



# City of Allentown

Quarterly Performance Report  
as of September 30, 2023



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# Marquette Update



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# Marquette Update

4Q 2023

\$362B

assets under advisement

99%

client retention rate

37<sup>th</sup>

year in business

100%

employee-owned<sup>1</sup>

25

partners

135+

employees



## QUARTERLY RESEARCH

October 26

▶ 3Q Market Insights

Webinar: 10/26

YouTube: 10/27



Letter from  
the Director of  
Research

## UPCOMING SPEAKING ENGAGEMENTS

- ▶ Greg Leonberger and Nic Solecki presenting at IFEBP 2023 Conference 10/2 ([link](#))
- ▶ Brett Graffy speaking at AIMSE Fall Conference 10/2 ([link](#))
- ▶ Greg Leonberger speaking at Institutional Investor 2023 Roundtable for Consultants & Institutional Investors 10/5 ([link](#))
- ▶ Mike Piotrowski Speaking at IPPFA MidAmerica Conference 10/6 ([link](#))
- ▶ Frank Valle Speaking at Southeast Institutional Forum 11/15 ([link](#))

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## Thank you for a great Symposium!

We had a great time hosting this year's event! From Frank Kelly's opening conversation covering election expectations and goings-on in Washington to Ben Mezrich's presentation reviewing just a handful of his books and experiences with the characters within them, we hope you too enjoyed the day and came away with a few new ideas and stories to discuss with your committees and fellow staff. All of Marquette's flash talks are now available to [watch on our website](#).

Client data as of June 30, 2023; firm data as of October 2023. Client retention rate calculated as the average annual retention rate trailing ten years. <sup>1</sup>By current and former employees. Marquette is an independent investment adviser registered under the Investment Advisers Act of 1940, as amended. Registration does not imply a certain level of skill or training. More information about Marquette including our investment strategies, fees and objectives can be found in our ADV Part 2, which is available upon request and on our website.

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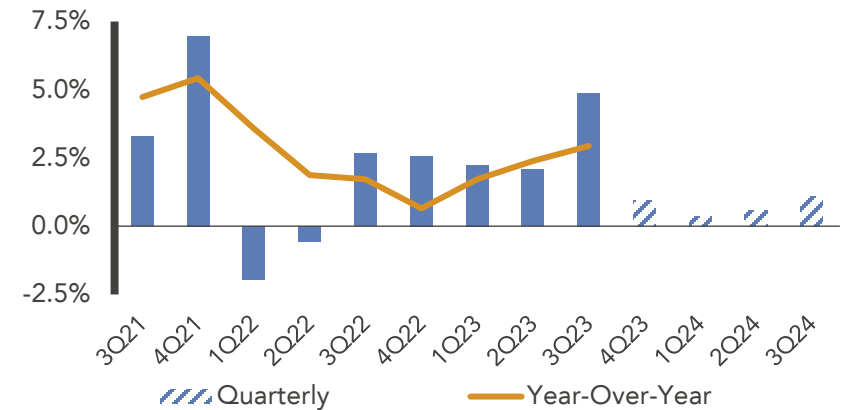
# Market Environment



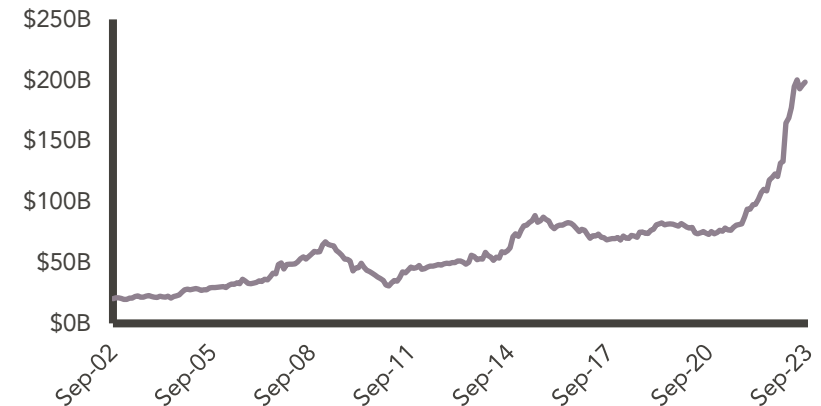
# U.S. Economy

- U.S. economic growth accelerated in Q3, with real GDP growing at an annualized rate of 4.9%. Consumer spending was a notable tailwind, while inventory investment and government spending also drove economic activity.
- While consumer spending has surprised to the upside this year, investment spending has also been much stronger than expected amid various stimulus efforts (e.g., CHIPS and Science Act) that have encouraged the construction of domestic manufacturing.
- Through August, for example, construction of manufacturing facilities was nearly 150% higher (in nominal terms) than two years ago as “reshoring” efforts in sectors like semiconductors and clean energy technologies have soared.

U.S. Real GDP Growth<sup>1</sup>



Total Construction Spending: Manufacturing



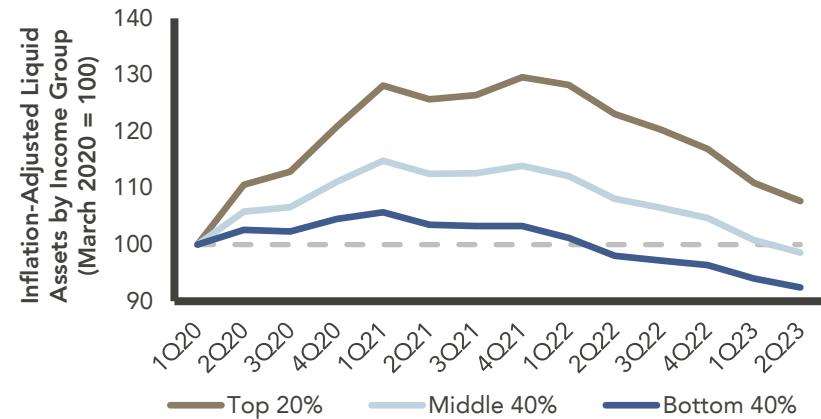
Source: Refinitiv, The Wall Street Journal

<sup>1</sup>Striped bars reflect economist estimates from The Wall Street Journal Economic Forecasting Survey.

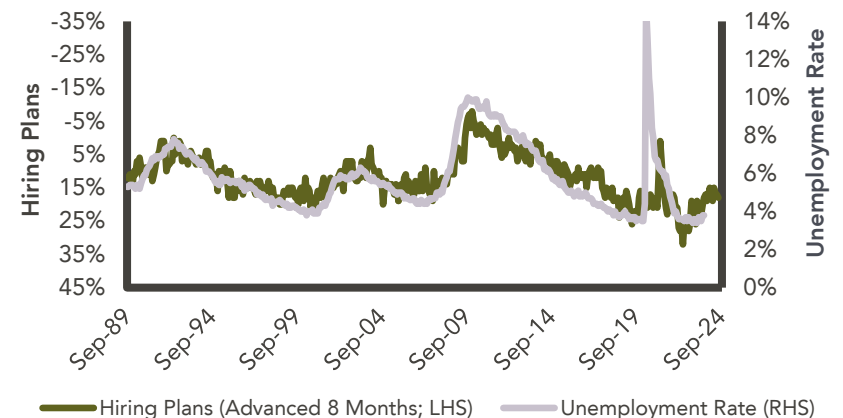
# U.S. Economy

- As the economy closes out the year and heads into 2024, the economic outlook likely hinges on the consumer, where it seems that headwinds are beginning to build.
- In the near-term, the restart of student loan payments and higher gasoline prices are likely to lead to a deceleration in consumer spending in Q4.
- Heading into next year, shrinking household savings and a labor market that is likely to weaken may also present challenges.
- More specifically, inflation-adjusted household savings are now below their pre-COVID level for the majority of consumers.
- Further, small business hiring plans have weakened in recent months, which is consistent with a softening labor market and higher unemployment rate in the coming quarters.

Real Household Savings – Pre-COVID Level



Small Business Hiring Plans<sup>1</sup> vs. Unemployment Rate



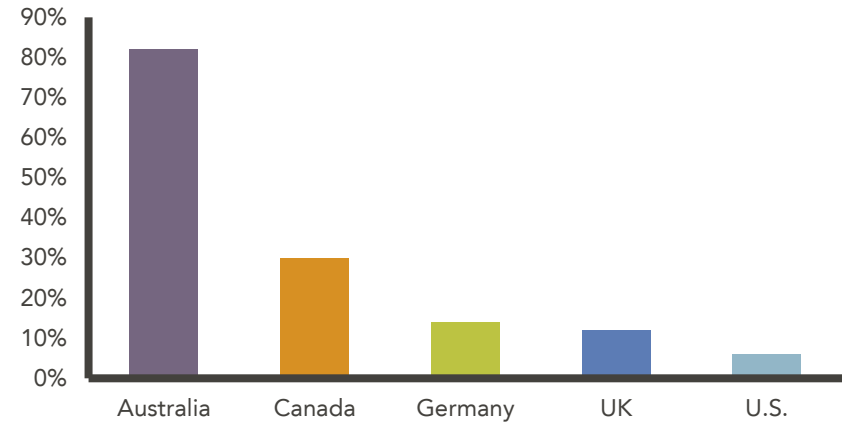
Source: Bloomberg, Federal Reserve, Refinitiv

<sup>1</sup>NFIB small business survey: net percentage of respondents planning to increase minus decreases total employees in the next three months

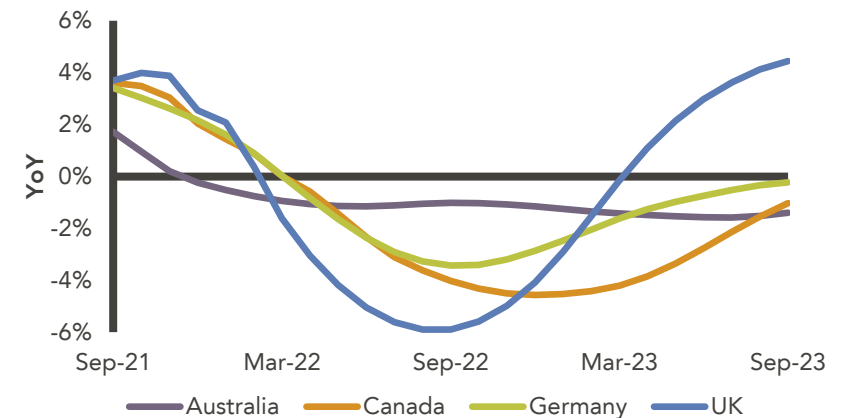
# Global Economy

- Economic data in most other major global economic regions and countries has been mixed as central bank tightening appears to have had a larger impact on economic growth.
- Variable-rate mortgages comprise a much larger share of mortgages in many developed market economies, which leaves a faster transmission channel for higher interest rates to have an impact on consumer spending.
- In Australia, for example, variable-rate mortgages account for approximately 80% of all household mortgages, according to PIMCO.
- Further, the typical term length for mortgages outside the U.S. ranges from 2-10 years, generating a higher frequency of refinancings.
- In turn, economic data (as measured by the OECD Leading Economic Indicators) have generally been weaker in those countries where variable-rate mortgages are most prominent.

Share of Mortgages That Are Variable



OECD Leading Economic Indicators

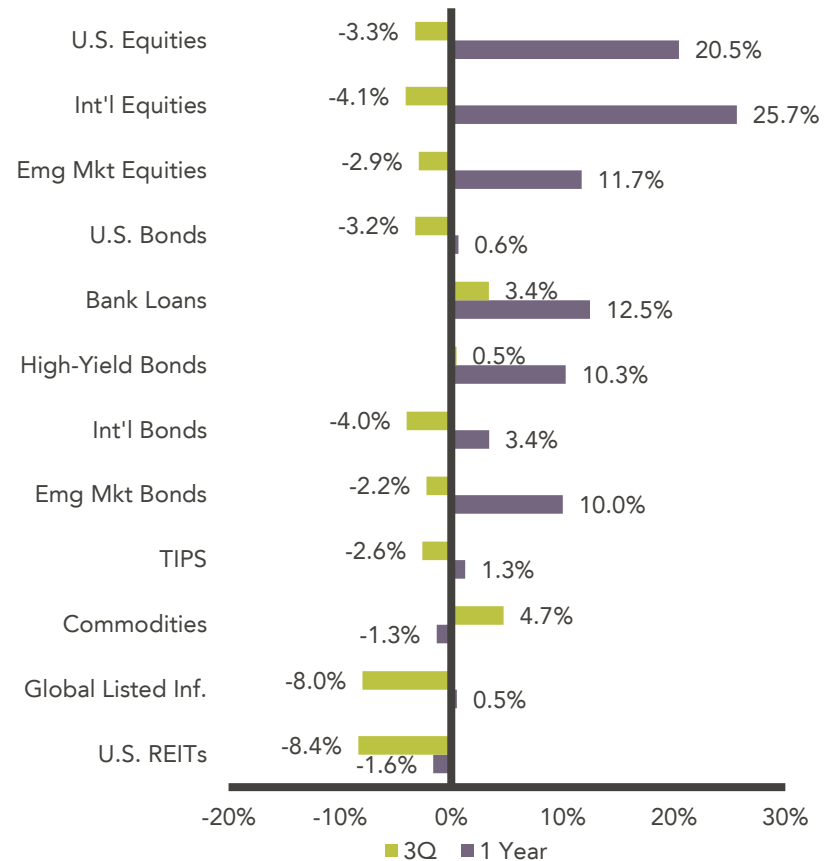


Source: PIMCO, OECD

# Global Asset Class Performance

- Global equities retreated in Q3 amid rising interest rates and surging oil prices. U.S equities slightly outperformed their international developed counterparts but slightly lagged emerging markets equities. U.S. dollar strength played a key role during Q3, exacerbating losses for unhedged U.S.-based investors. The greenback detracted approximately 2.8 and 1.5 percentage points, respectively, from international developed and emerging markets returns.
- Fixed income markets were mixed, with investment-grade bonds in the red due to higher rates across the yield curve. Sub-investment grade debt, on the other hand, posted gains, with bank loans outperforming high-yield debt given their floating-rate characteristics.
- Inflation-sensitive assets were mostly in the red in Q3. TIPS posted a negative return but outperformed their nominal government bond counterparts due to rising inflation expectations. Global listed infrastructure and REITs lagged broad global and U.S. equity markets, respectively, as higher rates drove the underperformance. Commodities, on the other hand, were in the black thanks in large part to a 15% jump in oil prices.

Asset Class Returns: Select Asset Class Performance

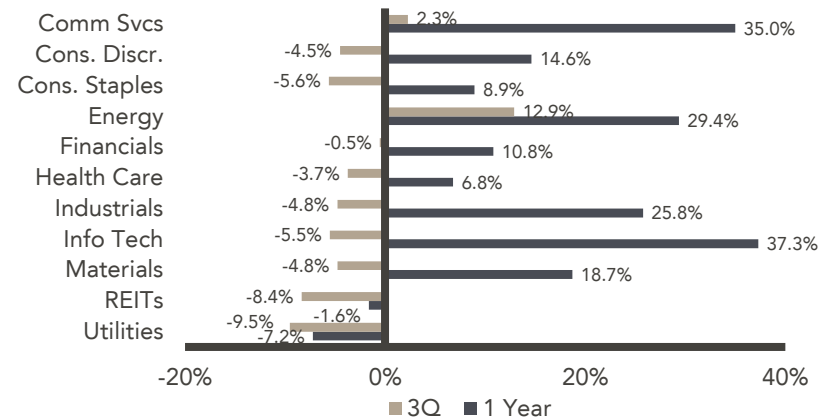


Source: Refinitiv

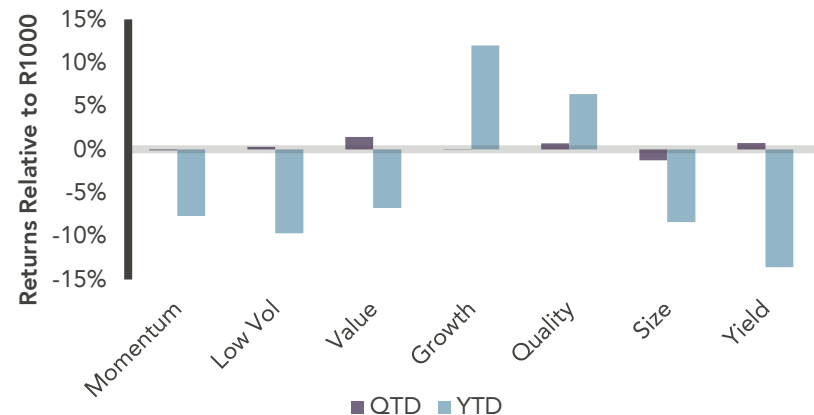
# U.S. Equity Markets

- Economic sector performance was mostly negative in Q3, with nine of eleven sectors posting losses. More defensive sectors lagged the broad markets, despite broad equity weakness, as sectors such as Consumer Staples and Utilities were pressured by higher rates. At the other end of the spectrum, Energy and Communication Services posted gains.
- There was little variation from a style perspective, with value stocks topping growth stocks by 0.1 percentage points in Q3. Value benefited from the outperformance of Energy and Financials. Year-to-date, however, growth has outperformed value by nearly 22 percentage points (as measured by their respective Russell 3000 Indices).
- Style and other factor returns were generally muted in Q3, as the market downdraft was broad based. Year-to-date, however, large-cap and growth stocks have dramatically outperformed the broad market, with the potential impact of artificial intelligence capturing investor attention and driving gains in those areas.

## Sector Returns



## Returns Relative to the Russell 1000

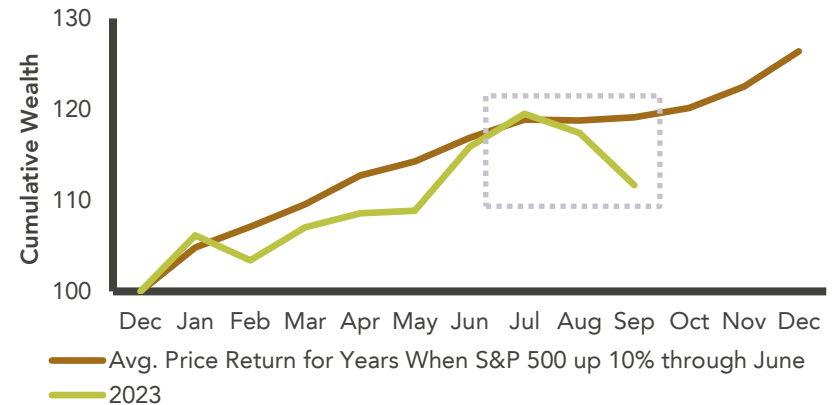


Source: Bloomberg, Refinitiv

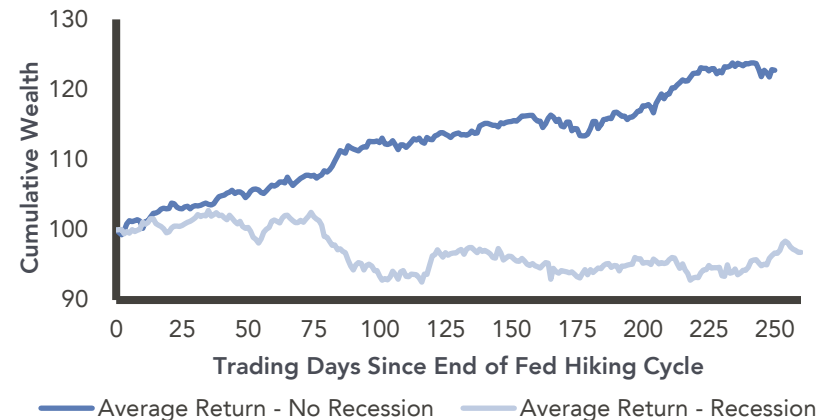
# U.S. Equity Markets

- While there have been more gyrations, particularly in Q3, the U.S. market has largely followed the historical script when the S&P 500 is up at least 10% through June since 1950. More specifically, these years have seen weakness or consolidation from the end of July through October.
- If the market continues to align with the directional pattern, history argues that the market will see a decent rally in Q4.
- That said, the key questions moving into next year are likely whether the Federal Reserve is done raising short-term interest rates and whether the economy will enter a recession.
- Since 1971, history shows that the equity market outcomes are radically different, depending on the latter question.
- More specifically, equities have rallied strongly after the Fed's last hike, absent a recession in the next twelve months. If a recession does occur, on the other hand, equities tend to lose ground over the next year.

U.S. Equity Seasonality



Average Stock Returns After the End of Fed Rate Hiking Cycle

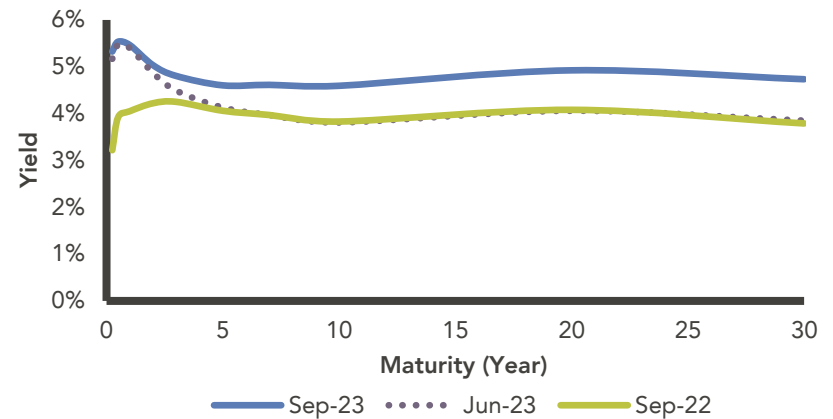


Source: Refinitiv

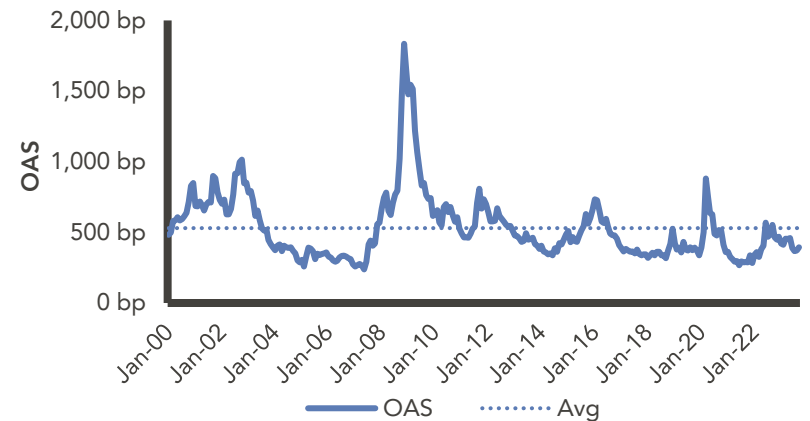
# U.S. Fixed Income

- Treasury rates rose across the curve in Q3, though the magnitude was more muted for shorter-dated issues. The long end of the curve saw rates jump notably as the Federal Reserve reiterated its intention to hold rates “higher for longer”.
- From a supply and demand perspective, treasury issuance has been much larger than expected, while the Fed continues its quantitative tightening program and foreign investors have dialed back treasury purchases.
- Given higher rates, the broad investment-grade bond market experienced another negative return in Q3, with the Bloomberg Aggregate Index returning -3.2%.
- Sub-investment grade debt, on the other hand, posted gains amid a strong environment for risk assets, with bank loans outperforming high-yield debt given their floating rate characteristics. High-yield spreads ended Q3 largely unchanged, despite the equity market weakness.

Yield Curve



High Yield Spread



Source: Refinitiv



# Global Index Returns

DOMESTIC EQUITY	QTR	YTD	1 Year	3 Year	5 Year	10 Year
S&P 500 Index	(3.3)	13.1	21.6	10.2	9.9	11.9
Russell 3000 Index	(3.3)	12.4	20.5	9.4	9.1	11.3
Russell 3000 Growth Index	(3.3)	23.8	26.6	7.5	11.7	13.9
Russell 3000 Value Index	(3.2)	1.7	14.1	11.2	6.0	8.3
Russell TOP 200 Index	(2.7)	16.3	23.9	10.0	10.8	12.6
Russell TOP 200 Growth Index	(2.8)	28.5	30.0	9.2	13.7	15.8
Russell TOP 200 Value Index	(2.4)	2.4	16.2	11.1	6.7	8.7
Russell 1000 Index	(3.1)	13.0	21.2	9.5	9.6	11.6
Russell 1000 Growth Index	(3.1)	25.0	27.7	9.5	12.4	14.5
Russell 1000 Value Index	(3.2)	1.8	14.4	11.1	6.2	8.4
Russell Mid-Cap Index	(4.7)	3.9	13.4	8.1	6.4	9.0
Russell Mid-Cap Growth Index	(5.2)	9.9	17.5	2.6	7.0	9.9
Russell Mid-Cap Value Index	(4.5)	0.5	11.0	11.0	5.2	7.9
Russell 2000 Index	(5.1)	2.5	8.9	7.2	2.4	6.6
Russell 2000 Growth Index	(7.3)	5.2	9.6	1.1	1.6	6.7
Russell 2000 Value Index	(3.0)	(0.5)	7.8	13.3	2.6	6.2
<b>DOMESTIC EQUITY BY SECTOR (MSCI)</b>						
Communication Services	2.3	37.4	35.0	3.9	8.9	7.8
Consumer Discretionary	(4.5)	24.0	14.6	3.3	9.0	11.8
Consumer Staples	(5.6)	(3.3)	8.9	6.5	8.5	8.8
Energy	12.9	6.9	29.4	52.4	8.1	4.1
Financials	(0.5)	(1.2)	10.8	13.8	5.5	9.4
Health Care	(3.7)	(4.3)	6.8	6.3	7.1	11.4
Industrials	(4.8)	7.8	25.8	12.0	7.5	10.1
Information Technology	(5.5)	32.0	37.3	11.2	16.7	19.1
Materials	(4.8)	2.8	18.7	10.8	7.8	8.4
Real Estate	(8.4)	(5.6)	(1.6)	2.7	2.8	6.1
Utilities	(9.5)	(14.7)	(7.2)	2.9	4.9	8.1

Source: Refinitiv

# Global Index Returns

INTERNATIONAL/GLOBAL EQUITY	QTR	YTD	1 Year	3 Year	5 Year	10 Year
MSCI EAFE (Net)	(4.1)	7.1	25.6	5.8	3.2	3.8
MSCI EAFE Growth (Net)	(8.6)	4.3	20.0	0.4	3.2	4.4
MSCI EAFE Value (Net)	0.6	9.9	31.5	11.1	2.8	3.0
MSCI EAFE Small Cap (Net)	(3.5)	1.8	17.9	1.1	0.8	4.3
MSCI AC World Index (Net)	(3.4)	10.1	20.8	6.9	6.5	7.6
MSCI AC World Index Growth (Net)	(4.9)	18.2	24.4	3.8	8.4	9.5
MSCI AC World Index Value (Net)	(1.8)	2.4	17.0	9.7	4.0	5.3
MSCI Europe ex UK (Net)	(5.9)	8.3	30.1	5.8	4.3	4.3
MSCI United Kingdom (Net)	(1.5)	6.8	24.9	12.1	2.9	2.5
MSCI Pacific ex Japan (Net)	(4.8)	(4.4)	10.6	4.1	1.8	2.8
MSCI Japan (Net)	(1.6)	11.2	25.9	2.8	2.1	4.4
MSCI Emerging Markets (Net)	(2.9)	1.8	11.7	(1.7)	0.6	2.1

Source: Refinitiv

# Global Index Returns

FIXED INCOME	QTR	YTD	1 Year	3 Year	5 Year	10 Year
Merrill Lynch 3-month T-Bill	1.3	3.6	4.5	1.7	1.7	1.1
Barclays Intermediate Gov't./Credit	(0.8)	0.7	2.2	(2.9)	1.0	1.3
Barclays Aggregate Bond	(3.2)	(1.2)	0.6	(5.2)	0.1	1.1
Barclays Short Government	0.7	1.7	2.5	(0.9)	1.0	0.8
Barclays Intermediate Government	(0.8)	0.3	1.3	(3.2)	0.7	0.8
Barclays Long Government	(11.8)	(8.5)	(9.0)	(15.7)	(2.8)	0.8
Barclays Investment Grade Corp.	(3.1)	0.0	3.6	(4.9)	0.9	2.2
Barclays High Yield Corp. Bond	0.5	5.9	10.3	1.8	3.0	4.2
Credit Suisse Leveraged Loan	3.4	9.9	12.5	5.9	4.3	4.3
JPMorgan Global ex US Bond	(4.0)	(3.2)	3.4	(8.4)	(3.1)	(1.7)
JPMorgan Emerging Market Bond	(2.2)	1.8	10.0	(4.6)	(0.4)	2.5
INFLATION SENSITIVE						
Consumer Price Index	0.9	3.7	3.7	5.7	4.0	2.8
BC TIPS	(2.6)	(0.8)	1.3	(2.0)	2.1	1.7
Commodities	4.7	(3.4)	(1.3)	16.2	6.1	(0.7)
Gold	(3.9)	1.3	10.9	(1.4)	8.1	2.6
REITs	(8.4)	(5.6)	(1.6)	2.7	2.8	6.1
FTSE EPRA/NAREIT Global REITs	(5.6)	(5.1)	1.8	(0.4)	(1.7)	1.8
NCREIF ODCE*	(2.2)	(8.2)	(12.9)	6.2	4.7	7.2

\*Data are preliminary.

Source: Refinitiv



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# Portfolio Summary



## Observations

- Police Pension Market Value as of September 30, 2023 was \$202.5 million
  - Q3-23: net investment change of **-\$5.3** million
  - Q3-23: the Fund returned **-2.6%** (net) vs. policy index return of **-2.9%**
- Firemen Pension Market Value as of September 30, 2023 was \$124.8 million
  - Q3-23: net investment change of **-\$3.1** million
  - Q3-23: the Fund returned **-2.4%** (net) vs. policy index return of **-2.6%**
- Officers & Employee Pension Market Value as of September 30, 2023 was \$7.0 million
  - Q3-23: net investment change of **-\$66K**
  - Q3-23: the Fund returned **-1.0%** (net) vs. policy index return of **-1.0%**

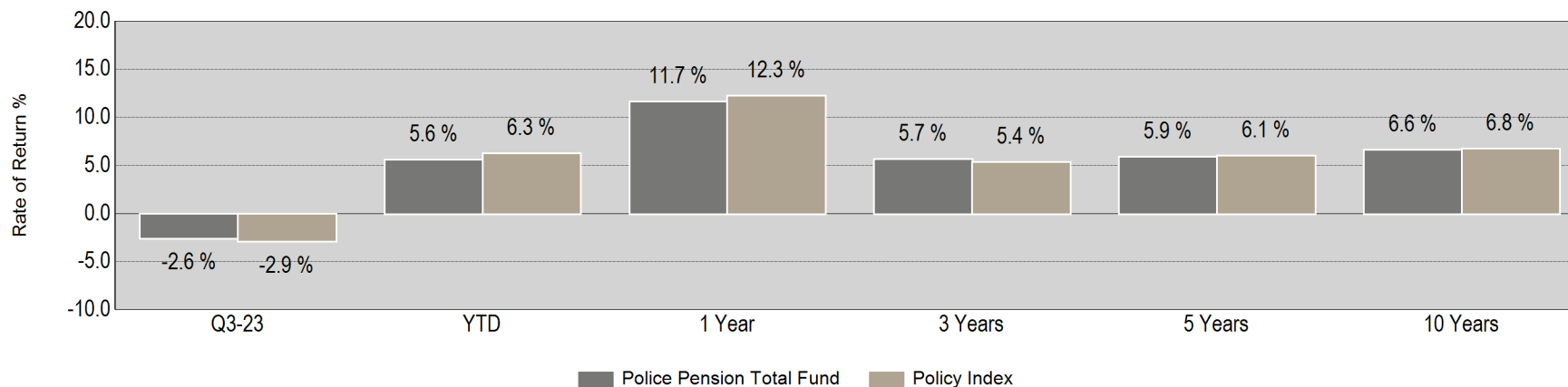
## Looking Ahead

- Cash-Flow Update
- Rebalancing

**Summary of Cash Flows**

	Third Quarter	Year-To-Date	One Year	Three Years	Five Years	Ten Years
<b>Beginning Market Value</b>	<b>\$208,571,037</b>	<b>\$196,239,999</b>	<b>\$184,372,726</b>	<b>\$179,871,229</b>	<b>\$165,601,466</b>	<b>\$60,757,333</b>
Contributions	\$2,681,694	\$5,700,134	\$10,617,101	\$29,340,972	\$45,950,968	\$154,552,682
Withdrawals	-\$3,439,016	-\$10,479,867	-\$14,235,136	-\$39,542,661	-\$62,492,280	-\$115,670,735
Net Cash Flow	-\$757,321	-\$4,779,733	-\$3,618,035	-\$10,201,689	-\$16,541,313	\$38,881,947
Net Investment Change	-\$5,311,734	\$11,041,716	\$21,747,290	\$32,832,442	\$53,441,829	\$102,862,702
<b>Ending Market Value</b>	<b>\$202,501,982</b>	<b>\$202,501,982</b>	<b>\$202,501,982</b>	<b>\$202,501,982</b>	<b>\$202,501,982</b>	<b>\$202,501,982</b>

**Return Summary (Net)**



**Asset Allocation vs. Target**

	Current	Policy	Difference*	Policy Range	Within Range
U.S. Equity	50.0%	50.0%	\$33,075	45.0% - 55.0%	Yes
Global Equity	4.1%	4.0%	\$290,544	0.0% - 9.0%	Yes
Non-U.S. Equity	11.8%	12.0%	-\$430,574	7.0% - 17.0%	Yes
Real Estate	11.2%	10.0%	\$2,478,407	5.0% - 15.0%	Yes
U.S. Fixed Income	20.2%	23.0%	-\$5,713,491	18.0% - 28.0%	Yes
Cash Equivalent	2.7%	1.0%	\$3,342,039	0.0% - 5.0%	Yes
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>			

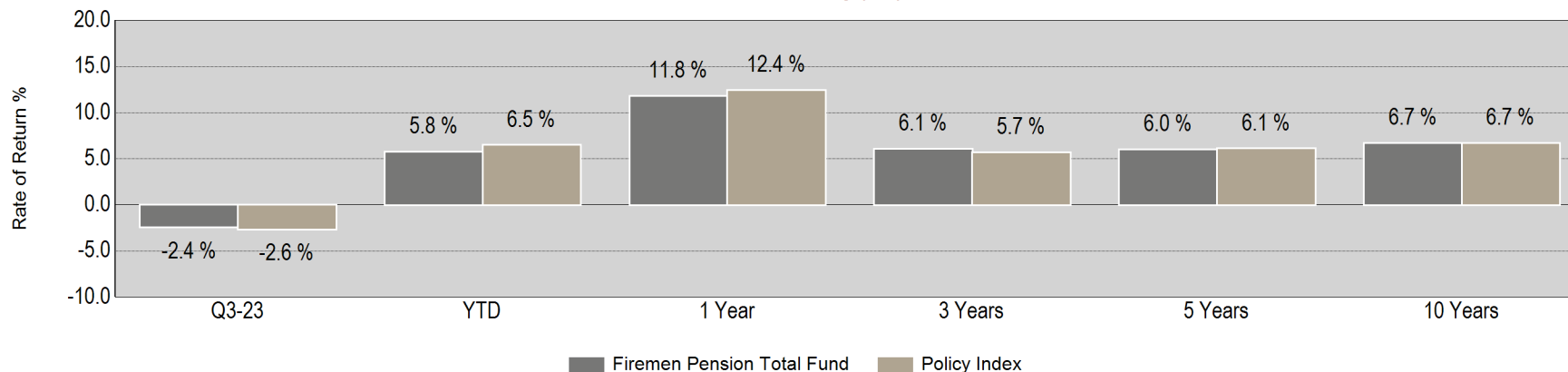
\*Difference between Policy and Current Allocation

As of September 30, 2023

Summary of Cash Flows

	Third Quarter	Year-To-Date	One Year	Three Years	Five Years	Ten Years
<b>Beginning Market Value</b>	<b>\$128,811,372</b>	<b>\$121,766,751</b>	<b>\$115,404,625</b>	<b>\$114,039,342</b>	<b>\$108,917,422</b>	<b>\$41,441,317</b>
Contributions	\$1,163,879	\$2,481,916	\$4,548,118	\$14,161,553	\$24,638,567	\$100,278,834
Withdrawals	-\$2,114,028	-\$6,488,462	-\$8,844,688	-\$25,499,213	-\$43,553,232	-\$84,650,876
Net Cash Flow	-\$950,150	-\$4,006,546	-\$4,296,570	-\$11,337,659	-\$18,914,665	\$15,627,958
Net Investment Change	-\$3,056,946	\$7,044,072	\$13,696,222	\$22,102,595	\$34,801,520	\$67,735,001
<b>Ending Market Value</b>	<b>\$124,804,277</b>	<b>\$124,804,277</b>	<b>\$124,804,277</b>	<b>\$124,804,277</b>	<b>\$124,804,277</b>	<b>\$124,804,277</b>

Return Summary (Net)



Asset Allocation vs. Target

	Current	Policy	Difference*	Policy Range	Within Range
U.S. Equity	50.0%	50.0%	\$47,242	45.0% - 55.0%	Yes
Global Equity	4.2%	4.0%	\$223,515	0.0% - 9.0%	Yes
Non-U.S. Equity	11.6%	12.0%	-\$436,826	7.0% - 17.0%	Yes
Real Estate	11.4%	10.0%	\$1,803,800	5.0% - 15.0%	Yes
U.S. Fixed Income	18.7%	23.0%	-\$5,338,266	18.0% - 28.0%	Yes
Cash Equivalent	4.0%	1.0%	\$3,700,534	0.0% - 5.0%	Yes
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>			

\*Difference between Policy and Current Allocation

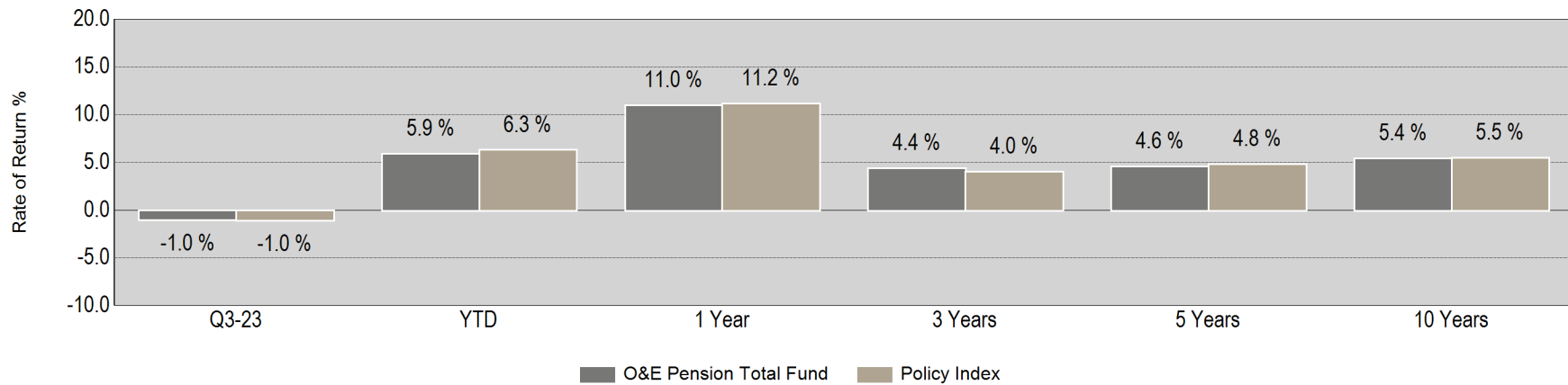


As of September 30, 2023

**Summary of Cash Flows**

	Third Quarter	Year-To-Date	One Year	Three Years	Five Years	Ten Years
<b>Beginning Market Value</b>	<b>\$7,362,144</b>	<b>\$7,521,372</b>	<b>\$7,444,427</b>	<b>\$9,635,171</b>	<b>\$11,931,644</b>	<b>\$13,718,822</b>
Contributions	\$79,505	\$138,800	\$256,163	\$727,719	\$1,158,841	\$6,273,335
Withdrawals	-\$350,198	-\$1,073,105	-\$1,470,888	-\$4,578,277	-\$8,256,720	-\$19,559,281
Net Cash Flow	-\$270,693	-\$934,306	-\$1,214,725	-\$3,850,559	-\$7,097,879	-\$13,285,946
Net Investment Change	-\$66,076	\$438,309	\$795,673	\$1,240,763	\$2,191,610	\$6,592,499
<b>Ending Market Value</b>	<b>\$7,025,375</b>	<b>\$7,025,375</b>	<b>\$7,025,375</b>	<b>\$7,025,375</b>	<b>\$7,025,375</b>	<b>\$7,025,375</b>

**Return Summary (Net)**



**Asset Allocation vs. Target**

	Current	Policy	Difference*	Policy Range	Within Range
U.S. Equity	33.3%	33.5%	-\$12,163	28.5% - 38.5%	Yes
Global Equity	3.0%	3.0%	-\$671	0.0% - 8.0%	Yes
Non-U.S. Equity	9.4%	9.5%	-\$9,578	4.5% - 14.5%	Yes
U.S. Fixed Income	39.1%	52.0%	-\$909,612	47.0% - 57.0%	No
Cash Equivalent	15.3%	2.0%	\$932,025	0.0% - 10.0%	No
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>			

\*Difference between Policy and Current Allocation

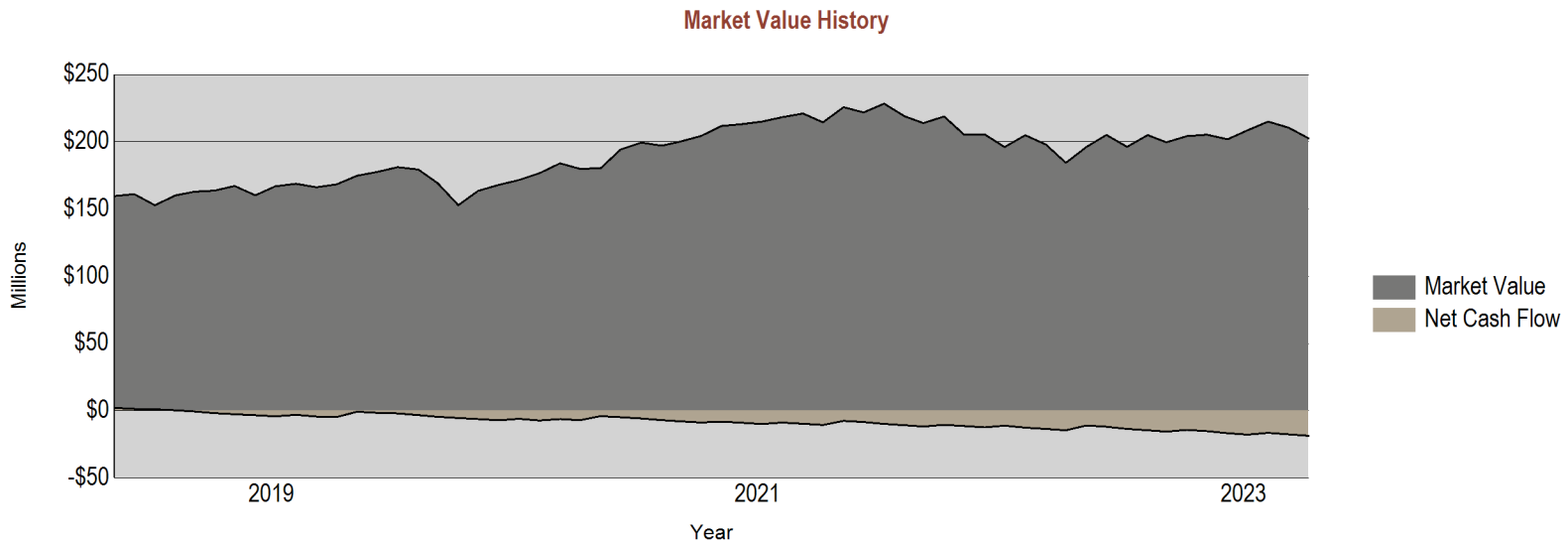
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# Police Pension

## Portfolio Overview



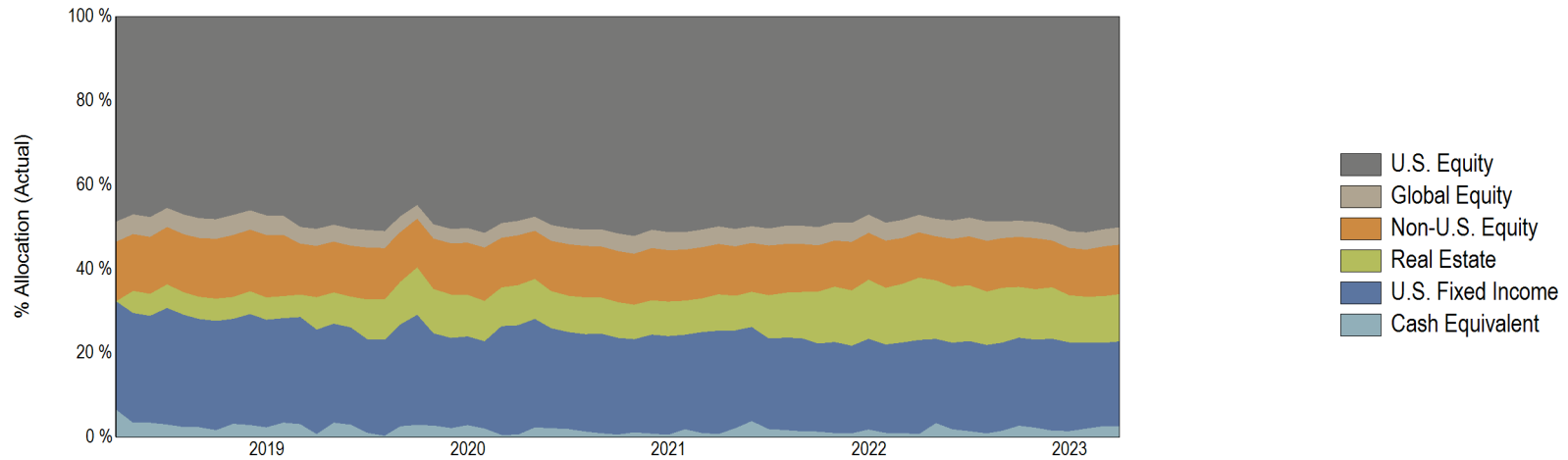
As of September 30, 2023



**Cash Flow Summary by Manager From July 01, 2023 to September 30, 2023**

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Vanguard Equity Income	\$12,513,766	\$0	-\$248,831	\$12,264,936
Vanguard Total Stock Market Index	\$61,013,440	-\$1,500,000	-\$1,982,217	\$57,531,224
Vanguard Total Stock Market Index ETF	\$26,595,726	-\$96,396	-\$853,797	\$25,645,534
Vanguard Mid Cap Index	\$6,154,263	\$0	-\$311,890	\$5,842,373
Dodge & Cox Global Stock	\$8,342,915	\$0	\$47,708	\$8,390,623
American Funds Int'l Growth & Income	\$11,739,140	\$750,000	-\$492,358	\$11,996,782
MFS International Intrinsic Value	\$11,688,107	\$750,000	-\$565,225	\$11,872,881
Morgan Stanley Prime Property Fund	\$23,419,704	-\$639,952	-\$51,148	\$22,728,605
Vanguard Total Bond Market Index	\$27,981,823	\$0	-\$862,577	\$27,119,247
Sterling Capital - Short-Term Bonds	\$9,981,758	-\$2,222,514	\$109,834	\$7,869,078
Baird Core Plus Bond Fund	\$6,038,431	\$0	-\$164,789	\$5,873,641
Govt Obligations MM Fund	\$3,101,965	\$2,201,540	\$63,554	\$5,367,059
<b>Total</b>	<b>\$208,571,037</b>	<b>-\$757,321</b>	<b>-\$5,311,734</b>	<b>\$202,501,982</b>

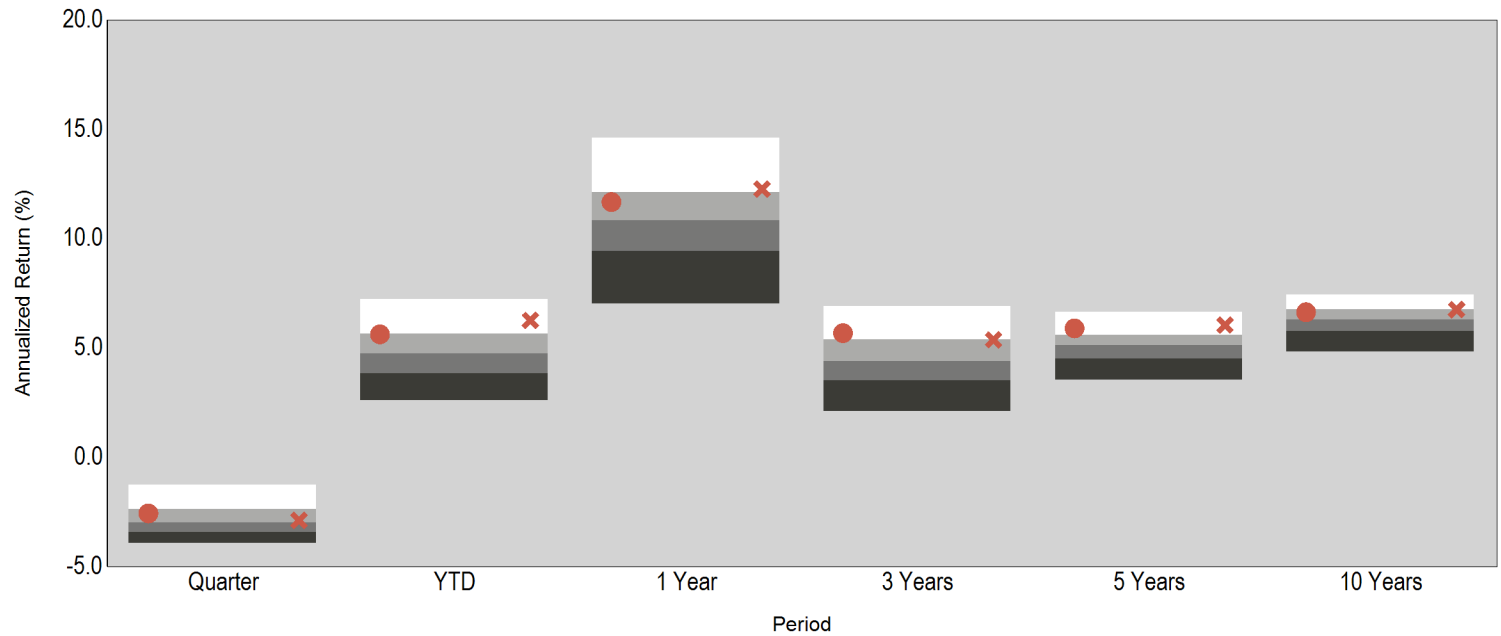
Asset Allocation History



	Market Value	% of Portfolio	Policy %	Policy Difference
<b>Police Pension Total Fund</b>	<b>202,501,982</b>	<b>100.0</b>	<b>100.0</b>	<b>0</b>
<b>Total Equity Composite</b>	<b>133,544,353</b>	<b>65.9</b>	<b>66.0</b>	<b>-106,955</b>
Vanguard Equity Income	12,264,936	6.1		
Vanguard Total Stock Market Index	57,531,224	28.4		
Vanguard Total Stock Market Index ETF	25,645,534	12.7		
Vanguard Mid Cap Index	5,842,373	2.9		
Dodge & Cox Global Stock	8,390,623	4.1		
American Funds Int'l Growth & Income	11,996,782	5.9		
MFS International Intrinsic Value	11,872,881	5.9		
<b>Real Estate Composite</b>	<b>22,728,605</b>	<b>11.2</b>	<b>10.0</b>	<b>2,478,407</b>
Morgan Stanley Prime Property Fund	22,728,605	11.2		
<b>U.S. Fixed Income Composite</b>	<b>40,861,965</b>	<b>20.2</b>	<b>23.0</b>	<b>-5,713,491</b>
Vanguard Total Bond Market Index	27,119,247	13.4		
Sterling Capital - Short-Term Bonds	7,869,078	3.9		
Baird Core Plus Bond Fund	5,873,641	2.9		
<b>Cash Equivalents Composite</b>	<b>5,367,059</b>	<b>2.7</b>	<b>1.0</b>	<b>3,342,039</b>
Govt Obligations MM Fund	5,367,059	2.7		

As of September 30, 2023

InvMetrics Public DB Net Return Comparison

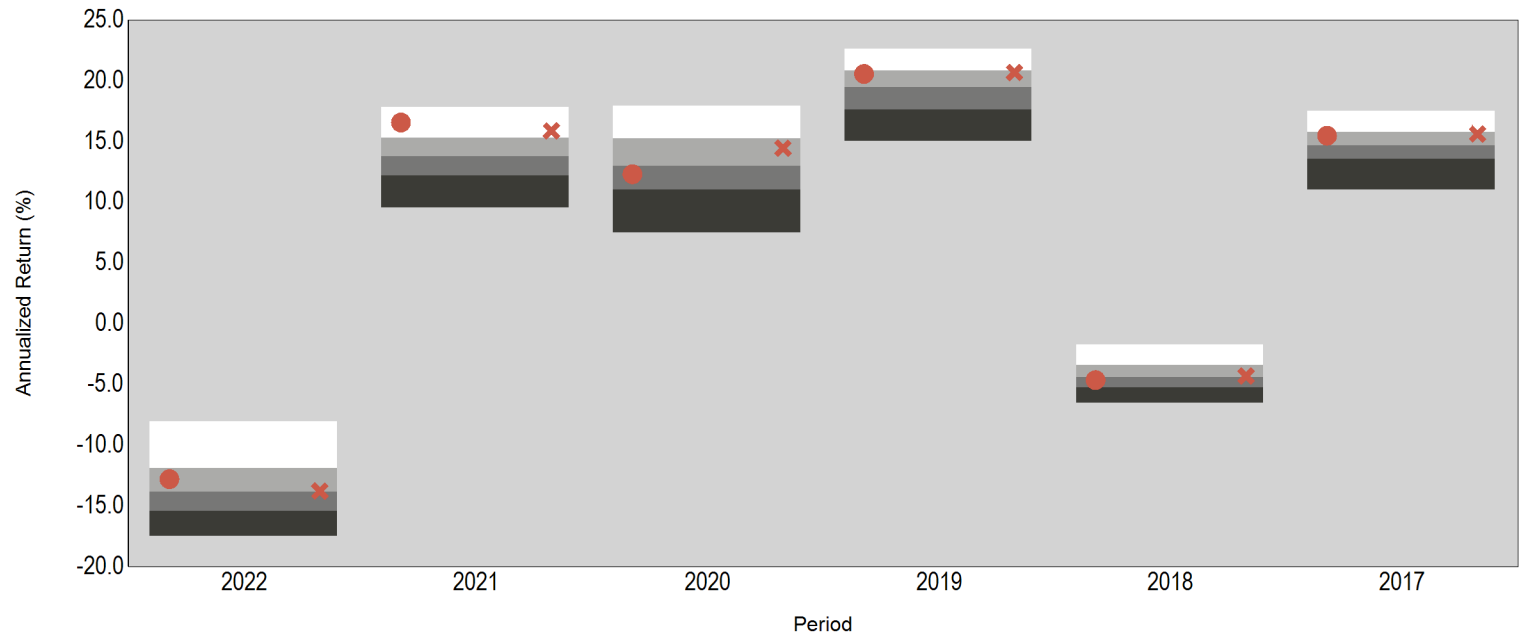


Return (Rank)

5th Percentile	-1.2	7.2	14.6	6.9	6.6	7.4
25th Percentile	-2.4	5.7	12.1	5.4	5.6	6.8
Median	-3.0	4.7	10.8	4.4	5.1	6.3
75th Percentile	-3.4	3.8	9.4	3.5	4.5	5.8
95th Percentile	-3.9	2.6	7.0	2.1	3.5	4.8
# of Portfolios	562	556	554	543	525	441
● Police Pension Total Fund	-2.6 (35)	5.6 (27)	11.7 (34)	5.7 (20)	5.9 (16)	6.6 (32)
▲ Policy Index	-2.9 (46)	6.3 (16)	12.3 (24)	5.4 (26)	6.1 (13)	6.8 (27)

As of September 30, 2023

InvMetrics Public DB Net Return Comparison



Return (Rank)

5th Percentile	-8.0	17.8	17.9	22.6	-1.7	17.5
25th Percentile	-11.9	15.3	15.3	20.8	-3.4	15.8
Median	-13.8	13.8	13.0	19.5	-4.4	14.7
75th Percentile	-15.4	12.2	11.0	17.6	-5.2	13.6
95th Percentile	-17.5	9.6	7.5	15.1	-6.5	11.1
# of Portfolios	539	559	596	550	496	269
● Police Pension Total Fund	-12.8 (36)	16.6 (13)	12.3 (59)	20.6 (31)	-4.6 (58)	15.5 (34)
▲ Policy Index	-13.8 (49)	15.9 (18)	14.4 (36)	20.7 (28)	-4.3 (48)	15.6 (30)

**RISK RETURN STATISTICS**  
October 01, 2018 Through September 30, 2023

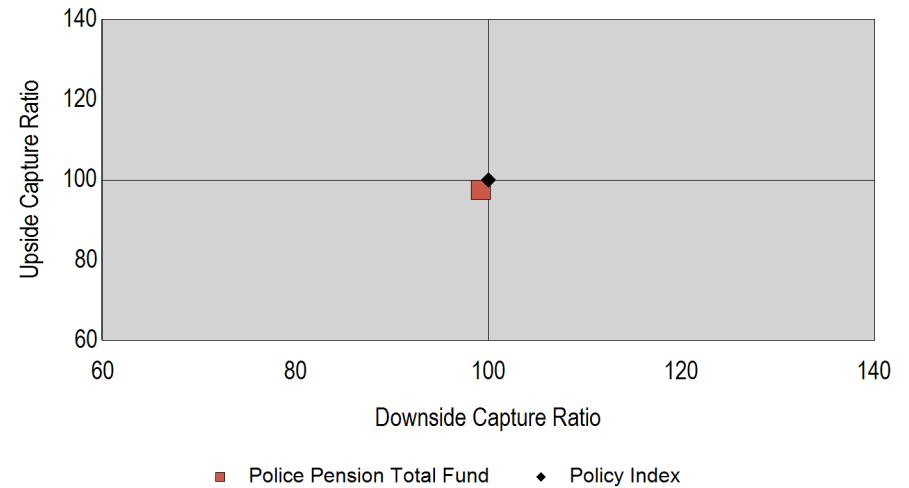
	Police Pension Total Fund	Policy Index
<b>RETURN SUMMARY STATISTICS</b>		
Number of Periods	60	60
Maximum Return	8.19	8.41
Minimum Return	-9.21	-9.19
Annualized Return	5.90	6.06
Total Return	33.20	34.17
Annualized Excess Return Over Risk Free	4.27	4.42
Annualized Excess Return	-0.15	0.00

	Police Pension Total Fund	Policy Index
<b>RISK SUMMARY STATISTICS</b>		
Beta	0.97	1.00
Upside Deviation	6.36	6.84
Downside Deviation	7.67	8.06

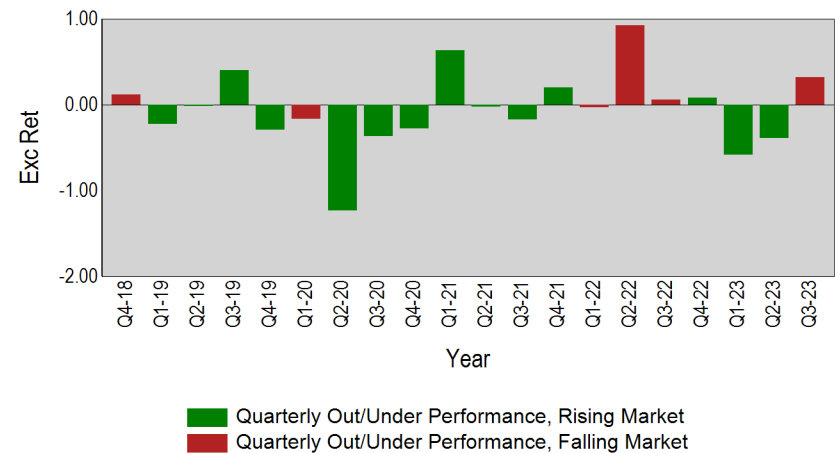
	Police Pension Total Fund	Policy Index
<b>RISK/RETURN SUMMARY STATISTICS</b>		
Annualized Standard Deviation	12.42	12.79
Alpha	0.00	0.00
Sharpe Ratio	0.34	0.35
Excess Return Over Market / Risk	-0.01	0.00
Tracking Error	1.03	0.00
Information Ratio	-0.15	--

	Police Pension Total Fund	Policy Index
<b>CORRELATION STATISTICS</b>		
R-Squared	0.99	1.00
Correlation	1.00	1.00

**Upside Capture Ratio vs. Downside Capture Ratio**  
5 Years Ending September 30, 2023



**Quarterly Excess Performance**  
Police Pension Total Fund vs. Policy Index





**RISK RETURN STATISTICS**  
October 01, 2018 Through September 30, 2023

Total Equity Composite Total Equity Policy Index

**RETURN SUMMARY STATISTICS**

Number of Periods	60	60
Maximum Return	12.73	12.44
Minimum Return	-14.58	-13.90
Annualized Return	7.76	7.74
Total Return	45.29	45.19
Annualized Excess Return Over Risk Free	6.13	6.11
Annualized Excess Return	0.01	0.00

**RISK SUMMARY STATISTICS**

Beta	0.99	1.00
Upside Deviation	9.96	10.17
Downside Deviation	11.71	11.87

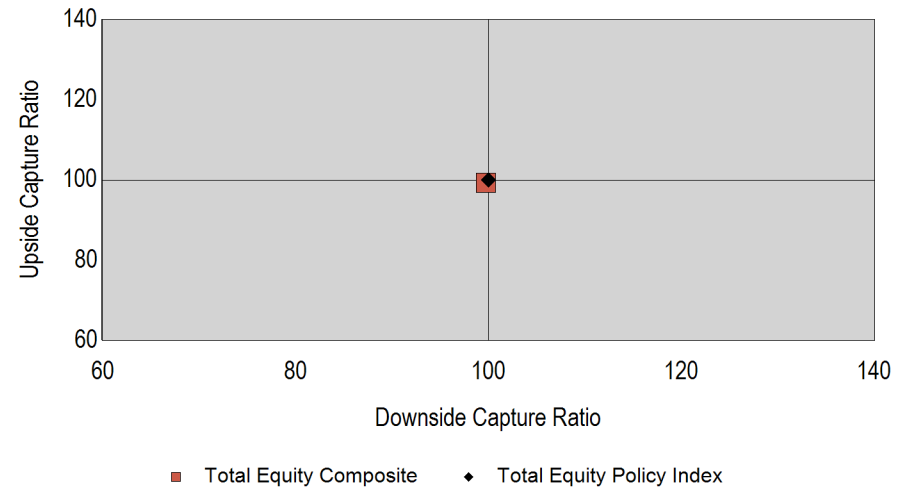
**RISK/RETURN SUMMARY STATISTICS**

Annualized Standard Deviation	18.68	18.84
Alpha	0.01	0.00
Sharpe Ratio	0.33	0.32
Excess Return Over Market / Risk	0.00	0.00
Tracking Error	1.25	0.00
Information Ratio	0.01	--

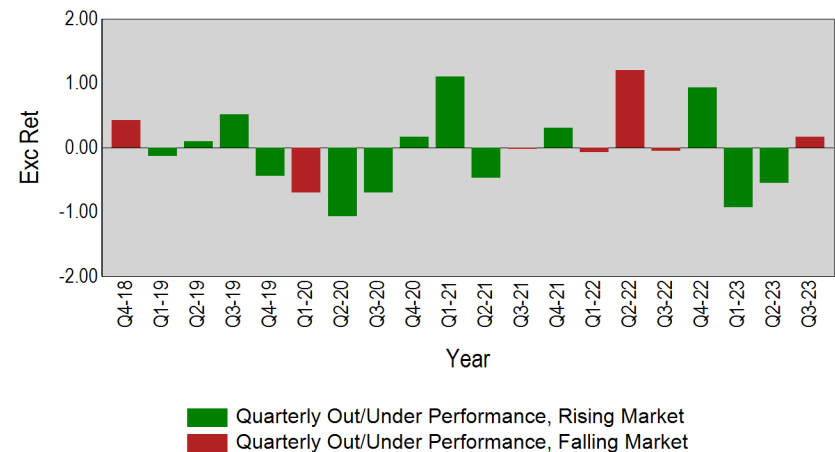
**CORRELATION STATISTICS**

R-Squared	1.00	1.00
Correlation	1.00	1.00

Upside Capture Ratio vs. Downside Capture Ratio  
5 Years Ending September 30, 2023



Quarterly Excess Performance  
Total Equity Composite vs. Total Equity Policy Index



**Characteristics**

	Portfolio	MSCI ACWI
Number of Holdings	4,077	2,947
Weighted Avg. Market Cap. (\$B)	388.0	408.9
Median Market Cap. (\$B)	2.0	12.1
Price To Earnings	18.1	18.0
Price To Book	3.3	3.3
Price To Sales	1.8	1.8
Return on Equity (%)	20.4	21.1
Yield (%)	2.1	2.3

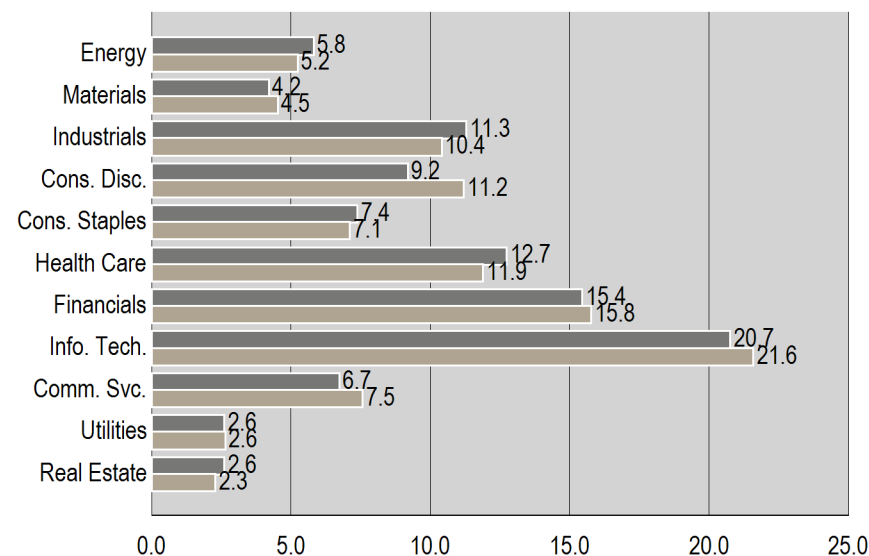
**Top Holdings**

APPLE INC	3.8%
MICROSOFT CORP	3.7%
AMAZON.COM INC	1.9%
NVIDIA CORPORATION	1.5%
ALPHABET INC	1.2%
ALPHABET INC	1.2%
META PLATFORMS INC	1.1%
TESLA INC	1.0%
BERKSHIRE HATHAWAY INC	0.9%
JPMORGAN CHASE & CO	0.9%
<b>Total</b>	<b>17.3%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Total Equity Composite	8.1%	17.0%	71.6%	3.2%
MSCI ACWI	7.2%	17.8%	75.1%	0.0%
<i>Weight Over/Under</i>	1.0%	-0.7%	-3.5%	3.2%

**Sector Allocation (%) vs MSCI ACWI**



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	1.5%	2.9%	-1.4%
United States	77.5%	62.3%	15.3%
Europe Ex U.K.	11.6%	12.1%	-0.5%
United Kingdom	3.3%	3.7%	-0.4%
Pacific Basin Ex Japan	0.6%	2.7%	-2.1%
Japan	2.2%	5.5%	-3.3%
Emerging Markets	2.6%	10.6%	-7.9%
Other	0.6%	0.3%	0.3%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**Characteristics**

	Portfolio	Russell 3000
Number of Holdings	3,746	2,994
Weighted Avg. Market Cap. (\$B)	469.8	549.4
Median Market Cap. (\$B)	1.6	2.3
Price To Earnings	19.8	21.0
Price To Book	3.6	3.9
Price To Sales	2.1	2.2
Return on Equity (%)	21.5	22.3
Yield (%)	1.8	1.6

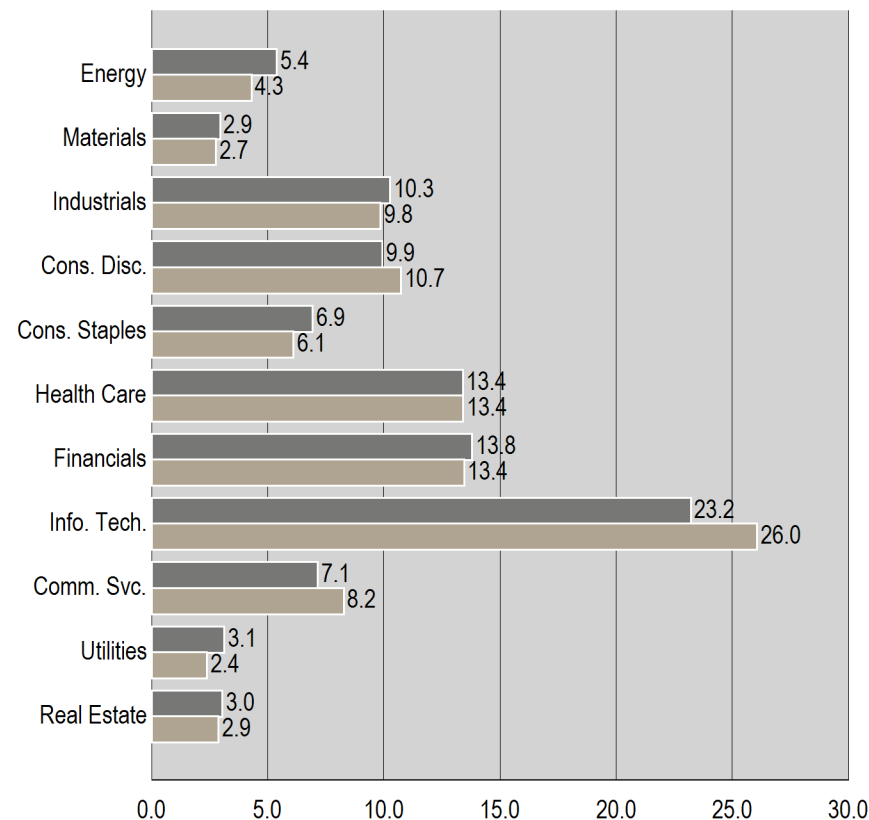
**Top Holdings**

APPLE INC	5.0%
MICROSOFT CORP	4.6%
AMAZON.COM INC	2.3%
NVIDIA CORPORATION	2.0%
ALPHABET INC	1.5%
TESLA INC	1.3%
META PLATFORMS INC	1.3%
ALPHABET INC	1.3%
BERKSHIRE HATHAWAY INC	1.2%
JPMORGAN CHASE & CO	1.2%
<b>Total</b>	<b>21.9%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
U.S. Equity Composite	3.0%	24.5%	70.0%	2.6%
Russell 3000	5.6%	21.1%	73.3%	0.0%
<i>Weight Over/Under</i>	<i>-2.6%</i>	<i>3.3%</i>	<i>-3.3%</i>	<i>2.6%</i>

**Sector Allocation (%) vs Russell 3000**



Common Holdings Matrix

	<i>Vanguard Equity Income</i>		<i>Vanguard Total Stock Market Index</i>		<i>Vanguard Total Stock Market Index ETF</i>		<i>Vanguard Mid Cap Index</i>	
	#	%	#	%	#	%	#	%
Vanguard Equity Income	--	--	180	30	180	30	48	15
Vanguard Total Stock Market Index	180	89	--	--	3,627	99	334	99
Vanguard Total Stock Market Index ETF	180	89	3,627	99	--	--	334	99
Vanguard Mid Cap Index	48	16	334	16	334	16	--	--

**Characteristics**

	Portfolio	MSCI ACWI ex USA
Number of Holdings	325	2,320
Weighted Avg. Market Cap. (\$B)	85.0	85.0
Median Market Cap. (\$B)	24.6	9.1
Price To Earnings	14.4	13.5
Price To Book	2.7	2.4
Price To Sales	1.6	1.1
Return on Equity (%)	18.0	15.1
Yield (%)	3.2	3.4

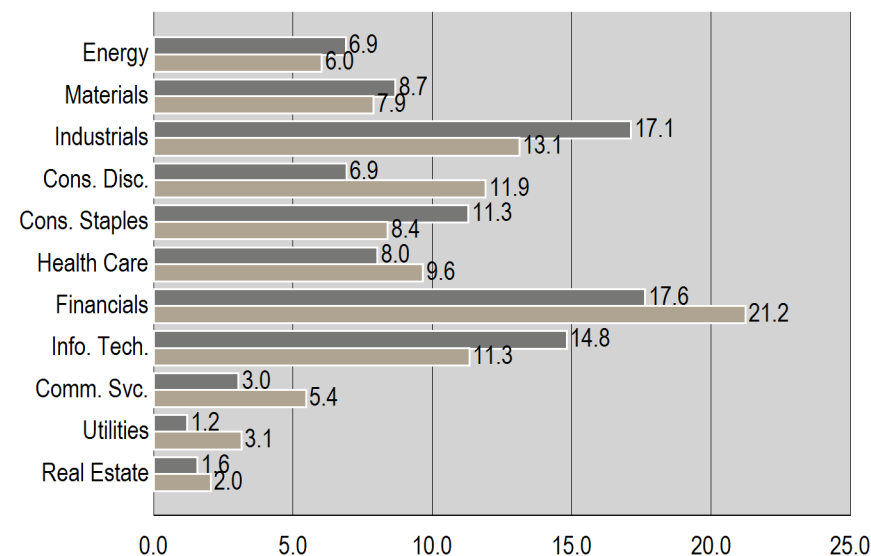
**Top Holdings**

TOTALENERGIES SE	2.8%
SCHNEIDER ELECTRIC SA	1.8%
ASTRAZENECA PLC	1.6%
SAMSUNG ELECTRONICS CO LTD	1.6%
FRANCO-NEVADA CORP	1.6%
CADENCE DESIGN SYSTEMS INC	1.5%
NESTLE SA, CHAM UND VEVEY	1.5%
NOVO NORDISK A/S	1.4%
ASML HOLDING NV	1.4%
LEGRAND	1.4%
<b>Total</b>	<b>16.6%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Non-U.S. Equity Composite	12.6%	27.5%	53.8%	6.1%
MSCI ACWI ex USA	16.1%	27.3%	56.6%	0.0%
<i>Weight Over/Under</i>	-3.5%	0.1%	-2.8%	6.1%

**Sector Allocation (%) vs MSCI ACWI ex USA**



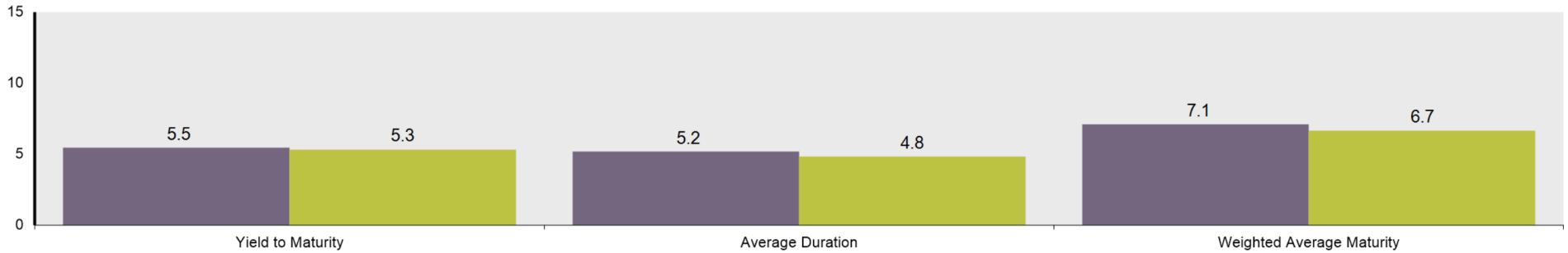
**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	4.7%	7.6%	-2.9%
United States	6.7%	0.0%	6.7%
Europe Ex U.K.	48.5%	32.0%	16.5%
United Kingdom	11.5%	9.8%	1.7%
Pacific Basin Ex Japan	3.3%	7.3%	-4.0%
Japan	11.8%	14.7%	-2.9%
Emerging Markets	11.6%	28.0%	-16.3%
Other	1.9%	0.7%	1.2%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

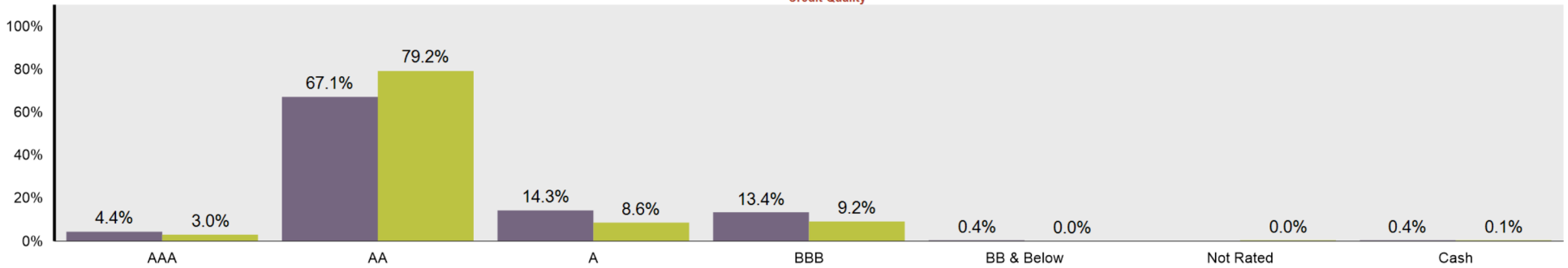
Common Holdings Matrix

	<i>American Funds Int'l Growth &amp; Income</i>		<i>MFS International Intrinsic Value</i>	
	#	%	#	%
American Funds Int'l Growth & Income	--	--	29	34
MFS International Intrinsic Value	29	16	--	--

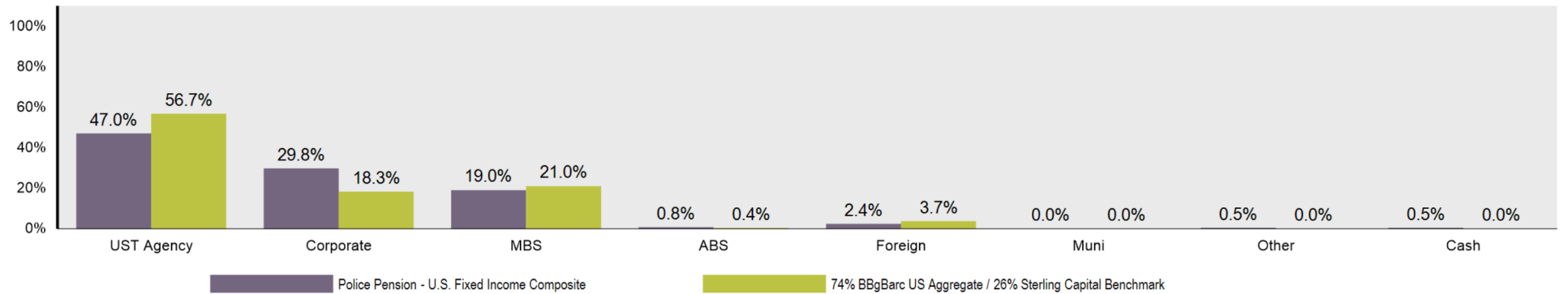
Yield to Maturity



Credit Quality



US Sector



# City of Allentown Police Pension

## Performance Summary (Net)

As of September 30, 2023

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	Market Value	% of Portfolio	Policy %	Inception	Inception Date
<b>Police Pension Total Fund</b>	<b>-2.6</b>	<b>5.6</b>	<b>11.7</b>	<b>5.7</b>	<b>5.9</b>	<b>202,501,982</b>	<b>100.0</b>	<b>100.0</b>	<b>6.4</b>	<b>Apr-05</b>
<i>Policy Index</i>	-2.9	6.3	12.3	5.4	6.1				6.6	Apr-05
<i>InvMetrics Public DB Net Rank</i>	35	27	34	20	16				31	Apr-05
<b>Total Equity Composite</b>	<b>-3.2</b>	<b>9.6</b>	<b>20.1</b>	<b>8.9</b>	<b>7.8</b>	<b>133,544,353</b>	<b>65.9</b>	<b>66.0</b>	<b>11.2</b>	<b>Jan-12</b>
<i>Total Equity Policy Index</i>	-3.4	10.9	20.6	8.2	7.7				11.1	Jan-12
Vanguard Equity Income	-2.0	-1.1	12.7	12.0	7.8	12,264,936	6.1		10.7	Aug-12
<i>Russell 1000 Value</i>	-3.2	1.8	14.4	11.0	6.2				10.0	Aug-12
<i>Large Value MStar MF Rank</i>	40	83	74	54	25				29	Aug-12
Vanguard Total Stock Market Index	-3.3	12.3	20.4	9.2	9.1	57,531,224	28.4		10.1	Nov-14
<i>CRSP US Total Market TR USD</i>	-3.3	12.3	20.4	9.3	9.1				10.1	Nov-14
<i>All Cap MStar MF Rank</i>	41	25	28	51	23				24	Nov-14
Vanguard Total Stock Market Index ETF	-3.2	12.4	20.3	9.3	9.0	25,645,534	12.7		10.5	Apr-14
<i>CRSP US Total Market TR USD</i>	-3.3	12.3	20.4	9.3	9.1				10.5	Apr-14
<i>All Cap MStar MF Rank</i>	39	25	29	51	24				23	Apr-14
Vanguard Mid Cap Index	-5.1	3.3	12.6	--	--	5,842,373	2.9		-3.4	May-21
<i>CRSP US Mid Cap TR USD</i>	-5.1	3.3	12.6	--	--				-3.4	May-21
<i>Mid-Cap Blend MStar MF Rank</i>	78	64	64	--	--				56	May-21
Dodge & Cox Global Stock	0.6	11.6	26.4	16.3	7.8	8,390,623	4.1		6.8	Aug-14
<i>MSCI ACWI Value NR USD</i>	-1.8	2.4	17.0	9.7	4.0				4.2	Aug-14
<i>Global Large Stock Value Mstar MF Rank</i>	1	10	16	3	3				9	Aug-14
American Funds Int'l Growth & Income	-4.1	5.7	24.5	5.7	3.8	11,996,782	5.9		2.9	Aug-14
<i>MSCI ACWI ex USA</i>	-3.8	5.3	20.4	3.7	2.6				2.6	Aug-14
<i>Foreign Large Blend MStar MF Rank</i>	35	55	40	31	21				69	Aug-14
MFS International Intrinsic Value	-4.7	7.2	20.5	0.2	4.4	11,872,881	5.9		6.4	Aug-14
<i>MSCI EAFE</i>	-4.1	7.1	25.6	5.8	3.2				3.3	Aug-14
<i>Foreign Large Blend MStar MF Rank</i>	54	25	77	97	11				3	Aug-14
<b>Real Estate Composite</b>						<b>22,728,605</b>	<b>11.2</b>	<b>10.0</b>		
Morgan Stanley Prime Property Fund	-0.2	-3.7	-7.2	8.0	6.4	22,728,605	11.2		6.4	Oct-18
<i>NFI-ODCE</i>	-2.1	-8.1	-12.9	6.2	4.7				4.7	Oct-18
<i>InvMetrics Public DB Real Estate Priv Net Rank</i>	13	13	11	9	6				6	Oct-18



City of Allentown Police Pension

Performance Summary (Net)

As of September 30, 2023

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	Market Value	% of Portfolio	Policy %	Inception	Inception Date
<b>U.S. Fixed Income Composite</b>	<b>-2.2</b>	<b>-0.1</b>	<b>1.5</b>	<b>-4.0</b>	<b>0.3</b>	<b>40,861,965</b>	<b>20.2</b>	<b>23.0</b>	<b>1.1</b>	<b>Jan-12</b>
<i>Fixed Income Policy Index</i>	-2.2	-0.3	1.3	-3.9	0.2				1.0	Jan-12
Vanguard Total Bond Market Index	-3.1	-0.9	0.7	-5.2	0.1	27,119,247	13.4		1.1	Dec-11
<i>Bloomberg US Aggregate TR</i>	-3.2	-1.2	0.6	-5.2	0.1				1.1	Dec-11
<i>Intermediate Core Bond MStar MF Rank</i>	57	59	57	65	56				77	Dec-11
Sterling Capital - Short-Term Bonds	1.2	2.9	3.7	0.2	1.4	7,869,078	3.9		1.2	Jun-14
<i>Sterling Capital Policy Index</i>	0.9	2.3	3.1	0.0	1.4				1.1	Jun-14
Baird Core Plus Bond Fund	-2.7	-0.2	2.3	--	--	5,873,641	2.9		-7.4	Nov-21
<i>Bloomberg US Universal TR</i>	-2.9	-0.6	1.6	--	--				-7.7	Nov-21
<i>Intermediate Core Plus Bond MStar MF Rank</i>	31	31	19	--	--				26	Nov-21
<b>Cash Equivalents Composite</b>						<b>5,367,059</b>	<b>2.7</b>	<b>1.0</b>		
Govt Obligations MM Fund						5,367,059	2.7			

Policy Index History

Police Pension Total Fund		
1/1/2020	Present	52% Russell 3000 / 14% MSCI ACWI ex USA / 17% Bloomberg US Aggregate TR / 6% Sterling Capital Policy Index / 1% ICE BofA 91 Days T-Bills TR / 10% NFI-ODCE
10/1/2019	12/31/2019	52% Russell 3000 / 14% MSCI ACWI ex USA / 19% Bloomberg US Aggregate TR / 6.5% Sterling Capital Policy Index / 1% ICE BofA 91 Days T-Bills TR / 7.5% NFI-ODCE
9/1/2019	9/30/2019	52% Russell 3000 / 14% MSCI ACWI ex USA / 20.5% Bloomberg US Aggregate TR / 7.5% Sterling Capital Policy Index / 1% ICE BofA 91 Days T-Bills TR / 5% NFI-ODCE
10/1/2018	8/31/2019	49% Russell 3000 / 17% MSCI ACWI ex USA / 14% Bloomberg US Aggregate TR / 14% Bloomberg US Govt 1-5 Yr TR / 1% ICE BofA 91 Days T-Bills TR / 5% NFI-ODCE
7/1/2015	9/30/2018	51% Russell 3000 / 17% MSCI ACWI ex USA / 13% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 2% ICE BofA 91 Days T-Bills TR
6/1/2015	6/30/2015	50% Russell 3000 / 16.0% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 6% ICE BofA 91 Days T-Bills TR
5/1/2015	5/31/2015	48.5% Russell 3000 / 15.5% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 8% ICE BofA 91 Days T-Bills TR
4/1/2015	4/30/2015	47% Russell 3000 / 15% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 10% ICE BofA 91 Days T-Bills TR
3/1/2015	3/31/2015	45.50% Russell 3000 / 14.5% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 12% ICE BofA 91 Days T-Bills TR
2/1/2015	2/28/2015	44% Russell 3000 / 14% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 14% ICE BofA 91 Days T-Bills TR
1/1/2015	1/31/2015	42.5% Russell 3000 / 13.5% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 16% ICE BofA 91 Days T-Bills TR
12/1/2014	12/31/2014	41% Russell 3000 / 13% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 18% ICE BofA 91 Days T-Bills TR
11/1/2014	11/30/2014	39.5% Russell 3000 / 12.5% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 20% ICE BofA 91 Days T-Bills TR
10/1/2014	10/31/2014	38% Russell 3000 / 12% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 22% ICE BofA 91 Days T-Bills TR
9/1/2014	9/30/2014	36.5% Russell 3000 / 11.5% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 24% ICE BofA 91 Days T-Bills TR
8/1/2014	8/31/2014	35% Russell 3000 / 11% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 26% ICE BofA 91 Days T-Bills TR
7/1/2014	7/31/2014	33.50% Russell 3000 / 10.5% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 28% ICE BofA 91 Days T-Bills TR
6/1/2014	6/30/2014	32% Russell 3000 / 10% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 47% ICE BofA 91 Days T-Bills TR
5/1/2014	5/31/2014	25.5% Russell 3000 / 8.5% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 55% ICE BofA 91 Days T-Bills TR
4/1/2014	4/30/2014	24% Russell 3000 / 8% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 57% ICE BofA 91 Days T-Bills TR
3/1/2014	3/31/2014	22.82% Russell 3000 / 7.89% MSCI ACWI ex USA / 12.29% Bloomberg US Aggregate TR / 57% ICE BofA 91 Days T-Bills TR
2/1/2014	2/28/2014	22.29% Russell 3000 / 7.71% MSCI ACWI ex USA / 12% Bloomberg US Aggregate TR / 58% ICE BofA 91 Days T-Bills TR
1/1/2014	1/31/2014	22.29% Russell 3000 / 7.71% MSCI ACWI ex USA / 12% Bloomberg US Aggregate TR / 58% ICE BofA 91 Days T-Bills TR
1/1/2012	12/31/2013	52% Russell 3000 / 28% Bloomberg US Aggregate TR / 18% MSCI EAFE / 2% 91 Day T-Bills
1/1/2007	12/31/2011	51% Russell 3000 / 32% Bloomberg US Govt/Credit Int TR / 12% MSCI EAFE / 5% FTSE NAREIT All Equity REIT
4/1/2005	12/31/2006	18% FT Wilshire 5000 Full Cap / 18% S&P 500 / 8% Russell 2000 / 20% Bloomberg US Aggregate TR / 20% Bloomberg US Govt/Credit Int TR / 10% MSCI EAFE / 6% FTSE NAREIT All Equity REIT

Police Pension (excl. LCP)		
10/1/2018	Present	49% Russell 3000 / 17% MSCI ACWI ex USA / 14% Bloomberg US Aggregate TR / 14% Bloomberg US Govt 1-5 Yr TR / 1% ICE BofA 91 Days T-Bills TR / 5% NFI-ODCE
8/1/2016	9/30/2018	51% Russell 3000 / 17% MSCI ACWI ex USA / 14% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 1% ICE BofA 91 Days T-Bills TR
7/1/2014	7/31/2016	51% Russell 3000 / 17% MSCI ACWI ex USA / 13% Bloomberg US Aggregate TR / 17% Bloomberg US Govt 1-5 Yr TR / 2% ICE BofA 91 Days T-Bills TR
1/1/2012	6/30/2014	52% Russell 3000 / 28% Bloomberg US Aggregate TR / 18% MSCI EAFE / 2% 91 Day T-Bills
1/1/2007	12/31/2011	51% Russell 3000 / 32% Bloomberg US Govt/Credit Int TR / 12% MSCI EAFE / 5% FTSE NAREIT All Equity REIT
4/1/2005	12/31/2006	18% FT Wilshire 5000 Full Cap / 18% S&P 500 / 8% Russell 2000 / 20% Bloomberg US Aggregate TR / 20% Bloomberg US Govt/Credit Int TR / 10% MSCI EAFE / 6% FTSE NAREIT All Equity REIT
Total Equity Composite		
9/1/2019	Present	79% Russell 3000 / 21% MSCI ACWI ex USA
10/1/2018	8/31/2019	74% Russell 3000 / 26% MSCI ACWI ex USA
7/1/2014	9/30/2018	75% Russell 3000 / 25% MSCI ACWI ex USA
1/1/2012	6/30/2014	74% Russell 3000 / 26% MSCI EAFE
U.S. Equity Composite		
1/1/2012	Present	Russell 3000
Global Equity Composite		
1/1/2012	Present	MSCI ACWI
Non-U.S. Equity Composite		
6/1/2014	Present	MSCI ACWI ex USA
1/1/2012	5/31/2014	MSCI EAFE
Real Estate Composite		
10/1/2018	Present	NFI-ODCE
U.S. Fixed Income Composite		
9/1/2019	Present	74% Bloomberg US Aggregate TR / 26% Sterling Capital Policy Index
6/1/2014	8/31/2019	43% Bloomberg US Aggregate TR / 57% Bloomberg US Govt 1-5 Yr TR
1/1/2012	5/31/2014	100% Bloomberg US Aggregate TR
Cash Equivalents Composite		
1/1/2012	Present	ICE BofA 91 Days T-Bills TR

# City of Allentown Police Pension

## Fee Summary

As of September 30, 2023

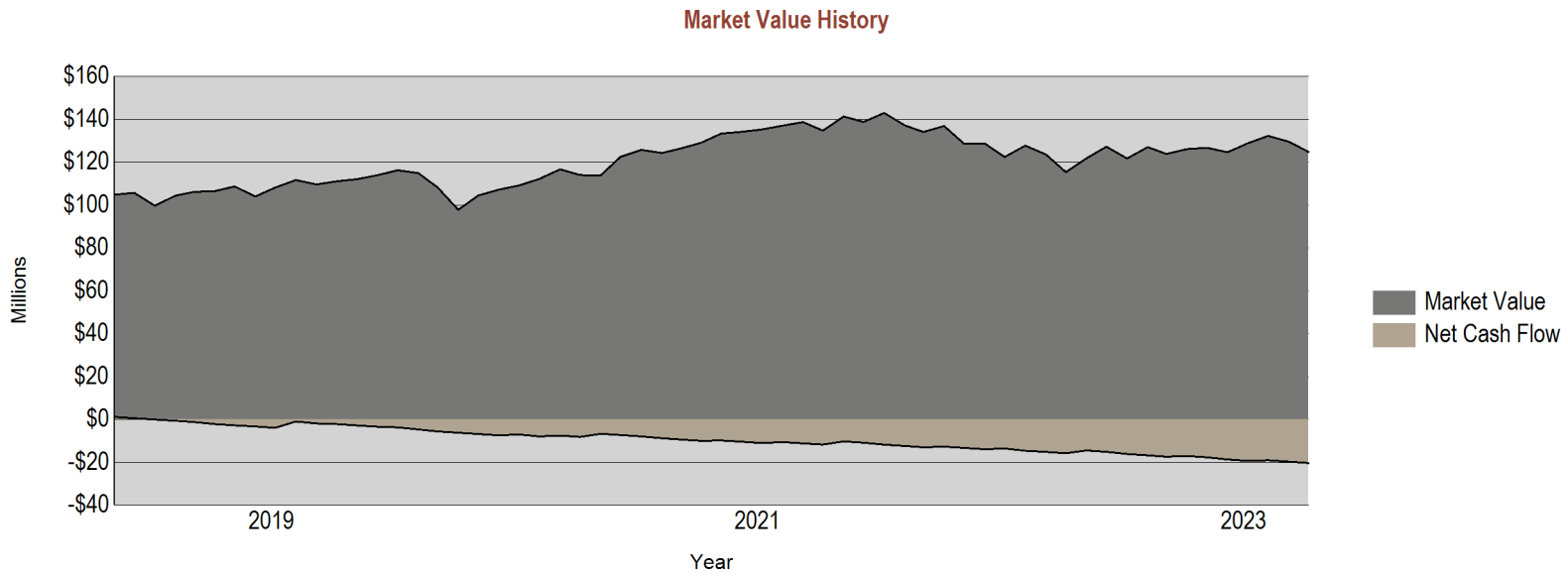
Account	Fee Schedule	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Vanguard Equity Income	0.19% of Assets	6.1%	\$23,303	0.19%
Vanguard Total Stock Market Index	0.03% of Assets	28.4%	\$17,259	0.03%
Vanguard Total Stock Market Index ETF	0.03% of Assets	12.7%	\$7,694	0.03%
Vanguard Mid Cap Index	0.04% of Assets	2.9%	\$2,337	0.04%
Dodge & Cox Global Stock	0.62% of Assets	4.1%	\$52,022	0.62%
American Funds Int'l Growth & Income	0.54% of Assets	5.9%	\$64,783	0.54%
MFS International Intrinsic Value	0.61% of Assets	5.9%	\$72,425	0.61%
Morgan Stanley Prime Property Fund	0.84% of Assets	11.2%	\$190,920	0.84%
Vanguard Total Bond Market Index	0.03% of Assets	13.4%	\$8,407	0.03%
Sterling Capital - Short-Term Bonds	0.08% of Assets	3.9%	\$6,295	0.08%
Baird Core Plus Bond Fund	0.30% of Assets	2.9%	\$17,621	0.30%
Govt Obligations MM Fund	0.30% of Assets	2.7%	\$16,101	0.30%
<b>Investment Management Fee</b>		<b>100.0%</b>	<b>\$479,167</b>	<b>0.24%</b>

# Firemen Pension

## Portfolio Overview



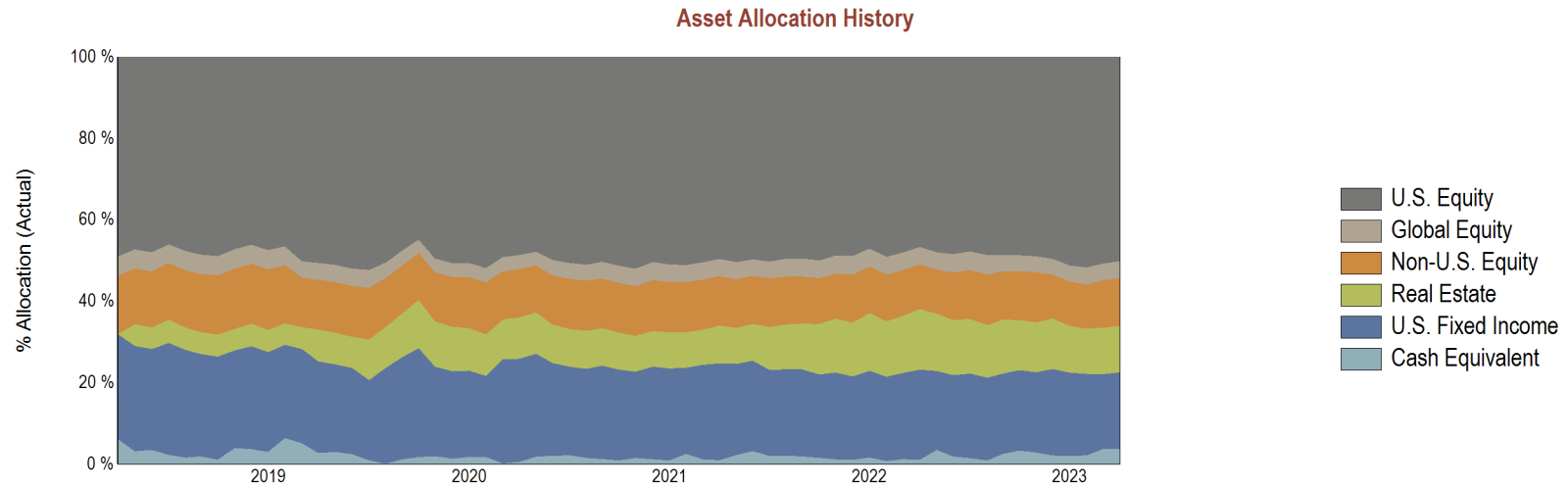
As of September 30, 2023



**Cash Flow Summary by Manager From July 01, 2023 to September 30, 2023**

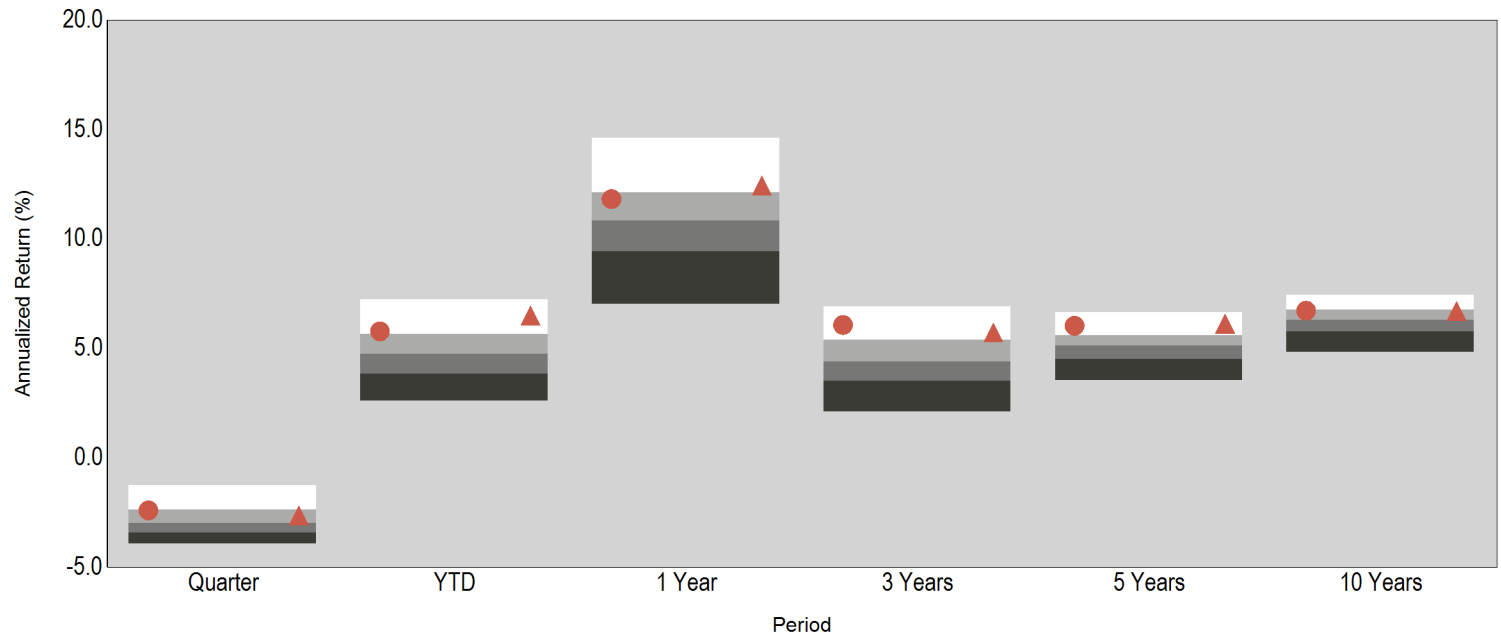
	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Vanguard Equity Income	\$7,858,839	\$0	-\$156,269	\$7,702,570
Vanguard Total Stock Market Index	\$38,155,204	-\$1,200,000	-\$1,235,249	\$35,719,956
Vanguard Total Stock Market Index ETF	\$15,887,254	-\$57,583	-\$510,025	\$15,319,646
Vanguard Mid Cap Index	\$3,905,115	\$0	-\$197,906	\$3,707,209
Dodge & Cox Global Stock	\$5,186,031	\$0	\$29,656	\$5,215,686
American Funds Int'l Growth & Income	\$7,016,015	\$600,000	-\$296,583	\$7,319,432
MFS International Intrinsic Value	\$6,959,485	\$600,000	-\$339,229	\$7,220,256
Morgan Stanley Prime Property Fund	\$14,718,574	-\$402,190	-\$32,157	\$14,284,228
Vanguard Total Bond Market Index	\$12,391,973	\$0	-\$381,999	\$12,009,974
Sterling Capital - Short-Term Bonds	\$10,204,433	-\$2,637,072	\$112,919	\$7,680,280
Baird Core Plus Bond Fund	\$3,779,610	\$0	-\$103,146	\$3,676,464
Govt Obligations MM Fund	\$2,748,840	\$2,146,696	\$53,042	\$4,948,577
<b>Total</b>	<b>\$128,811,372</b>	<b>-\$950,150</b>	<b>-\$3,056,946</b>	<b>\$124,804,277</b>

As of September 30, 2023



	Market Value	% of Portfolio	Policy %	Policy Difference
<b>Firemen Pension Total Fund</b>	<b>124,804,277</b>	<b>100.0</b>	<b>100.0</b>	<b>0</b>
<b>Total Equity Composite</b>	<b>82,204,755</b>	<b>65.9</b>	<b>66.0</b>	<b>-166,068</b>
Vanguard Equity Income	7,702,570	6.2		
Vanguard Total Stock Market Index	35,719,956	28.6		
Vanguard Total Stock Market Index ETF	15,319,646	12.3		
Vanguard Mid Cap Index	3,707,209	3.0		
Dodge & Cox Global Stock	5,215,686	4.2		
American Funds Int'l Growth & Income	7,319,432	5.9		
MFS International Intrinsic Value	7,220,256	5.8		
<b>Real Estate Composite</b>	<b>14,284,228</b>	<b>11.4</b>	<b>10.0</b>	<b>1,803,800</b>
Morgan Stanley Prime Property Fund	14,284,228	11.4		
<b>U.S. Fixed Income Composite</b>	<b>23,366,718</b>	<b>18.7</b>	<b>23.0</b>	<b>-5,338,266</b>
Vanguard Total Bond Market Index	12,009,974	9.6		
Sterling Capital - Short-Term Bonds	7,680,280	6.2		
Baird Core Plus Bond Fund	3,676,464	2.9		
<b>Cash Equivalents Composite</b>	<b>4,948,577</b>	<b>4.0</b>	<b>1.0</b>	<b>3,700,534</b>
Govt Obligations MM Fund	4,948,577	4.0		

InvMetrics Public DB Net Return Comparison



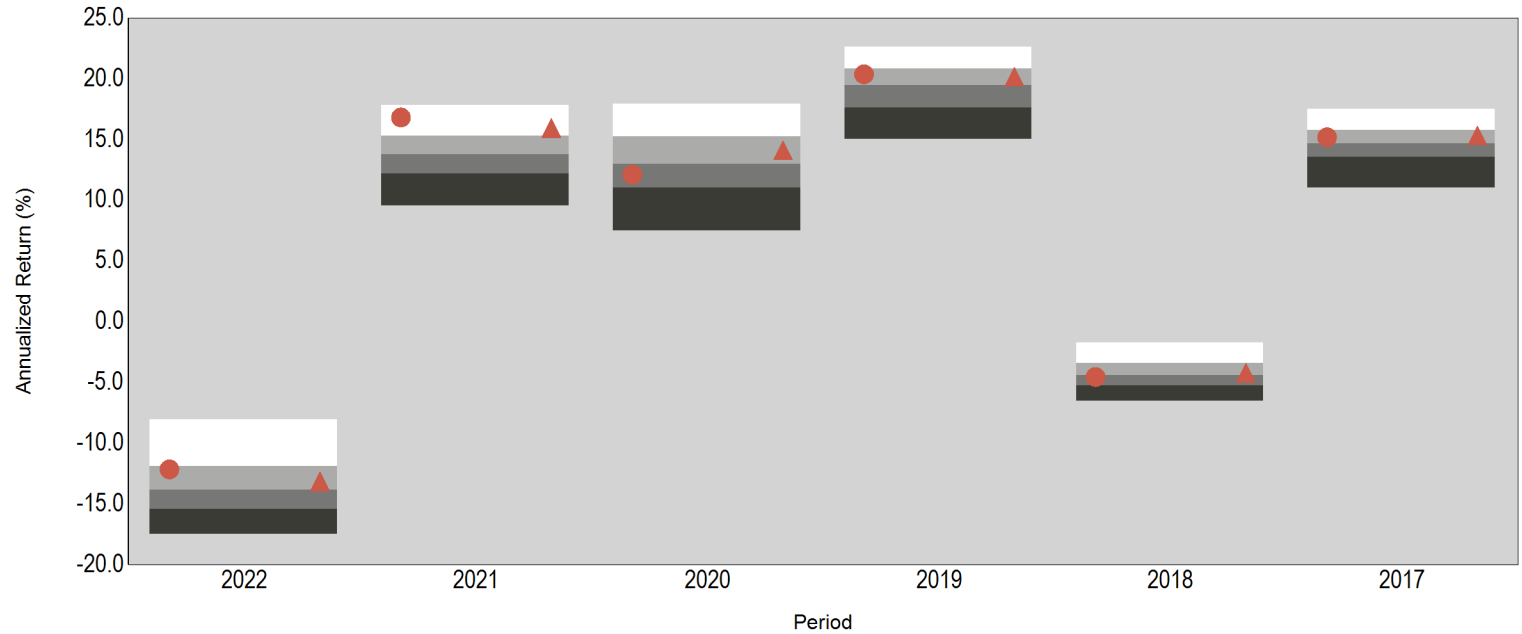
Return (Rank)

5th Percentile	-1.2	7.2	14.6	6.9	6.6	7.4
25th Percentile	-2.4	5.7	12.1	5.4	5.6	6.8
Median	-3.0	4.7	10.8	4.4	5.1	6.3
75th Percentile	-3.4	3.8	9.4	3.5	4.5	5.8
95th Percentile	-3.9	2.6	7.0	2.1	3.5	4.8
# of Portfolios	562	556	554	543	525	441
● Firemen Pension Total Fund	-2.4 (27)	5.8 (23)	11.8 (32)	6.1 (15)	6.0 (13)	6.7 (29)
▲ Policy Index	-2.6 (37)	6.5 (13)	12.4 (21)	5.7 (18)	6.1 (11)	6.7 (29)



As of September 30, 2023

InvMetrics Public DB Net Return Comparison



Return (Rank)

5th Percentile	-8.0	17.8	17.9	22.6	-1.7	17.5						
25th Percentile	-11.9	15.3	15.3	20.8	-3.4	15.8						
Median	-13.8	13.8	13.0	19.5	-4.4	14.7						
75th Percentile	-15.4	12.2	11.0	17.6	-5.2	13.6						
95th Percentile	-17.5	9.6	7.5	15.1	-6.5	11.1						
# of Portfolios	539	559	596	550	496	269						
● Firemen Pension Total Fund	-12.2	(28)	16.8	(11)	12.1	(61)	20.4	(35)	-4.5	(55)	15.2	(37)
▲ Policy Index	-13.1	(39)	16.0	(18)	14.1	(39)	20.2	(38)	-4.2	(44)	15.3	(36)

**RISK RETURN STATISTICS**  
October 01, 2018 Through September 30, 2023

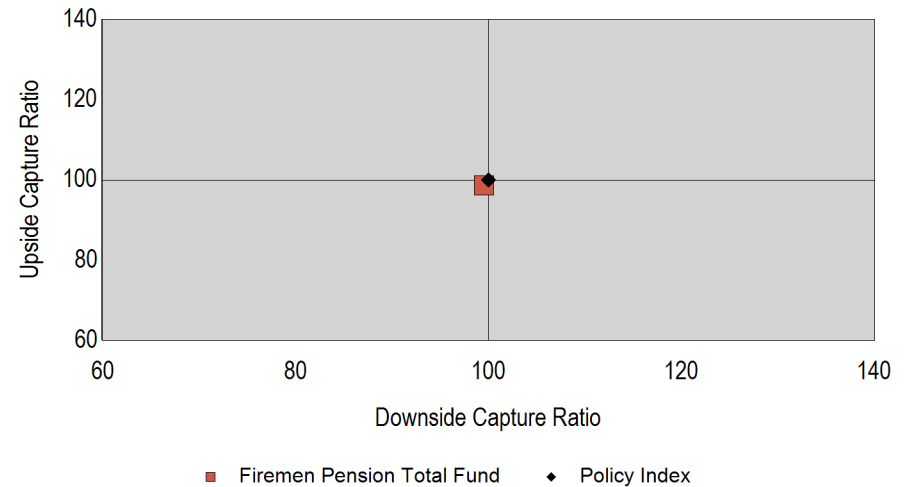
	Firemen Pension Total Fund	Policy Index
<b>RETURN SUMMARY STATISTICS</b>		
Number of Periods	60	60
Maximum Return	8.15	8.36
Minimum Return	-9.13	-9.10
Annualized Return	6.04	6.13
Total Return	34.05	34.64
Annualized Excess Return Over Risk Free	4.41	4.50
Annualized Excess Return	-0.09	0.00

	Firemen Pension Total Fund	Policy Index
<b>RISK SUMMARY STATISTICS</b>		
Beta	0.97	1.00
Upside Deviation	6.30	6.75
Downside Deviation	7.59	7.93

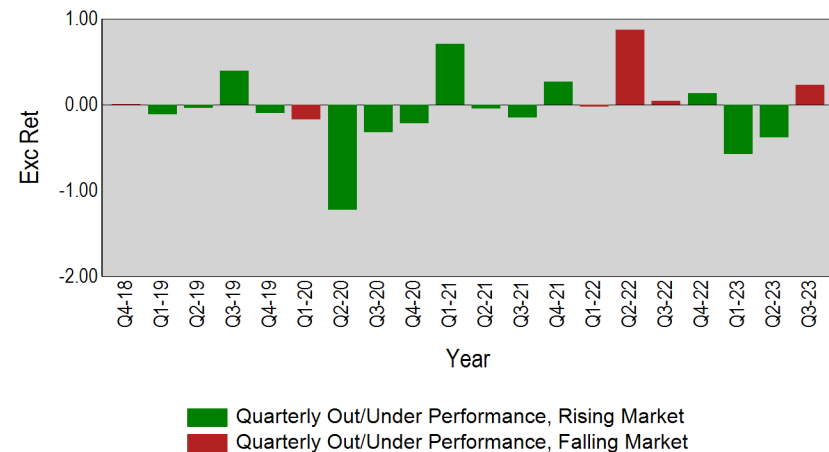
	Firemen Pension Total Fund	Policy Index
<b>RISK/RETURN SUMMARY STATISTICS</b>		
Annualized Standard Deviation	12.34	12.63
Alpha	0.00	0.00
Sharpe Ratio	0.36	0.36
Excess Return Over Market / Risk	-0.01	0.00
Tracking Error	1.03	0.00
Information Ratio	-0.09	--

	Firemen Pension Total Fund	Policy Index
<b>CORRELATION STATISTICS</b>		
R-Squared	0.99	1.00
Correlation	1.00	1.00

Upside Capture Ratio vs. Downside Capture Ratio  
5 Years Ending September 30, 2023



Quarterly Excess Performance  
Firemen Pension Total Fund vs. Policy Index



**RISK RETURN STATISTICS**

October 01, 2018 Through September 30, 2023

**Total Equity Composite    Total Equity Policy Index**

**RETURN SUMMARY STATISTICS**

Number of Periods	60	60
Maximum Return	12.73	12.44
Minimum Return	-14.58	-13.90
Annualized Return	7.83	7.74
Total Return	45.78	45.19
Annualized Excess Return Over Risk Free	6.20	6.11
Annualized Excess Return	0.09	0.00

**RISK SUMMARY STATISTICS**

Beta	0.99	1.00
Upside Deviation	9.93	10.17
Downside Deviation	11.74	11.87

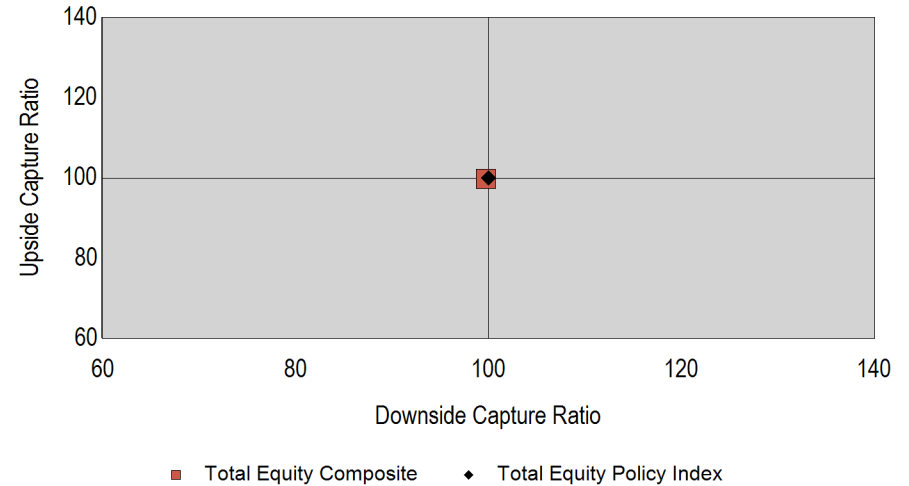
**RISK/RETURN SUMMARY STATISTICS**

Annualized Standard Deviation	18.69	18.84
Alpha	0.01	0.00
Sharpe Ratio	0.33	0.32
Excess Return Over Market / Risk	0.00	0.00
Tracking Error	1.26	0.00
Information Ratio	0.07	--

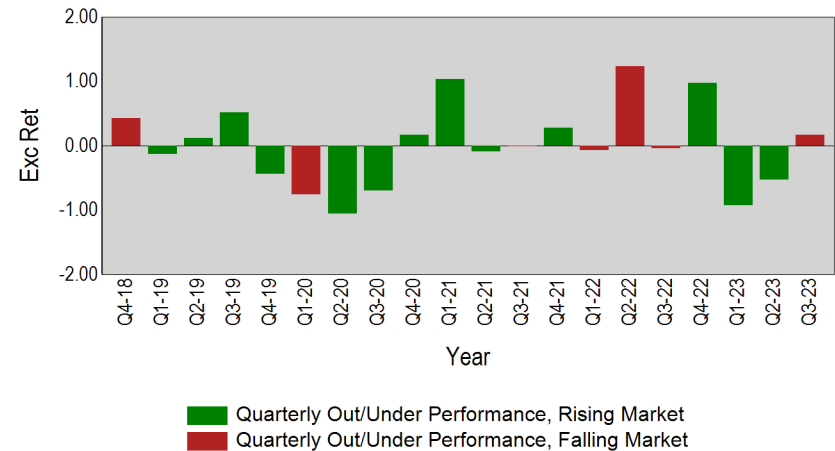
**CORRELATION STATISTICS**

R-Squared	1.00	1.00
Correlation	1.00	1.00

**Upside Capture Ratio vs. Downside Capture Ratio  
5 Years Ending September 30, 2023**



**Quarterly Excess Performance  
Total Equity Composite vs. Total Equity Policy Index**



**Characteristics**

	Portfolio	MSCI ACWI
Number of Holdings	4,077	2,947
Weighted Avg. Market Cap. (\$B)	387.2	408.9
Median Market Cap. (\$B)	2.0	12.1
Price To Earnings	18.1	18.0
Price To Book	3.3	3.3
Price To Sales	1.8	1.8
Return on Equity (%)	20.4	21.1
Yield (%)	2.1	2.3

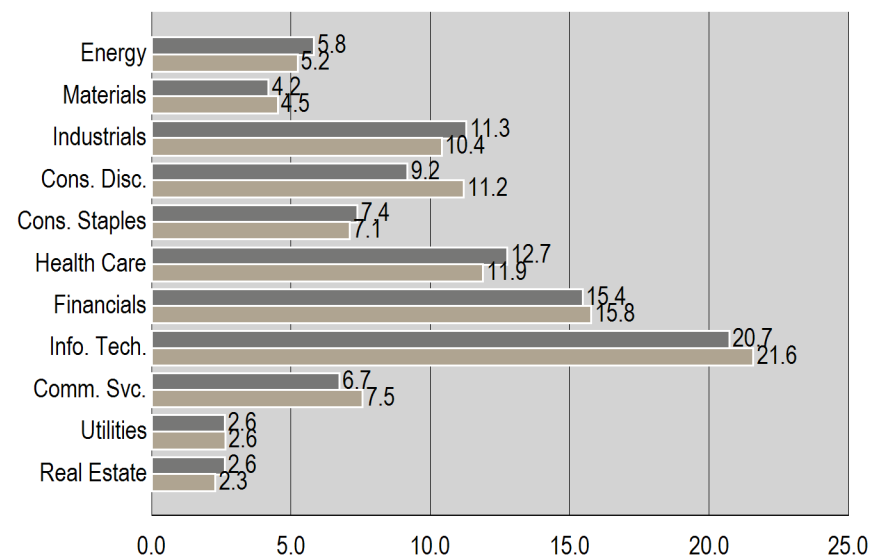
**Top Holdings**

APPLE INC	3.8%
MICROSOFT CORP	3.7%
AMAZON.COM INC	1.9%
NVIDIA CORPORATION	1.5%
ALPHABET INC	1.2%
ALPHABET INC	1.2%
META PLATFORMS INC	1.1%
TESLA INC	1.0%
BERKSHIRE HATHAWAY INC	0.9%
JPMORGAN CHASE & CO	0.9%
<b>Total</b>	<b>17.2%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Total Equity Composite	8.1%	17.1%	71.6%	3.2%
MSCI ACWI	7.2%	17.8%	75.1%	0.0%
<i>Weight Over/Under</i>	<i>0.9%</i>	<i>-0.7%</i>	<i>-3.5%</i>	<i>3.2%</i>

**Sector Allocation (%) vs MSCI ACWI**



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	1.5%	2.9%	-1.4%
United States	77.6%	62.3%	15.4%
Europe Ex U.K.	11.5%	12.1%	-0.5%
United Kingdom	3.3%	3.7%	-0.4%
Pacific Basin Ex Japan	0.6%	2.7%	-2.1%
Japan	2.2%	5.5%	-3.3%
Emerging Markets	2.6%	10.6%	-7.9%
Other	0.6%	0.3%	0.3%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**Characteristics**

	Portfolio	Russell 3000
Number of Holdings	3,746	2,994
Weighted Avg. Market Cap. (\$B)	468.0	549.4
Median Market Cap. (\$B)	1.6	2.3
Price To Earnings	19.7	21.0
Price To Book	3.6	3.9
Price To Sales	2.1	2.2
Return on Equity (%)	21.5	22.3
Yield (%)	1.8	1.6

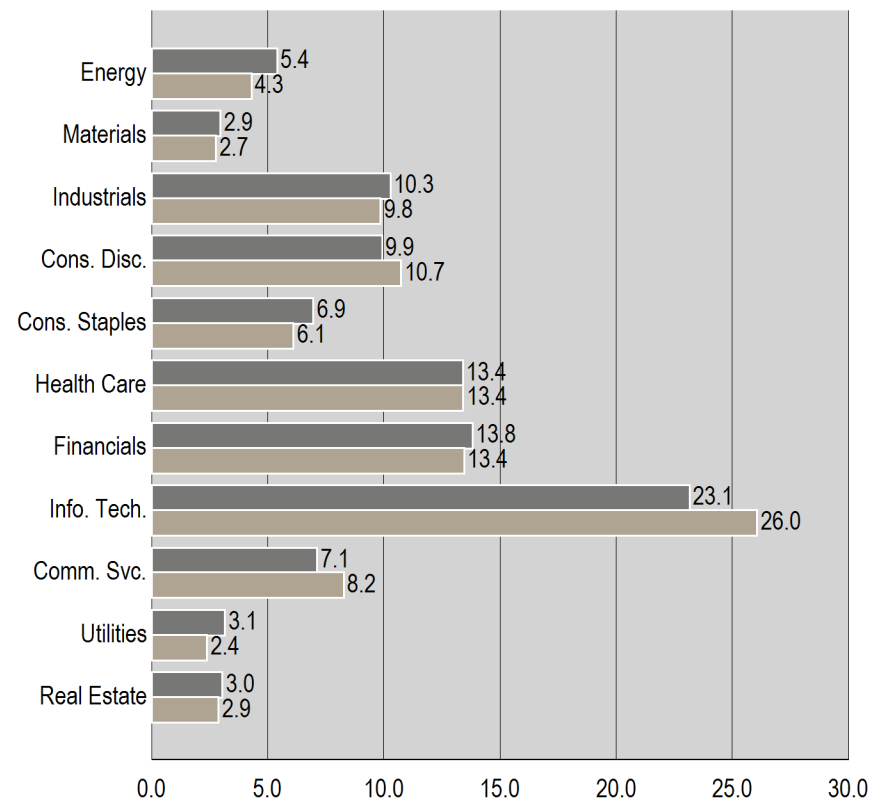
**Top Holdings**

APPLE INC	5.0%
MICROSOFT CORP	4.6%
AMAZON.COM INC	2.3%
NVIDIA CORPORATION	2.0%
ALPHABET INC	1.5%
TESLA INC	1.3%
META PLATFORMS INC	1.3%
ALPHABET INC	1.3%
BERKSHIRE HATHAWAY INC	1.2%
JPMORGAN CHASE & CO	1.2%
<b>Total</b>	<b>21.8%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
U.S. Equity Composite	3.0%	24.6%	69.9%	2.6%
Russell 3000	5.6%	21.1%	73.3%	0.0%
<i>Weight Over/Under</i>	<i>-2.6%</i>	<i>3.4%</i>	<i>-3.4%</i>	<i>2.6%</i>

**Sector Allocation (%) vs Russell 3000**



Common Holdings Matrix

	<i>Vanguard Equity Income</i>		<i>Vanguard Total Stock Market Index</i>		<i>Vanguard Total Stock Market Index ETF</i>		<i>Vanguard Mid Cap Index</i>	
	#	%	#	%	#	%	#	%
Vanguard Equity Income	--	--	180	30	180	30	48	15
Vanguard Total Stock Market Index	180	89	--	--	3,627	99	334	99
Vanguard Total Stock Market Index ETF	180	89	3,627	99	--	--	334	99
Vanguard Mid Cap Index	48	16	334	16	334	16	--	--

**Characteristics**

	Portfolio	MSCI ACWI ex USA
Number of Holdings	325	2,320
Weighted Avg. Market Cap. (\$B)	85.0	85.0
Median Market Cap. (\$B)	24.6	9.1
Price To Earnings	14.4	13.5
Price To Book	2.7	2.4
Price To Sales	1.6	1.1
Return on Equity (%)	18.0	15.1
Yield (%)	3.2	3.4

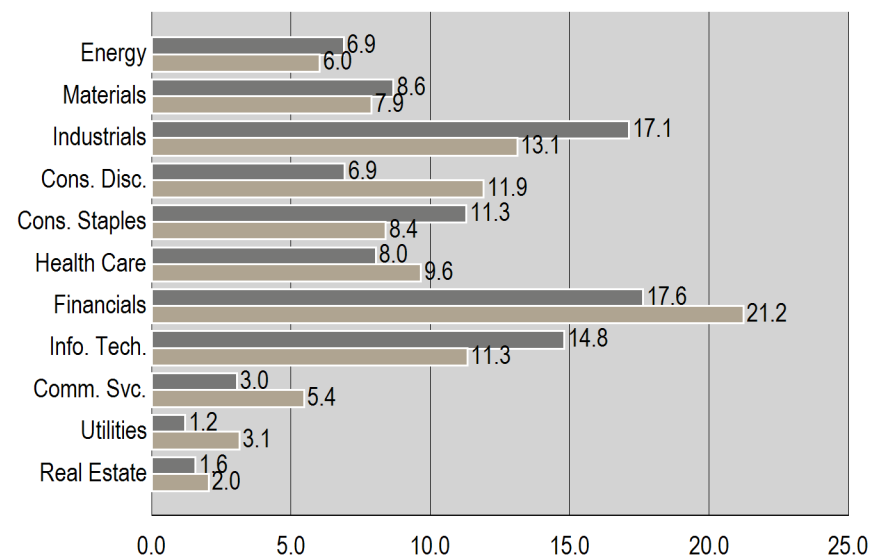
**Top Holdings**

TOTALENERGIES SE	2.8%
SCHNEIDER ELECTRIC SA	1.8%
ASTRAZENECA PLC	1.6%
SAMSUNG ELECTRONICS CO LTD	1.6%
FRANCO-NEVADA CORP	1.6%
CADENCE DESIGN SYSTEMS INC	1.5%
NESTLE SA, CHAM UND VEVEY	1.5%
NOVO NORDISK A/S	1.4%
ASML HOLDING NV	1.4%
LEGRAND	1.4%
<b>Total</b>	<b>16.5%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Non-U.S. Equity Composite	12.6%	27.5%	53.8%	6.1%
MSCI ACWI ex USA	16.1%	27.3%	56.6%	0.0%
<i>Weight Over/Under</i>	-3.5%	0.1%	-2.8%	6.1%

**Sector Allocation (%) vs MSCI ACWI ex USA**



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	4.7%	7.6%	-2.9%
United States	6.7%	0.0%	6.7%
Europe Ex U.K.	48.5%	32.0%	16.5%
United Kingdom	11.6%	9.8%	1.7%
Pacific Basin Ex Japan	3.3%	7.3%	-4.0%
Japan	11.8%	14.7%	-2.9%
Emerging Markets	11.6%	28.0%	-16.3%
Other	1.9%	0.7%	1.2%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

Common Holdings Matrix

	<i>American Funds Int'l Growth &amp; Income</i>		<i>MFS International Intrinsic Value</i>	
	#	%	#	%
American Funds Int'l Growth & Income	--	--	29	34
MFS International Intrinsic Value	29	16	--	--





# City of Allentown Firemen Pension

## Performance Summary (Net)

As of September 30, 2023

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	Market Value	% of Portfolio	Policy %	Inception	Inception Date
<b>Firemen Pension Total Fund</b>	<b>-2.4</b>	<b>5.8</b>	<b>11.8</b>	<b>6.1</b>	<b>6.0</b>	<b>124,804,277</b>	<b>100.0</b>	<b>100.0</b>	<b>6.4</b>	<b>Apr-05</b>
Policy Index	-2.6	6.5	12.4	5.7	6.1				6.6	Apr-05
InvMetrics Public DB Net Rank	27	23	32	15	13				33	Apr-05
<b>Total Equity Composite</b>	<b>-3.2</b>	<b>9.6</b>	<b>20.2</b>	<b>9.1</b>	<b>7.8</b>	<b>82,204,755</b>	<b>65.9</b>	<b>66.0</b>	<b>11.2</b>	<b>Jan-12</b>
Total Equity Policy Index	-3.4	10.9	20.6	8.2	7.7				11.1	Jan-12
Vanguard Equity Income	-2.0	-1.1	12.7	12.0	7.8	7,702,570	6.2		10.7	Aug-12
Russell 1000 Value	-3.2	1.8	14.4	11.0	6.2				10.0	Aug-12
Large Value MStar MF Rank	40	83	74	54	25				29	Aug-12
Vanguard Total Stock Market Index	-3.3	12.3	20.4	9.2	9.1	35,719,956	28.6		10.1	Nov-14
CRSP US Total Market TR USD	-3.3	12.3	20.4	9.3	9.1				10.1	Nov-14
All Cap MStar MF Rank	41	25	28	51	23				24	Nov-14
Vanguard Total Stock Market Index ETF	-3.2	12.4	20.3	9.3	9.1	15,319,646	12.3		10.5	Apr-14
CRSP US Total Market TR USD	-3.3	12.3	20.4	9.3	9.1				10.5	Apr-14
All Cap MStar MF Rank	39	25	29	51	24				23	Apr-14
Vanguard Mid Cap Index	-5.1	3.3	12.6	--	--	3,707,209	3.0		-3.4	May-21
CRSP US Mid Cap TR USD	-5.1	3.3	12.6	--	--				-3.4	May-21
Mid-Cap Blend MStar MF Rank	78	64	64	--	--				56	May-21
Dodge & Cox Global Stock	0.6	11.6	26.4	16.3	7.8	5,215,686	4.2		6.8	Aug-14
MSCI ACWI Value NR USD	-1.8	2.4	17.0	9.7	4.0				4.2	Aug-14
Global Large Stock Value Mstar MF Rank	1	10	16	3	3				9	Aug-14
American Funds Int'l Growth & Income	-4.1	5.7	24.5	5.7	3.8	7,319,432	5.9		2.9	Aug-14
MSCI ACWI ex USA	-3.8	5.3	20.4	3.7	2.6				2.6	Aug-14
Foreign Large Blend MStar MF Rank	35	55	40	31	21				69	Aug-14
MFS International Intrinsic Value	-4.7	7.2	20.5	0.2	4.4	7,220,256	5.8		6.4	Aug-14
MSCI EAFE	-4.1	7.1	25.6	5.8	3.2				3.3	Aug-14
Foreign Large Blend MStar MF Rank	54	25	77	97	11				3	Aug-14
<b>Real Estate Composite</b>						<b>14,284,228</b>	<b>11.4</b>	<b>10.0</b>		
Morgan Stanley Prime Property Fund	-0.2	-3.7	-7.2	8.0	6.4	14,284,228	11.4		6.4	Oct-18
NFI-ODCE	-2.1	-8.1	-12.9	6.2	4.7				4.7	Oct-18
InvMetrics Public DB Real Estate Priv Net Rank	13	13	11	9	6				6	Oct-18

City of Allentown Firemen Pension

Performance Summary (Net)

As of September 30, 2023

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	Market Value	% of Portfolio	Policy %	Inception	Inception Date
<b>U.S. Fixed Income Composite</b>	<b>-1.6</b>	<b>0.4</b>	<b>1.9</b>	<b>-2.9</b>	<b>0.4</b>	<b>23,366,718</b>	<b>18.7</b>	<b>23.0</b>	<b>1.0</b>	<b>Jan-12</b>
<i>Fixed Income Policy Index</i>	-1.1	0.7	2.0	-2.5	0.6				1.0	Jan-12
Vanguard Total Bond Market Index	-3.1	-0.9	0.7	-5.2	0.1	12,009,974	9.6		1.1	Dec-11
<i>Bloomberg US Aggregate TR</i>	-3.2	-1.2	0.6	-5.2	0.1				1.1	Dec-11
<i>Intermediate Core Bond MStar MF Rank</i>	57	58	57	66	56				76	Dec-11
Sterling Capital - Short-Term Bonds	1.3	3.0	3.8	0.4	1.5	7,680,280	6.2		1.3	Jul-14
<i>Sterling Capital Policy Index</i>	0.9	2.3	3.1	0.0	1.4				1.1	Jul-14
Baird Core Plus Bond Fund	-2.7	-0.2	2.3	--	--	3,676,464	2.9		-7.4	Nov-21
<i>Bloomberg US Universal TR</i>	-2.9	-0.6	1.6	--	--				-7.7	Nov-21
<i>Intermediate Core Plus Bond MStar MF Rank</i>	31	31	19	--	--				26	Nov-21
<b>Cash Equivalents Composite</b>						<b>4,948,577</b>	<b>4.0</b>	<b>1.0</b>		
Govt Obligations MM Fund						4,948,577	4.0			

Policy Index History

Firemen Pension Total Fund		
1/1/2020	Present	52% Russell 3000 / 14% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 12% Sterling Capital Policy Index / 1% ICE BofA 91 Days T-Bills TR / 10% NFI-ODCE
10/1/2019	12/31/2019	52% Russell 3000 / 14% MSCI ACWI ex USA / 12% Bloomberg US Aggregate TR / 13.5% Sterling Capital Policy Index / 1% ICE BofA 91 Days T-Bills TR / 7.5% NFI-ODCE
9/1/2019	9/30/2019	52% Russell 3000 / 14% MSCI ACWI ex USA / 13.5% Bloomberg US Aggregate TR / 14.5% Sterling Capital Policy Index / 1% ICE BofA 91 Days T-Bills TR / 5% NFI-ODCE
10/1/2018	8/31/2019	49% Russell 3000 / 17% MSCI ACWI ex USA / 4% Bloomberg US Aggregate TR / 24% Bloomberg US Govt 1-5 Yr TR / 1% ICE BofA 91 Days T-Bills TR / 5% NFI-ODCE
8/1/2016	9/30/2018	51% Russell 3000 / 17% MSCI ACWI ex USA / 4% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 1% ICE BofA 91 Days T-Bills TR
7/1/2015	7/30/2016	51% Russell 3000 / 17% MSCI ACWI ex USA / 3% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 2% ICE BofA 91 Days T-Bills TR
6/1/2015	6/30/2015	44.25% Russell 3000 / 14.75% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 4% ICE BofA 91 Days T-Bills TR
5/1/2015	5/31/2015	42.75% Russell 3000 / 14.25% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 6% ICE BofA 91 Days T-Bills TR
4/1/2015	4/30/2015	41.25% Russell 3000 / 13.75% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 8% ICE BofA 91 Days T-Bills TR
3/1/2015	3/31/2015	39.75% Russell 3000 / 13.25% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 10% ICE BofA 91 Days T-Bills TR
2/1/2015	2/28/2015	38.25% Russell 3000 / 12.75% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 12% ICE BofA 91 Days T-Bills TR
1/1/2015	1/31/2015	36.75% Russell 3000 / 12.25% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 14% ICE BofA 91 Days T-Bills TR
12/1/2014	12/31/2014	35.25% Russell 3000 / 11.75% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 16% ICE BofA 91 Days T-Bills TR
11/1/2014	11/30/2014	33.75% Russell 3000 / 11.25% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 18% ICE BofA 91 Days T-Bills TR
10/1/2014	10/31/2014	32.25% Russell 3000 / 10.75% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 20% ICE BofA 91 Days T-Bills TR
9/1/2014	9/30/2014	30.75% Russell 3000 / 10.25% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 22% ICE BofA 91 Days T-Bills TR
8/1/2014	8/31/2014	29.25% Russell 3000 / 9.75% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 24% ICE BofA 91 Days T-Bills TR
7/1/2014	7/31/2014	27.75% Russell 3000 / 9.25% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 26% ICE BofA 91 Days T-Bills TR
6/1/2014	6/30/2014	26.25% Russell 3000 / 8.75% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 55% ICE BofA 91 Days T-Bills TR
5/1/2014	5/31/2014	24.75% Russell 3000 / 8.25% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 57% ICE BofA 91 Days T-Bills TR
4/1/2014	4/30/2014	23.25% Russell 3000 / 7.75% MSCI ACWI ex USA / 10% Bloomberg US Aggregate TR / 59% ICE BofA 91 Days T-Bills TR
3/1/2014	3/31/2014	21.76% Russell 3000 / 7.53% MSCI ACWI ex USA / 11.71% Bloomberg US Aggregate TR / 59% ICE BofA 91 Days T-Bills TR
2/1/2014	2/28/2014	21.22% Russell 3000 / 7.35% MSCI ACWI ex USA / 11.43% Bloomberg US Aggregate TR / 60% ICE BofA 91 Days T-Bills TR
1/1/2014	1/31/2014	21.22% Russell 3000 / 7.35% MSCI ACWI ex USA / 11.43% Bloomberg US Aggregate TR / 60% ICE BofA 91 Days T-Bills TR
1/1/2012	12/31/2013	52% Russell 3000 / 28% Bloomberg US Aggregate TR / 18% MSCI EAFE / 2% 91 Day T-Bills

# City of Allentown Firemen Pension

# Policy Index History

As of September 30, 2023

1/1/2020	Present	52% Russell 3000 / 14% MSCI ACWI ex USA / 11% Bloomberg US Aggregate TR / 12% Bloomberg US Govt 1-5 Yr TR / 1% ICE BofA 91 Days T-Bills TR / 10% NFI-ODCE
10/1/2018	12/31/2019	49% Russell 3000 / 17% MSCI ACWI ex USA / 4% Bloomberg US Aggregate TR / 24% Bloomberg US Govt 1-5 Yr TR / 1% ICE BofA 91 Days T-Bills TR / 5% NFI-ODCE
8/1/2016	9/30/2018	51% Russell 3000 / 17% MSCI ACWI ex USA / 4% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 1% ICE BofA 91 Days T-Bills TR
7/1/2014	7/31/2016	51% Russell 3000 / 17% MSCI ACWI ex USA / 3% Bloomberg US Aggregate TR / 27% Bloomberg US Govt 1-5 Yr TR / 2% ICE BofA 91 Days T-Bills TR
1/1/2012	6/30/2014	52% Russell 3000 / 28% Bloomberg US Aggregate TR / 18% MSCI EAFE / 2% 91 Day T-Bills
1/1/2007	12/31/2011	51% Russell 3000 / 32% Bloomberg US Govt/Credit Int TR / 12% MSCI EAFE / 5% MSCI US REIT
4/1/2005	12/31/2006	18% FT Wilshire 5000 Full Cap / 18% S&P 500 / 8% Russell 2000 / 20% Bloomberg US Aggregate TR / 20% Bloomberg US Govt/Credit Int TR / 10% MSCI EAFE / 6% FTSE NAREIT All Equity REIT
<b>Total Equity Composite</b>		
9/1/2019	Present	79% Russell 3000 / 21% MSCI ACWI ex USA
10/1/2018	8/31/2019	74% Russell 3000 / 26% MSCI ACWI ex USA
7/1/2014	9/30/2018	75% Russell 3000 / 25% MSCI ACWI ex USA
1/1/2012	6/30/2014	74% Russell 3000 / 26% MSCI EAFE
<b>U.S. Equity Composite</b>		
1/1/2012	Present	Russell 3000
<b>Global Equity Composite</b>		
1/1/2012	Present	MSCI ACWI
<b>Non-U.S. Equity Composite</b>		
6/1/2014	Present	MSCI ACWI ex USA
1/1/2012	5/31/2014	MSCI EAFE
<b>Real Estate Composite</b>		
10/1/2018	Present	NFI-ODCE
<b>U.S. Fixed Income Composite</b>		
9/1/2019	Present	52% Sterling Capital Policy Index / 48% Bloomberg US Aggregate TR
8/1/2016	8/31/2019	13% Bloomberg US Aggregate TR / 87% Bloomberg US Govt 1-5 Yr TR
6/1/2014	7/31/2016	10% Bloomberg US Aggregate TR / 90% Bloomberg US Govt 1-5 Yr TR
1/1/2012	5/31/2014	Bloomberg US Aggregate TR
<b>Cash Equivalents Composite</b>		
12/31/2011	Present	ICE BofA 91 Days T-Bills TR

# City of Allentown Firemen Pension

## Fee Summary

As of September 30, 2023

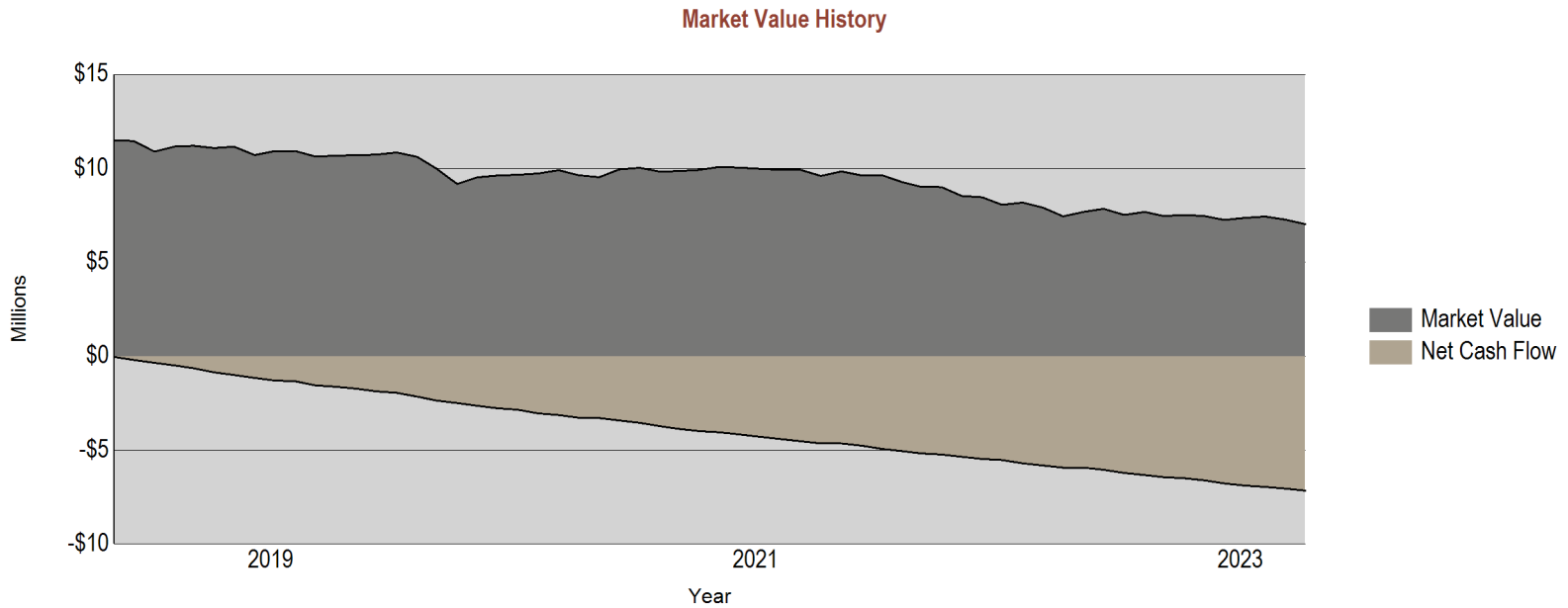
Account	Fee Schedule	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Vanguard Equity Income	0.19% of Assets	6.2%	\$14,635	0.19%
Vanguard Total Stock Market Index	0.03% of Assets	28.6%	\$10,716	0.03%
Vanguard Total Stock Market Index ETF	0.03% of Assets	12.3%	\$4,596	0.03%
Vanguard Mid Cap Index	0.04% of Assets	3.0%	\$1,483	0.04%
Dodge & Cox Global Stock	0.62% of Assets	4.2%	\$32,337	0.62%
American Funds Int'l Growth & Income	0.54% of Assets	5.9%	\$39,525	0.54%
MFS International Intrinsic Value	0.61% of Assets	5.8%	\$44,044	0.61%
Morgan Stanley Prime Property Fund	0.84% of Assets	11.4%	\$119,988	0.84%
Vanguard Total Bond Market Index	0.03% of Assets	9.6%	\$3,723	0.03%
Sterling Capital - Short-Term Bonds	0.08% of Assets	6.2%	\$6,144	0.08%
Baird Core Plus Bond Fund	0.30% of Assets	2.9%	\$11,029	0.30%
Govt Obligations MM Fund	0.30% of Assets	4.0%	\$14,846	0.30%
<b>Investment Management Fee</b>		<b>100.0%</b>	<b>\$303,065</b>	<b>0.24%</b>

# Officers & Employee Pension

## Portfolio Overview



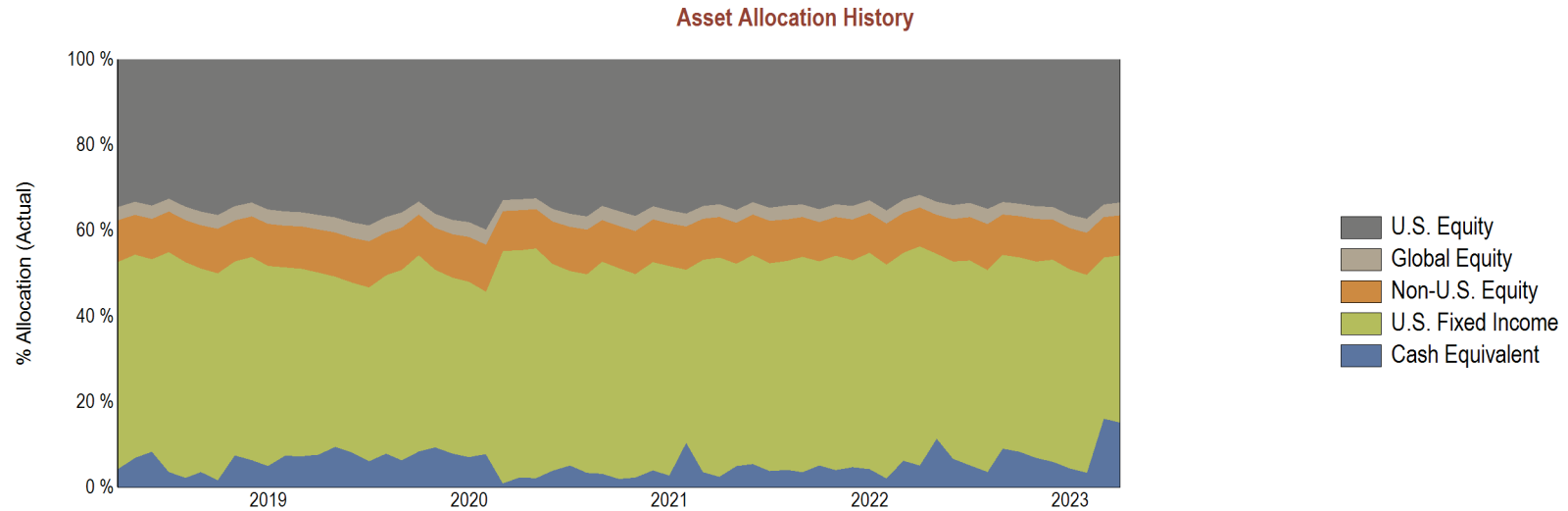
As of September 30, 2023



**Cash Flow Summary by Manager From July 01, 2023 to September 30, 2023**

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Vanguard Equity Income	\$307,537	-\$22,500	-\$5,496	\$279,540
Vanguard Total Stock Market Index	\$2,197,622	-\$205,000	-\$68,893	\$1,923,729
Vanguard Mid Cap Index	\$158,286	-\$12,500	-\$7,718	\$138,068
Dodge & Cox Global Stock	\$231,110	-\$22,500	\$1,480	\$210,090
American Funds Int'l Growth & Income	\$373,255	-\$20,000	-\$14,984	\$338,270
MFS International Intrinsic Value	\$335,406	\$0	-\$15,845	\$319,562
Sterling Capital - Short-Term Bonds	\$3,423,647	-\$715,880	\$35,816	\$2,743,583
Govt Obligations MM Fund	\$335,281	\$727,687	\$9,564	\$1,072,532
<b>Total</b>	<b>\$7,362,144</b>	<b>-\$270,693</b>	<b>-\$66,076</b>	<b>\$7,025,375</b>

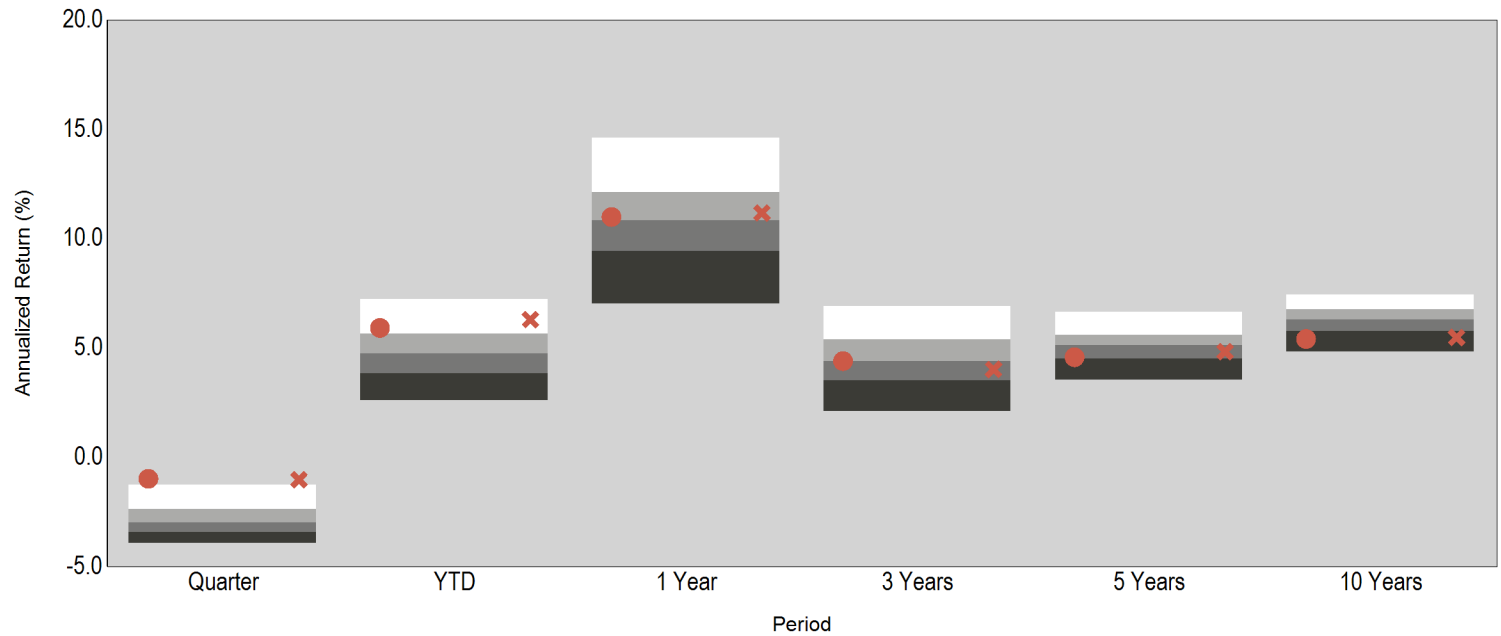




	Market Value	% of Portfolio	Policy %	Policy Difference
<b>O&amp;E Pension Total Fund</b>	<b>7,025,375</b>	<b>100.0</b>	<b>100.0</b>	<b>0</b>
<b>Total Equity Composite</b>	<b>3,209,260</b>	<b>45.7</b>	<b>46.0</b>	<b>-22,413</b>
Vanguard Equity Income	279,540	4.0		
Vanguard Total Stock Market Index	1,923,729	27.4		
Vanguard Mid Cap Index	138,068	2.0		
Dodge & Cox Global Stock	210,090	3.0		
American Funds Int'l Growth & Income	338,270	4.8		
MFS International Intrinsic Value	319,562	4.5		
<b>U.S. Fixed Income Composite</b>	<b>2,743,583</b>	<b>39.1</b>	<b>52.0</b>	<b>-909,612</b>
Sterling Capital - Short-Term Bonds	2,743,583	39.1		
<b>Cash Equivalents Composite</b>	<b>1,072,532</b>	<b>15.3</b>	<b>2.0</b>	<b>932,025</b>
Govt Obligations MM Fund	1,072,532	15.3	2.0	932,025

As of September 30, 2023

InvMetrics Public DB Net Return Comparison

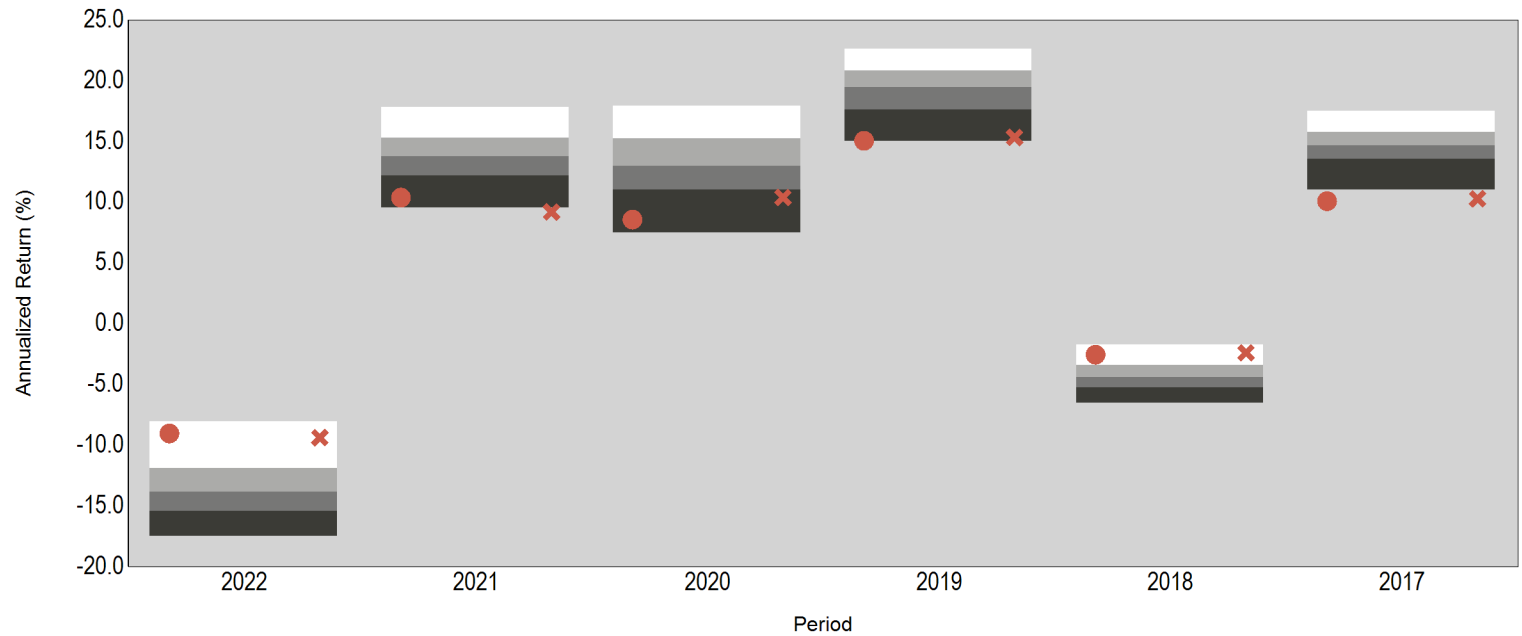


Return (Rank)

5th Percentile	-1.2	7.2	14.6	6.9	6.6	7.4
25th Percentile	-2.4	5.7	12.1	5.4	5.6	6.8
Median	-3.0	4.7	10.8	4.4	5.1	6.3
75th Percentile	-3.4	3.8	9.4	3.5	4.5	5.8
95th Percentile	-3.9	2.6	7.0	2.1	3.5	4.8
# of Portfolios	562	556	554	543	525	441
● O&E Pension Total Fund	-1.0 (4)	5.9 (20)	11.0 (48)	4.4 (50)	4.6 (72)	5.4 (88)
▲ Policy Index	-1.0 (4)	6.3 (15)	11.2 (44)	4.0 (62)	4.8 (61)	5.5 (86)

As of September 30, 2023

InvMetrics Public DB Net Return Comparison



Return (Rank)

5th Percentile	-8.0	17.8	17.9	22.6	-1.7	17.5						
25th Percentile	-11.9	15.3	15.3	20.8	-3.4	15.8						
Median	-13.8	13.8	13.0	19.5	-4.4	14.7						
75th Percentile	-15.4	12.2	11.0	17.6	-5.2	13.6						
95th Percentile	-17.5	9.6	7.5	15.1	-6.5	11.1						
# of Portfolios	539	559	596	550	496	269						
● O&E Pension Total Fund	-9.0	(8)	10.4	(93)	8.6	(93)	15.1	(95)	-2.5	(10)	10.1	(97)
▲ Policy Index	-9.4	(9)	9.2	(97)	10.4	(82)	15.3	(94)	-2.4	(9)	10.3	(97)

**RISK RETURN STATISTICS**  
October 01, 2018 Through September 30, 2023

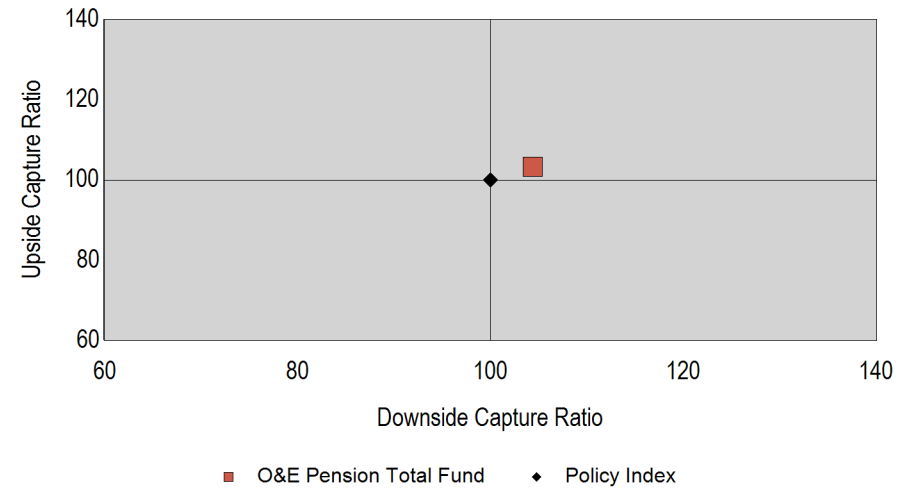
	O&E Pension Total Fund	Policy Index
<b>RETURN SUMMARY STATISTICS</b>		
Number of Periods	60	60
Maximum Return	5.75	5.75
Minimum Return	-6.90	-5.91
Annualized Return	4.58	4.84
Total Return	25.10	26.63
Annualized Excess Return Over Risk Free	2.95	3.20
Annualized Excess Return	-0.25	0.00

	O&E Pension Total Fund	Policy Index
<b>RISK SUMMARY STATISTICS</b>		
Beta	1.03	1.00
Upside Deviation	4.56	4.70
Downside Deviation	5.67	5.37

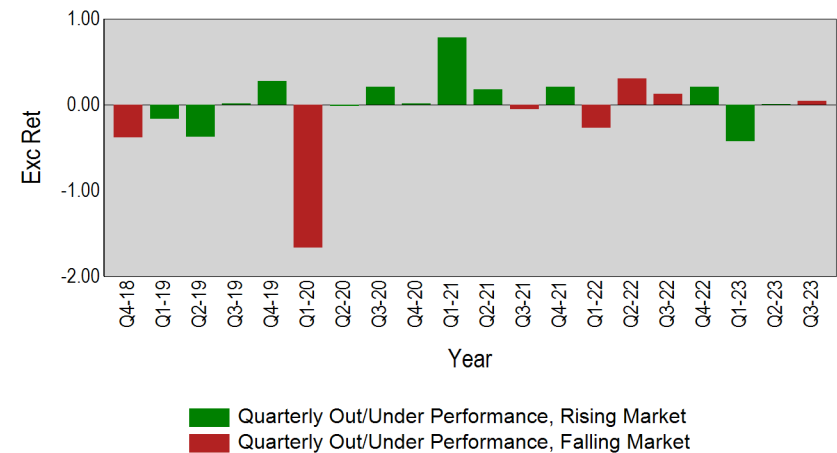
	O&E Pension Total Fund	Policy Index
<b>RISK/RETURN SUMMARY STATISTICS</b>		
Annualized Standard Deviation	8.92	8.65
Alpha	-0.03	0.00
Sharpe Ratio	0.33	0.37
Excess Return Over Market / Risk	-0.03	0.00
Tracking Error	0.85	0.00
Information Ratio	-0.30	--

	O&E Pension Total Fund	Policy Index
<b>CORRELATION STATISTICS</b>		
R-Squared	0.99	1.00
Correlation	1.00	1.00

Upside Capture Ratio vs. Downside Capture Ratio  
5 Years Ending September 30, 2023



Quarterly Excess Performance  
O&E Pension Total Fund vs. Policy Index



As of September 30, 2023

**RISK RETURN STATISTICS**  
October 01, 2018 Through September 30, 2023

Total Equity Composite Total Equity Policy Index

**RETURN SUMMARY STATISTICS**

Number of Periods	60	60
Maximum Return	12.88	12.47
Minimum Return	-14.60	-13.93
Annualized Return	7.67	7.60
Total Return	44.68	44.24
Annualized Excess Return Over Risk Free	6.04	5.97
Annualized Excess Return	0.07	0.00

**RISK SUMMARY STATISTICS**

Beta	0.99	1.00
Upside Deviation	9.95	10.10
Downside Deviation	11.75	11.84

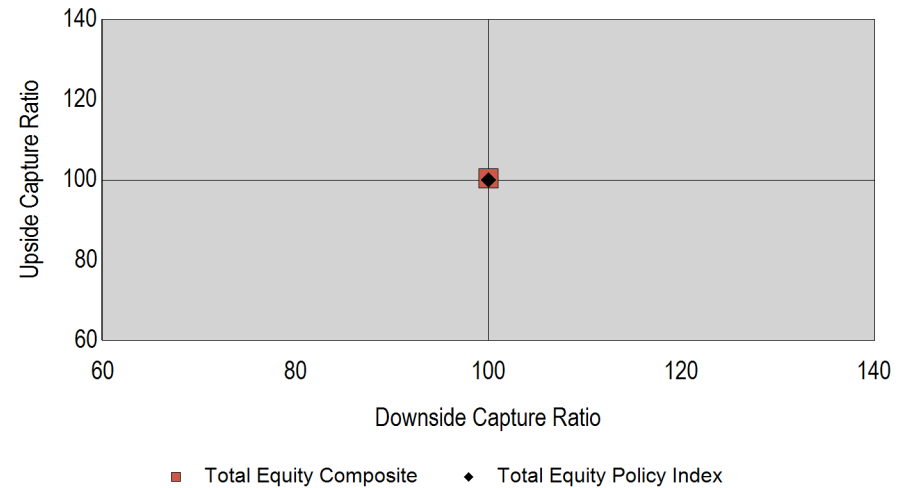
**RISK/RETURN SUMMARY STATISTICS**

Annualized Standard Deviation	18.73	18.79
Alpha	0.01	0.00
Sharpe Ratio	0.32	0.32
Excess Return Over Market / Risk	0.00	0.00
Tracking Error	1.25	0.00
Information Ratio	0.05	--

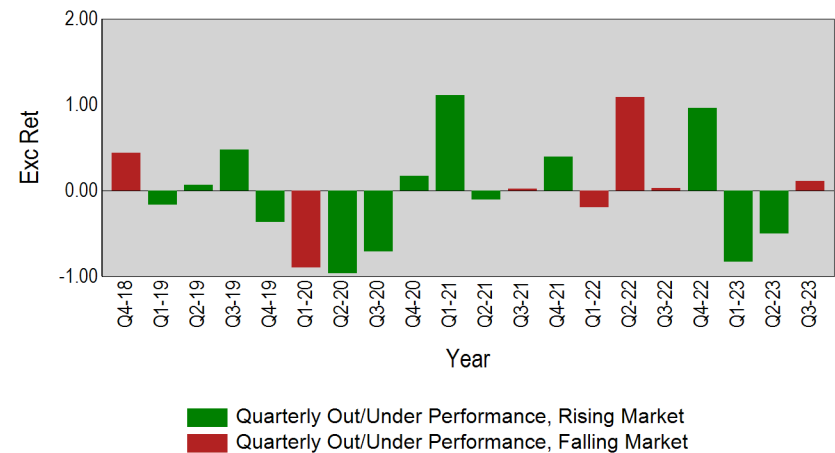
**CORRELATION STATISTICS**

R-Squared	1.00	1.00
Correlation	1.00	1.00

**Upside Capture Ratio vs. Downside Capture Ratio**  
5 Years Ending September 30, 2023



**Quarterly Excess Performance**  
Total Equity Composite vs. Total Equity Policy Index



**Characteristics**

	Portfolio	MSCI ACWI
Number of Holdings	4,074	2,947
Weighted Avg. Market Cap. (\$B)	377.7	408.9
Median Market Cap. (\$B)	3.0	12.1
Price To Earnings	17.9	18.0
Price To Book	3.3	3.3
Price To Sales	1.8	1.8
Return on Equity (%)	20.5	21.1
Yield (%)	2.1	2.3

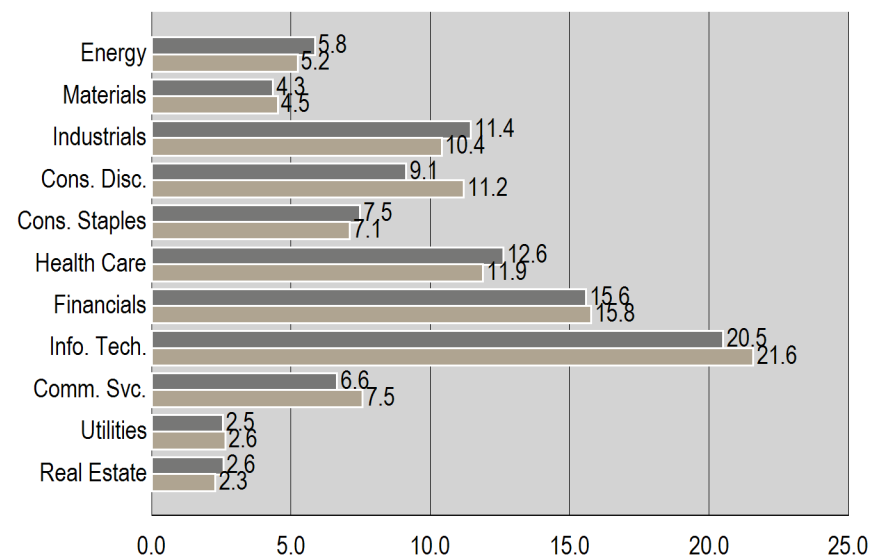
**Top Holdings**

APPLE INC	3.7%
MICROSOFT CORP	3.5%
AMAZON.COM INC	1.8%
NVIDIA CORPORATION	1.5%
ALPHABET INC	1.2%
ALPHABET INC	1.1%
META PLATFORMS INC	1.0%
TESLA INC	1.0%
BERKSHIRE HATHAWAY INC	0.9%
JPMORGAN CHASE & CO	0.9%
<b>Total</b>	<b>16.7%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Total Equity Composite	8.2%	17.4%	71.0%	3.3%
MSCI ACWI	7.2%	17.8%	75.1%	0.0%
<i>Weight Over/Under</i>	1.1%	-0.3%	-4.1%	3.3%

**Sector Allocation (%) vs MSCI ACWI**



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	1.6%	2.9%	-1.3%
United States	75.1%	62.3%	12.9%
Europe Ex U.K.	12.8%	12.1%	0.7%
United Kingdom	3.6%	3.7%	-0.1%
Pacific Basin Ex Japan	0.7%	2.7%	-2.0%
Japan	2.5%	5.5%	-3.0%
Emerging Markets	3.0%	10.6%	-7.6%
Other	0.6%	0.3%	0.4%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**Characteristics**

	Portfolio	Russell 3000
Number of Holdings	3,746	2,994
Weighted Avg. Market Cap. (\$B)	469.9	549.4
Median Market Cap. (\$B)	2.1	2.3
Price To Earnings	19.8	21.0
Price To Book	3.6	3.9
Price To Sales	2.1	2.2
Return on Equity (%)	21.8	22.3
Yield (%)	1.8	1.6

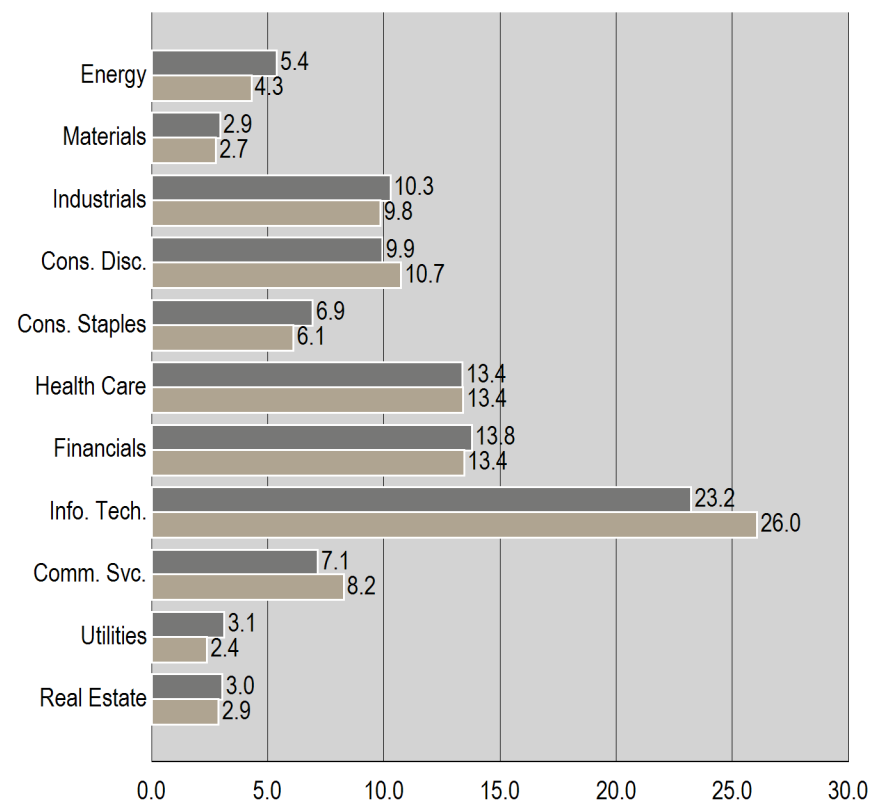
**Top Holdings**

APPLE INC	5.0%
MICROSOFT CORP	4.6%
AMAZON.COM INC	2.3%
NVIDIA CORPORATION	2.0%
ALPHABET INC	1.5%
TESLA INC	1.3%
META PLATFORMS INC	1.3%
ALPHABET INC	1.3%
BERKSHIRE HATHAWAY INC	1.2%
JPMORGAN CHASE & CO	1.2%
<b>Total</b>	<b>21.9%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
U.S. Equity Composite	3.0%	24.5%	69.9%	2.6%
Russell 3000	5.6%	21.1%	73.3%	0.0%
<i>Weight Over/Under</i>	-2.6%	3.4%	-3.4%	2.6%

**Sector Allocation (%) vs Russell 3000**



Common Holdings Matrix

	<i>Vanguard Equity Income</i>		<i>Vanguard Total Stock Market Index</i>		<i>Vanguard Mid Cap Index</i>	
	#	%	#	%	#	%
Vanguard Equity Income	--	--	180	30	48	15
Vanguard Total Stock Market Index	180	89	--	--	334	99
Vanguard Mid Cap Index	48	16	334	16	--	--



**Characteristics**

	Portfolio	MSCI ACWI ex USA
Number of Holdings	322	2,320
Weighted Avg. Market Cap. (\$B)	85.4	85.0
Median Market Cap. (\$B)	24.6	9.1
Price To Earnings	14.4	13.5
Price To Book	2.6	2.4
Price To Sales	1.6	1.1
Return on Equity (%)	18.0	15.1
Yield (%)	3.2	3.4

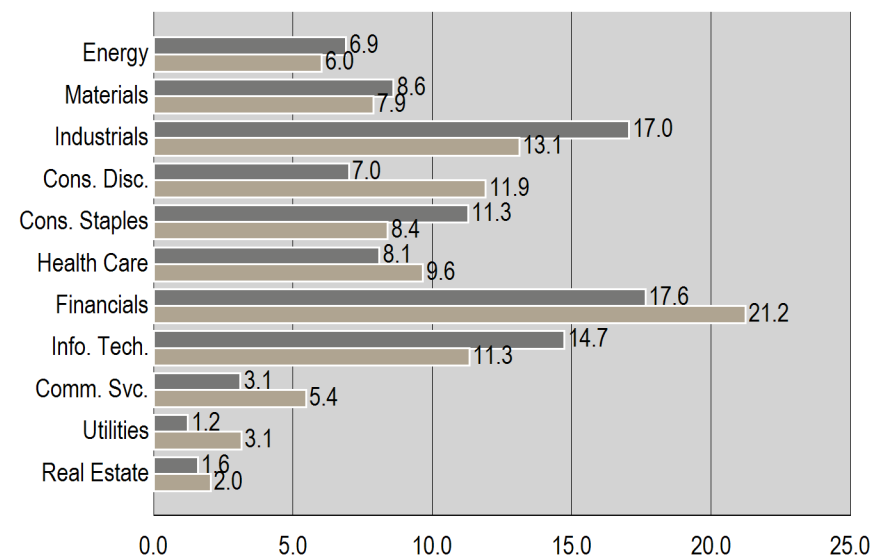
**Top Holdings**

TOTALENERGIES SE	2.8%
SCHNEIDER ELECTRIC SA	1.8%
ASTRAZENECA PLC	1.7%
SAMSUNG ELECTRONICS CO LTD	1.6%
FRANCO-NEVADA CORP	1.5%
NOVO NORDISK A/S	1.5%
CADENCE DESIGN SYSTEMS INC	1.5%
NESTLE SA, CHAM UND VEVEY	1.5%
ASML HOLDING NV	1.4%
LEGRAND	1.3%
<b>Total</b>	<b>16.5%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Non-U.S. Equity Composite	12.5%	27.4%	54.0%	6.1%
MSCI ACWI ex USA	16.1%	27.3%	56.6%	0.0%
<i>Weight Over/Under</i>	-3.6%	0.1%	-2.6%	6.1%

**Sector Allocation (%) vs MSCI ACWI ex USA**



**Region Allocation Summary**

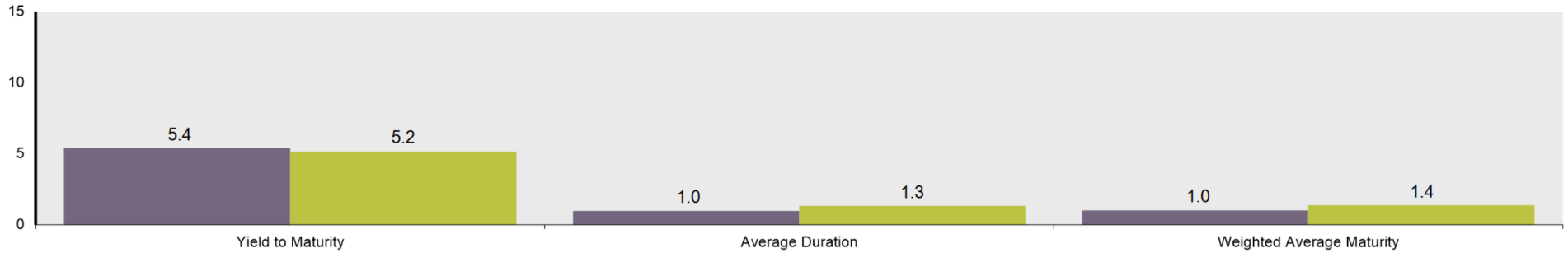
Region	% of Total	% of Bench	% Diff
North America ex U.S.	4.7%	7.6%	-2.9%
United States	6.7%	0.0%	6.7%
Europe Ex U.K.	48.3%	32.0%	16.3%
United Kingdom	11.6%	9.8%	1.8%
Pacific Basin Ex Japan	3.3%	7.3%	-3.9%
Japan	11.7%	14.7%	-3.0%
Emerging Markets	11.8%	28.0%	-16.2%
Other	1.9%	0.7%	1.2%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

Common Holdings Matrix

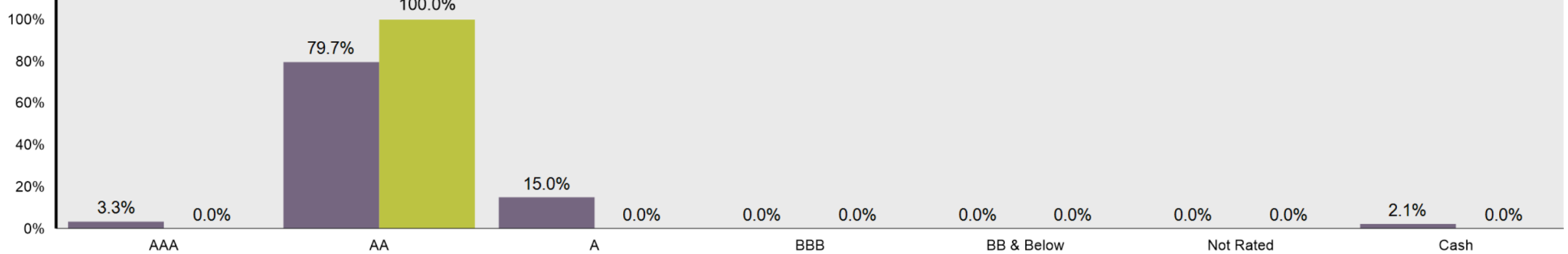
	<i>American Funds Int'l Growth &amp; Income</i>		<i>MFS International Intrinsic Value</i>	
	#	%	#	%
American Funds Int'l Growth & Income	--	--	29	34
MFS International Intrinsic Value	29	16	--	--

**Manager Summary:** Manages a customized portfolio of bond investments with the objective of meeting cash needs. Portfolio comprised of corporate and government debt. Regularly reassesses client objectives, cash flows, and risk to structure the most ideal cash flow matched portfolio. Emphasizes current return, liquidity, quality and stability of principal using a wide array of short-term obligations. Investment process combines top-down research on the current interest rate cycle with bottom up individual security analysis and selection.

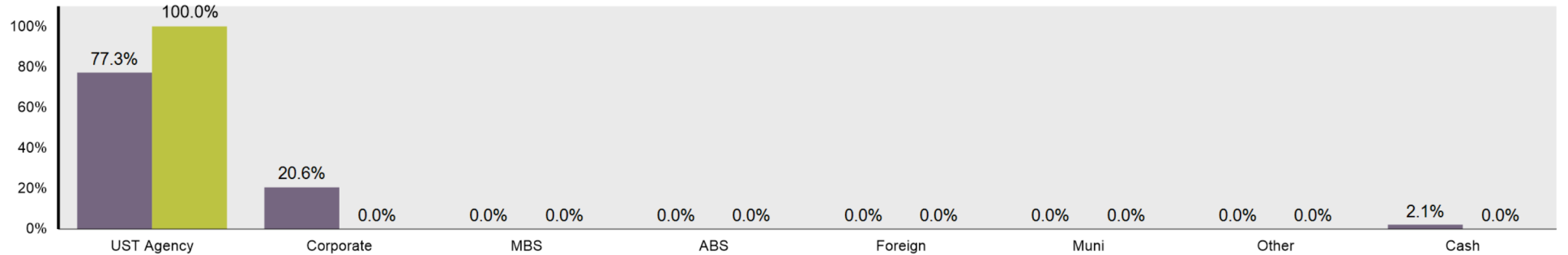
Yield to Maturity



Credit Quality



US Sector



Officers & Employee Pension - Sterling Capital - Short-Term Bonds

Sterling Capital Benchmark

# City of Allentown Officers & Employee Pension

## Performance Summary (Net)

As of September 30, 2023

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	Market Value	% of Portfolio	Policy %	Inception	Inception Date
<b>O&amp;E Pension Total Fund</b>	<b>-1.0</b>	<b>5.9</b>	<b>11.0</b>	<b>4.4</b>	<b>4.6</b>	<b>7,025,375</b>	<b>100.0</b>	<b>100.0</b>	<b>5.5</b>	<b>Apr-05</b>
Policy Index	-1.0	6.3	11.2	4.0	4.8				5.9	Apr-05
InvMetrics Public DB Net Rank	4	20	48	50	72				82	Apr-05
<b>Total Equity Composite</b>	<b>-3.3</b>	<b>9.4</b>	<b>20.3</b>	<b>8.9</b>	<b>7.7</b>	<b>3,209,260</b>	<b>45.7</b>	<b>46.0</b>	<b>11.1</b>	<b>Jan-12</b>
Total Equity Policy Index	-3.4	10.7	20.6	8.1	7.6				11.1	Jan-12
Vanguard Equity Income	-2.0	-1.1	12.7	12.0	7.8	279,540	4.0		10.7	Aug-12
Russell 1000 Value	-3.2	1.8	14.4	11.0	6.2				10.0	Aug-12
Large Value MStar MF Rank	40	83	74	54	25				29	Aug-12
Vanguard Total Stock Market Index	-3.3	12.3	20.4	9.2	9.1	1,923,729	27.4		10.1	Nov-14
CRSP US Total Market TR USD	-3.3	12.3	20.4	9.3	9.1				10.1	Nov-14
All Cap MStar MF Rank	41	25	28	51	23				24	Nov-14
Vanguard Mid Cap Index	-5.1	3.3	12.6	--	--	138,068	2.0		-3.4	May-21
CRSP US Mid Cap TR USD	-5.1	3.3	12.6	--	--				-3.4	May-21
Mid-Cap Blend MStar MF Rank	78	64	64	--	--				56	May-21
Dodge & Cox Global Stock	0.6	11.6	26.4	16.3	7.8	210,090	3.0		6.8	Aug-14
MSCI ACWI Value NR USD	-1.8	2.4	17.0	9.7	4.0				4.2	Aug-14
Global Large Stock Value Mstar MF Rank	1	10	16	3	3				9	Aug-14
American Funds Int'l Growth & Income	-4.1	5.7	24.5	5.7	3.8	338,270	4.8		2.9	Aug-14
MSCI ACWI ex USA	-3.8	5.3	20.4	3.7	2.6				2.6	Aug-14
Foreign Large Blend MStar MF Rank	35	55	40	31	21				69	Aug-14
MFS International Intrinsic Value	-4.7	7.2	20.5	0.2	4.4	319,562	4.5		6.4	Aug-14
MSCI EAFE	-4.1	7.1	25.6	5.8	3.2				3.3	Aug-14
Foreign Large Blend MStar MF Rank	54	25	77	97	11				3	Aug-14
<b>U.S. Fixed Income Composite</b>	<b>1.1</b>	<b>2.8</b>	<b>3.7</b>	<b>0.0</b>	<b>1.2</b>	<b>2,743,583</b>	<b>39.1</b>	<b>52.0</b>	<b>1.4</b>	<b>Dec-11</b>
Fixed Income Policy Index	0.9	2.3	3.1	0.0	1.7				1.5	Dec-11
Sterling Capital - Short-Term Bonds	1.1	2.8	3.7	0.0	1.2	2,743,583	39.1		1.1	Jun-14
Sterling Capital Policy Index	0.9	2.3	3.1	0.0	1.4				1.1	Jun-14
<b>Cash Equivalents Composite</b>						<b>1,072,532</b>	<b>15.3</b>	<b>2.0</b>		
Govt Obligations MM Fund						1,072,532	15.3	2.0		

**Policy Index History**

O&E Pension Total Fund		
9/1/2019	Present	35% Russell 3000 / 11% MSCI ACWI ex USA / 52% Sterling Capital Policy Index / 2% ICE BofA 91 Days T-Bills TR
6/1/2014	8/31/2019	35% Russell 3000 / 11% MSCI ACWI ex USA / 52% Bloomberg US Govt 1-5 Yr TR / 2% ICE BofA 91 Days T-Bills TR
5/1/2014	5/31/2014	44.25% Russell 3000 / 14.75% MSCI ACWI ex USA / 21% Bloomberg US Aggregate TR / 20% ICE BofA 91 Days T-Bills TR
4/1/2014	4/30/2014	43.50% Russell 3000 / 14.5% MSCI ACWI ex USA / 21% Bloomberg US Aggregate TR / 21% ICE BofA 91 Days T-Bills TR
3/1/2014	3/31/2014	40.59% Russell 3000 / 13.53% MSCI ACWI ex USA / 23.88% Bloomberg US Aggregate TR / 22% ICE BofA 91 Days T-Bills TR
2/1/2014	2/28/2014	40.07% Russell 3000 / 13.36% MSCI ACWI ex USA / 23.57% Bloomberg US Aggregate TR / 23% ICE BofA 91 Days T-Bills TR
1/1/2014	1/31/2014	39.55% Russell 3000 / 13.18% MSCI ACWI ex USA / 23.27% Bloomberg US Aggregate TR / 24% ICE BofA 91 Days T-Bills TR
1/1/2012	12/31/2013	51% Russell 3000 / 30% Bloomberg US Aggregate TR / 17% MSCI EAFE / 2% 91 Day T-Bills
1/1/2007	12/31/2011	51% Russell 3000 / 32% Bloomberg US Govt/Credit Int TR / 12% MSCI EAFE / 5% MSCI US REIT
4/1/2005	12/31/2006	18% FT Wilshire 5000 Full Cap / 18% S&P 500 / 8% Russell 2000 / 20% Bloomberg US Aggregate TR / 20% Bloomberg US Govt/Credit Int TR / 10% MSCI EAFE / 6% FTSE NAREIT All Equity REIT
O&E Pension (excl. LCP)		
6/1/2014	Present	35% Russell 3000 / 11% MSCI ACWI ex USA / 52% Bloomberg US Govt 1-5 Yr TR / 2% ICE BofA 91 Days T-Bills TR
1/1/2012	5/31/2014	51% Russell 3000 / 30% Bloomberg US Aggregate TR / 17% MSCI EAFE / 2% 91 Day T-Bills
1/1/2007	12/31/2011	51% Russell 3000 / 32% Bloomberg US Govt/Credit Int TR / 12% MSCI EAFE / 5% MSCI US REIT
4/1/2005	12/31/2006	18% FT Wilshire 5000 Full Cap / 18% S&P 500 / 8% Russell 2000 / 20% Bloomberg US Aggregate TR / 20% Bloomberg US Govt/Credit Int TR / 10% MSCI EAFE / 6% FTSE NAREIT All Equity REIT
Total Equity Composite		
6/1/2014	Present	76% Russell 3000 / 24% MSCI ACWI ex USA
1/1/2012	5/31/2014	75% Russell 3000 / 25% MSCI EAFE
U.S. Equity Composite		
1/1/2012	Present	Russell 3000
Global Equity Composite		
12/31/2011	Present	MSCI ACWI
Non-U.S. Equity Composite		
6/1/2014	Present	MSCI ACWI ex USA
12/31/2011	5/31/2014	MSCI EAFE
U.S. Fixed Income Composite		
9/1/2019	Present	Sterling Capital Policy Index
6/1/2014	8/31/2019	Bloomberg US Govt 1-5 Yr TR
12/31/2011	5/31/2014	Bloomberg US Aggregate TR
Cash Equivalents Composite		
12/31/2011	Present	ICE BofA 91 Days T-Bills TR

# City of Allentown Officers & Employee Pension

## Fee Summary

As of September 30, 2023

Account	Fee Schedule	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Vanguard Equity Income	0.19% of Assets	4.0%	\$531	0.19%
Vanguard Total Stock Market Index	0.03% of Assets	27.4%	\$577	0.03%
Vanguard Mid Cap Index	0.04% of Assets	2.0%	\$55	0.04%
Dodge & Cox Global Stock	0.62% of Assets	3.0%	\$1,303	0.62%
American Funds Int'l Growth & Income	0.54% of Assets	4.8%	\$1,827	0.54%
MFS International Intrinsic Value	0.61% of Assets	4.5%	\$1,949	0.61%
Sterling Capital - Short-Term Bonds	0.08% of Assets	39.1%	\$2,195	0.08%
Govt Obligations MM Fund	0.30% of Assets	15.3%	\$3,218	0.30%
<b>Investment Management Fee</b>		<b>100.0%</b>	<b>\$11,654</b>	<b>0.17%</b>

# Investment Managers



**Manager Summary:** Multi-manager fund combines two distinct strategies, both investing primarily in large cap value equities. Wellington Management Co. manages approximately 2/3 of the fund. Vanguard Group manages approximately 1/3 of the fund. Wellington seeks value opportunities in stocks that pay a dividend yield higher than the S&P 500. Vanguard implements a passively-managed approach, seeking to track the performance of a high dividend achievers benchmark. Overall strategy tends to have a higher dividend yield than the S&P 500.

**Characteristics**

	Portfolio	Russell 1000 Value
Number of Holdings	196	845
Weighted Avg. Market Cap. (\$B)	136.8	139.9
Median Market Cap. (\$B)	37.4	12.2
Price To Earnings	14.5	15.7
Price To Book	2.6	2.4
Price To Sales	1.6	1.7
Return on Equity (%)	23.2	15.8
Yield (%)	3.3	2.5

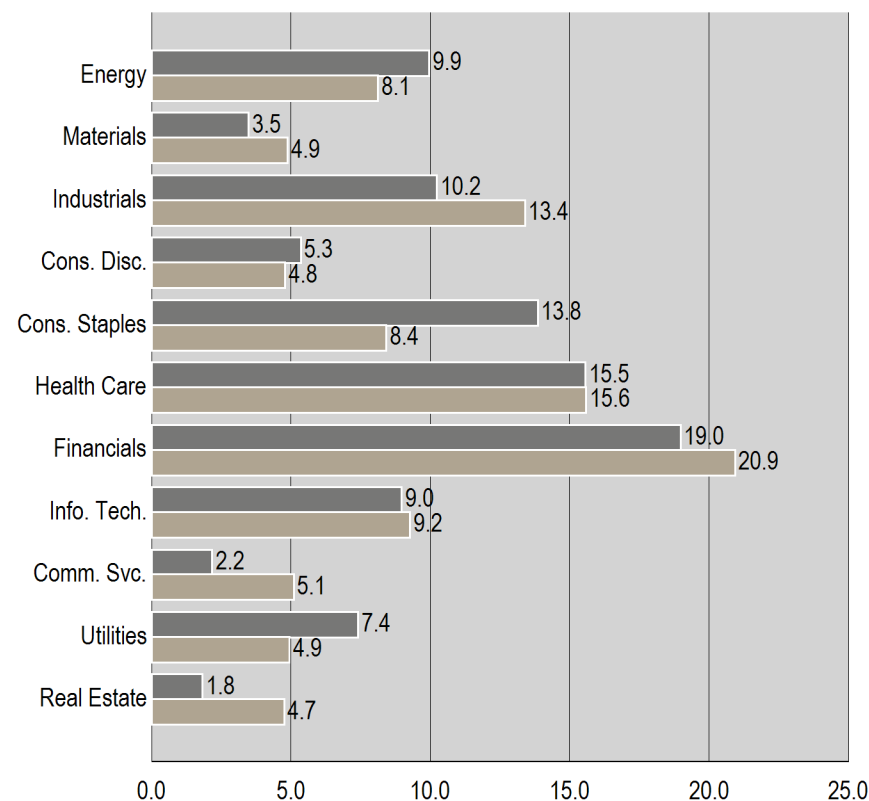
**Top Holdings**

JPMORGAN CHASE & CO	3.1%
JOHNSON & JOHNSON	2.9%
PFIZER INC	2.7%
MERCK & CO INC	2.5%
CONOCOPHILLIPS	2.5%
HOME DEPOT INC. (THE)	2.4%
EOG RESOURCES INC.	2.2%
PROCTER & GAMBLE CO (THE)	2.0%
CISCO SYSTEMS INC	1.9%
BROADCOM INC	1.8%
<b>Total</b>	<b>24.1%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap
Vanguard Equity Income	0.6%	22.3%	77.1%
Russell 1000 Value	2.4%	32.1%	65.6%
<b>Weight Over/Under</b>	<b>-1.8%</b>	<b>-9.8%</b>	<b>11.5%</b>

**Sector Allocation (%) vs Russell 1000 Value**





**Manager Summary:** Passively-managed using index sampling. The fund currently seeks to track the performance of the CRSP US Total Market Index. Diversified among large, mid and small-cap equities across growth and value styles. Fund remains fully invested.

**Characteristics**

	Portfolio	CRSP US Total Market TR USD
Number of Holdings	3,722	3,759
Weighted Avg. Market Cap. (\$B)	549.2	549.3
Median Market Cap. (\$B)	1.2	1.3
Price To Earnings	21.0	21.1
Price To Book	3.9	4.0
Price To Sales	2.2	2.2
Return on Equity (%)	21.7	21.7
Yield (%)	1.6	1.6

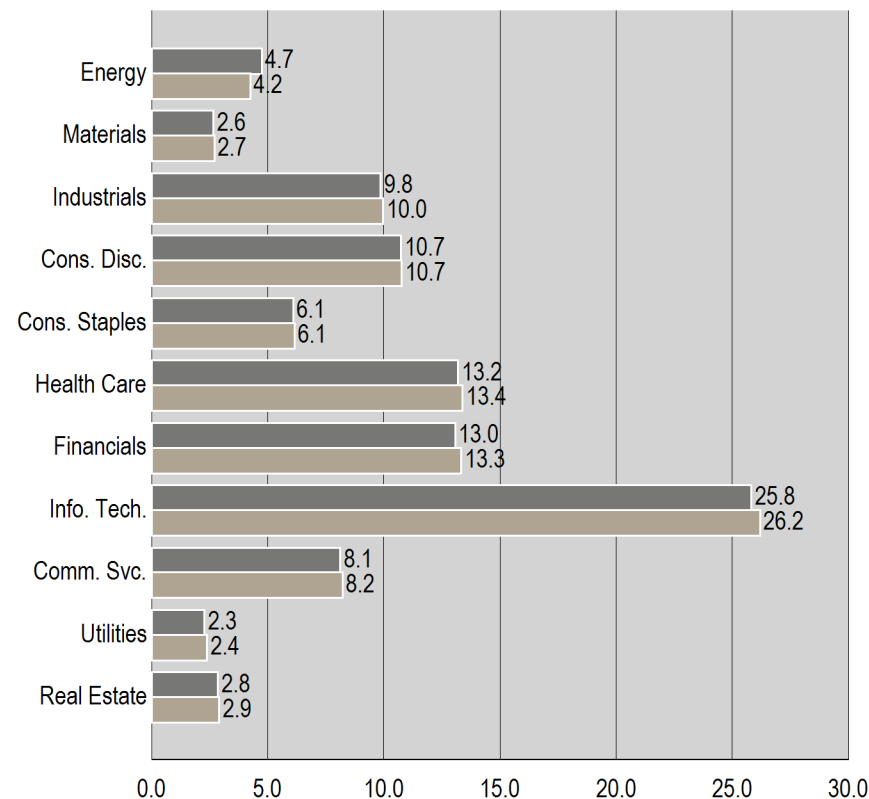
**Top Holdings**

APPLE INC	6.1%
MICROSOFT CORP	5.6%
AMAZON.COM INC	2.8%
NVIDIA CORPORATION	2.4%
ALPHABET INC	1.9%
TESLA INC	1.6%
META PLATFORMS INC	1.6%
ALPHABET INC	1.6%
BERKSHIRE HATHAWAY INC	1.5%
EXXON MOBIL CORP	1.1%
<b>Total</b>	<b>26.3%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap
Vanguard Total Stock Market Index	9.5%	12.9%	77.6%
CRSP US Total Market TR USD	11.3%	12.7%	76.0%
<i>Weight Over/Under</i>	<i>-1.8%</i>	<i>0.2%</i>	<i>1.6%</i>

**Sector Allocation (%) vs CRSP US Total Market TR USD**



**Manager Summary:** Passively-managed. Seeks to track the performance of the CRSP US Mid Cap Index. Invests in stocks of medium-size U.S. companies. Fund remains fully invested.

**Characteristics**

	Portfolio	CRSP US Mid Cap TR USD
Number of Holdings	339	338
Weighted Avg. Market Cap. (\$B)	26.2	26.3
Median Market Cap. (\$B)	19.1	19.1
Price To Earnings	19.2	19.1
Price To Book	2.9	2.9
Price To Sales	1.9	1.9
Return on Equity (%)	17.7	17.7
Yield (%)	1.8	1.8

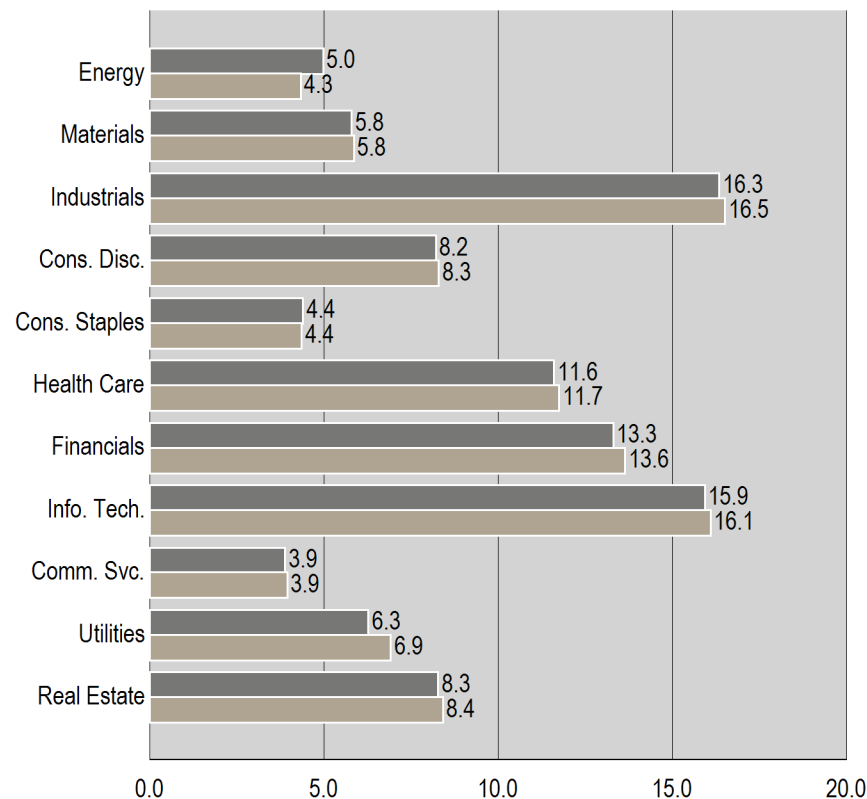
**Top Holdings**

AMPHENOL CORP	0.8%
ARTHUR J. GALLAGHER & CO.	0.8%
CARRIER GLOBAL CORP	0.8%
MOTOROLA SOLUTIONS INC	0.7%
PACCAR INC	0.7%
TRANSDIGM GROUP INC	0.7%
ARISTA NETWORKS INC	0.7%
WELLTOWER INC	0.7%
MICROCHIP TECHNOLOGY INC	0.7%
HESS CORP	0.7%
<b>Total</b>	<b>7.3%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap
Vanguard Mid Cap Index	2.0%	69.9%	28.1%
CRSP US Mid Cap TR USD	5.6%	67.4%	27.0%
<i>Weight Over/Under</i>	<i>-3.6%</i>	<i>2.5%</i>	<i>1.1%</i>

**Sector Allocation (%) vs CRSP US Mid Cap TR USD**



**Manager Summary:** Focuses on identifying large, well-established companies across the globe that trade at a discount to their long-term profit opportunities. Emphasize fundamental research, attempting to understand risks facing businesses over a 3-5-year time horizon. Seeks companies with solid management teams and strong, competitive franchises. Strategy tends to hold deep value stocks that may be out-of-favor in the short-term but offer good value for the long-term investor.

**Characteristics**

	Portfolio	MSCI ACWI
Number of Holdings	83	2,947
Weighted Avg. Market Cap. (\$B)	201.5	408.9
Median Market Cap. (\$B)	41.1	12.1
Price To Earnings	12.7	18.0
Price To Book	2.3	3.3
Price To Sales	1.1	1.8
Return on Equity (%)	16.0	21.1
Yield (%)	2.6	2.3

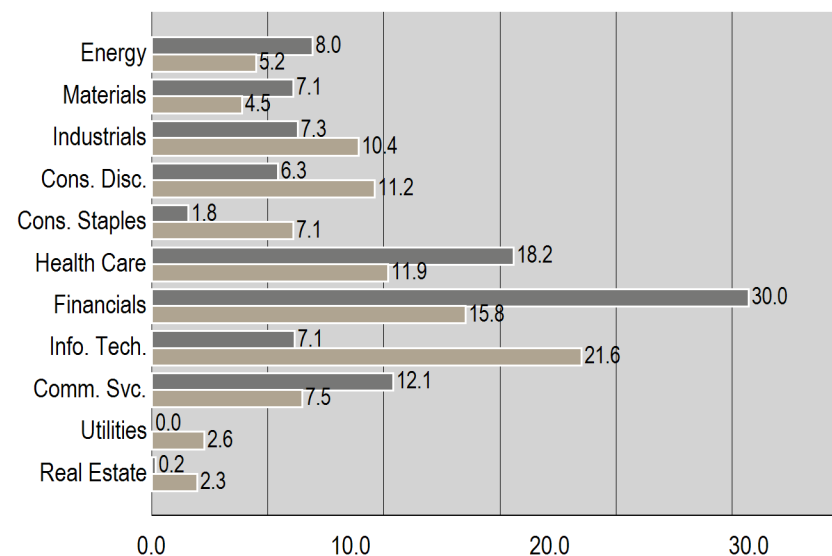
**Top Holdings**

ALPHABET INC	4.1%
SANOFI	3.7%
GSK PLC	3.0%
OCCIDENTAL PETROLEUM CORP	2.9%
CHARTER COMMUNICATIONS INC	2.8%
SUNCOR ENERGY INC.	2.7%
COMCAST CORP	2.7%
BANCO SANTANDER SA	2.6%
OVINTIV INC	2.6%
UBS GROUP AG	2.4%
<b>Total</b>	<b>29.5%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Dodge & Cox Global Stock	2.6%	19.5%	75.1%	2.7%
MSCI ACWI	7.2%	17.8%	75.1%	0.0%
<i>Weight Over/Under</i>	<i>-4.5%</i>	<i>1.8%</i>	<i>0.0%</i>	<i>2.7%</i>

**Sector Allocation (%) vs MSCI ACWI**



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	4.3%	2.9%	1.4%
United States	51.2%	62.3%	-11.1%
Europe Ex U.K.	22.1%	12.1%	10.1%
United Kingdom	9.3%	3.7%	5.6%
Pacific Basin Ex Japan	0.0%	2.7%	-2.7%
Japan	3.2%	5.5%	-2.4%
Emerging Markets	10.0%	10.6%	-0.6%
Other	0.0%	0.3%	-0.3%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**Manager Summary:** Focuses on investing in established companies that pay dividends. Emphasis on companies that may be relatively resilient during economic hardship. Multiple portfolio managers provide complementary investment styles of contrarian value, relative value and capital appreciation. Strategy tends to have dividend yield higher than the benchmark.

**Characteristics**

	Portfolio	MSCI ACWI ex USA
Number of Holdings	261	2,320
Weighted Avg. Market Cap. (\$B)	102.6	85.0
Median Market Cap. (\$B)	25.5	9.1
Price To Earnings	13.3	13.5
Price To Book	2.6	2.4
Price To Sales	1.3	1.1
Return on Equity (%)	17.5	15.1
Yield (%)	3.6	3.4

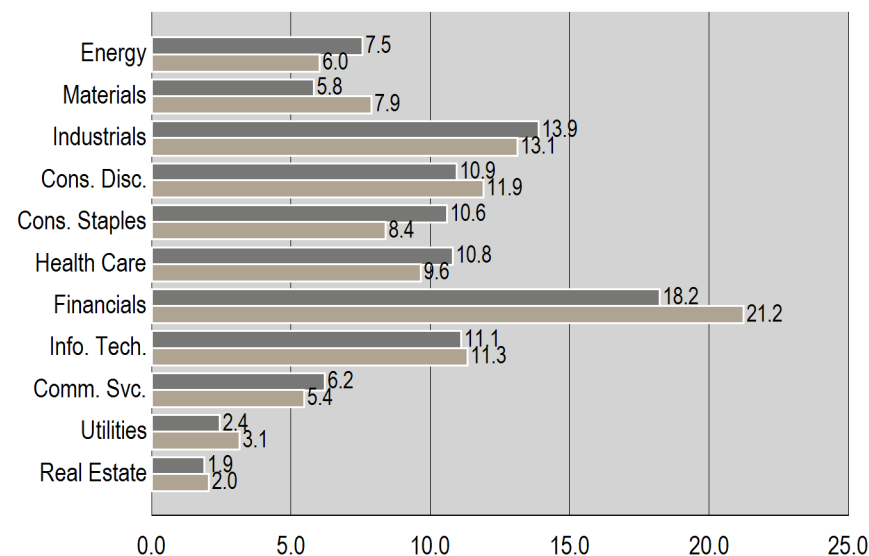
**Top Holdings**

ASTRAZENECA PLC	3.3%
NOVO NORDISK A/S	2.9%
TOTALENERGIES SE	2.5%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	2.4%
AIRBUS SE	2.3%
PHILIP MORRIS INTERNATIONAL INC	2.3%
ASML HOLDING NV	2.2%
BRITISH AMERICAN TOBACCO PLC	1.7%
SANOFI	1.7%
BAE SYSTEMS PLC	1.6%
<b>Total</b>	<b>22.8%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
American Funds Int'l Growth & Income	9.9%	25.0%	60.2%	4.9%
MSCI ACWI ex USA	16.1%	27.3%	56.6%	0.0%
<i>Weight Over/Under</i>	-6.2%	-2.3%	3.6%	4.9%

**Sector Allocation (%) vs MSCI ACWI ex USA**



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	4.6%	7.6%	-3.0%
United States	4.6%	0.0%	4.6%
Europe Ex U.K.	42.2%	32.0%	10.1%
United Kingdom	14.8%	9.8%	5.0%
Pacific Basin Ex Japan	4.6%	7.3%	-2.7%
Japan	8.1%	14.7%	-6.6%
Emerging Markets	18.2%	28.0%	-9.8%
Other	3.0%	0.7%	2.3%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**Manager Summary:** The strategy seeks sustainable returns in various market environments. Team focuses on the durability of returns and intrinsic value: quality - company's ability to generate returns above its cost of capital on a sustainable basis, valuation - stocks that are cheap on a wide range of valuation metrics, and improvement potential - potential value from improving structural conditions. Portfolio construction process is based on bottom-up, fundamental research. Sector, industry, country, and regional weightings are generally the residual of this process. Portfolio consists of 85 to 100 companies and is fully invested at all times.

**Characteristics**

	Portfolio	MSCI EAFE
Number of Holdings	93	795
Weighted Avg. Market Cap. (\$B)	67.7	81.8
Median Market Cap. (\$B)	19.8	12.1
Price To Earnings	16.2	13.9
Price To Book	2.7	2.4
Price To Sales	2.2	1.2
Return on Equity (%)	18.1	15.7
Yield (%)	2.8	3.5

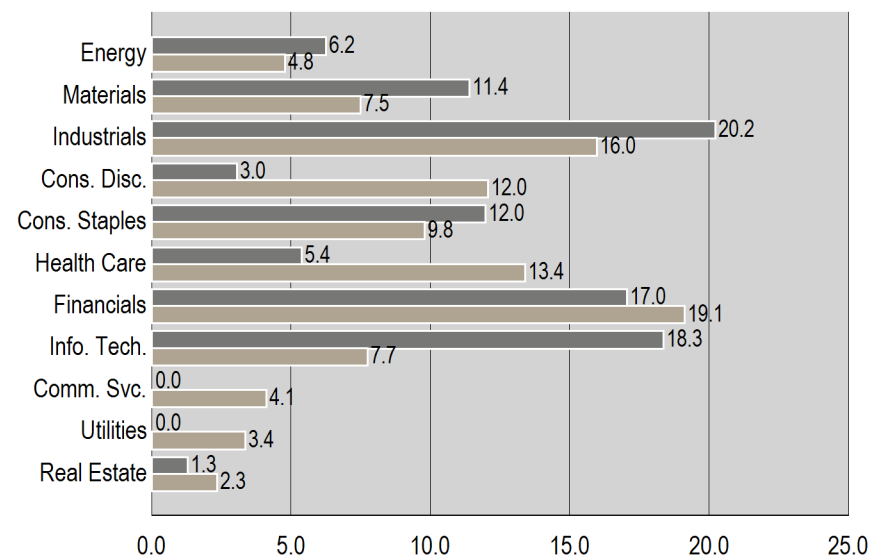
**Top Holdings**

SCHNEIDER ELECTRIC SA	3.6%
FRANCO-NEVADA CORP	3.1%
TOTALENERGIES SE	3.1%
CADENCE DESIGN SYSTEMS INC	3.0%
LEGRAND	2.7%
SAMSUNG ELECTRONICS CO LTD	2.4%
DEUTSCHE BOERSE AG	2.1%
WOODSIDE ENERGY GROUP LTD	2.0%
NESTLE SA, CHAM UND VEVEY	2.0%
DIAGEO PLC	1.9%
<b>Total</b>	<b>26.0%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
MFS International Intrinsic Value	15.2%	29.8%	47.7%	7.3%
MSCI EAFE	10.5%	27.5%	62.1%	0.0%
<i>Weight Over/Under</i>	4.7%	2.4%	-14.4%	7.3%

**Sector Allocation (%) vs MSCI EAFE**



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	4.7%	0.0%	4.7%
United States	8.8%	0.0%	8.8%
Europe Ex U.K.	54.8%	49.7%	5.0%
United Kingdom	8.3%	15.3%	-7.0%
Pacific Basin Ex Japan	2.0%	11.3%	-9.3%
Japan	15.5%	22.9%	-7.4%
Emerging Markets	5.1%	0.0%	5.1%
Other	0.8%	0.7%	0.1%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

As of September 30, 2023

**Characteristics**

Fund GAV (\$MM)	\$42,360.7
Fund NAV (\$MM)	\$33,032.9
Cash (% of NAV)	0.1%
# of Investments	540
% in Top 10 by NAV	14.1%
Leverage %	22.9%
Occupancy	92.4%
# of MSAs	53
1-Year Dividend Yield	4.0%
As of Date	30-Sep-23

**Strategy Breakdown**

	% of Portfolio
Pre-Development	0.6%
Development	2.1%
Initial Leasing	5.6%
Operating	91.2%
Re-Development	0.5%
Other	0.0%

**Top Five Metro Areas**

	% of NAV
Los Angeles, CA	13.1%
Boston, MA	8.4%
Miami, FL	8.2%
Chicago, IL	8.0%
New York, NY	7.6%

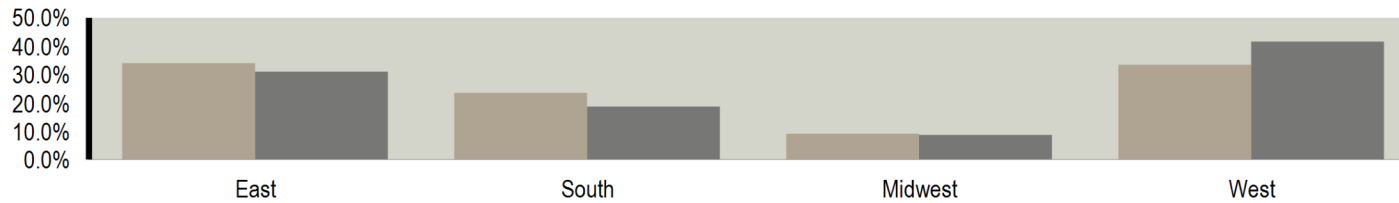
Queue In:

Contribution Queue (\$MM)	\$0.00
Anticipated Drawdown (Months)	0

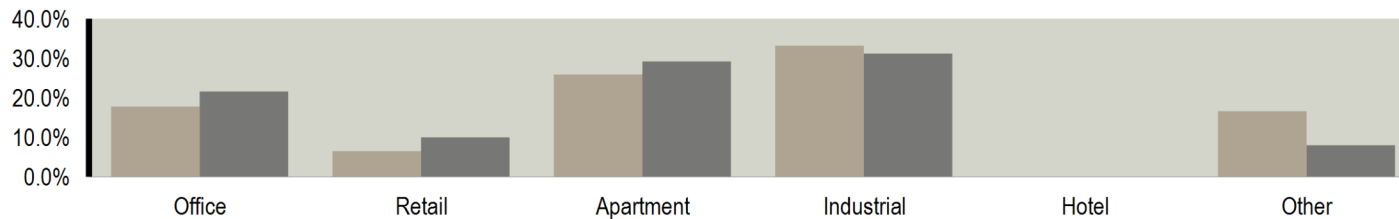
Queue Out:

Redemption Queue (\$MM)	\$5,064.96
Anticipated Payout (Months)	0

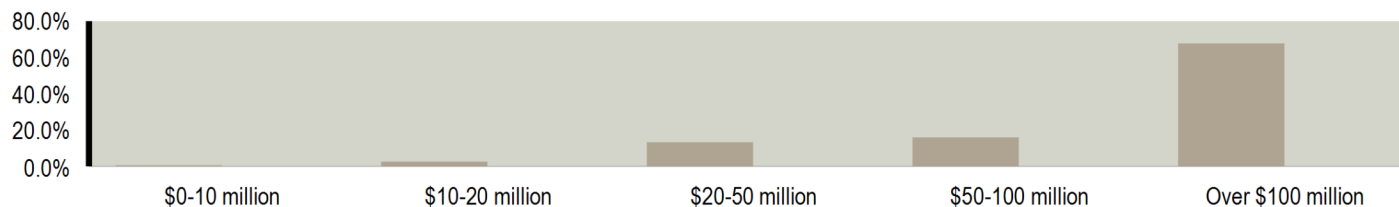
**Regional Breakdown by NAV (Excluding Cash & Debt)**



**Property Type Breakdown by NAV (Excluding Cash & Debt)**



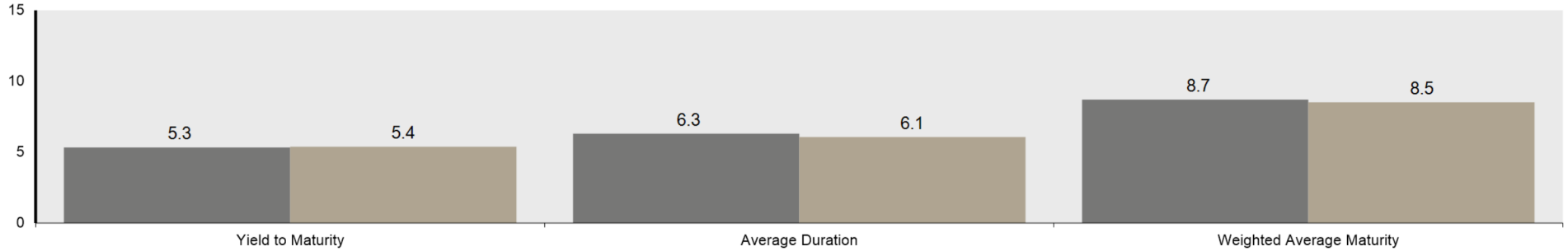
**Property Size Breakdown by NAV (Excluding Cash & Debt)**



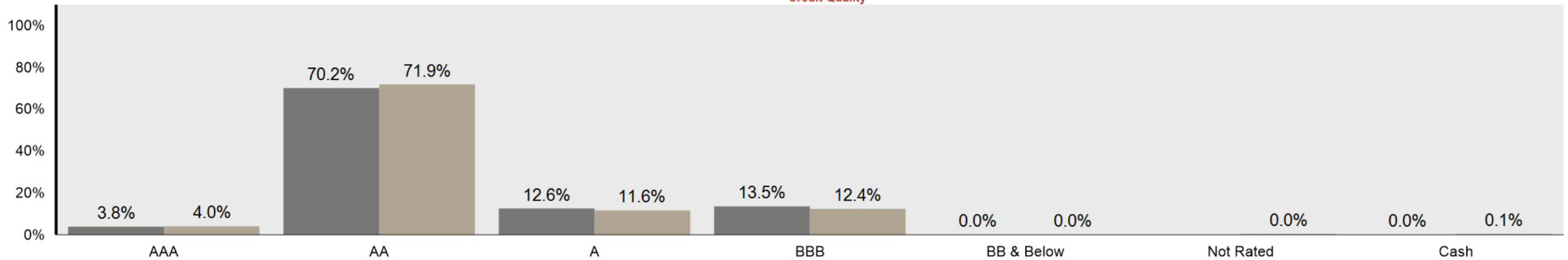
■ Morgan Stanley PRIME Property Fund ■ NCREIF-ODCE

**Manager Summary:** Passively-managed using index sampling. Seeks to track the performance of the Barclays Capital U.S. Aggregate Bond Index. Invests in a broadly diversified portfolio of investment-grade U.S. Bonds. Intermediate duration portfolio.

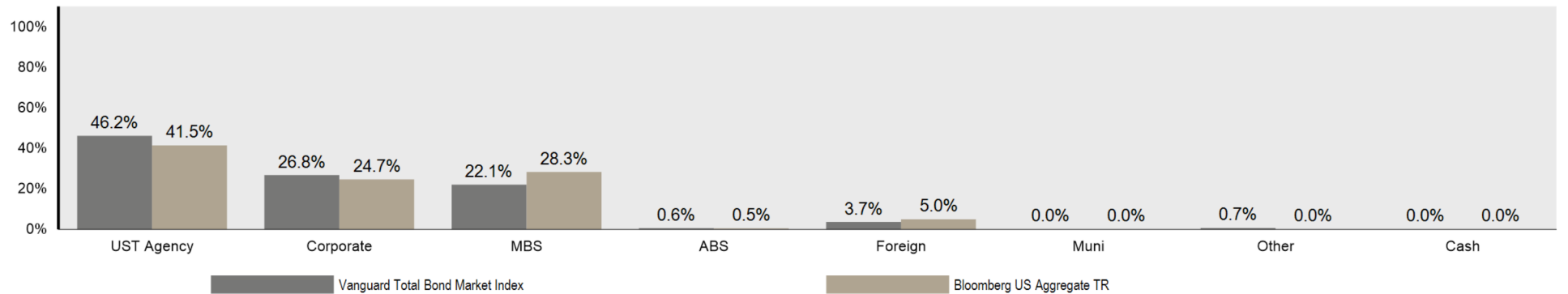
Yield to Maturity



Credit Quality

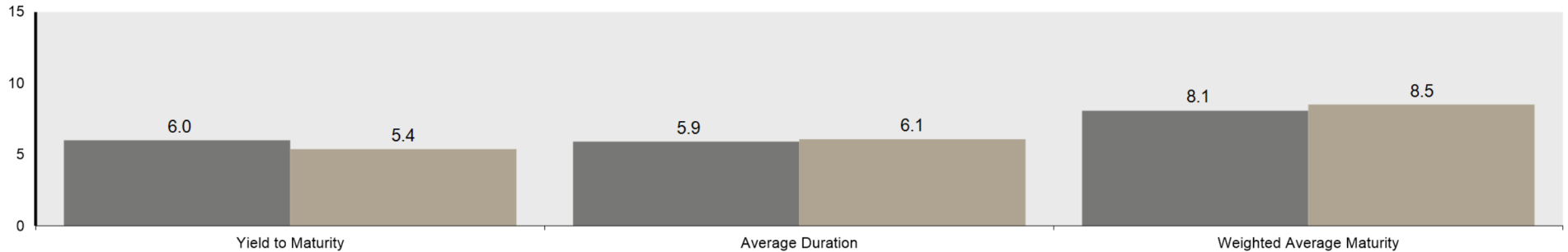


US Sector

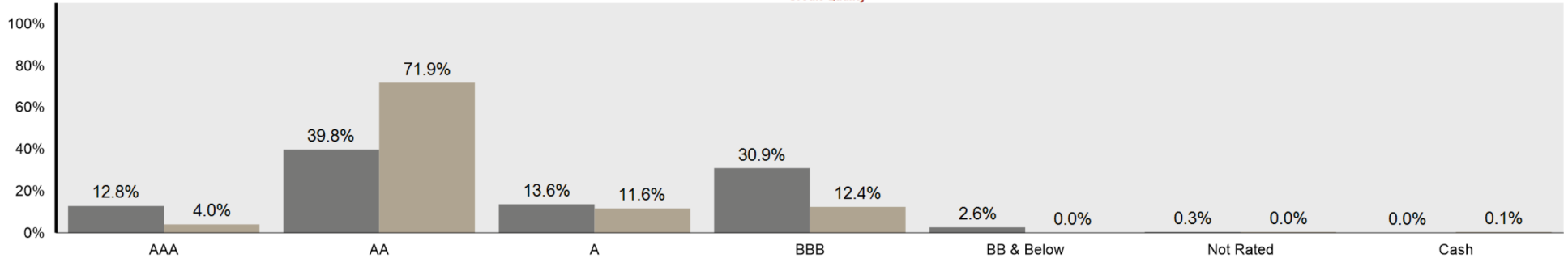


**Manager Summary:** A spread security-focused (corporate and securitized bonds), moderate-risk Aggregate Plus strategy. It typically maintains neutral duration and focuses more on security selection. It derives most of its plus sector alpha from credit, CMBS and non-agency RMBS. It typically allocates 40-50% to investment grade corporate bonds, 0-5% to high yield corporate bonds, and 5-15% to CMBS and non-agency RMBS.

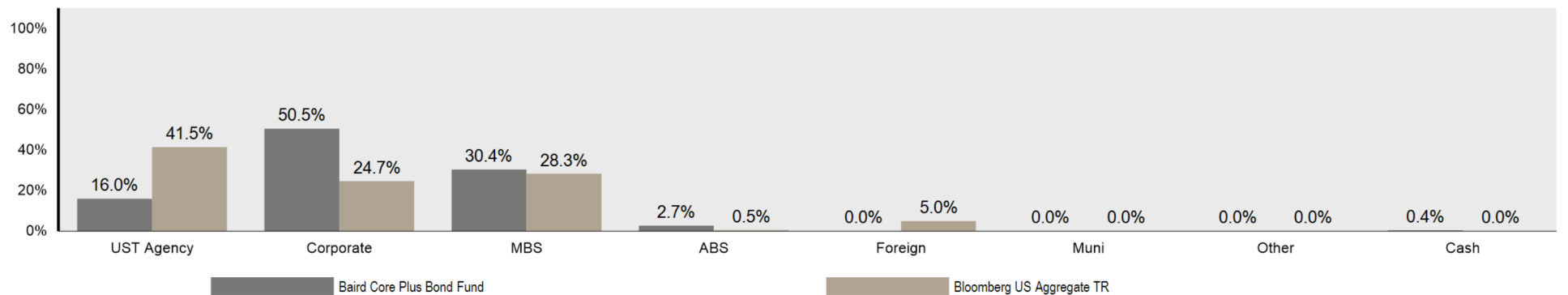
Yield to Maturity



Credit Quality



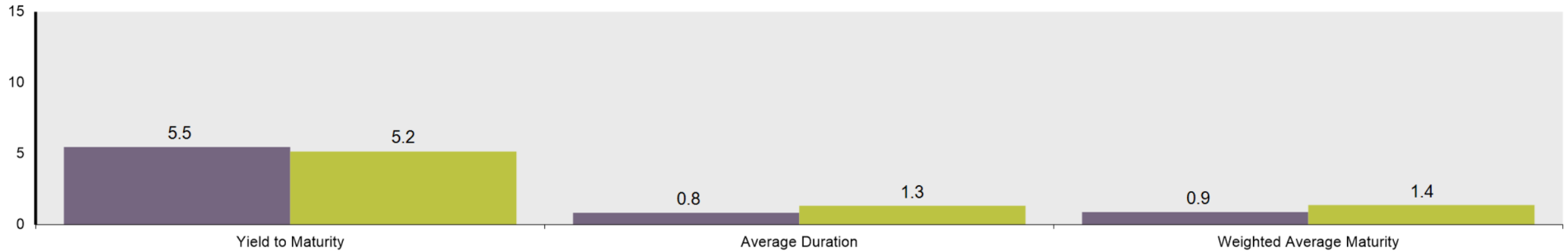
US Sector



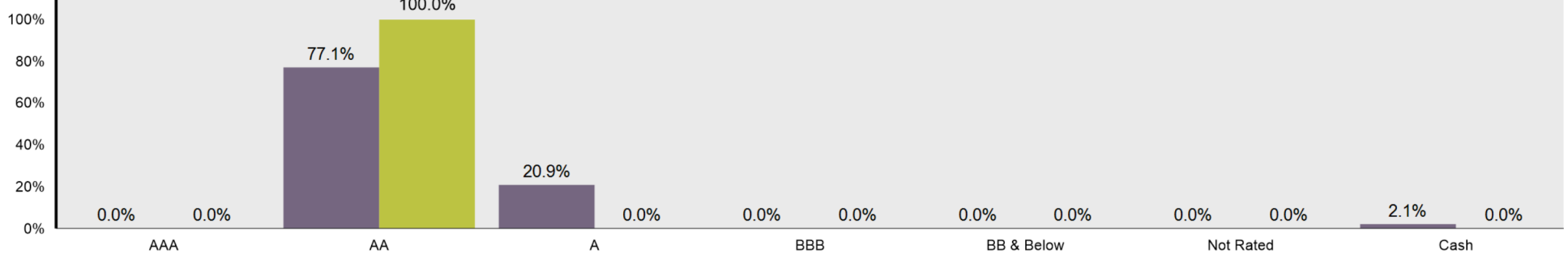


**Manager Summary:** Manages a customized portfolio of bond investments with the objective of meeting cash needs. Portfolio comprised of corporate and government debt. Regularly reassesses client objectives, cash flows, and risk to structure the most ideal cash flow matched portfolio. Emphasizes current return, liquidity, quality and stability of principal using a wide array of short-term obligations. Investment process combines top-down research on the current interest rate cycle with bottom up individual security analysis and selection.

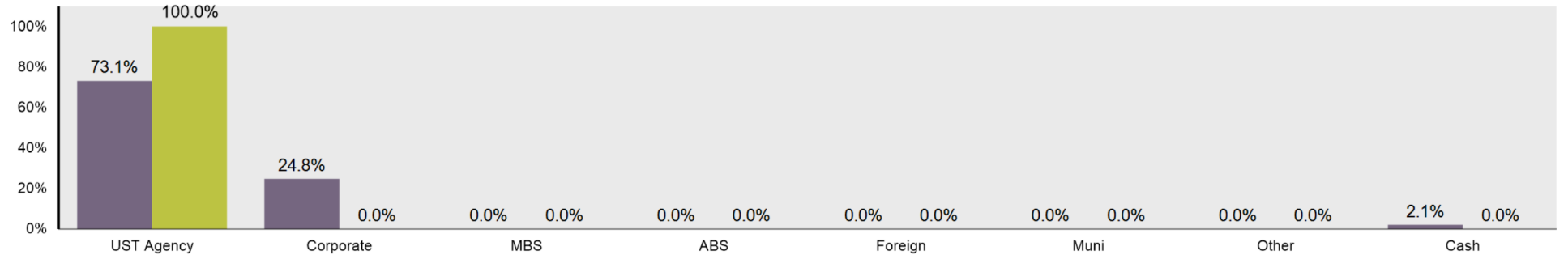
Yield to Maturity



Credit Quality



US Sector

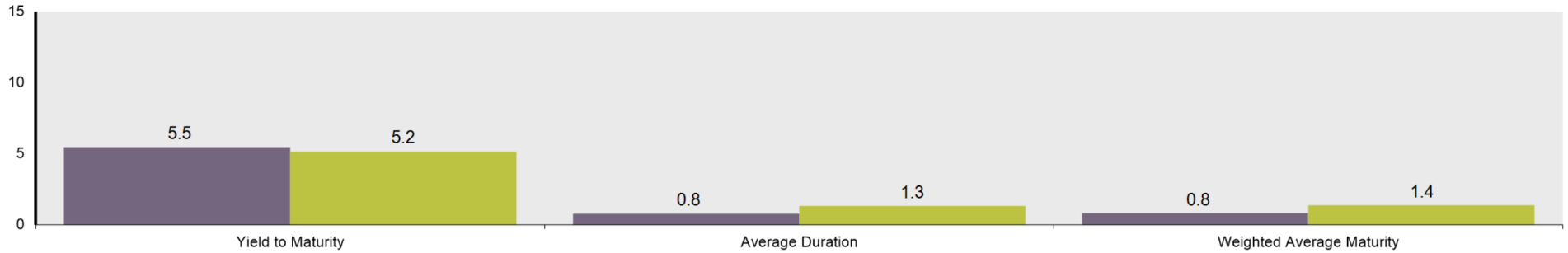


Police Pension - Sterling Capital - Short-Term Bonds

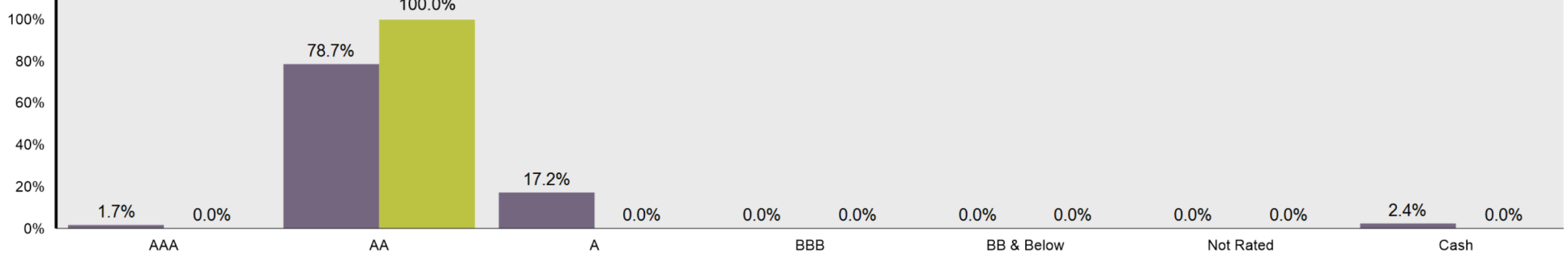
Sterling Capital Benchmark

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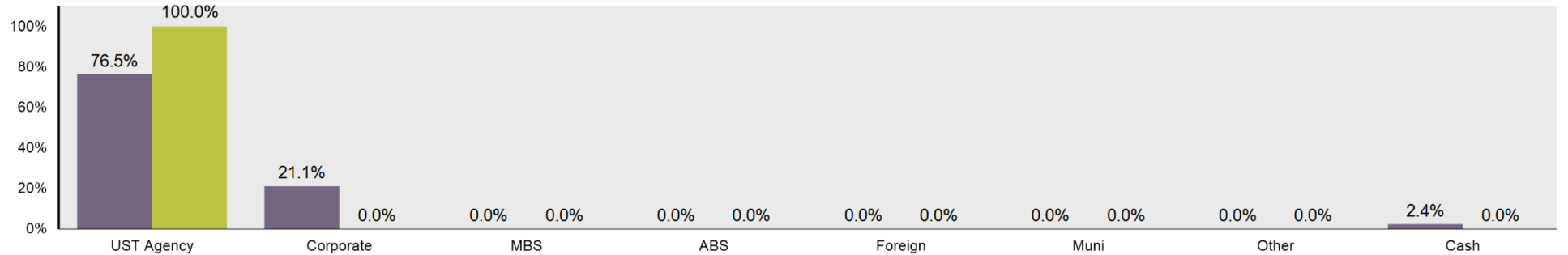
Yield to Maturity



Credit Quality



US Sector

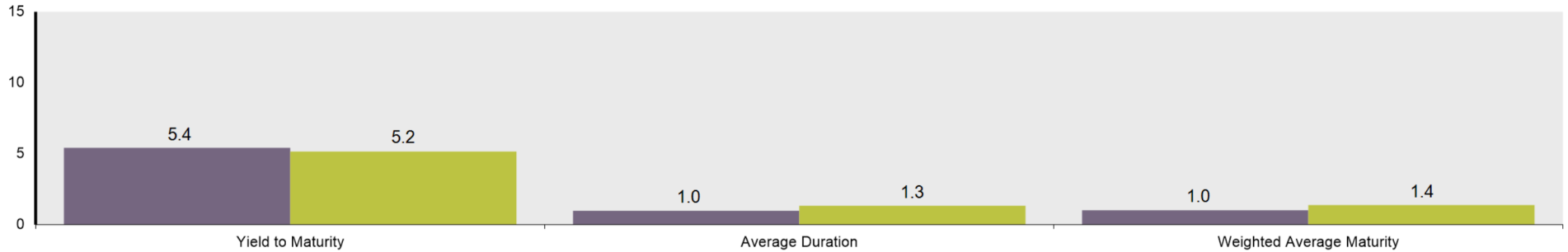


Firemen Pension - Sterling Capital - Short-Term Bonds

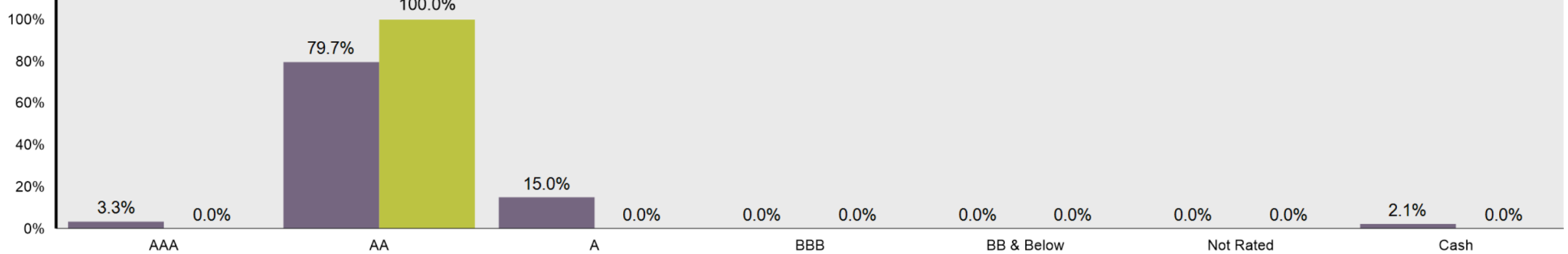
Sterling Capital Benchmark

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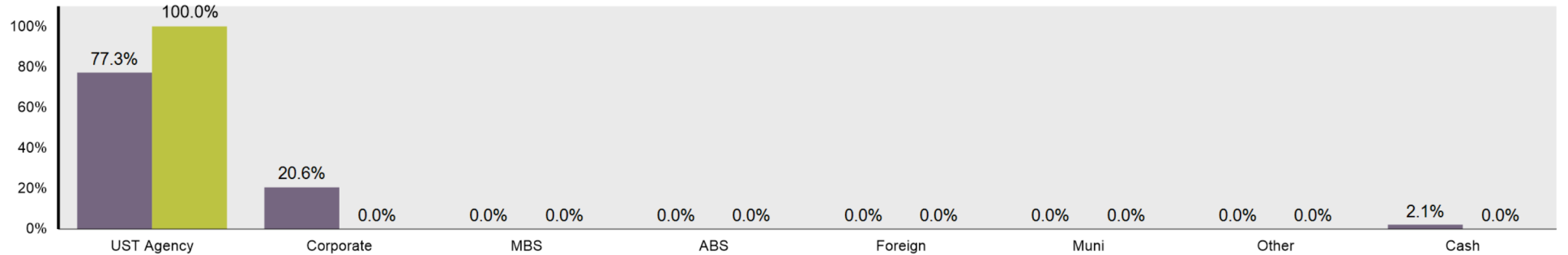
Yield to Maturity



Credit Quality



US Sector



Officers & Employee Pension - Sterling Capital - Short-Term Bonds

Sterling Capital Benchmark