIPS	57,138,071	17	
Loomis Sayles Core Plus Fixed Income	46,148,404	14	
Aberdeen Emerging Markets Bond Fund	62,183,904	19	
Pyramis Tactical Bond Fund	26,504,769	8	
Aristotle Pacific	23,865,379	7	
Total Fixed Income	334,621,344	100	

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



Pyramis Tactical Bond Fund fixed income characteristics are lagged as of March 31, 2024 due to manager data being unavailable.

Austin Firefighters Retirement Fund

Manager Equity | As of June 30, 2024

Top Holdings	
Bank of America Corp	3.5
Microsoft Corp	3.4
JPMorgan Chase & Co	3.2
Apple Inc	3.2
Johnson & Johnson	3.1
Abbott Laboratories	2.7
UnitedHealth Group Incorporated	2.6
Goldman Sachs Group Inc (The)	2.5
Becton Dickinson and Co	2.3
Walmart Inc	2.3

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	51	846						
Wtd. Avg. Mkt. Cap \$B	435.1	160.1						
Median Mkt. Cap \$B	131.5	12.6						
P/E Ratio	20.6	19.0						
Yield (%)	2.0	2.2						
EPS Growth - 5 Yrs. (%)	16.1	8.5						
Price to Book	3.1	2.6						

Sector Weights (%)



% of Portfolio

Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Westwood Capital Large Cap Value	-1.1	6.4	11.5	5.8	9.0	8.9	8.7	10/01/2001
Russell 1000 Value Index	-2.2	6.6	13.1	5.5	9.0	8.2	8.1	10/01/2001

% of Portfolio

Austin Firefighters Retirement Fund

Manager Equity | As of June 30, 2024

Top Holdings	
Axon Enterprise Inc	3.1
Comfort Systems USA Inc	2.9
Avery Dennison Corp	2.6
Ascendis Pharma AS	2.5
LPL Financial Holdings Inc	2.5
Blue Owl Capital Inc	2.4
Hubbell Inc	2.3
Option Care Health Inc	2.3
Texas Roadhouse Inc	2.1
Permian Resources Corp	2.1

Acco	unt 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 1,245 66 Wtd. Avg. Mkt. Cap \$B 10.4 8.2 Median Mkt. Cap \$B 8.3 1.6 P/E Ratio 26.6 23.3 Yield (%) 0.6 0.7 EPS Growth - 5 Yrs. (%) 27.1 22.2 Price to Book 4.1 4.8

Sector Weights (%)



Port	tfolio	Perf	orm	ance	Sumi	mary		
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Westfield Small/Mid Cap Growth	-7.8	3.9	8.1	-0.3	10.4	9.3	12.2	11/01/2002
Russell 2500 Growth Index	-4.2	3.9	9.0	-4.1	7.6	8.8	10.9	11/01/2002

Austin Firefighters Retirement Fund

Manager Equity | As of June 30, 2024

Top Holdings	
Element Solutions Inc	3.7
Western Alliance Bancorporation	2.2
First American Financial Corp	2.1
Kirby Corp	2.1
Globus Medical Inc	2.1
Janus International Group Inc	2.0
Comerica Incorporated	2.0
Beacon Roofing Supply Inc	2.0
Evercore Inc	1.9
Insight Enterprises Inc	1.9

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	69	1,402					
Wtd. Avg. Mkt. Cap \$B	5.7	3.0					
Median Mkt. Cap \$B	5.6	0.8					
P/E Ratio	19.0	12.8					
Yield (%)	1.8	2.3					
EPS Growth - 5 Yrs. (%)	13.0	8.9					
Price to Book	2.5	1.7					

Sector Weights (%)



% of Portfolio

Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Vaughan Nelson Small Cap Value	-3.4	2.9	12.7	8.1	12.1	-	10.4	01/01/2016
Russell 2000 Value Index	-3.6	-0.8	10.9	-0.5	7.1	6.2	8.3	01/01/2016

% of Portfolio

SSgA S&P 500

S&P 500 Index

Austin Firefighters Retirement Fund

Manager Equity | As of June 30, 2024

Top Holdings	
Microsoft Corp	7.2
NVIDIA Corporation	6.6
Apple Inc	6.6
Amazon.com Inc	3.8
Meta Platforms Inc	2.4
Alphabet Inc Class A	2.3
Alphabet Inc Class C	1.9
Berkshire Hathaway Inc	1.6
Eli Lilly and Co	1.6
Broadcom Inc	1.5

QTD

(%)

4.3

4.3

YTD

(%)

15.3

15.3

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					

Inception

Date

02/01/2004

02/01/2004

35.5

Portfolio Performance Summary

(%)

10.0

10.0

3 Yrs 5 Yrs

(%)

15.0

15.0

10 Yrs

(%)

12.8

12.9

Since

Inception

10.1

10.2

1 Yr

(%)

24.5

24.6

Equity Characteristics vs S&P 500 Index								
Portfolio Benchmark								
Number of Holdings	505	503						
Wtd. Avg. Mkt. Cap \$B	995.9	999.1						
Median Mkt. Cap \$B 34.7 34.7								
P/E Ratio	27.1	27.1						
Yield (%)	1.4	1.4						
EPS Growth - 5 Yrs. (%)	17.8	17.8						
Price to Book	5.0	5.0						

Sector Weights (%)



Austin Firefighters Retirement Fund

Manager Equity | As of June 30, 2024

Top Holdings		
ASML Holding NV	7.1	Ac
MercadoLibre Inc	6.2	_
Spotify Technology SA	5.7	Ac
Taiwan Semiconductor Manufacturing	5.4	Inc
Ferrari NV	4.4	As
Atlas Copco AB	4.2	Be
Adyen N.V	3.9	Pe
arGEN-X SE	3.2	
LOreal SA	3.0	
Wix.com Ltd	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 2,159 60 Wtd. Avg. Mkt. Cap \$B 128.1 112.4 Median Mkt. Cap \$B 17.2 9.2 P/E Ratio 32.1 16.3 Yield (%) 0.8 3.0 EPS Growth - 5 Yrs. (%) 19.5 10.3 Price to Book 2.6 6.2

Sector Weights (%)



MSCI AC World ex USA index

% of Portfolio	
----------------	--

Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Baillie Gifford International Growth Fund	0.4	4.2	5.1	-11.9	5.1	5.7	9.3	05/01/2009
MSCI AC World ex USA (Net)	1.0	5.7	11.6	0.5	5.5	3.8	7.0	05/01/2009

Austin Firefighters Retirement Fund

Manager Equity | As of June 30, 2024

Top Holdings	
Alstom	1.2
Yaoko Co Ltd	1.1
Orica Ltd	0.9
Linea Directa Aseguradora SA	0.9
British Land Company PLC	0.9
Kakaku.com Inc	0.9
Shizuoka Financial Group Inc	0.9
Weir Group PLC	0.9
Renishaw PLC	0.9
As One Corp	0.9

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 Benchmark Number of Holdings 183 2,118 Wtd. Avg. Mkt. Cap \$B 1.9 3.0 Median Mkt. Cap \$B 1.2 1.3 P/E Ratio 14.6 16.0 Yield (%) 2.9 3.2 EPS Growth - 5 Yrs. (%) 2.4 7.4 2.1 Price to Book 2.0

Sector Weights (%)



%	of Portfolio	

Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Highclere International Small Cap	-1.6	-0.6	7.7	-5.2	2.8	3.4	6.3	12/01/2009
MSCI EAFE Small Cap (Net)	-1.8	0.5	7.8	-3.4	4.2	4.3	6.7	12/01/2009

Austin Firefighters Retirement Fund

Manager Equity | As of June 30, 2024

Top Holdings	
Generic Future	3.1
Novo Nordisk A/S	2.7
ASML Holding NV	2.4
Nestle SA, Cham Und Vevey	1.6
Astrazeneca PLC	1.4
Shell Plc	1.3
Toyota Motor Corp	1.2
Novartis AG	1.2
LVMH Moet Hennessy Louis Vuitton SE	1.2
SAP SE	1.2

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	767	742							
Wtd. Avg. Mkt. Cap \$B	95.9	100.9							
Median Mkt. Cap \$B	14.0	14.0							
P/E Ratio	16.8	16.7							
Yield (%)	3.1	3.1							
EPS Growth - 5 Yrs. (%)	9.1	9.1							
Price to Book	2.7	2.7							

Sector Weights (%)



% of Po	ortfolio
---------	----------

Portfolio Performance Summary									
QTD YTD 1 Yr 3 Yrs 5 Yrs 10 Yrs Since (%) (%) (%) (%) (%) (%) Inception									
SSgA MSCI EAFE Fund	-0.3	5.5	11.8	3.2	6.8	4.6	5.9	02/01/2013	
MSCI EAFE (Net)	-0.4	5.3	11.5	2.9	6.5	4.3	5.6	02/01/2013	

Austin Firefighters Retirement Fund

Manager Equity | As of June 30, 2024

Top Holdings				
Reliance Industries Ltd	3.6			
Hon Hai Precision Industry Co Ltd	2.6			
China Construction Bank Corp	2.5			
Alibaba Group Holding Ltd	1.5			
TECHNO ELECTRIC & ENGINEERIN	1.4			
Axis Bank Ltd	1.3			
Bank of China Ltd	1.2			
Petroleo Brasileiro Sa	1.1			
Ping An Insurance Group				
Mahindra & Mahindra Ltd				

Account Information					
Account Name	DFA Emerging Markets Value				
Account Structure	Mutual Fund				
Inception Date	12/01/2009				
Asset Class	International Equity				
Benchmark	MSCI Emerging Markets Value (Net)				
Peer Group	eV Emg Mkts All Cap Value Equity				

Equity Characteristics vs MSCI Emerging Markets Index Portfolio Benchmark Number of Holdings 3,250 1,330 Wtd. Avg. Mkt. Cap \$B 34.8 152.4 Median Mkt. Cap \$B 0.8 7.0 P/E Ratio 15.4 10.1 Yield (%) 3.7 2.8 EPS Growth - 5 Yrs. (%) 11.1 13.6 1.7 Price to Book 2.6

Sector Weights (%)



% of Portfolio

Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
DFA Emerging Markets Value	5.9	8.7	16.7	3.1	5.9	3.9	3.6	12/01/2009
MSCI Emerging Markets (Net)	5.0	7.5	12.5	-5.1	3.1	2.8	3.4	12/01/2009

Austin Firefighters Retirement Fund

Manager Equity | As of June 30, 2024

Top Holdings	
Taiwan Semiconductor Manufacturing	11.5
Samsung Electronics Co Ltd	5.4
Ypf Sociedad Anonima Yacimientos Petroliferos Fiscales	4.0
HDFC Bank Limited	3.6
Ase Technology Holdings Co	3.1
Samsung Electronics Co Ltd	3.1
Tencent Holdings LTD	3.0
Grupo Financiero Galicia Sa, Buenos Aires	2.9
SK Hynix Inc	2.9
Capstone Copper Corp	2.7
% of Portfolio	42.2

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 1,330 80 Wtd. Avg. Mkt. Cap \$B 178.9 152.4 Median Mkt. Cap \$B 7.0 19.6 P/E Ratio 16.1 15.4 Yield (%) 1.5 2.8 EPS Growth - 5 Yrs. (%) 18.8 13.6 2.7 2.6 Price to Book

Sector Weights (%)



Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
TT Emerging Markets Equity	5.9	13.1	14.0	-9.3	2.3	-	2.3	04/01/2019
MSCI Emerging Markets (Net)	5.0	7.5	12.5	-5.1	3.1	2.8	3.1	04/01/2019
Austin Firefighters Retirement Fund

Manager Fixed Income | As of June 30, 2024

	Account Information	
Account Name	SSgA Bond Fund	8
Account Structure	Commingled Fund	6
Inception Date	01/01/2004	
Asset Class	US Fixed Income	4
Benchmark	Blmbg. U.S. Aggregate Index	2
Peer Group	eV US Core Fixed Inc	

Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
SSgA Bond Fund	0.1	-0.6	2.7	-3.0	-0.2	1.3	3.0	01/01/2004
Blmbg. U.S. Aggregate Index	0.1	-0.7	2.6	-3.0	-0.2	1.3	3.1	



Sector Allocation



Portfolio Fixed Income Characteristics						
	Q2-24 Q1-24					
	Portfolio	Benchmark	Portfolio			
Yield To Maturity	5.0	5.0	4.9			
Average Duration	6.1	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 June 30, 2024

	Account Information	
Account Name	Loomis Sayles Core Plus Fixed Income	8
Account Structure	Commingled Fund	6
Inception Date	06/01/2015	_
Asset Class	US Fixed Income	4
Benchmark	Blmbg. U.S. Aggregate Index	2
Peer Group	eV US Core Plus Fixed Inc	

Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Loomis Sayles Core Plus Fixed Income	-0.3	-0.4	2.7	-2.6	0.9	-	2.2	07/01/2015
Blmbg. U.S. Aggregate Index	0.1	-0.7	2.6	-3.0	-0.2	1.3	1.3	



Sector Allocation



Portfolio Fixed Income Characteristics Q2-24 Q1-24 Portfolio Portfolio Benchmark Yield To Maturity 5.6 5.0 5.6 **Average Duration** 7.1 6.2 7.1 Average Quality AA AA AA Weighted Average Maturity 9.6 8.4 9.6

Austin Firefighters Retirement Fund

Manager Fixed Income | As of June 30, 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								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Aberdeen Emerging Markets Bond Fund	0.0	2.9	11.7	-1.9	0.4	-	2.4	12/01/2014
JPM EMBI Global Diversified	0.3	2.3	9.2	-2.6	0.0	2.6	2.6	

Credit Quality Allocation 32.0 27.0 27.7 23.0 24.0 19.0 17.0 17.0 15.0 16.0 13.7 7.0 8.0 6.5 5.3 46 2.9 3.0 2.8 _{2.0} 0.2 0.0 0.0 0.0 BEB^{+/B28/}BBB/B282 0.0 ccclcaa AAAIABB BBIBS ccilca NotRated AAIAB cash C Aberdeen Emerging Markets Bond Fund JPM EMBI Global Diversified

Sector Allocation

150.0

Portfolio Fixed Income Characteristics						
	Q2-24 Q1-2					
	Portfolio	Benchmark	Portfolio			
Yield To Maturity	8.3	9.6	8.3			
Average Duration	6.4	6.5	6.4			
Average Quality	BB	BB	BB			
Weighted Average Maturity	10.8	11.6	10.8			



Austin Firefighters Retirement Fund

Manager Fixed Income | As of June 30, 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 (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
SSgA TIPS	0.8	0.8	2.7	-1.4	2.0	-	1.8	08/01/2014
Blmbg. U.S. TIPS Index	0.8	0.7	2.7	-1.3	2.1	1.9	1.9	

Credit Quality Allocation 100.0 100.0 AAIAS SSgA TIPS Bimbg. U.S. TIPS Index

Sector Allocation

0.0

150.0

Portfolio Fixed Income Characteristics					
	୍	2-24	Q1-24		
	Portfolio	Benchmark	Portfolio	50.0	
Yield To Maturity	4.7	4.5	4.6		
Average Duration	4.9	6.5	4.6		
Average Quality	AA	AA	AA	0.0	
Weighted Average Maturity	7.1	2.5	7.4		



MEKETA INVESTMENT GROUP

Austin Firefighters Retirement Fund

Manager Fixed Income | As of June 30, 2024

	Account Information
Account Name	Pyramis Tactical Bond Fund
Account Structure	Commingled Fund
Inception Date	08/01/2013
Asset Class	US Fixed Income
Benchmark	Blmbg. U.S. Aggregate Index
Peer Group	eV US Core Plus Fixed Inc

Portfolio Performance Summary									
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date	
Pyramis Tactical Bond Fund	0.0	-0.1	3.7	-1.3	1.9	3.2	3.5	08/01/2013	
Blmbg. U.S. Aggregate Index	0.1	-0.7	2.6	-3.0	-0.2	1.3	1.6		

Portfolio Fixed Income Characteristics									
	Q2-24 Q1-								
	Portfolio	Benchmark	Portfolio						
Yield To Maturity	5.9	5.0	5.9						
Average Duration	6.9	6.2	6.9						
Average Quality	AA	AA	AA						
Weighted Average Maturity	13.3	8.4	13.3						



Sector Allocation



Pyramis Tactical Bond Fund fixed income characteristics are lagged as of March 31, 2024 due to manager data being unavailable.

Austin Firefighters Retirement Fund

Manager Fixed Income | As of June 30, 2024

	Account Information	
Account Name	Aristotle Pacific	100.
Account Structure	Commingled Fund	
Inception Date	11/27/2019	75.
Asset Class	US Fixed Income	
Benchmark	Credit Suisse Leveraged Loan Index	50.
Peer Group	Bank Loan	25.

Portfolio Performance Summary									
	QTD (%)	ҮТD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date	
Aristotle Pacific	1.6	4.4	11.2	6.5	-	-	5.7	12/01/2019	
Credit Suisse Leveraged Loan Index	1.9	4.4	11.0	6.0	5.4	4.6	5.6		



Credit Quality Allocation

Sector Allocation

150.0

Portfolio Fixed Income Characteristics									
Q2-24 Q1-									
	Portfolio								
Yield To Maturity	8.0	9.4	9.2						
Average Duration	0.3	0.3	0.4						
Average Quality	В	В	В						
Weighted Average Maturity	4.4	4.2	4.2						





Fee Schedule | As of June 30, 2024

Public Manager Annual Investment Expense Analysis									
	Market Value (\$)	% of Portfolio	Estimated Annual Fee (%)	Estimated Expense (\$)					
Westwood Capital Large Cap Value	13,110,645	1.54	0.50	65,553					
Westfield Small/Mid Cap Growth	61,187,807	7.20	0.68	416,077					
Vaughan Nelson Small Cap Value	68,068,232	8.01	0.81	551,478					
SSgA S&P 500	121,680,840	14.32	0.01	14,668					
Baillie Gifford International Growth Fund	34,469,059	4.06	0.61	206,814					
Highclere International Small Cap	30,107,170	3.54	1.17	353,625					
SSgA MSCI EAFE Fund	124,303,503	14.63	0.05	64,721					
DFA Emerging Markets Value	28,581,909	3.36	0.38	154,342					
TT Emerging Markets Equity	33,791,053	3.98	0.80	270,328					
SSgA Bond Fund	118,780,817	13.98	0.03	33,756					
Loomis Sayles Core Plus Fixed Income	46,148,404	5.43	0.29	135,371					
Aberdeen Emerging Markets Bond Fund	62,183,904	7.32	0.45	279,828					
SSgA TIPS	57,138,071	6.72	0.03	17,141					
Pyramis Tactical Bond Fund	26,504,769	3.12	0.34	90,116					
Aristotle Pacific	23,865,379	2.81	0.41	97,848					
Total	849,921,563	100.00	-	2,751,668					

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.

Annual Private Equity Peer Performance Review as of December 31, 2023



Annual Private Equity Peer Performance Review



Trailing Performance Comparison (as of December 31, 2023)¹

→ Austin Fire Fighter's private equity portfolio has marginally outperformed the Prquin All PE Peer Benchmark over the 5-year period, and both the Prequin PE and Fund of Fund Peer Benchmark over the 10-year period, and significantly outperformed public equity markets over the past 10 years.

All Funds Peer Quartile Overview

¹ Austin Fire Private Equity performance is calculated from true 12/31/23 NAVs. (i.e. it should match the returns found in the 3/31/24 Austin Fire performance report. Benchmarks are also based on true 12/31/23 NAVs. MSCI ACWI +2% is as of 12/31/23 to match the same time frame of the Austin Fire private equity performance numbers.

Austin Fire Fighters Relief and Retirement Fund

Annual Private Equity Peer Performance Review

Partnership	Commitment \$mm	Quartile	Change from last year?
LGT Crown Global Secondaries II	3.0	1st	
Cross Creek Capital Partners II	12.5	1st	
StepStone Global Partners V	7.5	1st	
Cross Creek Capital Partners III	7.5	1st	
StepStone Global Partners VI	7.5	1st	
Constitution Capital Partners Ironsides III	15.0	1st	
Dover Street X	40.0	1st	
LGT Crown Europe Small Buyouts III	8.4	2rd	+
HighVista Flag Private Equity V	10.0	2rd	
HarbourVest 2013 Direct	10.0	2rd	
High Vista Flag Private Equity VI	15.0	2rd	
SVB Strategic Investors Fund IX	10.0	2rd	-
Partners Group Distressed Private Equity 2009	7.0	3rd	
LGT Crown Asia II	10.0	3rd	
LGT Crown Global Secondaries III	10.0	3rd	
Private Advisors Co-Investment Fund III	10.0	3rd	
Blue Bay Direct Lending Fund II	20.0	3th	
LGT Crown Global Opportunities VI	40.0	3rd	+
HarbourVest Co-Investment Fund IV	10.0	3rd	+
Private Equity Investors V	3.0	4th	
57 Stars Global Opportunity 3	10.0	4th	
Deutsche Bank Secondary Opportunities Fund III	10.0	4th	
Partners Group Emerging Markets 2015	10.0	4th	



Annual Private Equity Peer Performance Review

Partnership	Vintage Year	Committed \$mm	Quartile	Fund's nIRR (%)	Upper nIRR (%)	Median nIRR (%)	Peer Group
LGT Crown Global Secondaries II	2009	3.0	1 st	17.7	16.3	13.8	All Regions Secondaries
Cross Creek Capital Partners II	2010	12.5	st	19.0	18.7	15.9	All Regions all FoF
StepStone Global Partners V	2011	7.5	st	23.4	16.4	14.0	All Regions all FoF
Cross Creek Capital Partners III	2013	7.5	st	19.5	19.0	15.0	All Regions all FoF
StepStone Global Partners VI	2013	7.5	1 st	21.5	19.0	15.0	All Regions all FoF
Constitution Capital Partners Ironsides III	2014	15.0	st	25.43 24.64	20.5	17.4	All Regions all FoF
Dover Street X	2020	40.0	1 st	27.4	26.0	21.0	All Regions Secondaries

Top Quartile Exposure



2.5x net multiple



Annual Private Equity Peer Performance Review

	Vintage	Committed		Fund's	Upper nIRR	Median	
Partnership	Year	\$mm	Quartile	nIRR (%)	(%)	nIRR (%)	Peer Group
LGT Crown Europe Small Buyouts III	2012	8.4	2 nd	15.7	17.2	14.9	All Regions all FoF
HighVista Private Equity V	2012	10.0	2 nd	16.7	19.0	15.0	All Regions all FoF
HarbourVest 2013 Direct	2013	10.0	2 nd	16.7	17.2	14.9	All Regions all FoF
HighVista Private Equity VI	2015	15.0	2 nd	18.7	21.4	17.3	All Regions all FoF
SVB Strategic Investors Fund IX	2018	10.0	2 nd	18.7	21.2	17.0	All Regions all FoF

Second Quartile Exposure







Annual Private Equity Peer Performance Review

Partnership	Vintage Year	Committed \$mm	Quartile	Fund's nIRR (%)	Upper nIRR (%)	Median nIRR (%)	Peer Group
Partners Group Distressed Private Equity 2009	2009	10.0	3 rd	10.4	19.0	12.8	All Regions all FoF
LGT Crown Asia II	2011	10.0	3 rd	10.9	16.4	14.0	All Regions all FoF
LGT Crown Global Secondaries III	2012	10.0	3 rd	12.0	15.0	12.2	All Regions Secondaries
Private Advisors Co-Investment Fund III	2013	10.0	3 rd	12.25	19.0	15.0	All Regions all FoF
Blue Bay Direct Lending Fund II	2015	20.0	3 rd	7.4	12.0	9.7	All Regions Direct Lending
LGT Crown Global Opportunities VI	2016	40.0	3 rd	15.1	19.9	16.9	All Regions all FoF
HarbourVest Co-Investment Fund IV	2017	10.0	3rd	16.5	21.9	18.3	All Regions all FoF

Third Quartile Exposure





MEKETA INVESTMENT GROUP

1.7x

net multiple



Annual Private Equity Peer Performance Review

Bottom Quartile Exposure

Partnership	Vintage Year	Committed \$mm	Quartile	Fund's nIRR (%)	Upper nIRR (%)	Median nIRR (%)	Peer Group
Private Equity Investors V	2009	3.0	4 th	-1.8	16.3	13.8	All Regions Secondaries
57 Stars Global Opportunity 3	2011	10.0	4 th	4.1	16.4	14.0	All Regions all FoF
Deutsche Bank Secondary Opportunities Fund III	2014	10.0	4 th	10.8	16.3	13.7	All Regions Secondaries
Partners Group Emerging Markets 2015	2015	10.0	4 th	8.1	21.4	17.3	All Regions all FoF







Annual Private Equity Peer Performance Review



All Funds Peer Quartile Overview



Annual Private Equity Peer Performance Review

Summary

- \rightarrow The private equity investments have performed very well and are marked at a 2.0x net multiple.
- \rightarrow Twelve funds are performing above median, including seven in the top quartile (relative to vintage year peers).
- \rightarrow Relative to last year, three funds improved their relative ranking, and only one fell to a lower quartile.
- \rightarrow Only one fund is marked at a loss (Private Equity Investors V). It was the smallest commitment made.
- → In total, we estimate the total private equity program has generated \$249.3 million in investment appreciation (after fees).

Investments by Quartile	Invested (\$mm)	TVPI Net Multiple	Investment Appreciation (\$mm)
First Quartile Funds	82.2	2.5x	119.9
Second Quartile Funds	50.7	2.0x	50.4
Third Quartile Funds	99.1	1.7x	67.7
Bottom Quartile Funds	31.1	1.4x	11.4
Total	263.1	2.0x	249.3



Private Equity Program Structure

Introduction

- \rightarrow Austin Fire Fighters Relief and Retirement Fund has a 15% target to private equity.
- \rightarrow 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 the pros and cons of each approach.
- \rightarrow This presentation builds on recent ones where we addressed the same topic.



Private Equity Program Structure

Different Approaches to Private Equity

	Current Approach: Fund of Funds	Fund of One: Managed by an investment manager	Custom Account: Managed by an investment manager	Internally Directed: Supported by a consultant
Who decides what "underlying" funds to invest in?	The Fund of Funds manager	The Fund of One manager	The Custom Account manager	Either an internal investment team or a consultant
How many decisions ("approvals") does the Board need to make per year?	One every year or so	None, once the Fund of One manager is hired	None, once the Custom Account manager is hired	~5 per year
How many line items will I see on Meketa's quarterly report after five years?	2 to 5	1 or 2	~ 25, but can be consolidated into 1 line item for reporting purposes	~ 25, but can be consolidated into 1 line item for reporting purposes



	Current Approach: Fund of Funds	Fund of One: Managed by an investment manager	Custom Account: Managed by an investment manager	Internally Directed: Supported by a consultant
Expected management fee to the firm overseeing Private Equity?1	Historically 0.70% of committed (to the FOF manager)	Expected 0.30% - 0.50% of committed (to the Fund of One manager)	0.25% - 0.40% of target allocation	0.25% - 0.40% of target allocation
Performance fee to firm overseeing Private Equity?	5% - 15% to the Fund of Funds manager	5% - 15% to the Fund of One manager	Typically none	None
Hypothetical number of portfolio companies after 5 years ²	2,000 to 2,500	500 to 700	400 to 500	400 to 500

¹ These fees are "best guess" based on industry observations. Actual fees could be different based on many factors.

² Assuming: (A) FOF manager program, assuming 4 FOF investments by AFRF over 5 years and each FOF manager commits to 30 General Partnerships per FOF, and each GP fund invests in 20 companies. (4 x 30 x 20)

⁽B) Fund of One assumes one Fund of One over five years and the investment manager invests in 30 General Partnerships and each GP invests in 20 companies (30 x 20).

⁽C and D) Custom account and Internally Directed both assume 5 commitments by AFRF per year over 5 years, and each GP fund invests in 20 companies (5 x 5 x 20).



	Current Approach: Fund of Funds	Fund of One: Managed by an investment manager	Custom Account: Managed by an investment manager	Internally Directed: Supported by a consultant
Who does the legal review and the fund amendments?	Fund of Funds level – AFRF Underlying funds – FOF managers	Fund of One level – AFRF Underlying funds – FOO manager	Custom Account level – AFRF (may not be a fund, but rather a contract to review) Underlying funds – Custom Account manager	Underlying Funds - AFRF
Who does the capital calls?	Fund of Funds level – AFRF Underlying funds – Fund of Funds managers	Fund of One level – AFRF Underlying funds – Fund of One managers	Typically, Custom Account manager (but can be customized)	Consultant or Staff (flexible and can be customized)
Expected # of capital calls	Few	Few	Many	Many



	Current Approach: Fund of Funds	Fund of One: Managed by an investment manager	Custom Account: Managed by an investment manager	Internally Directed: Supported by a consultant
Who "owns" each underlying fund commitment?	The Fund of Funds	The Fund of One	AFRF	AFRF
Reporting	From Meketa and each FOFs manager	From Meketa and the Fund of One manager	From Meketa and the Custom Account manager	From Meketa and the Private Markets Consultant
Who controls subsector exposure (buyout vs. growth equity vs. venture)	The Fund of Funds manager	The Fund of One manager, but AFRF sets guidelines and can customize target ranges	The Custom Account manager, but AFRF sets guidelines and can customize target ranges	AFRF, with support from Consultant



	Current Approach: Fund of Funds	Fund of One: Managed by an investment manager	Custom Account: Managed by an investment manager	Internally Directed: Supported by a consultant
Access to best quality investments	No concerns	No concerns	No concerns	Dependent (at times) on Boards ability to approve quickly and on process established to do so
FOIA concerns	No issues – as AFRF is investor in the FOF, not directly in each underlying GP	No issues – as AFRF is investor in the FOO, not directly in each underlying GP	Could be an issue with certain venture capital firms that don't want to disclose certain info	Could be an issue with certain venture capital firms that don't want to disclose certain info

Austin Firefighters Retirement Fund



Austin Firefighters Retirement Fund



Austin Firefighters Retirement Fund





Private Equity Program Structure

Summary

- \rightarrow Each approach has advantages and disadvantages.
- \rightarrow We intend to go in more detail over each of these approaches when we meet in person at the August meeting.
- \rightarrow We are not seeking any action or Board decision at this upcoming meeting.
- → Instead, we continue to allocate time at Board meetings to ensure all trustees and staff understand different options for potential future capital deployment in illiquid asset classes.

Roadmap



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AUSTIN FIREFIGHTERS RETIREMENT FUND

PRELIMINARY ROAD MAP

August 2024 Investment Committee Meeting

- 1. Annual private equity peer performance benchmarking
- 2. Private Equity Program Structure

November 2024 Investment Committee Meeting

- 1. Annual fee benchmarking
- 2. Progress report on IPPE recommendations
- 3. Investment Policy Statement + Operating Procedures

February 2025 Investment Committee Meeting

1. Annual asset allocation review

Ongoing Future objective

1. Asset allocation/liability study – possibly 2026

¹ Dates and actions subject to change based on client needs and capital market conditions

Appendix



Disclaimer, Glossary, and Notes



Disclaimer, Glossary, and Notes

THIS REPORT HAS BEEN PREPARED FOR THE SOLE BENEFIT OF THE AUSTIN FIREFIGHTERS RETIREMENT FUND

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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.



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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.



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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.