



IUOE Local No. 77 Annuity Fund

Investment Performance Report

**Period Ended
June 30, 2023**

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Market Discussion

2Q | 2023



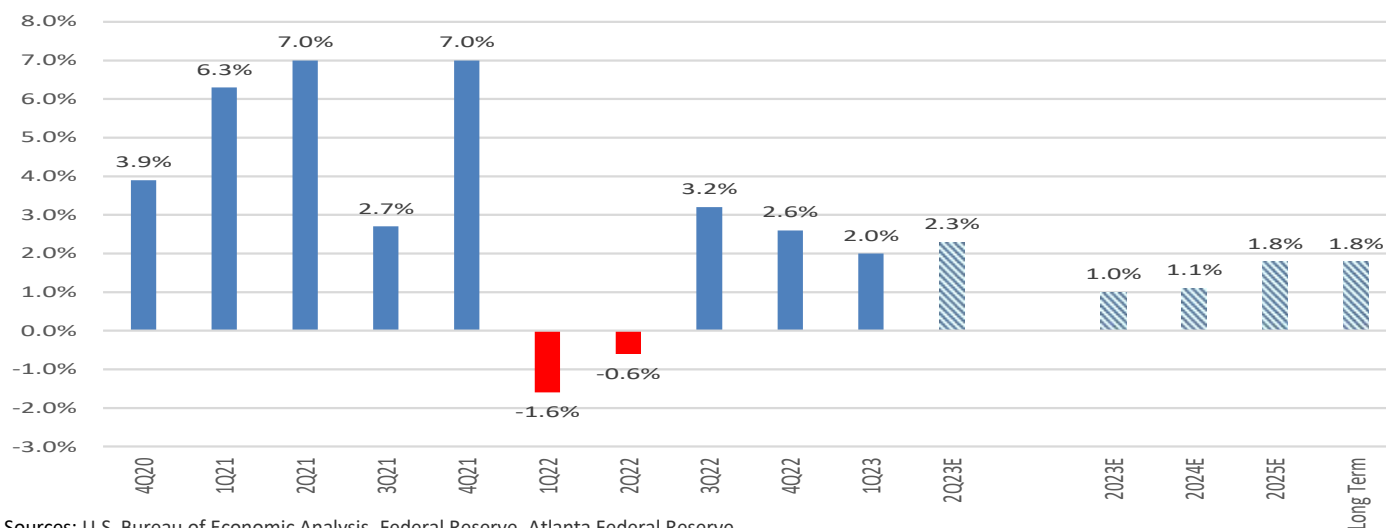
Financial Market Performance

Periods Ending June 30, 2023

Strategy	Sector	Index	QTR	YTD	2022	2021	2020	2019	2018	2017	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Stocks	US Large Cap	S&P 500	8.7%	16.9%	-18.1%	28.7%	18.4%	31.5%	-4.4%	21.8%	19.6%	14.6%	12.3%	12.8%	10.0%
	US Small Cap	Russell 2000	5.2%	8.1%	-20.5%	14.8%	19.9%	25.5%	-11.0%	14.6%	12.3%	10.8%	4.2%	8.2%	8.9%
	All Country	MSCI All Country World (net)	6.2%	13.9%	-18.4%	18.5%	16.3%	26.6%	-9.4%	24.0%	16.5%	11.0%	8.1%	8.7%	8.2%
	Non-US Developed	MSCI EAFE (net)	3.0%	11.7%	-14.5%	11.3%	7.8%	22.0%	-13.8%	25.0%	18.8%	8.9%	4.4%	5.4%	6.5%
	Emerging Markets	MSCI EM (net)	0.9%	4.9%	-20.1%	-2.5%	18.3%	18.4%	-14.6%	37.3%	1.7%	2.3%	0.9%	2.9%	8.2%
	Int'l Small Cap	MSCI EAFE Small Cap (net)	0.6%	5.5%	-21.4%	10.1%	12.3%	25.0%	-17.9%	33.0%	10.2%	5.7%	1.3%	6.2%	8.3%
Bonds	Treasury	Bloomberg US Govt	-1.4%	1.6%	-12.3%	-2.3%	7.9%	6.8%	0.9%	2.3%	-2.1%	-4.7%	0.5%	1.0%	2.5%
	Broad Market	Bloomberg Aggregate	-0.8%	2.1%	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	-0.9%	-4.0%	0.8%	1.5%	3.0%
	Intermediate	Bloomberg Gov/Credit Int.	-0.8%	1.5%	-8.2%	-1.4%	6.4%	6.8%	0.9%	2.1%	-0.1%	-2.5%	1.2%	1.4%	2.7%
	High Yield	Bloomberg HY BaB 2% IC	1.4%	4.8%	-10.6%	4.6%	7.7%	15.2%	-1.9%	6.9%	8.9%	2.6%	3.7%	4.5%	6.3%
	Short Duration HY	ICE BofA 1-3 Yrs BB US Cash Pay HY	1.3%	3.6%	-3.1%	3.2%	5.4%	8.7%	1.3%	3.6%	7.1%	3.4%	3.7%	3.9%	5.4%
	Global Bonds	FTSE WGBI	-1.8%	1.7%	-18.3%	-7.0%	10.1%	5.9%	-0.8%	7.5%	-2.5%	-6.5%	-2.0%	-0.5%	2.1%
GTAA	Unconstrained	65% MSCI World /35% FTSE WGBI	3.8%	10.3%	-18.1%	11.0%	14.6%	19.9%	-5.8%	17.0%	10.9%	5.5%	5.4%	6.1%	6.4%
Real Estate	Core	NCREIF ODCE Equal Weighted (net)	-3.0%	-6.4%	7.6%	21.9%	0.8%	5.2%	7.3%	6.9%	-10.5%	7.6%	6.1%	8.1%	6.9%
Hedge Fund of Funds	Diversified FOFs	HFRI FOF Composite	1.4%	2.2%	-5.3%	6.2%	10.9%	8.4%	-4.0%	7.8%	3.6%	5.0%	3.3%	3.4%	3.6%
	Equity Long-Short	HFRI Equity Hedge	2.9%	5.5%	-10.1%	11.7%	17.9%	13.7%	-7.1%	13.3%	7.4%	8.9%	5.4%	5.6%	5.9%
Commodities	Commodities	Goldman Sachs Commodity	-2.7%	-7.5%	26.0%	40.4%	-23.7%	17.6%	-13.8%	5.8%	-14.2%	25.1%	2.8%	-3.5%	-0.9%

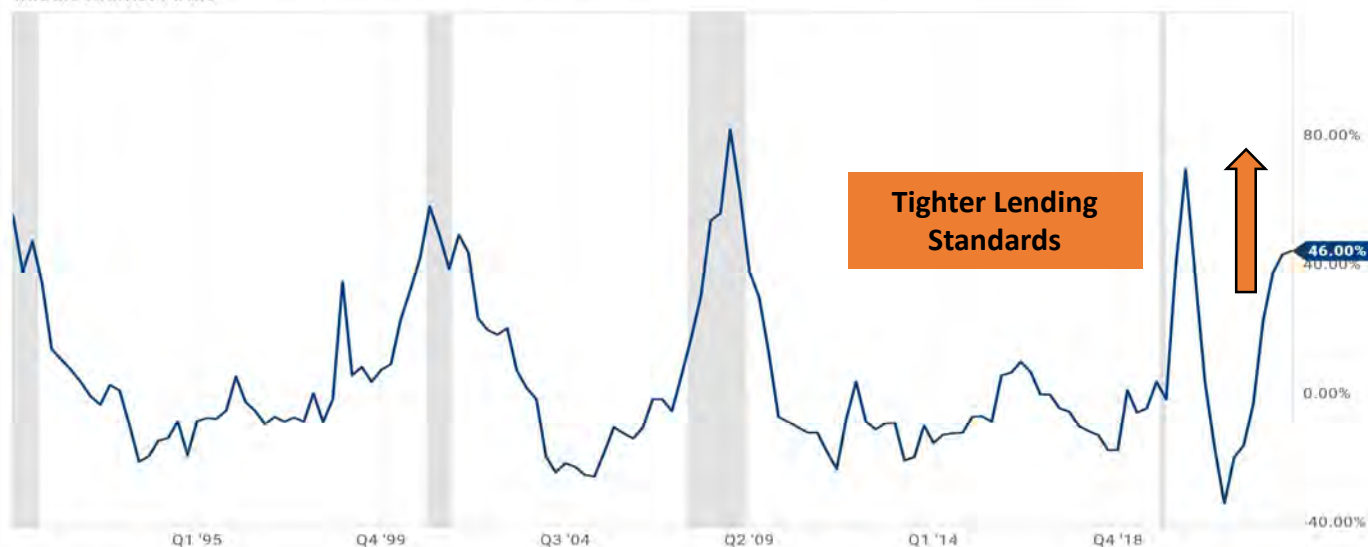
U.S. Economy

U.S. GDP Growth



Sources: U.S. Bureau of Economic Analysis, Federal Reserve, Atlanta Federal Reserve

US Net Percentage of Banks Reporting Tightening Standards for C&I Loans to Large and Middle-market Firms



Date Range: 06/30/1990 - 06/30/2023

Source: Federal Reserve

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U.S Economy Remains Resilient

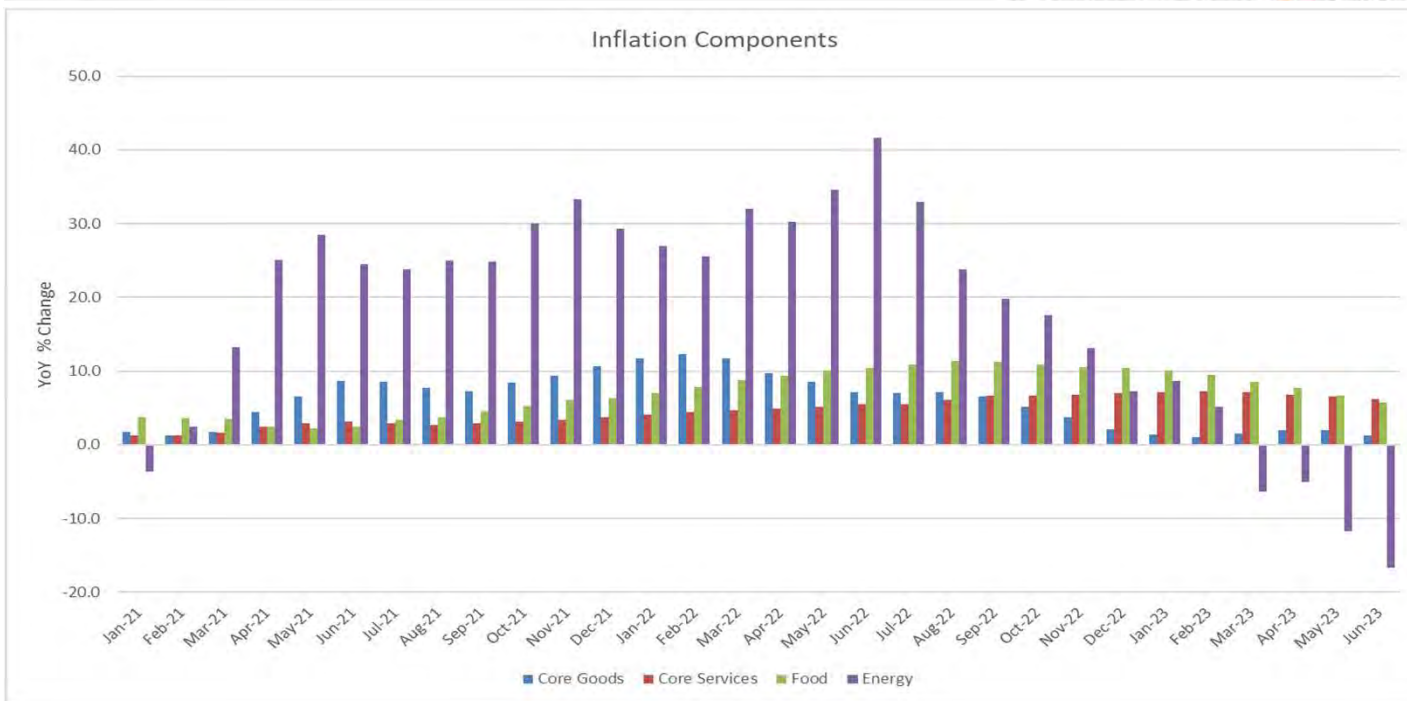
- Despite widespread predictions at the start of the year that a recession was imminent, U.S. economic growth has remained positive, with GDP increasing by 2.0% in Q1 2023.
- As of July 10, 2023, the Atlanta Fed GDPNow model is forecasting 2.3% growth in Q2 2023.
- In their most recent projections, the U.S. Federal Reserve expects economic growth to slow to 1.0% for the full year of 2023, 1.1% in 2024, 1.8% in 2025 and 1.8% over the long-term.
- One of the drivers of the expectation for slowing growth is a reduced availability of credit, as lending standards have tightened since Q2 2023 following the collapse of three U.S. banks. Tighter lending standards will reduce available credit and are likely to negatively impact economic growth.

U.S. Economy



Inflation Continues Downward Trend but Remains Above Target

- Year-over-year CPI was 3.0% in June, the lowest level since March 2021.
- Excluding food and energy, core inflation increased by 4.9% vs. a year ago, the lowest level since October 2021.
- A decline in energy prices vs. one year ago was the largest driver of the recent decline in headline inflation.
- Year-over-year core goods inflation was 1.3% as used car prices declined for eight consecutive quarters.
- Service inflation remains elevated, driven by the shelter component, which tends to lag real time prices.
- PCE, the Fed's preferred inflation measure, increased by 4.6% over the last year through May. PCE has been in a range of 4.6% to 4.7% since December 2022, down from the peak year-over-year growth of 5.4% in February 2022.



U.S. Economy

Effective Federal Funds Rate



Date Range: 01/31/2022 - 07/13/2023

Source: Federal Reserve

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Fed Continues Efforts to Combat Inflation

- After increasing interest rates by 500 bps over the course of 2022 and the first three meetings of 2023, the U.S. Federal Reserve paused at the June 2023 meeting, leaving the effective Fed Funds Rate at 5.08%, the highest level since July 2007.
- Forward guidance from Fed officials suggests additional rate hikes in 2023 are likely.
- The reduction in the size of the Fed's balance sheet that began in 2022 was briefly interrupted in March 2023 when the Fed provided a liquidity injection to banks following three of the four largest bank failures in history.
- By the end of Q2 2023, the increase in the Fed's balance sheet was reversed and the quantitative tightening program resumed.

US Total Assets Held by All Federal Reserve Banks



Date Range: 07/16/2003 - 07/12/2023

Source: Federal Reserve

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U.S. Economy

Employment Showing Signs of Slowing Momentum

- While the employment market has remained resilient despite the Federal Reserve's efforts to reduce inflation by raising interest rates, signs have appeared that momentum may be slowing.
- Weekly claims for unemployment averaged 240,000 in Q2 2023, compared to an average of 214,000 for calendar year 2022.
- Despite recent rising claims, the overall employment market remains tight, with 30 consecutive months of job gains and an unemployment rate close to a 50-year low.
- Job openings in the U.S. declined below 10 million for the first time since May 2021; however, they remain elevated by historical standards.

● US Initial Claims for Unemployment Insurance



● US Unemployment Rate



● US Job Openings: Total Nonfarm



Date Range: 07/20/2013 - 07/08/2023

Sources: DoL, BLS

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U.S. Equity Market

Sector	Index	2Q23	YTD	2022	2021	2020	2019	2018	2017	1-Year	3-Year	5-Year	10-Year
Large Cap	S&P 500	8.7%	16.9%	-18.1%	28.7%	18.4%	31.5%	-4.4%	21.8%	19.6%	14.6%	12.3%	12.8%
	Russell 1000	8.6%	16.7%	-19.1%	26.4%	21.0%	31.4%	-4.8%	21.7%	19.3%	14.1%	11.9%	12.6%
	Russell 1000 Value	4.1%	5.1%	-7.6%	25.1%	2.8%	26.5%	-8.3%	13.6%	11.5%	14.3%	8.1%	9.2%
	Russell 1000 Growth	12.8%	29.0%	-29.1%	27.6%	38.5%	36.4%	-1.5%	30.2%	27.1%	13.7%	15.1%	15.7%
Mid Cap	Russell Mid-Cap	4.8%	9.0%	-17.3%	22.6%	17.1%	30.5%	-9.1%	18.5%	14.9%	12.5%	8.5%	10.3%
	Russell Mid-Cap Value	3.9%	5.2%	-12.1%	28.3%	5.0%	27.0%	-12.3%	13.3%	10.5%	15.0%	6.8%	9.0%
	Russell Mid-Cap Growth	6.2%	15.9%	-26.7%	12.7%	35.6%	35.5%	-4.8%	25.3%	23.1%	7.6%	9.7%	11.5%
Small Cap	Russell 2000	5.2%	8.1%	-20.5%	14.8%	19.9%	25.5%	-11.0%	14.6%	12.3%	10.8%	4.2%	8.2%
	Russell 2000 Value	3.2%	2.5%	-14.5%	28.2%	4.6%	22.4%	-12.9%	7.8%	6.0%	15.4%	3.5%	7.3%
	Russell 2000 Growth	7.0%	13.5%	-26.4%	2.8%	34.6%	28.4%	-9.3%	22.1%	18.5%	6.1%	4.2%	8.8%
Total Market	Wilshire 5000	8.4%	16.3%	-19.0%	26.7%	20.8%	31.0%	-5.3%	21.0%	19.1%	14.2%	11.7%	12.5%
	Russell 3000	8.4%	16.2%	-19.2%	25.6%	20.9%	31.0%	-5.2%	21.1%	18.9%	13.9%	11.4%	12.3%

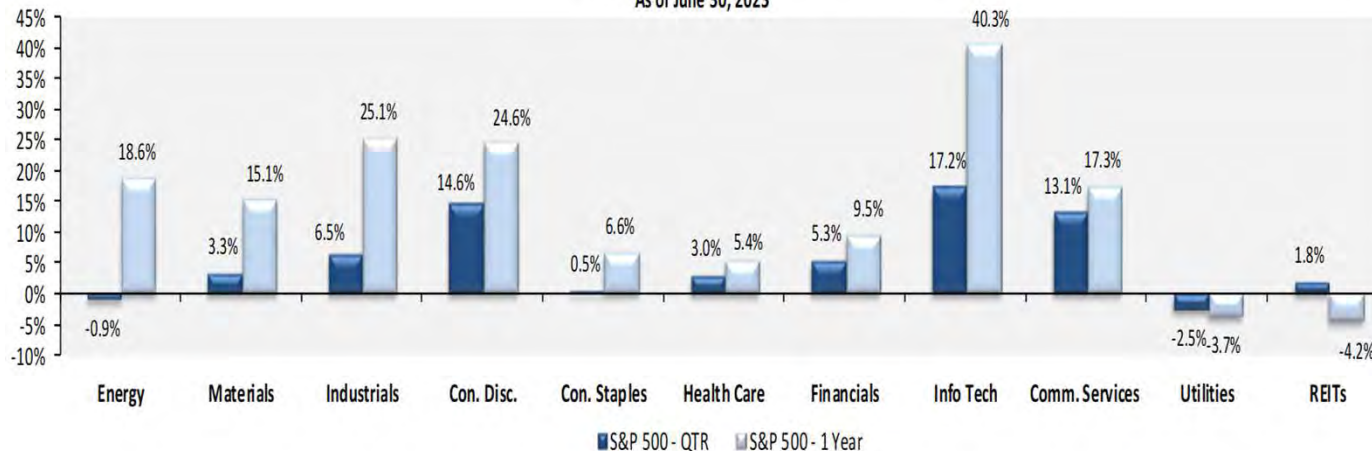
Major Index Total Return as of June 30, 2023

Asset Class	Name	1H 2023	% off Low	% Off All Time High
U.S. Large Cap	S&P 500	16.9%	25.8%	-4.9%
U.S. Mid Cap	Russell Midcap	9.0%	19.1%	-12.0%
U.S. Smid Cap	Russell 2500	8.8%	17.3%	-15.8%
U.S. Small Cap	Russell 2000	8.1%	15.2%	-20.8%
International Large Cap	MSCI EAFE (gross)	12.1%	32.7%	-5.8%
International Small Cap	MSCI EAFE Small Cap (gross)	5.9%	24.8%	-20.8%
Emerging Markets	MSCI Emerging Markets (gross)	5.1%	19.9%	-26.4%
Global Equity	MSCI World (gross)	15.4%	27.4%	-5.5%

- U.S. stock market indices have surged ahead in 2023, overcoming regional bank turmoil, government debt ceiling brinkmanship, and higher interest rates.
- The S&P 500 index increased by 8.7% in Q2 2023 and 16.9% in 1H 2023, while an equal-weighted approach yielded only a 7% gain in the first half of the year. This 10% spread has primarily been driven by large, profitable growth stocks within the S&P 500 index.
- In 1H 2023, growth and high beta factors significantly outperformed dividend-focused factors, mainly due to the strong performance of the information technology (IT) sector. While IT remained dominant in the first five months, June marked a noticeable shift towards cyclicals, suggesting a potential improvement in economic activity.

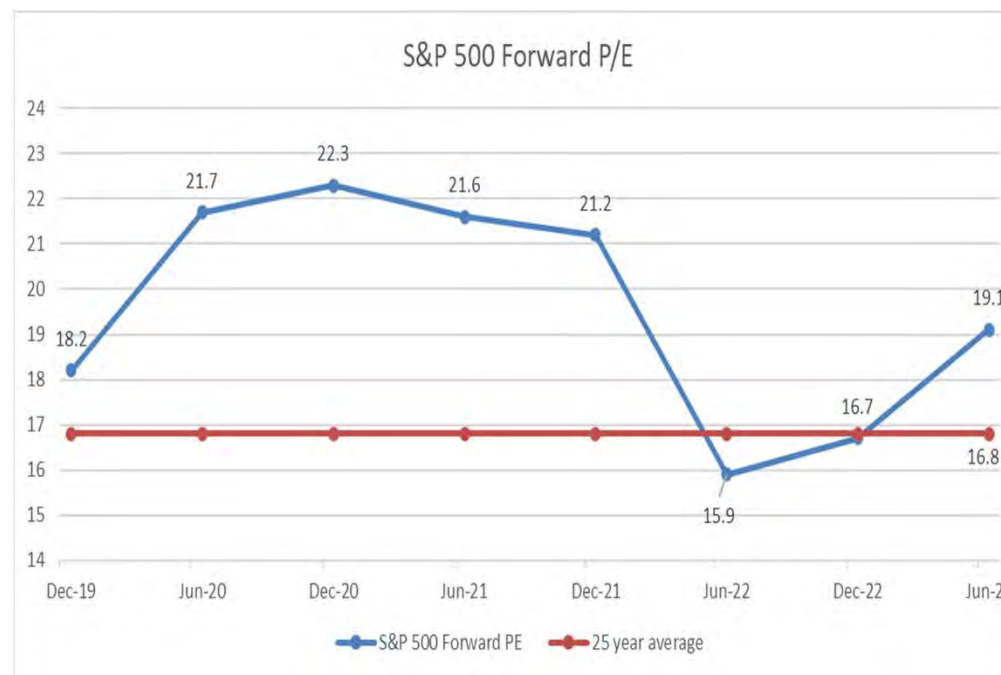
U.S. Equity Market

S&P 500 Sector Performance
As of June 30, 2023



S&P 500 P/E Ratio Expands as Earnings Growth Stalls

- While analysts predict a meager 0.8% growth in S&P 500 earnings for the full year 2023, the index has produced strong gains. As a result, the index's price-to-earnings ratio (P/E) increased to 19.1x as of June 30, 2023. In essence, despite static earnings expectations, the higher S&P 500 index price has driven up the P/E ratio.



Source: J.P. Morgan Asset Management

Information Technology Sector Soars while the S&P 500 Faces Earnings Decline

- The information technology sector achieved a remarkable 42.8% total return in 1H 2023, mainly driven by multiple expansion rather than substantial earnings growth. The information technology sector's strong performance can be attributed to its perceived safe-haven status amidst market uncertainty, potentially also influenced by artificial intelligence euphoria.
- In contrast, certain sectors including staples, financials, healthcare, energy, and utilities have experienced low to negative returns throughout this year. These sectors are categorized as "Low Volatility High Dividend," which has not proven favorable for investors in 2023.
- S&P 500 earnings are expected to decline by -7.2% in Q2 2023, marking the largest decline since Q2 2020. This would also extend the streak to three consecutive quarters with year-over-year decreases in earnings for the index.

U.S. Equity Market

Big Tech's Influence: 'Magnificent Seven' Drive S&P 500 Surge

- The "Magnificent Seven," a term recently coined by investors, comprises high-growth technology giants Alphabet (Google), Amazon, Apple, Meta Platforms (formerly known as Facebook), Microsoft, NVIDIA, and Tesla. Representing over 25% of the S&P 500, this group is responsible for 74% of the S&P 500 index's 16.9% year-to-date gains.

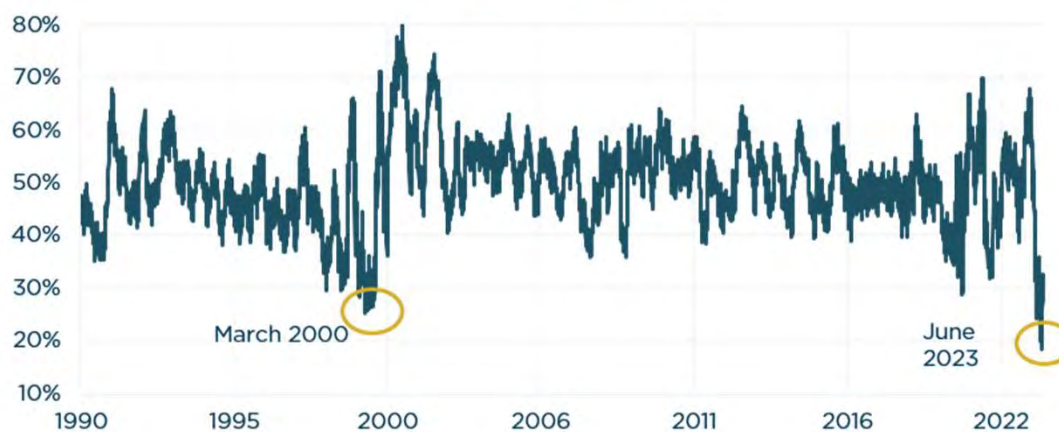
- In H1 2023, over 80% of the S&P 500 index returns can be traced back to only 10 securities, highlighting the narrow market concept. While this concentration of returns among a select group of outperformers is not a new phenomenon, the contribution from the top 10 in 2023 is well above the historical median of 32% of the index's overall returns.

Exhibit 1: 10 stocks typically account for 32% of the S&P 500's return each year
as of June 29, 2023; % contribution



Source: FactSet, Goldman Sachs Global Investment Research

**% Of S&P 500 Stocks Beating S&P 500 Index
Over Trailing 3 Months**



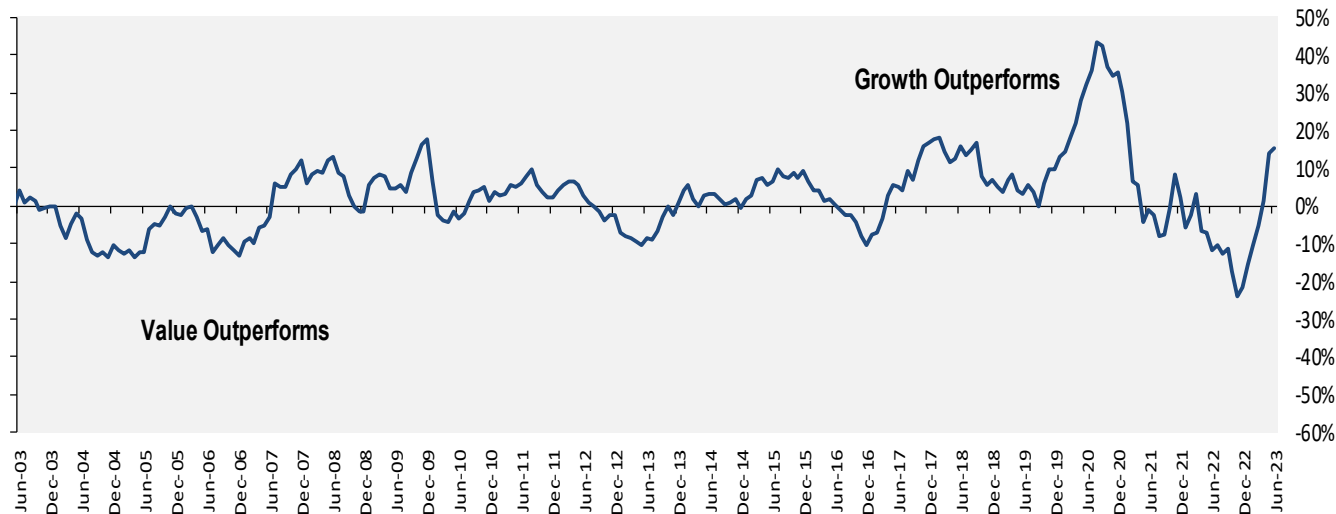
Source: Piper Sandler

S&P 500's Lopsided Performance: AI Tech Stocks Leave Others Behind

- In early June, the S&P 500 witnessed a record-low percentage of stocks outperforming the index over the past three months, signaling considerable underperformance among its constituents. Although larger stocks typically exert greater influence on cap-weighted indexes, the notable extent of underperformance underscores potential concentration risks.
- The concentration in returns is largely driven by the excitement surrounding artificial intelligence (AI) and its transformative potential. Investors are favoring companies directly exposed to this technology, as seen with NVIDIA, whose stock surged 190% year-to-date, leading to a market capitalization surpassing \$1 trillion.

U.S. Equity Market

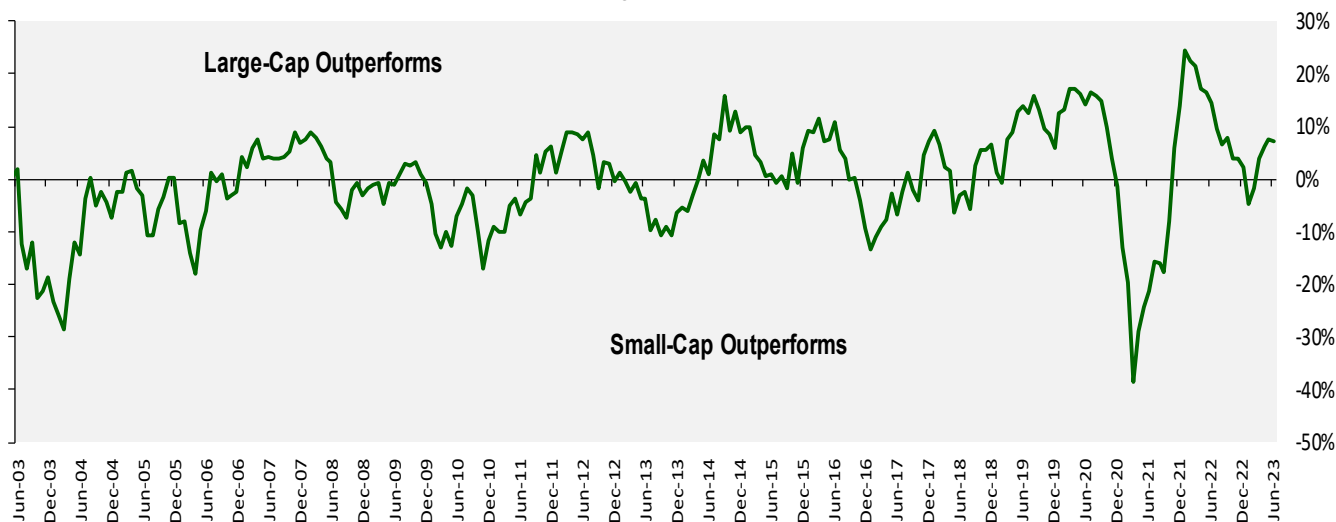
Russell 1000 Growth vs. Russell 1000 Value
Rolling One-Year Returns



Market Divergence Exposed: Russell Index Spread Signals Winners and Losers

- In the past six months, the Russell 1000 Growth Index has notably outperformed the Russell 1000 Value Index. This level of outperformance exceeded all but two rolling six-month periods since 1979. The prior instances occurred in early 2000, marking the end of the dot-com bubble, and in mid 2020, amidst government-mandated Covid-19 shutdowns.
- High beta, growth, and quality factors yielded higher returns, while high dividend and low volatility strategies have underperformed.
- The 2023 banking crisis heavily impacted small caps, particularly smaller regional players. In the Russell 2000, banks were the top-detracting industry for Q2 2023 and the first half of the year. Despite positive returns in Q2 2023 and the first half of 2023, the Russell 2000 index remained in a bear market, down -20.8% from its peak on 11/8/21 to 6/30/23.

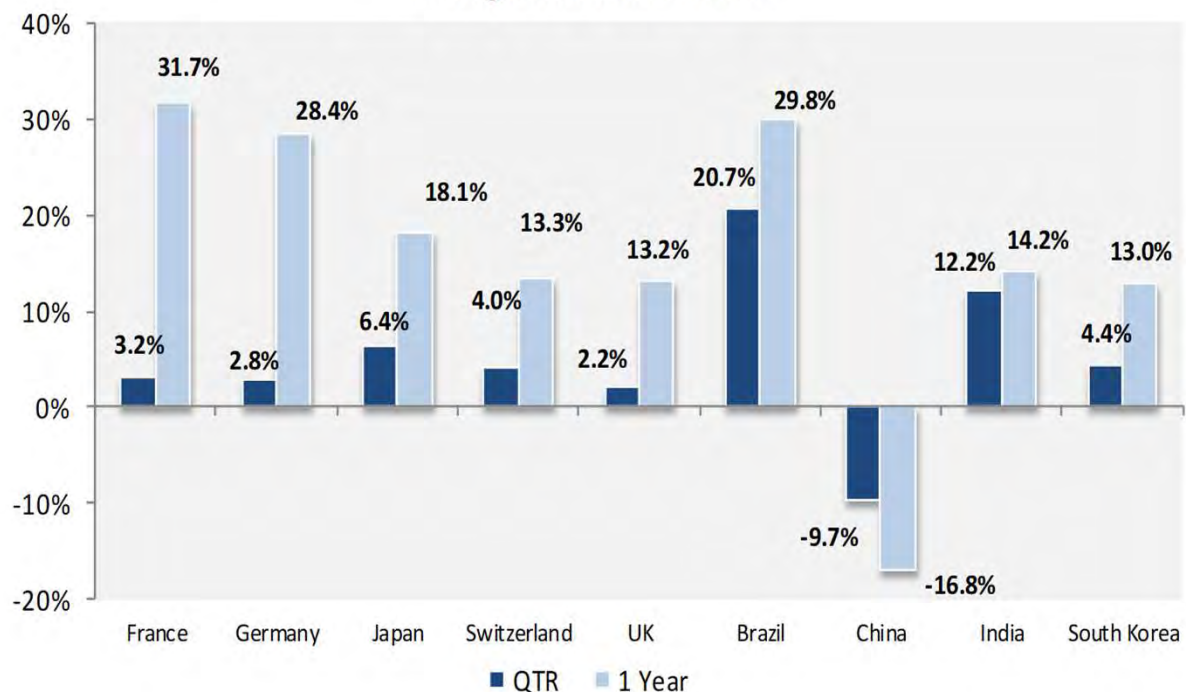
S&P 500 vs. Russell 2000
Rolling One-Year Returns



International Equity Market

Sector	Index	2Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Global	MSCI AC World Index (net)	6.2%	13.9%	-18.4%	18.5%	16.3%	26.6%	-9.4%	16.5%	11.0%	8.1%	8.8%
	MSCI World Small Cap (net)	3.2%	7.6%	-18.8%	15.8%	16.0%	26.2%	-13.9%	12.9%	10.4%	4.4%	7.9%
	MSCI World ex US (net)	3.0%	11.3%	-14.3%	12.6%	7.6%	22.5%	-14.1%	17.4%	9.3%	4.6%	5.4%
	MSCI World ex US Small Cap (net)	0.5%	5.5%	-20.6%	11.1%	12.8%	25.4%	-18.1%	10.0%	6.4%	1.8%	6.0%
Developed ex US	MSCI EAFE (net)	3.0%	11.7%	-14.5%	11.3%	7.8%	22.0%	-13.8%	18.8%	8.9%	4.4%	5.4%
	MSCI EAFE Value (net)	3.2%	9.3%	-5.6%	10.9%	-2.6%	16.1%	-14.8%	17.4%	11.3%	2.9%	4.1%
	MSCI EAFE Growth (net)	2.8%	14.2%	-22.9%	11.3%	18.3%	27.9%	-12.8%	20.2%	6.3%	5.4%	6.4%
	MSCI EAFE Small Cap (net)	0.6%	5.5%	-21.4%	10.1%	12.3%	25.0%	-17.9%	10.2%	5.7%	1.3%	6.2%
Emerging Markets	MSCI Emerging Markets (net)	0.9%	4.9%	-20.1%	-2.5%	18.3%	18.4%	-14.6%	1.8%	2.3%	0.9%	2.9%

Foreign Markets Returns



- European indices mostly rose in Q2 2023, led by financials and IT sectors. Semiconductor stocks fueled IT growth. Banks outperformed as the ECB raised interest rates twice.
- The TOPIX and Nikkei 225 indices in Japan reached their highest levels since 1989 in Q2 2023. Reasons contributing to this resurgence include the delayed reopening of the Japanese economy after the pandemic, providing a cyclical boost, and the Tokyo Stock Exchange's increased focus on sustainable growth and enhanced corporate value which has brought about a needed long-term structural development.
- China's equity market slumped in Q2 2023 as the post-Covid economic rebound weakened. Factors such as reduced consumer spending, lower export demand, and interest rate hikes in the US and Europe impacted factory output and dampened investor sentiment.

International Equity Market

ICE US Dollar Index Level



Date Range: 06/28/2013 - 06/30/2023

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Steady Dollar Index Relieves Pressure on International Markets

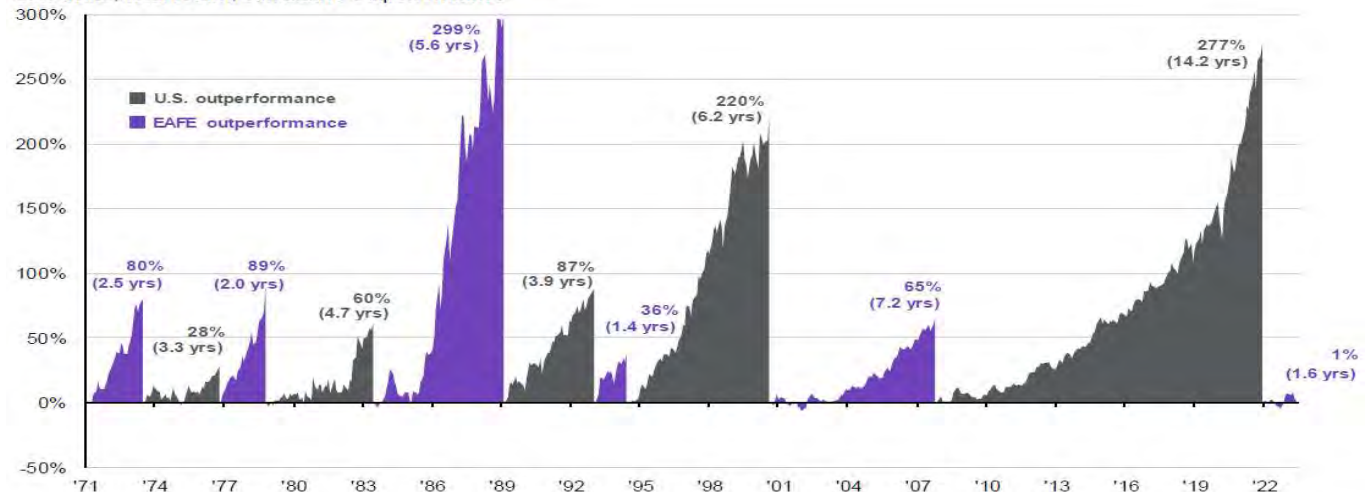
- Gold briefly traded at all-time highs in Q2 2023 on mounting U.S. banking concerns, attracting investors seeking safety. However, attention has shifted elsewhere after the regional banking turmoil in March and April.
- During Q2 2023, the US Dollar Index (DXY) exhibited minimal fluctuations, persistently staying well below its previous high, as numerous foreign central banks worked towards harmonizing their interest rates with the initial measures implemented by the U.S. Federal Reserve.

Regime Change or Just a Pause?

- U.S. equity markets outperformed international markets by 277% in the past 14.2 years, marking the longest duration of outperformance in 50 years; however, this trend may have ended by the close of 2021.
- Over the past year and a half, international and U.S. markets had similar performance, with neither consistently overtaking the other.

MSCI EAFE and MSCI USA relative performance

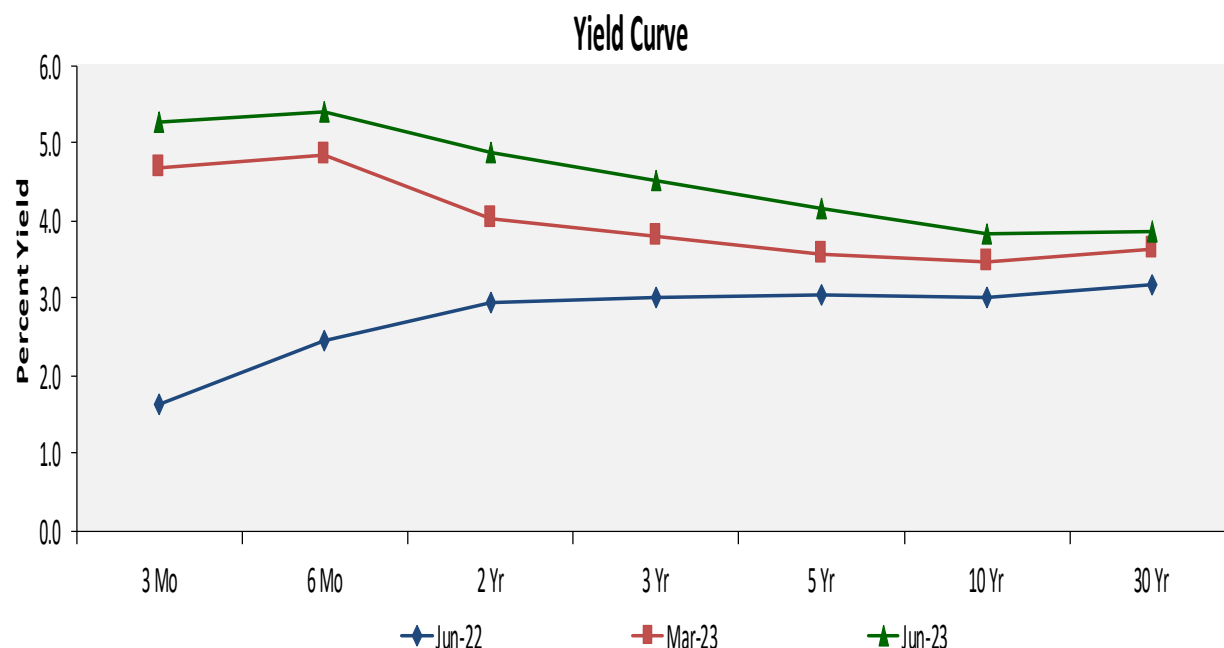
U.S. dollar, total return, cumulative outperformance



Source: J.P. Morgan Asset Management

Bond Market

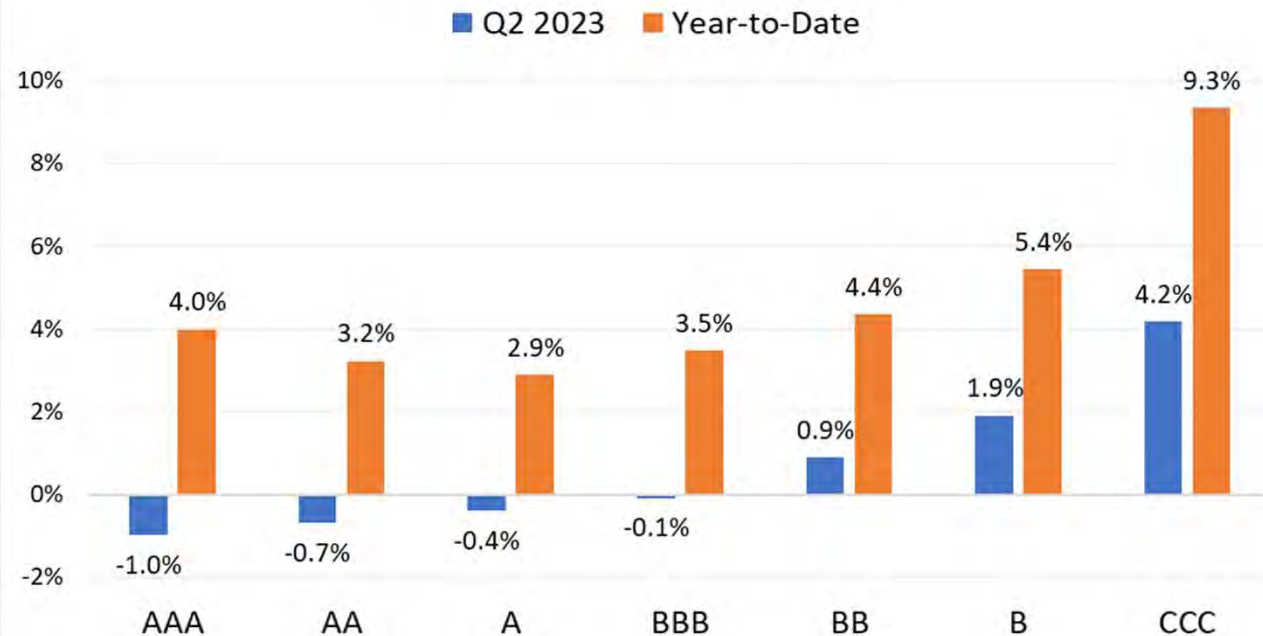
Index	Duration (years)	Yield	2Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Bloomberg Aggregate	6.5	4.81%	-0.8%	2.1%	-13.0%	-1.5%	7.5%	8.7%	0.0%	-0.9%	-4.0%	0.8%	1.5%
Bloomberg Govt/Credit	6.7	4.80%	-0.9%	2.2%	-13.6%	-1.7%	8.9%	9.7%	-0.4%	-0.7%	-4.1%	1.0%	1.7%
Bloomberg Int Agg	4.8	4.82%	-0.7%	1.6%	-9.5%	-1.3%	5.6%	6.7%	0.9%	-0.6%	-2.9%	0.8%	1.3%
Bloomberg Int Govt/Credit	3.9	4.81%	-0.8%	1.5%	-8.2%	-1.4%	6.4%	6.8%	0.9%	-0.1%	-2.5%	1.2%	1.4%
Bloomberg U.S. Corporate	7.4	5.48%	-0.3%	3.2%	-15.8%	-1.0%	9.9%	14.5%	-2.5%	1.5%	-3.4%	1.8%	2.6%
Bloomberg HY Ba/B 2% IC	4.1	7.82%	1.4%	4.8%	-10.6%	4.6%	7.7%	15.2%	-1.9%	8.9%	2.6%	3.7%	4.5%
ICE BofA 1-3 Yrs BB US Cash Pay HY	1.8	7.00%	1.3%	3.6%	-3.1%	3.2%	5.4%	8.7%	1.3%	7.1%	3.4%	3.7%	3.9%
Bloomberg Mortgage	6.4	4.78%	-0.6%	1.9%	-11.8%	-1.0%	3.9%	6.4%	1.0%	-1.5%	-3.7%	0.0%	1.1%
Bloomberg Treasury	6.3	4.37%	-1.4%	1.6%	-12.5%	-2.3%	8.0%	6.9%	0.9%	-2.1%	-4.8%	0.4%	1.0%
Bloomberg US TIPS	6.8	4.60%	-1.4%	1.9%	-11.8%	6.0%	11.0%	8.4%	-1.3%	-1.4%	-0.1%	2.5%	2.1%
BofA ML 91 day T-Bills	0.2	5.30%	1.2%	2.4%	1.5%	0.0%	0.7%	2.3%	1.9%	3.7%	1.3%	1.6%	1.0%



- The U.S. treasury yield curve shifted higher in Q2 2023 as markets accepted the narrative that interest rates would remain higher for longer.
- The yield curve remains heavily inverted, reflecting a view that a slow-down in growth and/or lower levels of inflation will arrive at some point in the next 5-10 years.
- Returns for U.S. bond markets were mixed in Q2 2023. Riskier, higher yielding bonds outperformed while safer, longer duration bonds underperformed.
- Year-to-date, lower-quality credit has outperformed higher-quality credit, providing some evidence that investors are again adding risk back into portfolios.

Bond Market

Returns by Credit Rating



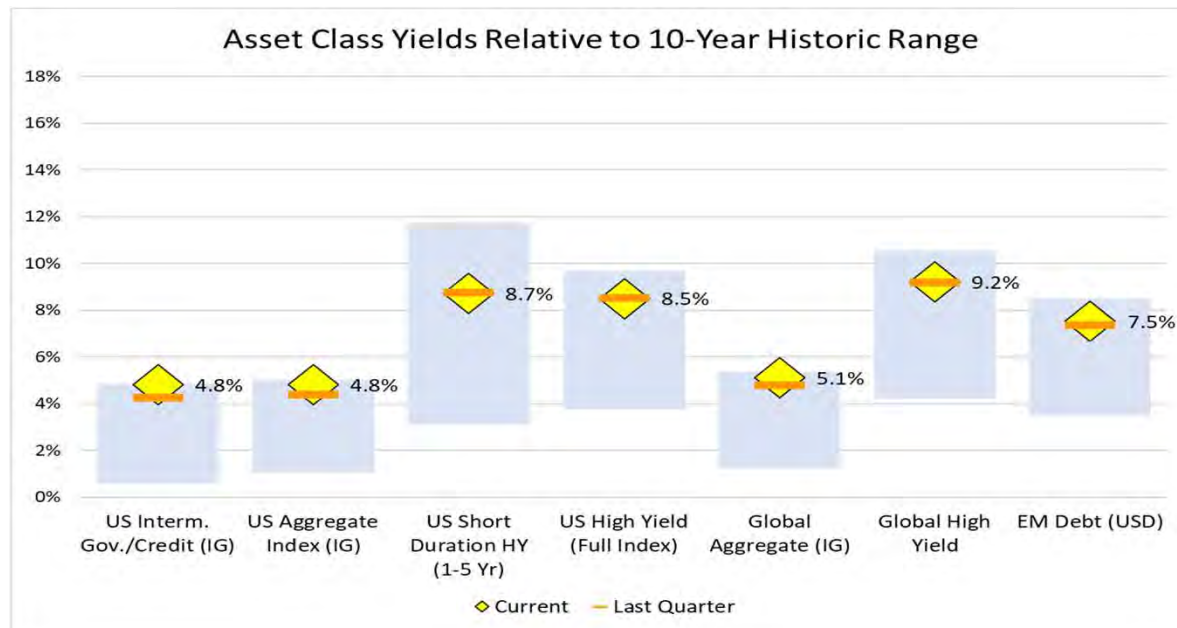
Lower Quality Corporate Bonds Outperform

- High Yield corporate bonds generated positive returns in Q2 2023 while investment grade corporate bonds experienced losses for the quarter.
- Credit spreads tightened (bond prices increased) in Q2 2023 while interest rates rose. This caused longer duration bonds (investment grade) to underperform lower duration bonds (high yield) for the quarter.
- Riskier, lower-quality credit (single-B & CCC-rated) experienced the most spread tightening, providing some evidence that investors are adding more risk to portfolios.
- Year-to-date, CCC-rated bonds are outperforming by a wide margin. This is a reversal of CCC-rated spreads widening (bond prices down) in the 2nd half of 2022 while higher-rated bonds started experiencing spread tightening in Q3 2022.

Bond Ratings

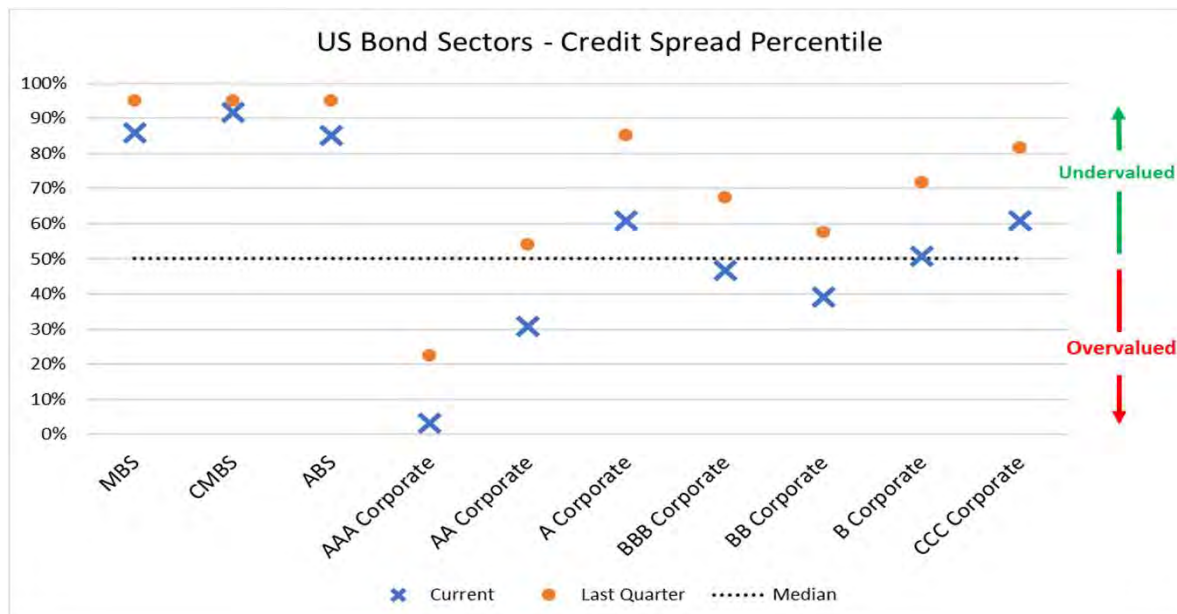
	Standard & Poor's	Moody's
Investment Grade	AAA	Aaa
	AA	Aa
	A	A
	BBB	Baa
High Quality High Yield	BB	Ba
	B	B
Low Quality High Yield	CCC	Caa
	CC	Ca
	C	C

Bond Market



Bond Yields

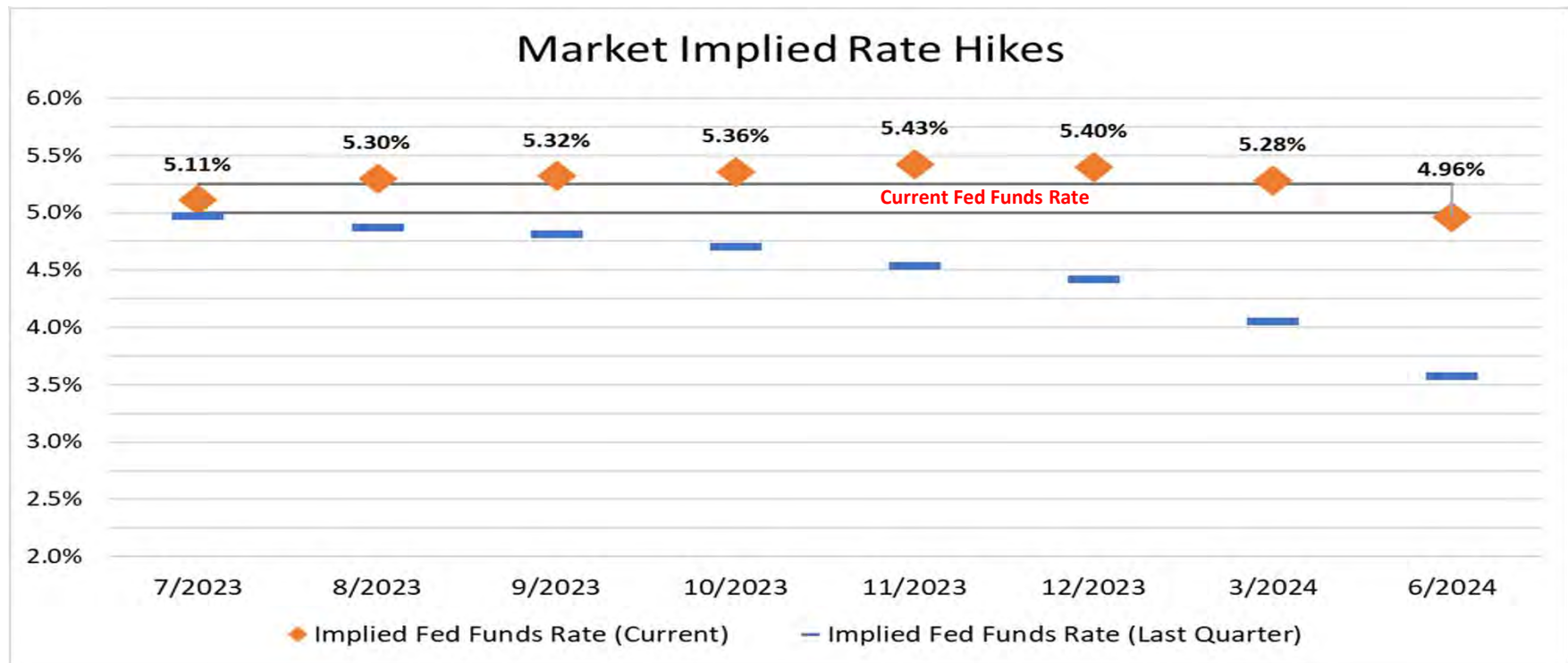
- Yields on investment grade bonds pushed slightly higher in Q2 2023 while yields on high yield bonds stayed flat.
- Investors can earn an additional yield pick-up of 350 to 400 bps in US high yield relative to US investment grade bonds.
- Shorter maturity bonds in high yield are earning a slightly higher yield relative to the full high yield universe.
- Bonds outside of the US are earning a slightly higher yield relative to US credit.



Credit Spreads/Valuations

- Credit spreads pulled tighter (bond prices up) in Q2 2023.
- Riskier corporate bonds experienced the most tightening in the quarter as investors added more risk to portfolios.
- In corporate credit, AAA-rated bonds have almost fully recovered from 2022. BB-rated bonds have recovered most of their recent widening but remain well above pre-2022 levels.
- Spreads in structured credit (MBS, CMBS, ABS) remain well above their pre-2022 lows. CMBS remains just below the widest spreads experienced in the past decade.

Bond Market

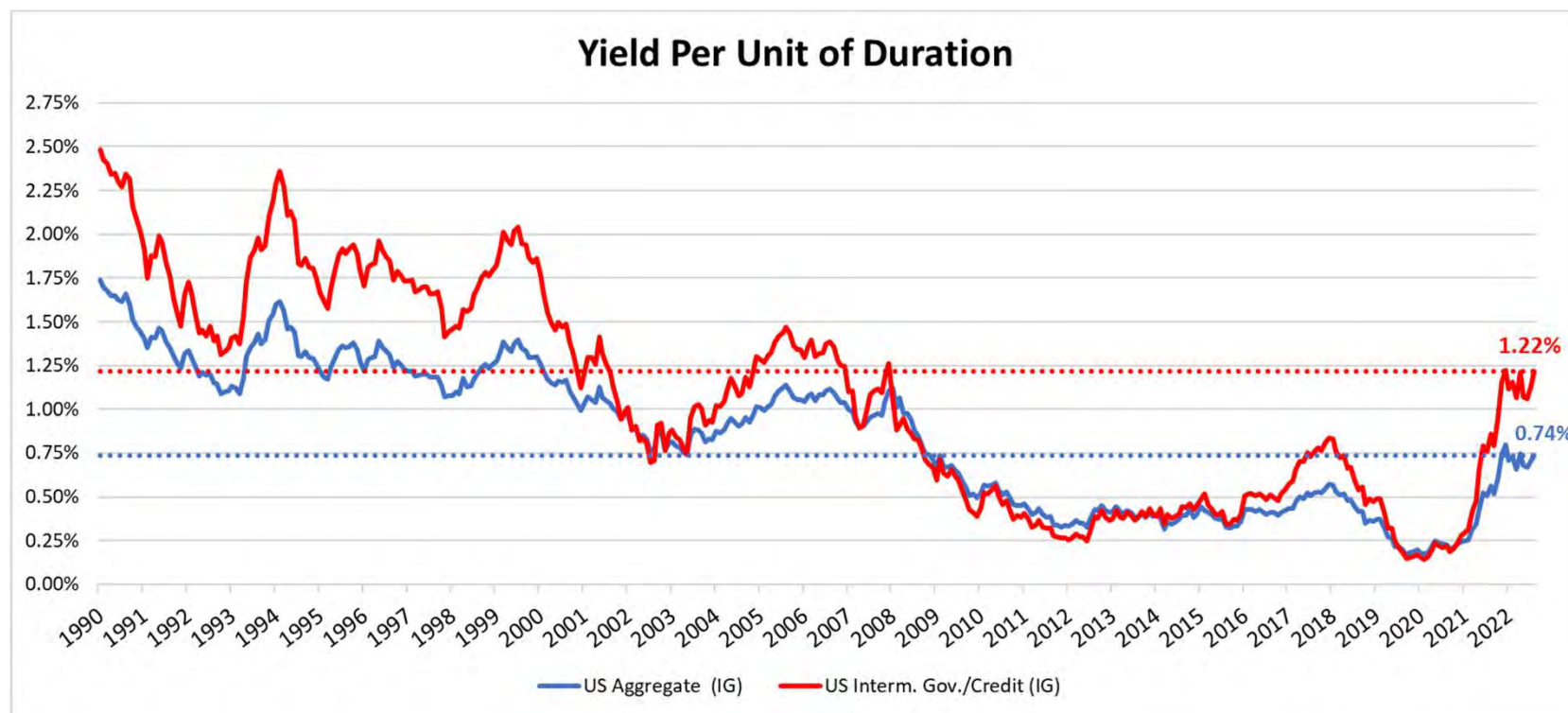


As of 7/7/23

- The FOMC raised interest rates by another 25 bps in early May but elected to pause and not raise rates at their mid-June meeting. The current target federal funds rate is now at 5.00-5.25%, up from 4.75-5.00% at the end of Q1 2023 and up from 4.25-4.50% in Q4 2022.
- Last quarter (end of Q1), the market was predicting a 25 bps increase in May and no rate-hike at the mid-June meeting which proved to be correct. However, following the banking failures in March, the market immediately began to expect the Federal Reserve to begin to cut rates significantly in the 2nd half of 2023.
- In the past two Federal Reserve press conferences, Fed Chairman Jerome Powell has indicated that additional rate increases will be slower going forward, but they are not in a position to begin cutting rates for the foreseeable future due to the potential risk of more inflation. As a result of these comments, market expectations rebounded sharply in late Q2 2023 to reflect an additional 25 bps increase by year-end.
- Current expectations are for the Federal Reserve to hike rates another 25 bps by the end of 2023. Pricing on 2024 futures contracts suggests the Federal Reserve will keep rates unchanged for the next year.

Bond Market

Investment Grade Investors Are Now Compensated For Duration Risk



- Investment grade bonds were susceptible to a rise in interest rates for most of the past decade. With the recent surge higher in bond yields, investment grade bond investors are now being adequately compensated for duration risk.
- Interest rates can now move ~75 bps higher before core bond investors (US Aggregate Index) start to realize negative returns on their portfolio in the near-term while intermediate investment grade investors can withstand a ~125 bps rise in interest rates before realizing losses on their portfolio.
- Given yields are equal for the US Intermediate Gov./Credit Index and the US Aggregate Index, intermediate investment grade bonds (US Interm. Gov./Credit) are seemingly better positioned to limit downside risk in the near-term while core bonds (US Aggregate) can provide more upside if interest rates fall but have less protection in the event interest rates continue to rise.

Bond Market

Interest Rate Sensitivity

12 Month Holding Period - Annualized Returns as of 6/30/2023							
Yield Change (bps)	10 Year Treasury	Bloomberg Aggregate	Bloomberg Int Govt/Credit	ICE BofA Gov/Corp Master	ICE BofA 1-3 yr Gov/Corp	Defensive ICE BofA US HY BB/B ND	Short Duration ICE BofA US HY BB/B 1-3 yr
-300	28.57	24.39	16.66	24.53	10.74	19.80	13.47
-250	24.44	21.13	14.68	21.24	9.82	17.78	12.53
-200	20.32	17.87	12.71	17.95	8.90	15.75	11.60
-150	16.19	14.60	10.73	14.67	7.97	13.73	10.66
-100	12.06	11.34	8.76	11.38	7.05	11.71	9.73
-75	10.00	9.71	7.77	9.74	6.59	10.70	9.26
-50	7.94	8.07	6.79	8.10	6.13	9.69	8.79
-25	5.87	6.44	5.80	6.45	5.67	8.67	8.32
0	3.81	4.81	4.81	4.81	5.21	7.66	7.85
25	1.75	3.18	3.83	3.17	4.74	6.65	7.39
50	-0.32	1.55	2.84	1.53	4.28	5.64	6.92
75	-2.38	-0.09	1.85	-0.12	3.82	4.63	6.45
100	-4.44	-1.72	0.86	-1.76	3.36	3.62	5.98
150	-8.57	-4.98	-1.11	-5.04	2.44	1.60	5.05
200	-12.70	-8.24	-3.08	-8.33	1.52	-0.43	4.11
250	-16.82	-11.51	-5.06	-11.62	0.59	-2.45	3.17
300	-20.95	-14.77	-7.03	-14.90	-0.33	-4.47	2.24
Duration	8.25	6.53	3.95	6.57	1.85	4.05	1.87

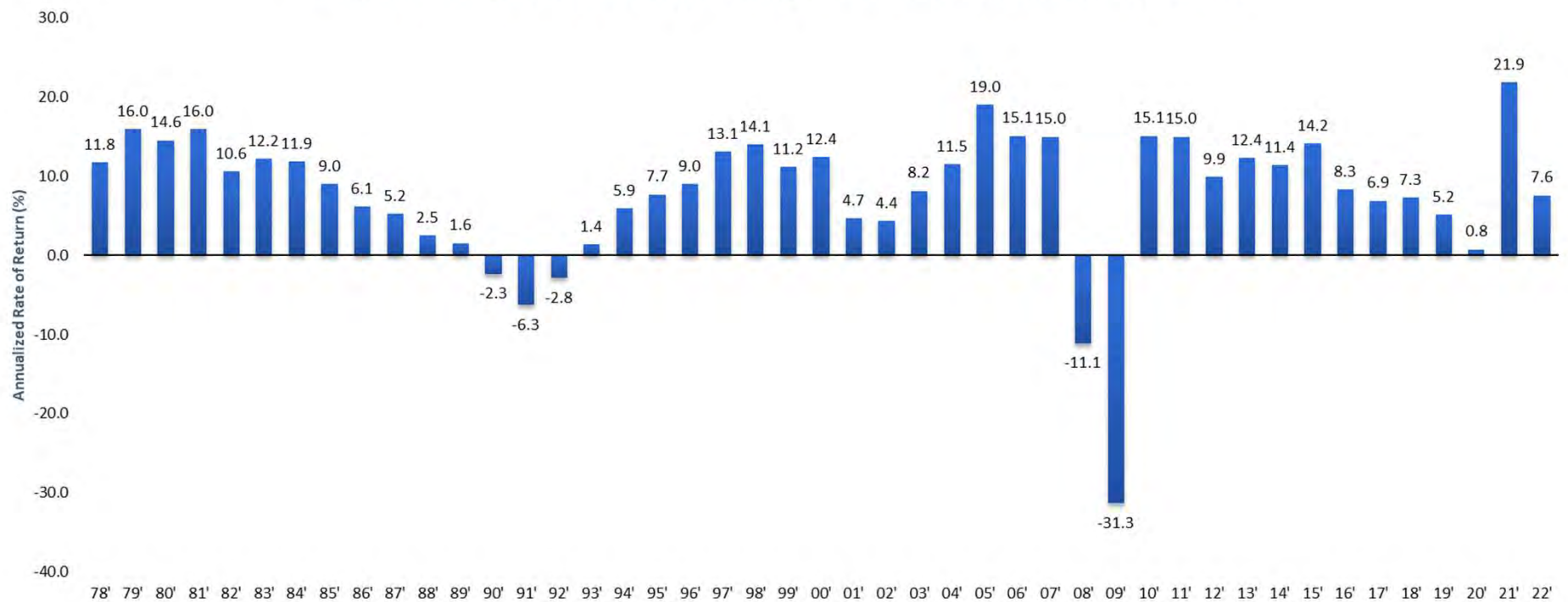
FOR ILLUSTRATIVE PURPOSES ONLY: For each index the current yield to worst as of 6/30/2023 was used as the base case annualized return. The annualized return sensitivity to a uniform increase or decrease in the yield curve was calculated by taking the index's Option-Adjusted Duration as of 6/30/2023 multiplied by the percentage point change in the yield curve (basis point change divided by 100) and then appropriately adding or subtracting this implied percentage change in the value of the index (due to the shift in the yield curve) to the base case annualized return. This is a rough approximation of the annual return sensitivity to parallel shifts in the yield curve.

Real Estate Market

Sector	Index	2Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
US Private	NCREIF ODCE Equal Weighted (net)	-3.0%	-6.4%	7.6%	21.9%	0.8%	5.2%	7.3%	-10.5%	7.6%	6.1%	8.1%
	NCREIF ODCE EW Income Index	0.9%	1.7%	3.5%	4.1%	3.6%	3.5%	3.5%	3.4%	3.8%	3.7%	3.8%
	NCREIF ODCE EW Appreciation Index	-3.7%	-7.7%	4.8%	18.3%	-2.4%	1.7%	3.7%	-12.8%	4.6%	2.9%	4.5%

- The NCREIF ODCE Equal Weighted Index (net) declined for the third quarter in a row, generating a return of -3.0% in Q2 2023. Though the last three quarters have been negative, the trend is improving, as the ODCE index declined -5.1% in Q4 2022 and -3.5% in Q1 2023.
- For the first half of 2023, the NCREIF ODCE Equal Weighted Index (net) declined by -6.4%. If the negative return for the calendar year holds, it will represent just the sixth negative calendar year for the index since 1978 and the first since 2009.

Calendar Year NCREIF ODCE Equal Weight Total Net Performance 1978 - 2022

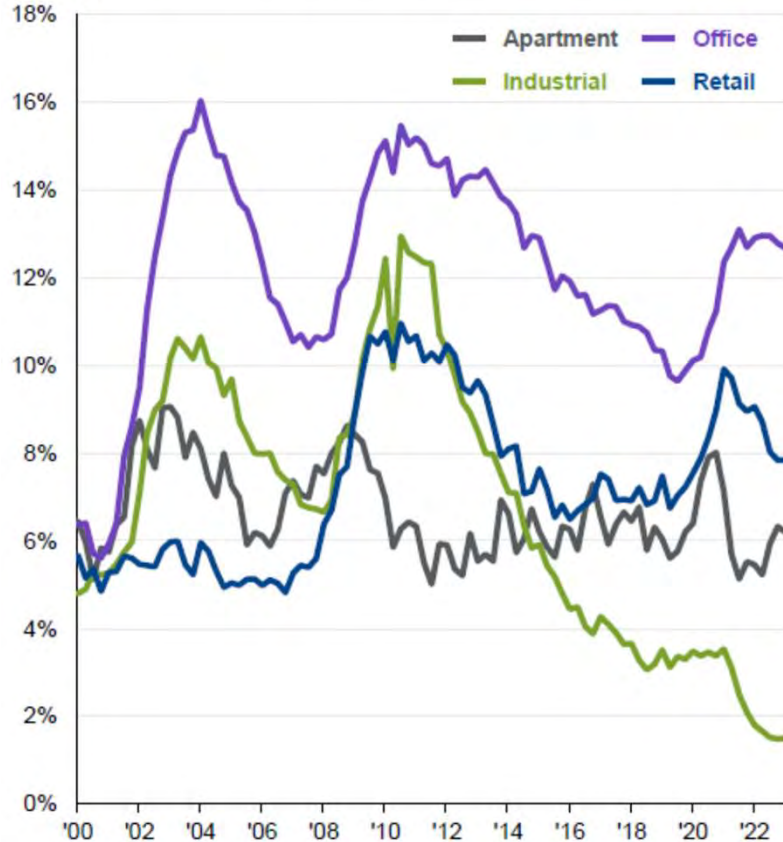


Real Estate Market

- Vacancy rates have largely declined from their early pandemic (2020) peaks in apartment, industrial and retail assets, while remaining elevated in U.S. office assets at approximately 13%. Office properties continue to face high levels of uncertainty moving forward due to companies' changing need for office space amid higher levels of remote work. While still lower than their pandemic peak, apartment vacancies increased in 2022 and stand at just over 6% in the U.S.
- Real estate transaction volumes continue to remain low and are down more than 50% year-over-year, driven by higher borrowing costs and wide bid/ask spreads.

U.S. vacancy rates by property type

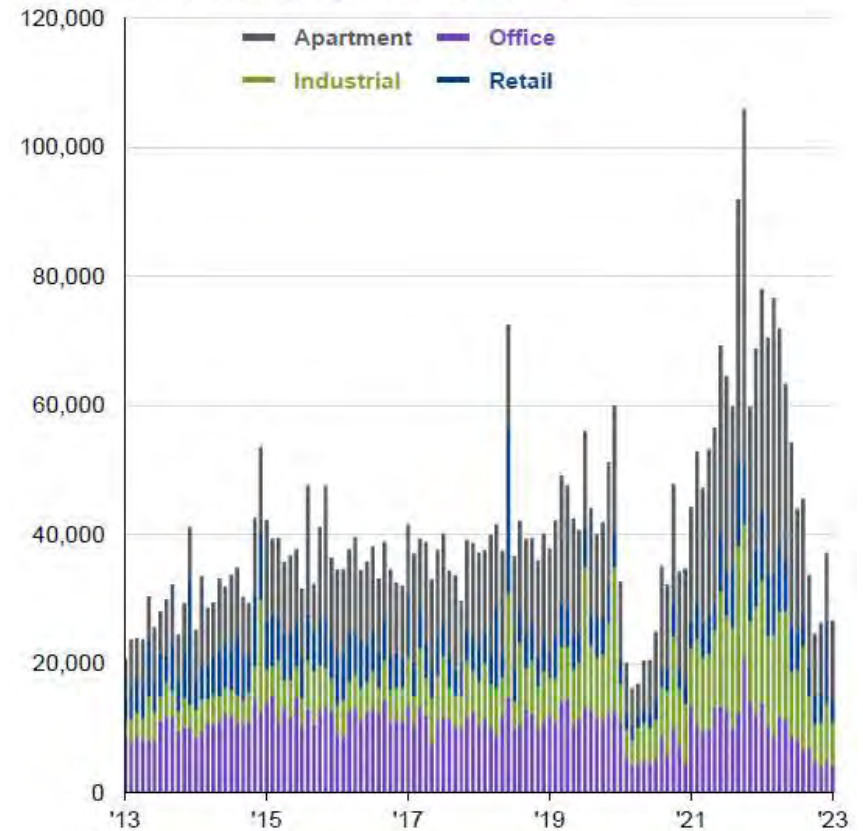
Percent



Source: J.P. Morgan Asset Management, as of 3/31/23.

U.S. real estate transaction volumes

USD millions, seasonally adjusted, last 10 years



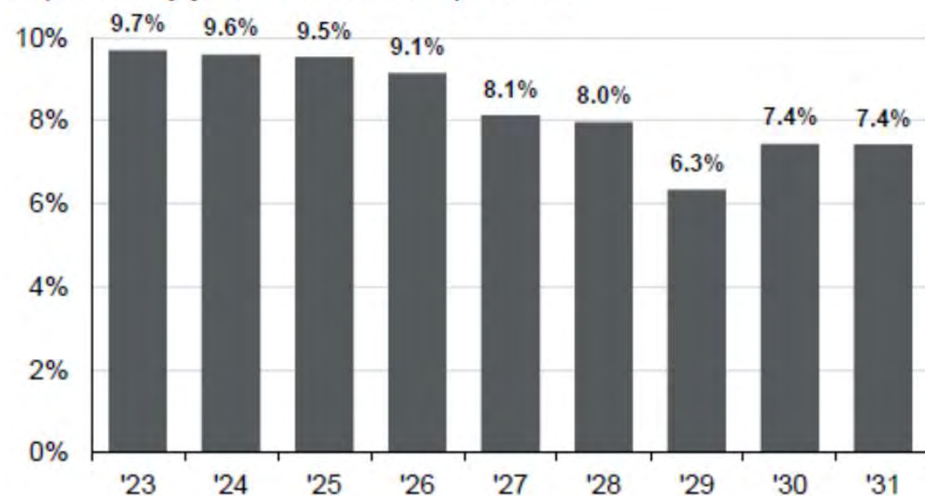
Source: NCREIF, NAREIT Statista via J.P. Morgan Asset Management as of 5/31/23.

Real Estate Market

- The office sector continues to be the poorest-performing sector in commercial real estate, with valuation declines progressing in Q2 2023 amid deteriorating fundamentals and continued high levels of uncertainty around companies' future needs for office space. Write-downs have been worse on office assets with lower occupancy levels and lower weighted-average lease terms, and in large gateway markets with lower percentages of employees returning to in-person work (San Francisco, Chicago, NYC, etc.).
- Approximately 10% of office real estate leases (as a percentage of total square feet) are set to expire in 2023 and in each of the next three years (2024-2026). Debt on office assets maturing in 2023 is relatively low at 3.4% but is expected to increase substantially over the next two years, which may require many office owners to refinance or restructure their debt. Combined with the potential changing needs for office space, debt maturities and lease rolls add to the overall level of uncertainty in the office sector.

Office real estate lease expiration

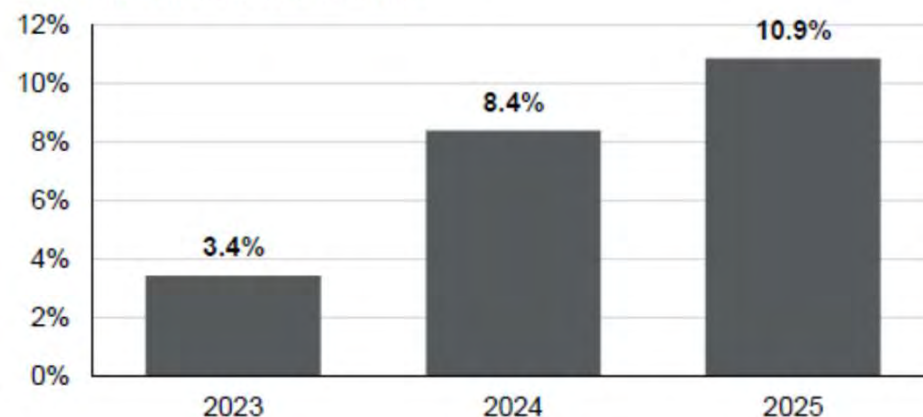
Expiration by year as % of total square feet



Source: J.P. Morgan Asset Management, as of 5/31/23.

Office real estate debt maturity

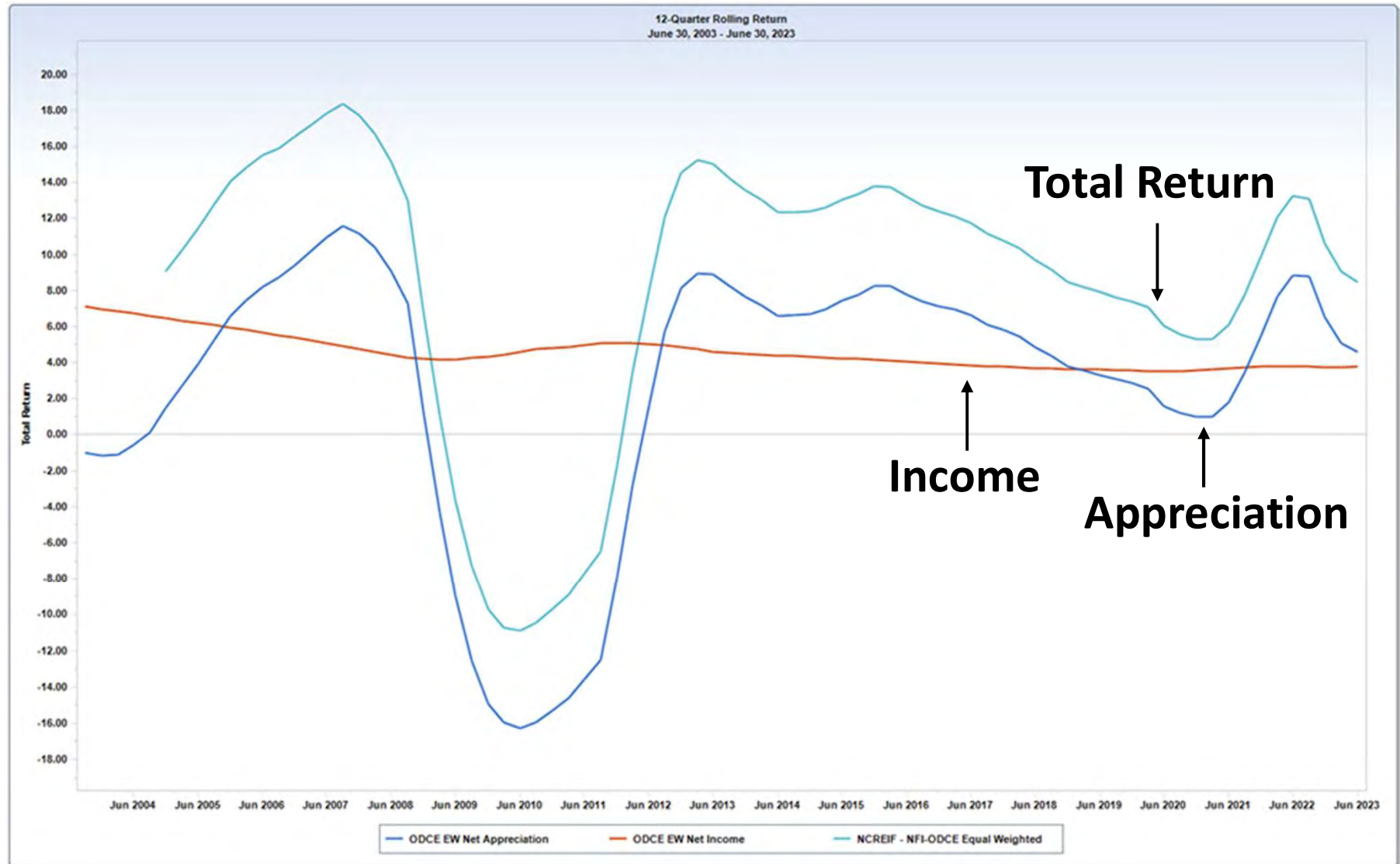
% of current total debt balance



Source: NCREIF, NAREIT Statista via J.P. Morgan Asset Management as of 5/31/23.

Real Estate Market

- The income component of real estate returns continues to remain stable, providing a buffer against the recent periods of negative appreciation. Appreciation was positive in the first half of 2022 and drove the positive calendar year return for the index last year but was flat in Q3 2022 and has been negative since Q4 2022, driving the negative returns for the ODCE index over the last three quarters.



Hedge Fund Market

Strategy	Index	2Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Fund of Funds	HFRI FOF Composite	1.4%	2.2%	-5.3%	6.2%	10.9%	8.4%	-4.0%	3.6%	5.0%	3.3%	3.4%
Equity Long-Short	HFRI Equity Hedge	2.9%	5.5%	-10.1%	11.7%	17.9%	13.7%	-7.1%	7.4%	8.9%	5.4%	5.6%
Event Driven	HFRI Event Driven	1.3%	2.7%	-4.8%	12.4%	9.3%	7.5%	-2.1%	5.5%	8.6%	4.4%	4.6%
Global Macro	HFRI Macro Index	1.9%	-0.6%	9.0%	7.7%	5.4%	6.5%	-4.1%	-0.2%	7.4%	5.0%	3.1%
Relative Value	HFRI Relative Value	1.2%	2.6%	-0.7%	7.6%	3.4%	7.4%	-0.4%	4.1%	5.9%	3.6%	4.0%
Credit	HFRI Credit Index	1.3%	2.8%	-2.6%	7.9%	6.3%	6.5%	-0.0%	3.7%	6.0%	3.7%	4.1%

Hedge Fund Strategy Performance



- Hedge fund strategies were modestly positive in Q2 2023 amid broader gains for risk assets during the quarter. The HFRI Fund of Funds Composite generated positive performance in each month during Q2, ending the quarter up 1.4% and up 2.2% YTD.
- Equity Hedge strategies again led broad sector returns in Q2 2023, with nearly all of the Q2 return for the HFRI Equity Hedge Index occurring in June, led by strategies with growth, technology and artificial intelligence exposures. The index was flat in April and May. Directional equity strategies continued to gain during the quarter, as investors continue to be increasingly comfortable with adding risk in portfolios as inflation slows and the Federal Reserve indicated a slowdown in its pace of interest rate hikes.
- The HFRI Macro index was up nearly 2% for the quarter but remains in negative territory YTD. Macro strategies are often less correlated to broader markets, and experienced gains in April when global equity market performance was more mixed, as the turmoil from the regional bank failures and higher volatility extended throughout the month into May. Macro strategies were again positive in June, with gains led by commodity-oriented strategies as prices rose, particularly in energy.
- Relative value and credit strategies advanced during Q2, though more modestly than equity-oriented strategies, as credit spreads tightened during the quarter and interest rates increased. The HFRI Relative Value Index and HFRI Credit Index were up 1.2% and 1.3%, respectively, during the quarter.



IUOE Local No. 77 Annuity Fund

Investment Performance Report

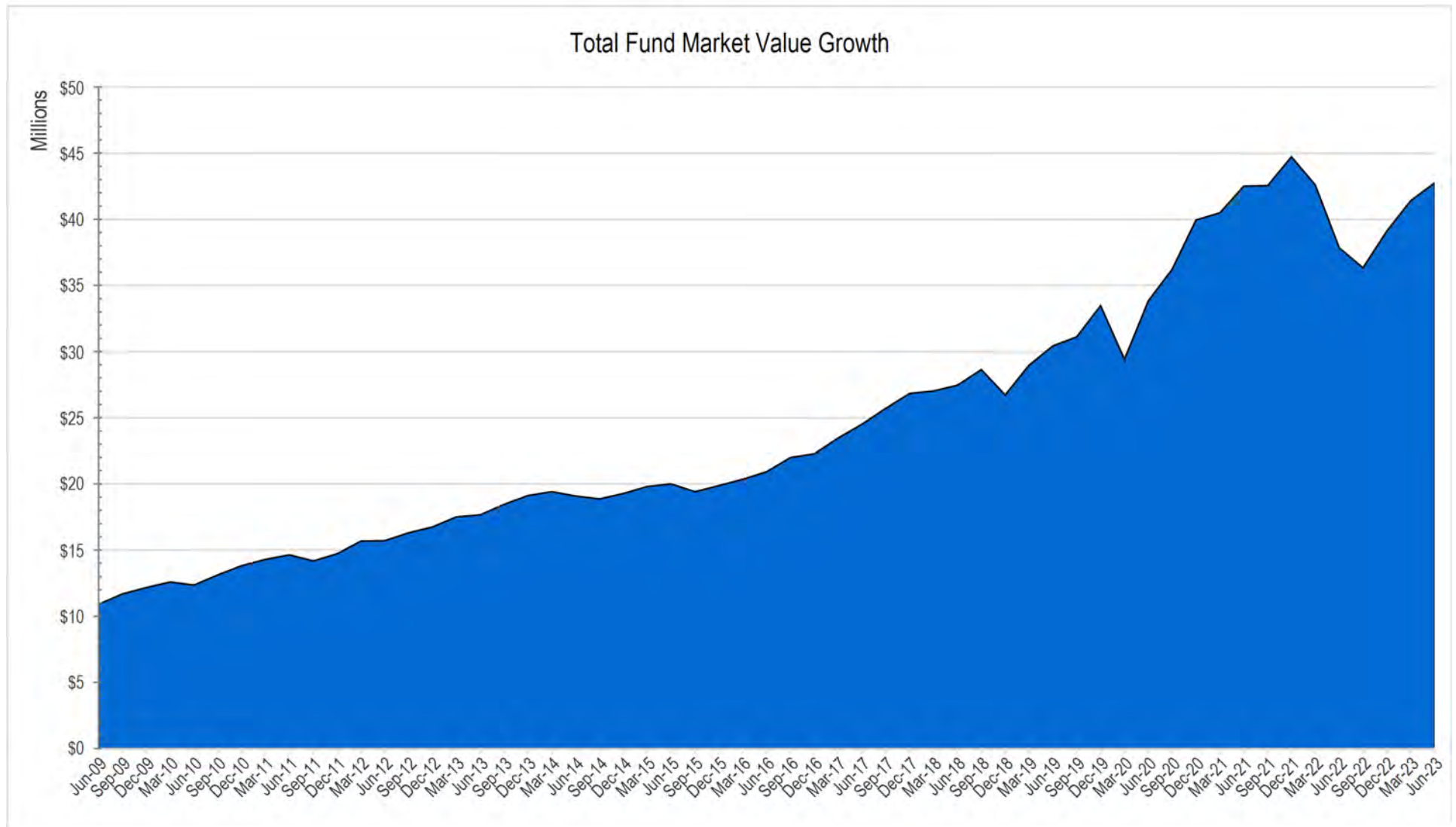
Period Ended

June 30, 2023

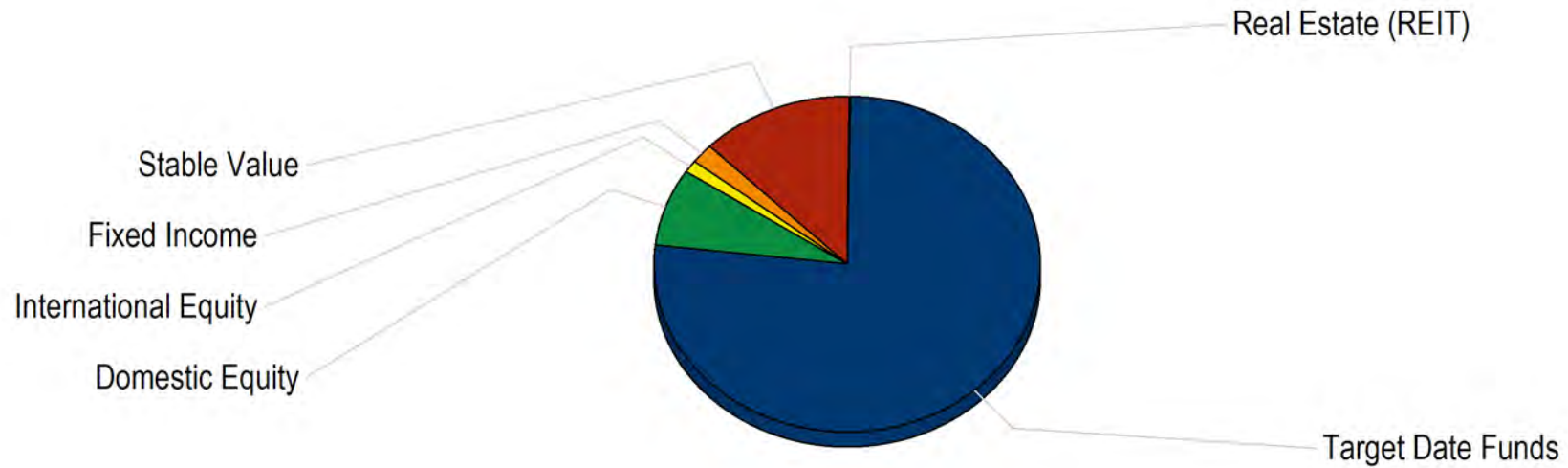
IUOE Local No. 77 Annuity Fund
Investment Performance Report as of June 30, 2023

Total Fund Growth of Assets

	Quarter Ending March 31	Quarter Ending June 30	Quarter Ending September 30	Quarter Ending December 31
2023	\$41,406,753	\$42,753,166	-	-
2022	\$42,590,150	\$37,848,557	\$36,332,422	\$39,114,841
2021	\$40,486,314	\$42,500,221	\$42,541,556	\$44,720,977
2020	\$29,413,529	\$33,829,564	\$36,219,895	\$39,945,311
2019	\$28,965,507	\$30,429,058	\$31,114,044	\$33,471,332
2018	\$27,025,726	\$27,457,905	\$28,639,222	\$26,726,290
2017	\$23,468,954	\$24,510,754	\$25,713,956	\$26,840,656
2016	\$20,348,414	\$20,917,578	\$21,987,483	\$22,274,102
2015	\$19,798,253	\$19,997,614	\$19,407,137	\$19,867,667
2014	\$19,411,611	\$19,082,997	\$18,865,153	\$19,278,079
2013	\$17,509,679	\$17,661,805	\$18,453,388	\$19,122,441
2012	\$15,681,014	\$15,709,815	\$16,307,675	\$16,749,139
2011	\$14,298,684	\$14,638,327	\$14,180,615	\$14,718,540
2010	\$12,588,726	\$12,354,846	\$13,122,426	\$13,819,325
2009	\$10,219,710	\$10,904,803	\$11,682,969	\$12,167,061



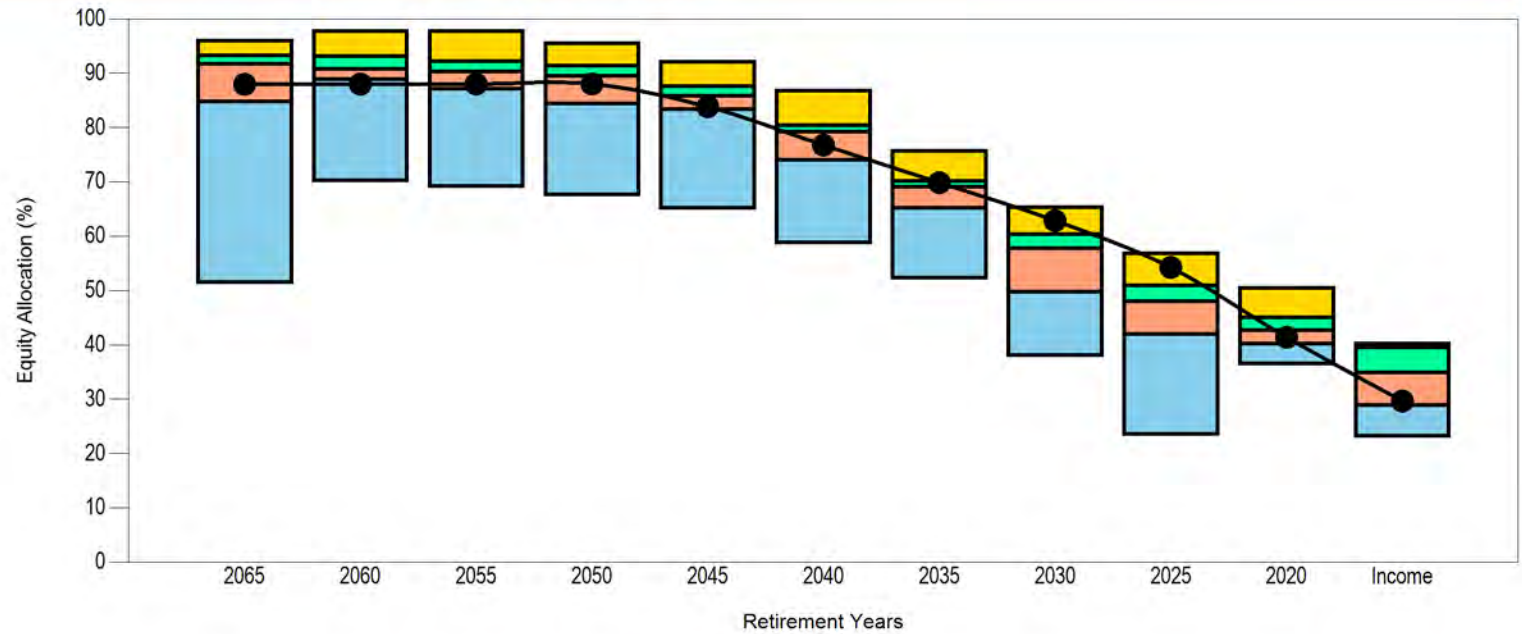
IUOE Local No. 77 Annuity Fund
Investment Performance Report as of June 30, 2023



Total Fund Asset Allocation
As Of June 30, 2023

	Current	%
Target Date Funds	\$32,760,525	76.6%
Domestic Equity	\$3,199,934	7.5%
International Equity	\$508,874	1.2%
Fixed Income	\$792,535	1.9%
Stable Value	\$5,467,182	12.8%
Real Estate (REIT)	\$24,116	0.1%
Total	\$42,753,166	100.0%

Vanguard Target Date Investments Equity Allocation vs. Universe of Target Date Families
As of June 30, 2023



	Allocation (Rank)										
5th Percentile	51.6	70.4	69.3	67.8	65.3	58.9	52.5	38.2	23.7	36.7	23.4
25th Percentile	84.9	89.0	87.3	84.5	83.4	74.2	65.3	49.8	42.0	40.3	29.0
Median	91.9	90.9	90.5	89.6	85.9	79.4	69.2	57.9	48.1	42.8	35.0
75th Percentile	93.4	93.2	92.4	91.5	87.7	80.4	70.3	60.5	51.1	45.1	39.6
95th Percentile	95.9	97.7	97.7	95.5	92.1	86.8	75.7	65.3	56.8	50.4	40.2
# of Portfolios	12	21	21	21	21	20	21	20	21	13	14
● Vanguard Inv	88.0 (37)	88.0 (20)	88.0 (30)	88.0 (30)	83.9 (35)	76.8 (32)	69.9 (60)	62.9 (85)	54.3 (85)	41.4 (34)	29.7 (31)

Note: The above chart illustrates the Vanguard target date funds' total equity allocation by retirement fund year relative to the peer universe. A higher Rank indicates a greater allocation to equities relative to peers. For example, a Rank of 100 indicates the highest equity allocation among peers and a Rank of 1 indicates the lowest equity allocation.

IUOE Local No. 77 Annuity Fund

Investment Performance Report as of June 30, 2023

Manager Roster					
Name	Ticker	Account Type	Benchmark	Market Value	% of Portfolio
Vanguard Target Retirement Income Fund - Investor	VTINX	Target Date Fund	Target Retirement Income Composite	\$386,347	0.90%
Vanguard Target Retirement 2020 - Investor	VTWNX	Target Date Fund	Target Retirement 2020 Composite	\$2,051,733	4.80%
Vanguard Target Retirement 2025 - Investor	VTTVX	Target Date Fund	Target Retirement 2025 Composite	\$6,656,302	15.57%
Vanguard Target Retirement 2030 - Investor	VTHRX	Target Date Fund	Target Retirement 2030 Composite	\$5,027,668	11.76%
Vanguard Target Retirement 2035 - Investor	VTTHX	Target Date Fund	Target Retirement 2035 Composite	\$4,391,352	10.27%
Vanguard Target Retirement 2040 - Investor	VFORX	Target Date Fund	Target Retirement 2040 Composite	\$4,334,169	10.14%
Vanguard Target Retirement 2045 - Investor	VTIVX	Target Date Fund	Target Retirement 2045 Composite	\$3,780,254	8.84%
Vanguard Target Retirement 2050 - Investor	VFIFX	Target Date Fund	Target Retirement 2050 Composite	\$3,186,704	7.45%
Vanguard Target Retirement 2055 - Investor	VFFVX	Target Date Fund	Target Retirement 2055 Composite	\$1,873,901	4.38%
Vanguard Target Retirement 2060 - Investor	VTTSX	Target Date Fund	Target Retirement 2060 Composite	\$916,285	2.14%
Vanguard Target Retirement 2065 - Investor	VLXVX	Target Date Fund	Target Retirement 2065 Composite	\$155,810	0.36%
Vanguard 500 Index Fund	VFIAX	Domestic Equity	S&P 500	\$2,278,120	5.33%
Vanguard Mid-Cap Index Fund	VIMAX	Domestic Equity	CRSP US Mid Cap TR USD	\$685,347	1.60%
Vanguard Small Cap Index Fund	VSMAX	Domestic Equity	CRSP US Small Cap TR USD	\$236,467	0.55%
Vanguard Developed Markets Index Fund Admiral	VTMGX	International Equity	FTSE-Developed All Cap Ex U.S. Index	\$459,171	1.07%
Vanguard FTSE All-World ex-US SmallCap Index	VFSAX	International Equity	FTSE - Global Small Cap Ex U.S. Index	\$25,728	0.06%
Vanguard Emerging Markets Index Fund Admiral	VEMAX	International Equity	Spliced Emerging Markets Index	\$23,976	0.06%
Vanguard High-Yield Corporate Fund	VWEAX	Fixed Income	High-Yield Corporate Composite Index	\$34,093	0.08%
Vanguard Total Bond Market Index Admiral	VBTLX	Fixed Income	Spliced Barclays USAgg Float Adj	\$758,441	1.77%
SAGIC Diversified Bond		Stable Value	FTSE T-Bill 3 Months TR	\$5,467,182	12.79%
Vanguard Real Estate Index Fund Admiral	VGSLX	Real Estate	REIT Spliced Index	\$24,116	0.06%
Total				\$42,753,166	100.00%

IUOE Local No. 77 Annuity Fund

Investment Performance Report as of June 30, 2023

Asset Allocation of Vanguard Target Retirement Investments by Fund Vintage Year As of June 30, 2023											
	2065	2060	2055	2050	2045	2040	2035	2030	2025	2020	Income
Multi-Cap Core Funds	53.4%	53.6%	54.0%	54.3%	52.1%	47.6%	43.0%	38.7%	33.3%	25.1%	18.0%
Vanguard Total Stock Market Index Fund;Inst +	53.4%	53.6%	54.0%	54.3%	52.1%	47.6%	43.0%	38.7%	33.3%	25.1%	18.0%
International Multi-Cap Core	35.9%	35.8%	35.3%	35.0%	33.1%	30.3%	27.9%	25.1%	21.8%	16.9%	12.1%
Vanguard Total International Stock Index Fund;Inv	35.9%	35.8%	35.3%	35.0%	33.1%	30.3%	27.9%	25.1%	21.8%	16.9%	12.1%
Core Bond Funds	6.6%	6.8%	6.8%	6.8%	9.7%	14.7%	19.6%	24.4%	27.8%	31.9%	36.3%
Vanguard Total Bond Market II Index Fund;Investor	6.6%	6.8%	6.8%	6.8%	9.7%	14.7%	19.6%	24.4%	27.8%	31.9%	36.3%
International Income Funds	2.8%	2.8%	2.8%	2.7%	3.9%	6.1%	8.3%	10.5%	11.9%	14.3%	16.1%
Vanguard Total International Bond II Index Fd;Inst	2.8%	2.8%	2.8%	2.7%	3.9%	6.1%	8.3%	10.5%	11.9%	14.3%	16.1%
Inflation Protected Bond Funds	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	11.0%	16.6%
Vanguard Sht-Term Inflation-Protected Sec Idx;Adm	--	--	--	--	--	--	--	--	4.1%	11.0%	16.6%
Other	1.2%	1.1%	1.1%	1.1%	1.3%	1.3%	1.3%	1.3%	1.2%	0.9%	0.9%
USD Cash	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Vanguard Market Liquidity Fund	1.2%	1.1%	1.1%	1.1%	1.3%	1.3%	1.3%	1.3%	1.2%	0.9%	0.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

IUOE Local No. 77 Annuity Fund

Investment Performance Report as of June 30, 2023

Performance Detail (Net of Fees) - Annualized

		Ending June 30, 2023															
	Market Value	% of Portfolio	2023 Q2 Rank	YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank	7 Yrs Rank	10 Yrs Rank	Expense Ratio							
Total Fund	\$42,753,166	100.0%															
Total Target Date Funds	\$32,760,525	76.6%															
Vanguard Target Retirement Income Fund - Investor	\$386,347	0.9%	1.4%	--	5.6%	--	4.5%	--	1.7%	--	3.4%	--	3.8%	--	--	--	0.08%
Target Retirement Income Composite			1.4%	--	5.6%	--	4.8%	--	1.9%	--	3.7%	--	4.0%	--	--	--	
Vanguard Target Retirement 2020 - Investor	\$2,051,733	4.8%	2.1%	--	7.0%	--	6.6%	--	3.8%	--	4.6%	--	5.7%	--	--	--	0.08%
Target Retirement 2020 Composite			2.2%	--	7.0%	--	6.9%	--	4.1%	--	5.0%	--	6.0%	--	--	--	
Vanguard Target Retirement 2025 - Investor	\$6,656,302	15.6%	3.0%	--	8.5%	--	8.6%	--	5.0%	--	5.3%	--	6.5%	--	--	--	0.08%
Target Retirement 2025 Composite			3.0%	--	8.4%	--	9.0%	--	5.3%	--	5.7%	--	6.9%	--	--	--	
Vanguard Target Retirement 2030 - Investor	\$5,027,668	11.8%	3.6%	--	9.4%	--	9.9%	--	6.0%	--	5.8%	--	7.2%	--	--	--	0.08%
Target Retirement 2030 Composite			3.6%	--	9.4%	--	10.5%	--	6.4%	--	6.2%	--	7.6%	--	--	--	
Vanguard Target Retirement 2035 - Investor	\$4,391,352	10.3%	4.1%	--	10.3%	--	11.3%	--	7.2%	--	6.4%	--	8.0%	--	--	--	0.08%
Target Retirement 2035 Composite			4.1%	--	10.2%	--	11.8%	--	7.6%	--	6.7%	--	8.3%	--	--	--	
Vanguard Target Retirement 2040 - Investor	\$4,334,169	10.1%	4.6%	--	11.1%	--	12.6%	--	8.4%	--	6.9%	--	8.7%	--	--	--	0.08%
Target Retirement 2040 Composite			4.6%	--	11.1%	--	13.1%	--	8.7%	--	7.3%	--	9.0%	--	--	--	
Vanguard Target Retirement 2045 - Investor	\$3,780,254	8.8%	5.1%	--	11.9%	--	13.9%	--	9.5%	--	7.5%	--	9.2%	--	--	--	0.08%
Target Retirement 2045 Composite			5.1%	--	11.9%	--	14.5%	--	9.9%	--	7.9%	--	9.6%	--	--	--	
Vanguard Target Retirement 2050 - Investor	\$3,186,704	7.5%	5.4%	--	12.4%	--	14.6%	--	9.7%	--	7.6%	--	9.3%	--	--	--	0.08%
Target Retirement 2050 Composite			5.4%	--	12.3%	--	15.0%	--	10.1%	--	8.0%	--	9.7%	--	--	--	
Vanguard Target Retirement 2055 - Investor	\$1,873,901	4.4%	5.4%	--	12.4%	--	14.6%	--	9.7%	--	7.6%	--	9.3%	--	--	--	0.08%
Target Retirement 2055 Composite			5.4%	--	12.3%	--	15.0%	--	10.1%	--	8.0%	--	9.7%	--	--	--	
Vanguard Target Retirement 2060 - Investor	\$916,285	2.1%	5.4%	--	12.4%	--	14.6%	--	9.8%	--	7.6%	--	9.3%	--	--	--	0.08%
Target Retirement 2060 Composite			5.4%	--	12.3%	--	15.0%	--	10.1%	--	8.0%	--	9.7%	--	--	--	
Vanguard Target Retirement 2065 - Investor	\$155,810	0.4%	5.3%	--	12.3%	--	14.6%	--	9.8%	--	7.6%	--	--	--	--	--	0.08%
Target Retirement 2065 Composite			6.4%	--	13.4%	--	16.1%	--	10.5%	--	8.2%	--	--	--	--	--	

IUOE Local No. 77 Annuity Fund

Investment Performance Report as of June 30, 2023

Performance Detail (Net of Fees) - Annualized

			Ending June 30, 2023															
	Market Value	% of Portfolio	2023 Q2 Rank	YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank	7 Yrs Rank	10 Yrs Rank	Expense Ratio								
Total Domestic Equity	\$3,199,934	7.5%																
Vanguard 500 Index Fund	\$2,278,120	5.3%	8.7%	23	16.9%	22	19.5%	27	14.6%	31	12.3%	20	13.3%	18	12.8%	13	0.04%	
S&P 500			8.7%	22	16.9%	21	19.6%	25	14.6%	29	12.3%	18	13.4%	16	12.9%	11		
Vanguard Mid-Cap Index Fund	\$685,347	1.6%	4.8%	51	8.8%	39	13.7%	56	12.0%	72	8.6%	25	10.3%	24	10.4%	15	0.05%	
CRSP US Mid Cap TR USD			4.8%	52	8.8%	40	13.7%	56	12.0%	70	8.6%	24	10.3%	22	10.5%	12		
Vanguard Small Cap Index Fund	\$236,467	0.6%	5.3%	25	9.3%	26	14.9%	33	12.5%	69	6.6%	26	9.7%	27	9.5%	27	0.05%	
CRSP US Small Cap TR USD			5.3%	26	9.2%	29	14.8%	34	12.5%	70	6.6%	26	9.6%	27	9.4%	28		
Total International Equity	\$508,874	1.2%																
Vanguard Developed Markets Index Fund Admiral	\$459,171	1.1%	3.1%	38	11.1%	55	16.5%	49	9.0%	33	4.4%	33	6.9%	31	5.7%	29	0.07%	
FTSE-Developed All Cap Ex U.S. Index			3.1%	38	11.1%	55	16.9%	42	9.3%	25	4.6%	29	7.2%	23	--	--		
Vanguard FTSE All-World ex-US SmallCap Index	\$25,728	0.1%	1.9%	28	7.9%	52	10.0%	79	7.1%	52	1.7%	64	5.2%	77	4.9%	93	0.16%	
FTSE - Global Small Cap Ex U.S. Index			2.0%	24	7.9%	52	10.6%	68	7.6%	40	1.9%	54	5.5%	66	5.1%	78		
Vanguard Emerging Markets Index Fund Admiral	\$23,976	0.1%	1.1%	68	4.7%	83	1.2%	82	3.4%	43	2.1%	42	4.9%	50	3.2%	48	0.14%	
Spliced Emerging Markets Index			1.1%	70	4.2%	87	1.5%	78	3.7%	40	2.2%	39	5.1%	46	3.2%	47		
Total Fixed Income	\$792,535	1.9%																
Vanguard High-Yield Corporate Fund	\$34,093	0.1%	1.1%	--	4.3%	--	8.5%	--	2.5%	--	3.4%	--	4.0%	--	4.2%	--	0.13%	
High-Yield Corporate Composite Index			1.2%	--	4.6%	--	8.4%	--	2.4%	--	3.6%	--	4.2%	--	4.3%	--		
Vanguard Total Bond Market Index Admiral	\$758,441	1.8%	-0.9%	--	2.2%	--	-0.9%	--	-4.0%	--	0.8%	--	0.4%	--	1.5%	--	0.05%	
Spliced Barclays USAgg Float Adj			-0.9%	--	2.1%	--	-0.8%	--	-4.0%	--	0.8%	--	0.5%	--	1.5%	--		
Total Stable Value	\$5,467,182	12.8%																
SAGIC Diversified Bond	\$5,467,182	12.8%	1.0%	--	1.9%	--	3.8%	--	3.5%	--	3.7%	--	3.6%	--	--	--	0.42%	
FTSE T-Bill 3 Months TR			1.3%	--	2.4%	--	3.7%	--	1.3%	--	1.6%	--	1.4%	--	--	--		

Performance Detail (Net of Fees) - Annualized

			Ending June 30, 2023														
	Market Value	% of Portfolio	2023 Q2	Rank	YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank	7 Yrs Rank	10 Yrs Rank	Expense Ratio						
Total Real Estate (REIT)	\$24,116	0.1%															
Vanguard Real Estate Index Fund Admiral	\$24,116	0.1%	1.6%	--	3.5%	--	-3.9%	--	5.9%	--	4.4%	--	3.2%	--	6.1%	--	0.12%
REIT Spliced Index			1.7%	--	3.6%	--	-3.8%	--	6.0%	--	4.5%	--	3.3%	--	6.2%	--	

Note: SAGIC Diversified Bond market value does not reflect unallocated assets (forfeitures).

IUOE Local No. 77 Annuity Fund

Investment Performance Report as of June 30, 2023

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31st				
			2022	2021	2020	2019	2018
Total Fund	\$42,753,166	100.0%					
Total Target Date Funds	\$32,760,525	76.6%					
Vanguard Target Retirement Income Fund - Investor	\$386,347	0.9%	-12.7%	5.2%	10.0%	13.2%	-2.0%
Target Retirement Income Composite			-12.5%	5.4%	10.7%	13.4%	-2.0%
Vanguard Target Retirement 2020 - Investor	\$2,051,733	4.8%	-14.2%	8.2%	12.0%	17.6%	-4.2%
Target Retirement 2020 Composite			-13.8%	8.4%	12.9%	17.9%	-4.2%
Vanguard Target Retirement 2025 - Investor	\$6,656,302	15.6%	-15.5%	9.8%	13.3%	19.6%	-5.2%
Target Retirement 2025 Composite			-15.0%	10.1%	14.2%	19.9%	-5.0%
Vanguard Target Retirement 2030 - Investor	\$5,027,668	11.8%	-16.3%	11.4%	14.1%	21.1%	-5.9%
Target Retirement 2030 Composite			-15.7%	11.7%	15.0%	21.3%	-5.7%
Vanguard Target Retirement 2035 - Investor	\$4,391,352	10.3%	-16.6%	13.0%	14.8%	22.4%	-6.6%
Target Retirement 2035 Composite			-16.1%	13.2%	15.7%	22.8%	-6.5%
Vanguard Target Retirement 2040 - Investor	\$4,334,169	10.1%	-17.0%	14.6%	15.5%	23.9%	-7.3%
Target Retirement 2040 Composite			-16.5%	14.9%	16.3%	24.2%	-7.2%
Vanguard Target Retirement 2045 - Investor	\$3,780,254	8.8%	-17.4%	16.2%	16.3%	24.9%	-7.9%
Target Retirement 2045 Composite			-16.8%	16.4%	17.0%	25.4%	-7.8%
Vanguard Target Retirement 2050 - Investor	\$3,186,704	7.5%	-17.5%	16.4%	16.4%	25.0%	-7.9%
Target Retirement 2050 Composite			-17.1%	16.7%	17.2%	25.4%	-7.8%
Vanguard Target Retirement 2055 - Investor	\$1,873,901	4.4%	-17.5%	16.4%	16.3%	25.0%	-7.9%
Target Retirement 2055 Composite			-17.1%	16.7%	17.2%	25.4%	-7.8%
Vanguard Target Retirement 2060 - Investor	\$916,285	2.1%	-17.5%	16.4%	16.3%	25.0%	-7.9%
Target Retirement 2060 Composite			-17.1%	16.7%	17.2%	25.4%	-7.8%
Vanguard Target Retirement 2065 - Investor	\$155,810	0.4%	-17.4%	16.5%	16.2%	25.0%	-7.9%
Target Retirement 2065 Composite			-17.1%	16.7%	17.2%	25.4%	-7.8%

IUOE Local No. 77 Annuity Fund

Investment Performance Report as of June 30, 2023

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31st				
			2022	2021	2020	2019	2018
Total Domestic Equity	\$3,199,934	7.5%					
Vanguard 500 Index Fund	\$2,278,120	5.3%	-18.1%	28.7%	18.4%	31.5%	-4.4%
S&P 500			-18.1%	28.7%	18.4%	31.5%	-4.4%
Vanguard Mid-Cap Index Fund	\$685,347	1.6%	-18.7%	24.5%	18.2%	31.0%	-9.2%
CRSP US Mid Cap TR USD			-18.7%	24.5%	18.2%	31.1%	-9.2%
Vanguard Small Cap Index Fund	\$236,467	0.6%	-17.6%	17.7%	19.1%	27.4%	-9.3%
CRSP US Small Cap TR USD			-17.6%	17.7%	19.1%	27.3%	-9.3%
Total International Equity	\$508,874	1.2%					
Vanguard Developed Markets Index Fund Admiral	\$459,171	1.1%	-15.3%	11.4%	10.3%	22.0%	-14.5%
FTSE-Developed All Cap Ex U.S. Index			-15.3%	11.9%	10.3%	22.7%	-14.5%
Vanguard FTSE All-World ex-US SmallCap Index	\$25,728	0.1%	-21.3%	12.7%	11.9%	21.7%	-18.5%
FTSE - Global Small Cap Ex U.S. Index			-21.2%	13.4%	11.8%	22.1%	-18.6%
Vanguard Emerging Markets Index Fund Admiral	\$23,976	0.1%	-17.8%	0.9%	15.2%	20.3%	-14.6%
Spliced Emerging Markets Index			-17.6%	1.5%	15.5%	20.4%	-14.8%
Total Fixed Income	\$792,535	1.9%					
Vanguard High-Yield Corporate Fund	\$34,093	0.1%	-9.0%	3.8%	5.4%	15.9%	-2.9%
High-Yield Corporate Composite Index			-10.3%	4.4%	7.6%	14.6%	-1.7%
Vanguard Total Bond Market Index Admiral	\$758,441	1.8%	-13.2%	-1.7%	7.7%	8.7%	0.0%
Spliced Barclays USAgg Float Adj			-13.1%	-1.6%	7.7%	8.9%	-0.1%
Total Stable Value	\$5,467,182	12.8%					
SAGIC Diversified Bond	\$5,467,182	12.8%	3.4%	3.3%	3.8%	3.8%	4.1%
FTSE T-Bill 3 Months TR			1.5%	0.0%	0.6%	2.3%	1.9%

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31st				
			2022	2021	2020	2019	2018
Total Real Estate (REIT)	\$24,116	0.1%					
Vanguard Real Estate Index Fund Admiral	\$24,116	0.1%	-26.2%	40.4%	-4.7%	28.9%	-5.9%
<i>REIT Spliced Index</i>			-26.1%	40.6%	-4.6%	29.0%	-5.9%

Note: SAGIC Diversified Bond market value does not reflect unallocated assets (forfeitures).

IUOE Local No. 77 Annuity Fund

Investment Performance Report as of June 30, 2023

Investment Options	Plan Assets	Net	Revenue	Revenue	Net Inv	Net Inv
	6/30/2023	Expense	Sharing	Sharing	Mgmt	Management
	(A)	Ratio	Fee %	Fee \$	Expense	Cost
		(B)	(C)	D=(A x C)	Ratio	F=(A x B)-D
Target Date Funds						
Vanguard Target Retirement Income Fund - Investor (VTINX)	\$386,347	0.08%	0.00%	\$0	0.08%	\$309
Vanguard Target Retirement 2020 - Investor (VTWNX)	\$2,051,733	0.08%	0.00%	\$0	0.08%	\$1,641
Vanguard Target Retirement 2025 - Investor (VTTVX)	\$6,656,302	0.08%	0.00%	\$0	0.08%	\$5,325
Vanguard Target Retirement 2030 - Investor (VTHR)	\$5,027,668	0.08%	0.00%	\$0	0.08%	\$4,022
Vanguard Target Retirement 2035 - Investor (VTTHX)	\$4,391,352	0.08%	0.00%	\$0	0.08%	\$3,513
Vanguard Target Retirement 2040 - Investor (VFORX)	\$4,334,169	0.08%	0.00%	\$0	0.08%	\$3,467
Vanguard Target Retirement 2045 - Investor (VTIVX)	\$3,780,254	0.08%	0.00%	\$0	0.08%	\$3,024
Vanguard Target Retirement 2050 - Investor (VFIFX)	\$3,186,704	0.08%	0.00%	\$0	0.08%	\$2,549
Vanguard Target Retirement 2055 - Investor (VFFVX)	\$1,873,901	0.08%	0.00%	\$0	0.08%	\$1,499
Vanguard Target Retirement 2060 - Investor (VTTSX)	\$916,285	0.08%	0.00%	\$0	0.08%	\$733
Vanguard Target Retirement 2065 - Investor (VLXVX)	\$155,810	0.08%	0.00%	\$0	0.08%	\$125
Domestic Equity						
Vanguard 500 Index Fund (VFIAX)	\$2,278,120	0.04%	0.00%	\$0	0.04%	\$911
Vanguard Mid-Cap Index Fund (VIMAX)	\$685,347	0.05%	0.00%	\$0	0.05%	\$343
Vanguard Small Cap Index Fund (VSMAX)	\$236,467	0.05%	0.00%	\$0	0.05%	\$118
International Equity						
Vanguard Developed Markets Index Fund Admiral (VTMGX)	\$459,171	0.07%	0.00%	\$0	0.07%	\$321
Vanguard FTSE All-World ex-US SmallCap Index (VFSAX)	\$25,728	0.16%	0.00%	\$0	0.16%	\$41
Vanguard Emerging Markets Index Fund Admiral (VEMAX)	\$23,976	0.14%	0.00%	\$0	0.14%	\$34
Fixed Income						
Vanguard High-Yield Corporate Fund (VWEAX)	\$34,093	0.13%	0.00%	\$0	0.13%	\$44
Vanguard Total Bond Market Index Admiral (VBTLX)	\$758,441	0.05%	0.00%	\$0	0.05%	\$379
Stable Value						
SAGIC Diversified Bond ¹	\$5,467,182	0.42%	0.00%	\$0	0.42%	\$22,962
Real Estate (REIT)						
Vanguard Real Estate Index Fund Admiral (VGSIX)	\$24,116	0.12%	0.00%	\$0	0.12%	\$29
Total	\$42,753,166	0.12%	0.00%	\$0	0.12%	\$51,391

¹SAGIC Diversified Bond market value does not reflect unallocated asset (forfeitures).

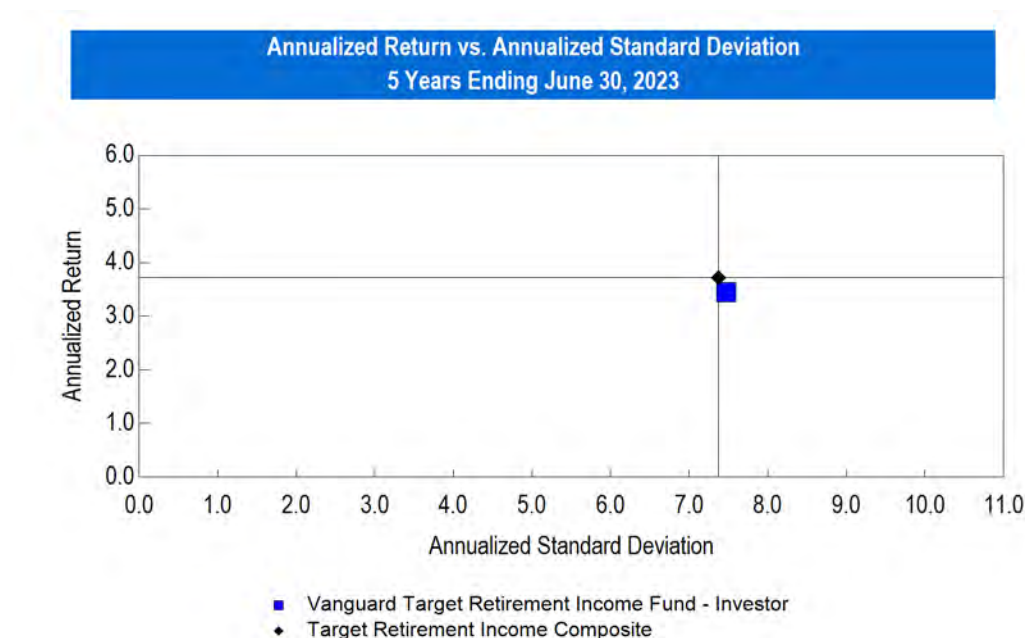
IUOE Local No. 77 Annuity - SAGIC Diversified Bond

Quarter End Date	Market-to-Book	Net Crediting Rate
June 30, 2023	88.3%	4.07%
March 31, 2023	87.7%	3.69%
December 31, 2022	86.7%	3.79%
September 30, 2022	91.4%	3.74%
June 30, 2022	91.0%	3.54%
March 31, 2022	98.5%	3.28%
December 31, 2021	105.6%	2.65%
September 30, 2021	106.1%	3.22%
June 30, 2021	106.5%	3.05%
March 31, 2021	104.2%	3.62%
December 31, 2020	107.1%	3.75%
September 30, 2020	104.6%	3.88%
June 30, 2020	102.6%	4.01%
March 31, 2020	96.7%	3.69%

- Market-to-Book Value Ratio: The market-to-book value ratio is the difference in market value of underlying assets to book value. This ratio may be interpreted as a sign of investment soundness, with a ratio greater than 100% indicating higher market value in support of the stable value investment.
- Net Crediting Rate: The net crediting rating is the interest rate earned on the contract value (principal plus accrued income) after adjusting for expenses expressed as an effective annual yield.

Account Information	
Account Name	Vanguard Target Retirement Income Fund - Investor
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	8/31/21
Account Type	Target Date Fund
Benchmark	Target Retirement Income Composite
Universe	

3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement Income Fund - Investor	1.7%	8.0%	100.7%	102.4%
Target Retirement Income Composite	1.9%	7.9%	100.0%	100.0%



5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement Income Fund - Investor	3.4%	7.5%	99.6%	102.1%
Target Retirement Income Composite	3.7%	7.4%	100.0%	100.0%

	Calendar Years										Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	
Vanguard Target Retirement Income Fund - Investor	1.4%	5.6%	4.5%	1.7%	3.4%	-12.7%	5.2%	10.0%	13.2%	-2.0%	-4.2% Aug-21
Target Retirement Income Composite	1.4%	5.6%	4.8%	1.9%	3.7%	-12.5%	5.4%	10.7%	13.4%	-2.0%	-4.0% Aug-21

Note: Returns are net of fees.

Vanguard Target Retirement Income Fund - Investor

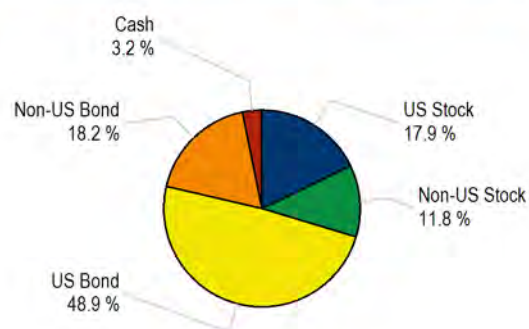
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide current income and some capital appreciation.

The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors currently in retirement. Its indirect bond holdings are a diversified mix of short-, intermediate-, and long-term U.S. government, U.S. agency, and investment-grade U.S. corporate bonds; inflation-protected public obligations issued by the U.S. Treasury; mortgage-backed and asset-backed securities; and government, agency, corporate, and securitized investment-grade foreign bonds issued in currencies other than the U.S. dollar.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VTINX
Morningstar Category	Target-Date Retirement
Average Market Cap (\$mm)	71,952.69
Net Assets (\$mm)	36,969.34
% Assets in Top 10 Holdings	99.11
Total Number of Holdings	6
Manager Name	Walter Nejman
Manager Tenure	10
Expense Ratio	0.08%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD TOTAL BOND MARKET II IDX INV	36.32%
VANGUARD TOTAL STOCK MKT IDX INSTL PLS	18.00%
VANGUARD SHRT-TERM INFL-PROT SEC IDX ADM	16.60%
VANGUARD TOTAL INTL BD II IDX INSL	16.09%
VANGUARD TOTAL INTL STOCK INDEX INV	12.11%

Fund Characteristics as of June 30, 2023

Versus Target Retirement Income Composite

Sharpe Ratio (3 Year)	0.06
Average Market Cap (\$mm)	71,952.69
Price/Earnings	16.19
Price/Book	2.25
Price/Sales	1.49
Price/Cash Flow	9.22
Dividend Yield	2.48
Number of Equity Holdings	0
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.02%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.64%
COMMUNICATION SERVICES	6.80%
CONSUMER CYCLICAL	11.20%
CONSUMER DEFENSIVE	6.79%
ENERGY	4.59%
FINANCIAL SERVICES	14.86%
HEALTHCARE	11.85%
INDUSTRIALS	11.63%
REAL ESTATE	3.13%
TECHNOLOGY	21.77%
UTILITIES	2.74%

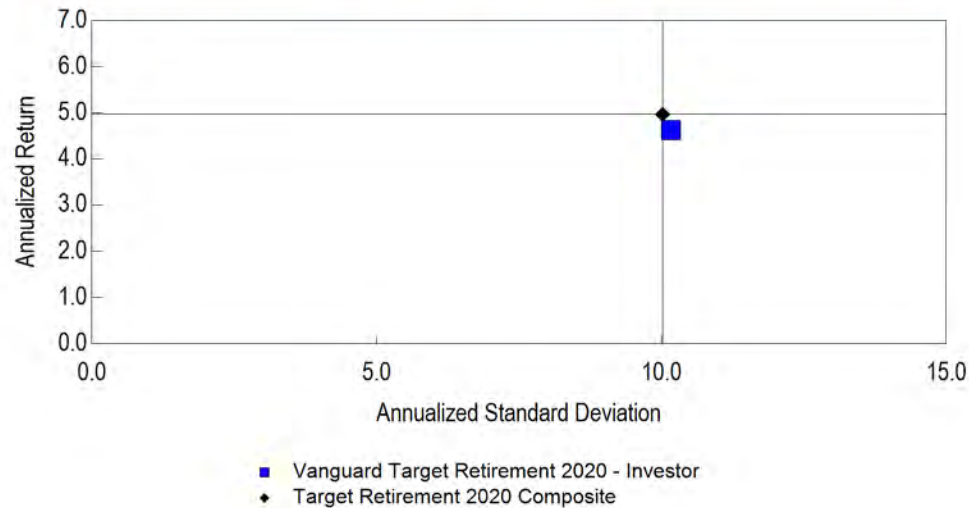
Account Information

Account Name	Vanguard Target Retirement 2020 - Investor
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	8/31/21
Account Type	Target Date Fund
Benchmark	Target Retirement 2020 Composite
Universe	

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2020 - Investor	3.8%	10.1%	100.9%	102.6%
Target Retirement 2020 Composite	4.1%	9.9%	100.0%	100.0%

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



5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2020 - Investor	4.6%	10.2%	99.8%	102.0%
Target Retirement 2020 Composite	5.0%	10.0%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Vanguard Target Retirement 2020 - Investor	2.1%	7.0%	6.6%	3.8%	4.6%	-14.2%	8.2%	12.0%	17.6%	-4.2%	-4.2%	Aug-21
Target Retirement 2020 Composite	2.2%	7.0%	6.9%	4.1%	5.0%	-13.8%	8.4%	12.9%	17.9%	-4.2%	-4.0%	Aug-21

Note: Returns are net of fees.

Vanguard Target Retirement 2020 - Investor

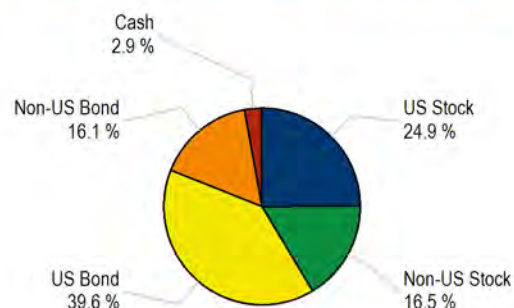
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation.

The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2020 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VTWNX
Morningstar Category	Target-Date 2020
Average Market Cap (\$mm)	71,843.12
Net Assets (\$mm)	40,066.91
% Assets in Top 10 Holdings	99.11
Total Number of Holdings	6
Manager Name	Walter Nejman
Manager Tenure	10
Expense Ratio	0.08%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD TOTAL BOND MARKET II IDX INV	31.87%
VANGUARD TOTAL STOCK MKT IDX INSTL PLS	25.08%
VANGUARD TOTAL INTL STOCK INDEX INV	16.94%
VANGUARD TOTAL INTL BD II IDX INSL	14.28%
VANGUARD SHRT-TERM INFL-PROT SEC IDX ADM	10.96%

Fund Characteristics as of June 30, 2023

Versus Target Retirement 2020 Composite

Sharpe Ratio (3 Year)	0.26
Average Market Cap (\$mm)	71,843.12
Price/Earnings	16.19
Price/Book	2.25
Price/Sales	1.49
Price/Cash Flow	9.22
Dividend Yield	2.48
Number of Equity Holdings	0
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.03%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.64%
COMMUNICATION SERVICES	6.80%
CONSUMER CYCLICAL	11.20%
CONSUMER DEFENSIVE	6.79%
ENERGY	4.59%
FINANCIAL SERVICES	14.87%
HEALTHCARE	11.84%
INDUSTRIALS	11.63%
REAL ESTATE	3.13%
TECHNOLOGY	21.76%
UTILITIES	2.74%

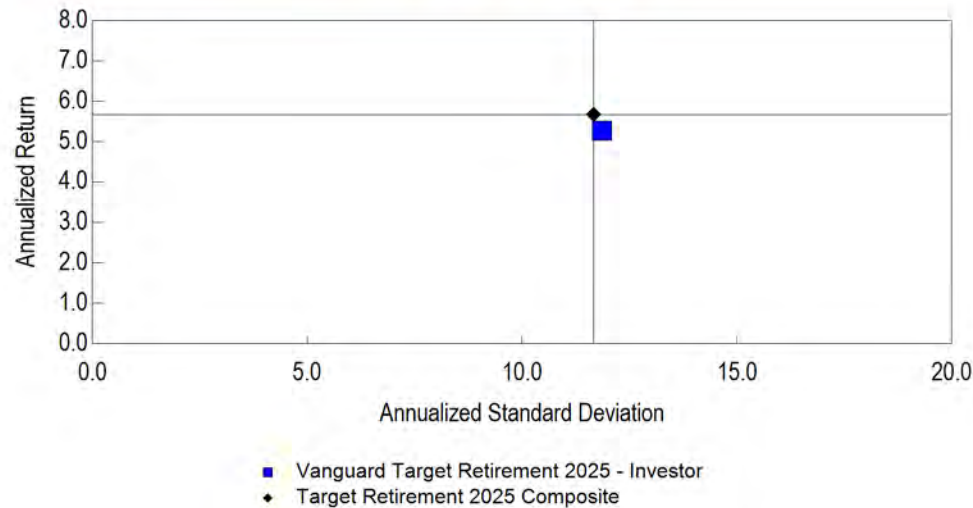
Account Information

Account Name	Vanguard Target Retirement 2025 - Investor
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	8/31/21
Account Type	Target Date Fund
Benchmark	Target Retirement 2025 Composite
Universe	

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2025 - Investor	5.0%	11.7%	100.6%	102.6%
Target Retirement 2025 Composite	5.3%	11.5%	100.0%	100.0%

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



5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2025 - Investor	5.3%	11.9%	99.8%	101.9%
Target Retirement 2025 Composite	5.7%	11.7%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Vanguard Target Retirement 2025 - Investor	3.0%	8.5%	8.6%	5.0%	5.3%	-15.5%	9.8%	13.3%	19.6%	-5.2%	-4.3%	Aug-21
Target Retirement 2025 Composite	3.0%	8.4%	9.0%	5.3%	5.7%	-15.0%	10.1%	14.2%	19.9%	-5.0%	-3.9%	Aug-21

Note: Returns are net of fees.

Vanguard Target Retirement 2025 - Investor

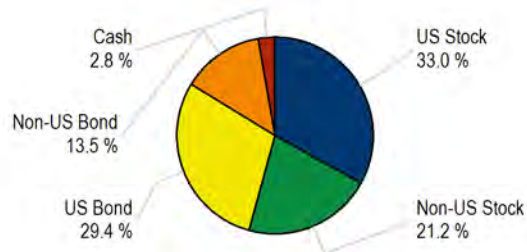
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation.

The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2025 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VTTVX
Morningstar Category	Target-Date 2025
Average Market Cap (\$mm)	72,649.61
Net Assets (\$mm)	75,530.87
% Assets in Top 10 Holdings	98.81
Total Number of Holdings	7
Manager Name	Walter Nejman
Manager Tenure	10
Expense Ratio	0.08%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD TOTAL STOCK MKT IDX INSTL PLS	33.25%
VANGUARD TOTAL BOND MARKET II IDX INV	27.75%
VANGUARD TOTAL INTL STOCK INDEX INV	21.80%
VANGUARD TOTAL INTL BD II IDX INSL	11.91%
VANGUARD SHRT-TERM INFL-PROT SEC IDX ADM	4.09%

Fund Characteristics as of June 30, 2023

Versus Target Retirement 2025 Composite

Sharpe Ratio (3 Year)	0.32
Average Market Cap (\$mm)	72,649.61
Price/Earnings	16.23
Price/Book	2.27
Price/Sales	1.50
Price/Cash Flow	9.26
Dividend Yield	2.47
Number of Equity Holdings	0
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.04%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.60%
COMMUNICATION SERVICES	6.81%
CONSUMER CYCLICAL	11.19%
CONSUMER DEFENSIVE	6.78%
ENERGY	4.59%
FINANCIAL SERVICES	14.82%
HEALTHCARE	11.87%
INDUSTRIALS	11.59%
REAL ESTATE	3.13%
TECHNOLOGY	21.86%
UTILITIES	2.74%

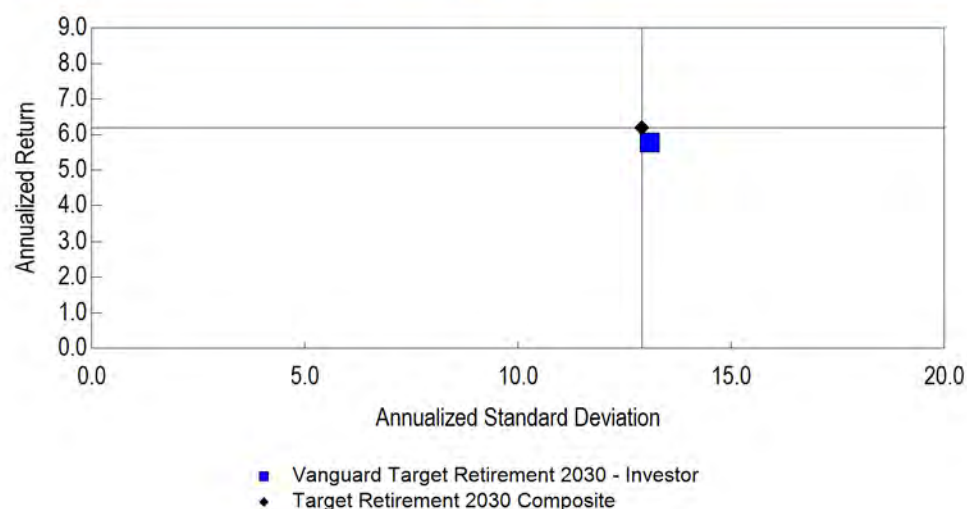
Account Information

Account Name	Vanguard Target Retirement 2030 - Investor
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	8/31/21
Account Type	Target Date Fund
Benchmark	Target Retirement 2030 Composite
Universe	

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2030 - Investor	6.0%	12.8%	100.4%	102.2%
Target Retirement 2030 Composite	6.4%	12.6%	100.0%	100.0%

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



5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2030 - Investor	5.8%	13.1%	99.9%	101.6%
Target Retirement 2030 Composite	6.2%	12.9%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Vanguard Target Retirement 2030 - Investor	3.6%	9.4%	9.9%	6.0%	5.8%	-16.3%	11.4%	14.1%	21.1%	-5.9%	-4.2%	Aug-21
Target Retirement 2030 Composite	3.6%	9.4%	10.5%	6.4%	6.2%	-15.7%	11.7%	15.0%	21.3%	-5.7%	-3.8%	Aug-21

Note: Returns are net of fees.

Vanguard Target Retirement 2030 - Investor

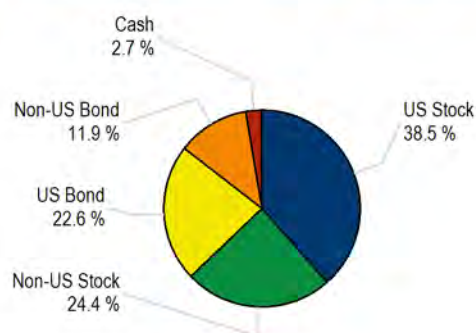
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation.

The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2030 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VTHRX
Morningstar Category	Target-Date 2030
Average Market Cap (\$mm)	72,969.53
Net Assets (\$mm)	84,089.46
% Assets in Top 10 Holdings	98.67
Total Number of Holdings	5
Manager Name	Walter Nejman
Manager Tenure	10
Expense Ratio	0.08%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD TOTAL STOCK MKT IDX INSTL PLS	38.71%
VANGUARD TOTAL INTL STOCK INDEX INV	25.09%
VANGUARD TOTAL BOND MARKET II IDX INV	24.41%
VANGUARD TOTAL INTL BD II IDX INSL	10.46%

Fund Characteristics as of June 30, 2023

Versus Target Retirement 2030 Composite

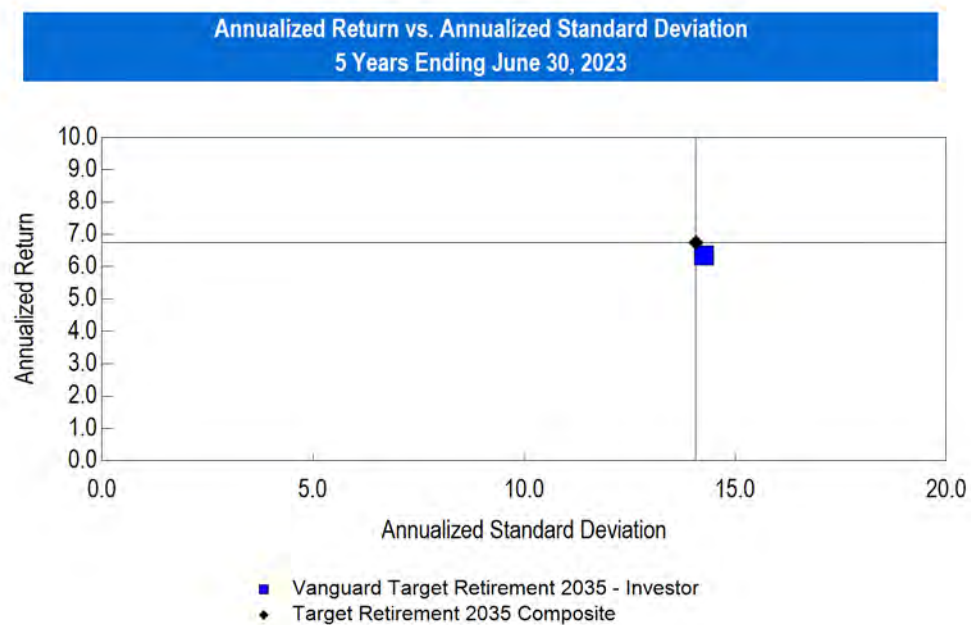
Sharpe Ratio (3 Year)	0.37
Average Market Cap (\$mm)	72,969.53
Price/Earnings	16.25
Price/Book	2.27
Price/Sales	1.50
Price/Cash Flow	9.27
Dividend Yield	2.46
Number of Equity Holdings	0
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.04%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.59%
COMMUNICATION SERVICES	6.82%
CONSUMER CYCLICAL	11.19%
CONSUMER DEFENSIVE	6.78%
ENERGY	4.58%
FINANCIAL SERVICES	14.80%
HEALTHCARE	11.88%
INDUSTRIALS	11.58%
REAL ESTATE	3.13%
TECHNOLOGY	21.91%
UTILITIES	2.74%

Account Information	
Account Name	Vanguard Target Retirement 2035 - Investor
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	8/31/21
Account Type	Target Date Fund
Benchmark	Target Retirement 2035 Composite
Universe	

3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2035 - Investor	7.2%	13.8%	100.7%	102.3%
Target Retirement 2035 Composite	7.6%	13.6%	100.0%	100.0%



5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2035 - Investor	6.4%	14.3%	100.2%	101.5%
Target Retirement 2035 Composite	6.7%	14.1%	100.0%	100.0%

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Vanguard Target Retirement 2035 - Investor	4.1%	10.3%	11.3%	7.2%	6.4%	-16.6%	13.0%	14.8%	22.4%	-6.6%	-3.9%	Aug-21
Target Retirement 2035 Composite	4.1%	10.2%	11.8%	7.6%	6.7%	-16.1%	13.2%	15.7%	22.8%	-6.5%	-3.5%	Aug-21

Note: Returns are net of fees.

Vanguard Target Retirement 2035 - Investor

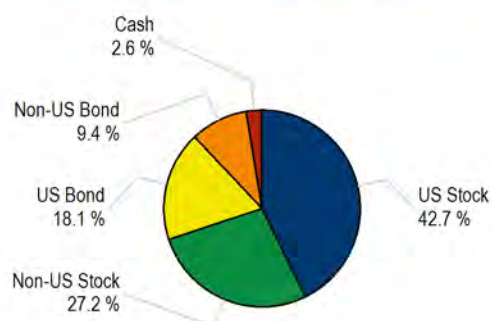
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation.

The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2035 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VTTHX
Morningstar Category	Target-Date 2035
Average Market Cap (\$mm)	72,920.00
Net Assets (\$mm)	84,529.15
% Assets in Top 10 Holdings	98.73
Total Number of Holdings	6
Manager Name	Walter Nejman
Manager Tenure	10
Expense Ratio	0.08%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD TOTAL STOCK MKT IDX INSTL PLS	42.99%
VANGUARD TOTAL INTL STOCK INDEX INV	27.91%
VANGUARD TOTAL BOND MARKET II IDX INV	19.55%
VANGUARD TOTAL INTL BD II IDX INSL	8.28%

Fund Characteristics as of June 30, 2023

Versus Target Retirement 2035 Composite

Sharpe Ratio (3 Year)	0.43
Average Market Cap (\$mm)	72,920.00
Price/Earnings	16.25
Price/Book	2.27
Price/Sales	1.50
Price/Cash Flow	9.27
Dividend Yield	2.46
Number of Equity Holdings	0
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.03%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.59%
COMMUNICATION SERVICES	6.82%
CONSUMER CYCLICAL	11.19%
CONSUMER DEFENSIVE	6.78%
ENERGY	4.58%
FINANCIAL SERVICES	14.80%
HEALTHCARE	11.88%
INDUSTRIALS	11.58%
REAL ESTATE	3.13%
TECHNOLOGY	21.90%
UTILITIES	2.74%

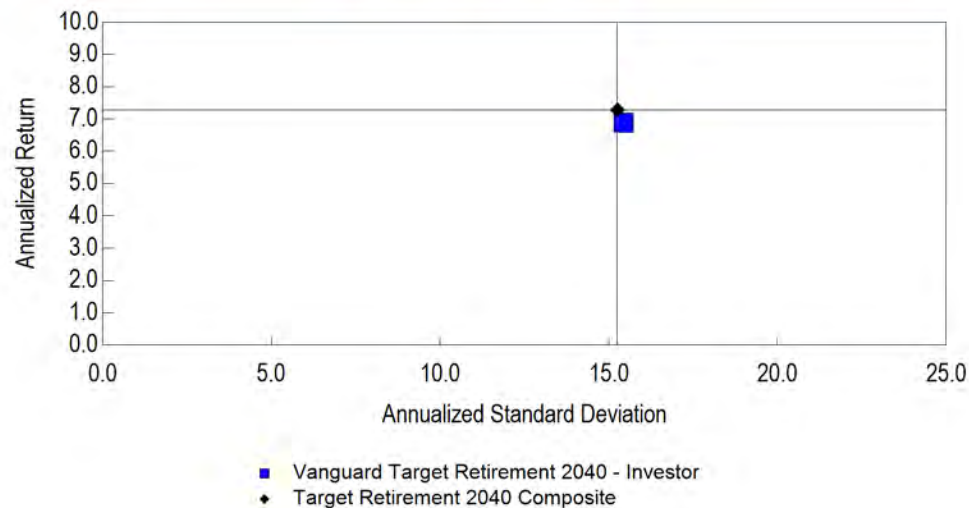
Account Information

Account Name	Vanguard Target Retirement 2040 - Investor
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	8/31/21
Account Type	Target Date Fund
Benchmark	Target Retirement 2040 Composite
Universe	

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2040 - Investor	8.4%	14.8%	100.6%	102.1%
Target Retirement 2040 Composite	8.7%	14.6%	100.0%	100.0%

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



5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2040 - Investor	6.9%	15.4%	100.1%	101.3%
Target Retirement 2040 Composite	7.3%	15.3%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Vanguard Target Retirement 2040 - Investor	4.6%	11.1%	12.6%	8.4%	6.9%	-17.0%	14.6%	15.5%	23.9%	-7.3%	-3.6%	Aug-21
Target Retirement 2040 Composite	4.6%	11.1%	13.1%	8.7%	7.3%	-16.5%	14.9%	16.3%	24.2%	-7.2%	-3.3%	Aug-21

Note: Returns are net of fees.

Vanguard Target Retirement 2040 - Investor

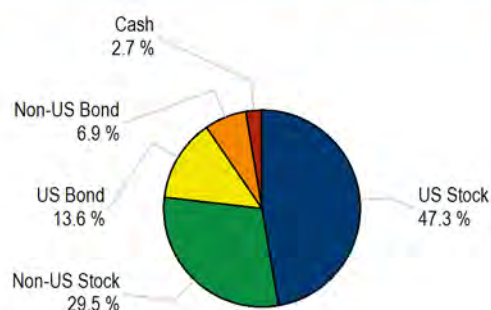
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation.

The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2040 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VFORX
Morningstar Category	Target-Date 2040
Average Market Cap (\$mm)	73,491.21
Net Assets (\$mm)	74,197.87
% Assets in Top 10 Holdings	98.69
Total Number of Holdings	6
Manager Name	Walter Nejman
Manager Tenure	10
Expense Ratio	0.08%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD TOTAL STOCK MKT IDX INSTL PLS	47.62%
VANGUARD TOTAL INTL STOCK INDEX INV	30.28%
VANGUARD TOTAL BOND MARKET II IDX INV	14.74%
VANGUARD TOTAL INTL BD II IDX INSL	6.05%

Fund Characteristics as of June 30, 2023

Versus Target Retirement 2040 Composite

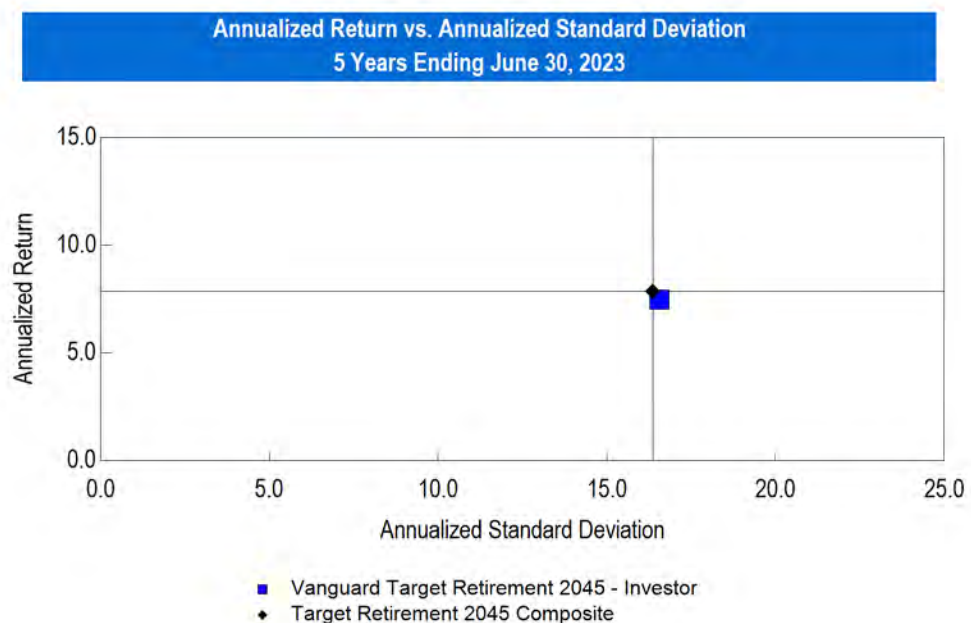
Sharpe Ratio (3 Year)	0.48
Average Market Cap (\$mm)	73,491.21
Price/Earnings	16.28
Price/Book	2.28
Price/Sales	1.51
Price/Cash Flow	9.29
Dividend Yield	2.45
Number of Equity Holdings	0
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.04%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.56%
COMMUNICATION SERVICES	6.83%
CONSUMER CYCLICAL	11.19%
CONSUMER DEFENSIVE	6.77%
ENERGY	4.58%
FINANCIAL SERVICES	14.77%
HEALTHCARE	11.90%
INDUSTRIALS	11.56%
REAL ESTATE	3.13%
TECHNOLOGY	21.97%
UTILITIES	2.74%

Account Information	
Account Name	Vanguard Target Retirement 2045 - Investor
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	8/31/21
Account Type	Target Date Fund
Benchmark	Target Retirement 2045 Composite
Universe	

3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2045 - Investor	9.5%	15.8%	101.0%	102.4%
Target Retirement 2045 Composite	9.9%	15.6%	100.0%	100.0%



5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2045 - Investor	7.5%	16.6%	100.5%	101.4%
Target Retirement 2045 Composite	7.9%	16.4%	100.0%	100.0%

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Vanguard Target Retirement 2045 - Investor	5.1%	11.9%	13.9%	9.5%	7.5%	-17.4%	16.2%	16.3%	24.9%	-7.9%	-3.3%	Aug-21
Target Retirement 2045 Composite	5.1%	11.9%	14.5%	9.9%	7.9%	-16.8%	16.4%	17.0%	25.4%	-7.8%	-3.0%	Aug-21

Note: Returns are net of fees.

Vanguard Target Retirement 2045 - Investor

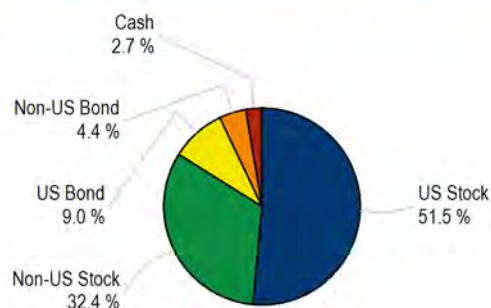
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation.

The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2045 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VTIVX
Morningstar Category	Target-Date 2045
Average Market Cap (\$mm)	73,705.99
Net Assets (\$mm)	70,405.17
% Assets in Top 10 Holdings	98.71
Total Number of Holdings	6
Manager Name	Walter Nejman
Manager Tenure	10
Expense Ratio	0.08%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD TOTAL STOCK MKT IDX INSTL PLS	52.05%
VANGUARD TOTAL INTL STOCK INDEX INV	33.06%
VANGUARD TOTAL BOND MARKET II IDX INV	9.74%
VANGUARD TOTAL INTL BD II IDX INSL	3.86%

Fund Characteristics as of June 30, 2023

Versus Target Retirement 2045 Composite

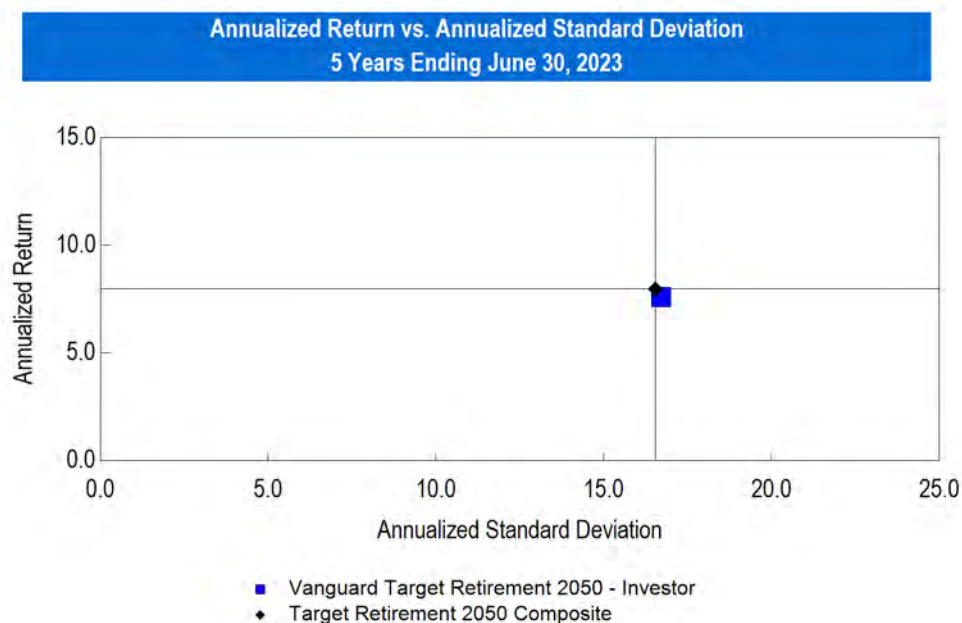
Sharpe Ratio (3 Year)	0.52
Average Market Cap (\$mm)	73,705.99
Price/Earnings	16.28
Price/Book	2.27
Price/Sales	1.52
Price/Cash Flow	9.32
Dividend Yield	2.47
Number of Equity Holdings	0
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.04%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.52%
COMMUNICATION SERVICES	7.03%
CONSUMER CYCLICAL	10.74%
CONSUMER DEFENSIVE	6.92%
ENERGY	4.53%
FINANCIAL SERVICES	14.75%
HEALTHCARE	12.22%
INDUSTRIALS	11.24%
REAL ESTATE	3.17%
TECHNOLOGY	22.06%
UTILITIES	2.82%

Account Information	
Account Name	Vanguard Target Retirement 2050 - Investor
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	8/31/21
Account Type	Target Date Fund
Benchmark	Target Retirement 2050 Composite
Universe	

3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2050 - Investor	9.7%	16.1%	100.8%	102.1%
Target Retirement 2050 Composite	10.1%	15.9%	100.0%	100.0%



5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2050 - Investor	7.6%	16.7%	100.4%	101.3%
Target Retirement 2050 Composite	8.0%	16.5%	100.0%	100.0%

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Vanguard Target Retirement 2050 - Investor	5.4%	12.4%	14.6%	9.7%	7.6%	-17.5%	16.4%	16.4%	25.0%	-7.9%	-3.2%	Aug-21
Target Retirement 2050 Composite	5.4%	12.3%	15.0%	10.1%	8.0%	-17.1%	16.7%	17.2%	25.4%	-7.8%	-2.9%	Aug-21

Note: Returns are net of fees.

Vanguard Target Retirement 2050 - Investor

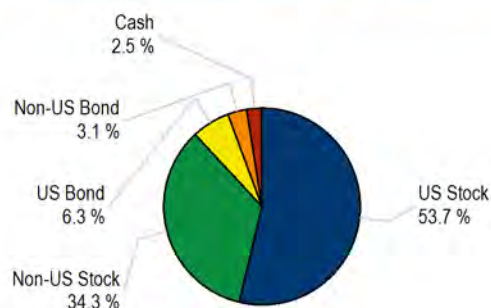
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation.

The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2050 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VFIFX
Morningstar Category	Target-Date 2050
Average Market Cap (\$mm)	73,285.43
Net Assets (\$mm)	57,752.60
% Assets in Top 10 Holdings	98.87
Total Number of Holdings	6
Manager Name	Walter Nejman
Manager Tenure	10
Expense Ratio	0.08%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD TOTAL STOCK MKT IDX INSTL PLS	54.33%
VANGUARD TOTAL INTL STOCK INDEX INV	35.04%
VANGUARD TOTAL BOND MARKET II IDX INV	6.76%
VANGUARD TOTAL INTL BD II IDX INSL	2.74%

Fund Characteristics as of June 30, 2023

Versus Target Retirement 2050 Composite

Sharpe Ratio (3 Year)	0.53
Average Market Cap (\$mm)	73,285.43
Price/Earnings	16.25
Price/Book	2.27
Price/Sales	1.51
Price/Cash Flow	9.30
Dividend Yield	2.48
Number of Equity Holdings	0
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.03%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.54%
COMMUNICATION SERVICES	7.02%
CONSUMER CYCLICAL	10.74%
CONSUMER DEFENSIVE	6.93%
ENERGY	4.54%
FINANCIAL SERVICES	14.77%
HEALTHCARE	12.21%
INDUSTRIALS	11.26%
REAL ESTATE	3.17%
TECHNOLOGY	22.00%
UTILITIES	2.82%

Account Information

Account Name	Vanguard Target Retirement 2055 - Investor
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	8/31/21
Account Type	Target Date Fund
Benchmark	Target Retirement 2055 Composite
Universe	

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2055 - Investor	9.7%	16.1%	100.8%	102.1%
Target Retirement 2055 Composite	10.1%	15.9%	100.0%	100.0%

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



5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2055 - Investor	7.6%	16.7%	100.3%	101.2%
Target Retirement 2055 Composite	8.0%	16.5%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Vanguard Target Retirement 2055 - Investor	5.4%	12.4%	14.6%	9.7%	7.6%	-17.5%	16.4%	16.3%	25.0%	-7.9%	-3.1%	Aug-21
Target Retirement 2055 Composite	5.4%	12.3%	15.0%	10.1%	8.0%	-17.1%	16.7%	17.2%	25.4%	-7.8%	-2.9%	Aug-21

Note: Returns are net of fees.

Vanguard Target Retirement 2055 - Investor

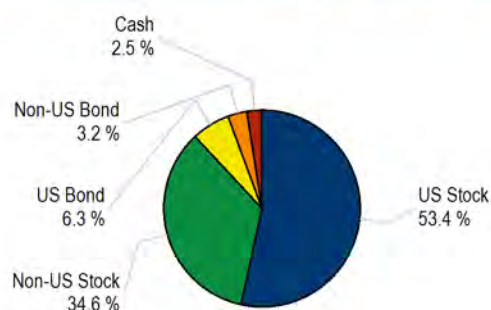
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation.

The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2055 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VFFVX
Morningstar Category	Target-Date 2055
Average Market Cap (\$mm)	72,904.54
Net Assets (\$mm)	37,111.73
% Assets in Top 10 Holdings	98.91
Total Number of Holdings	6
Manager Name	Walter Nejman
Manager Tenure	10
Expense Ratio	0.08%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD TOTAL STOCK MKT IDX INSTL PLS	54.03%
VANGUARD TOTAL INTL STOCK INDEX INV	35.32%
VANGUARD TOTAL BOND MARKET II IDX INV	6.79%
VANGUARD TOTAL INTL BD II IDX INSL	2.76%

Fund Characteristics as of June 30, 2023

Versus Target Retirement 2055 Composite

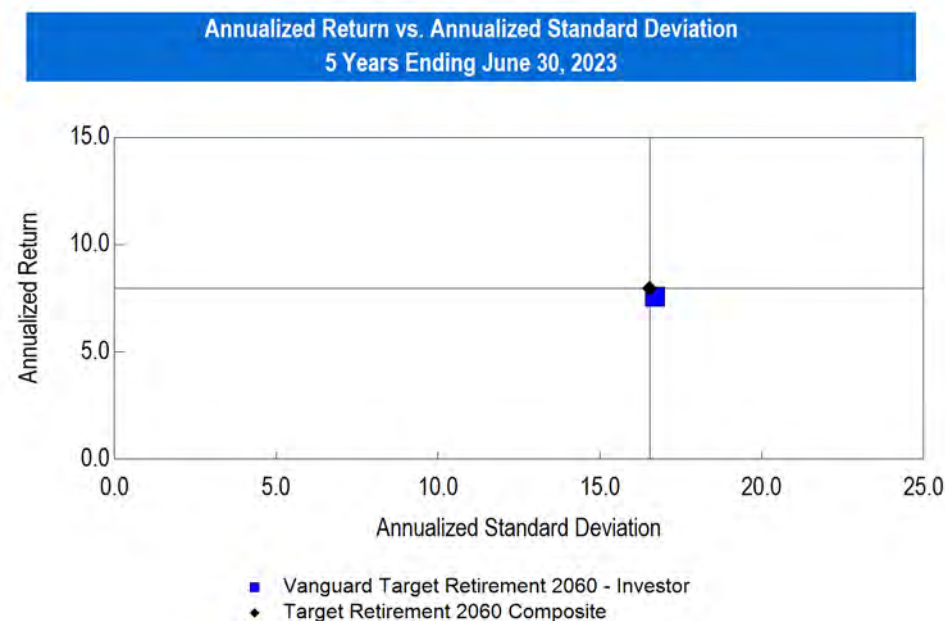
Sharpe Ratio (3 Year)	0.53
Average Market Cap (\$mm)	72,904.54
Price/Earnings	16.23
Price/Book	2.26
Price/Sales	1.51
Price/Cash Flow	9.28
Dividend Yield	2.48
Number of Equity Holdings	0
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.03%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.56%
COMMUNICATION SERVICES	7.01%
CONSUMER CYCLICAL	10.75%
CONSUMER DEFENSIVE	6.93%
ENERGY	4.54%
FINANCIAL SERVICES	14.80%
HEALTHCARE	12.20%
INDUSTRIALS	11.27%
REAL ESTATE	3.17%
TECHNOLOGY	21.95%
UTILITIES	2.82%

Account Information	
Account Name	Vanguard Target Retirement 2060 - Investor
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	8/31/21
Account Type	Target Date Fund
Benchmark	Target Retirement 2060 Composite
Universe	

3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2060 - Investor	9.8%	16.1%	100.7%	102.0%
Target Retirement 2060 Composite	10.1%	15.9%	100.0%	100.0%



5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2060 - Investor	7.6%	16.7%	100.3%	101.2%
Target Retirement 2060 Composite	8.0%	16.5%	100.0%	100.0%

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Vanguard Target Retirement 2060 - Investor	5.4%	12.4%	14.6%	9.8%	7.6%	-17.5%	16.4%	16.3%	25.0%	-7.9%	-3.1%	Aug-21
Target Retirement 2060 Composite	5.4%	12.3%	15.0%	10.1%	8.0%	-17.1%	16.7%	17.2%	25.4%	-7.8%	-2.9%	Aug-21

Note: Returns are net of fees.

Vanguard Target Retirement 2060 - Investor

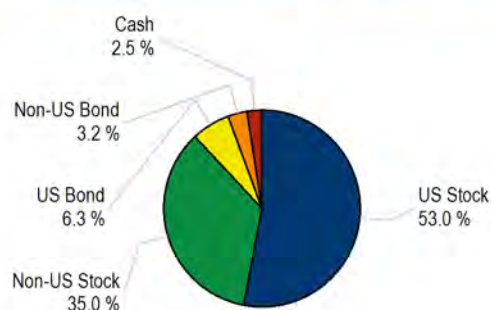
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation.

The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2060 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VTTSX
Morningstar Category	Target-Date 2060
Average Market Cap (\$mm)	72,317.20
Net Assets (\$mm)	19,523.17
% Assets in Top 10 Holdings	98.93
Total Number of Holdings	6
Manager Name	Walter Nejman
Manager Tenure	10
Expense Ratio	0.08%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD TOTAL STOCK MKT IDX INSTL PLS	53.57%
VANGUARD TOTAL INTL STOCK INDEX INV	35.77%
VANGUARD TOTAL BOND MARKET II IDX INV	6.81%
VANGUARD TOTAL INTL BD II IDX INSL	2.77%

Fund Characteristics as of June 30, 2023

Versus Target Retirement 2060 Composite

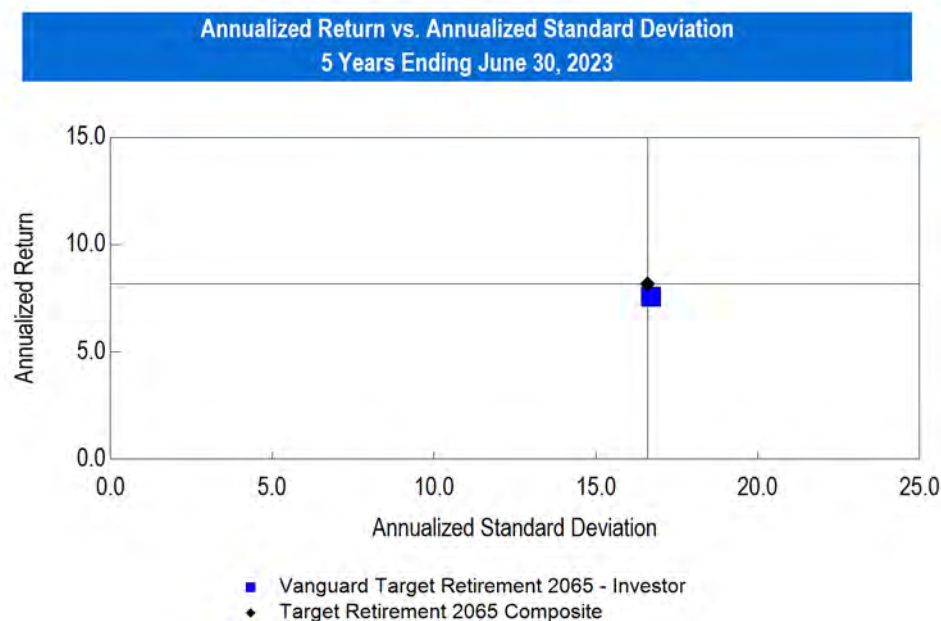
Sharpe Ratio (3 Year)	0.53
Average Market Cap (\$mm)	72,317.20
Price/Earnings	16.20
Price/Book	2.25
Price/Sales	1.50
Price/Cash Flow	9.26
Dividend Yield	2.49
Number of Equity Holdings	0
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.03%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.58%
COMMUNICATION SERVICES	7.00%
CONSUMER CYCLICAL	10.75%
CONSUMER DEFENSIVE	6.94%
ENERGY	4.55%
FINANCIAL SERVICES	14.83%
HEALTHCARE	12.17%
INDUSTRIALS	11.30%
REAL ESTATE	3.17%
TECHNOLOGY	21.88%
UTILITIES	2.82%

Account Information	
Account Name	Vanguard Target Retirement 2065 - Investor
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	8/01/21
Account Type	Target Date Fund
Benchmark	Target Retirement 2065 Composite
Universe	

3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2065 - Investor	9.8%	16.1%	99.1%	102.0%
Target Retirement 2065 Composite	10.5%	16.0%	100.0%	100.0%



5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Target Retirement 2065 - Investor	7.6%	16.7%	98.9%	101.2%
Target Retirement 2065 Composite	8.2%	16.6%	100.0%	100.0%

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Vanguard Target Retirement 2065 - Investor	5.3%	12.3%	14.6%	9.8%	7.6%	-17.4%	16.5%	16.2%	25.0%	-7.9%	-1.9%	Aug-21
Target Retirement 2065 Composite	6.4%	13.4%	16.1%	10.5%	8.2%	-17.1%	16.7%	17.2%	25.4%	-7.8%	-1.1%	Aug-21

Note: Returns are net of fees.

Vanguard Target Retirement 2065 - Investor

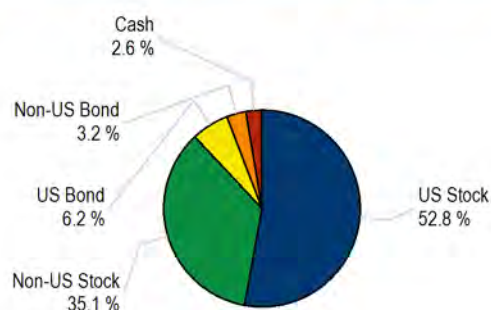
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation.

The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2065 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VLXVX
Morningstar Category	Target-Date 2065+
Average Market Cap (\$mm)	72,153.56
Net Assets (\$mm)	4,968.52
% Assets in Top 10 Holdings	98.76
Total Number of Holdings	6
Manager Name	Walter Nejman
Manager Tenure	6
Expense Ratio	0.08%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD TOTAL STOCK MKT IDX INSTL PLS	53.43%
VANGUARD TOTAL INTL STOCK INDEX INV	35.89%
VANGUARD TOTAL BOND MARKET II IDX INV	6.64%
VANGUARD TOTAL INTL BD II IDX INSL	2.81%

Fund Characteristics as of June 30, 2023

Versus Target Retirement 2065 Composite

Sharpe Ratio (3 Year)	0.53
Average Market Cap (\$mm)	72,153.56
Price/Earnings	16.19
Price/Book	2.25
Price/Sales	1.50
Price/Cash Flow	9.25
Dividend Yield	2.49
Number of Equity Holdings	0
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.05%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.59%
COMMUNICATION SERVICES	6.99%
CONSUMER CYCLICAL	10.75%
CONSUMER DEFENSIVE	6.94%
ENERGY	4.55%
FINANCIAL SERVICES	14.84%
HEALTHCARE	12.17%
INDUSTRIALS	11.31%
REAL ESTATE	3.17%
TECHNOLOGY	21.86%
UTILITIES	2.83%

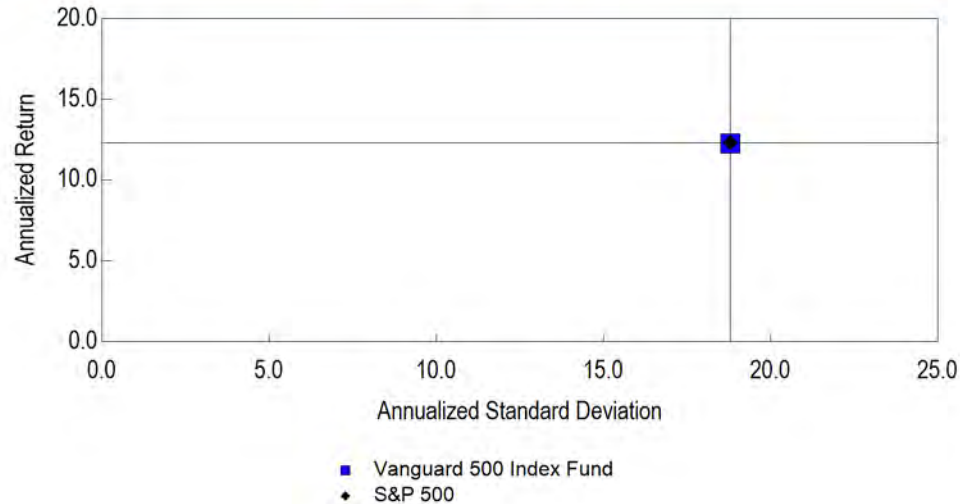
Account Information

Account Name	Vanguard 500 Index Fund
Account Structure	Mutual Fund
Investment Style	Passive
Inception Date	1/01/17
Account Type	Domestic Equity
Benchmark	S&P 500
Universe	Large Blend MStar MF

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard 500 Index Fund	14.6%	18.2%	99.9%	100.1%
S&P 500	14.6%	18.2%	100.0%	100.0%

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



5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard 500 Index Fund	12.3%	18.8%	99.9%	100.0%
S&P 500	12.3%	18.8%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Vanguard 500 Index Fund	8.7%	16.9%	19.5%	14.6%	12.3%	-18.1%	28.7%	18.4%	31.5%	-4.4%	13.1%	Jan-17
S&P 500	8.7%	16.9%	19.6%	14.6%	12.3%	-18.1%	28.7%	18.4%	31.5%	-4.4%	13.2%	Jan-17

Note: Returns are net of fees.

Vanguard 500 Index Fund

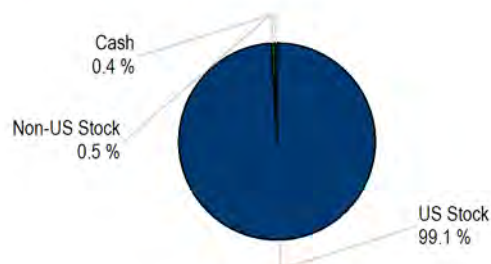
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to track the performance of the Standard & Poor's 500 Index that measures the investment return of large-capitalization stocks.

The fund employs an indexing investment approach designed to track the performance of the Standard & Poor's 500 Index, a widely recognized benchmark of U.S. stock market performance that is dominated by the stocks of large U.S. companies. The advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VFIAX
Morningstar Category	Large Blend
Average Market Cap (\$mm)	223,380.30
Net Assets (\$mm)	425,129.39
% Assets in Top 10 Holdings	30.40
Total Number of Holdings	508
Manager Name	Donald M. Butler
Manager Tenure	7
Expense Ratio	0.04%
Closed to New Investors	No

Top Holdings as of June 30, 2023

APPLE INC	7.69%
MICROSOFT CORP	6.79%
AMAZON.COM INC	3.12%
NVIDIA CORP	2.81%
ALPHABET INC CLASS A	1.91%
TESLA INC	1.89%
META PLATFORMS INC CLASS A	1.70%
ALPHABET INC CLASS C	1.66%
BERKSHIRE HATHAWAY INC CLASS B	1.63%
UNITEDHEALTH GROUP INC	1.20%

Fund Characteristics as of June 30, 2023

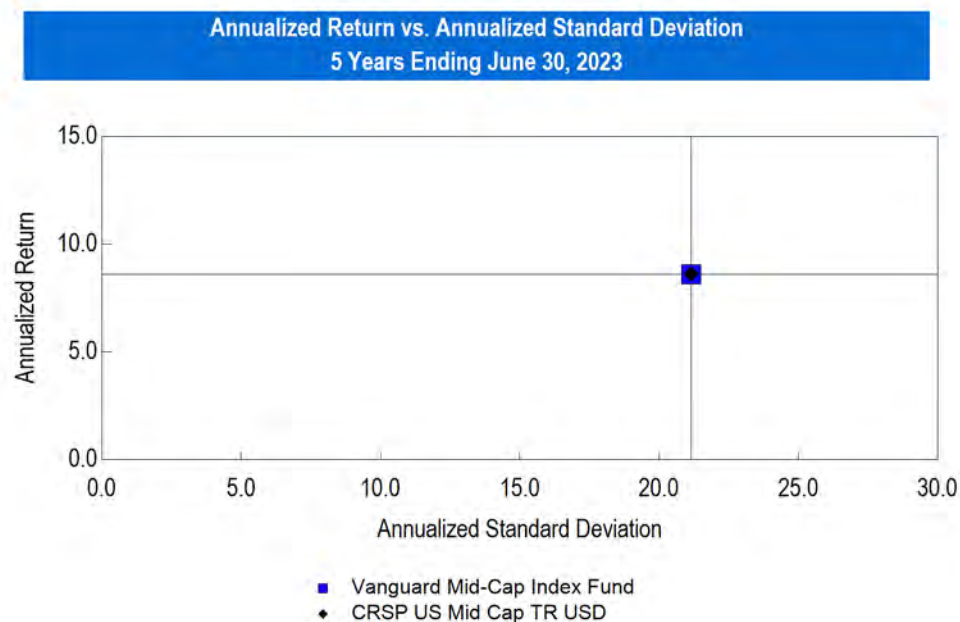
Versus S&P 500

Sharpe Ratio (3 Year)	0.73
Average Market Cap (\$mm)	223,380.30
Price/Earnings	19.93
Price/Book	3.72
Price/Sales	2.25
Price/Cash Flow	12.79
Dividend Yield	1.72
Number of Equity Holdings	505
R-Squared (3 Year)	1.00
Alpha (3 Year)	0.00%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	2.28%
COMMUNICATION SERVICES	8.40%
CONSUMER CYCLICAL	10.82%
CONSUMER DEFENSIVE	6.62%
ENERGY	4.11%
FINANCIAL SERVICES	11.95%
HEALTHCARE	13.49%
INDUSTRIALS	8.34%
REAL ESTATE	2.49%
TECHNOLOGY	28.93%
UTILITIES	2.58%

Account Information	
Account Name	Vanguard Mid-Cap Index Fund
Account Structure	Mutual Fund
Investment Style	Passive
Inception Date	1/01/17
Account Type	Domestic Equity
Benchmark	CRSP US Mid Cap TR USD
Universe	Mid-Cap Blend MStar MF



3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Mid-Cap Index Fund	12.0%	19.2%	100.0%	100.0%
CRSP US Mid Cap TR USD	12.0%	19.2%	100.0%	100.0%

5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Mid-Cap Index Fund	8.6%	21.1%	100.0%	100.0%
CRSP US Mid Cap TR USD	8.6%	21.2%	100.0%	100.0%

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Vanguard Mid-Cap Index Fund	4.8%	8.8%	13.7%	12.0%	8.6%	-18.7%	24.5%	18.2%	31.0%	-9.2%	9.9%	Jan-17
CRSP US Mid Cap TR USD	4.8%	8.8%	13.7%	12.0%	8.6%	-18.7%	24.5%	18.2%	31.1%	-9.2%	9.9%	Jan-17

Note: Returns are net of fees.

Vanguard Mid-Cap Index Fund

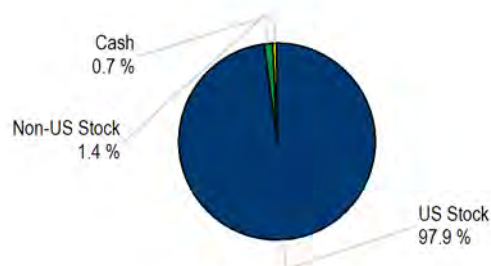
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to track the performance of the CRSP US Mid Cap Index that measures the investment return of mid-capitalization stocks.

The fund employs an indexing investment approach designed to track the performance of the CRSP US Mid Cap Index, a broadly diversified index of stocks of mid-size U.S. companies. The advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VIMAX
Morningstar Category	Mid-Cap Blend
Average Market Cap (\$mm)	24,880.42
Net Assets (\$mm)	55,011.79
% Assets in Top 10 Holdings	7.26
Total Number of Holdings	345
Manager Name	Donald M. Butler
Manager Tenure	25
Expense Ratio	0.05%
Closed to New Investors	No

Top Holdings as of June 30, 2023

AMPHENOL CORP CLASS A	0.79%
DEXCOM INC	0.78%
MICROCHIP TECHNOLOGY INC	0.77%
MOTOROLA SOLUTIONS INC	0.77%
ARTHUR J. GALLAGHER & CO	0.74%
TRANSDIGM GROUP INC	0.73%
PACCAR INC	0.69%
CINTAS CORP	0.67%
CARRIER GLOBAL CORP ORDINARY SHARES	0.65%
IQVIA HOLDINGS INC	0.65%

Fund Characteristics as of June 30, 2023

Versus CRSP US Mid Cap TR USD

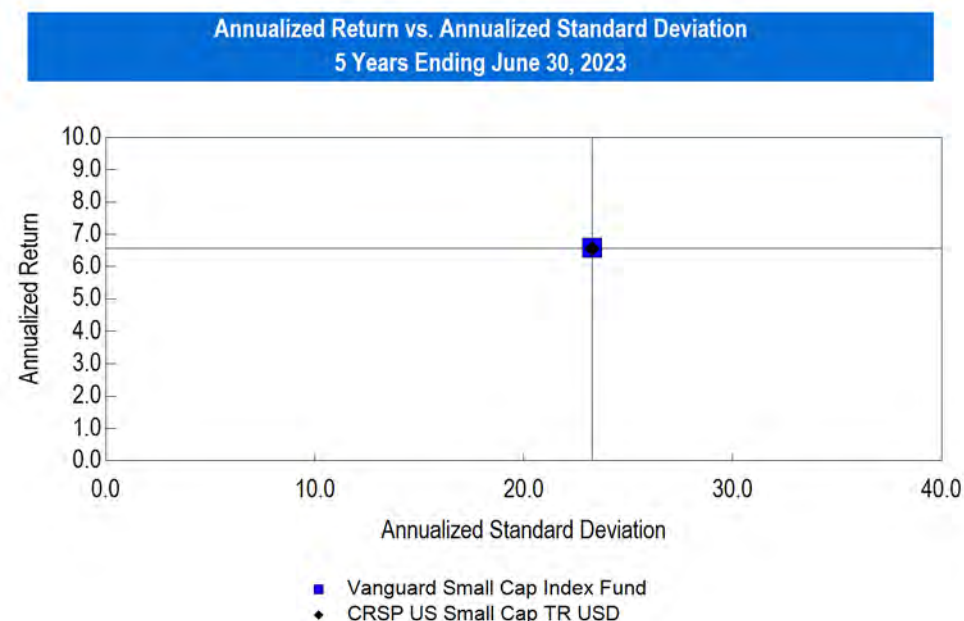
Sharpe Ratio (3 Year)	0.56
Average Market Cap (\$mm)	24,880.42
Price/Earnings	17.85
Price/Book	2.65
Price/Sales	1.51
Price/Cash Flow	9.62
Dividend Yield	1.92
Number of Equity Holdings	342
R-Squared (3 Year)	1.00
Alpha (3 Year)	0.00%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.87%
COMMUNICATION SERVICES	3.93%
CONSUMER CYCLICAL	9.61%
CONSUMER DEFENSIVE	4.15%
ENERGY	4.37%
FINANCIAL SERVICES	11.64%
HEALTHCARE	12.26%
INDUSTRIALS	15.62%
REAL ESTATE	8.49%
TECHNOLOGY	18.38%
UTILITIES	6.68%

Account Information	
Account Name	Vanguard Small Cap Index Fund
Account Structure	Mutual Fund
Investment Style	Passive
Inception Date	1/01/17
Account Type	Domestic Equity
Benchmark	CRSP US Small Cap TR USD
Universe	Small Blend MStar MF

3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Small Cap Index Fund	12.5%	20.6%	100.0%	99.9%
CRSP US Small Cap TR USD	12.5%	20.6%	100.0%	100.0%



5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Small Cap Index Fund	6.6%	23.3%	100.1%	100.0%
CRSP US Small Cap TR USD	6.6%	23.3%	100.0%	100.0%

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Vanguard Small Cap Index Fund	5.3%	9.3%	14.9%	12.5%	6.6%	-17.6%	17.7%	19.1%	27.4%	-9.3%	8.5%	Jan-17
CRSP US Small Cap TR USD	5.3%	9.2%	14.8%	12.5%	6.6%	-17.6%	17.7%	19.1%	27.3%	-9.3%	8.4%	Jan-17

Note: Returns are net of fees.

Vanguard Small Cap Index Fund

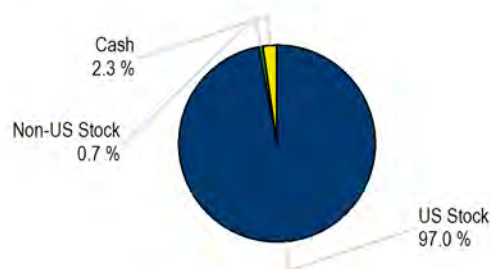
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to track the performance of the CRSP US Small Cap Index that measures the investment return of small-capitalization stocks.

The fund employs an indexing investment approach designed to track the performance of the CRSP US Small Cap Index, a broadly diversified index of stocks of small U.S. companies. The advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VSMAX
Morningstar Category	Small Blend
Average Market Cap (\$mm)	5,422.39
Net Assets (\$mm)	48,485.92
% Assets in Top 10 Holdings	3.44
Total Number of Holdings	1,450
Manager Name	William A. Coleman
Manager Tenure	7
Expense Ratio	0.05%
Closed to New Investors	No

Top Holdings as of June 30, 2023

FAIR ISAAC CORP	0.40%
BUILDERS FIRSTSOURCE INC	0.36%
ATMOS ENERGY CORP	0.35%
EXACT SCIENCES CORP	0.35%
TARGA RESOURCES CORP	0.35%
ENTEGRIS INC	0.34%
IDEX CORP	0.33%
PTC INC	0.33%
RELIANCE STEEL & ALUMINUM CO	0.33%
BOOZ ALLEN HAMILTON HOLDING CORP CLASS A	0.30%

Fund Characteristics as of June 30, 2023

Versus CRSP US Small Cap TR USD

Sharpe Ratio (3 Year)	0.55
Average Market Cap (\$mm)	5,422.39
Price/Earnings	14.76
Price/Book	1.96
Price/Sales	1.10
Price/Cash Flow	6.88
Dividend Yield	1.85
Number of Equity Holdings	1,446
R-Squared (3 Year)	1.00
Alpha (3 Year)	0.00%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	4.30%
COMMUNICATION SERVICES	2.40%
CONSUMER CYCLICAL	13.15%
CONSUMER DEFENSIVE	4.06%
ENERGY	4.75%
FINANCIAL SERVICES	12.00%
HEALTHCARE	12.20%
INDUSTRIALS	19.82%
REAL ESTATE	8.33%
TECHNOLOGY	16.17%
UTILITIES	2.82%

Account Information

Account Name	Vanguard Developed Markets Index Fund Admiral
Account Structure	Mutual Fund
Investment Style	Passive
Inception Date	1/01/17
Account Type	International Equity
Benchmark	FTSE-Developed All Cap Ex U.S. Index
Universe	Foreign Large Blend MStar MF

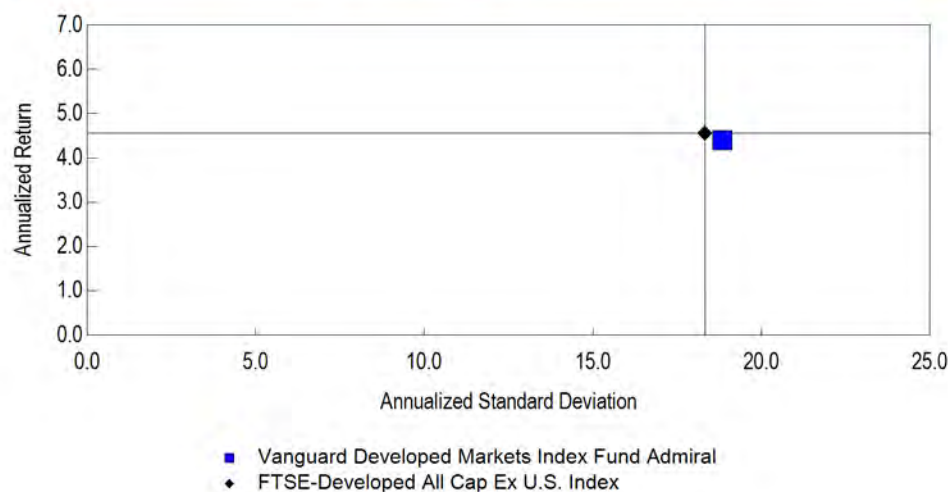
3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Developed Markets Index Fund Admiral	9.0%	18.9%	105.5%	104.6%
FTSE-Developed All Cap Ex U.S. Index	9.3%	18.3%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Developed Markets Index Fund Admiral	4.4%	18.8%	106.3%	102.5%
FTSE-Developed All Cap Ex U.S. Index	4.6%	18.3%	100.0%	100.0%

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



Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Vanguard Developed Markets Index Fund Admiral	3.1%	11.1%	16.5%	9.0%	4.4%	-15.3%	11.4%	10.3%	22.0%	-14.5%	6.7%	Jan-17
FTSE-Developed All Cap Ex U.S. Index	3.1%	11.1%	16.9%	9.3%	4.6%	-15.3%	11.9%	10.3%	22.7%	-14.5%	6.9%	Jan-17

Note: Returns are net of fees.

Vanguard Developed Markets Index Fund Admiral

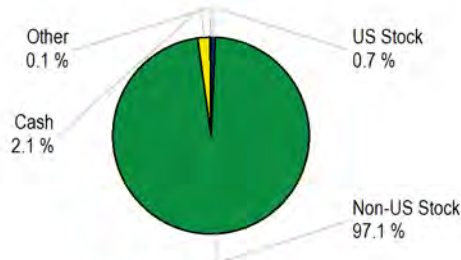
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to track the performance of the FTSE Developed All Cap ex US Index.

The fund employs an indexing investment approach designed to track the performance of the FTSE Developed All Cap ex US Index, a market-capitalization-weighted index that is made up of approximately 4,006 common stocks of large-, mid-, and small-cap companies located in Canada and the major markets of Europe and the Pacific region. The Advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VTMGX
Morningstar Category	Foreign Large Blend
Average Market Cap (\$mm)	30,164.88
Net Assets (\$mm)	24,828.83
% Assets in Top 10 Holdings	11.10
Total Number of Holdings	4,052
Manager Name	Christine D. Franquin
Manager Tenure	10
Expense Ratio	0.07%
Closed to New Investors	No

Top Holdings as of June 30, 2023

NESTLE SA	1.50%
ASML HOLDING NV	1.34%
SAMSUNG ELECTRONICS CO LTD	1.22%
NOVO NORDISK A/S CLASS B	1.18%
LVMH MOET HENNESSY LOUIS VUITTON SE	1.09%
ASTRAZENECA PLC	0.99%
ROCHE HOLDING AG	0.99%
NOVARTIS AG REGISTERED SHARES	0.95%
SHELL PLC	0.95%
TOYOTA MOTOR CORP	0.90%

Fund Characteristics as of June 30, 2023

Versus FTSE-Developed All Cap Ex U.S. Index

Sharpe Ratio (3 Year)	0.41
Average Market Cap (\$mm)	30,164.88
Price/Earnings	13.12
Price/Book	1.49
Price/Sales	1.03
Price/Cash Flow	6.70
Dividend Yield	3.61
Number of Equity Holdings	4,024
R-Squared (3 Year)	0.98
Alpha (3 Year)	-0.04%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	7.79%
COMMUNICATION SERVICES	3.97%
CONSUMER CYCLICAL	11.20%
CONSUMER DEFENSIVE	8.28%
ENERGY	5.22%
FINANCIAL SERVICES	18.21%
HEALTHCARE	10.90%
INDUSTRIALS	17.13%
REAL ESTATE	3.27%
TECHNOLOGY	10.96%
UTILITIES	3.07%

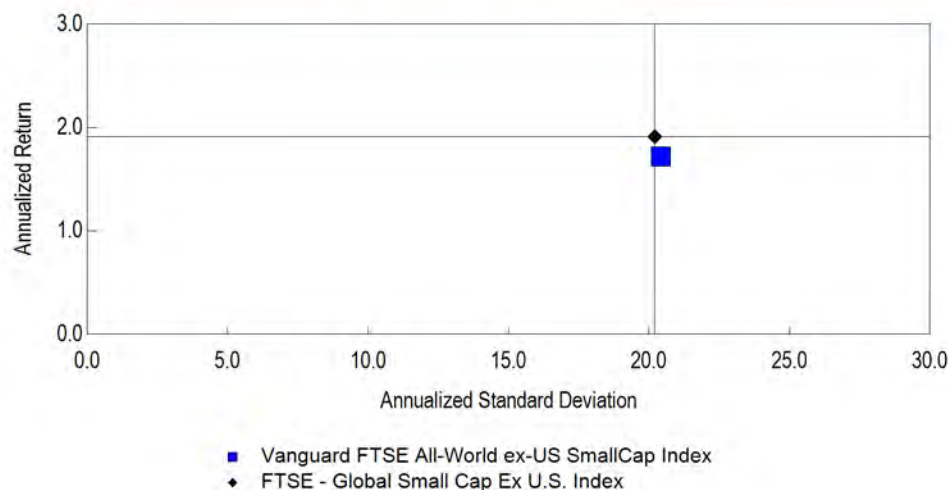
Account Information

Account Name	Vanguard FTSE All-World ex-US SmallCap Index
Account Structure	Mutual Fund
Investment Style	Passive
Inception Date	10/01/18
Account Type	International Equity
Benchmark	FTSE - Global Small Cap Ex U.S. Index
Universe	Foreign Small/Mid Blend Mstar MF

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard FTSE All-World ex-US SmallCap Index	7.1%	18.5%	101.5%	102.5%
FTSE - Global Small Cap Ex U.S. Index	7.6%	18.2%	100.0%	100.0%

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



5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard FTSE All-World ex-US SmallCap Index	1.7%	20.4%	102.8%	101.2%
FTSE - Global Small Cap Ex U.S. Index	1.9%	20.2%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Vanguard FTSE All-World ex-US SmallCap Index	1.9%	7.9%	10.0%	7.1%	1.7%	-21.3%	12.7%	11.9%	21.7%	-18.5%	2.3%	Oct-18
FTSE - Global Small Cap Ex U.S. Index	2.0%	7.9%	10.6%	7.6%	1.9%	-21.2%	13.4%	11.8%	22.1%	-18.6%	2.5%	Oct-18

Note: Returns are net of fees.

Vanguard FTSE All-World ex-US SmallCap Index

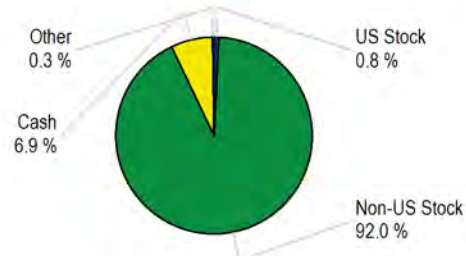
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to track the performance of a benchmark index that measures the investment return of stocks of international small-cap companies.

The fund employs an indexing investment approach designed to track the performance of the FTSE Global Small Cap ex US Index. The advisor attempts to sample the target index by investing all, or substantially all, of its assets in common stocks in the index and by holding a representative sample of securities that resembles the full index in terms of key risk factors and other characteristics.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VFSAX
Morningstar Category	Foreign Small/Mid Blend
Average Market Cap (\$mm)	1,716.22
Net Assets (\$mm)	1,374.71
% Assets in Top 10 Holdings	3.87
Total Number of Holdings	4,298
Manager Name	Jeffrey D. Miller
Manager Tenure	8
Expense Ratio	0.16%
Closed to New Investors	No

Top Holdings as of June 30, 2023

WSP GLOBAL INC	0.54%
CAMECO CORP	0.47%
FIRST QUANTUM MINERALS LTD	0.46%
EMERA INC	0.39%
OPEN TEXT CORP	0.39%
ECOPRO CO LTD	0.38%
RB GLOBAL INC	0.38%
TFI INTERNATIONAL INC	0.33%
ARC RESOURCES LTD	0.29%
GFL ENVIRONMENTAL INC	0.27%

Fund Characteristics as of June 30, 2023

Versus FTSE - Global Small Cap Ex U.S. Index

Sharpe Ratio (3 Year)	0.32
Average Market Cap (\$mm)	1,716.22
Price/Earnings	12.02
Price/Book	1.26
Price/Sales	0.77
Price/Cash Flow	5.95
Dividend Yield	3.62
Number of Equity Holdings	4,224
R-Squared (3 Year)	0.99
Alpha (3 Year)	-0.04%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	11.02%
COMMUNICATION SERVICES	3.04%
CONSUMER CYCLICAL	12.45%
CONSUMER DEFENSIVE	4.06%
ENERGY	4.41%
FINANCIAL SERVICES	10.24%
HEALTHCARE	6.99%
INDUSTRIALS	20.42%
REAL ESTATE	8.95%
TECHNOLOGY	14.92%
UTILITIES	3.49%

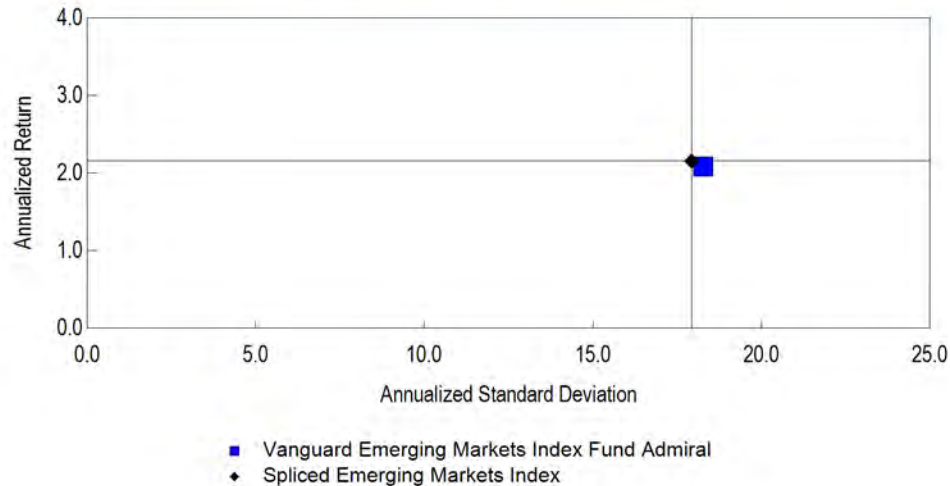
Account Information

Account Name	Vanguard Emerging Markets Index Fund Admiral
Account Structure	Mutual Fund
Investment Style	Passive
Inception Date	8/31/21
Account Type	International Equity
Benchmark	Spliced Emerging Markets Index
Universe	Diversified Emerging Mkts MStar MF

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Emerging Markets Index Fund Admiral	3.4%	16.6%	98.8%	101.0%
Spliced Emerging Markets Index	3.7%	16.4%	100.0%	100.0%

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



5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Emerging Markets Index Fund Admiral	2.1%	18.3%	101.4%	100.9%
Spliced Emerging Markets Index	2.2%	17.9%	100.0%	100.0%

Calendar Years

	2023 Q2 Rank		YTD Rank		1 Yr Rank		3 Yrs Rank		5 Yrs Rank		2022 Rank		2021 Rank		2020 Rank		2019 Rank		2018 Rank		Inception	Inception Date
Vanguard Emerging Markets Index Fund Admiral	1.1%	68	4.7%	83	1.2%	82	3.4%	43	2.1%	42	-17.8%	26	0.9%	38	15.2%	67	20.3%	51	-14.6%	28	-9.7%	Aug-21
Spliced Emerging Markets Index	1.1%	70	4.2%	87	1.5%	78	3.7%	40	2.2%	39	-17.6%	24	1.5%	34	15.5%	64	20.4%	50	-14.8%	31	-9.9%	Aug-21

Note: Returns are net of fees.

Vanguard Emerging Markets Index Fund Admiral

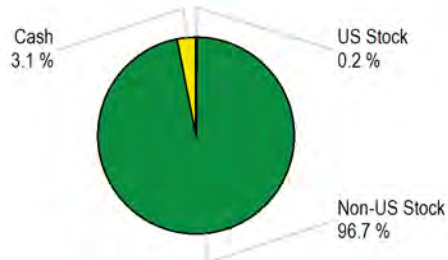
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to track the performance of a benchmark index that measures the investment return of stocks issued by companies located in emerging market countries.

The fund employs an indexing investment approach designed to track the performance of the FTSE Emerging Markets All Cap China A Inclusion Index. It invests by sampling the index, meaning that it holds a broadly diversified collection of securities that, in the aggregate, approximates the index in terms of key characteristics.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VEMAX
Morningstar Category	Diversified Emerging Mkts
Average Market Cap (\$mm)	20,755.76
Net Assets (\$mm)	15,076.44
% Assets in Top 10 Holdings	17.92
Total Number of Holdings	4,774
Manager Name	Michael Perre
Manager Tenure	15
Expense Ratio	0.14%
Closed to New Investors	No

Top Holdings as of June 30, 2023

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	5.25%
TENCENT HOLDINGS LTD	3.63%
ALIBABA GROUP HOLDING LTD ORDINARY SHARES	2.44%
RELIANCE INDUSTRIES LTD	1.42%
MEITUAN CLASS B	1.15%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD ADR	0.88%
HOUSING DEVELOPMENT FINANCE CORP LTD	0.83%
CHINA CONSTRUCTION BANK CORP CLASS H	0.82%
INFOSYS LTD	0.78%
VALE SA	0.71%

Fund Characteristics as of June 30, 2023

Versus Spliced Emerging Markets Index

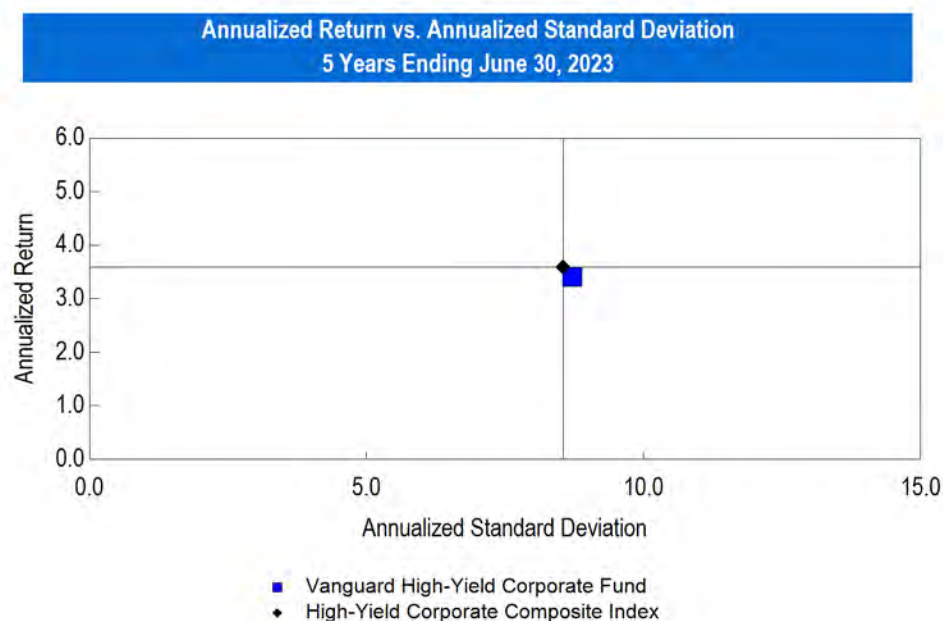
Sharpe Ratio (3 Year)	0.13
Average Market Cap (\$mm)	20,755.76
Price/Earnings	12.56
Price/Book	1.60
Price/Sales	1.19
Price/Cash Flow	6.80
Dividend Yield	3.90
Number of Equity Holdings	4,698
R-Squared (3 Year)	0.98
Alpha (3 Year)	-0.02%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	8.68%
COMMUNICATION SERVICES	9.55%
CONSUMER CYCLICAL	12.98%
CONSUMER DEFENSIVE	6.41%
ENERGY	5.38%
FINANCIAL SERVICES	20.89%
HEALTHCARE	4.57%
INDUSTRIALS	8.23%
REAL ESTATE	2.80%
TECHNOLOGY	17.17%
UTILITIES	3.33%

Account Information	
Account Name	Vanguard High-Yield Corporate Fund
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	10/01/18
Account Type	Fixed Income
Benchmark	High-Yield Corporate Composite Index
Universe	

3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard High-Yield Corporate Fund	2.5%	8.2%	99.8%	99.4%
High-Yield Corporate Composite Index	2.4%	8.0%	100.0%	100.0%



5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard High-Yield Corporate Fund	3.4%	8.7%	100.3%	101.9%
High-Yield Corporate Composite Index	3.6%	8.6%	100.0%	100.0%

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Vanguard High-Yield Corporate Fund	1.1%	4.3%	8.5%	2.5%	3.4%	-9.0%	3.8%	5.4%	15.9%	-2.9%	3.0%	Oct-18
High-Yield Corporate Composite Index	1.2%	4.6%	8.4%	2.4%	3.6%	-10.3%	4.4%	7.6%	14.6%	-1.7%	3.3%	Oct-18

Note: Returns are net of fees.

Vanguard High-Yield Corporate Fund

Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide a high level of current income.

The fund invests primarily in a diversified group of high-yielding, higher-risk corporate bonds-commonly known as "junk bonds"-with medium- and lower-range credit-quality ratings. It invests at least 80% of its assets in corporate bonds that are rated below Baa by Moody's Investors Service, Inc. (Moody's); have an equivalent rating by any other independent bond-rating agency; or, if unrated, are determined to be of comparable quality by the fund's advisor. The fund's high-yield bonds and loans mostly have short- and intermediate-term maturities.

Mutual Fund Allocation as of March 31, 2023



Portfolio Fund Information as of March 31, 2023

Ticker	VWEAX
Morningstar Category	High Yield Bond
Average Market Cap (\$mm)	
Net Assets (\$mm)	20,252.92
% Assets in Top 10 Holdings	7.58
Total Number of Holdings	790
Manager Name	Michael L. Hong
Manager Tenure	15
Expense Ratio	0.13%
Closed to New Investors	No

Top Holdings as of March 31, 2023

UNITED STATES TREASURY NOTES	1.12%
IMOLA MERGER CORP.	0.93%
HERC HOLDINGS INC	0.77%
UNITED STATES TREASURY NOTES	0.74%
MOZART DEBT MERGER SUBORDINATED INC.	0.69%
T-MOBILE US INC	0.68%
UNITED STATES TREASURY NOTES	0.68%
UNITED STATES TREASURY BILLS	0.67%
UNITED STATES TREASURY NOTES	0.67%
SS&C TECHNOLOGIES, INC.	0.62%

Fund Characteristics as of March 31, 2023

Versus High-Yield Corporate Composite Index

Sharpe Ratio (3 Year)	0.45
Average Duration	3.82
Average Coupon	
Average Effective Maturity	5.20
R-Squared (3 Year)	0.99
Alpha (3 Year)	-0.03%
Beta (3 Year)	0.99

Fixed Income Sectors as of March 31, 2023

GOVERNMENT	5.74%
MUNICIPAL	0.00%
CORPORATE	90.51%
SECURITIZED	0.09%
CASH & EQUIVALENTS	3.57%
DERIVATIVE	0.09%

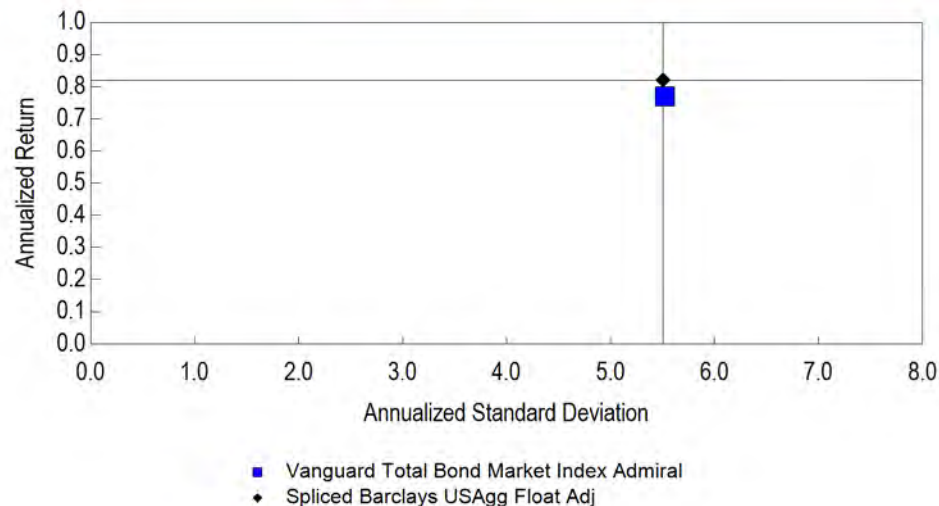
Account Information

Account Name	Vanguard Total Bond Market Index Admiral
Account Structure	Mutual Fund
Investment Style	Passive
Inception Date	1/01/17
Account Type	Fixed Income
Benchmark	Spliced Barclays USAgg Float Adj
Universe	

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Total Bond Market Index Admiral	-4.0%	6.2%	101.5%	101.2%
Spliced Barclays USAgg Float Adj	-4.0%	6.2%	100.0%	100.0%

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



5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Total Bond Market Index Admiral	0.8%	5.5%	99.8%	100.5%
Spliced Barclays USAgg Float Adj	0.8%	5.5%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Vanguard Total Bond Market Index Admiral	-0.9%	2.2%	-0.9%	-4.0%	0.8%	-13.2%	-1.7%	7.7%	8.7%	0.0%	0.9%	Jan-17
Spliced Barclays USAgg Float Adj	-0.9%	2.1%	-0.8%	-4.0%	0.8%	-13.1%	-1.6%	7.7%	8.9%	-0.1%	0.9%	Jan-17

Note: Returns are net of fees.

Vanguard Total Bond Market Index Admiral

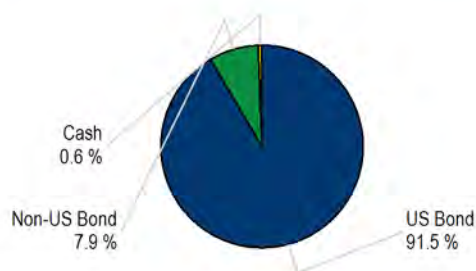
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to track the performance of the Bloomberg U.S. Aggregate Float Adjusted Index.

This index measures the performance of a wide spectrum of public, investment-grade, taxable, fixed income securities in the United States-including government, corporate, and international dollar-denominated bonds, as well as mortgage-backed and asset-backed securities-all with maturities of more than 1 year. All of the fund's investments will be selected through the sampling process, and at least 80% of its assets will be invested in bonds held in the index.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VBTLX
Morningstar Category	Intermediate Core Bond
Average Market Cap (\$mm)	
Net Assets (\$mm)	97,335.33
% Assets in Top 10 Holdings	4.65
Total Number of Holdings	17,835
Manager Name	Joshua C. Barrickman
Manager Tenure	10
Expense Ratio	0.05%
Closed to New Investors	No

Top Holdings as of June 30, 2023

UNITED STATES TREASURY NOTES	0.59%
UNITED STATES TREASURY NOTES	0.49%
UNITED STATES TREASURY NOTES	0.48%
UNITED STATES TREASURY NOTES	0.47%
UNITED STATES TREASURY NOTES	0.45%
UNITED STATES TREASURY NOTES	0.41%
UNITED STATES TREASURY NOTES	0.40%

Fund Characteristics as of June 30, 2023

Versus Spliced Barclays USAgg Float Adj

Sharpe Ratio (3 Year)	-0.85
Average Duration	6.56
Average Coupon	2.99%
Average Effective Maturity	8.90
R-Squared (3 Year)	1.00
Alpha (3 Year)	0.00%
Beta (3 Year)	1.01

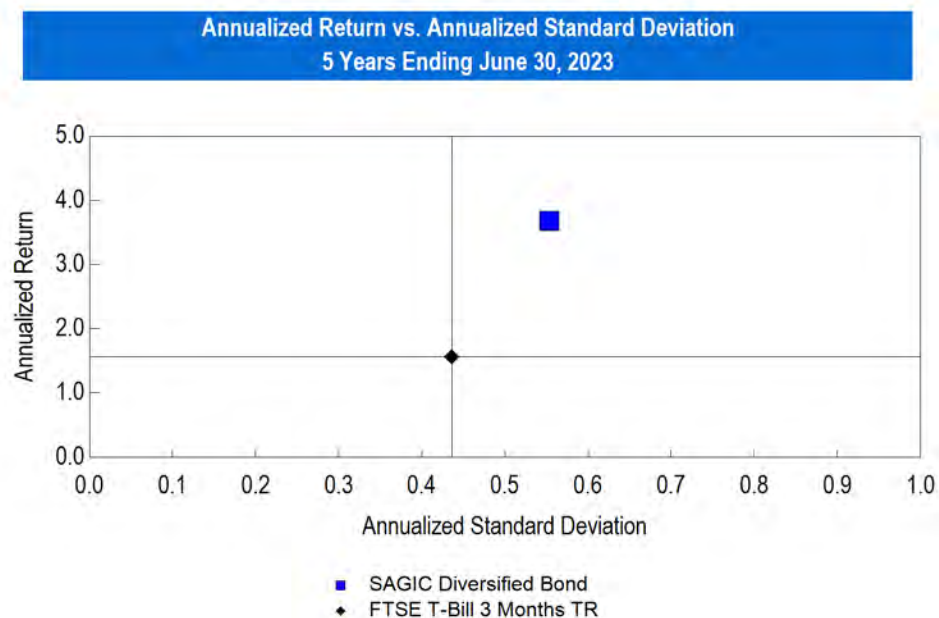
Fixed Income Sectors as of June 30, 2023

GOVERNMENT	49.33%
MUNICIPAL	0.65%
CORPORATE	26.80%
SECURITIZED	22.61%
CASH & EQUIVALENTS	0.61%
DERIVATIVE	0.00%

Account Information	
Account Name	SAGIC Diversified Bond
Account Structure	Separate Account
Investment Style	Active
Inception Date	1/01/16
Account Type	Stable Value
Benchmark	FTSE T-Bill 3 Months TR
Universe	

3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
SAGIC Diversified Bond	3.5%	0.1%	272.5%	--
FTSE T-Bill 3 Months TR	1.3%	0.5%	100.0%	--

5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
SAGIC Diversified Bond	3.7%	0.6%	245.0%	--
FTSE T-Bill 3 Months TR	1.6%	0.4%	100.0%	--



	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
SAGIC Diversified Bond	1.0%	1.9%	3.8%	3.5%	3.7%	3.4%	3.3%	3.8%	3.8%	4.1%	3.5%	Jan-16
FTSE T-Bill 3 Months TR	1.3%	2.4%	3.7%	1.3%	1.6%	1.5%	0.0%	0.6%	2.3%	1.9%	1.3%	Jan-16

Note: Returns are net of fees.

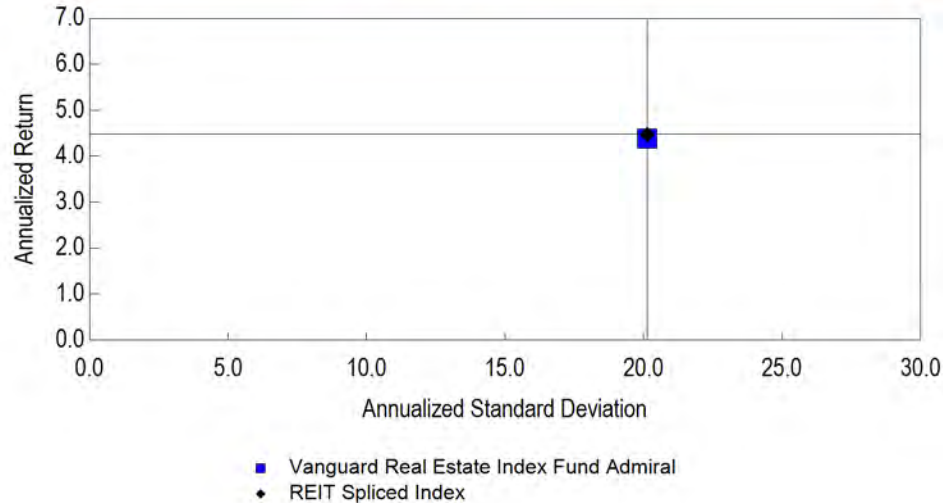
Account Information

Account Name	Vanguard Real Estate Index Fund Admiral
Account Structure	Mutual Fund
Investment Style	Passive
Inception Date	8/01/21
Account Type	Real Estate
Benchmark	REIT Spliced Index
Universe	

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Real Estate Index Fund Admiral	5.9%	20.2%	99.7%	100.1%
REIT Spliced Index	6.0%	20.2%	100.0%	100.0%

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



5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Real Estate Index Fund Admiral	4.4%	20.1%	99.7%	100.1%
REIT Spliced Index	4.5%	20.1%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Vanguard Real Estate Index Fund Admiral	1.6%	3.5%	-3.9%	5.9%	4.4%	-26.2%	40.4%	-4.7%	28.9%	-5.9%	-8.4%	Aug-21
REIT Spliced Index	1.7%	3.6%	-3.8%	6.0%	4.5%	-26.1%	40.6%	-4.6%	29.0%	-5.9%	-8.3%	Aug-21

Note: Returns are net of fees.

Vanguard Real Estate Index Fund Admiral

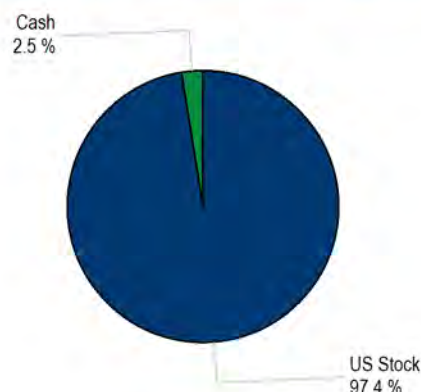
Investment Performance Report as of June 30, 2023

Description:

The investment seeks to provide a high level of income and moderate long-term capital appreciation by tracking the performance of the MSCI US Investable Market Real Estate 25/50 Index that measures the performance of publicly traded equity REITs and other real estate-related investments.

The advisor attempts to track the index by investing all, or substantially all, of its assets-either directly or indirectly through a wholly owned subsidiary, which is itself a registered investment company-in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index. The fund is non-diversified.

Mutual Fund Allocation as of June 30, 2023



Portfolio Fund Information as of June 30, 2023

Ticker	VGSLX
Morningstar Category	Real Estate
Average Market Cap (\$mm)	21,514.51
Net Assets (\$mm)	20,172.81
% Assets in Top 10 Holdings	46.90
Total Number of Holdings	169
Manager Name	Gerard C. O'Reilly
Manager Tenure	27
Expense Ratio	0.12%
Closed to New Investors	No

Top Holdings as of June 30, 2023

VANGUARD REAL ESTATE II INDEX	12.52%
PROLOGIS INC	7.44%
AMERICAN TOWER CORP	5.93%
EQUINIX INC	4.81%
CROWN CASTLE INC	3.24%
PUBLIC STORAGE	3.03%
REALTY INCOME CORP	2.59%
WELLTOWER INC	2.54%
SIMON PROPERTY GROUP INC	2.40%
COSTAR GROUP INC	2.38%

Fund Characteristics as of June 30, 2023

Versus REIT Spliced Index

Sharpe Ratio (3 Year)	0.23
Average Market Cap (\$mm)	21,514.51
Price/Earnings	32.87
Price/Book	2.14
Price/Sales	4.20
Price/Cash Flow	12.47
Dividend Yield	4.06
Number of Equity Holdings	165
R-Squared (3 Year)	1.00
Alpha (3 Year)	-0.01%

Sector Allocation as of June 30, 2023

BASIC MATERIALS	0.00%
COMMUNICATION SERVICES	0.81%
CONSUMER CYCLICAL	0.00%
CONSUMER DEFENSIVE	0.00%
ENERGY	0.00%
FINANCIAL SERVICES	0.00%
HEALTHCARE	0.00%
INDUSTRIALS	0.00%
REAL ESTATE	99.11%
TECHNOLOGY	0.08%
UTILITIES	0.00%

Footnotes

- Select overseas (MFS/Harris) funds were transferred to EuroPacific Growth (American) on June 18, 2008. Select Diversified Value (Benstein) closed on July 1, 2009.
- NFJ Small Cap Value (Allianz) was funded on June 1, 2009.
- Small Cap Growth (Van Kampen) was funded on June 1, 2009.
- Large Cap Value (Eaton Vance) was funded on June 1, 2009.
- Balanced (Ultra Aggressive Journey) was funded on October 1, 2009.
- On July 15, 2010 the fund invested in the following funds:

Adv Dow Jones Target Today (Wells Fargo)	Dow Jones Target 2030
Dow Jones Target 2010	Dow Jones Target 2035
Dow Jones Target 2015	Dow Jones Target 2040
Dow Jones Target 2020	Dow Jones Target 2045
Dow Jones Target 2025	Dow Jones Target 2050
- The above Dow Jones Target funds replaced the Journey Funds previously held by the fund.
- Small Cap Growth (Invesco Van Kampen) name changed to Small Cap Discovery (Invesco) SIA-RD for the 3Q 2012 report.
- Domestic equity (Select Sands/Delaware Growth Opportunities Fund), domestic equity (New Horizons - T. Rowe Price), domestic equity (Invesco Comstock A Load Waived), and domestic equity (Wells Fargo Advantage Special Mid Cap Value) were funded November 1, 2013.
- Investment grade fixed income (MetWest Total Return Bond Fund) replaced investment grade fixed income (Select PIMCO Total Return) on October 1, 2014.
- Investment grade fixed income (Stable Return II) closed on June 1, 2015 and was replaced with investment grade fixed income (Blended Stable Value Fund).
- During 1Q 2016, all assets from investment grade fixed income (Blended Stable Value) were transferred to investment grade fixed income (SAGIC Diversified Bond).
- Benchmark indexes listed in report were identified by the recordkeeper, Mass Mutual and the fund company prospectus.
- Values, flows, and returns for all commingled funds, mutual funds, partnerships, and all other alternative assets are provided by the firm managing the assets and cannot be independently verified by IPS.
- The net of fees returns in this report are estimated. Fees do not include: The investment consulting fee paid to IPS, custodian fees, or other administrative costs.
- The information contained in this report is propriety and confidential information. You are hereby notified that any dissemination, distribution, or copying of this document is strictly prohibited.

- During 1Q 2017, the fund invested in the following funds:

Vanguard Target Retirement 2010 Fund	Vanguard Target Retirement 2040 Fund
Vanguard Target Retirement 2015 Fund	Vanguard Target Retirement 2045 Fund
Vanguard Target Retirement 2020 Fund	Vanguard Target Retirement 2050 Fund
Vanguard Target Retirement 2025 Fund	Vanguard Target Retirement 2055 Fund
Vanguard Target Retirement 2030 Fund	Vanguard Target Retirement 2060 Fund
Vanguard Target Retirement 2035 Fund	Vanguard Target Retirement Income Fund
- The above Vanguard Target Retirement Funds replaced the Dow Jones funds previously held by the fund.
- During 1Q 2017, the following funds were removed from investment:

MM S&P 500 Index Fund	Invesco Comstock A Load Waived Fund
Select Sands/Delaware Growth Opportunities Fund	Wells Fargo Advantage Spec Md Cap Val Inv Fund
Sel Mid Cap Growth II Fund	NFJ Small Cap Value Fund
New Horizons - T. Rowe Price Fund	EuroPacific Growth Fund
- The above funds were replaced with the following Vanguard Funds:

Total Bond Market Index Fund	Small Cap Index Fund
500 Index Fund	Developed Markets Index Fund Admiral
Mid-Cap Index Fund	FTSE All-World ex-US Index Fund
- On July 21, 2017, balanced (Vanguard Target Retirement 2010) merged into balanced (Vanguard Target Retirement Income Fund).
- On October 1, 2018, high yield fixed income (Vanguard High-Yield Corporate Fund) was added to the fund.
- On October 1, 2018, international equity (Vanguard FTSE All-World ex-US SmallCap Index) was added to the fund.
- Effective June 26, 2019, international equity (Vanguard Index Funds) merged with international equity (Admiral Share Class), the merger had no impact on current values.
- Effective August 16, 2021, international equity (Vanguard FTSE All-World ex-US Index Fund Admiral) was eliminated and all assets were merged with international equity (Vanguard Developed Markets Index Fund Admiral).
- Effective August 16, 2021, balanced (Vanguard Target Retirement 2065 - Institutional) was added to the fund.
- Effective August 16, 2021, emerging markets (Vanguard Emerging Markets Index Fund Admiral) was added to the fund.
- Effective August 16, 2021, real estate (Vanguard Real Estate Index Fund Admiral) was added to the fund.
- Effective August 16, 2021, all Vanguard Target Retirement Funds were converted to Institutional share class for fee savings.
- Effective February 11, 2022, the Vanguard Target Date Retirement Series implemented share class mergers in which the investment options Institutional Class shares became Investor Class shares. The merger had no impact on current values or the investment option's gross expense ratio.

- On July 8, 2022, target date funds (Vanguard Target Retirement 2015 - Investor) merged into target date funds (Vanguard Target Retirement Income Fund - Investor).
- On April 11, 2023, participant assets that were involved in error in the MassMutual US Govt Money Market Fund - Class R5 were transferred by the participant into domestic equity (Vanguard 500 Index Fund) and fixed income (Vanguard High-Yield Corporate Fund).

SECURE Act 2.0

The chart below is intended to outline the required provisions of The SECURE Act 2.0. Trustees should be aware of the effective dates and may want to work with counsel to enact any new Plan design changes accordingly.

Provision	Details	Effective Date
RMD penalties & corrections	Reduce the penalty for failing to take a minimum required distribution from 50% to 25%. If a correction is made within two years (subject to some limitations), the tax is further reduced to 10%.	1/1/2023
Required minimum distributions (RMDs) beginning age changes	Increases the age for required minimum distributions from 72 to 73 effective Jan. 1, 2023, and to 75 effective Jan. 1, 2033.	1/1/2023
Increase in force-out limit	Plans may cash out participants, involuntarily, with balances up to \$7,000. These balances must be rolled over to an IRA.	1/1/2024
In-plan Roth RMD	Eliminate the pre-death distribution requirement for in-plan Roth accounts.	1/1/2024
Catch-up Contributions – Roth requirements	Participants with prior year wages greater than \$145k (indexed to inflation) will only be able to make catch-up contributions with Roth accounts. Plans will need a Roth option.	1/1/2024
Increase in catch-up contribution limits	Individuals aged 60-63 may make catch-up contributions to the greater of \$10,000 or 150% of catch-up limit. This is indexed to inflation.	1/1/2025
Long-term, part-time employee eligible after 2 years	Long-Term Part-Time Employees, which are those who complete at least 500 hours of service in each of two consecutive 12-month periods, must be eligible to make elective deferrals.	1/1/2025
Annual paper benefit statement required	Participants may opt out of receiving paper statements in e-delivery is available.	1/1/2026

Glossary of Investment Terminology

Total Return	The annual return on an investment including appreciation, depreciation and income (interest, dividends, net operating income).
Alpha	The excess return (positive or negative) generated by active portfolio management and security selection, relative to a benchmark.
Beta	A historical measure of an investment's volatility relative to the market. The beta of the market is 1.0 (as represented by a benchmark such as the S&P 500 Index). A beta of greater than 1.0 indicates an investment with greater volatility than the benchmark. A beta of less than 1.0 indicates less volatility than the benchmark.
Standard Deviation	Standard deviation is a statistical measurement of the dispersion of a set of data from its mean. The more spread apart the data are, the greater the standard deviation.
Risk	For an investment portfolio, risk is typically defined as the volatility of the returns, as measured by calculating the standard deviation. The risk does not necessarily indicate the risk of loss, but does indicate the risk of inconsistent returns.
Capture Ratio	Calculates how well a manager performs in a rising or falling market as a percentage of a benchmark. In a rising market, a percentage of 100 or better is preferred, and indicates the manager exceeded the benchmark (upside capture ratio). In a falling market, a percentage of less than 100 is preferred, indicating that the manager lost less than the benchmark (downside capture ratio).
Correlation	A statistical measure of how two asset classes perform in relation to each other. Asset classes with a correlation of 1.0 have perfect positive correlation (exactly the same). Assets with perfect negative correlation of -1.0 will perform equally but in opposite directions.
Efficient Frontier	A series of portfolios with the maximum expected return for any level of risk, which is calculated based on assumptions of risk, return and correlation. These portfolios are shown graphically on a risk and return chart, and represent the most efficient tradeoff between risk and return.
Market Cap	The dollar value of a corporation, which is calculated by multiplying the share price and the number of outstanding shares.
Large Cap	Stocks which typically have a market capitalization of \$10 billion or higher.
Mid Cap	Stocks which typically have a market capitalization of \$2 to \$10 billion.
Small Cap	Stocks which typically have a market capitalization of \$2 billion or less.
Geometric Calculation	Geometric Calculations are used when determining an annualized investment return and tends to dampen the effect of very high or very low values. The result is a number that is smaller than (or equal to) the arithmetic average of the values.
Compound Annual Returns	Compound annual returns show the annual investment return, assuming the investment grew at a constant rate, and reflects the impact of the time in the calculation of an investment return.
Return/Risk Ratio	The return/risk ratio is the expected return of an investment divided by the expected standard deviation (risk). When comparing return/risk ratios a higher value is presumed to be better than a lower value

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EPIC

May 3-5, 2023

The following investment managers and providers attended and helped to defray the cost of IPS' annual conference EPIC. EPIC is an educational conference addressing various issues related to employee benefit plans. IPS does not give preferential treatment to investment managers or any other provider that pays to attend EPIC.

Amalgamated Bank of Chicago	GoldenTree Asset Management	Oaktree Capital Management
American Realty Advisors	Great Lakes Advisors	Old Glory Asset Management
Ares Management	Hamilton Lane Advisors	Partners Group
Aristotle	Hardman Johnston Global Advisors	Patriot Financial Partners
ASB Real Estate Investments	HPS Partners	PNC Capital Advisors
Atlanta Capital Management	Intercontinental Real Estate Corp.	Post Advisory Group
Barrow Hanley Global Investors	Invesco Advisers, Inc.	Principal Financial Group
BentallGreenOak	Janus Henderson Investors	Principal Life Insurance
BNY Mellon Asset Management (Mellon)	John Hancock	Raymond James Investment Management
Boston Partners Global Investors	JP Morgan Asset Management	Richmond Capital Mgmt
Boyd Watterson Asset Management	Kearney Capital LLC	Schroders Investment Management
Capital Group	Kelson Group	Segall Bryant & Hamill
Chartwell Investment Partners	Lazard Asset Management	Sierra Investment Partners
Christenson Investment Partners	Loomis, Sayles & Company	Smith Graham & Co.
Columbia Threadneedle Investments	Lord Abnett & Co.	State Street Global Advisors
Constitution Capital Equity Partners	LSV Asset Management	Stonepeak Partners
Corbin Capital Partners	Lyrical Asset Management	Ullico Investment Company
Earnest Partners	MacKay Shields	Vanguard
Empower	McMorgan & Company	Victory Capital Management
EnTrust Global	Manning & Napier	Vista Underwriting
Fidelity Investments	Manulife	Washington Capital Management
First Eagle Investment Mgmt.	Mesirow Private Equity	WEDGE Capital Management
Foundry Partners	National Investment Services	Wellington Management Company
Fred Alger Management	National Real Estate Investors	Westfield Capital Management
GAMCO Asset Management	Neuberger Berman	Westport Capital Partners
GCM Grosvenor	Northern Trust Asset Management	William Blair & Company
Glouston Capital Partners	Nuveen Investment Group	Xponance