



QUARTERLY INVESTMENT REPORT

December 2021



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In the meantime, cling tooth and nail to the following rule: not to give in to adversity, not to trust prosperity, and always take full note of fortune's habit of behaving just as she pleases.

— Seneca, Author

MERS' Portfolio Characteristics

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

MERS' Office of Investments Goals

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

Economic and Market Summary

The U.S. equity market continued to rise during the fourth quarter as it capped off a remarkable year. The S&P 500 recorded 70 closing highs throughout 2021, the most since 1955, despite the concerns over the emergence of several Covid-19 variants and the prospects of tighter central bank policy. U.S. large caps were the best performing asset class as the index returned 11.02% for Q4 and 28.68% on year. Performance can be partially attributed to strong earnings growth which came in at approximately 49% for 2021 and 22% for Q4. U.S. mid and small caps came in strong as well as they rose 7.97% and 5.59% respectively for the quarter. U.S. economic growth slowed slightly in Q3 as quarter over quarter GDP growth rose 2.30%, but it bounced back in Q4 as it came in at 6.90%. Inflation has continued to run hot as the CPI index has rose 7% over the past year – the highest since 1982. At its December meeting, the Federal Reserve began plans to start tapering its monthly bonds purchases and also indicated that there may be three interest rate hikes in 2022 to combat persistent inflationary pressures. The central bank notably abandoned the word “transitory” to describe inflation as pricing pressures continue to build across a broad number of sectors in the economy, exacerbated by global supply chain issues. The Fed is widely recognized to be behind the curve on addressing inflation and markets will continue to focus intensely on the number of rate hikes in 2022 and plans for balance sheet reduction. The monthly jobs report disappointed in December with 199,000 jobs added versus the expectations of 422,000. The unemployment rate fell to a pandemic-era low of 3.9%. Globally, developed markets have lagged the U.S. due to slower growth, but still maintained positive returns as the MSCI EAFE index rose 2.74% on the quarter. In emerging markets, headwinds of the U.S. dollar strengthening and economic issues in China led to the index returning -1.36% for the quarter.

Portfolio Performance Review

MERS' Total Portfolio returned 3.24% (net) for the fourth quarter and underperformed the Policy Benchmark by 113 bps. The Global Equity portfolio returned 4.70%, underperforming the global equity policy blend by 220 bps due to an underweight in U.S. equities and overweight to international and emerging market equities. Within U.S. equities, MERS outperformed the Russell 3000 benchmark by 115 bps due to allocation to multifactor strategies and to active management in micro-cap. The MERS Emerging Market portfolio outperformed its respective index due to an allocation in small cap. The Global Fixed Income portfolio returned -0.31% on the quarter, outperforming the global fixed income policy blend by 2 bps. The Liquid Natural Resources portfolio, designed to protect MERS' assets from rising inflation, continues to benefit from a rising inflationary environment and returned 7.07% on the quarter. The Private Investments portfolio delivered positive absolute returns of 3.36%. Private Equity was the top performer in this portfolio returning 4.45% and ending the year up 48.28%. MERS finished the year with strong absolute returns of 14.13%, outperforming the policy benchmark by 252bps as portfolio diversification and MERS asset allocation were positive contributors. MERS' Defined Benefit (DB) portfolio assets are \$12.35 billion and MERS' total assets are \$15.78 billion.

Risks and Trends

Economic Risks

- Covid-19 resurgence
- Monetary policy mistakes
- Corporate/government debt levels
- Eurozone instability
- Fiscal policy implementation
- Supply-chain disruptions

Medium-Term Trends

- Rise of populism
- Investment industry consolidation
- Rise of passive investing
- 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

Projects and Initiatives

- Incorporating ETFs into the asset allocation program and internal strategies
- Researching the role of active management in sub-asset classes
- 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 Barclays US Aggregate, and 10% Bloomberg Barclays Global Aggregate ex U.S.

Asset Class Valuation Summary

Value/Price Discrepancy¹

Asset Class	Overvalued	Undervalued
US Equity	-39.80%	
Europe Equity		16.20%
Japan Equity		59.10%
EM Equity		50.20%
US Treasury	-2.40%	
EMD		0.20%
US IG	-9.60%	
US HY	-10.40%	

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

- Given the large rally in the market, valuation multiples have been stretched to even higher levels in the U.S. and current earnings remain above estimated trend earnings as a result of cyclically high profit margins, low interest rates, and lower corporate taxes.
- 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 Europe, Japan, and Emerging Markets
- European and Japanese earnings are currently below trend which is expected to drive higher returns going forward 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

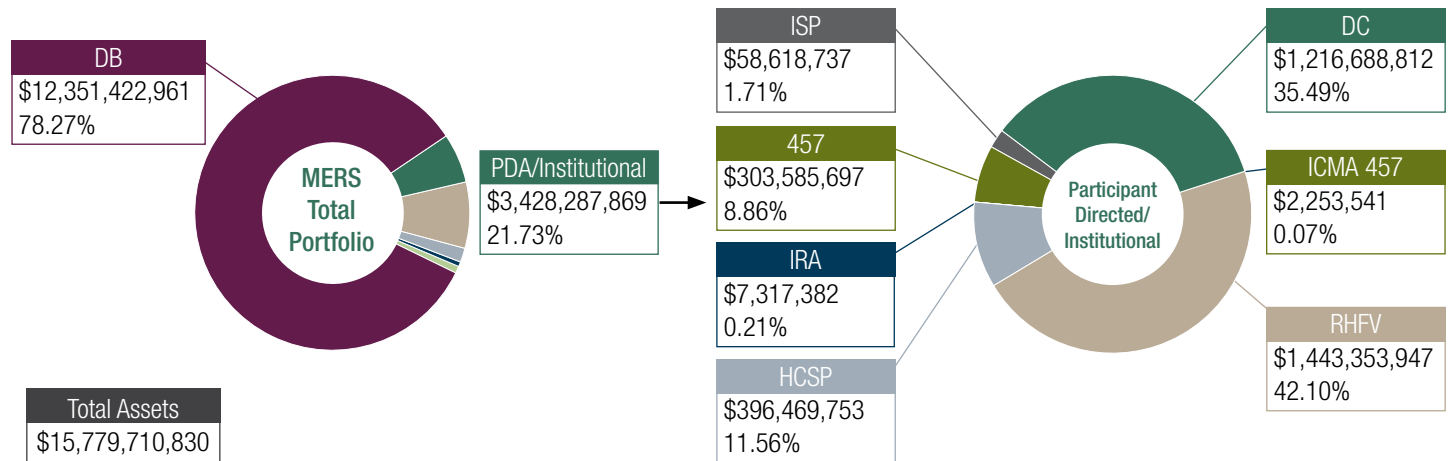
- Most fixed income asset classes are currently overvalued due to current market interest rates being lower than MERS' long-term assumptions
- Emerging Markets Debt spreads are near fair value and the asset class is now modestly undervalued as spreads widened.
- U.S. Investment Grade and High Yield bonds are the most overvalued due to the current historically low credit spreads and yields in those asset classes.

Chart of the Quarter Source: Callan

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gbl ex-U.S. Fixed	Emerging Market Equity	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
22.37%	59.82%	37.96%	34.00%	42.12%	39.38%	5.24%	78.51%	26.85%	7.84%	27.73%	38.82%	15.02%	1.38%	21.31%	37.28%	1.87%	31.49%	19.96%	28.71%
U.S. Fixed Income	Small Cap Equity	Emerging Market Equity	Real Estate	Emerging Market Equity	Dev ex-U.S. Equity	Gbl ex-U.S. Fixed Income	High Yield	Real Estate	High Yield	Emerging Market Equity	Large Cap Equity	Large Cap Equity	U.S. Fixed Income	High Yield	Dev ex-U.S. Equity	U.S. Fixed Income	Small Cap Equity	Large Cap Equity	Real Estate
10.26%	47.26%	16.35%	32.17%	12.44%	4.93%	58.21%	19.63%	4.98%	19.23%	13.69%	0.55%	17.13%	17.13%	13.69%	0.55%	26.53%	19.46%	26.09%	14.82%
Real Estate	Real Estate	Dev ex-U.S. Equity	Dev ex-U.S. Equity	U.S. Fixed Income	U.S. Fixed Income	Cash Equivalent	Emerging Market Equity	Gbl ex-U.S. Fixed Income	Emerging Market Equity	Gbl ex-U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	Cash Equivalent	Large Cap Equity	Large Cap Equity	High Yield	Dev ex-U.S. Equity	Emerging Market Equity	Small Cap Equity
2.82%	40.69%	20.38%	14.47%	25.71%	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%
Cash Equivalent	Dev ex-U.S. Equity	Small Cap Equity	Large Cap Equity	Small Cap Equity	U.S. Fixed Income	Dev ex-U.S. Equity	High Yield	Large Cap Equity	High Yield	Small Cap Equity	High Yield	Real Estate	Real Estate	Emerging Market Equity	Small Cap Equity	Gbl ex-U.S. Fixed Income	Real Estate	Gbl ex-U.S. Fixed Income	Dev ex-U.S. Equity
-1.78%	39.42%	18.33%	4.91%	18.37%	6.97%	-26.16%	33.87%	15.12%	2.11%	16.35%	7.44%	4.89%	-0.79%	11.19%	14.85%	-2.15%	21.91%	10.11%	12.62%
High Yield	High Yield	Gbl 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	Dev ex-U.S. Equity	Real Estate	Gbl ex-U.S. Fixed Income	Large Cap Equity	Emerging Market Equity	Dev ex-U.S. Equity	High Yield
-1.37%	28.97%	12.54%	4.85%	15.79%	5.49%	-33.79%	27.17%	15.06%	0.10%	16.00%	3.67%	2.45%	-3.04%	4.06%	10.36%	-5.63%	18.44%	7.59%	6.29%
Emerging Market Equity	Large Cap Equity	High Yield	Cash Equivalent	High Yield	Cash Equivalent	Large Cap Equity	Large Cap Equity	Dev ex-U.S. Equity	Small Cap Equity	High Yield	Cash Equivalent	Cash Equivalent	Small Cap Equity	Dev ex-U.S. Equity	Real Estate	Real Estate	High Yield	U.S. Fixed Income	Cash Equivalent
-6.16%	28.68%	11.13%	3.07%	11.85%	5.00%	-37.00%	26.47%	8.95%	-4.18%	15.81%	0.07%	0.93%	-4.41%	2.75%	10.36%	-5.63%	14.32%	7.51%	0.05%
Dev ex-U.S. Fixed Income	U.S. Fixed Income	High Yield	U.S. Fixed Income	High Yield	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	Real Estate	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	High Yield	Small Cap Equity	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income
-19.88%	19.35%	10.83%	2.74%	8.16%	1.87%	-49.56%	7.53%	6.54%	-5.46%	4.21%	-2.02%	-2.19%	-4.47%	2.65%	7.50%	-11.91%	8.72%	7.11%	-1.54%
Small Cap Equity	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	Cash Equivalent	Real Estate	U.S. Fixed Income	U.S. Fixed Income	Dev ex-U.S. Equity	Gbl ex-U.S. Fixed Income	Gbl ex-U.S. Fixed Income	Gbl ex-U.S. Fixed Income	Gbl ex-U.S. Fixed Income	Gbl ex-U.S. Fixed Income	Gbl ex-U.S. Fixed Income	Gbl ex-U.S. Fixed Income	Dev ex-U.S. Equity	Gbl ex-U.S. Fixed Income	Gbl ex-U.S. Fixed Income	Cash Equivalent
-20.48%	4.10%	4.34%	2.43%	4.85%	-1.57%	-48.21%	5.93%	4.95%	-12.21%	4.09%	-3.09%	-3.09%	-4.92%	1.49%	-5.02%	-14.09%	5.09%	0.67%	-2.54%
Large Cap Equity	Cash Equivalent	Cash Equivalent	Gbl ex-U.S. Fixed Income	U.S. Fixed Income	Real Estate	Emerging Market Equity	Cash Equivalent	Cash Equivalent	Emerging Market Equity	Cash Equivalent	Gbl ex-U.S. Fixed Income	Dev ex-U.S. Equity	Emerging Market Equity	Cash Equivalent	Cash Equivalent	Emerging Market Equity	Cash Equivalent	Real Estate	Gbl ex-U.S. Fixed Income
22.10%	1.15%	1.33%	8.65%	4.33%	-7.39%	-50.33%	0.21%	0.13%	-10.42%	0.11%	-3.98%	-4.32%	-14.92%	0.33%	0.86%	14.51%	2.23%	-8.04%	-7.88%

Large cap equity and real estate were the top performing asset classes this year returning 28.71% and 26.09% respectively. This is a year after real estate was the worst performer in 2020 coming in at -9.04%. We also see that emerging market equity was the third best asset class in 2020 and in 2021 it finished as one of the worst performing asset classes. The table highlights uncertainty in all areas of the capital markets as mean reversion remains a powerful force in markets. As a result, MERS continues to maintain a diversified portfolio and has positioned it to tilt away from overvalued asset classes such as U.S. equities into undervalued asset classes such as emerging markets.

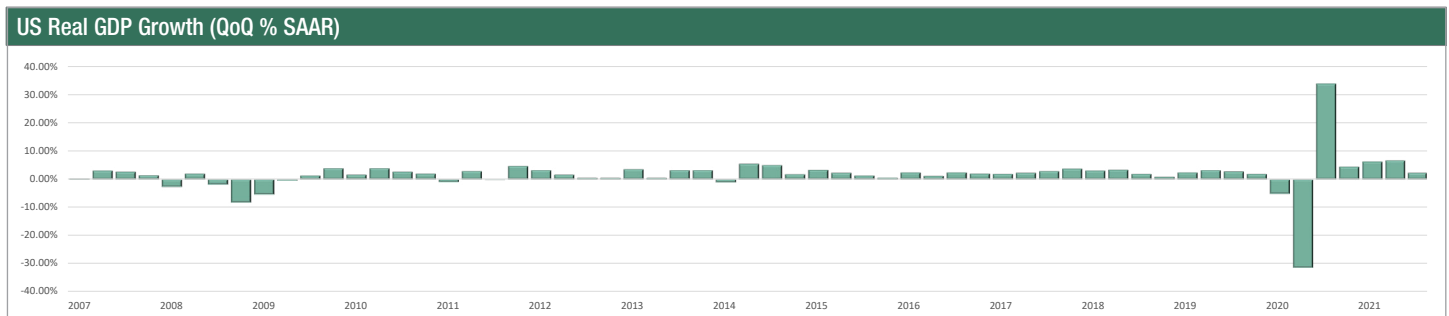
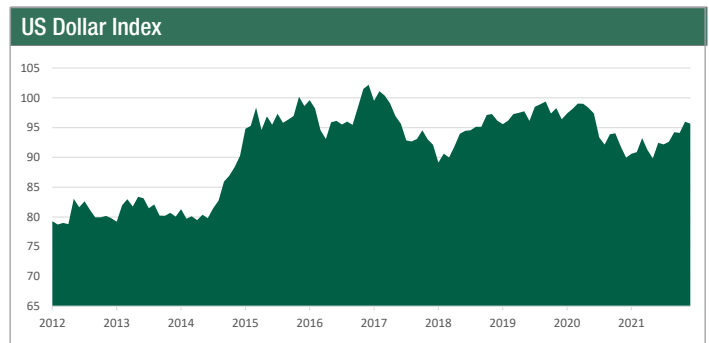
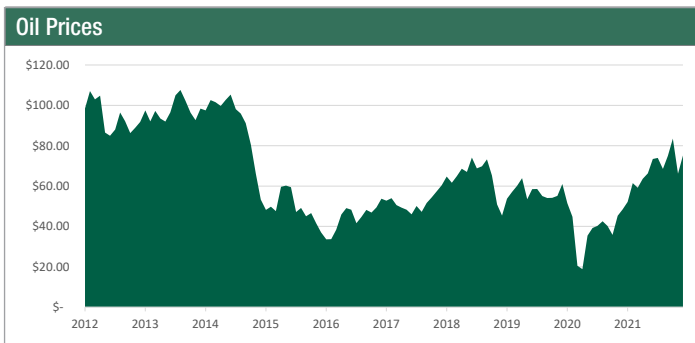
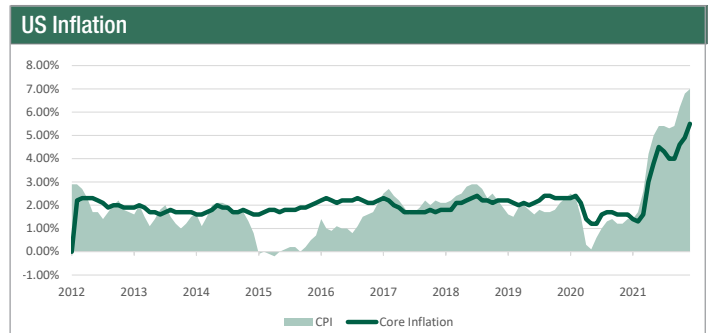
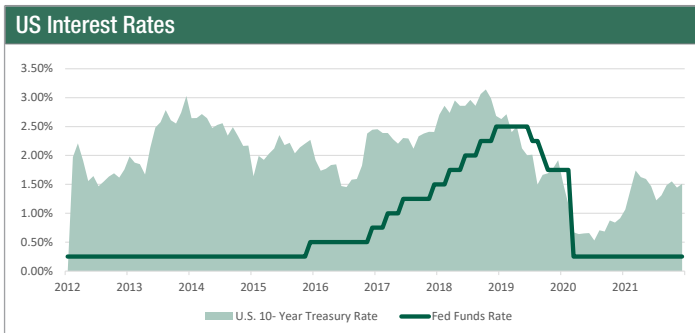
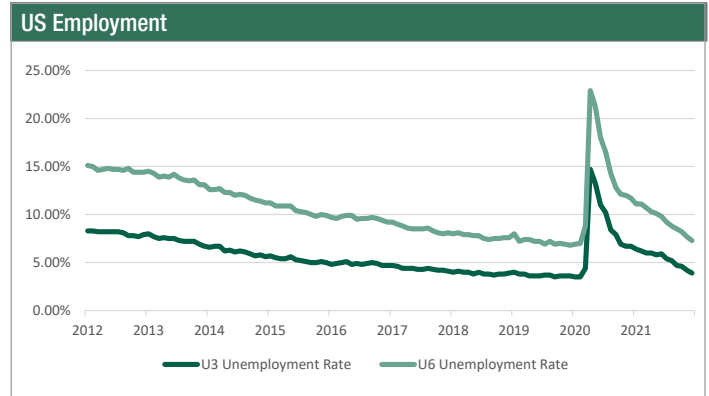
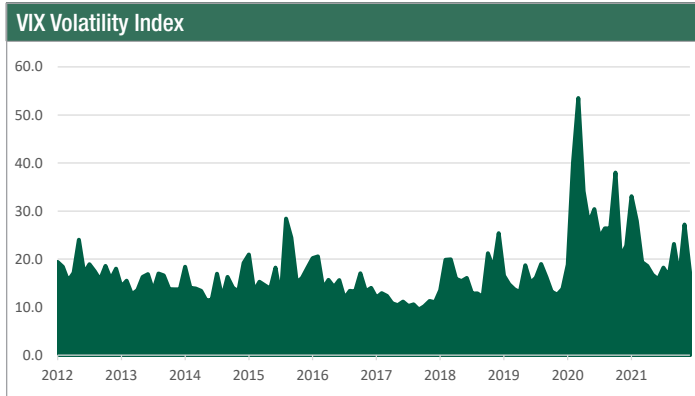
Assets by Program



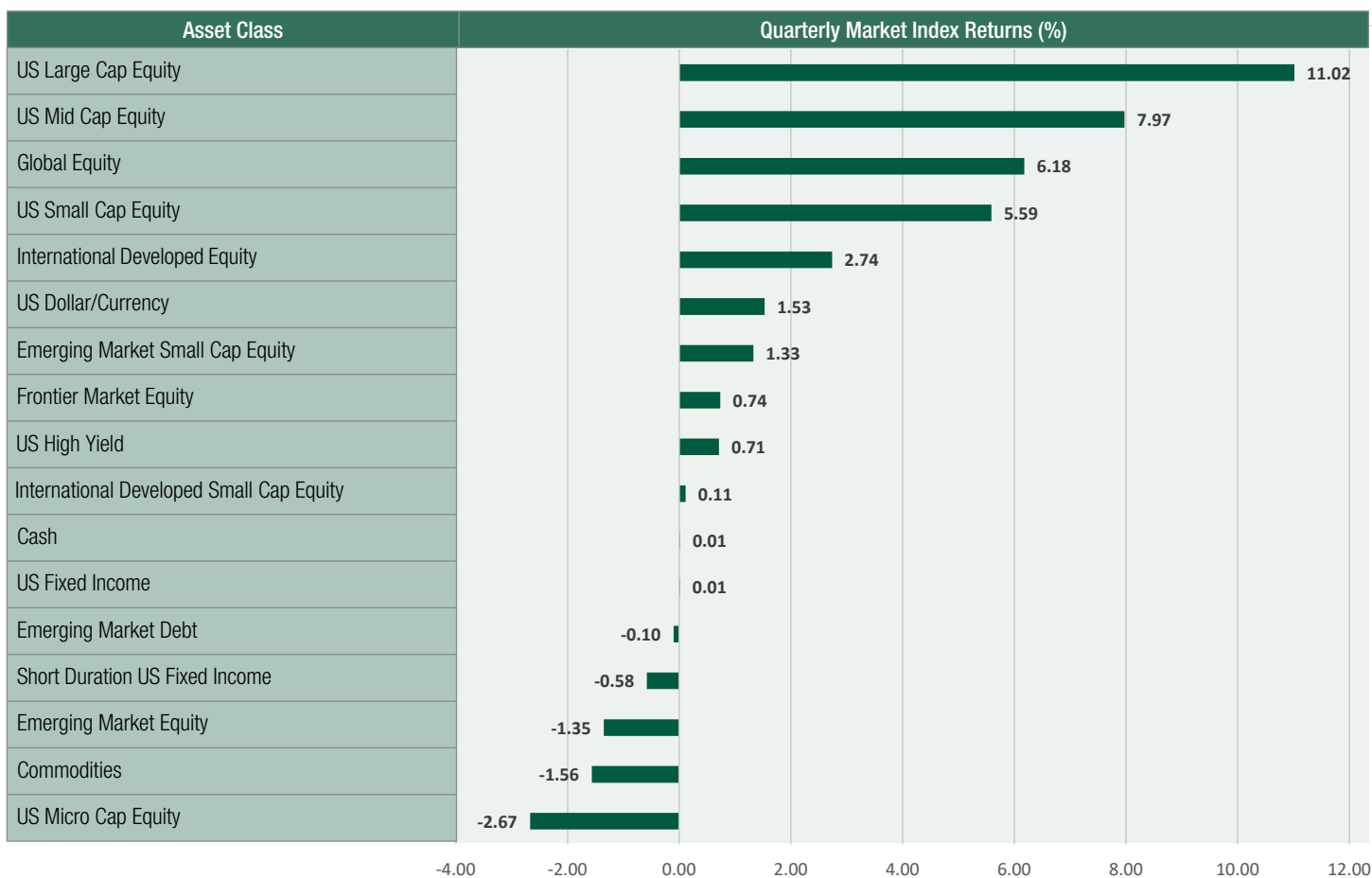
Market Indicators	Current	Prior Quarter
10 Year Treasury Yield	1.51%	1.49%
Fed Funds Rate	0.25%	0.25%
Crude Oil	\$75.2 /barrel	\$75.0 /barrel
Gold	\$1,829.2 /oz.	\$1,757.0 /oz.
30 Year Fixed Mortgage Rates	3.27%	3.18%
US Investment Grade Credit Spread	0.92%	0.84%
US High Yield Credit Spread	2.83%	2.89%
US Leading Economic Indicators	9.80%	9.40%

Economic Releases	Current	Prior Quarter
ISM Manufacturing	58.70	61.10
ISM Non-Manufacturing	62.00	61.90
U of M Consumer Sentiment	70.60	72.80
US Real GDP*	4.90%	12.20%
Eurozone Real GDP*	3.90%	14.40%
UK GDP*	6.80%	24.20%
Japan GDP*	1.20%	7.30%
China GDP*	4.90%	7.90%

* All GDP data is lagged 1 quarter

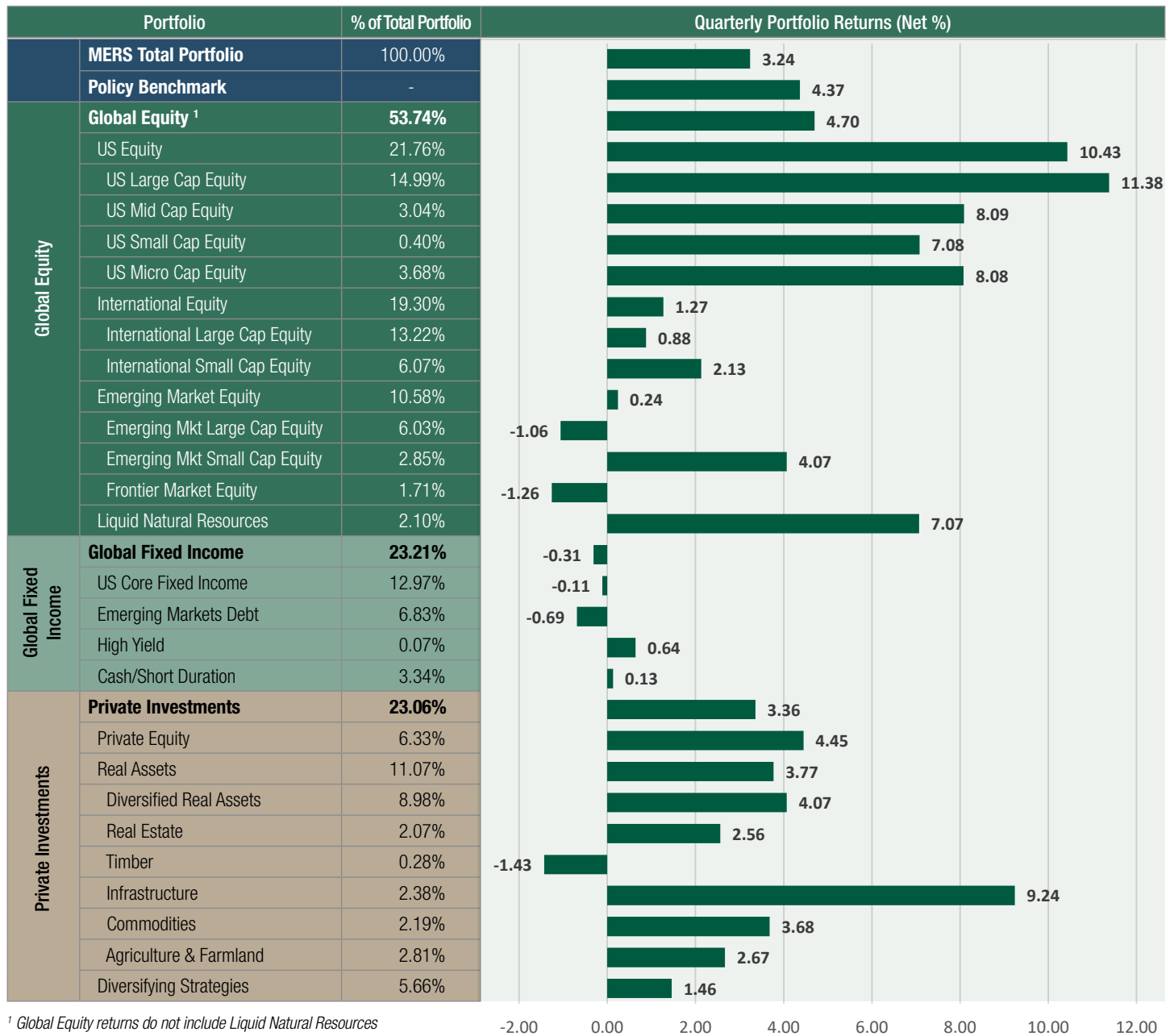


Quarterly Market Performance Review



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	11.02	28.68	28.68	26.05	18.46	14.92	16.54
S&P 400	US Mid Cap Equity	7.97	24.73	24.73	21.38	13.07	11.80	14.18
S&P 600	US Small Cap Equity	5.59	26.74	26.74	20.06	12.36	12.06	14.45
Russell Microcap	US Micro Cap Equity	-2.67	19.31	19.31	20.87	11.69	10.28	13.63
MSCI EAFE	International Developed Equity	2.74	11.86	11.86	14.18	10.16	7.35	8.64
MSCI EAFE Small Cap	International Developed Small Cap Equity	0.11	10.51	10.51	16.07	11.46	9.92	11.18
MSCI ACWI IMI	Global Equity	6.18	18.70	18.70	20.81	14.71	11.41	12.46
MSCI Emerging Markets	Emerging Market Equity	-1.35	-2.46	-2.46	11.25	10.21	6.48	5.84
MSCI Emerging Markets Small Cap	Emerging Market Small Cap Equity	1.33	18.98	18.98	16.73	11.73	7.56	7.66
MSCI Frontier Markets Index	Frontier Market Equity	0.74	19.88	19.88	12.85	9.63	4.80	7.30
BBG Barclays U.S. Aggregate	US Fixed Income	0.01	-1.54	-1.54	4.79	3.57	3.00	2.90
JPMorgan EMBI Global Diversified Index	Emerging Market Debt	-0.10	-2.32	-2.32	5.20	4.04	4.41	4.86
ICE BofA Merrill Lynch Global High Yield	US High Yield	0.71	5.28	5.28	8.83	6.30	6.15	6.83
91 Day Treasury Bill	Cash	0.01	0.04	0.04	0.93	1.08	0.81	0.58
BBG Barclays 1-3 Year Treasury	Short Duration US Fixed Income	-0.58	-0.60	-0.60	2.03	1.61	1.36	1.09
Bloomberg Commodity Index Total Return	Commodities	-1.56	27.11	27.11	9.86	3.66	0.11	-2.85
Bloomberg Dollar Spot Index	US Dollar/Currency	1.53	6.37	6.37	-0.52	-1.31	0.83	1.78



¹ Global Equity returns do not include Liquid Natural Resources

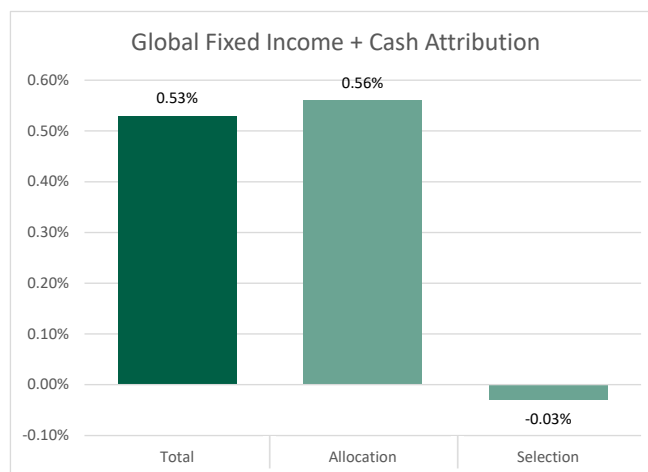
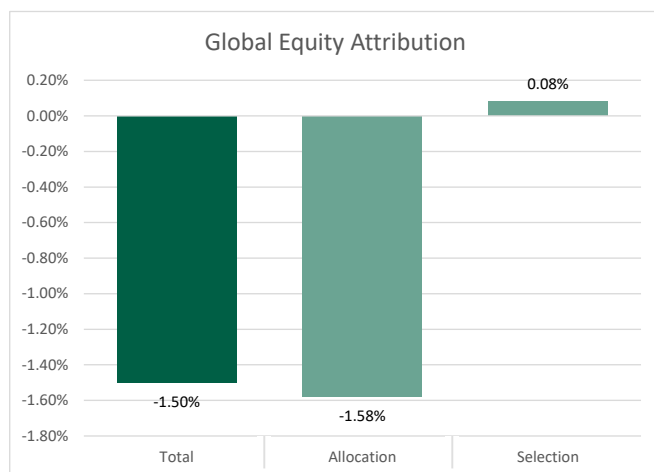
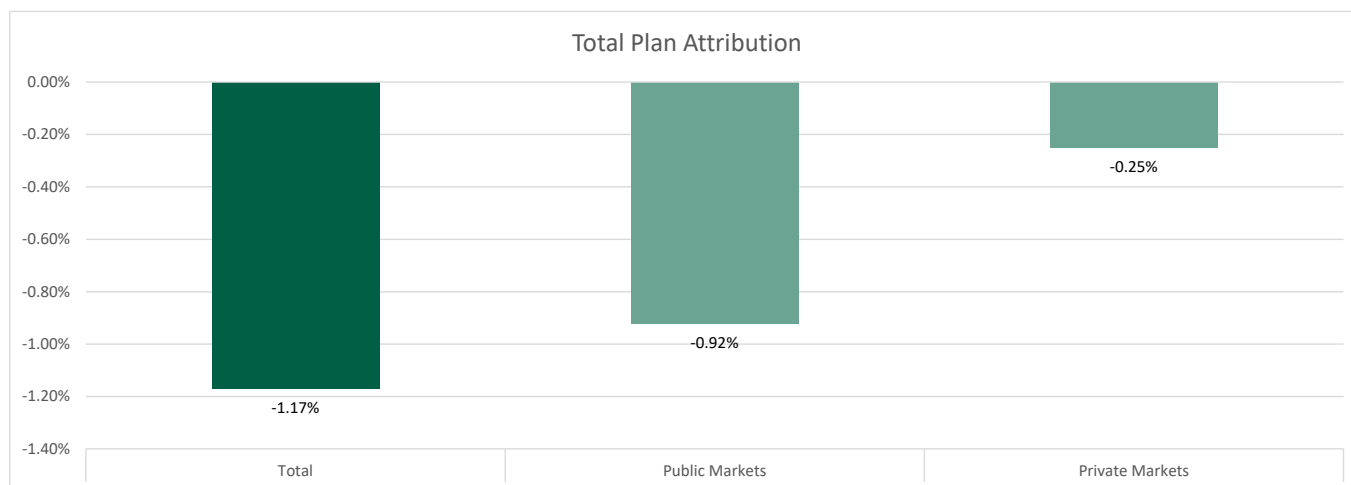
QUARTERLY PORTFOLIO ATTRIBUTION SUMMARY

2021
DECEMBER

	Avg Weight			Return (Net)			Attribution Totals		
	Port	BM	Diff	Port	BM	Diff	Allocation	Selection	Total
Total Plan	100.00%	100.00%	0.00%	3.24%	4.41%	-1.17%	-1.03%	-0.14%	-1.17%
Public Markets	77.46%	100.00%	-22.54%	3.23%	4.41%	-1.18%	-1.02%	0.11%	-0.92%
Global Equity ¹	53.41%	65.00%	-11.59%	4.70%	6.95%	-2.25%	-1.58%	0.08%	-1.50%
U.S. Equity	21.03%	45.00%	-23.97%	10.42%	9.28%	1.14%	-1.17%	0.24%	-0.94%
International Equity	19.47%	15.00%	4.47%	1.27%	2.71%	-1.44%	-0.09%	-0.29%	-0.38%
Emerging Market Equity	10.83%	5.00%	5.83%	0.24%	-0.99%	1.23%	-0.32%	0.14%	-0.19%
Liquid Natural Resources	2.08%	0.00%	2.08%	7.03%	4.37%	2.66%	0.00%	0.05%	0.05%
Global Fixed Income	20.46%	35.00%	-14.54%	-0.31%	-0.33%	0.02%	0.71%	-0.03%	0.68%
U.S. Core Fixed Income	13.38%	25.00%	-11.62%	-0.11%	0.01%	-0.12%	0.50%	-0.02%	0.48%
Global Agg ex USD	0.00%	10.00%	-10.00%	0.00%	-1.18%	1.18%	0.56%	0.00%	0.56%
Emerging Markets Debt	7.01%	0.00%	7.01%	-0.69%	-0.44%	-0.25%	-0.35%	-0.02%	-0.36%
U.S. High Yield	0.07%	0.00%	0.07%	0.64%	0.71%	-0.07%	0.00%	0.00%	0.00%
Cash	3.59%	0.00%	3.59%	0.13%	0.01%	0.12%	-0.15%	0.00%	-0.15%
Private Investments	22.54%	0.00%	22.54%	3.32%	4.37%	-1.05%	-0.01%	-0.24%	-0.25%

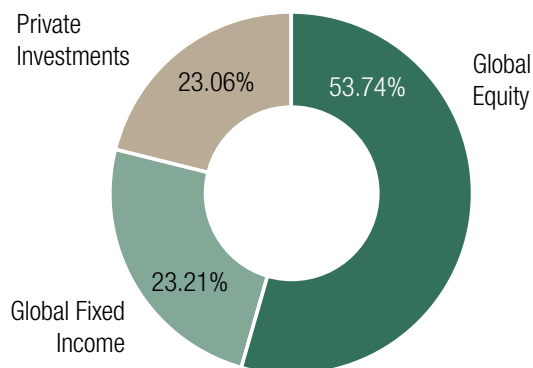
¹ Global Equity returns do not include Liquid Natural Resources

- Performance was driven by Global Equity portfolio (-158bps) and Global Fixed Income (+68bps).
- Underweight to U.S. was the largest detractor for the quarter (-94bps).
- Underweight to Global Agg ex USD and underweight to U.S. Core Fixed Income were the largest contributors (+56bps & +48bps).

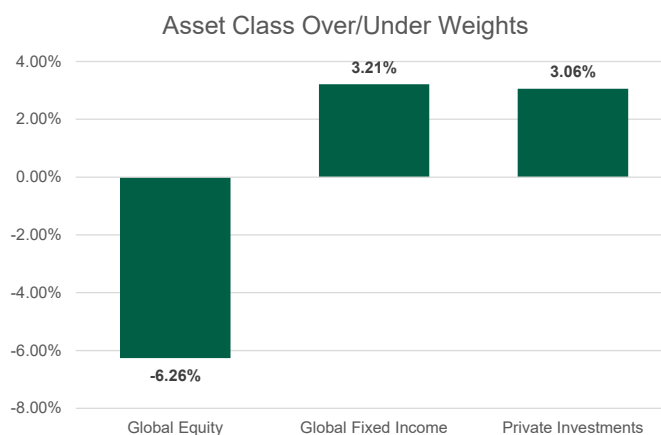


Asset Class	Market Value	% of Fund	Base Allocation	Over/Under Weight	Minimum Allocation	Maximum Allocation
Global Equity	\$7,467,855,536	53.74%	60.00%	-6.26%	30.00%	70.00%
Global Fixed Income	\$3,225,829,795	23.21%	20.00%	3.21%	10.00%	60.00%
Private Investments	\$3,204,622,696	23.06%	20.00%	3.06%	No Minimum	30.00%
Total	\$13,898,308,027	100.00%	100.00%			

Asset Allocation

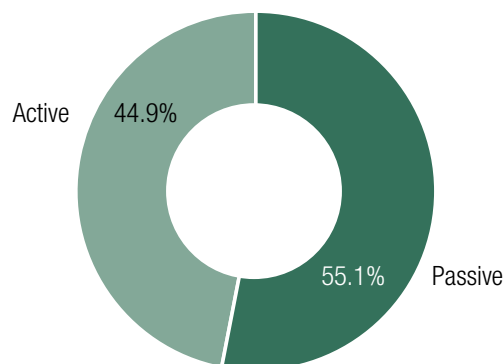


Asset Class Over/Under Weights



Asset Class	MERS Public Markets ¹	Policy Benchmark ²	Over/Under Weight
U.S. Equity	31.00%	45.00%	-14.00%
Europe Equity	14.74%	8.72%	5.88%
Japan Equity	10.34%	3.32%	7.18%
Emerging Market Equity	13.75%	7.96%	5.77%
U.S. Treasury	16.83%	19.86%	-3.03%
U.S. Investment Grade	0.05%	15.14%	-14.77%
U.S. High Yield	0.11%	0.00%	0.11%
Emerging Market Debt	8.88%	0.00%	8.88%
Cash/Short Duration	3.83%	0.00%	3.83%

MERS Public Markets

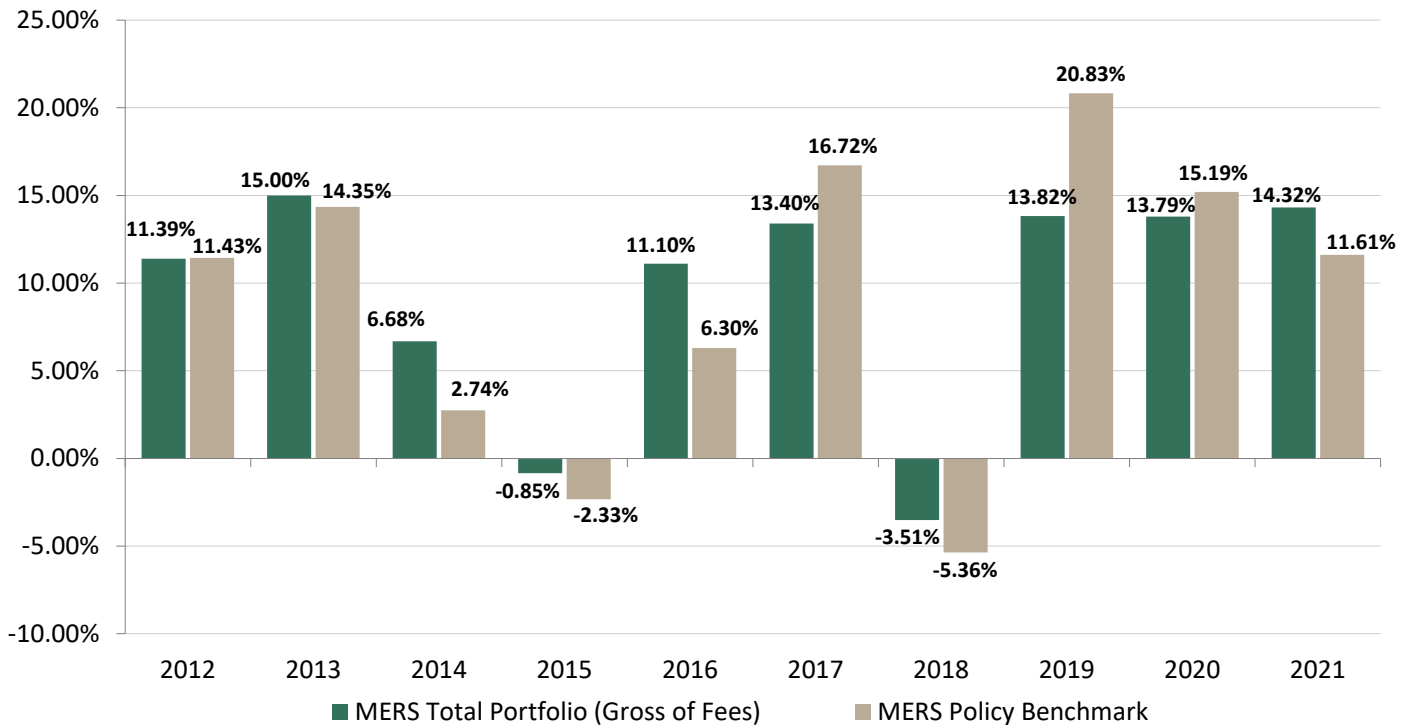


¹ MERS' Public Markets is made up of the Global Equity and Global Fixed Income Asset Classes

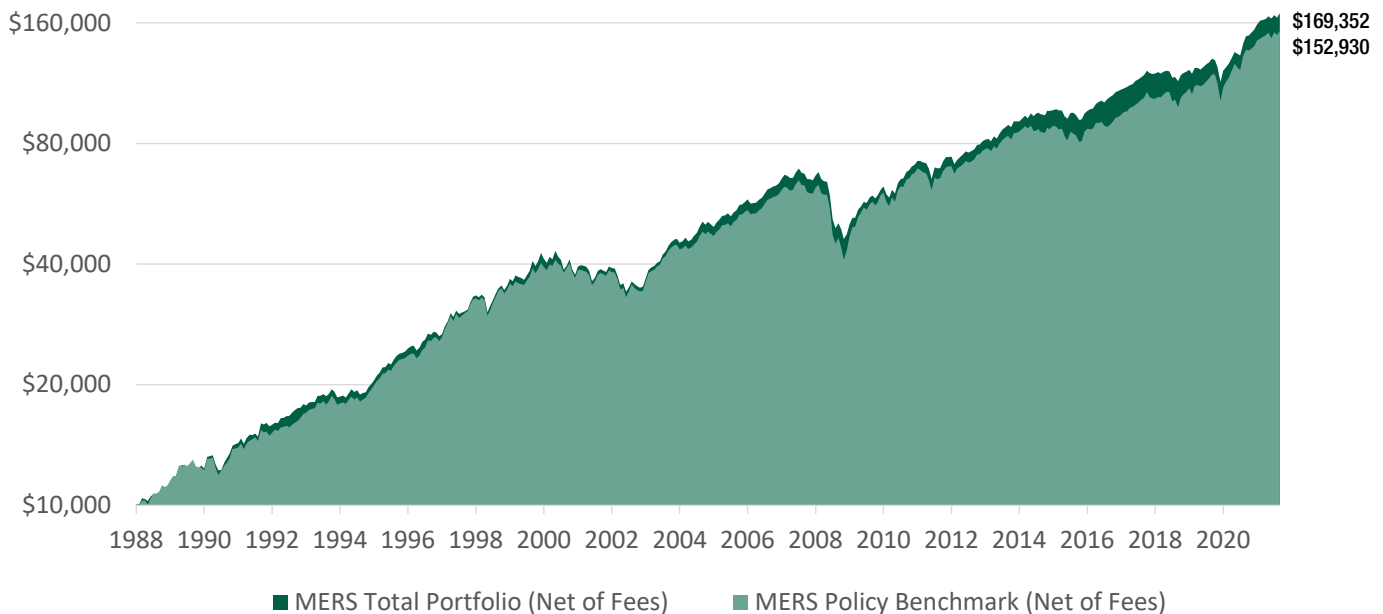
² 45% Russell 3000, 20% MSCI ACWI ex USA IMI (net), 25% Bloomberg Barclays US Aggregate, and 10% Bloomberg Barclays Global Aggregate ex U.S.

	QTD	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
MERS Total Portfolio - Gross of Fees (%)	3.32	14.32	14.32	13.97	10.13	8.63	9.32
MERS Total Portfolio - Net of Fees (%)	3.24	14.13	14.13	13.81	9.96	8.43	9.11
Policy Benchmark (%)	4.37	11.61	11.61	15.81	11.40	8.60	8.84
Excess (Net) (%)	-1.13	2.52	2.52	-2.00	-1.44	-0.17	0.27

Calendar Year Performance – Last 10 Years

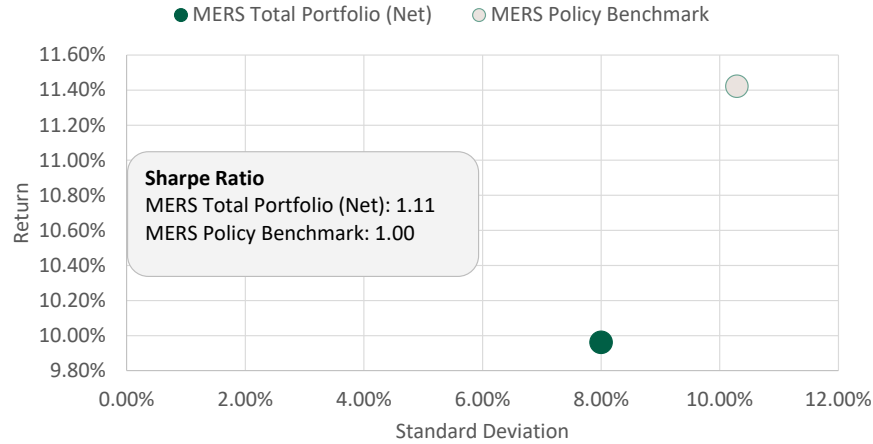


Growth of \$10,000 Comparison



5-Year

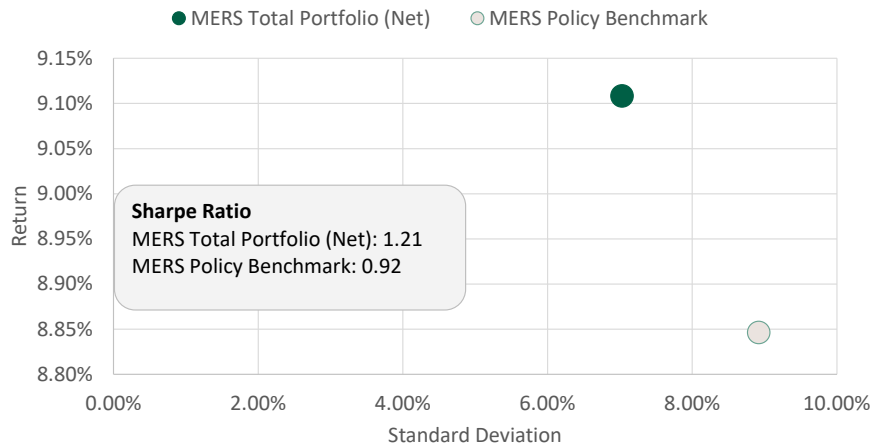
	Return	Standard Deviation	Downside Risk	Beta	R-Squared	Tracking Error
MERS Total Portfolio (Net)	9.96%	8.00%	5.95%	0.75	93.86	3.22%
MERS Policy Benchmark	11.42%	10.29%	7.76%	1.00	100	



	# of Months		Average Return		Up Capture	Down Capture
	Up	Down	Up	Down		
MERS Total Portfolio (Net)	44	16	1.80%	-1.87%	78.10%	73.80%
MERS Policy Benchmark	44	16	2.24%	-2.59%		

10-Year

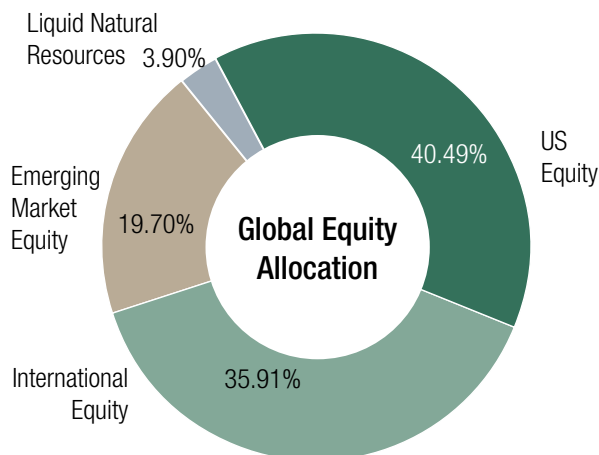
	Return	Standard Deviation	Downside Risk	Beta	R-Squared	Tracking Error
MERS Total Portfolio (Net)	9.11%	7.03%	5.22%	0.75	91.22	3.03%
MERS Policy Benchmark	8.85%	8.92%	6.60%	1.00	100.00	



	# of Months		Average Return		Up Capture	Down Capture
	Up	Down	Up	Down		
MERS Total Portfolio (Net)	86	34	1.68%	-1.60%	82.90%	67.70%
MERS Policy Benchmark	83	37	2.01%	-2.10%		

Market Value	\$7,467,855,536
Assets – % of Portfolio	53.73%

Sub Asset Class	Market Value
US Equity	\$3,023,705,260
International Equity	\$2,681,843,046
Emerging Market Equity	\$1,470,862,194
Liquid Natural Resources	\$291,445,036
Total	\$7,467,855,536



Performance (Net)

	Market Value	% OF PLAN	QTD	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
Global Equity ¹	\$7,467,855,536	51.64	4.70	17.82	17.82	16.89	11.92	9.68	11.66
<i>Global Equity Policy Blend ²</i>			6.90	20.20	20.20	21.97	15.47	11.74	13.33
<i>MSCI ACWI</i>			6.68	18.54	18.54	20.38	14.40	10.90	11.85
US Equity	\$3,023,705,260	21.76	10.43	29.33	29.33				
<i>Russell 3000</i>			9.28	25.66	25.66				
US Large Cap Equity	\$2,083,579,302	14.99	11.38	29.19	29.19	24.95	17.83	14.54	17.07
<i>S&P 500</i>			11.03	28.71	28.71	26.07	18.47	14.93	16.55
US Mid Cap Equity	\$422,318,465	3.04	8.09	24.93	24.93	21.35	13.11	11.04	13.80
<i>S&P 400</i>			8.00	24.76	24.76	21.41	13.09	11.81	14.20
US Small Cap Equity	\$55,844,126	0.40	7.08	30.04	30.04	20.39	12.07	11.04	12.84
<i>S&P 600</i>			5.64	26.82	26.82	20.11	12.42	12.12	14.50
US Micro Cap Equity	\$511,417,107	3.68	8.08	30.45	30.45	20.33	11.26	10.18	13.46
<i>Russell Microcap</i>			-2.66	19.34	19.34	20.90	11.69	10.29	13.62
International Equity	\$2,681,843,046	19.30	1.27	11.56	11.56				
<i>MSCI EAFE</i>			2.69	11.26	11.26				
International Large Cap Equity	\$1,837,964,313	13.22	0.88	9.55	9.55	12.51	8.45		
<i>MSCI EAFE</i>			2.69	11.26	11.26	13.54	9.55		
International Small Cap Equity	\$843,878,734	6.07	2.13	16.45	16.45	17.63	13.12	11.59	12.98
<i>MSCI EAFE Small Cap</i>			0.07	10.10	10.10	15.62	11.04	9.52	10.80
Emerging Market Equity	\$1,470,862,194	10.58	0.24	7.56	7.56	12.95	9.84	6.78	5.80
<i>MSCI Emerging Markets</i>			-1.31	-2.54	-2.54	10.94	9.88	6.11	5.49
Emerging Market Large Cap Equity	\$837,381,778	6.03	-1.06	-2.86	-2.86	10.96	9.13	5.55	3.72
<i>MSCI Emerging Markets</i>			-1.31	-2.54	-2.54	10.94	9.88	6.11	5.49
Emerging Market Small Cap Equity	\$396,358,760	2.85	4.07	23.23	23.23	20.69	13.75	11.01	
<i>MSCI Emerging Markets Small Cap</i>			1.33	18.75	18.75	16.46	11.47	7.32	
Frontier Market Equity	\$237,121,657	1.71	-1.26	13.31	13.31	7.25	6.31	3.59	5.99
<i>MSCI Frontier Markets</i>			0.71	19.73	19.73	12.74	9.57	4.78	7.34
Liquid Natural Resources	\$291,445,036	2.10	7.07	20.56	20.56				
<i>Policy Benchmark ³</i>			4.37	11.61	11.61				

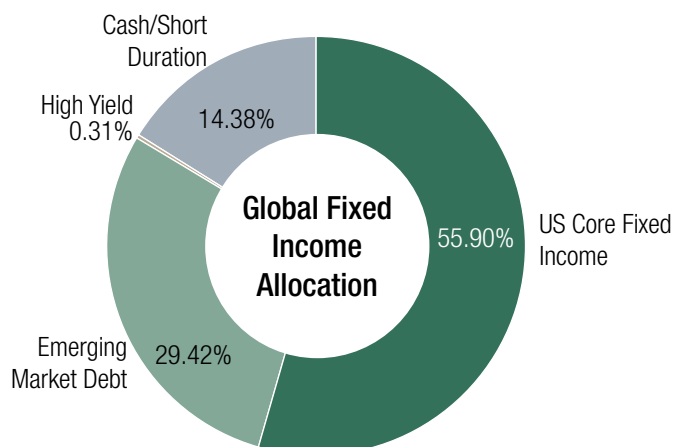
¹ Global Equity returns do not include Liquid Natural Resources

² 70% Russell 3000, 30% MSCI ACWI ex USA IMI (net)

³ 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	\$3,225,829,795
Assets – % of Portfolio	23.21%

Sub Asset Class	Market Value
US Core Fixed Income	\$1,803,120,174
Emerging Market Debt	\$948,886,039
High Yield	\$10,030,547
Cash/Short Duration	\$463,793,035
Total	\$3,225,829,795



Performance (Net)

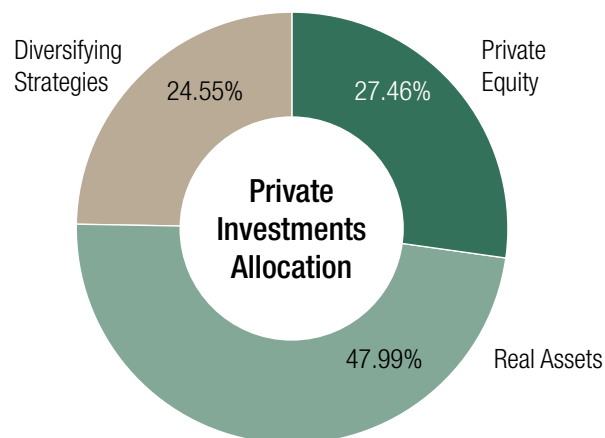
	Market Value	% OF PLAN	QTD	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
Global Fixed Income ex Cash	\$2,762,036,760	19.87	-0.31	-1.78	-1.78	6.85	5.14	4.80	4.26
<i>Global Fixed Income Policy Blend¹</i>			-0.33	-3.13	-3.13	4.14	3.45	2.28	2.11
<i>Bloomberg Barclays Global Aggregate</i>			-0.67	-4.71	-4.71	3.59	3.36	2.22	1.77
US Core Fixed Income	\$1,803,120,174	12.97	-0.11	-1.67	-1.67	4.19	3.13	2.75	3.05
<i>Bloomberg Barclays U.S. Aggregate</i>			0.01	-1.54	-1.54	4.79	3.57	3.00	2.90
Emerging Market Debt	\$948,886,039	6.83	-0.69	-3.26	-3.26	6.19	4.92	5.36	5.39
<i>JP Morgan EMBI Global Diversified</i>			-0.44	-1.80	-1.80	5.94	4.65	4.91	5.28
High Yield	\$10,030,547	0.07	0.64	3.98	3.98				
<i>Bloomberg Barclays U.S. Corporate High Yield</i>			0.71	5.28	5.28				
Cash/Short Duration²	\$463,793,035	3.34	0.13	0.74	0.74	1.88	1.60	1.32	1.22
<i>91 Day Treasury Bill</i>			0.01	0.05	0.05	0.99	1.14	0.87	0.63

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	\$3,204,622,696
Assets – % of Portfolio	23.06%

Sub Asset Class	Market Value
Private Equity	\$879,857,782
Real Assets	\$1,537,925,866
Diversifying Strategies	\$786,839,047
Total	\$3,204,622,696



Performance (Net)

	Market Value	% OF PLAN	QTD	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
Private Investments	\$3,204,622,696	23.06	3.36	23.29	23.29				
<i>Public Markets</i>			3.21	11.75	11.75				
<i>Policy Benchmark¹</i>			4.37	11.61	11.61				
Private Equity	\$879,857,782	6.33	4.45	48.28	48.28	25.57	21.33	16.64	15.03
<i>Private Equity Blend²</i>			1.12	12.58	12.58	17.93	11.67	10.31	12.17
Real Assets	\$1,537,925,866	11.07	3.77	15.54	15.54	13.43	8.97	8.91	7.11
<i>Real Assets Blend³</i>			2.34	10.04	10.04	9.30	5.40	4.90	4.35
Diversified Real Assets	\$1,247,481,045	8.98	4.07	13.48	13.48	13.13	8.24		
<i>Real Assets Blend</i>			2.34	10.04	10.04	9.30	5.40		
Real Estate	\$287,895,990	2.07	2.56	24.15	24.15	9.94	11.05	11.31	12.37
<i>Real Estate Blend⁴</i>			7.97	22.17	22.17	13.48	9.29	8.08	10.12
Timber	\$38,637,149	0.28	-1.43	20.61	20.61	9.49	11.24	9.21	7.88
<i>S&P Global Timber & Forestry Index Net</i>			8.13	16.67	16.67	18.73	13.11	9.90	11.20
Infrastructure	\$330,352,838	2.38	9.24	23.27	23.27	11.50	7.39	6.64	4.85
<i>Private Infrastructure Blend⁵</i>			5.30	11.65	11.65	10.88	6.47	6.03	5.68
Commodities	\$304,230,414	2.19	3.68	4.76	4.76	15.77	3.91	9.40	4.24
<i>Bloomberg Commodity Index Total Return</i>			-1.56	27.11	27.11	9.86	3.66	0.11	-2.85
Agriculture & Farmland	\$391,210,317	2.81	2.67	18.66	18.66	20.40	13.99	10.32	
<i>S&P Global Agribusiness Equity Index TR</i>			8.49	24.07	24.07	18.22	11.03	7.76	
Diversifying Strategies	\$786,839,047	5.66	1.46	16.23	16.23	8.48	7.07	6.05	
<i>Diversifying Strategies Blend⁶</i>			2.24	4.65	4.65	10.50	7.44	5.59	

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	\$1,216,688,812	30,395	\$40,029	0.38%	Retirement Strategies
HCSP	\$396,469,753	28,823	\$13,755	0.38%	Retirement Strategies
457 Program	\$303,585,697	9,439	\$32,163	0.39%	Retirement Strategies
MERS IRA	\$7,317,382	763	\$9,590	0.39%	Retirement Strategies
TOTAL	\$1,924,061,644	69,420	\$27,716		

Institutional Funds

Program	Assets	Municipalities	Average Account Size	Weighted Average Fee
RHFV	\$1,443,353,947	317	\$4,553,167	0.46%
ISP	\$58,618,737	5	\$11,723,747	0.46%
TOTAL	\$1,501,972,684	322	\$4,664,511	

Investment Allocations

	PDA	Institutional Funds	Total
Retirement Strategies	\$1,395,487,192		\$1,395,487,192
Total Market Fund	\$45,305,303	\$1,500,392,906	\$1,545,698,209
Asset Allocation Portfolios	\$49,635,364	\$227,165	\$49,862,529
Asset Specific funds	\$407,053,309	\$1,352,613	\$408,405,923
Self-directed Brokerage	\$10,281,796		\$10,281,796
Other	\$16,298,679		\$16,298,679
TOTAL	\$1,924,061,644	\$1,501,972,684	\$3,426,034,328

Program Highlights

- Added default option for RHFV plan (Total Market Portfolio)
- RHFV full plan reset (completed June 2021)
- Completed Record Keeper RFP by continuing relationship with Alerus Retirement Services
- Entered into relationship with Vergence Institutional Partners to review plans

Future Research

- RFP for Target Date Funds Provider (Q3 2022)
- RFP for Stable Value Fund (Q4 2022)
- Review options for Managed Account Solution

Retirement Strategies for PDA Accounts

MERS Retirement Strategies	Assets	Expense Ratio	1 Year	3 Year	5 Year	10 Year
Retirement Income Fund	\$20,209,483	0.37%	6.18	8.75	6.10	6.18
MERS 2010 Retirement Strategy	\$27,163,959	0.38%	6.91	9.47	6.72	6.91
MERS 2015 Retirement Strategy	\$89,087,782	0.38%	8.92	11.27	7.92	8.92
MERS 2020 Retirement Strategy	\$111,231,954	0.38%	10.86	12.83	8.95	10.86
MERS 2025 Retirement Strategy	\$231,224,982	0.39%	12.14	13.91	9.70	12.14
MERS 2030 Retirement Strategy	\$182,813,949	0.39%	13.05	14.84	10.39	13.05
MERS 2035 Retirement Strategy	\$181,481,001	0.39%	13.91	15.78	11.08	13.91
MERS 2040 Retirement Strategy	\$164,821,519	0.39%	15.16	16.82	11.81	15.16
MERS 2045 Retirement Strategy	\$136,986,572	0.39%	16.36	17.88	12.44	16.36
MERS 2050 Retirement Strategy	\$113,217,368	0.39%	16.64	18.00	12.51	16.64
MERS 2055 Retirement Strategy	\$83,879,370	0.39%	16.66	18.05	12.54	16.66
MERS 2060 Retirement Strategy	\$49,421,265	0.39%	16.57	18.09	12.56	16.57
MERS 2065 Retirement Strategy	\$3,947,989	0.39%	16.58			
TOTAL	\$1,395,487,192					

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	\$1,545,698,209	0.56%	13.77	13.32	9.56	8.74
<i>MERS Policy Benchmark</i>			<i>11.61</i>	<i>15.81</i>	<i>11.40</i>	<i>8.84</i>
MERS Global Stock Portfolio (100/0)	\$17,570,333	0.34%	16.83	18.59	12.98	
<i>Blended Benchmark</i>			<i>18.54</i>	<i>20.38</i>	<i>14.40</i>	
MERS Established Market Portfolio (60/40)	\$16,465,434	0.34%	9.54	12.96	9.06	8.75
<i>Blended Benchmark</i>			<i>10.20</i>	<i>14.95</i>	<i>10.85</i>	<i>9.34</i>
MERS Diversified Bond Portfolio (0/100)	\$15,826,763	0.33%	-0.86	3.93	2.91	2.85
<i>Bloomberg U.S. Aggregate Bond Index</i>			<i>-1.54</i>	<i>4.79</i>	<i>3.57</i>	<i>2.90</i>
TOTAL	\$1,595,560,738					

Premium Select Options – Funds to Build Your Own Portfolio

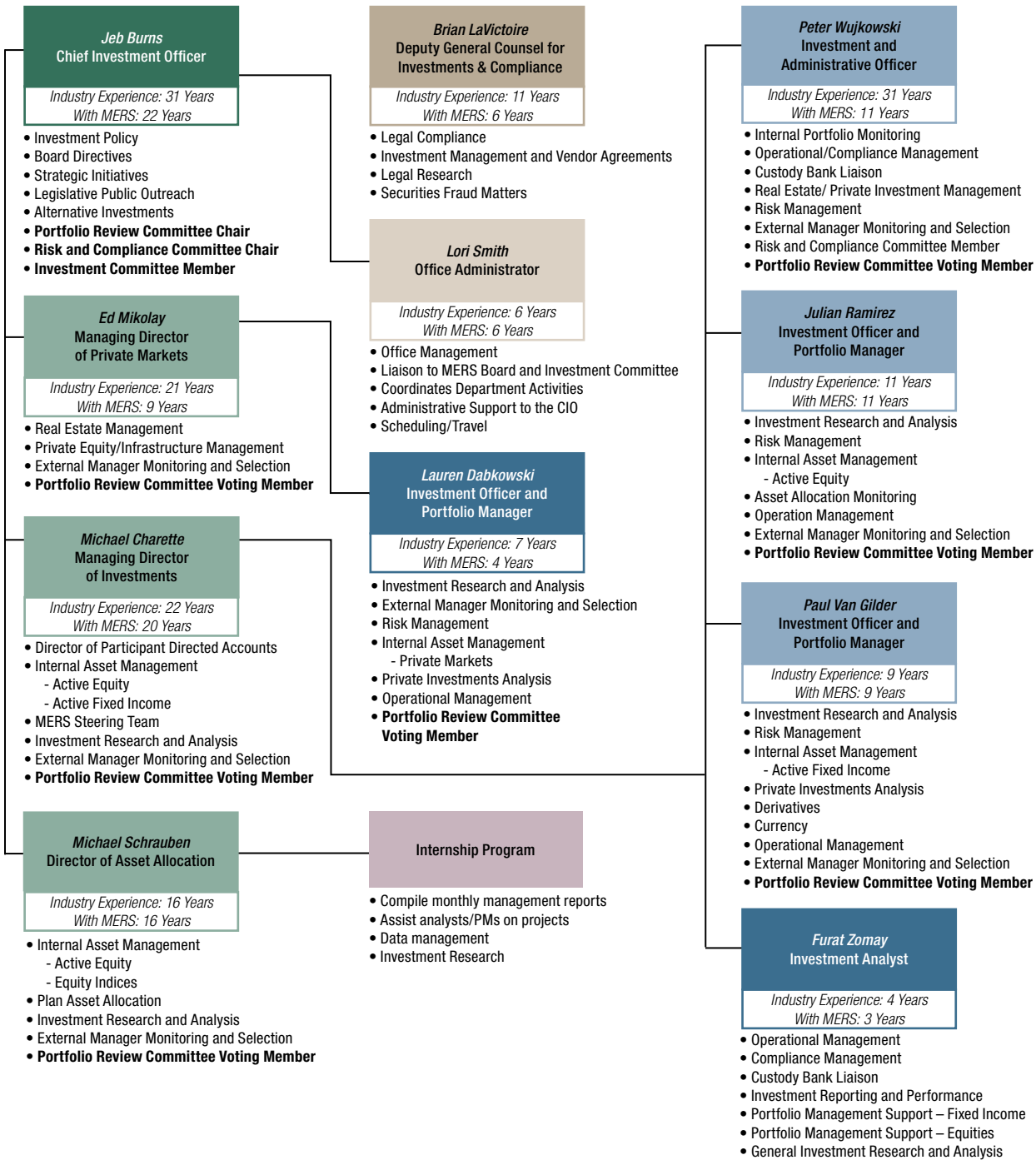
MERS Portfolio Options	Assets	Expense Ratio	1 Year	3 Year	5 Year	10 Year
Large Cap Stock Index Fund	\$211,120,223	0.33%	28.31	25.60	18.04	16.11
<i>S&P 500 Index</i>			28.71	26.07	18.47	16.55
Mid Cap Stock Index	\$42,116,935	0.33%	24.34	21.00	12.79	13.92
<i>S&P 400 Index</i>			24.76	21.41	13.09	14.20
Small Cap Stock Index	\$25,574,875	0.33%	26.20	20.26	12.48	
<i>S&P 600 Index</i>			26.82	20.11	12.42	
International Stock Index	\$17,689,059	0.36%	11.07	12.62	9.13	7.53
<i>MSCI EAFE Net Dividend Index</i>			11.26	13.54	9.55	8.03
Emerging Market Stock	\$5,226,068	0.45%	-0.26	11.28	8.47	
<i>Blended Benchmark</i>			-2.54	10.94	9.57	
Real Estate Stock	\$6,815,759	0.38%	45.86	18.45	11.24	11.05
<i>Dow Jones U.S. Select REIT Index</i>			45.91	16.84	9.65	10.70
Bond Index	\$19,794,470	0.35%	-1.90	5.00	3.45	2.53
<i>Bloomberg U.S. Aggregate Bond Index</i>			-1.54	4.79	3.57	2.90
High Yield Bond	\$6,086,311	0.48%	4.39	7.84	5.36	5.85
<i>Bloomberg U.S. High Yield Net Return Index</i>			9.96	6.39	5.97	6.50
Short-Term Income	\$22,569,173	0.33%	0.63	2.30	1.75	1.05
<i>Bloomberg U.S. Treasury: 1-3 Year</i>			-0.60	2.03	1.61	1.09
Stable Value	\$51,413,051	0.58%	1.61	2.09	2.02	2.01
<i>ICE BofA US 3 Month Treasury Bill Index G001</i>			0.05	0.99	1.14	0.63
TOTAL	\$408,405,923					

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 governance documents (Investment Guidelines, Defined Benefit Investment Policy Statement, and Participant Directed Accounts & Institutional Funds Investment Policy Statement) • Sets the Fund's asset class allocation ranges • Establishes the long-term actuarial investment return assumption • Approves the System'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 above PRC discretionary size limits • Provides advice on investment activities including: industry best practices, fiduciary duties, and risk expectations of the Board • Monitors portfolio risk and asset allocation
<p>PORTFOLIO REVIEW COMMITTEE</p>	<ul style="list-style-type: none"> • Office of Investments decision making body chaired by the CIO and key Office of Investments staff • Voting members are appointed by the CIO • Reports decisions to the Investment Committee • Determines and implements the Fund's asset allocation within Board approved allocation ranges • Approves investments and co-investments up to discretionary size limits • 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 all consultants, vendors, and custodial bank • Provides a quarterly report on the Fund's activities and performance • Reports any material changes within the Fund to the Investment Committee and Board • Internally manages a portion of the Fund • Monitors external investment managers • 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
<p>MERS INVESTMENT MANAGEMENT RISK AND COMPLIANCE COMMITTEE</p>	<ul style="list-style-type: none"> • Provides investment 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 • Consists of CEO, CIO, Chief Financial Officer, Deputy General Counsel for Investments and Compliance, Internal Auditor, Investment and Administrative Officer, and Analysts from the Office of Investments • Meets on a quarterly basis

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 12/31/2021. 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.

