



QUARTERLY INVESTMENT REPORT

December 2023



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“ *If there's one thing that's certain in business, it's uncertainty.*
– Stephen Covey ”

MERS' Portfolio Characteristics

- Disciplined asset allocation
- Globally diversified
- May lag in periods of extended bull markets
- Valuation focused investors
- Focus on risk-adjusted returns

MERS' Office of Investments Goals

- Maintain adequate liquidity
- Exceed the actuarial rate assumption on a long-term basis
- Minimize costs
- Exceed the Policy Benchmark ⁽¹⁾ on a long-term basis

Economic and Market Summary

In the final quarter of 2023, the US equity markets surged, nearing all-time highs. The S&P 500 featured a quarterly return of 11.68%, culminating in a remarkable 26.26% annual gain. Similarly, the Nasdaq 100 Index recorded a 14.60% fourth-quarter return, tallying a 55.13% return for the year, due to the strong performance of the Mag7 stocks. Nvidia had an annual return of 239.02%, leading the pack. Meta Platforms and Tesla also had staggering yearly returns, returning 194.13% and 101.72%, respectively. Inflation persisted above the Fed's 2.00% target, coming in at 3.10% in November. The housing market experienced a notable revival during the fourth quarter, with mortgage rates peaking at 8.10% before rapidly declining to slightly over 7.00% by quarter-end. Surprising the market, the Federal Reserve announced three rate cuts are expected for 2024, amounting to a total of 75 basis points. This announcement spurred a December rally in the equity markets. Concurrently, the 10-year treasury yield plummeted from 4.57% at the end of the third quarter to 3.88%, marking a substantial 69 basis point decline, largely attributed to the forthcoming Fed rate cuts in 2024. Shifting focus to foreign markets, the MSCI World ex US Index delivered a 10.57% quarterly return and 18.68% for the year. The MSCI Japan Index was a strong performer posting an 8.41% quarterly return and 20.03% annual return. Additionally, as a result of Chinese market weakness, the MSCI Emerging Markets Index significantly lagged, closing the year with a 7.85% return for the fourth quarter and 10.13% annual return. As 2024 unfolds, diligent monitoring of factors such as inflation, geopolitical risks, and the Fed's rate reduction strategy remains imperative.

Portfolio Performance Review

MERS' Total Portfolio returned 6.66% (net) for the fourth quarter, underperforming the Policy Benchmark by 337 bps, with portfolio diversification providing mixed results. The Global Equity Portfolio returned 10.22%, underperforming the Global Equity Policy Blend by 115 bps. The U.S. Equity Portfolio delivered an 11.90%, underperforming the Russell 3000 benchmark by 17 bps. The International Equity Portfolio delivered a 10.13% return for the quarter, underperforming its benchmark by 39 bps as MERS' overweight to Pacific equities detracted value. The Emerging Market Equity Portfolio delivered a 6.57% return for the quarter, underperforming its benchmark by 145 bps as a result of lagging performance from Frontier Markets. The Global Fixed Income Portfolio returned 6.35% in the quarter, lagging the Global Fixed Income Policy Blend by 115 bps, partially the result of lower duration. The Private Investments' Portfolio delivered a return of 1.18%, with Private Equity, Real Assets, and Diversifying Strategies returning -1.55%, 2.39%, and 3.81%, respectively. MERS' Defined Benefit (DB) portfolio assets are \$12.24 billion, and MERS' total assets are \$15.98 billion.

Investment Risks and Trends

Economic Risks

- Monetary policy mistakes
- Corporate/government debt levels
- Higher refinancing costs
- Eurozone instability
- Fiscal policy implementation
- Supply-chain disruptions

Medium-Term Trends

- Rise of populism
- Investment industry consolidation
- Rise of active investing
- Amplification of country and regional investment risks
- In-sourcing | Supply chain realignment

Long-Term Trends

- Aging population/workforce
- Rising taxes | Entitlement costs
- Aging infrastructure
- Deglobalization | Competition for resources
- Geopolitical instability
- Rise of ESG | Under investment in traditional energy sector

Projects and Initiatives

- Incorporating ETFs into the asset allocation program and internal strategies
- Researching the role of active management in sub-asset classes
- Private markets restructure
- Enhancing internal equity portfolio models
- Internal fixed income portfolio development

¹ The Policy Benchmark consists of: 45% Russell 3000, 20% MSCI ACWI ex USA IMI (net), 25% Bloomberg US Aggregate, and 10% Bloomberg Global Aggregate ex U.S.

Asset Class Valuation Summary

Value/Price Discrepancy¹

Asset Class	Overvalued	Undervalued
US Equity	-67.30%	
Europe Equity	-13.10%	
Asia Pacific Equity		31.40%
EM Equity		30.90%
US Treasury	-1.30%	
EMD		0.20%
US HY	-7.70%	

¹ The value/price discrepancy is a ratio that compares the estimated fair value of an asset relative to its current market price. Overvalued assets have prices above estimated fair value and are expressed as a negative percentage and undervalued assets have prices below estimated fair value and are expressed as a positive percentage.

Equity Market Outlook

- Valuation multiples are still historically elevated in the US, and current earnings remain above estimated trend earnings contributing to the US market's overvaluation.
- Valuation multiples and earnings are expected to revert to long-term averages resulting in lower expected returns for US equities.
- Valuations are more favorable in the Pacific and Emerging Market regions, where currencies are also cheap versus the US Dollar.
- Pacific earnings, led by Japan, are currently below trend, which is expected to drive higher returns in the future as earnings recover to long-term cyclically-adjusted levels.
- In Emerging Markets, recovery from current below-trend earnings and strong trend earnings growth is expected to provide positive support going forward.

Fixed Income Market Outlook

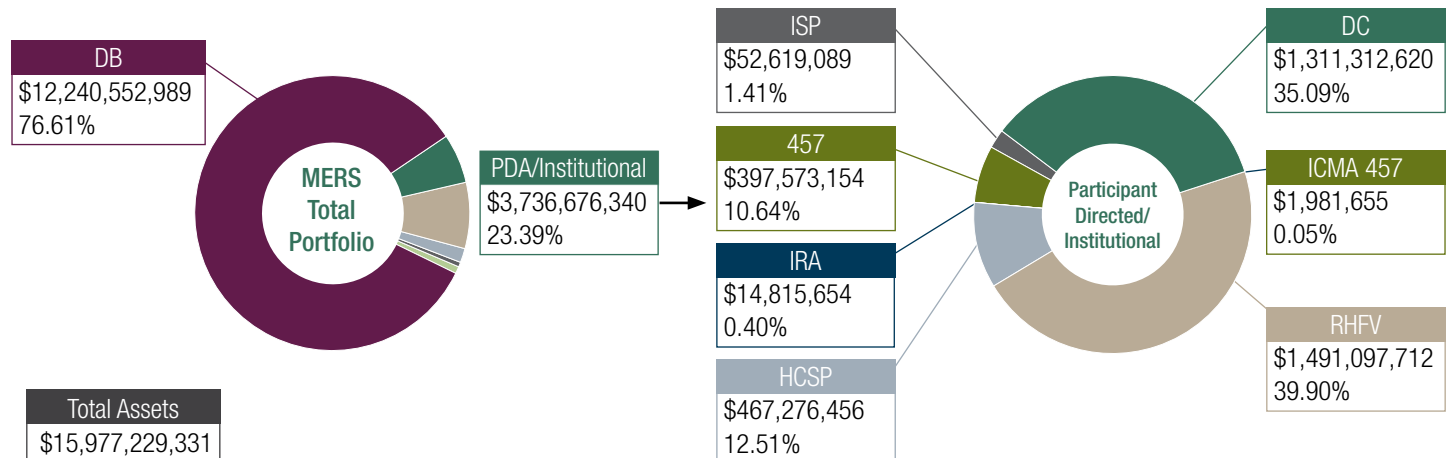
- Most fixed income asset classes are fair to slightly overvalued according to MERS' valuation model.
- Rising cash rates throughout 2023 has increased discount rates for longer duration assets such as US Treasuries.
- EM Debt is the most attractively priced fixed income segment, with spreads near MERS' fair value estimate.
- US high yield credit is overvalued due to spreads that are well below historical averages and MERS' fair value estimate.

Chart of the Quarter

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Real Estate	Emerging Market Equity	Real Estate	Emerging Market Equity	U.S. Fixed Income	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Real Estate	Small Cap Equity	Real Estate	Large Cap Equity	Small Cap Equity	Emerging Market Equity	Cash Equivalent	Large Cap Equity	Small Cap Equity	Large Cap Equity	Cash Equivalent	Large Cap Equity
37.96%	34.00%	42.12%	39.38%	5.24%	78.81%	26.85%	7.84%	27.73%	38.82%	16.02%	1.38%	21.31%	37.28%	1.87%	31.49%	19.96%	28.71%	1.46%	26.29%
Emerging Market Equity	Real Estate	Developed ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	High Yield	Real Estate	High Yield	Emerging Market Equity	Large Cap Equity	Large Cap Equity	Fixed Income	High Yield	Developed ex-U.S. Equity	U.S. Fixed Income	Small Cap Equity	Large Cap Equity	Real Estate	High Yield	Developed ex-U.S. Equity	High Yield
25.55%	15.35%	32.17%	12.44%	4.39%	58.21%	19.63%	4.98%	18.23%	32.39%	13.69%	0.55%	17.13%	24.21%	0.01%	25.52%	18.40%	26.09%	-11.19%	17.94%
Developed ex-U.S. Equity	Developed ex-U.S. Equity	Developed ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	Cash Equivalent	Real Estate	Emerging Market Equity	Global ex-U.S. Fixed Income	Developed ex-U.S. Equity	Developed ex-U.S. Equity	U.S. Fixed Income	Cash Equivalent	Large Cap Equity	Large Cap Equity	High Yield	Developed ex-U.S. Equity	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Small Cap Equity
20.38%	14.47%	26.71%	11.03%	2.06%	37.13%	18.88%	4.36%	16.41%	21.02%	5.97%	0.05%	11.96%	21.83%	-2.08%	22.49%	18.31%	14.82%	-13.01%	16.93%
Small Cap Equity	Large Cap Equity	Small Cap Equity	U.S. Fixed Income	High Yield	Developed ex-U.S. Equity	High Yield	Large Cap Equity	Small Cap Equity	High Yield	Small Cap Equity	Real Estate	Emerging Market Equity	Small Cap Equity	Global ex-U.S. Fixed Income	Real Estate	Global ex-U.S. Fixed Income	Developed ex-U.S. Equity	Developed ex-U.S. Equity	High Yield
16.33%	4.91%	10.37%	6.97%	-26.16%	33.67%	15.12%	2.11%	16.35%	7.44%	4.89%	-0.79%	11.19%	14.65%	-2.15%	21.91%	10.11%	12.62%	-14.29%	13.44%
Global ex-U.S. Fixed Income	Small Cap Equity	Large Cap Equity	Large Cap Equity	Small Cap Equity	Small Cap Equity	Large Cap Equity	Cash Equivalent	Large Cap Equity	Real Estate	High Yield	Developed ex-U.S. Equity	Real Estate	Global ex-U.S. Fixed Income	Large Cap Equity	Emerging Market Equity	Developed ex-U.S. Equity	High Yield	Large Cap Equity	Emerging Market Equity
12.54%	4.55%	16.73%	5.49%	-33.79%	27.17%	15.06%	0.10%	16.00%	3.67%	2.45%	-3.04%	4.06%	10.51%	-4.38%	18.44%	7.59%	5.28%	-18.11%	9.83%
High Yield	Cash Equivalent	High Yield	Cash Equivalent	Large Cap Equity	Large Cap Equity	Developed ex-U.S. Equity	Small Cap Equity	High Yield	Cash Equivalent	Cash Equivalent	Small Cap Equity	Small Cap Equity	Real Estate	High Yield	U.S. Fixed Income	Cash Equivalent	Global ex-U.S. Fixed Income	Real Estate	Real Estate
11.13%	3.07%	11.85%	5.00%	-37.00%	26.47%	8.95%	-4.18%	15.81%	0.07%	0.03%	-4.41%	2.75%	10.36%	-5.63%	14.32%	7.51%	0.08%	-18.70%	9.67%
Large Cap Equity	High Yield	High Yield	High Yield	Developed ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	Emerging Market Equity	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	Global ex-U.S. Fixed Income
10.83%	2.74%	6.16%	4.87%	-43.56%	7.53%	8.54%	-6.46%	4.21%	-2.02%	-2.19%	-4.47%	2.85%	7.59%	-11.91%	8.72%	-1.54%	-1.54%	5.72%	5.72%
U.S. Fixed Income	U.S. Fixed Income	Cash Equivalent	Small Cap Equity	Real Estate	U.S. Fixed Income	Global ex-U.S. Fixed Income	Developed ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income
4.34%	2.43%	4.85%	-1.57%	-48.21%	5.93%	4.95%	-12.21%	4.09%	-2.60%	-3.09%	-5.02%	1.49%	3.54%	-14.09%	5.09%	0.87%	-2.54%	-20.44%	5.53%
Cash Equivalent	Global ex-U.S. Fixed Income	U.S. Fixed Income	Real Estate	Emerging Market Equity	Cash Equivalent	Cash Equivalent	Emerging Market Equity	Cash Equivalent	Global ex-U.S. Fixed Income	Developed ex-U.S. Equity	Emerging Market Equity	Cash Equivalent	Cash Equivalent	Emerging Market Equity	Cash Equivalent	Real Estate	Global ex-U.S. Fixed Income	Real Estate	Cash Equivalent
1.33%	-6.65%	4.33%	-7.39%	-63.33%	0.21%	0.13%	-16.42%	0.11%	-3.08%	-4.32%	-14.92%	0.33%	0.86%	-14.57%	2.28%	-9.04%	-7.05%	-25.10%	5.01%

Recapping the year, 2023 proved to be an outstanding period for equities, with investors witnessing substantial returns, especially within US Large Cap and the Mag7 stocks. High-yield bonds rebounded from the challenges of 2022, delivering returns of just over 13.00% throughout the year. Despite initial concerns of contraction in early 2023, the commercial real estate sector exceeded expectations, bringing in just under 10.00% for investors. As a result of China weakness, Emerging Market equities struggled, posting a return of 9.83%, albeit a significant improvement from their -20.09% return in 2022. Furthermore, 2023 emerged as the year for cash, with money market funds offering investors returns exceeding 5.00%, leading to substantial inflows over the course of the year.

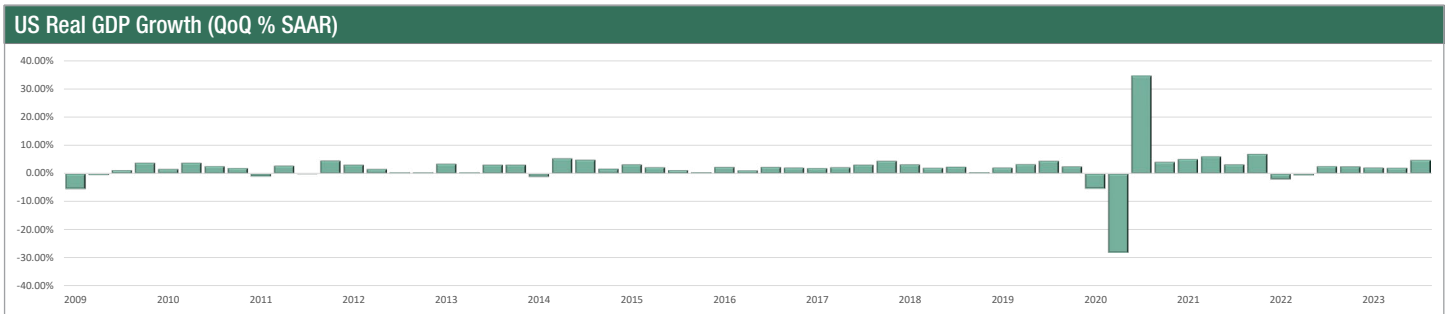
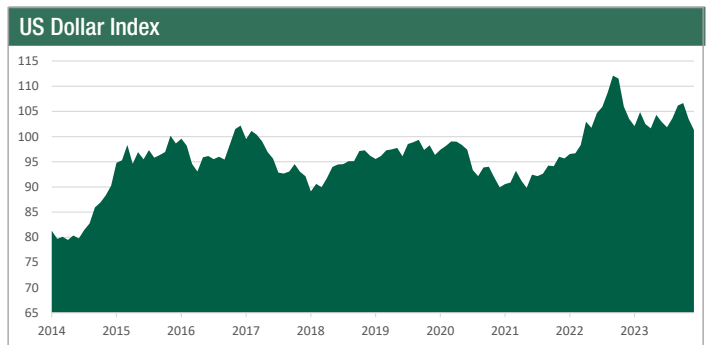
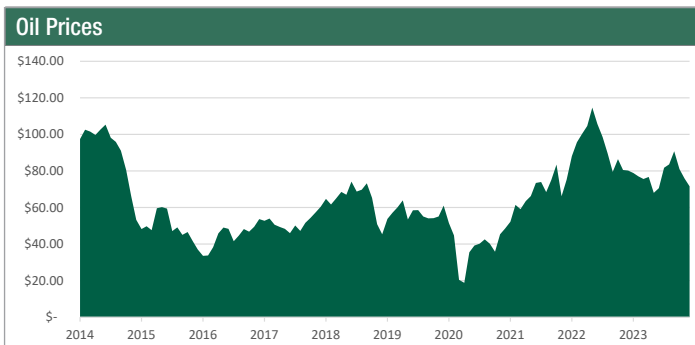
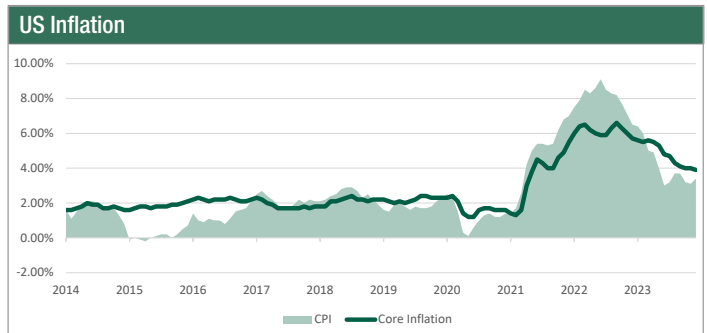
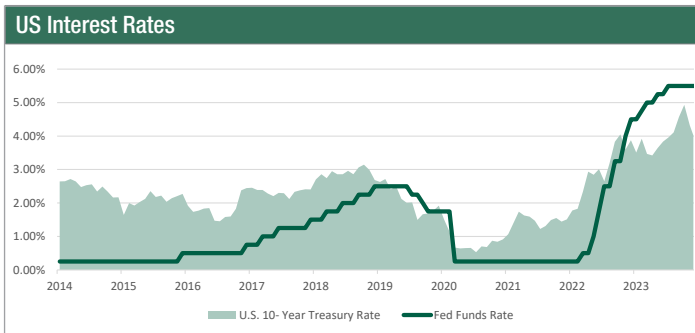
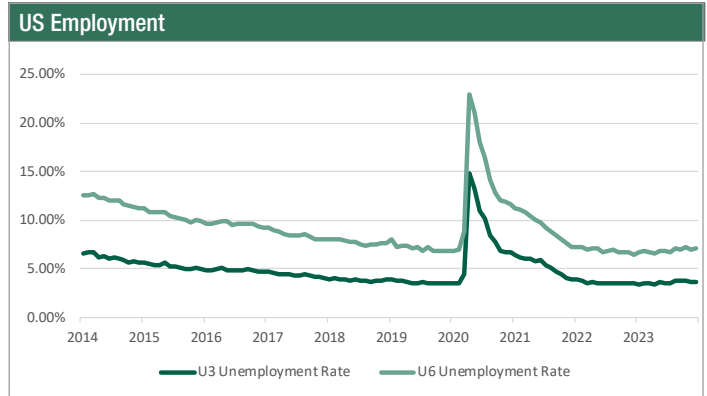
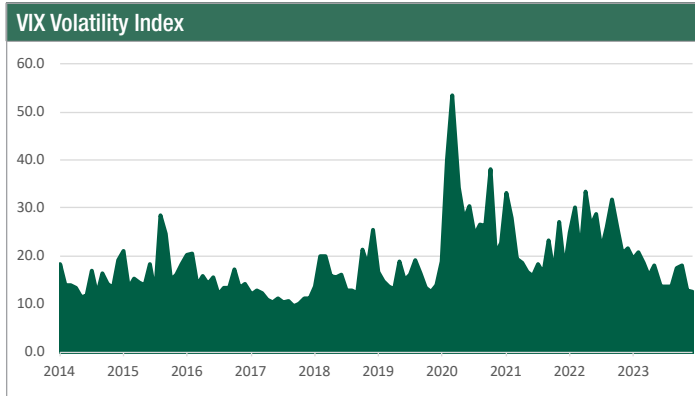
Assets by Program



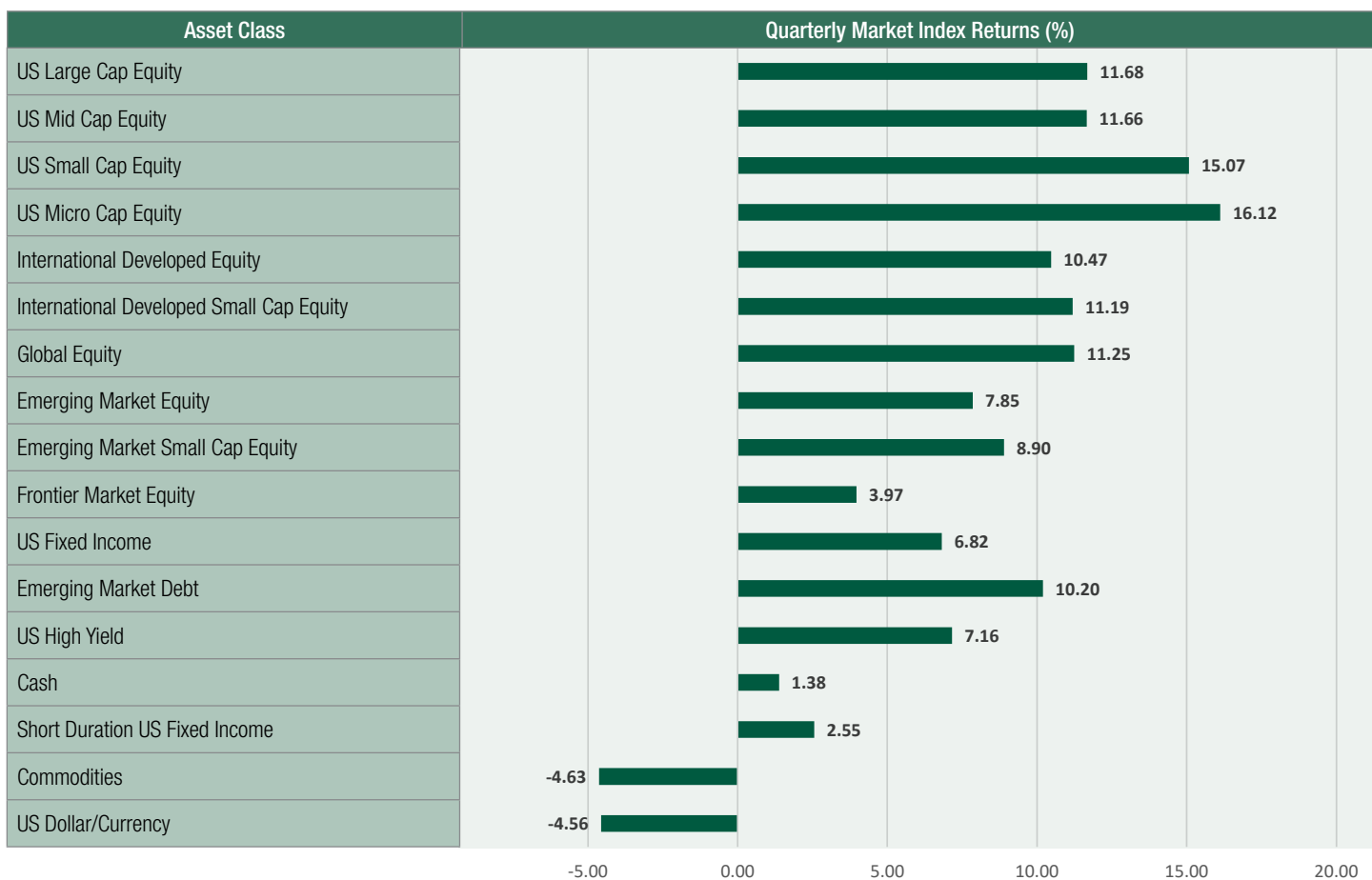
Market Indicators	Current	Prior Quarter
10 Year Treasury Yield	3.88%	4.57%
Fed Funds Rate	5.50%	5.50%
Crude Oil	\$71.7 /barrel	\$90.8 /barrel
Gold	\$2,063.0 /oz.	\$1,848.6 /oz.
30 Year Fixed Mortgage Rates	6.99%	7.74%
US Investment Grade Credit Spread	0.99%	1.21%
US High Yield Credit Spread	3.23%	3.94%
US Leading Economic Indicators	-7.10%	-8.10%

Economic Releases	Current	Prior Quarter
ISM Manufacturing	47.40	49.00
ISM Non-Manufacturing	50.60	53.60
U of M Consumer Sentiment	69.70	67.90
US Real GDP*	2.90%	2.40%
Eurozone Real GDP*	0.00%	0.60%
UK GDP*	0.30%	0.30%
Japan GDP*	1.50%	2.20%
China GDP*	4.90%	6.30%

* All GDP data is lagged 1 quarter

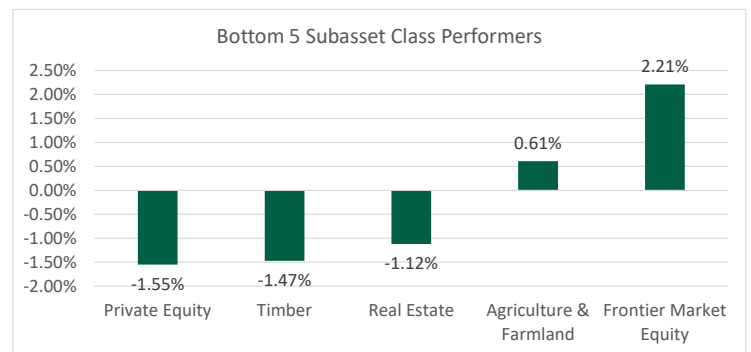
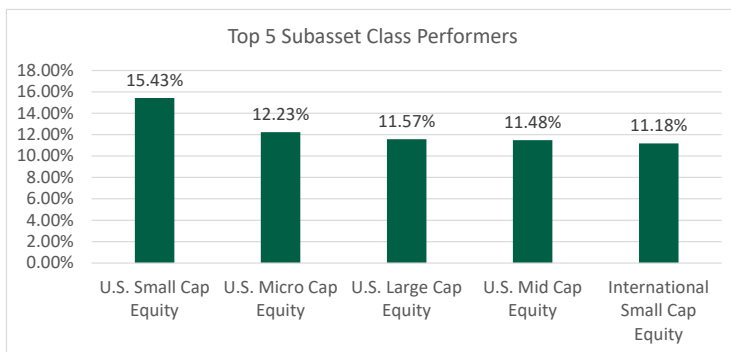
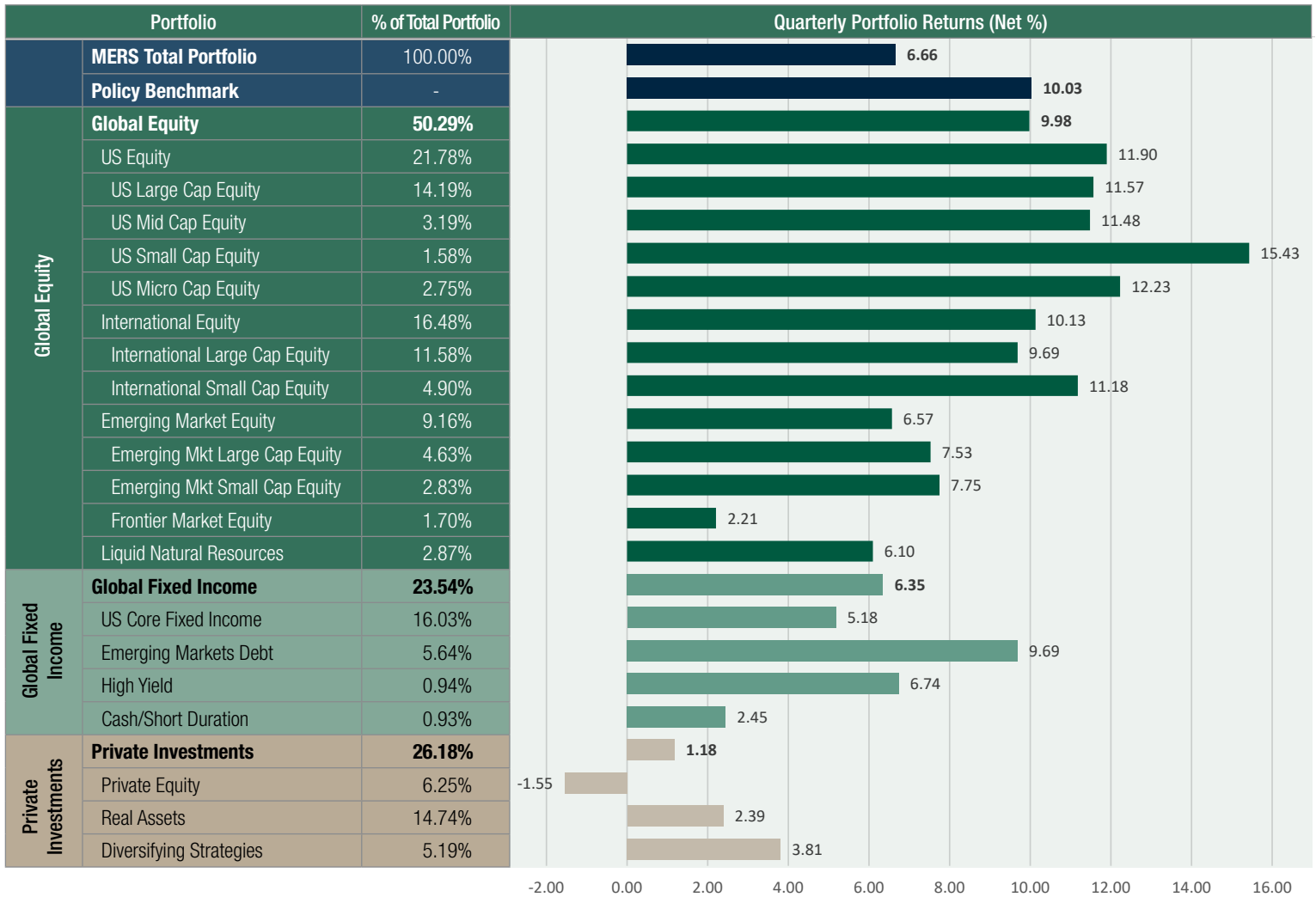


Quarterly Market Performance Review



Market Index Returns

Market Index	Asset Class	QTD	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
S&P 500	US Large Cap Equity	11.68	26.26	26.26	9.98	15.67	13.40	12.02
S&P 400	US Mid Cap Equity	11.66	16.39	16.39	8.06	12.59	9.35	9.25
S&P 600	US Small Cap Equity	15.07	15.94	15.94	7.21	10.96	8.25	8.60
Russell Microcap	US Micro Cap Equity	16.12	9.31	9.31	0.58	8.53	5.79	5.78
MSCI EAFE	International Developed Equity	10.47	18.95	18.95	4.63	8.80	7.52	4.88
MSCI EAFE Small Cap	International Developed Small Cap Equity	11.19	13.76	13.76	-0.23	7.04	6.42	5.21
MSCI ACWI IMI	Global Equity	11.25	22.19	22.19	5.96	12.06	10.34	8.35
MSCI Emerging Markets	Emerging Market Equity	7.85	10.12	10.12	-4.80	4.02	5.33	3.01
MSCI Emerging Markets Small Cap	Emerging Market Small Cap Equity	8.90	24.22	24.22	6.79	10.24	8.61	5.60
MSCI Frontier Markets Index	Frontier Market Equity	3.97	11.83	11.83	-0.33	3.49	3.91	2.04
Bloomberg U.S. Aggregate	US Fixed Income	6.82	5.53	5.53	-3.31	1.10	1.29	1.81
JPMorgan EMBI Global Diversified Index	Emerging Market Debt	10.20	10.96	10.96	-3.63	1.30	1.59	2.88
ICE BofA Merrill Lynch Global High Yield	US High Yield	7.16	13.45	13.45	1.98	5.37	4.57	4.60
91 Day Treasury Bill	Cash	1.38	5.14	5.14	2.21	1.87	1.72	1.23
Bloomberg 1-3 Year Treasury	Short Duration US Fixed Income	2.55	4.29	4.29	-0.10	1.28	1.20	1.04
Bloomberg Commodity Index Total Return	Commodities	-4.63	-7.91	-7.91	10.76	7.23	3.59	-1.11
Bloomberg Dollar Spot Index	US Dollar/Currency	-4.56	-2.11	-2.11	12.67	1.05	-0.12	2.39

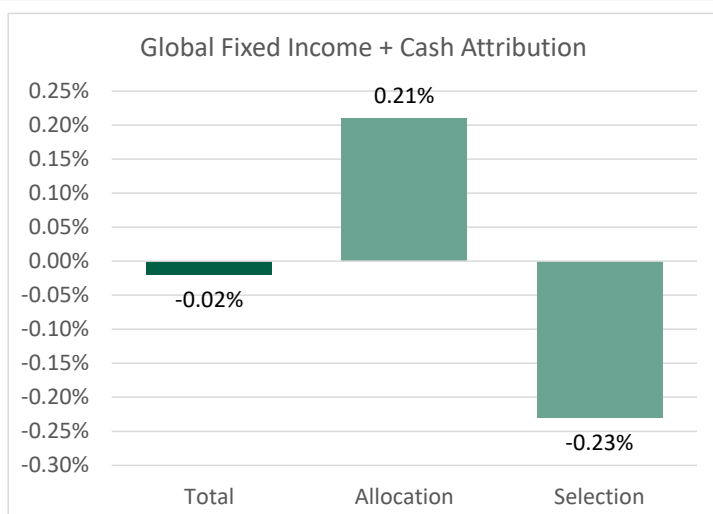
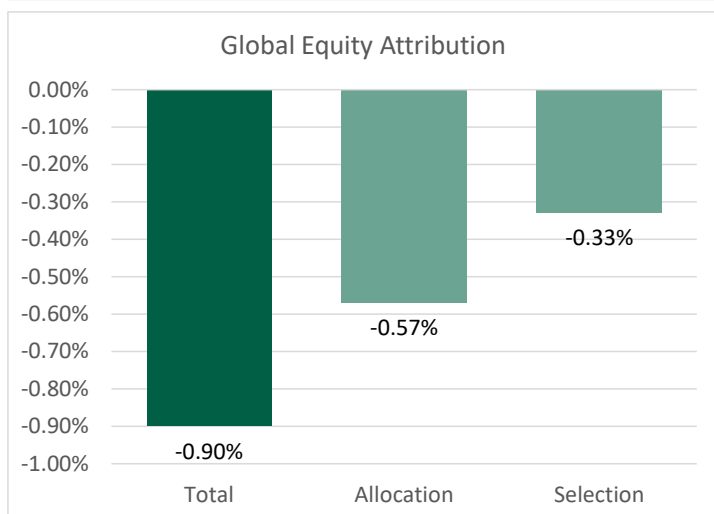
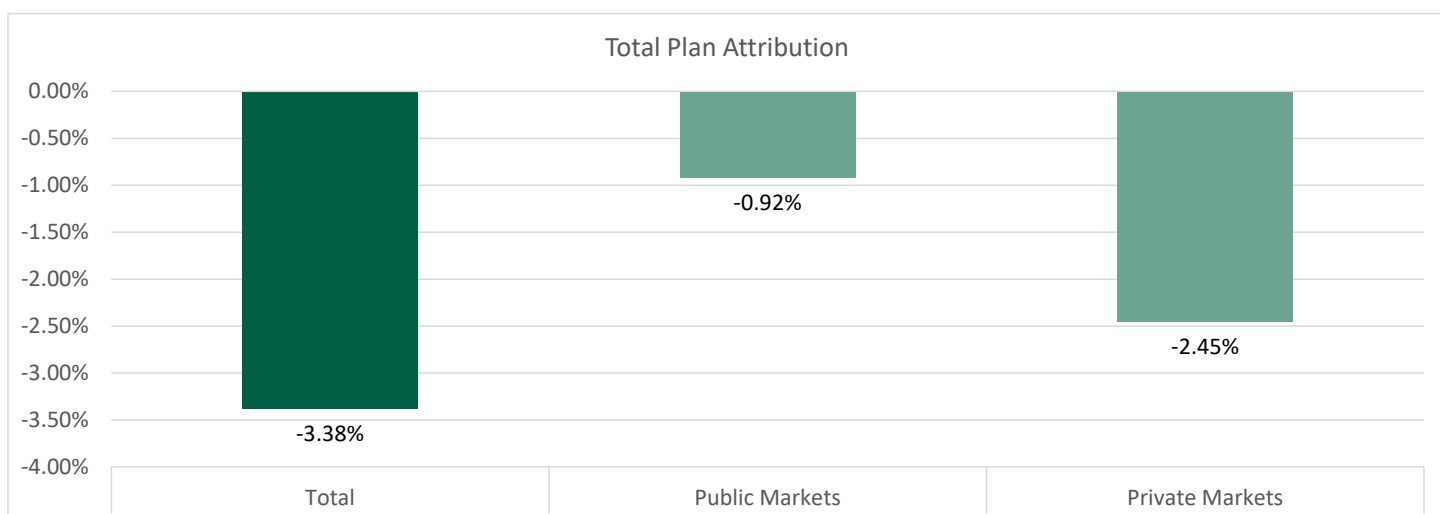


QUARTERLY PORTFOLIO ATTRIBUTION SUMMARY

2023
DECEMBER

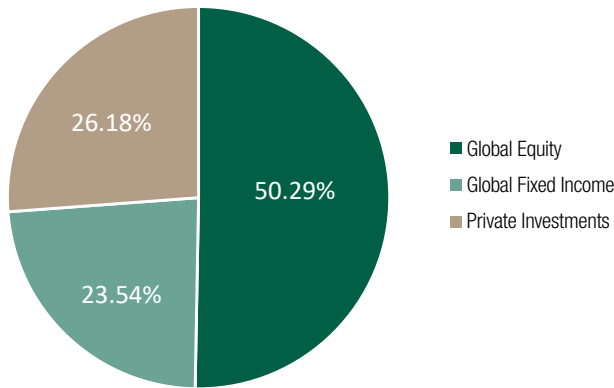
	Avg Weight			Return (Net)			Attribution Totals		
	Portfolio	Benchmark	Difference	Portfolio	Benchmark	Difference	Allocation	Selection	Total
Total Plan	100.00%	100.00%	0.00%	6.67%	10.05%	-3.38%	-0.37%	-3.01%	-3.37%
Public Markets	72.49%	100.00%	-27.51%	8.76%	10.05%	-1.29%	-0.36%	-0.56%	-0.92%
Global Equity	48.73%	65.00%	-16.27%	9.99%	11.40%	-1.41%	-0.57%	-0.33%	-0.90%
U.S. Equity	20.87%	45.00%	-24.13%	11.92%	12.07%	-0.15%	-0.49%	-0.02%	-0.51%
International Equity	15.95%	15.00%	0.95%	10.12%	10.52%	-0.40%	0.00%	-0.06%	-0.06%
Emerging Market Equity	9.12%	5.00%	4.12%	6.57%	8.02%	-1.45%	-0.08%	-0.13%	-0.22%
Liquid Natural Resources	2.80%	0.00%	2.80%	6.13%	10.03%	-3.90%	0.00%	-0.11%	-0.11%
Global Fixed Income	22.84%	35.00%	-12.16%	6.35%	7.50%	-1.15%	0.28%	-0.24%	0.04%
U.S. Core Fixed Income	16.32%	25.00%	-8.68%	5.19%	6.82%	-1.63%	0.27%	-0.27%	0.01%
Global Agg ex USD	0.00%	10.00%	-10.00%	0.00%	9.21%	-9.21%	0.08%	0.00%	0.08%
Emerging Markets Debt	5.57%	0.00%	5.57%	9.68%	9.17%	0.51%	-0.05%	0.03%	-0.02%
U.S. High Yield	0.95%	0.00%	0.95%	6.95%	7.17%	-0.22%	-0.03%	0.00%	-0.03%
Cash	0.92%	0.00%	0.92%	2.22%	1.38%	0.84%	-0.07%	0.01%	-0.06%
Private Investments	27.51%	0.00%	27.51%	1.18%	10.03%	-8.85%	-0.01%	-2.45%	-2.45%

- Underperformance was driven by the Private Investments Portfolio (-245 bps) and the Public Markets Portfolio (-92bps).
- The Global Fixed Income portfolio added value (+4 bps).
- Selection within US Equity detracted value (-2 bps).
- Selection within U.S. Core detracted value (-27 bps).

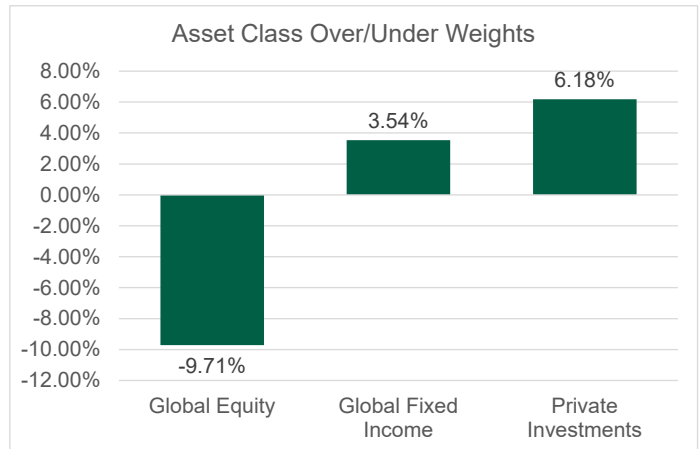


Asset Class	Market Value	% of Fund	Base Allocation	Over/Under Weight	Minimum Allocation	Maximum Allocation
Global Equity	\$6,955,252,677	50.29%	60.00%	-9.71%	30.00%	70.00%
Global Fixed Income	\$3,254,959,108	23.54%	20.00%	3.54%	10.00%	60.00%
Private Investments	\$3,620,694,927	26.18%	20.00%	6.18%	No Minimum	30.00%
Total	\$13,830,906,711	100.00%	100.00%			

Asset Allocation

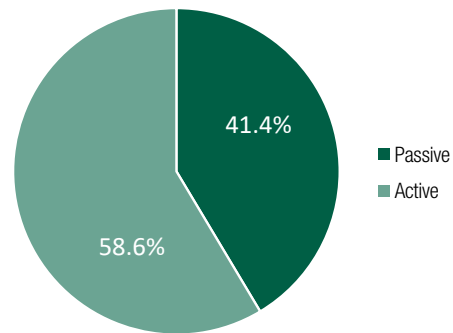


Asset Class Over/Under Weights



Asset Class	MERS Public Markets ¹	Policy Benchmark ²	Over/Under Weight
U.S. Equity	33.38%	45.00%	-11.62%
International Equity	21.47%	14.44%	7.03%
Emerging Market Equity	12.41%	5.56%	6.85%
U.S. Treasury	21.72%	20.87%	0.85%
U.S. Investment Grade	0.03%	14.13%	-14.11%
U.S. High Yield	1.28%	0.00%	1.28%
Emerging Market Debt	7.65%	0.00%	7.65%
Cash/Short Duration	1.21%	0.00%	1.21%

MERS Public Markets

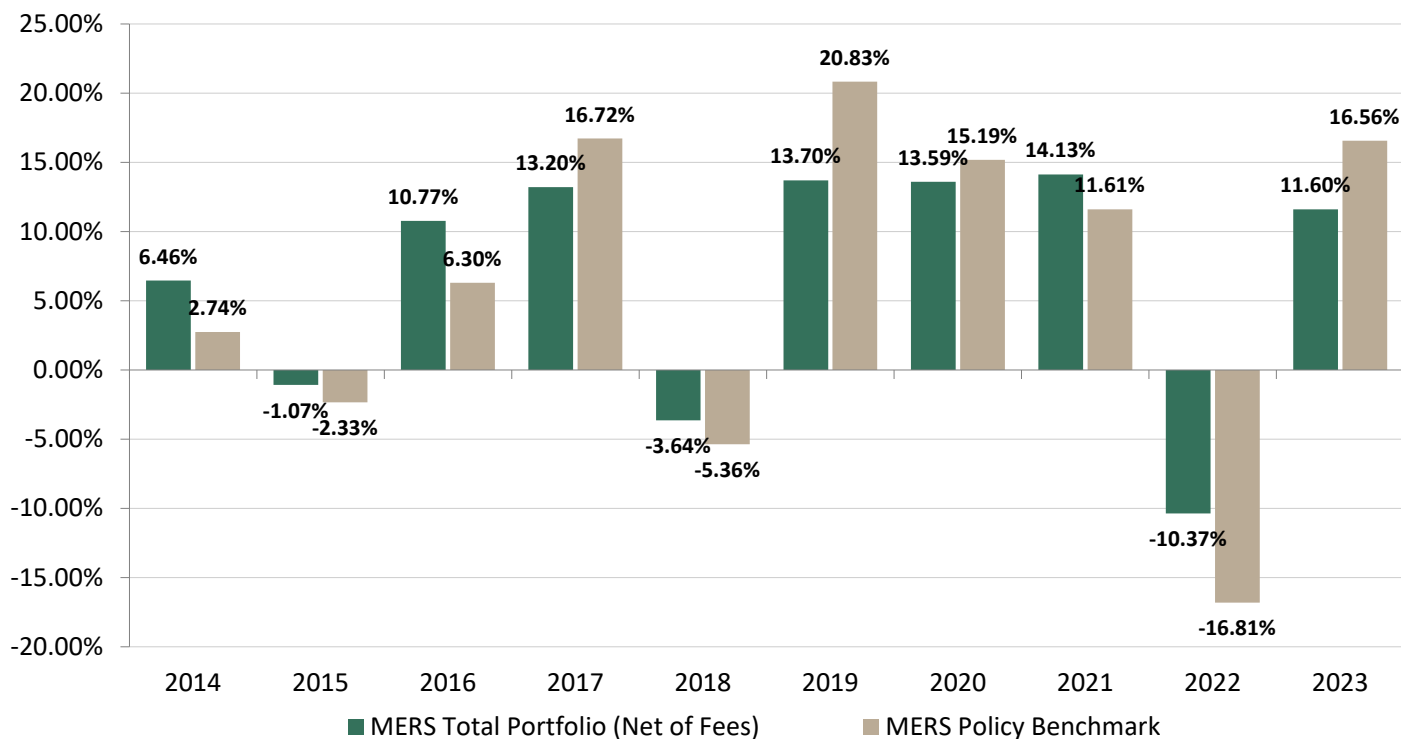


¹ MERS' Public Markets is made up of the Global Equity and Global Fixed Income Asset Classes

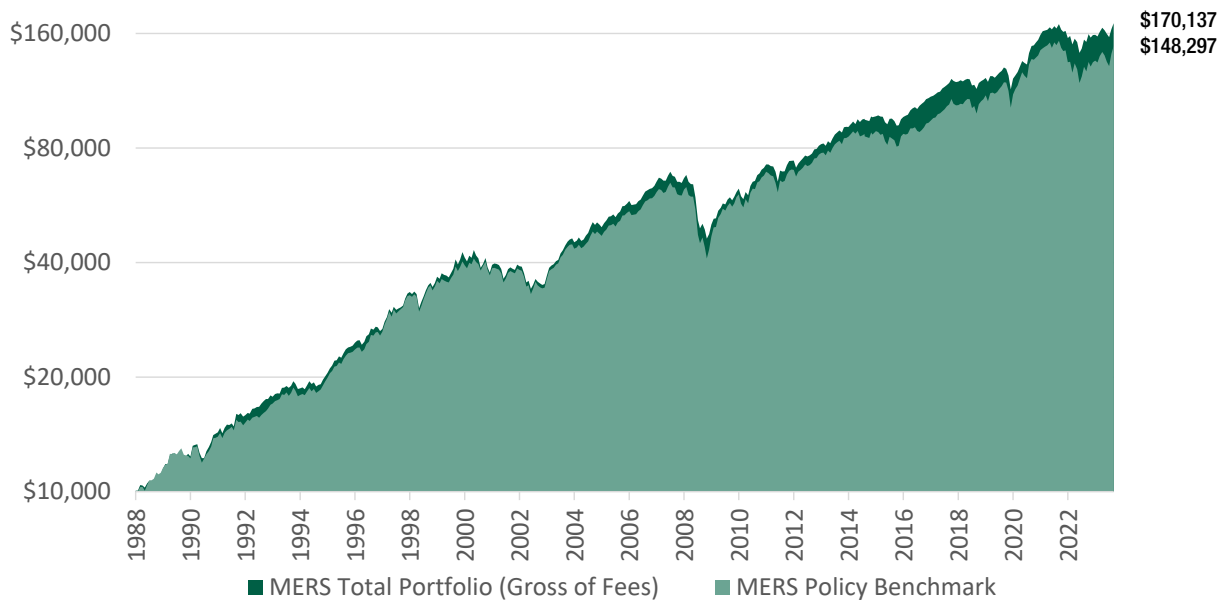
² 45% Russell 3000, 20% MSCI ACWI ex USA IMI (net), 25% Bloomberg Barclays US Aggregate, and 10% Bloomberg Barclays Global Aggregate ex U.S.

	QTD	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
MERS Total Portfolio - Gross of Fees (%)	6.72	11.92	11.92	4.72	8.26	7.21	6.70
MERS Total Portfolio - Net of Fees (%)	6.66	11.60	11.60	4.51	8.07	7.02	6.49
Policy Benchmark (%)	10.03	16.56	16.56	2.67	8.54	7.54	5.90
Excess (Net) (%)	-3.37	-4.96	-4.96	1.84	-0.47	-0.52	0.59

Calendar Year Performance – Last 10 Years

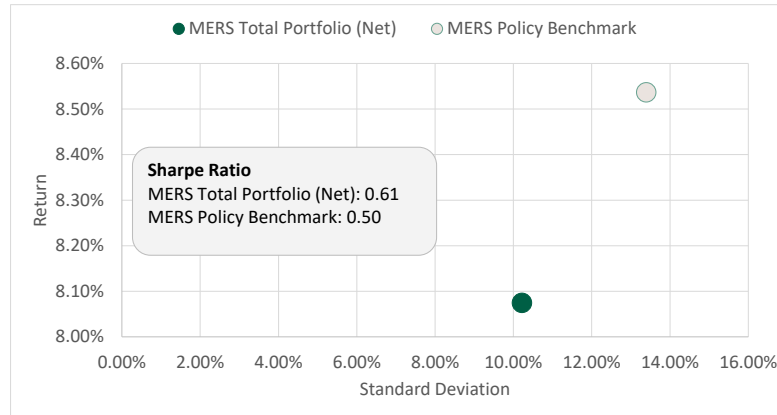


Growth of \$10,000 Comparison



5-Year

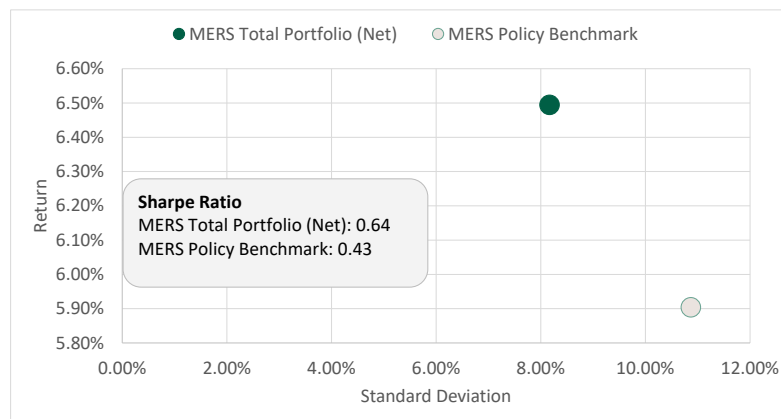
	Return	Standard Deviation	Downside Risk	Beta	R-Squared	Tracking Error
MERS Total Portfolio (Net)	8.07%	10.22%	7.50%	0.75	96.08	3.94%
MERS Policy Benchmark	8.54%	13.39%	9.88%	1.00	100.00	



	# of Months		Average Return		Up Capture	Down Capture
	Up	Down	Up	Down		
MERS Total Portfolio (Net)	38	22	2.33%	-2.48%	76.30	75.11
MERS Policy Benchmark	38	22	2.91%	-3.50%		

10-Year

	Return	Standard Deviation	Downside Risk	Beta	R-Squared	Tracking Error
MERS Total Portfolio (Net)	6.49%	8.17%	5.97%	0.70	93.44	3.64%
MERS Policy Benchmark	5.90%	10.87%	7.81%	1.00	100.00	

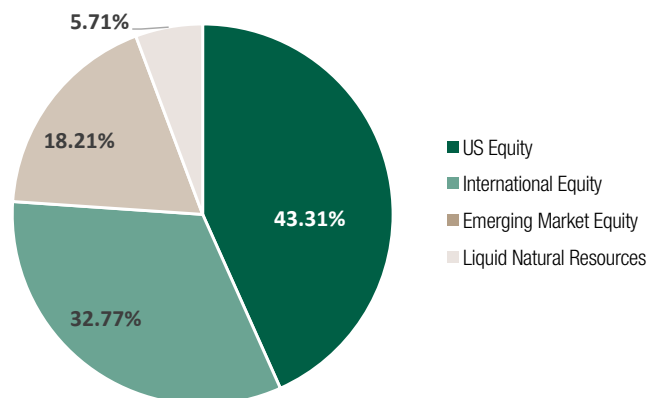


	# of Months		Average Return		Up Capture	Down Capture
	Up	Down	Up	Down		
MERS Total Portfolio (Net)	78	42	1.79%	-1.88%	77.12	68.40
MERS Policy Benchmark	76	44	2.22%	-2.62%		

¹ Calculated using the ICE BofAML US 3-Month Treasury Bill Index

Market Value	\$6,955,252,677
Assets – % of Portfolio	50.29%

Sub Asset Class	Market Value
US Equity	\$3,012,382,580
International Equity	\$2,279,003,182
Emerging Market Equity	\$1,266,693,762
Liquid Natural Resources	\$397,173,153
Total	\$6,955,252,677



Performance (Net)

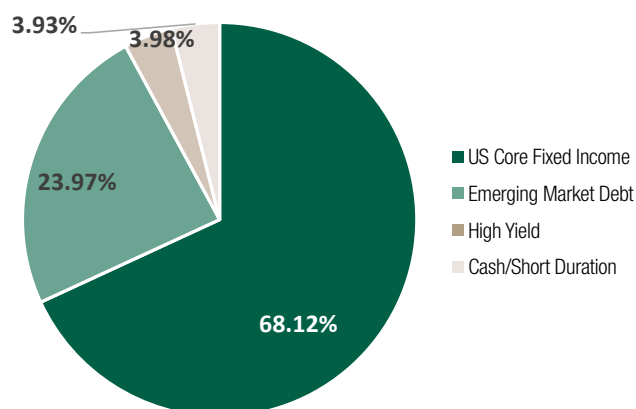
	Market Value	% OF PLAN	QTD	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
Global Equity	\$6,955,252,677	50.29	9.98	17.27	17.27	5.05	9.46	8.12	7.22
<i>Global Equity Policy Blend ¹</i>			11.37	22.73	22.73	6.43	12.72	10.86	8.52
<i>MSCI ACWI</i>			11.03	22.20	22.20	5.75	11.72	10.05	7.93
US Equity	\$3,012,382,580	21.78	11.90	21.64	21.64	9.54			
<i>Russell 3000</i>			11.96	26.53	26.53	8.97			
US Large Cap Equity	\$1,962,091,499	14.19	11.57	24.68	24.68	10.20	15.11	13.00	12.05
<i>Russell 1000</i>			11.69	26.29	26.29	10.00	15.69	13.42	12.03
US Mid Cap Equity	\$441,212,417	3.19	11.48	15.85	15.85	7.85	12.41	9.26	8.63
<i>Russell Midcap</i>			12.82	17.23	17.23	5.92	12.68	10.07	9.42
US Small Cap Equity	\$218,130,487	1.58	15.43	17.12	17.12	8.91	11.63	8.38	8.02
<i>Russell 2000</i>			14.03	16.93	16.93	2.22	9.97	7.33	7.16
US Micro Cap Equity	\$380,103,176	2.75	12.23	14.32	14.32	8.27	11.13	7.49	6.94
<i>Russell Microcap</i>			16.06	9.33	9.33	0.61	8.56	5.79	5.79
International Equity	\$2,279,003,182	16.48	10.13	15.61	15.61	2.35			
<i>MSCI World ex USA IMI</i>			10.52	17.18	17.18	3.73			
International Large Cap Equity	\$1,601,488,698	11.58	9.69	15.79	15.79	2.06	6.69	5.51	
<i>MSCI World ex USA</i>			10.51	17.94	17.94	4.42	8.45	6.95	
International Small Cap Equity	\$677,514,484	4.90	11.18	15.12	15.12	2.95	8.80	8.19	6.88
<i>MSCI World ex USA Small Cap</i>			10.60	12.62	12.62	-0.20	7.05	6.06	4.63
Emerging Market Equity	\$1,266,693,762	9.16	6.57	14.24	14.24	-0.69	5.58	5.51	3.63
<i>MSCI Emerging Markets IMI</i>			8.02	11.67	11.67	-3.71	4.45	5.40	3.00
Emerging Market Large Cap Equity	\$640,402,833	4.63	7.53	9.95	9.95	-6.01	3.15	4.08	2.03
<i>MSCI Emerging Markets</i>			7.86	9.83	9.83	-5.08	3.68	4.98	2.66
Emerging Market Small Cap Equity	\$391,465,040	2.83	7.75	20.06	20.06	6.76	11.66	9.44	
<i>MSCI Emerging Markets Small Cap</i>			8.95	23.92	23.92	6.45	9.92	8.31	
Frontier Market Equity	\$234,825,889	1.70	2.21	15.02	15.02	4.20	4.26	4.45	2.71
<i>MSCI Frontier Markets</i>			3.97	11.63	11.63	-0.52	3.33	3.80	2.00
Liquid Natural Resources	\$397,173,153	2.87	6.10	5.37	5.37				
<i>Policy Benchmark ²</i>			10.03	16.56	16.56				

¹ 70% Russell 3000, 30% MSCI ACWI ex USA IMI (net)

² 45% Russell 3000, 20% MSCI ACWI ex USA IMI (net), 25% Bloomberg Barclays US Aggregate, and 10% Bloomberg Barclays Global Aggregate ex U.S.

Market Value	\$3,254,959,108
Assets – % of Portfolio	23.53%

Sub Asset Class	Market Value
US Core Fixed Income	\$2,217,231,964
Emerging Market Debt	\$780,283,326
High Yield	\$129,430,937
Cash/Short Duration	\$128,012,881
Total	\$3,254,959,108



Performance (Net)

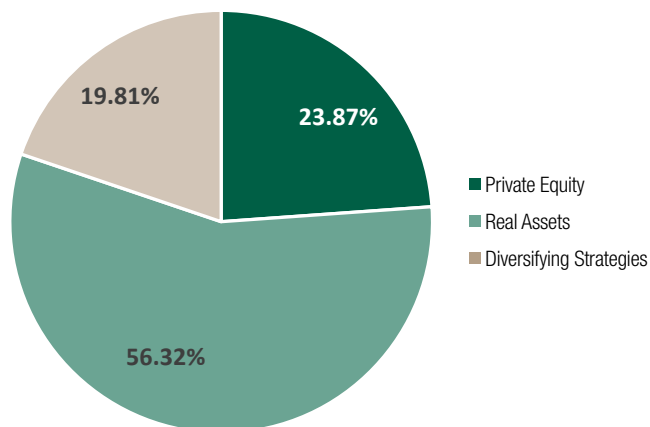
	Market Value	% OF PLAN	QTD	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
Global Fixed Income ex Cash	\$3,126,946,227	22.61	6.35	7.78	7.78	-2.54	2.83	2.77	3.13
<i>Global Fixed Income Policy Blend ¹</i>			7.50	5.60	5.60	-4.42	0.36	0.94	0.60
<i>Bloomberg Barclays Global Aggregate</i>			8.10	5.72	5.72	-5.51	-0.32	0.62	0.38
US Core Fixed Income	\$2,217,231,964	16.03	5.18	4.93	4.93	-2.78	1.11	1.24	1.76
<i>Bloomberg Barclays U.S. Aggregate</i>			6.82	5.53	5.53	-3.31	1.10	1.29	1.81
Emerging Market Debt	\$780,283,326	5.64	9.69	12.38	12.38	-3.27	2.30	2.51	3.23
<i>JP Morgan EMBI Global Diversified</i>			9.17	11.09	11.09	-3.56	1.67	1.97	3.22
High Yield	\$129,430,937	0.94	6.74	11.22	11.22	1.13			
<i>Bloomberg Barclays U.S. Corporate High Yield</i>			7.16	13.45	13.45	1.98			
Cash/Short Duration ²	\$128,012,881	0.93	2.45	18.43	18.43	24.91	15.39	11.14	7.93
<i>91 Day Treasury Bill</i>			1.38	5.05	5.05	2.17	1.89	1.74	1.26

¹ 70% Bloomberg Barclays U.S. Aggregate, 30% Bloomberg Barclays Global Aggregate ex U.S.

² Cash/Short Duration market value reflects collateral for futures positions

Market Value	\$3,620,694,927
Assets – % of Portfolio	26.18%

Sub Asset Class	Market Value
Private Equity	\$864,128,828
Real Assets	\$2,038,957,193
Diversifying Strategies	\$717,207,936
Currency Hedge	\$400,970
Total	\$3,620,694,927



Performance (Net)

	Market Value	% OF PLAN	QTD	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
Private Investments	\$3,620,694,927	26.18	1.18	4.25	4.25	10.30			
<i>Public Markets</i>			8.74	14.46	14.46	2.86			
<i>Policy Benchmark¹</i>			10.03	16.56	16.56	2.67			
Private Equity	\$864,128,828	6.25	-1.55	2.66	2.66	18.99	17.60	16.92	14.42
<i>Private Equity Blend²</i>			12.61	15.18	15.18	0.93	8.42	6.81	6.15
Real Assets	\$2,038,957,193	14.74	2.39	-0.03	-0.03	6.16	8.61	6.86	7.35
<i>Real Assets Blend³</i>			0.40	6.35	6.35	8.60	8.74	6.11	5.03
Diversified Real Assets	\$1,710,862,851	12.37	3.26	0.18	0.18	4.82	8.00	6.04	
<i>Real Assets Blend</i>			0.40	6.35	6.35	8.60	8.74		
Real Estate	\$328,094,342	2.37	-1.12	-1.00	-1.00	12.09	8.56	9.73	11.05
<i>Real Estate Blend⁴</i>									
Timber	\$33,799,539	0.24	-1.47	1.21	1.21	6.33	5.52	7.85	6.82
<i>S&P Global Timber & Forestry Index Net</i>			9.91	13.76	13.76	2.28	8.94	7.85	6.13
Infrastructure	\$401,720,805	2.90	8.82	24.68	24.68	22.52	15.64	11.42	10.05
<i>Private Infrastructure Blend⁵</i>			10.52	5.75	5.75	0.28	4.24	3.07	3.56
Commodities	\$300,736,494	2.17	2.32	8.47	8.47	-3.22	6.07	0.68	3.28
<i>Bloomberg Commodity Index Total Return</i>			-4.63	-7.91	-7.91	10.76	7.23	3.59	-1.11
Agriculture & Farmland	\$186,207,895	1.35	0.61	-22.03	-22.03	-2.42	6.45	6.03	7.55
<i>S&P Global Agribusiness Equity Index TR</i>			2.71	-6.93	-6.93	5.66	9.45	6.99	
Diversifying Strategies	\$717,207,936	5.19	3.81	17.02	17.02	10.14	7.97	7.11	6.25
<i>Diversifying Strategies Blend⁶</i>			8.92	11.49	11.49	-0.60	4.84	4.31	3.67

¹ 45% Russell 3000, 20% MSCI ACWI ex USA IMI (net), 25% Bloomberg Barclays US Aggregate, and 10% Bloomberg Barclays Global Aggregate ex U.S.

² 50% Russell 2000, 50% MSCI EAFE Small Cap (net)

³ 100% CPI + 3%

⁴ 100% NCREIF ODCE Value Weighted

⁵ 50% DJ Brookfield Global Infrastructure Index, 50% Bloomberg Barclays Global Inflation-Linked

⁶ 25% Russell 3000, 10% MSCI ACWI ex U.S. IMI (net), 45% Bloomberg Barclays U.S. Aggregate, 20% Bloomberg Barclays Global Aggregate ex U.S.

PDA Funds

Program	Assets	Participants	Average Account Size	Weighted Average Fee	Default Option
DC/Hybrid Plan	\$1,311,312,620	36,655	\$35,774	0.41%	Retirement Strategies
HCSP	\$467,276,456	39,948	\$11,697	0.39%	Retirement Strategies
457 Program	\$399,554,809	12,688	\$31,491	0.42%	Retirement Strategies
MERS IRA	\$14,815,654	1,026	\$14,440	0.41%	Retirement Strategies
TOTAL	\$2,192,959,540	90,317	\$24,281		

Institutional Funds

Program	Assets	Municipalities	Average Account Size	Weighted Average Fee
RHFV	\$1,491,097,712	325	\$4,587,993	0.60%
ISP	\$52,619,089	5	\$10,523,818	0.60%
TOTAL	\$1,543,716,802	330	\$4,677,930	

Investment Allocations

	PDA	Institutional Funds	Total
Retirement Strategies	\$1,650,462,746		\$1,650,462,746
Total Market Fund	\$45,909,957	\$1,542,551,428	\$1,588,461,385
Asset Allocation Portfolios	\$42,228,000	\$254,747	\$42,482,747
Asset Specific funds	\$419,911,692	\$910,626	\$420,822,319
Self-directed Brokerage	\$8,402,618		\$8,402,618
Other	\$22,935,726		\$22,935,726
TOTAL	\$2,189,850,740	\$1,543,716,802	\$3,733,567,542

Program Highlights

- Completed RFP for Stable Value Fund (April 2023)
 - Transition to Voya will be completed (February 2024)
- Transitioned to Blackrock's LifePath Target Date Funds (May 2023)
- Transitioned from index options managed by SSGA to BNY (February 2024)

Current Research

- Recordkeeper RFP
- Researching adding a money market fund option to HCSP menu
- Reviewing investment menu and design

Retirement Strategies for PDA Accounts

MERS Retirement Strategies	Assets	Expense Ratio	1 Year	3 Year	5 Year	10 Year
LifePath Retirement	\$226,908,137	0.39%	10.91	0.43	5.59	4.44
LifePath 2025	\$220,523,999	0.40%	11.77	1.09	6.58	5.25
LifePath 2030	\$215,981,647	0.40%	14.01	2.21	7.81	6.00
LifePath 2035	\$220,450,106	0.40%	16.05	3.26	8.97	6.69
LifePath 2040	\$205,544,453	0.41%	18.06	4.22	10.02	7.30
LifePath 2045	\$178,324,961	0.41%	19.89	5.05	10.91	7.79
LifePath 2050	\$152,524,296	0.41%	21.00	5.52	11.38	8.02
LifePath 2055	\$124,565,030	0.41%	21.31	5.63	11.48	8.07
LifePath 2060	\$83,334,070	0.41%	21.33	5.62	11.48	
LifePath 2065	\$22,306,047	0.41%	21.27	5.59		
TOTAL	\$1,650,462,746					

Premium Select Options – Portfolios Built for You

MERS Portfolio Options	Assets	Expense Ratio	1 Year	3 Year	5 Year	10 Year
MERS Total Market Portfolio	\$1,588,767,830	0.70%	11.33	4.20	7.67	6.14
<i>MERS Policy Benchmark</i>			16.56	2.67	8.54	5.90
MERS Global Stock Portfolio (100/0)	\$16,667,891	0.37%	19.93	4.75	10.41	7.70
<i>Blended Benchmark</i>			22.20	5.75	11.72	7.93
MERS Established Market Portfolio (60/40)	\$14,660,142	0.39%	14.31	2.14	6.99	5.57
<i>Blended Benchmark</i>			15.37	2.21	8.03	6.37
MERS Diversified Bond Portfolio (0/100)	\$11,154,714	0.41%	6.05	-2.08	1.23	1.69
<i>Bloomberg U.S. Aggregate Bond Index</i>			5.53	-3.31	1.10	1.81
TOTAL	\$1,631,250,578					

Premium Select Options – Funds to Build Your Own Portfolio

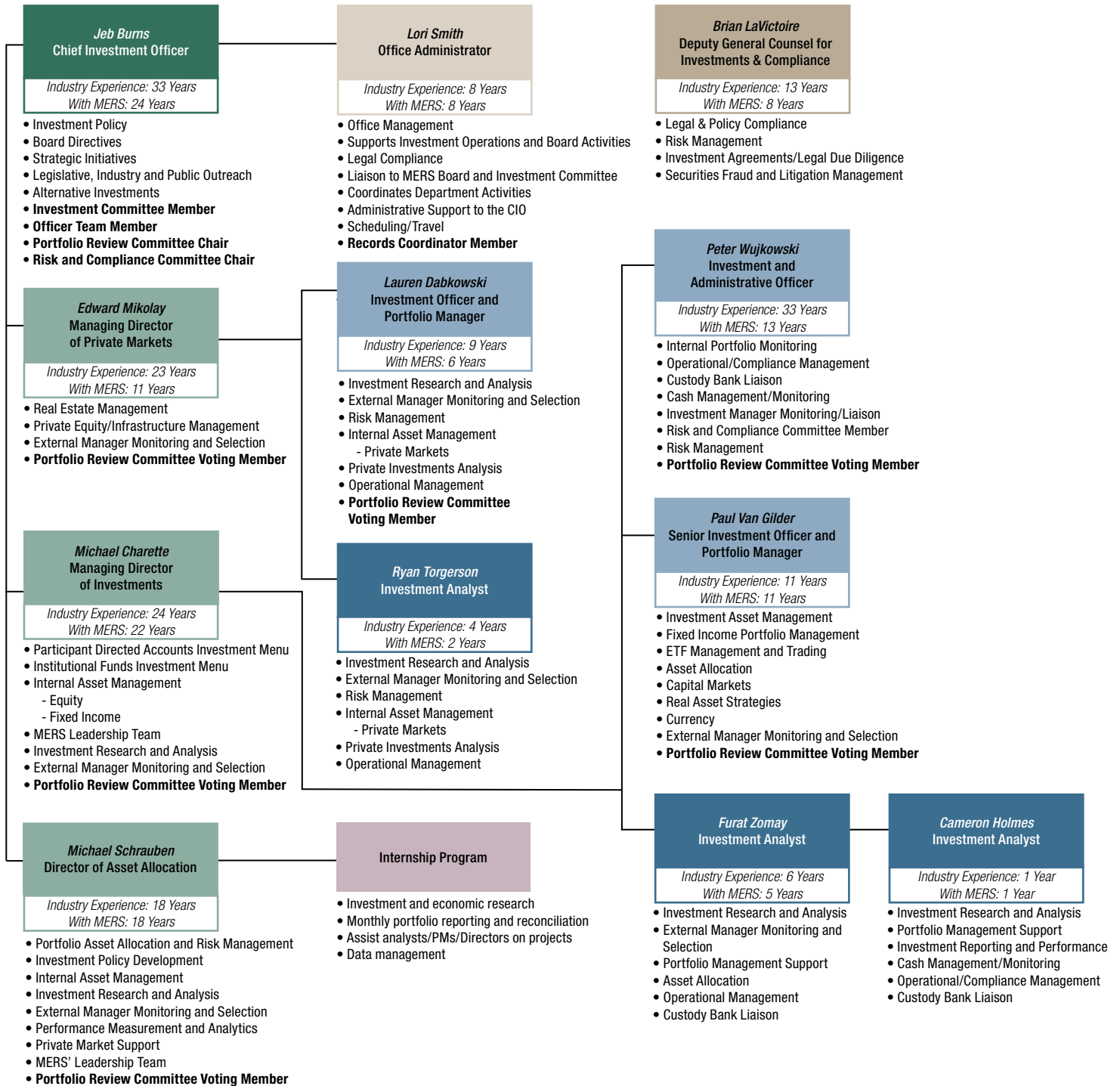
MERS Portfolio Options	Assets	Expense Ratio	1 Year	3 Year	5 Year	10 Year
Large Cap Stock Index Fund	\$211,906,758	0.36%	25.77	9.64	15.27	11.59
<i>S&P 500 Index</i>			26.29	10.00	15.69	12.03
Mid Cap Stock Index	\$44,122,358	0.38%	15.99	7.72	12.23	9.01
<i>S&P 400 Index</i>			16.44	8.09	12.62	9.27
Small Cap Stock Index	\$26,074,666	0.39%	15.09	6.73	10.88	
<i>S&P 600 Index</i>			16.05	7.28	11.03	
International Stock Index	\$18,802,364	0.36%	18.62	3.64	7.44	3.78
<i>MSCI EAFE Net Dividend Index</i>			18.24	4.02	8.16	4.28
Emerging Market Stock	\$4,685,661	0.53%	11.73	-4.48	3.79	2.53
<i>Blended Benchmark</i>			9.83	-5.08	3.68	2.61
Real Estate Stock	\$6,214,318	0.38%	13.99	6.96	6.87	7.42
<i>Dow Jones U.S. Select REIT Index</i>			13.96	7.18	6.12	7.00
Bond Index	\$18,548,138	0.35%	5.26	-3.65	1.09	1.51
<i>Bloomberg U.S. Aggregate Bond Index</i>			5.53	-3.31	1.10	1.81
High Yield Bond	\$6,013,562	0.47%	13.03	1.26	4.52	3.87
<i>Bloomberg U.S. High Yield Net Return Index</i>			-13.60	-0.70	1.49	3.61
Short-Term Income	\$19,358,925	0.38%	4.50	0.44	1.51	1.02
<i>Bloomberg U.S. Treasury: 1-3 Year</i>			4.29	-0.10	1.28	1.04
Stable Value	\$65,095,567	0.85%	2.46	1.92	2.08	1.98
<i>ICE BofA US 3 Month Treasury Bill Index G001</i>			5.05	2.17	1.89	1.26
TOTAL	\$420,822,319					

APPENDIX

Investment Decision Making Roles and Responsibilities

<p>MERS BOARD</p>	<ul style="list-style-type: none"> • Is the System's fiduciary; • Appoints public members with investment expertise to serve on the Investment Committee; • Appoints one Board member for two years to observe Investment Committee meetings (observer does not have voting privileges); • Monitors activity of the Investment Committee; • Approves investment governance documents (Investment Guidelines, Defined Benefit Investment Policy Statement, and Participant Directed Accounts & Institutional Funds Investment Policy Statement); • Sets the Portfolio's asset class allocation ranges; • Establishes the long-term actuarial investment return assumption; and • Approves the Portfolio's Policy Benchmark.
<p>INVESTMENT COMMITTEE</p>	<ul style="list-style-type: none"> • Contains three voting Board members, including two public members with investment expertise; • Includes CEO and CIO (both non-voting members); • Serves as the Board's investment policy development arm; • Monitors investment management activity and policy recommendations developed by the Office of Investments; • Approves PRC investment recommendations to hire/terminate investment managers; • Approves investments above PRC discretionary size limits; • Provides advice on investment activities including: industry best practices, fiduciary duties, and Portfolio risk expectations of the Board; and • Monitors Portfolio risk, asset allocation, and investment performance.
<p>PORTFOLIO REVIEW COMMITTEE</p>	<ul style="list-style-type: none"> • Office of Investment's decision-making body chaired by the CIO and consisting of Office staff; • Voting members are appointed by the CIO; • Reports decisions and provides recommendations to the Investment Committee; • Determines and implements the Portfolio's asset allocation within Board-approved allocation ranges; • Approves and implements investments up to discretionary size limits provided in this Policy; and • Develops and maintains PRC operating guidelines.
<p>OFFICE OF INVESTMENTS</p>	<ul style="list-style-type: none"> • Carries out all investment activity on behalf of the System; including policy documentation for Board approval; • Hires/terminates investment consultants, vendors, and the custodial bank with CEO approval; • Provides a quarterly report on the Portfolio's investment activities, allocation, and performance; • Reports any material changes within the Portfolio to the Investment Committee and the Board; • Internally manages a portion of the Portfolio across both Public and Private Investments; • Monitors performance and determines courses of action for external investment managers; • Monitors compliance with statutory, regulatory, and policy limitations; • Trade execution, settlement, and daily cash movements as needed; and • Conducts its affairs in a manner that reflects the highest standards of ethical conduct, and complies with CFA Institute Code of Ethics and Standards of Professional Conduct (Appendix).
<p>MERS' INVESTMENT MANAGEMENT RISK AND COMPLIANCE COMMITTEE</p>	<ul style="list-style-type: none"> • Provides investment and compliance oversight outside of the Office of Investments; • Monitors operational, market, and regulatory issues that may materially impact portfolio performance or put MERS at risk of regulatory sanctions; • Promotes cross-office discussion regarding varying potential risks including prevention and solutions; and • Consists of CEO, CIO, Financial Officer, Deputy General Counsel for Investments and Compliance, Internal Auditor, Investment and Administrative Officer, and Analysts from the Office of Investments.

Organizational Chart



Guiding Principles

- Collaborative team environment
- Robust collegial debate and cognitive diversity is critical
- Progressive and willing to deviate from conventional wisdom
- Commitment to continuous improvement and efficiency gains
- Relentless pursuit of fiduciary excellence

This publication is designed to provide descriptive information only. Investors should research all possible investment choices. Please make independent investment decisions carefully and seek the assistance of independent experts where appropriate. We recommend investors define their goals, risk tolerance, time horizon, and investment objectives to determine whether this fund is appropriate for you.

Investors should read the fund summary sheets and carefully consider the investment objective, risks, and fees of the fund before investing. The fund summary sheets may be found on the MERS website at www.mersofmich.com. To request the fund summary sheets, please contact the MERS Service Center at 800.767.6377.

This publication contains a summary description of MERS benefits, policies or procedures. MERS has made every effort to ensure that the information provided is accurate and up to date as of 09/30/2023. If this publication conflicts with the relevant provisions of the Plan Document, the Plan Document Controls. MERS, as a governmental plan, is exempted by state and federal law from registration with the SEC. However, it employs registered investment advisors to manage the trust fund in compliance with Michigan Public Employee Retirement System Investment Act. Past performance is not a guarantee of future returns. Please make independent investment decisions carefully and seek the assistance of independent experts when appropriate.

