

Butler County Employees Retirement Plan

Investment Performance Review
Period Ending March 31, 2024

MARINER

1st Quarter 2024 Market Environment

The Economy

- The US Federal Reserve (the Fed) held rates steady during the first quarter. However, domestic equities rallied on the prospect that the Fed could cut rates later in 2024. In its press release for the March meeting, the Fed stated that "In considering any adjustments to the target range for the federal funds rate, the Committee will carefully assess incoming data, the evolving outlook, and the balance of risks." In addition, the Fed will continue reducing its balance sheet as described in its previously announced plans.
- The Fed's prolonged pause in its rate-hiking cycle and the insertion of the word "any" in its December press release gave the market hope that the Fed may be ready to pivot in its stance and begin reducing rates to a less restrictive level in 2024. The Fed's published "Dot Plot" shared expectations of three quarter-point rate cuts during the year, which would be the first rate cut since the COVID pandemic in 2020.
- Growth in the US labor market continued in March, as nonfarm payrolls increased by 303,000 and unemployment held steady at 3.8%. Federal Reserve Chair Jerome Powell stated, "Strong hiring in and of itself would not be a reason to hold off on rate cuts," adding that the job market is not a primary cause for concern around inflation. Powell added "an unexpected weakening in the labor market could also warrant a policy response."

Equity (Domestic and International)

- US equities moved broadly higher during the first quarter based on expectations of a more favorable interest rate environment in the coming year. The S&P 500 Index rose 10.6% for the quarter.
- International stocks experienced robust growth to begin the year, albeit muted by a strengthening US Dollar (USD). USD performance lagged local currency (LCL) performance in most regions for the quarter, though both currency readings were positive.
- GDP growth across regions remains mixed as many regions are dealing with local headwinds and tailwinds as much of the world continues to navigate sticky inflation with varying degrees of success. Conflicts abroad have dragged on performance, but as we have seen with the Russia-Ukraine conflict, market conditions will typically normalize once the broader impact has been reasonably assessed.

Fixed Income

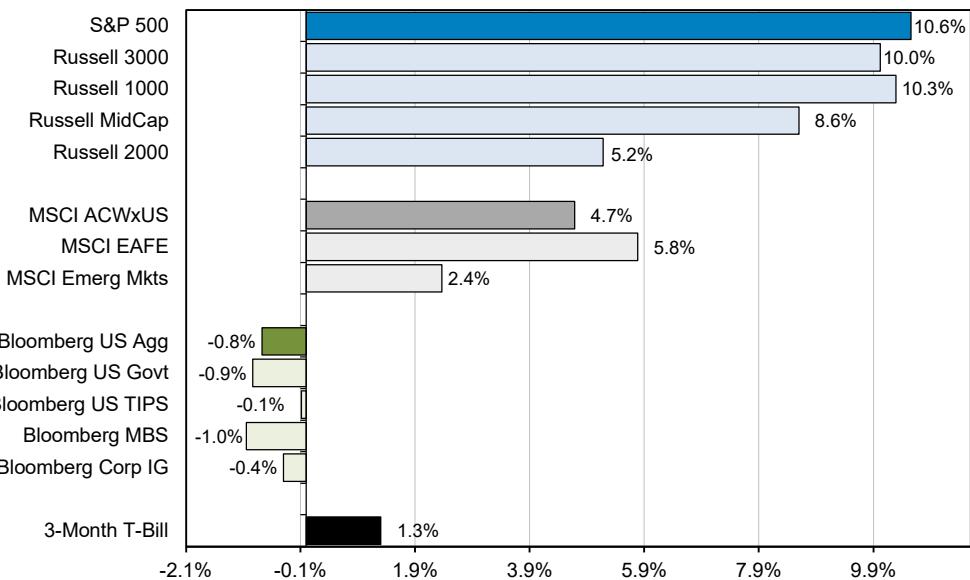
- While sticky inflation numbers and a robust job market likely prompted the Fed to keep the fed funds rate unchanged during the quarter, this lack of action also tempered expectations for potential rate cuts in 2024. Fixed-income markets fell in March (yield rose) on the belief that rates could be higher for longer.
- High-yield bonds outperformed investment-grade issues for the quarter, largely due to narrowing credit spreads and higher coupons. Although the high-yield bond benchmark's duration is almost half of the US Aggregate Bond index's duration, the high-yield index edged out the bellwether bond benchmark due to a relatively stable yield curve and the aforementioned narrowing credit spreads.
- Global bonds lagged the domestic bond market with the US Aggregate Index beating the Global Aggregate ex-US Index by 2.4%. This broke the two indexes' tie in 2023 and left global bonds 2.4% behind the domestic bond market for the full year.

Market Themes

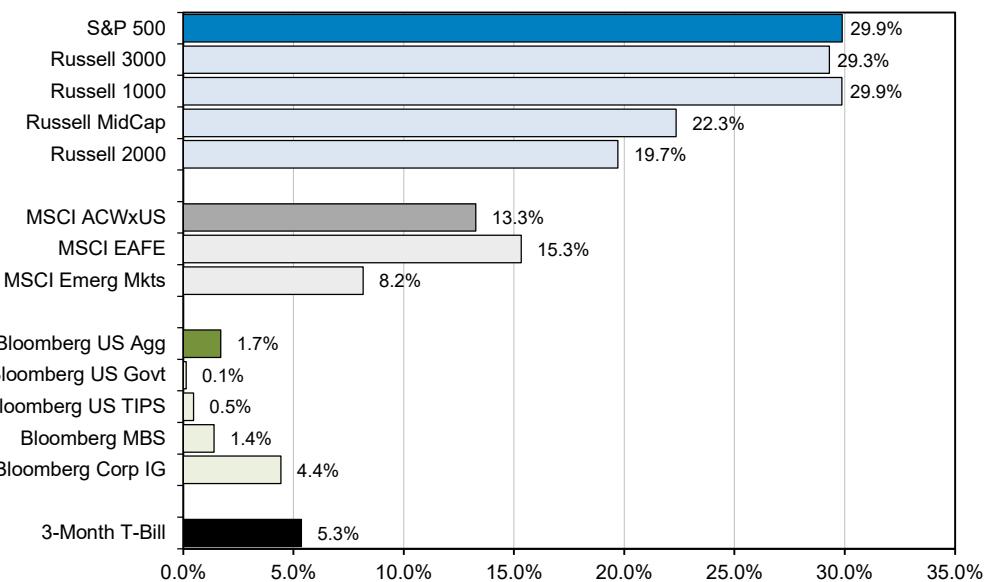
- 2024 opened with strong results in domestic and international equity markets, continuing what was a robust 2023. Growth sectors continued to outpace value sectors but by a narrower margin than 2023, showcasing increased breadth across many markets.
- Central banks remained vigilant in their stances to bring inflation under control. While inflation readings remain stubbornly elevated, signs of stable-to-cooling price pressures have shown up in most regions around the world.
- Policy rates remained relatively stable across most developed markets as central banks continued their tight policy stance. However, there are expectations of looser monetary policy to take hold as 2024 progresses.
- Ongoing military conflicts coupled with economic uncertainty around the globe continue to act as headwinds in international markets. While global disruptions from the Russia-Ukraine conflict seemed to subside, the proxy war in the Middle East has spread to other countries in the region and unsettled shipping channels globally.

- Domestic equity markets carried their momentum from late 2023 into the first quarter of 2024. Economic indicators continued to signal improving conditions for growth and softening inflation, resulting in an ongoing tailwind for risk assets. For the period, the S&P 500 large-cap benchmark returned 10.6% versus 8.6% for the Russell Mid Cap Index and 5.2% for the Russell 2000 small-cap index.
- International developed and emerging market equities also posted solid results. European markets continue to face geopolitical risks related to the conflict in Ukraine, the Middle East is grappling with a proxy war that has spread beyond Israel and Palestine, and Asia is feeling contagion effects from China's economic uncertainty. Despite the uncertainty, the developed market MSCI EAFE Index returned 5.8% for the quarter, while the MSCI Emerging Markets Index advanced 2.4%.
- Most broad fixed income indexes fell slightly during the first quarter of 2024. While market participants were generally optimistic about the possibility of a Fed rate cut during the first half of the year, sticky inflation pushed out these expectations and caused markets to re-think the timing of 2024's potential rate cuts. The Bloomberg (BB) US Aggregate Index returned -0.8% for the quarter while investment-grade corporate bonds were down less, returning -0.4%.
- US equity markets posted a stellar 29.9% during the trailing one-year period. The weakest relative performance for the year was the Russell 2000 Index, which nonetheless climbed 19.7% over the last 12 months.
- International markets also showcased a healthy rebound in 2023. Over the trailing one-year period, the MSCI EAFE Index was the best international performer, returning 15.3% while the MSCI Emerging Markets Index added a more modest 8.2%.
- Bond markets were relatively flat over the previous 12 months. Investment-grade corporate bonds were the best-performing sector, up by 4.4%. Meanwhile, Treasuries have lagged, returning just 0.1% over the previous 12 months. The bellwether fixed-income benchmark, the Bloomberg US Aggregate Index, returned a muted 1.7% for the year.

Quarter Performance



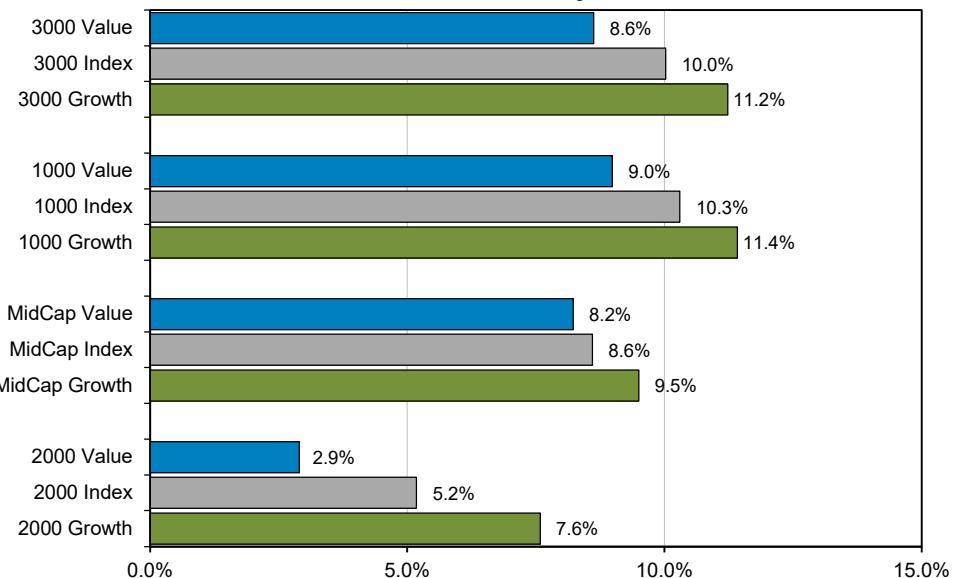
1-Year Performance



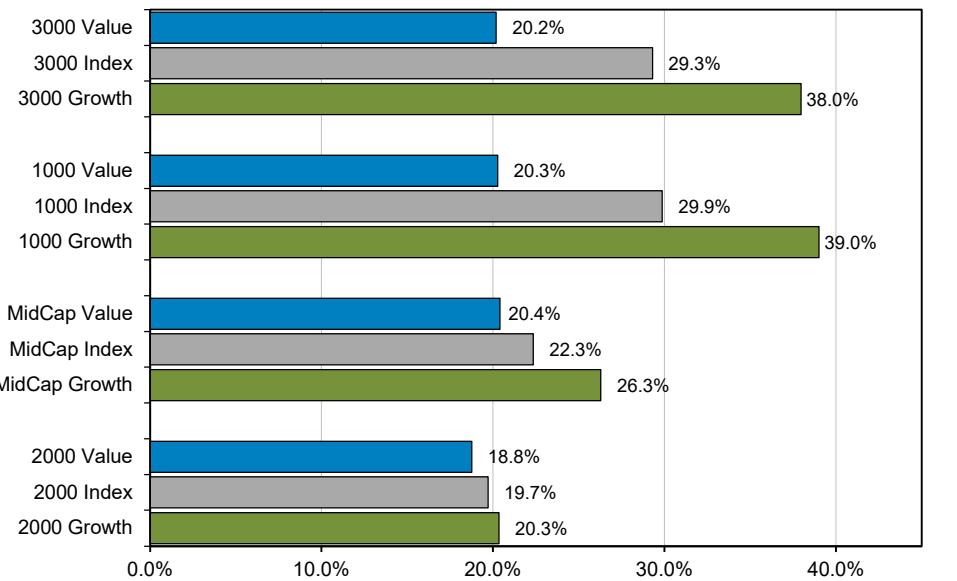
Source: Investment Metrics

- Domestic equity benchmarks were positive for the second consecutive quarter and growth style issues continued to outpace value. The best-performing area of the equity market was large-cap growth, with the Russell 1000 Growth index returning 11.4%. The worst performing area of the market was small-cap value, with the Russell 2000 Value index returning just 2.9% for the quarter. From a market capitalization perspective, large-cap stocks led their small-cap counterparts, with the Russell 1000 Index returning 10.3% and the Russell 2000 Index lagging with a lower, but still solid, 5.2%.
- The market continued its growth-led rally as growth stocks outpaced value stocks across the market-capitalization spectrum. While growth led the way during the quarter, value benchmarks largely kept pace, signaling that the rally seen in domestic equities may be broadening to other areas of the market.
- For the year, within large-cap stocks, the Russell 1000 Growth Index returned an impressive 39.0%, leading the way among style and market capitalization classifications. The weakest performing index for the year was the Russell 2000 Value, which still posted a double-digit return of 18.8%.
- The dominance of growth sectors is evident in the chart, with all growth benchmarks handily outpacing their core and value index counterparts. However, the strength of the outperformance differs meaningfully between the large cap and small cap segments of the market. The Russell 2000 Growth Index returned 20.3%, outpacing the Russell 2000 Value index return by a narrow margin of just 1.5%. However, this spread widens to 5.9% for the Russell Midcap Growth benchmarks and blows out to a span of 18.7% for the large cap benchmarks.

Quarter Performance - Russell Style Series

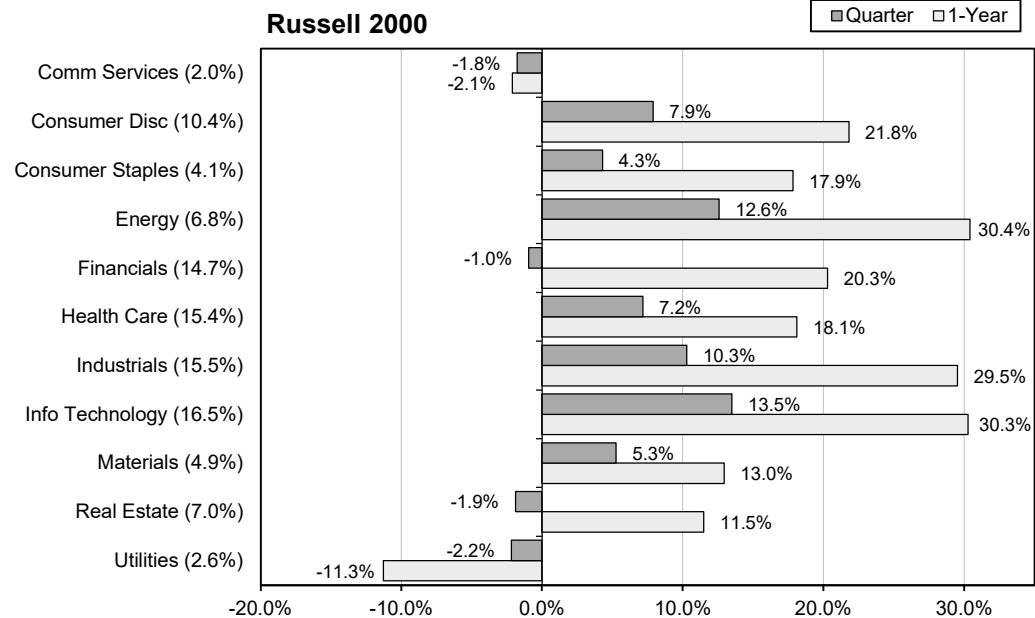
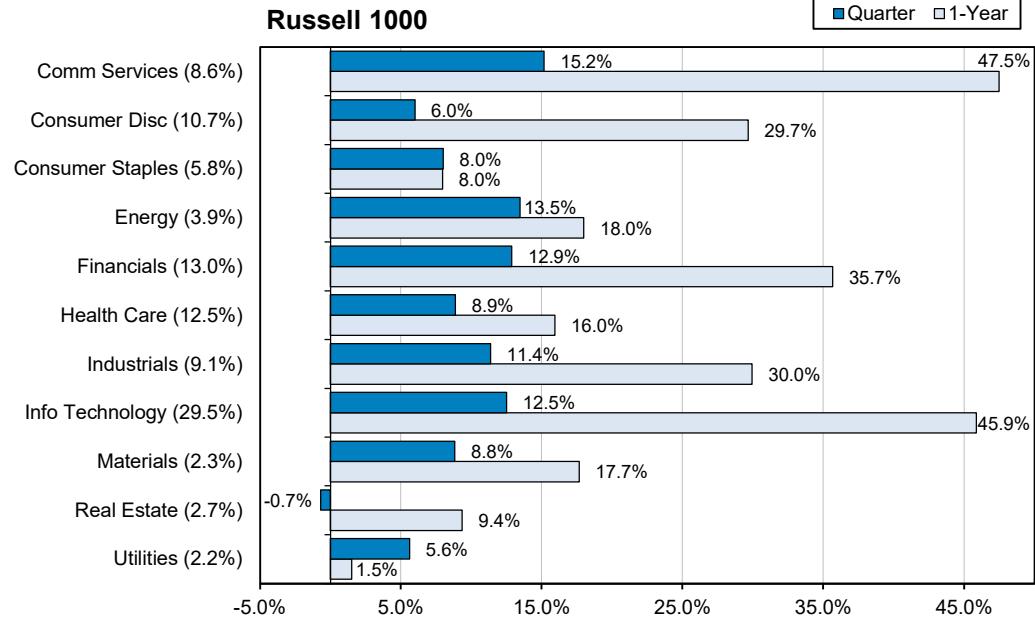


1-Year Performance - Russell Style Series



Source: Investment Metrics

- 2023's year-end rally continued into the first quarter of 2024 and expanded its breadth across styles and market capitalizations.
- Ten of the 11 GICS economic sectors in the large-cap Russell 1000 Index moved higher during the first quarter. Five of the 11 sectors outpaced the broad index return of 10.0%. Communication services led the way at 15.2% followed by energy (up 13.5%), financials (12.9%), information technology (12.5%), and industrials (11.4%).
- For the full year, all 11 economic sectors finished in positive territory with communication services leading the way at 47.5% and information technology following in lock step at 45.9%. Of the 11 sectors, four were up at least 30.0% the past year. Utilities (up 1.5%), consumer staples (8.0%), and real estate (9.4%) were the only three sectors that did not post double-digit results over the trailing year.
- Seven small-cap economic sectors posted positive results during the quarter with six of those sectors exceeding the 5.2% return of the Russell 2000 Index. The information technology (up 13.5%), energy (12.6%), and industrials (10.3%) sectors led the way as the only three sectors to showcase double-digit performance for the quarter. Utilities (-2.2%), real estate (-1.9%), communication services (-1.8%), and financials (-1.0%) sectors all lost ground during the quarter.
- Similar to large-cap sector performance, nine of the 11 small cap sectors were positive over the trailing year. Energy posted the strongest sector results (30.4%) with the information technology (30.3%) sector not far behind. Industrials (29.5%), consumer discretionary (21.8%) and financials (20.3%) each also returned more than 20.0% for the period. Six of the 11 economic sectors fell short of the core small-cap benchmark's return of 19.7% over the trailing year. The two negative sectors for the year were utilities with a return of -11.3% and communication services, which returned -2.1%.



Source: Morningstar Direct

As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

The Market Environment
Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000
As of March 31, 2024

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Microsoft Corp	6.5%	12.1%	47.1%	Information Technology
Apple Inc	5.2%	-10.8%	4.5%	Information Technology
NVIDIA Corp	4.5%	82.5%	225.4%	Information Technology
Amazon.com Inc	3.4%	18.7%	74.6%	Consumer Discretionary
Meta Platforms Inc Class A	2.2%	37.3%	129.4%	Communication Services
Alphabet Inc Class A	1.9%	8.0%	45.5%	Communication Services
Berkshire Hathaway Inc Class B	1.6%	17.9%	36.2%	Financials
Alphabet Inc Class C	1.6%	8.0%	46.4%	Communication Services
Eli Lilly and Co	1.4%	33.7%	128.4%	Health Care
JPMorgan Chase & Co	1.2%	18.5%	58.1%	Financials

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Super Micro Computer Inc	1.9%	255.3%	847.9%	Information Technology
MicroStrategy Inc Class A	0.9%	169.9%	483.1%	Information Technology
Comfort Systems USA Inc	0.4%	54.6%	118.7%	Industrials
e.l.f. Beauty Inc	0.4%	35.8%	138.0%	Consumer Staples
Light & Wonder Inc Ordinary Shares	0.3%	24.3%	70.0%	Consumer Discretionary
Carvana Co Class A	0.3%	66.1%	798.0%	Consumer Discretionary
Onto Innovation Inc	0.3%	18.4%	106.1%	Information Technology
Simpson Manufacturing Co Inc	0.3%	3.8%	88.6%	Industrials
Viking Therapeutics Inc	0.3%	340.6%	392.5%	Health Care
Weatherford International PLC	0.3%	18.0%	94.5%	Energy

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
NVIDIA Corp	4.5%	82.5%	225.4%	Information Technology
Vistra Corp	0.1%	81.4%	197.1%	Utilities
AppLovin Corp Ordinary Shares	0.0%	73.7%	339.5%	Information Technology
Shockwave Medical Inc	0.0%	70.9%	50.2%	Health Care
Vertiv Holdings Co Class A	0.1%	70.1%	471.2%	Industrials
Cava Group Inc	0.0%	63.0%	N/A	Consumer Discretionary
EMCOR Group Inc	0.0%	62.7%	116.2%	Industrials
Maplebear Inc	0.0%	58.9%	N/A	Consumer Staples
Constellation Energy Corp	0.1%	58.5%	138.0%	Utilities
Williams-Sonoma Inc	0.0%	58.0%	167.4%	Consumer Discretionary

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Ocean Biomedical Inc	0.0%	473.5%	-43.0%	Health Care
Viking Therapeutics Inc	0.3%	340.6%	392.5%	Health Care
Longboard Pharmaceuticals Inc	0.0%	258.2%	438.7%	Health Care
Super Micro Computer Inc	1.9%	255.3%	847.9%	Information Technology
Janux Therapeutics Inc	0.0%	250.9%	211.2%	Health Care
Arcutis Biotherapeutics Inc	0.0%	206.8%	-9.9%	Health Care
Veritone Inc	0.0%	190.6%	-9.8%	Information Technology
Avidity Biosciences Inc	0.1%	182.0%	66.3%	Health Care
Vera Therapeutics Inc Class A	0.1%	180.4%	455.7%	Health Care
SoundHound AI Inc Ordinary Shares	0.0%	177.8%	113.4%	Information Technology

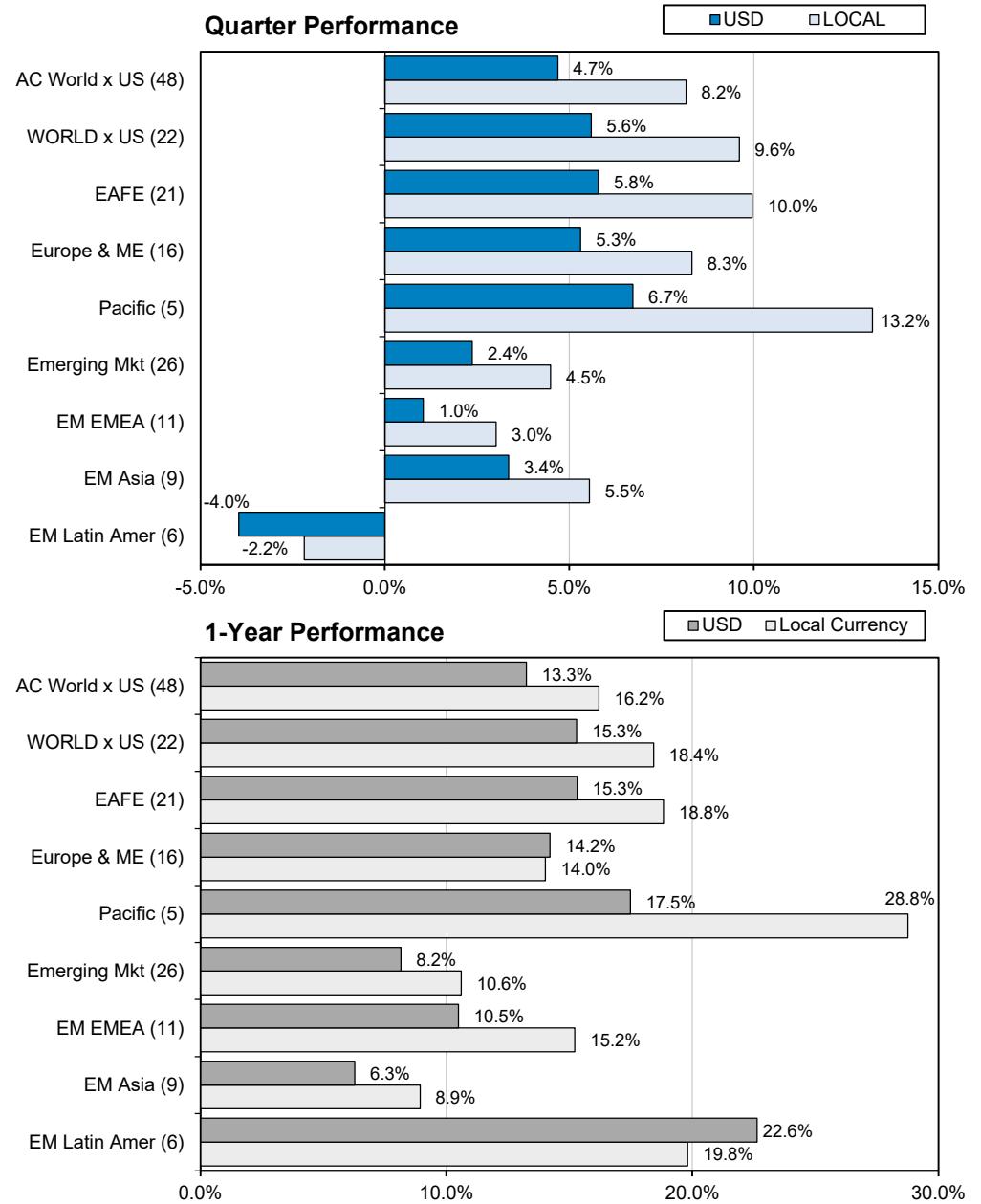
Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
New York Community Bancorp Inc	0.0%	-68.2%	-62.3%	Financials
SSR Mining Inc	0.0%	-58.7%	-70.1%	Materials
Rivian Automotive Inc Class A	0.0%	-53.3%	-29.3%	Consumer Discretionary
Agilon Health Inc	0.0%	-51.4%	-74.3%	Health Care
AMC Entertainment Holdings Inc	0.0%	-39.2%	-91.6%	Communication Services
Iridium Communications Inc	0.0%	-36.1%	-57.2%	Communication Services
Viasat Inc	0.0%	-35.3%	-46.5%	Information Technology
QuidelOrtho Corp	0.0%	-35.0%	-46.2%	Health Care
Unity Software Inc Ordinary Shares	0.0%	-34.7%	-17.7%	Information Technology
10x Genomics Inc Ordinary Shares	0.0%	-32.9%	-32.7%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Amylyx Pharmaceuticals Inc	0.0%	-80.7%	-90.3%	Health Care
Bakkt Holdings Inc Ordinary Shares	0.0%	-79.4%	-73.3%	Financials
WW International Inc	0.0%	-78.9%	-55.1%	Consumer Discretionary
iRobot Corp	0.0%	-77.4%	-79.9%	Consumer Discretionary
LivePerson Inc	0.0%	-73.7%	-77.4%	Information Technology
Office Properties Income Trust	0.0%	-72.1%	-81.1%	Real Estate
Spirit Airlines Inc	0.0%	-69.6%	-69.3%	Industrials
2U Inc	0.0%	-68.3%	-94.3%	Consumer Discretionary
CareMax Inc Ordinary Shares	0.0%	-67.8%	-94.0%	Health Care
Presto Automation Inc	0.0%	-67.3%	-89.0%	Information Technology

Source: Morningstar Direct

The Market Environment
International and Regional Market Index Performance (Country Count)
As of March 31, 2024

- Many of the international developed- and emerging-market benchmarks posted positive performance in both USD and LCL terms for the first quarter. A strengthening of the USD during the period was a drag on domestic non-US index performance across all regions. The developed-market MSCI EAFE Index still returned a solid 5.8% in USD and 10.0% in LCL terms for the period. The MSCI Emerging Markets Index rose by 2.4% in USD and 4.5% in LCL terms.
- Latin America was the only region to post negative performance for the quarter in both USD and LCL terms. The cyclical demand for commodity exports in the region has resulted in greater volatility due to continued uncertainty over central bank policies and global demand.
- The heaviest weighted country in the emerging market index (China, 7.0%) continued its drag on broad index returns, returning -2.2% during the quarter. The Chinese economy grew at a rate of 5.2% in 2023, lower than its pre-pandemic rate of 6.0% which was a headwind for performance. Troubles in the commercial property and banking sectors have also created challenges for growth in the region.
- Much like domestic markets, trailing one-year results for international developed and emerging markets benchmarks were strong. Outside of EM Latin America, the USD showed strength over broad and regional benchmarks for the year, and as a result, LCL returns finished higher than USD performance.
- MSCI Pacific results led the way in LCL currency terms at 28.8% for the trailing year. USD returns for the region were still strong but returned a more muted 17.5% due to softening currency in the region. Due to demand for commodity exports and rising oil prices, EM Latin America was the only region where the USD weakened relative to LCL returns, resulting in higher USD returns (22.6% vs. 19.8%). The EM Asia regional benchmark was the weakest relative-performing region in the emerging market index, with the EM Asia index returning 6.3% in USD and 8.9% in LCL terms.



Source: MSCI Global Index Monitor (Returns are Net)

The Market Environment
US Dollar International Index Attribution & Country Detail
As of March 31, 2024

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.0%	4.1%	6.6%
Consumer Discretionary	12.5%	11.1%	15.5%
Consumer Staples	8.6%	-3.1%	-5.9%
Energy	4.1%	2.2%	14.6%
Financials	19.3%	8.6%	25.8%
Health Care	12.7%	4.7%	8.6%
Industrials	16.8%	7.9%	23.1%
Information Technology	9.4%	14.3%	31.1%
Materials	7.2%	-1.1%	10.2%
Real Estate	2.3%	1.5%	13.0%
Utilities	3.1%	-5.0%	2.7%
Total	100.0%	5.8%	15.3%

MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.1%	2.1%	-3.0%
Consumer Discretionary	11.8%	7.2%	8.6%
Consumer Staples	7.4%	-3.2%	-4.6%
Energy	5.5%	5.2%	21.4%
Financials	21.4%	5.9%	21.4%
Health Care	9.2%	3.7%	7.5%
Industrials	13.8%	6.9%	19.8%
Information Technology	13.4%	11.4%	29.4%
Materials	7.4%	-1.6%	4.1%
Real Estate	2.0%	-0.3%	6.8%
Utilities	3.0%	-3.0%	5.2%
Total	100.0%	4.7%	13.3%

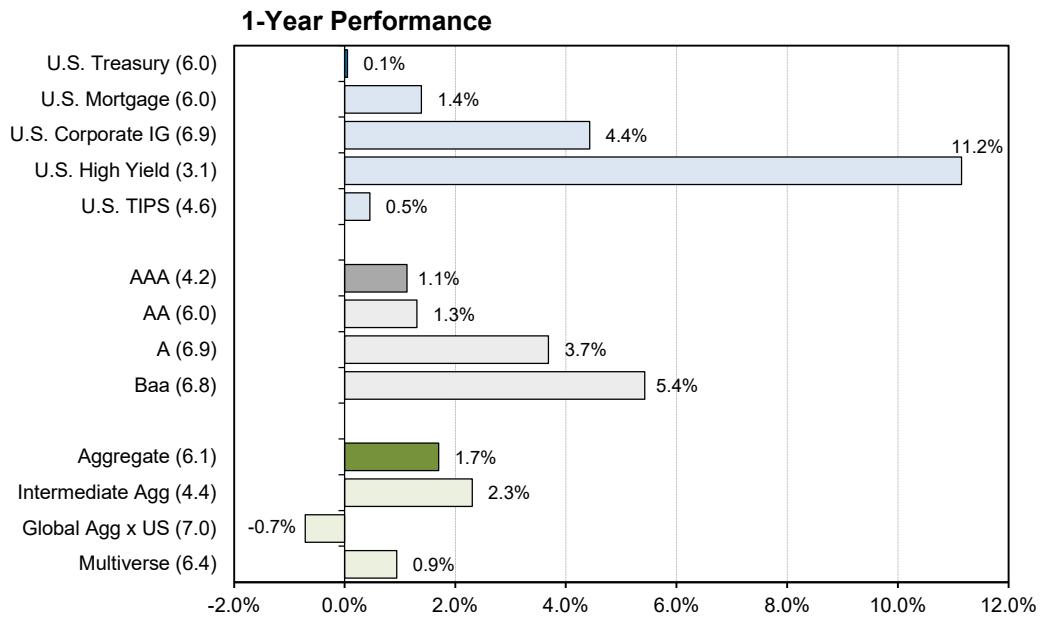
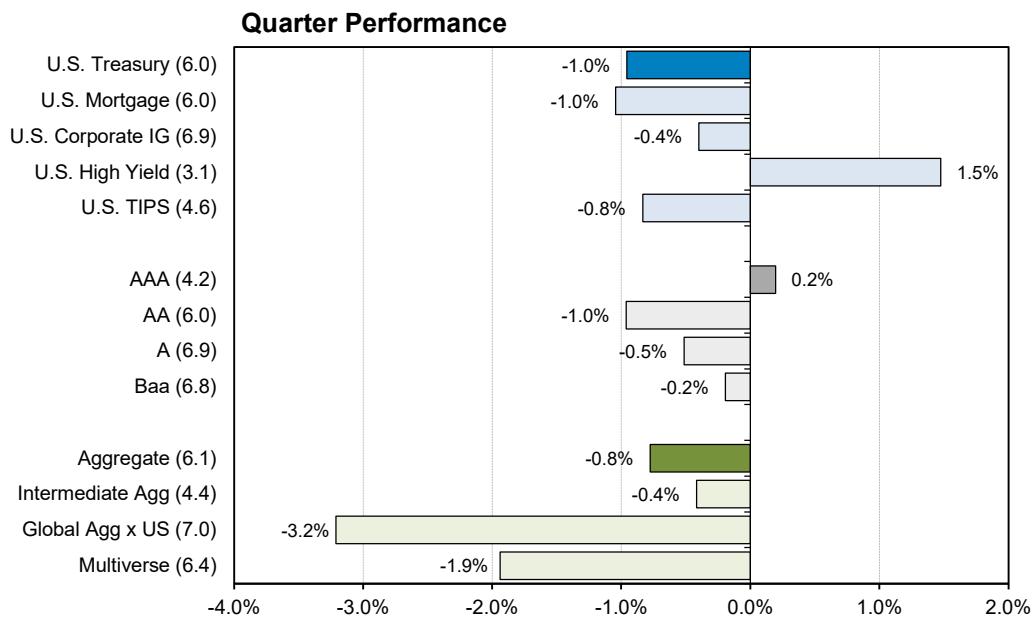
MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	8.6%	0.8%	-11.5%
Consumer Discretionary	12.4%	-0.5%	-5.3%
Consumer Staples	5.6%	-4.3%	-2.6%
Energy	5.3%	6.9%	36.0%
Financials	22.4%	2.3%	15.0%
Health Care	3.5%	-4.5%	-0.9%
Industrials	7.0%	1.4%	4.6%
Information Technology	23.7%	9.9%	26.7%
Materials	7.2%	-4.6%	-5.4%
Real Estate	1.5%	-6.0%	-11.3%
Utilities	2.8%	3.5%	17.9%
Total	100.0%	2.4%	8.2%

Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1- Year Return
Japan	23.3%	15.0%	10.2%	23.5%
United Kingdom	14.6%	9.4%	1.9%	6.4%
France	12.1%	7.8%	5.7%	9.7%
Switzerland	9.3%	6.0%	-2.1%	4.9%
Germany	8.7%	5.6%	6.8%	12.0%
Australia	7.3%	4.7%	-0.5%	8.1%
Netherlands	5.2%	3.3%	15.4%	22.5%
Denmark	3.6%	2.3%	14.4%	33.0%
Sweden	3.1%	2.0%	0.2%	11.6%
Italy	2.8%	1.8%	13.1%	30.6%
Spain	2.7%	1.7%	7.7%	19.6%
Hong Kong	1.8%	1.2%	-12.2%	-25.8%
Singapore	1.3%	0.9%	-0.1%	-6.1%
Finland	1.0%	0.6%	-6.0%	-12.8%
Belgium	0.9%	0.6%	1.7%	-0.2%
Israel	0.7%	0.5%	12.2%	22.1%
Norway	0.6%	0.4%	-7.9%	-0.2%
Ireland	0.4%	0.2%	14.8%	16.9%
Portugal	0.2%	0.1%	-17.9%	-16.6%
New Zealand	0.2%	0.1%	-4.9%	-8.2%
Austria	0.2%	0.1%	0.5%	10.5%
Total EAFE Countries	100.0%	64.5%	5.8%	15.3%
Canada			7.7%	3.4%
Total Developed Countries		71.9%	5.6%	15.3%
China		7.0%	-2.2%	-17.1%
India		5.0%	6.1%	36.8%
Taiwan		4.9%	12.4%	27.8%
Korea		3.5%	1.6%	14.2%
Brazil		1.4%	-7.4%	27.0%
Saudi Arabia		1.2%	4.7%	15.8%
South Africa		0.8%	-6.8%	-4.9%
Mexico		0.8%	0.5%	17.7%
Indonesia		0.5%	2.1%	3.4%
Thailand		0.4%	-8.2%	-16.4%
Malaysia		0.4%	3.0%	3.1%
United Arab Emirates		0.3%	0.4%	9.2%
Poland		0.3%	3.5%	55.3%
Qatar		0.2%	-3.6%	-1.4%
Kuwait		0.2%	8.3%	4.1%
Turkey		0.2%	14.6%	19.3%
Philippines		0.2%	6.1%	7.2%
Chile		0.1%	-4.5%	-5.9%
Greece		0.1%	6.5%	37.4%
Peru		0.1%	15.8%	46.2%
Hungary		0.1%	0.5%	47.4%
Czech Republic		0.0%	-7.7%	-7.6%
Colombia		0.0%	14.2%	48.3%
Egypt		0.0%	-29.7%	3.2%
Total Emerging Countries		27.9%	2.4%	8.2%
Total ACWIxUS Countries		100.0%	4.7%	13.3%

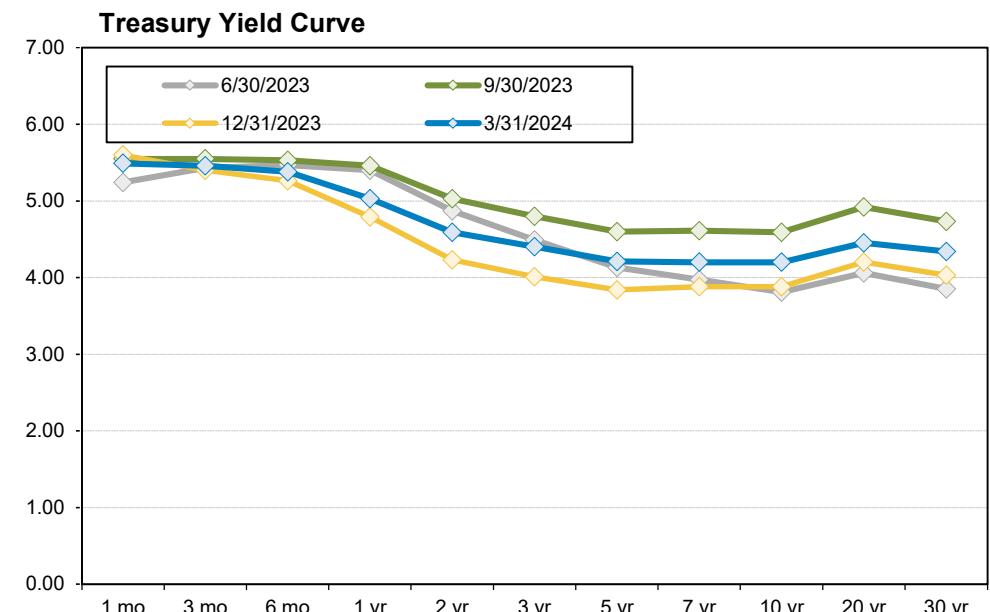
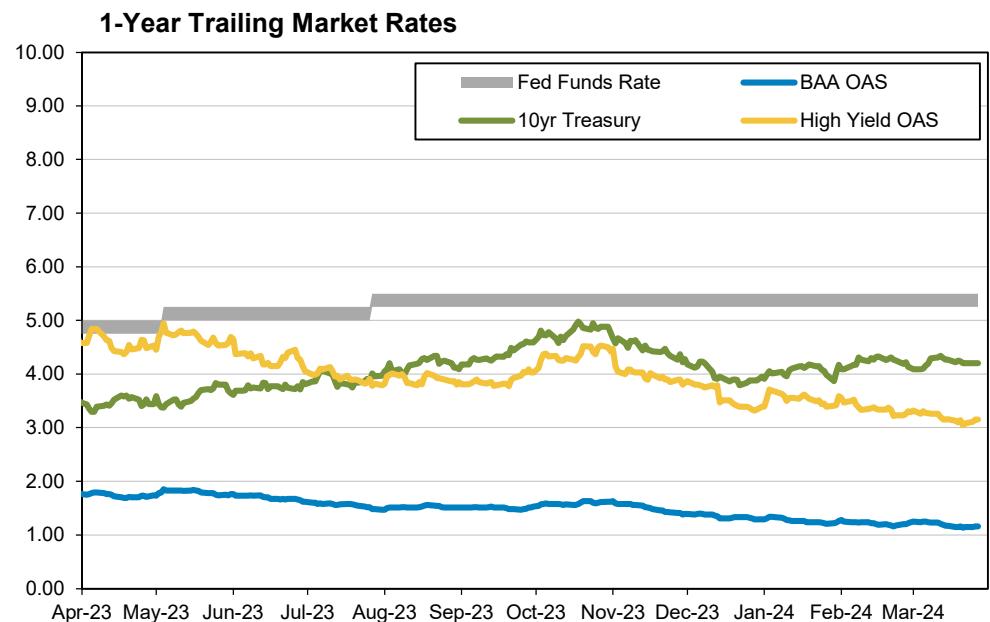
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

- Fixed-income markets pulled back slightly to start the year with many domestic and international bond indexes finishing modestly lower during the quarter. Yields remain elevated due to the Federal Reserve's decision to maintain rates at their current levels. While market expectations are that the Fed will eventually begin cutting rates in 2024, which will be a jolt to bond holder performance as yield fall, higher yields and coupon rates on bonds also are also offer an attractive stabilizing, lower-risk benefit for bond allocations in diversified portfolios.
- The Bloomberg US Aggregate Bond Index, the bellwether US investment grade benchmark, returned a mild negative result of -0.8% for the quarter. Performance across the investment grade index's segments finished the period with similar performance with the Bloomberg US Corporate Investment Grade Index returning -0.4% and the US Mortgage Index sliding by -1.0%.
- Outside of the Aggregate index's sub-components, high-yield bonds continued to rise with a return of 1.5% as credit spreads narrowed during the quarter. US TIPS fell -0.8% for the quarter. The Bloomberg Global Aggregate ex-US Index return of -3.2% for the quarter lagged all domestic fixed-income indexes as well as the multiverse benchmark's return of -1.9%.
- Over the trailing one-year period, the Bloomberg US Aggregate Bond Index climbed 1.7%. The benchmark's sub-components also posted positive performance over the trailing 12 months with the Bloomberg US Corporate Investment Grade Index rising 4.4% and the US Mortgage Index posting a more modest 1.4% return. US TIPS, which are excluded from the aggregate index, rose 0.5% for the year. High-yield corporate bonds, which have a much shorter duration, outpaced their investment grade counterparts with the Bloomberg US High Yield Index posting and equity-like return of 11.2% for the last year.
- Performance for non-US bonds were negative for the trailing year with the Bloomberg Global Aggregate ex-US Index falling by -0.7%. With foreign central banks largely tracking the Fed's tight monetary stance, the negative performance of global bonds is largely attributable to USD strength over the last year.



- The gray band across the graph illustrates the range of the current Fed Funds target rate. During the first quarter, the Federal Open Market Committee (FOMC) continued to hold the rates steady in the 5.25%-5.50% target range. The last rate increase in the current cycle occurred at the FOMC's July 2023 meeting and while their press releases have continued to push economic data-dependent outcomes, subtle press release rewordings since last July have increased the likelihood there will be no additional rate increase in this cycle. With early April's inflation surprise, the CME FedWatch tool, which forecasts rates based on Fed Fund futures pricing, is predicting two 0.25% rate cuts for 2024, with the first occurring in September. Fed officials and market participants have expressed concern about leaving rates at their current levels for an extended period could tip the US economy into a recession, but inflation remains stubbornly elevated and higher rates are the FOMC's primary inflation-fighting tool. Additionally, the FOMC continues to remove liquidity from the market by allowing bonds held on its balance sheet to mature without reinvesting maturity proceeds.
- The yield on the US 10-year Treasury (green line of the top chart) rose modestly, opening at the at 3.88% and finishing the quarter at 4.20%. The 0.32% increase was largely attributable to sticky inflation data released throughout the quarter. The benchmark's rate peaked in October 2023, cresting at just under 5.00% before pulling back in the remainder of the year.
- The blue line in the top chart illustrates changes in the Option Adjusted Spread (OAS) for BAA-rated corporate bonds. This measure quantifies the additional yield premium that investors require to purchase and hold non-US Treasury issues with the lowest investment grade rating. During the quarter, the spread narrowed from 1.29% to 1.17%, which is equivalent to falling rates for BAA bonds. The spread measure has continued to narrow over the trailing 12-month period after concerns about the regional banking sector during March 2023 caused credit spreads to spike. High-yield OAS spreads (represented by the yellow line in the top chart) have also continued to narrow from 3.39% at the end of 2023 to 3.15% at the end of March 2024. This narrowing provided an additional boost to high yield performance.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. If the anticipated rate cuts materialize in 2024, the yield curve will steepen into a positively sloped yield curve, which is the normal shape of the yield. Historically, a persistent inversion of the yield curve, as measured by the spread between 2 and 10-year Treasuries, has been a precursor of an economic recession within six to 24 months. As of quarter-end, the current yield curve inversion has persisted for 21 months.



[Fed Minutes Suggest Rate Hikes Are Over, but Offer No Timetable on Cuts - WSJ](#)

[Fed meeting today: Live updates on March Fed rate decision \(cnbc.com\)](#)

[CME FedWatch Tool - CME Group](#)

[Effective Federal Funds Rate - FEDERAL RESERVE BANK of NEW YORK \(newyorkfed.org\)](#)

[ICE BofA US High Yield Index Option-Adjusted Spread \(BAMLH0A0HYM2\) | FRED | St. Louis Fed \(stlouisfed.org\)](#)

[The quarter in review: what happened in the first three months of 2024? | J.P. Morgan Asset Management \(jpmorgan.com\)](#)

[When will the Federal Reserve start cutting interest rates? | J.P. Morgan Asset Management \(jpmorgan.com\)](#)

[Resource Center | U.S. Department of the Treasury](#)

[The S&P 500 Clinches Best Start to Year Since 2019 - WSJ](#)

[China's Economy Limps Into 2024 - WSJ](#)

[Support Site - Global Index Lens: Index Returns - MSCI](#)

[Q1 2024 CIO Review and Outlook - Matthews Asia - Commentaries - Advisor Perspectives](#)

[Treasuries Selloff Deepens as Traders Push Back First Rate Cut - Articles - Advisor Perspectives](#)

[Federal Reserve issues FOMC statement](#)

PLEASE NOTE ALL PERFORMANCE IN THIS REPORT IS NET OF FEES.

Comparative Performance
Total Fund
As of March 31, 2024

Comparative Performance Trailing Returns										
	QTR	FYTD	1 YR	2 YR	3 YR	5 YR	10 YR	15 YR	Inception	Inception Date
Total Fund Performance	4.47 (68)	4.47 (68)	14.86 (40)	3.64 (61)	3.52 (74)	6.88 (83)	6.48 (72)	9.15 (47)	6.29 (35)	01/01/2001
Total Fund Policy	4.24 (75)	4.24 (75)	14.62 (46)	3.69 (59)	3.72 (69)	7.17 (73)	6.68 (59)	9.57 (25)	6.40 (34)	
Allocation Index	4.49 (68)	4.49 (68)	14.85 (40)	3.62 (63)	3.50 (74)	6.83 (85)	N/A	N/A	N/A	
All Public Plans-Total Fund Median	5.01	5.01	14.41	3.85	4.34	7.86	6.88	9.05	5.97	
All Public Plan Sponsor Universes with 50% or Less Equities										
Total Fund Performance	4.47 (42)	4.47 (42)	14.86 (29)	3.64 (48)	3.52 (69)	6.88 (70)	6.48 (60)	9.15 (32)	6.29 (29)	01/01/2001
Total Fund Policy	4.24 (51)	4.24 (51)	14.62 (31)	3.69 (47)	3.72 (67)	7.17 (61)	6.68 (45)	9.57 (16)	6.40 (28)	
All Public Plans <= 50% Equities Median	4.24	4.24	12.79	3.57	4.27	7.53	6.57	8.78	5.82	
All Public Plan Sponsor Universes with 60% or More Equities										
Total Fund Performance	4.47 (95)	4.47 (95)	14.86 (58)	3.64 (77)	3.52 (83)	6.88 (96)	6.48 (84)	9.15 (59)	6.29 (46)	01/01/2001
Total Fund Policy	4.24 (99)	4.24 (99)	14.62 (67)	3.69 (74)	3.72 (77)	7.17 (88)	6.68 (76)	9.57 (36)	6.40 (43)	
All Public Plans >=60% Equities Median	5.73	5.73	15.59	4.39	4.53	8.16	7.13	9.24	6.10	

Returns for periods greater than one year are annualized.
 Returns are expressed as percentages.

Comparative Performance

Total Fund

As of March 31, 2024

	QTR	FYTD	1 YR	2 YR	3 YR	5 YR	10 YR	15 YR	Inception	Inception Date
Domestic Equity										
Total Fund Domestic Equity	9.35	9.35	26.66	8.38	8.89	13.09	N/A	N/A	11.07	07/01/2014
Vanguard Inst'l Index Fund (VINIX)	10.54 (9)	10.54 (9)	29.84 (16)	9.43 (11)	11.45 (10)	N/A	N/A	N/A	N/A	11/01/2020
S&P 500 Index	10.56 (1)	10.56 (1)	29.88 (4)	9.47 (1)	11.49 (1)	15.05 (3)	12.96 (1)	15.63 (1)	16.71 (2)	
IM S&P 500 Index (MF) Median	10.47	10.47	29.53	9.16	11.16	14.71	12.57	15.15	16.34	
Vanguard Growth Index (VIGIX)	10.91 (73)	10.91 (73)	38.83 (59)	10.15 (53)	10.92 (29)	17.92 (12)	15.07 (19)	N/A	15.15 (16)	05/01/2010
Vanguard Growth Index Hybrid	10.91 (73)	10.91 (73)	38.90 (59)	10.19 (52)	10.96 (28)	17.96 (12)	15.11 (17)	17.26 (13)	15.21 (15)	
Russell 1000 Growth Index	11.41 (67)	11.41 (67)	39.00 (58)	11.29 (34)	12.50 (8)	18.52 (9)	15.98 (6)	17.85 (6)	15.86 (6)	
IM U.S. Large Cap Growth Equity (MF) Median	12.60	12.60	39.96	10.26	9.52	15.73	13.96	16.01	14.06	
Vanguard Value Index (VIVIX)	9.76 (43)	9.76 (43)	21.12 (58)	7.84 (51)	10.20 (32)	11.54 (46)	10.46 (23)	N/A	12.97 (25)	07/01/2009
Vanguard Value Index Hybrid	9.75 (44)	9.75 (44)	21.03 (59)	7.82 (52)	10.20 (32)	11.53 (46)	10.46 (23)	13.94 (24)	13.01 (23)	
Russell 1000 Value Index	8.99 (54)	8.99 (54)	20.27 (64)	6.37 (70)	8.11 (76)	10.31 (73)	9.01 (64)	13.10 (46)	12.16 (43)	
IM U.S. Large Cap Value Equity (MF) Median	9.15	9.15	22.21	7.85	9.36	11.39	9.44	12.90	11.94	
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	9.94 (25)	9.94 (25)	23.25 (34)	8.11 (25)	6.90 (58)	11.64 (30)	N/A	N/A	11.19 (37)	12/01/2018
S&P MidCap 400 Index	9.95 (25)	9.95 (25)	23.33 (34)	8.17 (25)	6.96 (56)	11.71 (27)	9.99 (13)	14.74 (9)	11.26 (37)	
IM U.S. Mid Cap Core Equity (MF) Median	9.08	9.08	21.92	6.48	7.45	10.77	8.13	12.95	10.50	
Vanguard Small-Cap 600 Index I (VSMSX)	2.45 (91)	2.45 (91)	15.87 (69)	2.75 (69)	2.21 (67)	9.13 (53)	N/A	N/A	8.15 (60)	12/01/2018
S&P SmallCap 600 Index	2.46 (90)	2.46 (90)	15.93 (68)	2.82 (66)	2.28 (65)	9.15 (53)	8.80 (15)	14.32 (12)	8.17 (60)	
IM U.S. Small Cap Core Equity (MF) Median	5.16	5.16	18.71	4.19	3.91	9.28	7.61	12.84	8.66	

Returns for periods greater than one year are annualized.
 Returns are expressed as percentages.

Comparative Performance

Total Fund

As of March 31, 2024

	QTR	FYTD	1 YR	2 YR	3 YR	5 YR	10 YR	15 YR	Inception	Inception Date
International Equity										
Total Fund Performance - International Equity	3.38	3.38	10.53	1.90	-0.38	4.50	N/A	N/A	3.28	07/01/2014
Vanguard Intl Value (VTRIX)	4.01 (58)	4.01 (58)	11.20 (71)	6.05 (59)	N/A	N/A	N/A	N/A	4.96 (73)	12/01/2021
MSCI AC World ex USA Value	3.60 (64)	3.60 (64)	16.19 (32)	5.99 (60)	5.30 (38)	6.05 (55)	3.83 (43)	7.88 (25)	7.62 (40)	
IM International Multi-Cap Value Equity (MF) Median	4.30	4.30	13.87	6.67	4.44	6.32	3.68	7.26	6.75	
Vanguard Intl Growth (VWILX)	5.29 (46)	5.29 (46)	7.46 (88)	0.07 (88)	N/A	N/A	N/A	N/A	-7.88 (88)	12/01/2021
MSCI AC World ex USA Growth	5.97 (38)	5.97 (38)	11.54 (69)	2.38 (73)	-0.46 (64)	6.57 (68)	5.48 (70)	8.75 (81)	-1.55 (65)	
IM International Multi-Cap Growth Equity (MF) Median	5.10	5.10	13.28	4.26	1.11	7.52	6.01	9.72	-0.22	
Vanguard FTSE AW ex-US SC Index (VFSNX)	1.47 (84)	1.47 (84)	10.29 (84)	-0.35 (100)	-0.30 (93)	N/A	N/A	N/A	13.37 (79)	04/01/2020
FTSE Global ex U.S. Small Cap Index (Net)	1.29 (88)	1.29 (88)	10.51 (80)	-0.85 (100)	-0.39 (94)	4.90 (75)	3.39 (89)	N/A	13.17 (85)	
IM International SMID Cap Core Equity (MF) Median	3.81	3.81	12.87	4.26	2.05	6.72	4.71	N/A	14.86	
Vanguard Developed Markets Index (VTMNX)	5.14 (46)	5.14 (46)	14.94 (33)	5.65 (41)	3.96 (33)	7.39 (29)	5.04 (26)	N/A	7.08 (31)	07/01/2009
Vanguard Spliced Developed ex U.S. Index (Net)	5.11 (46)	5.11 (46)	15.22 (30)	5.12 (49)	3.92 (34)	7.37 (30)	5.02 (27)	8.56 (34)	7.05 (33)	
MSCI EAFE (Net) Index	5.78 (36)	5.78 (36)	15.32 (29)	6.64 (26)	4.78 (24)	7.33 (31)	4.80 (36)	8.41 (39)	6.90 (41)	
IM International Multi-Cap Equity (MF) Median	4.86	4.86	13.17	4.99	2.73	6.38	4.45	8.11	6.70	
Vanguard Emerging Markets Index (VEMIX)	1.94 (72)	1.94 (72)	7.43 (62)	-1.18 (57)	-3.73 (35)	2.86 (44)	3.24 (41)	N/A	2.22 (47)	10/01/2010
FTSE Emerging Mkts All Cap China A Inclusion Index	2.09 (69)	2.09 (69)	8.86 (51)	-0.90 (53)	-2.87 (29)	3.52 (35)	3.91 (27)	7.51 (30)	2.83 (31)	
MSCI Emerging Markets (Net) Index	2.37 (62)	2.37 (62)	8.15 (56)	-1.73 (64)	-5.05 (46)	2.22 (60)	2.95 (47)	6.66 (52)	2.20 (48)	
IM Emerging Markets Equity (MF) Median	3.05	3.05	8.97	-0.66	-5.51	2.66	2.75	6.68	2.07	

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Comparative Performance

Total Fund

As of March 31, 2024

	QTR	FYTD	1 YR	2 YR	3 YR	5 YR	10 YR	15 YR	Inception	Inception Date
Fixed Income										
Total Fund Performance - Fixed Income	-0.19	-0.19	4.25	0.32	-0.78	1.47	N/A	N/A	1.92	07/01/2014
Vanguard Short Term Bond Index (VBIRX)	0.17 (99)	0.17 (99)	3.06 (99)	1.36 (95)	-0.41 (97)	1.18 (87)	1.35 (70)	N/A	1.27 (69)	04/01/2013
Bloomberg 1-5 Year Gov/Credit Idx	0.14 (100)	0.14 (100)	3.16 (98)	1.40 (95)	-0.38 (96)	1.24 (84)	1.40 (67)	1.88 (68)	1.31 (66)	
IM U.S. Short Term Investment Grade (MF) Median	1.05	1.05	5.31	2.67	1.04	1.89	1.60	2.21	1.50	
Vanguard Total Bond Index (VBTIX)	-0.79 (81)	-0.79 (81)	1.67 (65)	-1.57 (37)	-2.41 (38)	N/A	N/A	N/A	-0.89 (63)	09/01/2019
Bloomberg U.S. Aggregate Index	-0.78 (80)	-0.78 (80)	1.70 (64)	-1.60 (40)	-2.46 (42)	0.36 (58)	1.54 (48)	2.62 (75)	-0.87 (61)	
IM U.S. Broad Market Core Fixed Income (MF) Median	-0.53	-0.53	2.08	-1.69	-2.54	0.47	1.52	3.17	-0.72	
Vanguard High Yield Bond Fund (VWEAX)	0.77 (96)	0.77 (96)	9.11 (77)	3.44 (34)	2.11 (38)	3.85 (42)	N/A	N/A	4.29 (22)	12/01/2014
Bloomberg U.S. Corp High Yield	1.47 (58)	1.47 (58)	11.15 (23)	3.65 (25)	2.19 (35)	4.21 (26)	4.44 (11)	8.86 (7)	4.66 (10)	
IM U.S. High Yield Bonds (MF) Median	1.58	1.58	10.22	2.93	1.82	3.59	3.54	7.54	3.79	
Vanguard International Bond (VTIFX)	0.06 (35)	0.06 (35)	5.16 (44)	-0.07 (37)	-1.68 (36)	0.33 (36)	N/A	N/A	1.75 (10)	05/01/2015
Bloomberg Global Agg ex-USD Flt Adj RIC Cpd (H)	0.09 (34)	0.09 (34)	5.49 (35)	0.03 (35)	-1.65 (35)	0.41 (34)	2.37 (9)	N/A	1.76 (10)	
IM International Fixed Income (MF) Median	-0.55	-0.55	4.70	-1.10	-3.25	-1.06	-0.70	2.37	-0.44	
Vanguard EM Bond (VEGBX)	2.46 (24)	2.46 (24)	13.71 (17)	5.08 (6)	N/A	N/A	N/A	N/A	1.36 (6)	12/01/2021
Bloomberg Emerging Markets USD Aggregate Index	1.53 (73)	1.53 (73)	8.43 (80)	1.68 (74)	-1.48 (71)	1.07 (56)	2.90 (29)	5.99 (14)	-2.28 (80)	
IM Emerging Markets Debt (MF) Median	2.03	2.03	10.93	2.27	-0.88	1.25	2.35	5.34	-1.08	
REIT										
Vanguard Real Estate Index Fund (VGSNX)	-1.16 (56)	-1.16 (56)	8.58 (42)	-6.86 (48)	1.78 (68)	3.74 (52)	6.24 (42)	N/A	8.03 (31)	10/01/2010
Vanguard Spliced REIT Index	-1.15 (56)	-1.15 (56)	8.68 (40)	-6.76 (41)	1.87 (65)	3.83 (49)	6.33 (40)	13.31 (26)	8.10 (27)	
IM Real Estate Sector (MF) Median	-1.05	-1.05	8.19	-6.93	2.41	3.79	6.14	12.67	7.67	

Returns for periods greater than one year are annualized.
 Returns are expressed as percentages.

Comparative Performance

Total Fund

As of March 31, 2024

	QTR	FYTD	1 YR	2 YR	3 YR	5 YR	10 YR	15 YR	Inception	Inception Date
Total Fund - Domestic Equity	9.35	9.35	26.66	8.38	8.89	13.09	N/A	N/A	11.07	07/01/2014
Total Domestic Large Cap Equity	10.47	10.47	29.93	9.47	10.89	13.77	N/A	N/A	11.99	06/01/2014
S&P 500 Index	10.56	10.56	29.88	9.47	11.49	15.05	12.96	15.63	12.84	
Large Cap Growth	10.91	10.91	38.83	10.15	10.92	18.18	N/A	N/A	15.06	06/01/2014
Vanguard Growth Index Hybrid	10.91	10.91	38.90	10.19	10.96	17.96	15.11	17.26	14.97	
Russell 1000 Growth Index	11.41	11.41	39.00	11.29	12.50	18.52	15.98	17.85	15.91	
Large Cap Core	10.54	10.54	30.06	9.49	10.85	12.72	N/A	N/A	11.24	06/01/2014
S&P 500 Index	10.56	10.56	29.88	9.47	11.49	15.05	12.96	15.63	12.84	
Large Cap Value	9.76	9.76	21.12	7.92	10.26	11.57	N/A	N/A	10.45	06/01/2014
Vanguard Value Index Hybrid	9.75	9.75	21.03	7.82	10.20	11.53	10.46	13.94	10.39	
Russell 1000 Value Index	8.99	8.99	20.27	6.37	8.11	10.31	9.01	13.10	8.90	
Mid Cap Equity	9.94	9.94	23.25	8.18	6.95	11.67	N/A	N/A	9.91	06/01/2014
Mid Cap Hybrid Index	9.95	9.95	23.33	8.17	6.96	11.71	9.89	N/A	9.91	
Small Cap Equity	2.45	2.45	15.87	2.75	2.21	9.13	N/A	N/A	8.22	06/01/2014
Small Cap Hybrid Index	2.46	2.46	15.93	2.82	2.28	9.15	7.96	N/A	8.23	
Total Fund - International Equity	3.38	3.38	10.53	1.90	-0.38	4.50	N/A	N/A	3.28	07/01/2014
Small Cap - International Equity	1.47	1.47	10.29	-0.35	-0.30	N/A	N/A	N/A	6.64	03/01/2020
FTSE Global ex U.S. Small Cap Index (Net)	1.29	1.29	10.51	-0.85	-0.39	4.90	3.39	N/A	6.89	
Developed Markets - International Equity	5.14	5.14	14.94	5.65	3.96	7.39	N/A	N/A	4.76	06/01/2014
Vanguard Spliced Developed ex U.S. Index (Net)	5.11	5.11	15.22	5.12	3.92	7.37	5.02	8.56	4.78	
Emerging Markets - International Equity	1.94	1.94	7.43	-1.18	-3.68	2.90	N/A	N/A	2.83	06/01/2014
FTSE Emerging Mkts All Cap China A Inclusion Index	2.09	2.09	8.86	-0.90	-2.87	3.52	3.91	7.51	3.56	
MSCI Emerging Markets (Net) Index	2.37	2.37	8.15	-1.73	-5.05	2.22	2.95	6.66	2.60	

Returns for periods greater than one year are annualized.
 Returns are expressed as percentages.

Comparative Performance
Total Fund
As of March 31, 2024

	QTR	FYTD	1 YR	2 YR	3 YR	5 YR	10 YR	15 YR	Inception	Inception Date
Total Fund - Fixed Income	-0.19	-0.19	4.25	0.32	-0.78	1.47	N/A	N/A	1.92	07/01/2014
Short - Term Fixed Income	0.17	0.17	3.06	1.36	-0.41	1.16	N/A	N/A	1.29	06/01/2014
Bloomberg 1-5 Year Gov/Credit Iidx	0.14	0.14	3.16	1.40	-0.38	1.24	1.40	1.88	1.35	
High Yield - Fixed Income	0.77	0.77	9.11	3.44	2.11	3.85	N/A	N/A	4.26	11/01/2014
Blmbg. U.S. Corp High Yield	1.47	1.47	11.15	3.65	2.19	4.21	4.44	8.86	4.54	
Non-US Fixed Income	0.06	0.06	5.16	-0.07	-1.68	0.33	N/A	N/A	1.81	05/01/2015
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	0.09	0.09	5.49	0.03	-1.65	0.41	2.37	N/A	1.76	
Real Estate	-1.16	-1.16	8.58	-6.86	1.78	3.74	N/A	N/A	5.62	06/01/2014
Vanguard Spliced REIT Index	-1.15	-1.15	8.68	-6.76	1.87	3.83	6.33	13.31	5.84	

Returns for periods greater than one year are annualized.
 Returns are expressed as percentages.

Comparative Performance
Total Fund
As of March 31, 2024

Comparative Performance Trailing Returns										
	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Fund Performance	15.13	-15.61	14.00	9.84	20.21	-5.76	13.91	8.58	-0.72	8.24
Total Fund Policy	15.02	-14.86	13.81	11.44	19.49	-4.94	13.67	8.48	-0.69	8.15
Allocation Index	15.09	-15.63	14.11	9.90	19.76	-5.32	14.25	7.44	-0.62	N/A
Domestic Equity										
Total Fund Domestic Equity	22.57	-16.59	26.91	13.96	29.77	-7.16	20.07	13.45	-0.10	N/A
Twin Capital Low Volatility	N/A	N/A	N/A	5.51 (91)	29.24 (53)	-5.37 (47)	19.16 (77)	16.03 (7)	-1.31 (79)	12.91 (46)
S&P 500 Index	26.29 (29)	-18.11 (61)	28.71 (29)	18.40 (41)	31.49 (26)	-4.38 (32)	21.83 (45)	11.96 (24)	1.38 (44)	13.69 (31)
IM U.S. Large Cap Core Equity (SA+CF) Median	23.79	-17.02	26.87	15.93	29.47	-5.68	21.58	9.87	1.05	12.69
Twin Capital Enhanced Index	N/A	N/A	N/A	15.07 (58)	29.73 (40)	-6.43 (65)	20.37 (77)	11.66 (57)	2.42 (25)	13.42 (52)
S&P 500 Index	26.29 (33)	-18.11 (52)	28.71 (49)	18.40 (43)	31.49 (32)	-4.38 (26)	21.83 (57)	11.96 (55)	1.38 (39)	13.69 (44)
IM U.S. Large Cap Enhanced Index Equity (SA+CF) Median	25.11	-18.07	28.63	16.26	29.40	-5.66	22.11	12.21	0.96	13.59
Vanguard Inst'l Index Fund (VINIX)	26.24 (15)	-18.14 (12)	28.67 (8)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S&P 500 Index	26.29 (5)	-18.11 (3)	28.71 (1)	18.40 (9)	31.49 (3)	-4.38 (7)	21.83 (1)	11.96 (3)	1.38 (2)	13.69 (1)
IM S&P 500 Index (MF) Median	25.96	-18.36	28.25	18.05	31.08	-4.66	21.37	11.55	0.97	13.18
Vanguard Growth Index (VIGIX)	46.78 (19)	-33.14 (70)	27.27 (20)	40.20 (28)	37.25 (12)	-3.32 (72)	27.82 (64)	6.11 (19)	3.23 (75)	13.70 (17)
Vanguard Growth Index Hybrid	46.86 (18)	-33.13 (69)	27.30 (19)	40.27 (28)	37.31 (11)	-3.34 (73)	27.86 (64)	6.16 (18)	3.38 (72)	13.69 (17)
Russell 1000 Growth Index	42.68 (37)	-29.14 (27)	27.60 (17)	38.49 (34)	36.39 (19)	-1.51 (54)	30.21 (39)	7.08 (10)	5.67 (49)	13.05 (24)
IM U.S. Large Cap Growth Equity (MF) Median	40.78	-31.30	22.39	35.62	33.26	-1.22	29.28	2.21	5.61	10.49
Vanguard Value Index (VIVIX)	9.26 (72)	-2.05 (12)	26.48 (44)	2.30 (70)	25.83 (59)	-5.42 (22)	17.14 (47)	16.87 (21)	-0.81 (18)	13.20 (10)
Vanguard Value Index Hybrid	9.17 (73)	-2.01 (11)	26.51 (43)	2.26 (71)	25.85 (59)	-5.40 (22)	17.16 (46)	16.93 (20)	-0.86 (19)	13.29 (9)
Russell 1000 Value Index	11.46 (57)	-7.54 (66)	25.16 (63)	2.80 (61)	26.54 (50)	-8.27 (45)	13.66 (82)	17.34 (17)	-3.83 (69)	13.45 (8)
IM U.S. Large Cap Value Equity (MF) Median	12.63	-6.10	25.96	3.82	26.50	-8.61	16.95	13.85	-3.00	10.82
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	16.36 (31)	-13.11 (50)	24.67 (59)	13.58 (26)	26.13 (72)	N/A	N/A	N/A	N/A	N/A
S&P MidCap 400 Index	16.44 (30)	-13.06 (50)	24.76 (59)	13.66 (26)	26.20 (72)	-11.08 (40)	16.24 (38)	20.74 (12)	-2.18 (29)	9.77 (41)
IM U.S. Mid Cap Core Equity (MF) Median	13.86	-13.21	25.73	8.44	28.59	-11.64	14.94	14.51	-3.74	8.88
Vanguard Small-Cap 600 Index I (VSMSX)	15.99 (51)	-16.18 (57)	26.74 (37)	11.46 (39)	22.74 (61)	N/A	N/A	N/A	N/A	N/A
S&P SmallCap 600 Index	16.05 (49)	-16.10 (54)	26.82 (36)	11.29 (41)	22.78 (61)	-8.48 (9)	13.23 (38)	26.56 (16)	-1.97 (21)	5.76 (34)
IM U.S. Small Cap Core Equity (MF) Median	15.99	-15.77	25.12	9.89	23.94	-12.71	12.09	21.66	-4.35	4.73

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.

Comparative Performance
Total Fund
As of March 31, 2024

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
International Equity										
Total Fund Performance - International Equity	14.07	-18.46	6.98	10.24	21.55	-14.50	28.00	5.26	-5.56	N/A
Vanguard Intl Value (VTRIX)	16.15 (65)	-11.66 (67)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI AC World ex USA Value	18.13 (51)	-7.95 (33)	11.13 (52)	-0.21 (69)	16.45 (64)	-13.45 (14)	23.35 (51)	9.59 (17)	-9.59 (94)	-4.60 (25)
IM International Multi-Cap Value Equity (MF) Median	18.18	-10.16	11.39	2.60	17.47	-16.91	23.48	2.91	-3.08	-6.25
Vanguard Intl Growth (VWILX)	14.81 (59)	-30.79 (83)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI AC World ex USA Growth	14.40 (65)	-22.80 (44)	5.37 (72)	22.56 (33)	27.84 (34)	-14.10 (32)	32.47 (31)	0.50 (37)	-0.91 (69)	-2.29 (18)
IM International Multi-Cap Growth Equity (MF) Median	15.50	-24.22	8.82	19.24	26.40	-15.75	29.11	-0.61	0.16	-5.01
Vanguard FTSE AW ex-US SC Index (VFSNX)	15.19 (58)	-21.25 (85)	12.76 (55)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FTSE Global ex U.S. Small Cap Index (Net)	15.35 (57)	-21.58 (87)	13.02 (53)	11.40 (14)	21.55 (30)	-18.91 (39)	29.78 (50)	3.93 (29)	-0.61 (82)	-4.34 (30)
IM International SMID Cap Core Equity (MF) Median	17.24	-17.04	13.19	5.76	19.58	-19.67	29.44	-0.75	4.70	-6.30
Vanguard Developed Markets Index (VTMNX)	17.84 (40)	-15.34 (47)	11.44 (34)	10.27 (43)	22.14 (43)	-14.49 (35)	26.46 (46)	2.46 (35)	-0.19 (44)	-5.62 (55)
Vanguard Spliced Developed ex U.S. Index (Net)	17.97 (37)	-15.58 (49)	11.57 (33)	10.00 (44)	22.34 (42)	-14.79 (38)	26.31 (47)	2.29 (37)	-0.28 (45)	-4.85 (44)
MSCI EAFE (Net) Index	18.24 (33)	-14.45 (40)	11.26 (37)	7.82 (57)	22.01 (45)	-13.79 (25)	25.03 (62)	1.00 (52)	-0.81 (53)	-4.90 (45)
IM International Multi-Cap Equity (MF) Median	16.81	-15.71	10.28	8.74	21.55	-15.87	25.85	1.12	-0.72	-5.32
Vanguard Emerging Markets Index (VEMIX)	9.18 (65)	-17.74 (21)	0.92 (36)	15.26 (65)	20.37 (50)	-14.54 (29)	31.43 (72)	11.76 (26)	-15.39 (68)	0.72 (18)
FTSE Emerging Mkts All Cap China A Inclusion Index	9.95 (59)	-17.26 (19)	1.76 (32)	15.84 (62)	20.81 (47)	-14.49 (29)	31.46 (72)	10.66 (34)	-13.28 (46)	2.96 (10)
MSCI Emerging Markets (Net) Index	9.83 (60)	-20.09 (32)	-2.54 (58)	18.31 (47)	18.42 (63)	-14.57 (29)	37.28 (43)	11.19 (29)	-14.92 (62)	-2.19 (43)
IM Emerging Markets Equity (MF) Median	10.91	-22.45	-1.60	17.68	20.17	-16.46	35.66	8.25	-13.73	-3.00

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Comparative Performance
Total Fund
As of March 31, 2024

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Fixed Income										
Total Fund Performance - Fixed Income	7.70	-11.27	0.05	6.75	10.16	-0.71	3.82	4.79	-0.18	N/A
Vanguard Short Term Bond Index (VBIRX)	4.88 (87)	-5.61 (91)	-0.97 (94)	4.71 (11)	4.84 (23)	1.37 (42)	1.19 (71)	1.51 (59)	0.98 (9)	1.32 (13)
Bloomberg 1-5 Year Gov/Credit Idx	4.89 (87)	-5.50 (89)	-0.97 (94)	4.71 (11)	5.01 (18)	1.38 (41)	1.27 (66)	1.56 (56)	0.97 (9)	1.42 (11)
IM U.S. Short Term Investment Grade (MF) Median	5.67	-3.79	0.02	3.02	4.12	1.24	1.45	1.68	0.27	0.67
Vanguard Total Bond Index (VBTIX)	5.72 (54)	-13.15 (27)	-1.65 (64)	7.73 (65)	N/A	N/A	N/A	N/A	N/A	N/A
Bloomberg U.S. Aggregate Index	5.53 (65)	-13.01 (22)	-1.55 (60)	7.51 (73)	8.72 (53)	0.01 (18)	3.54 (54)	2.65 (62)	0.55 (20)	5.97 (27)
IM U.S. Broad Market Core Fixed Income (MF) Median	5.77	-13.66	-1.33	8.16	8.76	-0.62	3.60	2.90	0.04	5.55
Vanguard High Yield Bond Fund (VWEAX)	11.74 (62)	-8.97 (18)	3.78 (80)	5.38 (52)	15.90 (9)	-2.87 (46)	7.13 (31)	11.27 (86)	-1.31 (13)	N/A
Bloomberg U.S. Corp High Yield	13.45 (14)	-11.19 (58)	5.28 (42)	7.11 (20)	14.32 (38)	-2.08 (22)	7.50 (21)	17.13 (8)	-4.47 (58)	2.45 (24)
IM U.S. High Yield Bonds (MF) Median	12.17	-10.97	4.94	5.43	13.83	-2.97	6.63	13.77	-3.98	1.50
Vanguard International Bond (VTIFX)	8.85 (23)	-12.89 (48)	-2.17 (20)	4.59 (75)	7.89 (25)	3.00 (2)	2.43 (86)	4.69 (35)	N/A	N/A
Bloomberg Global Agg ex-USD Flt Adj RIC Cpd (H)	8.75 (31)	-12.72 (44)	-2.10 (19)	4.75 (72)	8.06 (24)	3.16 (1)	2.57 (82)	4.90 (33)	1.34 (3)	9.14 (9)
IM International Fixed Income (MF) Median	7.17	-12.94	-5.39	6.55	6.64	-2.47	9.80	3.34	-5.82	0.63
Vanguard EM Bond (VEGBX)	13.80 (10)	-13.02 (31)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bloomberg Emerging Markets USD Aggregate Index	9.09 (82)	-15.26 (52)	-1.65 (23)	6.52 (38)	13.11 (61)	-2.46 (8)	8.17 (88)	9.88 (59)	1.29 (12)	4.76 (18)
IM Emerging Markets Debt (MF) Median	11.40	-15.10	-2.96	5.74	13.63	-5.92	10.54	10.43	-2.53	1.32
REIT										
Vanguard Real Estate Index Fund (VGSNX)	11.82 (55)	-26.20 (51)	40.47 (61)	-4.67 (54)	29.02 (33)	-5.93 (54)	4.93 (58)	8.51 (21)	2.56 (58)	30.17 (36)
Vanguard Spliced REIT Index	11.96 (50)	-26.12 (47)	40.56 (60)	-4.55 (53)	29.03 (33)	-5.86 (52)	5.07 (54)	8.60 (20)	2.52 (58)	30.38 (30)
IM Real Estate Sector (MF) Median	11.91	-26.17	41.32	-4.31	27.32	-5.71	5.32	6.34	2.91	29.47

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Comparative Performance
Total Fund
As of March 31, 2024

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Fund - Domestic Equity	22.57	-16.59	26.91	13.96	29.77	-7.16	20.07	13.45	-0.10	N/A
Total Domestic Large Cap Equity	26.14	-17.98	27.04	14.02	30.31	-5.16	20.67	13.09	1.00	N/A
S&P 500 Index	26.29	-18.11	28.71	18.40	31.49	-4.38	21.83	11.96	1.38	13.69
Large Cap Growth	46.78	-33.14	27.27	41.61	37.36	-3.51	27.82	5.87	3.78	N/A
Vanguard Growth Index Hybrid	46.86	-33.13	27.30	40.27	37.31	-3.34	27.86	6.16	3.38	13.69
Russell 1000 Growth Index	42.68	-29.14	27.60	38.49	36.39	-1.51	30.21	7.08	5.67	13.05
Large Cap Core	26.46	-18.20	27.04	9.03	29.41	-5.71	19.57	14.29	0.18	N/A
S&P 500 Index	26.29	-18.11	28.71	18.40	31.49	-4.38	21.83	11.96	1.38	13.69
Large Cap Value	9.42	-2.05	26.48	2.30	25.83	-5.50	17.14	16.87	-0.27	N/A
Vanguard Value Index Hybrid	9.17	-2.01	26.51	2.26	25.85	-5.40	17.16	16.93	-0.86	13.29
Russell 1000 Value Index	11.46	-7.54	25.16	2.80	26.54	-8.27	13.66	17.34	-3.83	13.45
Mid Cap Equity	16.52	-13.11	24.67	13.58	26.13	-10.44	19.29	11.23	-1.31	N/A
Mid Cap Hybrid Index	16.44	-13.06	24.76	13.66	26.20	-10.67	19.30	11.25	-1.28	13.83
Small Cap Equity	15.99	-16.18	26.74	11.46	22.74	-10.45	16.25	18.32	-3.63	N/A
Small Cap Hybrid Index	16.05	-16.10	26.82	11.29	22.78	-10.32	16.24	18.26	-3.68	7.54
Total Fund - International Equity	14.07	-18.46	6.98	10.24	21.55	-14.50	28.00	5.26	-5.56	N/A
Small Cap - International Equity	15.19	-21.25	12.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FTSE Global ex U.S. Small Cap Index (Net)	15.35	-21.58	13.02	11.40	21.55	-18.91	29.78	3.93	-0.61	-4.34
Developed Markets - International Equity	17.84	-15.34	11.44	10.27	22.14	-14.49	26.46	2.46	-0.41	N/A
Vanguard Spliced Developed ex U.S. Index (Net)	17.97	-15.58	11.57	10.00	22.34	-14.79	26.31	2.29	-0.28	-4.85
Emerging Markets - International Equity	9.18	-17.74	1.10	15.26	20.37	-14.54	31.43	11.76	-15.80	N/A
FTSE Emerging Mkts All Cap China A Inclusion Index	9.95	-17.26	1.76	15.84	20.81	-14.49	31.46	10.66	-13.28	2.96
MSCI Emerging Markets (Net) Index	9.83	-20.09	-2.54	18.31	18.42	-14.57	37.28	11.19	-14.92	-2.19

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 Returns are expressed as percentages.

Comparative Performance
Total Fund
As of March 31, 2024

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Fund - Fixed Income	7.70	-11.27	0.05	6.75	10.16	-0.71	3.82	4.79	-0.18	N/A
Short - Term Fixed Income	4.88	-5.61	-0.97	4.71	4.71	1.37	1.19	1.51	0.98	N/A
Bloomberg 1-5 Year Gov/Credit Idx	4.89	-5.50	-0.97	4.71	5.01	1.38	1.27	1.56	0.97	1.42
High Yield - Fixed Income	11.74	-8.97	3.78	5.38	15.90	-2.87	6.65	10.89	-1.28	N/A
Blmbg. U.S. Corp High Yield	13.45	-11.19	5.28	7.11	14.32	-2.08	7.50	17.13	-4.47	2.45
Non-US Fixed Income	8.85	-12.89	-2.17	4.59	7.89	3.00	2.43	4.69	N/A	N/A
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	8.75	-12.72	-2.10	4.75	8.06	3.16	2.57	4.90	1.34	9.14
Real Estate	11.82	-26.20	40.47	-4.67	29.02	-5.93	4.93	8.51	2.56	N/A
Vanguard Spliced REIT Index	11.96	-26.12	40.56	-4.55	29.03	-5.86	5.07	8.60	2.52	30.38

Returns for periods greater than one year are annualized.
 Returns are expressed as percentages.

Multi Time Period Statistics
Butler County Employees Retirement Plan
As of March 31, 2024

Multi Time Period Statistics												
	3 YR Return		3 YR Standard Deviation		3 YR Sharpe Ratio		5 YR Return		5 YR Standard Deviation		5 YR Sharpe Ratio	
Total Fund Performance	3.52		13.01		0.14		6.88		13.18		0.42	
Total Fund Policy	3.66		12.33		0.15		7.17		12.72		0.45	
Vanguard Instl Indx;Inst (VINIX) *	11.45	(9)	17.35	(34)	0.57	(9)	15.02	(9)	18.21	(34)	0.75	(8)
S&P 500 Index	11.49		17.35		0.57		15.05		18.21		0.75	
IM S&P 500 Index (MF) Median	11.16		17.34		0.56		14.71		18.20		0.74	
Vanguard Growth Index (VIGIX)	10.92	(29)	22.05	(28)	0.47	(36)	17.92	(12)	21.38	(20)	0.79	(22)
Vanguard Growth Index Hybrid	10.96		22.06		0.47		17.96		21.39		0.79	
IM U.S. Large Cap Growth Equity (MF) Median	9.52		20.86		0.42		15.73		20.48		0.73	
Vanguard Value Index (VIVIX)	10.20	(32)	15.40	(63)	0.55	(29)	11.54	(46)	17.61	(68)	0.60	(38)
Vanguard Value Index Hybrid	10.20		15.38		0.55		11.53		17.61		0.60	
IM U.S. Large Cap Value Equity (MF) Median	9.36		15.93		0.49		11.39		18.18		0.57	
Vanguard S&P MC400;Inst (VSPMX) *	6.90	(58)	19.78	(6)	0.31	(61)	11.64	(30)	22.04	(12)	0.52	(43)
S&P MidCap 400 Index	6.96		19.78		0.31		11.71		22.04		0.52	
IM U.S. Mid Cap Core Equity (MF) Median	7.45		17.94		0.35		10.77		20.37		0.51	
Vanguard S&P SC600;Inst (VSMSX) *	2.21	(67)	20.53	(32)	0.08	(66)	9.13	(53)	23.62	(44)	0.40	(54)
S&P SmallCap 600 Index	2.28		20.53		0.09		9.15		23.61		0.41	
IM U.S. Small Cap Core Equity (MF) Median	3.91		20.06		0.16		9.28		23.42		0.42	

* Mutual fund returns were used for this report if 3 & 5 year client specific results were not available.

The Vanguard Emerging Market Stock Index Fund performance shown may be different than actual performance as the client was invested in the ETF before transferring to the mutual fund.
All performance is reported net of fees.

Multi Time Period Statistics
Butler County Employees Retirement Plan
As of March 31, 2024

	3 YR Return		3 YR Standard Deviation		3 YR Sharpe Ratio		5 YR Return		5 YR Standard Deviation		5 YR Sharpe Ratio	
Vanguard Intl Val;Inv (VTRIX)*	2.91	(72)	16.95	(80)	0.10	(70)	6.68	(62)	19.23	(30)	0.33	(62)
MSCI EAFE Index	5.31		16.61		0.24		7.85		17.75		0.40	
IM International Large Cap Core Equity (MF) Median	3.80		17.35		0.16		7.18		18.32		0.36	
Vanguard Intl Gro;Adm (VWILX)*	-5.68	(99)	22.57	(7)	-0.26	(98)	8.70	(27)	22.89	(1)	0.39	(42)
MSCI EAFE Growth Index	3.08		18.85		0.12		8.17		17.99		0.42	
IM International Large Cap Growth Equity (MF) Median	1.82		17.84		0.04		7.25		18.58		0.36	
Vanguard FTSEUSSC;Ins (VFSNX) *	-0.30	(38)	17.66	(78)	-0.07	(43)	5.07	(53)	20.23	(48)	0.25	(53)
FTSE Global ex U.S. Small Cap Index (Net)	-0.39		17.39		-0.08		4.90		20.11		0.24	
IM International SMID Cap Growth Equity (MF) Median	-1.21		18.86		-0.11		5.17		20.15		0.25	
Vanguard Developed Markets Index (VTMNX)	3.96	(33)	17.68	(33)	0.16	(33)	7.39	(29)	18.69	(47)	0.37	(31)
Vanguard Spliced Developed ex U.S. Index (Net)	3.92		17.03		0.16		7.37		18.29		0.37	
IM International Multi-Cap Equity (MF) Median	2.73		17.29		0.09		6.38		18.53		0.32	
Vanguard Emerging Markets Index (VEMIX)	-3.73	(35)	16.17	(83)	-0.32	(41)	2.86	(44)	18.00	(90)	0.14	(47)
FTSE Emerging Mkts All Cap China A Inclusion Index	-2.87		15.78		-0.27		3.52		17.77		0.17	
IM Emerging Markets Equity (MF) Median	-5.51		17.96		-0.37		2.66		19.64		0.13	
Vanguard Short Term Bond Index (VBIRX)	-0.41	(97)	3.18	(6)	-0.96	(78)	1.18	(87)	2.68	(44)	-0.30	(85)
Bloomberg 1-5 Year Gov/Credit Idx	-0.38		3.15		-0.96		1.24		2.67		-0.28	
IM U.S. Short Term Investment Grade (MF) Median	1.04		2.28		-0.69		1.89		2.50		-0.04	
Vanguard Tot Bd:Inst (VBTIX) *	-2.41	(38)	7.10	(67)	-0.68	(42)	0.39	(55)	6.11	(74)	-0.24	(62)
Blmbg. U.S. Aggregate Index	-2.46		7.14		-0.68		0.36		6.08		-0.24	
IM U.S. Broad Market Core Fixed Income (MF) Median	-2.54		7.18		-0.69		0.47		6.42		-0.21	
Vanguard High Yield Bond Fund (VWEAX)	2.11	(38)	8.16	(51)	-0.02	(38)	3.85	(42)	8.60	(78)	0.25	(38)
Vanguard High Yield Corporate Composite Index	1.92		7.93		-0.04		4.13		8.56		0.28	
IM U.S. High Yield Bonds (MF) Median	1.82		8.16		-0.05		3.59		9.21		0.21	

* Mutual fund returns were used for this report if 3 & 5 year client specific results were not available.

The Vanguard Emerging Market Stock Index Fund performance shown may be different than actual performance as the client was invested in the ETF before transferring to the mutual fund.

All performance is reported net of fees.

Multi Time Period Statistics
Butler County Employees Retirement Plan
As of March 31, 2024

	3 YR Return		3 YR Standard Deviation		3 YR Sharpe Ratio		5 YR Return		5 YR Standard Deviation		5 YR Sharpe Ratio	
Vanguard Tot Itl Bl;Inst (VTIFX) *	-1.69	(38)	6.09	(67)	-0.68	(61)	0.32	(39)	5.33	(78)	-0.29	(45)
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	-1.65		5.87		-0.71		0.41		5.17		-0.28	
IM International Fixed Income (MF) Median	-3.25		9.30		-0.64		-1.06		7.92		-0.30	
Vanguard Em Mkt Bond;Adm (VEGBX)*	1.40	(12)	10.91	(17)	-0.05	(12)	4.58	(5)	11.35	(81)	0.28	(5)
JPM GBI-EM Diversified	-3.22		11.75		-0.45		-0.99		11.81		-0.20	
IM Emerging Markets Debt - LC (MF) Median	0.66		10.62		-0.13		1.91		12.26		0.05	
Vanguard Real Estate Index Fund (VGSNX)	1.78	(68)	21.47	(17)	0.07	(62)	3.74	(52)	20.39	(27)	0.19	(52)
Vanguard Spliced REIT Index	1.87		21.46		0.07		3.83		20.38		0.19	
IM Real Estate Sector (MF) Median	2.41		20.96		0.09		3.79		19.84		0.19	

* Mutual fund returns were used for this report if 3 & 5 year client specific results were not available.

The Vanguard Emerging Market Stock Index Fund performance shown may be different than actual performance as the client was invested in the ETF before transferring to the mutual fund.

All performance is reported net of fees.

Multi Time Period Statistics
Butler County Employees Retirement Plan
As of March 31, 2024

Multi Time Period Statistics												
	10 YR Return		10 YR Standard Deviation		10 YR Sharpe Ratio		15 YR Return		15 YR Standard Deviation		15 YR Sharpe Ratio	
Total Fund Performance	6.48		11.21		0.50		9.15		11.16		0.76	
Total Fund Policy	6.69		10.92		0.53		9.57		11.18		0.80	
Vanguard Instl Indx;Inst (VINIX) *	12.93	(4)	15.47	(12)	0.79	(4)	15.61	(2)	15.64	(8)	0.96	(3)
S&P 500 Index	12.96		15.47		0.79		15.63		15.63		0.96	
IM S&P 500 Index (MF) Median	12.57		15.45		0.77		15.15		15.61		0.94	
Vanguard Growth Index (VIGIX)	15.07	(19)	18.75	(40)	0.79	(29)	N/A		N/A		N/A	
Vanguard Growth Index Hybrid	15.11		18.78		0.79		17.26		18.02		0.94	
IM U.S. Large Cap Growth Equity (MF) Median	13.96		18.38		0.74		16.01		18.12		0.88	
Vanguard Value Index (VIVIX)	10.46	(23)	14.79	(67)	0.66	(20)	N/A		N/A		N/A	
Vanguard Value Index Hybrid	10.46		14.79		0.67		13.94		15.41		0.88	
IM U.S. Large Cap Value Equity (MF) Median	9.44		15.46		0.58		12.90		15.99		0.79	
Vanguard S&P MC400;Inst (VSPMX)*	9.92	(11)	19.07	(72)	0.53	(10)	N/A		N/A		N/A	
S&P MidCap 400 Index	9.99		19.07		0.53		14.74		19.24		0.77	
IM U.S. SMID Cap Core Equity (MF) Median	7.92		19.57		0.43		12.88		19.87		0.67	
Vanguard S&P SC600;Inst (VSMSX)*	8.79	(16)	21.17	(45)	0.45	(17)	N/A		N/A		N/A	
S&P SmallCap 600 Index	8.80		21.16		0.45		14.32		20.75		0.71	
IM U.S. Small Cap Core Equity (MF) Median	7.61		21.06		0.39		12.84		21.13		0.65	

* Mutual fund returns were used for this report if 10 & 15 year client specific results were not available.

The Vanguard Emerging Market Stock Index Fund performance shown may be different than actual performance as the client was invested in the ETF before transferring to the mutual fund.

All performance is reported net of fees.

Multi Time Period Statistics
Butler County Employees Retirement Plan
As of March 31, 2024

	10 YR Return		10 YR Standard Deviation		10 YR Sharpe Ratio		15 YR Return		15 YR Standard Deviation		15 YR Sharpe Ratio	
Vanguard Intl Val;Inv (VTRIX)*	4.20	(51)	17.36	(44)	0.25	(49)	7.87	(60)	19.01	(37)	0.45	(64)
MSCI EAFE Index	5.30		16.13		0.32		8.93		17.74		0.52	
IM International Large Cap Core Equity (MF) Median	4.21		16.81		0.25		8.03		18.23		0.47	
Vanguard Intl Gro;Adm (VWILX)*	7.73	(6)	21.74	(2)	0.39	(18)	11.16	(6)	21.92	(1)	0.55	(19)
MSCI EAFE Growth Index	6.24		16.74		0.37		9.48		17.55		0.56	
IM International Large Cap Growth Equity (MF) Median	5.12		17.09		0.29		8.55		18.29		0.49	
Vanguard FTSEUSSC;Ins (VFSNX)*	3.64	(74)	18.93	(71)	0.22	(74)	N/A		N/A		N/A	
FTSE Global ex U.S. Small Cap Index (Net)	3.39		18.81		0.20		N/A		N/A		N/A	
IM International SMID Cap Growth Equity (MF) Median	4.32		19.34		0.25		10.01		20.88		0.53	
Vanguard Developed Markets Index (VTMNX)	5.04	(26)	16.79	(60)	0.30	(24)	N/A		N/A		N/A	
Vanguard Spliced Developed ex U.S. Index (Net)	5.02		16.58		0.30		8.56		18.01		0.50	
IM International Multi-Cap Equity (MF) Median	4.45		17.16		0.27		8.11		18.48		0.47	
Vanguard Emerging Markets Index (VEMIX)	3.24	(41)	17.09	(93)	0.20	(41)	N/A		N/A		N/A	
FTSE Emerging Mkts All Cap China A Inclusion Index	3.91		16.95		0.23		7.51		19.88		0.42	
IM Emerging Markets Equity (MF) Median	2.75		18.83		0.17		6.68		20.97		0.37	
Vanguard Sh-Tm B;Inst (VBITX)*	1.35	(70)	2.37	(46)	0.00	(70)	N/A		N/A		N/A	
Bloomberg 1-5 Year Gov/Credit Idx	1.40		2.38		0.03		1.88		2.14		0.45	
IM U.S. Short Term Investment Grade (MF) Median	1.60		2.26		0.11		2.21		2.50		0.54	
Vanguard Tot Bd;Inst (VBTIX)*	1.53	(50)	5.01	(68)	0.06	(50)	2.59	(77)	4.56	(81)	0.38	(75)
Blmbg. U.S. Aggregate Index	1.54		4.97		0.06		2.62		4.50		0.39	
IM U.S. Broad Market Core Fixed Income (MF) Median	1.52		5.16		0.05		3.17		4.92		0.47	
Vanguard HY Corp;Adm (VWEAX)*	4.23	(16)	7.31	(90)	0.42	(10)	7.58	(48)	7.81	(95)	0.86	(5)
Vanguard High Yield Corporate Composite Index	4.30		7.58		0.42		7.70		8.11		0.84	
IM U.S. High Yield Bonds (MF) Median	3.54		8.38		0.30		7.54		9.18		0.73	

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The Vanguard Emerging Market Stock Index Fund performance shown may be different than actual performance as the client was invested in the ETF before transferring to the mutual fund.

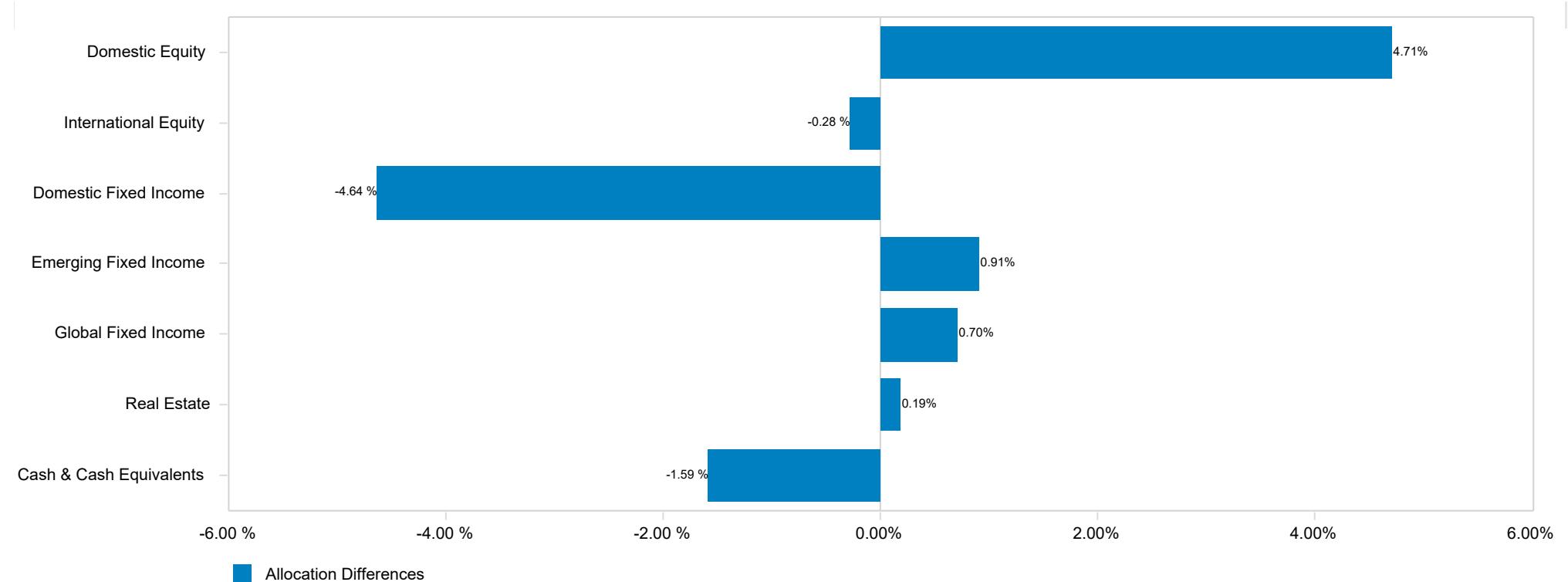
All performance is reported net of fees.

Multi Time Period Statistics
Butler County Employees Retirement Plan
As of March 31, 2024

	10 YR Return		10 YR Standard Deviation		10 YR Sharpe Ratio		15 YR Return	15 YR Standard Deviation	15 YR Sharpe Ratio
Vanguard Tot Itl Bl;Inst (VTIFX)*	2.23	(9)	4.55	(81)	0.21	(9)	N/A	N/A	N/A
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	2.37		4.50		0.25		N/A	N/A	N/A
IM International Fixed Income (MF) Median	-0.70		8.30		-0.17		2.37	9.20	0.19
Vanguard Em Mkt Bond;Adm (VEGBX)*	N/A		N/A		N/A		N/A	N/A	N/A
JPM GBI-EM Diversified	-1.09		12.69		-0.13		2.42	12.58	0.18
IM Emerging Markets Debt - LC (MF) Median	-0.17		13.13		-0.06		N/A	N/A	N/A
Vanguard Real Estate Index Fund (VGSNX)	6.24		17.47		0.36		N/A	N/A	N/A
Vanguard Spliced REIT Index	6.33		17.48		0.36		13.31	19.54	0.69

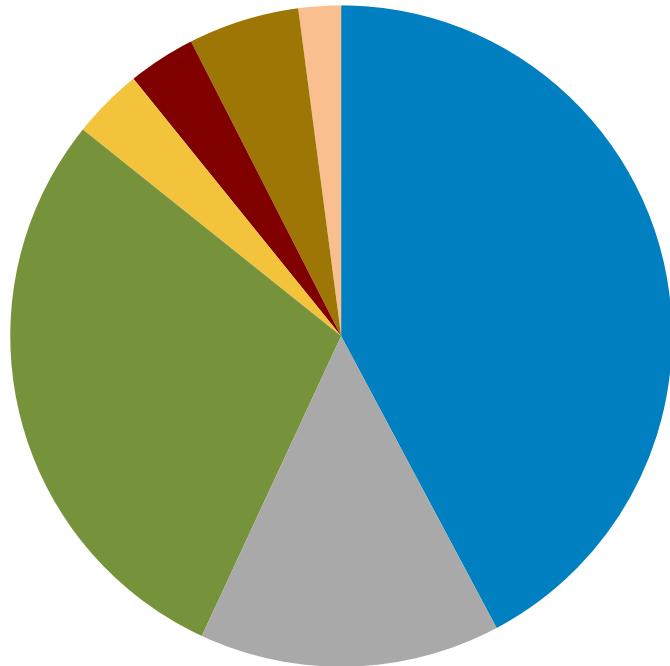
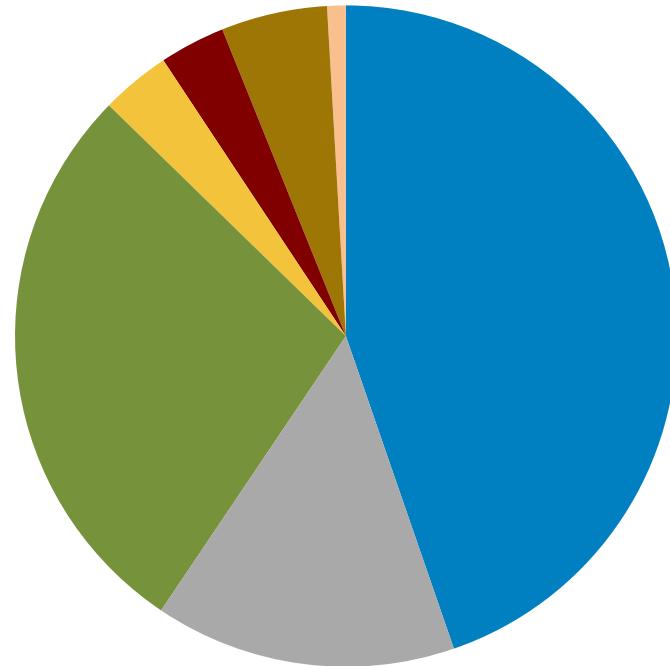
* Mutual fund returns were used for this report if 10 & 15 year client specific results were not available.

The Vanguard Emerging Market Stock Index Fund performance shown may be different than actual performance as the client was invested in the ETF before transferring to the mutual fund.
All performance is reported net of fees.



Asset Allocation Compliance

	Current Allocation (%)	Target Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)
Domestic Equity	44.71	40.00	15.00	65.00
International Equity	14.72	15.00	5.00	25.00
Domestic Fixed Income	27.86	32.50	15.00	50.00
Emerging Fixed Income	3.41	2.50	0.00	5.00
Global Fixed Income	3.20	2.50	0.00	5.00
Real Estate	5.19	5.00	0.00	10.00
Cash & Cash Equivalents	0.91	2.50	0.00	5.00
Total Fund	100.00	100.00	N/A	N/A

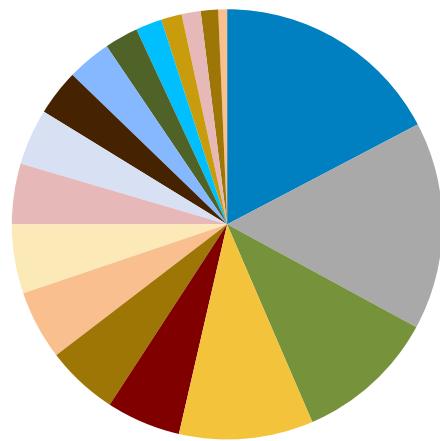
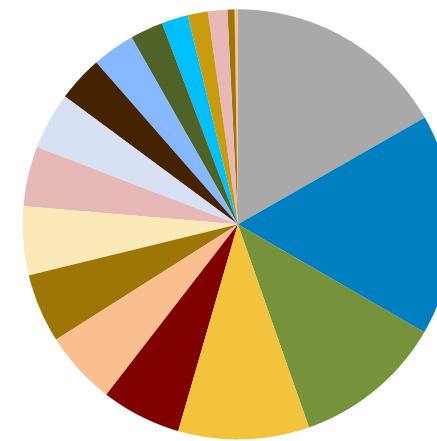
Asset Allocation By Segment as of
December 31, 2023 : \$256,503,010Asset Allocation By Segment as of
March 31, 2024 : \$264,835,927

Allocation

Segments	Market Value	Allocation
Domestic Equity	108,291,593	42.2
International Equity	37,708,964	14.7
Domestic Fixed Income	73,924,309	28.8
Emerging Fixed Income	8,860,878	3.5
Global Fixed Income	8,491,754	3.3
Real Estate	13,893,100	5.4
Cash	5,332,412	2.1

Allocation

Segments	Market Value	Allocation
Domestic Equity	118,414,080	44.7
International Equity	38,983,944	14.7
Domestic Fixed Income	73,773,734	27.9
Emerging Fixed Income	9,035,157	3.4
Global Fixed Income	8,481,278	3.2
Real Estate	13,732,032	5.2
Cash	2,415,704	0.9

Asset Allocation By Manager as of
Dec-2023 : \$256,503,010Asset Allocation By Manager as of
Mar-2024 : \$264,835,927

Allocation

	Market Value	Allocation
Vanguard Total Bond Index (VBTIX)	44,387,626	17.3
Vanguard Inst'l Index Fund (VINIX)	40,081,751	15.6
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	27,191,747	10.6
Vanguard High Yield Bond Fund (VWEAX)	25,821,779	10.1
Vanguard Growth Index (VIGIX)	14,317,772	5.6
Vanguard Real Estate Index Fund (VGSNX)	13,893,100	5.4
Vanguard Value Index (VIVIX)	13,359,679	5.2
Vanguard Small-Cap 600 Index I (VSMSX)	13,340,645	5.2
Vanguard Emerging Markets Index (VEMIX)	11,690,738	4.6
Vanguard Developed Markets Index (VTMNX)	10,811,007	4.2
Vanguard EM Bond (VEGBX)	8,860,878	3.5
Vanguard International Bond (VTIFX)	8,491,754	3.3
Vanguard FTSE AW ex-US SC Index (VFSNX)	6,477,533	2.5
Vanguard Intl Value (VTRIX)	5,063,789	2.0
Vanguard Short Term Bond Index (VBIRX)	3,980,762	1.6
Vanguard Intl Growth (VWILX)	3,665,897	1.4
NMA	3,360,184	1.3
Disbursement & MF Cash	1,706,370	0.7

Allocation

	Market Value	Allocation
Vanguard Inst'l Index Fund (VINIX)	44,308,342	16.7
Vanguard Total Bond Index (VBTIX)	44,038,184	16.6
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	29,895,370	11.3
Vanguard High Yield Bond Fund (VWEAX)	26,021,359	9.8
Vanguard Growth Index (VIGIX)	15,879,263	6.0
Vanguard Value Index (VIVIX)	14,663,095	5.5
Vanguard Real Estate Index Fund (VGSNX)	13,732,032	5.2
Vanguard Small-Cap 600 Index I (VSMSX)	13,668,010	5.2
Vanguard Emerging Markets Index (VEMIX)	11,917,167	4.5
Vanguard Developed Markets Index (VTMNX)	11,367,036	4.3
Vanguard EM Bond (VEGBX)	9,078,729	3.4
Vanguard International Bond (VTIFX)	8,497,054	3.2
Vanguard FTSE AW ex-US SC Index (VFSNX)	6,572,722	2.5
Vanguard Intl Value (VTRIX)	5,267,043	2.0
Vanguard Short Term Bond Index (VBIRX)	3,987,393	1.5
Vanguard Intl Growth (VWILX)	3,859,976	1.5
NMA	1,420,574	0.5
Disbursement & MF Cash	662,579	0.3

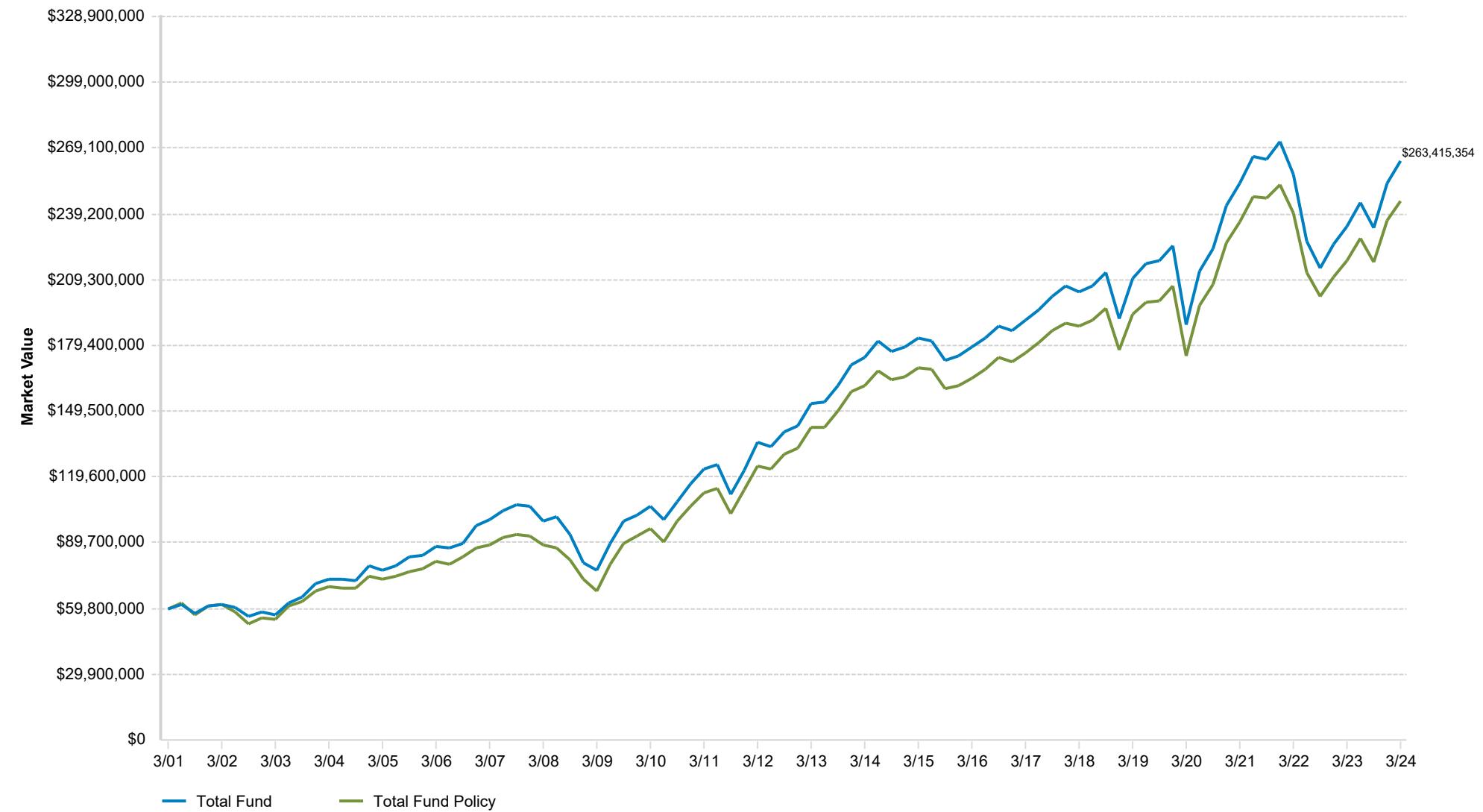
Asset Allocation Attributes																	
	Domestic Equity		International Equity		Domestic Fixed Income		Emerging Fixed Income		Global Fixed Income		Real Estate		Cash		Total Fund		
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	
Vanguard Inst'l Index Fund (VINIX)	44,308	100.0	-	-	-	-	-	-	-	-	-	-	-	-	44,308	16.7	
Vanguard Value Index (VIVIX)	14,663	100.0	-	-	-	-	-	-	-	-	-	-	-	-	14,663	5.5	
Vanguard Small-Cap 600 Index I (VSMSX)	13,668	100.0	-	-	-	-	-	-	-	-	-	-	-	-	13,668	5.2	
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	29,895	100.0	-	-	-	-	-	-	-	-	-	-	-	-	29,895	11.3	
Vanguard Growth Index (VIGIX)	15,879	100.0	-	-	-	-	-	-	-	-	-	-	-	-	15,879	6.0	
Twin Capital Enhanced Index	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	
Vanguard Intl Value (VTRIX)	-	-	5,267	100.0	-	-	-	-	-	-	-	-	-	-	5,267	2.0	
Vanguard Intl Growth (VWILX)	-	-	3,860	100.0	-	-	-	-	-	-	-	-	-	-	3,860	1.5	
Vanguard FTSE AW ex-US SC Index (VFSNX)	-	-	6,573	100.0	-	-	-	-	-	-	-	-	-	-	6,573	2.5	
Vanguard Developed Markets Index (VTMNX)	-	-	11,367	100.0	-	-	-	-	-	-	-	-	-	-	11,367	4.3	
Vanguard Emerging Markets Index (VEMIX)	-	-	11,917	100.0	-	-	-	-	-	-	-	-	-	-	11,917	4.5	
Vanguard High Yield Bond Fund (VWEAX)	-	-	-	-	25,890	99.5	-	-	-	-	-	-	-	131	0.5	26,021	9.8
Vanguard Short Term Bond Index (VBIRX)	-	-	-	-	3,977	99.7	-	-	-	-	-	-	-	11	0.3	3,987	1.5
Vanguard Total Bond Index (VBTIX)	-	-	-	-	43,906	99.7	-	-	-	-	-	-	-	132	0.3	44,038	16.6
Vanguard International Bond (VTIFX)	-	-	-	-	-	-	-	-	8,481	99.8	-	-	-	16	0.2	8,497	3.2
Vanguard EM Bond (VEGBX)	-	-	-	-	-	-	9,035	99.5	-	-	-	-	-	44	0.5	9,079	3.4
Vanguard Real Estate Index Fund (VGSNX)	-	-	-	-	-	-	-	-	-	-	13,732	100.0	-	-	13,732	5.2	
Disbursement & MF Cash	-	-	-	-	-	-	-	-	-	-	-	-	-	663	100.0	663	0.3
NMA	-	-	-	-	-	-	-	-	-	-	-	-	-	1,421	100.0	1,421	0.5
Total Fund	118,414	44.7	38,984	14.7	73,774	27.9	9,035	3.4	8,481	3.2	13,732	5.2	2,416	0.9	264,836	100.0	

Schedule of Investable Assets

Total Fund

January 1, 2001 To March 31, 2024

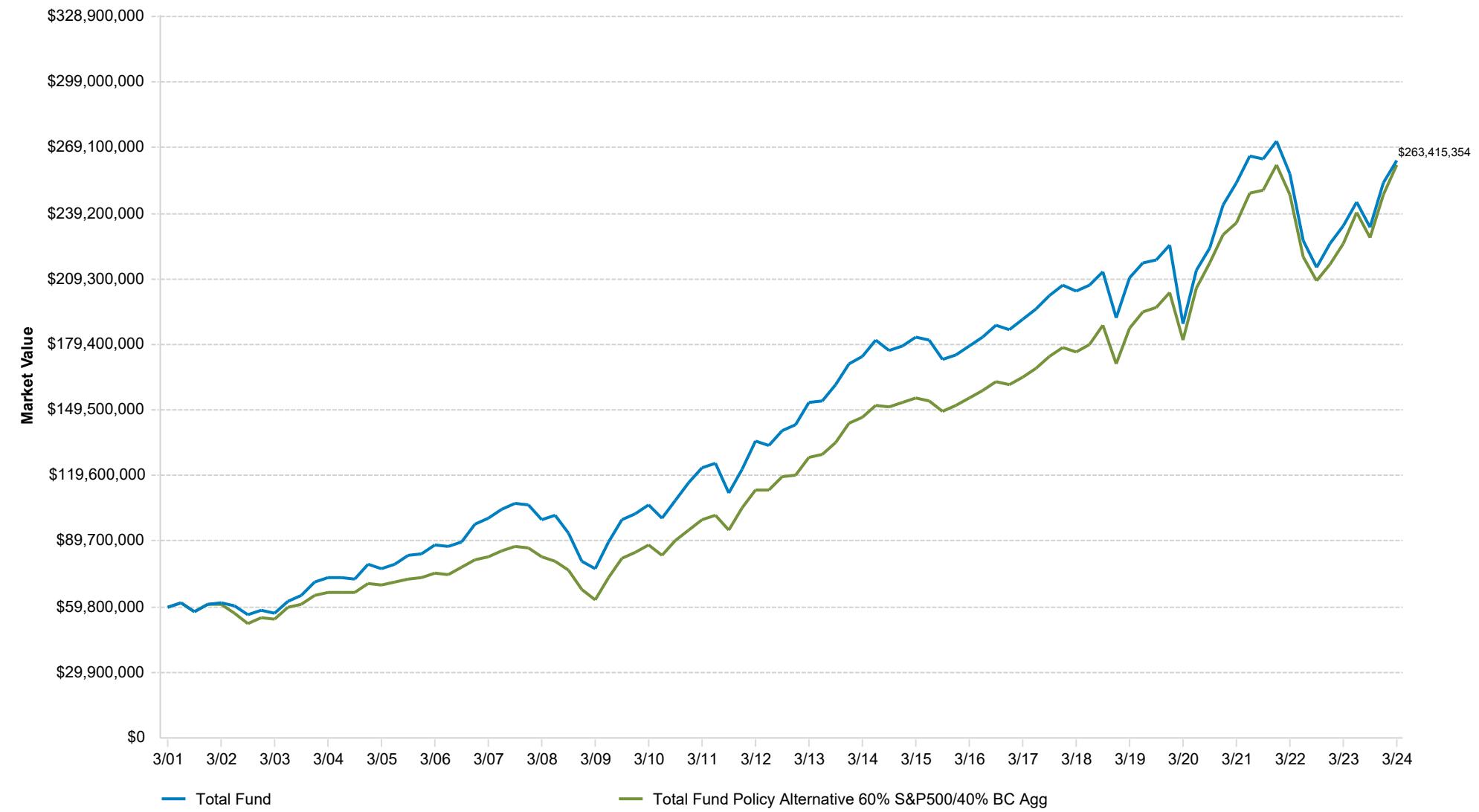
Schedule of Investable Assets



Schedule of Investable Assets

Periods Ending	Beginning Market Value \$	Net Cash Flow \$	Gain/Loss \$	Ending Market Value \$	%Return
Jan-2001 To Mar-2024	59,528,253	-30,573,177	234,460,278	263,415,354	331.64

Does not include Non-Measured Assets (NMA).

Schedule of Investable Assets
Total Fund
January 1, 2001 To March 31, 2024
Schedule of Investable Assets

Schedule of Investable Assets

Periods Ending	Beginning Market Value \$	Net Cash Flow \$	Gain/Loss \$	Ending Market Value \$	%Return
Jan-2001 To Mar-2024	59,528,253	-30,573,177	234,460,278	263,415,354	331.64

Does not include Non-Measured Assets (NMA).

Fee Analysis
Total Fund
As of March 31, 2024

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Vanguard Inst'l Index Fund (VINIX)	0.03	44,308,342	13,293	0.03 % of Assets
Vanguard Growth Index (VIGIX)	0.04	15,879,263	6,352	0.04 % of Assets
Vanguard Value Index (VIVIX)	0.04	14,663,095	5,865	0.04 % of Assets
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	0.08	29,895,370	23,916	0.08 % of Assets
Vanguard Small-Cap 600 Index I (VSMSX)	0.08	13,668,010	10,934	0.08 % of Assets
Vanguard Intl Value (VTRIX)	0.35	5,267,043	18,435	0.35 % of Assets
Vanguard Intl Growth (VWILX)	0.33	3,859,976	12,738	0.33 % of Assets
Vanguard FTSE AW ex-US SC Index (VFSNX)	0.11	6,572,722	7,230	0.11 % of Assets
Vanguard Developed Markets Index (VTMNX)	0.05	11,367,036	5,684	0.05 % of Assets
Vanguard Emerging Markets Index (VEMIX)	0.10	11,917,167	11,917	0.10 % of Assets
Vanguard Short Term Bond Index (VBIRX)	0.07	3,987,393	2,791	0.07 % of Assets
Vanguard Total Bond Index (VBTIX)	0.03	44,038,184	13,211	0.03 % of Assets
Vanguard High Yield Bond Fund (VWEAX)	0.13	26,021,359	33,828	0.13 % of Assets
Vanguard International Bond (VTIFX)	0.07	8,497,054	5,948	0.07 % of Assets
Vanguard EM Bond (VEGBX)	0.45	9,078,729	40,854	0.45 % of Assets
Vanguard Real Estate Index Fund (VGSNX)	0.10	13,732,032	13,732	0.10 % of Assets
Total Fund Performance	0.09	263,415,354	226,728	

Does not include Non-Measured Assets (NMA).

Fee information on this page is an illustrative estimate of management fees based on current reported portfolio values. Fee estimates do not reflect actual calculation methodologies or applicable carried interest.

Financial Reconciliation
Total Fund
as of March 31, 2024

Quarter To Date	Market Value 01/01/2024	Management Fees	Net Flows	Return On Investment	Market Value 03/31/2024
Domestic Equity					
Vanguard Inst'l Index Fund (VINIX)	40,081,751	-	-	4,226,591	44,308,342
Vanguard Value Index (VIVIX)	13,359,679	-	-	1,303,416	14,663,095
Vanguard Small-Cap 600 Index I (VSMSX)	13,340,645	-	-	327,365	13,668,010
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	27,191,747	-	-	2,703,623	29,895,370
Vanguard Growth Index (VIGIX)	14,317,772	-	-	1,561,491	15,879,263
International Equity					
Vanguard Intl Value (VTRIX)	5,063,789	-	-	203,254	5,267,043
Vanguard Intl Growth (VWILX)	3,665,897	-	-	194,079	3,859,976
Vanguard FTSE AW ex-US SC Index (VFSNX)	6,477,533	-	-	95,189	6,572,722
Vanguard Developed Markets Index (VTMNX)	10,811,007	-	-	556,029	11,367,036
Vanguard Emerging Markets Index (VEMIX)	11,690,738	-	-	226,429	11,917,167
Fixed Income					
Vanguard Short Term Bond Index (VBIRX)	3,980,762	-	-	6,631	3,987,393
Vanguard Total Bond Index (VBTIX)	44,387,626	-	-	-349,442	44,038,184
Vanguard High Yield Bond Fund (VWEAX)	25,821,779	-	-	199,580	26,021,359
Vanguard International Bond (VTIFX)	8,491,754	-	-	5,300	8,497,054
Vanguard EM Bond (VEGBX)	8,860,878	-	-	217,852	9,078,729
REIT					
Vanguard Real Estate Index Fund (VGSNX)	13,893,100	-	-	-161,069	13,732,032
Disbursement & MF Cash	1,706,370	-	-1,069,135	25,343	662,579
Total Fund Performance	253,142,827	-	-1,069,135	11,341,662	263,415,354
NMA	3,360,184	-	-1,939,610	-	1,420,574
Total Fund	256,503,010	-	-3,008,745	11,341,662	264,835,927

Financial Reconciliation
Total Fund
as of March 31, 2024

Year To Date	Market Value 01/01/2024	Management Fees	Net Flows	Return On Investment	Market Value 03/31/2024
Domestic Equity					
Vanguard Inst'l Index Fund (VINIX)	40,081,751	-	-	4,226,591	44,308,342
Vanguard Value Index (VIVIX)	13,359,679	-	-	1,303,416	14,663,095
Vanguard Small-Cap 600 Index I (VSMSX)	13,340,645	-	-	327,365	13,668,010
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	27,191,747	-	-	2,703,623	29,895,370
Vanguard Growth Index (VIGIX)	14,317,772	-	-	1,561,491	15,879,263
International Equity					
Vanguard Intl Value (VTRIX)	5,063,789	-	-	203,254	5,267,043
Vanguard Intl Growth (VWILX)	3,665,897	-	-	194,079	3,859,976
Vanguard FTSE AW ex-US SC Index (VFSNX)	6,477,533	-	-	95,189	6,572,722
Vanguard Developed Markets Index (VTMNX)	10,811,007	-	-	556,029	11,367,036
Vanguard Emerging Markets Index (VEMIX)	11,690,738	-	-	226,429	11,917,167
Fixed Income					
Vanguard Short Term Bond Index (VBIRX)	3,980,762	-	-	6,631	3,987,393
Vanguard Total Bond Index (VBTIX)	44,387,626	-	-	-349,442	44,038,184
Vanguard High Yield Bond Fund (VWEAX)	25,821,779	-	-	199,580	26,021,359
Vanguard International Bond (VTIFX)	8,491,754	-	-	5,300	8,497,054
Vanguard EM Bond (VEGBX)	8,860,878	-	-	217,852	9,078,729
REIT					
Vanguard Real Estate Index Fund (VGSNX)	13,893,100	-	-	-161,069	13,732,032
Disbursement & MF Cash	1,706,370	-	-1,069,135	25,343	662,579
Total Fund Performance	253,142,827	-	-1,069,135	11,341,662	263,415,354
NMA	3,360,184	-	-1,939,610	-	1,420,574
Total Fund	256,503,010	-	-3,008,745	11,341,662	264,835,927

Goals

- Maintain the actuarial soundness of the Plan in order to meet future obligations by preserving the inflation adjusted value of the Plan's assets after all investment expenses, administrative costs, benefit payments and refunds.
- Obtain an average annual rate of investment return equal to or greater than the actuarial assumed rate of 7.5% (net of fees), with an emphasis over a longer term (fifteen year) trailing period.

Asset Allocation Ranges (Based on IPS Second Addendum)

Asset Class	Minimum	Target	Maximum
Large Cap Core	10%	15%	20%
Large Cap Value	0%	5%	10%
Large Cap Growth	0%	5%	10%
Mid Cap Core	5%	10%	15%
Small Cap Core	0%	5%	10%
International Developed Markets	5%	7.5%	15%
International Emerging Markets	0%	5%	10%
All World ex US Small Cap	0%	2.5%	5%
Aggregate Fixed Income	10%	20%	30%
Short-Term Fixed Income	0%	2.5%	5%
High Yield Fixed Income	5%	10%	15%
Non-US Fixed Income	0%	5%	10%
Real Estate	0%	5%	10%
Cash	0%	2.5%	5%

Rebalancing Policy

The Investment Consultant will monitor the asset allocation policy and shall recommend any necessary rebalancing on a quarterly basis, or more frequently. At each quarterly Board meeting, the Investment Consultant will provide the Plan's actual and target allocations (including ranges). Upon any Board approval, the Investment Consultant will initiate rebalancing.

Other Portfolio Guidelines and Restrictions

- Additional investment policies and guidelines are contained in the formal Investment Policy Statement.

Portfolio Guidelines and Restrictions

Equity Guidelines

- Equity investment manager of a separate account should diversify their portfolio in an attempt to minimize the impact of a substantial loss in any specific sector, industry or company.
- No more than 5% of each manager's equity holdings shall be invested in the securities of any one company (valued at market).
- The economic sector weightings shall not exceed the greater of two and half times the appropriate benchmark, valued at market, or 15% of the equity portfolio.
- The market for individual security holdings in the equity portfolio shall be liquid enough to allow for easy monetization.

Fixed Income Guidelines

- A fixed income investment manager of a separate account should diversify their portfolio in an attempt to minimize the adverse effects of interest rate fluctuations and default risk.
- No more than 5% of the fixed income portfolio in any one issuer, excluding direct and/or indirect obligations of the US Government.
- The market for individual security holdings in the fixed income shall be liquid enough to allow for easy monetization.
- The minimum quality rating for any fixed income security is an "investment grade" rating as determined by at least one nationally recognized credit ratings agency. Bond held in the fixed income portfolio must be rated investment grade ("Baa/BBB") or better by at least one agency, with the exception of securities held in a high-yield bond fund.
- The duration of the bonds held in the portfolios are at the discretion of the investment manager(s). However, the effective duration of the fixed income security should be within +/-20% of the index.

Cash & Equivalents Restrictions

- Commercial paper must be rated A-1 or P-1 by at least one nationally recognized credit rating agency.

Permissible Investments

- Permissible investments include those identified in the Plan's Asset Allocation Policy, subject to state statute and local ordinance.

Prohibited Investments

- Prohibited investments include those not specifically identified in the Plan's Asset Allocation Policy without prior approval of the Board, upon recommendation of the Investment Consultant.

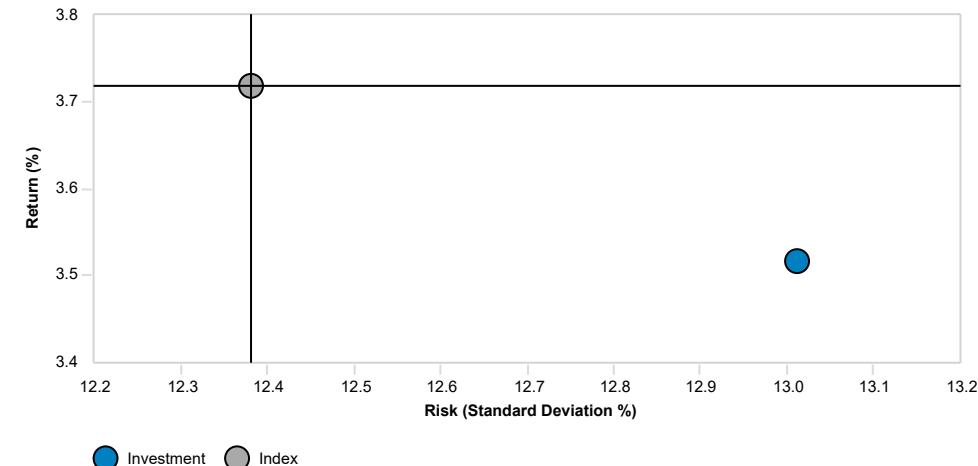
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.52	13.01	0.14	104.62	7	106.65	5
Index	3.72	12.38	0.15	100.00	7	100.00	5

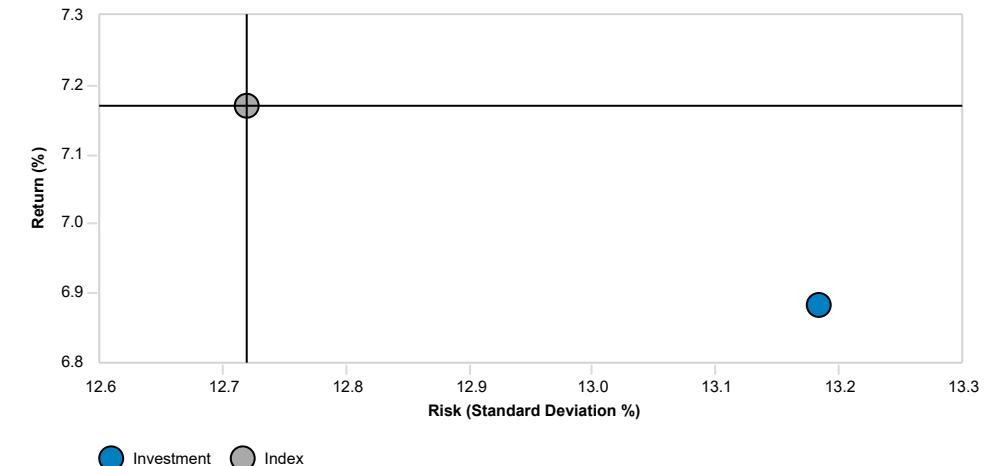
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.88	13.18	0.42	102.55	14	105.45	6
Index	7.17	12.72	0.45	100.00	14	100.00	6

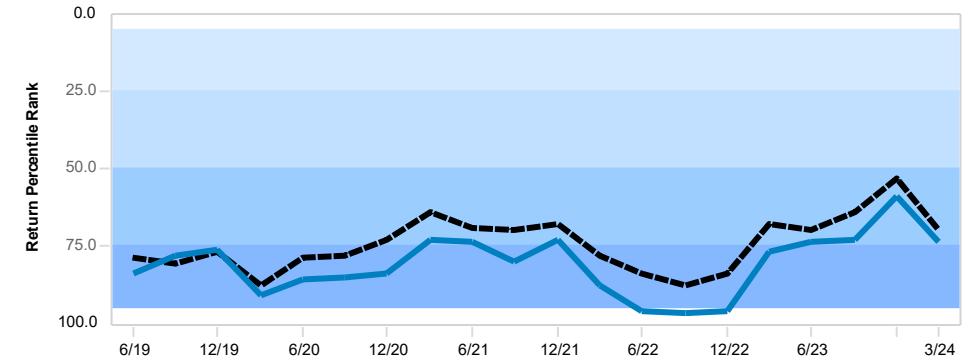
Risk and Return 3 Years



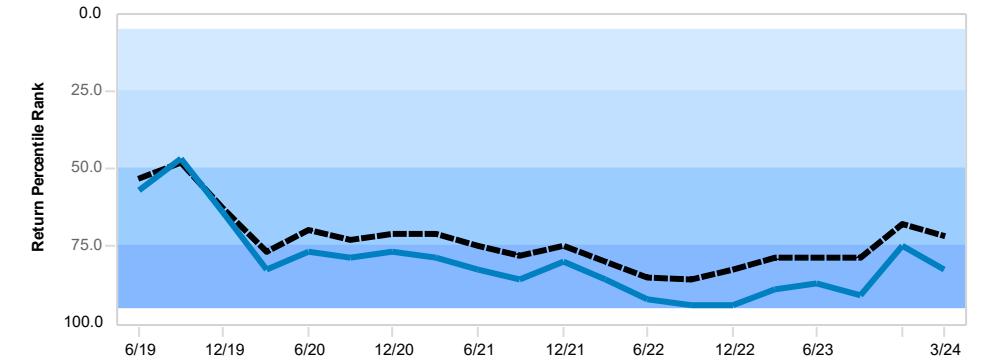
Risk and Return 5 Years



3 Year Rolling Percentile Rank All Public Plans-Total Fund



5 Year Rolling Percentile Rank All Public Plans-Total Fund

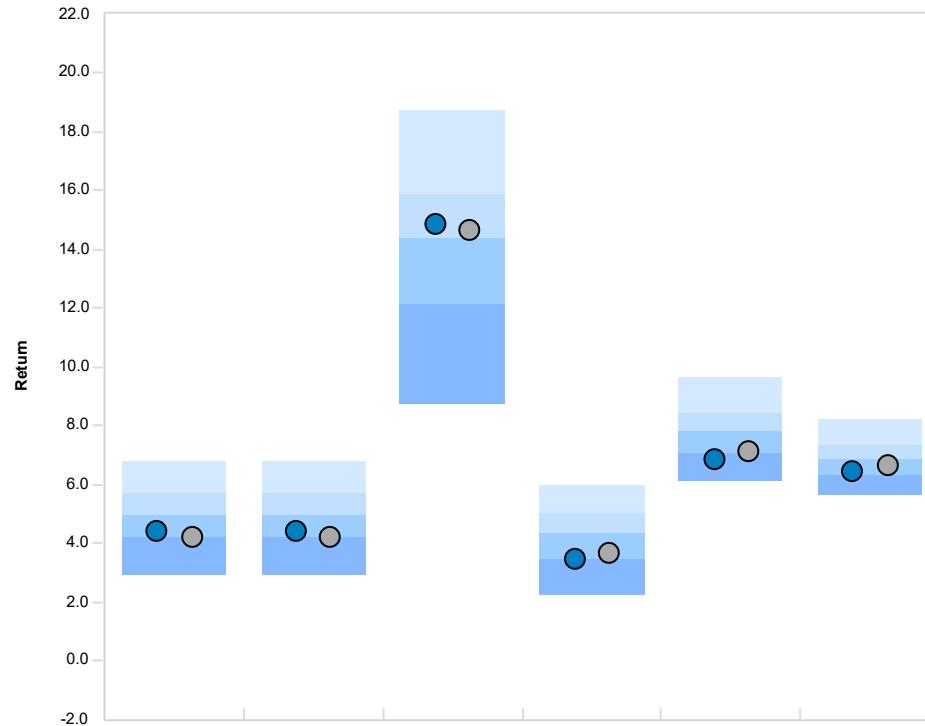


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	0 (0%)	7 (35%)	13 (65%)
Index	20	0 (0%)	0 (0%)	10 (50%)	10 (50%)

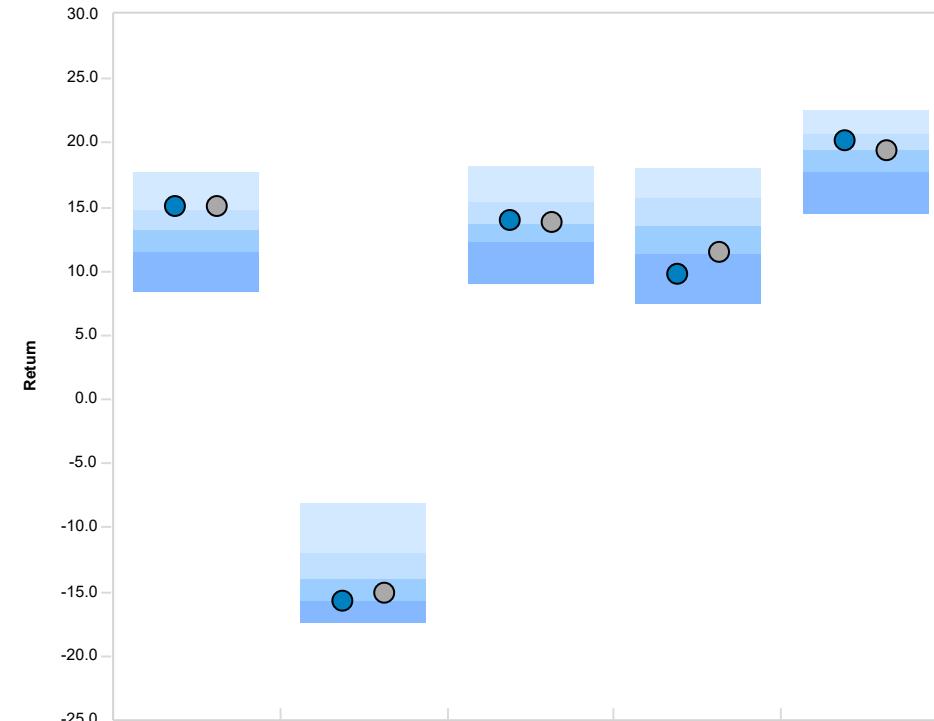
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	1 (5%)	3 (15%)	16 (80%)
Index	20	0 (0%)	1 (5%)	10 (50%)	9 (45%)

Does not include Non-Measured Assets (NMA).

Plan Sponsor Peer Group Analysis vs. All Public Plans-Total Fund



Plan Sponsor Peer Group Analysis vs. All Public Plans-Total Fund



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	4.47 (68)	4.47 (68)	14.86 (40)	3.52 (74)	6.88 (83)	6.48 (72)
Index	4.20 (76)	4.20 (76)	14.67 (45)	3.66 (70)	7.18 (72)	6.68 (59)
Median	5.01	5.01	14.41	4.34	7.86	6.88

	2023	2022	2021	2020	2019
Investment	15.13 (21)	-15.61 (75)	14.00 (44)	9.84 (88)	20.21 (38)
Index	15.06 (22)	-15.03 (67)	13.87 (48)	11.44 (75)	19.49 (50)
Median	13.21	-13.96	13.67	13.50	19.48

Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 04/01/2001	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	59,528,253	-31,419,217	235,306,318	263,415,354

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	10.06	-3.29	3.29	4.72	6.81	-5.15
Index	9.69	-2.94	3.29	4.60	6.41	-4.91

Does not include Non-Measured Assets (NMA).

Strategy Review
Vanguard Instl Indx;Inst (VINIX) | S&P 500 Index
As of March 31, 2024

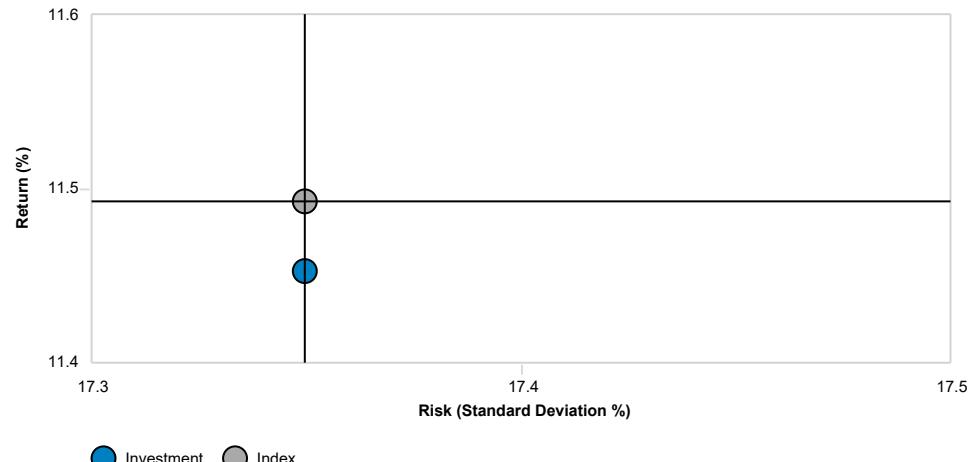
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.45	17.35	0.57	99.93	8	100.06	4
Index	11.49	17.35	0.57	100.00	8	100.00	4

Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	15.02	18.21	0.75	99.95	15	100.05	5
Index	15.05	18.21	0.75	100.00	15	100.00	5

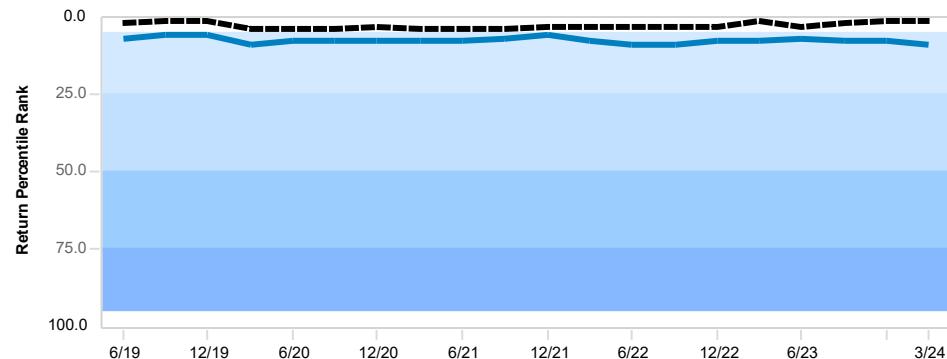
Risk and Return 3 Years



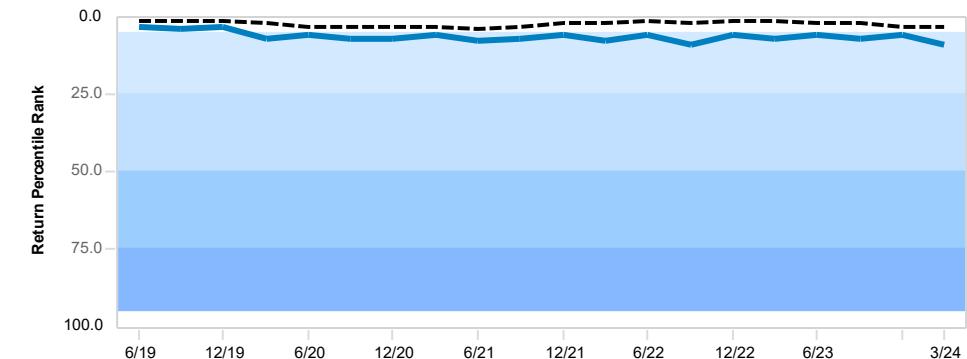
Risk and Return 5 Years



3 Year Rolling Percentile Rank IM S&P 500 Index (MF)



5 Year Rolling Percentile Rank IM S&P 500 Index (MF)

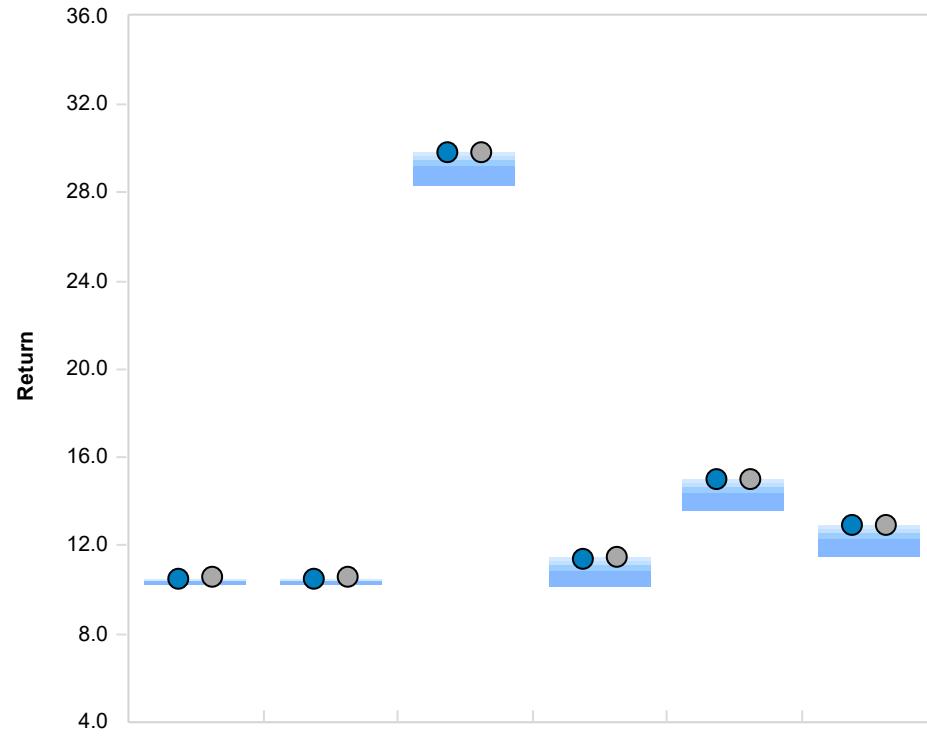


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)

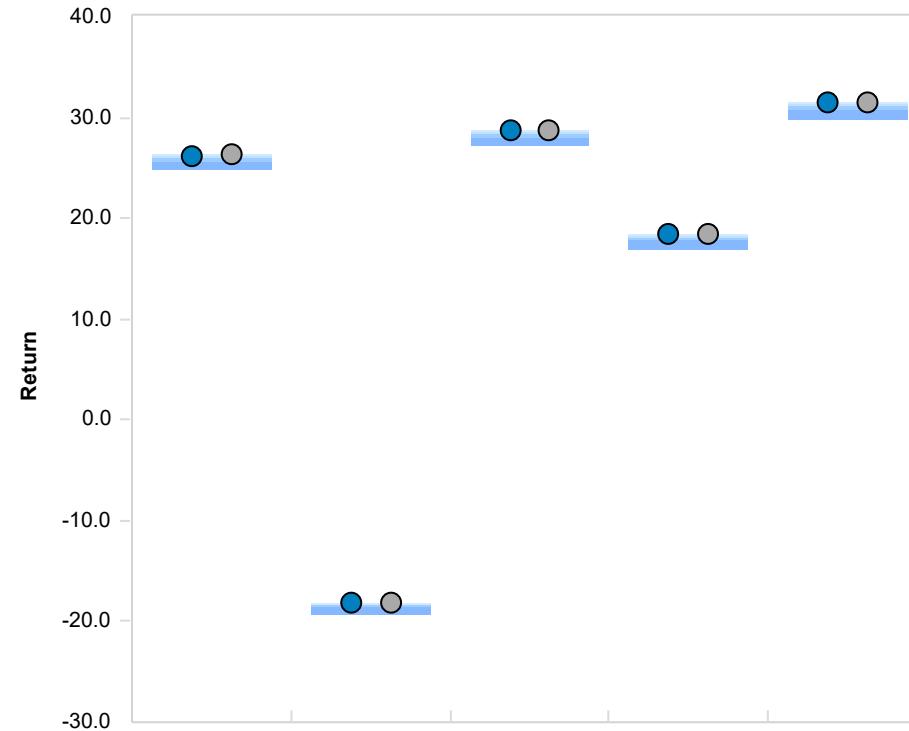
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)

Inception date for VINIX is 12/2020. Manager returns for VINIX have been used for this report.

Peer Group Analysis - IM S&P 500 Index (MF)



Peer Group Analysis - IM S&P 500 Index (MF)



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	10.54 (9)	10.54 (9)	29.84 (16)	11.45 (9)	15.02 (9)	12.93 (4)
Index	10.56 (1)	10.56 (1)	29.88 (4)	11.49 (1)	15.05 (3)	12.96 (1)
Median	10.47	10.47	29.53	11.16	14.71	12.57

	2023	2022	2021	2020	2019
Investment	26.24 (15)	-18.14 (12)	28.67 (7)	18.39 (12)	31.46 (5)
Index	26.29 (5)	-18.11 (3)	28.71 (1)	18.40 (9)	31.49 (3)
Median	25.96	-18.36	28.25	18.05	31.08

Financial Reconciliation Since Inception Ending March 31, 2024

No data found.

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	11.68 (18)	-3.28 (16)	8.73 (15)	7.49 (13)	7.55 (15)	-4.89 (16)
Index	11.69 (8)	-3.27 (12)	8.74 (8)	7.50 (5)	7.56 (8)	-4.88 (5)
Median	11.61	-3.34	8.66	7.43	7.47	-4.94

Inception date for VINIX is 12/2020. Manager returns for VINIX have been used for this report.

Fund Information

Fund Name :	Vanguard Institutional Index Fund: Vanguard Institutional Index Fund; Institutional Shares	Portfolio Assets :	\$283,245 Million
Fund Family :	Vanguard	Portfolio Manager :	Louie/Birkett
Ticker :	VINIX	PM Tenure :	2017--2023
Inception Date :	07/31/1990	Fund Style :	IM S&P 500 Index (MF)
Fund Assets :	\$119,463 Million	Style Benchmark :	S&P 500 Index
Portfolio Turnover :	3%		

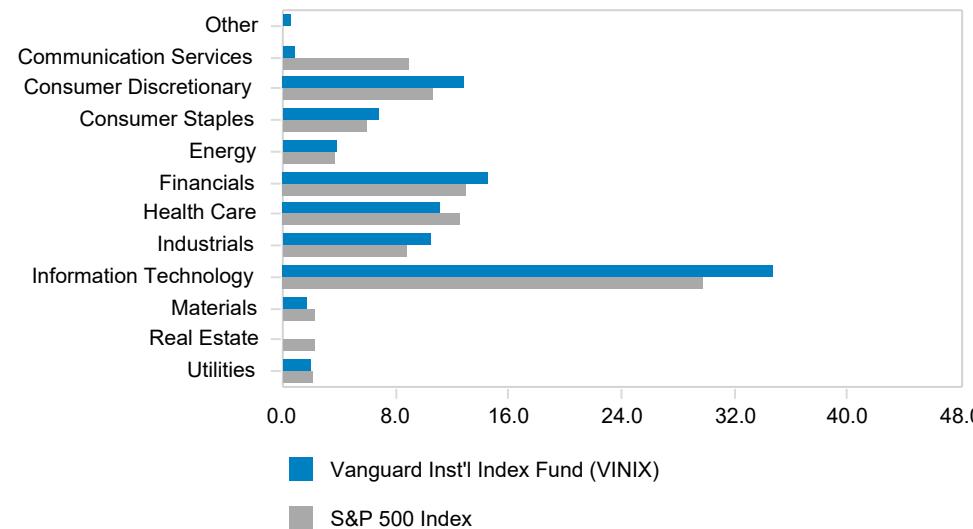
Portfolio Characteristics As of 02/29/2024

	Portfolio	Benchmark
Total Securities	505	503
Avg. Market Cap	757,310,922,314	783,674,150,317
Price/Earnings (P/E)	33.51	25.04
Price/Book (P/B)	10.37	4.60
Dividend Yield	1.77	1.44
Annual EPS	21.23	9.82
5 Yr EPS	15.17	14.94
3 Yr EPS Growth	24.15	N/A
Beta (3 Years, Monthly)	1.00	1.00

Top Ten Securities As of 02/29/2024

Microsoft Corp ORD	7.2 %
Apple Inc ORD	6.2 %
NVIDIA Corp ORD	4.6 %
Amazon.com Inc ORD	3.7 %
Meta Platforms Inc ORD	2.5 %
Alphabet Inc Class A ORD	1.9 %
Berkshire Hathaway Inc ORD	1.7 %
Alphabet Inc Class C ORD	1.6 %
Eli Lilly and Co ORD	1.4 %
Broadcom Inc ORD	1.3 %

Sector Weights As of 02/29/2024



Region (%)

No data found.

Strategy Review
Vanguard Growth Index (VIGIX) | Vanguard Growth Index Hybrid
As of March 31, 2024

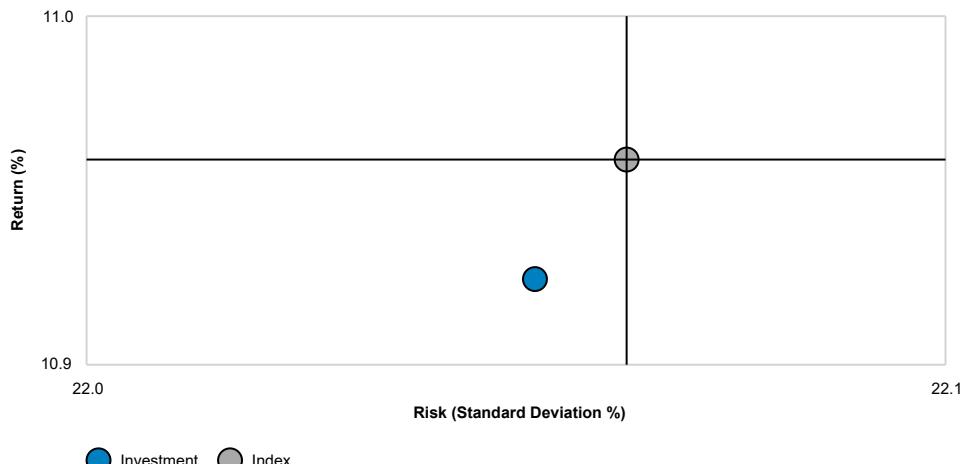
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.92	22.05	0.47	99.91	7	100.00	5
Index	10.96	22.06	0.47	100.00	7	100.00	5

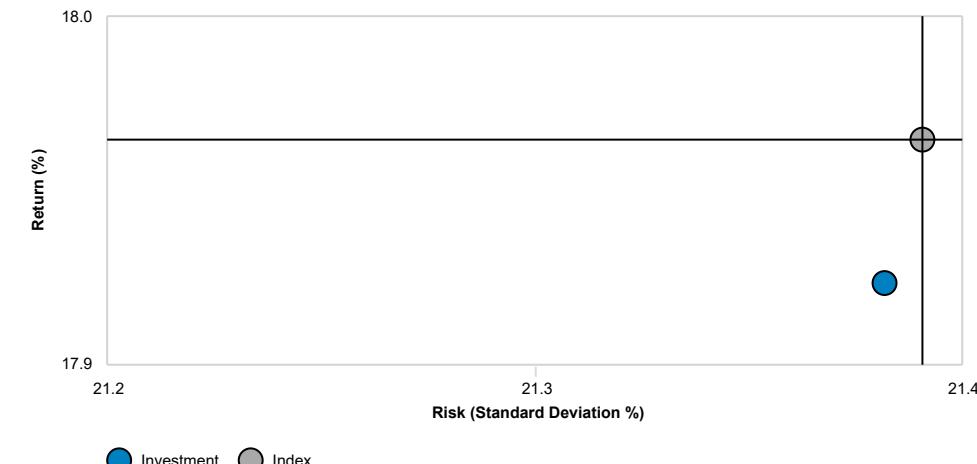
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	17.92	21.38	0.79	99.92	14	100.02	6
Index	17.96	21.39	0.79	100.00	14	100.00	6

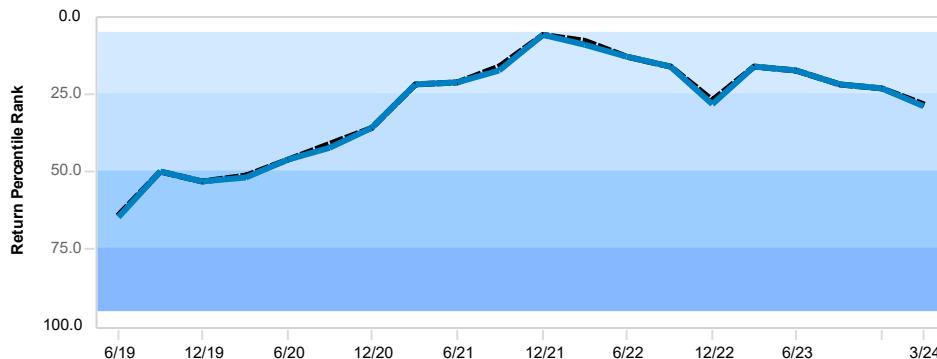
Risk and Return 3 Years



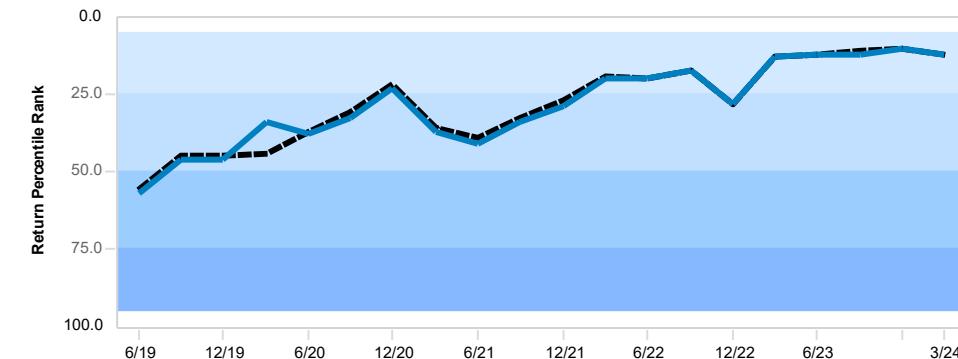
Risk and Return 5 Years



3 Year Rolling Percentile Rank IM U.S. Large Cap Growth Equity (MF)



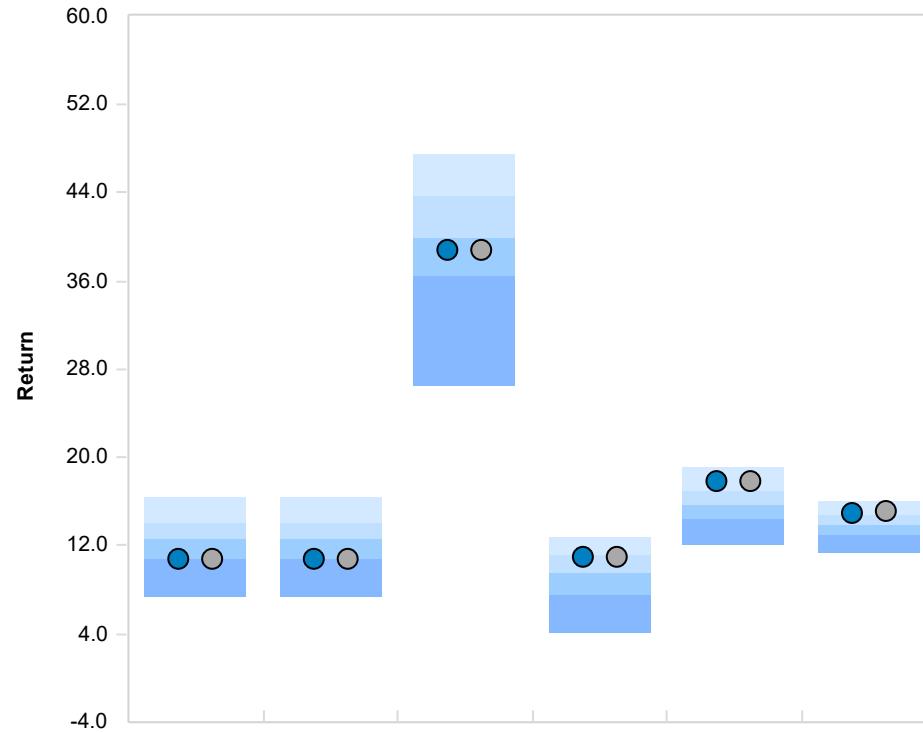
5 Year Rolling Percentile Rank IM U.S. Large Cap Growth Equity (MF)



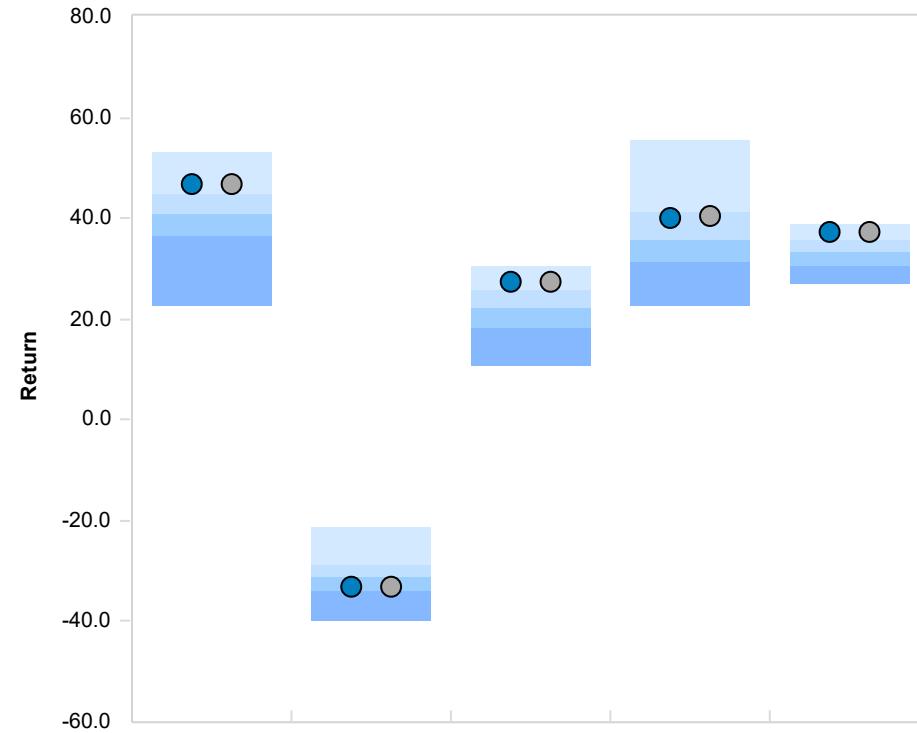
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	11 (55%)	6 (30%)	3 (15%)	0 (0%)
Index	20	11 (55%)	6 (30%)	3 (15%)	0 (0%)

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	9 (45%)	10 (50%)	1 (5%)	0 (0%)
Index	20	9 (45%)	10 (50%)	1 (5%)	0 (0%)

Peer Group Analysis - IM U.S. Large Cap Growth Equity (MF)



Peer Group Analysis - IM U.S. Large Cap Growth Equity (MF)



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	10.91 (73)	10.91 (73)	38.83 (59)	10.92 (29)	17.92 (12)	15.07 (19)
Index	10.91 (73)	10.91 (73)	38.90 (59)	10.96 (28)	17.96 (12)	15.11 (17)
Median	12.60	12.60	39.96	9.52	15.73	13.96

	2023	2022	2021	2020	2019
Investment	46.78 (19)	-33.14 (70)	27.27 (20)	40.20 (28)	37.25 (12)
Index	46.86 (18)	-33.13 (69)	27.30 (19)	40.27 (28)	37.31 (11)
Median	40.78	-31.30	22.39	35.62	33.26

Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 05/01/2010	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	16,642,537	-27,644,975	26,881,701	15,879,263

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	14.41	-3.69	13.61	17.25	-0.15	-3.79
Index	14.42	-3.68	13.63	17.27	-0.15	-3.78

Fund Information

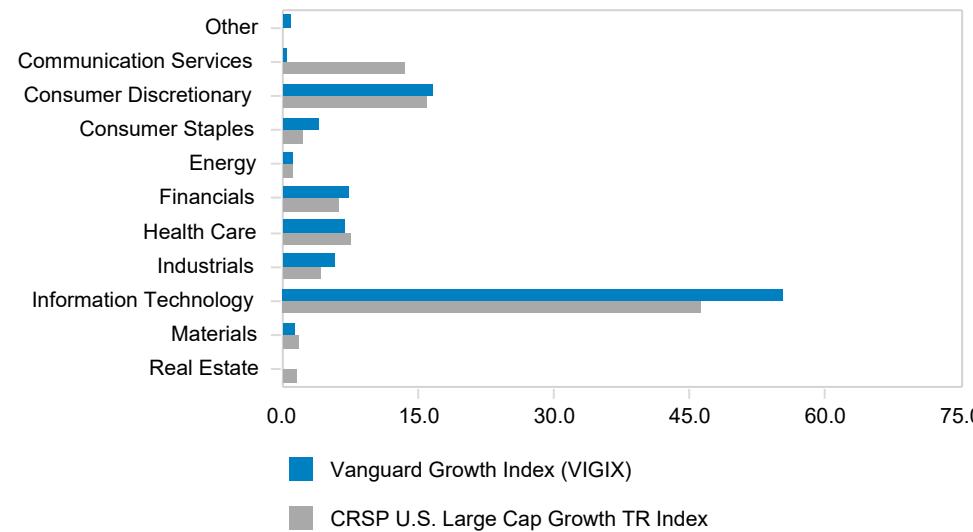
Fund Name :	Vanguard Index Funds: Vanguard Growth Index Fund; Institutional Class Shares	Portfolio Assets :	\$226,972 Million
Fund Family :	Vanguard	Portfolio Manager :	O'Reilly/Nejman
Ticker :	VIGIX	PM Tenure :	2000--2016
Inception Date :	05/14/1998	Fund Style :	IM U.S. Large Cap Growth Equity (MF)
Fund Assets :	\$31,304 Million	Style Benchmark :	CRSP U.S. Large Cap Growth TR Index
Portfolio Turnover :	5%		

Portfolio Characteristics As of 02/29/2024

	Portfolio	Benchmark
Total Securities	210	207
Avg. Market Cap	-	1,240,573,370,268
Price/Earnings (P/E)	41.33	37.10
Price/Book (P/B)	14.43	10.25
Dividend Yield	0.81	0.56
Annual EPS	30.72	8.81
5 Yr EPS	19.44	19.51
3 Yr EPS Growth	27.91	N/A
Beta (5 Years, Monthly)	1.00	1.00

Top Ten Securities As of 02/29/2024

Microsoft Corp ORD	12.9 %
Apple Inc ORD	11.2 %
NVIDIA Corp ORD	7.8 %
Amazon.com Inc ORD	6.9 %
Meta Platforms Inc ORD	4.6 %
Alphabet Inc Class A ORD	3.4 %
Alphabet Inc Class C ORD	2.8 %
Eli Lilly and Co ORD	2.7 %
Tesla Inc ORD	2.3 %
Visa Inc ORD	1.8 %

Sector Weights As of 02/29/2024**Region (%)**

No data found.

Strategy Review
Vanguard Value Index (VIVIX) | Vanguard Value Index Hybrid
As of March 31, 2024

Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.20	15.40	0.55	100.03	7	100.01	5
Index	10.20	15.38	0.55	100.00	7	100.00	5

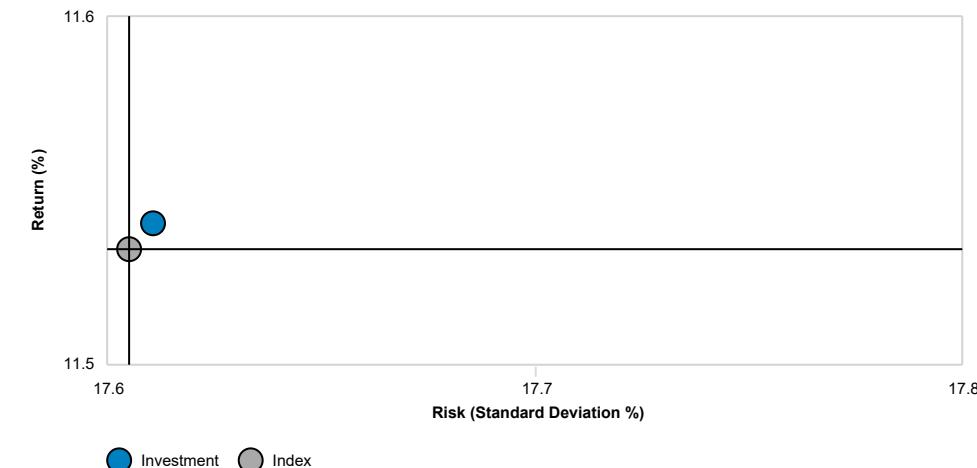
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.54	17.61	0.60	100.03	14	100.01	6
Index	11.53	17.61	0.60	100.00	14	100.00	6

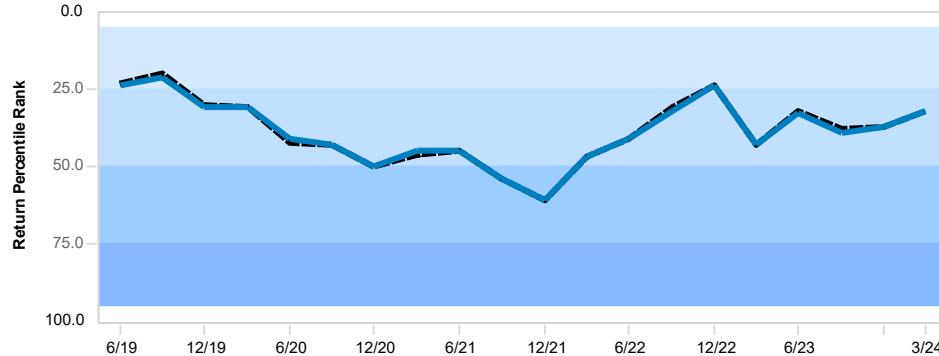
Risk and Return 3 Years



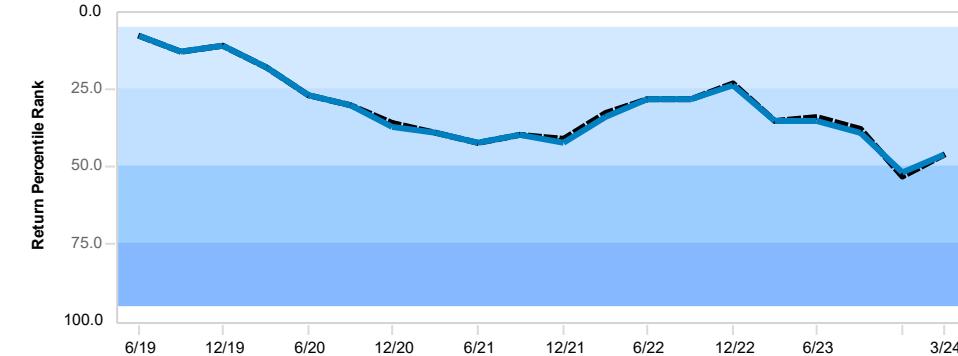
Risk and Return 5 Years



3 Year Rolling Percentile Rank IM U.S. Large Cap Value Equity (MF)



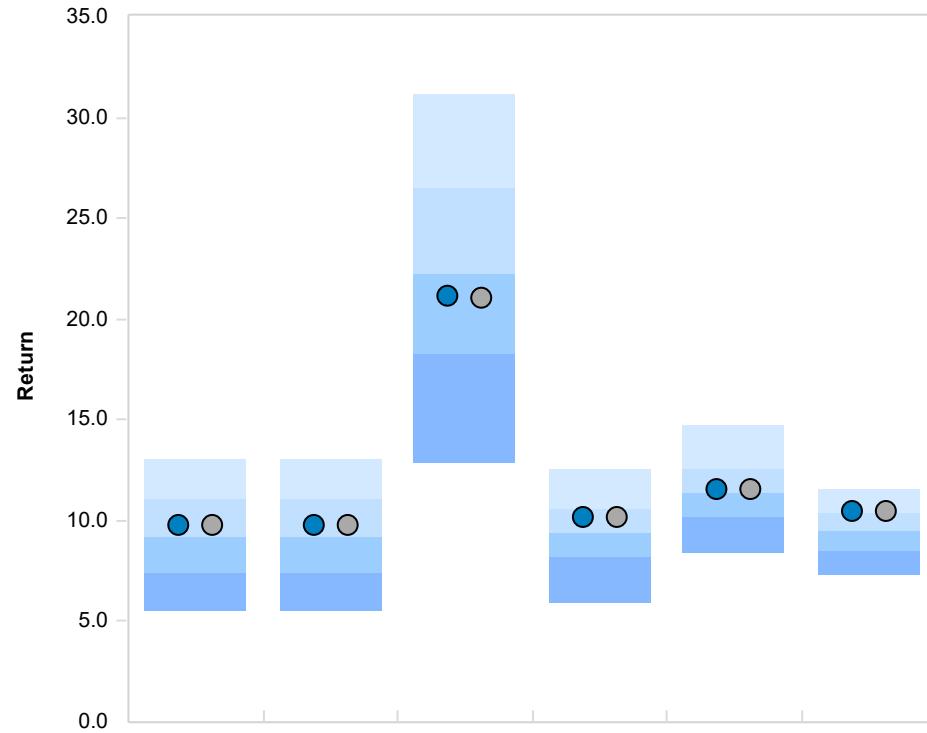
5 Year Rolling Percentile Rank IM U.S. Large Cap Value Equity (MF)



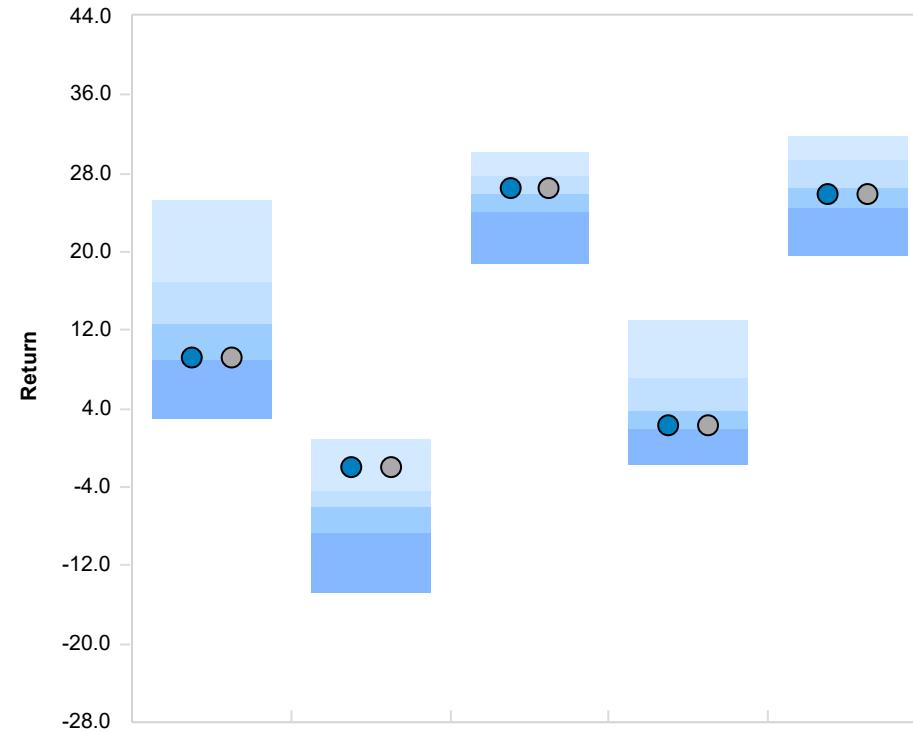
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	3 (15%)	15 (75%)	2 (10%)	0 (0%)
Index	20	3 (15%)	15 (75%)	2 (10%)	0 (0%)

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	5 (25%)	14 (70%)	1 (5%)	0 (0%)
Index	20	5 (25%)	14 (70%)	1 (5%)	0 (0%)

Peer Group Analysis - IM U.S. Large Cap Value Equity (MF)



Peer Group Analysis - IM U.S. Large Cap Value Equity (MF)



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	9.76 (43)	9.76 (43)	21.12 (58)	10.20 (32)	11.54 (46)	10.46 (23)
Index	9.75 (44)	9.75 (44)	21.03 (59)	10.20 (32)	11.53 (46)	10.46 (23)
Median	9.15	9.15	22.21	9.36	11.39	9.44

	2023	2022	2021	2020	2019
Investment	9.26 (72)	-2.05 (12)	26.48 (44)	2.30 (70)	25.83 (59)
Index	9.17 (73)	-2.01 (11)	26.51 (43)	2.26 (71)	25.85 (59)
Median	12.63	-6.10	25.96	3.82	26.50

Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 07/01/2009	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	1,021,656	-2,963,564	16,605,003	14,663,095

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	9.09	-2.33	3.57	-1.00	14.67	-5.74
Index	9.01	-2.33	3.57	-1.00	14.68	-5.72

Fund Information

Fund Name :	Vanguard Index Funds: Vanguard Value Index Fund; Institutional Shares	Portfolio Assets :	\$169,427 Million
Fund Family :	Vanguard	Portfolio Manager :	O'Reilly/Nejman
Ticker :	VIVIX	PM Tenure :	1998--2016
Inception Date :	07/02/1998	Fund Style :	IM U.S. Large Cap Value Equity (MF)
Fund Assets :	\$16,878 Million	Style Benchmark :	CRSP U.S. Large Cap Value TR Index
Portfolio Turnover :	10%		

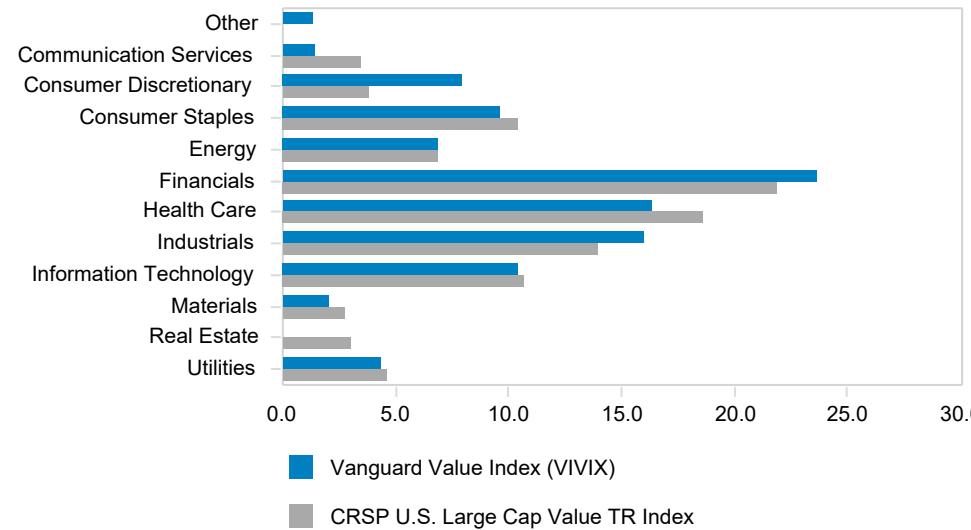
Portfolio Characteristics As of 02/29/2024

	Portfolio	Benchmark
Total Securities	352	345
Avg. Market Cap	185,588,340,691	199,510,181,933
Price/Earnings (P/E)	24.37	18.05
Price/Book (P/B)	5.75	2.79
Dividend Yield	2.52	2.43
Annual EPS	11.09	732.84
5 Yr EPS	10.34	9.83
3 Yr EPS Growth	19.35	N/A
Beta (5 Years, Monthly)	1.00	1.00

Top Ten Securities As of 02/29/2024

Berkshire Hathaway Inc ORD	3.8 %
Broadcom Inc ORD	3.0 %
JPMorgan Chase & Co ORD	2.8 %
UnitedHealth Group Inc ORD	2.4 %
Exxon Mobil Corp ORD	2.2 %
Johnson & Johnson ORD	2.0 %
Procter & Gamble Co ORD	1.9 %
Merck & Co Inc ORD	1.7 %
AbbVie Inc ORD	1.6 %
Chevron Corp ORD	1.4 %

Sector Weights As of 02/29/2024



Region (%)

No data found.

Strategy Review
Vanguard Mid-Cap 400 Index Fund I (VSPMX) | S&P MidCap 400 Index
As of March 31, 2024

Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.90	19.78	0.31	99.90	7	100.11	5
Index	6.96	19.78	0.31	100.00	7	100.00	5

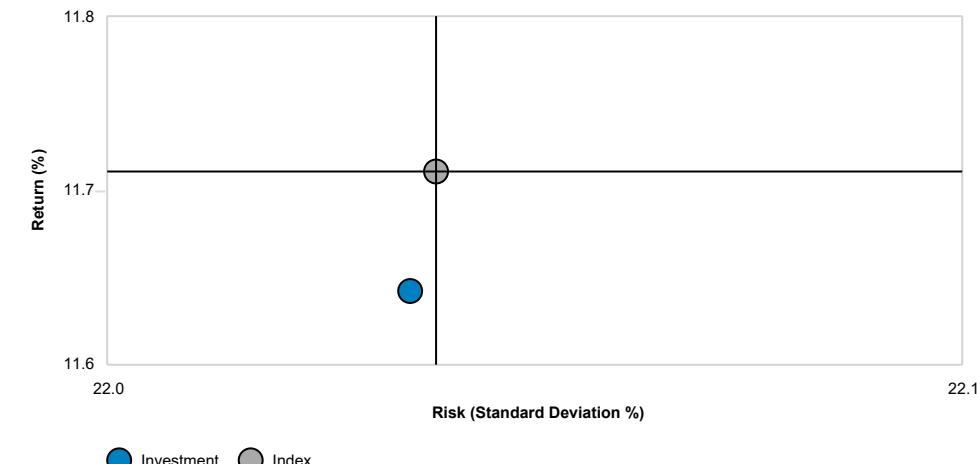
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.64	22.04	0.52	99.89	13	100.09	7
Index	11.71	22.04	0.52	100.00	13	100.00	7

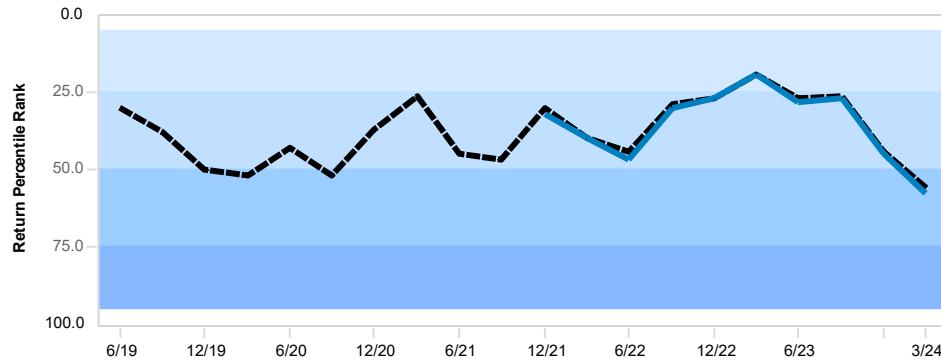
Risk and Return 3 Years



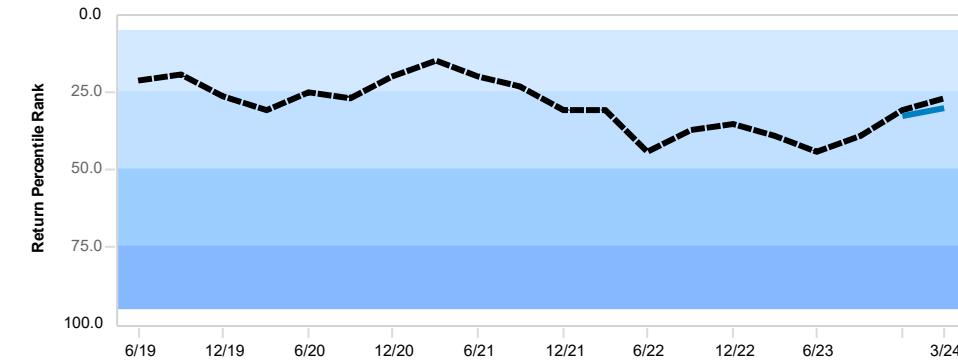
Risk and Return 5 Years



3 Year Rolling Percentile Rank IM U.S. Mid Cap Core Equity (MF)



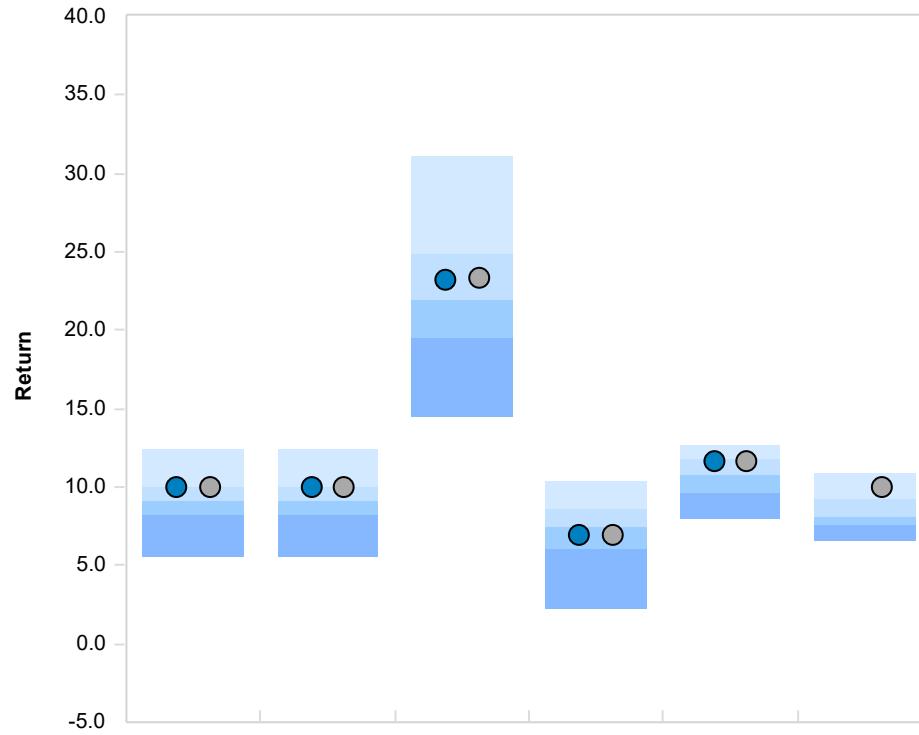
5 Year Rolling Percentile Rank IM U.S. Mid Cap Core Equity (MF)



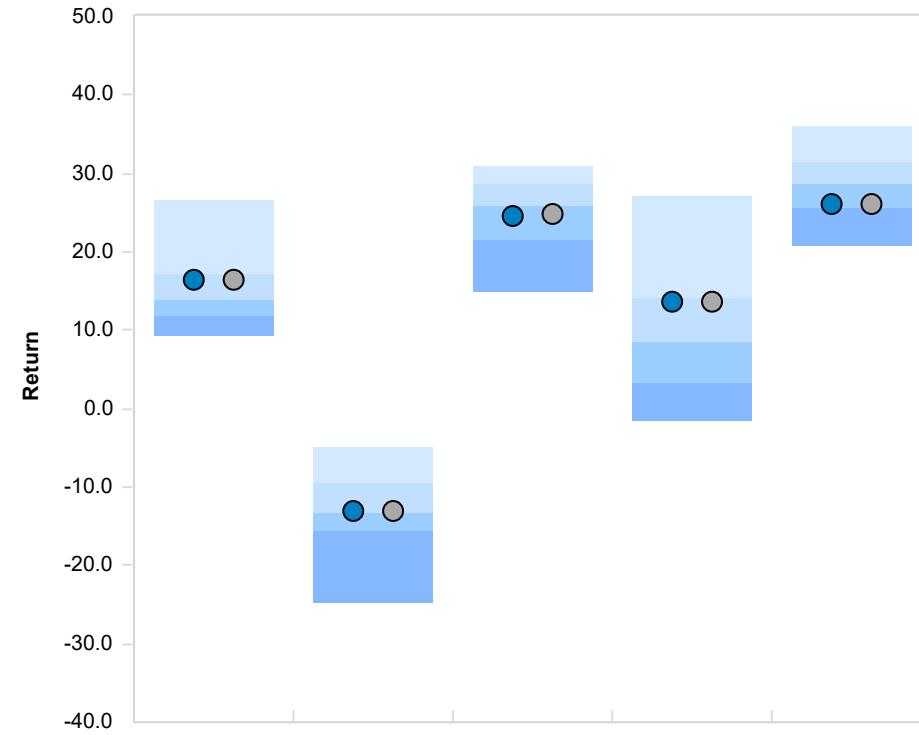
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	10	1 (10%)	8 (80%)	1 (10%)	0 (0%)
Index	20	1 (5%)	16 (80%)	3 (15%)	0 (0%)

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	2	0 (0%)	2 (100%)	0 (0%)	0 (0%)
Index	20	7 (35%)	13 (65%)	0 (0%)	0 (0%)

Peer Group Analysis - IM U.S. Mid Cap Core Equity (MF)



Peer Group Analysis - IM U.S. Mid Cap Core Equity (MF)



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	9.94 (25)	9.94 (25)	23.25 (34)	6.90 (58)	11.64 (30)	N/A
Index	9.95 (25)	9.95 (25)	23.33 (34)	6.96 (56)	11.71 (27)	9.99 (13)
Median	9.08	9.08	21.92	7.45	10.77	8.13

	2023	2022	2021	2020	2019
Investment	16.36 (31)	-13.11 (50)	24.67 (59)	13.58 (26)	26.13 (72)
Index	16.44 (30)	-13.06 (50)	24.76 (59)	13.66 (26)	26.20 (72)
Median	13.86	-13.21	25.73	8.44	28.59

Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 12/01/2018	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	21,384,601	-6,500,000	15,010,768	29,895,370

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	11.65 (49)	-4.22 (51)	4.83 (39)	3.79 (30)	10.77 (35)	-2.46 (13)
Index	11.67 (48)	-4.20 (49)	4.85 (38)	3.81 (30)	10.78 (35)	-2.46 (13)
Median	11.54	-4.22	4.64	2.27	9.65	-4.33

Fund Information

Fund Name :	Vanguard Admiral Funds: Vanguard S&P Mid-Cap 400 Index Fund; Institutional Shares	Portfolio Assets :	\$3,425 Million
Fund Family :	Vanguard	Portfolio Manager :	Khan/Narzikul
Ticker :	VSPMX	PM Tenure :	2017-2023
Inception Date :	12/15/2010	Fund Style :	IM S&P Midcap 400 Index Funds (MF)
Fund Assets :	\$1,402 Million	Style Benchmark :	S&P MidCap 400 Index
Portfolio Turnover :	14%		

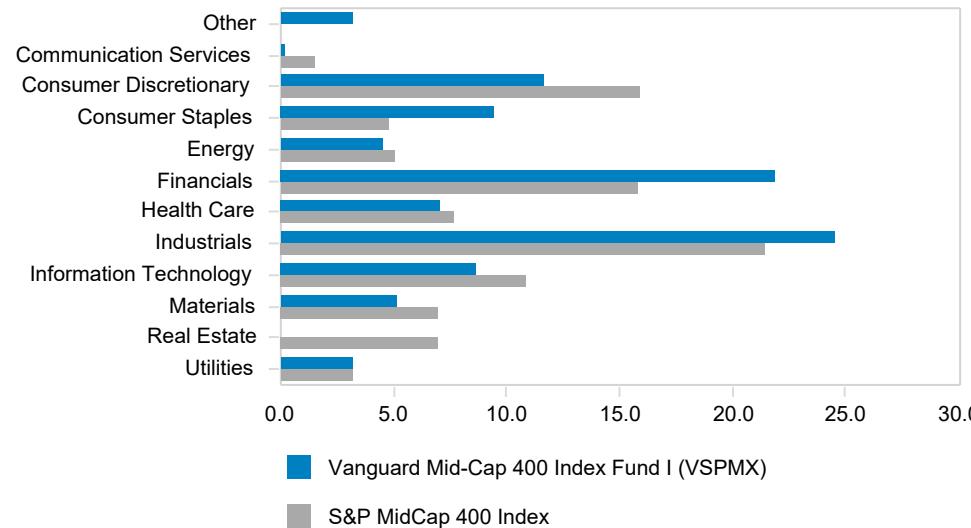
Portfolio Characteristics As of 02/29/2024

	Portfolio	Benchmark
Total Securities	403	401
Avg. Market Cap	9,588,792,110	9,335,983,676
Price/Earnings (P/E)	27.70	17.84
Price/Book (P/B)	5.30	2.83
Dividend Yield	2.29	1.58
Annual EPS	11.50	5.49
5 Yr EPS	13.44	12.30
3 Yr EPS Growth	23.18	N/A
Beta (5 Years, Monthly)	1.00	1.00

Top Ten Securities As of 02/29/2024

Super Micro Computer Inc ORD	1.5 %
Deckers Outdoor Corp ORD	0.9 %
Reliance Inc ORD	0.7 %
Vistra Corp ORD	0.7 %
Carlisle Companies Inc ORD	0.6 %
GoDaddy Inc ORD	0.6 %
Manhattan Associates Inc ORD	0.6 %
Vanguard Market Liquidity Fund	0.6 %
Pure Storage Inc ORD	0.6 %
Graco Inc ORD	0.6 %

Sector Weights As of 02/29/2024



Region (%)

No data found.

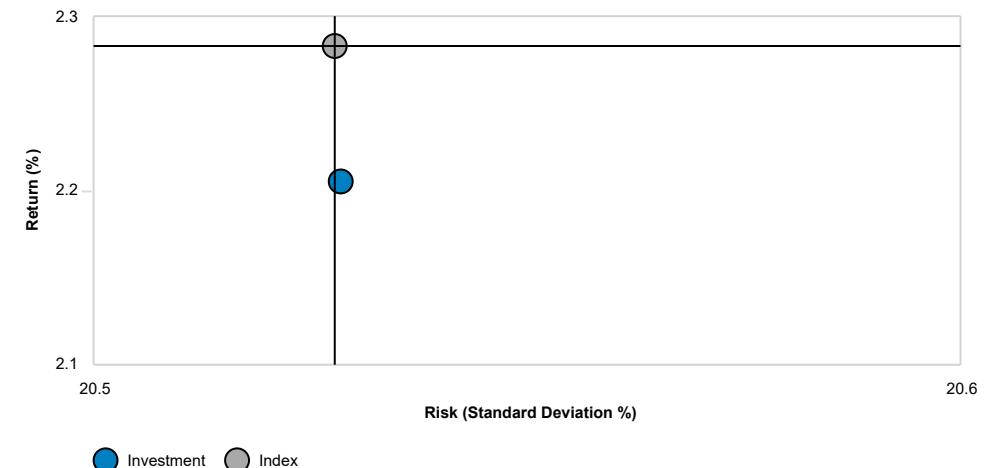
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.21	20.53	0.08	99.87	7	100.13	5
Index	2.28	20.53	0.09	100.00	7	100.00	5

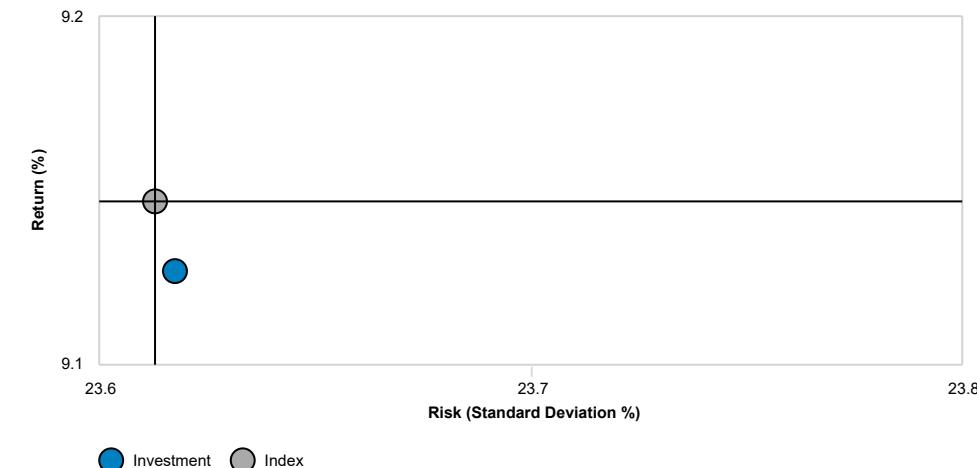
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.13	23.62	0.40	100.00	13	100.07	7
Index	9.15	23.61	0.41	100.00	13	100.00	7

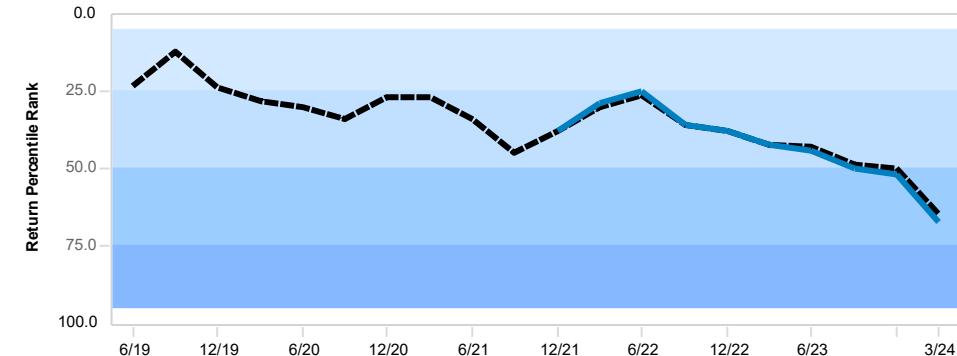
Risk and Return 3 Years



Risk and Return 5 Years

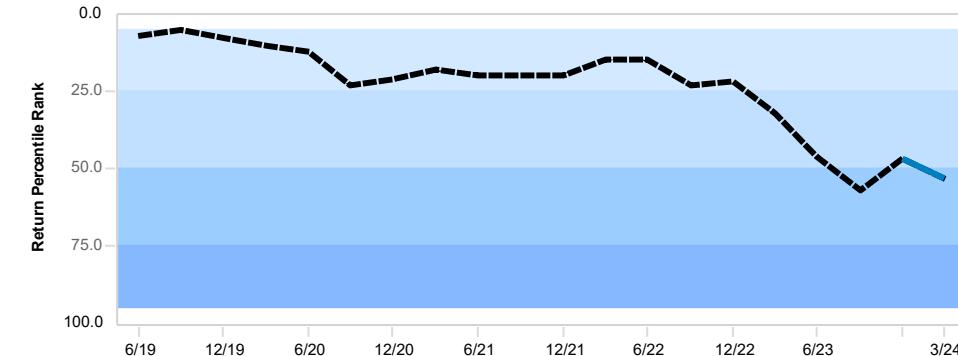


3 Year Rolling Percentile Rank IM U.S. Small Cap Core Equity (MF)



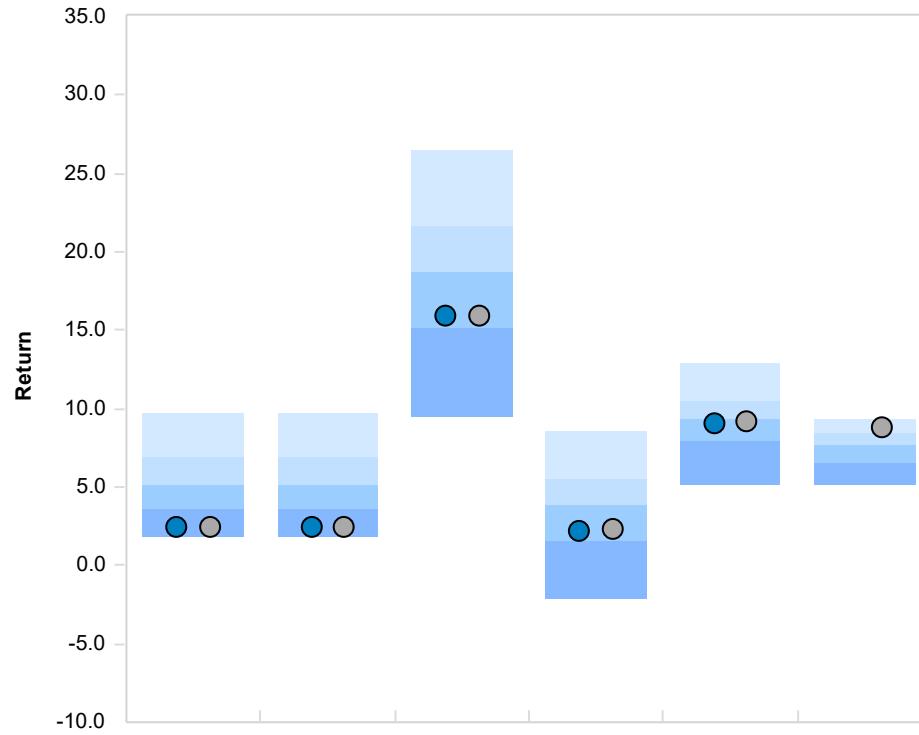
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	10	1 (10%)	7 (70%)	2 (20%)	0 (0%)
Index	20	3 (15%)	16 (80%)	1 (5%)	0 (0%)

5 Year Rolling Percentile Rank IM U.S. Small Cap Core Equity (MF)

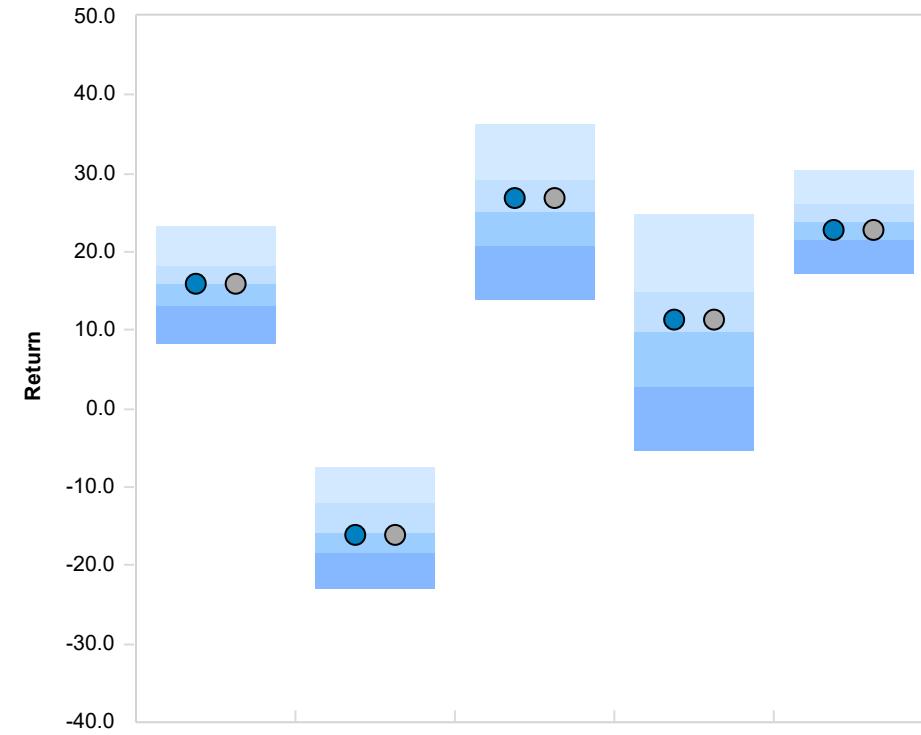


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	2	0 (0%)	1 (50%)	1 (50%)	0 (0%)
Index	20	15 (75%)	3 (15%)	2 (10%)	0 (0%)

Peer Group Analysis - IM U.S. Small Cap Core Equity (MF)



Peer Group Analysis - IM U.S. Small Cap Core Equity (MF)



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	2.45 (91)	2.45 (91)	15.87 (69)	2.21 (67)	9.13 (53)	N/A
Index	2.46 (90)	2.46 (90)	15.93 (68)	2.28 (65)	9.15 (53)	8.80 (15)
Median	5.16	5.16	18.71	3.91	9.28	7.61

	2023	2022	2021	2020	2019
Investment	15.99 (51)	-16.18 (57)	26.74 (37)	11.46 (39)	22.74 (61)
Index	16.05 (49)	-16.10 (54)	26.82 (36)	11.29 (41)	22.78 (61)
Median	15.99	-15.77	25.12	9.89	23.94

Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 12/01/2018	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	10,695,104	-2,500,000	5,472,906	13,668,010

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	15.10 (9)	-4.94 (70)	3.37 (67)	2.55 (54)	9.17 (58)	-5.22 (69)
Index	15.12 (8)	-4.93 (69)	3.38 (66)	2.57 (53)	9.19 (57)	-5.20 (68)
Median	12.88	-4.04	3.95	2.71	9.65	-4.49

Fund Information

Fund Name :	Vanguard Admiral Funds: Vanguard S&P Small-Cap 600 Index Fund; Institutional Shares	Portfolio Assets :	\$4,688 Million
Fund Family :	Vanguard	Portfolio Manager :	Narzikul/Birkett
Ticker :	VSMSX	PM Tenure :	2023--2023
Inception Date :	12/15/2010	Fund Style :	IM U.S. Small Cap Core Equity (MF)
Fund Assets :	\$2,034 Million	Style Benchmark :	S&P SmallCap 600 Index
Portfolio Turnover :	19%		

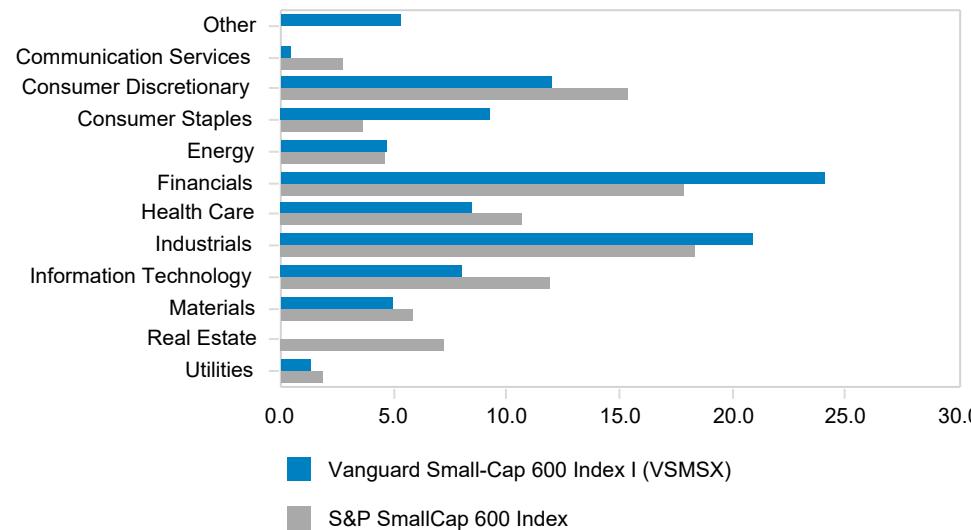
Portfolio Characteristics As of 02/29/2024

	Portfolio	Benchmark
Total Securities	605	602
Avg. Market Cap	2,936,467,346	2,945,839,355
Price/Earnings (P/E)	24.63	15.23
Price/Book (P/B)	3.03	2.17
Dividend Yield	3.00	1.85
Annual EPS	7.87	3.63
5 Yr EPS	10.15	9.92
3 Yr EPS Growth	18.91	N/A
Beta (5 Years, Monthly)	1.00	1.00

Top Ten Securities As of 02/29/2024

Fabrinet ORD	0.7 %
Applied Industrial Technologies	0.6 %
Cytokinetics Inc ORD	0.6 %
Ensign Group Inc ORD	0.6 %
Vanguard Market Liquidity Fund	0.6 %
SPS Commerce Inc ORD	0.6 %
Abercrombie & Fitch Co ORD	0.6 %
Allegheny Technologies Inc ORD	0.6 %
Mueller Industries Inc ORD	0.5 %
Meritage Homes Corp ORD	0.5 %

Sector Weights As of 02/29/2024



Region (%)

No data found.

Strategy Review
Vanguard Developed Markets Index (VTMNX) | Vanguard Spliced Developed ex U.S. Index (Net)
As of March 31, 2024

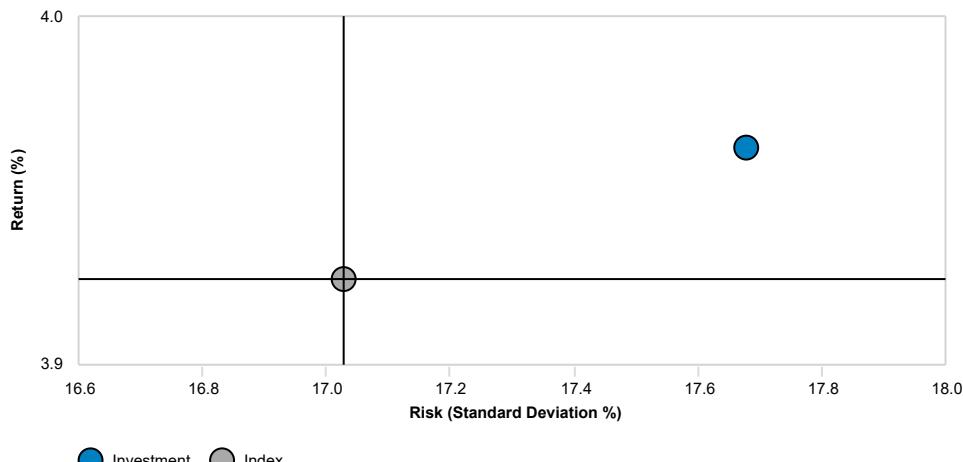
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.96	17.68	0.16	105.47	7	106.16	5
Index	3.92	17.03	0.16	100.00	7	100.00	5

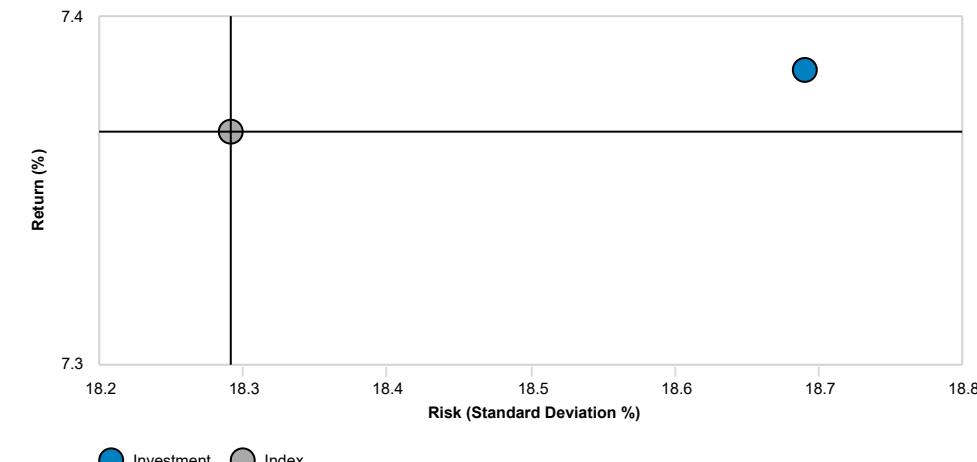
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.39	18.69	0.37	103.30	13	104.24	7
Index	7.37	18.29	0.37	100.00	13	100.00	7

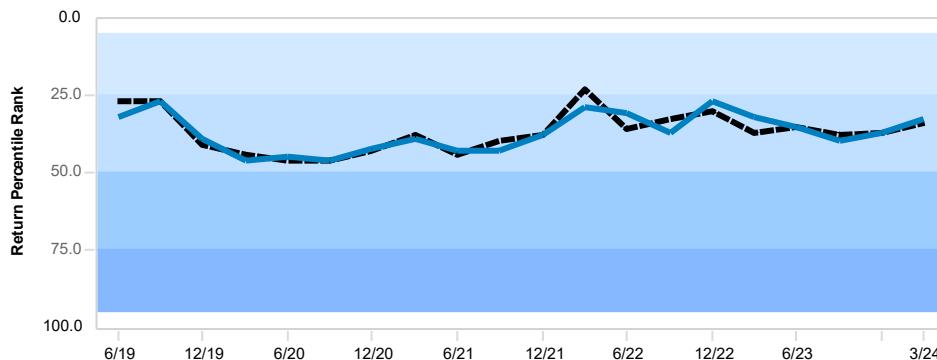
Risk and Return 3 Years



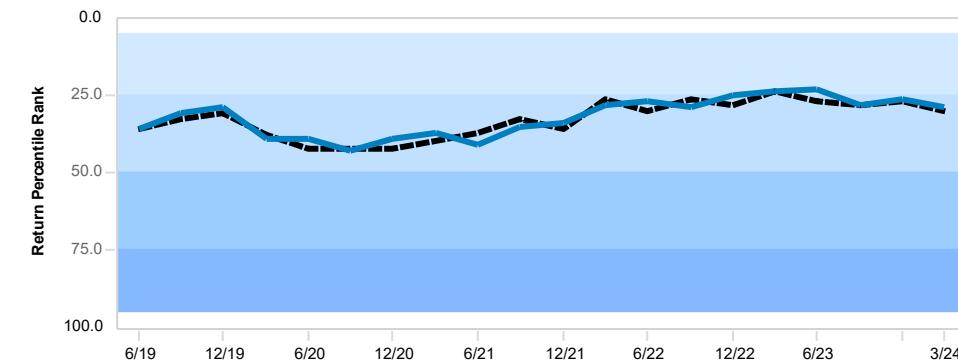
Risk and Return 5 Years



3 Year Rolling Percentile Rank IM International Multi-Cap Equity (MF)



5 Year Rolling Percentile Rank IM International Multi-Cap Equity (MF)

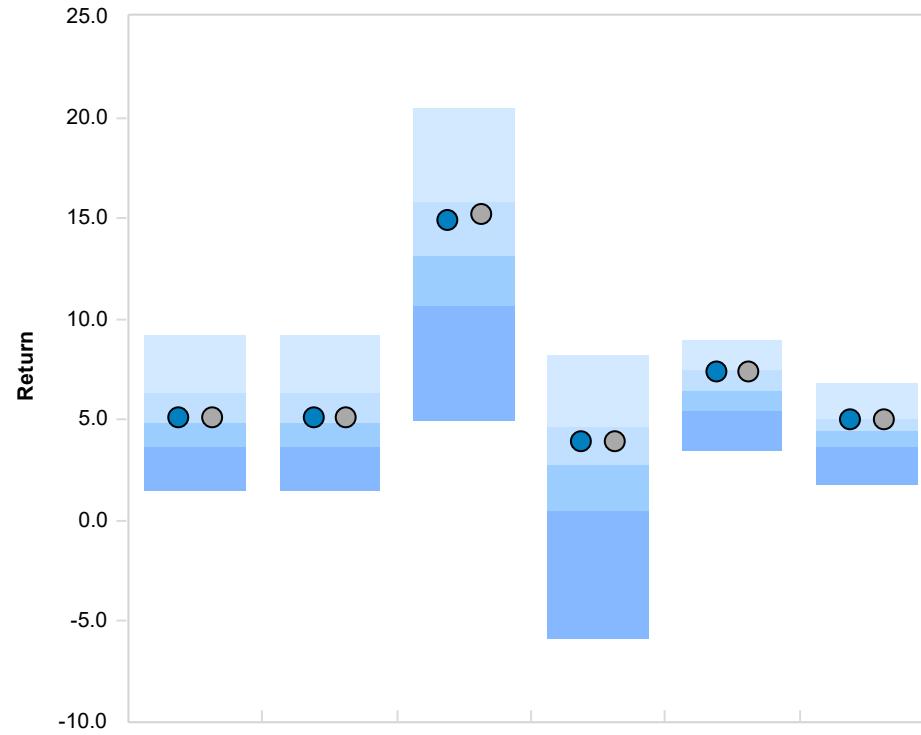


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	20 (100%)	0 (0%)	0 (0%)
Index	20	1 (5%)	19 (95%)	0 (0%)	0 (0%)

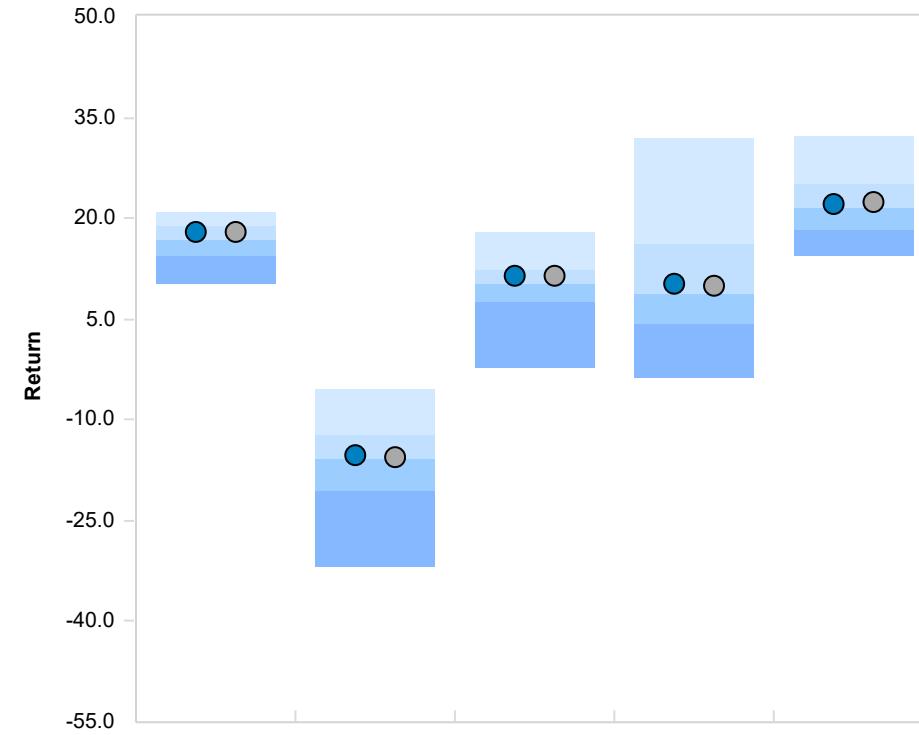
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	3 (15%)	17 (85%)	0 (0%)	0 (0%)
Index	20	1 (5%)	19 (95%)	0 (0%)	0 (0%)

Strategy Review
Vanguard Developed Markets Index (VTMNX) | Vanguard Spliced Developed ex U.S. Index (Net)
As of March 31, 2024

Peer Group Analysis - IM International Multi-Cap Equity (MF)



Peer Group Analysis - IM International Multi-Cap Equity (MF)



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	5.14 (46)	5.14 (46)	14.94 (33)	3.96 (33)	7.39 (29)	5.04 (26)
Index	5.11 (46)	5.11 (46)	15.22 (30)	3.92 (34)	7.37 (30)	5.02 (27)
Median	4.86	4.86	13.17	2.73	6.38	4.45

	2023	2022	2021	2020	2019
Investment	17.84 (40)	-15.34 (47)	11.44 (34)	10.27 (43)	22.14 (43)
Index	17.97 (37)	-15.58 (49)	11.57 (33)	10.00 (44)	22.34 (42)
Median	16.81	-15.71	10.28	8.74	21.55

Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 07/01/2009	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	253,831	45,927	11,067,277	11,367,036

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	11.18	-4.67	3.15	7.79	17.10	-10.49
Index	10.83	-3.97	3.00	7.62	16.28	-9.59

Fund Information

Fund Name :	Vanguard Tax-Managed Funds: Vanguard Developed Markets Index Fund; Institutional Shares	Portfolio Assets :	\$189,235 Million
Fund Family :	Vanguard	Portfolio Manager :	Franquin/Perre
Ticker :	VTMNX	PM Tenure :	2013-2017
Inception Date :	01/04/2001	Fund Style :	IM International Multi-Cap Core Equity (MF)
Fund Assets :	\$13,982 Million	Style Benchmark :	FTSE Developed x North America Index (Net)
Portfolio Turnover :	3%		

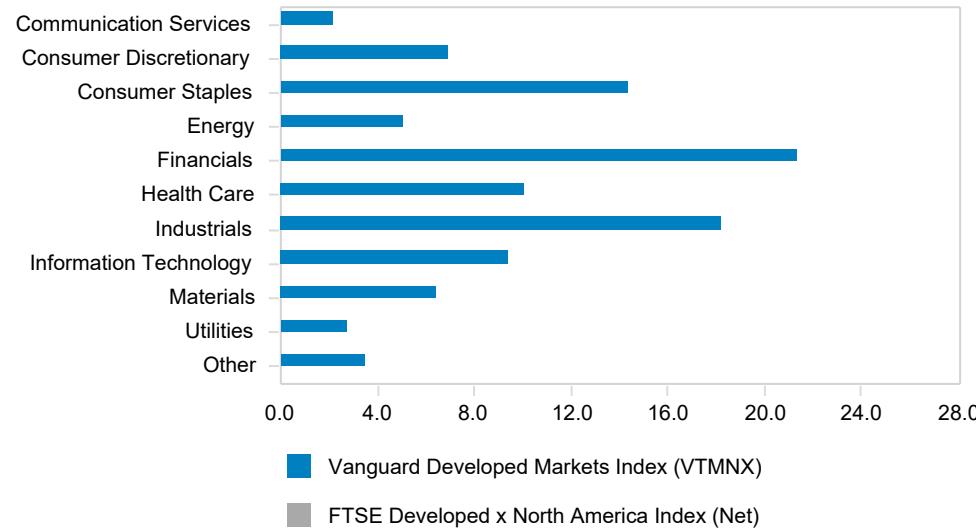
Portfolio Characteristics As of 02/29/2024

	Portfolio	Benchmark
Total Securities	4,048	N/A
Avg. Market Cap	79,629,742,814	-
Price/Earnings (P/E)	24.02	N/A
Price/Book (P/B)	4.15	N/A
Dividend Yield	3.08	N/A
Annual EPS	15.24	N/A
5 Yr EPS	7.80	N/A
3 Yr EPS Growth	19.89	N/A
Beta (5 Years, Monthly)	1.03	1.00

Top Ten Securities As of 02/29/2024

ASML Holding NV ORD	1.7 %
Novo Nordisk A/S ORD	1.7 %
Vanguard Market Liquidity Fund	1.5 %
Toyota Motor Corp ORD	1.3 %
Nestle SA ORD	1.2 %
Samsung Electronics Co Ltd ORD	1.2 %
LVMH Moet Hennessy Louis Vuitton	1.0 %
Novartis AG ORD	0.9 %
SAP SE ORD	0.9 %
Shell PLC ORD	0.9 %

Sector Weights As of 02/29/2024



Region (%)

No data found.

Strategy Review
Vanguard Emerging Markets Index (VEMIX) | FTSE Emerging Mkts All Cap China A Inclusion Index
As of March 31, 2024

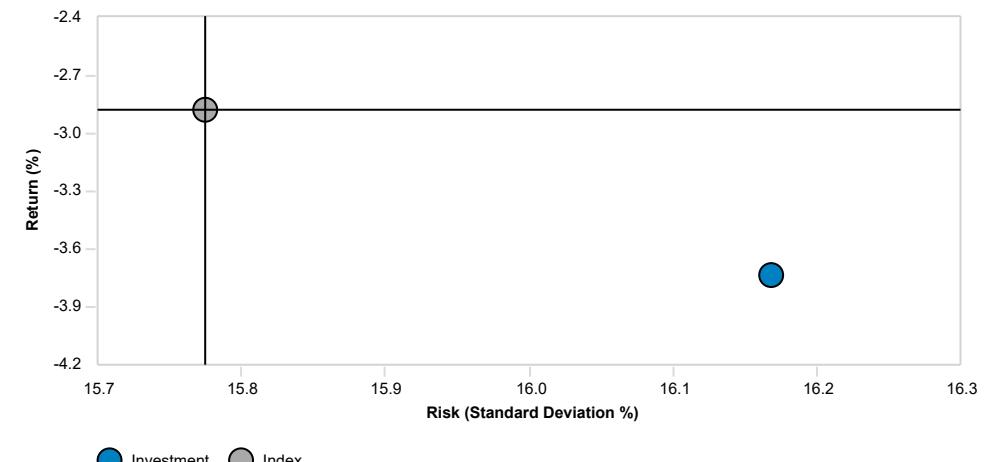
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-3.73	16.17	-0.32	99.60	6	103.34	6
Index	-2.87	15.78	-0.27	100.00	6	100.00	6

Historical Statistics 5 Years

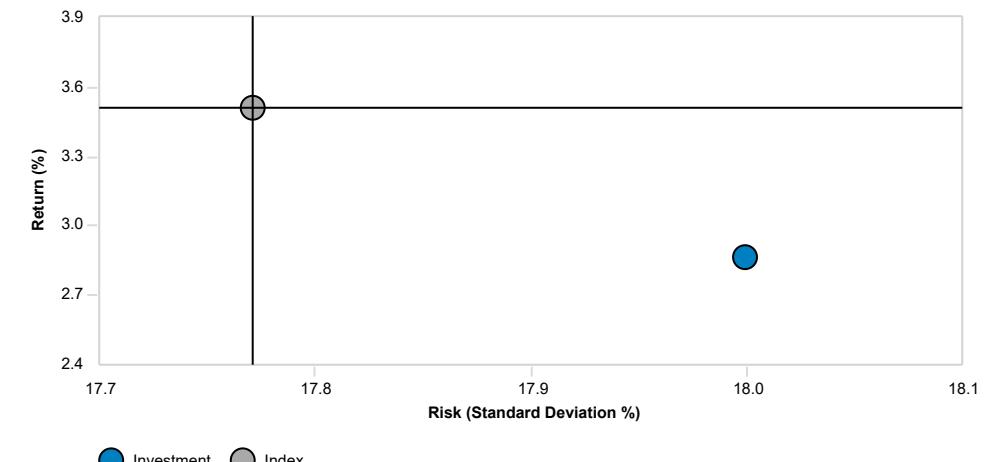
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.86	18.00	0.14	99.50	12	102.12	8
Index	3.52	17.77	0.17	100.00	12	100.00	8

Risk and Return 3 Years



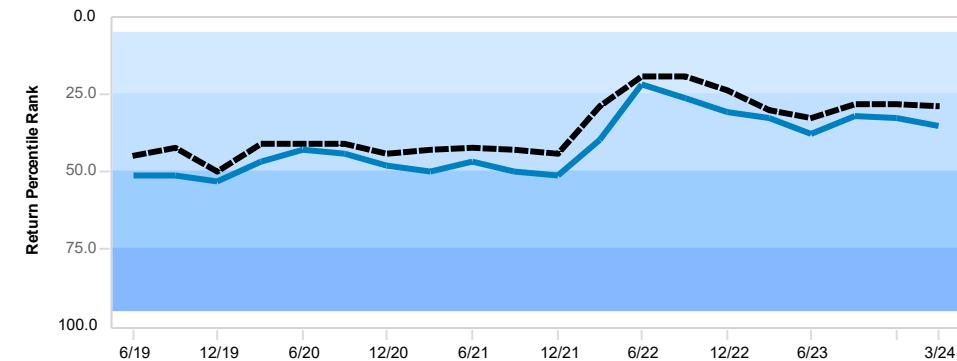
● Investment ● Index

Risk and Return 5 Years



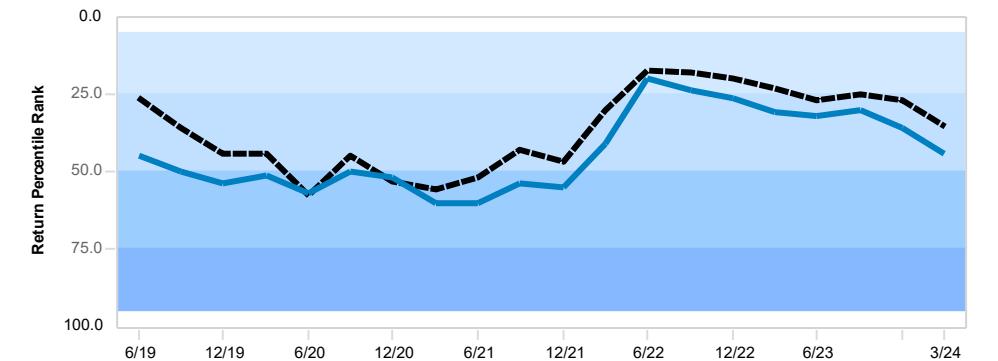
● Investment ● Index

3 Year Rolling Percentile Rank IM Emerging Markets Equity (MF)



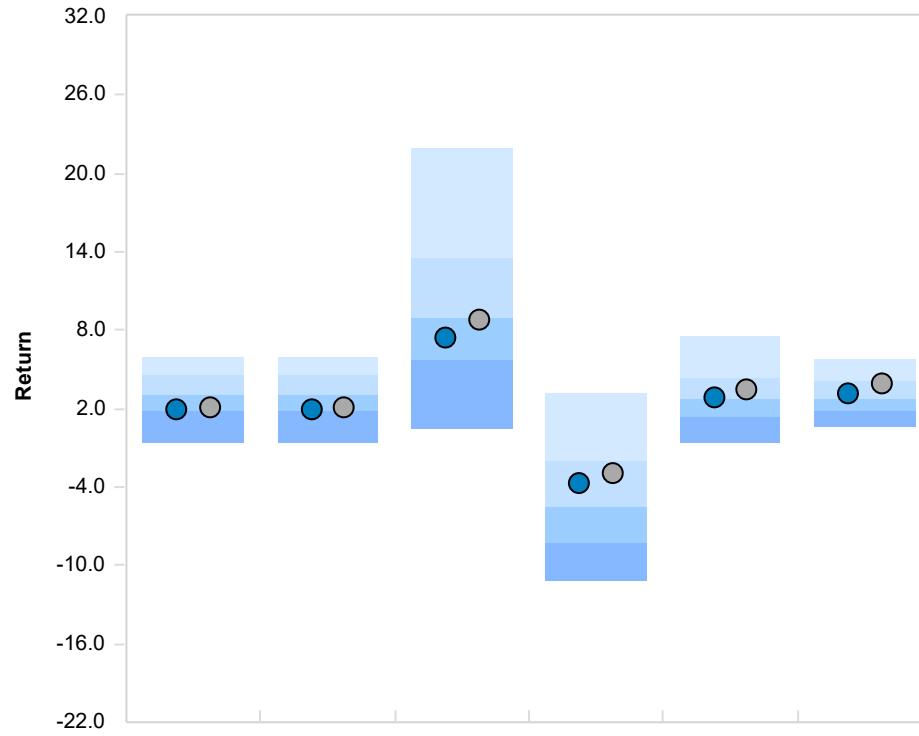
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	1 (5%)	15 (75%)	4 (20%)	0 (0%)
Index	20	3 (15%)	17 (85%)	0 (0%)	0 (0%)

5 Year Rolling Percentile Rank IM Emerging Markets Equity (MF)

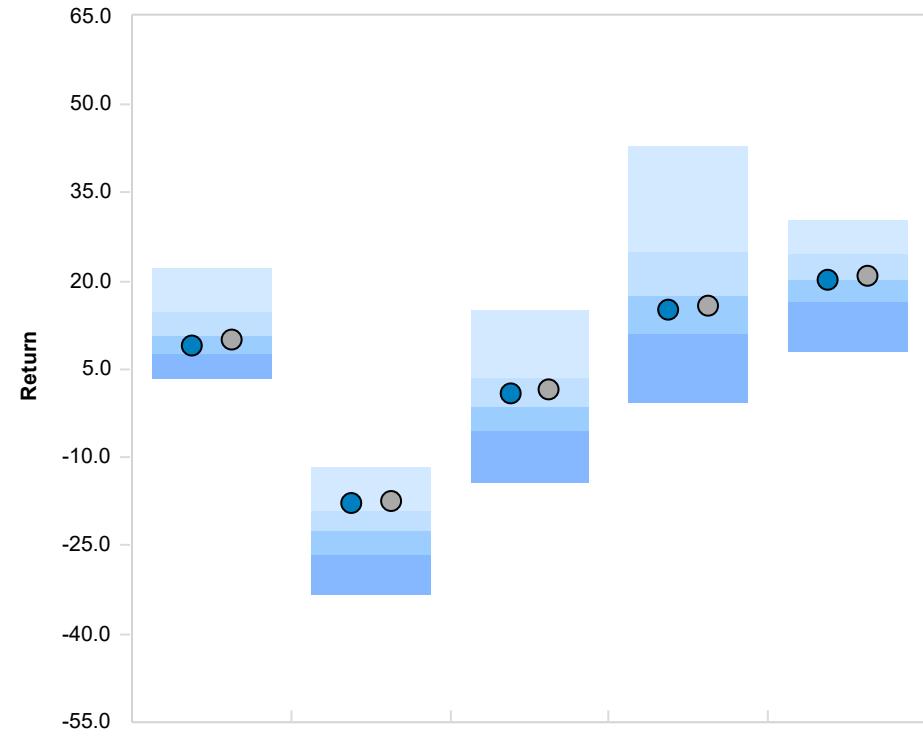


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	2 (10%)	10 (50%)	8 (40%)	0 (0%)
Index	20	5 (25%)	11 (55%)	4 (20%)	0 (0%)

Peer Group Analysis - IM Emerging Markets Equity (MF)



Peer Group Analysis - IM Emerging Markets Equity (MF)



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	1.94 (72)	1.94 (72)	7.43 (62)	-3.73 (35)	2.86 (44)	3.24 (41)
Index	2.09 (69)	2.09 (69)	8.86 (51)	-2.87 (29)	3.52 (35)	3.91 (27)
Median	3.05	3.05	8.97	-5.51	2.66	2.75

	2023	2022	2021	2020	2019
Investment	9.18 (65)	-17.74 (21)	0.92 (36)	15.26 (65)	20.37 (50)
Index	9.95 (59)	-17.26 (19)	1.76 (32)	15.84 (62)	20.81 (47)
Median	10.91	-22.45	-1.60	17.68	20.17

Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 10/01/2010	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	5,147,163	3,164,289	3,605,715	11,917,167

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	6.53	-2.14	1.09	3.60	8.22	-10.73
Index	6.82	-1.35	1.19	3.11	8.23	-9.78

Fund Information

Fund Name :	Vanguard International Equity Index Funds: Vanguard Emerging Markets Stock Index Fund; Instl Class Shares	Portfolio Assets :	\$103,637 Million
Fund Family :	Vanguard	Portfolio Manager :	Perre/Miller
Ticker :	VEMIX	PM Tenure :	2008--2016
Inception Date :	06/22/2000	Fund Style :	IM Emerging Markets Equity (MF)
Fund Assets :	\$7,182 Million	Style Benchmark :	FTSE Emerging Mkts All Cap China A Inclusion Index
Portfolio Turnover :	5%		

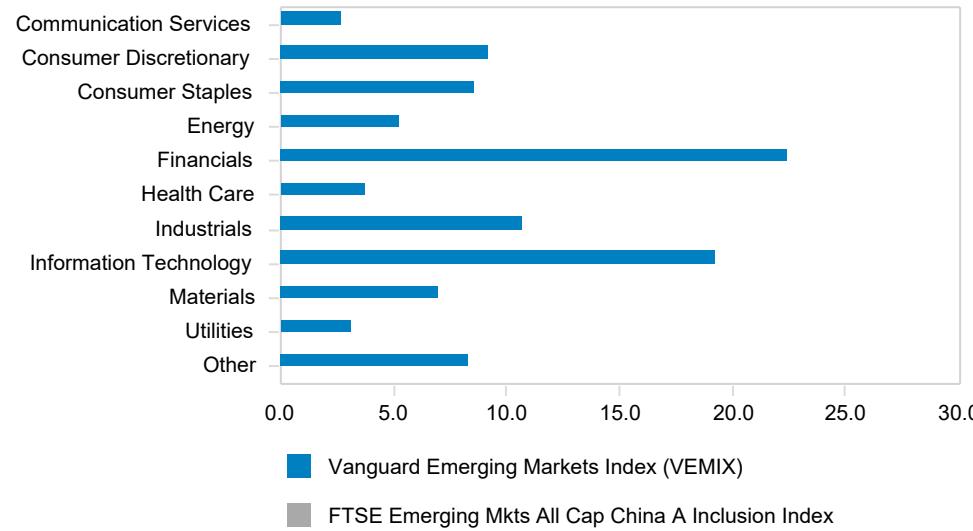
Portfolio Characteristics As of 02/29/2024

	Portfolio	Benchmark
Total Securities	4,797	N/A
Avg. Market Cap	89,914,863,580	-
Price/Earnings (P/E)	22.75	N/A
Price/Book (P/B)	4.02	N/A
Dividend Yield	3.38	N/A
Annual EPS	13.07	N/A
5 Yr EPS	14.68	N/A
3 Yr EPS Growth	19.76	N/A
Beta (5 Years, Monthly)	1.01	1.00

Top Ten Securities As of 02/29/2024

Taiwan Semiconductor Manufacturing	6.3 %
Vanguard Market Liquidity Fund	3.0 %
Tencent Holdings Ltd ORD	2.8 %
Alibaba Group Holding Ltd ORD	2.0 %
Reliance Industries Ltd ORD	1.5 %
HDFC Bank Ltd ORD	1.0 %
PDD HOLDINGS ADS	1.0 %
Infosys Ltd ORD	0.9 %
China Construction Bank Corp ORD	0.8 %
Meituan ORD	0.7 %

Sector Weights As of 02/29/2024



Region (%)

No data found.

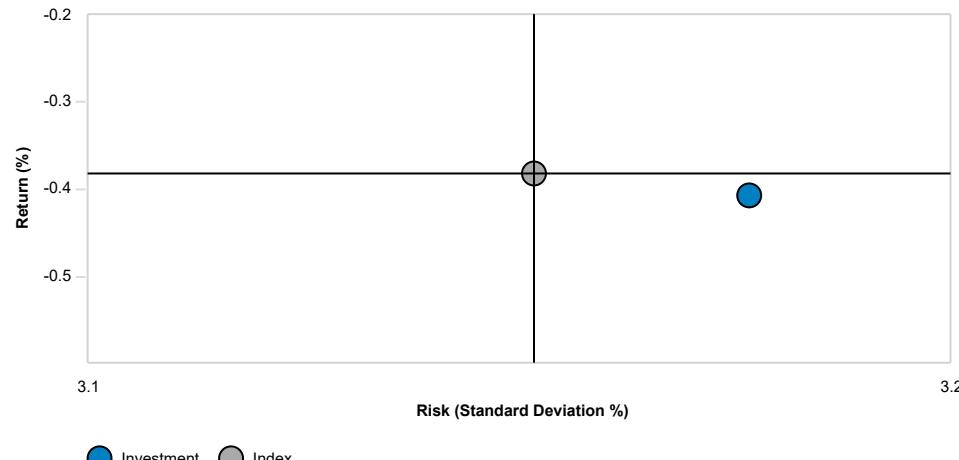
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.41	3.18	-0.96	100.44	6	100.96	6
Index	-0.38	3.15	-0.96	100.00	7	100.00	5

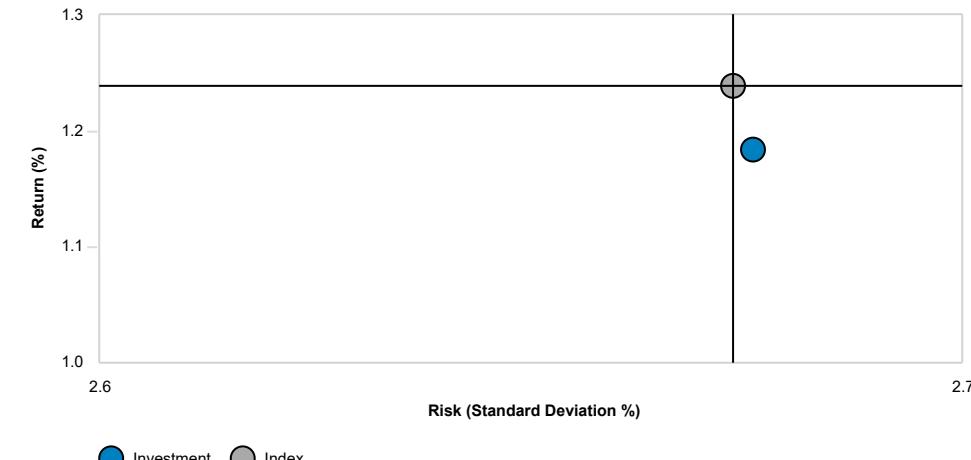
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.18	2.68	-0.30	98.03	13	99.10	7
Index	1.24	2.67	-0.28	100.00	14	100.00	6

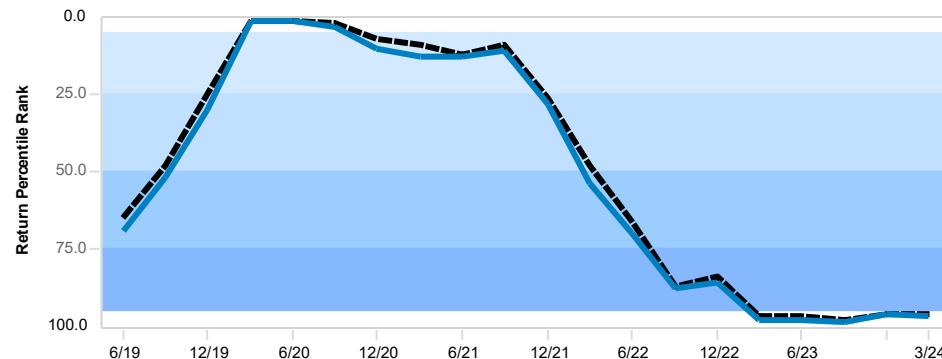
Risk and Return 3 Years



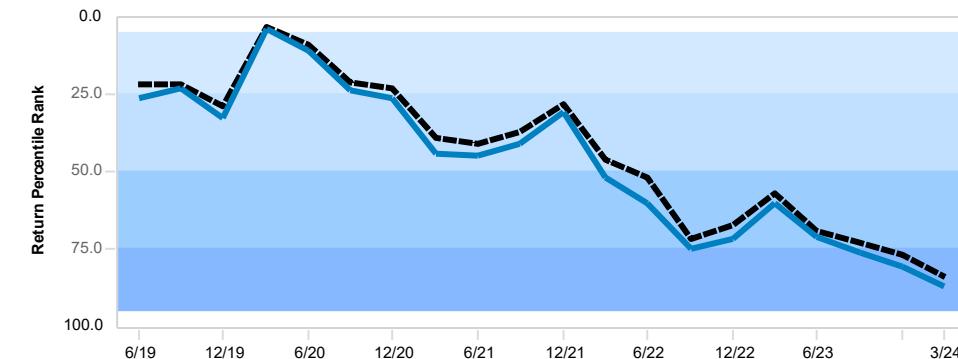
Risk and Return 5 Years



3 Year Rolling Percentile Rank IM U.S. Short Term Investment Grade (MF)



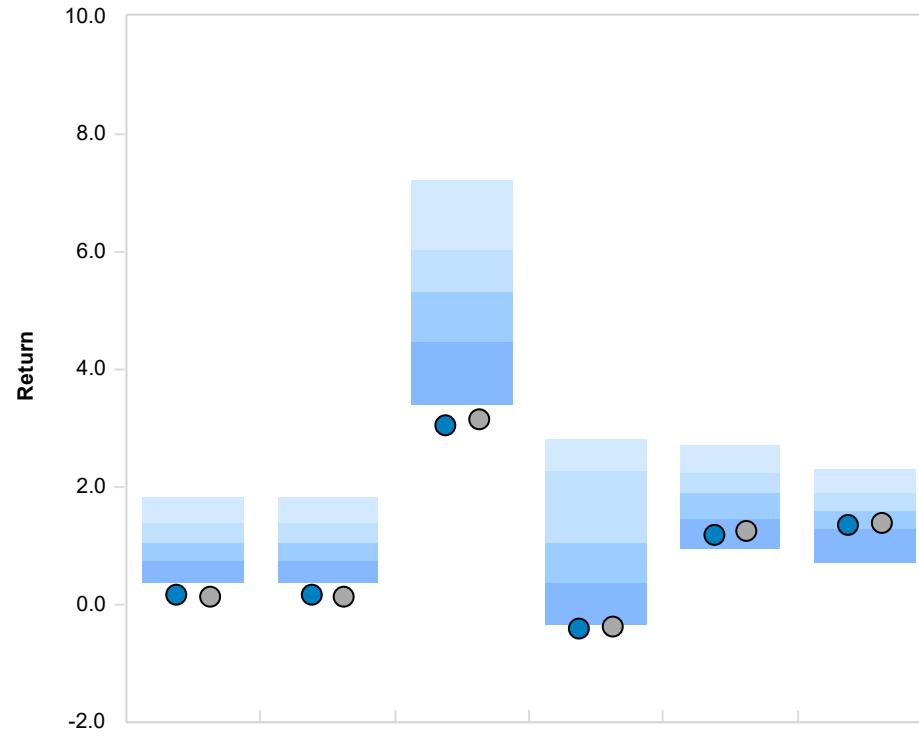
5 Year Rolling Percentile Rank IM U.S. Short Term Investment Grade (MF)



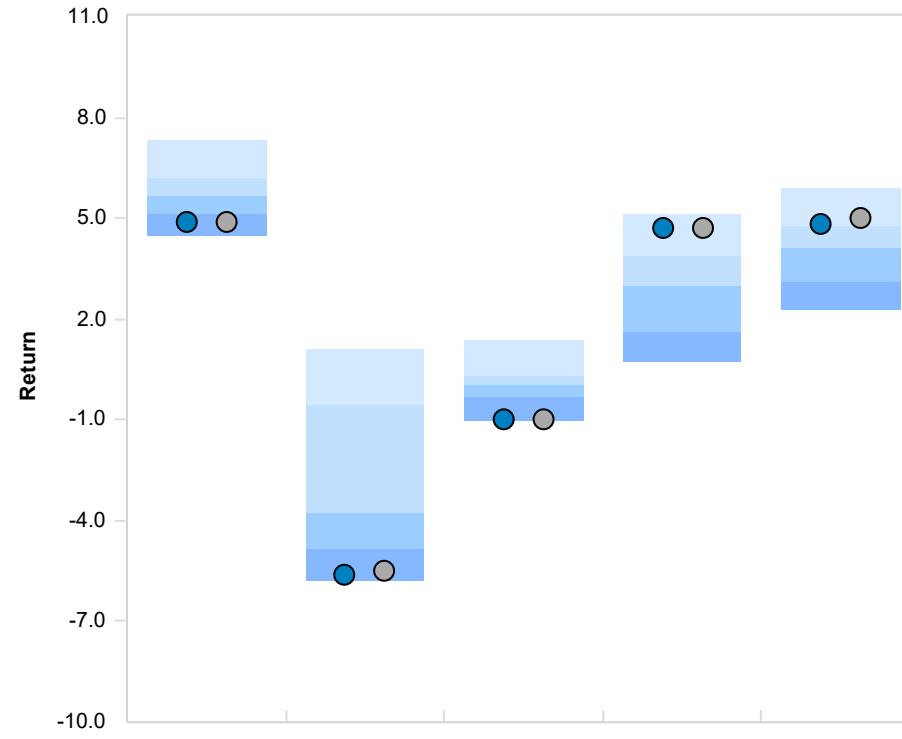
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	7 (35%)	2 (10%)	4 (20%)	7 (35%)
Index	20	8 (40%)	3 (15%)	2 (10%)	7 (35%)

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	4 (20%)	7 (35%)	6 (30%)	3 (15%)
Index	20	6 (30%)	6 (30%)	6 (30%)	2 (10%)

Peer Group Analysis - IM U.S. Short Term Investment Grade (MF)



Peer Group Analysis - IM U.S. Short Term Investment Grade (MF)



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	0.17 (99)	0.17 (99)	3.06 (99)	-0.41 (97)	1.18 (87)	1.35 (70)
Index	0.14 (100)	0.14 (100)	3.16 (98)	-0.38 (96)	1.24 (84)	1.40 (67)
Median	1.05	1.05	5.31	1.04	1.89	1.60

	2023	2022	2021	2020	2019
Investment	4.88 (87)	-5.61 (91)	-0.97 (94)	4.71 (11)	4.84 (23)
Index	4.89 (87)	-5.50 (89)	-0.97 (94)	4.71 (11)	5.01 (18)
Median	5.67	-3.79	0.02	3.02	4.12

Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 04/01/2013	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	10,001,804	-7,569,350	1,554,939	3,987,393

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	3.39	0.15	-0.64	1.93	1.07	-2.11
Index	3.44	0.21	-0.62	1.82	1.20	-2.16

Mutual Fund Holdings Analysis
Vanguard Short Term Bond Index (VBIRX)

March 31, 2024

Fund Information

Fund Name :	Vanguard Bond Index Funds: Vanguard Short-Term Bond Index Fund; Admiral Shares	Portfolio Assets :	\$61,733 Million
Fund Family :	Vanguard	Portfolio Manager :	Joshua C. Barrickman
Ticker :	VBIRX	PM Tenure :	2013
Inception Date :	11/12/2001	Fund Style :	IM U.S. Short Term Investment Grade (MF)
Fund Assets :	\$12,879 Million	Style Benchmark :	Bloomberg U.S. Aggregate 1-3 Yrs
Portfolio Turnover :	64%		

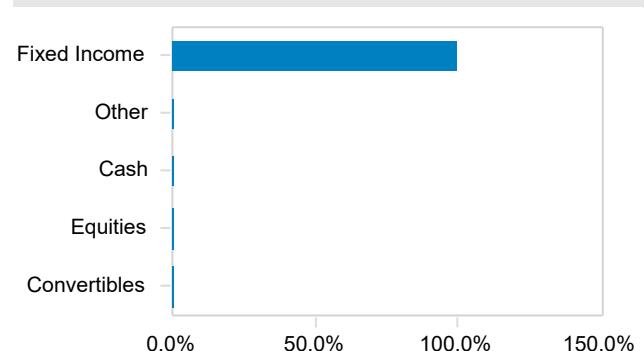
Fund Characteristics As of 12/31/2023

Avg. Coupon	2.80 %
Nominal Maturity	N/A
Effective Maturity	2.80 Years
Duration	2.60 Years
SEC 30 Day Yield	1.0
Avg. Credit Quality	AA

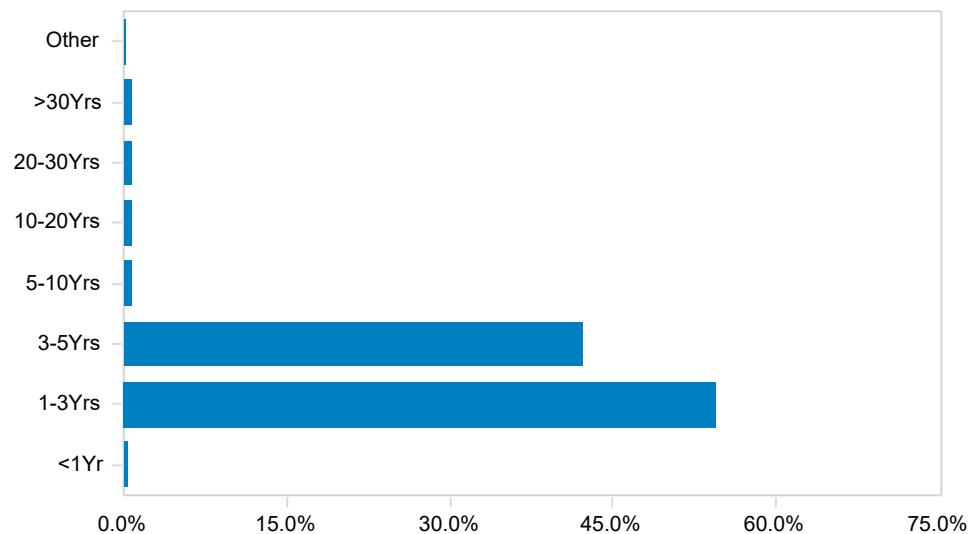
Top Ten Securities As of 12/31/2023

Government Agency Securities	33.6 %
Treasury Notes/Bonds	33.6 %
Corporate Notes/Bonds	27.2 %
Fgn. Currency Denominated Bonds	5.4 %

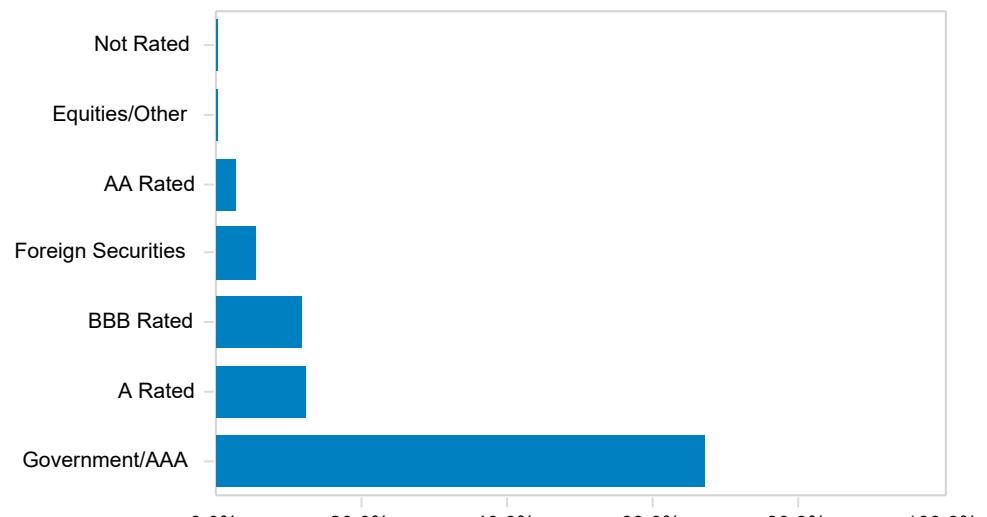
Asset Allocation As of 12/31/2023



Maturity Distribution As of 12/31/2023



Sector/Quality Allocation As of 12/31/2023



Strategy Review
Vanguard Total Bond Index (VBTIX) | Blmbg. U.S. Aggregate Index
As of March 31, 2024

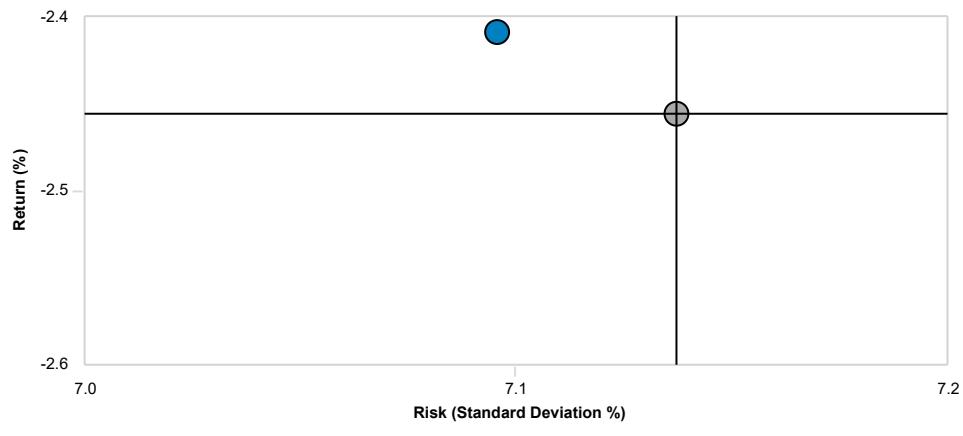
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-2.41	7.10	-0.68	100.13	5	99.68	7
Index	-2.46	7.14	-0.68	100.00	6	100.00	6

Historical Statistics 5 Years

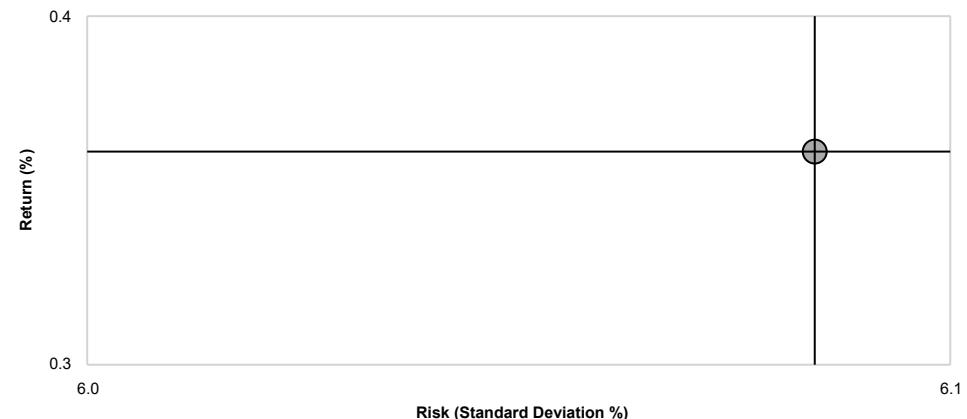
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	0.36	6.08	-0.24	100.00	13	100.00	7

Risk and Return 3 Years



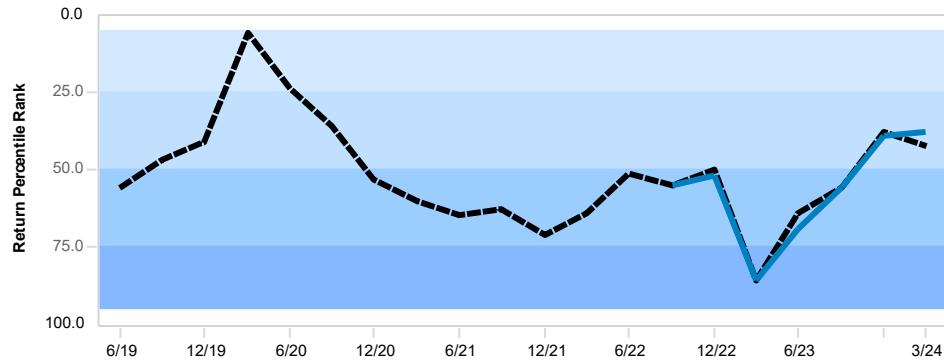
● Investment ● Index

Risk and Return 5 Years



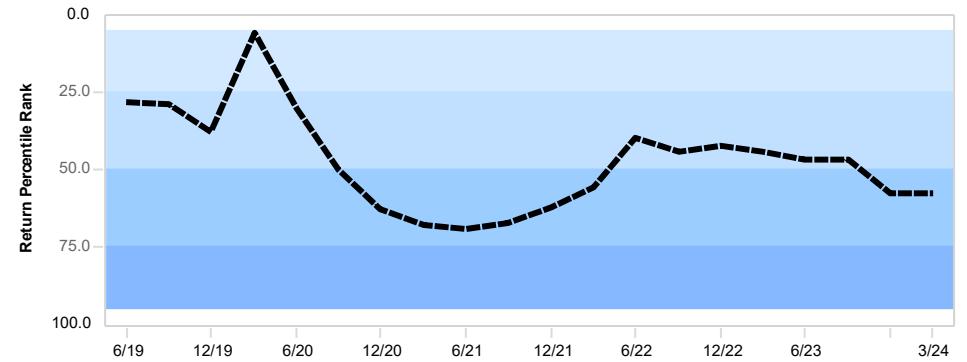
● Investment ● Index

3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	7	0 (0%)	2 (29%)	4 (57%)	1 (14%)
Index	20	2 (10%)	6 (30%)	11 (55%)	1 (5%)

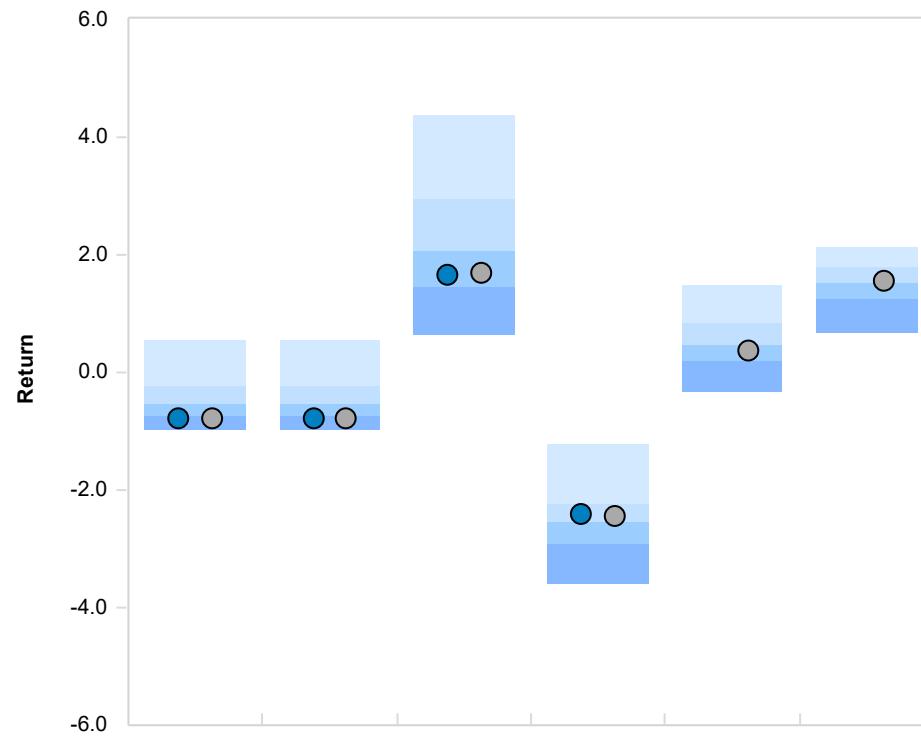
5 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (MF)



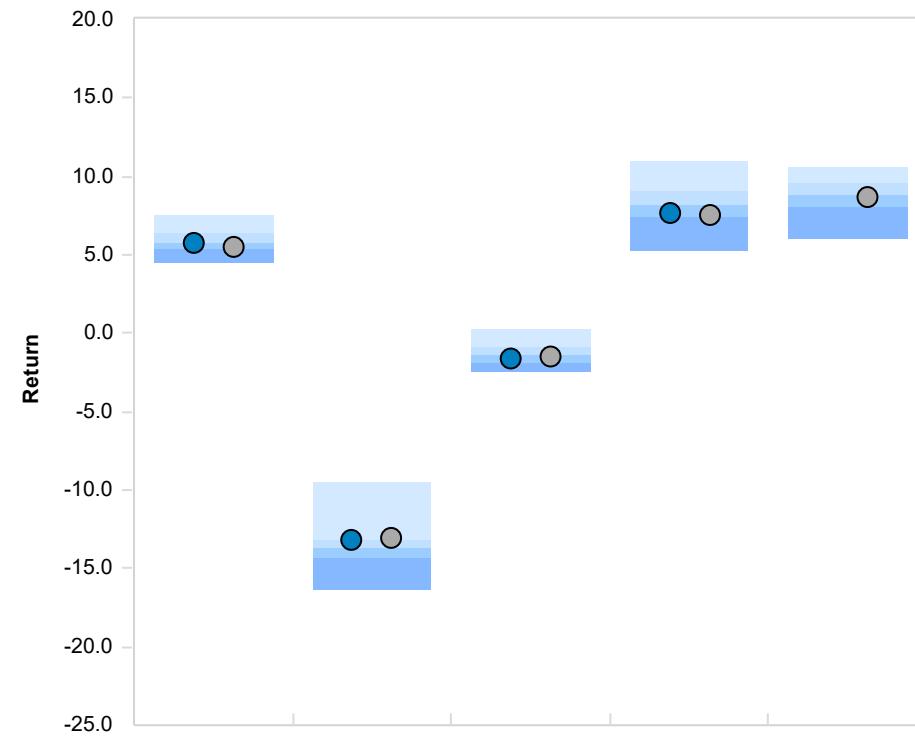
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	0	0	0	0	0
Index	20	1 (5%)	11 (55%)	8 (40%)	0 (0%)

Inception Date for VBTIX is 9/2019. Manager returns for VBTIX have been used for this report.

Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (MF)



Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (MF)



Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 09/01/2019	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	5,041,017	40,803,437	-1,806,269	44,038,184

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	6.69 (60)	-3.08 (51)	-0.90 (63)	3.16 (46)	1.67 (56)	-4.65 (47)
Index	6.82 (46)	-3.23 (70)	-0.84 (55)	2.96 (69)	1.87 (35)	-4.75 (60)
Median	6.77	-3.08	-0.81	3.14	1.71	-4.67

Inception Date for VBTIX is 9/2019. Manager returns for VBTIX have been used for this report.

Fund Information

Fund Name :	Vanguard Bond Index Funds: Vanguard Total Bond Market Index Fund; Institutional Shares	Portfolio Assets :	\$320,032 Million
Fund Family :	Vanguard	Portfolio Manager :	Joshua C. Barrickman
Ticker :	VBTIX	PM Tenure :	2013
Inception Date :	09/18/1995	Fund Style :	IM U.S. Broad Market Core Fixed Income (MF)
Fund Assets :	\$43,073 Million	Style Benchmark :	Bloomberg U.S. Aggregate
Portfolio Turnover :	36%		

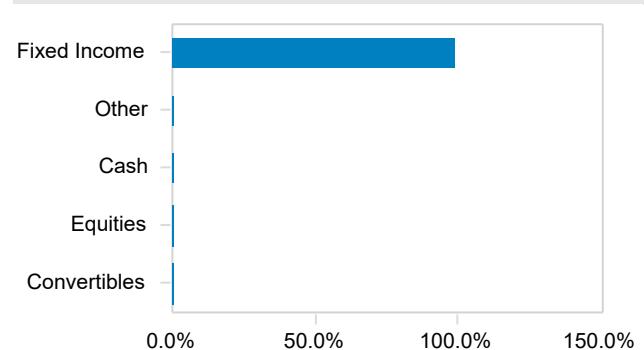
Fund Characteristics As of 12/31/2023

Avg. Coupon	3.20 %
Nominal Maturity	N/A
Effective Maturity	8.70 Years
Duration	6.40 Years
SEC 30 Day Yield	2.7
Avg. Credit Quality	AA

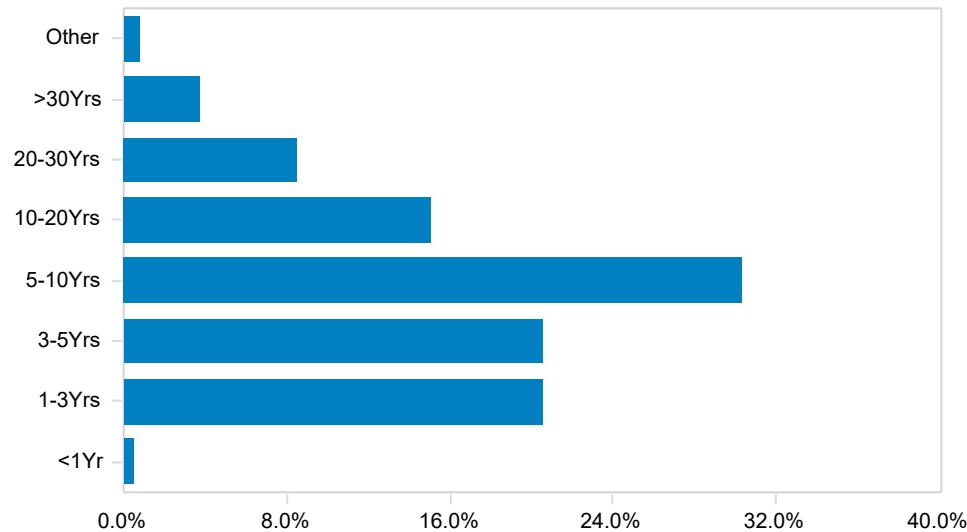
Top Ten Securities As of 12/31/2023

Corporate Notes/Bonds	27.0 %
Government Agency Securities	23.0 %
Treasury Notes/Bonds	23.0 %
GNMA and Other Mtg Backed	22.2 %
Fgn. Currency Denominated Bonds	3.5 %
Asset Backed Securities	0.5 %

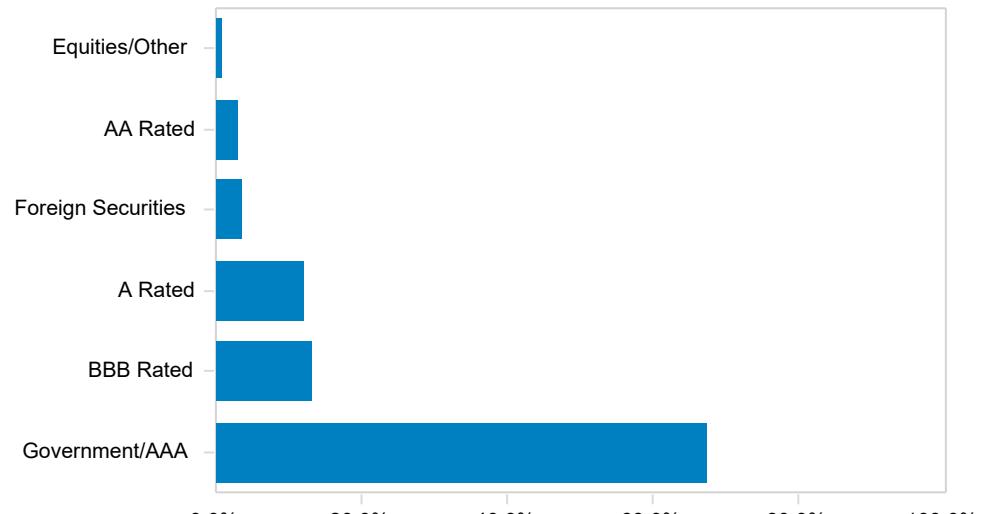
Asset Allocation As of 12/31/2023



Maturity Distribution As of 12/31/2023



Sector/Quality Allocation As of 12/31/2023



Strategy Review
Vanguard High Yield Bond Fund (VWEAX) | Blmbg. U.S. Corp High Yield
As of March 31, 2024

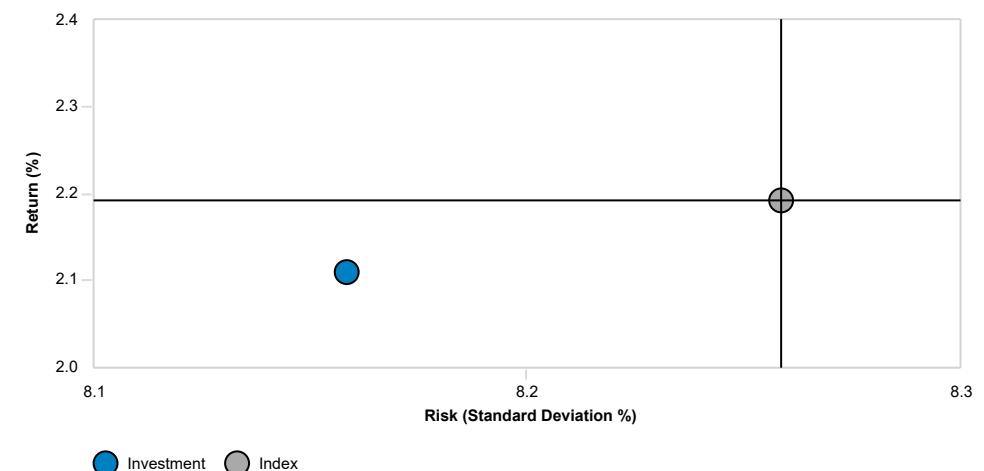
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.11	8.16	-0.02	97.97	8	98.40	4
Index	2.19	8.26	0.00	100.00	9	100.00	3

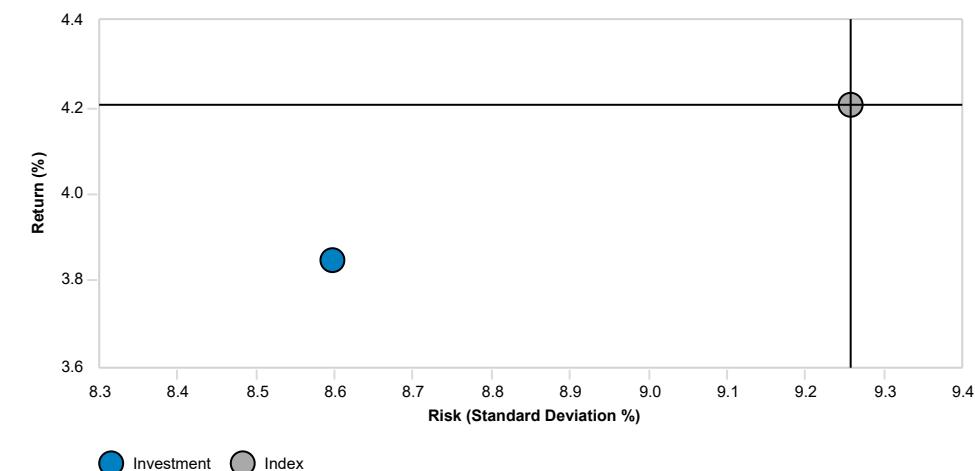
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.85	8.60	0.25	92.47	14	93.25	6
Index	4.21	9.26	0.28	100.00	16	100.00	4

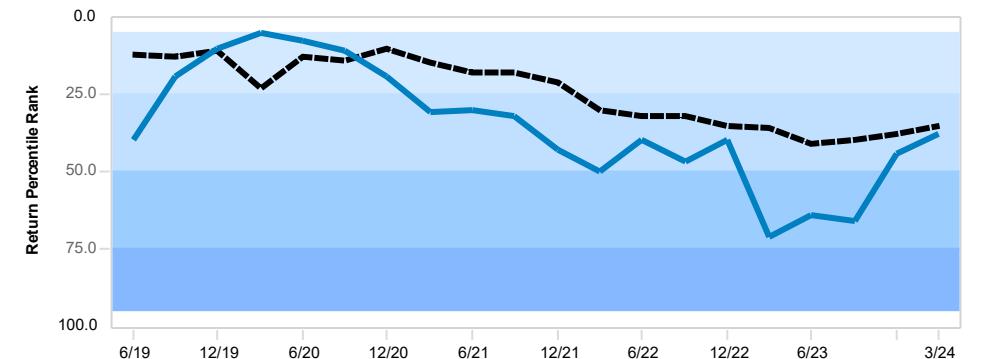
Risk and Return 3 Years



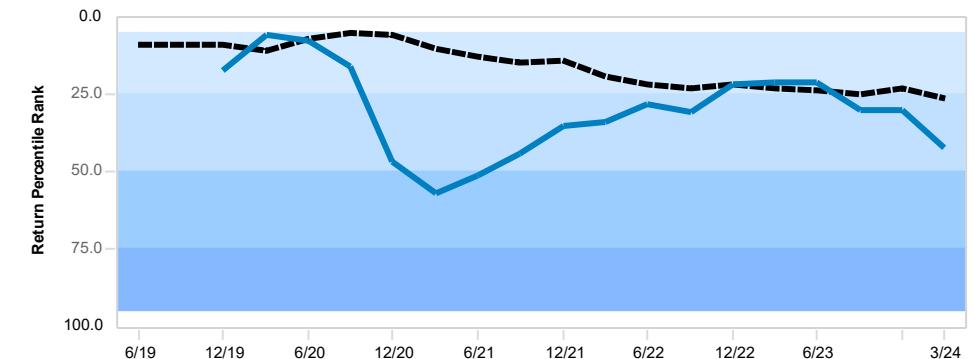
Risk and Return 5 Years



3 Year Rolling Percentile Rank IM U.S. High Yield Bonds (MF)



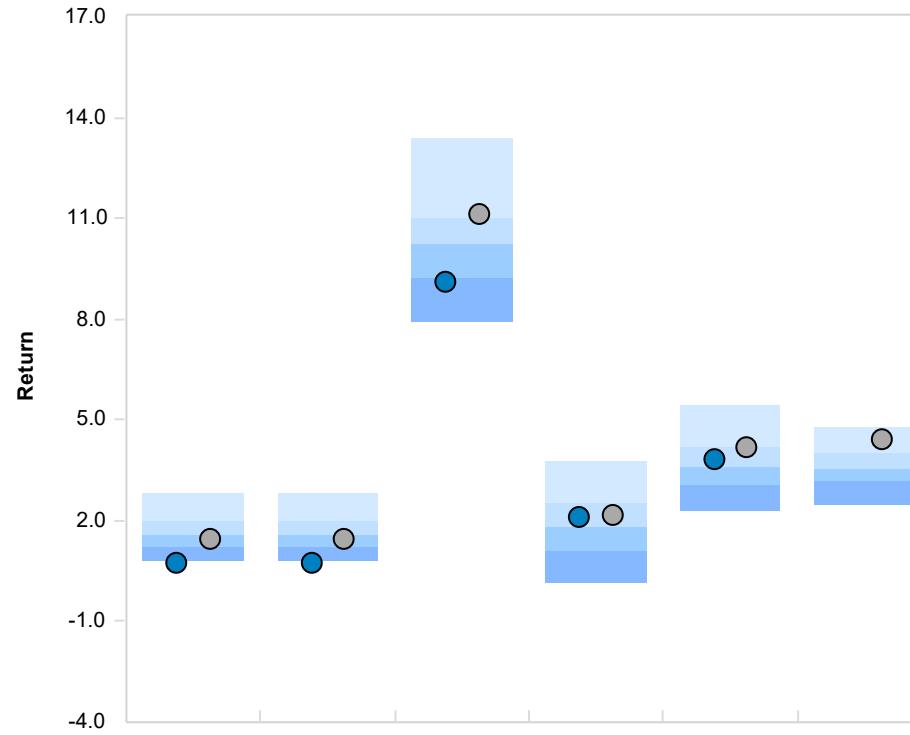
5 Year Rolling Percentile Rank IM U.S. High Yield Bonds (MF)



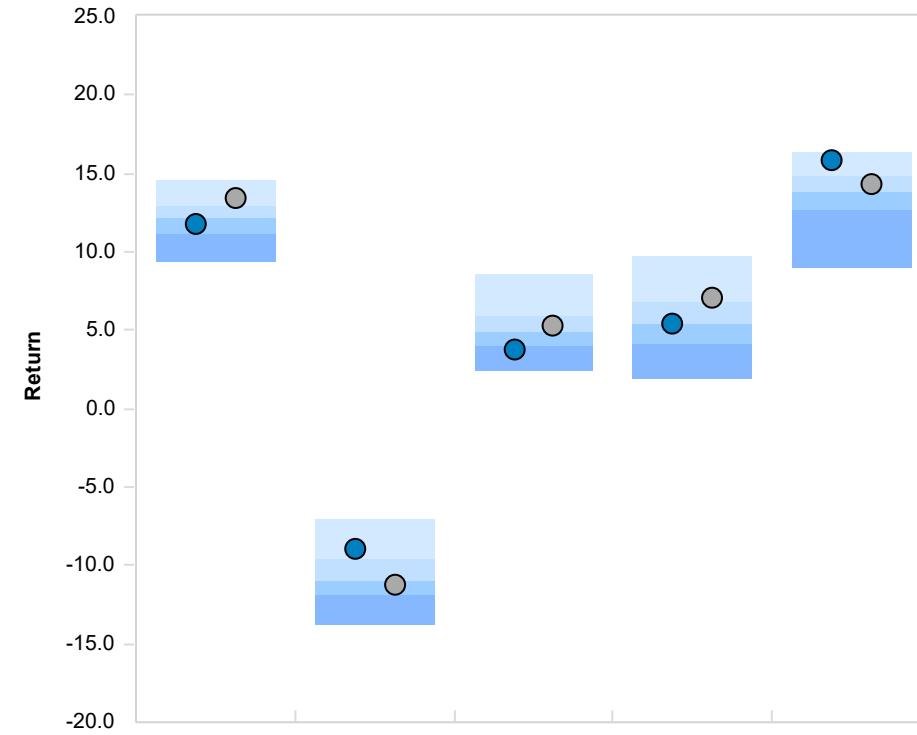
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	6 (30%)	11 (55%)	3 (15%)	0 (0%)
Index	20	11 (55%)	9 (45%)	0 (0%)	0 (0%)

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	18	7 (39%)	9 (50%)	2 (11%)	0 (0%)
Index	20	19 (95%)	1 (5%)	0 (0%)	0 (0%)

Peer Group Analysis - IM U.S. High Yield Bonds (MF)



Peer Group Analysis - IM U.S. High Yield Bonds (MF)



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	0.77 (96)	0.77 (96)	9.11 (77)	2.11 (38)	3.85 (42)	N/A
Index	1.47 (58)	1.47 (58)	11.15 (23)	2.19 (35)	4.21 (26)	4.44 (11)
Median	1.58	1.58	10.22	1.82	3.59	3.54

	2023	2022	2021	2020	2019
Investment	11.74 (62)	-8.97 (18)	3.78 (80)	5.38 (52)	15.90 (9)
Index	13.45 (14)	-11.19 (58)	5.28 (42)	7.11 (20)	14.32 (38)
Median	12.17	-10.97	4.94	5.43	13.83

Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 12/01/2014	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	12,642,764	5,350,000	8,028,595	26,021,359

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	7.30	-0.20	1.12	3.19	4.88	-0.85
Index	7.16	0.46	1.75	3.57	4.17	-0.65

Mutual Fund Holdings Analysis
Vanguard High Yield Bond Fund (VWEAX)
March 31, 2024

Fund Information

Fund Name :	Vanguard Fixed Income Securities Funds: Vanguard High-Yield Corporate Fund; Admiral Shares	Portfolio Assets :	\$23,648 Million
Fund Family :	Vanguard	Portfolio Manager :	Shortsleeve/Chang
Ticker :	VWEAX	PM Tenure :	2022--2022
Inception Date :	11/12/2001	Fund Style :	IM U.S. High Yield Bonds (MF)
Fund Assets :	\$20,599 Million	Style Benchmark :	FTSE High Yield Market Index
Portfolio Turnover :	36%		

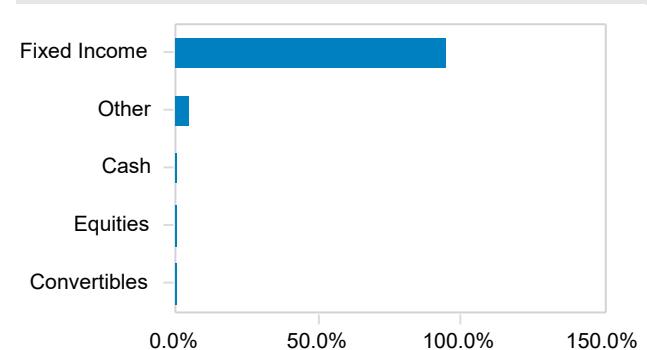
Fund Characteristics As of 12/31/2023

Avg. Coupon	5.40 %
Nominal Maturity	N/A
Effective Maturity	4.40 Years
Duration	3.20 Years
SEC 30 Day Yield	6.5
Avg. Credit Quality	BB

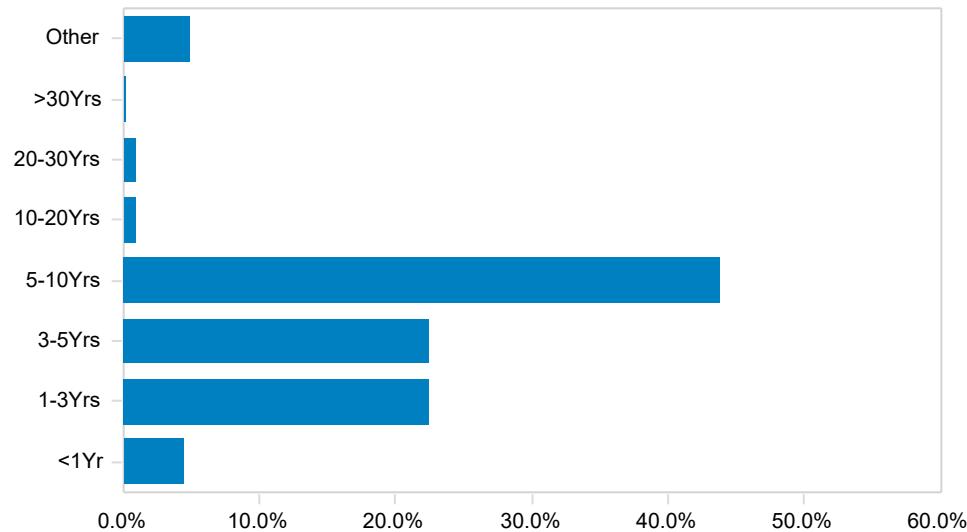
Top Ten Securities As of 12/31/2023

Corporate Notes/Bonds	89.5 %
Government Agency Securities	2.8 %
Treasury Notes/Bonds	2.8 %
Fgn. Currency Denominated Bonds	0.1 %

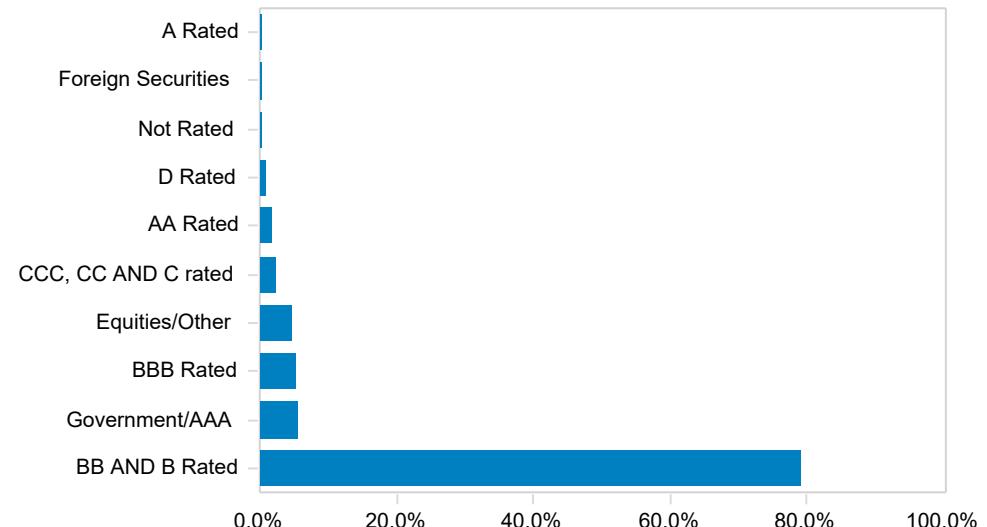
Asset Allocation As of 12/31/2023



Maturity Distribution As of 12/31/2023



Sector/Quality Allocation As of 12/31/2023



Strategy Review
Vanguard International Bond (VTIFX) | Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)
As of March 31, 2024

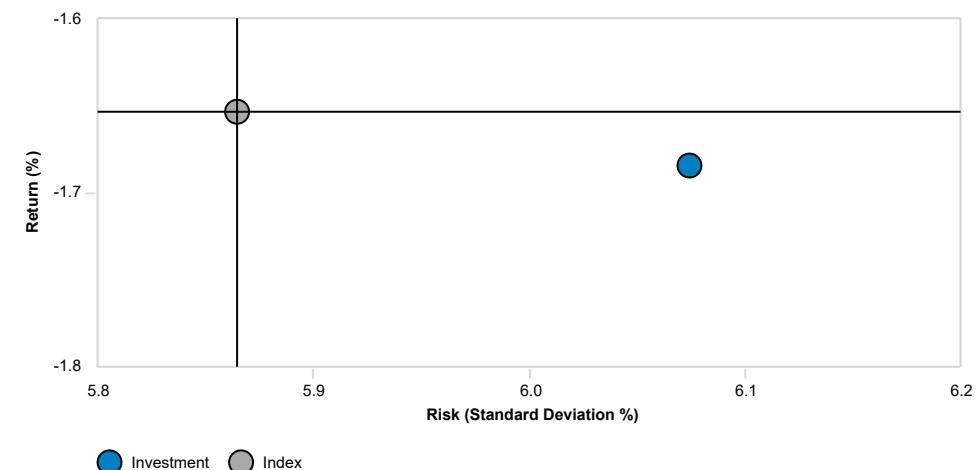
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.68	6.07	-0.69	102.68	6	102.43	6
Index	-1.65	5.87	-0.71	100.00	6	100.00	6

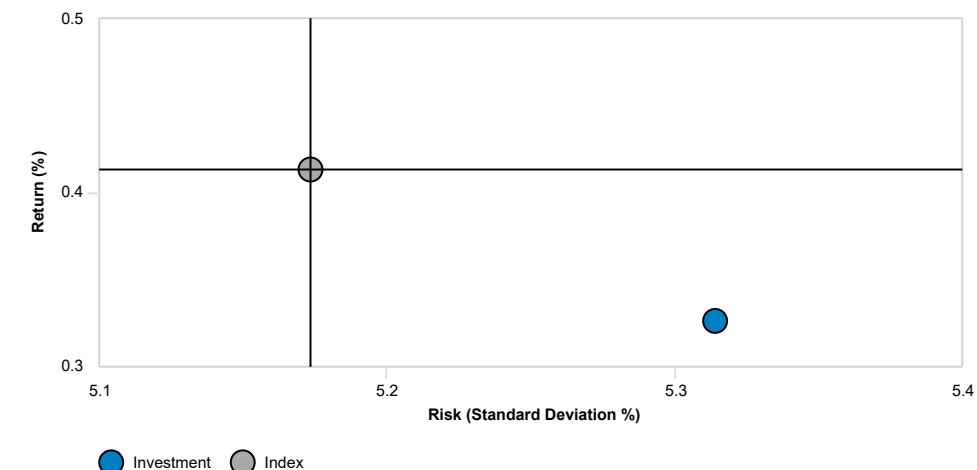
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.33	5.31	-0.29	100.67	12	101.93	8
Index	0.41	5.17	-0.28	100.00	12	100.00	8

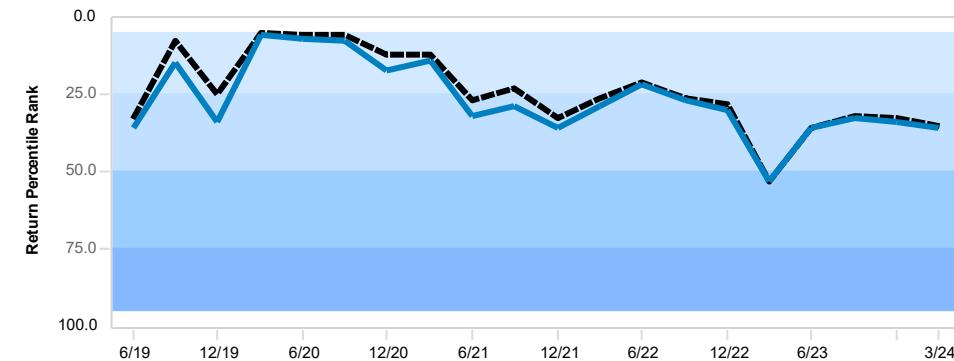
Risk and Return 3 Years



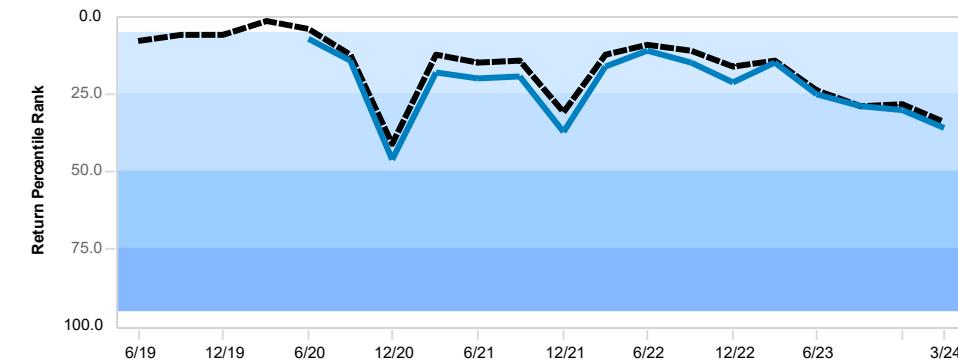
Risk and Return 5 Years



3 Year Rolling Percentile Rank IM International Fixed Income (MF)



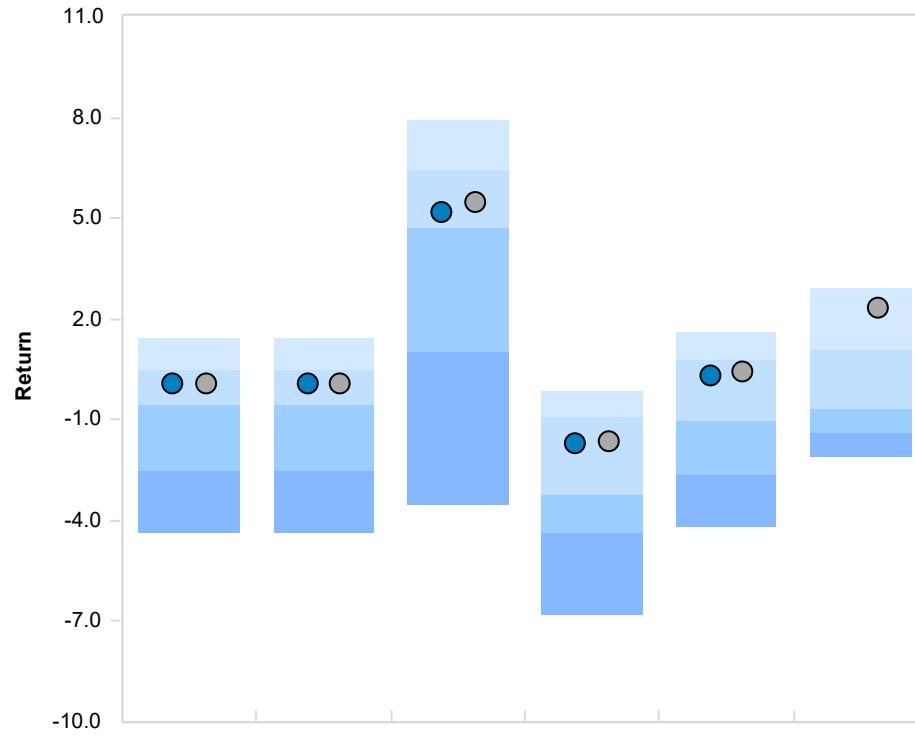
5 Year Rolling Percentile Rank IM International Fixed Income (MF)



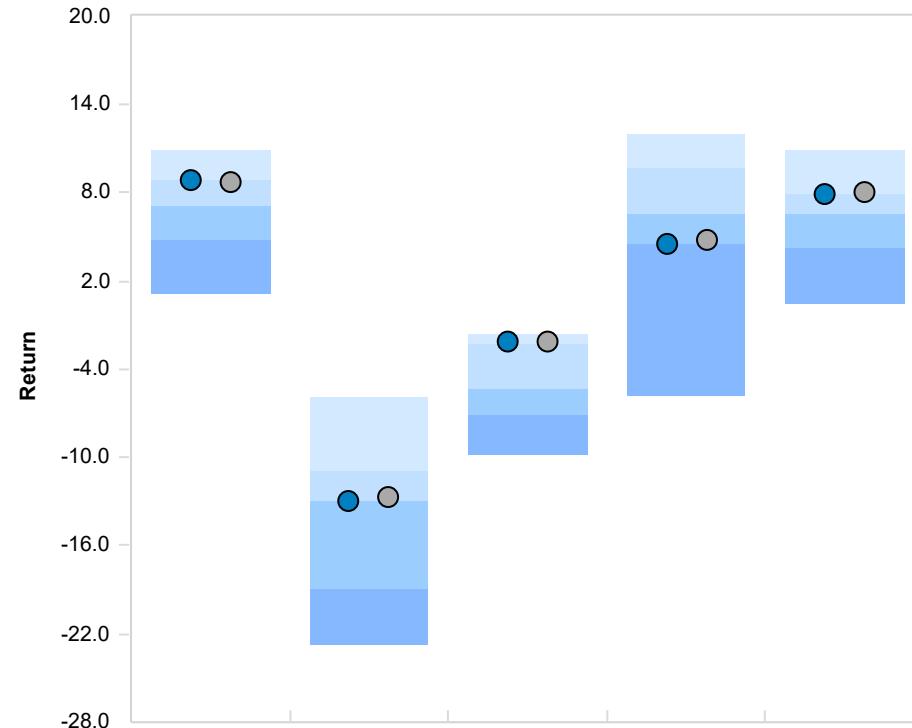
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	7 (35%)	12 (60%)	1 (5%)	0 (0%)
Index	20	9 (45%)	10 (50%)	1 (5%)	0 (0%)

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	16	11 (69%)	5 (31%)	0 (0%)	0 (0%)
Index	20	15 (75%)	5 (25%)	0 (0%)	0 (0%)

Peer Group Analysis - IM International Fixed Income (MF)



Peer Group Analysis - IM International Fixed Income (MF)



Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 06/01/2015	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	9,329,282	-2,425,000	1,592,772	8,497,054

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	6.50	-1.46	0.14	3.58	-0.05	-3.25
Index	6.38	-1.29	0.37	3.18	0.08	-3.09
Median	6.38	-1.29	0.37	3.18	0.08	-3.09

Fund Information

Fund Name :	Vanguard Charlotte Funds: Vanguard Total International Bond Index Fund; Institutional Class Shares	Portfolio Assets :	\$89,755 Million
Fund Family :	Vanguard	Portfolio Manager :	Barrickman/Talone
Ticker :	VTIFX	PM Tenure :	2013-2022
Inception Date :	05/31/2013	Fund Style :	IM International Fixed Income (MF)
Fund Assets :	\$12,464 Million	Style Benchmark :	FTSE Non-U.S. World Government Bond
Portfolio Turnover :	29%		

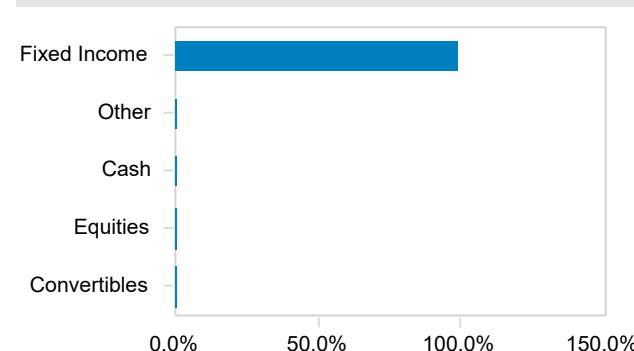
Fund Characteristics As of 12/31/2023

Avg. Coupon	2.30 %
Nominal Maturity	N/A
Effective Maturity	8.90 Years
Duration	7.30 Years
SEC 30 Day Yield	N/A
Avg. Credit Quality	N/A

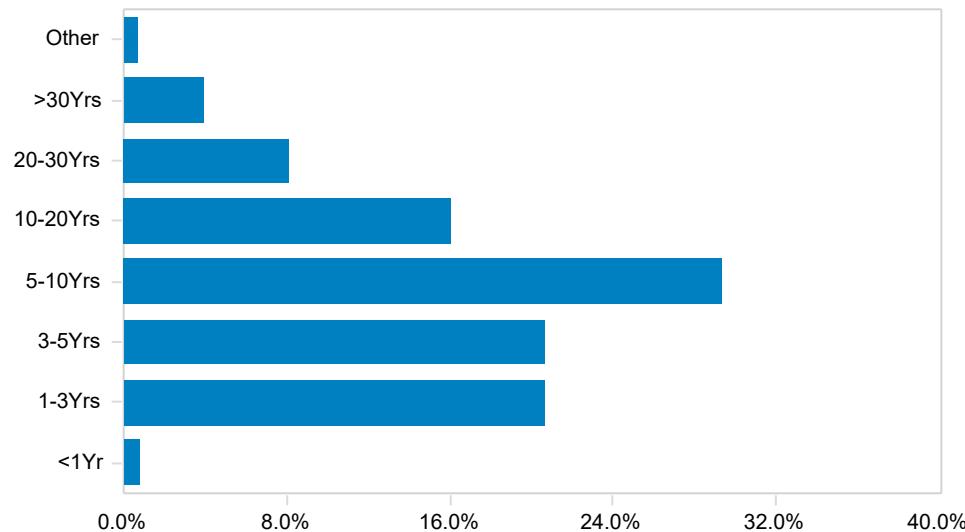
Top Ten Securities As of 12/31/2023

Fgn. Currency Denominated Bonds	78.6 %
Corporate Notes/Bonds	15.3 %
Asset Backed Securities	5.4 %

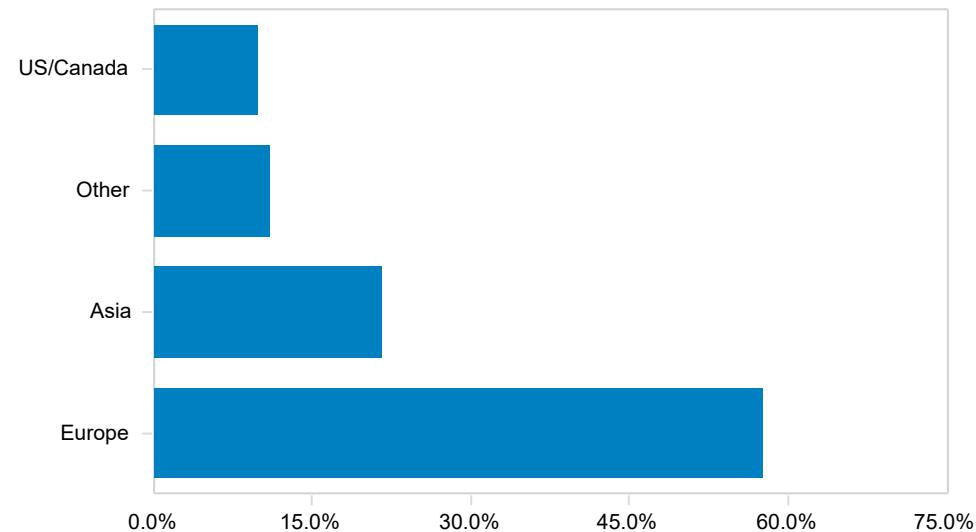
Asset Allocation As of 12/31/2023



Maturity Distribution As of 12/31/2023



Sector/Quality Allocation As of 12/31/2023



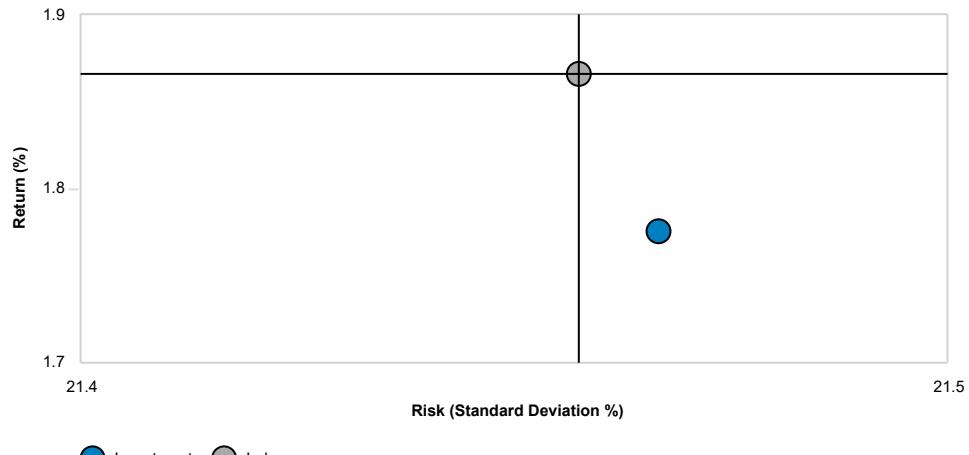
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.78	21.47	0.07	99.90	7	100.17	5
Index	1.87	21.46	0.07	100.00	7	100.00	5

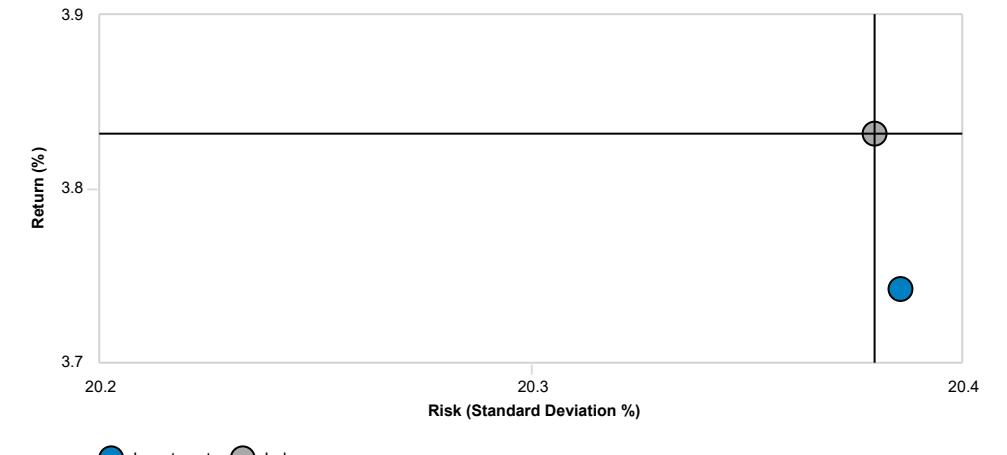
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.74	20.39	0.19	99.84	14	100.14	6
Index	3.83	20.38	0.19	100.00	14	100.00	6

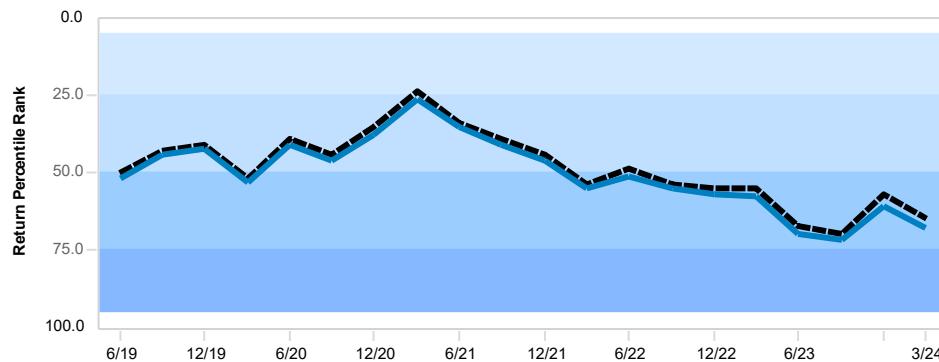
Risk and Return 3 Years



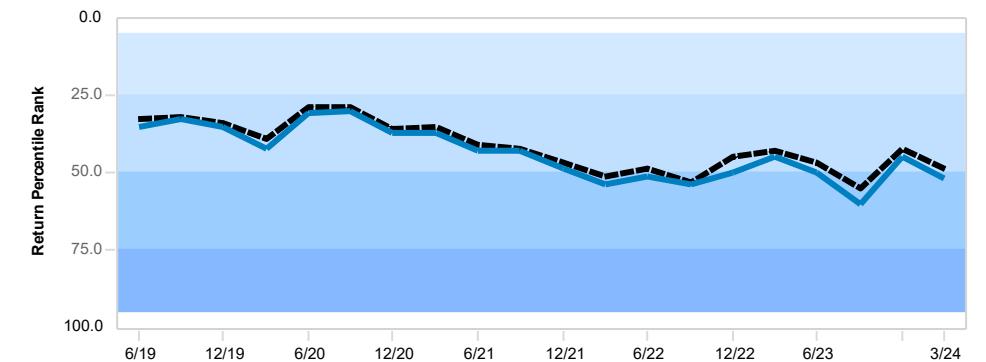
Risk and Return 5 Years



3 Year Rolling Percentile Rank IM Real Estate Sector (MF)



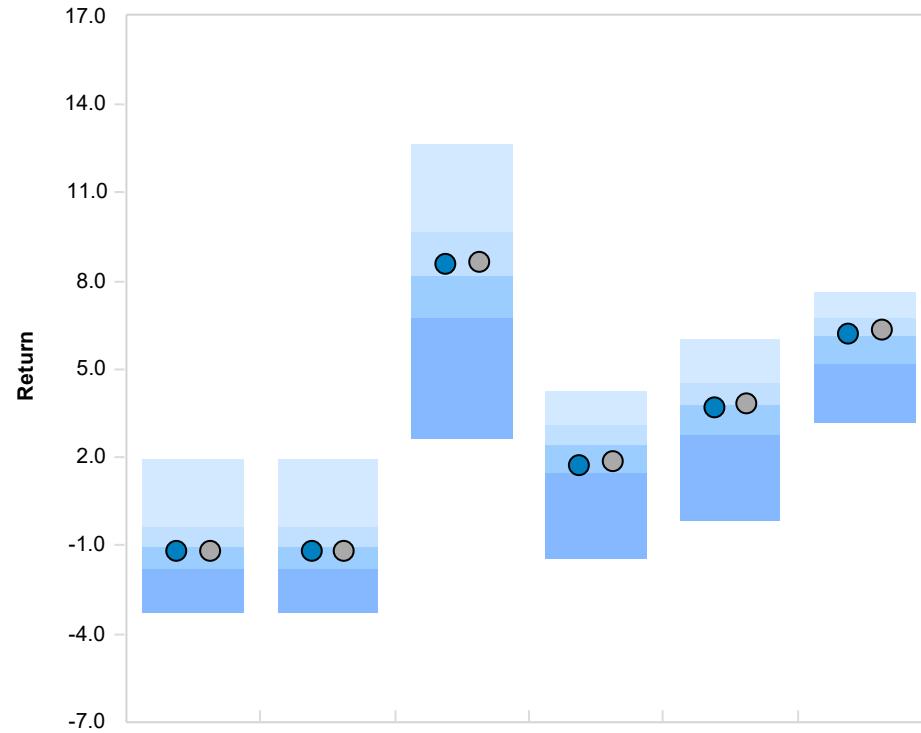
5 Year Rolling Percentile Rank IM Real Estate Sector (MF)



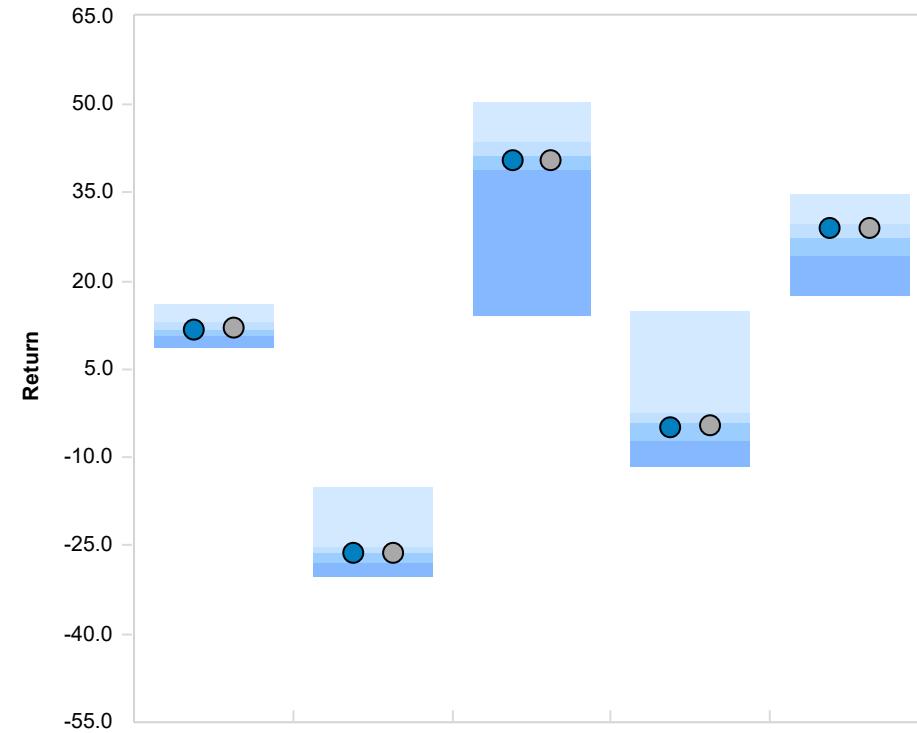
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	9 (45%)	11 (55%)	0 (0%)
Index	20	1 (5%)	10 (50%)	9 (45%)	0 (0%)

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	15 (75%)	5 (25%)	0 (0%)
Index	20	0 (0%)	17 (85%)	3 (15%)	0 (0%)

Peer Group Analysis - IM Real Estate Sector (MF)



Peer Group Analysis - IM Real Estate Sector (MF)



Financial Reconciliation Since Inception Ending March 31, 2024

	Market Value 10/01/2010	Net Flows	Return On Investment	Market Value 03/31/2024
Investment	4,801,552	-1,776,630	10,707,109	13,732,032

Comparative Performance

	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022
Investment	18.13 (11)	-8.50 (79)	1.63 (54)	1.79 (82)	4.36 (25)	-11.01 (69)
Index	18.18 (10)	-8.50 (79)	1.68 (51)	1.83 (81)	4.35 (27)	-10.98 (66)
Median	16.27	-7.66	1.70	2.56	3.86	-10.73

Fund Information

Fund Name :	Vanguard Specialized Funds: Vanguard Real Estate Index Fund; Institutional Class Shares	Portfolio Assets :	\$65,950 Million
Fund Family :	Vanguard	Portfolio Manager :	O'Reilly/Nejman
Ticker :	VGSNX	PM Tenure :	2003--2016
Inception Date :	12/02/2003	Fund Style :	IM Real Estate Sector (MF)
Fund Assets :	\$10,144 Million	Style Benchmark :	Vanguard Spliced REIT Index
Portfolio Turnover :	7%		

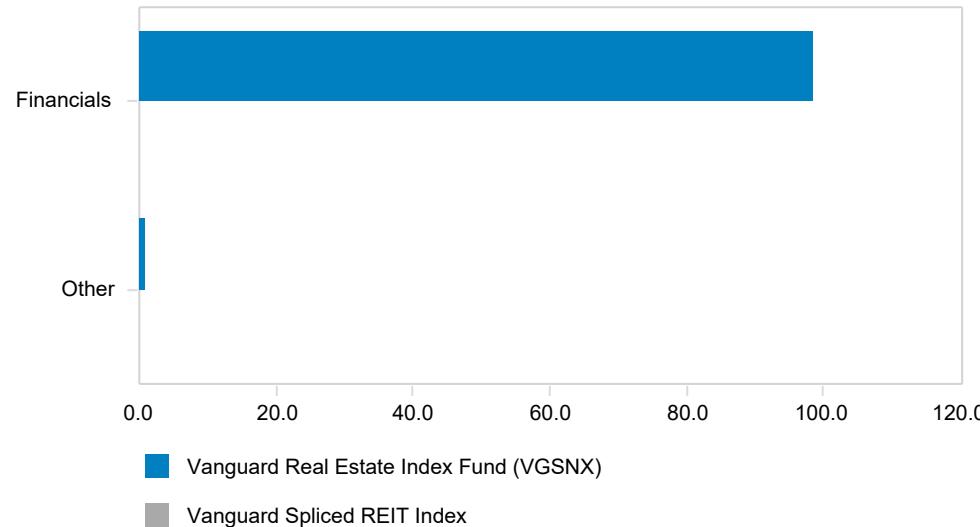
Portfolio Characteristics As of 02/29/2024

	Portfolio	Benchmark
Total Securities	162	N/A
Avg. Market Cap	46,345,057,622	-
Price/Earnings (P/E)	44.36	N/A
Price/Book (P/B)	5.96	N/A
Dividend Yield	4.46	N/A
Annual EPS	4.51	N/A
5 Yr EPS	7.46	N/A
3 Yr EPS Growth	13.67	N/A
Beta (5 Years, Monthly)	1.00	1.00

Top Ten Securities As of 02/29/2024

Vanguard Real Estate II Index Fund;Insti	13.0 %
Prologis Inc ORD	7.9 %
American Tower Corp ORD	5.9 %
Equinix Inc ORD	5.3 %
Welltower Inc ORD	3.2 %
Simon Property Group Inc ORD	3.1 %
Crown Castle Inc ORD	3.1 %
Public Storage ORD	2.9 %
Realty Income Corp ORD	2.8 %
Digital Realty Trust Inc ORD	2.8 %

Sector Weights As of 02/29/2024



Region (%)

No data found.

Total Fund Policy			
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Jan-1979		Jul-2014	
Russell 1000 Growth Index	20.00	CRSP U.S. Large Cap Value TR Index	8.00
Russell 1000 Value Index	20.00	CRSP U.S. Large Cap Growth TR Index	8.00
MSCI EAFE (Net) Index	10.00	CRSP U.S. Mid Cap TR Index	10.00
Bloomberg Intermediate US Govt/Credit Idx	40.00	CRSP U.S. Small Cap TR Index	5.00
Russell 2000 Index	10.00	Vanguard Spliced Emerging Markets Index (Net)	4.00
90 Day U.S. Treasury Bill	0.00	Vanguard Spliced Developed ex U.S. Index (Net)	9.00
Jun-2010		Blmbg. U.S. Gov/Credit: 5-10 Yr	7.50
Russell 1000 Value Index	15.00	Bloomberg U.S. TIPS Index	7.50
MSCI US Prime Market Growth	15.00	Bloomberg 1-5 Year Gov/Credit Idx	7.50
MSCI US Mid Cap 450 Index	10.00	Bloomberg US TIPS 0-5 Year Index	7.50
Russell 2000 Index	10.00	Vanguard Spliced REIT Index	10.00
MSCI EAFE (Net) Index	10.00	90 Day U.S. Treasury Bill	1.00
MSCI Emerging Markets (Net) Index	5.00	S&P 500 Index	15.00
Blmbg. U.S. Gov/Credit: 5-10 Yr	15.00		
Bloomberg U.S. TIPS Index	15.00		
Vanguard Spliced REIT Index	5.00		
Jun-2013			
CRSP U.S. Large Cap Value TR Index	15.00		
CRSP U.S. Large Cap Growth TR Index	15.00		
CRSP U.S. Mid Cap TR Index	10.00		
CRSP U.S. Small Cap TR Index	10.00		
Vanguard Spliced Emerging Markets Index (Net)	5.00		
Vanguard Spliced Developed ex U.S. Index (Net)	10.00		
Blmbg. U.S. Gov/Credit: 5-10 Yr	7.50		
Bloomberg U.S. TIPS Index	7.50		
Bloomberg 1-5 Year Gov/Credit Idx	7.50		
Bloomberg US TIPS 0-5 Year Index	7.50		
Vanguard Spliced REIT Index	4.00		
90 Day U.S. Treasury Bill	1.00		

Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Jun-2015		Oct-2019	
CRSP U.S. Large Cap Value TR Index	5.00	S&P 500 Index	15.00
CRSP U.S. Large Cap Growth TR Index	5.00	CRSP U.S. Large Cap Value TR Index	5.00
CRSP U.S. Mid Cap TR Index	10.00	CRSP U.S. Large Cap Growth TR Index	5.00
CRSP U.S. Small Cap TR Index	5.00	S&P MidCap 400 Index	10.00
Vanguard Spliced Emerging Markets Index (Net)	5.00	S&P SmallCap 600 Index	5.00
Vanguard Spliced Developed ex U.S. Index (Net)	10.00	FTSE Developed All Cap ex-U.S. Index	10.00
Blmbg. U.S. Gov/Credit: 5-10 Yr	7.50	FTSE Emerging Mkts All Cap China A Inclusion Index	5.00
Bloomberg U.S. TIPS Index	5.00	Blmbg. U.S. Aggregate Index	20.00
Bloomberg 1-5 Year Gov/Credit Idx	7.50	Bloomberg 1-5 Year Gov/Credit Idx	2.50
Bloomberg US TIPS 0-5 Year Index	5.00	Blmbg. U.S. Corp High Yield	10.00
Vanguard Spliced REIT Index	5.00	Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	5.00
90 Day U.S. Treasury Bill	2.50	Vanguard Spliced REIT Index	5.00
S&P 500 Index	15.00	90 Day U.S. Treasury Bill	2.50
Blmbg. U.S. Corp High Yield	7.50		
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	5.00		
Dec-2018		Mar-2020	
CRSP U.S. Large Cap Value TR Index	5.00	S&P 500 Index	15.00
CRSP U.S. Large Cap Growth TR Index	5.00	CRSP U.S. Large Cap Value TR Index	5.00
S&P MidCap 400 Index	10.00	CRSP U.S. Large Cap Growth TR Index	5.00
S&P SmallCap 600 Index	5.00	S&P MidCap 400 Index	10.00
Vanguard Spliced Emerging Markets Index (Net)	5.00	S&P SmallCap 600 Index	5.00
Vanguard Spliced Developed ex U.S. Index (Net)	10.00	FTSE Developed All Cap ex-U.S. Index	7.50
Blmbg. U.S. Gov/Credit: 5-10 Yr	7.50	FTSE Emerging Mkts All Cap China A Inclusion Index	5.00
Bloomberg U.S. TIPS Index	5.00	FTSE Global ex U.S. Small Cap Index (Net)	2.50
Bloomberg 1-5 Year Gov/Credit Idx	7.50	Blmbg. U.S. Aggregate Index	20.00
Bloomberg US TIPS 0-5 Year Index	5.00	Bloomberg 1-5 Year Gov/Credit Idx	2.50
Vanguard Spliced REIT Index	5.00	Blmbg. U.S. Corp High Yield	10.00
90 Day U.S. Treasury Bill	2.50	Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	5.00
S&P 500 Index	15.00	Vanguard Spliced REIT Index	5.00
Blmbg. U.S. Corp High Yield	7.50	90 Day U.S. Treasury Bill	2.50
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	5.00		

Mid Cap Index Policy	
Allocation Mandate	Weight (%)
Oct-2010	
Vanguard Spliced Mid Cap Index	100.00
Dec-2018	
S&P MidCap 400 Index	100.00

Small Cap Index Policy	
Allocation Mandate	Weight (%)
Jul-2009	
Vanguard Spliced Small Cap Index	100.00
Dec-2018	
S&P SmallCap 600 Index	100.00

Vanguard Spliced REIT Index History

MSCI US REIT Index adjusted to include a 2% cash position (Lipper Money Market Average) through April 30, 2009

MSCI US REIT Index through February 1, 2018

MSCI US Investable Market Real Estate 25/50 Transition Index through July 24, 2018

MSCI US Investable Market Real Estate 25/50 Index thereafter

Active Return	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
Alpha	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
Beta	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
Consistency	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
Distributed to Paid In (DPI)	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
Down Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
Downside Risk	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
Excess Return	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
Excess Risk	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
Information Ratio	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
Public Market Equivalent (PME)	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
R-Squared	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
Return	- Compounded rate of return for the period.
Sharpe Ratio	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
Standard Deviation	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
Total Value to Paid In (TVPI)	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
Tracking Error	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
Treynor Ratio	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
Up Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

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Methodology for this Award: For the 2022 Greenwich Quality Award for Overall U.S. Investment Consulting – Midsized Consultants – Between February and November 2022, Coalition Greenwich conducted interviews with 727 individuals from 590 of the largest tax-exempt funds in the United States. These U.S.-based institutional investors are corporate and union funds, public funds, and endowment and foundation funds, with either pension or investment pool assets greater than \$150 million. Study participants were asked to provide quantitative and qualitative evaluations of their asset management and investment consulting providers, including qualitative assessments of those firms soliciting their business and detailed information on important market trends.

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