

Pennsylvania Municipal Retirement System

Quarterly Performance Report
As of June 30, 2025



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Marquette Update

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Marquette Update

3Q 2025

2025 INVESTMENT SYMPOSIUM

JOIN US SEPTEMBER 26

Our 2025 Investment Symposium will be held as a hybrid event, with an in-person option in Chicago at the Union League Club as well as a virtual livestream with recordings available afterward.

[Visit our website](#) for full details and register to attend using our email invitation coming in August.

LIVE WEBINAR — JULY 17

2025 Halftime Market Insights

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UPCOMING SPEAKING ENGAGEMENTS

- ▶ Frank Valle speaking at 2025 Association of Public Treasurers of the United States & Canada Annual Conference 7/21
- ▶ Luis Sierra speaking at Carmo Companies 2025 D.C. Private Markets Meeting 7/22
- ▶ Chris Grimm speaking at AIMSE Twin Cities Regional Event 7/24
- ▶ Sarah E.R. Wilson speaking at PSACC Annual Summer Conference 7/29
- ▶ Brad Hampton speaking at National Public Pension Fund Association 2025 National Round Table Conference 8/12
- ▶ Chris Grimm and James Torgerson speaking at Great Plains Institutional Forum 9/4
- ▶ Luis Sierra speaking at 2025 529 Conference 9/29

Client data as of March 31, 2025; firm data as of July 2025. The client retention rate is calculated as the average annual retention rate over the last ten years. Owned 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.

\$407B

assets under advisement

145+

employees

39th

year in business

MID-YEAR PROMOTIONS

Amy Miller
Assoc. Director of
Private Equity

James Torgerson
Sr. Research Analyst

Zach Houston-Read
Assoc. Research
Analyst

Andrea Blomquist
Sr. Client Analyst,
OCIO Services

Artem Rozenshteyn
Client Analyst,
OCIO Services

Michael DeSantis
Assoc. Client Analyst,
OCIO Services

Lauren Smith
Assoc. Client Analyst

Bridget DeZellar
Assoc. Client Analyst

Jocelyn Rivera
Sr. Perf. Analyst

Donny Namani
Sr. Perf. Analyst

Brandon Avant
Sr. Perf. Analyst

RECENT HIRES

Chris Grimm
Senior Vice President

Fred Huang
Research Analyst

Eduardo Melgoza
Performance Analyst

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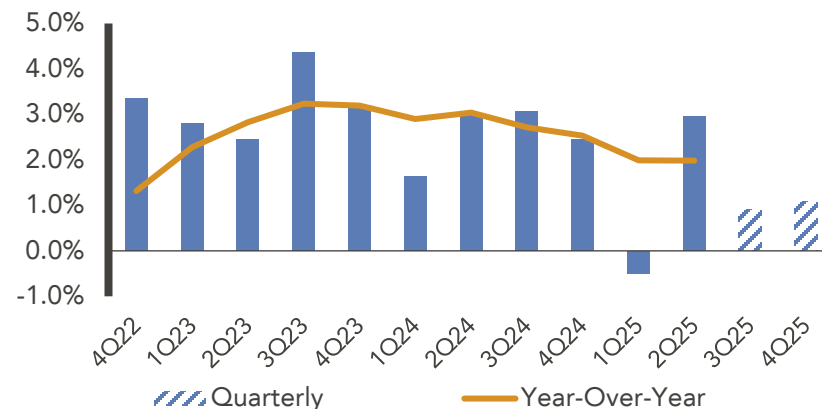


Market Environment

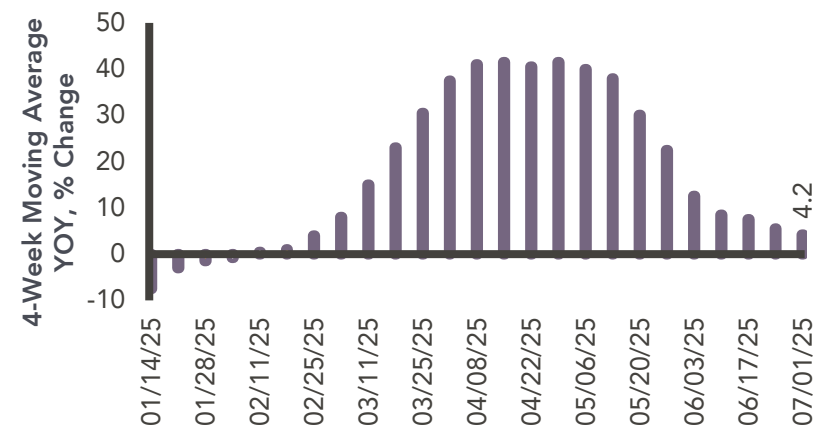
U.S. Economy

- The U.S. economy rebounded in Q2, with real GDP growing at an annual pace of 3.0%. Net exports were a large contributor to growth—a reversal from Q1—adding 5.0 percentage points. Consumer spending was also a key driver of the acceleration in economic activity, despite surveys showing poor confidence and sentiment in late Q1 and early Q2 amid tariff announcements.
- Tariff revenue surged during the quarter, generating \$27 billion in June alone, which was more than 3x higher than a year earlier. Still, little impact from tariffs on inflation or economic activity has been seen to this point.
- According to Carlyle, the disconnect is likely explained by the massive inventories accumulated in advance of tariff announcements on April 2nd. This allowed businesses to maintain pricing and production schedules without impacting margins. These stockpiles have since fallen but remain 4% above levels from a year earlier as of early July.

U.S. Real GDP Growth¹



Inventories of Goods



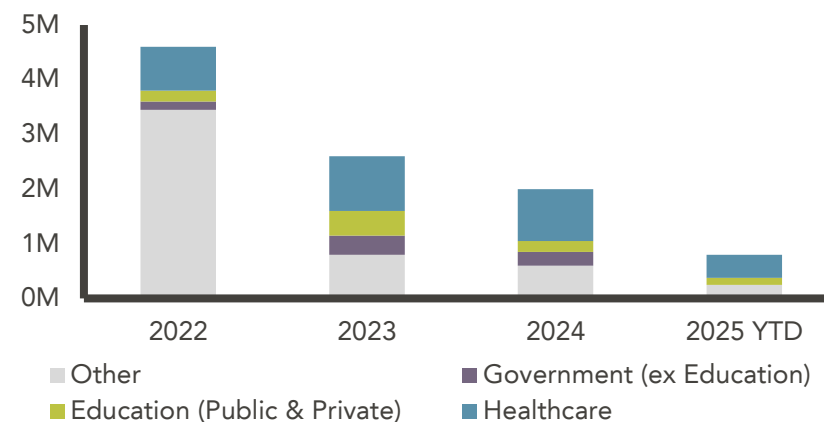
Source: Carlyle, The Wall Street Journal

¹Striped bars reflect economist estimates from The Wall Street Journal Economic Forecasting Survey

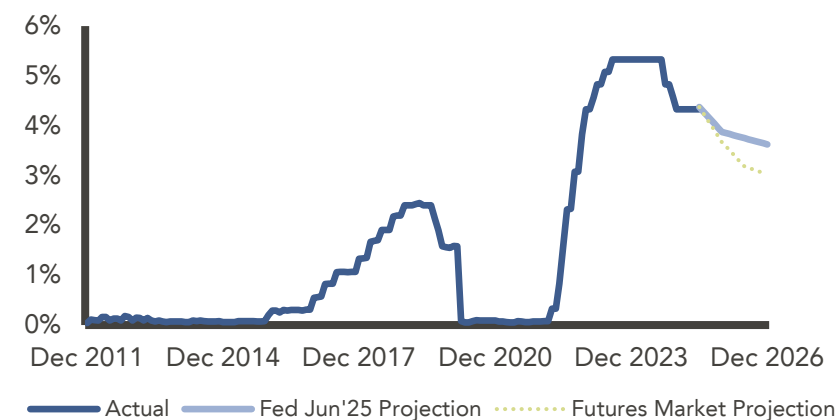
U.S. Economy

- Economists and market participants may get a better sense of the tariff impact in the coming months. Morgan Stanley, for example, estimates that tariffs begin to impact inflation about four months after implementation (i.e., August) and begin to impact economic growth about eight months after implementation (i.e., December).
- In the interim, labor market data appear to have weakened at the margin but don't show signs of rolling over. The June Non-Farm Payrolls report, for instance, showed a gain of 147,000 jobs, which exceeded expectations. The quality of the report, however, was underwhelming, with nearly half of the gains coming from the government sector, while the private sector generated the smallest gains in eight months.
- Amid a modestly softer labor market and the possibility for an uptick in inflation in the coming months, the Federal Reserve ("Fed") held rates steady during the quarter. Its revised Summary of Economic Projections ("SEP") continued to show a base case of 50 basis points ("bps") of cuts in 2025. Markets, meanwhile, are now pricing in two 25 bp rate cuts in 2025, along with a marginal possibility of a third 25 bp rate cut before year end.

Change in U.S. Non-Farm Payrolls



Short-Term Interest Rates

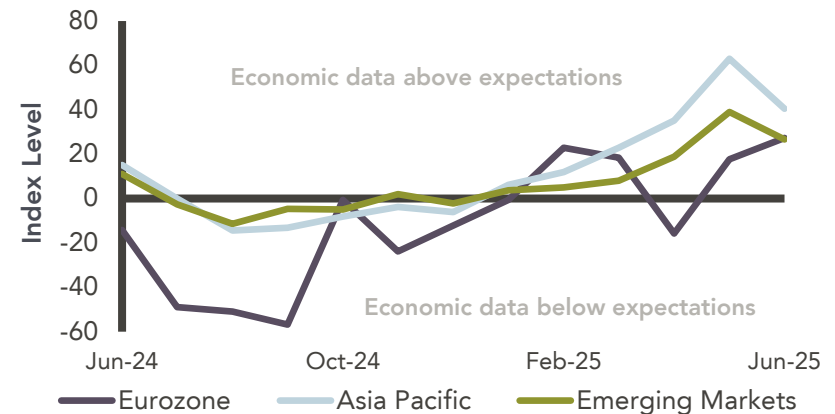


Source: Refinitiv, Sit Investment Associates

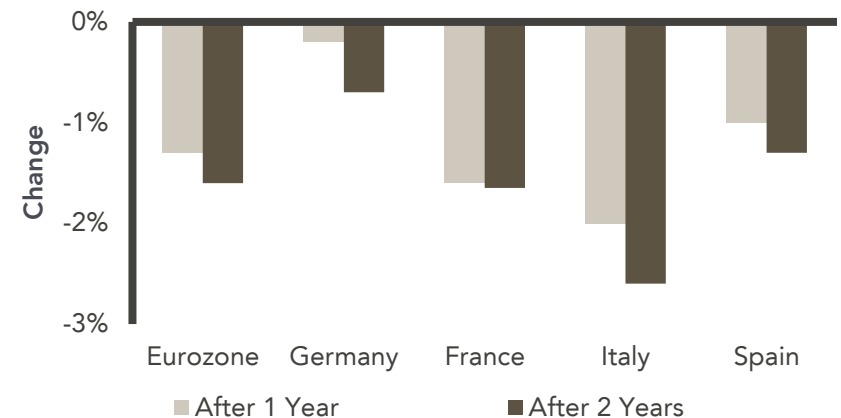
Global Economy

- Economic data outside the U.S. was notably above expectations during the quarter (as measured by the Citigroup Economic Surprise Index), despite U.S. tariff implementation and uncertainty around trade policy.
- Amid the uncertainty and deceleration in inflation, the European Central Bank cut rates for the eighth time over the past year in June, lowering its deposit facility rate to 2.0%.
- Despite its rate-cutting cycle, the euro continued to appreciate in Q2, reaching its strongest level relative to the U.S. dollar in nearly four years.
- Moving forward, trade tensions and a strong euro will likely weigh growth in the Eurozone, particularly exports for the less competitive members of the bloc (e.g., Italy).

Citigroup Economic Surprise Indices



Impact on Exports of a 5% Euro Effective Exchange Rate Appreciation

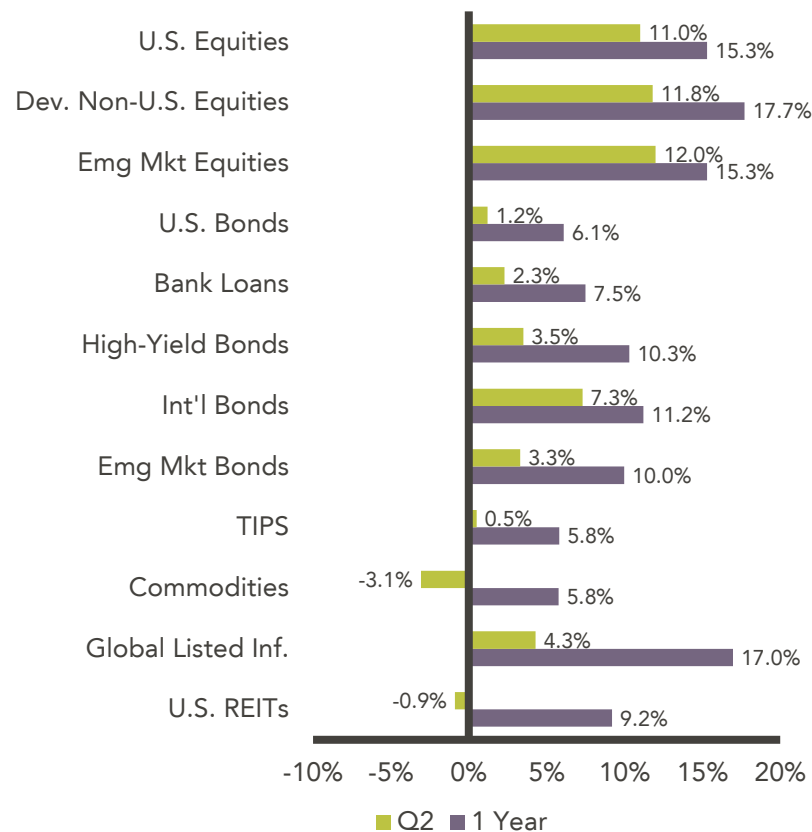


Source: Morgan Stanley, Refinitiv

Global Asset Class Performance

- Global equities posted strong gains in Q2 as markets saw a considerable rally off the April lows in the wake of a 90-day pause on reciprocal tariffs that were announced just a week earlier. Relative regional returns showed little dispersion, with U.S. equities modestly underperforming developed non-U.S. and emerging markets. U.S. dollar weakness continued in Q2, contributing to gains for unhedged U.S.-based investors. Specifically, the decline in the greenback added approximately 7.0 and 4.1 percentage points, respectively, to non-U.S. developed and emerging markets returns.
- Fixed income markets were broadly positive. Investment-grade bonds were in the black despite a modest uptick in rates on the back end of the Treasury curve. Sub-investment grade debt also posted gains, with high-yield debt topping bank loans.
- Inflation-sensitive assets were mixed in Q2. TIPS lagged their nominal government bond counterparts amid falling inflation expectations. Global listed infrastructure and REITs trailed broad equity markets. Commodities, meanwhile, were one of the worst-performing asset classes thanks in large part to a decline in oil prices and other energy-related commodities.

Asset Class Returns: Select Asset Class Performance

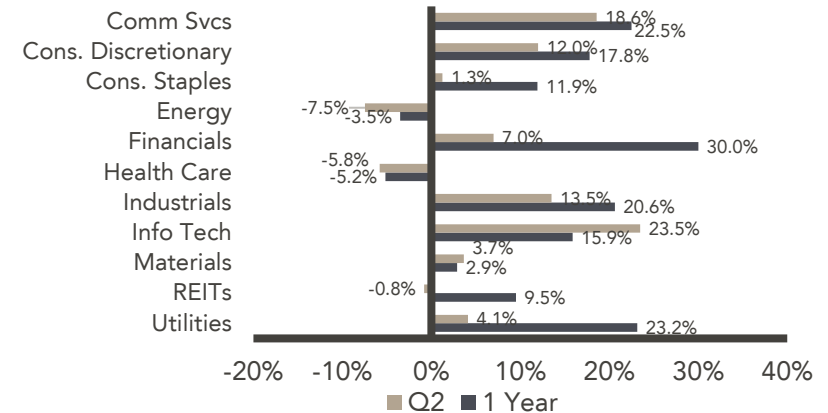


Source: Refinitiv

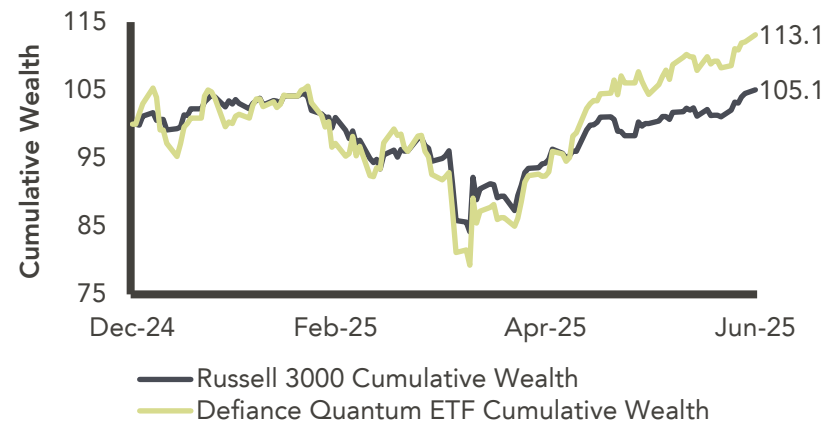
U.S. Equity Markets

- U.S equities briefly entered a bear market in early April amid tariff concerns before staging a historic rally to end Q2 at all-time highs. In fact, the S&P 500 Index saw the fastest recovery (55 trading days) in the last 70 years of a 15% decline (or greater) to close out the quarter.
- Economic sector performance was mostly positive, with Information Technology and Communication Services leading the way. At the other end of the spectrum, Energy and Health Care were the worst performers, while REITs were also in the red.
- From a style perspective, growth stocks trounced their value counterparts, with mid- and mega-cap growth stocks outperforming. This relative performance continued the pattern seen over the past few calendar years. More specifically, anything related to AI, cryptocurrency, quantum computing, etc. has fueled the market during rallies, while notably underperforming during bouts of market weakness (see Q1 equity returns).

Sector Returns



Russell 3000 vs. Quantum Computing and Machine Learning Stocks



Source: Refinitiv

Note: The BlueStar® Machine Learning and Quantum Computing Index (BQTUM) tracks liquid companies in the global quantum computing and machine learning industries.

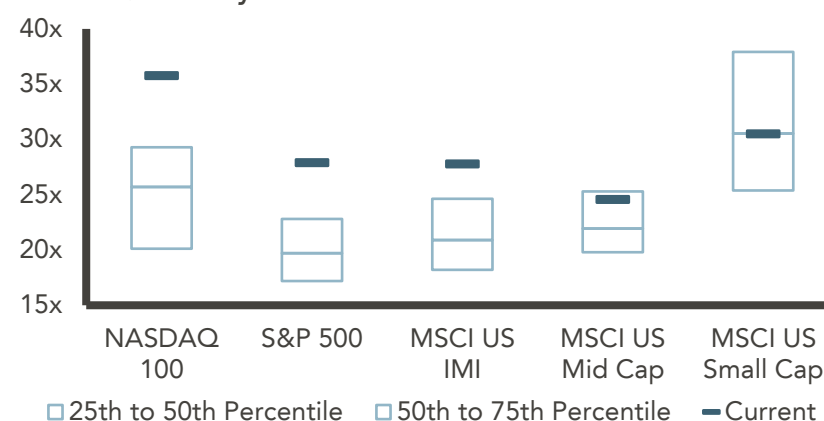
U.S. Equity Markets

- While the market rebound from the April lows was incredibly impressive at the headline index level, new all-time highs came amid poor equity market breadth.
- According to Bank of America, the S&P 500 Index ended Q2 on the cusp of its 7th breakout since 1990. The current bull market, however, is the narrowest on the list, with just 22 index constituents at all-time highs.
- Goldman Sachs also recently commented on this phenomenon, stating that the top 10 companies in the S&P now account for a record 38% of market cap and 30% of index profits. While the latter is also a record, the spread between market cap and profits remains one of the widest seen over the past 40 years.
- This disconnect is also evident in valuations, which show indices comprised of the largest stocks trading well above their historical medians, while indices of mid- and small-cap stocks appear more reasonably valued.

S&P 500 Index Breakouts and Number of Stocks at All-Time Highs

S&P 500 Index Breakout	# of Stocks at All-Time Highs
02/13/1991	51
11/23/1998	66
05/30/2007	82
03/28/2013	97
08/18/2020	54
01/19/2024	67
06/26/2025	22

Current P/E vs. 20-year Distribution

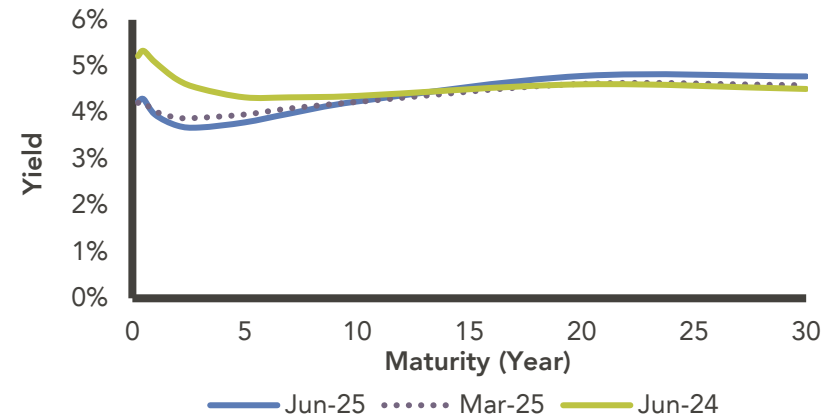


Source: BofA Global Investment Strategy, Refinitiv

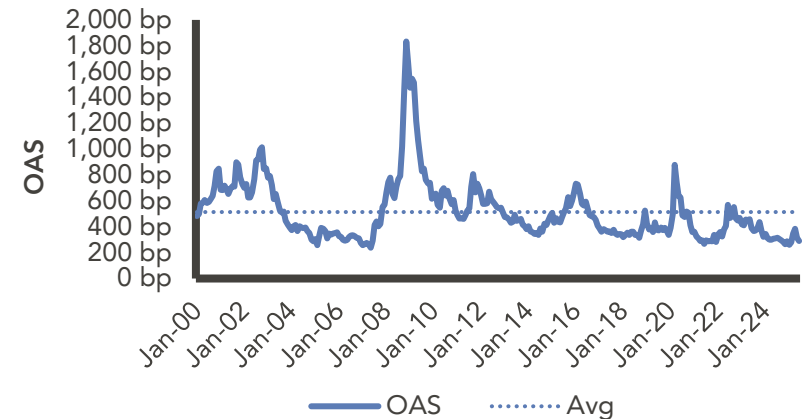
U.S. Fixed Income

- While Treasury yields were mixed in Q2, falling across most short maturities (1-7 years) but rising modestly for longer-dated issues (10-30 years), intermediate- and long-term rates saw notable volatility. The 10-year note, for example, saw a 60 bp range (4.0-4.6%) during the quarter.
- The Fed remained on hold, continuing to opt for a “wait and see” approach regarding the impacts of policy decisions (e.g., tariffs). Its updated SEP continued to show a base case of 50 bps of cuts in 2025, despite an increase in its forecast for Core PCE inflation (3.1% from 2.8%) in 2025.
- The broad investment-grade bond market returned 1.2% in Q2. Sub-investment grade debt outperformed their investment-grade counterparts, with high-yield debt topping bank loans. High-yield spreads ended Q2 at 290 basis points—essentially unchanged from year-end levels, and still comfortably below the long-term average.

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	10.9	6.2	15.2	19.7	16.6	13.6
Russell 3000 Index	11.0	5.8	15.3	19.1	16.0	13.0
Russell 3000 Growth Index	17.7	5.9	17.0	25.1	17.6	16.4
Russell 3000 Value Index	3.8	5.5	13.3	12.5	13.9	9.0
Russell TOP 200 Index	11.8	6.5	15.8	21.3	17.3	14.6
Russell TOP 200 Growth Index	18.0	5.8	16.3	26.6	19.3	18.3
Russell TOP 200 Value Index	3.0	7.6	14.9	13.5	14.0	9.6
Russell 1000 Index	11.1	6.1	15.7	19.6	16.3	13.4
Russell 1000 Growth Index	18.0	6.2	17.3	19.6	18.2	17.0
Russell 1000 Value Index	3.8	6.0	13.7	12.8	13.9	9.2
Russell Mid-Cap Index	8.5	4.8	15.2	14.3	13.1	9.9
Russell Mid-Cap Growth Index	18.2	9.8	26.5	21.5	12.7	12.1
Russell Mid-Cap Value Index	5.3	3.1	11.5	11.3	13.7	8.4
Russell 2000 Index	8.5	(1.8)	7.7	10.0	10.0	7.1
Russell 2000 Growth Index	12.0	(0.5)	9.7	12.4	7.4	7.1
Russell 2000 Value Index	5.0	(3.2)	5.5	7.5	12.5	6.7
DOMESTIC EQUITY BY SECTOR (MSCI)						
Communication Services	18.6	10.6	22.5	26.0	15.8	12.2
Consumer Discretionary	12.0	(2.8)	17.8	18.6	13.0	12.7
Consumer Staples	1.3	6.1	11.9	9.4	11.4	9.1
Energy	(7.5)	0.1	(3.5)	10.0	23.4	4.8
Financials	7.0	8.7	30.0	20.8	20.0	12.3
Health Care	(5.8)	(1.3)	(5.2)	3.4	6.8	7.6
Industrials	13.5	10.7	20.6	21.5	18.3	12.3
Information Technology	23.5	7.6	15.9	30.3	21.4	21.9
Materials	3.7	4.6	2.9	8.8	12.1	8.3
Real Estate	(0.8)	2.0	9.5	3.5	6.7	6.6
Utilities	4.1	9.6	23.2	8.6	10.9	10.5

Source: Refinitiv

Global Index Returns

INTERNATIONAL/GLOBAL EQUITY	QTR	YTD	1 Year	3 Year	5 Year	10 Year
MSCI EAFE (Net)	11.8	19.4	17.7	16.0	11.2	6.5
MSCI EAFE Growth (Net)	13.5	16.0	11.4	13.6	7.9	6.7
MSCI EAFE Value (Net)	10.1	22.8	24.2	18.4	14.3	6.1
MSCI EAFE Small Cap (Net)	16.6	20.9	22.5	13.3	9.3	6.5
MSCI AC World Index (Net)	11.5	10.0	16.2	17.3	13.7	10.0
MSCI AC World Index Growth (Net)	17.3	9.3	16.7	21.4	13.9	12.3
MSCI AC World Index Value (Net)	5.8	10.9	15.6	13.1	13.0	7.3
MSCI Europe ex UK (Net)	12.2	24.2	17.9	17.9	11.9	7.3
MSCI United Kingdom (Net)	8.7	19.3	20.0	15.2	14.0	5.4
MSCI Pacific ex Japan (Net)	14.2	14.6	19.1	10.4	9.0	5.8
MSCI Japan (Net)	11.4	11.7	13.9	15.0	8.8	6.1
MSCI Emerging Markets (Net)	12.0	15.3	15.3	9.7	6.8	4.8

Source: Refinitiv

Global Index Returns

FIXED INCOME	QTR	YTD	1 Year	3 Year	5 Year	10 Year
Merrill Lynch 3-month T-Bill	1.0	2.1	4.7	4.6	2.8	2.0
Barclays Intermediate Gov't./Credit	1.7	4.1	6.7	3.6	0.6	2.0
Barclays Aggregate Bond	1.2	4.0	6.1	2.5	(0.7)	1.8
Barclays Short Government	1.2	2.8	5.7	3.4	1.3	1.6
Barclays Intermediate Government	1.5	4.0	6.3	2.8	0.2	1.5
Barclays Long Government	(1.5)	3.1	1.6	(3.7)	(8.2)	0.1
Barclays Investment Grade Corp.	1.8	4.2	6.9	4.3	0.1	2.9
Barclays High Yield Corp. Bond	3.5	4.6	10.3	9.9	6.0	5.4
Credit Suisse Leveraged Loan	2.3	3.0	7.5	9.5	7.4	5.1
JPMorgan Global ex US Bond	7.3	10.0	11.2	2.7	(1.6)	0.6
JPMorgan Emerging Market Bond	3.3	5.6	10.0	8.9	1.8	3.5
INFLATION SENSITIVE						
Consumer Price Index	0.9	2.2	2.7	2.9	4.6	3.1
BC TIPS	0.5	4.7	5.8	2.3	1.6	2.7
Commodities	(3.1)	5.5	5.8	0.1	12.7	2.0
Gold	5.2	24.4	39.8	21.4	11.8	9.9
FTSE Nareit All Equity REITs	(0.9)	1.8	9.2	3.4	6.7	6.6
FTSE EPRA/NAREIT Global REITs	4.8	6.3	11.2	3.2	4.3	2.9
NCREIF ODCE*	0.8	1.7	2.7	(6.2)	2.5	4.4

*Data are preliminary.

Source: Refinitiv



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Portfolio Overview

Observations

- Market Value as of June 30, 2025, was \$3.73 billion
- Q2-25 Return: Total Fund 6.3% (net) vs. Policy Index 6.4%; investment gain of \$222 million
- Contributors to Q2-25 Performance:
 - Growth Equities
 - International Equities
 - Real Assets
 - Opportunistic Credit
- Detractors from Q2-25 Performance:
 - Value Equities
 - Defensive Equities
 - Real Estate Separate Account
- Longer term performance has been strong:
 - 5-Year Return: 8.9% (net), 9.2% (gross) vs. Policy Index 9.2%; investment gain of \$1.36 billion
 - 10-Year Return: 7.5% (net), 7.8% (gross) vs. Policy Index 7.5%; investment gain of \$2.11 billion
 - Peer Group Ranking: second quartile
 - Lower volatility and downside capture: Beta 0.95
- Very low Investment Management Fees: 0.28%

Recent Changes / Looking Ahead

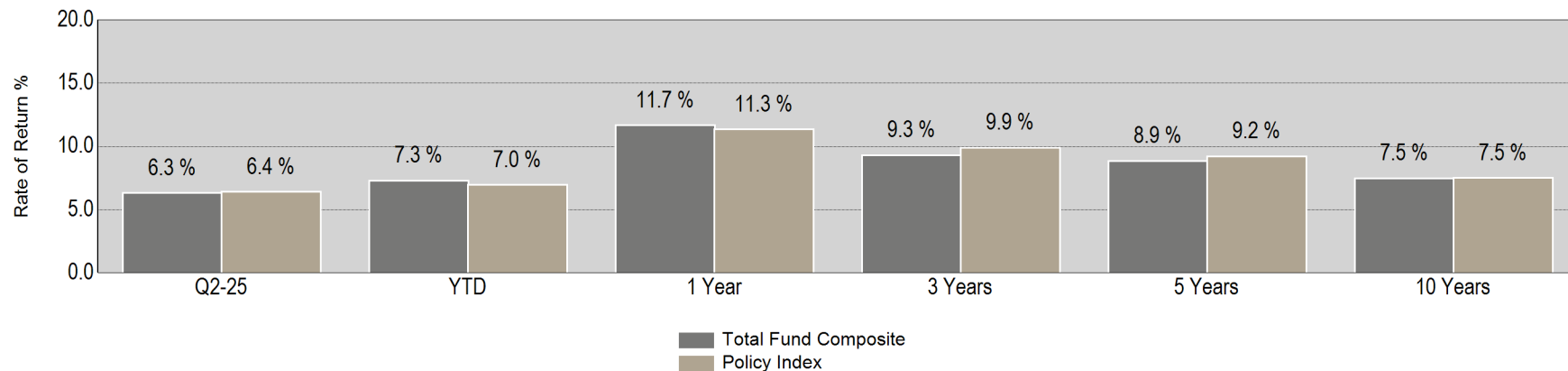
- Jacobs Levy Contract being finalized and transition being planned
- Ongoing search activity: New Private Infrastructure and Private Credit mandates

As of June 30, 2025

Summary of Cash Flows

	Second Quarter	Year-To-Date	One Year	Three Years	Five Years	Ten Years
Beginning Market Value	\$3,536,195,315	\$3,523,888,102	\$3,403,160,448	\$3,022,152,580	\$2,649,623,811	\$2,092,084,026
Net Cash Flow	-\$31,464,320	-\$52,054,490	-\$70,130,846	-\$196,144,297	-\$283,437,820	-\$477,841,665
Net Investment Change	\$222,396,156	\$255,293,539	\$394,097,550	\$901,118,868	\$1,360,941,160	\$2,112,884,790
Ending Market Value	\$3,727,127,151	\$3,727,127,151	\$3,727,127,151	\$3,727,127,151	\$3,727,127,151	\$3,727,127,151

Return Summary (Net)



Asset Allocation vs. Target

	Current	Policy	Difference*	Policy Range	Within Range
U.S. Equity	32.7%	32.5%	\$8,263,806	27.0% - 38.0%	Yes
Global Equity	5.3%	5.0%	\$10,383,816	0.0% - 10.0%	Yes
Non-U.S. Equity	20.3%	17.5%	\$103,023,123	12.0% - 23.0%	Yes
Timberland/Farmland	4.5%	5.0%	-\$17,718,368	0.0% - 10.0%	Yes
Private Real Estate	8.5%	10.0%	-\$57,567,997	5.0% - 15.0%	Yes
High Yield	5.0%	5.0%	\$1,516,761	0.0% - 10.0%	Yes
U.S. Fixed Income	23.4%	24.0%	-\$21,100,952	19.0% - 29.0%	Yes
Cash Equivalent	0.3%	1.0%	-\$26,800,189	0.0% - 5.0%	Yes
Total	100.0%	100.0%			

*Difference between Policy and Current Allocation

Pennsylvania Municipal Retirement System

Market Value Summary

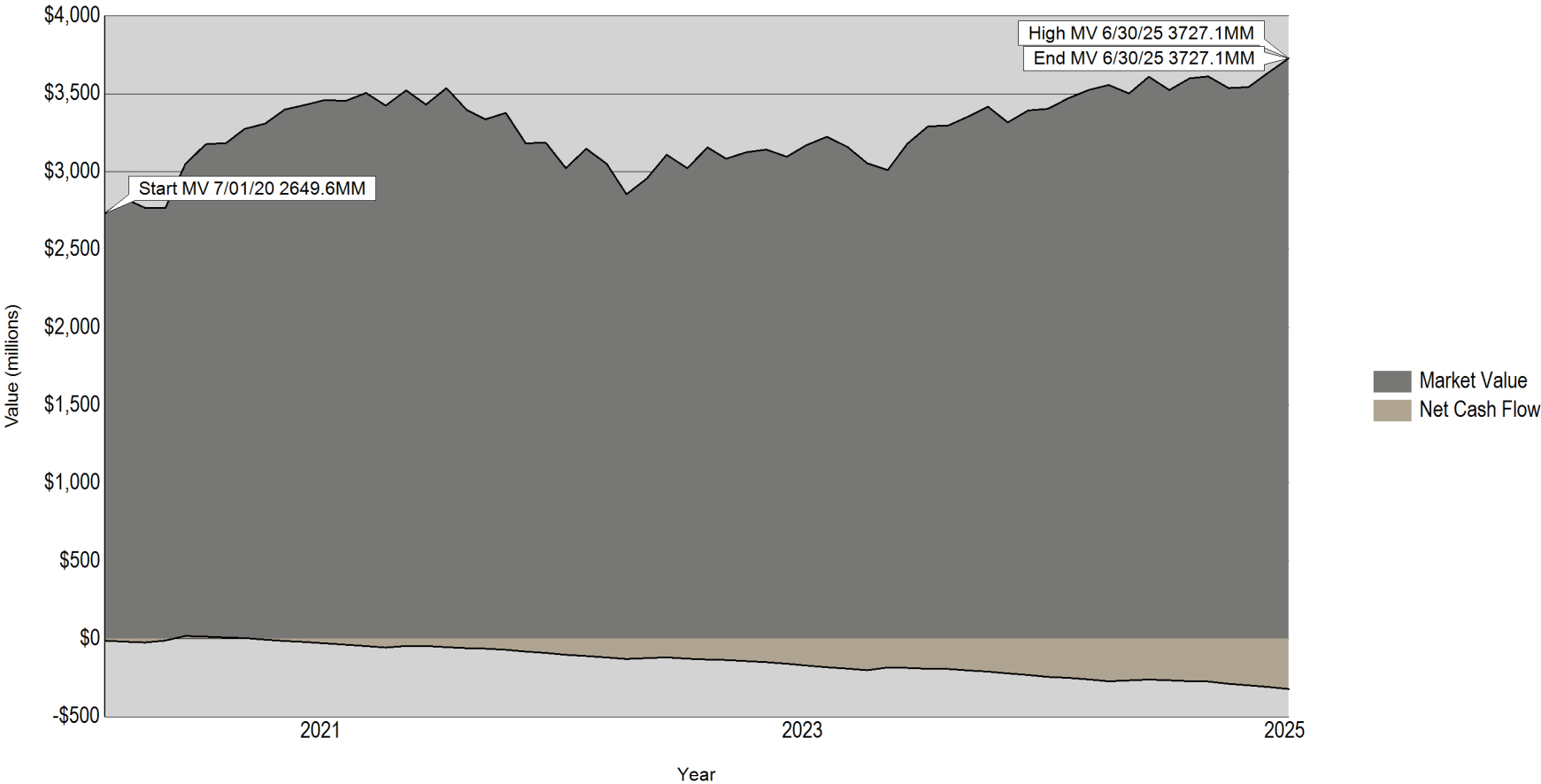
As of June 30, 2025

Cash Flow Summary by Manager From April 01, 2025 to June 30, 2025

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
MFS Large Cap Value	\$161,268,559	\$0	\$4,628,840	\$165,897,399
Xponance S&P 500	\$284,746,010	\$0	\$31,156,127	\$315,902,137
Northern Trust S&P 500	\$279,285,558	\$2,917	\$30,537,235	\$309,825,710
Polen Focus Growth	\$126,439,098	\$0	\$11,441,288	\$137,880,386
Northern Trust Dow Jones Completion Index	\$111,330,360	\$4,507	\$13,467,648	\$124,802,515
Copeland SMID Cap Dividend Growth	\$54,612,981	\$0	\$3,100,332	\$57,713,312
Emerald Small Cap Growth	\$46,130,976	\$0	\$9,386,124	\$55,517,101
Channing Capital Management Small Cap Value	\$47,098,195	\$0	\$4,938,281	\$52,036,476
Dana Inv. Advisors Small Cap Value	\$5,038	-\$10	\$67	\$5,094
Rhumblin Global Min. Volatility	\$190,458,607	\$30,491	\$6,251,076	\$196,740,174
SSGA MSCI World ex US	\$226,181,413	\$22,558	\$27,678,541	\$253,882,512
Hardman Johnston Int'l Equity	\$120,942,478	\$0	\$20,628,506	\$141,570,984
Hudson Edge Int'l Equity	\$120,730,726	\$0	\$15,008,588	\$135,739,315
Jarislowsky, Fraser Limited	\$122,989	\$0	\$10,663	\$133,652
Boston Partners Int'l Value Equity	\$117,859,709	\$0	\$15,362,690	\$133,222,399
SSGA MSCI Emerging Markets Index	\$81,518,983	\$10,086	\$9,192,444	\$90,721,513
Forest Investment Associates	\$165,476,876	\$309,523	\$2,851,591	\$168,637,990
PRISA LP	\$54,642,294	-\$401,014	\$881,648	\$55,122,928
PRISA II	\$111,201,498	-\$650,981	\$1,546,581	\$112,097,097
PennMuni-Nuveen U.S. Real Estate Fund	\$164,705,457	-\$14,419,771	-\$3,582,504	\$146,703,182
1721 N. Front Street, LLC	\$1,221,511	\$0	\$0	\$1,221,511
SSGA US Aggregate Bond Index	\$431,207,983	\$13,021	\$5,261,615	\$436,482,618
Federated Hermes Core Aggregate Strategy	\$430,088,893	\$0	\$6,838,053	\$436,926,946
Ares Global Multi-Asset Credit	\$194,747,390	-\$12,500,000	\$5,625,728	\$187,873,118
Cash Management	\$14,171,733	-\$3,885,646	\$184,995	\$10,471,083
Total	\$3,536,195,315	-\$31,464,320	\$222,396,156	\$3,727,127,151

*1721 N. Front St. as of 12/31/2024.

Market Value History



Pennsylvania Municipal Retirement System

Asset Allocation Summary

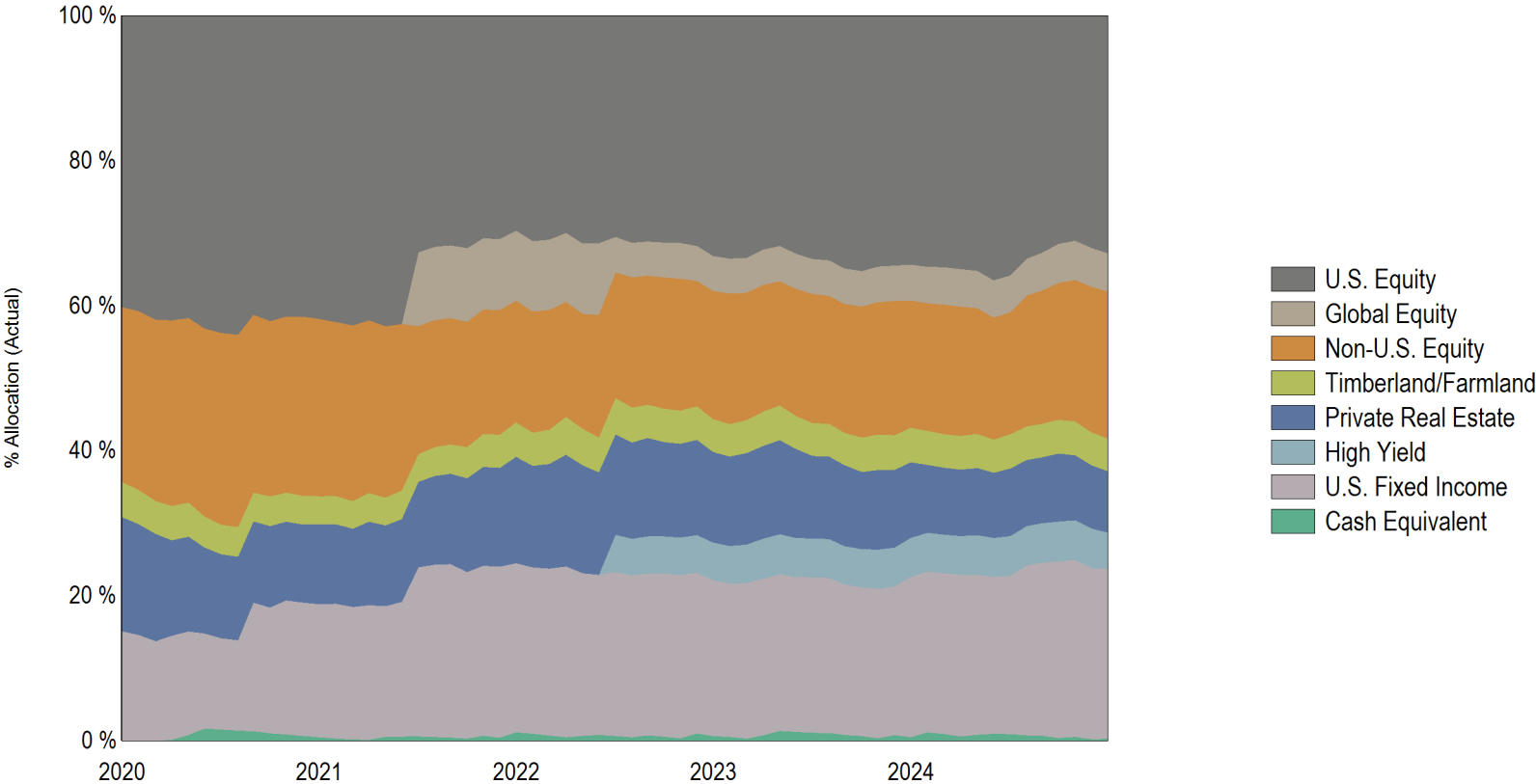
As of June 30, 2025

	Market Value	% of Portfolio	Policy %	Policy Difference
Total Fund Composite	3,727,127,151	100.0	100.0	0
Total Equity Composite	2,171,590,677	58.3	55.0	121,670,744
U.S. Equity Composite	1,219,580,130	32.7	32.5	8,263,806
MFS Large Cap Value	165,897,399	4.5		
Xponance S&P 500	315,902,137	8.5		
Northern Trust S&P 500	309,825,710	8.3		
Polen Focus Growth	137,880,386	3.7		
Northern Trust Dow Jones Completion Index	124,802,515	3.3		
Copeland SMID Cap Dividend Growth	57,713,312	1.5		
Emerald Small Cap Growth	55,517,101	1.5		
Channing Capital Management Small Cap Value	52,036,476	1.4		
Global Equity Composite	196,740,174	5.3	5.0	10,383,816
Rhumblin Global Min. Volatility	196,740,174	5.3		
Non-U.S Equity Composite	755,270,374	20.3	17.5	103,023,123
SSGA MSCI World ex US	253,882,512	6.8		
Hardman Johnston Int'l Equity	141,570,984	3.8		
Hudson Edge Int'l Equity	135,739,315	3.6		
Boston Partners Int'l Value Equity	133,222,399	3.6		
SSGA MSCI Emerging Markets Index	90,721,513	2.4		
Real Assets Composite	483,782,708	13.0	15.0	-75,286,365
Forest Investment Associates	168,637,990	4.5		
PRISA LP	55,122,928	1.5		
PRISA II	112,097,097	3.0		
PennMuni-Nuveen U.S. Real Estate Fund	146,703,182	3.9		
1721 N. Front Street, LLC	1,221,511	0.0		
Total Fixed Income Composite	1,061,282,683	28.5	29.0	-19,584,191
SSGA US Aggregate Bond Index	436,482,618	11.7		
Federated Hermes Core Aggregate Strategy	436,926,946	11.7		
Ares Global Multi-Asset Credit	187,873,118	5.0		
Cash Composite	10,471,083	0.3	1.0	-26,800,189

*1721 N. Front St. as of 12/31/2024.

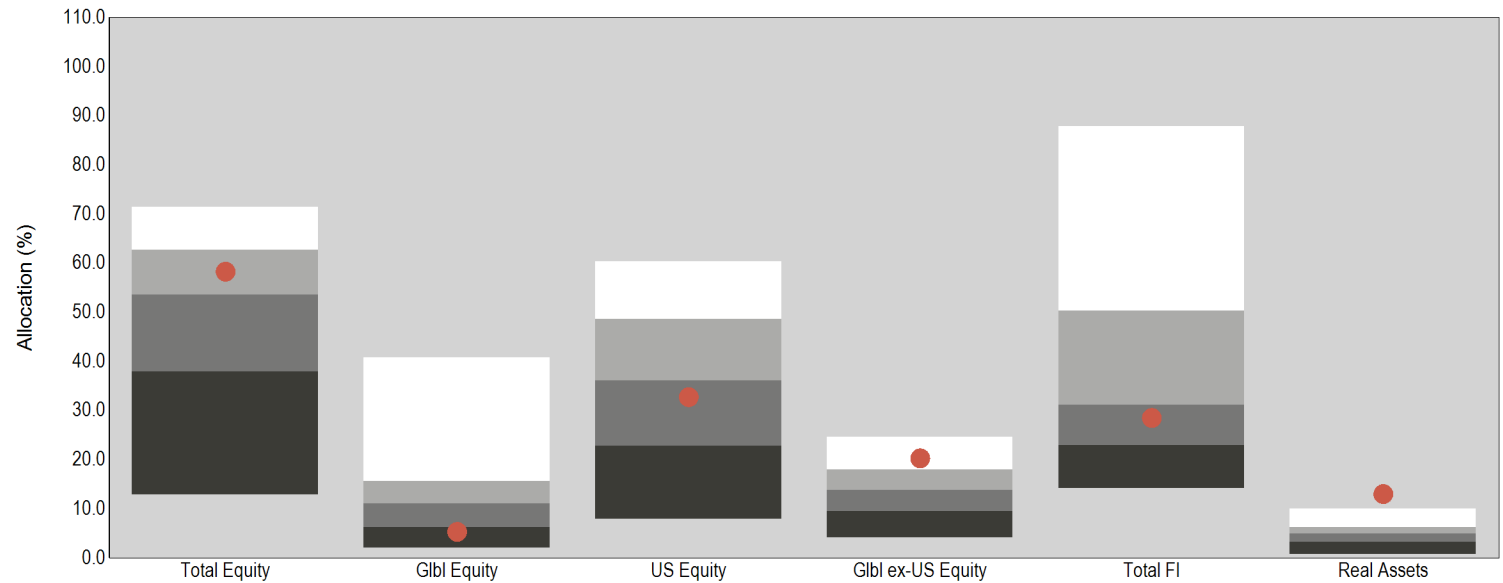
*Residual value for Jarislowsky (approx. \$134k), and Dana (approx. \$5k) included in Non-US Equity, US Equity and Total Fund Composite values.

Asset Allocation History



As of June 30, 2025

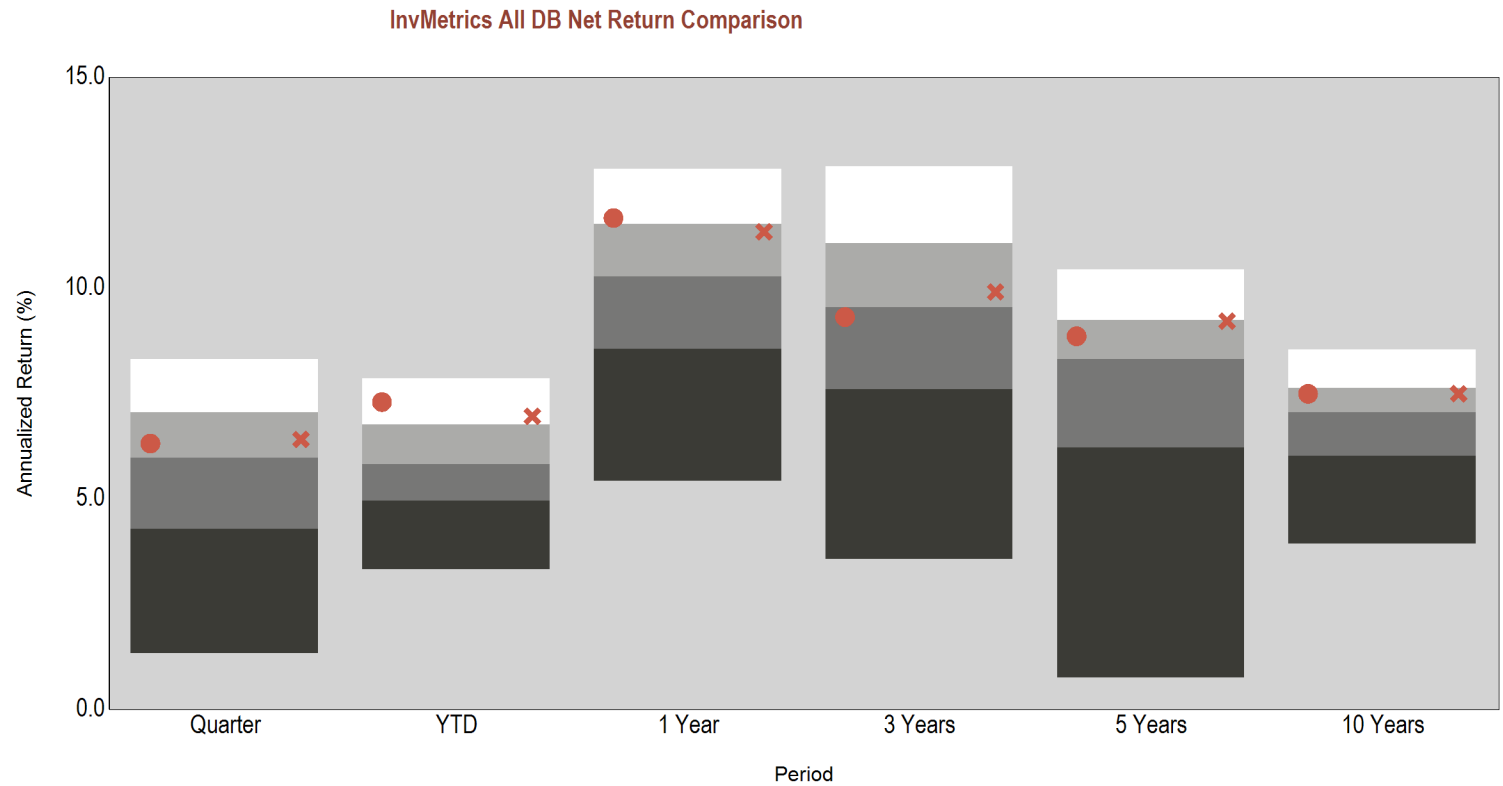
Total Plan Allocation vs. InvMetrics All DB Net
As of June 30, 2025



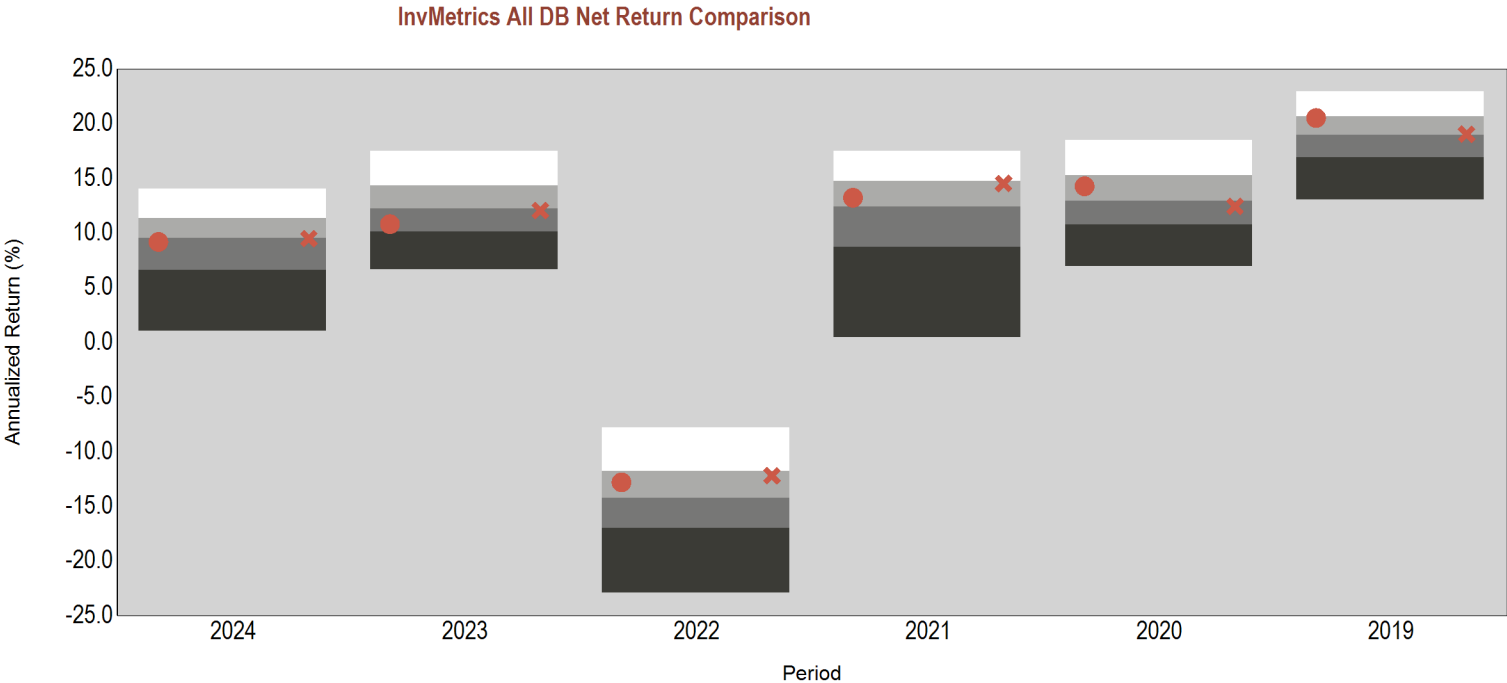
Allocation (Rank)

5th Percentile	71.4	40.8	60.4	24.6	87.8	10.0
25th Percentile	62.7	15.6	48.6	17.9	50.2	6.2
Median	53.6	11.1	36.1	13.8	31.1	4.9
75th Percentile	37.8	6.2	22.7	9.5	23.0	3.3
95th Percentile	12.9	2.1	7.9	4.2	14.2	0.8
# of Portfolios	1,327	262	1,280	1,155	1,379	315
● Total Fund Composite	58.3 (38)	5.3 (79)	32.7 (57)	20.3 (17)	28.5 (58)	13.0 (2)

As of June 30, 2025



	Return (Rank)											
5th Percentile	8.3			7.9			12.8			12.9		
25th Percentile	7.0			6.8			11.5			11.1		
Median	6.0			5.8			10.3			9.5		
75th Percentile	4.3			5.0			8.6			7.6		
95th Percentile	1.3			3.3			5.4			3.6		
# of Portfolios	1,460			1,457			1,445			1,378		
● Total Fund Composite	6.3	(44)		7.3	(13)		11.7	(22)		9.3	(54)	
▲ Policy Index	6.4	(41)		7.0	(20)		11.3	(29)		9.9	(44)	



	Return (Rank)											
5th Percentile	14.1		17.5		-7.8		17.5		18.5		23.0	
25th Percentile	11.4		14.3		-11.8		14.7		15.3		20.7	
Median	9.6		12.2		-14.2		12.4		12.9		18.9	
75th Percentile	6.6		10.1		-17.0		8.7		10.8		16.9	
95th Percentile	1.1		6.7		-22.9		0.5		7.0		13.0	
# of Portfolios	1,478		1,452		1,531		1,646		1,745		1,580	
● Total Fund Composite	9.2	(55)	10.8	(68)	-12.8	(35)	13.2	(42)	14.3	(36)	20.5	(27)
▲ Policy Index	9.5	(51)	12.1	(53)	-12.2	(30)	14.5	(27)	12.4	(56)	19.0	(49)

RISK RETURN STATISTICS

July 01, 2020 Through June 30, 2025

	Total Fund Composite	Policy Index
RETURN SUMMARY STATISTICS		
Number of Periods	60	60
Maximum Return	8.96	8.97
Minimum Return	-6.12	-6.49
Annualized Return	8.85	9.21
Total Return	52.83	55.36
Annualized Excess Return Over Risk Free	6.10	6.46
Annualized Excess Return	-0.36	0.00

RISK SUMMARY STATISTICS

Beta	0.95	1.00
Upside Deviation	5.99	6.12
Downside Deviation	4.98	5.14

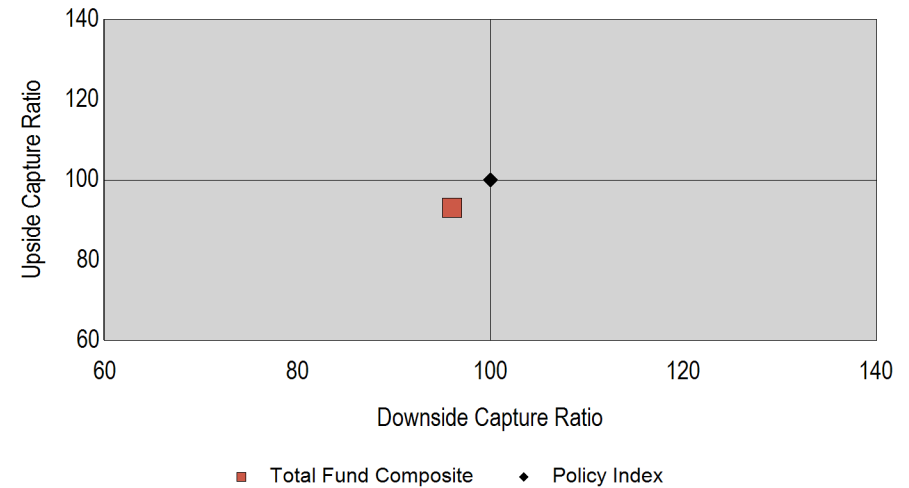
RISK/RETURN SUMMARY STATISTICS

Annualized Standard Deviation	9.91	10.12
Alpha	0.01	0.00
Sharpe Ratio	0.62	0.64
Excess Return Over Market / Risk	-0.04	0.00
Tracking Error	2.31	0.00
Information Ratio	-0.15	--

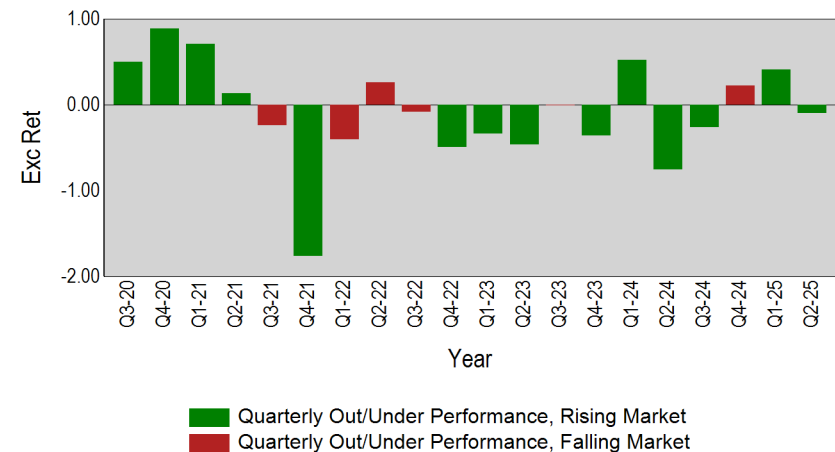
CORRELATION STATISTICS

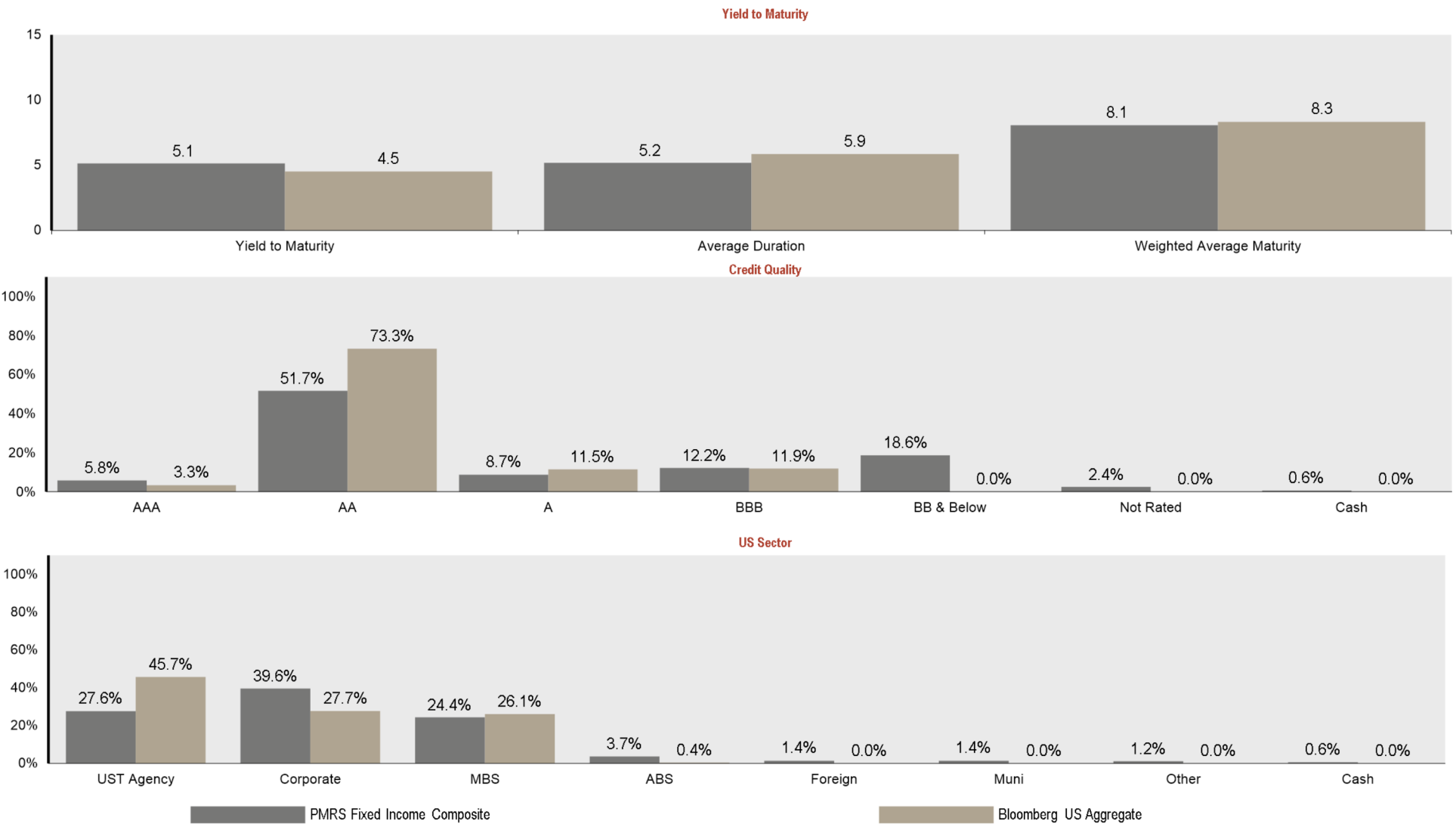
R-Squared	0.95	1.00
Correlation	0.97	1.00

Upside Capture Ratio vs. Downside Capture Ratio
5 Years Ending June 30, 2025



Quarterly Excess Performance
Total Fund Composite vs. Policy Index





Pennsylvania Municipal Retirement System

Performance Summary (Net)

As of June 30, 2025

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Market Value	Inception	Inception Date
Total Fund Composite	6.3	7.3	11.7	9.3	8.9	7.5	3,727,127,151	8.5	Jan-86
Policy Index	6.4	7.0	11.3	9.9	9.2	7.5		9.0	Jan-86
InvMetrics All DB Net Rank	44	13	22	54	37	32		26	Jan-86
Total Equity Composite	10.3	10.5	16.3	15.7	--	--	2,171,590,677	12.4	Oct-20
MSCI ACWI IMI Net USD	11.6	9.8	15.9	16.8	--	--		12.3	Oct-20
U.S. Equity Composite	9.8	4.8	13.4	16.7	14.8	11.5	1,219,580,130	9.5	Jan-06
Russell 3000	11.0	5.8	15.3	19.1	16.0	13.0		10.5	Jan-06
InvMetrics Public DB US Eq Net Rank	59	51	56	64	62	45		74	Jan-06
MFS Large Cap Value	2.9	6.9	12.3	12.1	--	--	165,897,399	12.1	Jun-22
Russell 1000 Value	3.8	6.0	13.7	12.8	--	--		12.8	Jun-22
eV US Large Cap Value Equity Net Rank	73	30	54	62	--	--		62	Jun-22
Xponance S&P 500	10.9	6.2	15.1	19.7	--	--	315,902,137	9.5	Dec-21
S&P 500	10.9	6.2	15.2	19.7	--	--		9.5	Dec-21
eV US Large Cap Core Equity Net Rank	42	41	29	32	--	--		31	Dec-21
Northern Trust S&P 500	10.9	6.2	15.1	19.7	--	--	309,825,710	9.5	Dec-21
S&P 500	10.9	6.2	15.2	19.7	--	--		9.5	Dec-21
eV US Large Cap Core Equity Net Rank	42	41	28	31	--	--		31	Dec-21
Polen Focus Growth	9.0	2.8	11.1	15.9	9.0	13.7	137,880,386	14.5	Oct-10
Russell 1000 Growth	17.8	6.1	17.2	25.8	18.1	17.0		16.9	Oct-10
eV US Large Cap Growth Equity Net Rank	90	93	77	88	96	71		66	Oct-10
Northern Trust Dow Jones Completion Index	12.1	2.1	15.5	15.1	--	--	124,802,515	2.7	Dec-21
Dow Jones U.S. Completion Total Stock Market	12.2	2.1	15.6	15.1	--	--		2.6	Dec-21
eV US Small-Mid Cap Core Equity Net Rank	13	26	9	14	--	--		44	Dec-21
Copeland SMID Cap Dividend Growth	5.7	0.7	1.8	9.5	11.3	--	57,713,312	8.4	Sep-17
Russell 2500	8.6	0.4	9.9	11.1	10.7	--		6.8	Sep-17
Russell 2500 Value	7.3	1.0	10.5	10.7	14.0	--		7.2	Sep-17
eV US Small Cap Core Equity Net Rank	69	28	85	69	63	--		36	Sep-17
Emerald Small Cap Growth	20.3	6.1	15.6	16.8	10.3	9.0	55,517,101	10.5	Oct-98
Russell 2000 Growth	12.0	-0.5	9.7	12.4	7.4	7.1		7.7	Oct-98
eV US Small Cap Growth Equity Net Rank	8	9	14	12	28	51		45	Oct-98
Channing Capital Management Small Cap Value	10.5	-2.7	--	--	--	--	52,036,476	-2.3	Aug-24
Russell 2000 Value	5.0	-3.2	--	--	--	--		-4.1	Aug-24
eV US Small Cap Value Equity Net Rank	10	51	--	--	--	--		42	Aug-24

Pennsylvania Municipal Retirement System

Performance Summary (Net)

As of June 30, 2025

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Market Value	Inception	Inception Date
Global Equity Composite	3.3	9.9	17.0	11.3	--	--	196,740,174	4.3	Dec-21
Global Equity Policy Index	3.0	9.3	15.9	10.6	--	--		3.7	Dec-21
InvMetrics Public DB Gbl Eq Net Rank	99	91	13	97	--	--		97	Dec-21
Rhumblin Global Min. Volatility	3.3	9.9	17.0	10.6	--	--	196,740,174	5.2	Dec-21
MSCI ACWI Minimum Volatility Index	3.0	9.3	15.9	10.2	--	--		4.8	Dec-21
MSCI ACWI	11.5	10.0	16.2	17.3	--	--		7.5	Dec-21
eV Global Low Volatility Equity Net Rank	88	81	69	80	--	--		77	Dec-21
Non-U.S Equity Composite	13.2	21.4	20.5	14.9	10.7	7.4	755,270,374	8.1	May-12
MSCI ACWI ex USA IMI	12.7	17.9	17.8	13.9	10.2	6.2		7.4	May-12
InvMetrics Public DB ex-US Eq Net Rank	33	7	12	27	29	23		36	May-12
SSGA MSCI World ex US	12.2	19.3	19.1	16.1	11.9	7.0	253,882,512	7.3	Apr-12
MSCI World ex USA	12.0	19.0	18.7	15.7	11.5	6.7		6.9	Apr-12
eV ACWI ex-US Large Cap Equity Net Rank	42	43	47	34	37	45		37	Apr-12
Hardman Johnston Int'l Equity	17.1	25.0	27.8	15.8	9.7	9.1	141,570,984	9.1	Apr-12
MSCI EAFE	11.8	19.4	17.7	16.0	11.2	6.5		7.0	Apr-12
eV EAFE All Cap Equity Net Rank	6	12	15	57	75	9		13	Apr-12
Hudson Edge Int'l Equity	12.4	22.9	16.5	13.1	12.1	8.2	135,739,315	9.4	Feb-12
MSCI EAFE	11.8	19.4	17.7	16.0	11.2	6.5		7.3	Feb-12
eV EAFE All Cap Equity Net Rank	49	26	81	83	42	17		13	Feb-12
Boston Partners Int'l Value Equity	13.0	--	--	--	--	--	133,222,399	19.4	Jan-25
MSCI EAFE Value	10.1	--	--	--	--	--		16.9	Jan-25
Foreign Large Value MStar MF Rank	13	--	--	--	--	--		31	Jan-25
SSGA MSCI Emerging Markets Index	11.3	15.4	15.1	9.4	6.5	4.7	90,721,513	7.0	Nov-08
MSCI Emerging Markets	12.0	15.3	15.3	9.7	6.8	4.8		7.2	Nov-08
eV Emg Mkts Equity Net Rank	77	48	46	69	66	73		79	Nov-08

Pennsylvania Municipal Retirement System

Performance Summary (Net)

As of June 30, 2025

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Market Value	Inception	Inception Date
Real Assets Composite	0.4	1.2	3.4	-2.0	3.4	4.6	483,782,708	6.9	Apr-93
Real Assets Policy Index	1.0	1.9	3.5	-1.4	5.2	5.8		7.1	Apr-93
Forest Investment Associates	1.7	1.3	3.6	8.7	8.4	5.6	168,637,990	4.6	Mar-99
NCREIF Timberland Property Index	1.4	2.3	5.3	8.7	8.2	5.4		6.4	Mar-99
PRISA LP	1.6	2.7	5.0	-5.9	2.7	4.8	55,122,928	5.8	Jan-86
NFI-ODCE	0.8	1.7	2.7	-6.2	2.5	4.4		5.7	Jan-86
InvMetrics Public DB Real Estate Priv Net Rank	8	1	9	44	55	40		--	Jan-86
PRISA II	1.4	2.4	5.4	-6.5	2.6	5.1	112,097,097	3.3	Jul-07
NFI-ODCE	0.8	1.7	2.7	-6.2	2.5	4.4		3.9	Jul-07
InvMetrics Public DB Real Estate Priv Net Rank	19	5	6	67	56	38		--	Jul-07
PennMuni-Nuveen U.S. Real Estate Fund	-2.4	-0.6	1.1	-5.4	0.6	4.2	146,703,182	4.3	Dec-08
NFI-ODCE	0.8	1.7	2.7	-6.2	2.5	4.4		4.6	Dec-08
InvMetrics Public DB Real Estate Priv Net Rank	99	98	81	29	91	44		--	Dec-08
1721 N. Front Street, LLC	0.0	0.0	-10.1	-12.7	-9.9	--	1,221,511	-7.9	Sep-16
Consumer Price Index	0.9	2.2	2.7	2.9	4.6	--		3.4	Sep-16
Total Fixed Income Composite	1.7	3.9	6.9	3.7	-0.2	2.0	1,061,282,683	5.6	Jan-86
Bloomberg US Aggregate TR	1.2	4.0	6.1	2.5	-0.7	1.8		5.5	Jan-86
InvMetrics Public DB US Fix Inc Net Rank	35	67	22	49	77	87		--	Jan-86
SSGA US Aggregate Bond Index	1.2	4.0	6.1	2.6	-0.7	1.8	436,482,618	4.3	Apr-97
Bloomberg US Aggregate TR	1.2	4.0	6.1	2.5	-0.7	1.8		4.3	Apr-97
eV US Core Fixed Inc Net Rank	63	52	54	81	85	82		81	Apr-97
Federated Hermes Core Aggregate Strategy	1.6	4.1	6.5	2.7	--	--	436,926,946	2.7	Jul-22
Bloomberg US Aggregate TR	1.2	4.0	6.1	2.5	--	--		2.5	Jul-22
eV US Core Fixed Inc Net Rank	6	44	18	68	--	--		68	Jul-22
Ares Global Multi-Asset Credit	2.9	3.4	9.2	--	--	--	187,873,118	10.9	Dec-22
50% Bloomberg HY / 50% CSFB Lev Loans	2.8	3.6	8.8	--	--	--		10.2	Dec-22
eV US High Yield Fixed Inc Net Rank	76	85	50	--	--	--		8	Dec-22
Cash Composite							10,471,083		

*1721 N. Front St. as of 12/31/2024.

As of June 30, 2025

Investment Manager	Asset Class	Status	Reason
MFS Large Cap Value	US Stock Large Cap Value	In Compliance	---
Xponance S&P 500	US Stock Large Cap Core	In Compliance	---
Northern Trust S&P 500	US Stock Large Cap Core	In Compliance	---
Polen Focus Growth	US Stock Large Cap Growth	In Compliance	---
Northern Trust Dow Jones Completion Index	US Stock SMID Cap Core	In Compliance	---
Channing Capital Small Cap Value	US Stock Small Cap Value	In Compliance	---
Copeland SMID Cap Dividend Growth	US Stock SMID Cap Core	In Compliance	---
Emerald Small Cap Growth	US Stock Small Cap Growth	In Compliance	---
Rhumblin Global Min. Volatility	Global Stock Low Volatility	In Compliance	---
SSGA MSCI World ex US	Non-US Stock All Cap Core	In Compliance	---
Hardman Johnston Int'l Equity	Non-US Stock All Cap Core	In Compliance	---
HGK Int'l Equity	Non-US Stock All Cap Core	In Compliance	---
SSGA MSCI Emerging Markets Index	Non-US Stock Emerging	In Compliance	---
Forest Investment Associates	Real Assets - Timberland	In Compliance	---
PRISA LP	Real Estate	In Compliance	---
PRISA II	Real Estate	In Compliance	---
PennMuni-Nuveen U.S. Real Estate Fund	Real Estate	In Compliance	---
1721 N. Front St., LLC	Real Estate	In Compliance	---
SSGA US Aggregate Bond Index	US Fixed Income Core	In Compliance	---
Federated Hermes Core Aggregate Strategy	US Fixed Income Core	In Compliance	---
Ares Global Multi-Asset Credit Fund	Opportunistic Credit	In Compliance	---

Investment Manager Evaluation Terminology

The following terminology has been developed by Marquette Associates to facilitate efficient communication between the investment program's responsible parties. Each term signifies a particular status with the investment program.

In Compliance – Marquette has not been notified of any issues or changes to the investment manager that would materially impede upon its ability to execute the investment strategy or adhere to any applicable investment guidelines.

Alert – The investment manager has experienced a problem in performance (usually relative to a benchmark), a change in investment characteristics, an alteration in management style, ownership, or key investment professionals, and/or any other irregularities that may impede upon its ability to execute the investment strategy or adhere to any applicable investment guidelines.

On Notice – The investment manager has experienced continued concern with one or more Alert issues. Failure to improve upon stated issues within a certain time frame may justify termination.

Termination – The investment manager has been terminated and transition plans are in place.

Policy Index History

Total Fund Composite		
12/1/2022	Present	32.5% Russell 3000 / 5% Global Equity Policy Index / 17.5% MSCI ACWI ex USA IMI / 15% Real Assets Policy Index / 29% Bloomberg US Aggregate TR / 1% 91 Day T-Bills
1/1/2022	11/30/2022	32.5% Russell 3000 / 10% Global Equity Policy Index / 17.5% MSCI ACWI ex USA IMI / 15% Real Assets Policy Index / 24% Bloomberg US Aggregate TR / 1% 91 Day T-Bills
10/1/2020	12/31/2021	25% S&P 500 / 15% Russell 2000 / 15% MSCI EAFE / 10% MSCI Emerging Markets / 20% NFI-ODCE / 15% Bloomberg US Aggregate TR
Total Equity Composite		
10/1/2020	Present	MSCI ACWI IMI Net USD
U.S. Equity Composite		
1/1/2006	Present	Russell 3000
Large Cap U.S. Equity Composite		
1/1/1986	Present	S&P 500
SMID Cap U.S. Equity Composite		
1/1/1993	Present	Russell 2000
Global Equity Composite		
12/1/2022	Present	100% MSCI ACWI Minimum Volatility Index
1/1/2022	11/30/2022	50% MSCI ACWI / 50% MSCI ACWI Minimum Volatility Index
Non-U.S Equity Composite		
5/31/2012	Present	MSCI ACWI ex USA IMI
Developed Non-U.S. Equity Composite		
1/1/1993	Present	MSCI EAFE
Emerging Markets Composite		
1/1/2009	Present	MSCI Emerging Markets
Real Assets Composite		
7/1/2025	Present	0.0
1/1/2022	6/30/2025	66.67% NFI-ODCE / 33.33% NCREIF Timberland Property Index
4/1/1993	12/31/2021	100% NFI-ODCE
Total Fixed Income Composite		
1/31/1986	Present	Bloomberg US Aggregate TR
Cash Composite		
	Present	91 Day T-Bills

Pennsylvania Municipal Retirement System

Fee Summary

As of June 30, 2025

Account	Fee Schedule	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
MFS Large Cap Value	0.35% of First 100.0 Mil, 0.33% Thereafter	4.5%	\$564,167	0.34%
Xponance S&P 500	0.02% of Assets	8.5%	\$63,180	0.02%
Northern Trust S&P 500	0.00% of Assets	8.3%	\$12,393	0.00%
Polen Focus Growth	0.50% of First 100.0 Mil, 0.40% Thereafter	3.7%	\$651,522	0.47%
Northern Trust Dow Jones Completion Index	0.02% of Assets	3.4%	\$18,720	0.02%
Copeland SMID Cap Dividend Growth	0.50% of Assets	1.6%	\$288,567	0.50%
Emerald Small Cap Growth	0.53% of Assets	1.5%	\$294,241	0.53%
Channing Capital Management Small Cap Value	0.65% of First 25.0 Mil, 0.60% of Next 75.0 Mil, 0.50% Thereafter	1.4%	\$324,719	0.62%
Rhumblin Global Min. Volatility	0.07% of Assets	5.3%	\$127,881	0.06%
SSGA MSCI World ex US	0.04% of Assets	6.8%	\$101,553	0.04%
Hardman Johnston Int'l Equity	0.75% of First 25.0 Mil, 0.60% of Next 50.0 Mil, 0.50% Thereafter	3.8%	\$820,355	0.58%
Hudson Edge Int'l Equity	0.65% of Assets	3.7%	\$882,306	0.65%
Boston Partners Int'l Value Equity	0.45% of Assets	3.6%	\$599,501	0.45%
SSGA MSCI Emerging Markets Index	0.05% of Assets	2.4%	\$45,361	0.05%
Forest Investment Associates	0.75% of Assets	4.5%	\$1,264,785	0.75%

Pennsylvania Municipal Retirement System

Fee Summary

As of June 30, 2025

Account	Fee Schedule	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
PRISA LP	1.00% of First 25.0 Mil, 0.95% of Next 25.0 Mil, 0.85% of Next 50.0 Mil, 0.75% of Next 100.0 Mil, 0.70% of Next 100.0 Mil, 0.65% Thereafter	1.5%	\$531,045	0.96%
PRISA II	1.20% of First 25.0 Mil, 1.15% of Next 25.0 Mil, 1.05% of Next 50.0 Mil, 0.95% of Next 100.0 Mil, 0.90% of Next 100.0 Mil, 0.85% Thereafter	3.0%	\$1,227,422	1.09%
PennMuni-Nuveen U.S. Real Estate Fund	0.85% of Assets	3.9%	\$1,246,977	0.85%
1721 N. Front Street, LLC	0.85% of Assets	0.0%	\$10,383	0.85%
SSGA US Aggregate Bond Index	0.02% of First 100.0 Mil, 0.01% of Next 300.0 Mil, 0.01% Thereafter	11.7%	\$52,736	0.01%
Federated Hermes Core Aggregate Strategy	0.12% of First 100.0 Mil, 0.10% of Next 400.0 Mil, 0.07% Thereafter	11.8%	\$456,927	0.10%
Ares Global Multi-Asset Credit	0.35% of Assets	5.1%	\$657,556	0.35%
Investment Management Fee		100.0%	\$10,242,295	0.28%

Pennsylvania Municipal Retirement System

Total Equity Composite

As of June 30, 2025

Characteristics

	Portfolio	MSCI ACWI IMI Net USD
Number of Holdings	5,655	8,192
Weighted Avg. Market Cap. (\$B)	468.5	685.4
Median Market Cap. (\$B)	7.6	2.7
Price To Earnings	21.3	21.8
Price To Book	3.4	3.6
Price To Sales	2.0	2.1
Return on Equity (%)	19.5	19.7
Yield (%)	1.9	1.9

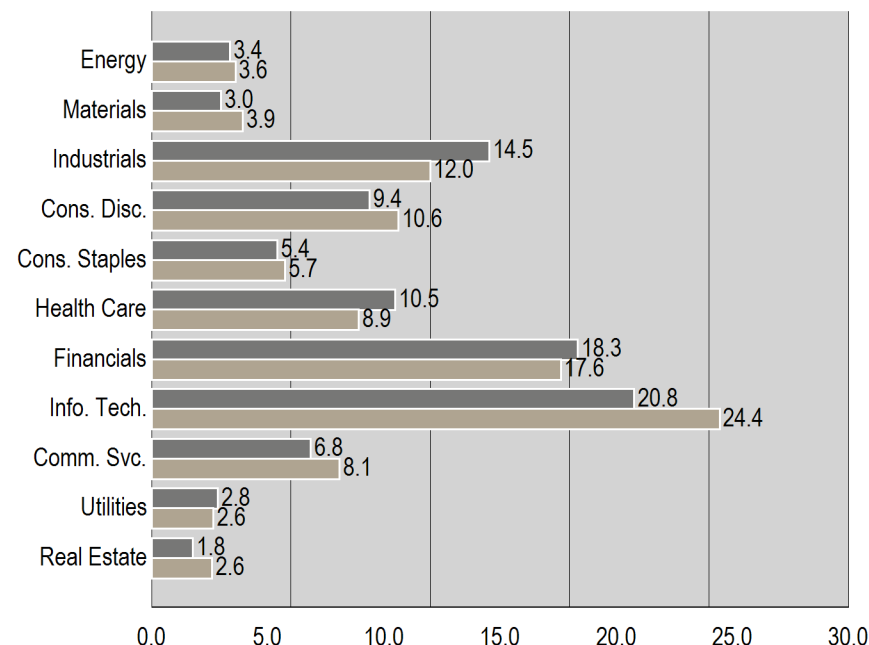
Top Holdings

MICROSOFT CORP	2.7%
NVIDIA CORPORATION	2.1%
APPLE INC	1.7%
AMAZON.COM INC	1.6%
ISHARES MSCI EMERGING MARKETS MIN VOL FACTOR ETF	1.2%
META PLATFORMS INC	0.9%
JPMORGAN CHASE & CO	0.8%
VISA INC	0.8%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	0.7%
ALPHABET INC	0.7%
Total	13.3%

Market Capitalization

	Small Cap	Mid Cap	Large Cap	Unclassified
Total Equity Composite	15.2%	16.7%	61.6%	6.5%
MSCI ACWI IMI Net USD	16.4%	14.8%	68.8%	0.0%
Weight Over/Under	-1.2%	1.9%	-7.3%	6.5%

Sector Allocation (%) vs MSCI ACWI IMI Net USD



Region Allocation Summary

Region	% of Total	% of Bench	% Diff
North America ex U.S.	3.7%	2.9%	0.8%
United States	61.1%	63.1%	-2.0%
Europe Ex U.K.	16.0%	11.4%	4.5%
United Kingdom	4.2%	3.4%	0.9%
Pacific Basin Ex Japan	1.9%	2.6%	-0.7%
Japan	5.5%	5.5%	0.0%
Emerging Markets	6.7%	10.7%	-3.9%
Other	0.9%	0.4%	0.5%
Total	100.0%	100.0%	0.0%

Pennsylvania Municipal Retirement System

U.S. Equity Composite

As of June 30, 2025

Characteristics

	Portfolio	Russell 3000
Number of Holdings	3,564	2,999
Weighted Avg. Market Cap. (\$B)	728.9	1,021.0
Median Market Cap. (\$B)	3.1	2.5
Price To Earnings	25.3	26.4
Price To Book	4.3	4.7
Price To Sales	2.5	2.9
Return on Equity (%)	22.8	23.8
Yield (%)	1.4	1.3

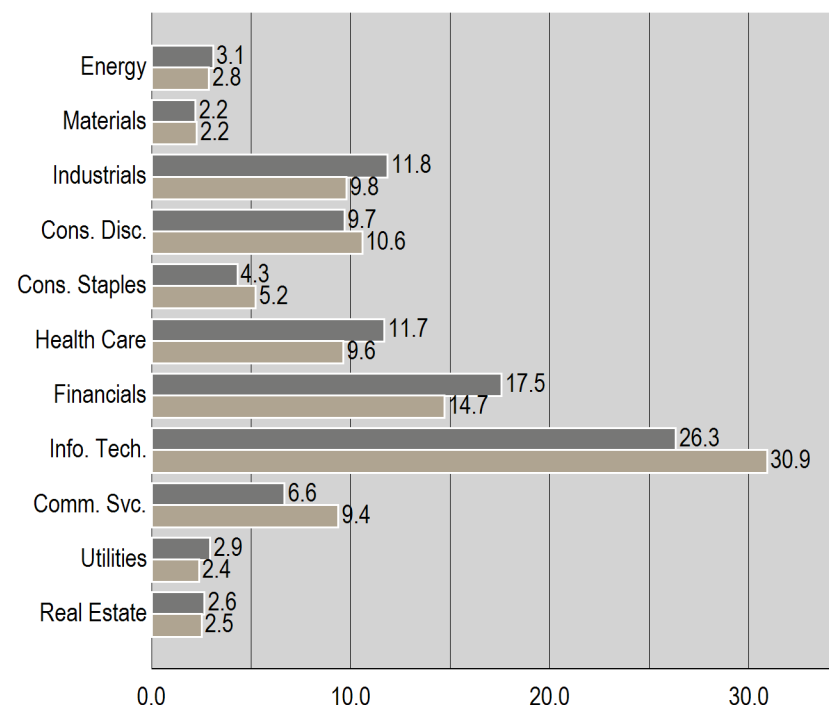
Top Holdings

MICROSOFT CORP	4.6%
NVIDIA CORPORATION	3.8%
APPLE INC	3.0%
AMAZON.COM INC	2.9%
META PLATFORMS INC	1.6%
JPMORGAN CHASE & CO	1.4%
VISA INC	1.3%
ALPHABET INC	1.3%
BROADCOM INC	1.3%
ORACLE CORP	1.2%
Total	22.4%

Market Capitalization

	Small Cap	Mid Cap	Large Cap	Unclassified
U.S. Equity Composite	5.9%	23.3%	65.9%	4.9%
Russell 3000	6.6%	18.2%	75.2%	0.0%
<i>Weight Over/Under</i>	-0.7%	5.1%	-9.3%	4.9%

Sector Allocation (%) vs Russell 3000



Common Holdings Matrix

	<i>MFS Large Cap Value</i>		<i>Xponance S&P 500</i>		<i>Northern Trust S&P 500</i>		<i>Polen Focus Growth</i>		<i>Northern Trust Dow Jones Completion Index</i>		<i>Copeland SMID Cap Dividend Growth</i>		<i>Emerald Small Cap Growth</i>		<i>Channing Capital Management Small Cap Value</i>		<i>Dana Inv. Advisors Small Cap Value</i>	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
MFS Large Cap Value	--	--	64	15	64	15	3	10	2	1	0	0	0	0	0	0	0	0
Xponance S&P 500	64	95	--	--	502	100	23	93	0	0	7	11	0	0	0	0	0	0
Northern Trust S&P 500	64	95	502	100	--	--	23	93	0	0	7	11	0	0	0	0	0	0
Polen Focus Growth	3	5	23	20	23	20	--	--	0	0	0	0	0	0	0	0	0	0
Northern Trust Dow Jones Completion Index	2	1	0	0	0	0	0	0	--	--	56	83	104	92	43	98	0	0
Copeland SMID Cap Dividend Growth	0	0	7	0	7	0	0	0	56	5	--	--	2	1	5	12	0	0
Emerald Small Cap Growth	0	0	0	0	0	0	0	0	104	5	2	3	--	--	8	15	0	0
Channing Capital Management Small Cap Value	0	0	0	0	0	0	0	0	43	3	5	7	8	6	--	--	0	0
Dana Inv. Advisors Small Cap Value	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	--

Pennsylvania Municipal Retirement System

Global Equity Composite

As of June 30, 2025

Characteristics

	Portfolio	MSCI ACWI IMI Net USD
Number of Holdings	279	8,192
Weighted Avg. Market Cap. (\$B)	133.2	685.4
Median Market Cap. (\$B)	27.5	2.7
Price To Earnings	20.0	21.8
Price To Book	3.1	3.6
Price To Sales	1.4	2.1
Return on Equity (%)	21.9	19.7
Yield (%)	2.5	1.9

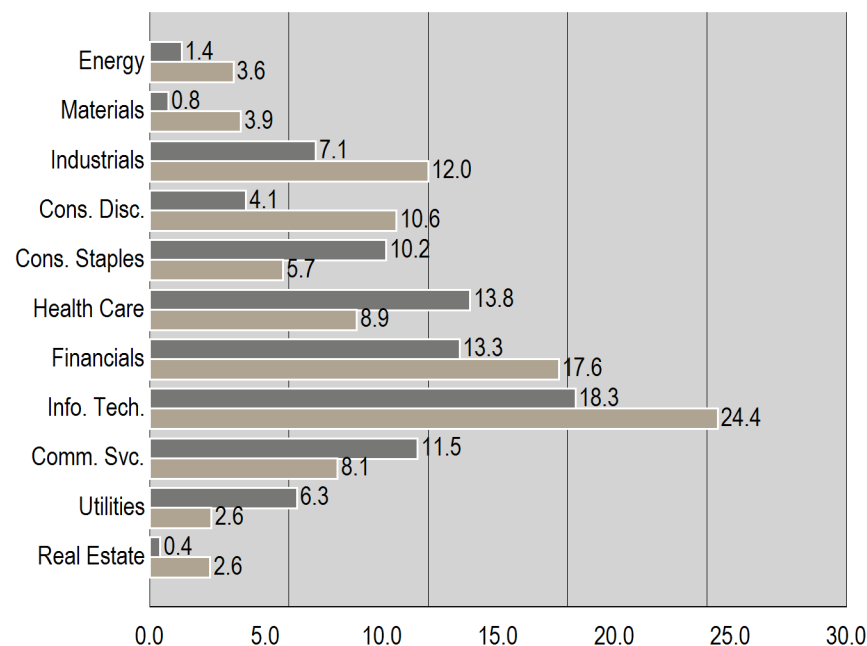
Top Holdings

ISHARES MSCI EMERGING MARKETS MIN VOL FACTOR ETF	12.6%
CISCO SYSTEMS INC	1.5%
REPUBLIC SERVICES INC.	1.4%
MCKESSON CORP	1.3%
ROPER TECHNOLOGIES INC	1.3%
T-MOBILE US INC	1.3%
CENCORA INC	1.2%
MOTOROLA SOLUTIONS INC	1.2%
WASTE MANAGEMENT INC.	1.2%
DUKE ENERGY CORP	1.1%
Total	24.2%

Market Capitalization

	Small Cap	Mid Cap	Large Cap	Unclassified
Global Equity Composite	18.2%	27.2%	53.5%	1.1%
MSCI ACWI IMI Net USD	16.4%	14.8%	68.8%	0.0%
Weight Over/Under	1.8%	12.4%	-15.3%	1.1%

Sector Allocation (%) vs MSCI ACWI IMI Net USD



Region Allocation Summary

Region	% of Total	% of Bench	% Diff
North America ex U.S.	1.5%	2.9%	-1.4%
United States	69.6%	63.1%	6.5%
Europe Ex U.K.	6.3%	11.4%	-5.2%
United Kingdom	0.6%	3.4%	-2.7%
Pacific Basin Ex Japan	3.0%	2.6%	0.3%
Japan	9.9%	5.5%	4.4%
Emerging Markets	7.7%	10.7%	-3.0%
Other	1.4%	0.4%	1.0%
Total	100.0%	100.0%	0.0%

Characteristics

	Portfolio	MSCI ACWI ex USA IMI
Number of Holdings	2,087	5,978
Weighted Avg. Market Cap. (\$B)	114.0	106.2
Median Market Cap. (\$B)	12.3	2.3
Price To Earnings	16.6	16.3
Price To Book	2.5	2.5
Price To Sales	1.5	1.4
Return on Equity (%)	14.8	14.3
Yield (%)	2.6	3.0

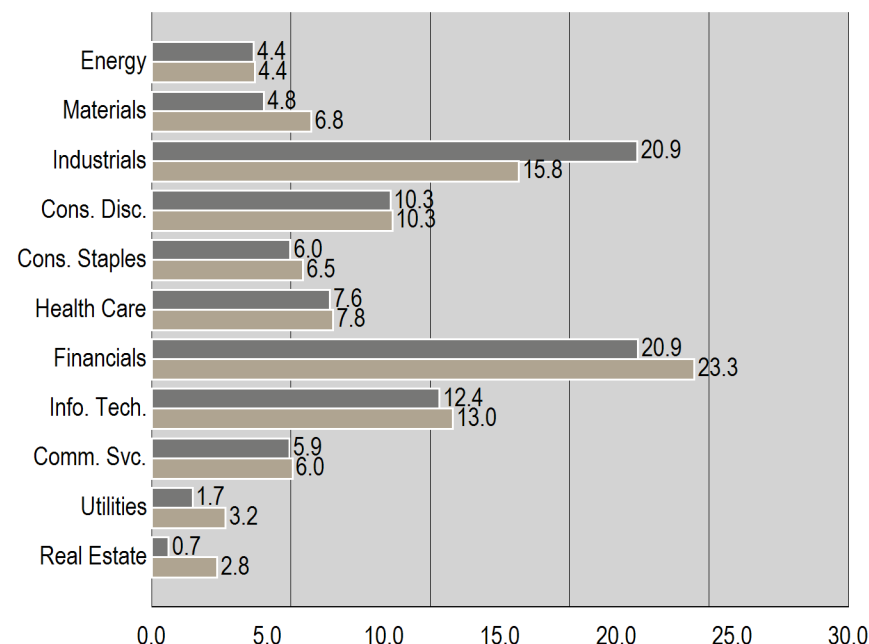
Top Holdings

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	2.1%
RHEINMETALL	1.7%
SUZUKI MOTOR CORP	1.6%
SANDOZ GROUP AG COMMON STOCK	1.4%
ASTRAZENECA PLC	1.4%
PROSUS ORD	1.3%
ASML HOLDING NV	1.3%
HITACHI LTD	1.3%
BAE SYSTEMS PLC	1.3%
HDFC BANK LIMITED	1.3%
Total	14.8%

Market Capitalization

	Small Cap	Mid Cap	Large Cap	Unclassified
Non-U.S Equity Composite	12.4%	25.9%	51.1%	10.6%
MSCI ACWI ex USA IMI	26.4%	22.8%	50.8%	0.0%
Weight Over/Under	-14.0%	3.2%	0.3%	10.6%

Sector Allocation (%) vs MSCI ACWI ex USA IMI



Region Allocation Summary

Region	% of Total	% of Bench	% Diff
North America ex U.S.	9.0%	7.9%	1.1%
United States	3.4%	0.0%	3.4%
Europe Ex U.K.	40.6%	31.0%	9.6%
United Kingdom	10.1%	9.2%	0.9%
Pacific Basin Ex Japan	4.5%	7.1%	-2.6%
Japan	13.4%	14.9%	-1.5%
Emerging Markets	17.6%	28.9%	-11.3%
Other	1.5%	1.1%	0.3%
Total	100.0%	100.0%	0.0%

Common Holdings Matrix

	<i>SSGA MSCI World ex US</i>		<i>Hardman Johnston Int'l Equity</i>		<i>Hudson Edge Int'l Equity</i>		<i>Boston Partners Int'l Value Equity</i>	
	#	%	#	%	#	%	#	%
SSGA MSCI World ex US	--	--	17	76	24	70	47	55
Hardman Johnston Int'l Equity	17	8	--	--	4	12	6	6
Hudson Edge Int'l Equity	24	4	4	14	--	--	6	9
Boston Partners Int'l Value Equity	47	12	6	27	6	21	--	--

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Investment Managers

Pennsylvania Municipal Retirement System

MFS Large Cap Value

As of June 30, 2025

Manager Summary: Active strategy holding diversified portfolio of 70-80 stocks. Stock selection focuses on bottom-up company analysis seeking to identify high quality undervalued stocks that have durable franchises, significant free cash flow, solid balance sheets and strong management teams.

Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	71	871
Weighted Avg. Market Cap. (\$B)	168.0	292.9
Median Market Cap. (\$B)	91.7	14.4
Price To Earnings	20.2	20.3
Price To Book	3.1	2.9
Price To Sales	1.9	2.1
Return on Equity (%)	22.6	17.5
Yield (%)	2.3	2.0

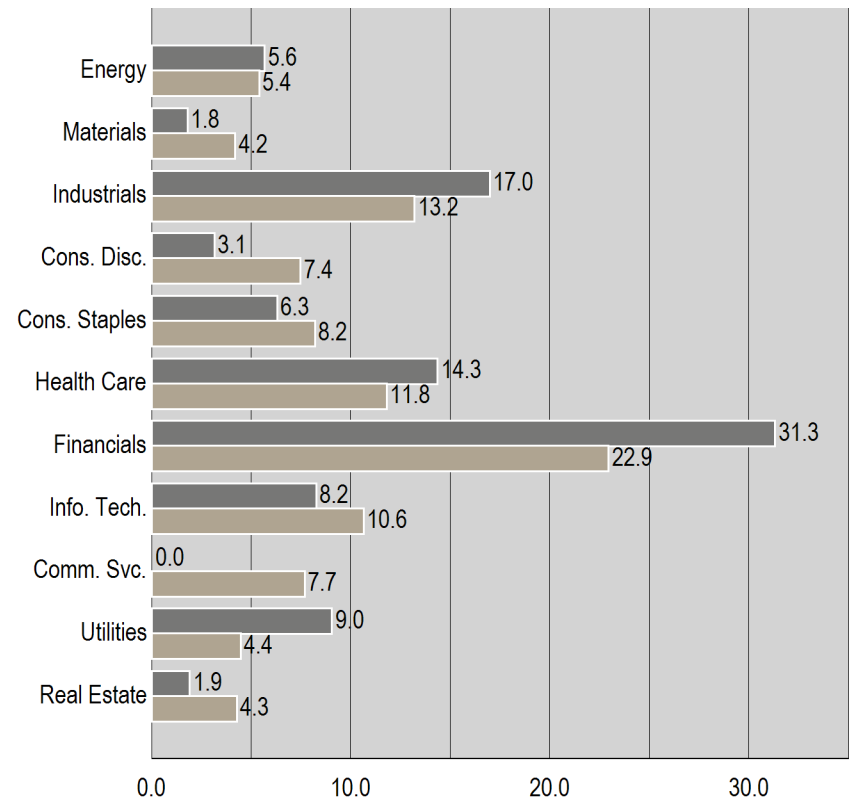
Top Holdings

JPMORGAN CHASE & CO	4.7%
PROGRESSIVE CORP (THE)	4.2%
THE CIGNA GROUP	3.3%
MCKESSON CORP	3.1%
AMERICAN EXPRESS CO	2.5%
BOEING CO	2.5%
RTX CORP	2.3%
MARSH & MCLENNAN COMPANIES INC	2.3%
MORGAN STANLEY	2.1%
JOHNSON & JOHNSON	2.1%
Total	29.1%

Market Capitalization

	Small Cap	Mid Cap	Large Cap
MFS Large Cap Value	0.0%	9.1%	90.9%
Russell 1000 Value	3.1%	29.4%	67.5%
Weight Over/Under	-3.1%	-20.3%	23.4%

Sector Allocation (%) vs Russell 1000 Value



Manager Summary: Passive strategy that seeks to replicate the return of the Standard & Poor's 500 index. This strategy is a low-cost option to gain diversified exposure to U.S. domiciled companies by owning the 500 largest companies by market capitalization in the U.S.

Characteristics

	Portfolio	S&P 500
Number of Holdings	505	503
Weighted Avg. Market Cap. (\$B)	1,147.5	1,129.7
Median Market Cap. (\$B)	36.6	36.4
Price To Earnings	27.0	27.0
Price To Book	5.1	5.1
Price To Sales	3.3	3.3
Return on Equity (%)	36.1	35.8
Yield (%)	1.3	1.3

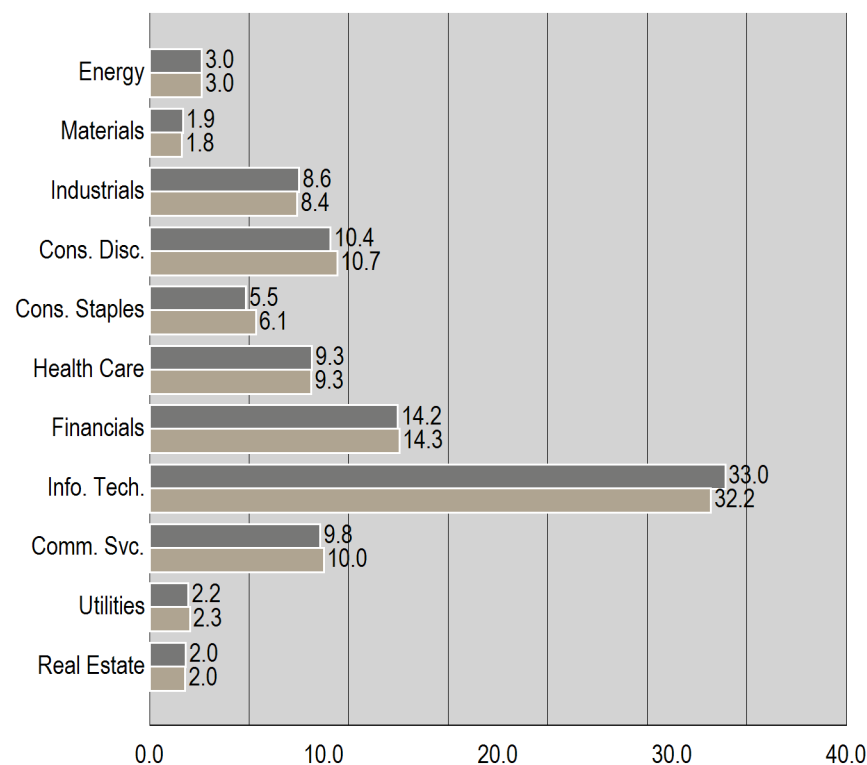
Top Holdings

NVIDIA CORPORATION	7.3%
MICROSOFT CORP	7.0%
APPLE INC	5.8%
AMAZON.COM INC	3.9%
META PLATFORMS INC	3.0%
BROADCOM INC	2.5%
ALPHABET INC	2.0%
TESLA INC	1.7%
BERKSHIRE HATHAWAY INC	1.7%
ALPHABET INC	1.6%
Total	36.6%

Market Capitalization

	Small Cap	Mid Cap	Large Cap
Xponance S&P 500	0.0%	13.2%	86.8%
S&P 500	1.7%	12.8%	85.4%
<i>Weight Over/Under</i>	<i>-1.7%</i>	<i>0.3%</i>	<i>1.4%</i>

Sector Allocation (%) vs S&P 500



Pennsylvania Municipal Retirement System

Northern Trust S&P 500

As of June 30, 2025

Manager Summary: Passive strategy that seeks to replicate the return of the Standard & Poor's 500 index. This strategy is a low-cost option to gain diversified exposure to U.S. domiciled companies by owning the 500 largest companies by market capitalization in the U.S.

Characteristics

	Portfolio	S&P 500
Number of Holdings	505	503
Weighted Avg. Market Cap. (\$B)	1,148.1	1,129.7
Median Market Cap. (\$B)	36.3	36.4
Price To Earnings	27.0	27.0
Price To Book	5.1	5.1
Price To Sales	3.3	3.3
Return on Equity (%)	36.1	35.8
Yield (%)	1.3	1.3

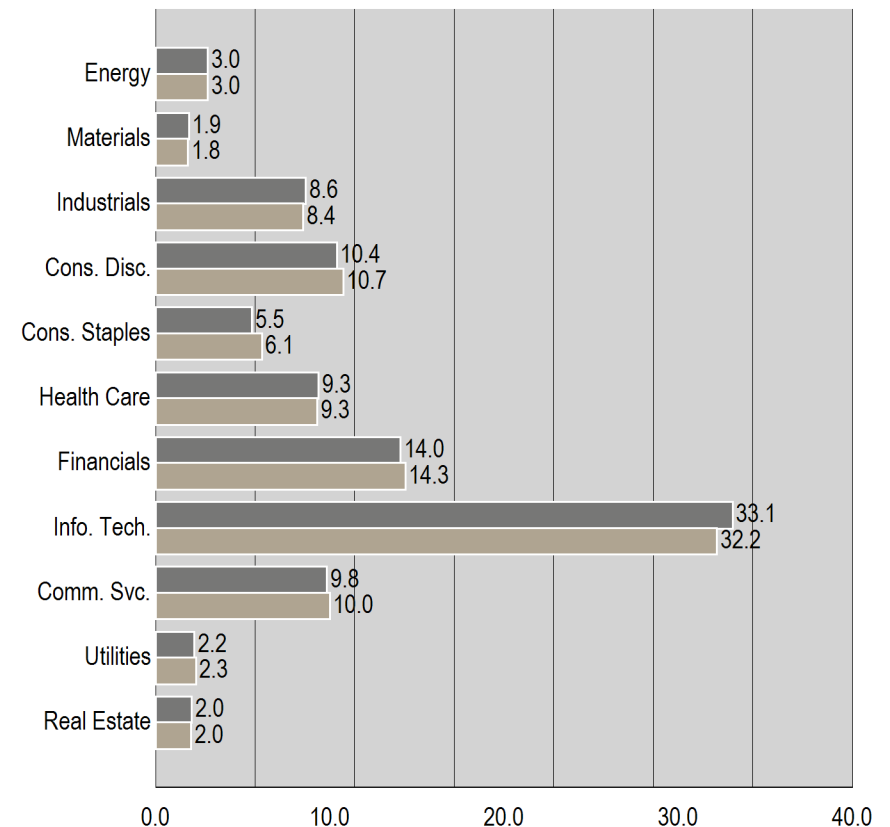
Top Holdings

NVIDIA CORPORATION	7.3%
MICROSOFT CORP	7.0%
APPLE INC	5.8%
AMAZON.COM INC	3.9%
META PLATFORMS INC	3.1%
BROADCOM INC	2.5%
ALPHABET INC	2.0%
BERKSHIRE HATHAWAY INC	1.7%
TESLA INC	1.7%
ALPHABET INC	1.6%
Total	36.6%

Market Capitalization

	Small Cap	Mid Cap	Large Cap
Northern Trust S&P 500	0.0%	13.2%	86.8%
S&P 500	1.7%	12.8%	85.4%
<i>Weight Over/Under</i>	<i>-1.7%</i>	<i>0.3%</i>	<i>1.4%</i>

Sector Allocation (%) vs S&P 500



Manager Summary: Concentrated U.S. large cap growth portfolio with 20-30 names. Investment process begins with negative screening, only including names with robust financials, strong management and attractive earnings growth potential. Then team of generalists perform bottom-up fundamental analysis reviewing industry dynamics, competitive advantage, free cash flow modeling, meet with mgmt. and perform worst case scenarios. High active share. Position limit: 50% limit on sector exposure. Low portfolio turnover (30%).

Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	25	385
Weighted Avg. Market Cap. (\$B)	841.2	1,794.2
Median Market Cap. (\$B)	183.7	24.3
Price To Earnings	37.0	38.5
Price To Book	10.9	14.4
Price To Sales	7.6	6.8
Return on Equity (%)	39.5	53.9
Yield (%)	0.6	0.6

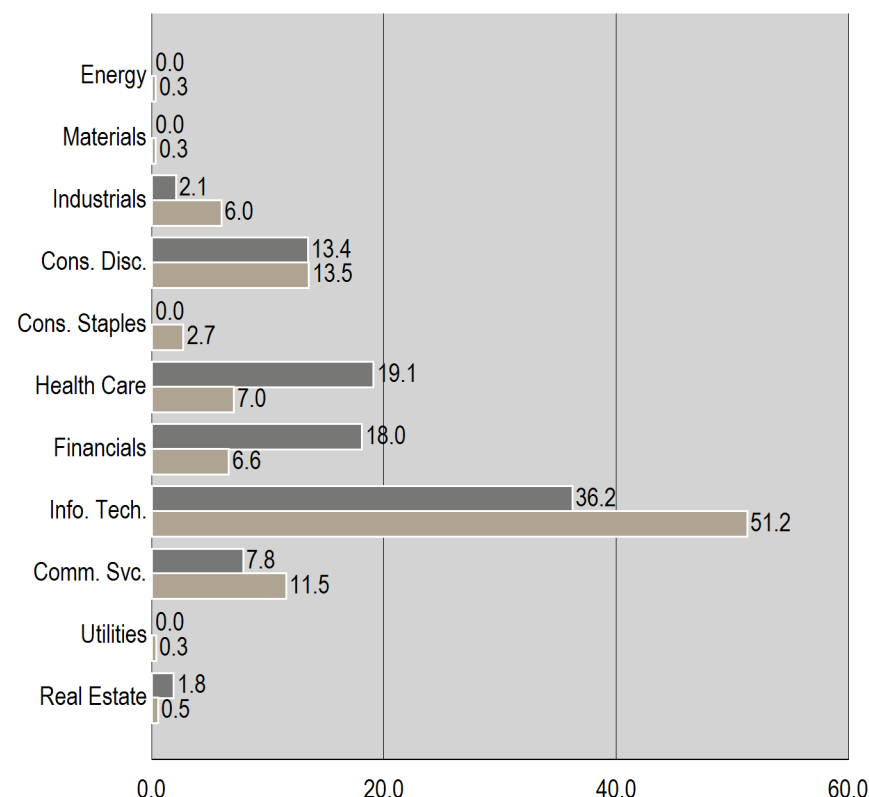
Top Holdings

MICROSOFT CORP	8.9%
AMAZON.COM INC	7.6%
ORACLE CORP	7.5%
VISA INC	6.6%
MASTERCARD INC	5.6%
SHOPIFY INC	5.2%
ELI LILLY AND CO	4.8%
ABBOTT LABORATORIES	4.7%
ZOETIS INC	4.5%
ADOBE INC	4.3%
Total	59.6%

Market Capitalization

	Small Cap	Mid Cap	Large Cap
Polen Focus Growth	0.0%	11.3%	88.7%
Russell 1000 Growth	4.1%	6.9%	89.0%
<i>Weight Over/Under</i>	<i>-4.1%</i>	<i>4.4%</i>	<i>-0.3%</i>

Sector Allocation (%) vs Russell 1000 Growth



As of June 30, 2025

Manager Summary: The fund employs a replication technique in order to approximate the risk and return characteristics of the Dow Jones U.S. Completion Total Stock Market Index. This Index is commonly used to represent the small and mid cap segments of the U.S. equity market. The 'completion' index is a sub-set of the DJ US Total Stock Market Index that excludes components of the S&P500.

Characteristics

	Portfolio	Dow Jones U.S. Completion Total Stock Market
Number of Holdings	3,035	3,413
Weighted Avg. Market Cap. (\$B)	14.5	14.5
Median Market Cap. (\$B)	0.8	0.7
Price To Earnings	20.7	20.6
Price To Book	2.9	2.9
Price To Sales	1.6	1.6
Return on Equity (%)	4.3	4.0
Yield (%)	1.3	1.3

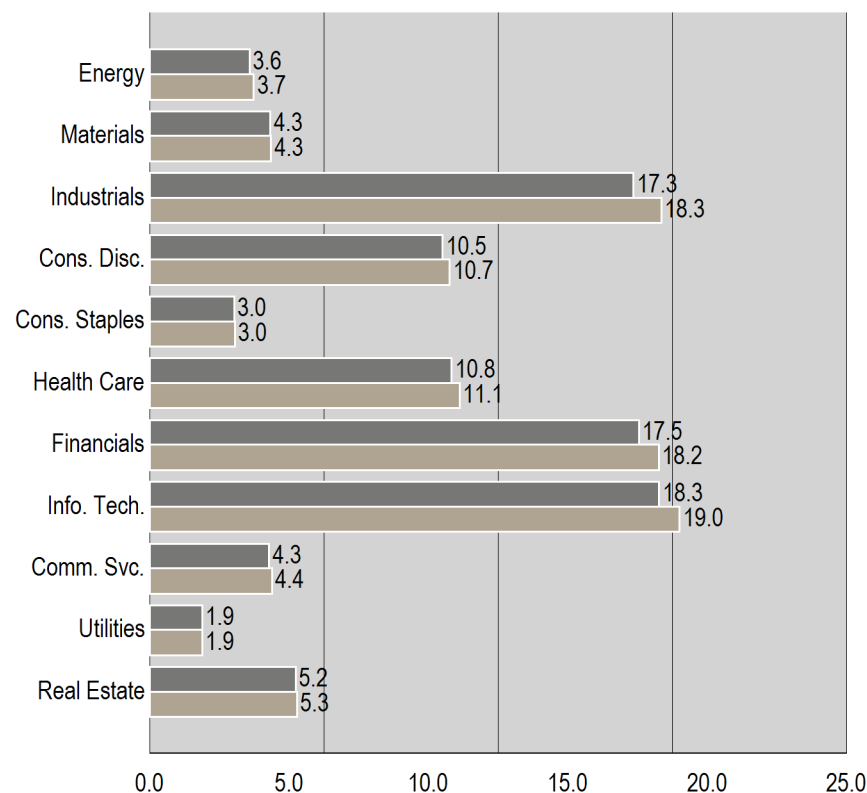
Top Holdings

STRATEGY INC	1.4%
APLOVIN CORP	1.1%
SNOWFLAKE INC	1.0%
MARVELL TECHNOLOGY INC	0.9%
ROBINHOOD MARKETS INC	0.9%
CRH PLC	0.8%
CLOUDFLARE INC	0.8%
ROBLOX CORP	0.8%
CHENIERE ENERGY INC	0.7%
FLUTTER ENTERTAINMENT PLC DI COMMON STOCK EUR.09	0.7%
Total	9.3%

Market Capitalization

	Small Cap	Mid Cap	Large Cap
Northern Trust Dow Jones Completion Index	26.9%	67.3%	5.8%
Dow Jones U.S. Completion Total Stock Market	39.1%	56.1%	4.8%
<i>Weight Over/Under</i>	<i>-12.2%</i>	<i>11.3%</i>	<i>1.0%</i>

Sector Allocation (%) vs Dow Jones U.S. Completion Total Stock Market



Pennsylvania Municipal Retirement System

Channing Capital Management Small Cap Value

Manager Summary: Minority-owned investment management firm with fundamental bottom-up process. Stocks are first screened based on earnings, book value, and cash flow criteria with fundamental analysis performed on the top 20% within each respective sector. Sell candidates are companies that have dropped to the bottom 40% of their screen. The strategy holds 50-75 positions and is typically within plus/minus 5% of index sector weightings.

Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	44	1,441
Weighted Avg. Market Cap. (\$B)	5.6	2.7
Median Market Cap. (\$B)	5.0	0.7
Price To Earnings	18.5	14.5
Price To Book	2.1	1.5
Price To Sales	1.5	1.0
Return on Equity (%)	16.3	2.1
Yield (%)	1.9	2.4

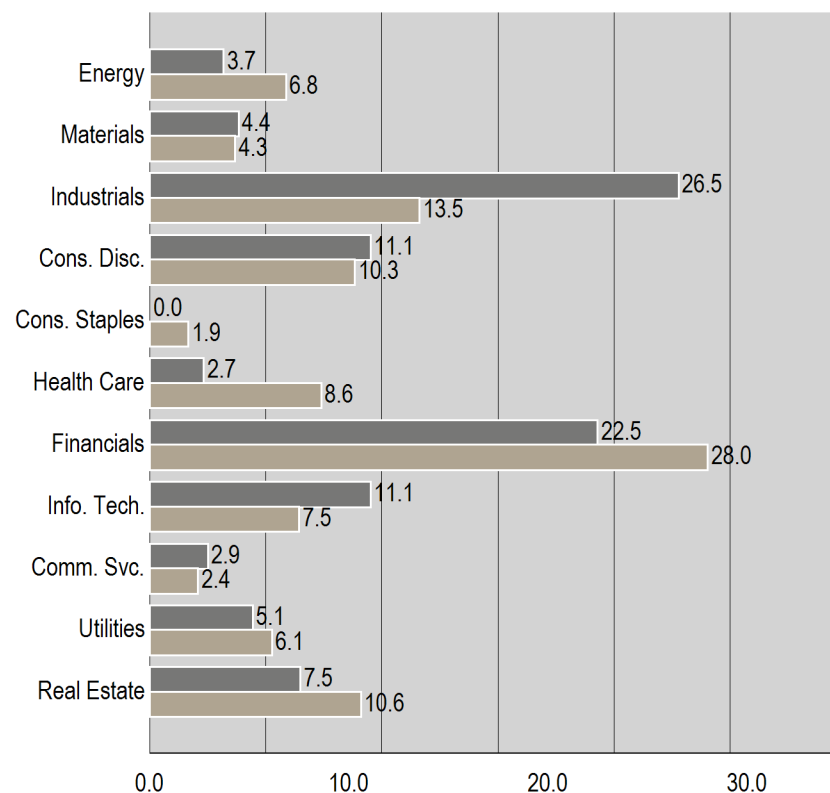
Top Holdings

NEXSTAR MEDIA GROUP INC.	2.9%
BRINK'S CO (THE)	2.9%
AFFILIATED MANAGERS GROUP INC.	2.8%
GATES INDUSTRIAL CORPORATION PLC	2.8%
SYNOVUS FINANCIAL CORP.	2.8%
STAG INDUSTRIAL INC	2.7%
COPT DEFENSE PROPERTIES	2.7%
HERC HOLDINGS INC	2.7%
INTEGER HOLDINGS CORP	2.7%
PORTLAND GENERAL ELECTRIC CO	2.7%
Total	27.6%

Market Capitalization

	Small Cap	Mid Cap	Large Cap
Channing Capital Management Small Cap Value	26.4%	73.6%	0.0%
Russell 2000 Value	81.1%	18.9%	0.0%
Weight Over/Under	-54.6%	54.6%	0.0%

Sector Allocation (%) vs Russell 2000 Value



Manager Summary: A bottom-up fundamental manager who views dividend growth as a litmus test for earnings quality and focuses on attributes such as dividend coverage, cash flow strength, earnings growth, and return on capital. Fundamental research is focused on identifying companies with strong competitive positions that support steadily rising dividends. Strategy invests in larger, more established small cap firms while tending to underweight the lower market cap ranges. The strategy seeks sector diversification with 45-60 holdings.

Characteristics

	Portfolio	Russell 2500
Number of Holdings	68	2,489
Weighted Avg. Market Cap. (\$B)	8.7	7.7
Median Market Cap. (\$B)	6.5	1.4
Price To Earnings	22.3	19.7
Price To Book	3.2	2.6
Price To Sales	2.0	1.4
Return on Equity (%)	16.3	8.8
Yield (%)	1.7	1.7

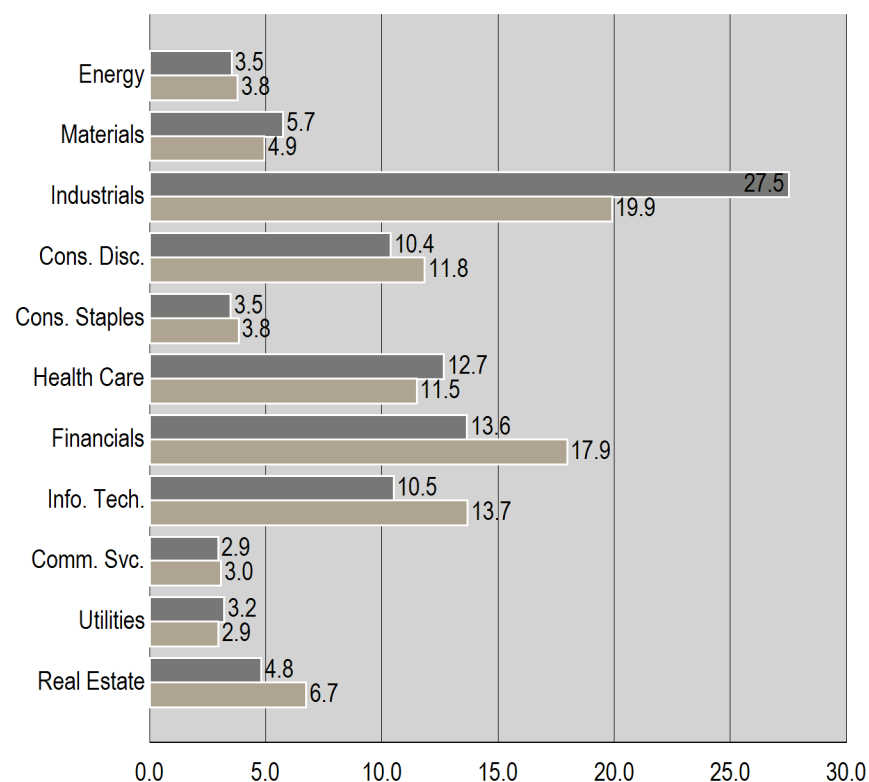
Top Holdings

RELiance INC	2.1%
ENSIGN GROUP INC (THE)	2.1%
AIR LEASE CORP	2.1%
NVENT ELECTRIC PLC	2.0%
CASEY'S GENERAL STORES INC.	2.0%
WINGSTOP INC	1.8%
LITTELFUSE INC	1.8%
BWX TECHNOLOGIES INC	1.8%
ENCOMPASS HEALTH CORP	1.8%
WESCO INTERNATIONAL INC	1.8%
Total	19.2%

Market Capitalization

	Small Cap	Mid Cap	Large Cap
Copeland SMID Cap Dividend Growth	21.8%	78.2%	0.0%
Russell 2500	39.0%	61.0%	0.0%
Weight Over/Under	-17.2%	17.2%	0.0%

Sector Allocation (%) vs Russell 2500



As of June 30, 2025

Manager Summary: Core growth strategy, fundamental, bottom-up process seeking companies with a competitive advantage, market leadership, growth rates exceeding peers, differentiated growth drivers, and low research coverage. Analysts work across the market cap spectrum supporting small, mid, and all-cap strategies with coverage of dynamic sectors. The strategy holds 110-125 companies and portfolio construction limits of no more than 15% in any one industry group.

Characteristics

	Portfolio	Russell 2000 Growth
Number of Holdings	116	1,100
Weighted Avg. Market Cap. (\$B)	5.1	4.1
Median Market Cap. (\$B)	4.2	1.1
Price To Earnings	34.0	25.2
Price To Book	4.5	4.1
Price To Sales	3.2	2.2
Return on Equity (%)	-6.3	2.6
Yield (%)	0.3	0.7

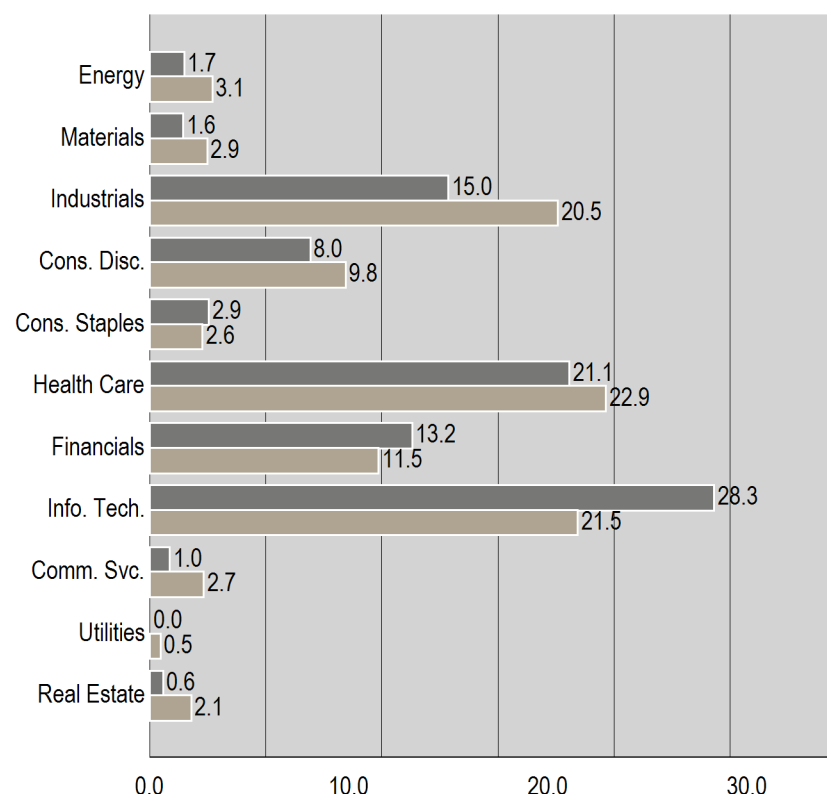
Top Holdings

CREDO TECHNOLOGY GROUP HOLDING	3.2%
AEROVIRONMENT INC	2.7%
KRATOS DEFENSE & SECURITY SOLUTIONS INC	2.6%
TRANSMEDICS GROUP INC	2.2%
TTM TECHNOLOGIES INC	2.2%
SOLENO THERAPEUTICS INC	2.1%
PALOMAR HOLDINGS INC	1.8%
RAMBUS INC	1.8%
Q2 HOLDINGS INC	1.8%
VARONIS SYSTEMS INC	1.8%
Total	22.2%

Market Capitalization

	Small Cap	Mid Cap	Large Cap
Emerald Small Cap Growth	44.2%	55.8%	0.0%
Russell 2000 Growth	67.8%	32.2%	0.0%
Weight Over/Under	-23.5%	23.5%	0.0%

Sector Allocation (%) vs Russell 2000 Growth



Pennsylvania Municipal Retirement System

Rhumblin Global Min. Volatility

As of June 30, 2025

Manager Summary: The fund invests primarily in U.S. and foreign stocks that are expected to minimize volatility relative to the global equity market. To reduce volatility, the fund will consider stocks' risk and diversification characteristics and seek to hedge away most of the currency exposure resulting from its foreign stock holdings.

Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	279	2,522
Weighted Avg. Market Cap. (\$B)	133.2	761.2
Median Market Cap. (\$B)	27.5	17.2
Price To Earnings	20.0	22.3
Price To Book	3.1	3.9
Price To Sales	1.4	2.3
Return on Equity (%)	21.9	23.0
Yield (%)	2.5	1.9

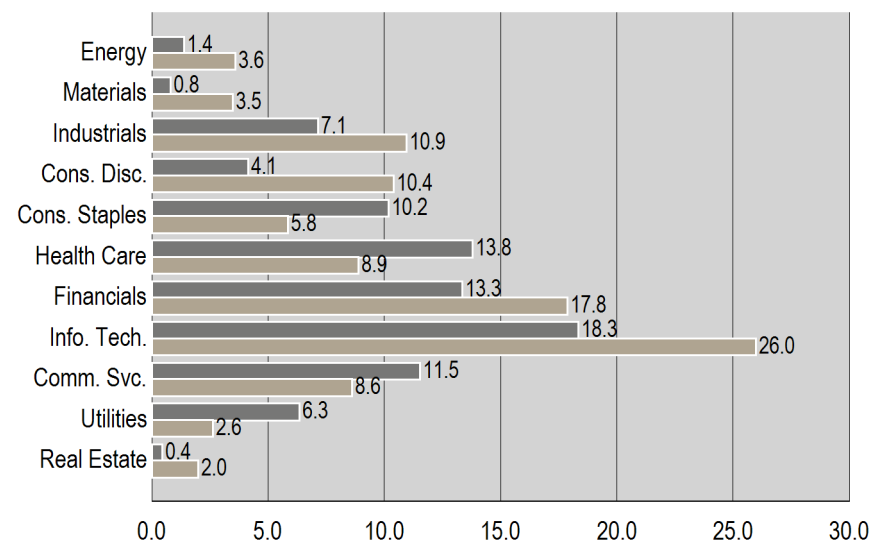
Top Holdings

ISHARES MSCI EMERGING MARKETS MIN VOL FACTOR ETF	12.6%
CISCO SYSTEMS INC	1.5%
REPUBLIC SERVICES INC.	1.4%
MCKESSON CORP	1.3%
ROPER TECHNOLOGIES INC	1.3%
T-MOBILE US INC	1.3%
CENCORA INC	1.2%
MOTOROLA SOLUTIONS INC	1.2%
WASTE MANAGEMENT INC.	1.2%
DUKE ENERGY CORP	1.1%
Total	24.2%

Market Capitalization

	Small Cap	Mid Cap	Large Cap	Unclassified
Rhumblin Global Min. Volatility	18.2%	27.2%	53.5%	1.1%
MSCI ACWI	6.9%	15.8%	77.2%	0.0%
Weight Over/Under	11.2%	11.4%	-23.7%	1.1%

Sector Allocation (%) vs MSCI ACWI



Region Allocation Summary

Region	% of Total	% of Bench	% Diff
North America ex U.S.	1.5%	2.9%	-1.3%
United States	69.6%	64.4%	5.2%
Europe Ex U.K.	6.3%	11.6%	-5.3%
United Kingdom	0.6%	3.3%	-2.6%
Pacific Basin Ex Japan	3.0%	2.4%	0.5%
Japan	9.9%	4.9%	5.1%
Emerging Markets	7.7%	10.3%	-2.6%
Other	1.4%	0.3%	1.1%
Total	100.0%	100.0%	0.0%

Pennsylvania Municipal Retirement System

SSGA MSCI World ex US

As of June 30, 2025

Manager Summary: Passive strategy that seeks to replicate the returns of the MSCI ACWI ex US index. This strategy is a low-cost option to gain diversified exposure to internationally based companies.

Characteristics

	Portfolio	MSCI World ex USA
Number of Holdings	798	774
Weighted Avg. Market Cap. (\$B)	90.0	93.2
Median Market Cap. (\$B)	15.7	18.3
Price To Earnings	17.8	17.6
Price To Book	2.4	2.5
Price To Sales	1.6	1.5
Return on Equity (%)	14.4	14.9
Yield (%)	3.0	3.0

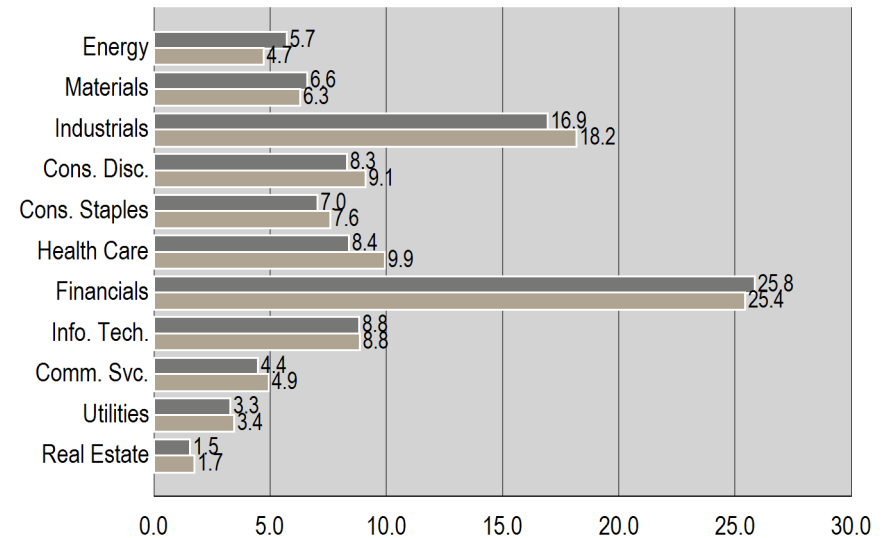
Top Holdings

ROYAL BANK OF CANADA	1.5%
ASML HOLDING NV	1.3%
SAP SE	1.3%
SHOPIFY INC	1.2%
NESTLE SA, CHAM UND VEVEY	1.1%
TORONTO-DOMINION BANK (THE)	1.1%
NOVARTIS AG	1.0%
ROCHE HOLDING AG	1.0%
NOVO NORDISK A/S	0.9%
ASTRAZENECA PLC	0.9%
Total	11.3%

Market Capitalization

	Small Cap	Mid Cap	Large Cap	Unclassified
SSGA MSCI World ex US	7.0%	24.8%	60.1%	8.0%
MSCI World ex USA	9.2%	26.0%	64.8%	0.0%
Weight Over/Under	-2.1%	-1.2%	-4.7%	8.0%

Sector Allocation (%) vs MSCI World ex USA



Region Allocation Summary

Region	% of Total	% of Bench	% Diff
North America ex U.S.	19.5%	11.4%	8.1%
United States	3.1%	0.0%	3.1%
Europe Ex U.K.	41.9%	45.8%	-3.9%
United Kingdom	9.5%	13.0%	-3.5%
Pacific Basin Ex Japan	8.2%	9.6%	-1.4%
Japan	17.1%	19.3%	-2.3%
Emerging Markets	0.0%	0.0%	0.0%
Other	0.8%	0.9%	-0.1%
Total	100.0%	100.0%	0.0%

Pennsylvania Municipal Retirement System

Hardman Johnston Int'l Equity

As of June 30, 2025

Manager Summary: Concentrated portfolio (20-30 names). Utilizes fundamental research invests in quality companies with 10% EPS growth and market leaders, invest at attractive valuation. Turnover is between 20-30%. Maximum position is 5%. Given the concentrated nature of the portfolio, high idiosyncratic risk in the portfolio and sizable tracking error. High active share (around 90-95%). No currency hedge.

Characteristics

	Portfolio	MSCI EAFE
Number of Holdings	25	691
Weighted Avg. Market Cap. (\$B)	171.5	96.4
Median Market Cap. (\$B)	132.5	18.0
Price To Earnings	18.6	17.3
Price To Book	3.6	2.5
Price To Sales	2.0	1.5
Return on Equity (%)	19.0	15.5
Yield (%)	1.4	3.1

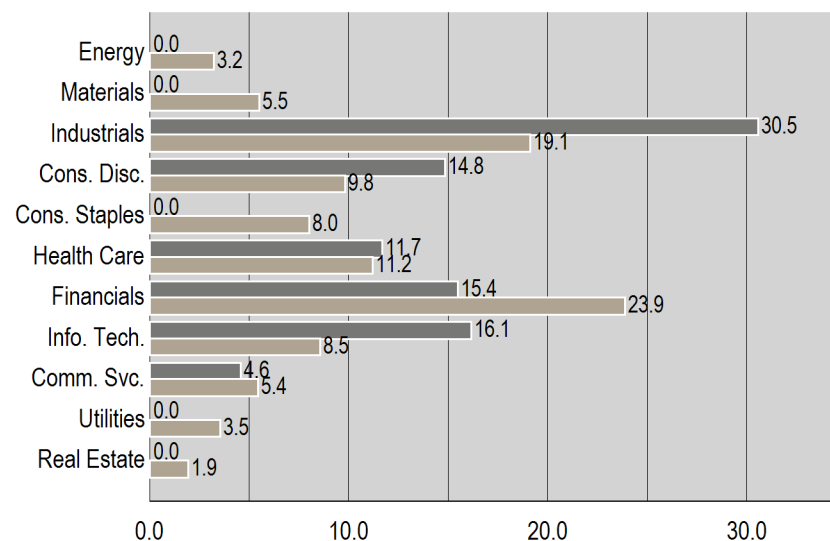
Top Holdings

INFINEON TECHNOLOGIES AG	5.7%
SAFRAN SA	5.6%
AIRBUS SE	5.5%
PROSUS ORD	5.5%
SANDOZ GROUP AG COMMON STOCK	5.3%
STANDARD CHARTERED PLC	5.2%
COMMERZBANK	5.1%
MITSUBISHI HEAVY INDUSTRIES LTD	5.1%
HITACHI LTD	5.0%
UCB SA	4.9%
Total	52.9%

Market Capitalization

	Small Cap	Mid Cap	Large Cap	Unclassified
Hardman Johnston Int'l Equity	2.5%	18.1%	62.7%	16.7%
MSCI EAFE	9.2%	26.2%	64.6%	0.0%
<i>Weight Over/Under</i>	-6.7%	-8.2%	-1.9%	16.7%

Sector Allocation (%) vs MSCI EAFE



Region Allocation Summary

Region	% of Total	% of Bench	% Diff
North America ex U.S.	0.0%	0.0%	0.0%
United States	5.3%	0.0%	5.3%
Europe Ex U.K.	56.3%	51.7%	4.6%
United Kingdom	9.3%	14.7%	-5.4%
Pacific Basin Ex Japan	1.4%	10.9%	-9.4%
Japan	14.5%	21.8%	-7.3%
Emerging Markets	10.2%	0.0%	10.2%
Other	3.1%	1.0%	2.1%
Total	100.0%	100.0%	0.0%

Manager Summary: Bottom-up fundamental manager looking for businesses that are undergoing structural change. Analysts are generalists who are unconstrained in their candidates. Looking for upside over a time horizon of 2-3 years through assessing and predicting earnings estimates. Concentrated portfolio: 25-35 names equally weighted with a max of 5% initial allocation. Sector and countries limits of 30%. Turnover is roughly 30-40%.

Characteristics

	Portfolio	MSCI EAFE
Number of Holdings	34	691
Weighted Avg. Market Cap. (\$B)	103.3	96.4
Median Market Cap. (\$B)	31.4	18.0
Price To Earnings	17.1	17.3
Price To Book	2.3	2.5
Price To Sales	1.6	1.5
Return on Equity (%)	12.6	15.5
Yield (%)	2.2	3.1

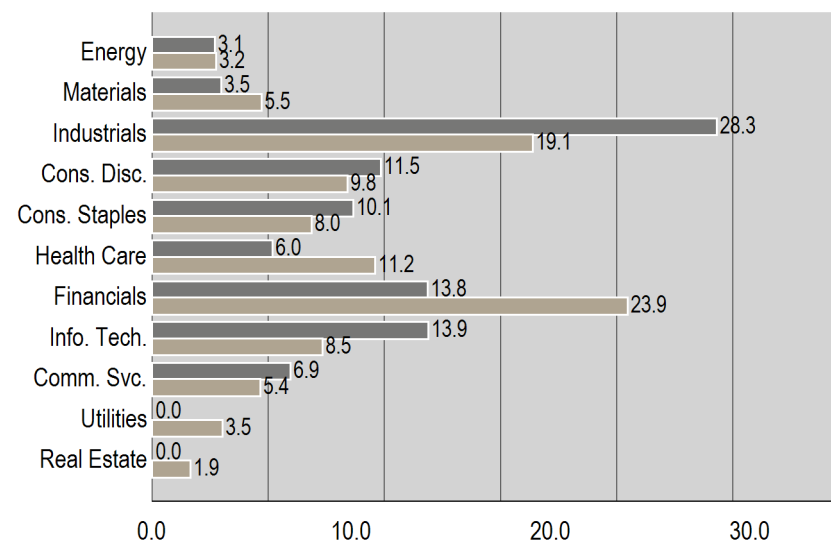
Top Holdings

SONY GROUP CORPORATION	4.0%
STMICROELECTRONICS NV	3.9%
THALES SA	3.9%
KB FINANCIAL GROUP INC	3.8%
BAE SYSTEMS PLC	3.8%
UNIVERSAL MUSIC GROUP INC	3.7%
SAMSUNG ELECTRONICS CO LTD	3.7%
FRANCO-NEVADA CORP	3.6%
RHEINMETALL	3.6%
HDFC BANK LIMITED	3.5%
Total	37.6%

Market Capitalization

	Small Cap	Mid Cap	Large Cap	Unclassified
Hudson Edge Int'l Equity	9.9%	35.9%	41.0%	13.3%
MSCI EAFE	9.2%	26.2%	64.6%	0.0%
<i>Weight Over/Under</i>	<i>0.7%</i>	<i>9.7%</i>	<i>-23.6%</i>	<i>13.3%</i>

Sector Allocation (%) vs MSCI EAFE



Region Allocation Summary

Region	% of Total	% of Bench	% Diff
North America ex U.S.	6.6%	0.0%	6.6%
United States	0.0%	0.0%	0.0%
Europe Ex U.K.	50.7%	51.7%	-1.0%
United Kingdom	10.6%	14.7%	-4.1%
Pacific Basin Ex Japan	2.1%	10.9%	-8.7%
Japan	12.4%	21.8%	-9.5%
Emerging Markets	17.7%	0.0%	17.7%
Other	0.0%	1.0%	-1.0%
Total	100.0%	100.0%	0.0%

Pennsylvania Municipal Retirement System

Boston Partners Int'l Value Equity

As of June 30, 2025

Manager Summary: Boston Partners uses a bottom up approach to create a relatively concentrated portfolio of value stocks using their "three circles" philosophy of identifying companies trading at the intersection of attractive valuation, strong business fundamentals and exhibiting positive business momentum.

Characteristics

	Portfolio	MSCI EAFE Value
Number of Holdings	84	423
Weighted Avg. Market Cap. (\$B)	59.5	82.4
Median Market Cap. (\$B)	19.1	16.8
Price To Earnings	14.7	12.9
Price To Book	1.9	1.7
Price To Sales	1.2	1.0
Return on Equity (%)	13.4	11.8
Yield (%)	3.2	4.4

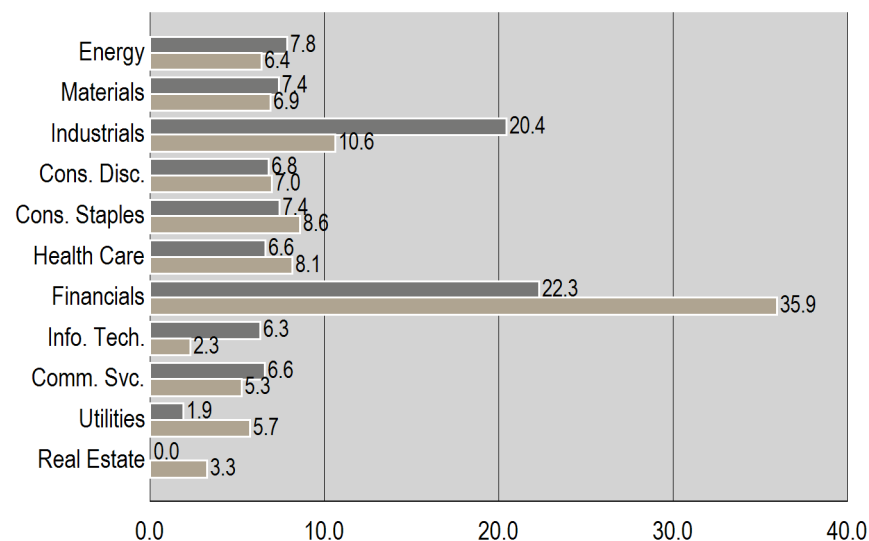
Top Holdings

BAE SYSTEMS PLC	3.1%
WEIR GROUP PLC	2.9%
HEINEKEN NV	2.4%
NAVER CORP	2.4%
SHELL PLC	2.3%
EURONEXT NV	2.3%
DANSKE BANK AS	2.3%
SANDOZ GROUP AG COMMON STOCK	2.2%
ALIBABA GROUP HOLDING LTD	2.0%
ENEL SPA	2.0%
Total	23.8%

Market Capitalization

	Small Cap	Mid Cap	Large Cap	Unclassified
Boston Partners Int'l Value Equity	31.6%	26.1%	34.8%	7.5%
MSCI EAFE Value	10.7%	28.9%	60.4%	0.0%
<i>Weight Over/Under</i>	<i>20.9%</i>	<i>-2.8%</i>	<i>-25.6%</i>	<i>7.5%</i>

Sector Allocation (%) vs MSCI EAFE Value



Region Allocation Summary

Region	% of Total	% of Bench	% Diff
North America ex U.S.	6.6%	0.0%	6.6%
United States	3.9%	0.0%	3.9%
Europe Ex U.K.	38.5%	49.1%	-10.5%
United Kingdom	18.5%	17.6%	0.9%
Pacific Basin Ex Japan	2.7%	10.8%	-8.1%
Japan	15.3%	21.4%	-6.1%
Emerging Markets	12.1%	0.0%	12.1%
Other	2.4%	1.1%	1.4%
Total	100.0%	100.0%	0.0%

Manager Summary: Passive strategy that seeks to replicate the return of the MSCI Emerging Markets index. This strategy is a low-cost option to gain diversified exposure to emerging market based companies.

Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	1,260	1,201
Weighted Avg. Market Cap. (\$B)	198.2	197.3
Median Market Cap. (\$B)	9.7	9.8
Price To Earnings	14.1	14.2
Price To Book	2.8	2.8
Price To Sales	1.3	1.3
Return on Equity (%)	15.7	15.7
Yield (%)	2.9	2.9

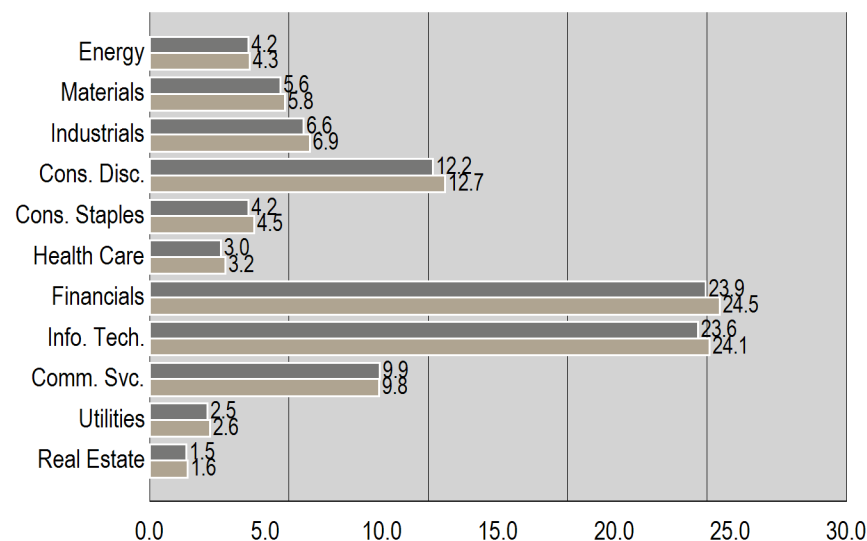
Top Holdings

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	10.3%
TENCENT HOLDINGS LTD	4.8%
ALIBABA GROUP HOLDING LTD	2.8%
SAMSUNG ELECTRONICS CO LTD	2.4%
HDFC BANK LIMITED	1.5%
XIAOMI CORPORATION	1.5%
SK HYNIX INC	1.4%
RELIANCE INDUSTRIES LTD	1.2%
CHINA CONSTRUCTION BANK CORP	1.1%
ICICI BANK	1.0%
Total	28.1%

Market Capitalization

	Small Cap	Mid Cap	Large Cap	Unclassified
SSGA MSCI Emerging Markets Index	5.3%	24.8%	61.0%	8.9%
MSCI Emerging Markets	13.9%	25.2%	61.0%	0.0%
<i>Weight Over/Under</i>	-8.6%	-0.3%	0.0%	8.9%

Sector Allocation (%) vs MSCI Emerging Markets



Region Allocation Summary

Region	% of Total	% of Bench	% Diff
North America ex U.S.	0.0%	0.0%	0.0%
United States	5.5%	0.0%	5.5%
Europe Ex U.K.	1.1%	0.6%	0.5%
United Kingdom	0.0%	0.0%	0.0%
Pacific Basin Ex Japan	4.9%	0.0%	4.9%
Japan	0.0%	0.0%	0.0%
Emerging Markets	86.9%	98.6%	-11.7%
Other	1.6%	0.8%	0.9%
Total	100.0%	100.0%	0.0%

Pennsylvania Municipal Retirement System

PRISA LP

As of June 30, 2025

Characteristics

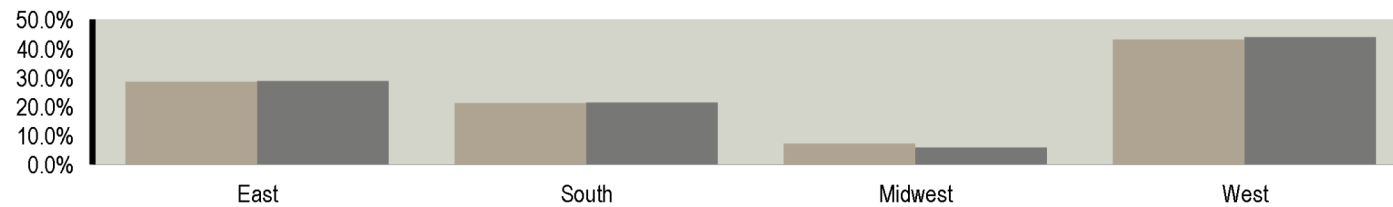
Fund GAV (\$MM)	\$29,122.0
Fund NAV (\$MM)	\$22,109.0
Cash (% of NAV)	1.1%
# of Investments	290
% in Top 10 by NAV	18.2%
Leverage %	25.5%
Occupancy	91.6%
# of MSAs	50
1-Year Dividend Yield	3.4%
As of Date	30-Jun-25

Strategy Breakdown

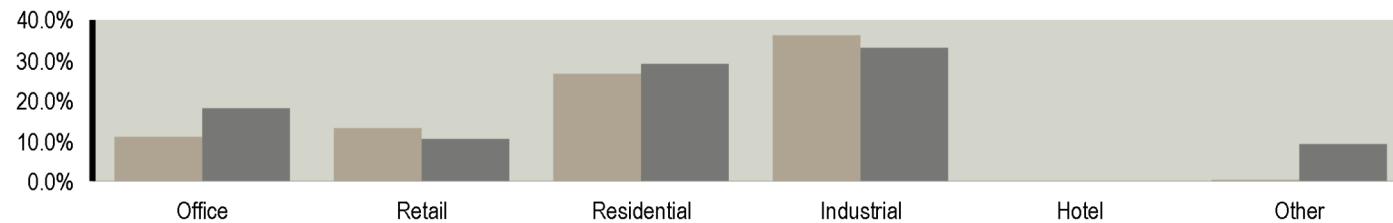
	% of Portfolio
Pre-Development	1.2%
Development	1.5%
Initial Leasing	0.3%
Operating	97.1%
Re-Development	
Other	
<u>Queue In:</u>	
Contribution Queue (\$MM)	\$0.00
Anticipated Drawdown (Months)	

Top Five Metro Areas	% of NAV
Los Angeles-Long Beach, CA	22.3%
New York-Newark, NY-NJ-CT-F	12.3%
Washington-Baltimore-Arlington	8.8%
Atlanta--Athens-Clarke County-	6.3%
San Jose-San Francisco-Oaklai	6.1%
<u>Queue Out:</u>	
Redemption Queue (\$MM)	\$2,139.43
Anticipated Payout (Months)	

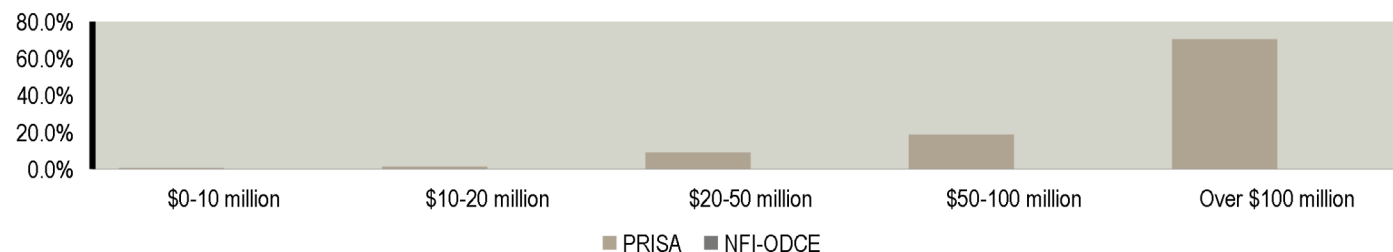
Regional Breakdown by NAV (Excluding Cash & Debt)



Property Type Breakdown by NAV (Excluding Cash & Debt)



Property Size Breakdown by NAV (Excluding Cash & Debt)



■ PRISA ■ NFI-ODCE

Characteristics

Fund GAV (\$MM)	\$15,192.7
Fund NAV (\$MM)	\$8,518.0
Cash (% of NAV)	0.7%
# of Investments	126
% in Top 10 by NAV	24.5%
Leverage %	41.6%
Occupancy	87.7%
# of MSAs	50
1-Year Dividend Yield	2.3%
As of Date	31-Mar-25

Strategy Breakdown

	% of Portfolio
Pre-Development	5.9%
Development	9.1%
Initial Leasing	6.8%
Operating	73.3%
Re-Development	
Other	4.9%

Queue In:

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

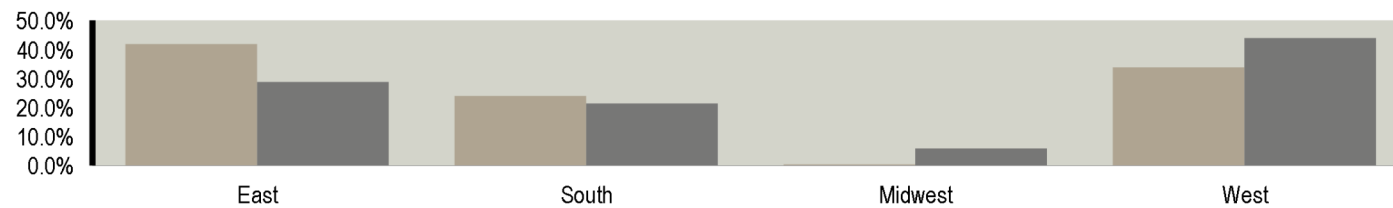
Top Five Metro Areas

	% of NAV
Northern NJ	10.5%
Riverside	8.1%
Boston	7.2%
San Francisco	7.2%
Jersey City	5.3%

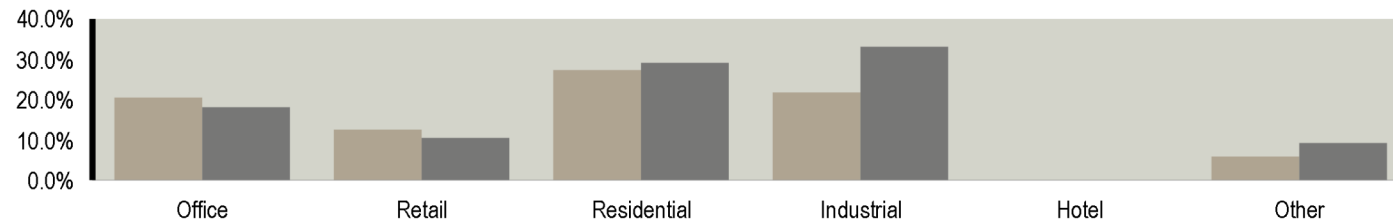
Queue Out:

Redemption Queue (\$MM)	\$1,112.40
Anticipated Payout (Months)	

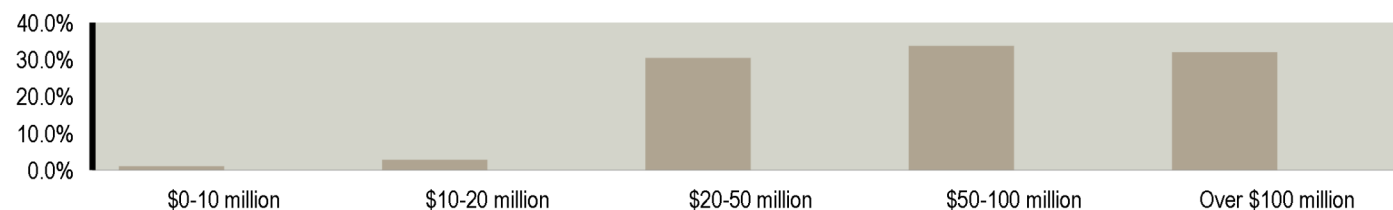
Regional Breakdown by NAV (Excluding Cash & Debt)



Property Type Breakdown by NAV (Excluding Cash & Debt)



Property Size Breakdown by NAV (Excluding Cash & Debt)



■ PRISA II ■ NFI-ODCE

Characteristics

Fund NAV (\$MM)	\$211.6
Cash (% of NAV)	1.9%
# of Investments	7
Occupancy	90.4%
NOI	3.9%
Loan to Value	7.1%
As of Date	3/31/2025

Asset Summary

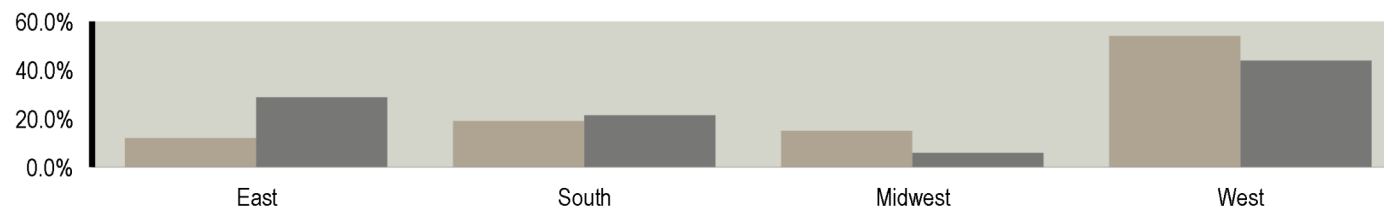
Property	Acquisition
Copley Corporate Center	2010
SR Ranch	2011
708 Uptown	2014
Fairway Center II	2016
Republic Distribution Center	2013
526 Route 46	2014
Shoppes at Monarch Lakes	2010

Portfolio Allocation

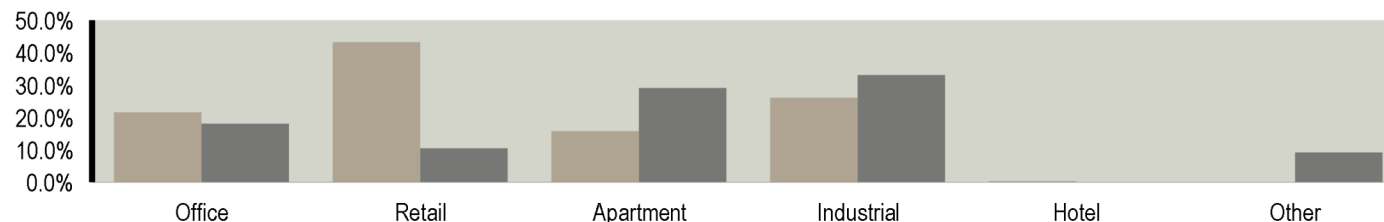
#	Property	Type	Location	% of Fund NAV
1	Copley Corporate Center	Office	San Diego, CA	10.8%
2	SR Ranch	Retail	San Diego, CA	23.6%
3	708 Uptown	Apartment	Seattle, WA	18.1%
4	Fairway Center II	Office	Brea, CA	9.9%
5	Republic Distribution Center	Industrial	Houston, TX	16.7%
6	526 Route 46	Industrial	Teterboro, NJ	13.6%
7	Shoppes at Monarch Lakes	Retail	Miramar, FL	7.4%

Total 100.0%

Regional Breakdown by NAV



Property Type Breakdown by NAV



Net Assets (\$MM) \$167.6

Portfolio Allocation

#	Property	Type	Location	% of Fund NAV
1	Bear Island	Pine	Virginia	5.4%
2	Fitz-Weller	Pine	New York	3.2%
3	Carter Pasture	Douglas Fir/Cedar	Texas	10.0%
4	Dupont	Douglas Fir/Hemlock	Georgia	19.1%
5	Black River	Pine	South Carolina	17.9%
6	Coquille	Pine	Oregon	16.8%
7	Bucktails	Pine	Pennsylvania	8.3%
8	North River	Maple/Oak	Washington	19.2%
Total				100.0%

Regional Breakdown by NAV



Pennsylvania Municipal Retirement System

SSGA US Aggregate Bond Index

As of June 30, 2025

