

Employees' Retirement System of the City of Norfolk

Performance Update
As of April 30, 2024

Fund Evaluation Report

Economic and Market Update

Data as of April 30, 2024

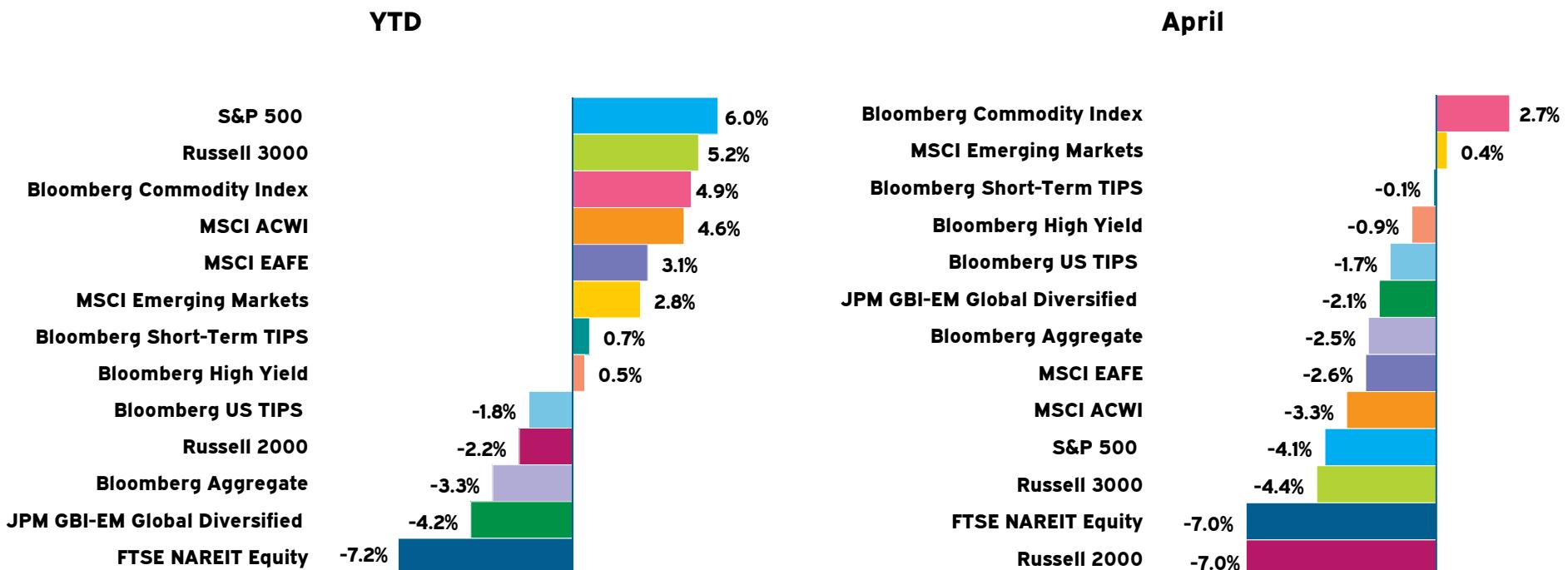
Commentary

→ Stronger than expected inflation and employment data in the US weighed on both stocks and bonds in April.

- Major central banks have largely paused interest rate hikes with expectations that many will still cut rates, but the uneven pace of falling inflation and economic growth could desynchronize the pace of rate cuts.
- Inflation pressures have eased in most countries from their pandemic peaks, but some uncertainty remains and levels are still above most central bank targets. Headline and core inflation measures in the US met expectations at 3.4% and 3.6% for April, respectively, and represented slight declines from the prior month.
- After rising 10% in the first quarter the US equity markets (Russell 3000 index) fell 4.4% in April. Except for utilities, most sectors, particularly those sensitive to interest rates, fell for the month.
- Non-US developed equity markets also fell in April (-2.6%) but by less than US equities. Local currency returns fared better in the month of April (0.9%) given the strengthening US dollar.
- Emerging market equities (+0.4%) beat developed market equities as coordinated buying of Chinese exchange traded funds (ETFs) by state-backed financial services companies helped boost Chinese stocks (+6.6%). The stronger dollar also hurt performance in emerging markets for US investors with returns in local currency terms 1.0% higher.
- Rising interest rates weighed on bonds, with the broad US bond market declining -2.5% in April.

→ Looking to the rest of this year, the paths of inflation and monetary policy, China's economic disorder and slowing economic growth, the many looming elections, and the wars in Ukraine and Israel will be key.

Index Returns¹



- After a strong start to the year in the first quarter most asset classes declined in April, particularly equities.
- Higher than expected inflation data broadly weighed on markets and dashed hopes of near-term cuts in interest rates.

¹ Source: Bloomberg. Data is as of April 30, 2024.

Domestic Equity Returns¹

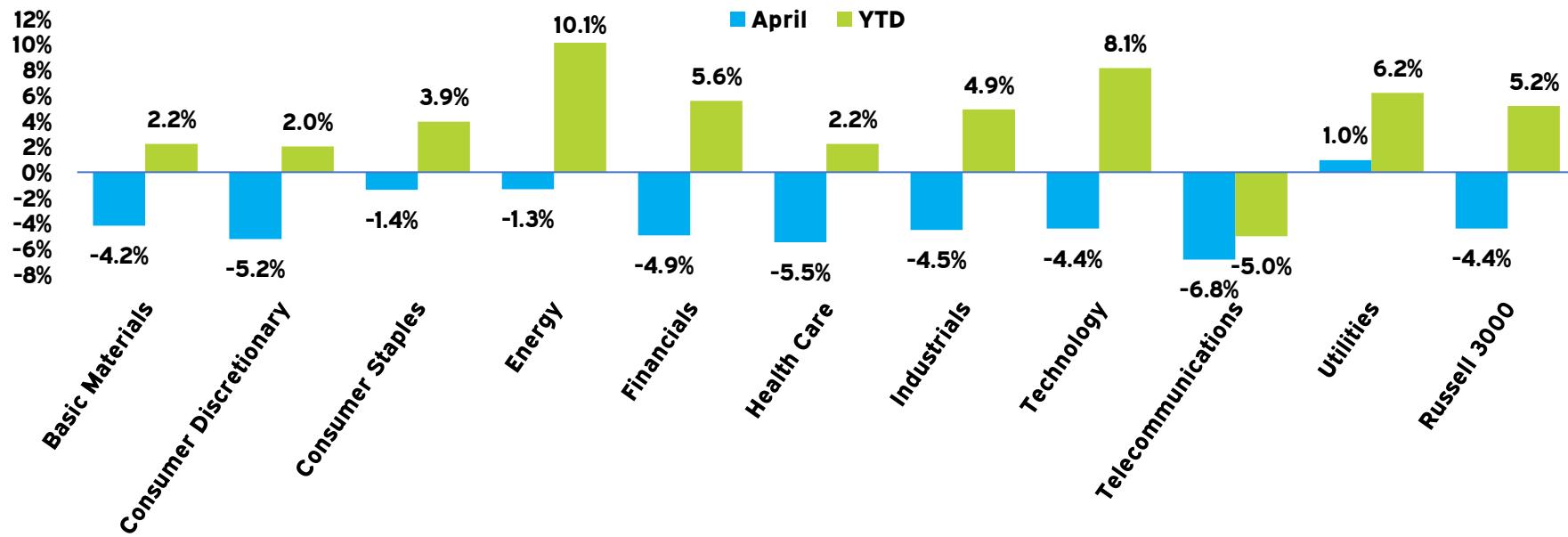
Domestic Equity	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	-4.1	10.6	6.0	22.7	8.1	13.2	12.4
Russell 3000	-4.4	10.0	5.2	22.3	6.3	12.4	11.8
Russell 1000	-4.3	10.3	5.6	22.8	7.0	12.9	12.1
Russell 1000 Growth	-4.2	11.4	6.7	31.8	8.5	16.5	15.5
Russell 1000 Value	-4.3	9.0	4.3	13.4	5.2	8.6	8.4
Russell MidCap	-5.4	8.6	2.7	16.4	2.4	9.0	9.4
Russell MidCap Growth	-5.8	9.5	3.1	20.7	0.7	9.5	10.8
Russell MidCap Value	-5.2	8.2	2.6	14.1	3.3	8.1	7.9
Russell 2000	-7.0	5.2	-2.2	13.3	-3.2	5.8	7.2
Russell 2000 Growth	-7.7	7.6	-0.7	12.4	-5.9	5.0	7.6
Russell 2000 Value	-6.4	2.9	-3.7	14.0	-0.7	6.0	6.4

US Equities: The Russell 3000 fell 4.4% in April after a strong first quarter.

- US stocks declined in April, given stronger than expected employment and inflation reports. The strong economic data weighed on hopes for the Federal Reserve to lower rates in the near term.
- Large cap stocks outperformed small cap stocks for the month. Several large cap technology-related stocks reported strong Q1 earnings, including Alphabet and Microsoft, which partly drove the divergence.
- After the “Magnificent 7” stocks fueled the performance of the US equity market in 2023, these stocks have deviated in 2024. Most notably, Tesla and Apple have significantly lagged the broader market this year.

¹ Source: Bloomberg. Data is as of April 30, 2024.

Russell 3000 Sector Returns¹



- Most sectors fell in April, particularly those most sensitive to interest rates. The defensive utilities sector was the only area to post a gain for the month.
- Except for telecommunications, all sectors held onto positive returns for the year-to-date period despite the April declines. The energy sector (10.1%) is up the most this year given rising oil prices followed by the technology sector (8.1%) driven by artificial intelligence-related companies.

¹ Source: Bloomberg. Data is as of April 30, 2024.

Foreign Equity Returns¹

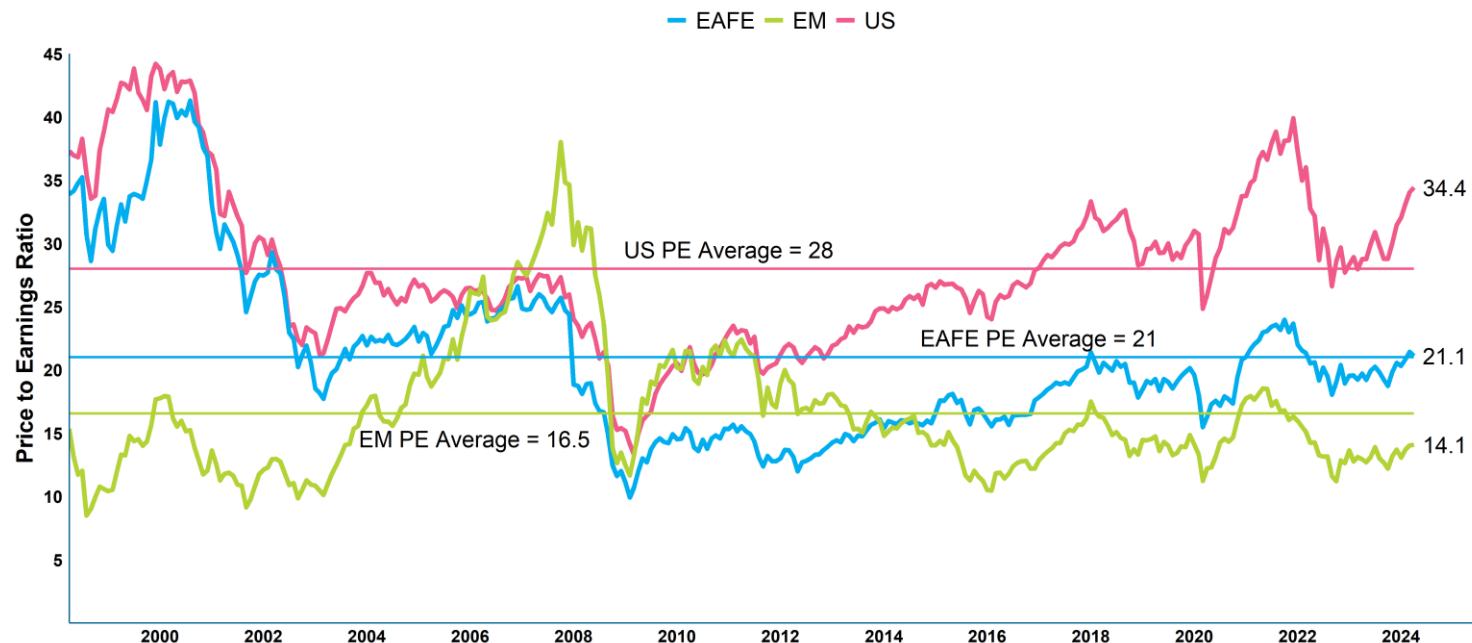
Foreign Equity	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-1.8	4.7	2.8	9.3	0.3	5.0	3.9
MSCI EAFE	-2.6	5.8	3.1	9.3	2.9	6.2	4.4
MSCI EAFE (Local Currency)	-0.9	10.0	9.0	15.2	8.6	8.4	7.5
MSCI EAFE Small Cap	-3.0	2.4	-0.6	5.1	-3.6	3.7	4.5
MSCI Emerging Markets	0.4	2.4	2.8	9.9	-5.7	1.9	3.0
MSCI Emerging Markets (Local Currency)	1.4	4.5	6.0	12.9	-2.4	4.1	5.9
MSCI EM ex. China	-1.6	4.0	2.3	17.6	0.6	5.6	3.9
MSCI China	6.6	-2.2	4.3	-6.8	-17.5	-5.5	2.1

Foreign Equity: Developed international equities (MSCI EAFE) fell 2.6% in April while emerging market equities (MSCI EM) rose 0.4%.

- Developed markets particularly in Eurozone countries saw losses in April driven in part by higher than expected US inflation numbers and hawkish comments from the Fed; UK equities outperformed given higher weights in value sectors. Japan equities saw a correction especially in the large cap space; the yen remained weak. The appreciation of the US dollar lowered returns for US investors by 1.7% for the month.
- Emerging market equities were the only area to see positive performance for the month, driven by China's rebound. Emerging markets ex-China posted losses but less than developed markets. China saw the highest performance for April, with positive developments (and easing restrictions) in the real estate sector and financial intervention in financial markets driving results. The appreciation of the US dollar also weighed on emerging market returns for US investors.

¹ Source: Bloomberg. Data is as of April 30, 2024.

Equity Cyclically Adjusted P/E Ratios¹



- Despite the sell-off in April, the US equity price-to-earnings ratio remained elevated and above its 21st century average.
- International market valuations also fell in April and remain well below the US. In the case of developed markets, valuations are now close to the long-term average, while emerging market valuations remain well below its long-term average.

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 April 2024. 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.

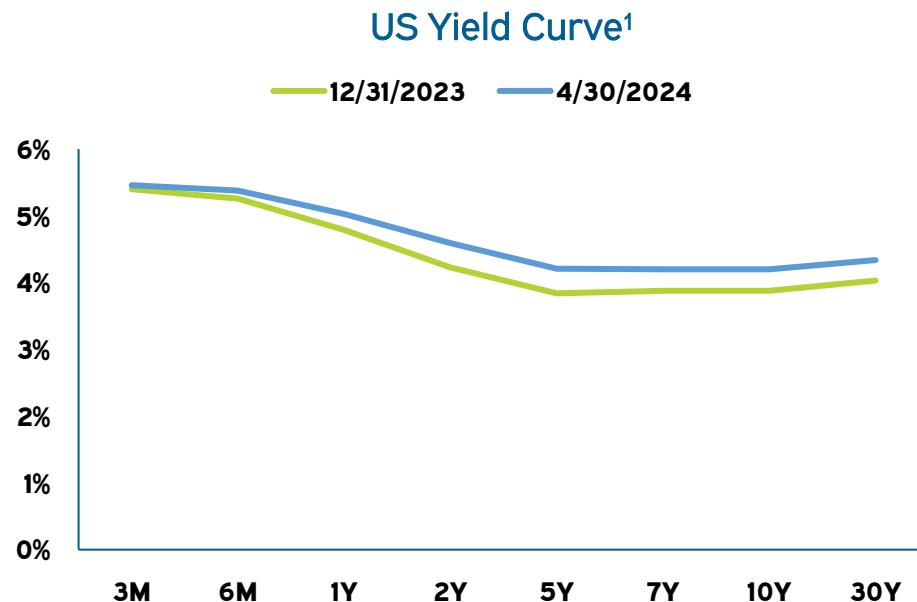
Fixed Income Returns¹

Fixed Income	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-2.3	-0.5	-2.8	-0.3	-3.1	0.2	1.5	5.6	5.9
Bloomberg Aggregate	-2.5	-0.8	-3.3	-1.5	-3.5	-0.2	1.2	5.3	6.1
Bloomberg US TIPS	-1.7	-0.1	-1.8	-1.3	-1.6	2.1	1.9	5.0	6.7
Bloomberg Short-term TIPS	-0.1	0.8	0.7	2.8	1.9	3.1	2.0	5.1	2.5
Bloomberg High Yield	-0.9	1.5	0.5	9.0	1.5	3.7	4.3	8.1	3.7
JPM GBI-EM Global Diversified (USD)	-2.1	-2.1	-4.2	1.8	-3.0	-0.3	-0.6	6.8	5.0

Fixed Income: The Bloomberg Universal index fell 2.3% in April.

- Bonds also felt pressure in April of above expectations economic data and the related shift in interest rate expectations. The anticipated start date of interest rate cuts has been pushed back as well as the number of cuts for 2024.
- The broad US bond market (Bloomberg Aggregate) fell 2.5% with the broad TIPS market declining 1.7%. The less interest rate sensitive short-term TIPS index fell only slightly (0.1%) for the month.
- High yield bonds (-0.9%) also declined, but by less than the broad market with spreads remaining relatively tight to Treasury equivalents.

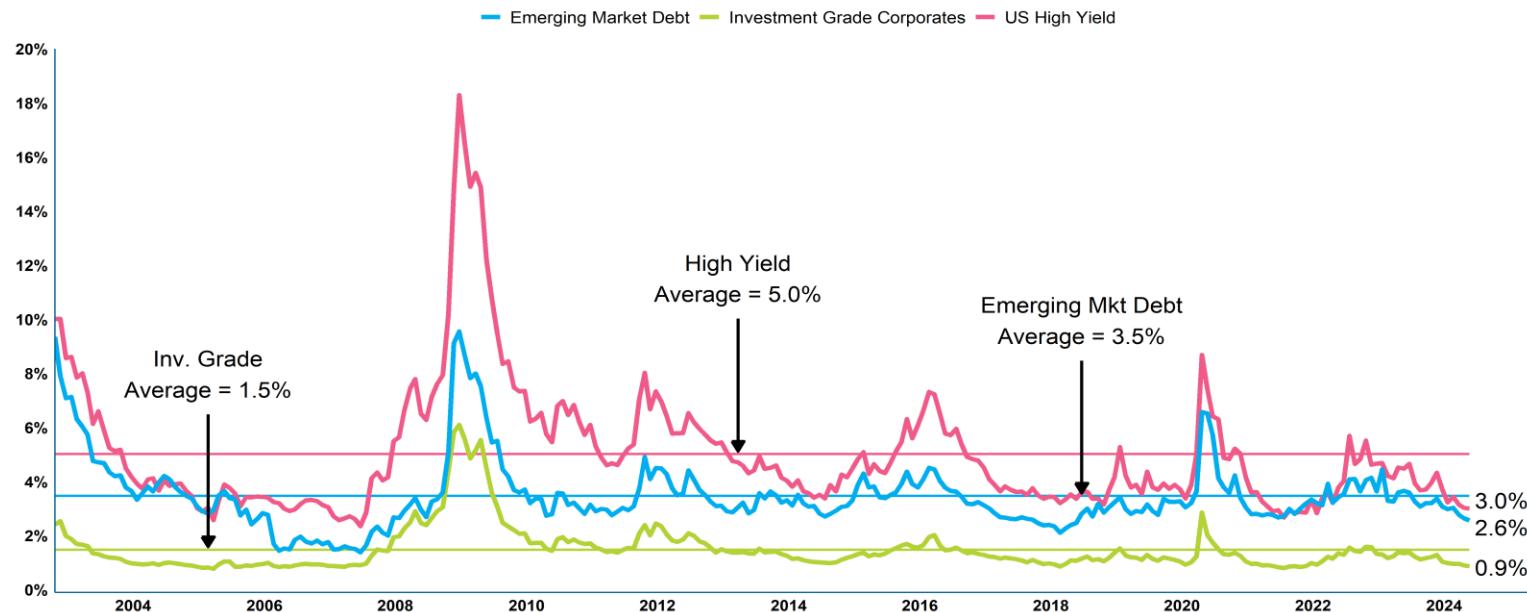
¹ Source: Bloomberg. JPM GBI-EM data is from PARis. Data is as of April 30, 2024. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.



- Interest rates moved significantly higher over the month due to the largely above expectations economic data, particularly inflation, and the related shifts in monetary policy expectations.
- The more policy sensitive two-year Treasury yield rose by 42 basis points to just over 5.0%, while the ten-year Treasury yield increased by 48 basis points to a year-to-date high of 4.7%.
- The yield curve remained inverted at month-end, with the spread between the two-year and ten-year Treasury at -35 basis points.

¹ Source: Bloomberg. Data is as of April 30, 2024.

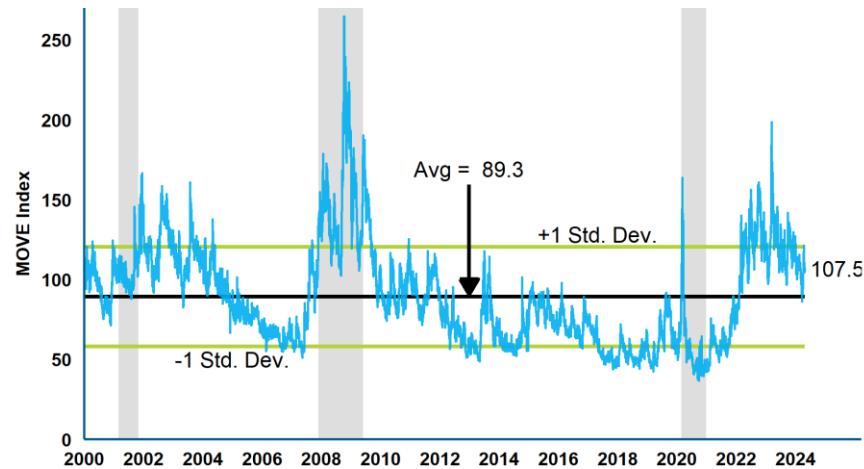
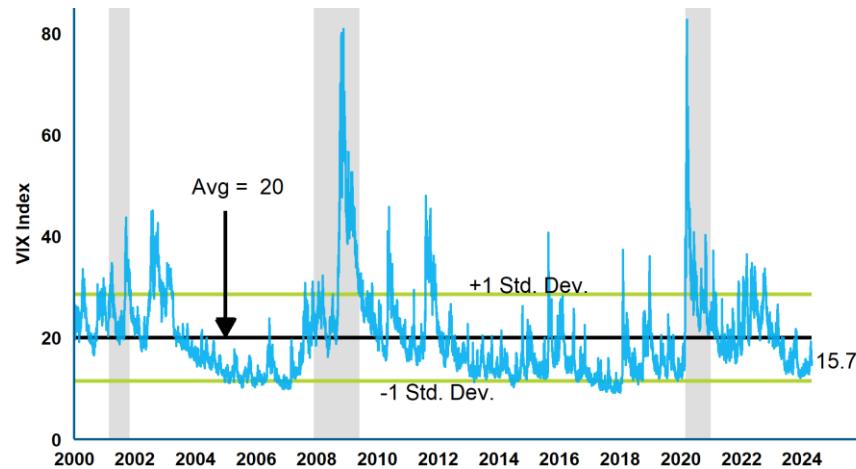
Credit Spreads vs. US Treasury Bonds¹



- A positive economic outlook along with expectations of slightly lower interest rates by year-end has led to an increased risk appetite. This has benefited credit, with spreads (the added yield above a comparable maturity Treasury) narrowing.
- In April credit spreads were steady near post-pandemic lows with all spreads remaining below their respective long-run averages, particularly high yield.
- Despite spreads being relatively tight, yields generally remain at above average levels compared to the last two decades, particularly for short-term issues.

¹ Source: Bloomberg. Data is as of April 30, 2024. 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.

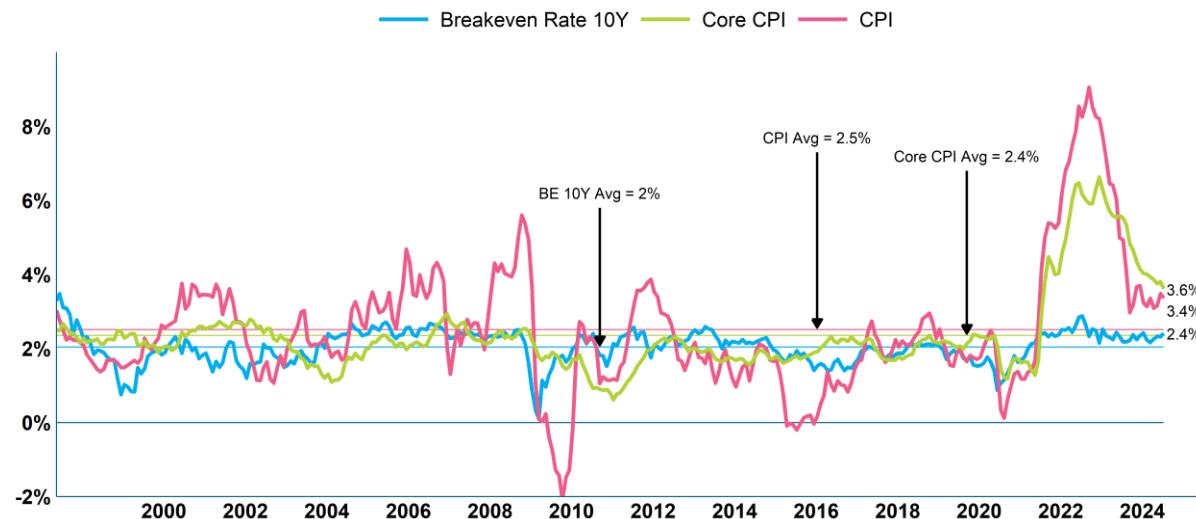
Equity and Fixed Income Volatility¹



- Strong economic data and the potential for policy rates to stay higher than previously anticipated drove volatility in the stock and bond markets in April. Both measures finished the month off their mid-month peaks though.
- Volatility in equities (VIX) ended April below its long-run average while volatility in bonds (MOVE) rose above its long-run average.

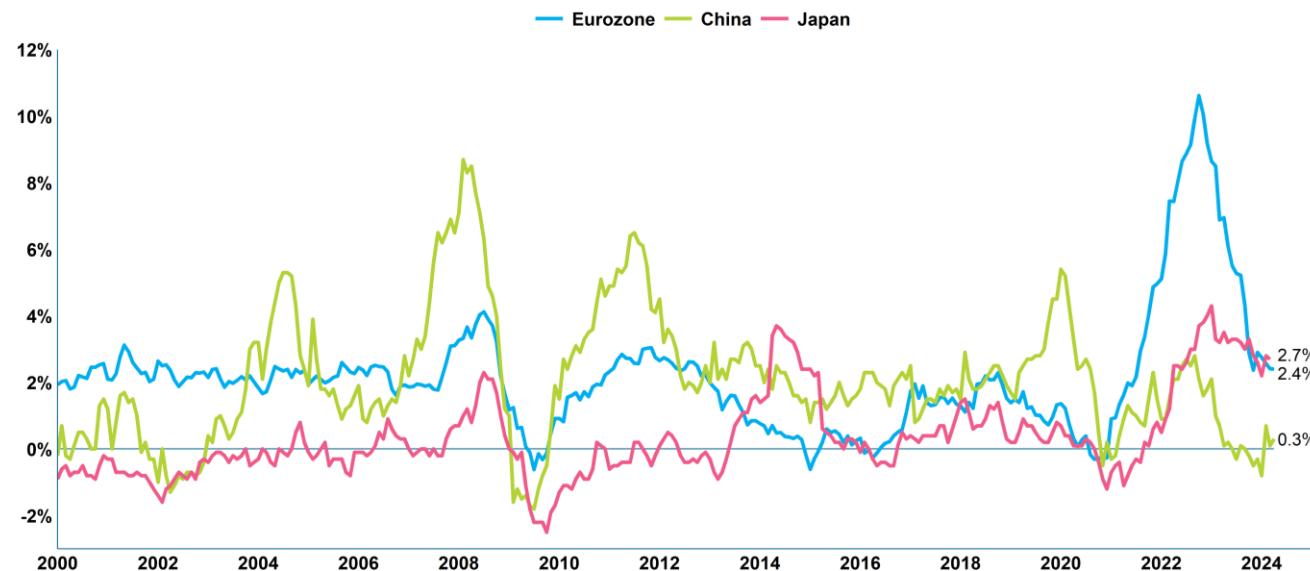
¹ Equity Volatility – Source: FRED. Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of April 2024. The average line indicated is the average of the VIX and MOVE values between January 2000 and April 2024.

US Ten-Year Breakeven Inflation and CPI¹



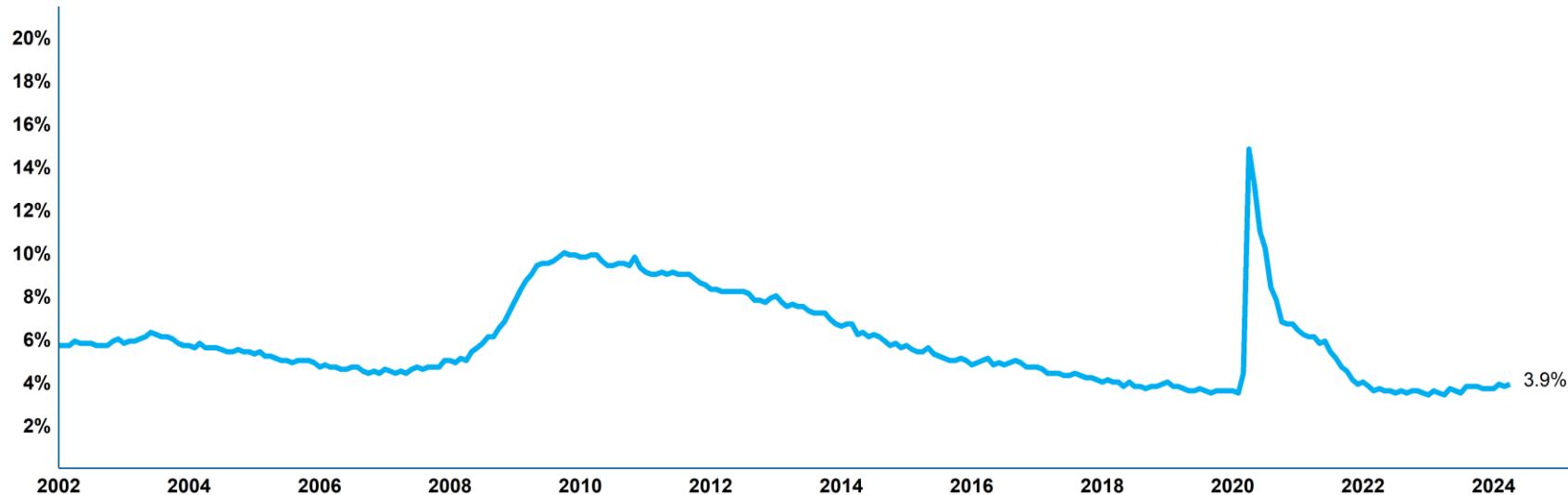
- Year-over-year headline inflation fell in April (3.5% to 3.4%) and met expectations.
- Month-over-month inflation rose 0.3% in April, slightly below the March gain of 0.4%. Energy (mainly gasoline) and shelter accounted for more than seventy percent of inflation gains in April, with food prices unchanged.
- Core inflation (excluding food and energy) also fell in April (3.8% to 3.6%) and matched expectations. Shelter, transportation (particularly car insurance), and medical care services all rose for the month while new and used cars and furnishings fell.
- Inflation expectations (breakevens) have remained relatively stable despite the significant volatility in inflation.

¹ Source: FRED. Data is as April 2024. 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.

Global Inflation (CPI Trailing Twelve Months)¹

- Outside the US, inflation is also easing across major economies from the recent peaks.
- In the eurozone, inflation experienced a dramatic decline last year but remains above the central bank's 2% target. In April, inflation held steady at 2.4%, a level below the 3.4% year-over-year reading in the US.
- Inflation in Japan has slowly declined from the early 2023 peak of 4.3%, but it remains near levels not seen in a decade. In the most recent reading, inflation fell slightly from 2.8% to 2.7%.
- In China, inflation levels remain well below other major economies given slowing economic growth. Prices did rise in April though from 0.1% to 0.3% as policy stimulus and liquidity injections into banks helped ease financial conditions.

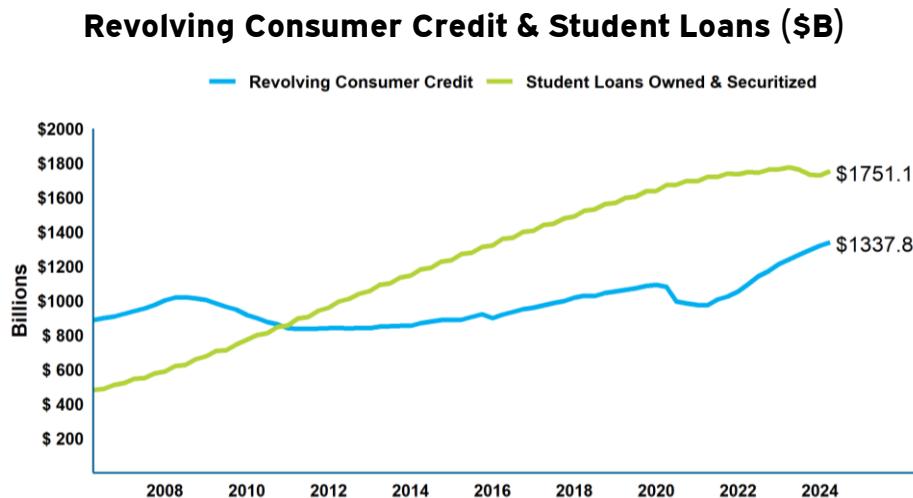
¹ Source: Bloomberg. Data is April 30, 2024, except Japan which is as of March 31, 2024.

US Unemployment¹

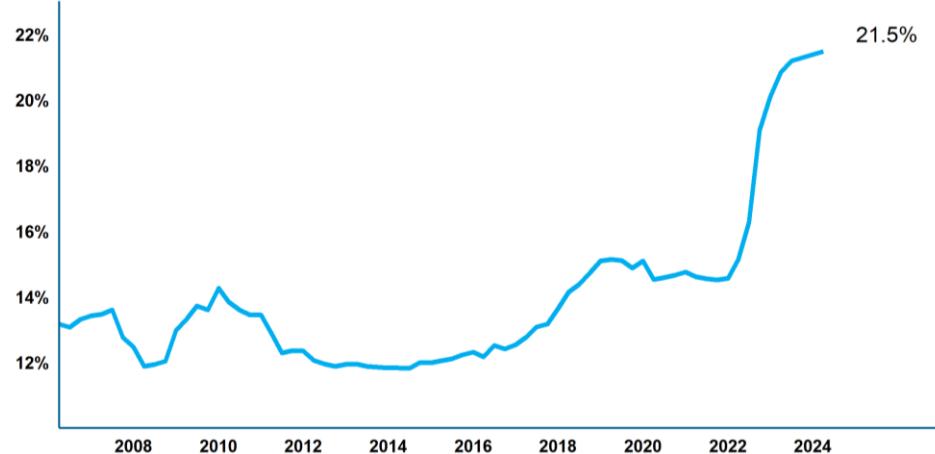
- Overall, the US labor market remains healthy, with the unemployment rate low (3.9%), wage growth around 4% annually, and initial claims for unemployment staying subdued.
- In April jobs added came in below expectations at 175,000 compared to 240,000, while the March number was revised upward (303,000 to 315,000). The healthcare sector added the most jobs followed by the social assistance, transportation and warehouse, and retail sectors.
- The unemployment rate held steady at 3.9% and wage growth dropped slightly from 4.1% to 3.9% compared to a year prior, a level well off the 6.0% peak, but above inflation levels.
- Quit rates have declined, and layoffs are stable, with 1.3 job openings per unemployed worker.

¹ Source: FRED. Data is as April 30, 2024.

US Consumer Under Stress?¹



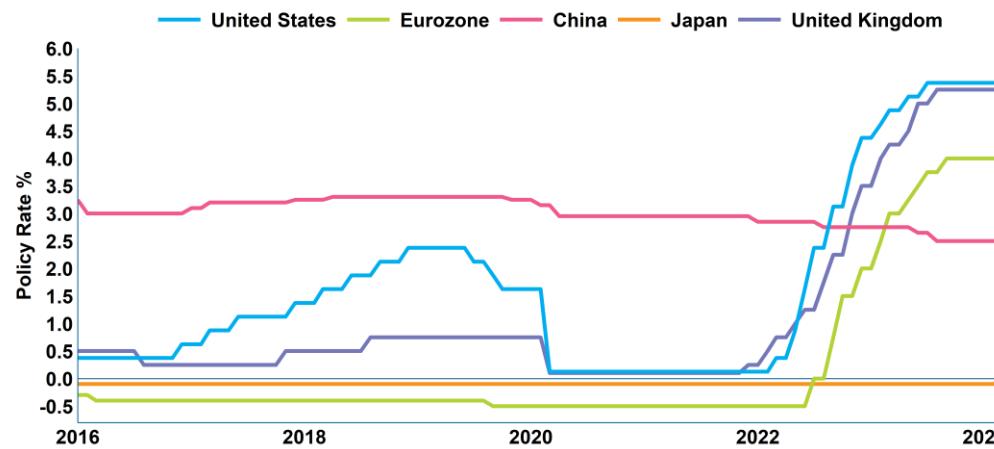
Consumer Credit Card Interest Rates (%)



- 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 a key 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). Recently, we have also seen payment delinquencies on credit cards and auto loans start to increase, particularly for younger people.
- The return of student loan repayments after a three-year pandemic-related reprieve could add to pressures on consumers' budgets. This might be partially mitigated by recently initiated repayment and forgiveness programs.
- It is worth noting though that many people locked in low-rate fixed mortgages before rates increased and many corporations issued debt at very low levels, reducing the sensitivity to higher rates.

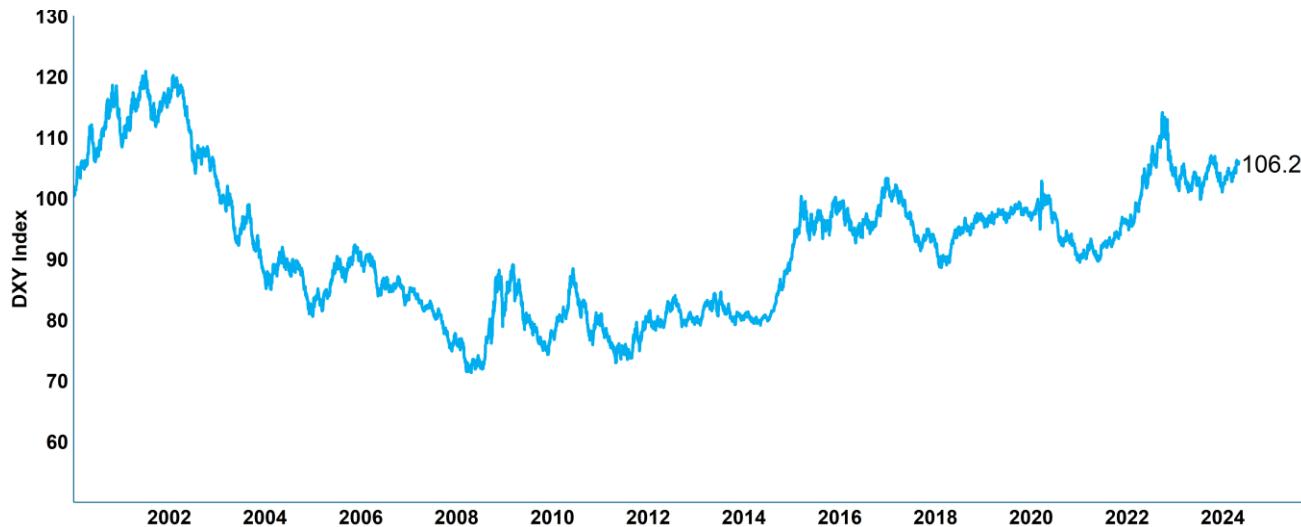
¹ Source: FRED. Data is as of March 31, 2024. Revolving Consumer Credit data is seasonally adjusted to remove distortions during the holiday season.

Policy Rates¹



- The Fed has been on hold since July 2023 when it raised rates to a range of 5.25%-5.50%. Markets are now pricing in fewer than two rate cuts this year, down from close to seven late last year, as inflation has not reached their inflation target and the labor market remains relatively strong.
- The European and UK central banks also recently paused their rate increases on slowing inflation. It appears that the European Central Bank could be one of the first central banks to cut rates with expectations over 95% for a June cut.
- Given the return of inflation driven by wage growth the Bank of Japan (BOJ) recently ended the final negative interest rate policy, stopped purchasing exchange traded funds (ETFs), and moved away from its yield curve control.
- The central bank in China has maintained interest rates at record low levels and continues to inject liquidity into the banking system, as weaker-than-expected economic data appears to indicate a widespread slowdown.

¹ Source: Bloomberg. Data is as of April 30, 2024.

US Dollar vs. Broad Currencies¹

- The dollar continued to appreciate in April versus a basket of currencies of major trading partners.
- Strong economic data in the US may delay policy rate cuts this year, which could contribute to continued upward pressure on the dollar as other countries pivot to rate cuts.

¹ Source: Bloomberg. Data as of April 30, 2024.

Summary

Key Trends:

- According to the International Monetary Fund (IMF), global growth this year is expected to match the 2023 estimate at around 3.1% with most major economies predicted to avoid a recession. Continued strong economic growth does run the risk of inflation and interest rates staying higher for longer.
- Key economic data in the US has recently started to come in below forecasts with expectations continuing to evolve for the timing and pace of interest rate cuts.
- Outside the US we could see other central banks start cutting rates ahead of the Fed, with the European Central Bank (ECB) particularly in focus. The risk of policy errors remains elevated as central banks try to further reduce inflation toward targets while not tipping their economies into recession.
- US consumers could feel pressure as certain components of inflation (e.g., shelter and insurance) remain high, borrowing costs are elevated, and the job market may weaken.
- A focus for US equities going forward will be whether earnings can remain resilient if growth slows. 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 China's economic uncertainty and on-going weakness in the real estate sector which could spill over into key trading partners' economies. Japan's recent tightening of monetary policy along with changes in corporate governance in the country could influence relative results.

Executive Summary

- In April, higher than expected U.S. inflation data, as well as resilient employment data hurt both equity and bond markets. This data also pushed back the anticipated start date for rate cuts, as well as the number of cuts expected in 2024.
- The below table reflects the latest estimated valuation data through April 2024.

NERS	April 30, 2024	March 31, 2024	February 29, 2024
Total Fund Balance	\$1.29 Billion	\$1.33 Billion	\$1.30 Billion
Funded Status	84%	87%	85%
NERS Assumed Rate of Return	6.75%	6.75%	6.75%
FYTD Rate of Return	6.6%	8.9%	6.2%
12 Months Trailing Rate of Return	8.4%	11.9%	10.7%
Monthly Rate of Return	-2.2%	2.6%	2.1%
Monthly Gains/Losses	-\$28.7 million	\$33.7 million	\$27.0 million
Monthly Net Cash Flow	-\$7.7 million	-\$8.4 million	-\$7.2 million

- The Actuarial Determined Contribution rates for Fiscal Year 2024 are:

- NERS: 20.96%
- VRS: 12.94%

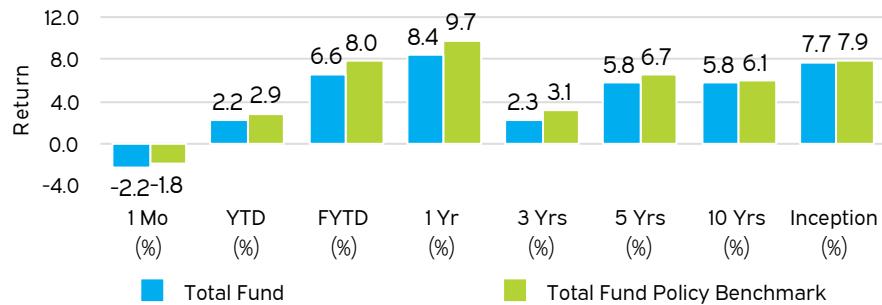
- As of April 30, the System was inside of its target asset allocation ranges for all asset classes.

Performance Summary

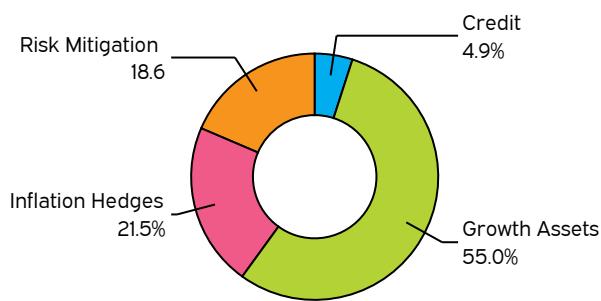
Portfolio Objective

The Employees' Retirement System of the City of Norfolk is a long-term investor whose objective is to enable the System to provide retirement income for plan participants and beneficiaries. The System's strategy is to generate a return that meets the long-term return objective, while minimizing volatility.

Return Summary



Current Allocation

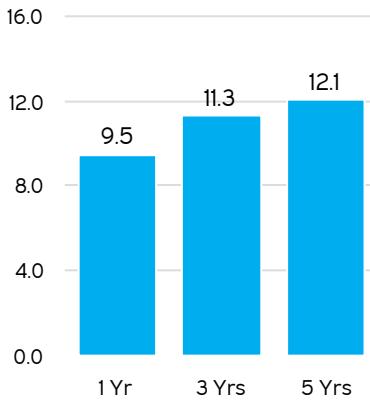


	1 Mo (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Total Fund	-2.2	2.2	6.6	8.4	2.3	5.8	5.8	7.7	10/01/1990
Total Fund Policy Benchmark	-1.8	2.9	8.0	9.7	3.1	6.7	6.1	7.9	

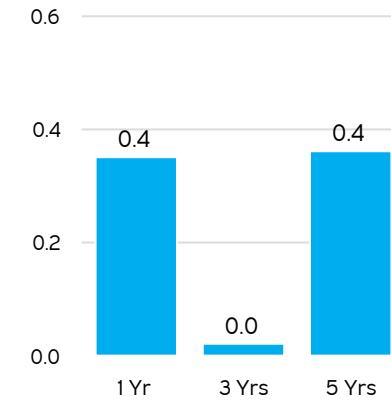
Summary of Cash Flows

	Last Month	Year-To-Date	One Year
Total Fund			
Beginning Market Value	1,327,215,388	1,295,810,106	1,244,481,618
Net Cash Flow	-7,705,886	-32,558,372	-55,398,583
Net Investment Change	-28,679,629	27,578,140	101,746,838
Ending Market Value	1,290,829,874	1,290,829,874	1,290,829,874

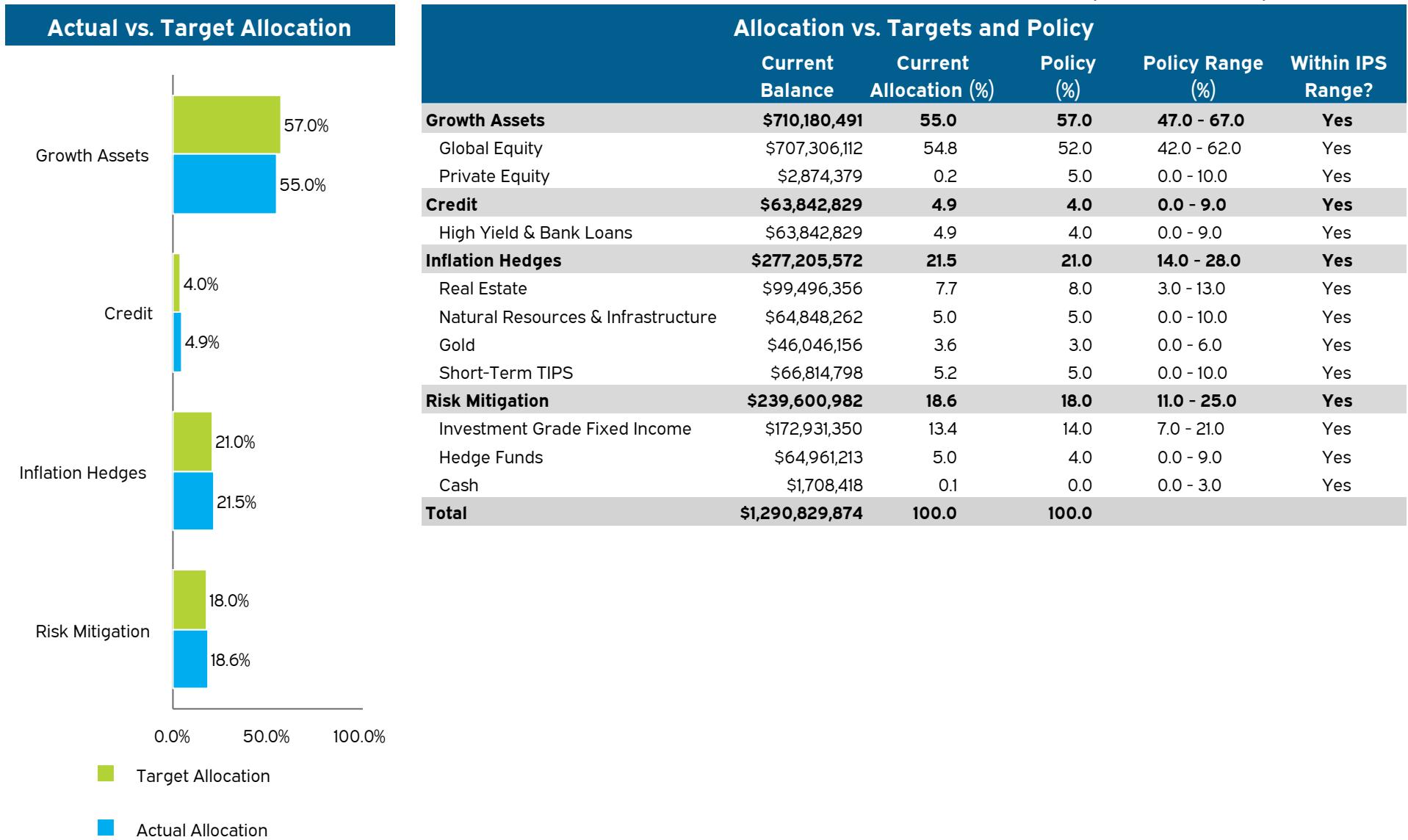
Annualized Standard Deviation

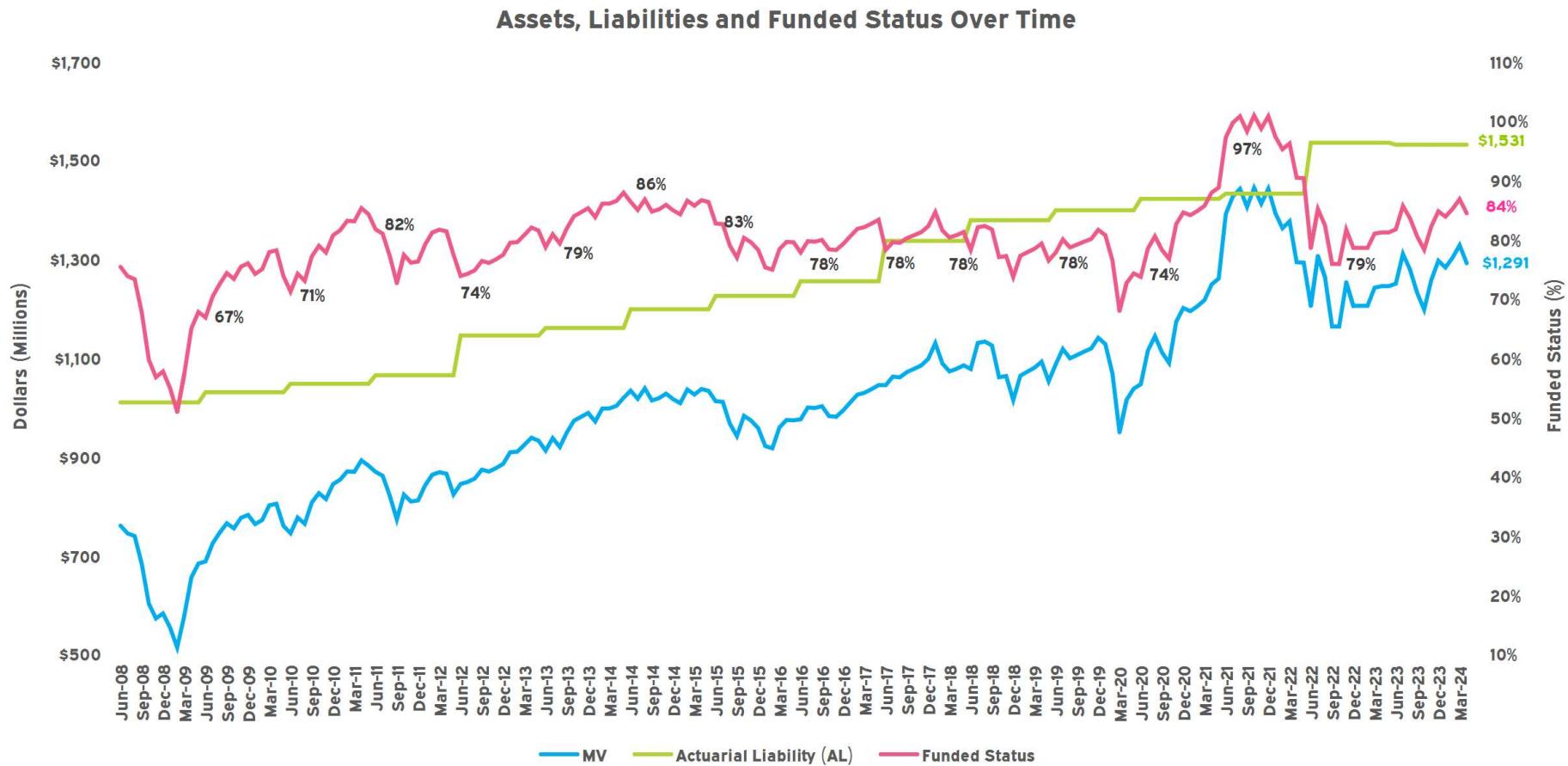


Sharpe Ratio



Performance Update | As of April 30, 2024





As of June 30, 2023, Total Plan Actuarial Liability (AL) is \$1.531 billion and the Actuarial Value of assets (AVA) is \$1.294 billion for an Actuarial Funded Ratio (AVA/AL) of 85%. Using the Market Value of Assets (MVA), the Market Funded Ratio (MV/AL) was approximately 87% in March 2024 and 84% in April 2024.

Asset Class Performance Summary												
	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date	
Total Fund	1,290,829,874	100.0	-2.2	2.2	6.6	8.4	2.3	5.8	5.8	7.7	Oct-90	
Total Fund Policy Benchmark			-1.8	2.9	8.0	9.7	3.1	6.7	6.1	7.9		
Total Fund Actual Allocation Benchmark			-1.9	2.6	7.7	9.5	--	--	--	--		
Total Fund Public Benchmark			-3.2	2.1	8.6	11.9	1.7	6.3	6.0	7.9		
Growth Assets	710,180,491	55.0	-3.1	4.7	11.7	16.6	--	--	--	14.4	Dec-22	
Growth Assets Custom Benchmark			-3.0	4.8	12.4	17.1	--	--	--	15.4		
Global Equity	707,306,112	54.8	-3.1	4.8	11.7	16.6	3.6	9.3	8.5	9.1	Oct-90	
Global Equity Policy Benchmark			-3.4	4.1	11.7	16.8	3.6	9.1	8.2	9.4		
Private Equity	2,874,379	0.2										
Credit	63,842,829	4.9	-0.6	1.8	8.1	10.2	--	--	--	10.2	May-23	
Credit Custom Benchmark			-0.1	1.9	9.0	10.6	--	--	--	10.6		
High Yield & Bank Loans	63,842,829	4.9	-0.6	1.8	8.1	10.2	--	--	--	10.2	May-23	
High Yield & Bank Loans Custom Benchmark			-0.1	1.9	9.0	10.6	--	--	--	10.6		
Inflation Hedges	277,205,572	21.5	0.0	0.1	0.5	-2.2	--	--	--	-5.0	Dec-22	
Inflation Hedges Custom Benchmark			0.9	1.1	1.1	-2.1	--	--	--	-2.6		
Real Estate	99,496,356	7.7	-2.5	-5.6	-10.8	-12.2	-1.7	-1.2	3.3	5.3	Apr-11	
NCREIF ODCE (Net)			0.0	-2.6	-9.4	-12.0	2.5	2.6	5.8	7.2		
Natural Resources & Infrastructure	64,848,262	5.0	1.4	3.1	7.6	2.8	--	--	--	3.3	Apr-23	
S&P Global LargeMidcap Resources & Commodities NR USD			1.9	3.0	6.9	2.0	--	--	--	2.6		
Gold	46,046,156	3.6	3.7	7.6	13.7	5.9	--	--	--	7.0	Apr-23	
60% Gold (Spot)/ 40% FTSE Gold Mines			3.8	8.2	15.5	8.2	--	--	--	9.9		
Short-Term TIPS	66,814,798	5.2	-0.1	0.8	3.8	2.9	--	--	--	3.4	Mar-23	
Blmbg. U.S. TIPS 0-5 Year			-0.1	0.7	3.8	2.8	--	--	--	4.3		

Total Fund Public Benchmark consists of 74% MSCI ACWI IMI / 26% Bloomberg US Aggregate. Historical varies. See benchmark history page for additional benchmark detail.

Performance Update | As of April 30, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Risk Mitigation	239,600,982	18.6	-2.4	-3.0	-1.3	-2.0	--	--	--	1.3	Dec-22
<i>Risk Mitigation Custom Benchmark</i>			-1.7	-1.2	1.6	0.6	--	--	--	1.9	
Investment Grade Fixed Income	172,931,350	13.4	-3.6	-4.8	-2.3	-3.9	-4.0	-0.4	1.2	5.0	Oct-90
<i>Blmbg. U.S. Aggregate Index</i>			-2.5	-3.3	0.0	-1.5	-3.5	-0.2	1.2	5.0	
Intermediate-Term Bonds	126,676,911	9.8	-2.6	-3.2	0.3	-1.0	-3.2	0.1	1.5	5.1	Oct-90
<i>Blmbg. U.S. Aggregate Index</i>			-2.5	-3.3	0.0	-1.5	-3.5	-0.2	1.2	5.0	
Long-Term Bonds	46,254,439	3.6	-6.0	-9.0	-9.8	-12.3	--	--	--	-6.6	Mar-23
<i>Blmbg. U.S. Treasury: Long</i>			-6.1	-9.2	-9.7	-12.3	--	--	--	-6.6	
Hedge Funds	64,961,213	5.0	0.7	1.8	0.8	3.4	--	--	--	4.1	Apr-23
<i>Hedge Fund Custom Benchmark</i>			1.1	6.6	7.2	8.0	--	--	--	8.2	
Cash	1,708,418	0.1									

Trailing Net Performance												
	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date	
Total Fund	1,290,829,874	100.0	-2.2	2.2	6.6	8.4	2.3	5.8	5.8	7.7	Oct-90	
Total Fund Policy Benchmark			-1.8	2.9	8.0	9.7	3.1	6.7	6.1	7.9		
Total Fund Actual Allocation Benchmark			-1.9	2.6	7.7	9.5	--	--	--	--		
Total Fund Public Benchmark			-3.2	2.1	8.6	11.9	1.7	6.3	6.0	7.9		
Growth Assets	710,180,491	55.0	-3.1	4.7	11.7	16.6	--	--	--	14.4	Dec-22	
Growth Assets Custom Benchmark			-3.0	4.8	12.4	17.1	--	--	--	15.4		
Global Equity	707,306,112	54.8	-3.1	4.8	11.7	16.6	3.6	9.3	8.5	9.1	Oct-90	
Global Equity Policy Benchmark			-3.4	4.1	11.7	16.8	3.6	9.1	8.2	9.4		
SSgA Russell 1000 Growth Index	29,529,862	2.3	-4.2	6.7	18.0	31.8	--	--	--	35.2	Mar-23	
Russell 1000 Growth Index			-4.2	6.7	18.0	31.8	--	--	--	35.1		
SSgA Russell 1000 Value Index	29,913,706	2.3	-4.3	4.3	10.6	13.4	--	--	--	12.4	Mar-23	
Russell 1000 Value Index			-4.3	4.3	10.6	13.4	--	--	--	12.4		
Fidelity Small Cap Index Fund	14,776,750	1.1	-7.0	--	--	--	--	--	--	1.7	Feb-24	
Russell 2000 Index			-7.0	--	--	--	--	--	--	1.7		
SSgA Russell 3000 Index	174,053,740	13.5	-4.4	5.1	14.0	22.3	--	--	--	22.7	Mar-23	
Russell 3000 Index			-4.4	5.2	14.0	22.3	--	--	--	22.6		
SSgA MSCI EAFE	84,291,350	6.5	-2.5	3.2	9.3	9.5	--	--	--	13.2	Mar-23	
MSCI EAFE (Net)			-2.6	3.1	9.1	9.3	--	--	--	12.8		
SSgA Emerging Markets Index	35,740,179	2.8	-0.2	2.0	6.3	8.3	--	--	--	9.2	Mar-23	
MSCI Emerging Markets (Net)			0.4	2.8	7.7	9.9	--	--	--	10.1		
ABS China Direct	8,104,854	0.6	6.0	2.4	-6.0	-13.0	--	--	--	-11.4	Mar-23	
MSCI China (Net)			6.6	4.3	-2.1	-6.8	--	--	--	-6.5		

Performance Update | As of April 30, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
ABS EM ex China Direct	21,310,377	1.7	-1.5	1.9	10.6	19.9	--	--	--	20.1	Mar-23
<i>MSCI EM ex China</i>			-1.6	2.3	11.8	17.6	--	--	--	18.0	
Kopernik Global All-Cap	32,593,826	2.5	1.7	2.8	13.5	10.8	--	--	--	11.9	Apr-23
<i>MSCI AC World Index (Net)</i>			-3.3	4.6	12.2	17.5	--	--	--	17.5	
First Eagle Global Equity	120,204,250	9.3	-2.9	4.0	6.7	9.5	--	--	--	11.0	Apr-23
<i>MSCI AC World Index (Net)</i>			-3.3	4.6	12.2	17.5	--	--	--	17.5	
Artisan Global Opportunities	96,276,391	7.5	-3.1	7.5	15.1	23.2	--	--	--	20.4	Apr-23
<i>MSCI AC World Index (Net)</i>			-3.3	4.6	12.2	17.5	--	--	--	17.5	
J. Stern & Co. World Stars Global Equity Fund	60,510,826	4.7	-4.3	--	--	--	--	--	--	5.7	Feb-24
<i>MSCI AC World IMI Index (Net)</i>			-3.4	--	--	--	--	--	--	3.8	
Private Equity	2,874,379	0.2									
NexPhase Capital Fund V, L.P.	21,844	0.0									
Vitruvian Investment Partnership V	222,544	0.0									
Lexington Capital Partners X, L.P.	2,569,991	0.2									
Flagship Pioneering Fund VIII, L.P.	60,000	0.0									
Credit	63,842,829	4.9	-0.6	1.8	8.1	10.2	--	--	--	10.2	May-23
<i>Credit Custom Benchmark</i>			-0.1	1.9	9.0	10.6	--	--	--	10.6	
High Yield & Bank Loans	63,842,829	4.9	-0.6	1.8	8.1	10.2	--	--	--	10.2	May-23
<i>High Yield & Bank Loans Custom Benchmark</i>			-0.1	1.9	9.0	10.6	--	--	--	10.6	
Sculptor Credit Opportunities Overseas Fund	26,158,716	2.0	0.7	2.6	5.6	8.0	--	--	--	8.0	May-23
<i>Blmbg. Global High Yield Index</i>			-0.8	1.3	9.7	11.3	--	--	--	11.2	

Performance Update | As of April 30, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Brigade High Income Fund	37,684,113	2.9	-1.5	1.3	9.9	11.7	--	--	--	11.7	May-23
60% Barclays U.S. Corporate High Yield & 40% CS Lev Loans			-0.3	1.6	8.9	10.3	--	--	--	10.3	
Inflation Hedges	277,205,572	21.5	0.0	0.1	0.5	-2.2	--	--	--	-5.0	Dec-22
<i>Inflation Hedges Custom Benchmark</i>			0.9	1.1	1.1	-2.1	--	--	--	-2.6	
Real Estate	99,496,356	7.7	-2.5	-5.6	-10.8	-12.2	-1.7	-1.2	3.3	5.3	Apr-11
NCREIF ODCE (Net)			0.0	-2.6	-9.4	-12.0	2.5	2.6	5.8	7.2	
JP Morgan Asset Management Strategic Property Fund	43,263,138	3.4	0.3	-5.4	-15.5	-16.7	-0.7	0.7	4.5	6.4	Apr-11
NCREIF ODCE (Net)			0.0	-2.6	-9.4	-12.0	2.5	2.6	5.8	7.2	
UBS Trumbull Property Fund	22,451,869	1.7	0.0	-1.9	-7.5	-10.8	-0.3	-1.7	2.8	3.9	Dec-11
NCREIF ODCE (Net)			0.0	-2.6	-9.4	-12.0	2.5	2.6	5.8	6.9	
SSgA US REIT	33,781,349	2.6	-7.3	-7.7	-0.6	1.6	--	--	--	-0.3	Mar-23
<i>Dow Jones U.S. Select RESI</i>			-7.3	-7.7	-0.5	1.7	--	--	--	-0.2	
Natural Resources & Infrastructure	64,848,262	5.0	1.4	3.1	7.6	2.8	--	--	--	3.3	Apr-23
<i>S&P Global LargeMidcap Resources & Commodities Ind</i>			1.9	3.0	6.9	2.0	--	--	--	2.6	
SSgA S&P Global LargeMidCap Natural Resources Index	48,936,800	3.8	1.8	3.1	6.9	2.1	--	--	--	2.7	Apr-23
<i>S&P Global LargeMidcap Resources & Commodities Ind</i>			1.9	3.0	6.9	2.0	--	--	--	2.6	
JP Morgan Infrastructure Investments Fund	15,911,461	1.2	0.0	2.7	--	--	--	--	--	6.1	Oct-23
<i>DJ Brookfield Listed Public Infrastructure +1%</i>			-2.8	-3.0	--	--	--	--	--	9.1	

Performance Update | As of April 30, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Gold	46,046,156	3.6	3.7	7.6	13.7	5.9	--	--	--	7.0	Apr-23
60% Gold (Spot)/ 40% FTSE Gold Mines			3.8	8.2	15.5	8.2	--	--	--	9.9	
First Eagle Institutional Gold Fund, LP	46,046,156	3.6	3.7	7.6	13.7	5.9	--	--	--	7.0	Apr-23
60% Gold (Spot)/ 40% FTSE Gold Mines			3.8	8.2	15.5	8.2	--	--	--	9.9	
Short-Term TIPS	66,814,798	5.2	-0.1	0.8	3.8	2.9	--	--	--	3.4	Mar-23
Blmbg. U.S. TIPS 0-5 Year			-0.1	0.7	3.8	2.8	--	--	--	4.3	
Vanguard Short-Term TIPS Index	66,814,798	5.2	-0.1	0.8	3.8	2.9	--	--	--	2.8	Apr-23
Blmbg. U.S. TIPS 0-5 Year			-0.1	0.7	3.8	2.8	--	--	--	2.8	
Risk Mitigation	239,600,982	18.6	-2.4	-3.0	-1.3	-2.0	--	--	--	1.3	Dec-22
Risk Mitigation Custom Benchmark			-1.7	-1.2	1.6	0.6	--	--	--	1.9	
Investment Grade Fixed Income	172,931,350	13.4	-3.6	-4.8	-2.3	-3.9	-4.0	-0.4	1.2	5.0	Oct-90
Blmbg. U.S. Aggregate Index			-2.5	-3.3	0.0	-1.5	-3.5	-0.2	1.2	5.0	
Intermediate-Term Bonds	126,676,911	9.8	-2.6	-3.2	0.3	-1.0	-3.2	0.1	1.5	5.1	Oct-90
Blmbg. U.S. Aggregate Index			-2.5	-3.3	0.0	-1.5	-3.5	-0.2	1.2	5.0	
SSgA US Aggregate Bond	35,870,452	2.8	-2.5	-3.2	0.0	-1.5	-3.5	-0.1	1.2	2.4	Jan-09
Blmbg. U.S. Aggregate Index			-2.5	-3.3	0.0	-1.5	-3.5	-0.2	1.2	2.4	
Wellington Core Bond	73,606,285	5.7	-2.4	-2.5	1.2	0.0	--	--	--	0.0	May-23
Blmbg. U.S. Aggregate Index			-2.5	-3.3	0.0	-1.5	--	--	--	-1.5	
Brandywine U.S. Fixed Income	17,200,173	1.3	-4.0	-5.6	-3.1	--	--	--	--	-3.8	Jun-23
Blmbg. U.S. Aggregate Index			-2.5	-3.3	0.0	--	--	--	--	-0.4	

Performance Update | As of April 30, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Long-Term Bonds	46,254,439	3.6	-6.0	-9.0	-9.8	-12.3	--	--	--	-6.6	Mar-23
Blmbg. U.S. Treasury: Long			-6.1	-9.2	-9.7	-12.3	--	--	--	-6.6	
SSgA Long US Treasury Index	46,254,439	3.6	-6.0	-9.0	-9.8	-12.3	--	--	--	-6.6	Mar-23
Blmbg. U.S. Treasury: Long			-6.1	-9.2	-9.7	-12.3	--	--	--	-6.6	
Hedge Funds	64,961,213	5.0	0.7	1.8	0.8	3.4	--	--	--	4.1	Apr-23
Hedge Fund Custom Benchmark			1.1	6.6	7.2	8.0	--	--	--	8.2	
36 South Kohinoor Series (Cayman) Fund	21,478,755	1.7	0.9	1.1	0.3	1.7	--	--	--	1.6	Apr-23
CBOE Eurekahedge Long Volatility Hedge Fund Index			0.6	-1.4	-3.6	-5.4	--	--	--	-5.7	
BH-DG Systematic Trading Master Fund	18,326,982	1.4	1.0	3.5	0.0	7.7	--	--	--	9.0	Apr-23
Barclay CTA Index			0.8	5.2	4.3	5.8	--	--	--	6.3	
Lombard Odier Bear Convexity	7,677,791	0.6	-0.7	0.9	-3.9	-4.4	--	--	--	-3.7	Apr-23
CBOE Eurekahedge Long Volatility Hedge Fund Index			0.6	-1.4	-3.6	-5.4	--	--	--	-5.7	
Alpstone Global Macro Fund	17,477,685	1.4	0.9	1.4	4.5	4.7	--	--	--	4.7	May-23
HFRI Macro (Total) Index			0.9	7.2	7.7	8.6	--	--	--	8.6	
Cash	1,708,418	0.1									
Cash	1,708,418	0.1									

**Annual Investment Expense Analysis
As of April 30, 2024**

	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Total Fund		\$1,290,829,874	\$4,375,119	0.34
Growth Assets		\$710,180,491	\$2,033,335	0.29
Global Equity		\$707,306,112	\$2,027,470	0.29
SSgA Russell 1000 Growth Index	0.02 % of Assets	\$29,529,862	\$5,906	0.02
SSgA Russell 1000 Value Index	0.02 % of Assets	\$29,913,706	\$5,983	0.02
Fidelity Small Cap Index Fund	0.03 % of Assets	\$14,776,750	\$3,694	0.03
SSgA Russell 3000 Index	0.02 % of Assets	\$174,053,740	\$34,811	0.02
SSgA MSCI EAFE	0.04 % of Assets	\$84,291,350	\$33,717	0.04
SSgA Emerging Markets Index	0.08 % of Assets	\$35,740,179	\$28,592	0.08
ABS China Direct	0.65 % of Assets	\$8,104,854	\$52,682	0.65
ABS EM ex China Direct	0.50 % of Assets	\$21,310,377	\$106,552	0.50
Kopernik Global All-Cap	0.75 % of Assets	\$32,593,826	\$244,454	0.75
First Eagle Global Equity	0.55 % of Assets	\$120,204,250	\$661,123	0.55
Artisan Global Opportunities	0.60 % of Assets	\$96,276,391	\$577,658	0.60
J. Stern & Co. World Stars Global Equity Fund	0.45 % of Assets	\$60,510,826	\$272,299	0.45
Private Equity		\$2,874,379	\$5,865	0.20
NexPhase Capital Fund V, L.P.	2.00 % of Assets	\$21,844	\$437	2.00
Vitruvian Investment Partnership V	1.90 % of Assets	\$222,544	\$4,228	1.90
Lexington Capital Partners X, L.P.	1.00% on committed capital.	\$2,569,991	-	-
Flagship Pioneering Fund VIII, L.P.	2.00 % of Assets	\$60,000	\$1,200	2.00
Credit		\$63,842,829	\$457,545	0.72
High Yield & Bank Loans		\$63,842,829	\$457,545	0.72
Sculptor Credit Opportunities Overseas Fund	Performance Based 1.00 % and 20.00 %	\$26,158,716	\$261,587	1.00
Brigade High Income Fund	0.52 % of Assets	\$37,684,113	\$195,957	0.52

Performance Update | As of April 30, 2024

	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Inflation Hedges		\$277,205,572	\$1,046,221	0.38
Real Estate		\$99,496,356	\$612,191	0.62
JP Morgan Asset Management Strategic Property Fund	0.91 % of Assets	\$43,263,138	\$393,695	0.91
UBS Trumbull Property Fund	0.96 % of First \$10 M 0.83 % of Next \$15 M 0.81 % of Next \$25 M 0.79 % of Next \$50 M 0.67 % of Next \$150 M 0.60 % of Next \$150 M 0.56 % of Next \$200 M 0.52 % Thereafter	\$22,451,869	\$198,228	0.88
SSgA US REIT	0.06 % of Assets	\$33,781,349	\$20,269	0.06
Natural Resources & Infrastructure		\$64,848,262	\$200,096	0.31
SSgA S&P Global LargeMidCap Natural Resources Index	0.10 % of Assets	\$48,936,800	\$48,937	0.10
JP Morgan Infrastructure Investments Fund	0.95 % of Assets	\$15,911,461	\$151,159	0.95
Gold		\$46,046,156	\$207,208	0.45
First Eagle Institutional Gold Fund, LP	0.45 % of Assets	\$46,046,156	\$207,208	0.45
Short-Term TIPS		\$66,814,798	\$26,726	0.04
Vanguard Short-Term TIPS Index	0.04 % of Assets	\$66,814,798	\$26,726	0.04
Risk Mitigation		\$239,600,982	\$838,019	0.35
Investment Grade Fixed Income		\$172,931,350	\$159,258	0.09
Intermediate-Term Bonds		\$126,676,911	\$145,382	0.11
SSgA US Aggregate Bond	0.02 % of Assets	\$35,870,452	\$7,174	0.02
Wellington Core Bond	0.12 % of Assets	\$73,606,285	\$88,328	0.12
Brandywine U.S. Fixed Income	0.29 % of Assets	\$17,200,173	\$49,881	0.29

Performance Update | As of April 30, 2024

	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Long-Term Bonds		\$46,254,439	\$13,876	0.03
SSgA Long US Treasury Index	0.03 % of Assets	\$46,254,439	\$13,876	0.03
Hedge Funds		\$64,961,213	\$678,761	1.04
36 South Kohinoor Series (Cayman) Fund	Performance Based 1.00 % and 20.00 %	\$21,478,755	\$214,788	1.00
BH-DG Systematic Trading Master Fund	0.93 % of Assets	\$18,326,982	\$170,441	0.93
Lombard Odier Bear Convexity	Performance Based 0.75 % and 27.50 %	\$7,677,791	\$57,583	0.75
Alpstone Global Macro Fund	Performance Based 1.35 % and 20.00 %	\$17,477,685	\$235,949	1.35
Cash		\$1,708,418	-	-
Cash		\$1,708,418	-	-

		Benchmark History
From Date	To Date	Benchmark
Total Fund		
01/01/2024	Present	14.0% Blmbg. U.S. Aggregate Index, 2.0% Blmbg. U.S. Corp: High Yield Index, 4.0% Hedge Fund Custom Benchmark, 8.0% NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net), 52.0% MSCI AC World IMI Index (Net), 5.0% Blmbg. U.S. TIPS 0-5 Year, 5.0% S&P Global LargeMidcap Resources & Commodities Ind, 2.0% Credit Suisse Leveraged Loan Index, 3.0% 60% Gold (Spot)/ 40% FTSE Gold Mines, 5.0% MSCI ACWI + 3% 1Q Lag
12/01/2022	01/01/2024	14.0% Blmbg. U.S. Aggregate Index, 2.0% Blmbg. U.S. Corp: High Yield Index, 4.0% HFRI Macro (Total) Index, 8.0% NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net), 52.0% MSCI AC World IMI Index (Net), 5.0% Blmbg. U.S. TIPS 0-5 Year, 5.0% S&P Global LargeMidcap Resources & Commodities Ind, 2.0% Credit Suisse Leveraged Loan Index, 3.0% 60% Gold (Spot)/ 40% FTSE Gold Mines, 5.0% MSCI ACWI + 3% 1Q Lag
05/01/2016	12/01/2022	30.0% Blmbg. U.S. Aggregate Index, 7.5% NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net), 7.5% Alerian MLP Index, 55.0% MSCI AC World IMI Index (Net)
03/01/2016	05/01/2016	33.0% Russell 3000 Index, 30.0% Blmbg. U.S. Aggregate Index, 7.5% NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net), 22.0% MSCI AC World ex USA (Net), 7.5% Alerian MLP Index
02/01/2013	03/01/2016	33.0% Russell 3000 Index, 35.0% Blmbg. U.S. Aggregate Index, 5.0% NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net), 22.0% MSCI AC World ex USA (Net), 5.0% Alerian MLP Index
03/01/2011	02/01/2013	36.0% Russell 3000 Index, 35.0% Blmbg. U.S. Aggregate Index, 5.0% NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net), 24.0% MSCI AC World ex USA (Net)
09/01/2009	03/01/2011	36.0% Russell 3000 Index, 40.0% Blmbg. U.S. Aggregate Index, 24.0% MSCI AC World ex USA (Net)
06/01/2009	09/01/2009	42.0% Russell 3000 Index, 40.0% Blmbg. U.S. Aggregate Index, 18.0% MSCI AC World ex USA (Net)
06/01/2006	06/01/2009	42.0% Russell 3000 Index, 40.0% Blmbg. U.S. Aggregate Index, 18.0% MSCI EAFE (Net)
07/01/2003	06/01/2006	60.0% S&P 500 Index, 40.0% Blmbg. U.S. Aggregate Index
10/01/2002	07/01/2003	55.0% S&P 500 Index, 45.0% Blmbg. U.S. Aggregate Index
10/01/1990	10/01/2002	50.0% S&P 500 Index, 50.0% Blmbg. U.S. Aggregate Index

Total Fund Public benchmark consists of 74% MSCI ACWI IMI / 26% Bloomberg US Aggregate. Historical Varies.

Total Fund Actual Allocation Benchmark reflects the asset classes set forth in the Fund's investment policy statement, weighted for the Fund's actual investments and performance of the indexes referenced above.

		Benchmark History	Benchmark
From Date	To Date		
Growth Assets			
12/01/2022	Present	91.0% MSCI AC World IMI Index (Net), 9.0% MSCI ACWI + 3% 1Q Lag	
Global Equity			
05/01/2016	Present	100.0% MSCI AC World IMI Index (Net)	
09/01/2009	05/01/2016	60.0% Russell 3000 Index, 40.0% MSCI AC World ex USA (Net)	
06/01/2009	09/01/2009	70.0% Russell 3000 Index, 30.0% MSCI AC World ex USA (Net)	
01/01/2006	06/01/2009	70.0% Russell 3000 Index, 30.0% MSCI EAFE (Net)	
10/01/1990	01/01/2006	100.0% S&P 500 Index	
Inflation Hedges			
12/01/2022	Present	38.0% NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net), 24.0% Blmbg. U.S. TIPS 1-5 Year Index, 24.0% S&P Global LargeMidcap Resources & Commodities Ind, 14.0% 60% Gold (Spot)/ 40% FTSE Gold Mines	
Risk Mitigation			
01/01/2024	Present	78.0% Blmbg. U.S. Aggregate Index, 22.0% Hedge Fund Custom Benchmark	
12/01/2022	01/01/2024	78.0% Blmbg. U.S. Aggregate Index, 22.0% HFRI Macro (Total) Index	
Hedge Funds			
01/01/2024	Present	33.3% HFRI Macro (Total) Index, 33.3% SG Trend Index, 33.3% CBOE Eurekahedge Long Volatility Hedge Fund Index	
03/01/2023	01/01/2024	100.0% HFRI Macro (Total) Index	