

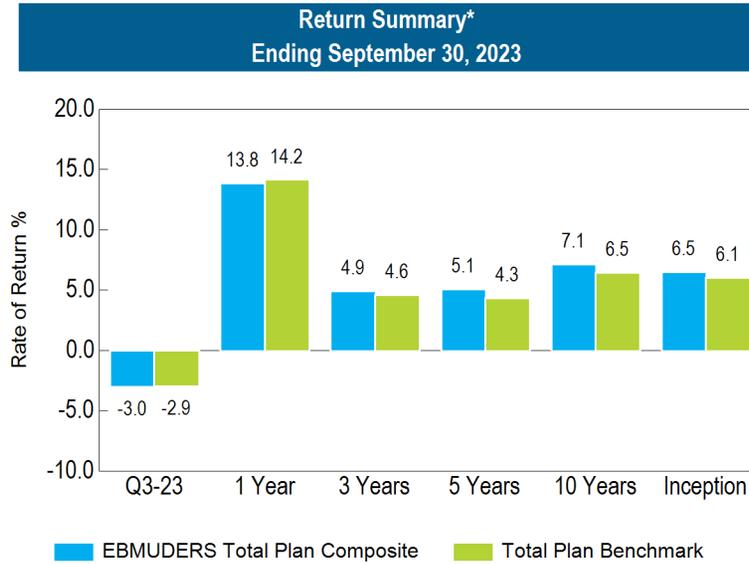
East Bay Municipal Utility District Employees' Retirement System

January 18, 2024

Q3 2023 Performance Report

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Introduction



* Performance is gross of fees.

	Third Quarter	One Year
Beginning Market Value	\$2,248,004,762	\$1,937,045,018
Net Cash Flow	-\$3,119,268	-\$25,480,984
Capital Appreciation	-\$67,604,330	\$265,717,131
Ending Market Value	\$2,177,281,164	\$2,177,281,164

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)
EBMUDERS Total Plan Composite - Gross	-3.0	13.8	4.9	5.1	7.1	7.4
EBMUDERS Total Plan Composite - Net	-3.0	13.7	4.8	4.9	6.9	--
<i>Total Plan Benchmark</i>	<i>-2.9</i>	<i>14.2</i>	<i>4.6</i>	<i>4.3</i>	<i>6.5</i>	<i>7.1</i>
<i>InvMetrics Public DB > \$1B Gross Median</i>	<i>-2.1</i>	<i>10.3</i>	<i>5.7</i>	<i>5.7</i>	<i>6.6</i>	<i>7.0</i>

Historical net returns for the Total Portfolio Aggregate are currently available from 2Q 2011.

InvMetrics Public DB >\$1B Universe includes BNY Mellon Public>\$1B Fund Universe and IM client data.

Performance Summary								
	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)
EBMUDERS Total Plan Composite	2,177,281,164	100.0	-3.0	13.8	4.9	5.1	7.1	7.4
<i>Total Plan Benchmark</i>			<i>-2.9</i>	<i>14.2</i>	<i>4.6</i>	<i>4.3</i>	<i>6.5</i>	<i>7.1</i>
US Equity Composite	568,630,500	26.1	-3.2	20.4	9.4	9.1	11.5	9.7
<i>Russell 3000 Hybrid</i>			<i>-3.3</i>	<i>20.5</i>	<i>9.4</i>	<i>9.1</i>	<i>11.3</i>	<i>9.8</i>
Non-US Equity Composite	524,849,374	24.1	-3.8	21.5	4.3	2.6	3.5	6.5
<i>MSCI ACWI xUS (blend)</i>			<i>-3.7</i>	<i>21.0</i>	<i>4.2</i>	<i>3.1</i>	<i>3.8</i>	<i>6.3</i>
Covered Calls Composite	452,961,877	20.8	-1.5	18.7	8.3	6.5	--	--
<i>CBOE S&P 500 BuyWrite USD</i>			<i>-2.8</i>	<i>14.6</i>	<i>7.2</i>	<i>3.0</i>	--	--
Real Estate Composite	115,478,269	5.3	-4.8	-5.7	7.3	5.8	8.5	--
<i>Real Estate Composite Benchmark</i>			<i>-4.5</i>	<i>-1.5</i>	<i>6.9</i>	<i>5.0</i>	<i>7.3</i>	--
Fixed Income Composite	510,632,717	23.5	-2.9	1.9	-2.8	1.1	1.7	3.4
<i>Fixed Income Composite Benchmark</i>			<i>-2.3</i>	<i>1.7</i>	<i>-2.9</i>	<i>0.8</i>	<i>1.7</i>	<i>3.2</i>
Cash Composite	4,728,427	0.2	1.0	4.2	1.7	2.0	1.3	1.8
<i>FTSE T-Bill 3 Months TR</i>			<i>1.4</i>	<i>4.7</i>	<i>1.8</i>	<i>1.7</i>	<i>1.1</i>	<i>1.4</i>

Benchmark composition and history provided at the end of this report.

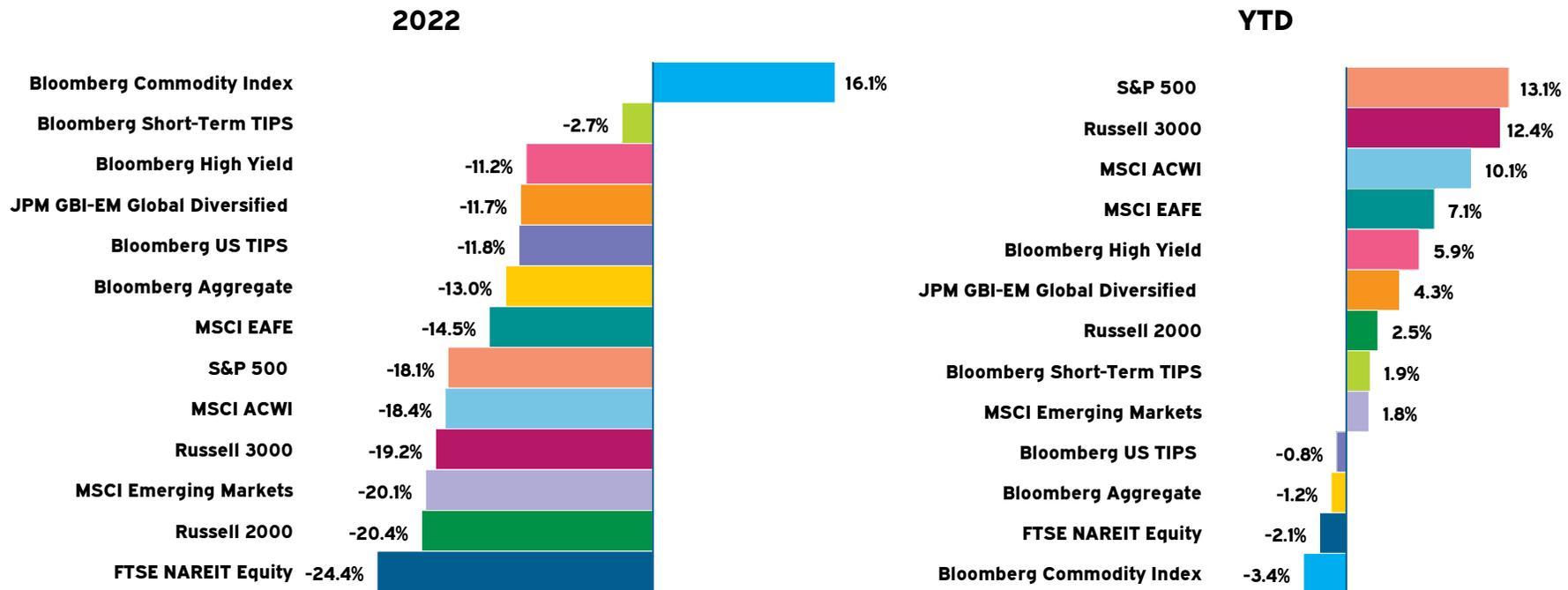
Economic and Market Update

Data as of September 30, 2023

Commentary

- After a strong July, global assets turned negative in August and September as expectations shifted to the Fed keeping interest rates higher for longer. Weakening economic data from Europe and China, as well as further instability in the Chinese real estate sector and a strong US dollar, weighed on results.
- The Federal Open Markets Committee (FOMC) increased policy rates in July by 0.25% to a range of 5.25% - 5.5% and kept rates at that level at their September meeting. Markets are now largely expecting the FOMC to maintain interest rates at this level through the first half of next year.
 - US equity markets (Russell 3000 index) fell in the third quarter (-3.3%), bringing the year-to-date gains to 12.4%. The technology sector remains the key driver of results this year, helped by artificial intelligence optimism.
 - Non-US developed equity markets declined more than the US in the third quarter (MSCI EAFE -4.1%) with the strength of the US dollar adding 2.8% to the quarterly declines. This widened the gap between US and international developed equities for the year (12.4% versus 7.1%).
 - Emerging market equities experienced the smallest declines in the third quarter (-2.9%). Negative results were driven by China and again the strong US dollar. Emerging markets continue to significantly trail developed market equities year-to-date, returning just 1.8%, again driven by China.
 - Interest rates generally rose over the quarter, particularly for longer-dated maturities. The broad US bond market fell (-3.2%) for the quarter and turned negative (-1.2%) year-to-date, as higher income has offset capital losses from rising rates.
- For the rest of this year, the paths of inflation and monetary policy, slowing global growth, and the wars in Ukraine and Israel will all be key.

Index Returns¹



→ After a particularly difficult 2022, most public market assets are up thus far in 2023, led by developed market equities.

→ While hopes for a soft landing remain in place, the prospect of higher interest rates for longer weighed on market sentiment in August and September.

¹ Source: Bloomberg. Data is as of September 30, 2023.

Domestic Equity Returns¹

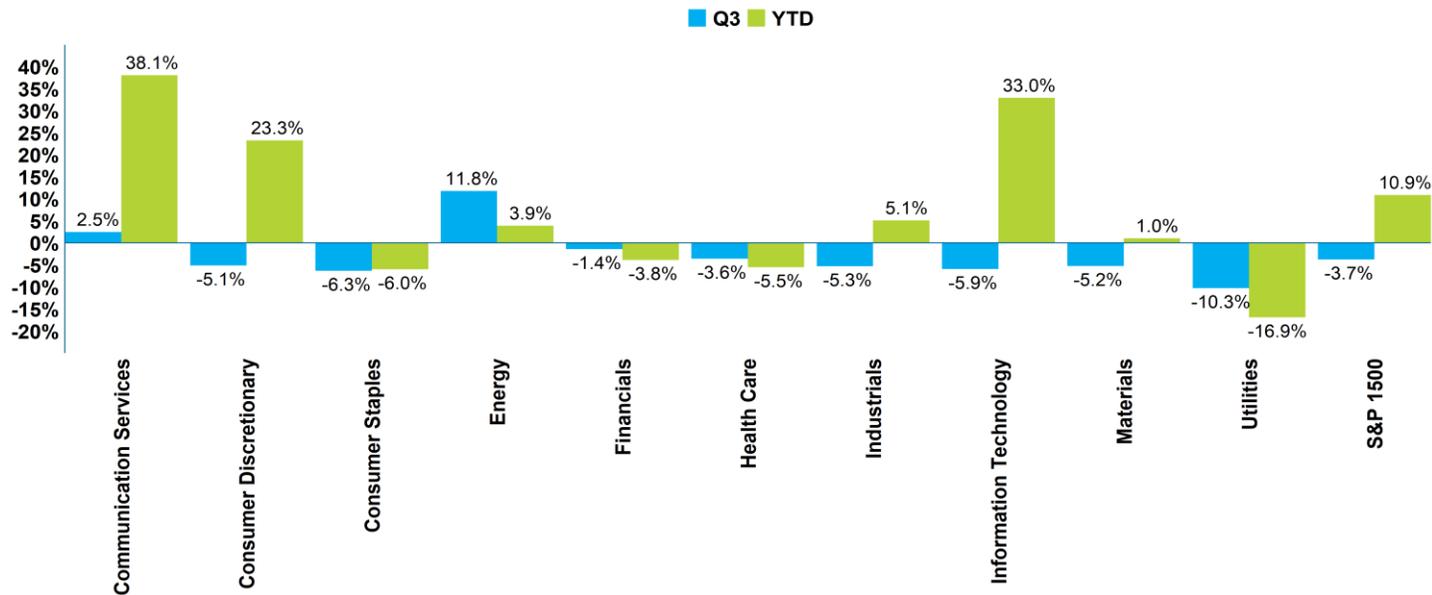
Domestic Equity	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	-4.8	-3.3	13.1	21.6	10.2	9.9	11.9
Russell 3000	-4.8	-3.3	12.4	20.5	9.4	9.1	11.3
Russell 1000	-4.7	-3.1	13.0	21.2	9.5	9.6	11.6
Russell 1000 Growth	-5.4	-3.1	25.0	27.7	8.0	12.4	14.5
Russell 1000 Value	-3.9	-3.2	1.8	14.4	11.1	6.2	8.4
Russell MidCap	-5.0	-4.7	3.9	13.4	8.1	6.4	9.0
Russell MidCap Growth	-4.9	-5.2	9.9	17.5	2.6	7.0	9.9
Russell MidCap Value	-5.1	-4.5	0.5	11.0	11.0	5.2	7.9
Russell 2000	-5.9	-5.1	2.5	8.9	7.2	2.4	6.6
Russell 2000 Growth	-6.6	-7.3	5.2	9.6	1.1	1.6	6.7
Russell 2000 Value	-5.2	-3.0	-0.5	7.8	13.3	2.6	6.2

US Equities: The Russell 3000 Index fell 3.3% in the third quarter but is up 12.4% YTD.

- US stocks fell 3.3% in the third quarter as healthy economic data and comments from the Fed caused investors to expect interest rates to remain higher for longer.
- Large cap stocks outperformed small cap stocks during the quarter, bringing their year-to-date outperformance to over 10%. The so called “Magnificent Seven” within the large cap market drove most of this outperformance despite a weak third quarter.
- Energy strongly led the way during the quarter posting double-digit gains while most other sectors declined. Oil prices rose after Saudi Arabia and Russia extended output cuts.

¹ Source: Bloomberg. Data is as of September 30, 2023.

S&P 1500 Sector Returns¹



→ Except for energy, which benefited from rising oil prices, all sectors were down in the third quarter.

→ So far in 2023, the communication services (+38.1%) and technology (+33.0%) sectors had the best results on artificial intelligence optimism. Given the continued strength in the US consumer the consumer discretionary sector followed (+23.3%), while more defensive sectors like utilities (-16.9%) and consumer staples (-6.0%) have trailed.

¹ Source: Bloomberg. Data is as of September 30, 2023.

Foreign Equity Returns¹

Foreign Equity	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-3.2	-3.8	5.3	20.4	3.7	2.6	3.3
MSCI EAFE	-3.4	-4.1	7.1	25.6	5.8	3.2	3.8
MSCI EAFE (Local Currency)	-1.1	-1.3	10.7	20.3	10.8	5.7	6.8
MSCI EAFE Small Cap	-4.4	-3.5	1.8	17.9	1.1	0.8	4.3
MSCI Emerging Markets	-2.6	-2.9	1.8	11.7	-1.7	0.6	2.1
MSCI Emerging Markets (Local Currency)	-1.8	-1.4	4.0	10.9	0.6	2.7	4.9
MSCI China	-2.8	-1.9	-7.3	5.2	-14.3	-4.2	1.7

Foreign Equity: Developed international equities (MSCI EAFE) fell 4.1% in the third quarter bringing the YTD gain to 7.1%. Emerging market equities (MSCI EM) fell 2.9% in the period, rising 1.8% YTD.

- Outside of the US, equities were also weak during the third quarter with the continued strength of the US dollar being a key driver.
- Eurozone shares felt pressure from slowing GDP growth and an interest rate hike by the ECB, although inflation continued to ease. By contrast, the UK saw modest gains amid promising economic data including slowing inflation and GDP back around pre-pandemic levels. Japan outperformed regional peers for the quarter due in part to strong earnings.
- Emerging market performance, while negative, outpaced developed peers. Chinese markets saw losses in-line with other emerging market countries, driven largely by unease surrounding property company Evergrande and a continued lackluster reopening of the economy.

¹ Source: Bloomberg. Data is as of September 30, 2023.

Fixed Income Returns¹

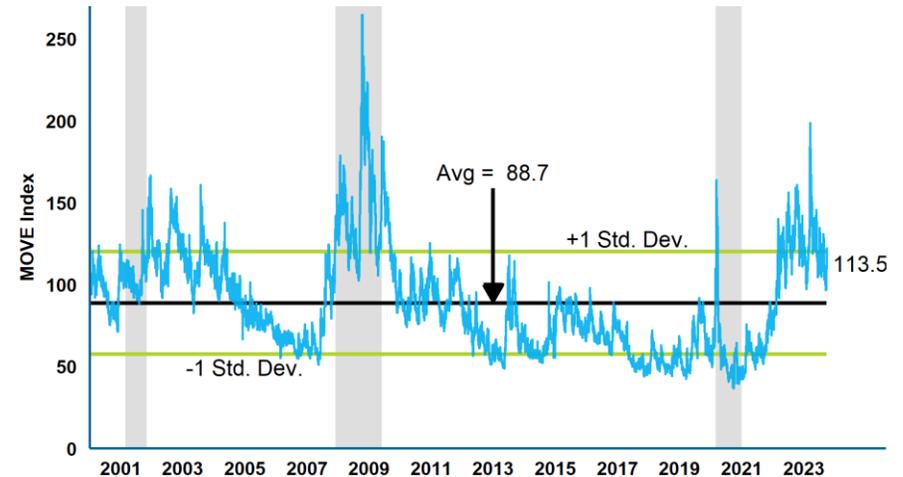
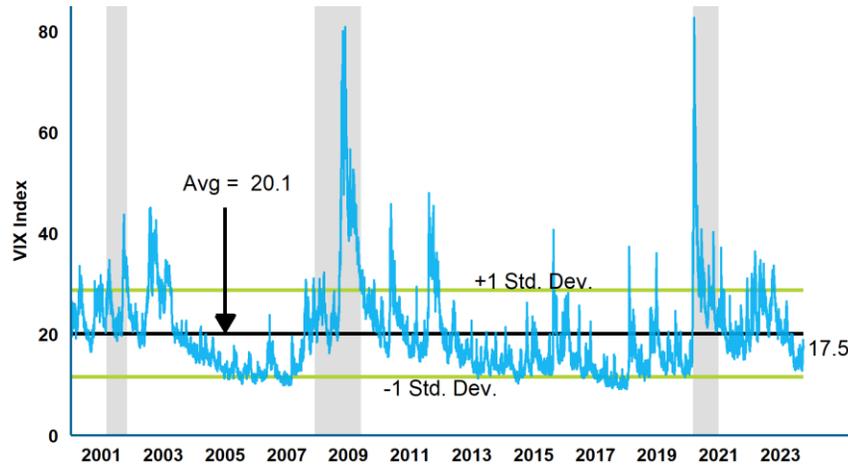
Fixed Income	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-2.4	-2.9	-0.6	1.6	-4.7	0.3	1.4	5.7	6.0
Bloomberg Aggregate	-2.5	-3.2	-1.2	0.6	-5.2	0.1	1.1	5.4	6.2
Bloomberg US TIPS	-1.8	-2.6	-0.8	1.2	-2.0	2.1	1.7	5.0	6.6
Bloomberg Short-term TIPS	-0.2	0.4	1.9	3.2	1.9	2.8	1.7	5.4	2.5
Bloomberg High Yield	-1.2	0.5	5.9	10.3	1.8	3.0	4.2	8.9	4.0
JPM GBI-EM Global Diversified (USD)	-3.4	-3.3	4.3	13.1	-2.7	0.0	-0.8	6.9	4.9

Fixed Income: The Bloomberg Universal index declined 2.9% in the third quarter and -0.6% YTD.

- The downgrade of US government debt from AAA to AA+ by Fitch combined with expectations for higher borrowing put upward pressure on longer-term rates for the quarter and weighed on overall results. Expectations for policy rates to remain higher for longer than previously expected also contributed to the decline in bonds.
- The broad US bond market (Bloomberg Aggregate) fell 3.2% for the quarter bringing YTD results into negative territory. The broader TIPS index fell by 2.6%, while the less interest-rate-sensitive short-term TIPS index outperformed most sectors, up 0.4%.
- High yield bonds were the strongest quarterly performers, up 0.5%, while emerging market bonds were the weakest performer, falling 3.3%. The two asset classes remain the top performers for the year as risk appetite in credit markets remains robust.

¹ Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of September 30, 2023. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.

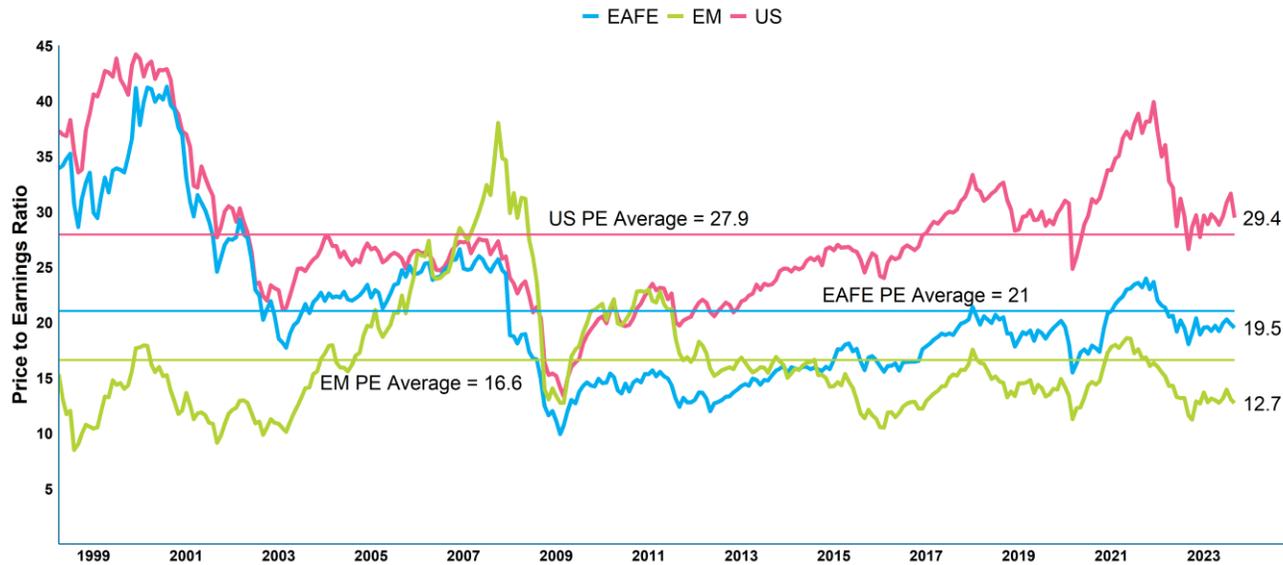
Equity and Fixed Income Volatility¹



- Volatility in equities (VIX) increased over the quarter but finished at a level below the long-term average. The recent increase in equity volatility has largely been driven by investors coming to terms that interest rates might remain higher for a longer period.
- In comparison, volatility in the bond market (MOVE) remains well above its long-run average (88.7) after last year’s historic losses and due to continued policy uncertainty. Over the quarter, fixed income volatility finished slightly higher compared to where it started, like equities, driven by expectations for rates to stay higher for longer.

¹ Equity Volatility – Source: FRED. Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of September 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and September 2023.

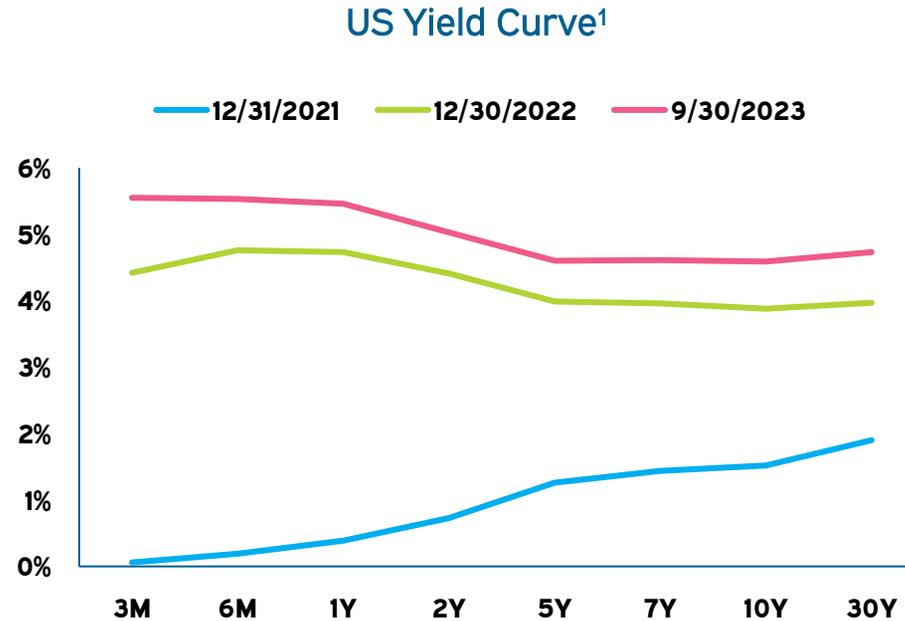
Equity Cyclically Adjusted P/E Ratios¹



→ Given the strong technology-driven rally this year, the US equity price-to-earnings ratio increased above its long-run (21st century) average. With the equity market decline in August and September the P/E ratio fell from its recent peak.

→ International developed market valuations are below their own long-term average, with those for emerging markets the lowest and well under the long-term average (close to one standard deviation below).

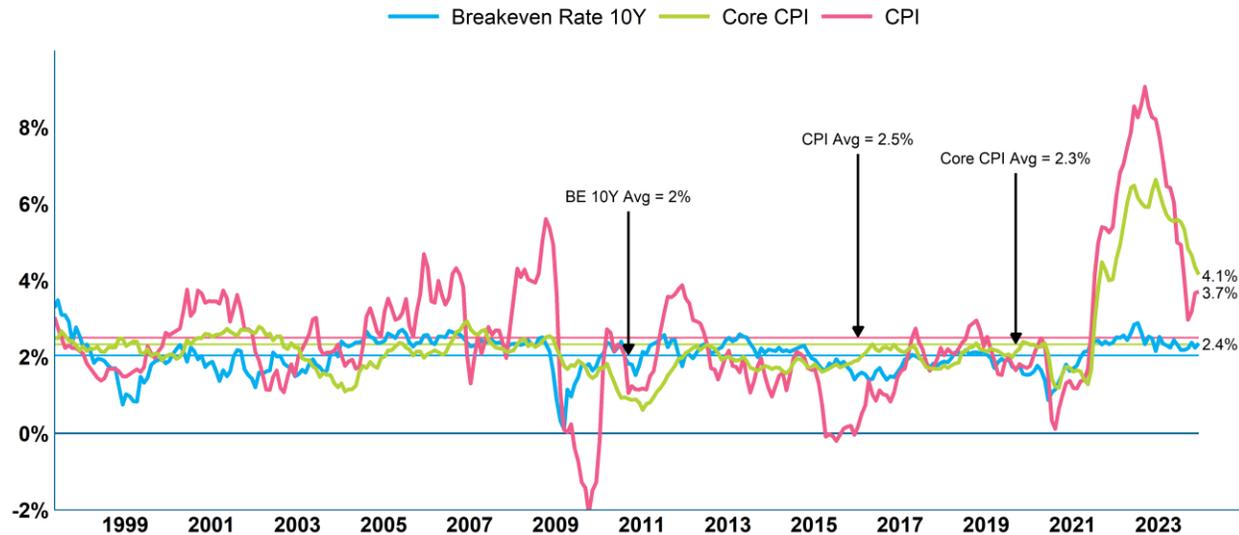
¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of September 2023. The average line is the long-term average of the US, EM, and EAFE PE values from April 1998 to the recent month-end respectively.



- Overall rates have continued to increase this year, particularly at the policy sensitive front-end of the yield curve, but at much slower pace compared to last year.
- Over the quarter, very short-term interest rates (two years or less) increased only slightly as monetary policy has likely reached close to its terminal rate for this cycle. By contrast, longer-term rates rose dramatically as US debt was downgraded and investors came to terms with rates remaining higher for longer. The ten-year Treasury yield increased from 3.8% to 4.6% over the quarter.
- Because of the dynamic above, the yield curve's inversion decreased with the spread between two-year and ten-year Treasuries finishing the quarter at -0.47% (it started the quarter at -1.05%).

¹ Source: Bloomberg. Data is as of September 30, 2023.

Ten-Year Breakeven Inflation and CPI¹

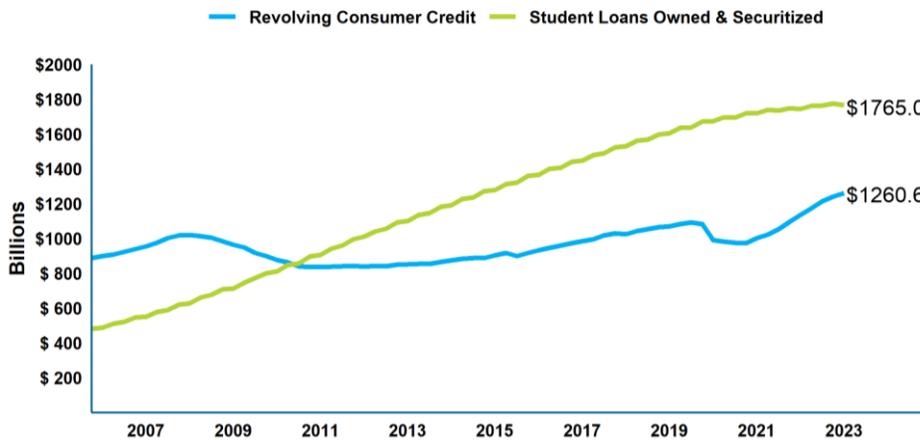


- After the steady decline in inflation from the June 2022 peak, consumer prices recently increased driven by energy prices.
- Year-over-year headline inflation was flat at 3.7% coming in slightly higher than expectations as improvements in energy prices were offset by higher shelter costs.
- Core inflation – excluding food and energy – continued its decline (4.3% to 4.1%) year-over-year. It remains stubbornly high, though, driven by shelter costs (+7.2%), particularly owners’ equivalent rent, and transportation services (+9.1%).
- Inflation expectations (breakevens) remain well below current inflation as investors continue to expect inflation to track back toward the Fed’s 2% average target.

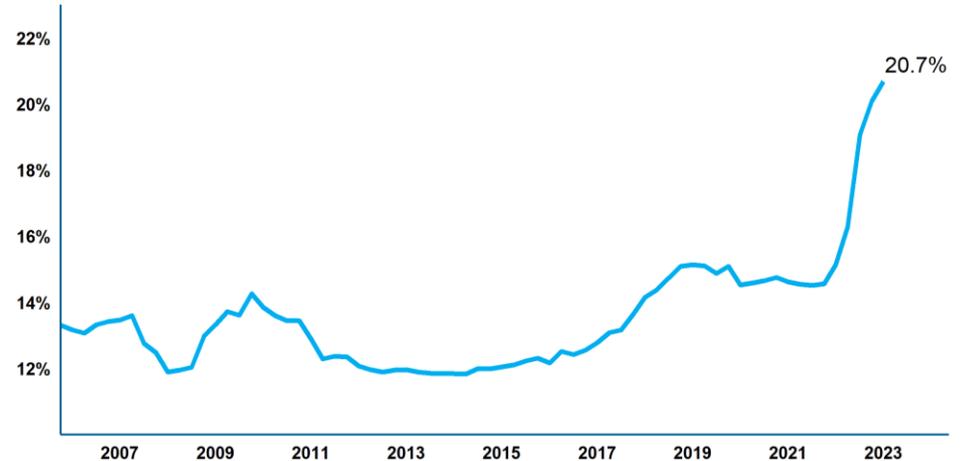
¹ Source: FRED. Data is as September 30, 2023. The CPI and 10 Year Breakeven average lines denote the average values from February 1997 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

US Consumer Under Stress¹

Revolving Consumer Credit & Student Loans (\$B)



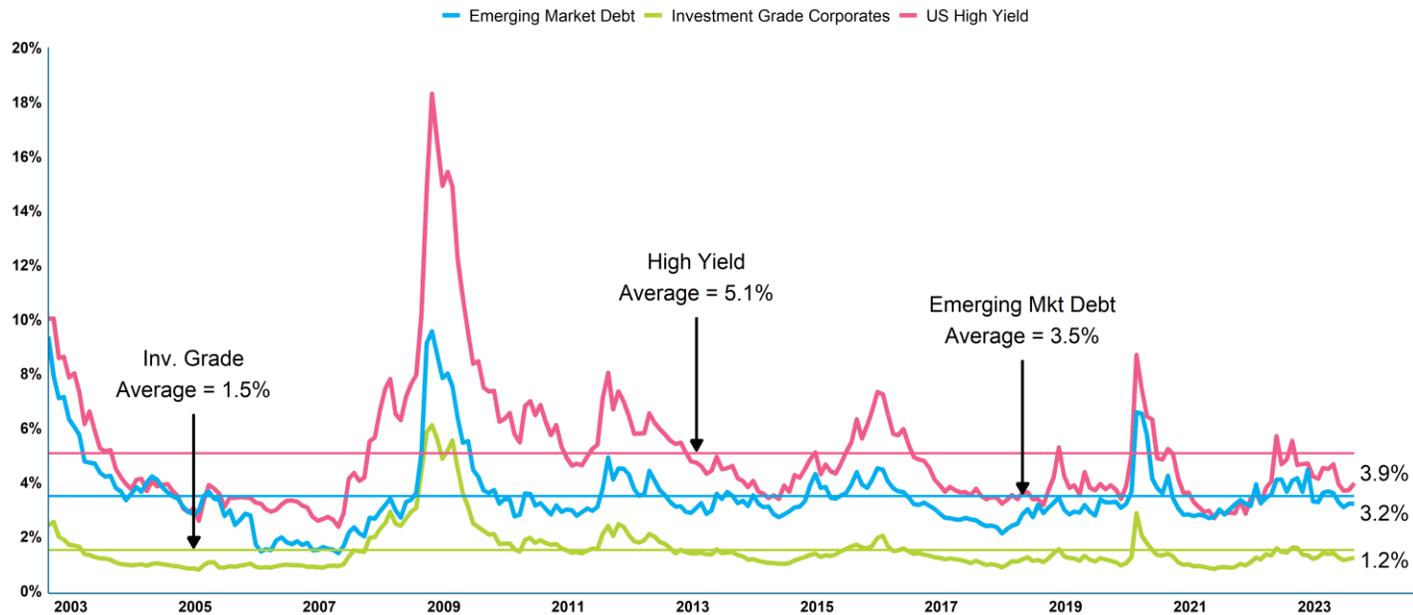
Consumer Credit Card Interest Rates (%)



- Despite the strong labor market and higher wages, pressures have started to build on the US consumer. This is an important consideration as consumer spending has been an important driver of economic growth.
- Revolving consumer credit surged to new highs in 2023 even as credit card interest rates hit levels not seen before (the prior peak was around 19% in the 1980s).
- The return of student loan repayments after a three-year pandemic-related reprieve could add to pressures on consumers' budgets. This might be partially balanced by recently initiated repayment and forgiveness programs.
- As we look ahead, the strength of the US consumers will remain key as they make up most of domestic growth (GDP).

¹ Source: FRED. The most recent data is as June 30, 2023. Revolving Consumer Credit data is seasonally adjusted to remove distortions during the holiday season.

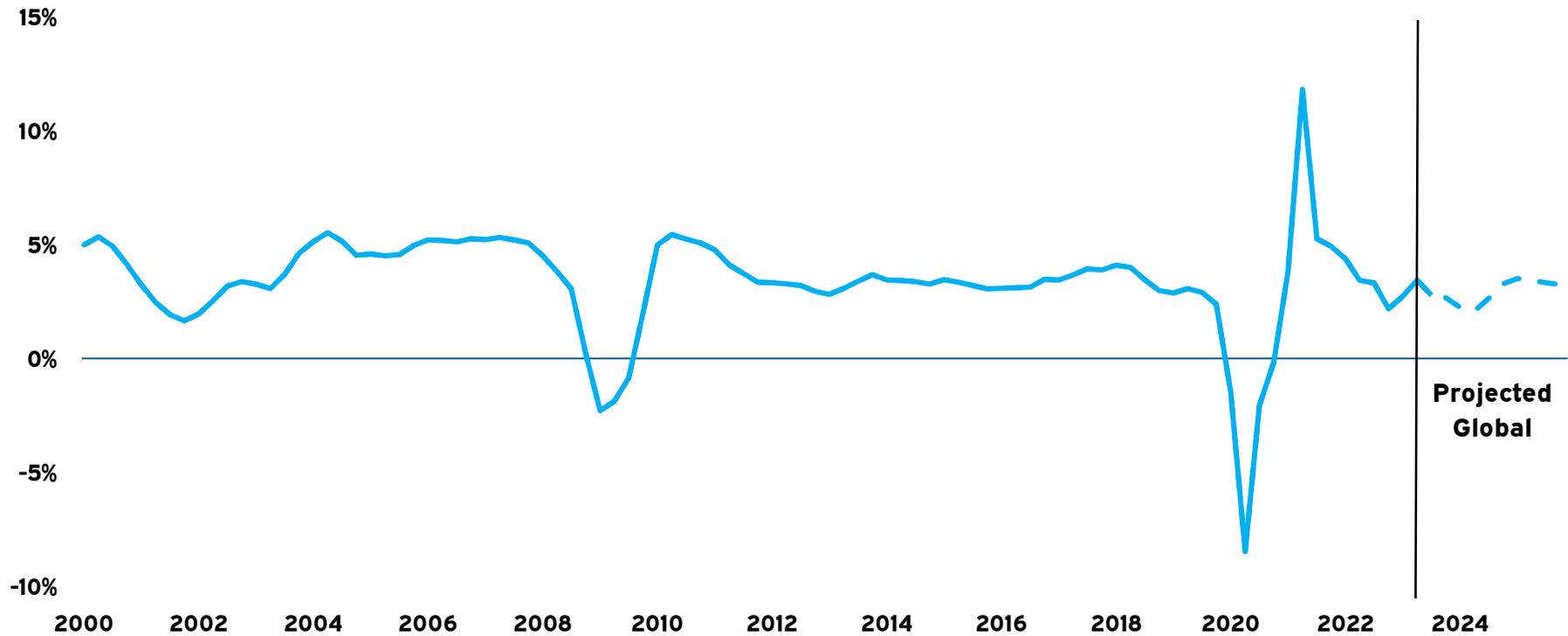
Credit Spreads vs. US Treasury Bonds¹



- Credit spreads (the added yield above a comparable maturity Treasury) largely remained unchanged over the quarter.
- High yield spreads remain well below the long-term average given the overall risk appetite this year. Investment grade and emerging market spreads are also below their respective long-term averages, but by smaller margins.

¹ Sources: Bloomberg. Data is as of September 30, 2023. Average lines denote the average of the investment grade, high yield, and emerging market spread values from September 2002 to the recent month-end, respectively.

Global Real Gross Domestic Product (GDP) Growth¹

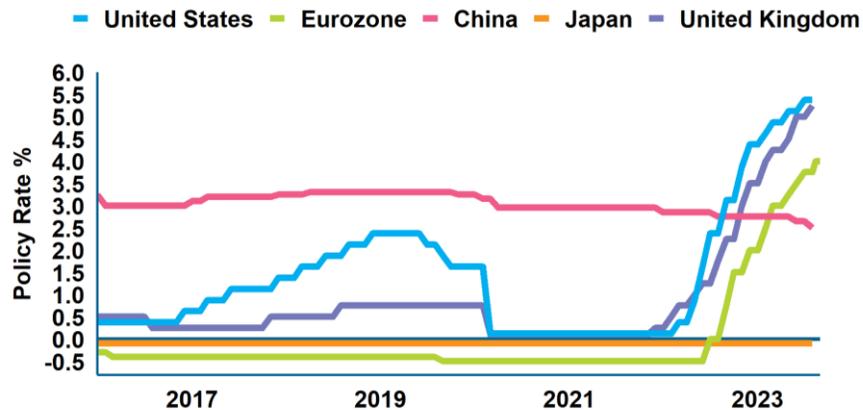


- Global economies are expected to slow this year compared to 2022. The risk of recession remains elevated given policymakers' aggressive tightening, but optimism has started to grow over some central banks potentially navigating a soft landing.
- The delicate balancing act of central banks trying to reduce inflation without dramatically disrupting labor markets and depressing economic growth, will remain key.

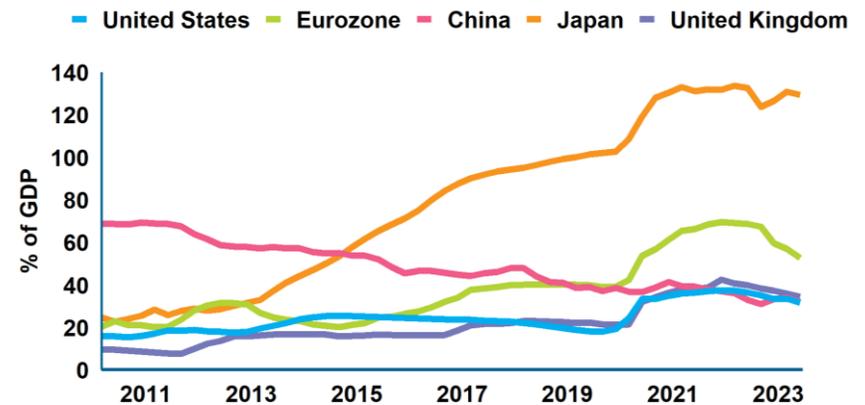
¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated September 2023.

Central Bank Response¹

Policy Rates



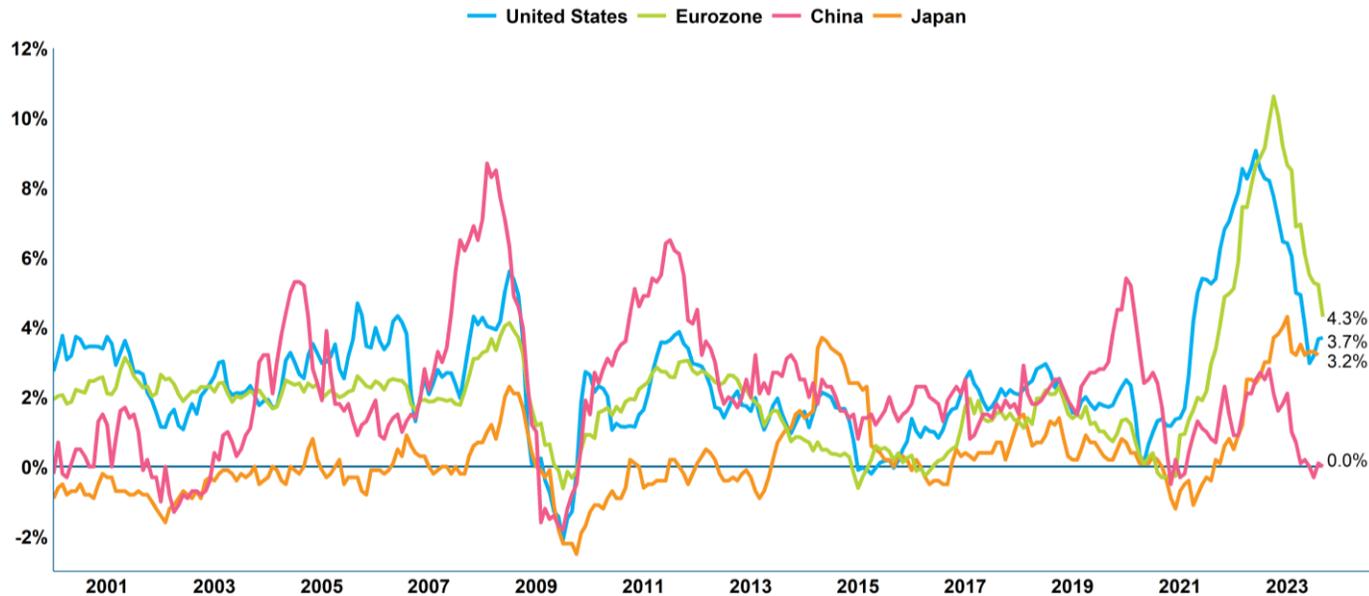
Balance Sheet as % of GDP



- Slowing inflation and growth have led to expectations for a reduction in the pace of aggressive policy tightening.
- In July the Fed raised rates another 25 basis points to a range of 5.25% to 5.50% and then kept rates at this level at their September meeting. Markets are expecting at most one more hike later this year.
- The European Central Bank also increased rates in July, with an additional hike in September, but rates remain lower than in the US. In Japan, expectations have increased that the BOJ will end its negative interest rate policy due to rising inflation.
- The central bank in China has continued to cut interest rates and inject liquidity into the banking system, as weaker than expected economic data appears to indicate a widespread slowdown.
- Risks remain for a policy error as central banks attempt to balance bringing down inflation, maintaining financial stability, and supporting growth.

¹ Source: Bloomberg. Policy rate data is as of September 30, 2023. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of June 30, 2023.

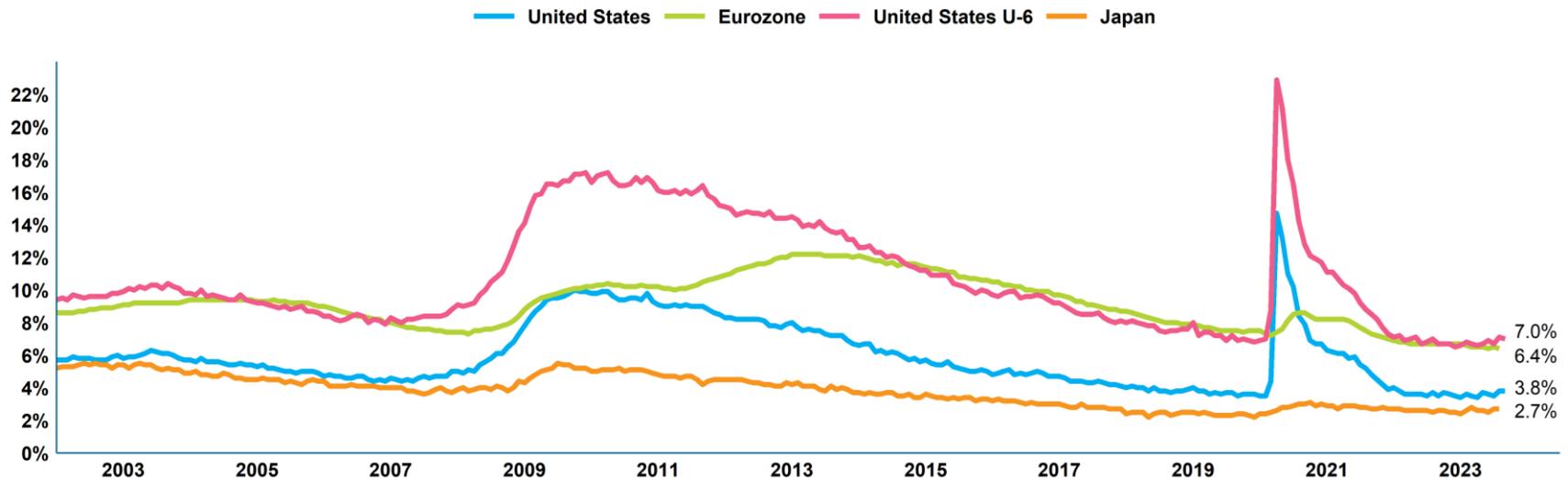
Inflation (CPI Trailing Twelve Months)¹



- The inflation picture remains mixed across the major economies.
- In the US, inflation was flat at 3.7%, influenced by rising shelter costs, while eurozone inflation remained higher than the US at 4.3%, a level well off its peak, however. Despite 2023's significant declines in the US and Europe, inflation levels remain elevated compared to central bank targets.
- Inflation in Japan has increased to levels not seen in almost a decade largely driven by food and home related items. In China, deflationary pressures eased but prices were flat from a year prior.

¹ United States CPI and Eurozone CPI – Source: FRED. Japan CPI and China CPI - Source: Bloomberg. Data is as September 30, 2023. The most recent data for Japanese and Eurozone inflation is as of August 2023.

Unemployment¹



- Overall, the US labor market remains healthy with the unemployment rate relatively low, wage growth now positive in real terms, and initial claims for unemployment staying subdued. The pace of wage growth has slowed though, and despite remaining elevated, the number of job openings has declined from recent highs.
- In September, unemployment remained at 3.8%, a level only 0.2% higher than the start of the quarter. The labor force participation rate remained at 62.8% well off the lows of the pandemic (60.1%) but not back to pre-pandemic levels (63.3%). Broader measures of unemployment (U-6) finished the quarter at 7.0% up only slightly from the end of June (6.9%).
- Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been flat through the pandemic given less layoffs.

¹ Eurozone Unemployment - Source: Bloomberg. Japan, United States, United States U-6 Unemployment – Source: FRED. Data is as September 30, 2023, for the US. The most recent data for Eurozone unemployment is as of August 2023 and Japanese unemployment is as of August 2023.

US Dollar versus Broad Currencies¹



- After a strong 2022, the US dollar declined late last year and into early this year as weaker economic data and lower inflation led to investors anticipating the end of FOMC tightening.
- Recently though, the dollar reversed course and appreciated against major currencies as relative growth remains strong and investors anticipate the FOMC keeping interest rates higher for longer.
- For the rest of this year, the track of inflation across economies and the corresponding monetary policies will be key drivers of currency moves.

¹ Source: Bloomberg. Data as of September 30, 2023.

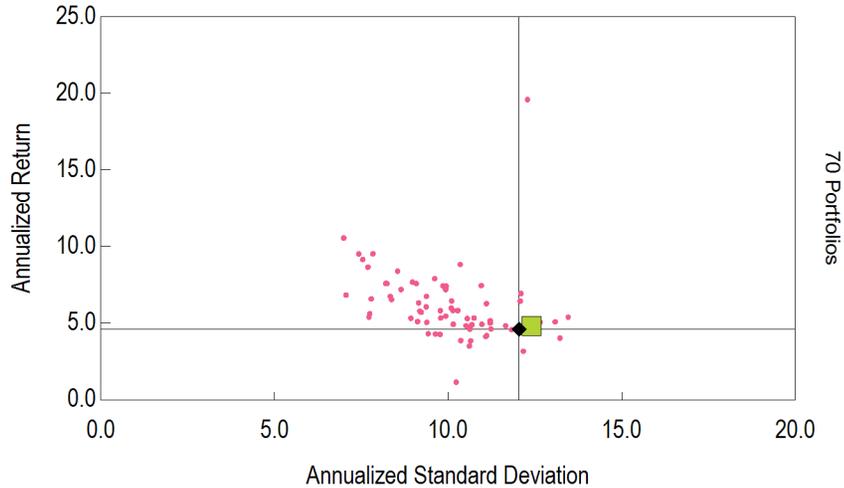
Summary

Key Trends:

- The impact of inflation still above policy targets will remain key, with bond market volatility likely to stay high.
- Global monetary policies could diverge going forward. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.
- Growth is expected to slow globally this year, with many economies forecasted to tip into recession. However, optimism has been building that some economies could experience a soft landing. Inflation, monetary policy, and the war will all be key.
- In the US, consumers could feel pressure as certain components of inflation remain high (e.g., shelter), borrowing costs are elevated, and the job market may weaken.
- The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow. Also, the future paths of the large technology companies that have driven market gains will be important.
- Equity valuations remain lower in emerging and developed markets, but risks remain, including the potential for recent strength in the US dollar to persist, higher inflation weighing particularly on Europe, and China's sluggish economic reopening and on-going weakness in the real estate sector. Japan's recent hint at potentially tightening monetary policy along with changes in corporate governance in the country could influence relative results.
- After month-end, heightened tensions in Israel could add to overall uncertainty and drive safe haven flows.

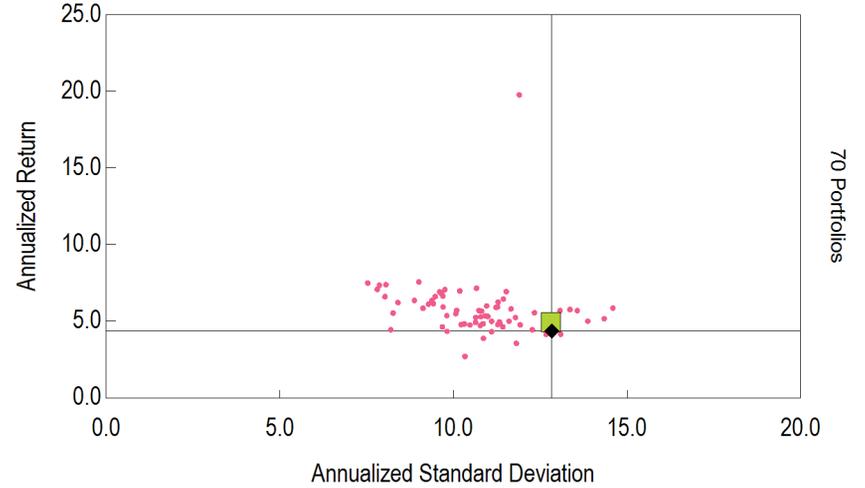
Third Quarter Performance Review

**Annualized Return vs. Annualized Standard Deviation
3 Years Ending September 30, 2023**



■ EBMUDERS Total Plan Composite ● InvMetrics Public DB > \$1B Gross
◆ Total Plan Benchmark

**Annualized Return vs. Annualized Standard Deviation
5 Years Ending September 30, 2023**

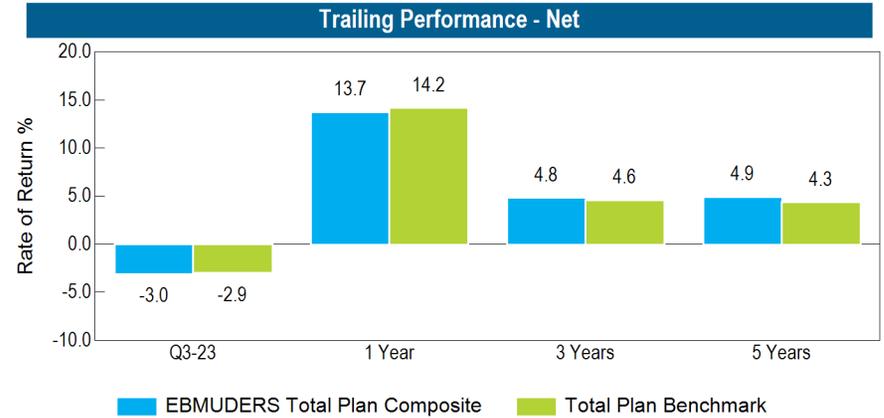
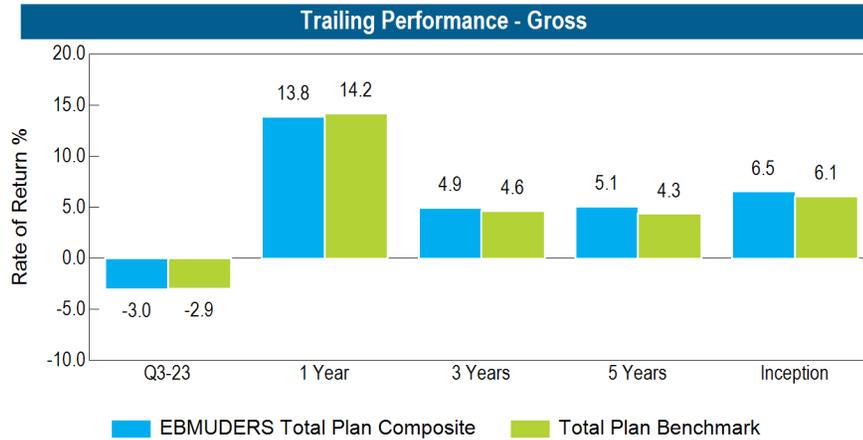


■ EBMUDERS Total Plan Composite ● InvMetrics Public DB > \$1B Gross
◆ Total Plan Benchmark

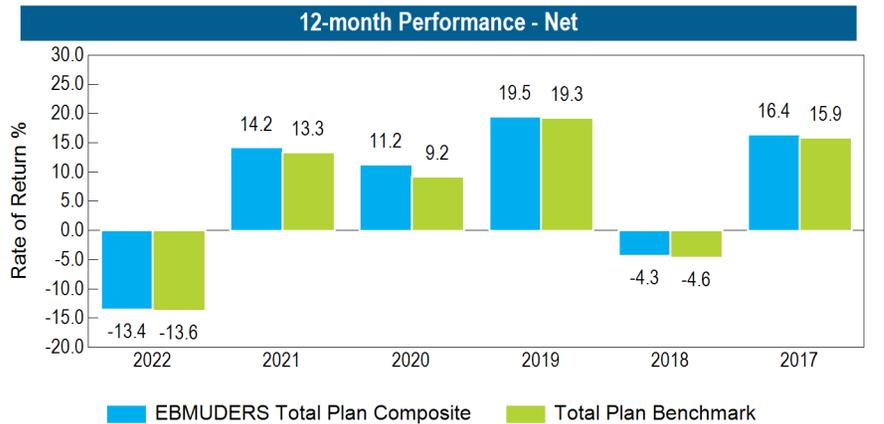
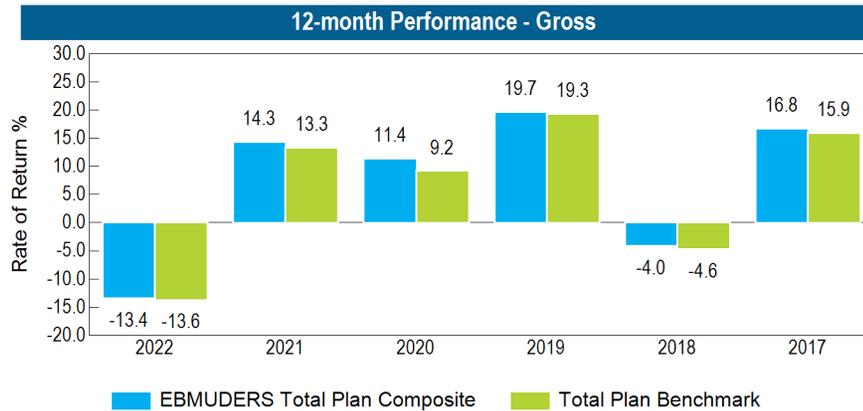
3 Years Ending September 30, 2023			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
EBMUDERS Total Plan Composite	4.93%	12.40%	0.26
Total Plan Benchmark	4.59%	12.04%	0.24

5 Years Ending September 30, 2023			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
EBMUDERS Total Plan Composite	5.07%	12.80%	0.27
Total Plan Benchmark	4.34%	12.83%	0.21

EBMUDERS Total Plan Composite | As of September 30, 2023



	QTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018	2017
EBMUDERS Total Plan Composite - Gross	-3.0	13.8	4.9	5.1	7.1	-13.4	14.3	11.4	19.7	-4.0	16.8
EBMUDERS Total Plan Composite - Net	-3.0	13.7	4.8	4.9	6.9	-13.4	14.2	11.2	19.5	-4.3	16.4
<i>Total Plan Benchmark</i>	-2.9	14.2	4.6	4.3	6.5	-13.6	13.3	9.2	19.3	-4.6	15.9
<i>InvMetrics Public DB > \$1B Gross Median</i>	-2.1	10.3	5.7	5.7	6.6	-11.1	14.9	11.5	16.7	-3.7	16.2

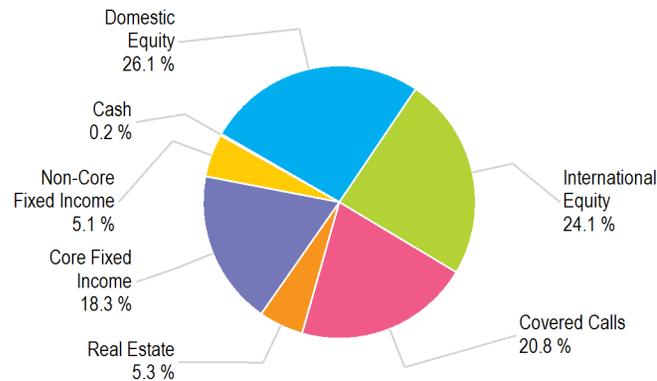


Asset Allocation vs. Target

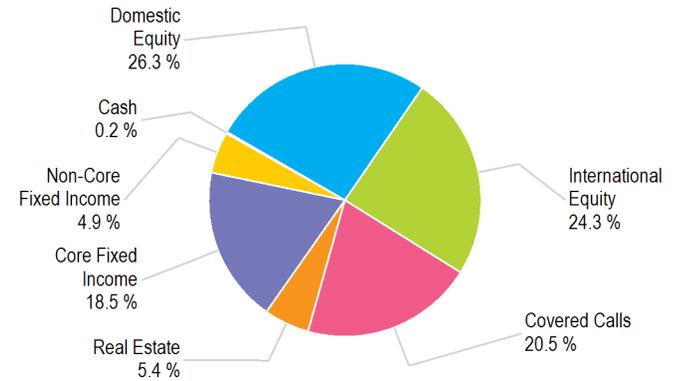
	Current (\$)	Current (%)	Policy (%)	Difference* (%)	Within Range
Domestic Equity	568,630,500	26.1	25.0	1.1	Yes
International Equity	524,849,374	24.1	25.0	-0.9	Yes
Covered Calls	452,961,877	20.8	20.0	0.8	Yes
Real Estate	115,478,269	5.3	5.0	0.3	Yes
Core Fixed Income	399,206,328	18.3	20.0	-1.7	Yes
Non-Core Fixed Income	111,426,389	5.1	5.0	0.1	Yes
Cash	4,728,428	0.2	0.0	0.2	Yes
Total	2,177,281,164	100.0	100.0		

*Difference between Policy and Current Allocation

September 30, 2023 : \$2,177,281,164



June 30, 2023 : \$2,248,004,762



Policy rebalancing ranges shown are for non-turbulent market periods. The Plan also has established rebalancing ranges to be in effect during turbulent market periods.

Domestic and International Equity						
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs	
US Equity Composite	568,630,500	-3.2	20.4	9.4	9.1	
<i>Russell 3000 Hybrid</i>		<i>-3.3</i>	<i>20.5</i>	<i>9.4</i>	<i>9.1</i>	
Northern Trust Russell 3000	567,734,131	-3.2	20.5	9.4	9.1	
<i>Russell 3000</i>		<i>-3.3</i>	<i>20.5</i>	<i>9.4</i>	<i>9.1</i>	
Non-US Equity Composite	524,849,374	-3.8	21.5	4.3	2.6	
<i>MSCI ACWI xUS (blend)</i>		<i>-3.7</i>	<i>21.0</i>	<i>4.2</i>	<i>3.1</i>	
Northern Trust ACWI ex US	524,849,374	-3.8	21.5	4.0	2.7	
<i>MSCI ACWI ex USA Gross</i>		<i>-3.7</i>	<i>21.0</i>	<i>4.2</i>	<i>3.1</i>	

	Covered Calls				
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs
Covered Calls Composite	452,961,877	-1.5	18.7	8.3	6.5
<i>CBOE S&P 500 BuyWrite USD</i>		<i>-2.8</i>	<i>14.6</i>	<i>7.2</i>	<i>3.0</i>
Parametric BXM	153,141,748	-1.1	17.7	8.8	6.1
<i>CBOE S&P 500 BuyWrite USD</i>		<i>-2.8</i>	<i>14.6</i>	<i>7.2</i>	<i>3.0</i>
Parametric Delta Shift	153,423,917	-2.5	23.1	10.6	9.3
<i>CBOE S&P 500 BuyWrite USD</i>		<i>-2.8</i>	<i>14.6</i>	<i>7.2</i>	<i>3.0</i>
Van Hulzen	146,396,212	-0.7	15.0	5.4	3.9
<i>CBOE S&P 500 BuyWrite USD</i>		<i>-2.8</i>	<i>14.6</i>	<i>7.2</i>	<i>3.0</i>

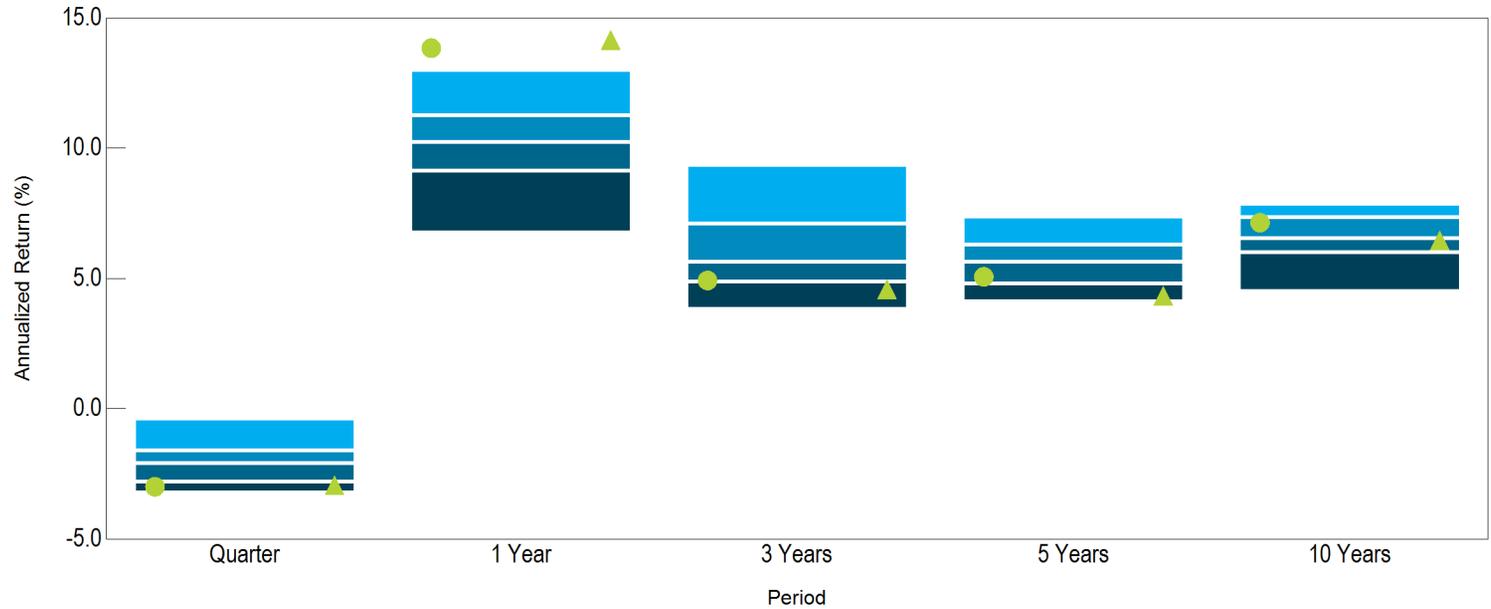
Fixed Income Composite					
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs
Fixed Income Composite	510,632,717	-2.9	1.9	-2.8	1.1
<i>Fixed Income Composite Benchmark</i>		<i>-2.3</i>	<i>1.7</i>	<i>-2.9</i>	<i>0.8</i>
CS McKee	201,853,438	-3.2	1.1	-5.1	0.3
<i>Bloomberg US Aggregate TR</i>		<i>-3.2</i>	<i>0.6</i>	<i>-5.2</i>	<i>0.1</i>
Garcia Hamilton	197,352,890	-5.0	-1.1	-3.7	--
<i>Garcia Hamilton Custom Index</i>		<i>-3.2</i>	<i>-0.9</i>	<i>-3.9</i>	<i>--</i>
MacKay Shields (HY)	56,897,918	1.3	9.7	4.2	--
<i>ICE BofA ML US Corp Cash Pay BB-B 1-5Yr</i>		<i>0.9</i>	<i>9.5</i>	<i>3.1</i>	<i>--</i>
Federated Investment Counseling (Bank Loans)	54,528,470	2.5	8.4	2.9	--
<i>60% CredSuisLevLoan/40% BBStGovCorp</i>		<i>2.5</i>	<i>9.2</i>	<i>4.1</i>	<i>--</i>

Benchmark composition and history provided at the end of this report.

Real Estate Composite						
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs	
Real Estate Composite	115,478,269	-4.8	-5.7	7.3	5.8	
<i>Real Estate Composite Benchmark</i>		<i>-4.5</i>	<i>-1.5</i>	<i>6.9</i>	<i>5.0</i>	
RREEF America II Lag	60,417,439	-2.6	-12.4	7.7	7.0	
<i>NCREIF NPI Mo 1 Qtr Lag</i>		<i>-2.0</i>	<i>-6.5</i>	<i>7.0</i>	<i>6.0</i>	
CenterSquare	55,060,830	-7.2	3.2	6.0	3.8	
<i>FTSE NAREIT Equity REIT</i>		<i>-7.1</i>	<i>3.0</i>	<i>5.8</i>	<i>2.8</i>	

RREEF American II Performance results are lagged one quarter.

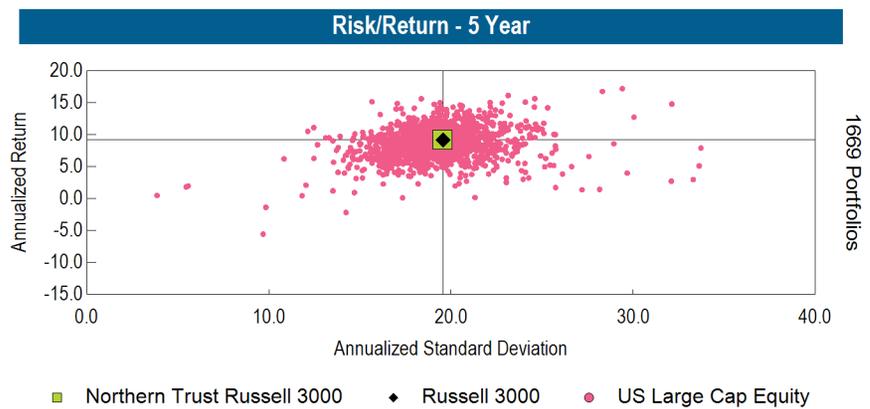
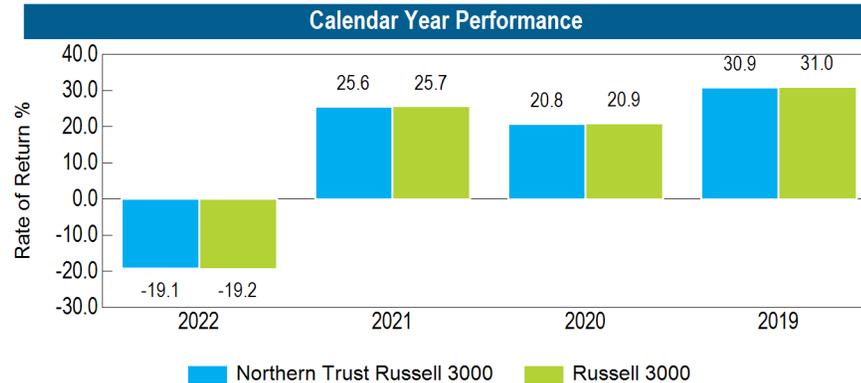
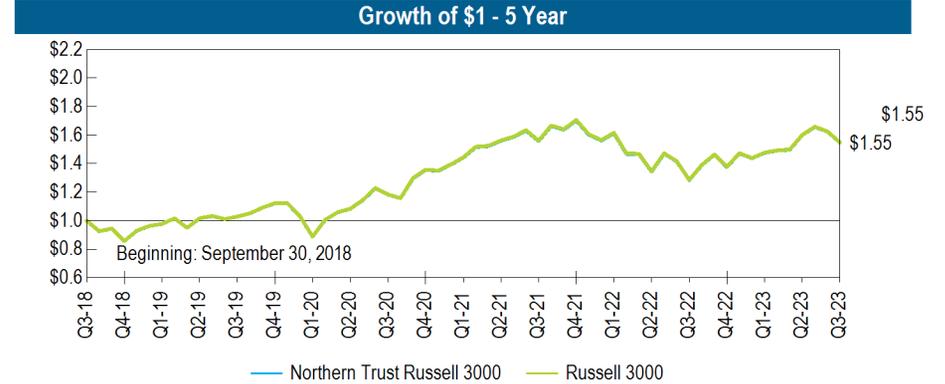
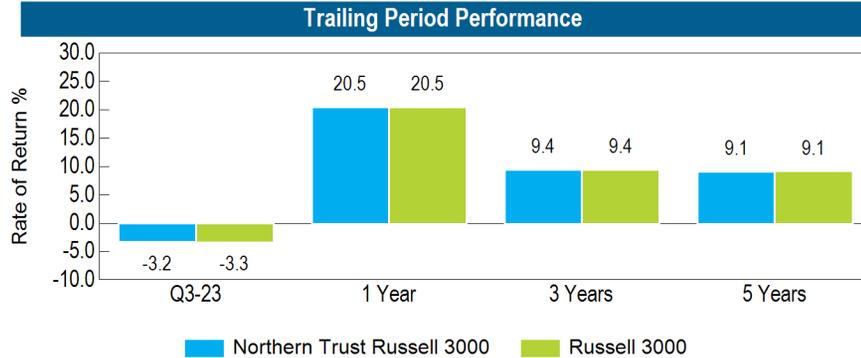
InvMetrics Public DB > \$1B Gross Return Comparison
Ending September 30, 2023



	Return (Rank)										
	5th Percentile	25th Percentile	Median	75th Percentile	95th Percentile	# of Portfolios	Quarter	1 Year	3 Years	5 Years	10 Years
● EBMUDERS Total Plan Composite	-3.0	(88)	13.8	(3)	4.9	(74)	5.1	(67)	7.1	(32)	
▲ Total Plan Benchmark	-2.9	(87)	14.2	(3)	4.6	(84)	4.3	(92)	6.5	(55)	

5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Northern Trust Russell 3000	0.00%	1.00	-0.43	0.38	0.07%	1.00	99.59%	99.91%
Russell 3000	0.00%	1.00	--	0.38	0.00%	1.00	100.00%	100.00%

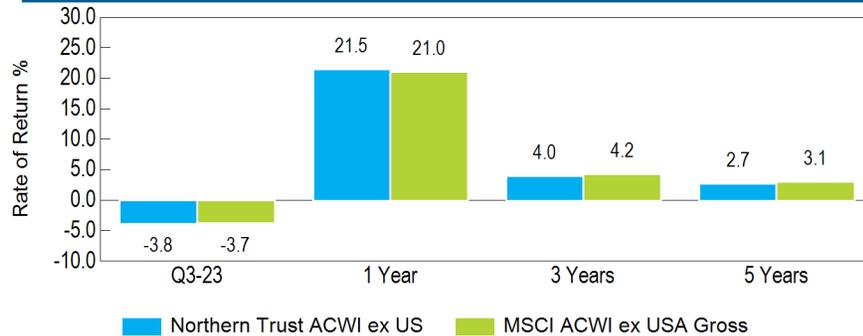


NorthernTrust Russell 3000 has an inception date of June 2018.

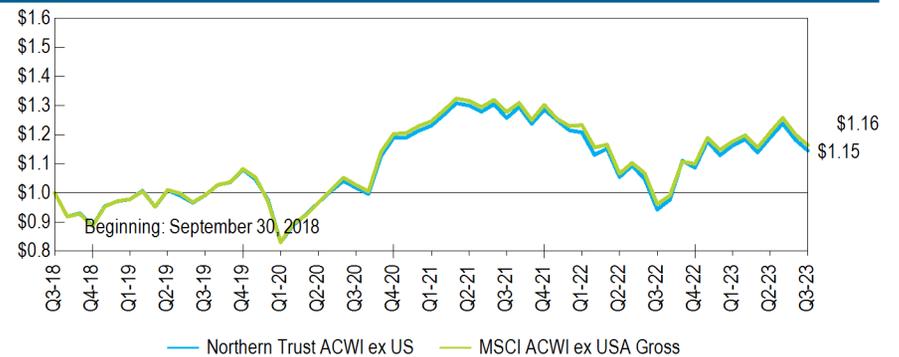
5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Northern Trust ACWI ex US	-0.03%	1.01	-0.21	0.06	1.81%	0.99	102.96%	101.81%
MSCI ACWI ex USA Gross	0.00%	1.00	--	0.08	0.00%	1.00	100.00%	100.00%

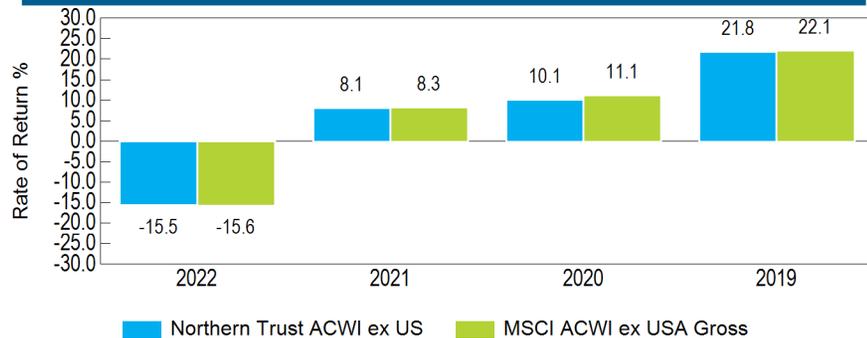
Trailing Period Performance



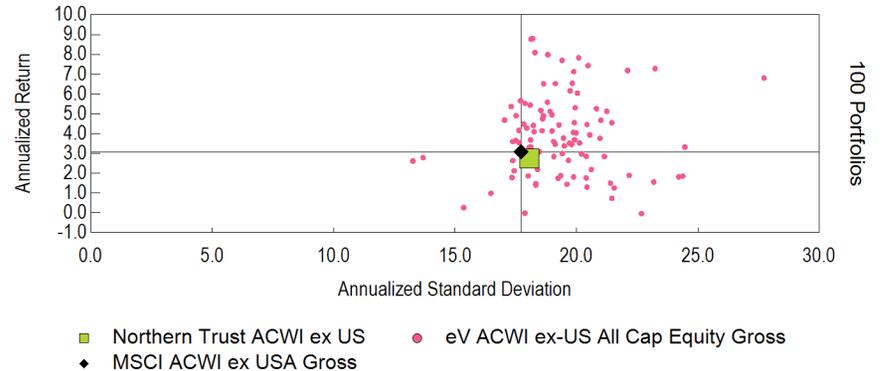
Growth of \$1 - 5 Year



Calendar Year Performance



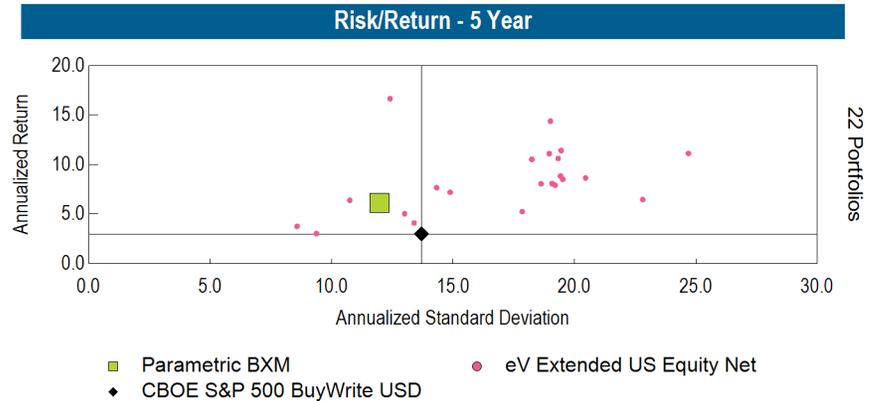
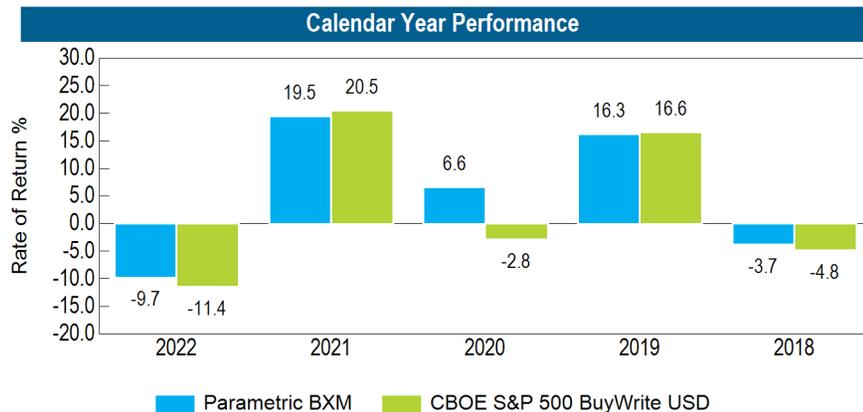
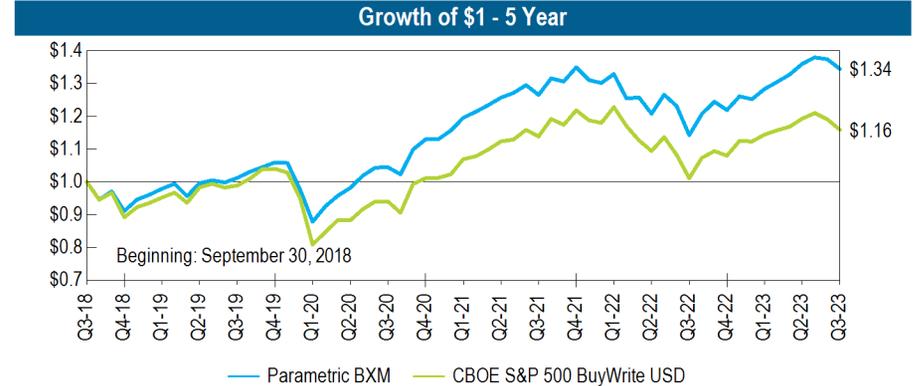
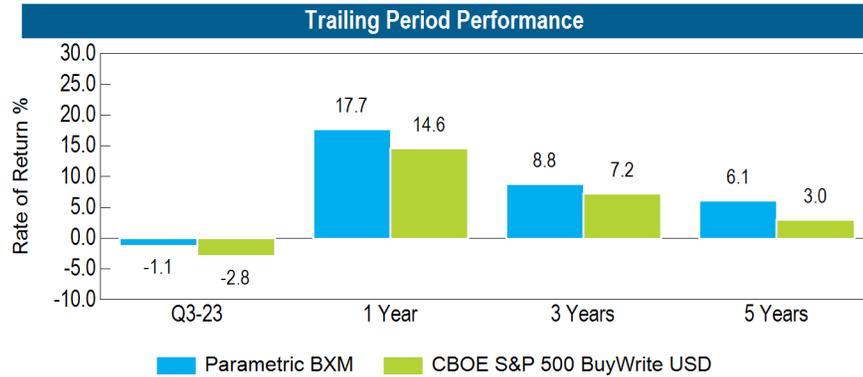
Risk/Return - 5 Year



Northern Trust ACWI ex US has an inception date of June 2018.

5 Year Statistics Summary

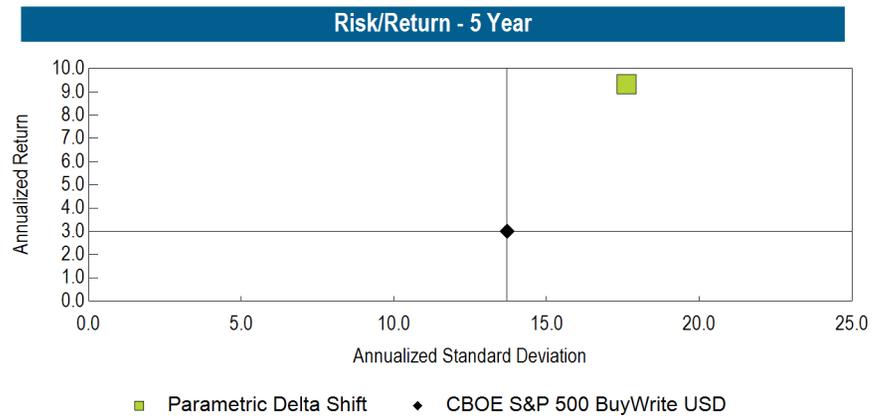
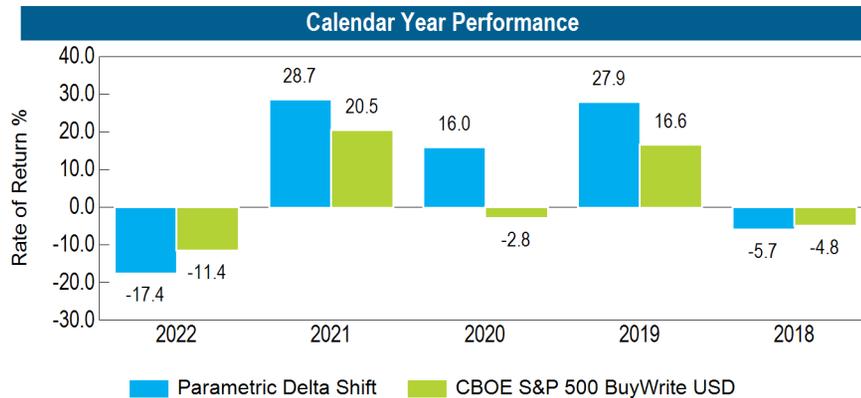
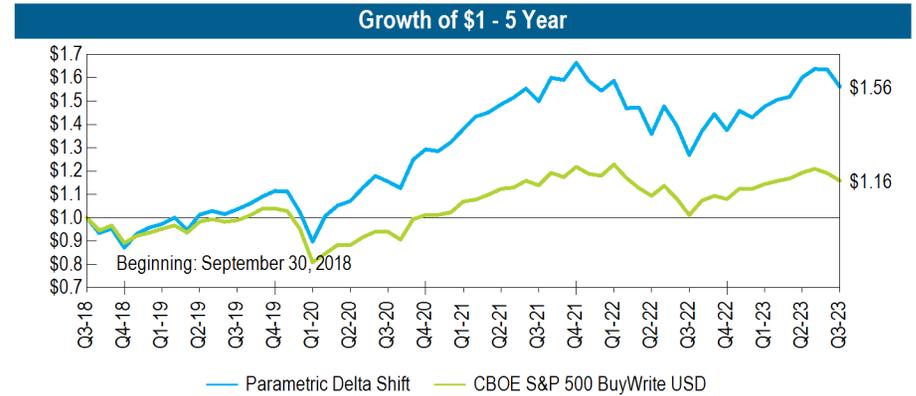
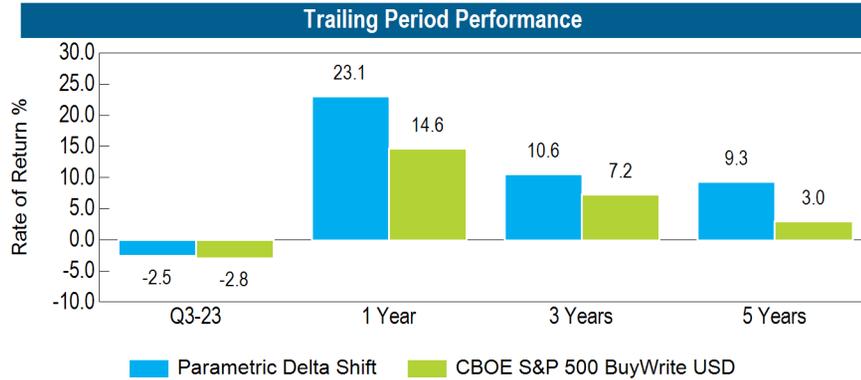
	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Parametric BXM	0.27%	0.83	0.70	0.36	4.21%	0.91	97.44%	86.79%
CBOE S&P 500 BuyWrite USD	0.00%	1.00	--	0.10	0.00%	1.00	100.00%	100.00%



Parametric BXM has an inception date of March 2014.

5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Parametric Delta Shift	0.47%	1.18	0.82	0.42	7.37%	0.84	197.72%	113.57%
CBOE S&P 500 BuyWrite USD	0.00%	1.00	--	0.10	0.00%	1.00	100.00%	100.00%

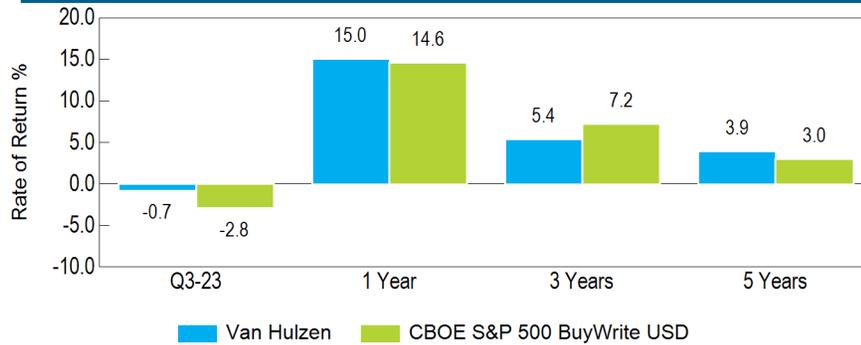


Parametric Delta Shift has an inception date of March 2014.

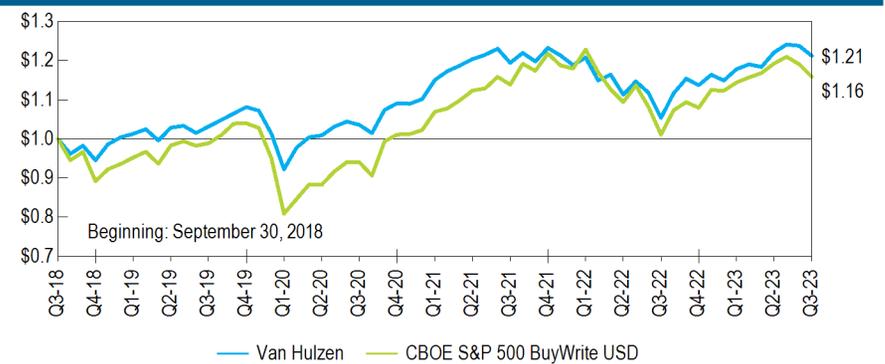
5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Van Hulzen	0.12%	0.69	0.12	0.20	5.78%	0.85	73.75%	81.67%
CBOE S&P 500 BuyWrite USD	0.00%	1.00	--	0.10	0.00%	1.00	100.00%	100.00%

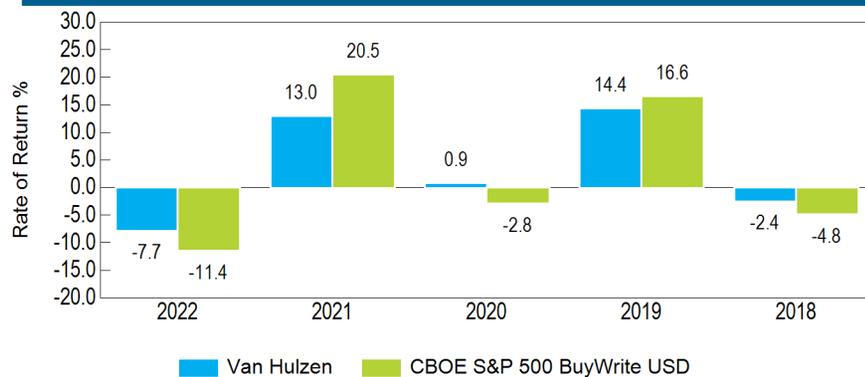
Trailing Period Performance



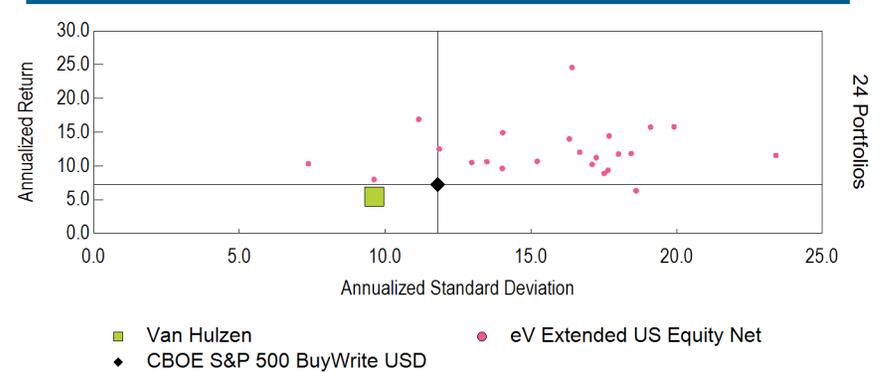
Growth of \$1 - 5 Year



Calendar Year Performance



Risk/Return - 5 Year

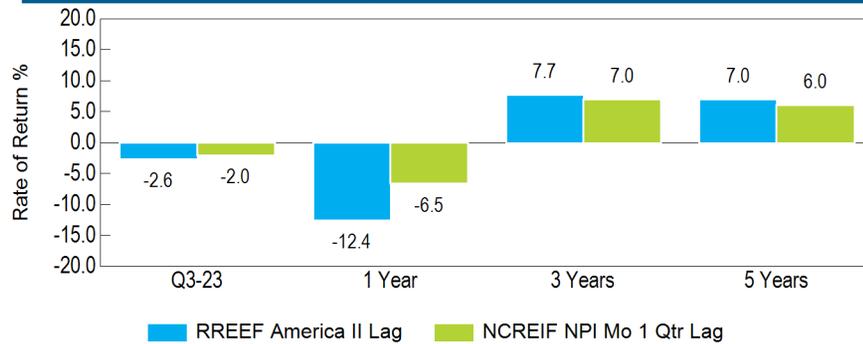


Van Hulzen has an inception date of March 2014.

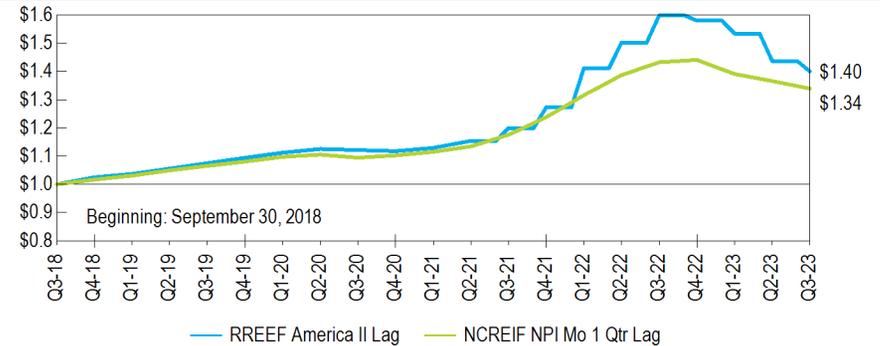
5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
RREEF America II Lag	-0.20%	1.44	0.00	0.57	6.66%	0.27	115.57%	154.46%
NCREIF NPI Mo 1 Qtr Lag	0.00%	1.00	--	1.58	0.00%	1.00	100.00%	100.00%

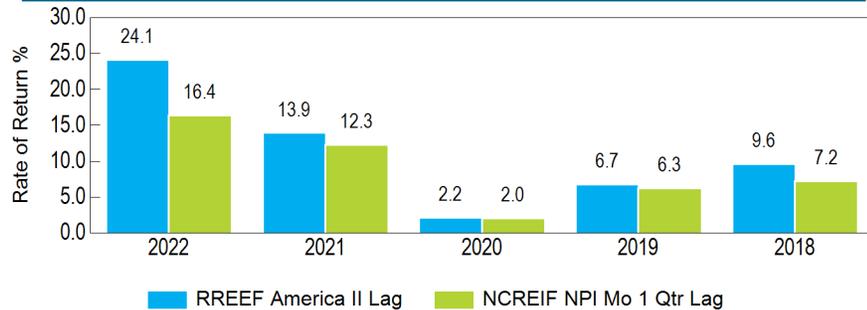
Trailing Period Performance



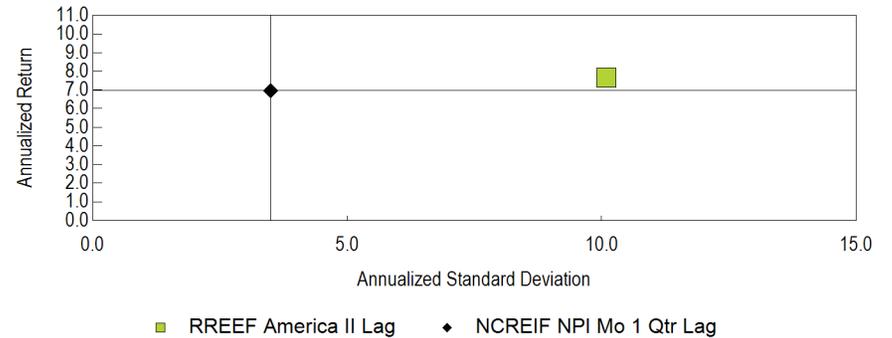
Growth of \$1 - 5 Year



Calendar Year Performance



Risk/Return - 5 Year

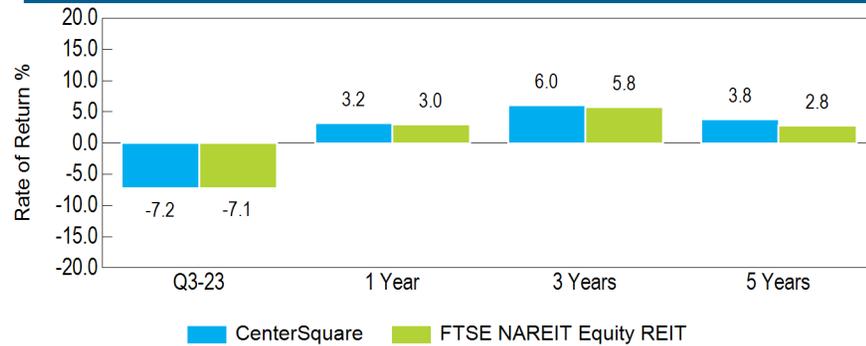


RREEF American II Performance results are lagged one quarter.
RREEF America II Lag has an inception date of January 2007.

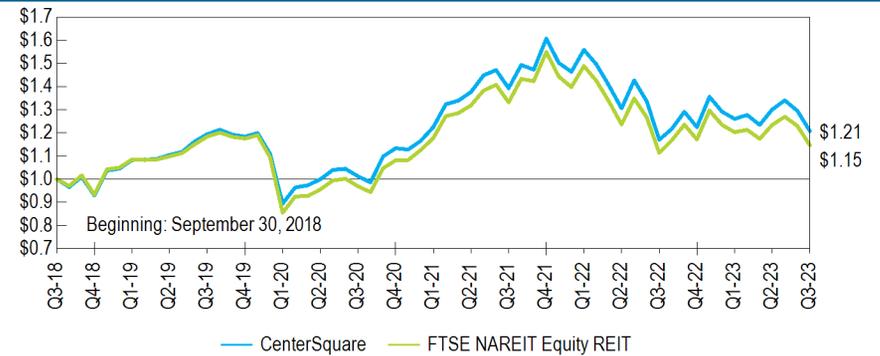
5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
CenterSquare	0.06%	0.97	0.48	0.09	1.65%	0.99	100.13%	98.63%
FTSE NAREIT Equity REIT	0.00%	1.00	--	0.05	0.00%	1.00	100.00%	100.00%

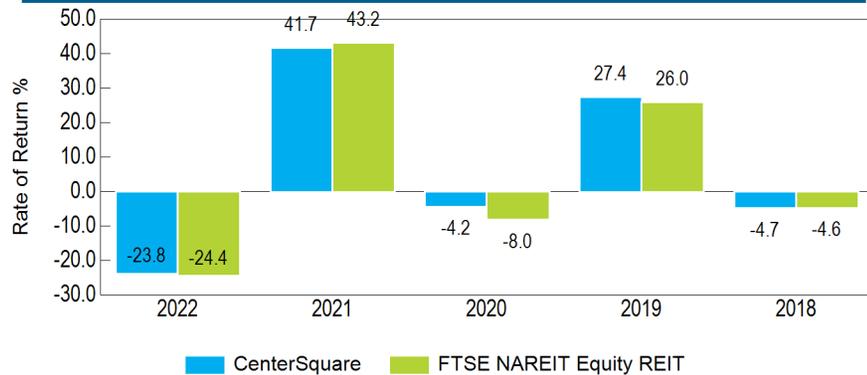
Trailing Period Performance



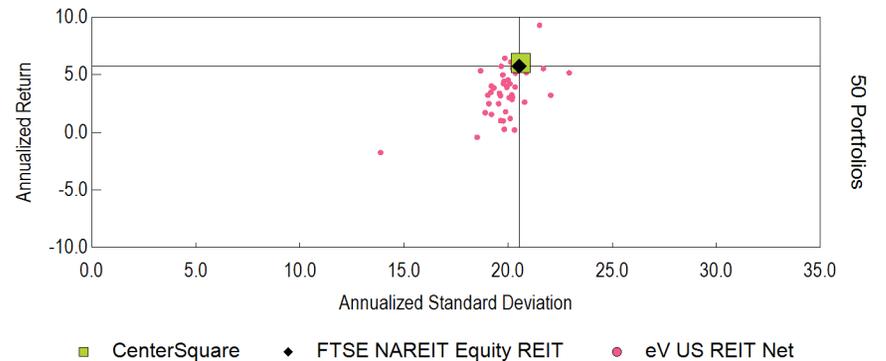
Growth of \$1 - 5 Year



Calendar Year Performance

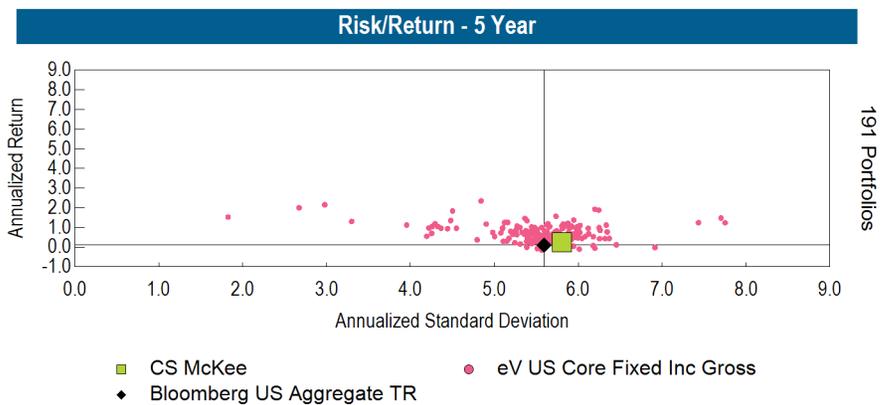
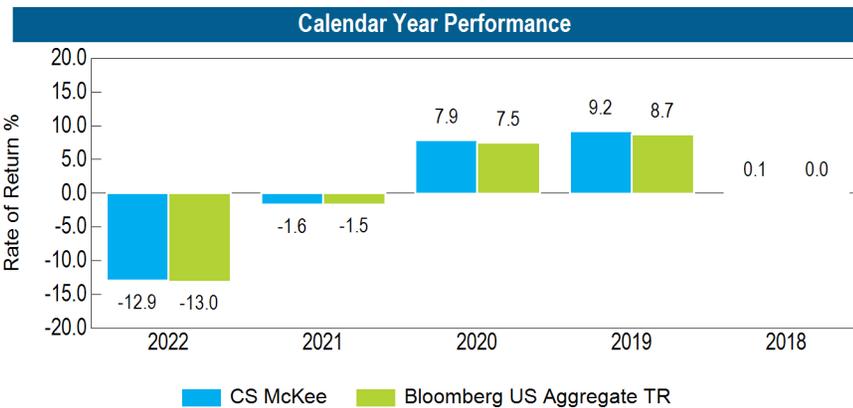
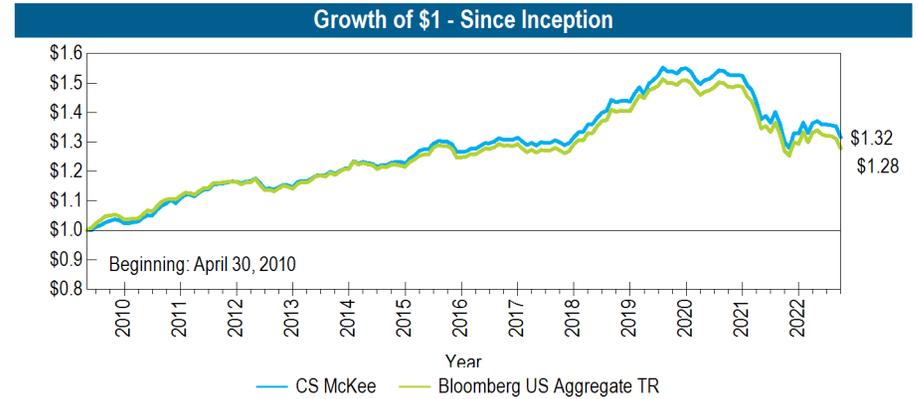
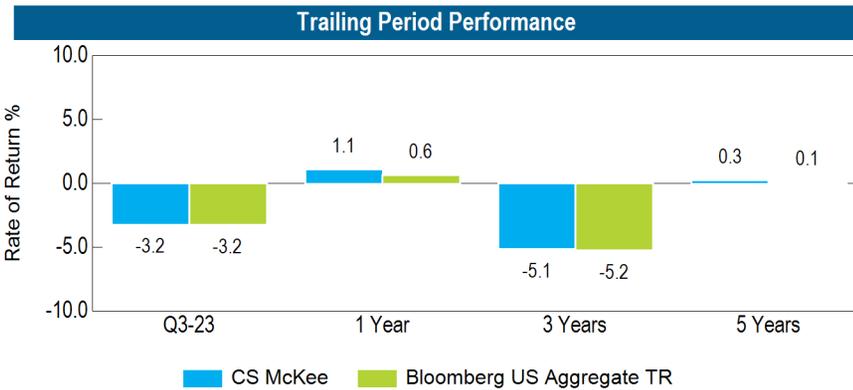


Risk/Return - 5 Year



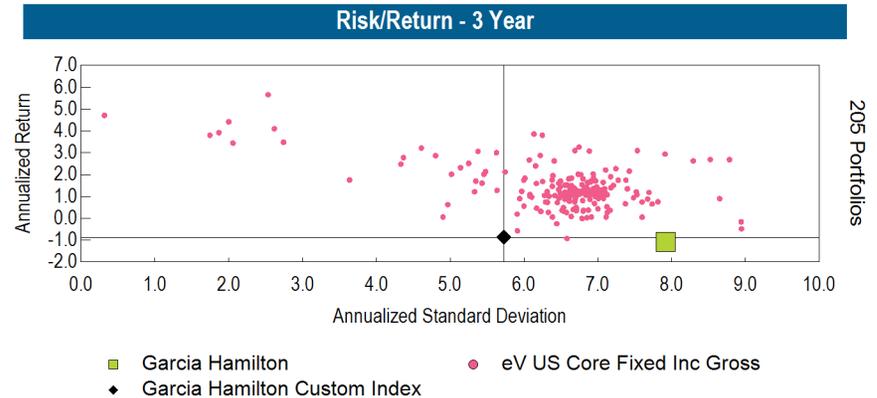
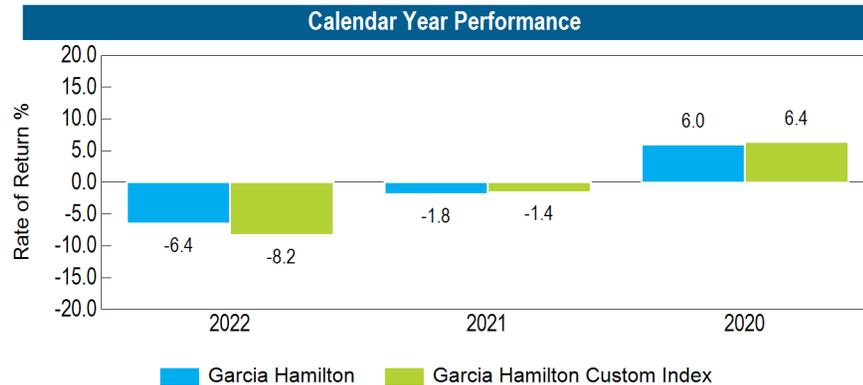
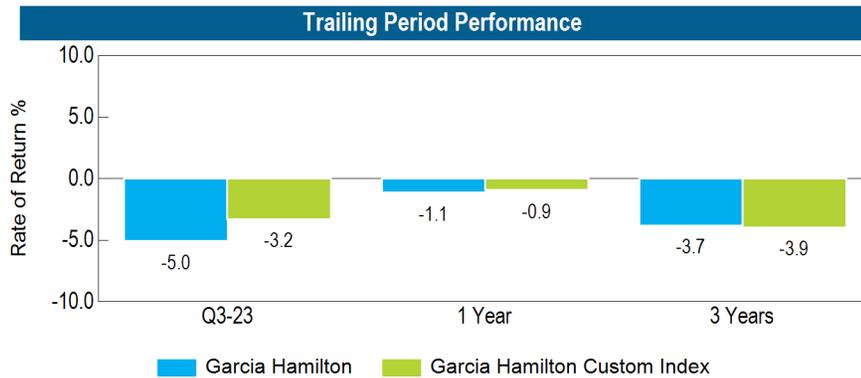
CenterSquare has an inception date of October 2011.

5 Year Statistics Summary									
	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	
CS McKee	0.02%	0.99	0.26	0.30	0.85%	0.96	101.82%	97.47%	
Bloomberg US Aggregate TR	0.00%	1.00	--	0.25	0.00%	1.00	100.00%	100.00%	



CS McKee has an inception date of April 2010.

3 Year Statistics Summary									
	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	
Garcia Hamilton	0.08%	1.19	0.10	-0.99	1.64%	0.93	123.17%	107.59%	
Garcia Hamilton Custom Index	0.00%	1.00	--	-1.26	0.00%	1.00	100.00%	100.00%	

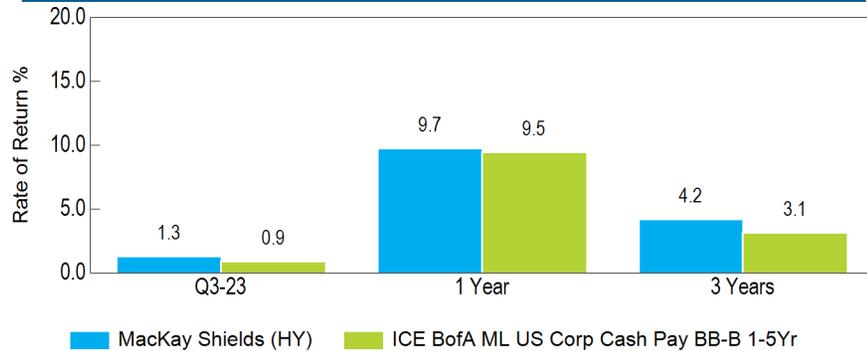


Garcia Hamilton has an inception date of November 2019.
5 Year risk statistics are not available at this time.

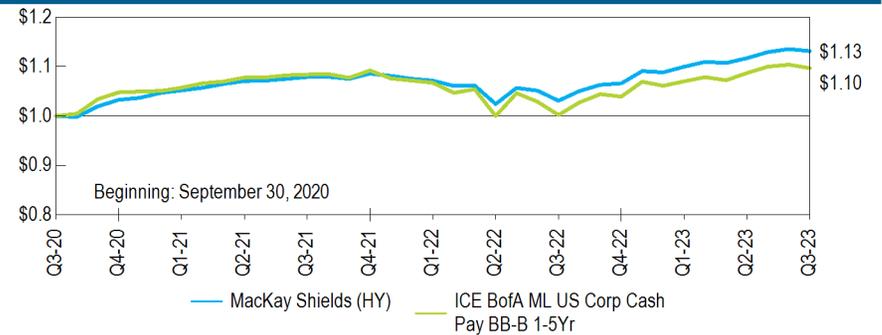
3 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
MacKay Shields (HY)	0.13%	0.68	0.30	0.51	2.13%	0.94	77.10%	59.27%
ICE BofA ML US Corp Cash Pay BB-B 1-5Yr	0.00%	1.00	--	0.24	0.00%	1.00	100.00%	100.00%

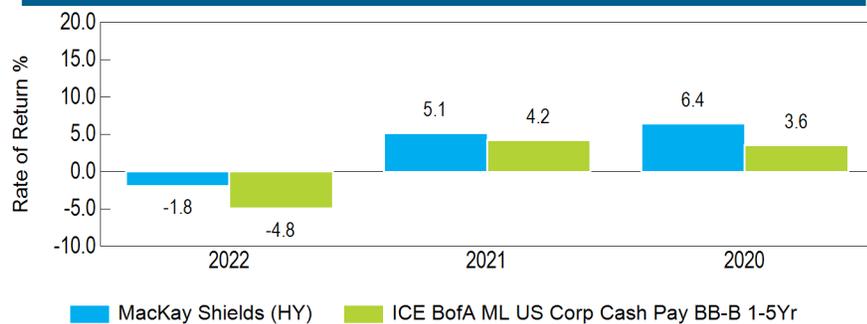
Trailing Period Performance



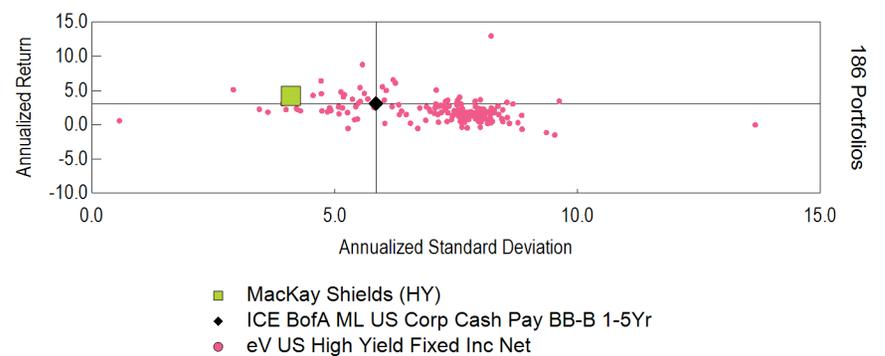
Growth of \$1 - 3 Year



Calendar Year Performance



Risk/Return - 3 Year

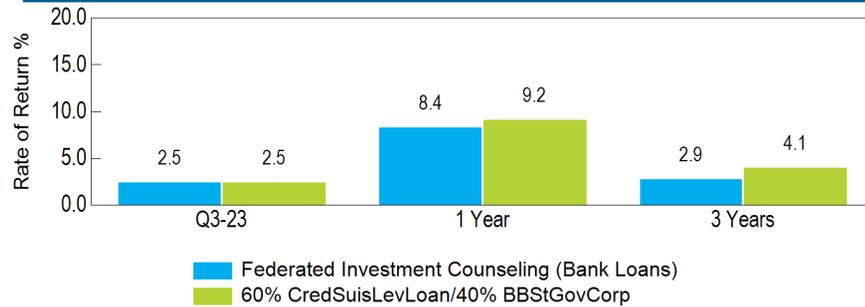


MacKay Shields has an inception date of February 2019.
5 Year Risk statistics are not available at this time.

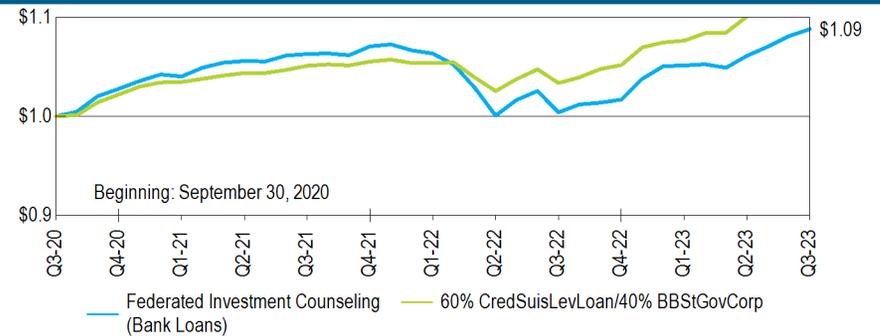
3 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Federated Investment Counseling (Bank Loans)	-0.26%	1.36	-1.13	0.19	1.57%	0.86	91.54%	180.90%
60% CredSuisLevLoan/40% BBStGovCorp	0.00%	1.00	--	1.01	0.00%	1.00	100.00%	100.00%

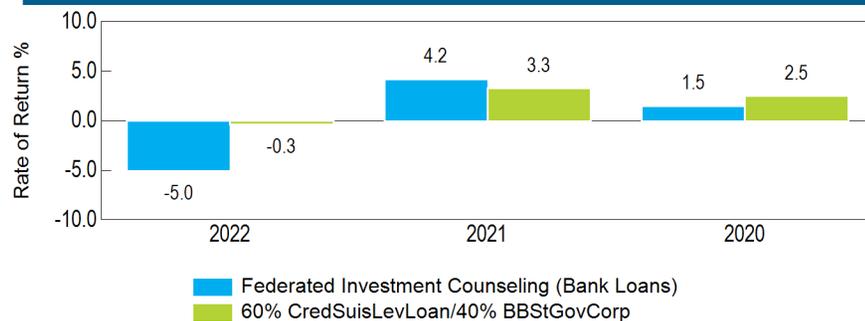
Trailing Period Performance



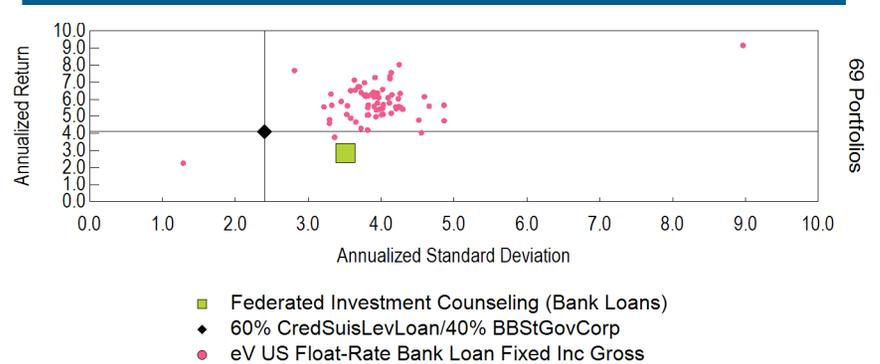
Growth of \$1 - 3 Year



Calendar Year Performance



Risk/Return - 3 Year



Federated Investment Counseling has an inception date of February 2019.
5 Year Risk statistics are not available at this time.

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
EBMUDERS Total Plan Composite	-3.0	13.7	4.8	4.9
<i>Total Plan Benchmark</i>	<i>-2.9</i>	<i>14.2</i>	<i>4.6</i>	<i>4.3</i>
US Equity Composite	-3.2	20.4	9.4	9.1
<i>Russell 3000 Hybrid</i>	<i>-3.3</i>	<i>20.5</i>	<i>9.4</i>	<i>9.1</i>
Non-US Equity Composite	-3.8	21.5	4.3	2.5
<i>MSCI ACWI xUS (blend)</i>	<i>-3.7</i>	<i>21.0</i>	<i>4.2</i>	<i>3.1</i>
Covered Calls Composite	-1.5	18.5	8.1	6.3
<i>CBOE S&P 500 BuyWrite USD</i>	<i>-2.8</i>	<i>14.6</i>	<i>7.2</i>	<i>3.0</i>
Real Estate Composite	-5.0	-6.1	6.8	5.3
<i>Real Estate Composite Benchmark</i>	<i>-4.5</i>	<i>-1.5</i>	<i>6.9</i>	<i>5.0</i>
Fixed Income Composite	-2.9	1.7	-3.0	0.9
<i>Fixed Income Composite Benchmark</i>	<i>-2.3</i>	<i>1.7</i>	<i>-2.9</i>	<i>0.8</i>
Cash Composite	1.0	4.2	1.7	2.0
<i>FTSE T-Bill 3 Months TR</i>	<i>1.4</i>	<i>4.7</i>	<i>1.8</i>	<i>1.7</i>

Benchmark composition and history provided at the end of this report.

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
US Equity Composite	-3.2	20.4	9.4	9.1
<i>Russell 3000 Hybrid</i>	<i>-3.3</i>	<i>20.5</i>	<i>9.4</i>	<i>9.1</i>
Northern Trust Russell 3000	-3.2	20.5	9.4	9.1
<i>Russell 3000</i>	<i>-3.3</i>	<i>20.5</i>	<i>9.4</i>	<i>9.1</i>
Non-US Equity Composite	-3.8	21.5	4.3	2.5
<i>MSCI ACWI xUS (blend)</i>	<i>-3.7</i>	<i>21.0</i>	<i>4.2</i>	<i>3.1</i>
Northern Trust ACWI ex US	-3.8	21.4	4.0	2.7
<i>MSCI ACWI ex USA Gross</i>	<i>-3.7</i>	<i>21.0</i>	<i>4.2</i>	<i>3.1</i>
Covered Calls Composite	-1.5	18.5	8.1	6.3
<i>CBOE S&P 500 BuyWrite USD</i>	<i>-2.8</i>	<i>14.6</i>	<i>7.2</i>	<i>3.0</i>
Parametric BXM	-1.2	17.5	8.6	5.9
<i>CBOE S&P 500 BuyWrite USD</i>	<i>-2.8</i>	<i>14.6</i>	<i>7.2</i>	<i>3.0</i>
Parametric Delta Shift	-2.5	22.7	10.3	9.0
<i>CBOE S&P 500 BuyWrite USD</i>	<i>-2.8</i>	<i>14.6</i>	<i>7.2</i>	<i>3.0</i>
Van Hulzen	-0.8	14.8	5.1	3.7
<i>CBOE S&P 500 BuyWrite USD</i>	<i>-2.8</i>	<i>14.6</i>	<i>7.2</i>	<i>3.0</i>

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Real Estate Composite	-5.0	-6.1	6.8	5.3
<i>Real Estate Composite Benchmark</i>	<i>-4.5</i>	<i>-1.5</i>	<i>6.9</i>	<i>5.0</i>
RREEF America II Lag	-2.8	-13.1	6.7	6.0
<i>NCREIF NPI Mo 1 Qtr Lag</i>	<i>-2.0</i>	<i>-6.5</i>	<i>7.0</i>	<i>6.0</i>
CenterSquare	-7.2	2.9	5.8	3.6
<i>FTSE NAREIT Equity REIT</i>	<i>-7.1</i>	<i>3.0</i>	<i>5.8</i>	<i>2.8</i>
Fixed Income Composite	-2.9	1.7	-3.0	0.9
<i>Fixed Income Composite Benchmark</i>	<i>-2.3</i>	<i>1.7</i>	<i>-2.9</i>	<i>0.8</i>
Fixed Income Core Fixed Income Composite	-4.1	-0.1	-4.5	0.3
<i>Fixed Income Core Composite Bench</i>	<i>-3.2</i>	<i>-0.1</i>	<i>-4.6</i>	<i>--</i>
CS McKee	-3.2	0.9	-5.3	0.1
<i>Bloomberg US Aggregate TR</i>	<i>-3.2</i>	<i>0.6</i>	<i>-5.2</i>	<i>0.1</i>
Garcia Hamilton	-5.0	-1.2	-3.9	--
<i>Garcia Hamilton Custom Index</i>	<i>-3.2</i>	<i>-0.9</i>	<i>-3.9</i>	<i>--</i>
Fixed Income Non-Core Fixed Income Composite	1.8	8.7	3.2	3.0
<i>Fixed Income Non-Core Composite Bench</i>	<i>1.7</i>	<i>9.4</i>	<i>3.6</i>	<i>3.3</i>
MacKay Shields (HY)	1.2	9.3	3.8	--
<i>ICE BofA ML US Corp Cash Pay BB-B 1-5Yr</i>	<i>0.9</i>	<i>9.5</i>	<i>3.1</i>	<i>--</i>
Federated Investment Counseling (Bank Loans)	2.4	7.8	2.3	--
<i>60% CredSuisLevLoan/40% BBStGovCorp</i>	<i>2.5</i>	<i>9.2</i>	<i>4.1</i>	<i>--</i>

Benchmark History

As of September 30, 2023

EBMUDERS Total Plan Composite

2/1/2023	Present	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 20% Bloomberg US Aggregate TR / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
12/1/2019	1/31/2023	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 10% Bloomberg US Intermediate Gov/Cred / 10% Bloomberg US Aggregate TR / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
3/1/2019	11/30/2019	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 15% Bloomberg US Aggregate TR / 5% Bloomberg US Govt/Credit 1-3 Yr. TR / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
7/1/2018	2/28/2019	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 15% Bloomberg US Aggregate TR / 5% Bloomberg US Govt/Credit 1-3 Yr. TR / 2.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
4/1/2014	6/30/2018	40% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 15% MSCI ACWI ex USA Gross / 10% Bloomberg US Aggregate TR / 5% Bloomberg US Govt/Credit 1-3 Yr. TR / 2.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
3/1/2014	3/31/2014	40% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 15% MSCI ACWI ex USA Gross / 15% Bloomberg US Aggregate TR / 2.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
11/1/2011	2/28/2014	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% Bloomberg US Universal TR / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT
1/1/2008	10/31/2011	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% Bloomberg US Universal TR / 5% NCREIF NPI Mo 1 Qtr Lag
1/1/2007	12/31/2007	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% Bloomberg US Aggregate TR / 5% NCREIF Property Index
10/1/2005	12/31/2006	50% Russell 3000 / 25% Bloomberg US Aggregate TR / 5% NCREIF NPI Mo 1 Qtr Lag / 20% MSCI EAFE
4/1/2005	9/30/2005	30% S&P 500 / 10% S&P 400 MidCap / 10% Russell 2000 / 20% MSCI EAFE / 25% Bloomberg US Aggregate TR / 5% NCREIF NPI Mo 1 Qtr Lag

Benchmark History

As of September 30, 2023

Fixed Income Composite

2/1/2023	Present	80% Bloomberg US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 10% 60% CredSuisLevLoan/40% BBStGovCorp
12/1/2019	1/31/2023	40% Bloomberg US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 40% Bloomberg US Intermediate Gov/Cred / 10% 60% CredSuisLevLoan/40% BBStGovCorp
3/1/2019	11/30/2019	60% Bloomberg US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 20% Bloomberg US Govt/Credit 1-3 Yr. TR / 10% 60% CredSuisLevLoan/40% BBStGovCorp
7/1/2018	2/28/2019	60% Bloomberg US Aggregate TR / 10% Morningstar LSTA US Performing Loans Index / 20% Bloomberg US Govt/Credit 1-3 Yr. TR / 10% Bloomberg US High Yield 1-5Yr Cash Pay 2%
4/1/2014	6/30/2018	50% Bloomberg US Aggregate TR / 12.5% Morningstar LSTA US Performing Loans Index / 25% Bloomberg US Govt/Credit 1-3 Yr. TR / 12.5% Bloomberg US High Yield 1-5Yr Cash Pay 2%
3/1/2014	3/31/2014	75% Bloomberg US Aggregate TR / 12.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 12.5% Morningstar LSTA US Performing Loans Index
1/1/2008	2/28/2014	Bloomberg US Universal TR
1/1/1976	12/31/2007	Bloomberg US Aggregate TR

Fixed Income Core Fixed Income Composite

2/1/2023	Present	Bloomberg US Aggregate TR
12/1/2019	1/31/2023	50% Bloomberg US Aggregate TR / 50% Bloomberg US Intermediate Gov/Cred

Fixed Income Non-Core Fixed Income Composite

12/1/2019	Present	50% 60% CredSuisLevLoan/40% BBStGovCorp / 50% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr
3/1/2019	11/30/2019	25% 60% CredSuisLevLoan/40% BBStGovCorp / 25% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 50% Bloomberg US Govt/Credit 1-3 Yr. TR
3/1/2014	2/28/2019	25% Morningstar LSTA US Performing Loans Index / 25% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 50% Bloomberg US Govt/Credit 1-3 Yr. TR

Benchmark History

As of September 30, 2023

Real Estate Composite

11/1/2011	Present	50% FTSE NAREIT Equity REIT / 50% NCREIF NPI Mo 1 Qtr Lag
10/1/1998	10/31/2011	NCREIF NPI Mo 1 Qtr Lag
4/1/1978	9/30/1998	NCREIF Property Index

Garcia Hamilton

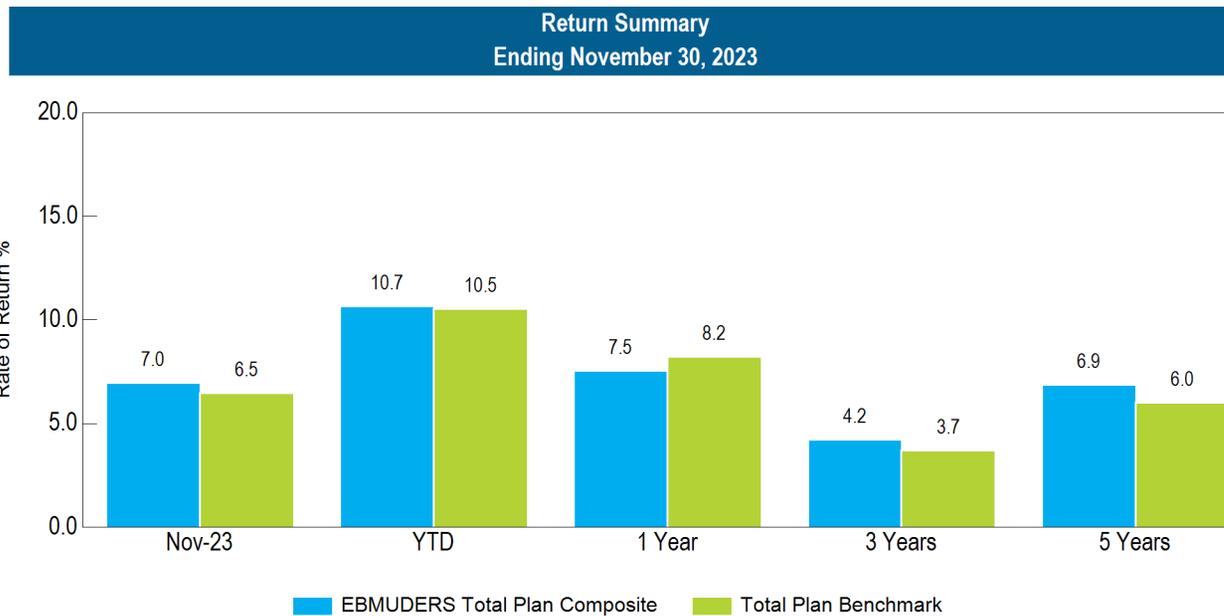
2/1/2023	Present	Bloomberg US Aggregate TR
11/1/2019	1/31/2023	Bloomberg US Govt/Credit Int TR

November 30, 2023 Flash Report

Performance Summary							
	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
EBMUDERS Total Plan Composite	2,269,480,660	100.0	7.0	10.7	7.5	4.2	6.9
<i>Total Plan Benchmark</i>			<i>6.5</i>	<i>10.5</i>	<i>8.2</i>	<i>3.7</i>	<i>6.0</i>
US Equity Composite	605,194,732	26.7	9.3	19.6	12.6	8.3	11.7
<i>Russell 3000 Hybrid</i>			<i>9.3</i>	<i>19.6</i>	<i>12.6</i>	<i>8.3</i>	<i>11.8</i>
Non-US Equity Composite	548,635,432	24.2	9.0	10.1	7.8	2.3	5.3
<i>MSCI ACWI xUS (blend)</i>			<i>9.0</i>	<i>10.6</i>	<i>9.8</i>	<i>2.2</i>	<i>5.6</i>
Covered Calls Composite	466,093,030	20.5	5.3	15.0	11.7	7.9	8.1
<i>CBOE S&P 500 BuyWrite USD</i>			<i>2.9</i>	<i>9.7</i>	<i>8.3</i>	<i>6.0</i>	<i>4.1</i>
Real Estate Composite	118,729,807	5.2	5.1	-4.3	-7.2	6.8	6.1
<i>Real Estate Composite Benchmark</i>			<i>5.3</i>	<i>-1.5</i>	<i>-3.9</i>	<i>6.5</i>	<i>5.3</i>
Fixed Income Composite	525,616,059	23.2	4.5	2.4	2.3	-2.2	1.7
<i>Fixed Income Composite Benchmark</i>			<i>4.1</i>	<i>2.5</i>	<i>2.3</i>	<i>-2.3</i>	<i>1.4</i>
Cash Composite	5,211,598	0.2	0.0	4.8	4.8	2.0	2.1
<i>FTSE T-Bill 3 Months TR</i>			<i>0.5</i>	<i>4.8</i>	<i>5.1</i>	<i>2.1</i>	<i>1.9</i>

Benchmark composition and history provided at the end of this report.

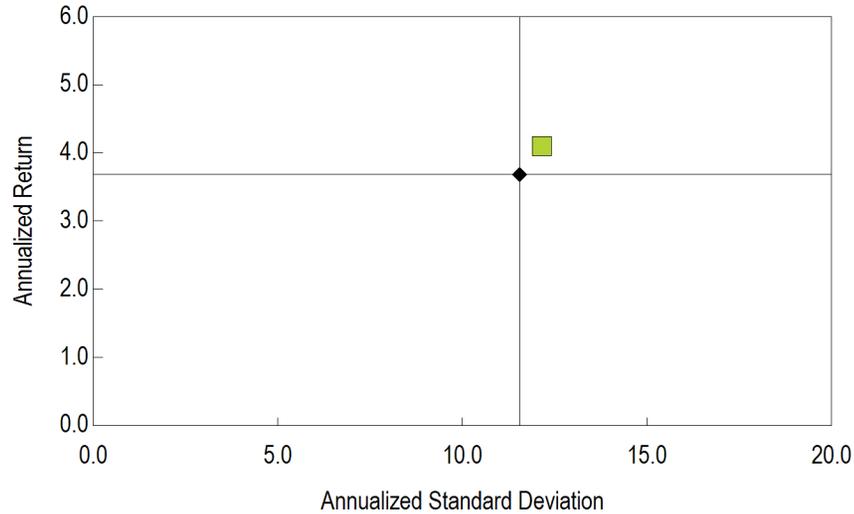
Summary of Cash Flows		
	Quarter-To-Date	One Year
Beginning Market Value	\$2,177,281,164	\$2,135,979,160
Net Cash Flow	-\$5,461,554	-\$24,487,538
Capital Appreciation	\$97,661,049	\$157,989,038
Ending Market Value	\$2,269,480,660	\$2,269,480,660



Benchmark composition and history provided at the end of this report.

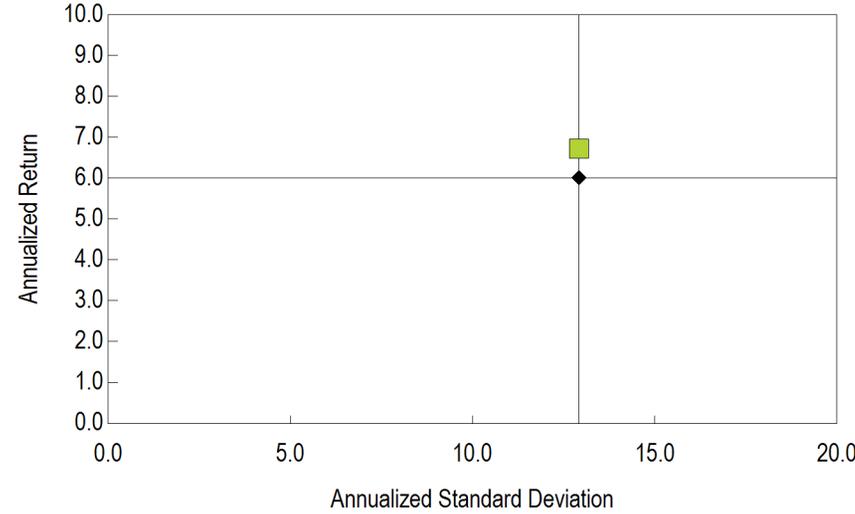
EBMUDERS Total Plan Composite | As of November 30, 2023

**Annualized Return vs. Annualized Standard Deviation
3 Years Ending November 30, 2023**



■ EBMUDERS Total Plan Composite ◆ Total Plan Benchmark

**Annualized Return vs. Annualized Standard Deviation
5 Years Ending November 30, 2023**



■ EBMUDERS Total Plan Composite ◆ Total Plan Benchmark

3 Years Ending November 30, 2023			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
EBMUDERS Total Plan Composite	4.20%	12.16%	0.18
Total Plan Benchmark	3.68%	11.55%	0.15

5 Years Ending November 30, 2023			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
EBMUDERS Total Plan Composite	6.86%	12.91%	0.40
Total Plan Benchmark	6.01%	12.92%	0.33

Asset Allocation vs. Target

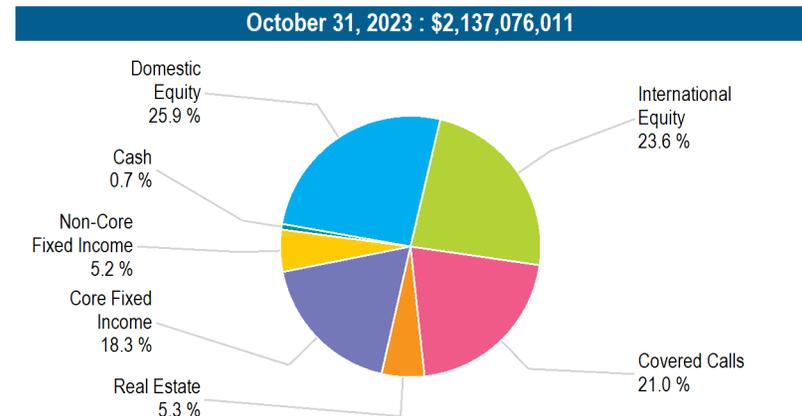
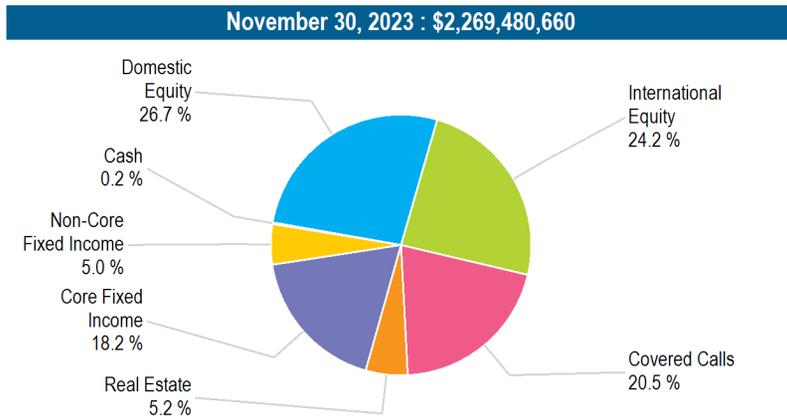
	Current (\$)	Current (%)	Policy (%)	Difference* (%)	Policy Range (%)	Within Range
Domestic Equity	605,194,732	26.7	25.0	1.7	20.0 - 30.0	Yes
International Equity	548,635,432	24.2	25.0	-0.8	20.0 - 30.0	Yes
Covered Calls	466,093,030	20.5	20.0	0.5	17.0 - 23.0	Yes
Real Estate	118,729,807	5.2	5.0	0.2	3.0 - 7.0	Yes
Core Fixed Income	412,249,931	18.2	20.0	-1.8	17.0 - 23.0	Yes
Non-Core Fixed Income	113,366,128	5.0	5.0	0.0	3.0 - 7.0	Yes
Cash	5,211,599	0.2	0.0	0.2	0.0 - 5.0	Yes
Total	2,269,480,660	100.0	100.0			

*Difference between Policy and Current Allocation

¹Current policy target allocations elected by the Board in January 2019 took effect March 2019 upon the transition to the new long-term strategic allocation.

²Policy rebalancing ranges shown are for non-turbulent market periods. The Plan also has established rebalancing ranges to be in effect during turbulent market periods

³RREEF results are lagged 1 quarter



	Market Value	1 Mo	YTD	1 Yr	3 Yrs	5 Yrs
Domestic Equity	605,194,732					
Northern Trust Russell 3000	604,319,104	9.3	19.7	12.7	8.3	11.8
<i>Russell 3000</i>		<i>9.3</i>	<i>19.6</i>	<i>12.6</i>	<i>8.3</i>	<i>11.8</i>
International Equity	548,635,432					
Northern Trust ACWI ex US	548,635,432	9.0	10.1	7.8	2.0	5.2
<i>MSCI ACWI ex USA Gross</i>		<i>9.0</i>	<i>10.6</i>	<i>9.8</i>	<i>2.2</i>	<i>5.6</i>
Covered Calls	466,093,030					
Parametric BXM	154,711,397	3.5	13.8	11.5	8.1	7.4
<i>CBOE S&P 500 BuyWrite USD</i>		<i>2.9</i>	<i>9.7</i>	<i>8.3</i>	<i>6.0</i>	<i>4.1</i>
Parametric Delta Shift	158,872,936	7.8	20.2	14.4	9.8	11.6
<i>CBOE S&P 500 BuyWrite USD</i>		<i>2.9</i>	<i>9.7</i>	<i>8.3</i>	<i>6.0</i>	<i>4.1</i>
Van Hulzen	152,508,697	4.4	11.0	9.4	5.5	5.1
<i>CBOE S&P 500 BuyWrite USD</i>		<i>2.9</i>	<i>9.7</i>	<i>8.3</i>	<i>6.0</i>	<i>4.1</i>
Real Estate	118,729,807					
RREEF America II Lag	60,417,439	0.0	-11.4	-12.4	7.8	6.6
<i>NCREIF NPI Mo 1 Qtr Lag</i>		<i>0.0</i>	<i>-7.1</i>	<i>-6.9</i>	<i>6.8</i>	<i>5.8</i>
CenterSquare	58,312,368	11.0	4.4	-0.9	5.2	4.8
<i>FTSE NAREIT Equity REIT</i>		<i>10.6</i>	<i>3.5</i>	<i>-1.9</i>	<i>5.0</i>	<i>3.6</i>

¹RREEF results are lagged 1 quarter

	Market Value	1 Mo	YTD	1 Yr	3 Yrs	5 Yrs
Core Fixed Income	412,249,931					
CS McKee	208,368,189	5.1	2.2	2.2	-4.3	0.9
<i>Bloomberg US Aggregate TR</i>		<i>4.5</i>	<i>1.6</i>	<i>1.2</i>	<i>-4.5</i>	<i>0.7</i>
Garcia Hamilton	203,881,743	5.6	-0.6	-1.0	-2.9	--
<i>Garcia Hamilton Custom Benchmark</i>		<i>4.5</i>	<i>0.4</i>	<i>0.3</i>	<i>-3.1</i>	<i>--</i>
Non-Core Fixed Income	113,366,128					
Mackay Shields (HY)	58,220,907	2.3	8.5	8.8	4.3	--
<i>ICE BofA ML US Corp Cash Pay BB-B 1-5Yr</i>		<i>3.5</i>	<i>8.5</i>	<i>8.0</i>	<i>2.9</i>	<i>--</i>
Federated Investment Counseling (Bank Loans)	55,145,221	0.8	8.2	8.5	2.6	--
<i>60% CredSuisLevLoan/40% BBStGovCorp</i>		<i>0.9</i>	<i>8.6</i>	<i>9.0</i>	<i>4.0</i>	<i>--</i>
Cash	5,211,599					
Cash LAIF	5,211,598	0.0	4.8	4.8	2.0	2.1
<i>FTSE T-Bill 3 Months TR</i>		<i>0.5</i>	<i>4.8</i>	<i>5.1</i>	<i>2.1</i>	<i>1.9</i>

Benchmark History

As of November 30, 2023

EBMUDERS Total Plan Composite

2/1/2023	Present	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 20% Bloomberg US Aggregate TR / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
12/1/2019	1/31/2023	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 10% Bloomberg US Intermediate Gov/Cred / 10% Bloomberg US Aggregate TR / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
3/1/2019	11/30/2019	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 15% Bloomberg US Aggregate TR / 5% Bloomberg US Govt/Credit 1-3 Yr. TR / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
7/1/2018	2/28/2019	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 15% Bloomberg US Aggregate TR / 5% Bloomberg US Govt/Credit 1-3 Yr. TR / 2.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
4/1/2014	6/30/2018	40% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 15% MSCI ACWI ex USA Gross / 10% Bloomberg US Aggregate TR / 5% Bloomberg US Govt/Credit 1-3 Yr. TR / 2.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
3/1/2014	3/31/2014	40% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 15% MSCI ACWI ex USA Gross / 15% Bloomberg US Aggregate TR / 2.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
11/1/2011	2/28/2014	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% Bloomberg US Universal TR / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT
1/1/2008	10/31/2011	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% Bloomberg US Universal TR / 5% NCREIF NPI Mo 1 Qtr Lag
1/1/2007	12/31/2007	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% Bloomberg US Aggregate TR / 5% NCREIF Property Index
10/1/2005	12/31/2006	50% Russell 3000 / 25% Bloomberg US Aggregate TR / 5% NCREIF NPI Mo 1 Qtr Lag / 20% MSCI EAFE
4/1/2005	9/30/2005	30% S&P 500 / 10% S&P 400 MidCap / 10% Russell 2000 / 20% MSCI EAFE / 25% Bloomberg US Aggregate TR / 5% NCREIF NPI Mo 1 Qtr Lag
9/1/1998	3/31/2005	33% S&P 500 / 10% S&P 400 MidCap / 10% Russell 2000 / 17% MSCI EAFE / 30% Bloomberg US Aggregate TR
3/31/1996	8/31/1998	30% S&P 500 / 15% Wilshire 5000 / 15% MSCI EAFE / 30% Bloomberg US Aggregate TR / 5% NCREIF Property Index / 5% FTSE T-Bill 3 Months TR

EBMUDERS Total Plan x Securities Lending Composite		
No Benchmark Selected		
Public Equity Composite		
1/1/2007	Present	71.43% Russell 3000 / 28.57% MSCI ACWI ex USA Gross
10/1/2005	12/31/2006	28.57% MSCI EAFE / 71.43% Russell 3000
4/1/2005	9/30/2005	42.86% S&P 500 / 14.285% S&P 400 MidCap / 14.285% Russell 2000 / 28.57% MSCI EAFE
9/1/1998	3/31/2005	47.14% S&P 500 / 14.285% S&P 400 MidCap / 14.285% Russell 2000 / 24.29% MSCI EAFE
1/1/1994	8/31/1998	50% S&P 500 / 25% Wilshire 5000 / 25% MSCI EAFE
US Equity Composite		
10/1/2005	Present	Russell 3000
4/1/2005	9/30/2005	60% S&P 500 / 20% S&P 400 MidCap / 20% Russell 2000
9/1/1998	3/31/2005	62.23% S&P 500 / 18.87% S&P 400 MidCap / 18.87% Russell 2000
4/1/1996	8/31/1998	33.3% Wilshire 5000 / 66.6% S&P 500
US Equity Large Cap Composite		
10/1/2005	Present	Russell 1000 Value
6/1/1994	9/30/2005	S&P 500
Non-US Equity Composite		
1/1/2007	Present	MSCI ACWI ex USA Gross
1/1/1970	12/31/2006	MSCI EAFE
NonUSE Developed Markets Composite		
1/1/2007	Present	MSCI ACWI ex USA Gross
1/1/1970	12/31/2006	MSCI EAFE
Covered Calls Composite		
	Present	CBOE S&P 500 BuyWrite USD

Real Estate Composite		
11/1/2011	Present	50% FTSE NAREIT Equity REIT / 50% NCREIF NPI Mo 1 Qtr Lag
10/1/1998	10/31/2011	NCREIF NPI Mo 1 Qtr Lag
4/1/1978	9/30/1998	NCREIF Property Index
Fixed Income Composite		
2/1/2023	Present	80% Bloomberg US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 10% 60% CredSuisLevLoan/40% BBStGovCorp
12/1/2019	1/31/2023	40% Bloomberg US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 40% Bloomberg US Intermediate Gov/Cred / 10% 60% CredSuisLevLoan/40% BBStGovCorp
3/1/2019	11/30/2019	60% Bloomberg US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 20% Bloomberg US Govt/Credit 1-3 Yr. TR / 10% 60% CredSuisLevLoan/40% BBStGovCorp
7/1/2018	2/28/2019	60% Bloomberg US Aggregate TR / 10% Morningstar LSTA US Performing Loans Index / 20% Bloomberg US Govt/Credit 1-3 Yr. TR / 10% Bloomberg US High Yield 1-5Yr Cash Pay 2%
4/1/2014	6/30/2018	50% Bloomberg US Aggregate TR / 12.5% Morningstar LSTA US Performing Loans Index / 25% Bloomberg US Govt/Credit 1-3 Yr. TR / 12.5% Bloomberg US High Yield 1-5Yr Cash Pay 2%
3/1/2014	3/31/2014	75% Bloomberg US Aggregate TR / 12.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 12.5% Morningstar LSTA US Performing Loans Index
1/1/2008	2/28/2014	Bloomberg US Universal TR
1/1/1976	12/31/2007	Bloomberg US Aggregate TR
Fixed Income Core Fixed Income Composite		
2/1/2023	Present	Bloomberg US Aggregate TR
12/1/2019	1/31/2023	50% Bloomberg US Aggregate TR / 50% Bloomberg US Intermediate Gov/Cred
Fixed Income Non-Core Fixed Income Composite		
12/1/2019	Present	50% 60% CredSuisLevLoan/40% BBStGovCorp / 50% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr
3/1/2019	11/30/2019	25% 60% CredSuisLevLoan/40% BBStGovCorp / 25% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 50% Bloomberg US Govt/Credit 1-3 Yr. TR
3/1/2014	2/28/2019	25% Morningstar LSTA US Performing Loans Index / 25% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 50% Bloomberg US Govt/Credit 1-3 Yr. TR
Cash Composite		
	Present	FTSE T-Bill 3 Months TR

Manager Watch Screens

Performance Monitoring Summary

Portfolio	Violation Type (Window) ¹	Date of Initial Violation	Correction Action(s)	Current Status			
				Current Status	Est. Beg. Date of Current Status	Months Since Est. Beg. Date	Performance Since Est. Beg. Date ^{2,3}
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→ As of September 30, 2023 there are no managers currently on watch.

¹ Defined as: Short-Term (12 months), Medium-Term (36 months), Long-Term (60 months).

² Annualized for periods greater than 12 months.

³ Performance figures not yet available.

Quantitative Compliance Monitoring per Watch Criteria

Active Management Criteria

- Active investment managers are expected to outperform their respective passive benchmarks related to both their asset class and investment style.
- Relative excess performance that falls below the red acceptable threshold stated in the Watch Criteria for six consecutive months may be a trigger for Watch status.

Passive Management Criteria

- Passive investment managers are expected to track the performance of their respective passive benchmarks related to both their asset class and their investment style.
- Tracking error is a measure of how closely a portfolio follows the index to which it is benchmarked.
- For short- and medium-term performance monitoring, a portfolio with tracking error that is above the red acceptable threshold stated in the Watch Criteria for six consecutive months may be a trigger for Watch status.
- For long-term performance monitoring, relative excess performance that falls below the red acceptable threshold stated in the Watch Criteria for six consecutive months may be a trigger for Watch status.

Quantitative Monitoring Results - Overall Status Summary

	Prior Qtr Status	Current Qtr Status
Northern Trust – R3000	Acceptable	Acceptable
Northern Trust – ACWixUS	N/A	Acceptable
Parametric – BXM	Acceptable	Acceptable
Parametric – Delta Shift	Acceptable	Acceptable
Van Hulzen	Acceptable	Acceptable
CS McKee	Acceptable	Acceptable
Garcia Hamilton	Acceptable	Acceptable
Mackay Shields – Short Term HY	Acceptable	Acceptable
Federated – Bank Loans	Acceptable	Acceptable
CenterSquare	Acceptable	Acceptable

Investment Performance Criteria by Asset Class

Asset Class	Short-term (rolling 12-month periods)	Medium-term (rolling 36-month periods)	Long-term (60+ months)
Domestic Equity - Passive	Tracking error > 0.30%	Tracking error > 0.25% for 6 consecutive months	Fund annualized return < benchmark annualized return -0.40% for 6 consecutive months
Non-US Equity - Passive	Tracking error > 1.75%	Tracking error > 1.5% for 6 consecutive months	Fund annualized return < benchmark annualized return - 0.50% for 6 consecutive months
Covered Calls - Active	Fund return < benchmark return - 3.5%	Fund annualized return < benchmark annualized return -1.75% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Covered Calls - Replication	Fund return < benchmark return - 3.5%	Fund annualized return < benchmark annualized return -1.75% for 6 consecutive months	Fund annualized return < benchmark annualized return - 0.40% for 6 consecutive months
Fixed Income - Core – Active	Fund return < benchmark return - 1.5%	Fund annualized return < benchmark annualized return -1.0% for 6 consecutive months	VRR < 0.98 for 6 consecutive months
Fixed Income - Core – Passive	Tracking error > 0.25%	Tracking error > 0.20% for 6 consecutive months	Fund annualized return < benchmark annualized return - 0.30% for 6 consecutive months
Fixed Income - Non-Core	Fund return < benchmark return - 4.5%	Fund annualized return < benchmark annualized return - 2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months

All criteria are on an annualized basis.

VRR – Value Relative Ratio – is calculated as: manager cumulative return / benchmark cumulative return.

Manager Performance			
	QTD	1 Yr	3 Yrs
Northern Trust Russell 3000	-3.2	20.5	9.4
<i>Russell 3000</i>	-3.3	20.5	9.4

Short-Term Criteria (rolling 12-month periods)

Tracking error > 0.30% for 6 consecutive months

Current Status: **Acceptable**

Medium-Term Criteria (rolling 36-month periods)

Tracking error > 0.25% for 6 consecutive months

Current Status: **Acceptable**

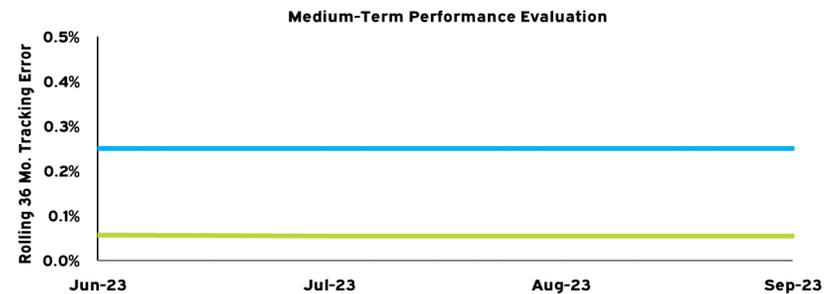
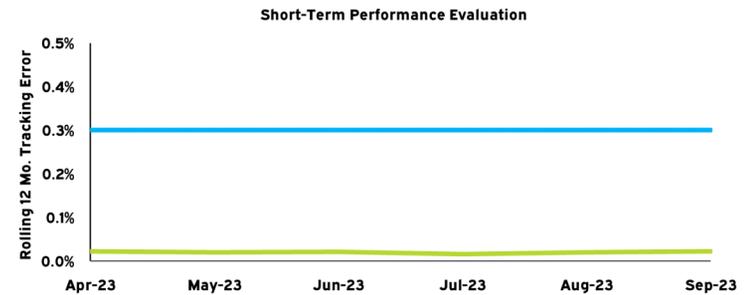
Long-Term Criteria (60+ months)

Fund annualized return < benchmark annualized return -0.40% for 6 consecutive months

Current Status: Not Applicable

Overall Status:
Acceptable

— Excess
— Threshold



Manager Performance			
	QTD	1 Yr	3 Yrs
Northern Trust ACWI ex US	-3.8	21.4	4.0
MSCI ACWI ex USA Gross	-3.7	21.0	4.2

Short-Term Criteria (rolling 12-month periods)

Tracking error > 1.75% for 6 consecutive months

Current Status: **Acceptable**

Medium-Term Criteria (rolling 36-month periods)

Tracking error > 1.5% for 6 consecutive months

Current Status: **Acceptable**

Long-Term Criteria (60+ months)

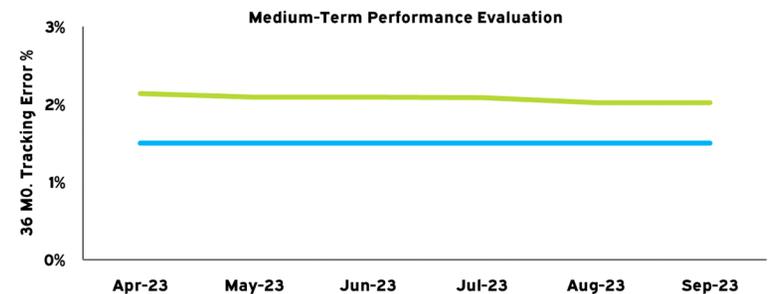
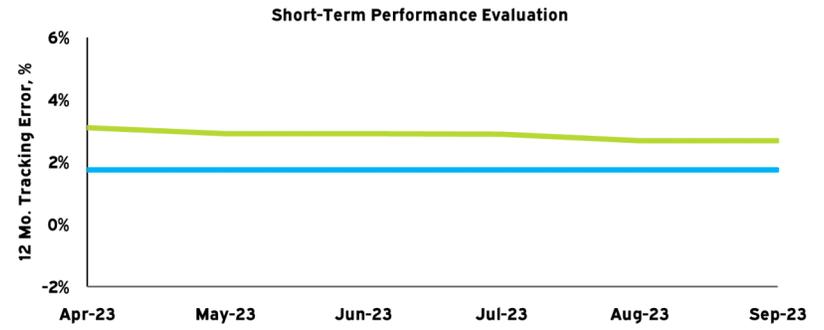
Fund annualized return < benchmark annualized return -0.50% for 6 consecutive months

Current Status: Not Applicable

Overall Status:

Acceptable

— Excess
— Threshold



Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
Parametric BXM	-1.2	17.5	8.6	5.9
<i>CBOE S&P 500 BuyWrite USD</i>	-2.8	14.6	7.2	3.0

Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -3.5% for 6 consecutive months

Current Status: Acceptable

Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.75% for 6 consecutive months

Current Status: Acceptable

Long-Term Criteria (60+ months)

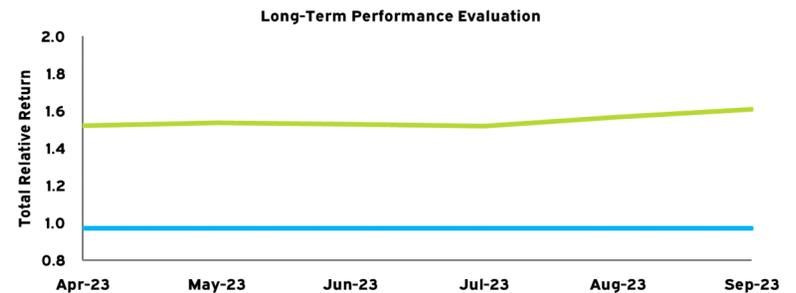
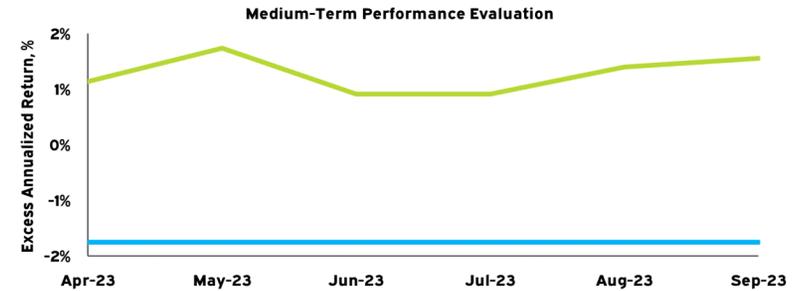
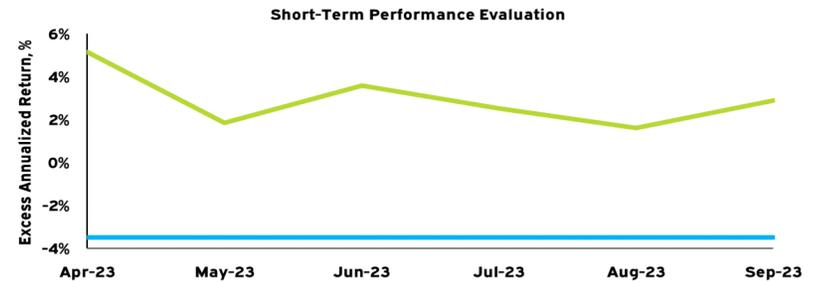
VRR < 0.97 for 6 consecutive months

Current Status: Acceptable

Parametric is on watch for qualitative reasons.

Overall Status:
Acceptable

Excess
Threshold



Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
Parametric Delta Shift	-2.5	22.7	10.3	9.0
<i>CBOE S&P 500 BuyWrite USD</i>	-2.8	14.6	7.2	3.0

Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -3.5% for 6 consecutive months

Current Status: Acceptable

Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.75% for 6 consecutive months

Current Status: Acceptable

Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

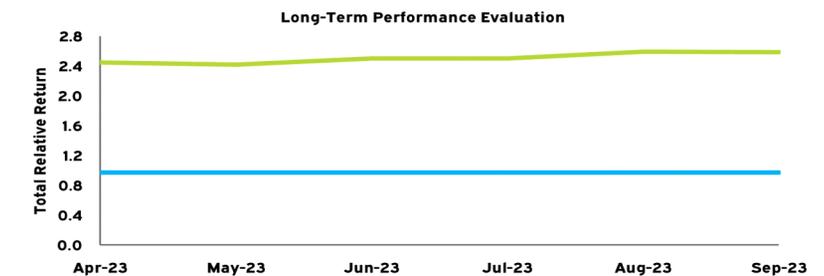
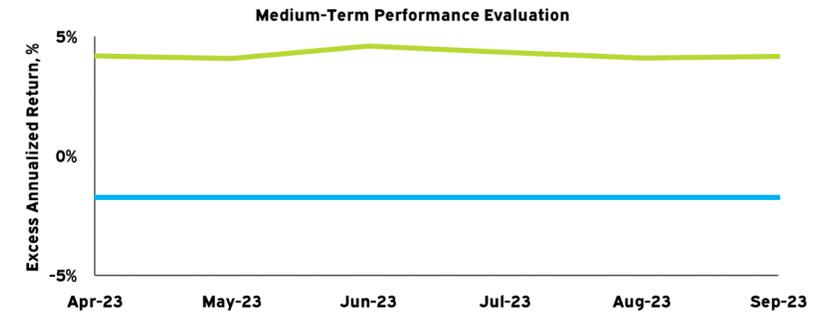
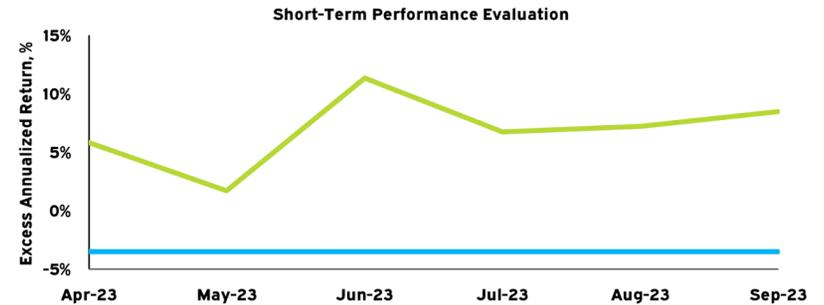
Current Status: Acceptable

Parametric is on watch for qualitative reasons.

Overall Status:

Acceptable

Excess
Threshold



Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
Van Hulzen	-0.7	15.0	5.4	3.9
<i>CBOE S&P 500 BuyWrite USD</i>	-2.8	14.6	7.2	3.0

Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -3.5% for 6 consecutive months

Current Status: Acceptable

Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.75% for 6 consecutive months

Current Status: Acceptable

Long-Term Criteria (60+ months)

VRR < 0.98 for 6 consecutive months

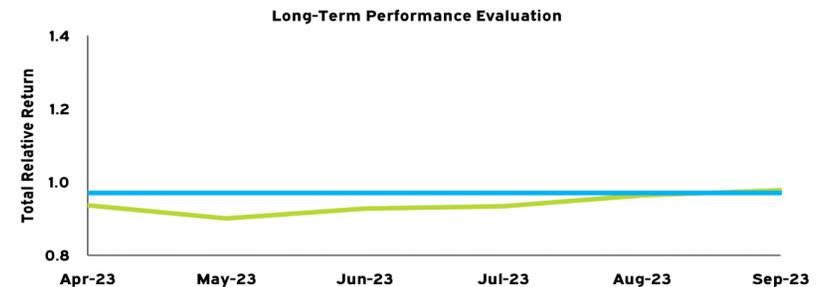
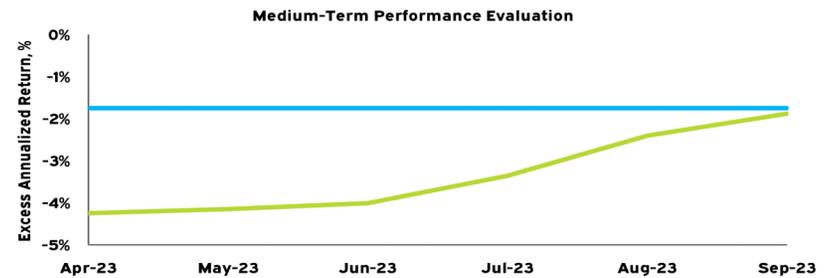
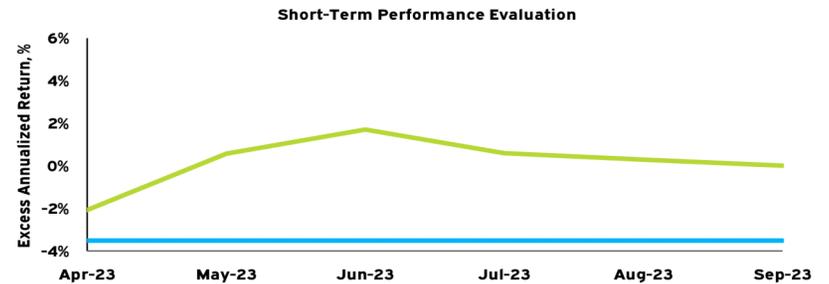
Current Status: Acceptable

Overall Status:

Acceptable

Excess

Threshold



Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
CS McKee	-3.2	0.9	-5.3	0.1
<i>Bloomberg US Aggregate TR</i>	-3.2	0.6	-5.2	0.1

Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -1.5% for 6 consecutive months

Current Status: Acceptable

Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.0% for 6 consecutive months

Current Status: Acceptable

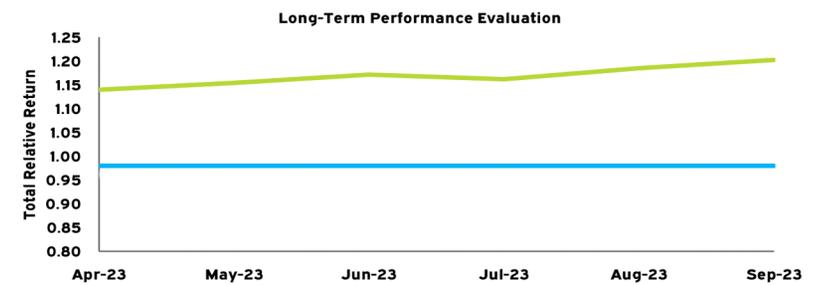
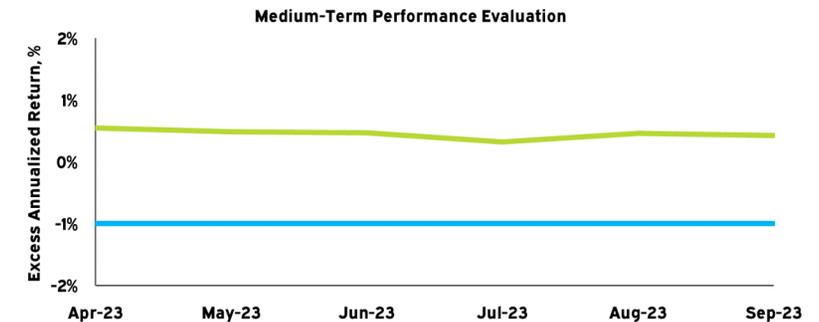
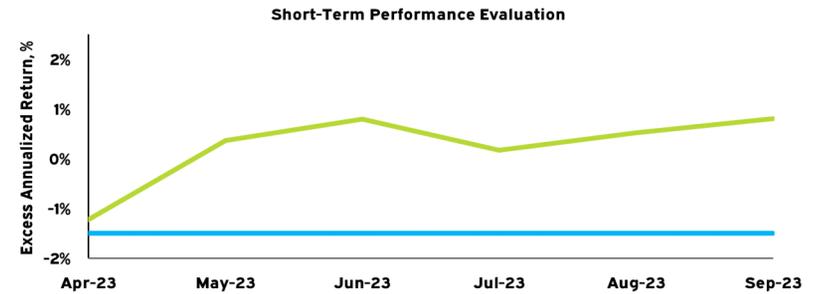
Long-Term Criteria (60+ months)

VRR < 0.98 for 6 consecutive months

Current Status: Acceptable

Overall Status:
Acceptable

— Excess
— Threshold



Manager Performance			
	QTD	1 Yr	3 Yrs
Garcia Hamilton	-4.8	-1.0	-3.8
<i>Garcia Hamilton Custom Index</i>	-3.2	-0.9	-3.9

Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -1.5% for 6 consecutive months

Current Status: **Acceptable**

Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.0% for 6 consecutive months

Current Status: **Acceptable**

Long-Term Criteria (60+ months)

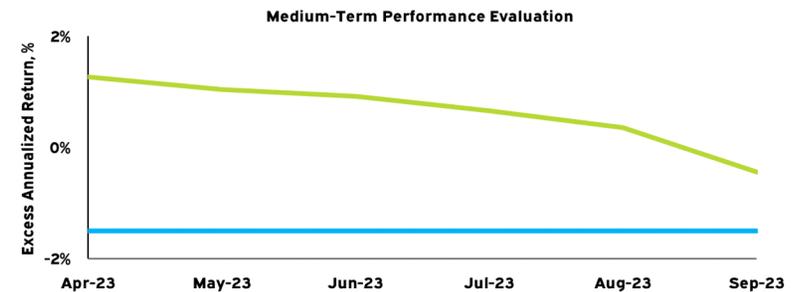
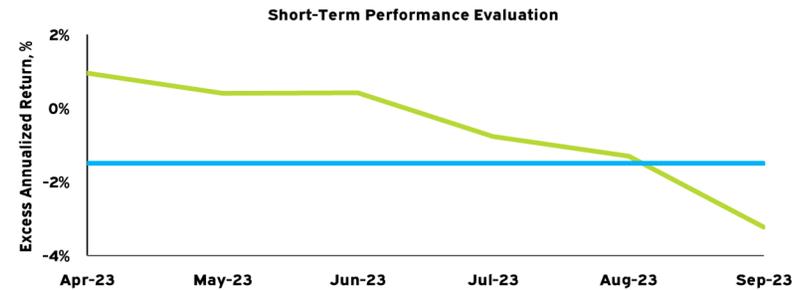
VRR < 0.98 for 6 consecutive months

Current Status: Not Applicable

Overall Status:

Acceptable

Excess
Threshold



Manager Performance			
	QTD	1 Yr	3 Yrs
MacKay Shields (HY)	1.2	9.3	3.8
ICE BofA ML US Corp Cash Pay BB-B 1-5Yr	0.9	9.5	3.1

Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -4.5% for 6 consecutive months

Current Status: Acceptable

Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -2.0% for 6 consecutive months

Current Status: Acceptable

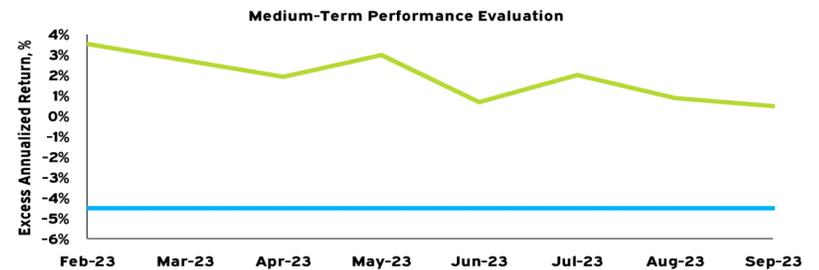
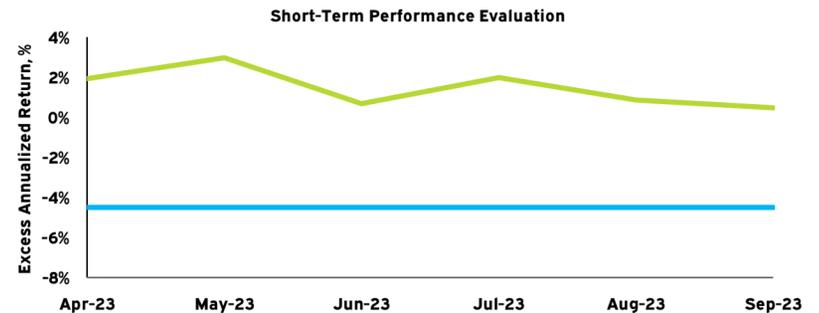
Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Not Applicable

Overall Status:
Acceptable

— Excess
— Threshold



Manager Performance			
	QTD	1 Yr	3 Yrs
Federated Investment Counseling (Bank Loans)	2.4	7.8	2.3
60% CredSuisLevLoan/40% BBStGovCorp	2.5	9.2	4.1

Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -4.5% for 6 consecutive months

Current Status: Acceptable

Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -2.0% for 6 consecutive months

Current Status: Acceptable

Long-Term Criteria (60+ months)

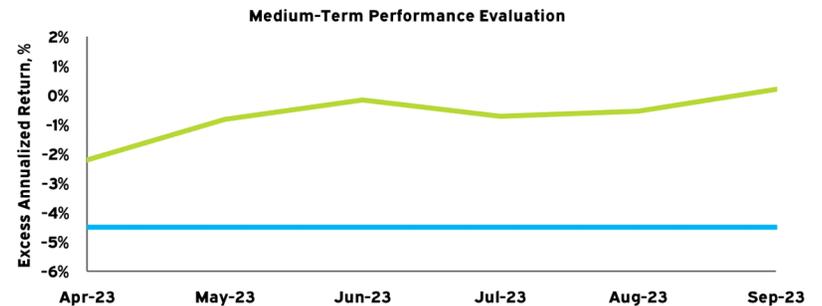
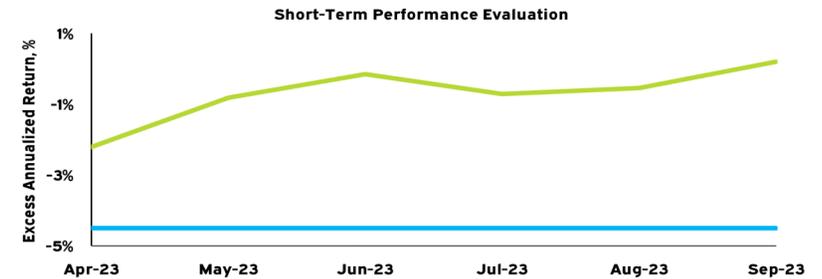
VRR < 0.97 for 6 consecutive months

Current Status: Not Applicable

Overall Status:

Acceptable

— Excess
— Threshold



Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
CenterSquare	-7.2	2.9	5.8	3.6
<i>FTSE NAREIT Equity REIT</i>	<i>-7.1</i>	<i>3.0</i>	<i>5.8</i>	<i>2.8</i>

Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -3.5% for 6 consecutive months

Current Status: Acceptable

Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.75% for 6 consecutive months

Current Status: Acceptable

Long-Term Criteria (60+ months)

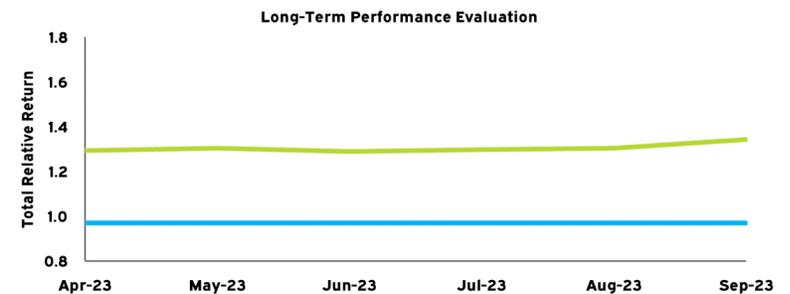
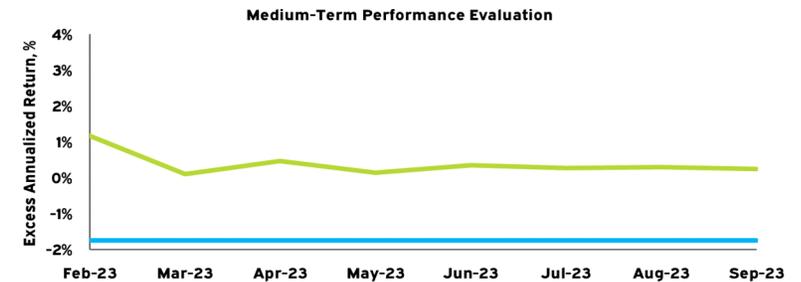
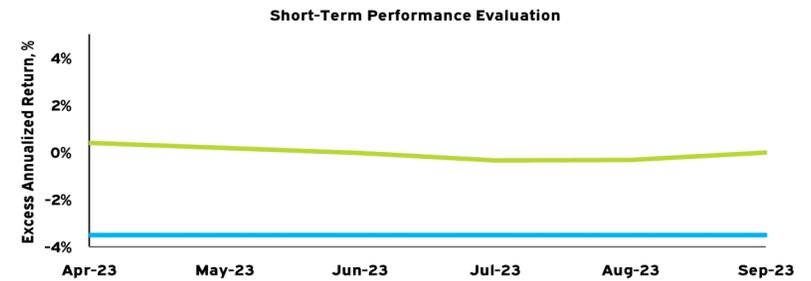
VRR < 0.97 for 6 consecutive months

Current Status: Acceptable

Overall Status:

Acceptable

— Excess
— Threshold



Manager Compliance Certification Responses

Manager Compliance Certification Responses

Qualitative Compliance Monitoring per EBMUDERS Investment Policy

Each of EBMUDERS managers is required to respond to a questionnaire on a quarterly basis to certify their compliance with EBMUDERS Investment Policy Statement and provide an update on specific qualitative indicators to be evaluated.

These indicators include:

- Compliance with the guidelines of 'Eligible Investments' for the manager's specific mandate
- Any litigation or governmental regulatory proceedings involving the firm/manager
- Changes to the manager's investment outlook, investment strategy, and/or portfolio structure
- Personnel changes to the investment team responsible for the EBMUDERS mandate
- Significant personnel changes at the management level of the firm
- Material client terminations
- Compliance with EBMUDERS current Investment Policy Statement

The manager's responses are rated based on the potential effects these factors could pose to the performance and management of the EBMUDERS portfolio.

Reasons for heightened concern triggering Watch status include, but are not limited to:

- Instability of key members of the portfolio management team and organization
- Changes in investment strategy and style
- Failure to comply with investment guidelines

A summary of manager responses as of the latest quarter-end is provided below.

Manager Compliance Certification Responses

Manager	Asset Class	Question 1 Compliance with 'Eligible Investments' for mandate	Question 2 Good standing as Registered Investment Advisor	Question 3 Litigation?	Question 4 Changes in manager's investment outlook, strategy, structure	Question 5 Investment team personnel changes	Question 6 Management level personnel changes	Question 7 Material business changes	Question 8 Compliance with IPS
Northern Trust R3000	Domestic Equity – All Cap	Yes	Yes	Yes*	No	No	Yes*	No	Yes
Northern Trust ACWI ex US	International Equity	Yes	Yes	Yes*	No	No	Yes*	No	Yes
Parametric	Covered Calls	Yes	Yes	No*	No	No	No	No	Yes
Van Hulzen	Covered Calls	Yes	Yes	No	No	No	No	No	Yes
CS McKee	Fixed Income – Core	Yes	Yes	No	No	No	No	No	Yes
Garcia Hamilton	Fixed Income – Core	Yes	Yes	No	No	No	No	No	Yes
Mackay Shields	Fixed Income – Short-term HY	No*	Yes	No	No	No	No	No	No*
Federated	Fixed Income – Bank Loans	Yes	Yes	No	No	Yes*	No	No	Yes
RREEF	Real Estate	Yes	Yes	No	No	No	No	No	Yes
CenterSquare	Real Estate	Yes	Yes	No	No	No	Yes*	No	Yes

■ no concern
 ■ low concern
 ■ high concern (Watch status)

* see detailed manager response below.

Northern Trust – R3000 and ACWI ex US**Question 3: Is there any litigation or governmental regulatory proceedings involving your Firm, the Manager?**

→ As one of the world's largest asset managers, Northern Trust Investments, Inc. ("NTI") is occasionally named as a defendant in litigation. In the past 5 years, NTI has not been party to any litigation that has had a material effect on its ability to perform services for its clients. Below is one pending litigation case that involves NTI:

- Michael J. Iannone, Jr. and Nicole A. James v. AutoZone, Inc. (W.D. Tenn.). In September 2021, plan participants of the AutoZone, Inc. 401(k) Plan sued AutoZone, Inc., its Investment Committee, and Northern Trust Corporation and Northern Trust, Inc. (later described as Northern Trust Investments, Inc.) (collectively, "Defendants") as investment fiduciaries for breach of fiduciary duty in connection with the use of the GoalMaker® asset allocation service furnished by Prudential Insurance Company ("GoalMaker"). The Complaint alleges that the funds that Defendants selected for GoalMaker paid excessive investment management fees to Prudential and its affiliates while consistently underperforming benchmark indices and lower-cost index fund alternatives. Northern Trust – R3000 and ACWI ex US (cont.)

Question 6: Have there been any significant personnel changes at the management level of the Firm during the quarter?

→ As a result of the constantly changing landscape of asset management, we believe the occasional organizational changes are a natural progression and necessary in order to adapt to new market and regulatory environments. The most recent changes to senior personnel are the following:

- October; Sunitha Thomas, CFA, rejoined NTAM after spending more than 15 years managing client portfolios for Northern Trust Wealth Management. In this newly created role, Sunitha will co-head our Wealth Client Group. She has a BA in Economics from University of Chicago and an MBA from The Wharton School of the University of Pennsylvania. Sunitha will report directly to Daniel Gamba and join NTAM Executive Group.
- September; Anwiti Bahuguna, Ph.D., joined Northern Trust Asset Management as Chief Investment Officer (CIO) of Global Asset Allocation bringing 25 years of industry experience to this newly created role.

Parametric

Question 3: Is there any litigation or governmental regulatory proceedings involving your Firm, the Manager?

→ Parametric is part of Morgan Stanley Investment Management, the asset management division of Morgan Stanley. The distinct investment brands of Eaton Vance Management, Parametric, Atlanta Capital and Calvert, have from time to time, been plaintiffs or defendants in various lawsuits and arbitrations that are incidental to their businesses and are or were handled in the ordinary course of business. From time to time, Parametric and its affiliates are subject to periodic audits, regulatory and governmental examinations, information-gathering requests, investigations, and proceedings both formal and informal which have the potential to result in findings, conclusions, recommendations, or various forms of sanction. Parametric believes that these actions have not and will not have a material adverse effect on its consolidated financial condition, liquidity, results of operations or the ability to manage client assets.

Mackay Shields

Question 1: Please confirm the EBMUD portfolio was in compliance with the guidelines of 'Eligible Investments' of the Manager's specific mandate, as listed in EBMUD's Investment Policy Statement (rev. March 2019).

→ As of August 8, 2023, Standard & Poor's upgraded two PDC Energy credits from BB to AA- (cusip: 69327RAJ0, represented 0.18% of the portfolio and cusip: 69327RAG65, represented 0.21% of the portfolio). At the time of the rating changes and Moody's rated both bonds Ba3. Further, on August 8, 2023, Standard & Poor's upgraded a Four Season Term Loan from BB+ to BBB- (cusip: BL4053601 – was exchanged into BL4378800 on 8/30/23 and had represented 0.50% of the portfolio). At the time of the rating change Moody's rated the loan Ba3. As a result of the upgrades, the portfolio passively held greater than 10% in investment grade securities (10.82%). As of the close of trading, August 25, 2023, and the portfolio was back in compliance with the 10% investment grade maximum (9.66%).

Question 8: Please confirm the EBMUD account was in compliance with EBMUD's Investment Policy Statement (rev. March 2019) during the quarter.

→ As of August 8, 2023, Standard & Poor's upgraded two PDC Energy credits from BB to AA- (cusip: 69327RAJ0, represented 0.18% of the portfolio and cusip: 69327RAG65, represented 0.21% of the portfolio). At the time of the rating changes and Moody's rated both bonds Ba3. Further, on August 8, 2023, Standard & Poor's upgraded a Four Season Term Loan from BB+ to BBB- (cusip: BL4053601 – was exchanged into BL4378800 on 8/30/23 and had represented 0.50% of the portfolio). At the time of the rating change Moody's rated the loan Ba3. As a result of the upgrades, the portfolio passively held greater than 10% in investment grade securities (10.82%). As of the close of trading, August 25, 2023, and the portfolio was back in compliance with the 10% investment grade maximum (9.66%).

Federated

Question 5: Have there been any personnel changes to the investment team responsible for the EBMUD portfolio during the quarter?

→ Steve Wagner has left Federated. The portfolio will continue being managed by Mark Durbiano and team.

CenterSquare

Question 6: Have there been any significant personnel changes at the management level of the Firm during the quarter?

→ Emily Mendell, Director of Marketing, left the firm on September 30, 2023, to pursue another career opportunity.

Required California AB 2833 Disclosure – RREEF AMERICA II

Effective January 1, 2017 RREEF America REIT II, Inc. ("alternative investment vehicle") is required to provide to the East Bay Municipal Utility District ("public investment fund" or "District") specific information at least annually pursuant to Section 7514.7 of the California Government Code ("Section 7514.7").

1. The fees and expenses that the public investment fund pays directly to the alternative investment vehicle, the fund manager, or related parties.

EBMUD asset management fees – January 2022 – December 2022= \$639,956.56

2. The public investment fund's pro rata share of fees and expenses not included in paragraph (1) that are paid from the alternative investment vehicle to the fund manager or related parties.

\$0.00

3. The public investment fund's pro rata share of carried interest distributed to the fund manager or related parties.

N/A

4. The public investment fund's pro rata share of aggregate fees and expenses paid by all of the portfolio companies held within the alternative investment vehicle to the fund manager or related parties.

EBMUDERS asset management fees – January 2022 – December 2022= \$639,956.56

5. Any additional information described in subdivision (b) of Section 6254.26.

N/A

6. The gross and net rate of return of each alternative investment vehicle since inception.

Gross = 7.4% Net = 6.6% (as of December 31, 2022)¹

7. Any other information required to be collected pursuant to Section 7514.7.

N/A

¹Please note that since inception returns provided represent the client's time frame in the Fund, and not the returns of the Fund as a whole.

Appendix

Glossary of Terms

Alpha: The premium an investment earns above a set standard. This is usually measured in terms of a common index (i.e., how the stock performs independent of the market). An Alpha is usually generated by regressing a security's excess return on the S&P 500 excess return.

Annualized Performance: The annual rate of return that when compounded t times generates the same t -period holding return as actually occurred from period 1 to period t .

Batting Average: Percentage of periods a portfolio outperforms a given index.

Beta: The measure of an asset's risk in relation to the Market (for example, the S&P 500) or to an alternative benchmark or factors. Roughly speaking, a security with a Beta of 1.5 will have moved, on average, 1.5 times the market return.

Bottom-up: A management style that de-emphasizes the significance of economic and market cycles, focusing instead on the analysis of individual stocks.

Dividend Discount Model: A method to value the common stock of a company that is based on the present value of the expected future dividends.

Growth Stocks: Common stock of a company that has an opportunity to invest money and earn more than the opportunity cost of capital.

Information Ratio: The ratio of annualized expected residual return to residual risk. A central measurement for active management, value added is proportional to the square of the information ratio.

R-Squared: Square of the correlation coefficient. The proportion of the variability in one series that can be explained by the variability of one or more other series a regression model. A measure of the quality of fit. 100% R-square means perfect predictability.

Standard Deviation: The square root of the variance. A measure of dispersion of a set of data from its mean.

Sharpe Ratio: A measure of a portfolio's excess return relative to the total variability of the portfolio.

Style Analysis: A returns-based analysis using a multi-factor attribution model. The model calculates a product's average exposure to particular investment styles over time (i.e., the product's normal style benchmark).

Top-down: Investment style that begins with an assessment of the overall economic environment and makes a general asset allocation decision regarding various sectors of the financial markets and various industries.

Tracking Error: The standard deviation of the difference between the performance of a portfolio and an appropriate benchmark.

Turnover: For mutual funds, a measure of trading activity during the previous year, expressed as a percentage of the average total assets of the fund. A turnover rate of 25% means that the value of trades represented one-fourth of the assets of the fund.

Value Stocks: Stocks with low price/book ratios or price/earnings ratios. Historically, value stocks have enjoyed higher average returns than growth stocks (stocks with high price/book or P/E ratios) in a variety of countries.

Definition of Benchmarks

BC Aggregate: an index comprised of approximately 6,000 publicly traded investment-grade bonds including U.S. Government, mortgage-backed, corporate, and yankee bonds with an approximate average maturity of 10 years.

BC High Yield: covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (e.g., Argentina, Brazil, Venezuela, etc.) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included. Original issue zeroes, step-up coupon structures, 144-As and pay-in-kind bonds (PIKs, as of October 1, 2009) are also included. Must be rated high-yield (Ba1/BB+ or lower) by at least two of the following ratings agencies: Moody's, S&P, Fitch. If only two of the three agencies rate the security, the lower rating is used to determine index eligibility. All issues must have at least one year to final maturity regardless of call features and have at least \$150 million par amount outstanding.

BC Multiverse Non-US Hedged: provides a broad-based measure of the international fixed-income bond market. The index represents the union of the BC Global Aggregate Index and the BC Global High Yield Index. In this sense, the term "Multiverse" refers to the concept of multiple universes in a single macro index.

BC US Credit: includes publicly issued U.S. corporate and foreign debentures and secured notes that which are rated investment grade or higher by Moody's Investor Services, Standard and Poor's Corporation, or Fitch Investor's Service, with all issues having at least one year to maturity and an outstanding par value of at least \$250 million. Issues must be publicly issued, dollar-denominated and non-convertible.

BC US Government: includes treasuries (i.e., public obligations of the U.S. Treasury that have remaining maturities of more than one year) and agencies (i.e., publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government).

BC Universal: includes market coverage by the Aggregate Bond Index fixed rate debt issues, which are rated investment grade or higher by Moody's Investor Services, Standard and Poor's Corporation, or Fitch Investor's Service, with all issues having at least one year to maturity and an outstanding par value of at least \$100 million) and includes exposures to high yield CMBS securities. All returns are market value weighted inclusive of accrued interest.

Citigroup 3-Month Treasury Bills (T-bills): tracks the performance of U.S. Treasury bills with 3-month maturity.

MSCI ACWI x US ND: comprises both developed and emerging markets less the United States. As of August 2008, the index consisted of 23 countries classified as developed markets and 25 classified as emerging markets. This series approximates the minimum possible dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI Barra uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates.

MSCI EAFE Free (Europe, Australasia, Far East) ND: is a free float-adjusted market capitalization index that is designed to measure developed market equity performance, excluding the US & Canada. This series approximates the minimum possible dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI Barra uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates.

MSCI EM (Emerging Markets) GD: is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. This series approximates the maximum possible dividend reinvestment. The amount reinvested is the entire dividend distributed to individuals resident in the country of the company, but does not include tax credits.

MSCI Europe is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in Europe. As of June 2007, this index consisted of the following 16 developed market country indices: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

MSCI Pacific is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in the Pacific region. As of June 2007, this index consisted of the following 5 Developed Market countries: Australia, Hong Kong, Japan, New Zealand, and Singapore.

NAREIT Index: consists of all tax-qualified REITs listed on the New York Stock Exchange, American Stock Exchange, and the NASDAQ National Market System. The data is market weighted.

NCREIF Property Index: the NPI contains investment-grade, non-agricultural, income-producing properties which may be financed in excess of 5% gross market value; were acquired on behalf of tax exempt institutions; and are held in a fiduciary environment. Returns are gross of fees; including income, realized gains/losses, and appreciation/depreciation; and are market value weighted. Index is lagged one quarter.

Russell 1000: measures the performance of the 1,000 largest securities in the Russell 3000 Index. Russell 1000 is highly correlated with the S&P 500 Index and capitalization-weighted.

Russell 1000 Growth: measures the performance of those Russell 1000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-earnings ratios, lower dividend yields and higher forecasted growth values than the Value universe.

Russell 1000 Value: measures the performance of those Russell 1000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than the Growth universe.

Russell 2000: measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index.

Russell 2000 Growth: measures the performance of those Russell 2000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-to-earnings ratios.

Russell 2000 Value: measures the performance of those Russell 2000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-to-earnings ratios.

Russell 3000: represents the largest 3,000 US companies based on total market capitalization, representing approximately 98% of the investable US equity market.

Value Relative Ratio (VRR): Performance metric used to evaluate long-term manager performance relative to a benchmark and to highlight compounded over/under performance data over a certain time frame. VRR is calculated by the growth of a dollar invested with the manager divided by the growth of a dollar invested in the benchmark for the same time period.

Risk Metric Description – Rationale for Selection and Calculation Methodology**US Equity Markets**

Metric: P/E ratio = Price / "Normalized" earnings for the S&P 500 Index

To represent the price of US equity markets, we have chosen the S&P 500 index. This index has the longest published history of price, is well known, and also has reliable, long-term, published quarterly earnings. The price= P of the P/E ratio is the current price of the market index (the average daily price of the most recent full month for the S&P 500 index). Equity markets are very volatile. Prices fluctuate significantly during normal times and extremely during periods of market stress or euphoria. Therefore, developing a measure of earnings power (E) which is stable is vitally important, if the measure is to provide insight. While equity prices can and do double, or get cut in half, real earnings power does not change nearly as much. Therefore, we have selected a well known measure of real, stable earnings power developed by Yale Professor Robert Shiller known as the Shiller E-10. The calculation of E-10 is simply the average real annual earnings over the past 10 years. Over 10 years, the earnings shenanigans and boom and bust levels of earnings tend to even out (and often times get restated). Therefore, this earnings statistic gives a reasonably stable, slow-to-change estimate of average real earnings power for the index. Professor Shiller's data and calculation of the E-10 are available on his website at <http://www.econ.yale.edu/~shiller/data.htm>. We have used his data as the base for our calculations. Details of the theoretical justification behind the measure can be found in his book *Irrational Exuberance* [Princeton University Press 2000, Broadway Books 2001, 2nd ed., 2005].

Developed Equity Markets Excluding the US

Metric: P/E ratio = Price / "Normalized" earnings for the MSCI EAFE Index

To represent the price of non-US developed equity markets, we have chosen the MSCI EAFE index. This index has the longest published history of price for non-US developed equities. The price= P of the P/E ratio is the current price of the market index (the average daily price of the most recent full month for the MSCI EAFE index). The price level of this index is available starting in December 1969. Again, for the reasons described above, we elected to use the Shiller E-10 as our measure of earnings (E). Since 12/1972, a monthly price earnings ratio is available from MSCI. Using this quoted ratio, we have backed out the implied trailing-twelve month earnings of the EAFE index for each month from 12/1972 to the present. These annualized earnings are then inflation adjusted using CPI-U to represent real earnings in US dollar terms for each time period. The Shiller E-10 for the EAFE index (10 year average real earnings) is calculated in the same manner as detailed above.

However, we do not believe that the pricing and earnings history of the EAFE markets are long enough to be a reliable representation of pricing history for developed market equities outside of the US. Therefore, in constructing the Long-Term Average Historical P/E for developed ex-US equities for comparison purposes, we have elected to use the US equity market as a developed market proxy, from 1881 to 1982. This lowers the Long-Term Average Historical P/E considerably. We believe this methodology provides a more realistic historical comparison for a market with a relatively short history.

Emerging Market Equity Markets

Metric: Ratio of Emerging Market P/E Ratio to Developed Market P/E Ratio

To represent the Emerging Markets P/E Ratio, we have chosen the MSCI Emerging Market Free Index, which has P/E data back to January 1995 on Bloomberg. To represent the Developed Markets PE Ratio, we have chosen the MSCI World Index, which also has data back to January 1995 on Bloomberg. Although there are issues with published, single time period P/E ratios, in which the denominator effect can cause large movements, we feel that the information contained in such movements will alert investors to market activity that they will want to interpret.

US Private Equity Markets

Metrics: S&P LCD Average EBITDA Multiples Paid in LBOs and US Quarterly Deal Volume

The Average Purchase Price to EBITDA multiples paid in LBOs is published quarterly by S&P in their LCD study. This is the total price paid (both equity and debt) over the trailing-twelve month EBITDA (earnings before interest, taxes, depreciation and amortization) as calculated by S&P LCD. This is the relevant, high-level pricing metric that private equity managers use in assessing deals. Data is published monthly.

US quarterly deal volume for private equity is the total deal volume in \$ billions (both equity and debt) reported in the quarter by Thomson Reuters Buyouts. This metric gives a measure of the level of activity in the market. Data is published quarterly.

US Private Real Estate Markets

Metrics: US Cap Rates, Cap Rate Spreads, and Transactions as a % of Market Value

Real estate cap rates are a measure of the price paid in the market to acquire properties versus their annualized income generation before financing costs (NOI=net operating income). The data, published by NCREIF, describes completed and leased properties (core) on an unleveraged basis. We chose to use current value cap rates. These are capitalization rates from properties that were revalued during the quarter. This data relies on estimates of value and therefore tends to be lagging (estimated prices are slower to rise and slower to fall than transaction prices). The data is published quarterly.

Spreads between the cap rate (described above) and the 10-year nominal Treasury yield, indicate a measure of the cost of properties versus a current measure of the cost of financing.

Transactions as a % of Market Value Trailing-Four Quarters is a measure of property turnover activity in the NCREIF Universe. This quarterly metric is a measure of activity in the market.

Credit Markets Fixed Income

Metric: Spreads

The absolute level of spreads over treasuries and spread trends (widening / narrowing) are good indicators of credit risk in the fixed income markets. Spreads incorporate estimates of future default, but can also be driven by technical dislocations in the fixed income markets. Abnormally narrow spreads (relative to historical levels) indicate higher levels of valuation risk, wide spreads indicate lower levels of valuation risk and / or elevated default fears. Investment grade bond spreads are represented by the Barclays Capital US Corporate Investment Grade Index Intermediate Component. The high yield corporate bond spreads are represented by the Barclays Capital US Corporate High Yield Index.

Measure of Equity Market Fear / Uncertainty

Metric: VIX – Measure of implied option volatility for US equity markets

The VIX is a key measure of near-term volatility conveyed by implied volatility of S&P 500 index option prices. VIX increases with uncertainty and fear. Stocks and the VIX are negatively correlated. Volatility tends to spike when equity markets fall.

Measure of Monetary Policy

Metric: Yield Curve Slope

We calculate the yield curve slope as the 10 year treasury yield minus the 1 year treasury yield. When the yield curve slope is zero or negative, this is a signal to pay attention. A negative yield curve slope signals lower rates in the future, caused by a contraction in economic activity. Recessions are typically preceded by an inverted (negatively sloped) yield curve. A very steep yield curve (2 or greater) indicates a large difference between shorter-term interest rates (the 1 year rate) and longer-term rates (the 10 year rate). This can signal expansion in economic activity in the future, or merely higher future interest rates.

Measures of US Inflation Expectations

Metrics: Breakeven Inflation and Inflation Adjusted Commodity Prices

Inflation is a very important indicator impacting all assets and financial instruments. Breakeven inflation is calculated as the 10 year nominal treasury yield minus the 10 year real yield on US TIPS (treasury inflation protected securities). Abnormally low long-term inflation expectations are indicative of deflationary fears. A rapid rise in breakeven inflation indicates an acceleration in inflationary expectations as market participants sell nominal treasuries and buy TIPS. If breakeven inflation continues to rise quarter over quarter, this is a signal of inflationary worries rising, which may cause Fed action and / or dollar decline.

Commodity price movement (above the rate of inflation) is an indication of anticipated inflation caused by real global economic activity putting pressure on resource prices. We calculate this metric by adjusted in the Dow Jones UBS Commodity Index (formerly Dow Jones AIG Commodity Index) by US CPI-U. While rising commodity prices will not necessarily translate to higher US inflation, higher US inflation will likely show up in higher commodity prices, particularly if world economic activity is robust.

These two measures of anticipated inflation can, and often are, conflicting.

Measures of US Treasury Bond Interest Rate Risk

Metrics: 10-Year Treasury Forward-Looking Real Yield and 10-Year Treasury Duration

The expected annualized real yield of the 10 year US Treasury Bond is a measure of valuation risk for US Treasuries. A low real yield means investors will accept a low rate of expected return for the certainty of receiving their nominal cash flows. Meketa estimates the expected annualized real yield by subtracting an estimate of expected 10 year inflation (produced by the Survey of Professional Forecasters as collected by the Federal Reserve Bank of Philadelphia), from the 10 year Treasury constant maturity interest rate.

Duration for the 10-Year Treasury Bond is calculated based on the current yield and a price of 100. This is a measure of expected percentage movements in the price of the bond based on small movements in percentage yield. We make no attempt to account for convexity.

Definition of "Extreme" Metric Readings

A metric reading is defined as "extreme" if the metric reading is in the top or bottom decile of its historical readings. These "extreme" reading should cause the reader to pay attention. These metrics have reverted toward their mean values in the past.

RISK METRICS DESCRIPTION – Meketa Market Sentiment Indicator**What is the Meketa Market Sentiment Indicator (MMSI)?**

The MMSI is a measure meant to gauge the market's sentiment regarding economic growth risk. Growth risk cuts across most financial assets, and is the largest risk exposure that most portfolios bear. The MMSI takes into account the momentum¹ (trend over time, positive or negative) of the economic growth risk exposure of publicly traded stocks and bonds, as a signal of the future direction of growth risk returns; either positive (risk seeking market sentiment), or negative (risk averse market sentiment).

¹ Momentum is defined as the persistence of relative performance. There is a significant amount of academic evidence indicating that positive momentum (e.g., strong performing stocks over the recent past continue to post strong performance into the near future) exists over near-to-intermediate holding periods. See, for example, "Understanding Momentum," *Financial Analysts Journal*, Scowcroft, Sefton, March, 2005.

How do I read the Meketa Market Sentiment Indicator (MMSI) graph?

Simply put, the MMSI is a color coded indicator that signals the market's sentiment regarding economic growth risk. It is read left to right chronologically. A green indicator on the MMSI indicates that the market's sentiment towards growth risk is positive. A gray indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market's sentiment towards growth risk is negative. The black line on the graph is the level of the MMSI. The degree of the signal above or below the neutral reading is an indication the signal's current strength.

How is the Meketa Market Sentiment Indicator (MMSI) Constructed?

The MMSI is constructed from two sub-elements representing investor sentiment in stocks and bonds:

1. Stock return momentum: Return momentum for the S&P 500 Equity Index (trailing 12-months)
2. Bond yield spread momentum: Momentum of bond yield spreads (excess of the measured bond yield over the identical duration U.S. Treasury bond yield) for corporate bonds (trailing 12-months) for both investment grade bonds (75% weight) and high yield bonds (25% weight). The scale of this measure is adjusted to match that of the stock return momentum measure.

The black line reading on the graph is calculated as the average of the stock return momentum measure and the bonds spread momentum measure. The color reading on the graph is determined as follows:

1. If both stock return momentum and bond spread momentum are positive = GREEN (positive)
2. If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive)
3. If both stock return momentum and bond spread momentum are negative = RED (negative)

What does the Meketa Market Sentiment Indicator (MMSI) mean? Why might it be useful?

There is strong evidence that time series momentum is significant and persistent.¹ In particular, across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12 month period. The MMSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.

¹ "Time Series Momentum" Moskowitz, Ooi, Pedersen, August 2010 <http://pages.stern.nyu.edu/~lpederse/papers/TimeSeriesMomentum.pdf>

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