

# Pennsylvania Municipal Retirement System

Quarterly Performance Report  
As of March 31, 2022



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## DISCLOSURE

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# Marquette Update



# Marquette Update

2Q 2022

\$356B

assets under advisement

99%

client retention rate

11 years

avg. client tenure

36<sup>th</sup>

year in business

19<sup>th</sup>

largest investment consulting firm according to P&I<sup>1</sup>

5

office locations in Chicago, Baltimore, Milwaukee, Philadelphia, and St. Louis

100%

employee-owned

120+

employees

24

full-time partners

## QUARTERLY RESEARCH



Q1 Market Insights Video: 4/26



Letter from the Director of Research: 4/28

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Firm and client statistics as of December 31, 2021. Client retention rate calculated 2012–2021. <sup>1</sup>As of June 30, 2021 per P&I Daily 2021 Investment Management Consultants Survey ranked by worldwide institutional assets under advisement. 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.

## 2022 Investment Symposium

This year's symposium will be held as a hybrid event, with an in-person option in Chicago at the Union League Club and a virtual livestream on Vimeo. We're excited to welcome Ted Seides and Dr. Jean Twenge as featured speakers and our research team will also present several flash talks. All clients are invited — please save the date!

Friday, September 23<sup>RD</sup>



### RECENT HIRES

**Frank Valle**  
Sr. Research Analyst,  
Fixed Income

**Chad Sheaffer**  
Research Analyst

**Kat Armstrong**  
Client Analyst, OCIO

**Israel Lopez**  
Client Analyst

**Spencer Goodman**  
Performance Analyst

**Michael DeSantis**  
Performance Analyst

**Jalen Hill**  
Performance Analyst

**Javier Palma**  
Performance Analyst

**Ricky Yang**  
Performance Analyst

**Mike Kleinman**  
Performance Analyst

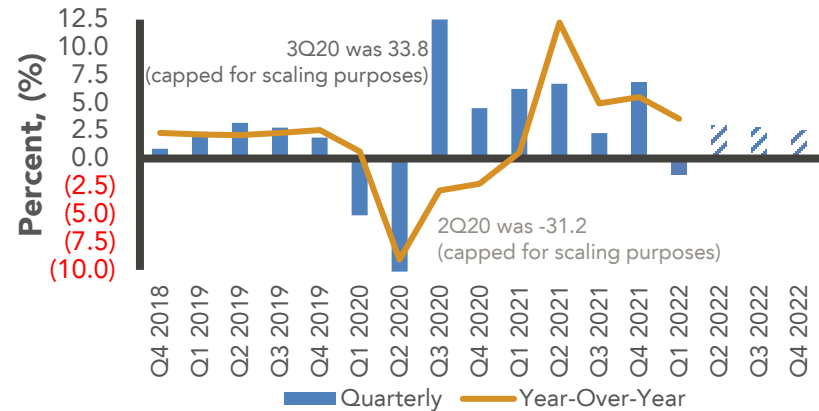
# Market Environment



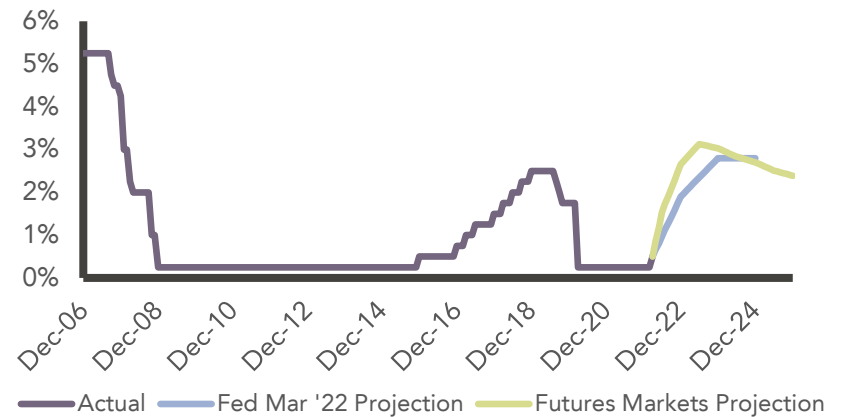
# U.S. Economy

- Economic activity plunged in Q1, with real GDP declining by 1.4% and significantly missing economist estimates. While consumer spending accelerated slightly from Q4, net exports and a slowdown in private inventory investment detracted more than four percentage points from real GDP.
- Economists expect economic growth to rebound for the rest of 2022, but the range of outcomes is wide amid a myriad of concerns, including the Russian invasion of Ukraine, the “zero-COVID” policy in China, and rising inflation, to name a few.
- The latter has triggered a hawkish shift in the Federal Reserve’s outlook for monetary policy. Multiple 50 basis point rate hikes at upcoming meetings appear likely, based on recent policymaker rhetoric and market expectations. Further, officials seem poised to shrink the Fed’s balance sheet, possibly beginning in May, at a much faster rate than seen in 2018 (i.e., the previous tightening cycle).

U.S. Real GDP Growth



Short-Term Interest Rates

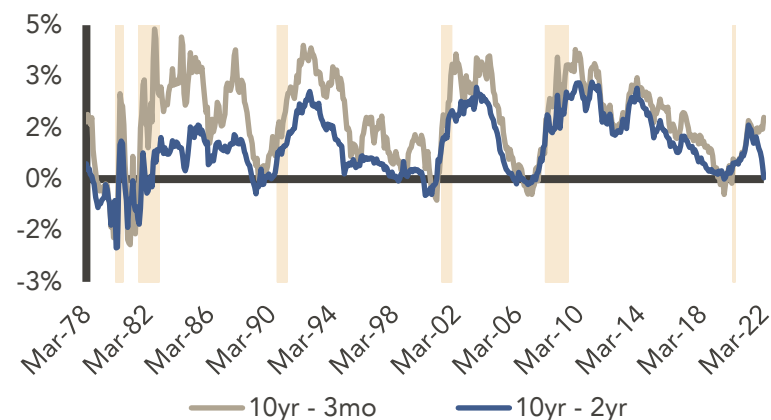


Sources: Refinitiv and The Wall Street Journal. Striped bars reflect estimates.

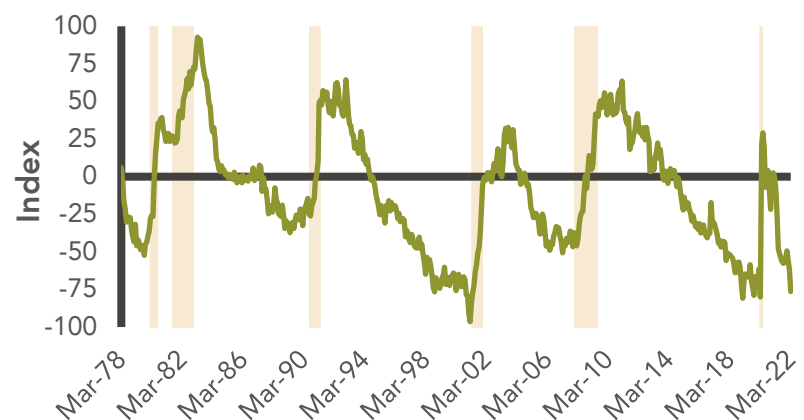
# U.S. Economy

- The remarkable shift in the Fed's policy outlook, coupled with economic uncertainty, has led to a notable flattening in key parts of the Treasury yield curve. The spread between 10-year and 2-year yields, for example, ended Q1 near zero. While the spread between the 10-year and 3-month yield has actually steepened, forward rates anticipate this spread will invert in the coming quarters.
- The key question is whether the Fed can engineer a "soft landing," leaving the economy in a mid-cycle slowdown, or whether their actions may tip the economy into recession over the next couple of years. It's important to remember that, while some parts of the yield curve are inverted, real interest rates remain deeply negative, which are more reflective of loose monetary policy.
- That said, many indicators, including consumer confidence, the unemployment rate, credit spreads and ISM New Orders are consistent with an economy in the latter stages of the economic cycle.

Yield Curve Spreads



Consumer Confidence: Expectations minus Current Conditions



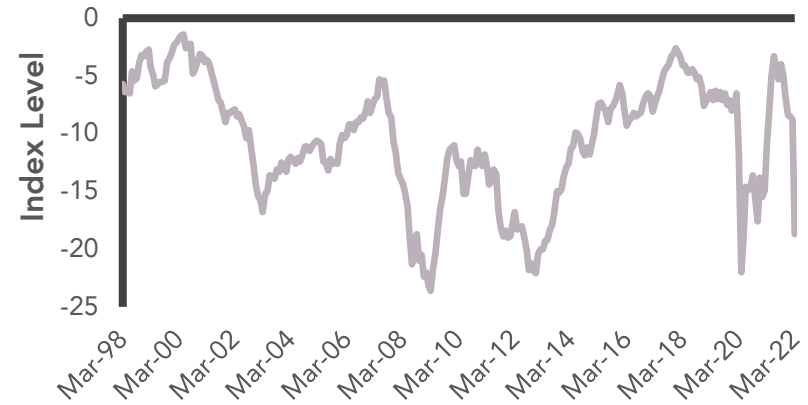
Sources: Refinitiv. Shaded areas indicate economic recessions.



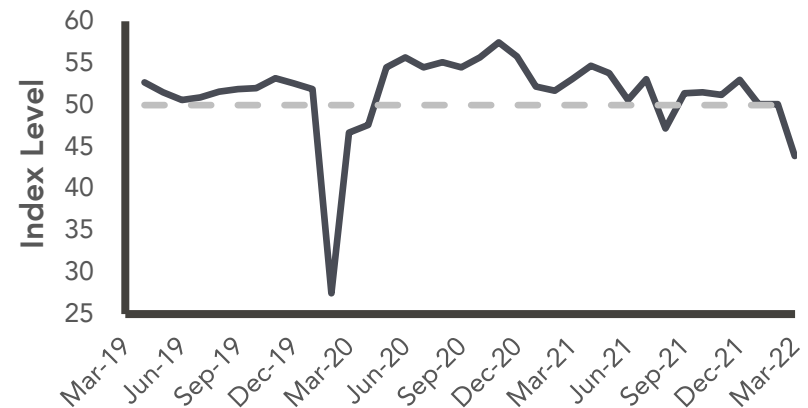
# Global Economy

- Outside the U.S., similar dynamics are playing out across the global economy. Global economic growth appears to have decelerated meaningfully from Q4 2021.
- In Europe, consumer confidence measures have collapsed, nearing pandemic lows, amid the Russian invasion of Ukraine and spiking energy costs. The latter may cause the European Central Bank to raise short-term rates later this year, much sooner than economists had previously anticipated.
- In China, meanwhile, economic growth remains subdued amid the country's "zero COVID policy," which has seen authorities impose a harsh lockdown on Shanghai and its 25 million residents. Recently, the China PMI Composite for March posted a reading of 43.9, well below the 50.0 level that separates economic growth and contraction.

European Consumer Confidence



China PMI Composite

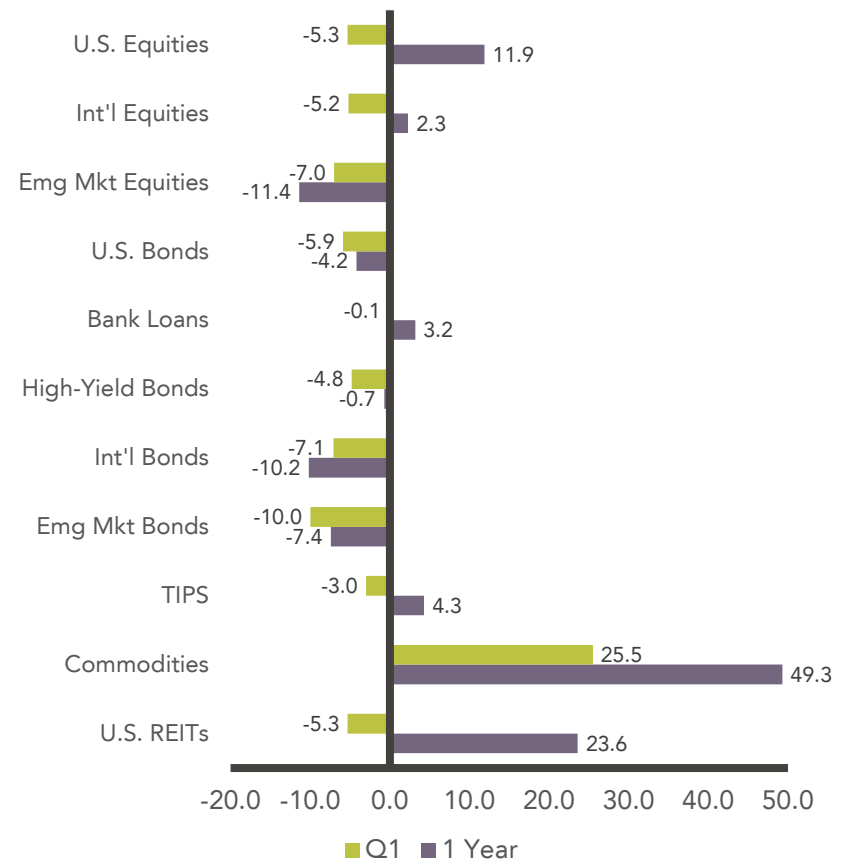


Sources: Morgan Stanley and Bloomberg. Striped bars reflect estimates. The credit impulse is defined as the monthly change of the flow in new credit as a share of GDP.

# Global Asset Class Performance

- Global equities** ended Q1 firmly in the red as the Russian invasion of Ukraine, the hawkish outlook for monetary policy, and inflation concerns weighed on investor sentiment. U.S. equities once again outperformed their international developed and emerging market counterparts. U.S. dollar strength exacerbated losses for unhedged U.S.-based investors, with the greenback rising amid the prospects for higher interest rates within the U.S.
- Fixed income** returns were poor during Q1, with investment-grade bonds lagging due to their longer duration. The Bloomberg Aggregate Bond Index posted its worst quarterly return in more than 40 years. Sub-investment grade debt was also in the red, though, bank loans outperformed notably due to their floating-rate characteristics.
- Inflation-sensitive assets** performance was mixed in Q1. TIPS outperformed nominal bonds amid rising inflation expectations, while commodities rose sharply amid supply concerns generated by the Russian invasion of Ukraine. Finally, REITs were in line with the broad U.S. equity market.

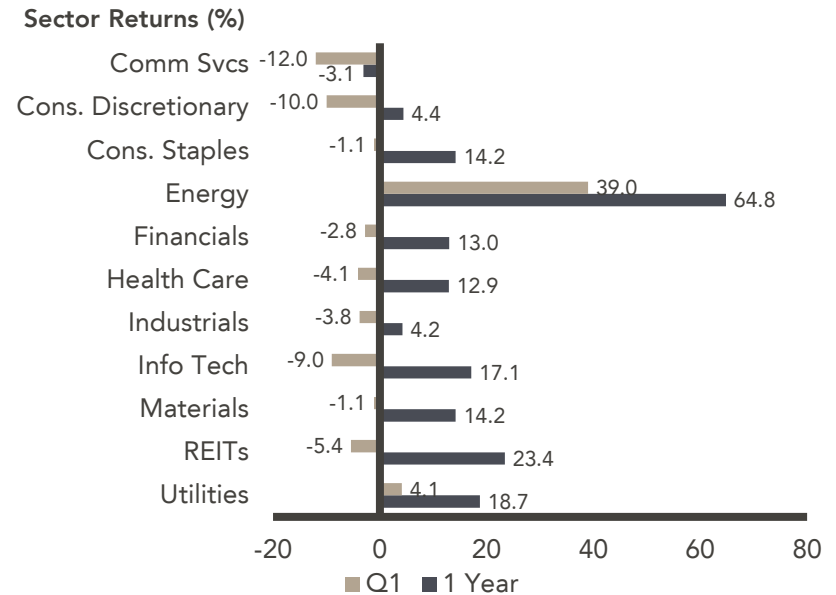
Asset Class Returns: Select Asset Class Performance (%)



Source: Markov Processes International

# U.S. Equity Markets

- Most economic sectors posted negative returns for the quarter, with Utilities and Energy the lone exceptions. The former gained ground due in part to its defensive characteristics, while Energy stocks rose sharply on the back of surging oil prices.
- Value stocks topped growth stocks for the first time since Q1 of last year amid rising interest rates, while large caps led their mid- and small-cap counterparts.
- Economic and market uncertainty appears higher than it has been for some time. However, since the late 1970s, global equity returns have historically generated solid returns following a yield curve inversion (as measured by the 10-year yield less the 2-year yield), according to Morgan Stanley.
- Digging a bit deeper, U.S. stocks have outperformed Non-U.S. equities in such episodes, while emerging markets equities have initially lagged Non-U.S. developed stocks before outperforming over a 12-month horizon.



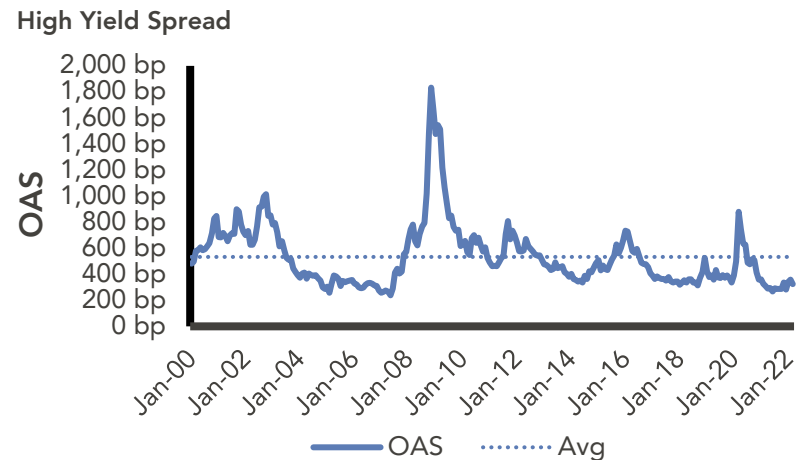
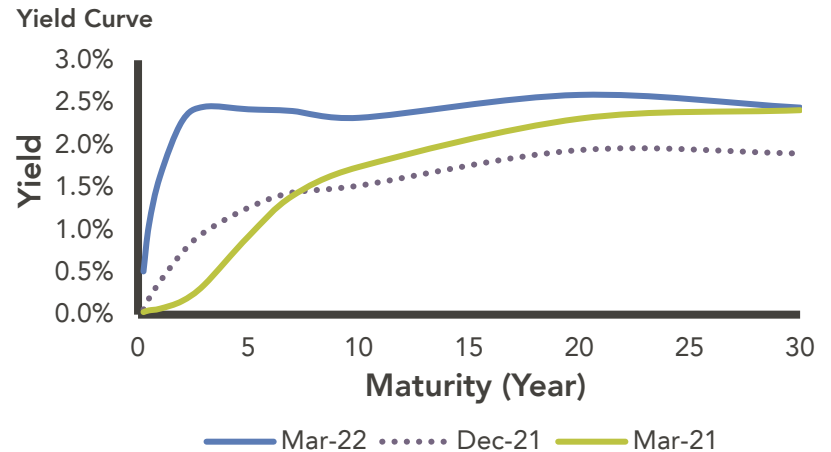
**Historical Returns After Yield Curve Inversions**

	Returns After 10yr-2yr Curve Inverts, %			
	1m	3m	6m	12m
MSCI ACWI	1.8	0.8	2.4	11.7
S&P 500	1.4	0.7	4.9	16.6
Eurostoxx 50	1.8	1.6	1.4	7.3
TOPIX	1.9	1.2	-2.3	3.9
FTSE 100	1.0	3.2	3.7	6.6
MSCI EM	0.4	-3.1	-0.8	12.0
Non-US vs. US	0.1	-2.3	-6.2	-8.7

Sources: Morgan Stanley and Refinitiv.

# U.S. Fixed Income

- Interest rates rose sharply across the yield curve, with shorter-dated issues experiencing the largest rise. This led to inversions on various segments across the curve amid the prospects of tighter monetary policy and economic uncertainty.
- After a negative calendar year return in 2021, the bond market remained under pressure. At -5.9%, the Bloomberg Aggregate Bond Index posted its worst quarterly return since the third quarter of 1981.
- Sub-investment grade debt continued to outperform their investment-grade counterparts, despite posting negative returns. High yield slightly outperformed, despite widening spreads, due to its shorter duration compared to investment-grade bonds. Bank Loans, meanwhile, finished just below the flat line in Q1 as their floating-rate characteristics shielded the asset class from rising rates.



Sources: Bloomberg Barclays and Refinitiv

# Global Index Returns

DOMESTIC EQUITY	QTR	YTD	1 Year	3 Year	5 Year	10 Year
S&P 500 Index	(4.6)	(4.6)	15.6	18.9	16.0	14.6
Russell 3000 Index	(5.3)	(5.3)	11.9	18.2	15.4	14.3
Russell 3000 Growth Index	(9.3)	(9.3)	12.9	22.7	20.2	16.6
Russell 3000 Value Index	(0.8)	(0.8)	11.1	13.0	10.2	11.6
Russell TOP 200 Index	(4.9)	(4.9)	15.7	20.1	17.0	15.2
Russell TOP 200 Growth Index	(8.3)	(8.3)	18.8	25.8	22.3	18.0
Russell TOP 200 Value Index	(0.1)	(0.1)	11.8	12.6	10.4	11.6
Russell 1000 Index	(5.1)	(5.1)	13.3	18.7	15.8	14.5
Russell 1000 Growth Index	(9.0)	(9.0)	15.0	23.6	20.9	17.0
Russell 1000 Value Index	(0.7)	(0.7)	11.7	13.0	10.3	11.7
Russell Mid-Cap Index	(5.7)	(5.7)	6.9	14.9	12.6	12.9
Russell Mid-Cap Growth Index	(12.6)	(12.6)	(0.9)	14.8	15.1	13.5
Russell Mid-Cap Value Index	(1.8)	(1.8)	11.5	13.7	10.0	12.0
Russell 2000 Index	(7.5)	(7.5)	(5.8)	11.7	9.7	11.0
Russell 2000 Growth Index	(12.6)	(12.6)	(14.3)	9.9	10.3	11.2
Russell 2000 Value Index	(2.4)	(2.4)	3.3	12.7	8.6	10.5
<b>DOMESTIC EQUITY BY SECTOR (MSCI)</b>						
Communication Services	(12.0)	(12.0)	(3.1)	15.1	10.8	10.8
Consumer Discretionary	(10.0)	(10.0)	4.4	21.8	18.6	17.1
Consumer Staples	(1.1)	(1.1)	14.2	13.7	9.9	11.4
Energy	39.0	39.0	64.8	10.8	5.9	3.2
Financials	(2.8)	(2.8)	13.0	15.8	11.6	13.4
Health Care	(4.1)	(4.1)	12.9	15.5	14.8	15.9
Industrials	(3.8)	(3.8)	4.2	13.4	11.3	12.8
Information Technology	(9.0)	(9.0)	17.1	28.9	25.9	20.0
Materials	(1.1)	(1.1)	14.2	18.7	12.4	11.2
Real Estate	(5.4)	(5.4)	23.4	11.8	10.7	10.4
Utilities	4.1	4.1	18.7	11.1	11.0	11.7

Source: Markov Processes International

# Global Index Returns

INTERNATIONAL/GLOBAL EQUITY	QTR	YTD	1 Year	3 Year	5 Year	10 Year
MSCI EAFE (Net)	(5.9)	(5.9)	1.2	7.8	6.7	6.3
MSCI EAFE Growth (Net)	(11.9)	(11.9)	(1.5)	9.8	8.9	7.5
MSCI EAFE Value (Net)	0.3	0.3	3.6	5.2	4.2	4.9
MSCI EAFE Small Cap (Net)	(8.5)	(8.5)	(3.6)	8.5	7.4	8.3
MSCI AC World Index (Net)	(5.4)	(5.4)	7.3	13.8	11.6	10.0
MSCI AC World Index Growth (Net)	(9.7)	(9.7)	5.4	17.9	15.5	12.1
MSCI AC World Index Value (Net)	(1.0)	(1.0)	8.8	9.0	7.5	7.6
MSCI Europe ex UK (Net)	(10.0)	(10.0)	0.6	9.3	7.4	7.0
MSCI United Kingdom (Net)	1.8	1.8	13.6	5.3	5.5	4.5
MSCI Pacific ex Japan (Net)	3.8	3.8	3.8	6.9	6.7	6.0
MSCI Japan (Net)	(6.6)	(6.6)	(6.5)	6.8	6.1	6.5
MSCI Emerging Markets (Net)	(7.0)	(7.0)	(11.4)	4.9	6.0	3.4

Source: Markov Processes International

# Global Index Returns

FIXED INCOME	QTR	YTD	1 Year	3 Year	5 Year	10 Year
Merrill Lynch 3-month T-Bill	0.0	0.0	0.1	0.8	1.1	0.6
Barclays Intermediate Gov't./Credit	(4.5)	(4.5)	(4.1)	1.5	1.8	1.8
Barclays Aggregate Bond	(5.9)	(5.9)	(4.2)	1.7	2.1	2.2
Barclays Short Government	(1.1)	(1.1)	(1.3)	1.0	1.2	0.8
Barclays Intermediate Government	(4.2)	(4.2)	(4.2)	1.0	1.3	1.3
Barclays Long Government	(10.6)	(10.6)	(1.5)	3.2	3.9	4.0
Barclays Investment Grade Corp.	(7.7)	(7.7)	(4.2)	3.0	3.3	3.6
Barclays High Yield Corp. Bond	(4.8)	(4.8)	(0.7)	4.6	4.7	5.7
Credit Suisse Leveraged Loan	(0.1)	(0.1)	3.2	4.1	4.1	4.5
JPMorgan Global ex US Bond	(7.1)	(7.1)	(10.2)	(1.3)	0.7	(0.4)
JPMorgan Emerging Market Bond	(10.0)	(10.0)	(7.4)	0.0	1.7	3.7
INFLATION SENSITIVE						
Consumer Price Index	3.1	3.1	8.5	4.2	3.4	2.3
BC TIPS	(3.0)	(3.0)	4.3	6.2	4.4	2.7
Commodities	25.5	25.5	49.3	16.1	9.0	(0.7)
Gold	6.6	6.6	13.1	13.0	8.1	0.7
REITs	(5.3)	(5.3)	23.6	11.7	10.7	10.5
FTSE EPRA/NAREIT Global REITs	(3.7)	(3.7)	18.1	6.4	6.5	7.1
NCREIF ODCE*	7.2	7.2	27.3	10.3	8.9	9.9
NCREIF Farmland**	3.8	7.8	7.8	5.2	5.7	9.7
NCREIF Timberland**	4.6	9.2	9.2	3.7	3.6	5.3

\*Data are preliminary.

\*\*Data are as of December 31, 2021.

Source: Markov Processes International

# Portfolio Overview





## Observations

- Market Value as of March 31, 2022, was \$3.37 billion.
- 1<sup>st</sup> Qtr. '22 Return: Total Fund -4.3% (net) vs. Policy Index -3.7%; investment loss of \$150.3 million.
- Contributors to 1<sup>st</sup> Qtr. Performance:
  - Higher quality U.S. Equity positions: LSV Large Cap Value and Copeland Small Cap Dividend Growth
  - Global Minimum Volatility Equity
  - HGK International Equity
  - Real Assets: Forest Investment Associates and PRISA II
- Detractors from 1<sup>st</sup> Qtr. Performance:
  - Concentrated Growth Equity Managers: Polen Focus Growth and Hardman Johnston International Equity
  - Core Fixed Income
- Longer term performance has been strong
  - 3-Year Return: 10.8% (net) vs. Policy Index 10.8%; investment gain of \$918 million
  - 5-Year Return: 9.8% (net) vs. Policy Index 9.4%; investment gain of \$1.30 billion
- Low Investment Management Fees: 0.28%

## Recent Changes / Looking Ahead

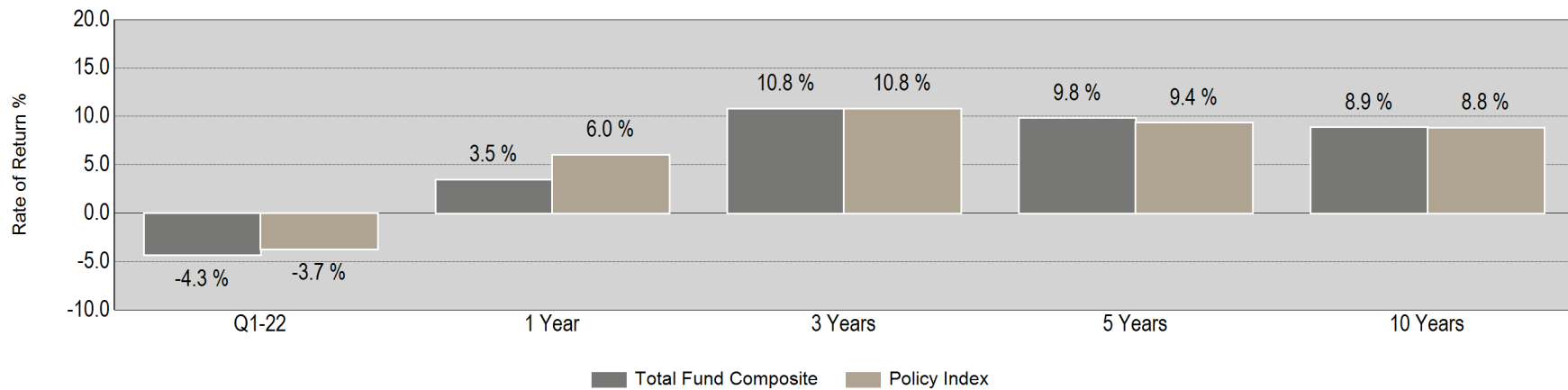
- Upcoming Transitions
  - MFS Large Cap Value
  - Federated Core Fixed Income
- Upcoming Investment Manager Search
  - Fixed Income: Opportunistic Credit - Ongoing

As of March 31, 2022

Summary of Cash Flows

	First Quarter	One Year	Three Years	Five Years	Ten Years
Beginning Market Value	\$3,536,148,177	\$3,308,194,183	\$2,578,513,727	\$2,252,298,701	\$1,616,357,047
Net Cash Flow	-\$16,318,380	-\$64,673,001	-\$127,435,026	-\$186,765,560	-\$275,362,945
Net Investment Change	-\$150,343,424	\$125,965,191	\$918,407,672	\$1,303,953,231	\$2,028,492,271
Ending Market Value	\$3,369,486,372	\$3,369,486,372	\$3,369,486,372	\$3,369,486,372	\$3,369,486,372

Return Summary (Net)

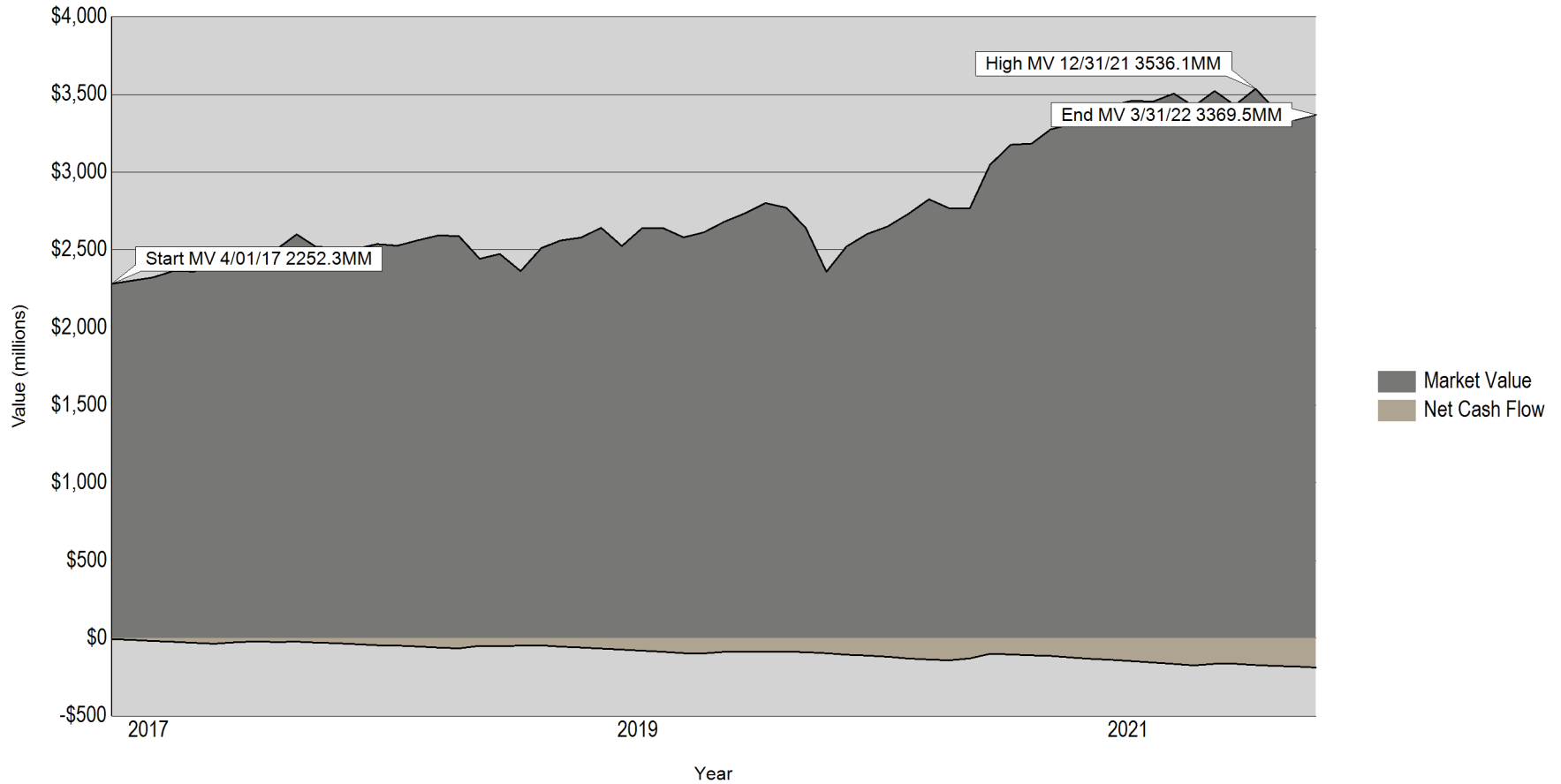


Asset Allocation vs. Target

	Current	Policy
U.S. Equity	32.1%	32.5%
Global Equity	10.2%	10.0%
Non-U.S. Equity	15.0%	15.0%
Emerging Markets	2.3%	2.5%
Real Assets	17.1%	15.0%
U.S. Fixed Income	23.0%	24.0%
Cash Equivalent	0.3%	1.0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>

The above is an interim policy allocation until Opp. Credit is funded (5% from Global Equity)

Market Value History



# Pennsylvania Municipal Retirement System

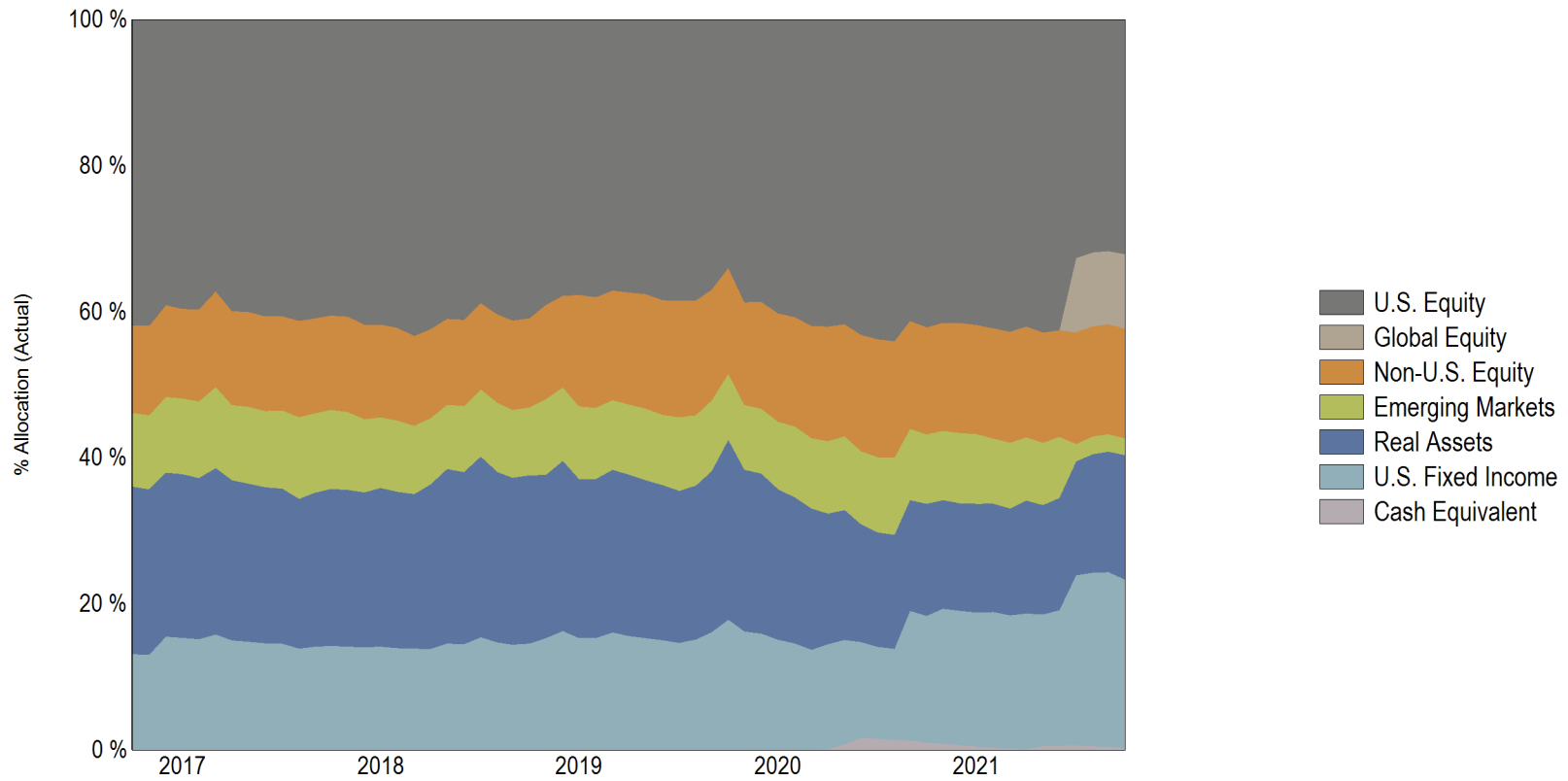
# Asset Allocation Summary

As of March 31, 2022

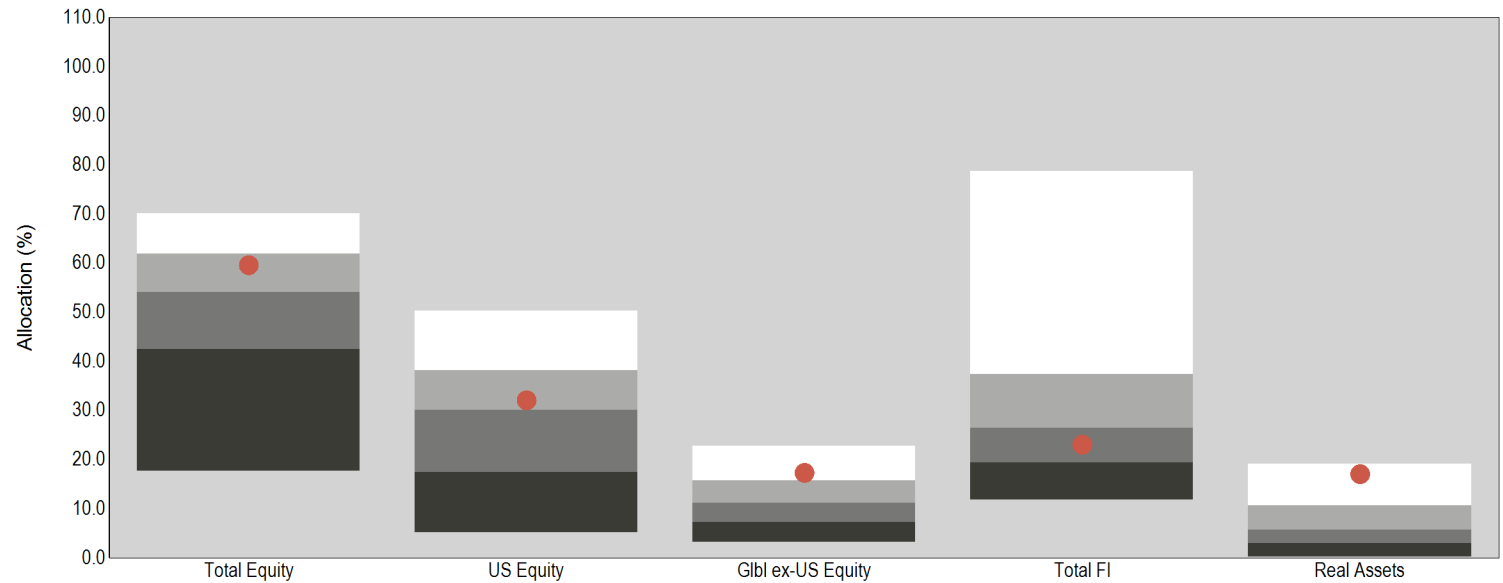
	Market Value	% of Portfolio	Policy %	Policy Difference
<b>Total Fund Composite</b>	<b>3,369,486,372</b>	<b>100.0</b>	<b>100.0</b>	<b>0</b>
<b>Total Equity Composite</b>	<b>2,007,709,345</b>	<b>59.6</b>	<b>60.0</b>	<b>-13,982,478</b>
<b>U.S. Equity Composite</b>	<b>1,080,643,850</b>	<b>32.1</b>	<b>32.5</b>	<b>-14,439,221</b>
LSV Large Cap Value	149,938,386	4.4		
Xponance S&P 500	272,531,728	8.1		
Northern Trust S&P 500	287,289,965	8.5		
Polen Focus Growth	115,801,122	3.4		
Northern Trust Dow Jones Completion Index	110,920,858	3.3		
Smith, Graham & Co Small Cap Value	49,538,620	1.5		
Copeland Small Cap Dividend Growth	50,875,599	1.5		
Emerald Small Cap Growth	43,747,086	1.3		
<b>Global Equity Composite</b>	<b>344,003,956</b>	<b>10.2</b>	<b>10.0</b>	<b>7,055,319</b>
Rhumbline Global Min. Volatility	169,309,132	5.0		
iShares MSCI ACWI	174,694,824	5.2		
<b>Non-U.S Equity Composite</b>	<b>583,061,539</b>	<b>17.3</b>	<b>17.5</b>	<b>-6,598,576</b>
SSGA MSCI World ex US	273,755,630	8.1		
Hardman Johnston Int'l Equity	105,570,288	3.1		
HGK Int'l Equity	126,085,161	3.7		
SSGA MSCI Emerging Markets Index	77,314,935	2.3		
<b>Real Assets Composite</b>	<b>574,571,864</b>	<b>17.1</b>	<b>15.0</b>	<b>69,148,908</b>
Forest Investment Associates	145,415,562	4.3		
PRISA LP	67,266,203	2.0		
PRISA II	137,706,111	4.1		
PennMuni-Nuveen U.S. Real Estate Fund	222,192,939	6.6		
N. Front Street (Nuveen)	1,991,048	0.1		
<b>Total Fixed Income Composite</b>	<b>776,305,124</b>	<b>23.0</b>	<b>24.0</b>	<b>-32,371,605</b>
SSGA US Aggregate Bond Index	776,305,124	23.0		
<b>Cash Composite</b>	<b>10,900,039</b>	<b>0.3</b>	<b>1.0</b>	<b>-22,794,824</b>
Cash Management	10,899,887	0.3		

Residual value for Jarislowsky (approx. \$296k) included in Non-US Equity and Total Fund Composite values. Residual values for Eagle (approx. \$486) included in the US Equity and Total Fund Composite values. Abel Noser Transition Account has \$153 residual cash.

Asset Allocation History



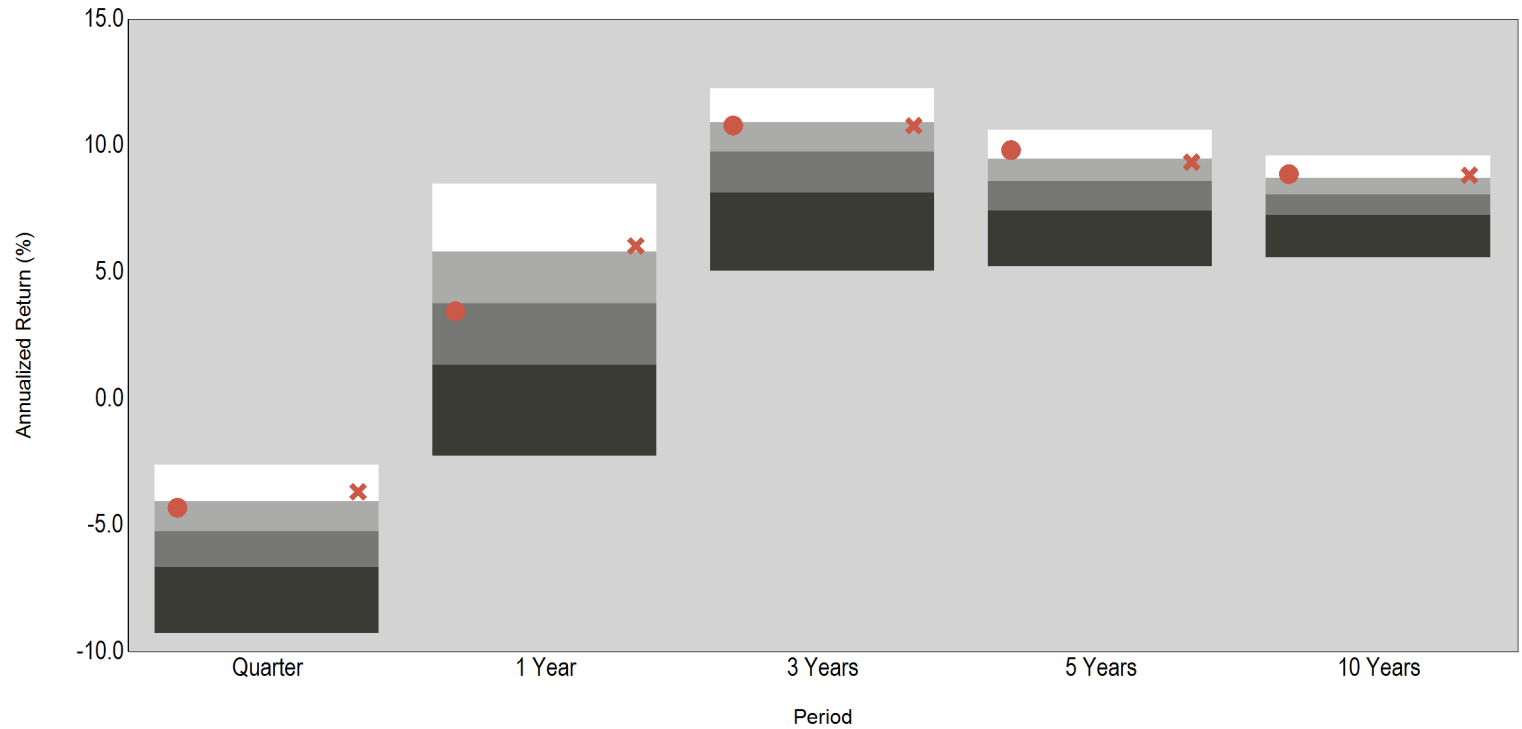
Total Plan Allocation vs. InvMetrics All DB Net  
As of March 31, 2022



**Allocation (Rank)**

<b>5th Percentile</b>	70.1		50.3		22.8		78.8		19.1	
<b>25th Percentile</b>	61.9		38.1		15.7		37.4		10.7	
<b>Median</b>	54.1		30.1		11.2		26.4		5.6	
<b>75th Percentile</b>	42.5		17.5		7.3		19.3		3.0	
<b>95th Percentile</b>	17.7		5.2		3.2		11.9		0.3	
<b># of Portfolios</b>	528		317		417		537		135	
<b>● Total Fund Composite</b>	59.6	(33)	32.1	(47)	17.3	(19)	23.0	(63)	17.1	(10)

InvMetrics All DB Net Return Comparison

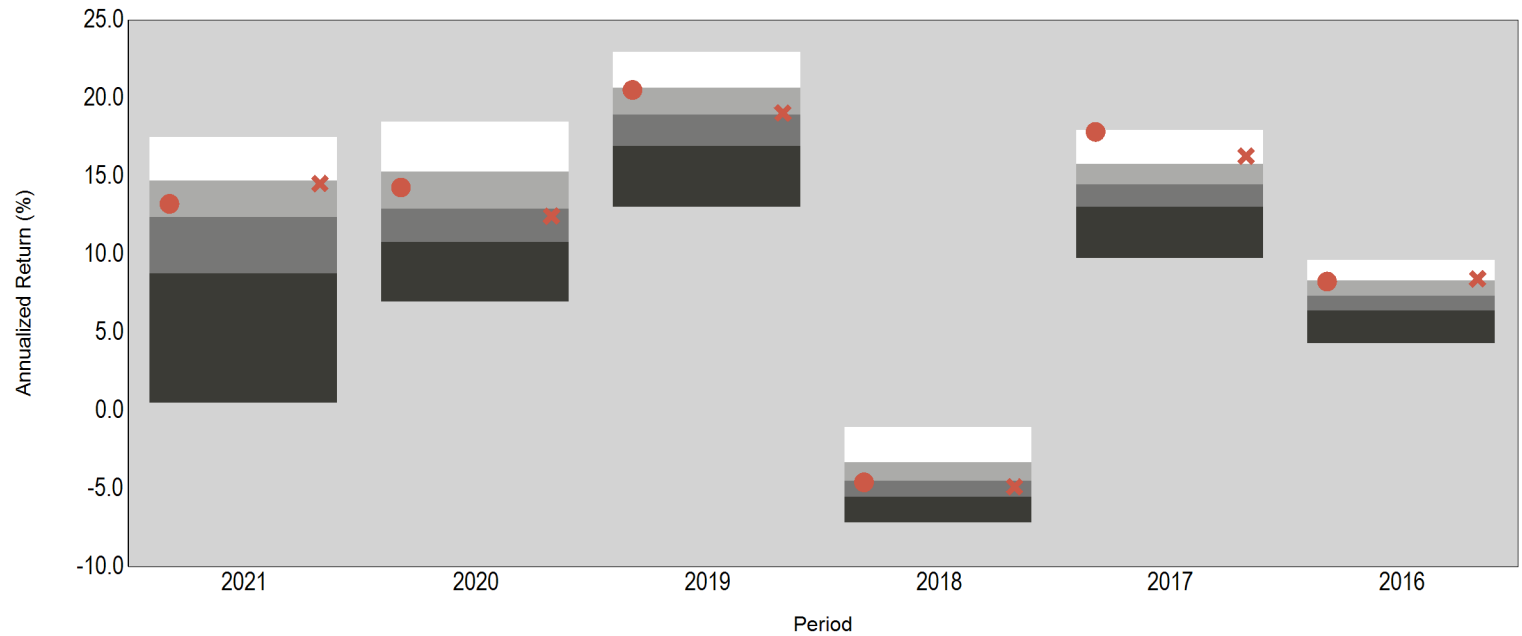


Return (Rank)

5th Percentile	-2.6		8.5		12.3		10.6		9.6	
25th Percentile	-4.1		5.8		10.9		9.5		8.7	
Median	-5.2		3.8		9.8		8.6		8.1	
75th Percentile	-6.6		1.3		8.2		7.4		7.3	
95th Percentile	-9.3		-2.2		5.1		5.2		5.6	
# of Portfolios	1,625		1,591		1,543		1,468		1,150	
● Total Fund Composite	-4.3	(30)	3.5	(54)	10.8	(27)	9.8	(16)	8.9	(21)
▲ Policy Index	-3.7	(17)	6.0	(23)	10.8	(28)	9.4	(28)	8.8	(23)

As of March 31, 2022

InvMetrics All DB Net Return Comparison



	Return (Rank)											
	2021		2020		2019		2018		2017		2016	
5th Percentile	17.5	(42)	18.5	(36)	23.0	(27)	-1.1	(53)	17.9	(6)	9.6	(28)
25th Percentile	14.7	(27)	15.3	(56)	20.7	(49)	-3.3	(60)	15.8	(19)	8.3	(23)
Median	12.4		12.9		18.9		-4.5		14.5		7.3	
75th Percentile	8.7		10.8		16.9		-5.5		13.0		6.4	
95th Percentile	0.5		7.0		13.0		-7.2		9.7		4.3	
# of Portfolios	1,646		1,745		1,580		1,647		1,009		1,028	
● Total Fund Composite	13.2	(42)	14.3	(36)	20.5	(27)	-4.6	(53)	17.8	(6)	8.3	(28)
▲ Policy Index	14.5	(27)	12.4	(56)	19.0	(49)	-4.9	(60)	16.3	(19)	8.4	(23)



**RISK RETURN STATISTICS**  
April 01, 2017 Through March 31, 2022

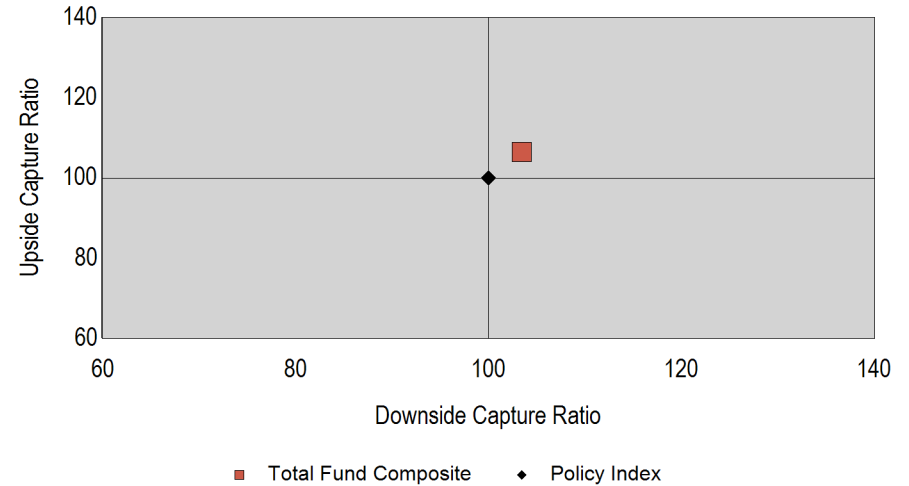
	Total Fund Composite	Policy Index
<b>RETURN SUMMARY STATISTICS</b>		
Number of Periods	20	20
Maximum Return	13.40	12.26
Minimum Return	-15.48	-14.88
Annualized Return	9.83	9.35
Total Return	59.80	56.38
Annualized Excess Return Over Risk Free	8.77	8.30
Annualized Excess Return	0.47	0.00

	Total Fund Composite	Policy Index
<b>RISK SUMMARY STATISTICS</b>		
Beta	1.06	1.00
Upside Deviation	7.67	6.98
Downside Deviation	12.96	12.58

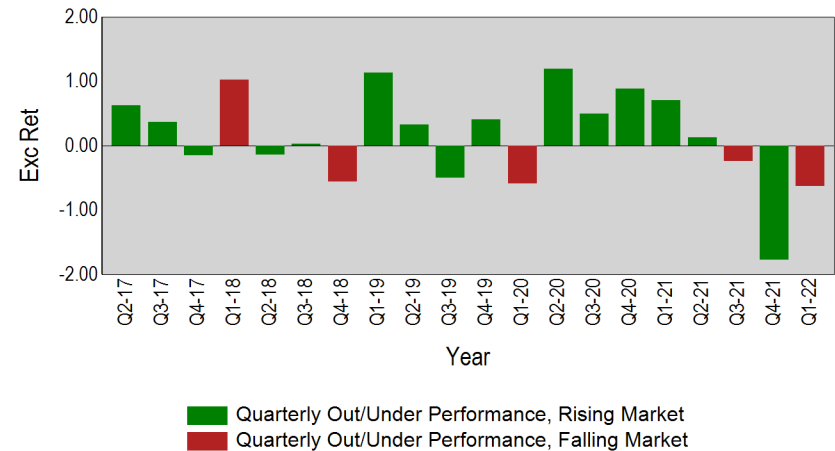
	Total Fund Composite	Policy Index
<b>RISK/RETURN SUMMARY STATISTICS</b>		
Annualized Standard Deviation	13.46	12.61
Alpha	-0.02	0.00
Sharpe Ratio	0.65	0.66
Excess Return Over Market / Risk	0.04	0.00
Tracking Error	1.47	0.00
Information Ratio	0.32	--

	Total Fund Composite	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 March 31, 2022



Quarterly Excess Performance  
Total Fund Composite vs. Policy Index



# Pennsylvania Municipal Retirement System

## Performance Summary (Net)

As of March 31, 2022

	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
<b>Total Fund Composite</b>	<b>-4.3</b>	<b>3.5</b>	<b>10.8</b>	<b>9.8</b>	<b>8.9</b>	<b>8.8</b>	<b>Jan-86</b>
Policy Index	-3.7	6.0	10.8	9.4	8.8	9.3	Jan-86
InvMetrics All DB Net Rank	30	54	27	16	21	41	Jan-86
<b>Total Equity Composite</b>	<b>-6.0</b>	<b>2.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>19.8</b>	<b>Oct-20</b>
MSCI ACWI IMI Net USD	-5.5	6.3	--	--	--	18.7	Oct-20
<b>U.S. Equity Composite</b>	<b>-6.2</b>	<b>5.4</b>	<b>16.8</b>	<b>14.7</b>	<b>13.5</b>	<b>9.6</b>	<b>Jan-06</b>
Russell 3000	-5.3	11.9	18.2	15.4	14.3	10.4	Jan-06
InvMetrics Public DB US Eq Net Rank	91	97	65	35	46	59	Jan-06
LSV Large Cap Value	-1.4	8.1	12.9	10.1	11.8	8.8	Apr-04
Russell 1000 Value	-0.7	11.7	13.0	10.3	11.7	8.5	Apr-04
S&P 500	-4.6	15.6	18.9	16.0	14.6	10.2	Apr-04
eV US Large Cap Value Equity Net Rank	62	89	70	72	50	51	Apr-04
Xponance S&P 500	-4.6	--	--	--	--	-4.6	Dec-21
S&P 500	-4.6	--	--	--	--	-4.6	Dec-21
eV US Large Cap Core Equity Net Rank	44	--	--	--	--	44	Dec-21
Northern Trust S&P 500	-4.6	--	--	--	--	-4.6	Dec-21
S&P 500	-4.6	--	--	--	--	-4.6	Dec-21
eV US Large Cap Core Equity Net Rank	44	--	--	--	--	44	Dec-21
Polen Focus Growth	-14.4	4.9	19.3	20.2	16.1	17.2	Oct-10
Russell 1000 Growth	-9.0	15.0	23.6	20.9	17.0	17.4	Oct-10
eV US Large Cap Growth Equity Net Rank	89	71	52	21	21	8	Oct-10
Northern Trust Dow Jones Completion Index	-9.3	--	--	--	--	-9.3	Dec-21
Dow Jones U.S. Completion Total Stock Market	-9.3	--	--	--	--	-9.3	Dec-21
eV US Small-Mid Cap Core Equity Net Rank	72	--	--	--	--	72	Dec-21
Smith, Graham & Co Small Cap Value	-5.9	-4.2	16.1	8.3	--	8.7	Dec-16
Russell 2000 Value	-2.4	3.3	12.7	8.6	--	8.8	Dec-16
Russell 2000	-7.5	-5.8	11.7	9.7	--	10.2	Dec-16
eV US Small Cap Value Equity Net Rank	77	97	16	60	--	59	Dec-16
Copeland Small Cap Dividend Growth	-5.3	4.7	13.3	--	--	11.7	Sep-17
Russell 2000	-7.5	-5.8	11.7	--	--	8.9	Sep-17
eV US Small Cap Core Equity Net Rank	21	27	56	--	--	24	Sep-17
Emerald Small Cap Growth	-11.0	-9.5	11.4	12.8	13.1	10.9	Oct-98
Russell 2000 Growth	-12.6	-14.3	9.9	10.3	11.2	8.2	Oct-98
eV US Small Cap Growth Equity Net Rank	24	54	78	74	59	59	Oct-98

# Pennsylvania Municipal Retirement System

# Performance Summary (Net)

As of March 31, 2022

	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
<b>Global Equity Composite</b>	<b>-4.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-4.5</b>	<b>Dec-21</b>
<i>Global Equity Policy Index</i>	-4.2	--	--	--	--	-4.2	Dec-21
Rhumbline Global Min. Volatility	-3.2	--	--	--	--	-3.2	Dec-21
<i>MSCI ACWI Minimum Volatility Index</i>	-3.0	--	--	--	--	-3.0	Dec-21
<i>eV Global Low Volatility Equity Net Rank</i>	59	--	--	--	--	59	Dec-21
iShares MSCI ACWI	-5.7	--	--	--	--	-5.7	Dec-21
<i>MSCI ACWI</i>	-5.4	--	--	--	--	-5.4	Dec-21
<i>eV Global Large Cap Core Eq Net Rank</i>	39	--	--	--	--	39	Dec-21
<b>Non-U.S Equity Composite</b>	<b>-6.7</b>	<b>-3.9</b>	<b>8.6</b>	<b>8.3</b>	<b>--</b>	<b>7.8</b>	<b>May-12</b>
<i>MSCI ACWI ex USA IMI</i>	-5.6	-1.3	7.9	6.9	--	7.3	May-12
<i>InvMetrics Public DB ex-US Eq Net Rank</i>	36	68	26	9	--	25	May-12
SSGA MSCI World ex US	-4.7	3.2	8.9	7.5	6.6	6.6	Apr-12
<i>MSCI World ex USA</i>	-4.8	3.0	8.6	7.1	6.3	6.3	Apr-12
<i>eV ACWI ex-US Core Equity Net Rank</i>	20	18	53	53	57	57	Apr-12
Hardman Johnston Int'l Equity	-15.1	-10.7	10.6	10.7	9.0	9.0	Apr-12
<i>MSCI EAFE</i>	-5.9	1.2	7.8	6.7	6.3	6.3	Apr-12
<i>eV EAFE All Cap Equity Net Rank</i>	93	93	16	5	10	10	Apr-12
HGK Int'l Equity	-2.2	5.6	12.2	10.3	9.8	9.8	Feb-12
<i>MSCI EAFE</i>	-5.9	1.2	7.8	6.7	6.3	6.7	Feb-12
<i>eV EAFE All Cap Equity Net Rank</i>	14	5	9	8	4	9	Feb-12
SSGA MSCI Emerging Markets Index	-7.9	-12.3	4.5	5.7	3.2	7.5	Nov-08
<i>MSCI Emerging Markets</i>	-7.0	-11.4	4.9	6.0	3.4	7.8	Nov-08
<i>eV Emg Mkts Equity Net Rank</i>	50	59	70	58	75	68	Nov-08

# Pennsylvania Municipal Retirement System

## Performance Summary (Net)

As of March 31, 2022

	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
<b>Real Assets Composite</b>	<b>4.7</b>	<b>16.2</b>	<b>7.1</b>	<b>7.0</b>	<b>7.9</b>	<b>7.8</b>	<b>Apr-93</b>
<i>Real Assets Policy Index</i>	5.8	25.8	9.9	8.6	9.8	8.0	Apr-93
Forest Investment Associates	9.3	10.6	2.8	3.8	5.2	4.1	Mar-99
<i>NCREIF Timberland Property Index</i>	3.2	11.8	4.8	4.1	5.6	6.1	Mar-99
<i>InvMetrics Public DB Real Assets/Commodities Net Rank</i>	22	96	99	97	99	--	Mar-99
PRISA LP	6.2	25.8	10.5	9.2	10.1	6.7	Jan-86
<i>NFI-ODCE</i>	7.2	27.3	10.3	8.9	9.9	6.6	Jan-86
<i>InvMetrics Public DB Real Estate Priv Net Rank</i>	86	84	70	59	62	--	Jan-86
PRISA II	7.4	28.6	11.0	9.8	11.1	5.1	Jul-07
<i>NFI-ODCE</i>	7.2	27.3	10.3	8.9	9.9	5.8	Jul-07
<i>InvMetrics Public DB Real Estate Priv Net Rank</i>	9	20	58	51	27	63	Jul-07
PennMuni-Nuveen U.S. Real Estate Fund	0.0	11.1	7.5	7.9	9.0	6.5	Dec-08
<i>NFI-ODCE</i>	7.2	27.3	10.3	8.9	9.9	6.9	Dec-08
<i>NCREIF Property Index</i>	5.3	21.9	9.6	8.5	9.6	8.0	Dec-08
<i>InvMetrics Public DB Real Estate Priv Net Rank</i>	99	99	95	97	95	78	Dec-08
N. Front Street (Nuveen)	0.0	-2.7	-0.8	-4.9	--	-5.6	Sep-16
<i>Consumer Price Index</i>	3.1	8.5	4.2	3.4	--	3.2	Sep-16
<b>Total Fixed Income Composite</b>							
SSGA US Aggregate Bond Index	-5.9	-4.1	1.7	2.2	2.2	4.7	Apr-97
<i>Bloomberg US Aggregate TR</i>	-5.9	-4.2	1.7	2.1	2.2	4.7	Apr-97
<i>eV US Core Fixed Inc Net Rank</i>	58	64	78	75	77	70	Apr-97
<b>Cash Composite</b>							
Cash Management							

# Pennsylvania Municipal Retirement System

## Fee Summary

As of March 31, 2022

Account	Fee Schedule	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
LSV Large Cap Value	0.60% of First 25.0 Mil, 0.50% of Next 25.0 Mil, 0.40% of Next 50.0 Mil, 0.30% of Next 100.0 Mil, 0.30% Thereafter	4.5%	\$624,815	0.42%
Xponance S&P 500	0.02% of Assets	8.1%	\$54,506	0.02%
Northern Trust S&P 500	0.00% of Assets	8.5%	\$11,492	0.00%
Polen Focus Growth	0.40% of Assets	3.4%	\$463,204	0.40%
Northern Trust Dow Jones Completion Index	0.02% of Assets	3.3%	\$16,638	0.02%
Smith, Graham & Co Small Cap Value	0.75% of First 50.0 Mil, 0.60% Thereafter	1.5%	\$371,540	0.75%
Copeland Small Cap Dividend Growth	0.50% of Assets	1.5%	\$254,378	0.50%
Emerald Small Cap Growth	0.60% of First 10.0 Mil, 0.55% of Next 5.0 Mil, 0.50% Thereafter	1.3%	\$231,235	0.53%
Rhumblin Global Min. Volatility	0.07% of Assets	5.0%	\$110,051	0.06%
iShares MSCI ACWI	0.32% of Assets	5.2%	\$559,023	0.32%
SSGA MSCI World ex US	0.04% of Assets	8.1%	\$109,502	0.04%
Hardman Johnston Int'l Equity	0.75% of First 25.0 Mil, 0.60% Thereafter	3.1%	\$670,922	0.64%
HGK Int'l Equity	0.65% of Assets	3.7%	\$819,554	0.65%
SSGA MSCI Emerging Markets Index	0.05% of Assets	2.3%	\$38,657	0.05%
Forest Investment Associates	0.75% of Assets	4.3%	\$1,090,617	0.75%

# Pennsylvania Municipal Retirement System

## Fee Summary

As of March 31, 2022

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	2.0%	\$634,263	0.94%
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	4.1%	\$1,470,708	1.07%
PennMuni-Nuveen U.S. Real Estate Fund	0.85% of Assets	6.6%	\$1,888,640	0.85%
N. Front Street (Nuveen)	0.85% of Assets	0.1%	\$16,924	0.85%
SSGA US Aggregate Bond Index	0.02% of First 100.0 Mil, 0.01% of Next 300.0 Mil, 0.01% Thereafter	23.0%	\$78,223	0.01%
Cash Management	No Fee	0.3%	--	--
<b>Investment Management Fee</b>		<b>100.0%</b>	<b>\$9,514,892</b>	<b>0.28%</b>

**Characteristics**

	Portfolio	MSCI ACWI IMI Net USD
Number of Holdings	6,348	9,203
Weighted Avg. Market Cap. (\$B)	301.8	367.0
Median Market Cap. (\$B)	7.9	2.2
Price To Earnings	18.4	17.9
Price To Book	3.5	3.4
Price To Sales	2.0	2.0
Return on Equity (%)	20.1	19.8
Yield (%)	1.7	1.9

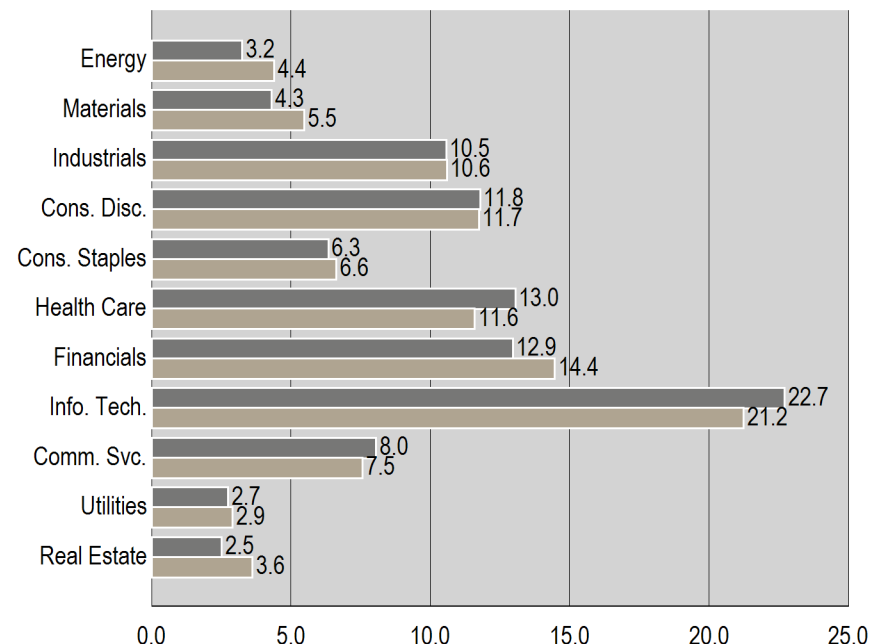
**Top Holdings**

MICROSOFT CORP	2.4%
APPLE INC	2.4%
AMAZON.COM INC	1.7%
ALPHABET INC	1.0%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	0.9%
ALPHABET INC	0.9%
META PLATFORMS INC	0.8%
TESLA INC	0.8%
VISA INC	0.8%
UNITEDHEALTH GROUP INC	0.7%
<b>Total</b>	<b>12.5%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Total Equity Composite	16.5%	15.8%	64.0%	3.7%
MSCI ACWI IMI Net USD	16.5%	15.1%	68.3%	0.0%
<i>Weight Over/Under</i>	<i>-0.1%</i>	<i>0.7%</i>	<i>-4.3%</i>	<i>3.7%</i>

**Sector Allocation (%) vs MSCI ACWI IMI Net USD**



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	2.2%	3.2%	-1.0%
United States	64.5%	60.3%	4.2%
Europe Ex U.K.	11.8%	12.0%	-0.2%
United Kingdom	2.9%	3.9%	-1.1%
Pacific Basin Ex Japan	3.3%	3.3%	-0.1%
Japan	5.0%	5.8%	-0.8%
Emerging Markets	9.7%	11.0%	-1.3%
Other	0.6%	0.4%	0.3%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**Characteristics**

	Portfolio	Russell 3000
Number of Holdings	4,111	3,040
Weighted Avg. Market Cap. (\$B)	412.5	550.1
Median Market Cap. (\$B)	2.4	2.6
Price To Earnings	19.4	21.6
Price To Book	3.7	4.2
Price To Sales	2.1	2.8
Return on Equity (%)	22.8	24.2
Yield (%)	1.4	1.4

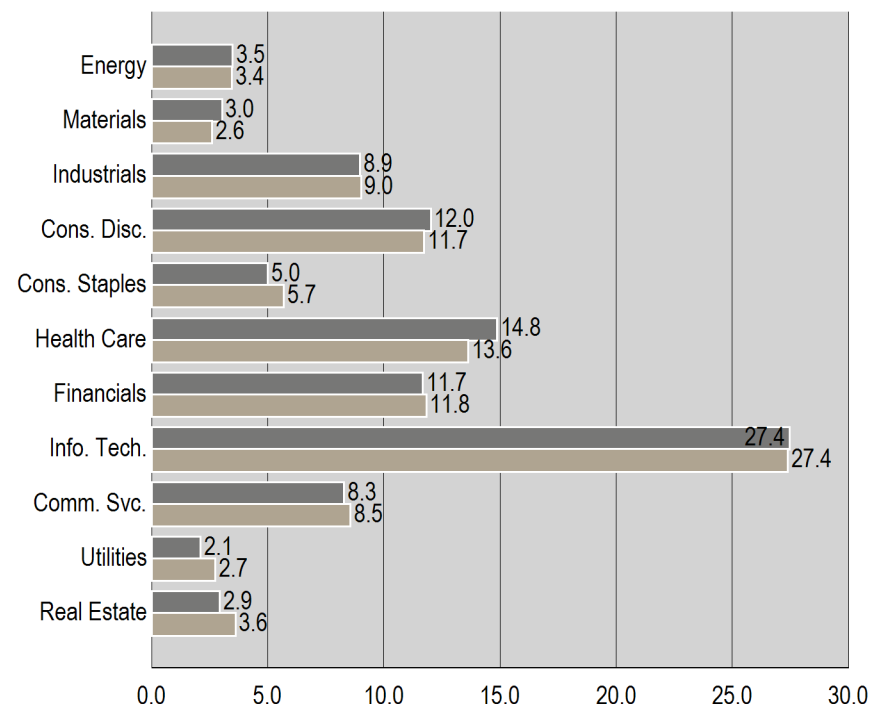
**Top Holdings**

MICROSOFT CORP	3.8%
APPLE INC	3.7%
AMAZON.COM INC	2.7%
ALPHABET INC	1.5%
ALPHABET INC	1.4%
META PLATFORMS INC	1.4%
TESLA INC	1.2%
VISA INC	1.1%
UNITEDHEALTH GROUP INC	1.1%
MASTERCARD INC	1.1%
<b>Total</b>	<b>19.1%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
U.S. Equity Composite	12.0%	25.8%	60.1%	2.0%
Russell 3000	5.6%	23.7%	70.7%	0.0%
<i>Weight Over/Under</i>	6.5%	2.1%	-10.6%	2.0%

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





**Characteristics**

	Portfolio	MSCI ACWI IMI Net USD
Number of Holdings	2,340	9,203
Weighted Avg. Market Cap. (\$B)	266.0	367.0
Median Market Cap. (\$B)	15.7	2.2
Price To Earnings	20.2	17.9
Price To Book	3.6	3.4
Price To Sales	2.4	2.0
Return on Equity (%)	22.4	19.8
Yield (%)	2.0	1.9

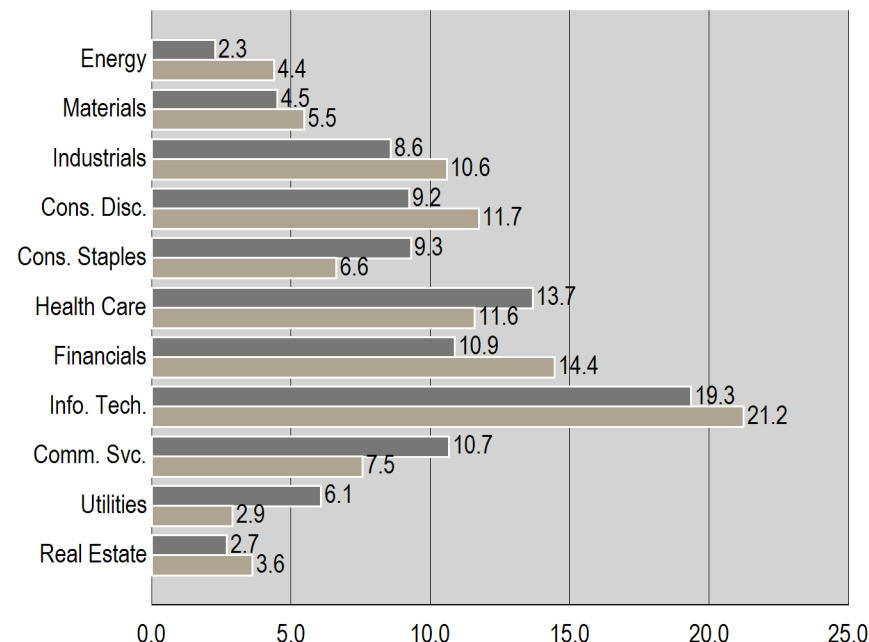
**Top Holdings**

APPLE INC	2.2%
MICROSOFT CORP	1.9%
AMAZON.COM INC	1.4%
ISHARES MSCI GLOBAL MIN VOL FACTOR ETF	1.0%
ROCHE HOLDING AG	0.9%
NESTLE SA, CHAM UND VEVEY	0.9%
VERIZON COMMUNICATIONS INC	0.9%
NEWMONT CORPORATION	0.8%
JOHNSON & JOHNSON	0.8%
WASTE MANAGEMENT INC.	0.8%
<b>Total</b>	<b>11.6%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Global Equity Composite	8.3%	19.0%	71.7%	1.1%
MSCI ACWI IMI Net USD	16.5%	15.1%	68.3%	0.0%
<i>Weight Over/Under</i>	-8.3%	3.8%	3.4%	1.1%

**Sector Allocation (%) vs MSCI ACWI IMI Net USD**



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	2.9%	3.2%	-0.4%
United States	60.0%	60.3%	-0.4%
Europe Ex U.K.	12.7%	12.0%	0.8%
United Kingdom	2.0%	3.9%	-1.9%
Pacific Basin Ex Japan	5.5%	3.3%	2.2%
Japan	7.9%	5.8%	2.0%
Emerging Markets	8.0%	11.0%	-3.0%
Other	1.0%	0.4%	0.7%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**Characteristics**

	Portfolio	MSCI ACWI ex USA IMI
Number of Holdings	2,166	6,640
Weighted Avg. Market Cap. (\$B)	93.2	81.0
Median Market Cap. (\$B)	9.1	1.8
Price To Earnings	15.5	13.9
Price To Book	2.9	2.5
Price To Sales	1.7	1.4
Return on Equity (%)	14.6	14.6
Yield (%)	2.2	2.8

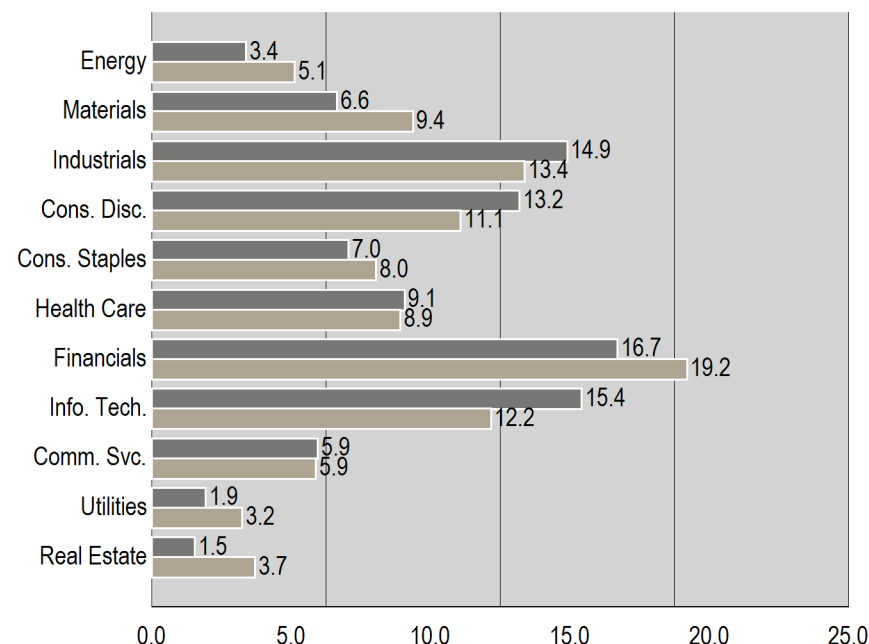
**Top Holdings**

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	3.1%
ASTRAZENECA PLC	1.7%
ASML HOLDING NV	1.5%
AIA GROUP LTD	1.5%
THALES	1.2%
RHEINMETALL	1.2%
TENCENT HOLDINGS LTD	1.1%
TOYOTA MOTOR CORP	1.1%
SAMSUNG ELECTRONICS CO LTD	1.1%
AIRBUS SE	1.1%
<b>Total</b>	<b>14.5%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Non-U.S Equity Composite	12.0%	22.9%	56.5%	8.6%
MSCI ACWI ex USA IMI	26.0%	21.3%	52.8%	0.0%
<i>Weight Over/Under</i>	<i>-14.0%</i>	<i>1.7%</i>	<i>3.7%</i>	<i>8.6%</i>

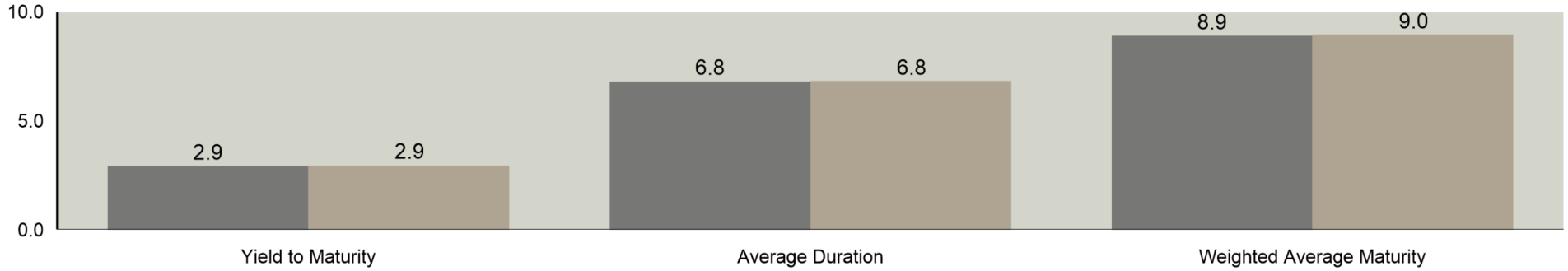
**Sector Allocation (%) vs MSCI ACWI ex USA IMI**



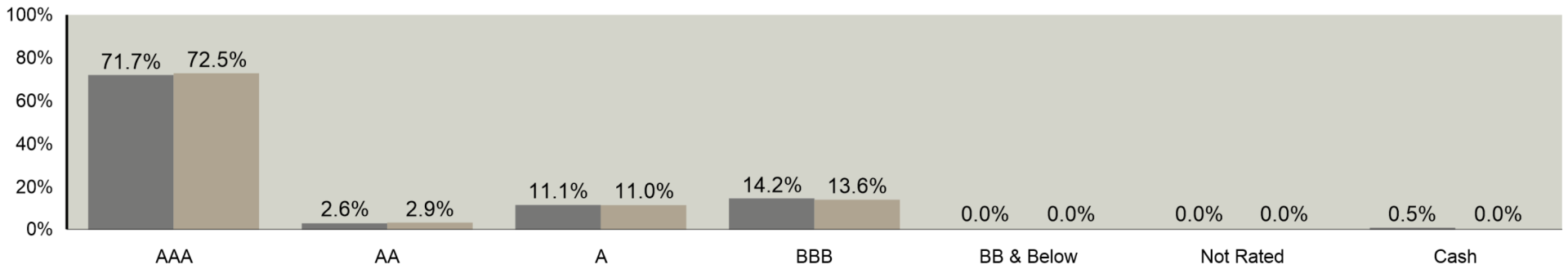
**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	6.1%	8.2%	-2.1%
United States	1.2%	0.0%	1.2%
Europe Ex U.K.	31.7%	30.2%	1.6%
United Kingdom	8.2%	9.9%	-1.7%
Pacific Basin Ex Japan	8.2%	8.4%	-0.1%
Japan	13.3%	14.7%	-1.4%
Emerging Markets	30.3%	27.8%	2.5%
Other	1.0%	0.9%	0.1%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

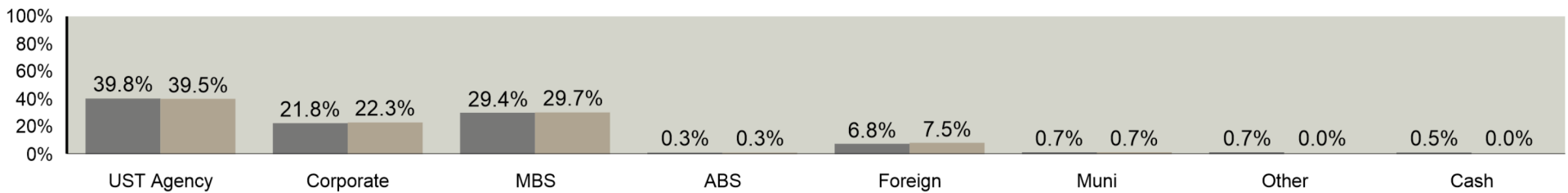
Summary Characteristics



Credibility Quality Allocation



US Sector Allocation



Fixed Income Composite

BbgBarc U.S. Aggregate Bond

# Investment Managers



**Manager Summary:** Quantitative model that selects deep value stocks. Model ranks stocks based on fundamental measures of value and indicators of price recovery. The model contains three basic blocks of variables: 1) Cheapness/Fundamentals (60%), 2) Past Long-Term Performance/Contrarian (15%) and 3) Momentum (25%). The top 15% of stocks are ranked by expected return and then optimized for risk control. The resulting portfolio consists of approximately 100-160 stocks.

**Characteristics**

	Portfolio	S&P 500
Number of Holdings	155	505
Weighted Avg. Market Cap. (\$B)	73.0	646.0
Median Market Cap. (\$B)	15.6	32.0
Price To Earnings	11.9	22.8
Price To Book	2.3	4.5
Price To Sales	0.9	3.1
Return on Equity (%)	24.0	30.8
Yield (%)	2.4	1.4

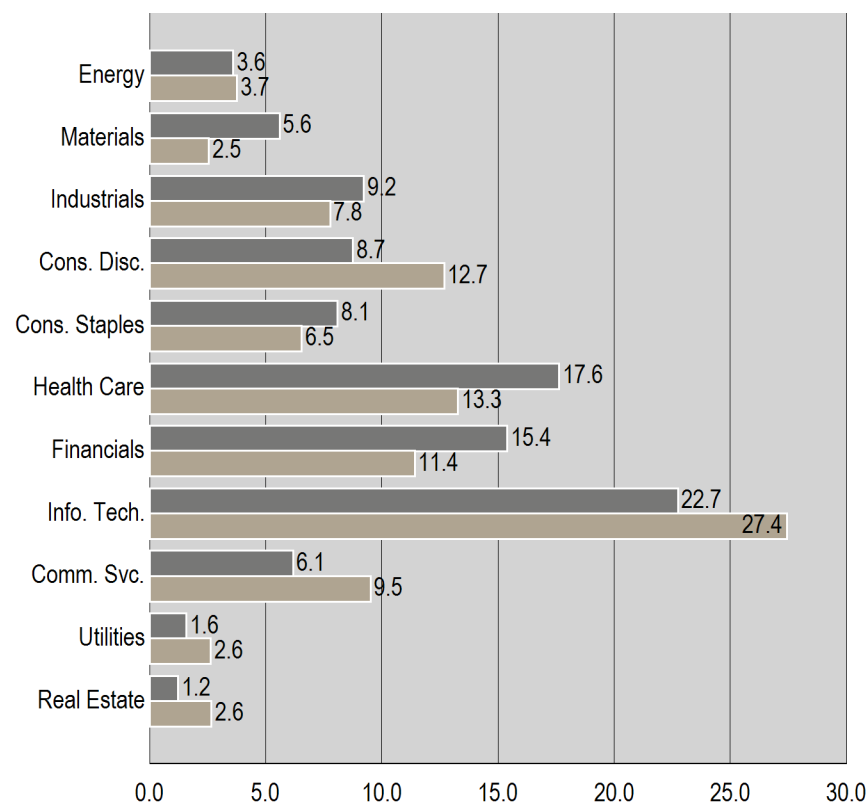
**Top Holdings**

PFIZER INC	2.3%
ORACLE CORP	2.2%
MERCK & CO INC	1.9%
INTEL CORP	1.9%
MCKESSON CORP	1.7%
CISCO SYSTEMS INC	1.7%
AMGEN INC	1.7%
ABBVIE INC	1.6%
KROGER CO. (THE)	1.6%
BRISTOL-MYERS SQUIBB CO	1.6%
<b>Total</b>	<b>18.2%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap
LSV Large Cap Value	6.0%	49.7%	44.3%
S&P 500	0.1%	17.1%	82.8%
<i>Weight Over/Under</i>	5.9%	32.6%	-38.5%

**Sector Allocation (%) vs S&P 500**



**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	507	505
Weighted Avg. Market Cap. (\$B)	639.1	646.0
Median Market Cap. (\$B)	32.1	32.0
Price To Earnings	22.7	22.8
Price To Book	4.5	4.5
Price To Sales	3.1	3.1
Return on Equity (%)	30.9	30.8
Yield (%)	1.4	1.4

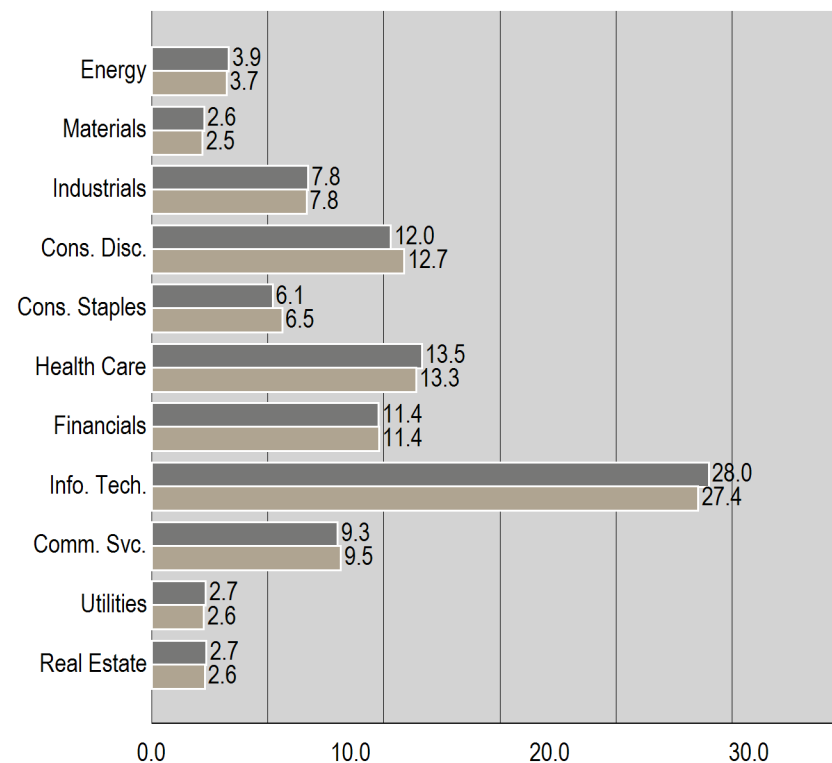
**Top Holdings**

APPLE INC	7.0%
MICROSOFT CORP	6.0%
AMAZON.COM INC	3.7%
TESLA INC	2.4%
ALPHABET INC	2.2%
ALPHABET INC	2.0%
NVIDIA CORPORATION	1.8%
BERKSHIRE HATHAWAY INC	1.7%
META PLATFORMS INC	1.3%
UNITEDHEALTH GROUP INC	1.3%
<b>Total</b>	<b>29.4%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap
Xpance S&P 500	0.0%	15.9%	84.1%
S&P 500	0.1%	17.1%	82.8%
<i>Weight Over/Under</i>	-0.1%	-1.2%	1.2%

**Sector Allocation (%) vs S&P 500**



**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	504	505
Weighted Avg. Market Cap. (\$B)	639.9	646.0
Median Market Cap. (\$B)	31.9	32.0
Price To Earnings	22.5	22.8
Price To Book	4.5	4.5
Price To Sales	3.1	3.1
Return on Equity (%)	30.9	30.8
Yield (%)	1.4	1.4

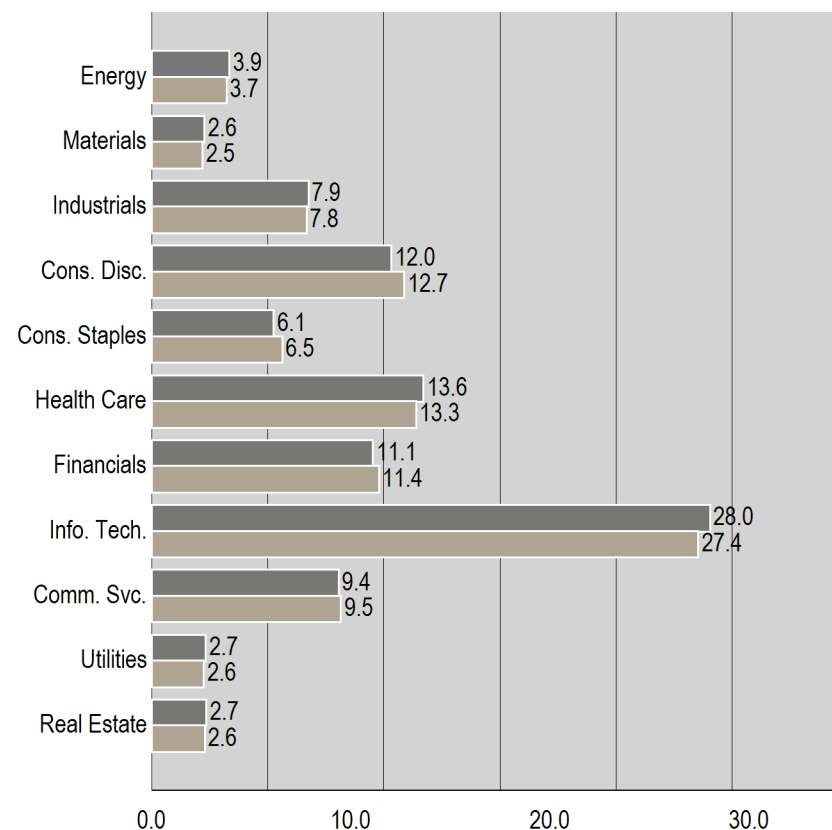
**Top Holdings**

APPLE INC	7.1%
MICROSOFT CORP	6.0%
AMAZON.COM INC	3.7%
TESLA INC	2.4%
ALPHABET INC	2.2%
ALPHABET INC	2.0%
NVIDIA CORPORATION	1.8%
BERKSHIRE HATHAWAY INC	1.7%
META PLATFORMS INC	1.3%
UNITEDHEALTH GROUP INC	1.3%
<b>Total</b>	<b>29.5%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap
Northern Trust S&P 500	0.0%	16.0%	84.0%
S&P 500	0.1%	17.1%	82.8%
<i>Weight Over/Under</i>	<i>-0.1%</i>	<i>-1.1%</i>	<i>1.2%</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	26	499
Weighted Avg. Market Cap. (\$B)	587.6	983.1
Median Market Cap. (\$B)	190.2	18.3
Price To Earnings	38.6	31.0
Price To Book	9.8	11.8
Price To Sales	7.3	5.1
Return on Equity (%)	35.8	42.2
Yield (%)	0.4	0.8

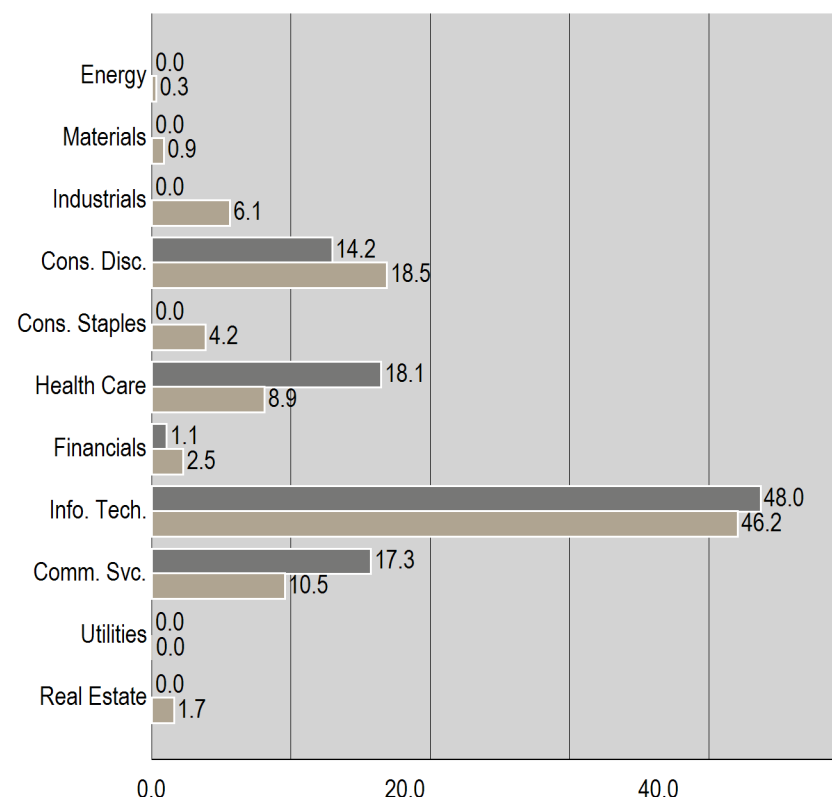
**Top Holdings**

AMAZON.COM INC	7.2%
ADOBE INC	6.7%
META PLATFORMS INC	6.4%
MICROSOFT CORP	6.4%
MASTERCARD INC	6.1%
VISA INC	5.9%
ABBOTT LABORATORIES	5.7%
AIRBNB INC	5.0%
SALESFORCE INC	4.8%
UNITEDHEALTH GROUP INC	4.3%
<b>Total</b>	<b>58.6%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap
Polen Focus Growth	0.0%	6.4%	93.6%
Russell 1000 Growth	1.0%	14.0%	85.0%
<i>Weight Over/Under</i>	<i>-1.0%</i>	<i>-7.6%</i>	<i>8.6%</i>

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





**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	3,574	3,735
Weighted Avg. Market Cap. (\$B)	13.4	13.4
Median Market Cap. (\$B)	0.8	0.8
Price To Earnings	16.5	16.5
Price To Book	3.0	3.0
Price To Sales	1.9	1.9
Return on Equity (%)	3.6	3.6
Yield (%)	1.2	1.2

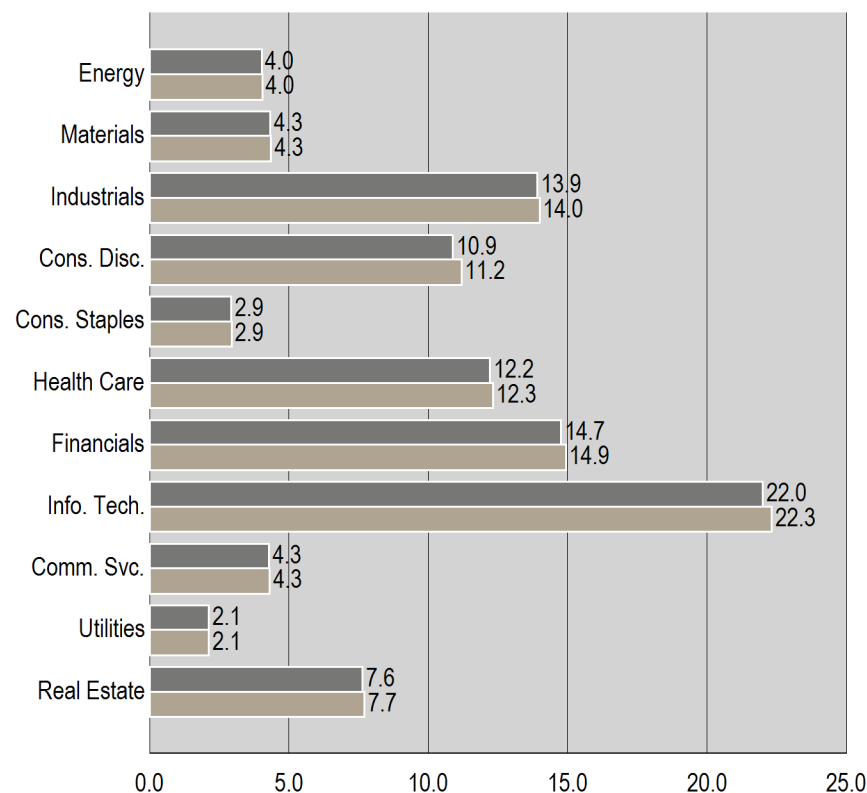
**Top Holdings**

BLACKSTONE GROUP INC	1.2%
BLOCK INC	0.9%
PALO ALTO NETWORKS INC	0.8%
MARVELL TECHNOLOGY INC	0.8%
AIRBNB INC	0.8%
UBER TECHNOLOGIES INC	0.8%
SNOWFLAKE INC	0.7%
CROWDSTRIKE HOLDINGS INC	0.6%
WORKDAY INC	0.6%
LULULEMON ATHLETICA INC	0.6%
<b>Total</b>	<b>8.0%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap
Northern Trust Dow Jones Completion Index	30.0%	61.7%	8.3%
Dow Jones U.S. Completion Total Stock Market	37.1%	55.3%	7.6%
<i>Weight Over/Under</i>	<i>-7.1%</i>	<i>6.4%</i>	<i>0.7%</i>

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



**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	65	1,435
Weighted Avg. Market Cap. (\$B)	3.0	3.2
Median Market Cap. (\$B)	2.1	1.1
Price To Earnings	12.0	13.1
Price To Book	1.9	1.8
Price To Sales	0.7	1.3
Return on Equity (%)	10.8	6.7
Yield (%)	1.3	1.8

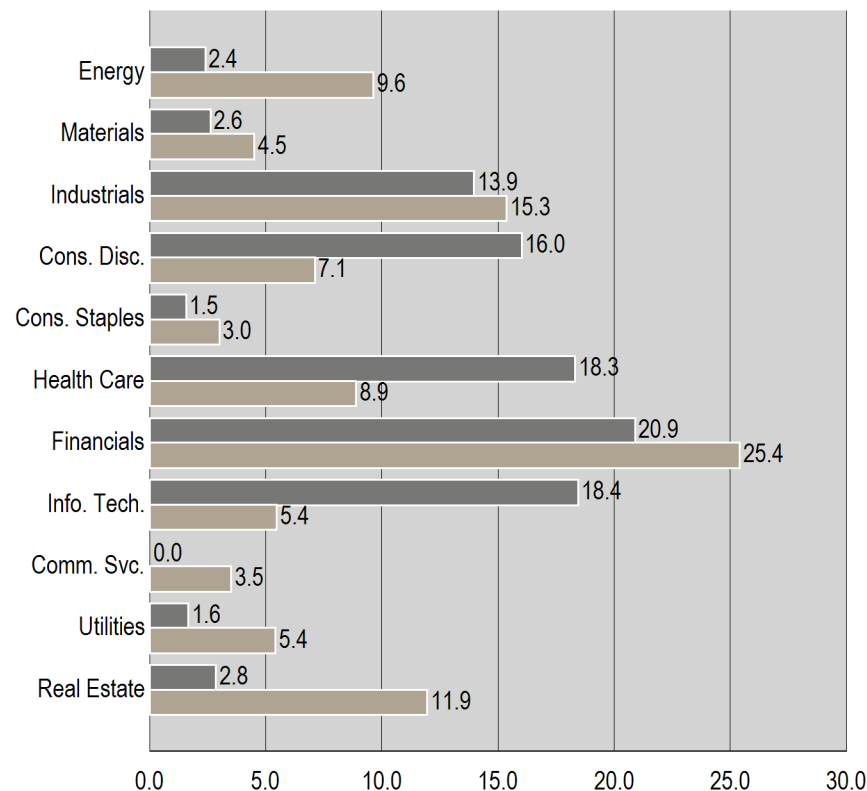
**Top Holdings**

OWENS & MINOR INC.	2.9%
DYCOM INDUSTRIES INC.	2.9%
NEXTGEN HEALTHCARE INC	2.6%
ATLAS AIR WORLDWIDE HOLDINGS INC.	2.5%
COMSTOCK RESOURCES INC	2.4%
ENCORE CAPITAL GROUP INC	2.3%
WEBSTER FINANCIAL CORP	2.3%
ALLSCRIPTS HEALTHCARE SOLUTIONS INC	2.3%
LITHIA MOTORS INC.	2.3%
GROUP 1 AUTOMOTIVE INC.	2.2%
<b>Total</b>	<b>24.5%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap
Smith, Graham & Co Small Cap Value	80.4%	19.6%	0.0%
Russell 2000 Value	78.5%	21.5%	0.0%
<i>Weight Over/Under</i>	<i>1.9%</i>	<i>-1.9%</i>	<i>0.0%</i>

**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 2000
Number of Holdings	57	2,017
Weighted Avg. Market Cap. (\$B)	4.0	3.4
Median Market Cap. (\$B)	3.5	1.2
Price To Earnings	17.9	15.5
Price To Book	3.1	2.5
Price To Sales	1.8	1.6
Return on Equity (%)	18.7	4.7
Yield (%)	1.8	1.2

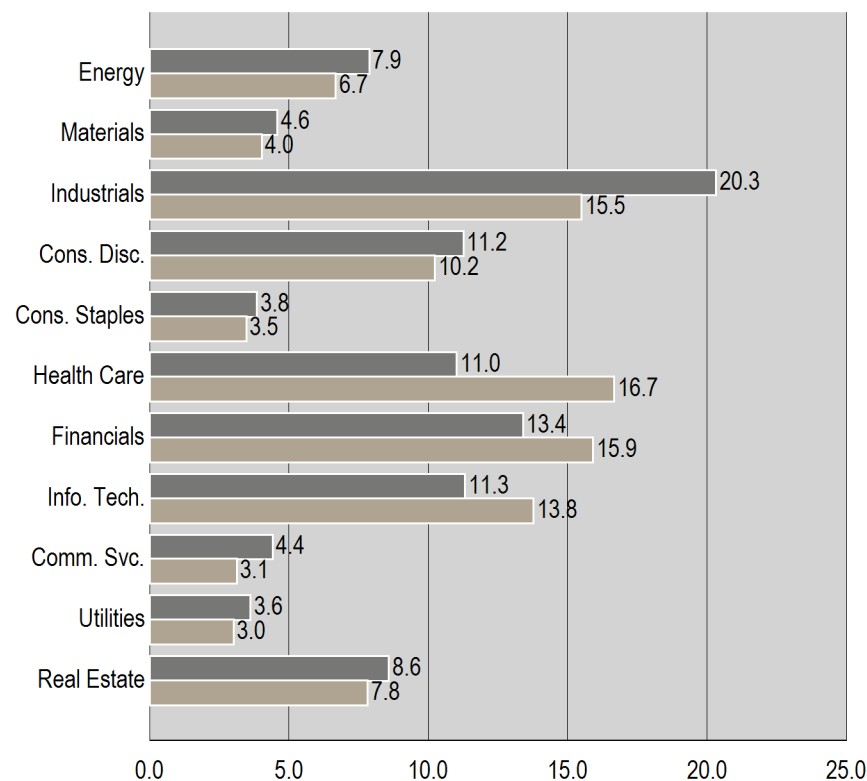
**Top Holdings**

NORTHERN OIL AND GAS INC	3.0%
ENSIGN GROUP INC (THE)	2.9%
OASIS PETROLEUM INC	2.8%
NEXSTAR MEDIA GROUP INC.	2.8%
BANK OZK	2.3%
NEXPOINT RESIDENTIAL TRUST INC	2.1%
CHEMED CORP	2.1%
STANDEX INTERNATIONAL CORP	2.1%
CIVITAS RESOURCES INC	2.1%
LEMAITRE VASCULAR INC	2.0%
<b>Total</b>	<b>24.2%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap
Copeland Small Cap Dividend Growth	57.1%	42.9%	0.0%
Russell 2000	73.1%	26.9%	0.0%
<i>Weight Over/Under</i>	<i>-16.0%</i>	<i>16.0%</i>	<i>0.0%</i>

**Sector Allocation (%) vs Russell 2000**



As of March 31, 2022

**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	103	1,243
Weighted Avg. Market Cap. (\$B)	3.9	3.7
Median Market Cap. (\$B)	3.2	1.3
Price To Earnings	25.6	20.6
Price To Book	3.7	4.2
Price To Sales	3.2	2.0
Return on Equity (%)	5.6	1.4
Yield (%)	0.4	0.5

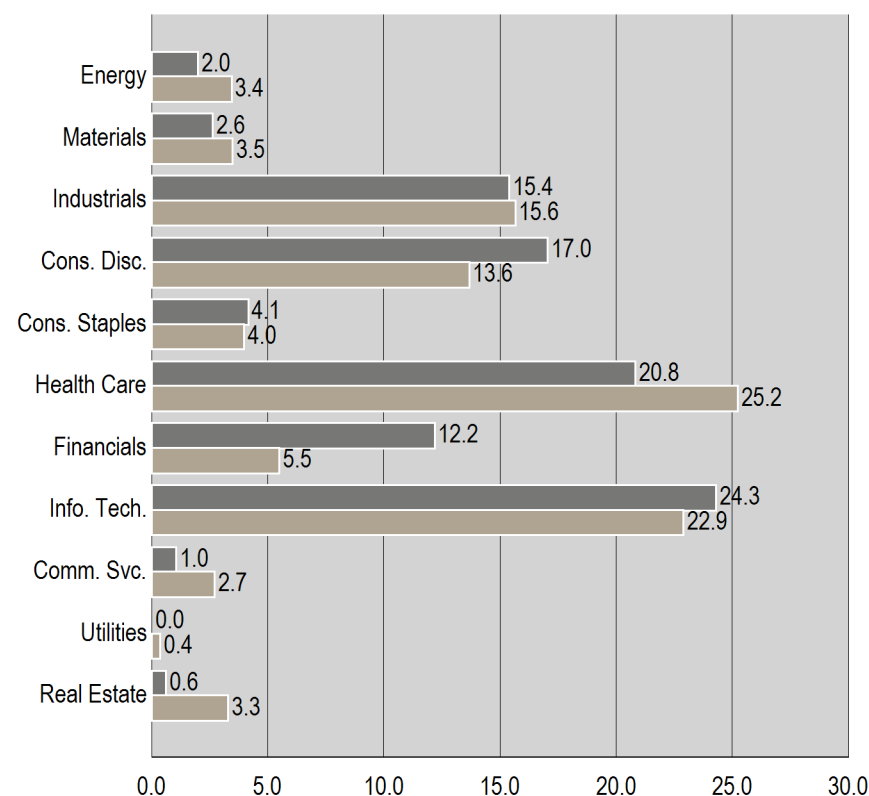
**Top Holdings**

RAPID7 INC	2.7%
CHART INDUSTRIES INC	2.6%
SEAWORLD ENTERTAINMENT INC	2.2%
CHURCHILL DOWNS INC	2.2%
SIMPLY GOOD FOODS CO (THE)	2.0%
PERFICIENT INC	2.0%
MACOM TECHNOLOGY SOLUTIONS HOLDINGS INC	1.9%
VARONIS SYSTEMS INC	1.9%
FRESHPET INC	1.8%
AVIENT CORP	1.8%
<b>Total</b>	<b>21.0%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap
Emerald Small Cap Growth	61.6%	38.4%	0.0%
Russell 2000 Growth	67.2%	32.8%	0.0%
<i>Weight Over/Under</i>	<i>-5.5%</i>	<i>5.5%</i>	<i>0.0%</i>

**Sector Allocation (%) vs Russell 2000 Growth**



**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 ACWI
Number of Holdings	2,316	2,929
Weighted Avg. Market Cap. (\$B)	415.6	415.1
Median Market Cap. (\$B)	14.7	13.2
Price To Earnings	18.3	18.4
Price To Book	3.6	3.5
Price To Sales	2.2	2.1
Return on Equity (%)	22.3	22.1
Yield (%)	1.9	1.9

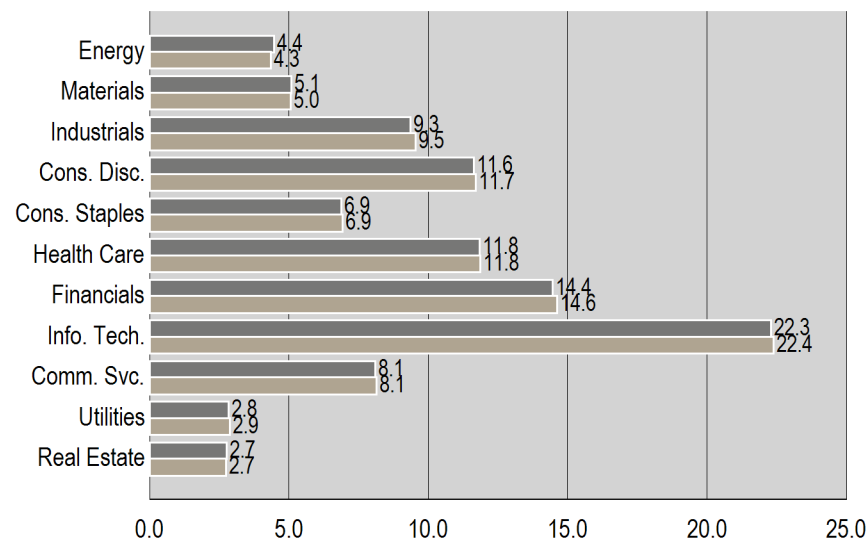
**Top Holdings**

APPLE INC	4.3%
MICROSOFT CORP	3.3%
AMAZON.COM INC	2.2%
TESLA INC	1.4%
ALPHABET INC	1.3%
ALPHABET INC	1.2%
NVIDIA CORPORATION	1.0%
META PLATFORMS INC	0.8%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	0.8%
UNITEDHEALTH GROUP INC	0.7%
<b>Total</b>	<b>17.0%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
iShares MSCI ACWI	4.8%	16.1%	77.1%	2.0%
MSCI ACWI	6.1%	16.3%	77.6%	0.0%
<i>Weight Over/Under</i>	-1.3%	-0.2%	-0.5%	2.0%

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



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	2.4%	3.2%	-0.8%
United States	60.6%	61.4%	-0.8%
Europe Ex U.K.	11.7%	12.0%	-0.3%
United Kingdom	0.4%	3.7%	-3.4%
Pacific Basin Ex Japan	7.4%	3.1%	4.3%
Japan	10.4%	5.4%	4.9%
Emerging Markets	5.8%	10.9%	-5.1%
Other	1.3%	0.3%	1.0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**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	284	2,929
Weighted Avg. Market Cap. (\$B)	114.5	415.1
Median Market Cap. (\$B)	24.9	13.2
Price To Earnings	22.8	18.4
Price To Book	3.7	3.5
Price To Sales	2.8	2.1
Return on Equity (%)	22.5	22.1
Yield (%)	2.1	1.9

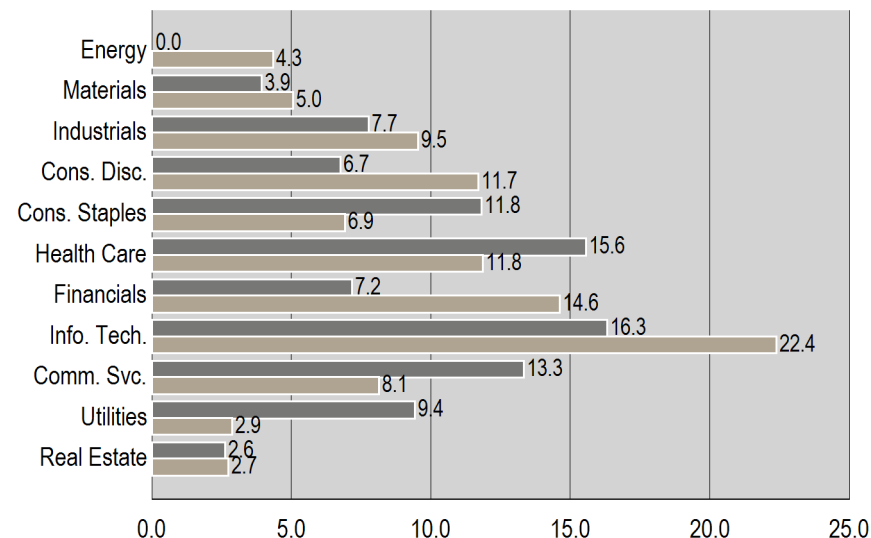
**Top Holdings**

ISHARES MSCI GLOBAL MIN VOL FACTOR ETF	2.0%
NEWMONT CORPORATION	1.6%
VERIZON COMMUNICATIONS INC	1.5%
ROCHE HOLDING AG	1.5%
WASTE MANAGEMENT INC.	1.5%
ISHARE INC - ISHARES MSCI TAIWAN ETF	1.4%
REGENERON PHARMACEUTICALS INC	1.3%
NESTLE SA, CHAM UND VEVEY	1.3%
HANG SENG BANK LTD	1.2%
KROGER CO. (THE)	1.2%
<b>Total</b>	<b>14.3%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Rhumblin Global Min. Volatility	11.9%	21.9%	66.1%	0.1%
MSCI ACWI	6.1%	16.3%	77.6%	0.0%
<i>Weight Over/Under</i>	5.8%	5.6%	-11.5%	0.1%

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



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	2.4%	3.2%	-0.8%
United States	60.6%	61.4%	-0.8%
Europe Ex U.K.	11.7%	12.0%	-0.3%
United Kingdom	0.4%	3.7%	-3.4%
Pacific Basin Ex Japan	7.4%	3.1%	4.3%
Japan	10.4%	5.4%	4.9%
Emerging Markets	5.8%	10.9%	-5.1%
Other	1.3%	0.3%	1.0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**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	1,883	911
Weighted Avg. Market Cap. (\$B)	94.3	81.7
Median Market Cap. (\$B)	10.2	13.4
Price To Earnings	14.1	15.0
Price To Book	2.5	2.5
Price To Sales	1.4	1.5
Return on Equity (%)	15.5	15.2
Yield (%)	2.8	2.9

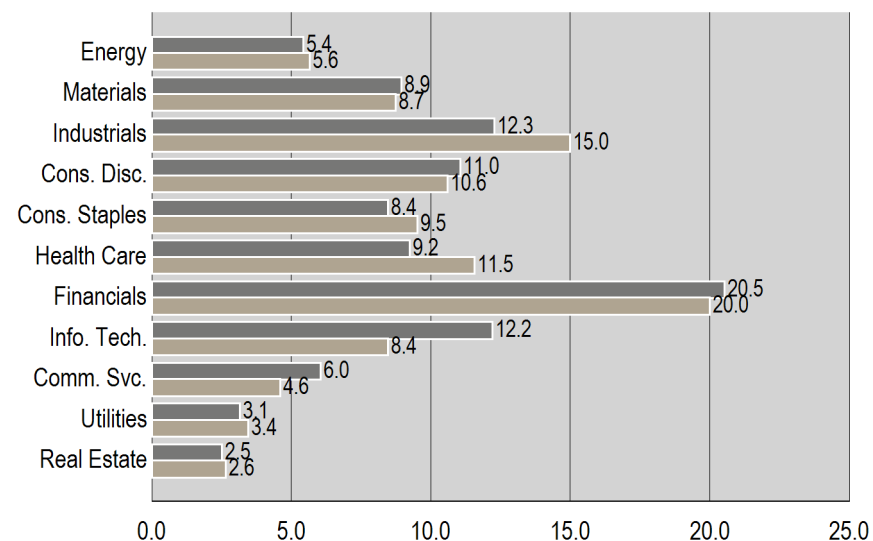
**Top Holdings**

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	2.0%
NESTLE SA, CHAM UND VEVEY	1.4%
ASML HOLDING NV	1.1%
ROCHE HOLDING AG	1.1%
TENCENT HOLDINGS LTD	1.1%
SAMSUNG ELECTRONICS CO LTD	1.1%
ALIBABA GROUP HOLDING LTD	0.8%
SHELL PLC	0.8%
ASTRAZENECA PLC	0.8%
LVMH MOET HENNESSY LOUIS VUITTON SE	0.8%
<b>Total</b>	<b>11.1%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
SSGA MSCI World ex US	11.4%	24.4%	59.4%	4.9%
MSCI World ex USA	8.8%	25.0%	66.2%	0.0%
<i>Weight Over/Under</i>	2.6%	-0.6%	-6.8%	4.9%

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



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	8.3%	11.6%	-3.3%
United States	0.4%	0.0%	0.4%
Europe Ex U.K.	32.6%	43.3%	-10.7%
United Kingdom	8.0%	13.5%	-5.5%
Pacific Basin Ex Japan	9.4%	11.2%	-1.8%
Japan	14.0%	19.7%	-5.8%
Emerging Markets	25.9%	0.0%	25.9%
Other	1.3%	0.6%	0.7%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**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	26	823
Weighted Avg. Market Cap. (\$B)	104.1	84.0
Median Market Cap. (\$B)	47.7	13.3
Price To Earnings	29.5	14.8
Price To Book	4.6	2.5
Price To Sales	3.8	1.4
Return on Equity (%)	-6.7	15.6
Yield (%)	0.7	2.9

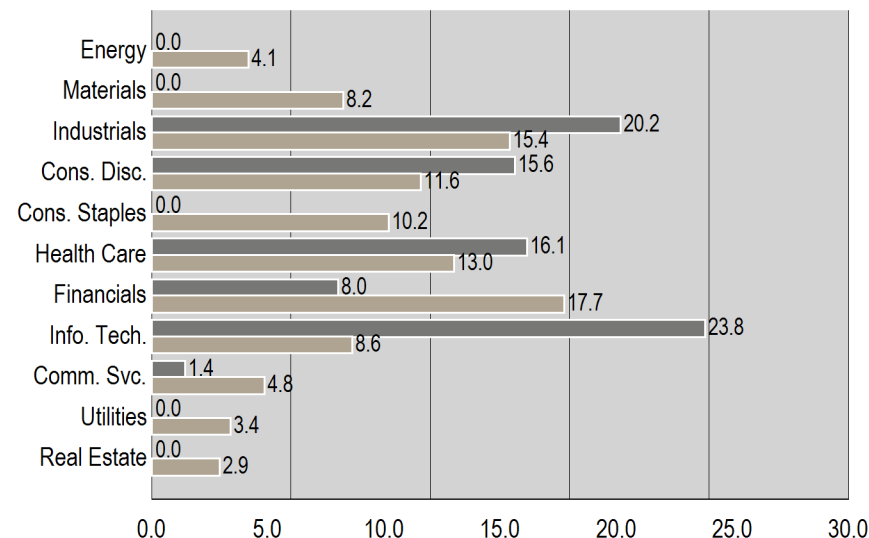
**Top Holdings**

ASTRAZENECA PLC	7.4%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	6.1%
ICICI BANK LTD	5.8%
ASML HOLDING NV	5.5%
GENMAB A/S	5.5%
SAFRAN SA	5.5%
AIRBUS SE	5.4%
MURATA MANUFACTURING CO LTD	5.2%
PRYSMIAN SPA	5.2%
KEYENCE CORP	5.0%
<b>Total</b>	<b>56.6%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
Hardman Johnston Int'l Equity	14.2%	8.6%	62.4%	14.8%
MSCI EAFE	8.9%	25.4%	65.7%	0.0%
<i>Weight Over/Under</i>	5.3%	-16.8%	-3.3%	14.8%

**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	0.0%	0.0%	0.0%
Europe Ex U.K.	41.0%	49.0%	-8.0%
United Kingdom	12.0%	15.3%	-3.3%
Pacific Basin Ex Japan	11.5%	12.7%	-1.2%
Japan	17.8%	22.3%	-4.5%
Emerging Markets	17.7%	0.0%	17.7%
Other	0.0%	0.7%	-0.7%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>



**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	26	823
Weighted Avg. Market Cap. (\$B)	47.4	84.0
Median Market Cap. (\$B)	28.6	13.3
Price To Earnings	10.4	14.8
Price To Book	3.2	2.5
Price To Sales	2.3	1.4
Return on Equity (%)	-4.1	15.6
Yield (%)	1.7	2.9

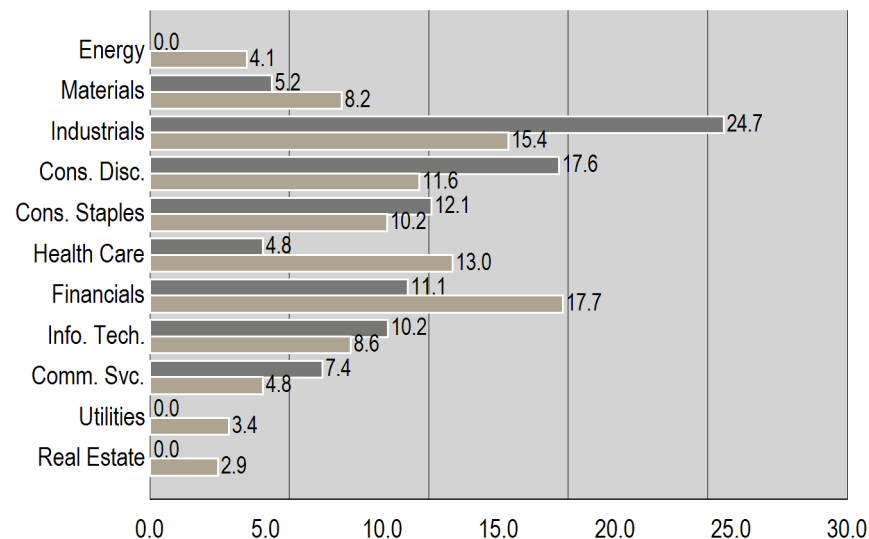
**Top Holdings**

THALES	7.1%
RHEINMETALL	7.1%
CAPGEMINI SE	5.8%
FRANCO-NEVADA CORP	5.5%
ALIMENTATION COUCHE-TARD INC	5.3%
ICON PLC	5.1%
SK HYNIX INC	5.0%
DEUTSCHE BOERSE AG	4.7%
COMPASS GROUP PLC	4.5%
LIBERTY GLOBAL PLC	4.4%
<b>Total</b>	<b>54.5%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
HGK Int'l Equity	5.6%	34.1%	46.7%	13.7%
MSCI EAFE	8.9%	25.4%	65.7%	0.0%
<i>Weight Over/Under</i>	<i>-3.3%</i>	<i>8.7%</i>	<i>-19.1%</i>	<i>13.7%</i>

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



**Region Allocation Summary**

Region	% of Total	% of Bench	% Diff
North America ex U.S.	10.5%	0.0%	10.5%
United States	4.8%	0.0%	4.8%
Europe Ex U.K.	46.7%	49.0%	-2.3%
United Kingdom	11.8%	15.3%	-3.5%
Pacific Basin Ex Japan	3.4%	12.7%	-9.3%
Japan	18.0%	22.3%	-4.3%
Emerging Markets	4.9%	0.0%	4.9%
Other	0.0%	0.7%	-0.7%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**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	1,244	1,391
Weighted Avg. Market Cap. (\$B)	126.5	126.9
Median Market Cap. (\$B)	7.2	7.1
Price To Earnings	12.5	12.6
Price To Book	2.6	2.6
Price To Sales	1.2	1.3
Return on Equity (%)	15.0	14.9
Yield (%)	2.6	2.6

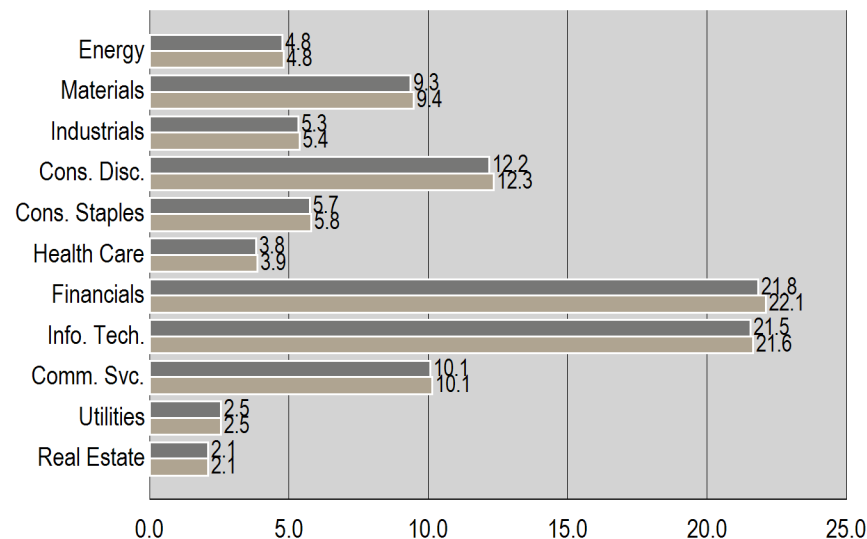
**Top Holdings**

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	7.0%
TENCENT HOLDINGS LTD	3.8%
SAMSUNG ELECTRONICS CO LTD	3.7%
ALIBABA GROUP HOLDING LTD	3.0%
RELIANCE INDUSTRIES LTD	1.4%
INFOSYS LTD	1.2%
VALE SA	1.1%
MEITUAN DIANPING USD0.00001 A B CLASS ISIN KYG596691041	1.1%
CHINA CONSTRUCTION BANK CORP	1.0%
JD.COM INC	0.8%
<b>Total</b>	<b>24.1%</b>

**Market Capitalization**

	Small Cap	Mid Cap	Large Cap	Unclassified
SSGA MSCI Emerging Markets Index	7.0%	21.9%	64.0%	7.1%
MSCI Emerging Markets	13.8%	22.0%	64.1%	0.0%
<i>Weight Over/Under</i>	-6.8%	-0.1%	-0.2%	7.1%

**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	0.9%	0.0%	0.9%
Europe Ex U.K.	0.3%	0.2%	0.0%
United Kingdom	0.0%	0.0%	0.0%
Pacific Basin Ex Japan	6.0%	0.0%	6.0%
Japan	0.0%	0.0%	0.0%
Emerging Markets	90.3%	99.0%	-8.7%
Other	2.4%	0.8%	1.6%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**Characteristics**

Fund GAV (\$MM)	\$33,436.0
Fund NAV (\$MM)	\$27,065.0
Cash (% of NAV)	1.3%
# of Investments	287
% in Top 10 by NAV	19.8%
Leverage %	19.2%
Occupancy	92.9%
# of MSAs	45
1-Year Dividend Yield	3.4%
As of Date	31-Mar-22

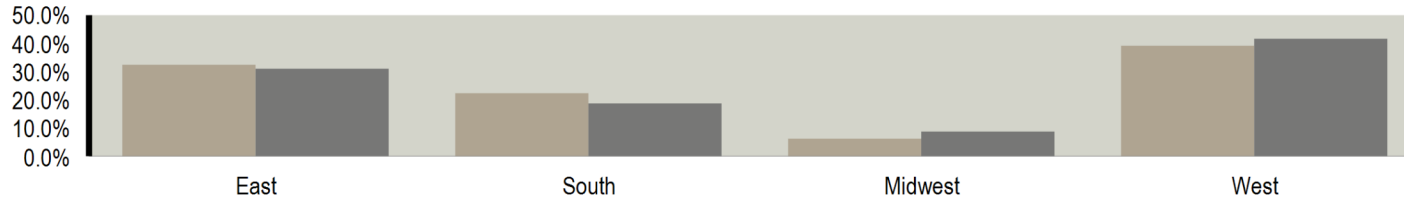
**Strategy Breakdown**

	% of Portfolio
Pre-Development	0.5%
Development	3.9%
Initial Leasing	0.5%
Operating	95.1%
Re-Development	
Other	
<u>Queue In:</u>	
Contribution Queue (\$MM)	\$1,490.60
Anticipated Drawdown (Months)	

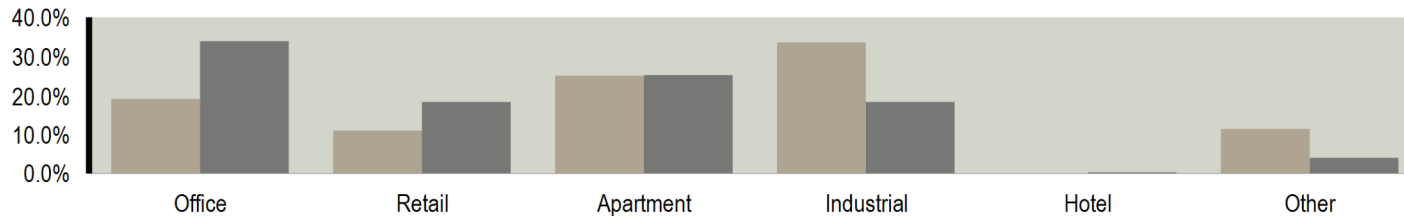
Top Five Metro Areas	% of NAV
Los Angeles-Long Beach, CA	21.5%
New York-Newark, NY-NJ-CT-F	14.4%
Washington-Baltimore-Arlington	10.5%
San Jose-San Francisco-Oakland	7.0%
Boston-Worcester-Providence,	5.4%

<u>Queue Out:</u>	
Redemption Queue (\$MM)	
Anticipated Payout (Months)	

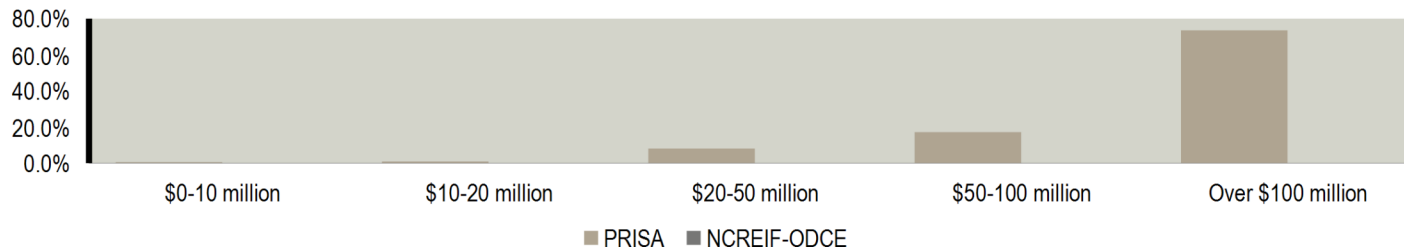
**Regional Breakdown by NAV (Excluding Cash & Debt)**



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



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



■ PRISA ■ NCREIF-ODCE

**Characteristics**

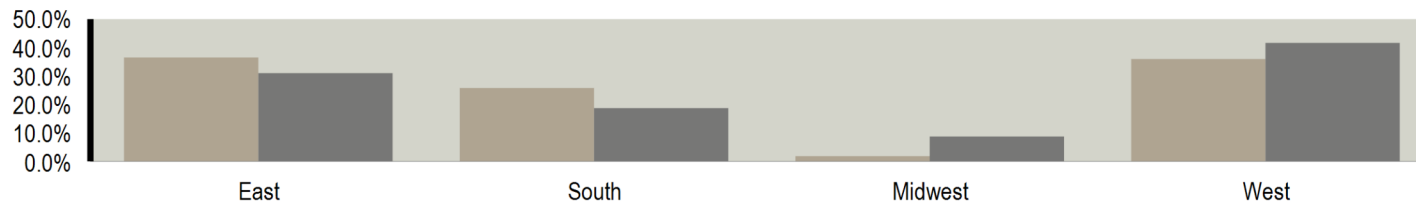
Fund GAV (\$MM)	\$17,362.0
Fund NAV (\$MM)	\$10,868.0
Cash (% of NAV)	1.5%
# of Investments	160
% in Top 10 by NAV	1.9%
Leverage %	32.4%
Occupancy	90.2%
# of MSAs	66
1-Year Dividend Yield	0.0%
As of Date	31-Mar-22

**Strategy Breakdown**

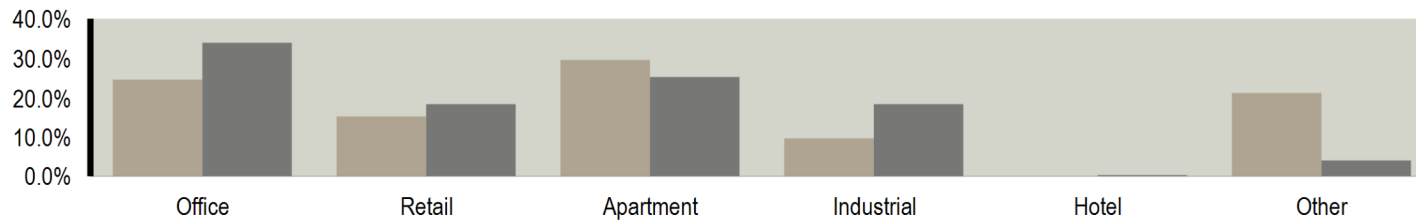
	% of Portfolio
Pre-Development	7.8%
Development	6.1%
Initial Leasing	11.0%
Operating	74.0%
Re-Development	0.0%
Other	1.0%
<u>Queue In:</u>	
Contribution Queue (\$MM)	\$0.00
Anticipated Drawdown (Months)	0

Top Five Metro Areas	% of NAV
Northern NJ	8.9%
Boston	7.6%
San Francisco	7.2%
Los Angeles	6.2%
San Jose	5.5%
<u>Queue Out:</u>	
Redemption Queue (\$MM)	\$0.00
Anticipated Payout (Months)	0

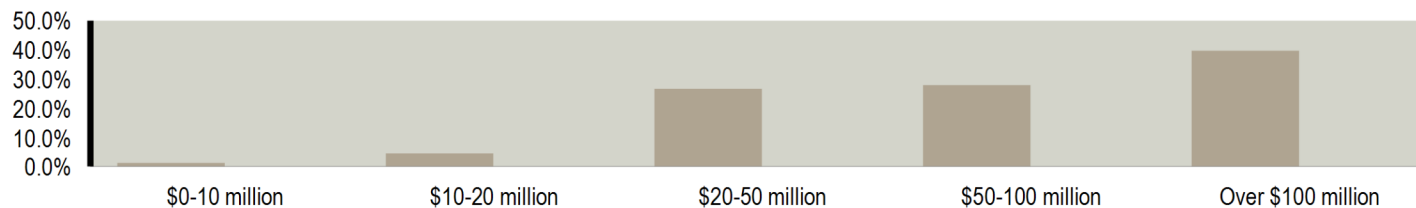
**Regional Breakdown by NAV (Excluding Cash & Debt)**



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



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



■ PRISA II ■ NCREIF-ODCE

**Characteristics**

Fund GAV (\$MM)	\$279.4
Fund NAV (\$MM)	\$259.7
Cash (% of NAV)	0.0%
# of Investments	8
Occupancy	67.0%
NOI	5.9%
Loan to Value	7.1%
As of Date	6/30/2021

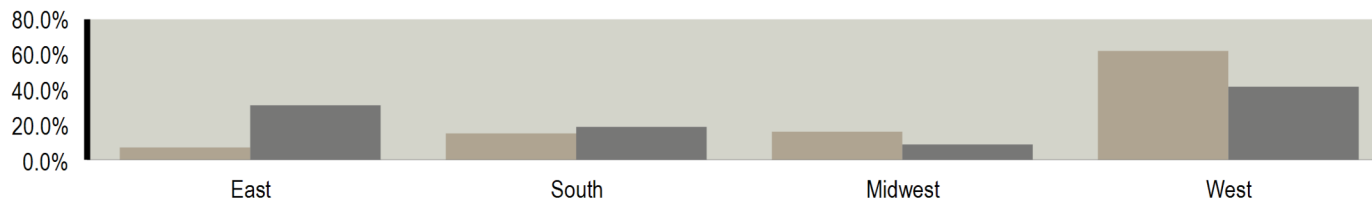
**Asset Summary**

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

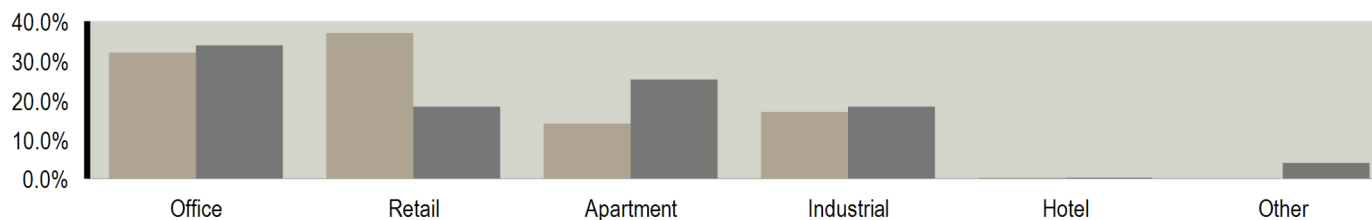
**Portfolio Allocation**

#	Property	Type	Location	% of Fund NAV
1	Copley Corporate Center	Office	San Diego, CA	18.2%
2	SR Ranch	Retail	San Diego, CA	16.1%
3	Des Peres Corners	Retail	Des Peres, MO	15.8%
4	708 Uptown	Apartment	Seattle, WA	14.6%
5	Fairway Center II	Office	Brea, CA	13.0%
6	Republic Distribution Center	Industrial	Houston, TX	10.3%
7	526 Route 46	Industrial	Teterboro, NJ	6.9%
8	Shoppes at Monarch Lakes	Retail	Miramar, FL	5.0%
<b>Total</b>				<b>100.0%</b>

**Regional Breakdown by NAV**



**Property Type Breakdown by NAV**



Net Assets (\$MM) 134.1

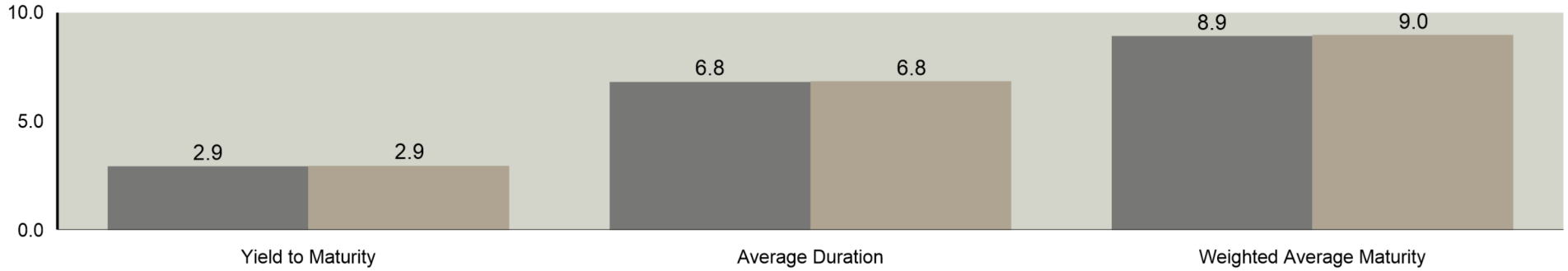
**Portfolio Allocation**

#	Property	Type	Location	% of Fund NAV
1	Dupont	Pine	Georgia	17.3%
2	Black River	Pine	South Carolina	16.3%
3	Coquille	Douglas Fir/Cedar	Oregon	17.6%
4	North River	Douglas Fir/Hemlock	Washington	13.1%
5	Bucktails	Maple/Oak/Cherry	Pennsylvania	13.3%
6	Carter Pasture	Pine	Texas	7.2%
7	Bennetts Creek	Pine	North Carolina	6.2%
8	Bear Island	Pine	Virginia	5.2%
9	Fitz-Weller	Maple/Oak	New York	3.8%
<b>Total</b>				<b>100.0%</b>

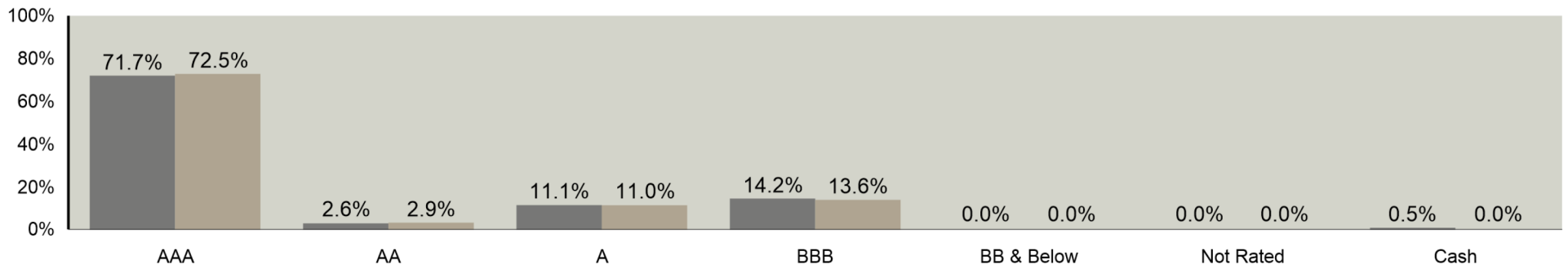
**Regional Breakdown by NAV**



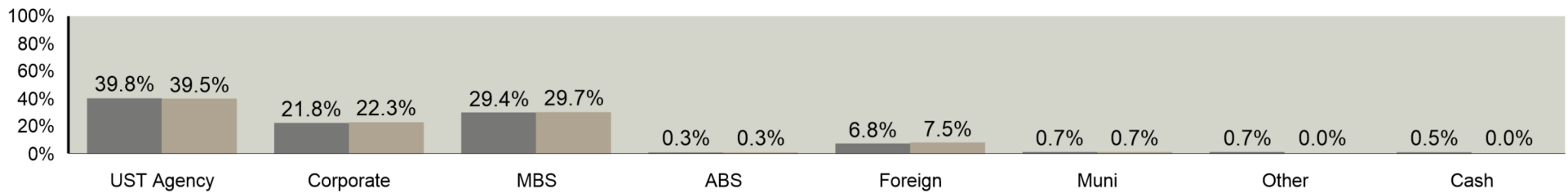
Summary Characteristics



Credibility Quality Allocation



US Sector Allocation



Fixed Income Composite

BBgBarc U.S. Aggregate Bond

# Appendix





As of March 31, 2022

**Cash Flow Summary by Manager From January 01, 2022 to March 31, 2022**

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
LSV Large Cap Value	\$152,075,039	-\$150,579	-\$1,986,074	\$149,938,386
Xpance S&P 500	\$285,628,221	\$0	-\$13,096,493	\$272,531,728
Northern Trust S&P 500	\$301,115,723	\$0	-\$13,825,757	\$287,289,965
Polen Focus Growth	\$135,234,255	-\$243,376	-\$19,189,757	\$115,801,122
William & Blair Large Cap Growth	\$4	-\$4	\$0	--
Eagle Asset Mgmt	\$645	-\$27	-\$132	\$486
Northern Trust Dow Jones Completion Index	\$122,278,522	\$0	-\$11,357,664	\$110,920,858
Smith, Graham & Co Small Cap Value	\$52,634,408	-\$147,494	-\$2,948,294	\$49,538,620
Copeland Small Cap Dividend Growth	\$53,729,229	-\$73,974	-\$2,779,656	\$50,875,599
Emerald Small Cap Growth	\$49,157,743	-\$103,968	-\$5,306,690	\$43,747,086
LSV Small Cap Value	\$12,998	-\$9,245	-\$3,753	--
AMI Small Cap Growth	\$13	-\$13	\$0	--
Rhumblin Global Min. Volatility	\$174,869,677	\$0	-\$5,560,545	\$169,309,132
iShares MSCI ACWI	\$185,199,624	\$0	-\$10,504,800	\$174,694,824
SSGA MSCI World ex US	\$287,336,015	\$0	-\$13,580,385	\$273,755,630
Hardman Johnston Int'l Equity	\$124,395,725	-\$240,248	-\$18,585,189	\$105,570,288
HGK Int'l Equity	\$128,983,313	\$0	-\$2,898,152	\$126,085,161
Jarislowsky, Fraser Limited	\$317,948	\$0	-\$5,872	\$312,076
Mercator Asset Management	\$18,378	\$0	-\$397	\$17,982
GlobeFlex Capital	\$2,764	\$0	-\$271	\$2,493
WHV Investment Management	\$3,040	\$0	-\$66	\$2,974
SSGA MSCI Emerging Markets Index	\$83,921,295	\$0	-\$6,606,360	\$77,314,935
Forest Investment Associates	\$134,881,477	-\$2,200,000	\$12,734,086	\$145,415,562
PRISA LP	\$63,309,985	-\$150,159	\$4,106,376	\$67,266,203
PRISA II	\$128,220,561	-\$345,149	\$9,830,699	\$137,706,111
PennMuni-Nuveen U.S. Real Estate Fund	\$223,633,881	-\$1,440,942	\$0	\$222,192,939
N. Front Street (Nuveen)	\$2,021,610	-\$30,562	\$0	\$1,991,048
SSGA US Aggregate Bond Index	\$825,100,631	\$0	-\$48,795,507	\$776,305,124
Cash Management	\$15,497,785	-\$4,632,409	\$34,511	\$10,899,887
Abel Noser Transition Account	\$6,567,668	-\$6,550,232	-\$17,283	\$153
<b>Total</b>	<b>\$3,536,148,177</b>	<b>-\$16,318,380</b>	<b>-\$150,343,424</b>	<b>\$3,369,486,372</b>

**Policy Index History**

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

Common Holdings Matrix

	<i>LSV Large Cap Value</i>		<i>Xponance S&amp;P 500</i>		<i>Northern Trust S&amp;P 500</i>		<i>Polen Focus Growth</i>		<i>Eagle Asset Mgmt</i>		<i>Northern Trust Dow Jones Completion Index</i>		<i>Smith, Graham &amp; Co Small Cap Value</i>		<i>Copeland Small Cap Dividend Growth</i>		<i>Emerald Small Cap Growth</i>	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
LSV Large Cap Value	--	--	94	16	95	16	0	0	0	0	57	5	3	4	2	4	1	1
Xponance S&P 500	94	75	--	--	503	100	23	92	0	0	2	0	0	0	0	0	0	0
Northern Trust S&P 500	95	75	503	100	--	--	23	92	0	0	4	0	0	0	0	0	0	0
Polen Focus Growth	0	0	23	23	23	23	--	--	0	0	2	1	0	0	0	0	0	0
Eagle Asset Mgmt	0	0	0	0	0	0	0	0	--	--	0	0	0	0	0	0	0	0
Northern Trust Dow Jones Completion Index	57	24	2	0	4	0	2	6	0	0	--	--	64	99	55	97	97	98
Smith, Graham & Co Small Cap Value	3	1	0	0	0	0	0	0	0	0	64	2	--	--	1	2	2	2
Copeland Small Cap Dividend Growth	2	1	0	0	0	0	0	0	0	0	55	3	1	2	--	--	2	2
Emerald Small Cap Growth	1	0	0	0	0	0	0	0	0	0	97	4	2	3	2	3	--	--

Common Holdings Matrix

	<i>Rhumbline Global Min. Volatility</i>		<i>iShares MSCI ACWI</i>	
	#	%	#	%
Rhumbline Global Min. Volatility	--	--	261	29
iShares MSCI ACWI	261	90	--	--

Common Holdings Matrix

	<i>SSGA MSCI World ex US</i>		<i>Hardman Johnston Int'l Equity</i>		<i>HGK Int'l Equity</i>		<i>SSGA MSCI Emerging Markets Index</i>	
	#	%	#	%	#	%	#	%
SSGA MSCI World ex US	--	--	20	69	19	74	954	96
Hardman Johnston Int'l Equity	20	7	--	--	1	3	4	9
HGK Int'l Equity	19	3	1	3	--	--	1	1
SSGA MSCI Emerging Markets Index	954	28	4	10	1	5	--	--