
Butler County Employees Retirement Plan

Investment Performance Review
Period Ending September 30, 2024

Finalized Report

MARINER

3rd Quarter 2024 Market Environment

The Economy

- The US Federal Reserve (the Fed) shifted its policy stance during the quarter and cut the fed funds rate by 0.50% for the first time in four years to a range of 4.75%-5.00%. Capital markets celebrated the move after struggling to predict the pace and timing of future Fed actions earlier in the year. In its press release for the September meeting, the Fed continued to assert its stance on fighting inflation, while also inserting that the committee is strongly committed to “supporting maximum employment.” Fed Chairman Jerome Powell signaled to the markets that the expectation is for the committee to shift to a more expansionary policy moving forward.
- The Fed’s September “Dot Plot” showed revised expectations from a single 0.25% rate cut for the remainder of 2024 to a low-end estimate of a 4.25%-4.50% range. The dots also showed the target rate range decreasing below 4.00% in 2025.
- Growth in the US labor market continued in the third quarter, albeit at a slower pace than previous quarters with growth coming in at 527,000 new jobs. However, the strength of the labor market during the previous year was undermined by the large downward revision (818,000) on the trailing one-year statistic.

Equity (Domestic and International)

- US equity results were sharply higher for the quarter, which also saw a significant broadening of returns across both the style and capitalization spectrum. The S&P 500 Index rose a solid 5.9% for the quarter and the small-cap Russell 2000 Index posted a higher gain of 9.3%. This quarter not only saw a significant rotation from large-cap to small-cap stocks but also from growth stocks to value stocks as value indexes outpaced their growth counterparts.
- Large-cap equity benchmarks continue to represent top-heavy concentration among a limited number of stocks. As of quarter end, the top 10 stocks in the S&P 500 Index made up nearly 35% of the index.
- International stocks continued delivering positive results during the second quarter and US Dollar (USD) denominated results were further helped by a weakening USD. USD performance of international stocks surged past local currency (LCL) returns in most regions for the quarter, albeit to varying degrees.

Fixed Income

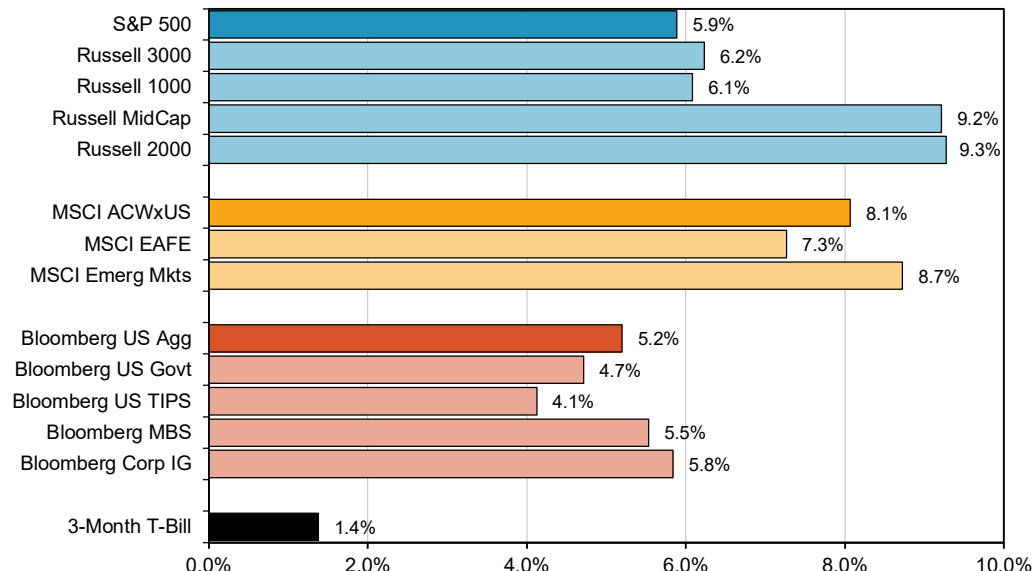
- Fixed-income markets traded higher during the quarter on the back of the Fed’s policy shift as Treasury yields fell. The inverse relationship between prices and yields resulted in the Bloomberg US Aggregate Bond Index advancing 5.2%. The yield on the bellwether 10-year Treasury declined by 0.55% during the quarter.
- High-yield bonds slightly outperformed the Bloomberg US Aggregate Bond Index for the quarter, largely due to higher coupons and partly due to narrowing option-adjusted spreads (OAS) for the Bloomberg US High-Yield index.
- Global bonds outpaced the domestic benchmarks, with the Bloomberg Global Aggregate ex-US returning 8.5% for the quarter in USD terms. Global bond performance was boosted by a weakening USD during the quarter.

Market Themes

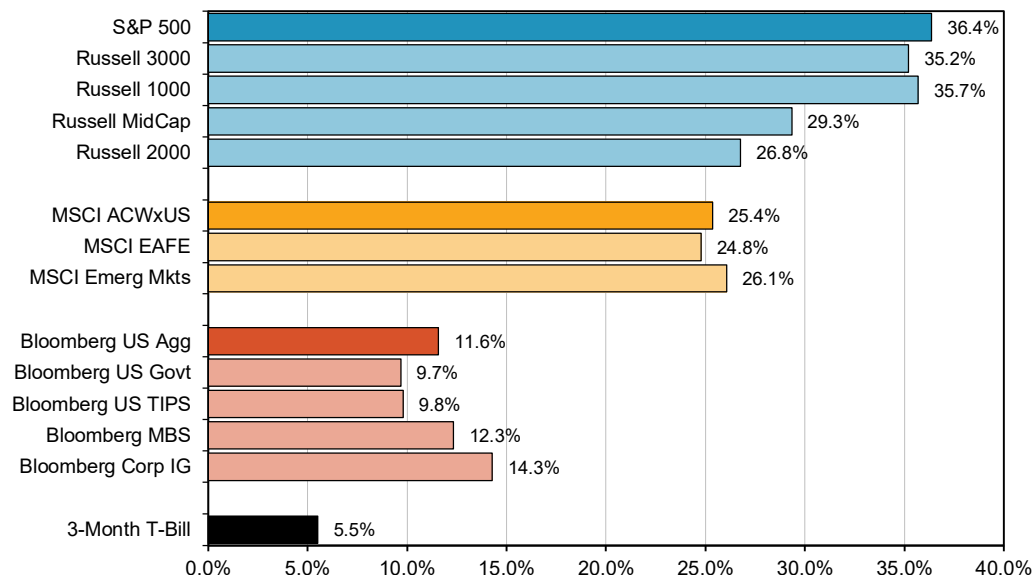
- Divergent monetary policies across regions led to increased volatility during the quarter. Most developed markets across the world kept rates at elevated levels as central banks continued their tight monetary stances. However, the Japanese Central Bank chose to raise its policy rates at the end of July, shortly before the Fed cut its policy rate in September. This divergence led to an unwinding of the systematic Yen carry trade, where investors quickly took action to cover short yen positions by taking down positions in various higher growth investments, including US equities. This subsequently led to a sharp decline in equity markets around the world in early August.
- Ongoing military conflicts in Ukraine and the Middle East, coupled with global economic uncertainty, continue to act as headwinds for international market results but they received a boost from the weakening USD. New escalations to existing conflicts have resulted in anticipated and unanticipated consequences. Domestic Defense companies have tended to trade higher on the news of developing escalations abroad while similarly putting upward pressure on oil prices and downward pressure on energy stocks as a result.

- Performance in the domestic equity markets was broadly positive after markets received a boost from the Fed's first rate cut in four years. Small-cap stocks outperformed their large-cap counterparts, with the Russell 2000 returning 9.3% versus a gain of 5.9% for the S&P 500. The all-cap Russell 3000, which is heavily weighted in its large-cap names, lagged the Russell 2000 Index by 3.1%, returning 6.2% for the quarter.
- International developed market equities realized similar results with both the MSCI ACWI ex US and MSCI EAFE indexes gaining during the quarter. The MSCI ACWI ex US Index posted a strong 8.1% for the quarter, while the MSCI EAFE Index returned a slightly lower 7.3%, both in USD terms. International emerging market (EM) equities were the best performing foreign segment, gaining 8.7% in for the quarter and outpacing their developed market counterparts. Much of the solid USD performance for EM can be attributed to the Far East index countries, particularly China, Taiwan, and Singapore.
- Broad fixed-income indexes added to their year-to-date results during the quarter, thanks in large part to the Fed's 0.50% rate cut on September 18th. The Bloomberg US Aggregate Index returned a solid 5.2% for the quarter. Investment-grade corporate bonds topped other US fixed-income sectors for the quarter, finishing with a return of 5.8%. The TIPS market, which is not part of the Aggregate Index, was the worst-performing bond benchmark during the quarter with a return of 4.1%, lagging the rest of the domestic fixed-income indexes.
- Large-cap US equity indexes built on their already massive returns over the trailing one-year period. The S&P 500 Index has gained 36.4%, while the Russell 1000 Index returned 35.7%. The weakest performing capitalization range of domestic equities for the year has been the small-cap Russell 2000 Index, which still posted a double-digit return of 26.8% over the last 12 months.
- Domestic bond indexes also produced strong, positive results for the year. Investment-grade corporate bonds continued to lead, returning an impressive 14.3% for the trailing one-year. The government bond index lagged for the year, but still returned a solid 9.7%.
- International markets also showcased healthy performance for the trailing one-year period. The MSCI EM Index was the best international performer, returning 26.1%, while the MSCI EAFE and MSCI ACWI ex US indexes posted returns of 24.8% and 25.4%, respectively.

Quarter Performance



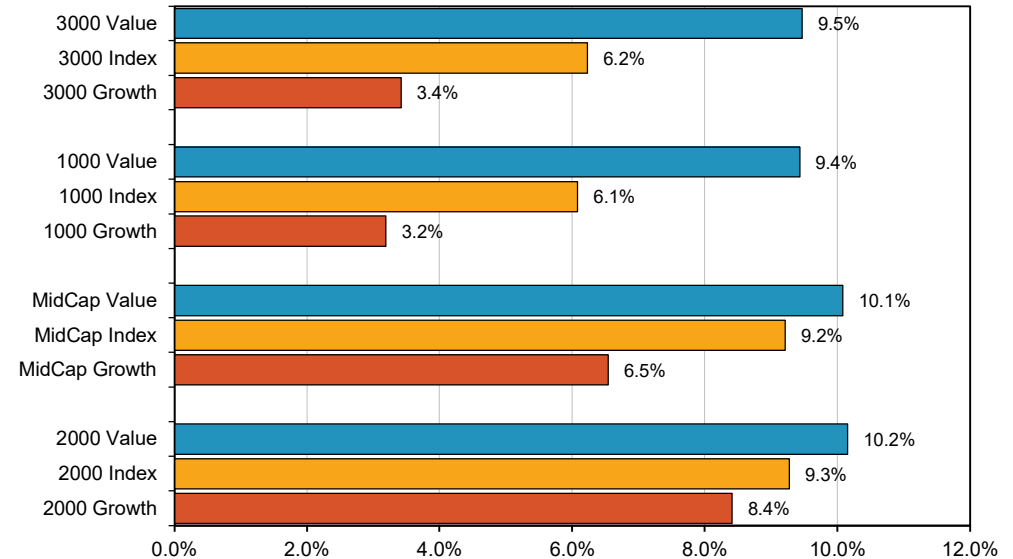
1-Year Performance



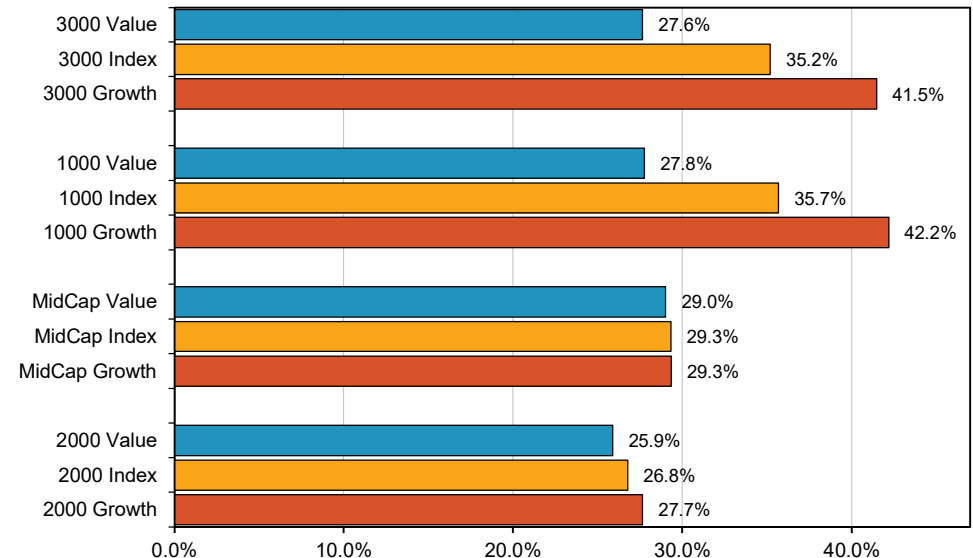
Source: Investment Metrics

- Domestic equity benchmarks posted strong absolute results across styles and market capitalization ranges. During the third quarter, value stocks outpaced their growth counterparts at each capitalization level for the first time since Q4 2022. The best-performing segment of the equity market was small-cap value, with the Russell 2000 Value Index advancing 10.2% for the quarter. Conversely, the large-cap growth Russell 1000 Growth Index produced the weakest relative equity performance, returning just 3.2%.
- The growth-oriented rally took a hiatus during the quarter with the broadest disparity visible in large-cap indexes. The Russell 1000 Value Index return of 9.4% surpassed the Russell 1000 Growth Index return by 6.2%. This quarter's results bucked the trend of large-cap growth stocks being the best-performing segment of the domestic equity market.
- This quarter's resurgence by the value indexes was not enough to bring them above growth indexes on a trailing one-year basis. The Russell 1000 Growth Index amassed a staggering 42.2%, leading the way among style and market capitalization classifications. Much of this strong performance has been attributable to the emergence of the "Magnificent 7" stocks (Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia, and Tesla) which have dominated the large-cap core and growth indexes over the past several years. The 10 largest stocks in the Russell 1000 Index have contributed more than 50% of the index's total performance over the trailing 12-month period. The weakest performing index for the year was the Russell 2000 Value Index, which still posted an impressive 25.9%.
- The strength of growth sectors is evident in the chart with the broad-cap, large-cap, and small-cap benchmarks outpacing their value counterparts for the trailing one-year period. The gap between the Russell 1000 Growth Index and the Russell 1000 Value Index was in double-digits for the year, while the gaps for mid- and small-cap indexes were much narrower.

Quarter Performance - Russell Style Series

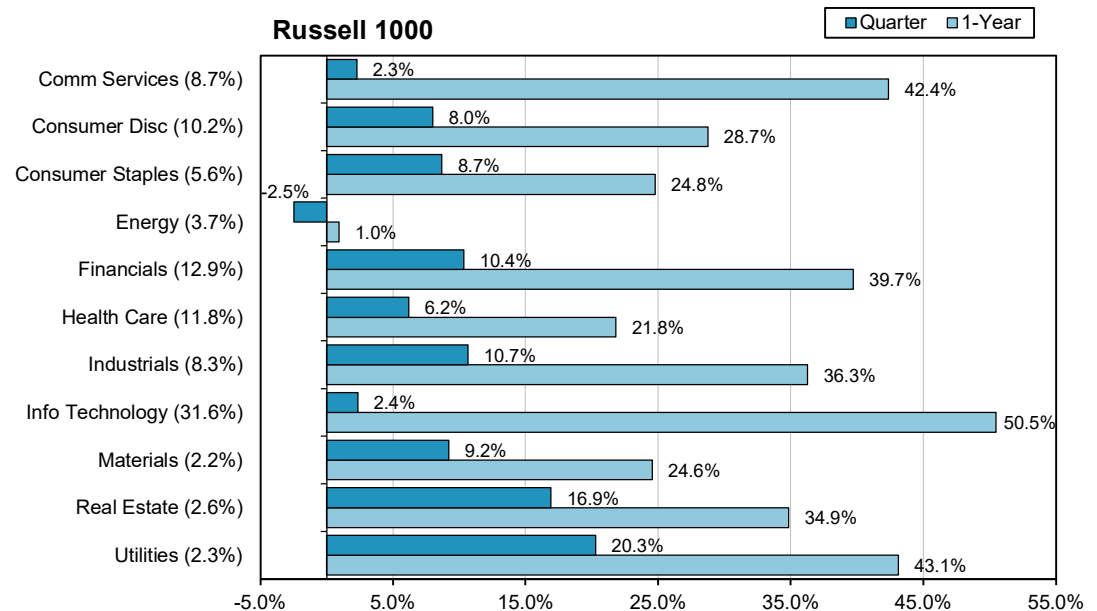


1-Year Performance - Russell Style Series

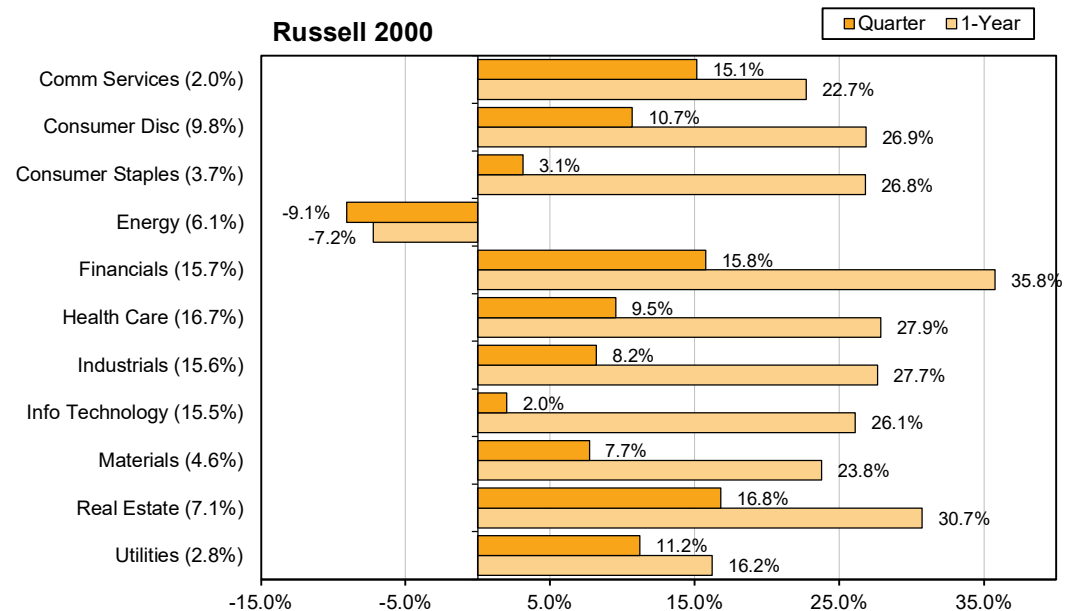


- Economic sector performance was mostly positive during the third quarter, with 10 of the 11 economic sectors moving higher in both the large-cap and small-cap indexes. The quarter continued the previous trend in the domestic equities markets of broader participation in companies outside of the technology sector. Energy was the lone sector to slide during the quarter, posting a return of -2.5%.
- Third-quarter results for the large-cap benchmark added to already strong trailing one-year numbers, with all but one sector producing a return of greater than 20%. Similar to the quarter's results, the energy sector was the one to fall short, gaining just 1.0% over the trailing year. Of the 11 sectors, three (communication services, information technology, and utilities) were up by more than 40.0% for the past year. Financials, industrials, and real estate followed closely behind with gains of 39.7%, 36.3%, and 34.9%, respectively. Despite this strong sector performance, only five of the six leading sectors managed to outpace the Russell 1000 Index's return of 35.7%, which was lifted even higher by the strong results in the most heavily weighted sector, information technology.
- Small-cap stocks displayed similar strength, with 10 of the 11 small-cap economic sectors gaining value during the quarter. Real estate, financials, and communication services led the way with gains of more than 15% for the quarter. Similar to the large-cap benchmark, energy was the worst-performing sector for the quarter and produced the sole negative sector return, falling -9.1%.
- Small-cap stocks also had a strong performance for the trailing year. The same 10 small-cap sectors that advanced during the quarter moved higher over the trailing one-year period. Energy remains the weakest performing sector, with the most recent quarterly return dragging the sector's performance to -7.2% for the trailing year. Financials (up 35.8%), and seven other sectors earned more than 20%.

Russell 1000



Russell 2000



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 September 30, 2024

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	6.4%	10.8%	36.8%	Information Technology
Microsoft Corp	6.1%	-3.6%	37.3%	Information Technology
NVIDIA Corp	5.4%	-1.7%	179.3%	Information Technology
Amazon.com Inc	3.3%	-3.6%	46.6%	Consumer Discretionary
Meta Platforms Inc Class A	2.4%	13.6%	91.3%	Communication Services
Alphabet Inc Class A	1.8%	-8.8%	27.1%	Communication Services
Berkshire Hathaway Inc Class B	1.6%	13.1%	31.4%	Financials
Alphabet Inc Class C	1.6%	-8.7%	27.1%	Communication Services
Broadcom Inc	1.5%	7.8%	110.9%	Information Technology
Tesla Inc	1.4%	32.2%	4.6%	Consumer Discretionary

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Exact Sciences Corp	0.0%	61.2%	-0.1%	Healthcare
Inspire Medical Systems Inc	0.0%	57.7%	6.4%	Healthcare
AppLovin Corp Ordinary Shares - A	0.1%	56.9%	226.7%	Information Technology
Doximity Inc Class A	0.0%	55.8%	105.3%	Healthcare
Ubiquiti Inc	0.0%	52.7%	55.3%	Information Technology
Vornado Realty Trust	0.0%	49.9%	75.4%	Real Estate
GE Vernova Inc	0.1%	48.7%	N/A	Utilities
VF Corp	0.0%	48.5%	15.5%	Communication Services
Palantir Technologies Inc Ordinary - A	0.1%	46.9%	132.5%	Technology
SharkNinja Inc	0.0%	44.7%	139.9%	Communication Services

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
New Fortress Energy Inc Class A	0.0%	-58.3%	-71.7%	Utilities
Wolfspeed Inc	0.0%	-57.4%	-74.5%	Information Technology
Trump Media & Technology Group Corp	0.0%	-50.9%	N/A	Communication Services
Super Micro Computer Inc	0.0%	-49.2%	51.8%	Information Technology
e.l.f. Beauty Inc	0.0%	-48.3%	-0.7%	Consumer Staples
Celsius Holdings Inc	0.0%	-45.1%	-45.2%	Consumer Staples
Moderna Inc	0.1%	-43.7%	-35.3%	Health Care
DexCom Inc	0.1%	-40.9%	-28.1%	Health Care
Advance Auto Parts Inc	0.0%	-38.2%	-29.1%	Communication Services
Dollar General Corp	0.0%	-35.7%	-18.6%	Consumer Staples

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Vaxcyte Inc Ordinary Shares	0.5%	51.3%	124.1%	Health Care
FTAI Aviation Ltd	0.5%	29.1%	281.0%	Industrials
Insmed Inc	0.4%	9.0%	189.1%	Health Care
Sprouts Farmers Market Inc	0.4%	32.0%	158.0%	Consumer Staples
Fabrinet	0.3%	-3.4%	41.9%	Information Technology
Applied Industrial Technologies Inc	0.3%	15.2%	45.4%	Industrials
Mueller Industries Inc	0.3%	30.5%	100.0%	Industrials
Fluor Corp	0.3%	9.6%	30.0%	Industrials
Ensign Group Inc	0.3%	16.3%	55.1%	Health Care
UFP Industries Inc	0.3%	17.5%	29.6%	Industrials

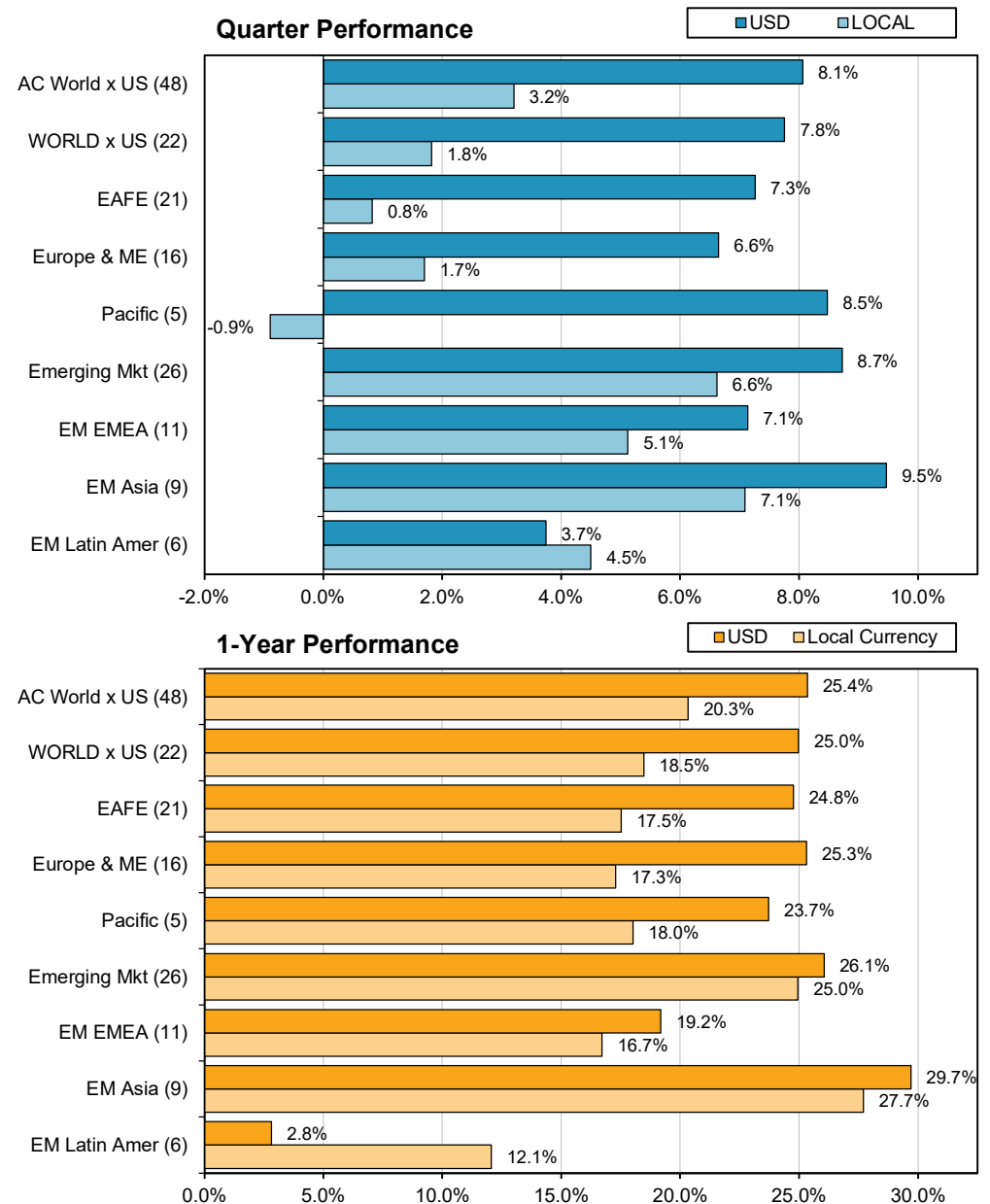
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Lumen Technologies Inc Ordinary	0.1%	545.5%	400.0%	Communication Services
CommScope Holding Co Inc	0.0%	396.7%	81.8%	Information Technology
Capricor Therapeutics Inc	0.0%	218.9%	344.7%	Health Care
Summit Therapeutics Inc Ordinary	0.0%	180.8%	1071.1%	Health Care
Q32 Bio Inc	0.0%	148.6%	N/A	Health Care
Intuitive Machines Inc Ordinary - A	0.0%	143.9%	120.5%	Industrials
IGM Biosciences Inc Ordinary	0.0%	140.8%	98.1%	Health Care
Cassava Sciences Inc	0.0%	138.3%	76.9%	Health Care
AST SpaceMobile Inc Ordinary - A	0.1%	125.2%	588.2%	Communication Services
Biomea Fusion Inc	0.0%	124.4%	-26.6%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Conduit Pharmaceuticals Inc	0.0%	-88.8%	-98.0%	Health Care
HilleVax Inc	0.0%	-87.8%	-86.9%	Health Care
iLearningEngines Inc	0.0%	-81.6%	N/A	Information Technology
SolarMax Technology Inc	0.0%	-80.8%	N/A	Industrials
Verrica Pharmaceuticals Inc	0.0%	-80.1%	-62.7%	Health Care
Elevation Oncology Inc	0.0%	-77.8%	-9.5%	Health Care
Actinium Pharmaceuticals Inc	0.0%	-74.6%	-68.2%	Health Care
Renovaro Inc	0.0%	-72.4%	-89.2%	Health Care
B. Riley Financial Inc	0.0%	-70.2%	-86.1%	Financials
ALX Oncology Holdings Inc Ordinary	0.0%	-69.8%	-62.1%	Health Care

Source: Morningstar Direct

The Market Environment
International and Regional Market Index Performance (Country Count)
As of September 30, 2024

- Results in USD terms among the headline international equity indexes were sharply higher during the quarter, echoing the performance of major domestic equity benchmarks. The weakening USD relative to many major currencies during the quarter was a tailwind for the USD performance of most regional benchmarks' returns. The developed-market MSCI EAFE Index returned a muted 0.8% in LCL terms but rose 7.3% in USD terms. The MSCI Emerging Markets Index was the best-performing broad index, climbing 8.7% in USD and 6.6% in LCL terms for the quarter.
- Latin America lagged other regions during the quarter in USD terms, posting a return of 3.7%. Weakening currencies in the region put pressure on performance, making it the only region with USD performance that lagged LCL currency performance. The MSCI Pacific benchmark was the only regional benchmark to deliver negative performance in LCL teams (-0.9%), but USD weakness led to an 8.5% positive return in USD terms. Regional LCL currency performance struggles were led by the unwinding of the carry trade in the Japanese equity markets in early August which carried over to neighboring Pacific countries and US markets.
- China, which is the most heavily weighted country in the emerging market index, continued its rebound during the quarter posting a 23.5% gain in USD terms. Recently announced government stimulus for the Chinese economy helped lift equity markets in the country during the quarter. The Chinese economy has yet to expand at its pre-pandemic rate of roughly 5.0% primarily due to troubles in its commercial property and banking sectors, which have created challenges for growth in the region.
- Much like domestic markets, trailing one-year results for international developed and emerging markets benchmarks were strongly positive. Higher USD versus LCL returns for most international benchmarks demonstrate the USD's relative weakness over the trailing one-year period.
- All broad and regional indexes were positive for the trailing 12 months in both USD and LCL terms. The EM Latin America index, where weakening local currencies dragged the region's double-digit LCL performance to a muted 2.8% in USD terms. MSCI Asia Index led the way with a return of 27.7% in LCL terms for the trailing year. The relative weakening of the USD during the period further boosted returns in the region to 29.7% in USD terms.



Source: MSCI Global Index Monitor (Returns are Net)

The Market Environment
US Dollar International Index Attribution & Country Detail
As of September 30, 2024

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.3%	11.5%	27.1%
Consumer Discretionary	11.0%	4.8%	14.4%
Consumer Staples	8.7%	10.6%	10.9%
Energy	3.6%	-5.8%	-2.1%
Financials	20.6%	10.4%	36.0%
Health Care	13.3%	4.6%	20.4%
Industrials	17.3%	9.4%	33.8%
Information Technology	8.7%	-2.4%	35.6%
Materials	6.8%	10.7%	24.0%
Real Estate	2.2%	17.3%	27.6%
Utilities	3.4%	14.9%	25.4%
Total	100.0%	7.3%	24.8%

MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.6%	13.6%	26.3%
Consumer Discretionary	11.3%	11.5%	20.4%
Consumer Staples	7.4%	10.5%	11.1%
Energy	5.0%	-1.7%	7.2%
Financials	22.5%	11.4%	33.2%
Health Care	9.4%	6.4%	20.4%
Industrials	13.8%	8.7%	30.5%
Information Technology	12.8%	-1.6%	38.3%
Materials	7.1%	9.4%	18.8%
Real Estate	1.9%	16.9%	23.5%
Utilities	3.2%	13.4%	27.7%
Total	100.0%	8.1%	25.4%

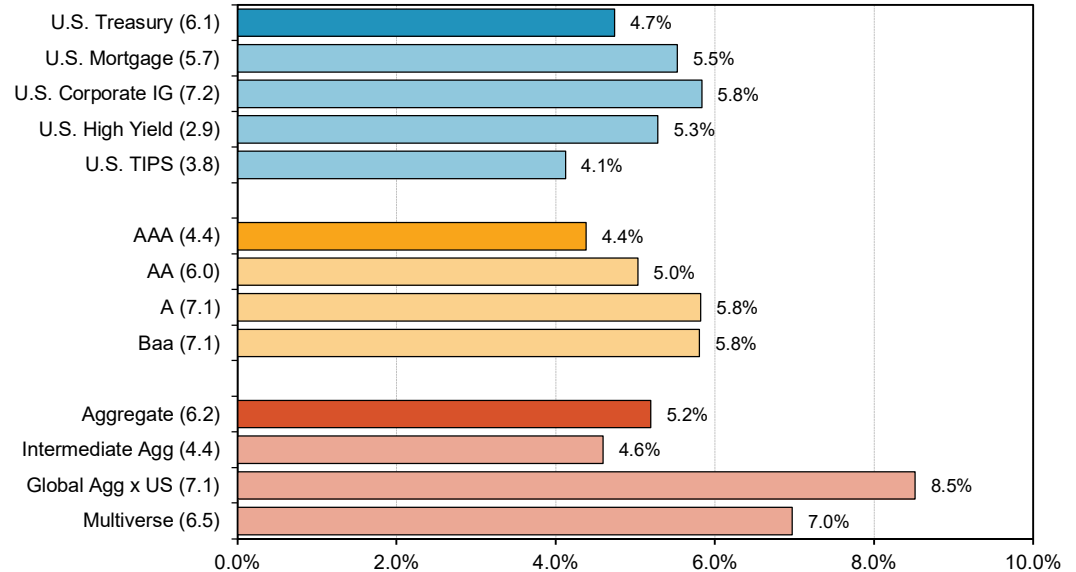
MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	9.4%	15.6%	26.2%
Consumer Discretionary	14.0%	25.0%	31.9%
Consumer Staples	5.2%	11.1%	9.6%
Energy	4.8%	-0.4%	17.4%
Financials	22.8%	10.4%	26.5%
Health Care	3.6%	22.9%	20.5%
Industrials	6.8%	7.0%	19.9%
Information Technology	22.2%	-2.6%	40.3%
Materials	6.6%	5.5%	5.5%
Real Estate	1.6%	14.8%	10.8%
Utilities	2.9%	9.3%	35.5%
Total	100.0%	8.7%	26.1%

Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1-Year Return
Japan	22.3%	14.0%	5.7%	21.6%
United Kingdom	14.7%	9.3%	7.9%	23.3%
France	11.4%	7.1%	7.7%	16.4%
Switzerland	9.9%	6.2%	8.5%	21.6%
Germany	9.0%	5.7%	10.7%	32.1%
Australia	7.8%	4.9%	11.5%	31.6%
Netherlands	4.8%	3.0%	-4.5%	38.7%
Denmark	3.4%	2.1%	-10.3%	24.5%
Sweden	3.4%	2.1%	8.4%	35.8%
Italy	2.7%	1.7%	8.6%	34.4%
Spain	2.8%	1.8%	13.7%	35.9%
Hong Kong	2.0%	1.3%	24.4%	14.8%
Singapore	1.5%	0.9%	17.6%	33.9%
Finland	1.0%	0.7%	8.1%	16.5%
Belgium	1.0%	0.6%	15.3%	25.9%
Israel	0.8%	0.5%	12.4%	32.4%
Norway	0.6%	0.4%	2.1%	4.5%
Ireland	0.3%	0.2%	13.9%	38.6%
Portugal	0.2%	0.1%	8.7%	11.3%
Austria	0.2%	0.1%	8.7%	28.3%
New Zealand	0.2%	0.1%	5.6%	20.1%
Total EAFE Countries	100.0%	62.7%	7.3%	24.8%
Canada		7.7%	12.0%	26.8%
Total Developed Countries		70.4%	7.8%	25.0%
China		8.2%	23.5%	23.9%
India		5.8%	7.3%	40.3%
Taiwan		5.2%	0.5%	52.7%
Korea		3.1%	-5.6%	9.3%
Brazil		1.4%	7.1%	2.6%
Saudi Arabia		1.1%	5.3%	11.2%
South Africa		0.9%	16.1%	36.7%
Mexico		0.6%	-3.4%	-3.4%
Indonesia		0.5%	15.3%	5.2%
Malaysia		0.4%	20.5%	35.6%
Thailand		0.4%	28.9%	17.0%
United Arab Emirates		0.3%	12.0%	6.4%
Poland		0.3%	-3.9%	45.7%
Turkey		0.2%	-12.6%	6.8%
Qatar		0.2%	10.6%	11.2%
Kuwait		0.2%	3.7%	8.9%
Philippines		0.2%	21.7%	22.7%
Greece		0.1%	10.4%	31.3%
Chile		0.1%	5.3%	5.8%
Peru		0.1%	7.9%	57.4%
Hungary		0.1%	6.3%	36.4%
Czech Republic		0.0%	5.1%	7.7%
Colombia		0.0%	-0.9%	25.4%
Egypt		0.0%	12.3%	-7.3%
Total Emerging Countries		29.6%	8.7%	26.1%
Total ACWIxUS Countries		100.0%	8.1%	25.4%

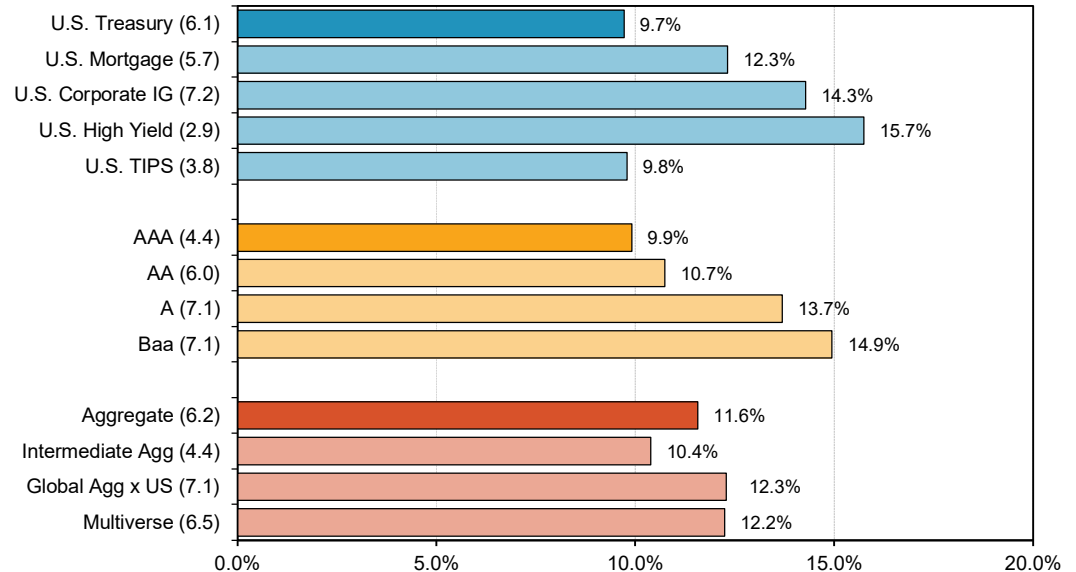
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

- Domestic fixed-income markets advanced during the third quarter. Although the Federal Reserve began to unwind its tight monetary policy stance that began in 2022 during the quarter, yields remained elevated. On September 18, the Fed reduced its target policy rate by 0.50%, a move that was celebrated in a performance boost by equity and bond markets alike.
- After a muted first half of 2024, which held the Bloomberg US Aggregate Bond Index slightly negative for the year, the index posted its best quarterly performance year-to-date, climbing 5.2% during the third quarter. Performance across the investment-grade index's segments was more favorable in the credit sectors, with the corporate investment-grade index rising 5.8%, outpacing the government and mortgage-backed-securities sectors. Lower quality issues also performed better, with A and BAA components of the index outpacing higher quality issues during the quarter.
- High Yield bonds underperformed investment grade issues as interest rates declined primarily due to the high-yield benchmark's lower duration. Despite their lower duration, below-investment grade issues continued to rise, posting a return of 5.3% for the quarter. The Bloomberg Global Aggregate ex-US Index outperformed all broad-market domestic indexes with a return of 8.5% for the quarter, aided by a weakening USD.
- Over the trailing one-year period, the Bloomberg US Aggregate Bond Index posted a solid 11.6% return. The benchmark's sub-components also posted positive performance over the trailing 12 months with the Bloomberg US Corporate Investment Grade Index rising a strong 14.3% and the US Mortgage Index returning 12.3%. US TIPS, which are excluded from the Bloomberg US Aggregate Bond Index, returned 9.8% for the trailing year.
- Among credit qualities, lower-quality issues (both within investment grade and below investment grade) have outperformed higher-quality bonds due to higher yields and credit spread compression over the last year. Higher yields mean larger coupon payments as well as greater sensitivity to changes in credit spreads, which narrowed. High-yield bonds have enjoyed a healthy 15.7% gain for the trailing year.
- The Bloomberg Global Aggregate ex-US Index moderately outpaced its domestic counterpart, the Bloomberg US Aggregate Bond Index, by 0.7% during the trailing year.

Quarter Performance



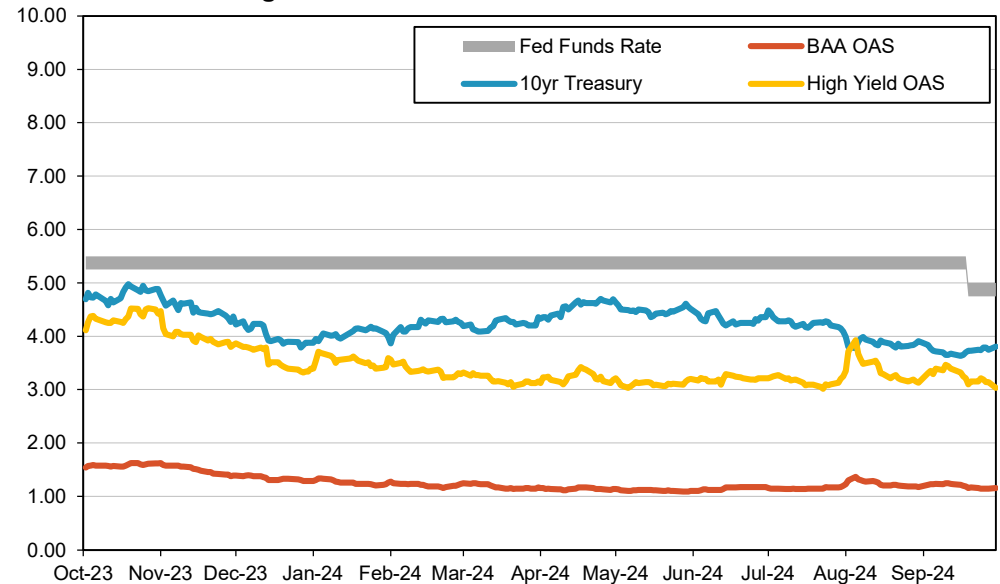
1-Year Performance



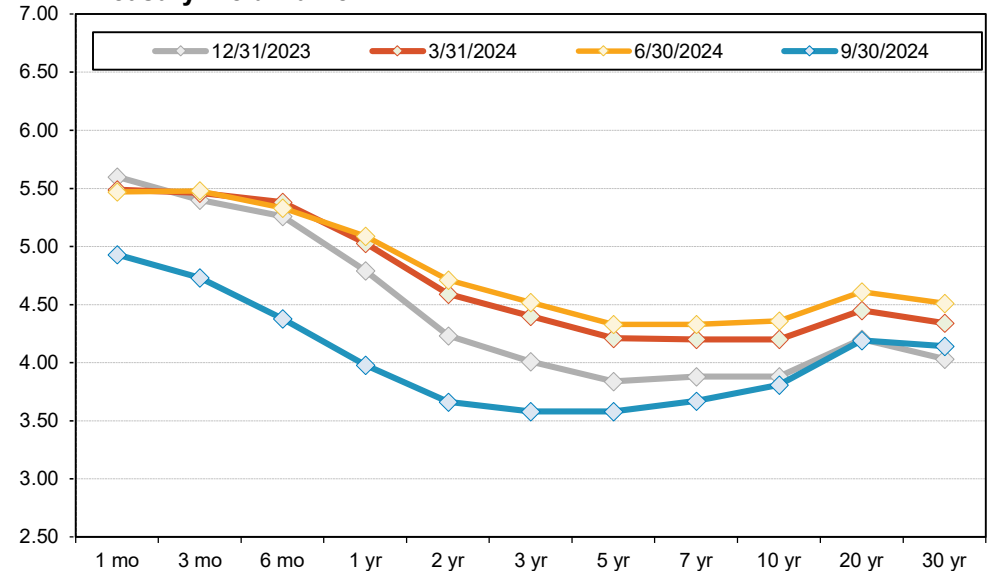
Source: Bloomberg

- The gray band across the graph illustrates the fed funds target rate range over the last 12 months. During the third quarter, the Federal Open Market Committee (FOMC) cut its policy rates by 0.50%, to a range of 4.75-5.00%. The last rate increase occurred at the FOMC's July 2023 meeting, and this was the first rate cut since March of 2020. With inflation declining and unemployment remaining largely stable, the Fed appears to be pivoting from a tight monetary policy stance. The most recent FOMC press release continued to emphasize economic data-dependent outcomes while placing renewed emphasis on the second part of the committee's dual mandate: full employment. The CME FedWatch tool, which forecasts rates based on fed fund futures pricing, showed a greater than 80% probability of a 0.25% rate decrease at the FOMC November meeting at the time of this writing. Fed officials and market participants continue to express concern that leaving rates at their current elevated levels for an extended period could tip the US economy into a recession. However, inflation remains above the FOMC's long-term 2.0% target level.
- The yield on the US 10-year Treasury (blue line of the top chart) fell roughly 0.55% during the quarter, attributable to Fed policy decisions and expectations of future rate actions. The bellwether benchmark rate opened the quarter at a yield of 4.36% and finished September at a yield of 3.81%. The 10-year Treasury benchmark's rate peaked in October 2023, cresting at a yield of just under 5.00% before pulling back during the remainder of the year.
- The red line in the top chart shows the option-adjusted spread (OAS) for BAA-rated corporate bonds. This measure quantifies the additional yield premium investors require to purchase and hold non-US Treasury issues with the lowest investment grade rating. During the quarter, the yield spread was relatively stable, beginning July at 1.18% and finishing September at 1.16%. High-yield OAS spreads (represented by the yellow line in the top chart) have also remained relatively unchanged, despite a sharp spike in early August spurred by an unwinding of the Yen carry trade. The high-yield OAS fell 0.18% over the quarter from 3.21% to 3.03%. The spread measure's relative stability over the trailing year results from steady economic growth, stable monetary policy, and falling inflation readings.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. For the first time since July 2022, the quarter-end yield on the 10-year Treasury was higher relative to the two-year Treasury. The yield curve has been inverted for each of the previous three quarter-end readings on the graph and for much of the last two years. This 2-10-year yield curve inversion is a common heuristic used to foretell a pending recession environment.

1-Year Trailing Market Rates



Treasury Yield Curve



Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)

[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 \(stlouisfed.org\)](#)

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[Fed rate cut: Here's what changed in the central bank's statement \(cnbc.com\)](#)

[10-Year Treasury Constant Maturity Minus 2-Year Treasury Constant Maturity \(T10Y2Y\) | FRED | St. Louis Fed \(stlouisfed.org\)](#)

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

Comparative Performance

Total Fund

As of September 30, 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	6.57	(11)	11.46	(62)	22.67	(32)	17.08	(30)	4.38	(58)	7.32	(82)	6.90	(74)	8.14	(52)	6.45	(37)	01/01/2001
Total Fund Policy	6.69	(8)	11.49	(61)	22.26	(37)	16.80	(34)	4.49	(54)	7.77	(70)	7.11	(65)	8.45	(33)	6.56	(35)	
Allocation Index	6.57	(11)	11.88	(54)	23.13	(27)	17.26	(28)	4.48	(55)	7.42	(79)	6.90	(74)	N/A		N/A		
All Public Plans-Total Fund Median	5.42		12.09		21.30		16.05		4.60		8.36		7.35		8.16		6.14		
All Public Plan Sponsor Universes with 50% or Less Equities																			
Total Fund Performance	6.57	(9)	11.46	(37)	22.67	(20)	17.08	(20)	4.38	(54)	7.32	(65)	6.90	(56)	8.14	(27)	6.45	(28)	01/01/2001
Total Fund Policy	6.69	(7)	11.49	(37)	22.26	(24)	16.80	(24)	4.49	(53)	7.77	(55)	7.11	(48)	8.45	(17)	6.56	(26)	
All Public Plans =< 50% Equities Median	5.27		10.68		18.75		14.19		4.60		8.05		7.06		7.80		6.11		
All Public Plan Sponsor Universes with 60% or More Equities																			
Total Fund Performance	6.57	(13)	11.46	(83)	22.67	(45)	17.08	(40)	4.38	(62)	7.32	(92)	6.90	(88)	8.14	(65)	6.45	(59)	01/01/2001
Total Fund Policy	6.69	(8)	11.49	(82)	22.26	(52)	16.80	(44)	4.49	(60)	7.77	(85)	7.11	(81)	8.45	(48)	6.56	(55)	
All Public Plans >=60% Equities Median	5.60		12.61		22.34		16.54		4.85		8.65		7.62		8.42		6.60		

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

Comparative Performance

Total Fund

As of September 30, 2024

	QTR		FYTD		1 YR		2 YR		3 YR		5 YR		10 YR		15 YR		Inception		Inception Date		
Domestic Equity																					
Total Fund Domestic Equity		6.97		16.54		30.88		24.57		9.27		13.38		11.56		N/A		11.19		07/01/2014	
Vanguard Inst'l Index Fund (VINIX)		5.88 (42)		22.04 (25)		36.30 (26)		28.73 (24)		11.88 (22)		N/A		N/A		N/A		N/A		11/01/2020	
S&P 500 Index		5.89 (41)		22.08 (24)		36.35 (25)		28.77 (23)		11.91 (20)		15.98 (17)		13.38 (7)		14.15 (7)		17.36 (21)			
Large Blend Median		5.79		20.58		34.79		27.42		10.73		14.87		12.11		13.05		16.34			
Vanguard Growth Index (VIGIX)		2.92 (55)		24.04 (37)		41.91 (39)		34.83 (26)		10.47 (20)		19.01 (15)		15.55 (18)		N/A		15.48 (14)		05/01/2010	
Vanguard Growth Index Hybrid		2.93 (55)		24.07 (37)		41.97 (38)		34.88 (26)		10.50 (20)		19.05 (14)		15.59 (18)		15.97 (11)		15.54 (13)			
Russell 1000 Growth Index		3.19 (51)		24.55 (31)		42.19 (37)		34.76 (27)		12.02 (7)		19.74 (11)		16.52 (7)		16.52 (7)		16.16 (7)			
Large Growth Median		3.20		22.81		40.20		32.13		8.24		16.48		14.15		14.47		14.09			
Vanguard Value Index (VIVIX)		9.43 (21)		18.98 (14)		29.79 (22)		22.09 (30)		11.65 (13)		12.27 (27)		10.80 (11)		12.14 (12)		13.12 (12)		07/01/2009	
Vanguard Value Index Hybrid		9.44 (21)		18.99 (14)		29.71 (23)		22.06 (31)		11.65 (13)		12.26 (27)		10.80 (11)		12.18 (12)		13.15 (11)			
Russell 1000 Value Index		9.43 (21)		16.68 (41)		27.76 (43)		20.92 (46)		9.03 (62)		10.69 (60)		9.23 (50)		11.20 (38)		12.24 (34)			
Large Value Median		8.05		15.92		27.06		20.63		9.66		11.12		9.23		10.87		11.79			
Vanguard Mid-Cap 400 Index Fund I (VSPMX)		6.92 (77)		13.49 (46)		26.71 (52)		20.94 (36)		7.40 (30)		11.71 (23)		N/A		N/A		10.78 (37)		12/01/2018	
S&P MidCap 400 Index		6.94 (76)		13.54 (45)		26.79 (51)		21.02 (35)		7.47 (29)		11.78 (22)		10.32 (15)		12.30 (15)		10.85 (36)			
Mid-Cap Blend Median		8.03		13.33		26.81		20.43		6.59		11.09		9.42		11.17		10.43			
Vanguard Small-Cap 600 Index I (VSMSX)		10.11 (14)		9.29 (71)		25.78 (45)		17.63 (55)		3.91 (50)		10.18 (45)		N/A		N/A		8.62 (53)		12/01/2018	
S&P SmallCap 600 Index		10.13 (14)		9.33 (70)		25.86 (44)		17.71 (54)		3.99 (49)		10.21 (44)		10.05 (12)		12.08 (7)		8.65 (52)			
Small Blend Median		8.86		10.87		25.44		18.27		3.90		9.94		8.82		10.72		8.73			

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

Comparative Performance

Total Fund

As of September 30, 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		8.27		13.77		24.39		21.00		2.13		6.41		4.71		N/A		4.08		07/01/2014	
Vanguard Intl Value (VTRIX)		8.40	(36)	11.30	(74)	21.61	(59)	22.33	(84)	N/A		N/A		N/A		N/A		6.58	(79)	12/01/2021	
MSCI AC World ex USA Value		9.41	(21)	15.10	(18)	24.90	(18)	25.49	(48)	8.25	(31)	8.49	(40)	4.93	(42)	5.23	(50)	10.26	(25)		
Foreign Large Value Median		7.89		12.63		22.12		25.21		7.05		7.97		4.70		5.23		8.81			
Vanguard Intl Growth (VWILX)		7.43	(33)	15.77	(26)	28.94	(39)	22.35	(69)	N/A		N/A		N/A		N/A		-3.35	(86)	12/01/2021	
MSCI AC World ex USA Growth		6.98	(37)	14.34	(42)	27.12	(54)	21.55	(82)	1.12	(48)	7.41	(75)	6.33	(81)	6.59	(90)	1.41	(55)		
Foreign Large Growth Median		6.45		13.40		27.52		23.76		0.75		8.43		7.23		8.00		1.71			
Vanguard FTSE AW ex-US SC Index (VFSNX)		8.11	(76)	10.84	(66)	22.39	(67)	20.19	(77)	0.87	(67)	N/A		N/A		N/A		14.02	(59)	04/01/2020	
FTSE Global ex U.S. Small Cap Index (Net)		8.30	(68)	11.08	(61)	22.50	(66)	20.08	(79)	0.71	(72)	7.06	(70)	4.78	(95)	N/A		13.94	(64)		
Foreign Small/Mid Blend Median		8.70		11.78		23.67		22.08		1.60		7.44		5.79		6.90		14.26			
Vanguard Developed Markets Index (VTMNX)		7.49	(46)	12.17	(59)	24.71	(43)	24.41	(35)	4.84	(37)	8.30	(35)	5.94	(34)	6.17	(46)	7.30	(45)	07/01/2009	
Vanguard Spliced Developed ex U.S. Index (Net)		7.56	(45)	12.21	(59)	24.36	(48)	24.06	(39)	4.65	(40)	8.30	(35)	5.90	(34)	6.13	(48)	7.27	(47)		
MSCI EAFE (Net) Index		7.26	(50)	12.99	(44)	24.77	(42)	25.21	(26)	5.48	(29)	8.20	(38)	5.71	(41)	5.99	(54)	7.13	(54)		
Foreign Median		7.25		12.66		24.09		23.27		3.85		7.68		5.45		6.06		7.18			
Vanguard Emerging Markets Index (VEMIX)		9.29	(12)	17.33	(19)	24.99	(32)	17.74	(52)	1.63	(25)	6.42	(36)	4.20	(38)	N/A		3.17	(41)	10/01/2010	
FTSE Emerging Mkts All Cap China A Inclusion Index		10.74	(4)	19.55	(8)	27.70	(14)	19.27	(38)	2.69	(18)	7.39	(23)	5.00	(21)	5.02	(24)	3.89	(25)		
MSCI Emerging Markets (Net) Index		8.72	(17)	16.86	(22)	26.05	(24)	18.66	(42)	0.40	(36)	5.75	(44)	4.02	(40)	4.16	(46)	3.10	(42)		
Diversified Emerging Mkts Median		6.38		14.15		23.46		17.85		-0.87		5.27		3.57		3.98		2.81			

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

Comparative Performance

Total Fund

As of September 30, 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	4.82	5.64	12.75	8.09	0.34	1.69	2.54	N/A	2.39	07/01/2014
Vanguard Short Term Bond Index (VBIRX)	3.48 (24)	4.52 (79)	8.06 (61)	5.26 (76)	0.91 (80)	1.49 (79)	1.73 (64)	N/A	1.59 (63)	04/01/2013
Bloomberg 1-5 Year Gov/Credit Idx	3.50 (23)	4.50 (80)	8.10 (58)	5.32 (73)	0.94 (79)	1.54 (74)	1.77 (61)	1.93 (64)	1.63 (58)	
Short-Term Bond Median	3.06	4.95	8.26	5.88	1.52	1.92	1.88	2.11	1.71	
Vanguard Total Bond Index (VBTIX)	5.07 (63)	4.42 (72)	11.41 (70)	5.94 (58)	-1.42 (43)	0.32 (57)	N/A	N/A	0.20 (57)	09/01/2019
Blmbg. U.S. Aggregate Index	5.20 (38)	4.45 (69)	11.57 (60)	5.97 (56)	-1.39 (39)	0.33 (55)	1.84 (43)	2.60 (55)	0.22 (54)	
Intermediate Core Bond Median	5.13	4.65	11.72	6.03	-1.50	0.39	1.78	2.67	0.28	
Vanguard High Yield Bond Fund (VWEAX)	4.41 (59)	6.68 (77)	14.46 (47)	11.81 (55)	2.94 (42)	4.00 (53)	N/A	N/A	4.67 (26)	12/01/2014
Blmbg. U.S. Corp High Yield	5.28 (12)	8.00 (27)	15.74 (17)	12.98 (17)	3.10 (35)	4.72 (22)	5.04 (11)	6.86 (8)	5.08 (11)	
High Yield Bond Median	4.51	7.31	14.33	11.92	2.74	4.04	4.23	6.01	4.26	
Vanguard International Bond (VTIFX)	4.12 (86)	3.61 (49)	10.35 (78)	6.17 (79)	-0.64 (30)	-0.15 (36)	N/A	N/A	2.03 (9)	05/01/2015
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	3.90 (95)	3.58 (50)	10.19 (80)	6.18 (79)	-0.60 (29)	-0.09 (36)	2.31 (2)	N/A	2.04 (9)	
Global Bond Median	6.90	3.53	12.06	7.44	-2.57	-0.77	0.47	1.55	0.69	
Vanguard EM Bond (VEGBX)	6.18 (52)	9.02 (25)	19.06 (34)	16.73 (11)	N/A	N/A	N/A	N/A	3.36 (9)	12/01/2021
Blmbg. Emerging Markets USD Aggregate Index	5.82 (70)	8.17 (61)	16.93 (63)	12.15 (82)	-0.18 (71)	1.35 (63)	3.18 (31)	4.86 (6)	0.34 (82)	
Emerging Markets Bond Median	6.21	8.39	18.15	14.49	0.42	1.71	2.74	4.20	1.19	
REIT										
Vanguard Real Estate Index Fund (VGSNX)	17.19 (13)	13.61 (56)	34.21 (27)	15.14 (48)	2.53 (62)	4.79 (57)	7.35 (47)	N/A	8.81 (43)	10/01/2010
Vanguard Spliced REIT Index	17.23 (10)	13.71 (54)	34.38 (24)	15.26 (46)	2.63 (59)	4.90 (51)	7.44 (45)	10.21 (38)	8.89 (38)	
Real Estate Median	15.92	13.86	32.86	15.09	2.97	4.93	7.30	9.90	8.63	

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

Comparative Performance

Total Fund

As of September 30, 2024

	QTR	FYTD	1 YR	2 YR	3 YR	5 YR	10 YR	15 YR	Inception	Inception Date
Total Fund - Domestic Equity	6.97	16.54	30.88	24.57	9.27	13.38	11.56	N/A	11.19	07/01/2014
Total Domestic Large Cap Equity	5.96	21.60	35.99	28.54	11.65	14.51	12.55	N/A	12.42	06/01/2014
S&P 500 Index	5.89	22.08	36.35	28.77	11.91	15.98	13.38	14.15	13.27	
Large Cap Growth	2.92	24.04	41.91	34.83	10.47	19.25	15.68	N/A	15.53	06/01/2014
Vanguard Growth Index Hybrid	2.93	24.07	41.97	34.88	10.50	19.05	15.59	15.97	15.44	
Russell 1000 Growth Index	3.19	24.55	42.19	34.76	12.02	19.74	16.52	16.52	16.33	
Large Cap Core	5.88	22.04	36.54	28.79	11.88	13.44	11.89	N/A	11.73	06/01/2014
S&P 500 Index	5.89	22.08	36.35	28.77	11.91	15.98	13.38	14.15	13.27	
Large Cap Value	9.43	18.98	29.79	22.18	11.71	12.30	10.86	N/A	10.78	06/01/2014
Vanguard Value Index Hybrid	9.44	18.99	29.71	22.06	11.65	12.26	10.80	12.18	10.73	
Russell 1000 Value Index	9.43	16.68	27.76	20.92	9.03	10.69	9.23	11.20	9.17	
Mid Cap Equity	6.92	13.49	26.71	21.02	7.45	11.74	9.88	N/A	9.74	06/01/2014
Mid Cap Hybrid Index	6.94	13.54	26.79	21.02	7.47	11.78	9.89	N/A	9.75	
Small Cap Equity	10.11	9.29	25.78	17.63	3.91	10.18	8.85	N/A	8.48	06/01/2014
Small Cap Hybrid Index	10.13	9.33	25.86	17.71	3.99	10.21	8.87	11.27	8.50	
Total Fund - International Equity	8.27	13.77	24.39	21.00	2.13	6.41	4.71	N/A	4.08	07/01/2014
Small Cap - International Equity	8.11	10.84	22.39	20.19	0.87	N/A	N/A	N/A	7.96	03/01/2020
FTSE Global ex U.S. Small Cap Index (Net)	8.30	11.08	22.50	20.08	0.71	7.06	4.78	N/A	8.28	
Developed Markets - International Equity	7.49	12.17	24.71	24.41	4.84	8.30	5.91	N/A	5.18	06/01/2014
Vanguard Spliced Developed ex U.S. Index (Net)	7.56	12.21	24.36	24.06	4.65	8.30	5.90	6.13	5.21	
Emerging Markets - International Equity	9.29	17.33	24.99	17.74	1.69	6.45	4.17	N/A	4.10	06/01/2014
FTSE Emerging Mkts All Cap China A Inclusion Index	10.74	19.55	27.70	19.27	2.69	7.39	5.00	5.02	4.97	
MSCI Emerging Markets (Net) Index	8.72	16.86	26.05	18.66	0.40	5.75	4.02	4.16	3.80	

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

Comparative Performance

Total Fund

As of September 30, 2024

	QTR	FYTD	1 YR	2 YR	3 YR	5 YR	10 YR	15 YR	Inception	Inception Date
Total Fund - Fixed Income	4.82	5.64	12.75	8.09	0.34	1.69	2.54	N/A	2.39	07/01/2014
Short - Term Fixed Income	3.48	4.52	8.06	5.26	0.91	1.46	1.71	N/A	1.64	06/01/2014
Bloomberg 1-5 Year Gov/Credit Idx	3.50	4.50	8.10	5.32	0.94	1.54	1.77	1.93	1.70	
High Yield - Fixed Income	4.41	6.68	14.46	11.81	2.94	4.00	N/A	N/A	4.64	11/01/2014
Blmbg. U.S. Corp High Yield	5.28	8.00	15.74	12.98	3.10	4.72	5.04	6.86	4.96	
Non-US Fixed Income	4.12	3.61	10.35	6.17	-0.64	-0.15	N/A	N/A	2.09	05/01/2015
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	3.90	3.58	10.19	6.18	-0.60	-0.09	2.31	N/A	2.04	
Real Estate	17.19	13.61	34.21	15.14	2.53	4.79	7.22	N/A	6.77	06/01/2014
Vanguard Spliced REIT Index	17.23	13.71	34.38	15.26	2.63	4.90	7.44	10.21	6.99	

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

Comparative Performance

Total Fund

As of September 30, 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	15.06		-15.03		13.87		11.44		19.29		-4.90		13.72		8.64		-0.63		8.19	
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 (90)		29.24 (54)		-5.37 (48)		19.16 (77)		16.03 (8)		-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 (43)		13.69 (31)	
IM U.S. Large Cap Core Equity (SA+CF) Median	23.77		-16.91		26.87		15.94		29.49		-5.67		21.54		9.88		0.96		12.59	
Twin Capital Enhanced Index	N/A		N/A		N/A		15.07 (60)		29.73 (42)		-6.43 (65)		20.37 (77)		11.66 (58)		2.42 (24)		13.42 (53)	
S&P 500 Index	26.29 (39)		-18.11 (50)		28.71 (49)		18.40 (46)		31.49 (34)		-4.38 (26)		21.83 (58)		11.96 (56)		1.38 (39)		13.69 (45)	
IM U.S. Large Cap Enhanced Index Equity (SA+CF) Median	25.61		-18.11		28.63		16.88		29.41		-5.63		22.08		12.21		0.90		13.60	
Vanguard Inst'l Index Fund (VINIX)	26.24 (25)		-18.14 (50)		28.67 (21)		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
S&P 500 Index	26.29 (24)		-18.11 (49)		28.71 (20)		18.40 (35)		31.49 (22)		-4.38 (24)		21.83 (32)		11.96 (26)		1.38 (24)		13.69 (18)	
Large Blend Median	24.50		-18.15		26.81		17.34		29.98		-5.51		21.16		10.69		0.25		12.03	
Vanguard Growth Index (VIGIX)	46.78 (16)		-33.14 (68)		27.27 (18)		40.20 (33)		37.25 (13)		-3.32 (67)		27.82 (61)		6.11 (27)		3.23 (64)		13.70 (18)	
Vanguard Growth Index Hybrid	46.86 (16)		-33.13 (68)		27.30 (17)		40.27 (33)		37.31 (13)		-3.34 (67)		27.86 (60)		6.16 (27)		3.38 (62)		13.69 (18)	
Russell 1000 Growth Index	42.68 (32)		-29.14 (36)		27.60 (15)		38.49 (38)		36.39 (19)		-1.51 (51)		30.21 (40)		7.08 (20)		5.67 (44)		13.05 (25)	
Large Growth Median	39.00		-30.94		21.92		35.65		32.80		-1.50		29.06		2.73		5.07		10.64	
Vanguard Value Index (VIVIX)	9.26 (66)		-2.05 (19)		26.48 (44)		2.30 (56)		25.83 (47)		-5.42 (16)		17.14 (38)		16.87 (27)		-0.81 (17)		13.20 (18)	
Vanguard Value Index Hybrid	9.17 (67)		-2.01 (19)		26.51 (44)		2.26 (56)		25.85 (46)		-5.40 (16)		17.16 (38)		16.93 (27)		-0.86 (18)		13.29 (17)	
Russell 1000 Value Index	11.46 (47)		-7.54 (70)		25.16 (62)		2.80 (50)		26.54 (37)		-8.27 (41)		13.66 (78)		17.34 (23)		-3.83 (58)		13.45 (15)	
Large Value Median	11.00		-5.40		26.02		2.73		25.58		-8.86		16.24		14.37		-3.40		11.04	
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	16.36 (39)		-13.11 (24)		24.67 (39)		13.58 (39)		26.13 (56)		N/A		N/A		N/A		N/A		N/A	
S&P MidCap 400 Index	16.44 (37)		-13.06 (23)		24.76 (38)		13.66 (38)		26.20 (56)		-11.08 (47)		16.24 (45)		20.74 (7)		-2.18 (28)		9.77 (36)	
Mid-Cap Blend Median	15.89		-14.77		24.12		13.09		26.87		-11.23		15.96		15.39		-3.03		9.22	
Vanguard Small-Cap 600 Index I (VSM SX)	15.99 (55)		-16.18 (39)		26.74 (24)		11.46 (56)		22.74 (68)		N/A		N/A		N/A		N/A		N/A	
S&P SmallCap 600 Index	16.05 (54)		-16.10 (37)		26.82 (23)		11.29 (57)		22.78 (68)		-8.48 (10)		13.23 (49)		26.56 (10)		-1.97 (23)		5.76 (39)	
Small Blend Median	16.28		-16.77		22.88		12.50		24.57		-12.05		13.19		20.66		-4.41		4.95	

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

Comparative Performance

Total Fund

As of September 30, 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 (67)	-11.66 (72)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI AC World ex USA Value	18.13 (46)	-7.95 (35)	11.13 (55)	-0.21 (70)	16.45 (72)	-13.45 (22)	23.35 (44)	9.59 (12)	-9.59 (90)	-4.60 (35)
Foreign Large Value Median	17.84	-9.45	11.69	2.58	18.27	-16.16	22.79	2.37	-3.32	-5.59
Vanguard Intl Growth (VWILX)	14.81 (69)	-30.79 (84)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI AC World ex USA Growth	14.40 (76)	-22.80 (34)	5.37 (69)	22.56 (46)	27.84 (54)	-14.10 (51)	32.47 (35)	0.50 (32)	-0.91 (72)	-2.29 (31)
Foreign Large Growth Median	15.99	-24.82	8.70	22.10	28.05	-13.96	31.07	-2.30	0.44	-3.69
Vanguard FTSE AW ex-US SC Index (VFSNX)	15.19 (36)	-21.25 (79)	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 (30)	-21.58 (83)	13.02 (51)	11.40 (37)	21.55 (61)	-18.91 (36)	29.78 (86)	3.93 (36)	-0.61 (93)	-4.34 (14)
Foreign Small/Mid Blend Median	14.73	-18.67	13.03	9.97	22.35	-19.95	33.02	1.30	6.37	-6.06
Vanguard Developed Markets Index (VTMNX)	17.84 (33)	-15.34 (41)	11.44 (40)	10.27 (50)	22.14 (54)	-14.49 (39)	26.46 (53)	2.46 (30)	-0.19 (47)	-5.62 (58)
Vanguard Spliced Developed ex U.S. Index (Net)	17.97 (31)	-15.58 (43)	11.57 (39)	10.00 (51)	22.34 (52)	-14.79 (42)	26.31 (54)	2.29 (32)	-0.28 (48)	-4.85 (47)
MSCI EAFE (Net) Index	18.24 (28)	-14.45 (34)	11.26 (42)	7.82 (63)	22.01 (55)	-13.79 (30)	25.03 (65)	1.00 (45)	-0.81 (55)	-4.90 (47)
Foreign Median	16.21	-16.85	10.63	10.18	22.56	-15.52	26.87	0.61	-0.47	-5.11
Vanguard Emerging Markets Index (VEMIX)	9.18 (67)	-17.74 (20)	0.92 (35)	15.26 (66)	20.37 (52)	-14.54 (30)	31.43 (70)	11.76 (25)	-15.39 (68)	0.72 (17)
FTSE Emerging Mkts All Cap China A Inclusion Index	9.95 (60)	-17.26 (18)	1.76 (31)	15.84 (63)	20.81 (49)	-14.49 (29)	31.46 (70)	10.66 (34)	-13.28 (47)	2.96 (7)
MSCI Emerging Markets (Net) Index	9.83 (60)	-20.09 (30)	-2.54 (58)	18.31 (47)	18.42 (65)	-14.57 (30)	37.28 (43)	11.19 (30)	-14.92 (63)	-2.19 (43)
Diversified Emerging Mkts Median	10.90	-22.44	-1.69	17.60	20.58	-16.34	35.45	8.46	-13.67	-2.90

Returns for periods greater than one year are annualized.
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Comparative Performance

Total Fund

As of September 30, 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 (75)	-5.61 (66)	-0.97 (82)	4.71 (30)	4.84 (40)	1.37 (19)	1.19 (73)	1.51 (68)	0.98 (10)	1.32 (38)
Bloomberg 1-5 Year Gov/Credit Idx	4.89 (74)	-5.50 (63)	-0.97 (82)	4.71 (30)	5.01 (35)	1.38 (18)	1.27 (68)	1.56 (65)	0.97 (11)	1.42 (35)
Short-Term Bond Median	5.51	-4.95	-0.30	3.90	4.62	0.92	1.60	1.88	0.36	1.02
Vanguard Total Bond Index (VBTIX)	5.72 (45)	-13.15 (35)	-1.65 (53)	7.73 (53)	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. U.S. Aggregate Index	5.53 (57)	-13.01 (28)	-1.55 (48)	7.51 (60)	8.72 (38)	0.01 (25)	3.54 (45)	2.65 (49)	0.55 (23)	5.97 (27)
Intermediate Core Bond Median	5.61	-13.39	-1.61	7.80	8.49	-0.42	3.42	2.62	0.21	5.54
Vanguard High Yield Bond Fund (VWEAX)	11.74 (61)	-8.97 (23)	3.78 (77)	5.38 (49)	15.90 (8)	-2.87 (49)	7.13 (35)	11.27 (80)	-1.31 (16)	N/A
Blmbg. U.S. Corp High Yield	13.45 (13)	-11.19 (62)	5.28 (40)	7.11 (19)	14.32 (36)	-2.08 (26)	7.50 (24)	17.13 (7)	-4.47 (64)	2.45 (27)
High Yield Bond Median	12.12	-10.70	4.85	5.31	13.55	-2.91	6.70	13.65	-3.72	1.64
Vanguard International Bond (VTIFX)	8.85 (9)	-12.89 (36)	-2.17 (21)	4.59 (84)	7.89 (32)	3.00 (4)	2.43 (94)	4.69 (28)	N/A	N/A
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	8.75 (10)	-12.72 (35)	-2.10 (21)	4.75 (83)	8.06 (29)	3.16 (4)	2.57 (92)	4.90 (26)	1.34 (1)	9.14 (1)
Global Bond Median	6.11	-15.67	-5.01	9.19	6.88	-2.49	7.73	2.71	-4.32	0.88
Vanguard EM Bond (VEGBX)	13.80 (9)	-13.02 (33)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. Emerging Markets USD Aggregate Index	9.09 (83)	-15.26 (52)	-1.65 (24)	6.52 (38)	13.11 (59)	-2.46 (8)	8.17 (84)	9.88 (60)	1.29 (14)	4.76 (18)
Emerging Markets Bond Median	11.24	-15.10	-2.96	5.65	13.62	-5.76	10.36	10.46	-2.67	1.57
REIT										
Vanguard Real Estate Index Fund (VGSNX)	11.82 (57)	-26.20 (48)	40.47 (63)	-4.67 (48)	29.02 (35)	-5.93 (52)	4.93 (60)	8.51 (15)	2.56 (61)	30.17 (43)
Vanguard Spliced REIT Index	11.96 (52)	-26.12 (45)	40.56 (62)	-4.55 (47)	29.03 (35)	-5.86 (51)	5.07 (56)	8.60 (15)	2.52 (62)	30.38 (35)
Real Estate Median	12.06	-26.29	41.44	-4.86	27.78	-5.81	5.37	6.07	2.98	29.82

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

Comparative Performance

Total Fund

As of September 30, 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

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

Comparative Performance

Total Fund

As of September 30, 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 September 30, 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	4.38		13.14		0.13		7.32		13.12		0.43	
Total Fund Policy	4.49		12.47		0.14		7.77		12.66		0.47	
Vanguard Instl Indx;Inst (VINIX) *	11.87	(22)	17.28	(40)	0.54	(25)	15.95	(19)	17.89	(49)	0.79	(18)
S&P 500 Index	11.91		17.28		0.55		15.98		17.89		0.79	
Large Blend Median	10.73		17.18		0.49		14.87		17.88		0.73	
Vanguard Growth Index (VIGIX)	10.47	(20)	21.91	(31)	0.41	(24)	19.01	(15)	21.32	(27)	0.82	(22)
Vanguard Growth Index Hybrid	10.50		21.92		0.41		19.05		21.33		0.82	
Large Growth Median	8.24		20.59		0.33		16.48		20.38		0.74	
Vanguard Value Index (VIVIX)	11.65	(13)	15.47	(67)	0.57	(11)	12.27	(27)	17.20	(74)	0.63	(18)
Vanguard Value Index Hybrid	11.65		15.45		0.57		12.26		17.19		0.63	
Large Value Median	9.66		16.08		0.44		11.12		18.06		0.55	
Vanguard S&P MC400;Inst (VSPMX) *	7.40	(30)	20.19	(26)	0.29	(31)	11.71	(23)	21.70	(29)	0.52	(31)
S&P MidCap 400 Index	7.47		20.19		0.29		11.78		21.70		0.52	
Mid-Cap Blend Median	6.59		19.28		0.26		11.09		20.63		0.50	
Vanguard S&P SC600;Inst (VSMSX) *	3.91	(50)	21.73	(25)	0.13	(49)	10.18	(45)	23.58	(32)	0.43	(47)
S&P SmallCap 600 Index	3.99		21.73		0.13		10.21		23.58		0.43	
Small Blend Median	3.90		20.95		0.12		9.94		22.91		0.43	

* 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 September 30, 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)*	5.20	(31)	17.02	(62)	0.18	(30)	7.89	(47)	18.91	(13)	0.38	(55)
MSCI EAFE Index	6.02		16.70		0.23		8.72		17.50		0.44	
Foreign Large Blend Median	4.25		17.25		0.13		7.78		17.95		0.38	
Vanguard Intl Gro;Adm (VWILX)*	-3.65	(86)	22.56	(13)	-0.21	(80)	10.76	(7)	22.37	(7)	0.47	(15)
MSCI EAFE Growth Index	2.25		18.83		0.03		8.08		17.86		0.40	
Foreign Large Growth Median	-0.01		19.23		-0.09		7.47		18.71		0.36	
Vanguard FTSExUSSC;Ins (VFSNX) *	0.87	(7)	17.65	(88)	-0.06	(5)	7.09	(25)	20.02	(60)	0.33	(25)
FTSE Global ex U.S. Small Cap Index (Net)	0.71		17.29		-0.07		7.06		19.86		0.33	
Foreign Small/Mid Growth Median	-3.51		19.60		-0.25		5.45		20.41		0.25	
Vanguard Developed Markets Index (VTMNX)	4.84	(37)	17.84	(39)	0.16	(37)	8.30	(35)	18.49	(51)	0.40	(37)
Vanguard Spliced Developed ex U.S. Index (Net)	4.65		17.09		0.15		8.30		18.03		0.41	
Foreign Median	3.85		17.58		0.11		7.68		18.49		0.37	
Vanguard Emerging Markets Index (VEMIX)	1.63	(25)	16.12	(83)	-0.03	(27)	6.42	(36)	17.73	(88)	0.31	(33)
FTSE Emerging Mkts All Cap China A Inclusion Index	2.69		15.82		0.03		7.39		17.58		0.37	
Diversified Emerging Mkts Median	-0.87		17.72		-0.15		5.27		19.15		0.25	
Vanguard Short Term Bond Index (VBIRX)	0.91	(80)	3.46	(29)	-0.77	(63)	1.49	(79)	2.80	(65)	-0.29	(80)
Bloomberg 1-5 Year Gov/Credit Idx	0.94		3.43		-0.77		1.54		2.78		-0.28	
Short-Term Bond Median	1.52		2.88		-0.68		1.92		3.06		-0.11	
Vanguard Tot Bd;Inst (VBTIX) *	-1.42	(43)	7.45	(64)	-0.63	(46)	0.32	(57)	6.20	(69)	-0.29	(61)
Blmbg. U.S. Aggregate Index	-1.39		7.53		-0.62		0.33		6.21		-0.29	
Intermediate Core Bond Median	-1.50		7.52		-0.64		0.39		6.30		-0.27	
Vanguard High Yield Bond Fund (VWEAX)	2.94	(42)	8.28	(46)	-0.02	(41)	4.00	(53)	8.57	(76)	0.23	(49)
Vanguard High Yield Corporate Composite Index	2.64		8.04		-0.06		4.30		8.55		0.27	
High Yield Bond Median	2.74		8.23		-0.05		4.04		9.13		0.23	

* 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 September 30, 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 Intl BI;Inst (VTIFX) *	-0.65	(30)	6.24	(88)	-0.64	(55)	-0.15	(36)	5.31	(94)	-0.44	(80)
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	-0.60		5.99		-0.67		-0.09		5.12		-0.45	
Global Bond Median	-2.57		9.57		-0.62		-0.77		8.64		-0.31	
Vanguard Em Mkt Bond;Adm (VEGBX)*	2.32	(65)	11.00	(36)	-0.05	(64)	4.72	(1)	11.39	(75)	0.26	(2)
JPM GBI-EM Diversified	-1.21		11.71		-0.35		-0.49		11.67		-0.18	
Emerging-Markets Local-Currency Bond Median	2.59		10.83		-0.02		2.26		12.22		0.06	
Vanguard Real Estate Index Fund (VGSNX)	2.53	(62)	21.91	(17)	0.07	(59)	4.79	(57)	21.15	(26)	0.22	(58)
Vanguard Spliced REIT Index	2.63		21.91		0.07		4.90		21.14		0.23	
Real Estate Median	2.97		21.29		0.08		4.93		20.61		0.23	

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Multi Time Period Statistics

Butler County Employees Retirement Plan

As of September 30, 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		6.90		11.25		0.51		8.14		10.79		0.68	
Total Fund Policy		7.11		10.97		0.54		8.45		10.71		0.71	
Vanguard Instl Indx;Inst (VINIX) *		13.35 (8)		15.47 (56)		0.80 (9)		14.12 (8)		15.02 (61)		0.90 (6)	
S&P 500 Index		13.38		15.47		0.80		14.15		15.02		0.90	
Large Blend Median		12.11		15.53		0.73		13.05		15.29		0.83	
Vanguard Growth Index (VIGIX)		15.55 (18)		18.78 (40)		0.79 (26)		N/A		N/A		N/A	
Vanguard Growth Index Hybrid		15.59		18.80		0.80		15.97		17.63		0.88	
Large Growth Median		14.15		18.31		0.74		14.47		17.62		0.81	
Vanguard Value Index (VIVIX)		10.80 (11)		14.97 (74)		0.66 (9)		12.14 (12)		14.71 (69)		0.79 (13)	
Vanguard Value Index Hybrid		10.80		14.96		0.66		12.18		14.71		0.79	
Large Value Median		9.23		15.72		0.54		10.87		15.61		0.68	
Vanguard S&P MC400;Inst (VSPMX)*		10.25 (16)		19.09 (31)		0.53 (25)		N/A		N/A		N/A	
S&P MidCap 400 Index		10.32		19.09		0.53		12.30		18.48		0.67	
Mid-Cap Blend Median		9.42		18.49		0.49		11.17		17.99		0.62	
Vanguard S&P SC600;Inst (VSMSX)*		10.03 (13)		21.16 (38)		0.49 (18)		N/A		N/A		N/A	
S&P SmallCap 600 Index		10.05		21.15		0.49		12.08		20.04		0.62	
Small Blend Median		8.82		20.93		0.44		10.72		20.02		0.56	

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All performance is reported net of fees.

Multi Time Period Statistics
Butler County Employees Retirement Plan
As of September 30, 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)*	5.01	(69)	17.33	(24)	0.28	(71)	5.43	(71)	17.51	(18)	0.33	(75)
MSCI EAFE Index	6.22		16.04		0.36		6.49		16.12		0.41	
Foreign Large Blend Median	5.40		16.63		0.31		5.90		16.74		0.36	
Vanguard Intl Gro;Adm (VWILX)*	8.97	(8)	21.66	(9)	0.43	(21)	8.81	(10)	20.62	(3)	0.46	(24)
MSCI EAFE Growth Index	6.99		16.63		0.40		7.30		16.45		0.45	
Foreign Large Growth Median	6.26		17.67		0.34		6.75		17.51		0.40	
Vanguard FTSExUSSC;Ins (VFSNX)*	4.98	(68)	18.81	(81)	0.27	(65)	6.03	(87)	18.77	(54)	0.35	(84)
FTSE Global ex U.S. Small Cap Index (Net)	4.78		18.70		0.26		N/A		N/A		N/A	
Foreign Small/Mid Growth Median	5.66		19.90		0.30		7.35		18.94		0.41	
Vanguard Developed Markets Index (VTMNX)	5.94	(34)	16.71	(64)	0.34	(31)	6.17	(46)	16.82	(61)	0.38	(42)
Vanguard Spliced Developed ex U.S. Index (Net)	5.90		16.52		0.34		6.13		16.45		0.38	
Foreign Median	5.45		17.17		0.31		6.06		17.10		0.37	
Vanguard Emerging Markets Index (VEMIX)	4.20	(38)	17.18	(92)	0.24	(35)	N/A		N/A		N/A	
FTSE Emerging Mkts All Cap China A Inclusion Index	5.00		17.12		0.28		5.02		17.17		0.31	
Diversified Emerging Mkts Median	3.57		18.58		0.20		3.98		18.46		0.25	
Vanguard Sh-Tm B;Inst (VBITX)*	1.73	(64)	2.57	(64)	0.05	(63)	1.84	(72)	2.22	(65)	0.35	(64)
Bloomberg 1-5 Year Gov/Credit Idx	1.77		2.57		0.07		1.93		2.23		0.39	
Short-Term Bond Median	1.88		2.75		0.11		2.11		2.45		0.42	
Vanguard Tot Bd;Inst (VBTIX)*	1.83	(44)	5.20	(49)	0.06	(44)	2.57	(58)	4.62	(48)	0.34	(57)
Blmbg. U.S. Aggregate Index	1.84		5.17		0.07		2.60		4.58		0.35	
Intermediate Core Bond Median	1.78		5.20		0.05		2.67		4.61		0.35	
Vanguard HY Corp;Adm (VWEAX)*	4.74	(22)	7.33	(86)	0.45	(13)	6.30	(29)	6.74	(90)	0.78	(7)
Vanguard High Yield Corporate Composite Index	4.78		7.59		0.45		6.33		6.91		0.77	
High Yield Bond Median	4.23		8.37		0.35		6.01		7.81		0.64	

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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 September 30, 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 Intl BI;Inst (VTIFX)*	2.19	(6)	4.66	(95)	0.14	(2)	N/A	N/A	N/A
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	2.31		4.59		0.17		N/A	N/A	N/A
Global Bond Median	0.47		7.87		-0.11		1.55	7.35	0.10
Vanguard Em Mkt Bond;Adm (VEGBX)*	N/A		N/A		N/A		N/A	N/A	N/A
JPM GBI-EM Diversified	-0.29		12.64		-0.09		1.47	12.08	0.09
Emerging-Markets Local-Currency Bond Median	0.62		13.24		-0.01		2.02	12.54	0.14
Vanguard Real Estate Index Fund (VGSNX)	7.35		18.01		0.40		N/A	N/A	N/A
Vanguard Spliced REIT Index	7.44		18.03		0.40		10.21	16.87	0.60

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

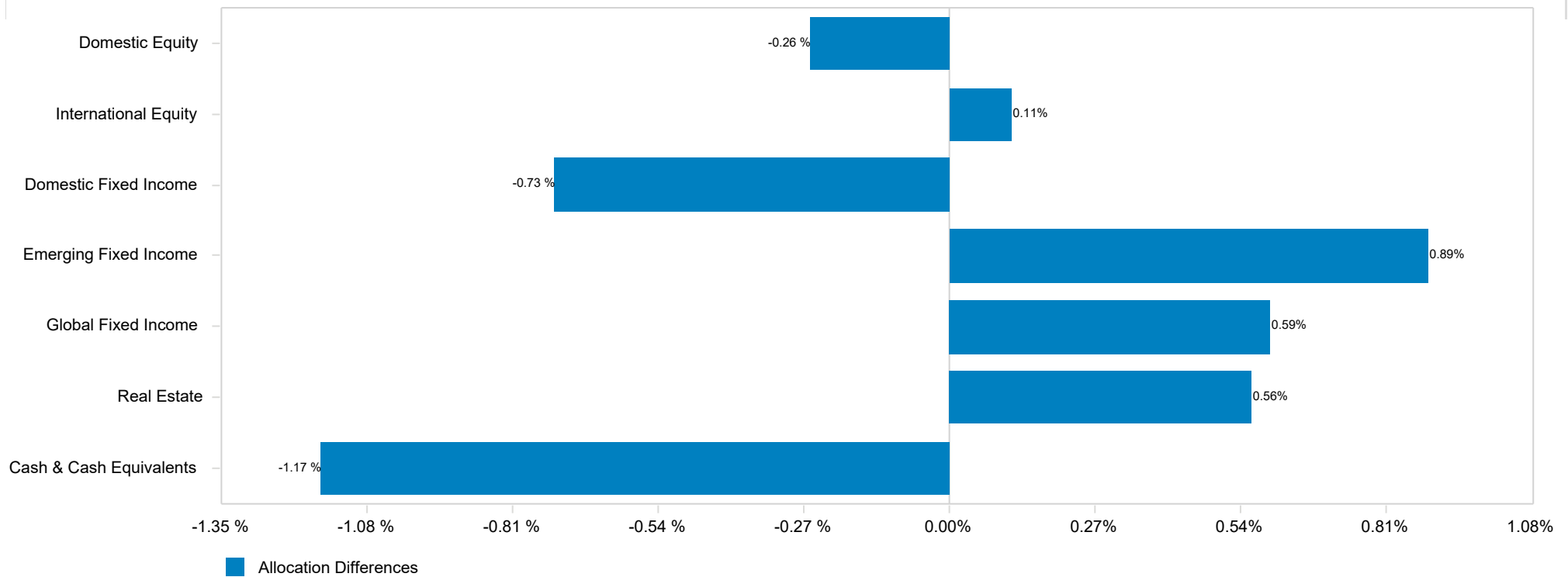
The Vanguard Emerging Market Stock Index Fund performance shown may be different than actual performance as the client was invested in the ETF before transferring to the mutual fund.

All performance is reported net of fees.

Total Fund Asset Allocation Analysis

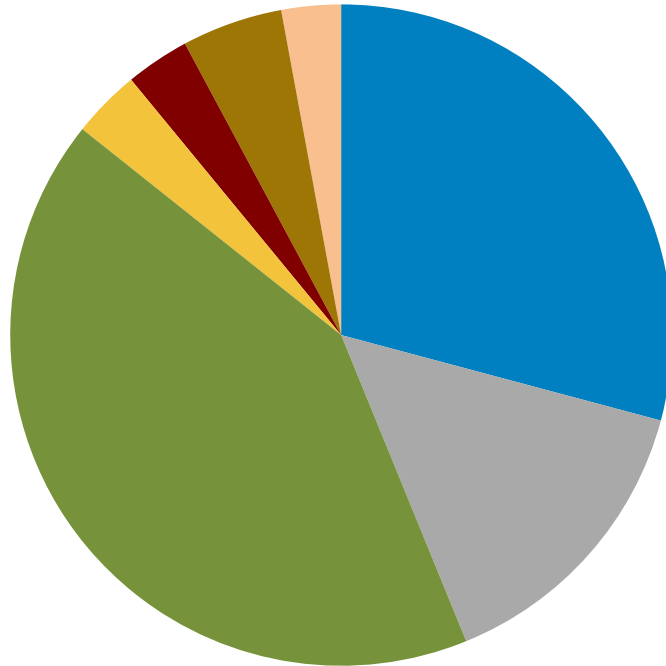
Total Fund

As of September 30, 2024

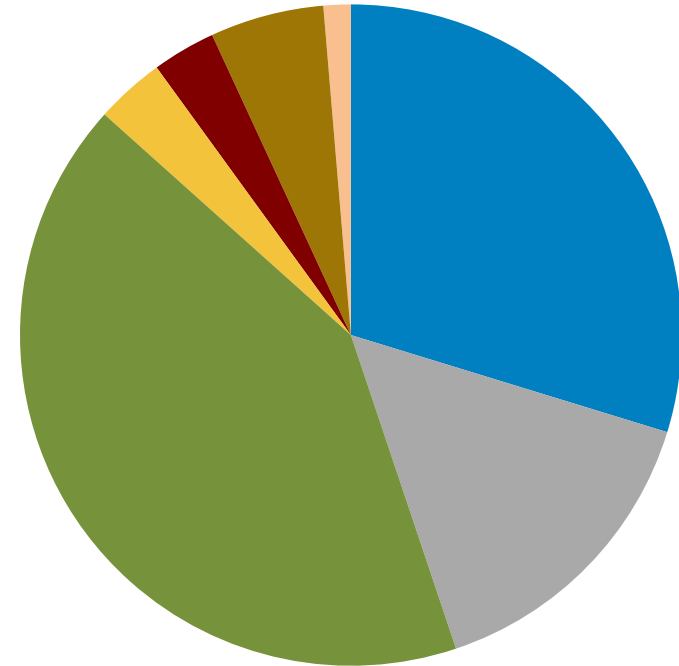


Asset Allocation Compliance				
	Current Allocation (%)	Target Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)
Domestic Equity	29.74	30.00	5.00	55.00
International Equity	15.11	15.00	5.00	30.00
Domestic Fixed Income	41.77	42.50	15.00	70.00
Emerging Fixed Income	3.39	2.50	0.00	5.00
Global Fixed Income	3.09	2.50	0.00	5.00
Real Estate	5.56	5.00	0.00	10.00
Cash & Cash Equivalents	1.33	2.50	0.00	5.00
Total Fund	100.00	100.00	N/A	N/A

Asset Allocation By Segment as of
June 30, 2024 : \$270,124,005

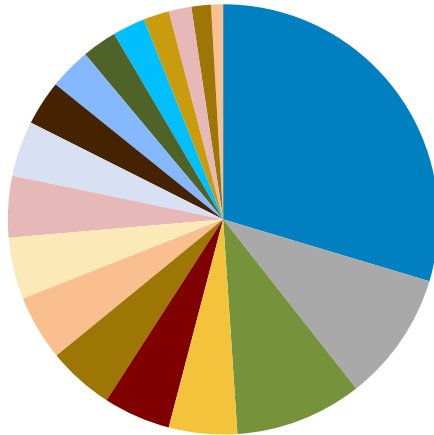


Asset Allocation By Segment as of
September 30, 2024 : \$283,849,917

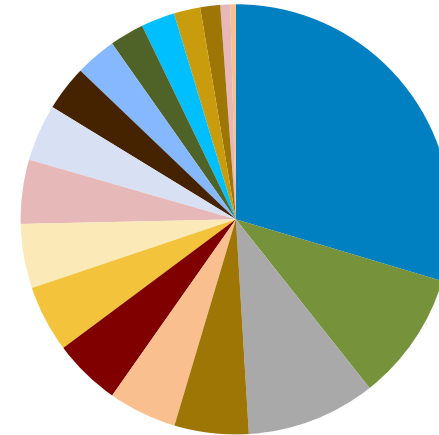


Allocation			Allocation		
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	78,775,863	29.2	Domestic Equity	84,423,103	29.7
International Equity	39,623,762	14.7	International Equity	42,902,468	15.1
Domestic Fixed Income	113,105,711	41.9	Domestic Fixed Income	118,559,404	41.8
Emerging Fixed Income	9,034,320	3.3	Emerging Fixed Income	9,613,904	3.4
Global Fixed Income	8,434,110	3.1	Global Fixed Income	8,781,831	3.1
Real Estate	13,305,167	4.9	Real Estate	15,784,489	5.6
Cash	7,845,072	2.9	Cash	3,784,718	1.3

Asset Allocation By Manager as of
Jun-2024 : \$270,124,005



Asset Allocation By Manager as of
Sep-2024 : \$283,849,917

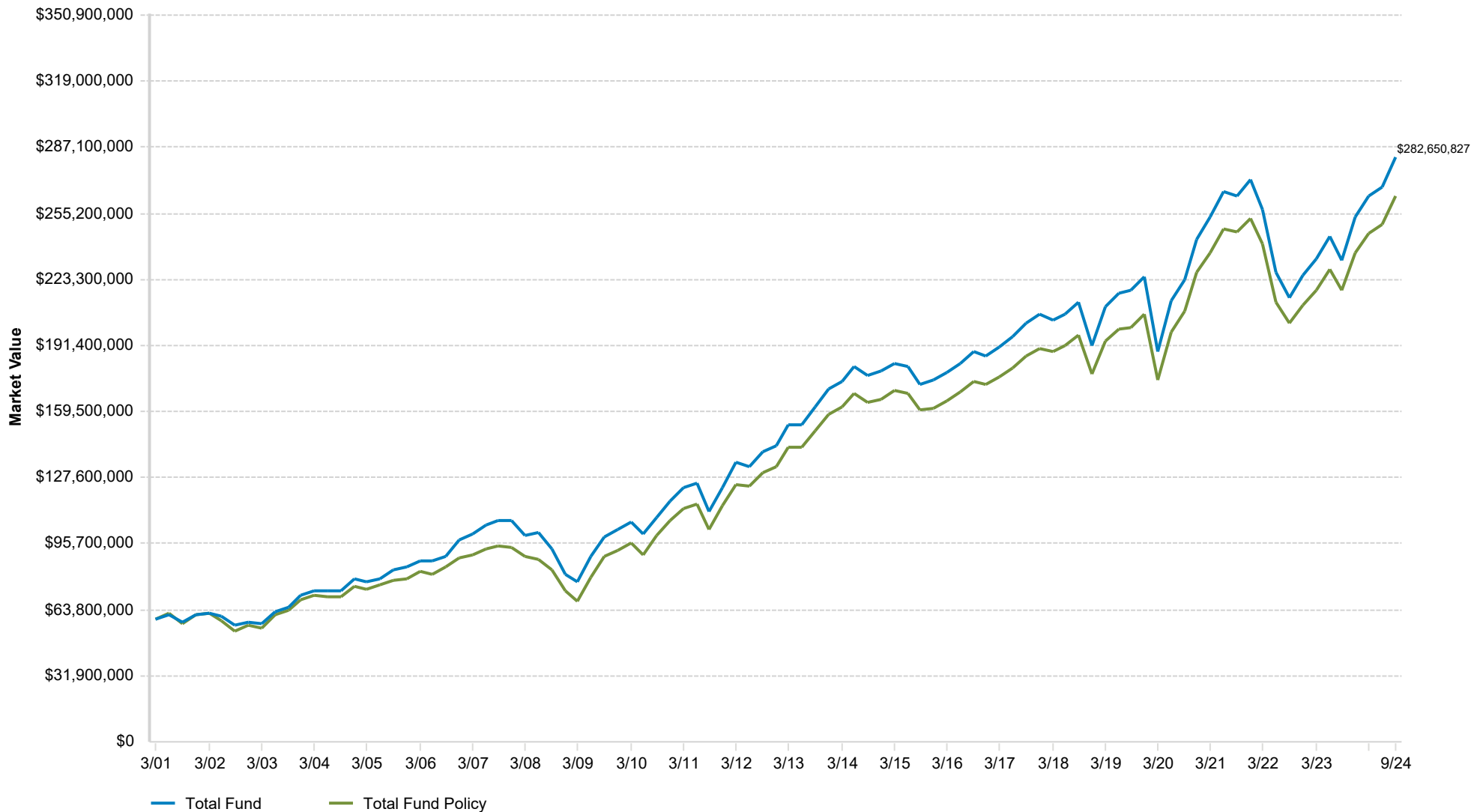


Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Vanguard Total Bond Index (VBTIX)	80,051,200	29.6	Vanguard Total Bond Index (VBTIX)	84,106,881	29.6
Vanguard High Yield Bond Fund (VWEAX)	26,383,678	9.8	Vanguard Mid-Cap 400 Index Fund I (VSPMX)	27,563,654	9.7
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	25,778,709	9.5	Vanguard High Yield Bond Fund (VWEAX)	27,546,135	9.7
Vanguard Growth Index (VIGIX)	13,851,787	5.1	Vanguard Real Estate Index Fund (VGSNX)	15,784,489	5.6
Vanguard Inst'l Index Fund (VINIX)	13,587,118	5.0	Vanguard Small-Cap 600 Index I (VSMSX)	14,579,479	5.1
Vanguard Real Estate Index Fund (VGSNX)	13,469,690	5.0	Vanguard Inst'l Index Fund (VINIX)	14,385,549	5.1
Vanguard Small-Cap 600 Index I (VSMSX)	13,241,230	4.9	Vanguard Growth Index (VIGIX)	14,256,821	5.0
Vanguard Emerging Markets Index (VEMIX)	12,550,519	4.6	Vanguard Emerging Markets Index (VEMIX)	13,716,251	4.8
Vanguard Value Index (VIVIX)	12,462,925	4.6	Vanguard Value Index (VIVIX)	13,637,601	4.8
Vanguard Developed Markets Index (VTMNX)	11,281,806	4.2	Vanguard Developed Markets Index (VTMNX)	12,126,362	4.3
Vanguard EM Bond (VEGBX)	9,098,475	3.4	Vanguard EM Bond (VEGBX)	9,660,395	3.4
Vanguard International Bond (VTIFX)	8,450,324	3.1	Vanguard International Bond (VTIFX)	8,798,724	3.1
Vanguard Short Term Bond Index (VBIRX)	7,071,113	2.6	Vanguard Short Term Bond Index (VBIRX)	7,317,186	2.6
Vanguard FTSE AW ex-US SC Index (VFSNX)	6,641,432	2.5	Vanguard FTSE AW ex-US SC Index (VFSNX)	7,179,771	2.5
Vanguard Intl Value (VTRIX)	5,199,291	1.9	Vanguard Intl Value (VTRIX)	5,635,911	2.0
Disbursement & MF Cash	4,592,562	1.7	Vanguard Intl Growth (VWILX)	4,244,173	1.5
Vanguard Intl Growth (VWILX)	3,950,714	1.5	Disbursement & MF Cash	2,111,444	0.7
NMA	2,461,432	0.9	NMA	1,199,089	0.4

Asset Allocation
Total Fund
As of September 30, 2024

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)	14,386	100.0	-	-	-	-	-	-	-	-	-	-	-	-	14,386	5.1
Vanguard Value Index (VIVIX)	13,638	100.0	-	-	-	-	-	-	-	-	-	-	-	-	13,638	4.8
Vanguard Small-Cap 600 Index I (VSM SX)	14,579	100.0	-	-	-	-	-	-	-	-	-	-	-	-	14,579	5.1
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	27,564	100.0	-	-	-	-	-	-	-	-	-	-	-	-	27,564	9.7
Vanguard Growth Index (VIGIX)	14,257	100.0	-	-	-	-	-	-	-	-	-	-	-	-	14,257	5.0
Twin Capital Enhanced Index	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Vanguard Intl Value (VTRIX)	-	-	5,636	100.0	-	-	-	-	-	-	-	-	-	-	5,636	2.0
Vanguard Intl Growth (VWILX)	-	-	4,244	100.0	-	-	-	-	-	-	-	-	-	-	4,244	1.5
Vanguard FTSE AW ex-US SC Index (VFSNX)	-	-	7,180	100.0	-	-	-	-	-	-	-	-	-	-	7,180	2.5
Vanguard Developed Markets Index (VTMNX)	-	-	12,126	100.0	-	-	-	-	-	-	-	-	-	-	12,126	4.3
Vanguard Emerging Markets Index (VEMIX)	-	-	13,716	100.0	-	-	-	-	-	-	-	-	-	-	13,716	4.8
Vanguard High Yield Bond Fund (VWEAX)	-	-	-	-	27,405	99.5	-	-	-	-	-	-	141	0.5	27,546	9.7
Vanguard Short Term Bond Index (VBIRX)	-	-	-	-	7,297	99.7	-	-	-	-	-	-	21	0.3	7,317	2.6
Vanguard Total Bond Index (VBTIX)	-	-	-	-	83,858	99.7	-	-	-	-	-	-	249	0.3	84,107	29.6
Vanguard International Bond (VTIFX)	-	-	-	-	-	-	-	-	8,782	99.8	-	-	17	0.2	8,799	3.1
Vanguard EM Bond (VEGBX)	-	-	-	-	-	-	9,614	99.5	-	-	-	-	46	0.5	9,660	3.4
Vanguard Real Estate Index Fund (VGSNX)	-	-	-	-	-	-	-	-	-	-	15,784	100.0	-	-	15,784	5.6
Disbursement & MF Cash	-	-	-	-	-	-	-	-	-	-	-	-	2,111	100.0	2,111	0.7
NMA	-	-	-	-	-	-	-	-	-	-	-	-	1,199	100.0	1,199	0.4
Total Fund	84,423	29.7	42,902	15.1	118,559	41.8	9,614	3.4	8,782	3.1	15,784	5.6	3,785	1.3	283,850	100.0

Schedule of Investable Assets

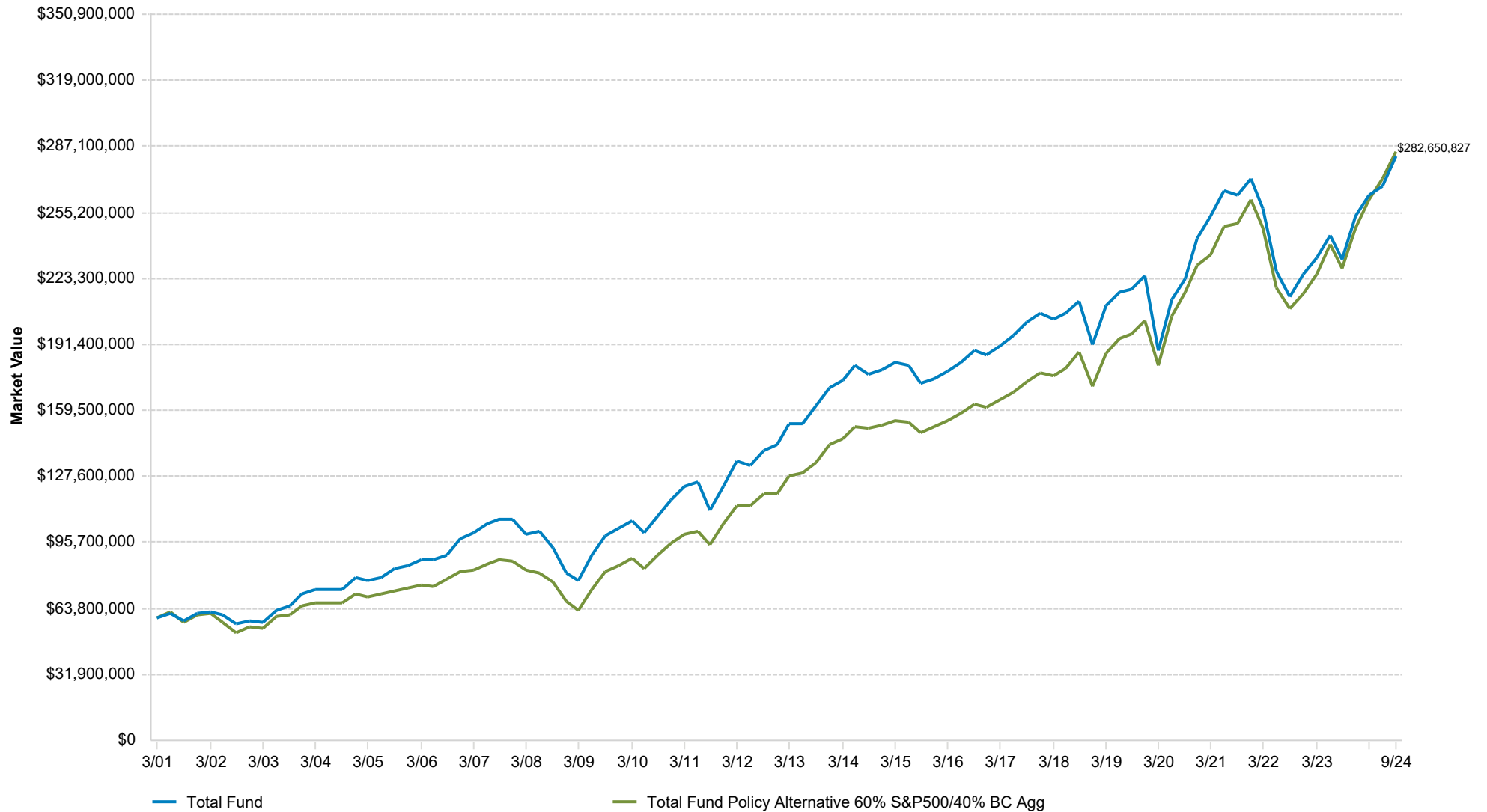


Schedule of Investable Assets

Periods Ending	Beginning Market Value \$	Net Cash Flow \$	Gain/Loss \$	Ending Market Value \$	%Return
Jan-2001 To Sep-2024	59,528,253	-29,245,809	252,368,383	282,650,827	360.51

Does not include Non-Measured Assets (NMA).

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 Sep-2024	59,528,253	-29,245,809	252,368,383	282,650,827	360.51

Does not include Non-Measured Assets (NMA).

Fee Analysis
Total Fund
As of September 30, 2024

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Vanguard Inst'l Index Fund (VINIX)	0.03	14,385,549	4,316	0.03 % of Assets
Vanguard Growth Index (VIGIX)	0.04	14,256,821	5,703	0.04 % of Assets
Vanguard Value Index (VIVIX)	0.04	13,637,601	5,455	0.04 % of Assets
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	0.08	27,563,654	22,051	0.08 % of Assets
Vanguard Small-Cap 600 Index I (VSM SX)	0.08	14,579,479	11,664	0.08 % of Assets
Vanguard Intl Value (VTRIX)	0.35	5,635,911	19,726	0.35 % of Assets
Vanguard Intl Growth (VWILX)	0.33	4,244,173	14,006	0.33 % of Assets
Vanguard FTSE AW ex-US SC Index (VFSNX)	0.11	7,179,771	7,898	0.11 % of Assets
Vanguard Developed Markets Index (VTMNX)	0.05	12,126,362	6,063	0.05 % of Assets
Vanguard Emerging Markets Index (VEMIX)	0.10	13,716,251	13,716	0.10 % of Assets
Vanguard Short Term Bond Index (VBIRX)	0.07	7,317,186	5,122	0.07 % of Assets
Vanguard Total Bond Index (VBTIX)	0.03	84,106,881	25,232	0.03 % of Assets
Vanguard High Yield Bond Fund (VWEAX)	0.13	27,546,135	35,810	0.13 % of Assets
Vanguard International Bond (VTIFX)	0.07	8,798,724	6,159	0.07 % of Assets
Vanguard EM Bond (VEGBX)	0.45	9,660,395	43,472	0.45 % of Assets
Vanguard Real Estate Index Fund (VGSNX)	0.10	15,784,489	15,784	0.10 % of Assets
Total Fund Performance	0.09	282,650,827	242,176	

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 September 30, 2024

Quarter To Date	Market Value 07/01/2024	Management Fees	Net Flows	Return On Investment	Market Value 09/30/2024
Domestic Equity					
Vanguard Inst'l Index Fund (VINIX)	13,587,118	-	-	798,432	14,385,549
Vanguard Value Index (VIVIX)	12,462,925	-	-	1,174,676	13,637,601
Vanguard Small-Cap 600 Index I (VSM SX)	13,241,230	-	-	1,338,249	14,579,479
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	25,778,709	-	-	1,784,944	27,563,654
Vanguard Growth Index (VIGIX)	13,851,787	-	-	405,034	14,256,821
International Equity					
Vanguard Intl Value (VTRIX)	5,199,291	-	-	436,620	5,635,911
Vanguard Intl Growth (VWILX)	3,950,714	-	-	293,459	4,244,173
Vanguard FTSE AW ex-US SC Index (VFSNX)	6,641,432	-	-	538,340	7,179,771
Vanguard Developed Markets Index (VTMNX)	11,281,806	-	-	844,555	12,126,362
Vanguard Emerging Markets Index (VEMIX)	12,550,519	-	-	1,165,732	13,716,251
Fixed Income					
Vanguard Short Term Bond Index (VBIRX)	7,071,113	-	-	246,073	7,317,186
Vanguard Total Bond Index (VBTIX)	80,051,200	-	-	4,055,682	84,106,881
Vanguard High Yield Bond Fund (VWEAX)	26,383,678	-	-	1,162,457	27,546,135
Vanguard International Bond (VTIFX)	8,450,324	-	-	348,400	8,798,724
Vanguard EM Bond (VEGBX)	9,098,475	-	-	561,920	9,660,395
REIT					
Vanguard Real Estate Index Fund (VGSNX)	13,469,690	-	-	2,314,799	15,784,489
Disbursement & MF Cash	4,592,562	-	-2,523,873	42,756	2,111,444
Total Fund Performance	267,662,573	-	-2,523,873	17,512,127	282,650,827
NMA	2,461,432	-	-1,262,343	-	1,199,089
Total Fund	270,124,005	-	-3,786,216	17,512,127	283,849,917

Financial Reconciliation
Total Fund
as of September 30, 2024

Year To Date					
	Market Value 01/01/2024	Management Fees	Net Flows	Return On Investment	Market Value 09/30/2024
Domestic Equity					
Vanguard Inst'l Index Fund (VINIX)	40,081,751	-	-30,000,000	4,303,798	14,385,549
Vanguard Value Index (VIVIX)	13,359,679	-	-2,000,000	2,277,922	13,637,601
Vanguard Small-Cap 600 Index I (VSM SX)	13,340,645	-	-	1,238,834	14,579,479
Vanguard Mid-Cap 400 Index Fund I (VSPMX)	27,191,747	-	-3,000,000	3,371,907	27,563,654
Vanguard Growth Index (VIGIX)	14,317,772	-	-3,000,000	2,939,049	14,256,821
International Equity					
Vanguard Intl Value (VTRIX)	5,063,789	-	-	572,123	5,635,911
Vanguard Intl Growth (VWILX)	3,665,897	-	-	578,276	4,244,173
Vanguard FTSE AW ex-US SC Index (VFSNX)	6,477,533	-	-	702,238	7,179,771
Vanguard Developed Markets Index (VTMNX)	10,811,007	-	-	1,315,355	12,126,362
Vanguard Emerging Markets Index (VEMIX)	11,690,738	-	-	2,025,512	13,716,251
Fixed Income					
Vanguard Short Term Bond Index (VBIRX)	3,980,762	-	3,000,000	336,425	7,317,186
Vanguard Total Bond Index (VBTIX)	44,387,626	-	35,000,000	4,719,255	84,106,881
Vanguard High Yield Bond Fund (VWEAX)	25,821,779	-	-	1,724,356	27,546,135
Vanguard International Bond (VTIFX)	8,491,754	-	-	306,970	8,798,724
Vanguard EM Bond (VEGBX)	8,860,878	-	-	799,518	9,660,395
REIT					
Vanguard Real Estate Index Fund (VGSNX)	13,893,100	-	-	1,891,389	15,784,489
Disbursement & MF Cash	1,706,370	-	258,233	146,841	2,111,444
Total Fund Performance	253,142,827	-	258,233	29,249,767	282,650,827
NMA	3,360,184	-	-2,161,094	-	1,199,089
Total Fund	256,503,010	-	-1,902,861	29,249,767	283,849,917

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 6.9% (net of fees), with an emphasis over a longer term (fifteen year) trailing period.

Asset Allocation Ranges (Based on IPS Addendum)

Asset Class	Minimum	Target	Maximum
Large Cap Core	0%	5%	10%
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%	30%	50%
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.

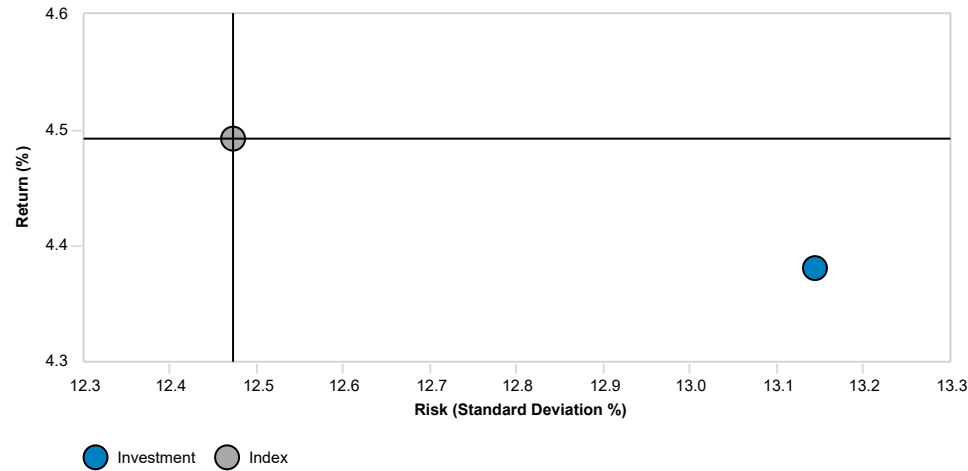
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.38	13.14	0.13	104.80	8	106.50	4
Index	4.49	12.47	0.14	100.00	8	100.00	4

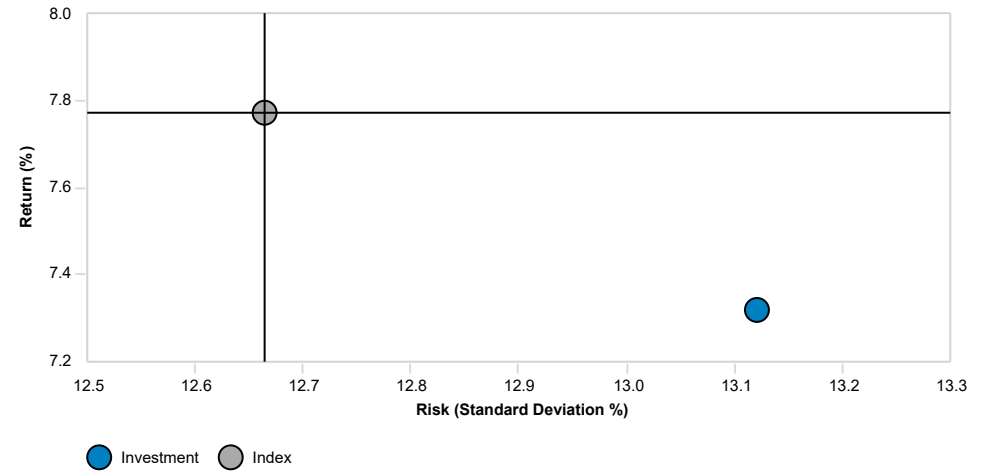
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.32	13.12	0.43	102.01	14	105.85	6
Index	7.77	12.66	0.47	100.00	14	100.00	6

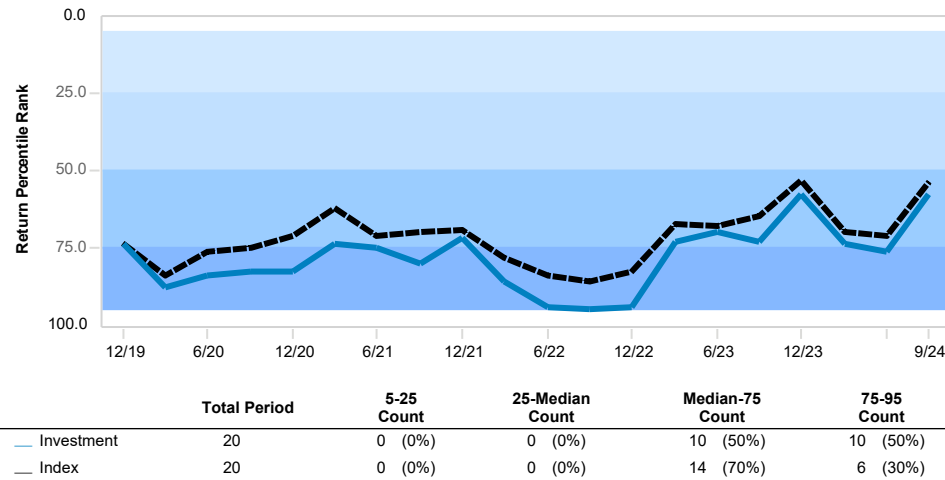
Risk and Return 3 Years



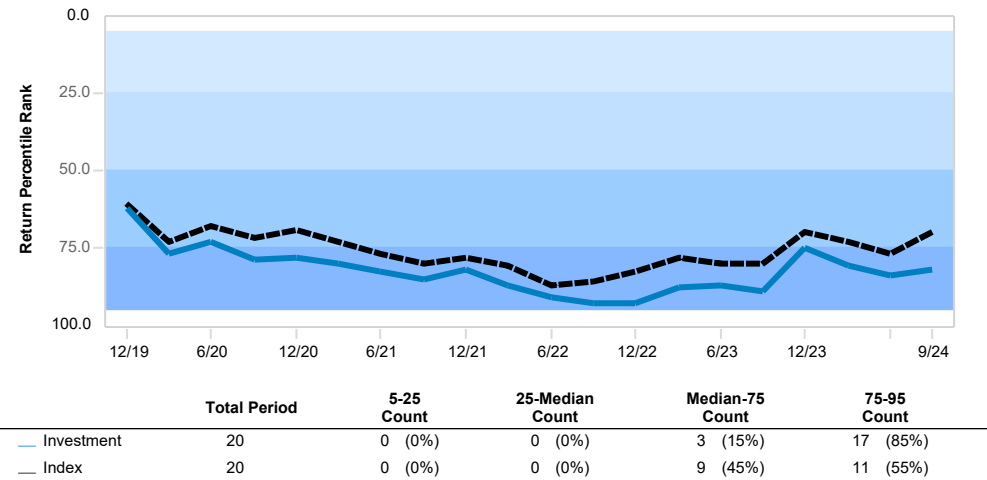
Risk and Return 5 Years



3 Year Rolling Percentile Rank All Public Plans-Total Fund

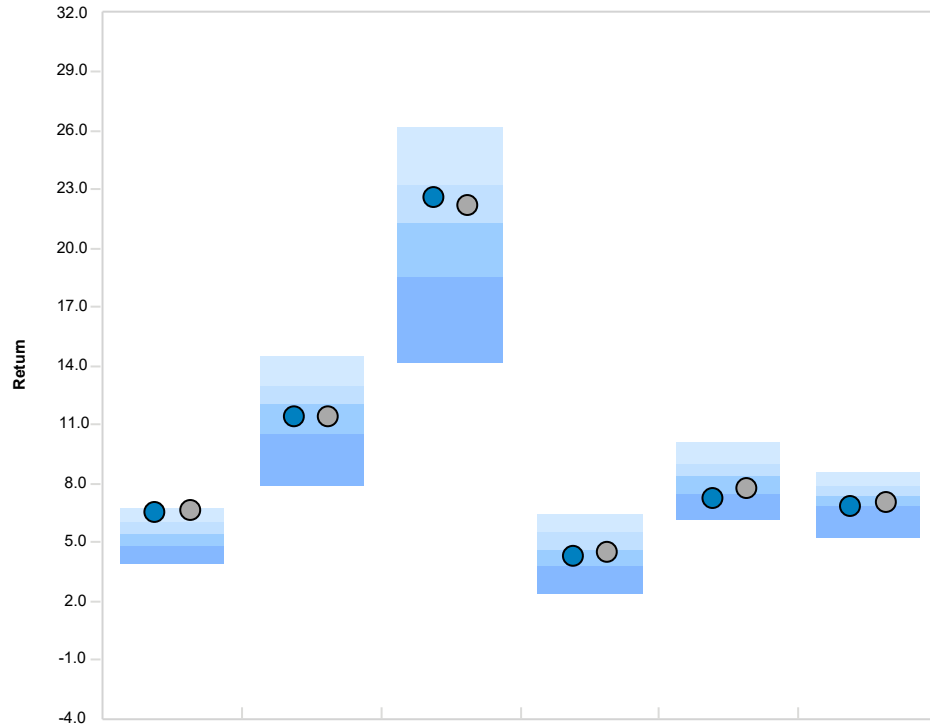


5 Year Rolling Percentile Rank All Public Plans-Total Fund

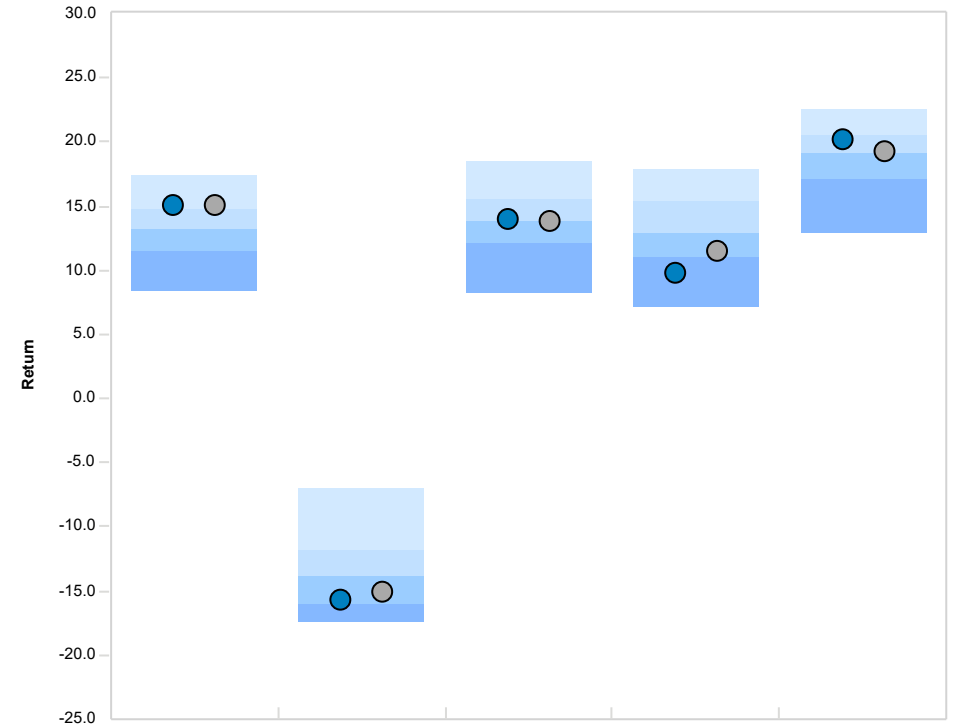


Does not include Non-Measured Assets (NMA).

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



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



Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 04/01/2001	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	59,528,253	-30,091,849	253,214,423	282,650,827

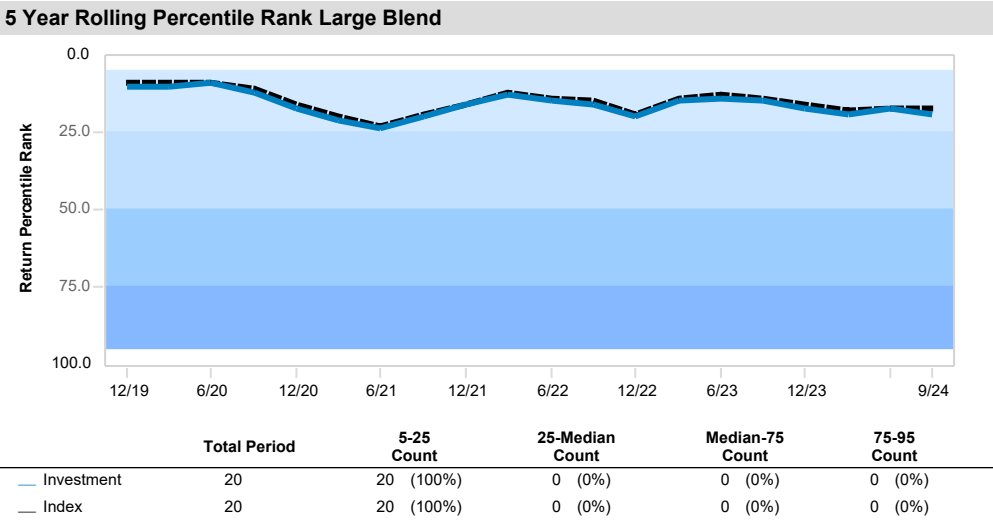
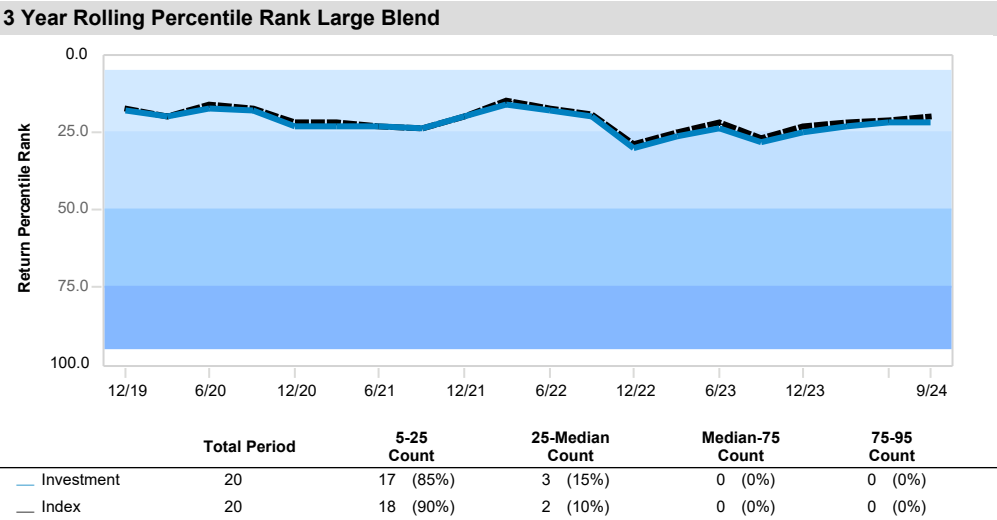
Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	0.11	4.47	10.06	-3.29	3.29	4.72
Index	0.28	4.20	9.66	-2.92	3.37	4.56

Does not include Non-Measured Assets (NMA).

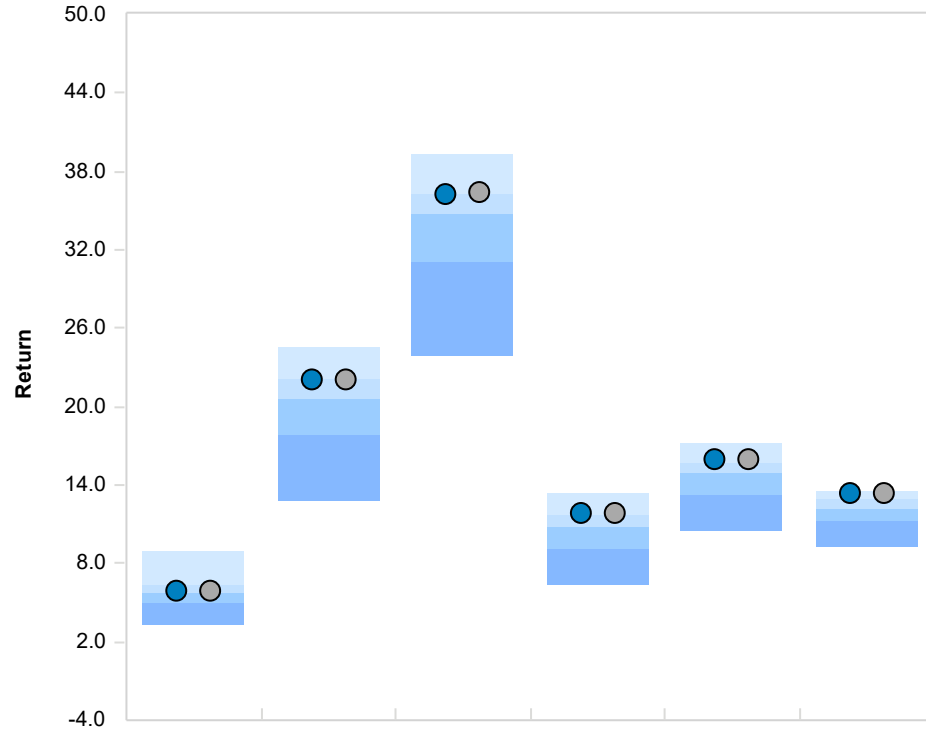
Historical Statistics 3 Years							
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.87	17.28	0.54	99.93	8	100.07	4
Index	11.91	17.28	0.55	100.00	8	100.00	4

Historical Statistics 5 Years							
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	15.95	17.89	0.79	99.95	15	100.05	5
Index	15.98	17.89	0.79	100.00	15	100.00	5



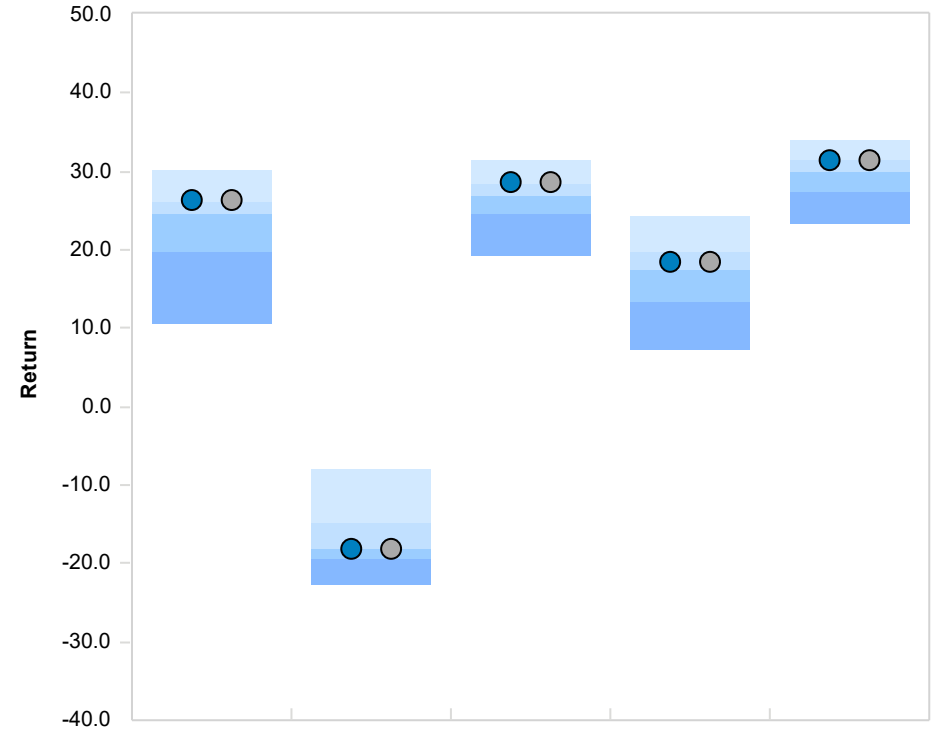
Inception date for VINIX is 12/2020. Manager returns for VINIX have been used for this report.

Peer Group Analysis - Large Blend



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	5.88 (42)	22.04 (25)	36.30 (26)	11.87 (22)	15.95 (19)	13.35 (8)
Index	5.89 (41)	22.08 (24)	36.35 (25)	11.91 (20)	15.98 (17)	13.38 (7)
Median	5.79	20.58	34.79	10.73	14.87	12.11

Peer Group Analysis - Large Blend



	2023	2022	2021	2020	2019
Investment	26.24 (25)	-18.14 (50)	28.67 (21)	18.39 (36)	31.46 (22)
Index	26.29 (24)	-18.11 (49)	28.71 (20)	18.40 (35)	31.49 (22)
Median	24.50	-18.15	26.81	17.34	29.98

Financial Reconciliation Since Inception Ending September 30, 2024

No data found.

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	4.28 (19)	10.54 (43)	11.68 (47)	-3.28 (50)	8.73 (22)	7.49 (21)
Index	4.28 (18)	10.56 (42)	11.69 (46)	-3.27 (49)	8.74 (22)	7.50 (20)
Median	3.23	10.45	11.64	-3.28	8.03	6.53

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

Fund Information As of 09/30/2024

Fund Name :	Vanguard Institutional Index I	Portfolio Assets :	\$126,604 Million
Fund Family :	Vanguard	Portfolio Manager :	Birkett,N/Louie,M
Ticker :	VINIX	PM Tenure :	6 Years 10 Months
Inception Date :	07/31/1990	Fund Style :	Large Blend
Fund Assets :	\$309,798 Million	Style Benchmark :	Russell 1000 Index
Portfolio Turnover :	3%		

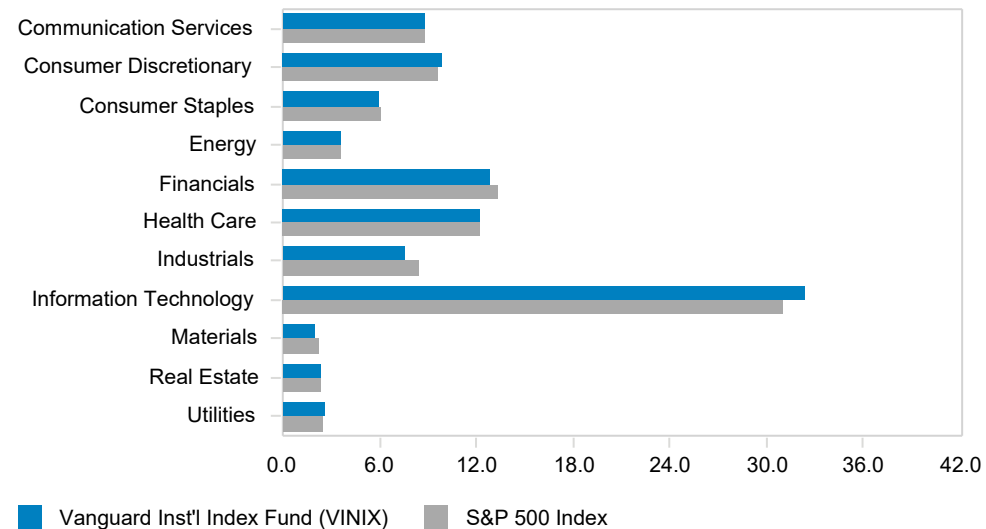
Portfolio Characteristics As of 08/31/2024

	Portfolio	Benchmark
Total Securities	506	503
Avg. Market Cap	-	-
Price/Earnings (P/E)	22.85	27.18
Price/Book (P/B)	4.22	5.02
Dividend Yield	1.45	1.33
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (3 Years, Monthly)	1.00	1.00

Top Ten Securities As of 08/31/2024

Apple Inc	7.0 %
Microsoft Corp	6.5 %
NVIDIA Corp	6.2 %
Amazon.com Inc	3.4 %
Meta Platforms Inc Class A	2.4 %
Alphabet Inc Class A	2.0 %
Berkshire Hathaway Inc Class B	1.8 %
Alphabet Inc Class C	1.7 %
Eli Lilly and Co	1.6 %
Broadcom Inc	1.5 %
Total	34.2 %

Sector Weights As of 08/31/2024



Region (%) As of 09/30/2024

No data found.

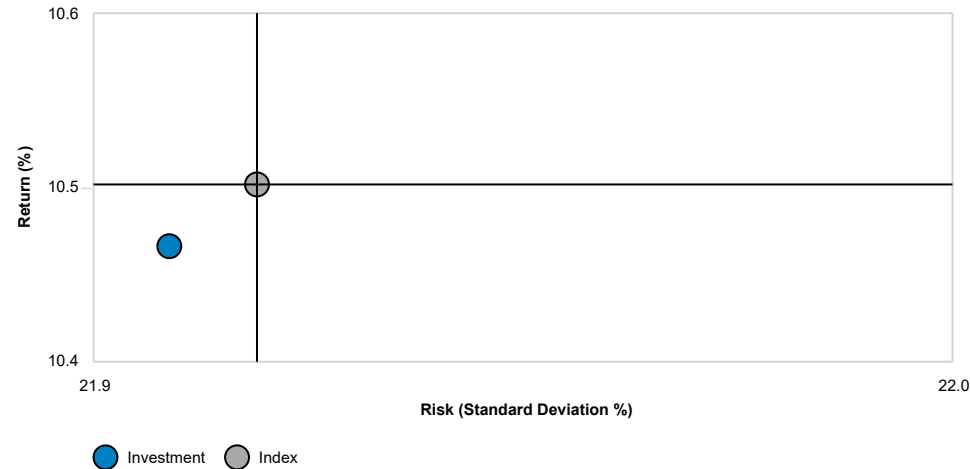
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.47	21.91	0.41	99.91	7	100.01	5
Index	10.50	21.92	0.41	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	19.01	21.32	0.82	99.92	14	100.01	6
Index	19.05	21.33	0.82	100.00	14	100.00	6

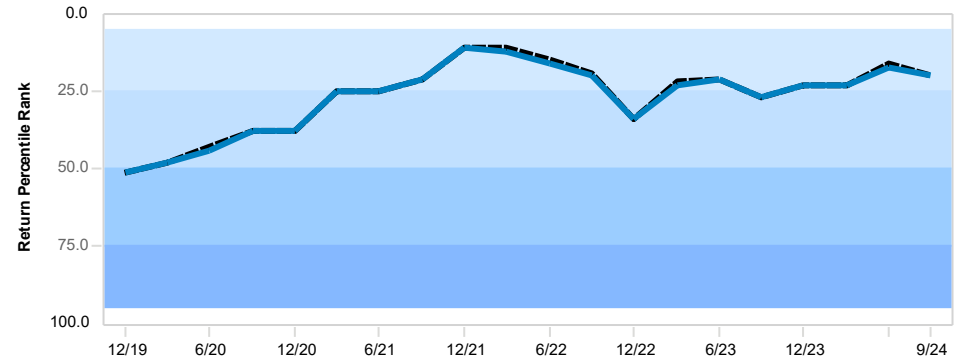
Risk and Return 3 Years



Risk and Return 5 Years

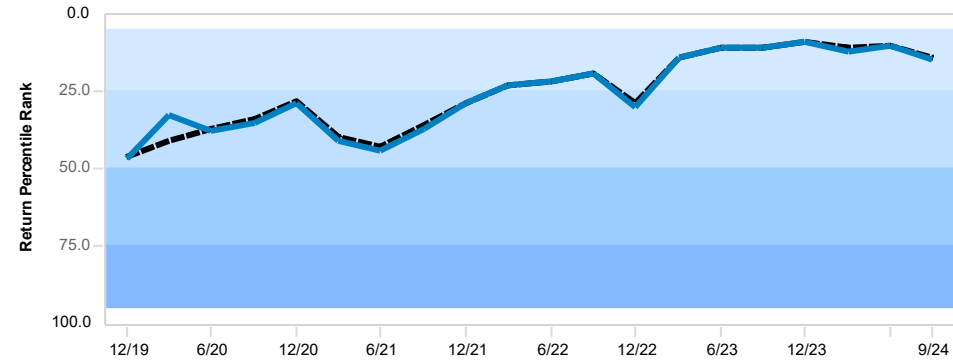


3 Year Rolling Percentile Rank Large Growth



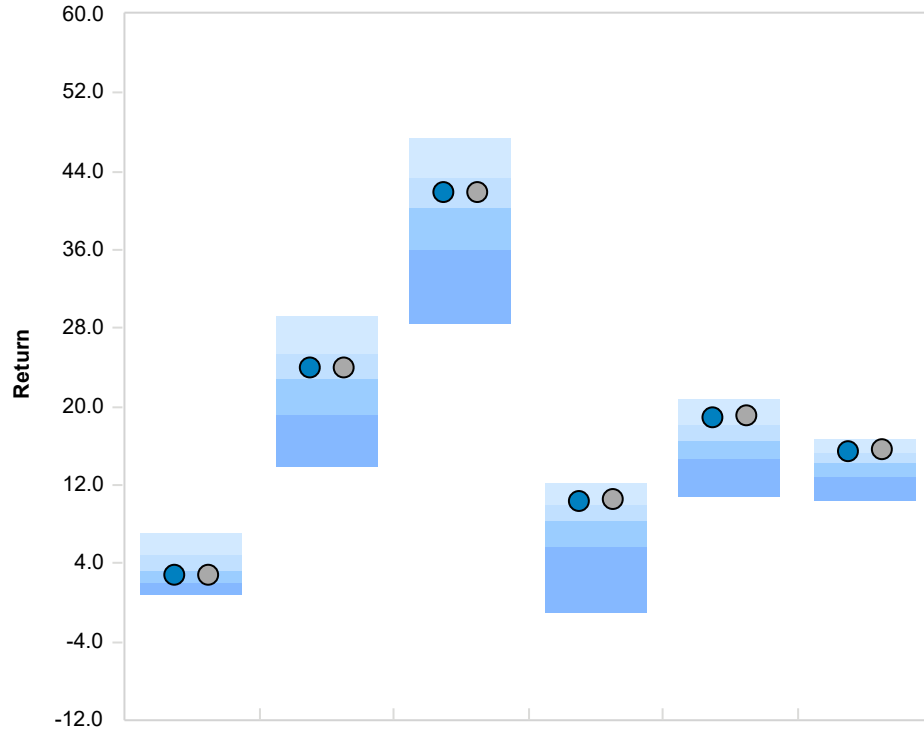
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	13 (65%)	6 (30%)	1 (5%)	0 (0%)
Index	20	13 (65%)	6 (30%)	1 (5%)	0 (0%)

5 Year Rolling Percentile Rank Large Growth



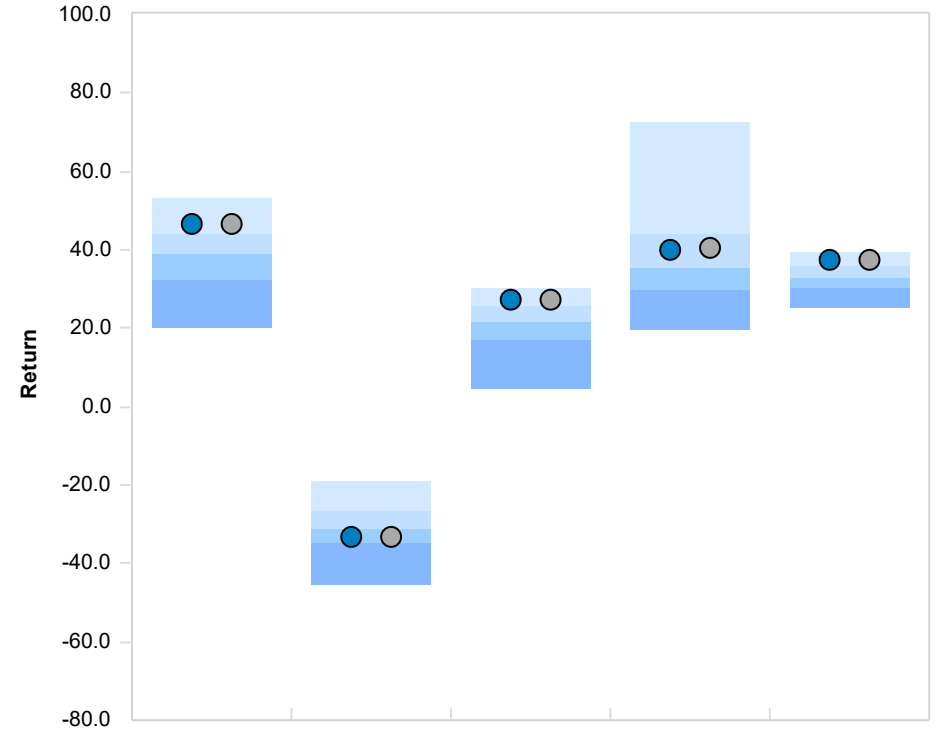
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	10 (50%)	10 (50%)	0 (0%)	0 (0%)
Index	20	10 (50%)	10 (50%)	0 (0%)	0 (0%)

Peer Group Analysis - Large Growth



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	2.92 (55)	24.04 (37)	41.91 (39)	10.47 (20)	19.01 (15)	15.55 (18)
Index	2.93 (55)	24.07 (37)	41.97 (38)	10.50 (20)	19.05 (14)	15.59 (18)
Median	3.20	22.81	40.20	8.24	16.48	14.15

Peer Group Analysis - Large Growth



	2023	2022	2021	2020	2019
Investment	46.78 (16)	-33.14 (68)	27.27 (18)	40.20 (33)	37.25 (13)
Index	46.86 (16)	-33.13 (68)	27.30 (17)	40.27 (33)	37.31 (13)
Median	39.00	-30.94	21.92	35.65	32.80

Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 05/01/2010	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	16,642,537	-30,644,975	28,259,259	14,256,821

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	8.66	10.91	14.41	-3.69	13.61	17.25
Index	8.68	10.91	14.42	-3.68	13.63	17.27

Fund Information As of 09/30/2024

Fund Name : Vanguard Growth Index Institutional
Fund Family : Vanguard
Ticker : VIGIX
Inception Date : 05/14/1998
Fund Assets : \$261,402 Million
Portfolio Turnover : 5%

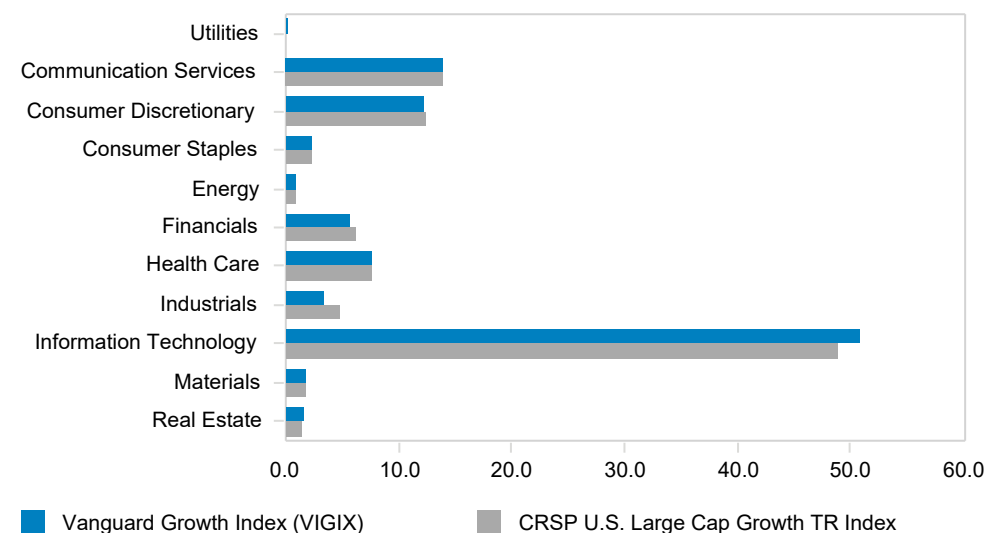
Portfolio Assets : \$36,631 Million
Portfolio Manager : Nejman,W/O'Reilly,G
PM Tenure : 29 Years 9 Months
Fund Style : Large Growth
Style Benchmark : Russell 1000 Growth Index

Portfolio Characteristics As of 08/31/2024

	Portfolio	Benchmark
Total Securities	191	187
Avg. Market Cap	-	-
Price/Earnings (P/E)	32.21	37.28
Price/Book (P/B)	8.98	11.07
Dividend Yield	0.56	0.53
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (5 Years, Monthly)	1.00	1.00

Top Ten Securities As of 08/31/2024

Apple Inc	13.0 %
Microsoft Corp	12.1 %
NVIDIA Corp	10.9 %
Amazon.com Inc	4.6 %
Meta Platforms Inc Class A	4.5 %
Alphabet Inc Class A	3.7 %
Eli Lilly and Co	3.2 %
Alphabet Inc Class C	3.1 %
Tesla Inc	2.3 %
Visa Inc Class A	1.7 %
Total	59.0 %

Sector Weights As of 08/31/2024**Region (%) As of 09/30/2024**

No data found.

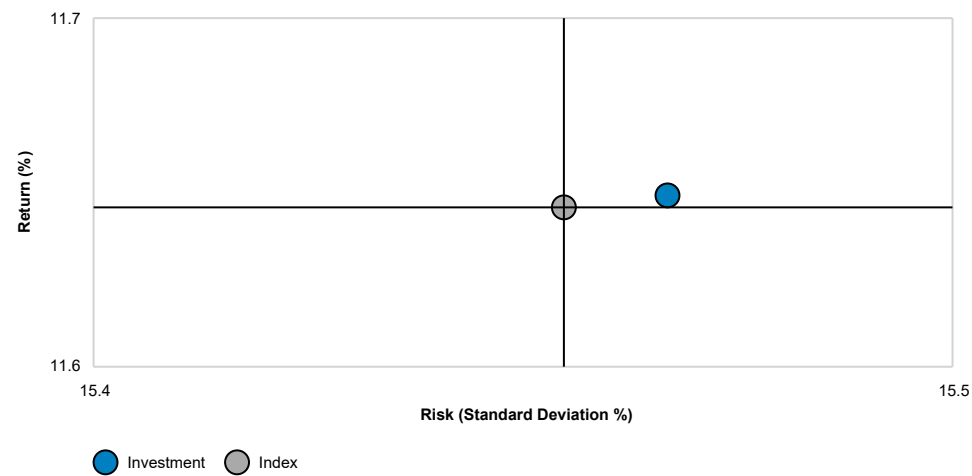
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.65	15.47	0.57	100.05	7	100.05	5
Index	11.65	15.45	0.57	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	12.27	17.20	0.63	100.03	13	100.00	7
Index	12.26	17.19	0.63	100.00	13	100.00	7

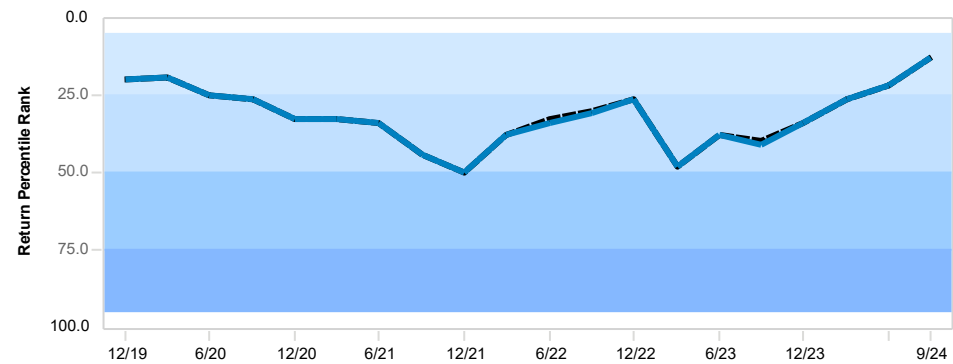
Risk and Return 3 Years



Risk and Return 5 Years

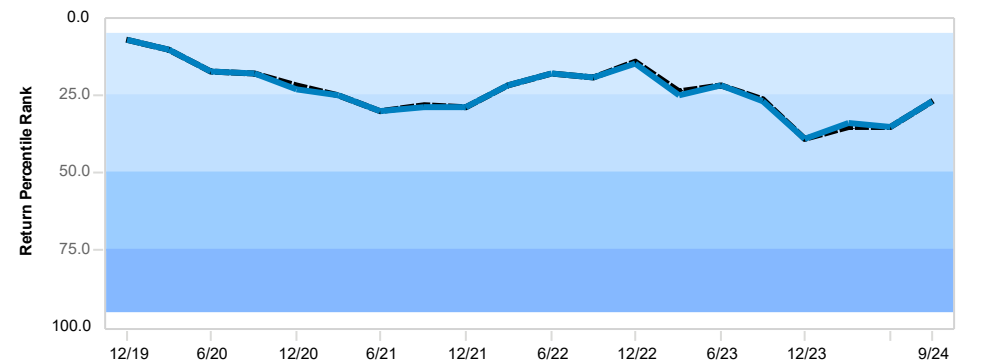


3 Year Rolling Percentile Rank IM U.S. Large Cap Value Equity (MF)



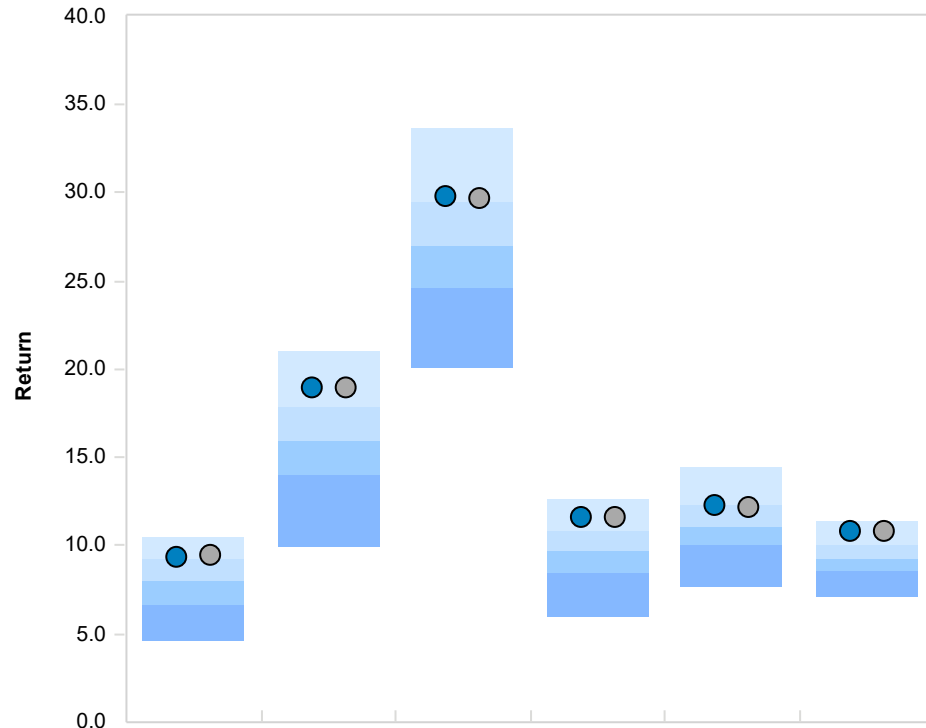
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	5 (25%)	15 (75%)	0 (0%)	0 (0%)
Index	20	5 (25%)	15 (75%)	0 (0%)	0 (0%)

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



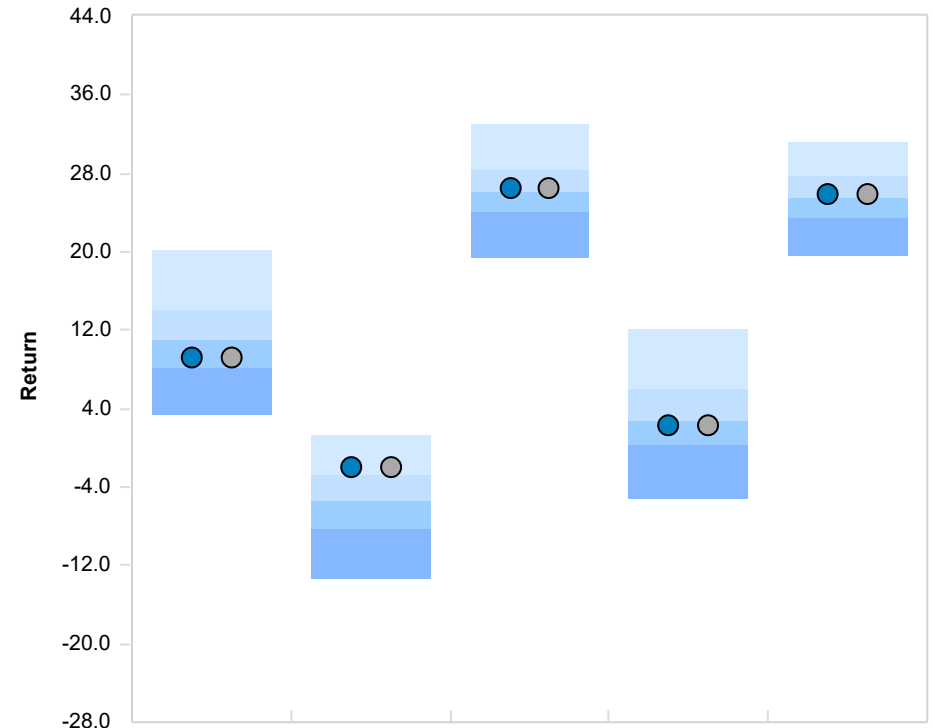
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	12 (60%)	8 (40%)	0 (0%)	0 (0%)
Index	20	12 (60%)	8 (40%)	0 (0%)	0 (0%)

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



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	9.43 (21)	18.98 (14)	29.79 (22)	11.65 (13)	12.27 (27)	10.80 (11)
Index	9.44 (21)	18.99 (14)	29.71 (23)	11.65 (13)	12.26 (27)	10.80 (11)
Median	8.05	15.92	27.06	9.66	11.12	9.23

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



	2023	2022	2021	2020	2019
Investment	9.26 (66)	-2.05 (19)	26.48 (44)	2.30 (56)	25.83 (47)
Index	9.17 (67)	-2.01 (19)	26.51 (44)	2.26 (56)	25.85 (46)
Median	11.00	-5.40	26.02	2.73	25.58

Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 07/01/2009	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	1,021,656	-4,963,564	17,579,509	13,637,601

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	-0.93	9.76	9.09	-2.33	3.57	-1.00
Index	-0.93	9.75	9.01	-2.33	3.57	-1.00

Fund Information As of 09/30/2024

Fund Name : Vanguard Value Index I
Fund Family : Vanguard
Ticker : VIVIX
Inception Date : 07/02/1998
Fund Assets : \$186,001 Million
Portfolio Turnover : 10%

Portfolio Assets : \$18,444 Million
Portfolio Manager : Nejman,W/O'Reilly,G
PM Tenure : 29 Years 9 Months
Fund Style : Large Value
Style Benchmark : Russell 1000 Value Index

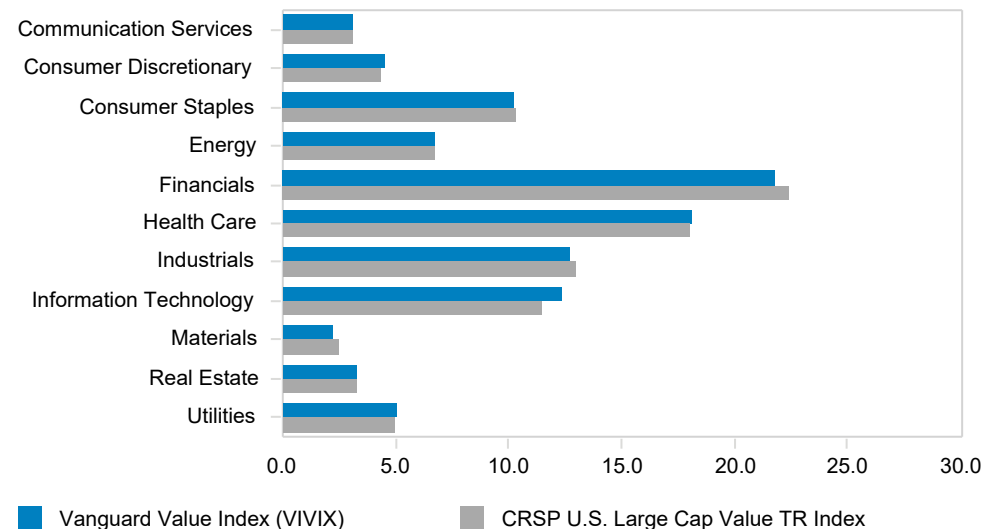
Portfolio Characteristics As of 08/31/2024

	Portfolio	Benchmark
Total Securities	345	340
Avg. Market Cap	-	-
Price/Earnings (P/E)	17.41	20.94
Price/Book (P/B)	2.67	3.11
Dividend Yield	2.31	2.22
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (5 Years, Monthly)	1.00	1.00

Top Ten Securities As of 08/31/2024

Broadcom Inc	3.4 %
Berkshire Hathaway Inc Class B	3.2 %
JPMorgan Chase & Co	2.9 %
UnitedHealth Group Inc	2.5 %
Exxon Mobil Corp	2.4 %
Procter & Gamble Co	1.8 %
Johnson & Johnson	1.8 %
The Home Depot Inc	1.7 %
AbbVie Inc	1.6 %
Walmart Inc	1.6 %
Total	22.9 %

Sector Weights As of 08/31/2024



Region (%) As of 09/30/2024

No data found.

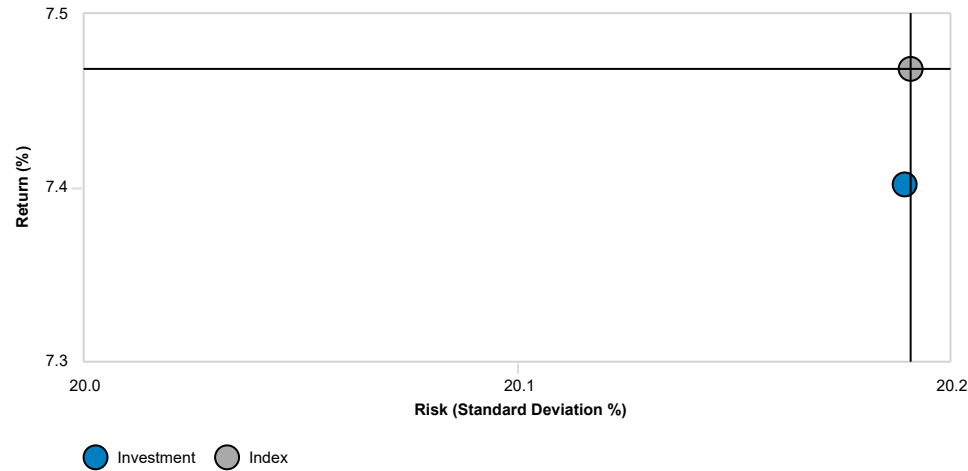
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.40	20.19	0.29	99.90	7	100.11	5
Index	7.47	20.19	0.29	100.00	7	100.00	5

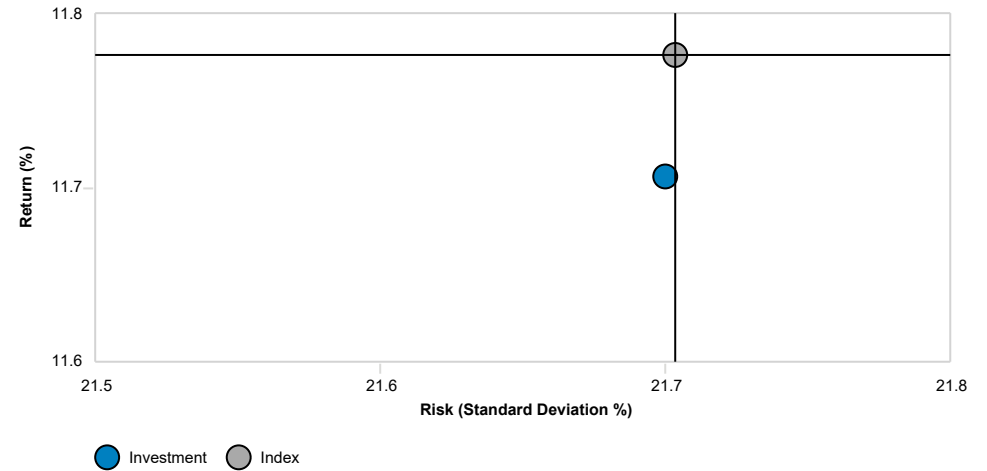
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.71	21.70	0.52	99.88	13	100.09	7
Index	11.78	21.70	0.52	100.00	13	100.00	7

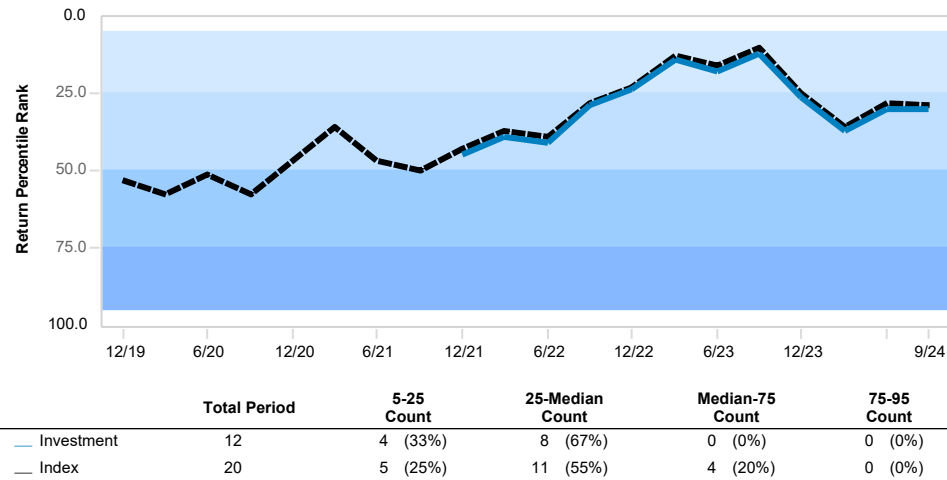
Risk and Return 3 Years



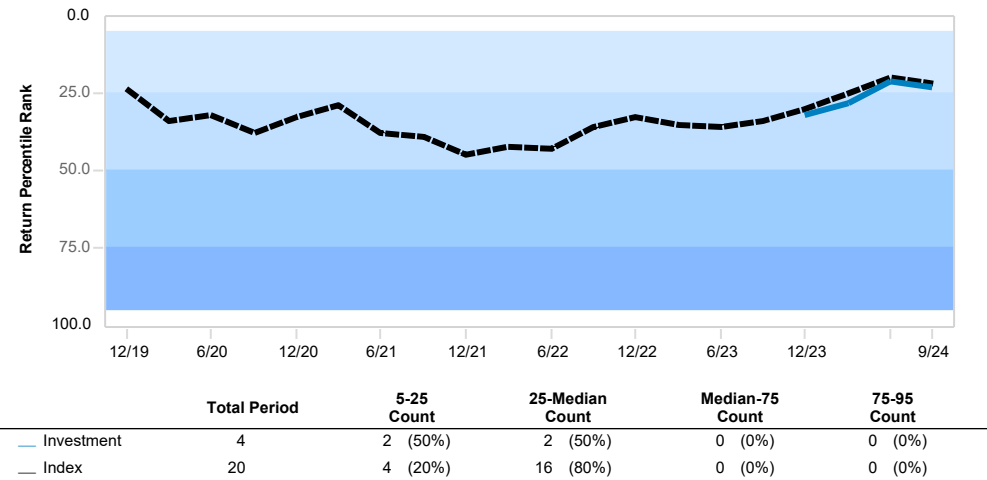
Risk and Return 5 Years



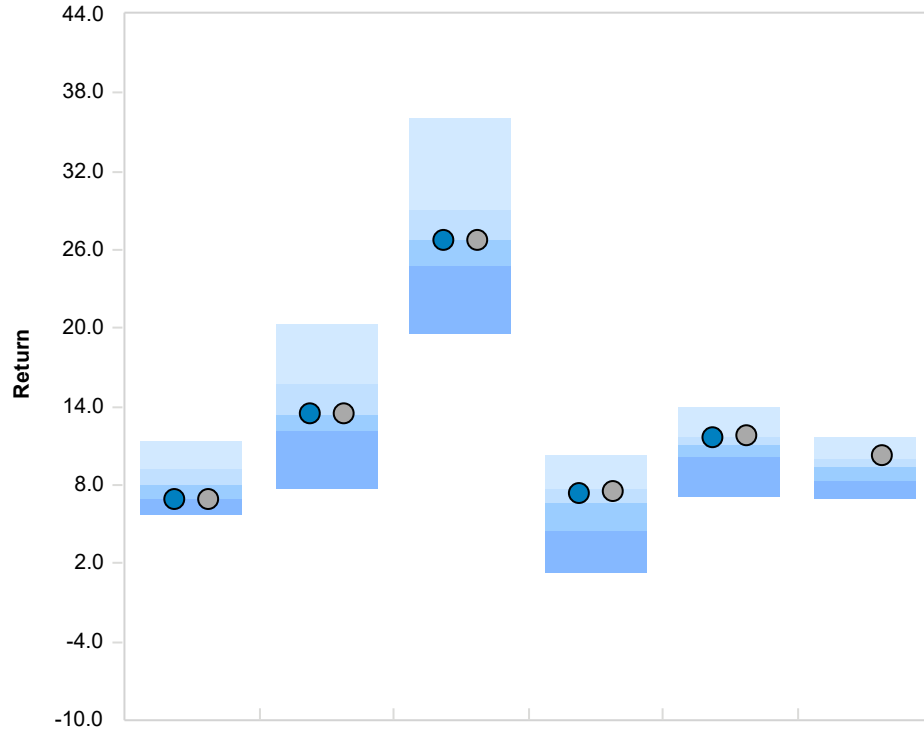
3 Year Rolling Percentile Rank Mid-Cap Blend



5 Year Rolling Percentile Rank Mid-Cap Blend

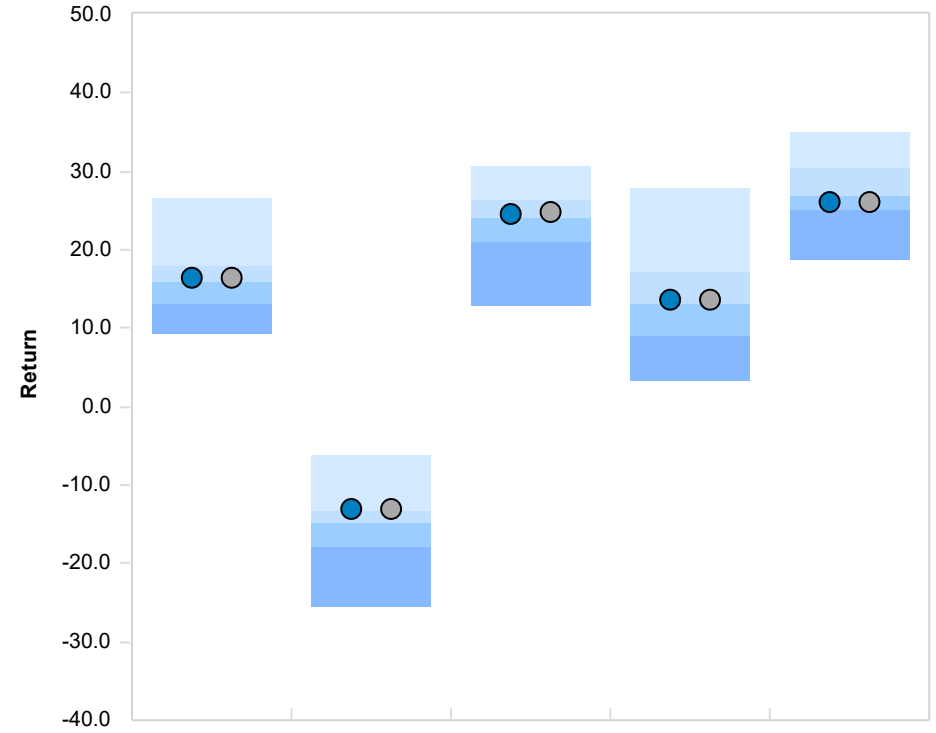


Peer Group Analysis - Mid-Cap Blend



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	6.92 (77)	13.49 (46)	26.71 (52)	7.40 (30)	11.71 (23)	N/A
Index	6.94 (76)	13.54 (45)	26.79 (51)	7.47 (29)	11.78 (22)	10.32 (15)
Median	8.03	13.33	26.81	6.59	11.09	9.42

Peer Group Analysis - Mid-Cap Blend



	2023	2022	2021	2020	2019
Investment	16.36 (39)	-13.11 (24)	24.67 (39)	13.58 (39)	26.13 (56)
Index	16.44 (37)	-13.06 (23)	24.76 (38)	13.66 (38)	26.20 (56)
Median	15.89	-14.77	24.12	13.09	26.87

Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 12/01/2018	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	21,384,601	-9,500,000	15,679,052	27,563,654

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	-3.46 (39)	9.94 (30)	11.65 (48)	-4.22 (41)	4.83 (41)	3.79 (45)
Index	-3.45 (38)	9.95 (29)	11.67 (47)	-4.20 (40)	4.85 (40)	3.81 (44)
Median	-3.58	9.33	11.60	-4.32	4.74	3.73

Fund Information As of 09/30/2024

Fund Name :	Vanguard S&P Mid-Cap 400 Index I	Portfolio Assets :	\$1,528 Million
Fund Family :	Vanguard	Portfolio Manager :	Narzikul,K
Ticker :	VSPMX	PM Tenure :	1 Year 7 Months
Inception Date :	03/28/2011	Fund Style :	Mid-Cap Blend
Fund Assets :	\$3,779 Million	Style Benchmark :	Russell Midcap Index
Portfolio Turnover :	14%		

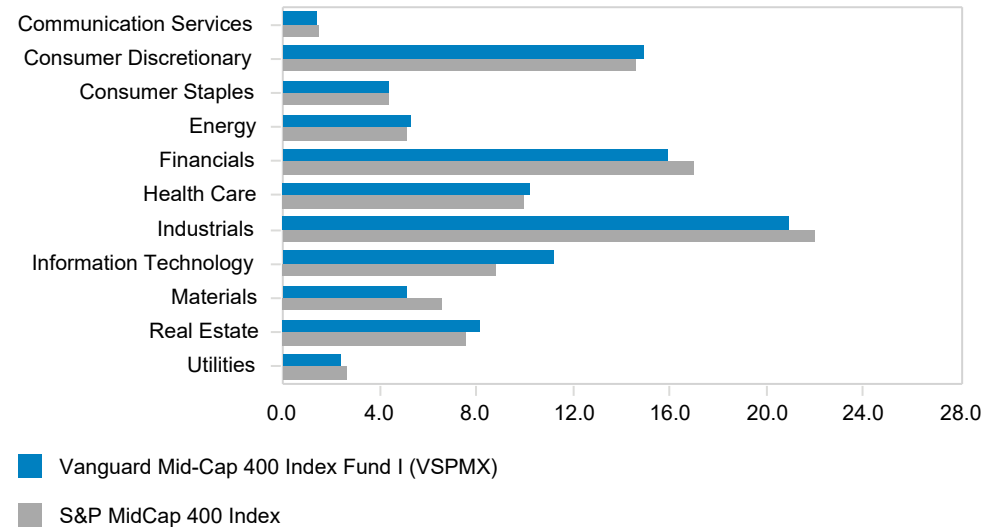
Portfolio Characteristics As of 08/31/2024

	Portfolio	Benchmark
Total Securities	405	401
Avg. Market Cap	-	-
Price/Earnings (P/E)	17.39	19.91
Price/Book (P/B)	2.27	2.80
Dividend Yield	1.64	1.50
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (5 Years, Monthly)	1.00	1.00

Top Ten Securities As of 08/31/2024

Illumina Inc	0.7 %
Carlisle Companies Inc	0.7 %
Lennox International Inc	0.7 %
EMCOR Group Inc	0.7 %
Avantor Inc	0.6 %
Biomarin Pharmaceutical Inc	0.6 %
Williams-Sonoma Inc	0.6 %
Burlington Stores Inc	0.6 %
Reliance Inc	0.6 %
Manhattan Associates Inc	0.6 %
Total	6.4 %

Sector Weights As of 08/31/2024



Region (%) As of 09/30/2024

No data found.

Strategy Review

Vanguard Small-Cap 600 Index I (VSMX) | S&P SmallCap 600 Index

As of September 30, 2024

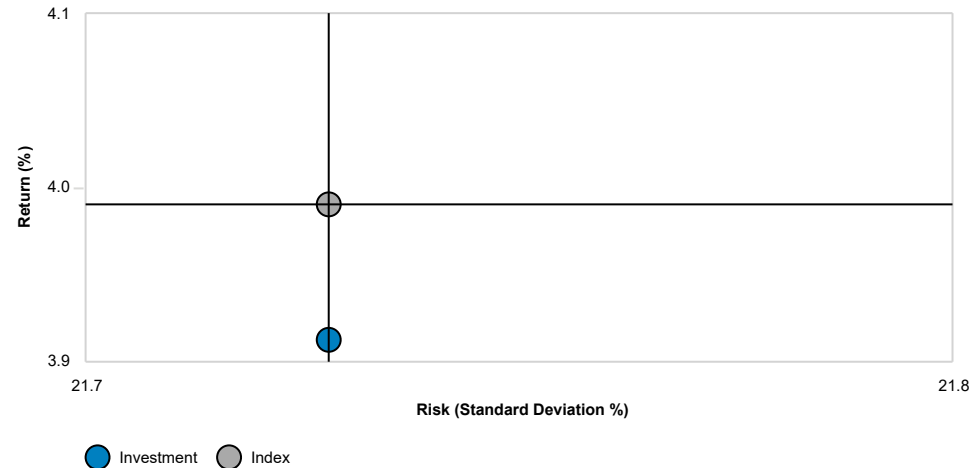
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.91	21.73	0.13	99.89	7	100.12	5
Index	3.99	21.73	0.13	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	10.18	23.58	0.43	99.99	13	100.08	7
Index	10.21	23.58	0.43	100.00	13	100.00	7

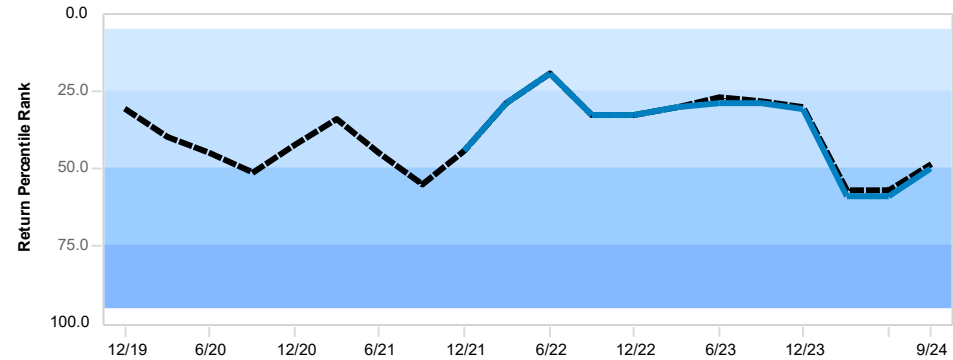
Risk and Return 3 Years



Risk and Return 5 Years

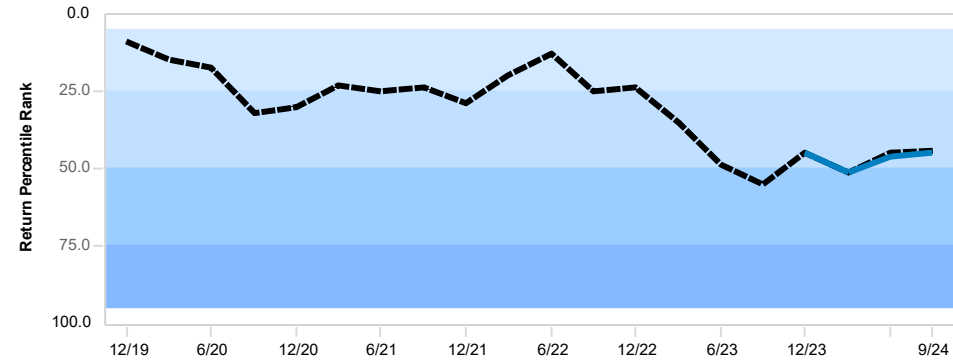


3 Year Rolling Percentile Rank Small Blend



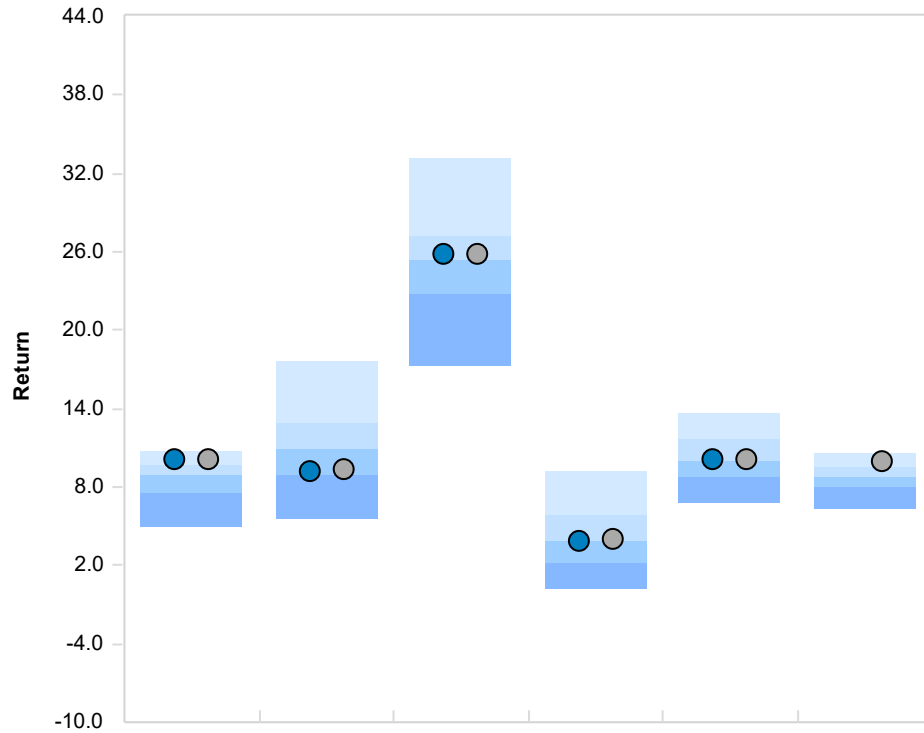
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	12	1 (8%)	9 (75%)	2 (17%)	0 (0%)
Index	20	1 (5%)	15 (75%)	4 (20%)	0 (0%)

5 Year Rolling Percentile Rank Small Blend



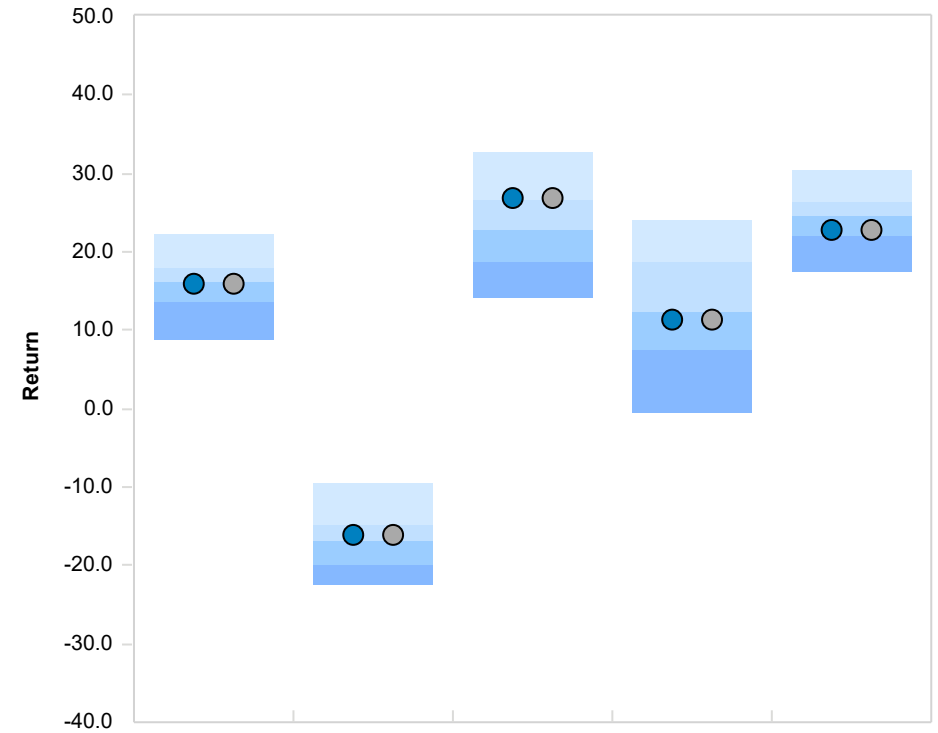
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	4	0 (0%)	3 (75%)	1 (25%)	0 (0%)
Index	20	10 (50%)	8 (40%)	2 (10%)	0 (0%)

Peer Group Analysis - Small Blend



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	10.11 (14)	9.29 (71)	25.78 (45)	3.91 (50)	10.18 (45)	N/A
Index	10.13 (14)	9.33 (70)	25.86 (44)	3.99 (49)	10.21 (44)	10.05 (12)
Median	8.86	10.87	25.44	3.90	9.94	8.82

Peer Group Analysis - Small Blend



	2023	2022	2021	2020	2019
Investment	15.99 (55)	-16.18 (39)	26.74 (24)	11.46 (56)	22.74 (68)
Index	16.05 (54)	-16.10 (37)	26.82 (23)	11.29 (57)	22.78 (68)
Median	16.28	-16.77	22.88	12.50	24.57

Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 12/01/2018	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	10,695,104	-2,500,000	6,384,374	14,579,479

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	-3.12 (40)	2.45 (91)	15.10 (6)	-4.94 (63)	3.37 (72)	2.55 (64)
Index	-3.11 (39)	2.46 (90)	15.12 (6)	-4.93 (62)	3.38 (72)	2.57 (63)
Median	-3.36	5.54	13.00	-4.62	4.51	2.83

Fund Information As of 09/30/2024

Fund Name :	Vanguard S&P Small-Cap 600 Index I	Portfolio Assets :	\$1,948 Million
Fund Family :	Vanguard	Portfolio Manager :	Birkett,N/Narzikul,K
Ticker :	VSM SX	PM Tenure :	1 Year 7 Months
Inception Date :	04/01/2011	Fund Style :	Small Blend
Fund Assets :	\$4,962 Million	Style Benchmark :	Russell 2000 Index
Portfolio Turnover :	19%		

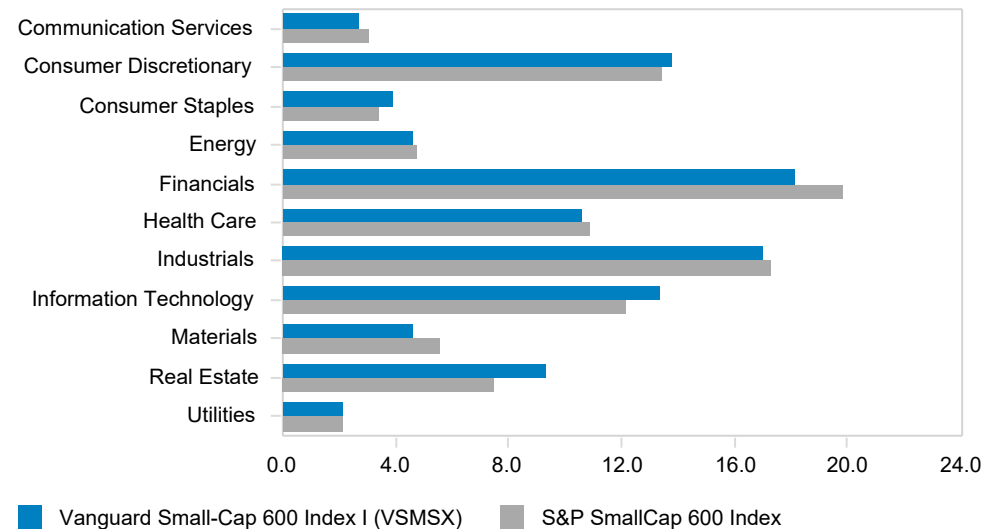
Portfolio Characteristics As of 08/31/2024

	Portfolio	Benchmark
Total Securities	607	602
Avg. Market Cap	-	-
Price/Earnings (P/E)	15.80	17.43
Price/Book (P/B)	1.68	2.27
Dividend Yield	1.89	1.72
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (5 Years, Monthly)	1.00	1.00

Top Ten Securities As of 08/31/2024

Fabrinet	0.7 %
Ensign Group Inc	0.7 %
Mueller Industries Inc	0.6 %
ATI Inc	0.6 %
Comerica Inc	0.6 %
SPX Technologies Inc	0.6 %
SPS Commerce Inc	0.6 %
Meritage Homes Corp	0.6 %
Carpenter Technology Corp	0.6 %
Glaukos Corp	0.5 %
Total	5.9 %

Sector Weights As of 08/31/2024



Region (%) As of 09/30/2024

No data found.

Strategy Review

Vanguard Developed Markets Index (VTMNX) | Vanguard Spliced Developed ex U.S. Index (Net)

As of September 30, 2024

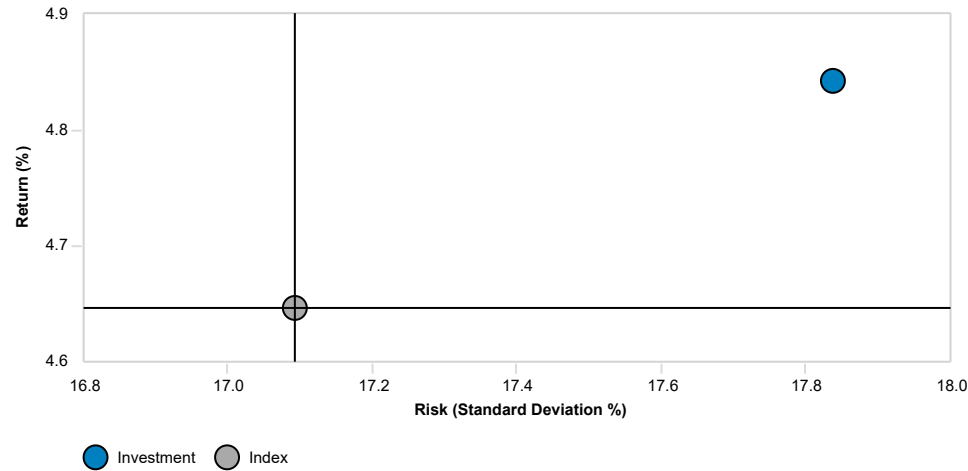
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.84	17.84	0.16	106.49	7	106.87	5
Index	4.65	17.09	0.15	100.00	7	100.00	5

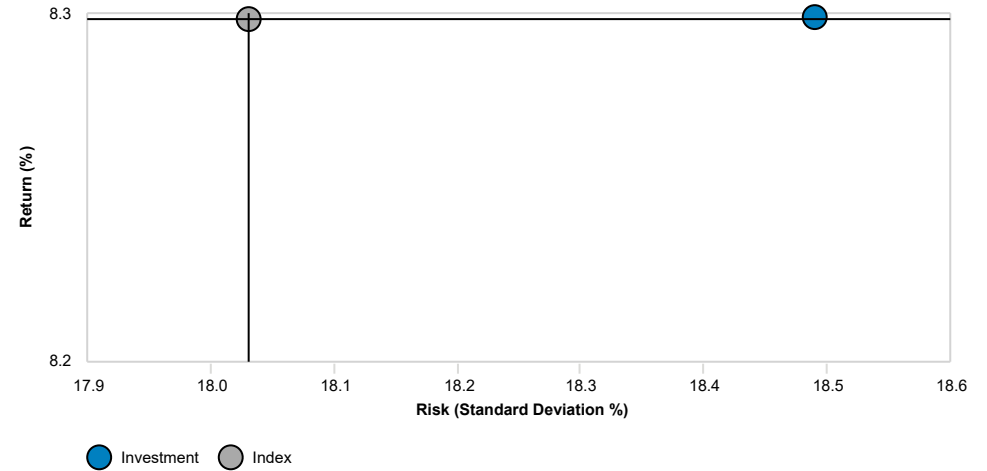
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.30	18.49	0.40	103.78	13	105.15	7
Index	8.30	18.03	0.41	100.00	13	100.00	7

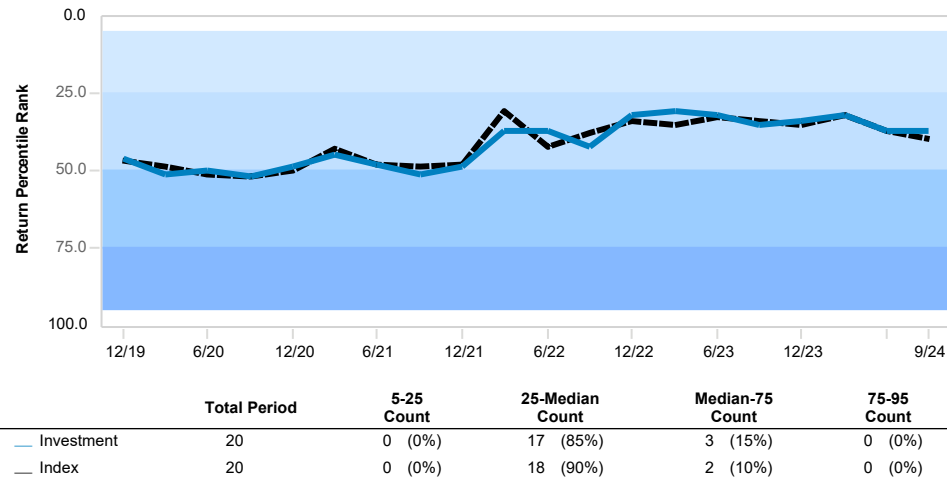
Risk and Return 3 Years



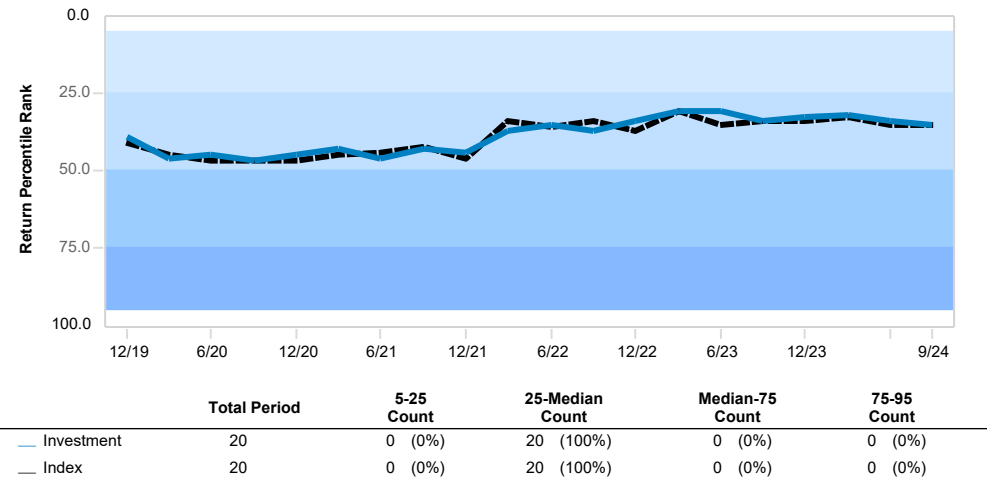
Risk and Return 5 Years



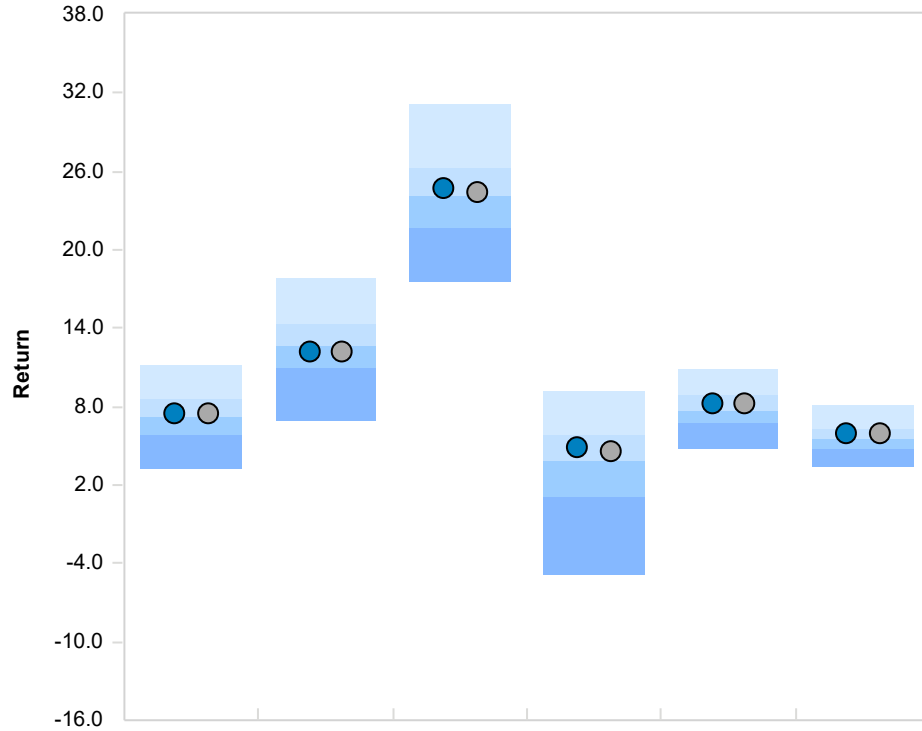
3 Year Rolling Percentile Rank Foreign



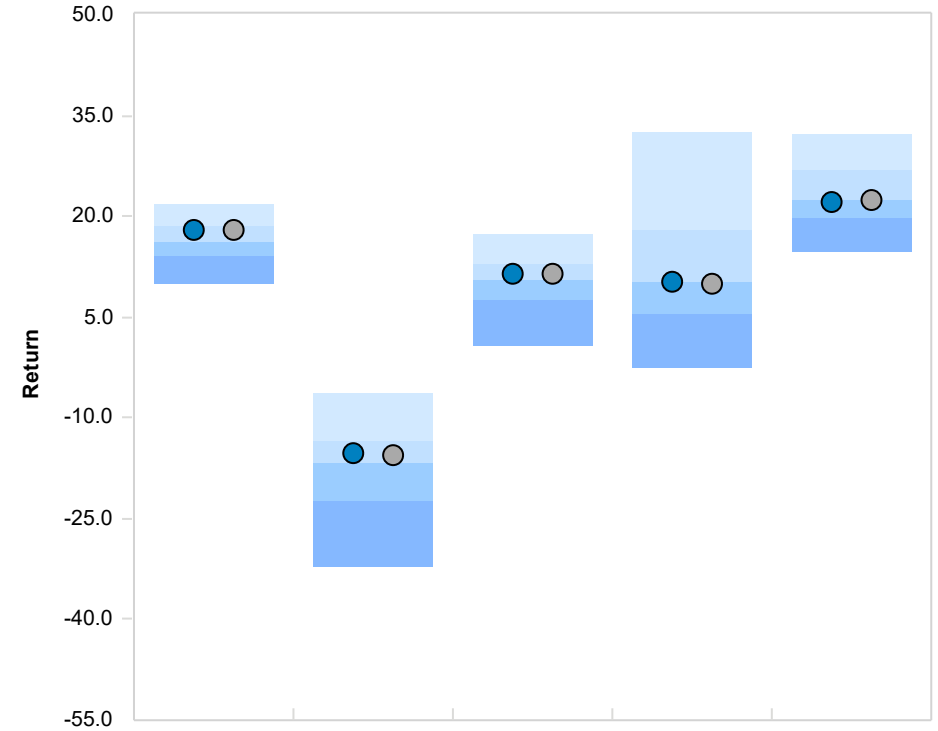
5 Year Rolling Percentile Rank Foreign



Peer Group Analysis - Foreign



Peer Group Analysis - Foreign



Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 07/01/2009	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	253,831	45,927	11,826,603	12,126,362

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	-0.75	5.14	11.18	-4.67	3.15	7.79
Index	-0.75	5.11	10.83	-3.97	3.00	7.62

Fund Information As of 09/30/2024

Fund Name : Vanguard Developed Markets Index Instl
Fund Family : Vanguard
Ticker : VTMNX
Inception Date : 01/04/2001
Fund Assets : \$206,982 Million
Portfolio Turnover : 3%

Portfolio Assets : \$15,418 Million
Portfolio Manager : Franquin,C/Perre,M
PM Tenure : 11 Years 7 Months
Fund Style : Foreign Large Blend
Style Benchmark : MSCI AC World ex USA (Net)

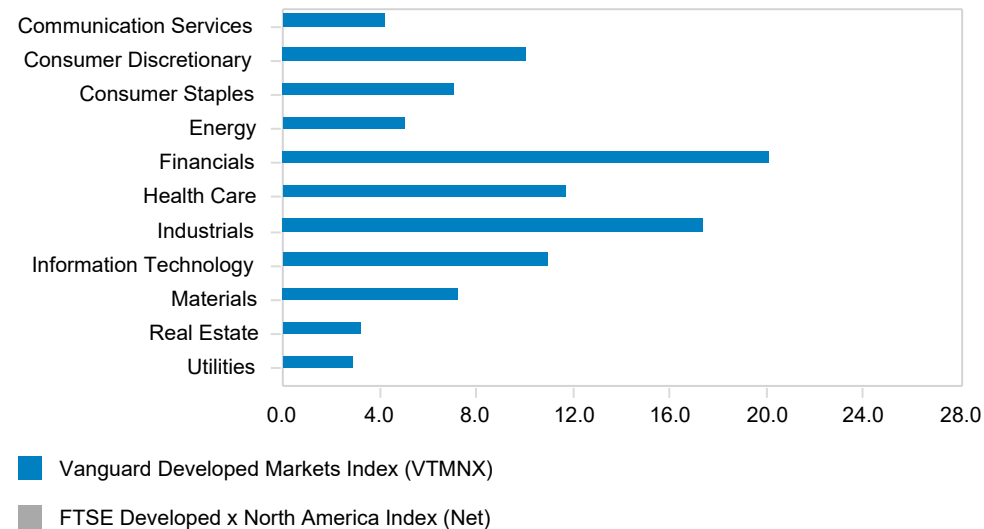
Portfolio Characteristics As of 08/31/2024

	Portfolio	Benchmark
Total Securities	4,001	N/A
Avg. Market Cap	-	-
Price/Earnings (P/E)	14.15	N/A
Price/Book (P/B)	1.60	N/A
Dividend Yield	3.32	N/A
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (5 Years, Monthly)	1.04	1.00

Top Ten Securities As of 08/31/2024

Novo Nordisk AS Class B	1.8 %
ASML Holding NV	1.5 %
Nestle SA	1.2 %
Samsung Electronics Co Ltd	1.1 %
AstraZeneca PLC	1.1 %
Novartis AG Registered Shares	1.0 %
SAP SE	1.0 %
Roche Holding AG	1.0 %
Shell PLC	0.9 %
Toyota Motor Corp	0.9 %
Total	11.4 %

Sector Weights As of 08/31/2024



Region (%) As of 09/30/2024

No data found.

Strategy Review

Vanguard Emerging Markets Index (VEMIX) | FTSE Emerging Mkts All Cap China A Inclusion Index

As of September 30, 2024

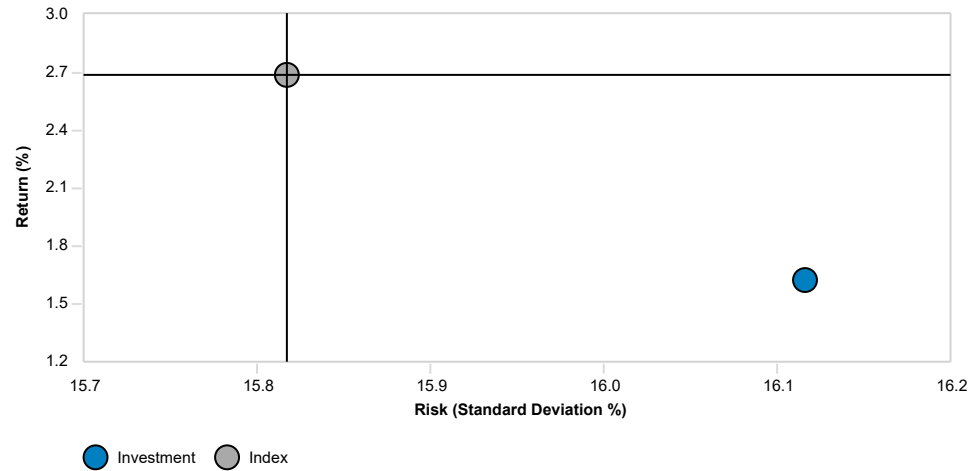
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.63	16.12	-0.03	98.60	7	103.49	5
Index	2.69	15.82	0.03	100.00	7	100.00	5

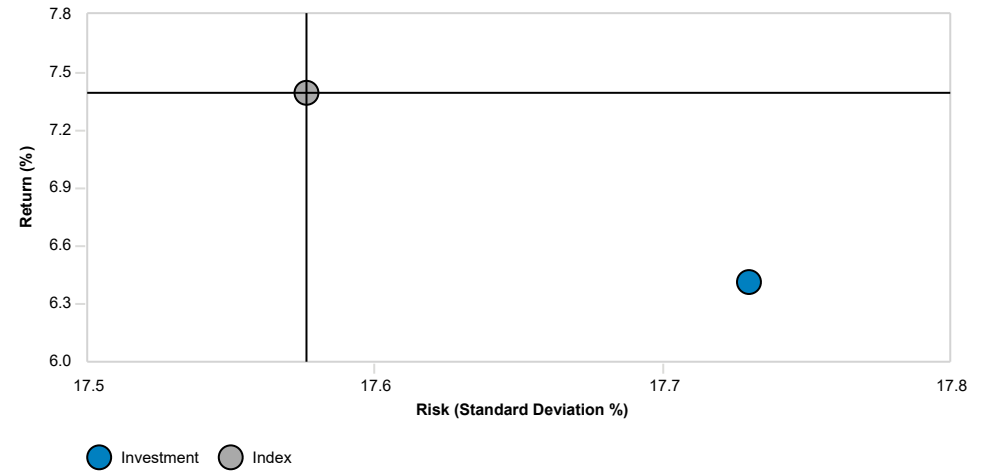
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.42	17.73	0.31	98.13	13	101.88	7
Index	7.39	17.58	0.37	100.00	13	100.00	7

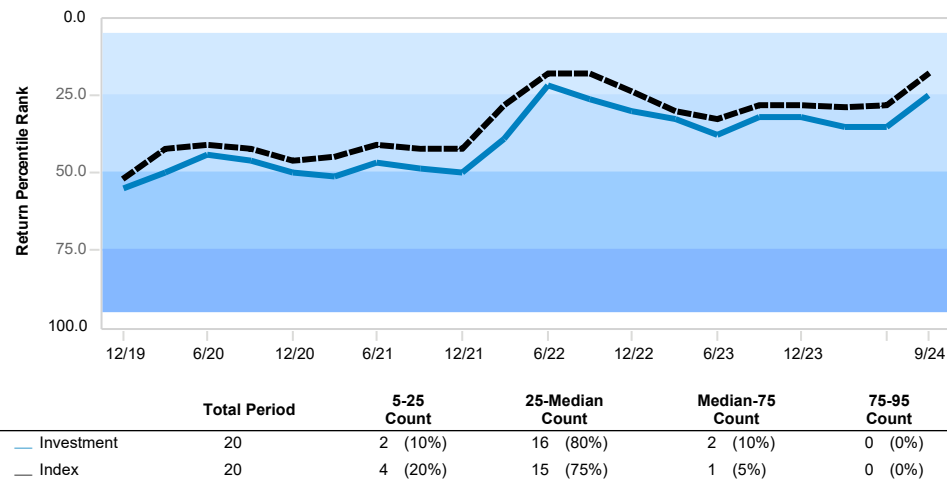
Risk and Return 3 Years



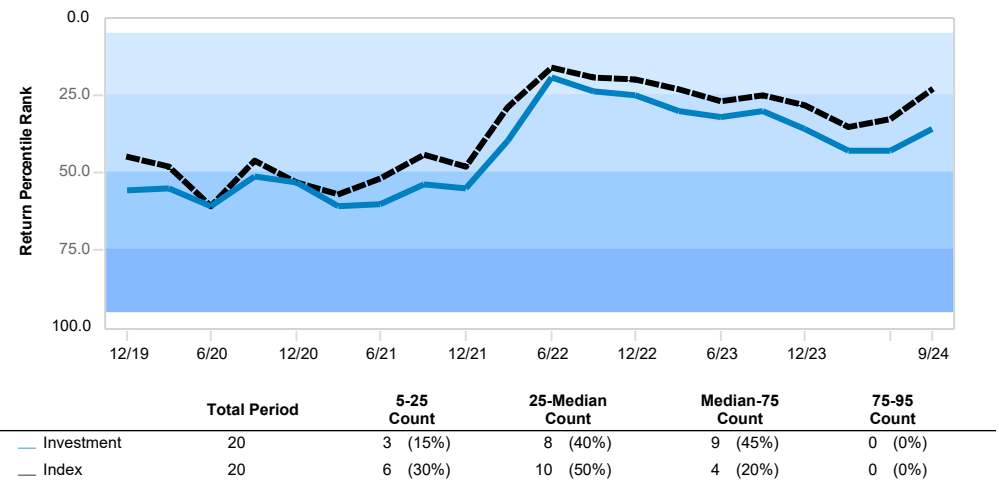
Risk and Return 5 Years



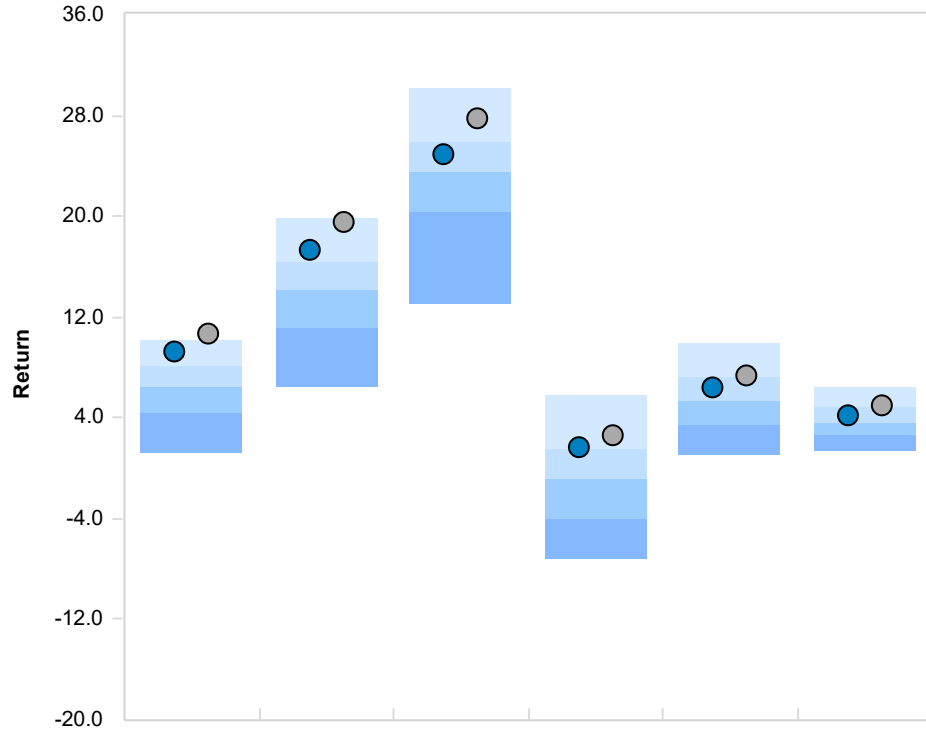
3 Year Rolling Percentile Rank Diversified Emerging Mkts



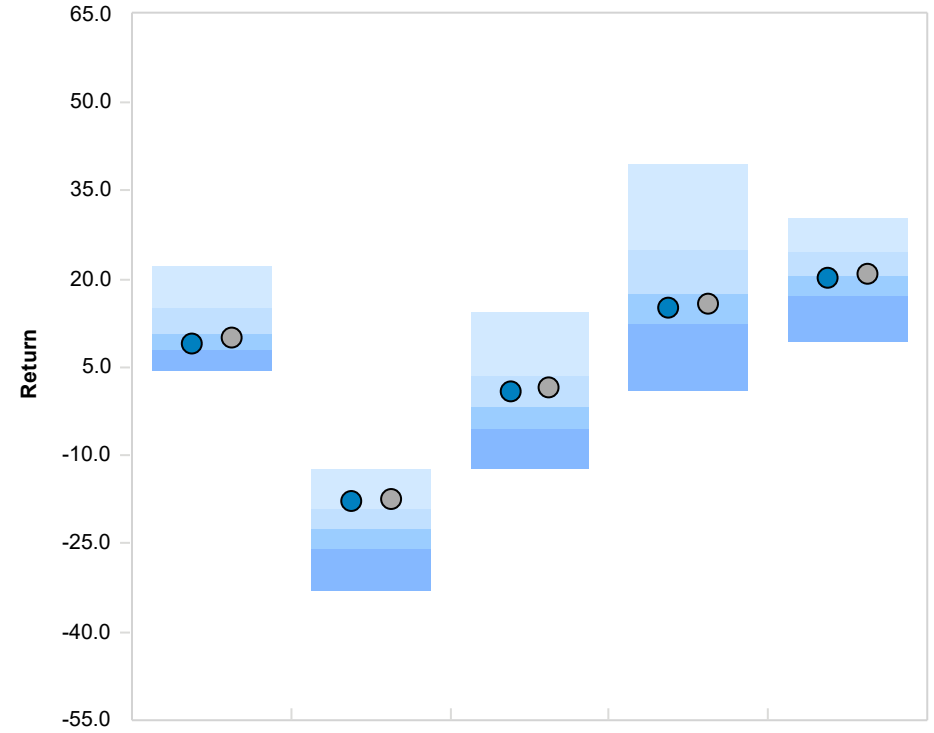
5 Year Rolling Percentile Rank Diversified Emerging Mkts



Peer Group Analysis - Diversified Emerging Mkts



Peer Group Analysis - Diversified Emerging Mkts



Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 10/01/2010	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	5,147,163	3,164,289	5,404,798	13,716,251

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	5.31	1.94	6.53	-2.14	1.09	3.60
Index	5.74	2.09	6.82	-1.35	1.19	3.11

Fund Information As of 09/30/2024

Fund Name : Vanguard Emerging Mkts Stock Idx Instl
Fund Family : Vanguard
Ticker : VEMIX
Inception Date : 06/22/2000
Fund Assets : \$115,929 Million
Portfolio Turnover : 5%

Portfolio Assets : \$8,505 Million
Portfolio Manager : Miller,J/Perre,M
PM Tenure : 16 Years 1 Month
Fund Style : Diversified Emerging Mkts
Style Benchmark : MSCI Emerging Markets (Net)

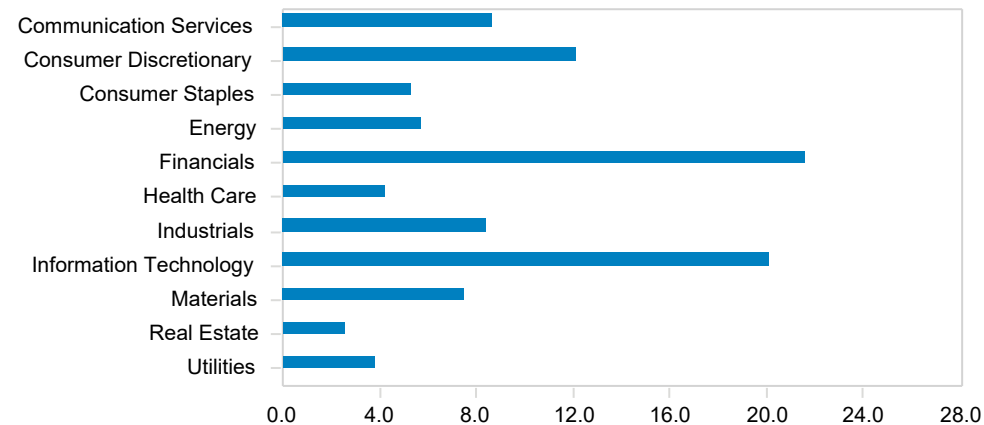
Portfolio Characteristics As of 08/31/2024

	Portfolio	Benchmark
Total Securities	4,968	N/A
Avg. Market Cap	-	-
Price/Earnings (P/E)	13.73	N/A
Price/Book (P/B)	1.55	N/A
Dividend Yield	3.13	N/A
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (5 Years, Monthly)	1.00	1.00

Top Ten Securities As of 08/31/2024

Taiwan Semiconductor Manufacturing	8.3 %
Tencent Holdings Ltd	3.6 %
Alibaba Group Holding Ltd Ordinary	2.1 %
Reliance Industries Ltd	1.4 %
HDFC Bank Ltd	1.3 %
Infosys Ltd	1.0 %
Meituan Class B	0.9 %
Hon Hai Precision Industry Co Ltd	0.8 %
PDD Holdings Inc ADR	0.8 %
China Construction Bank Corp Class	0.8 %
Total	20.9 %

Sector Weights As of 08/31/2024



■ Vanguard Emerging Markets Index (VEMIX)
■ FTSE Emerging Mkts All Cap China A Inclusion Index

Region (%) As of 09/30/2024

No data found.

Strategy Review
Vanguard Short Term Bond Index (VBIRX) | Bloomberg 1-5 Year Gov/Credit Idx
As of September 30, 2024

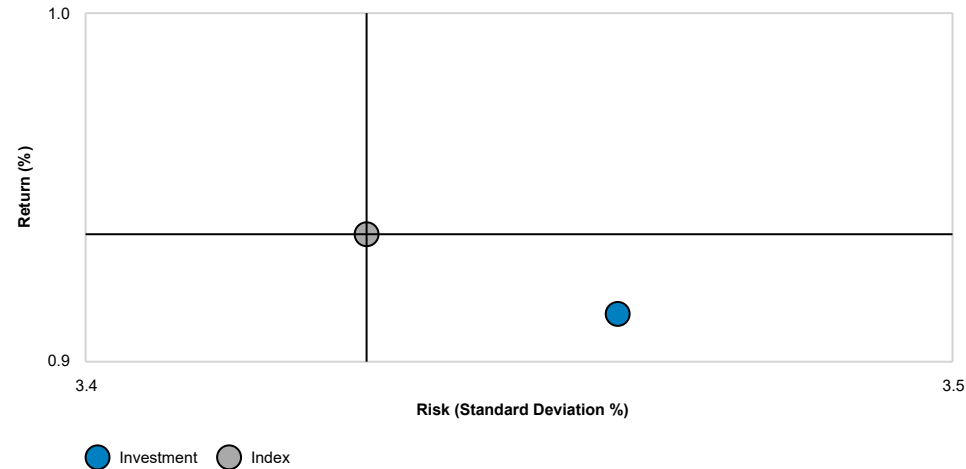
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.91	3.46	-0.77	100.62	7	101.23	5
Index	0.94	3.43	-0.77	100.00	7	100.00	5

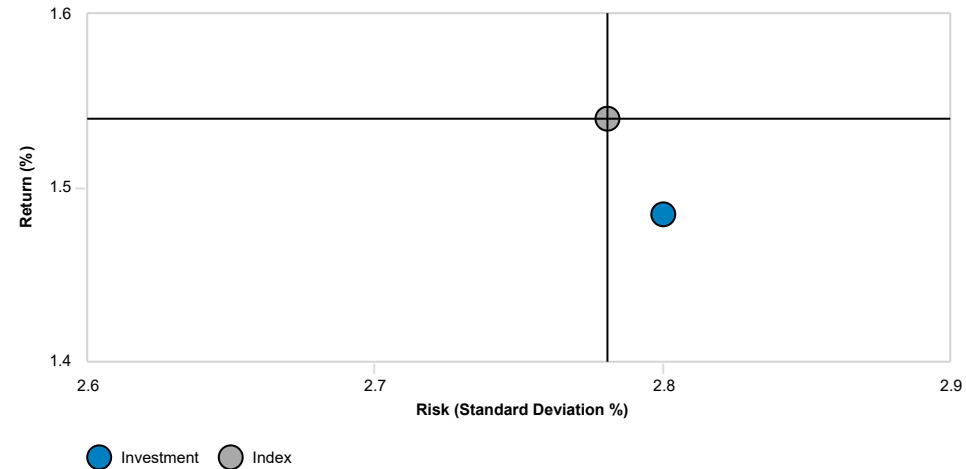
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.49	2.80	-0.29	99.22	13	100.63	7
Index	1.54	2.78	-0.28	100.00	14	100.00	6

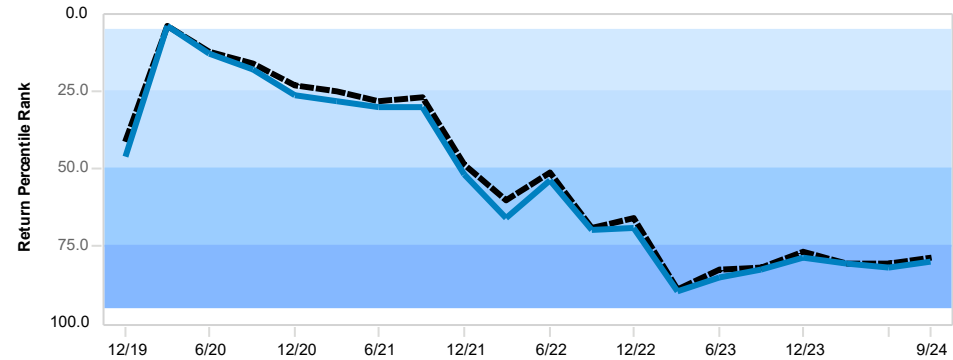
Risk and Return 3 Years



Risk and Return 5 Years

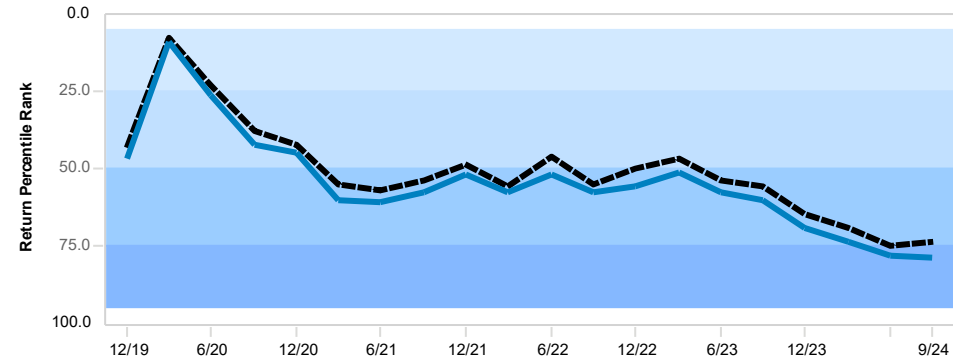


3 Year Rolling Percentile Rank Short-Term Bond



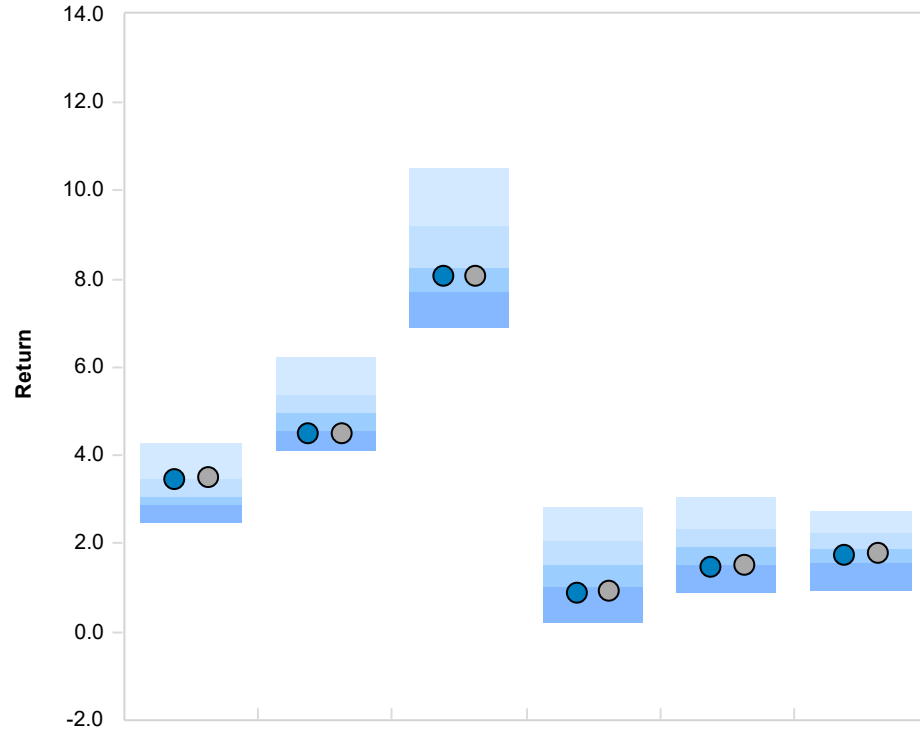
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	3 (15%)	5 (25%)	5 (25%)	7 (35%)
Index	20	5 (25%)	4 (20%)	4 (20%)	7 (35%)

5 Year Rolling Percentile Rank Short-Term Bond



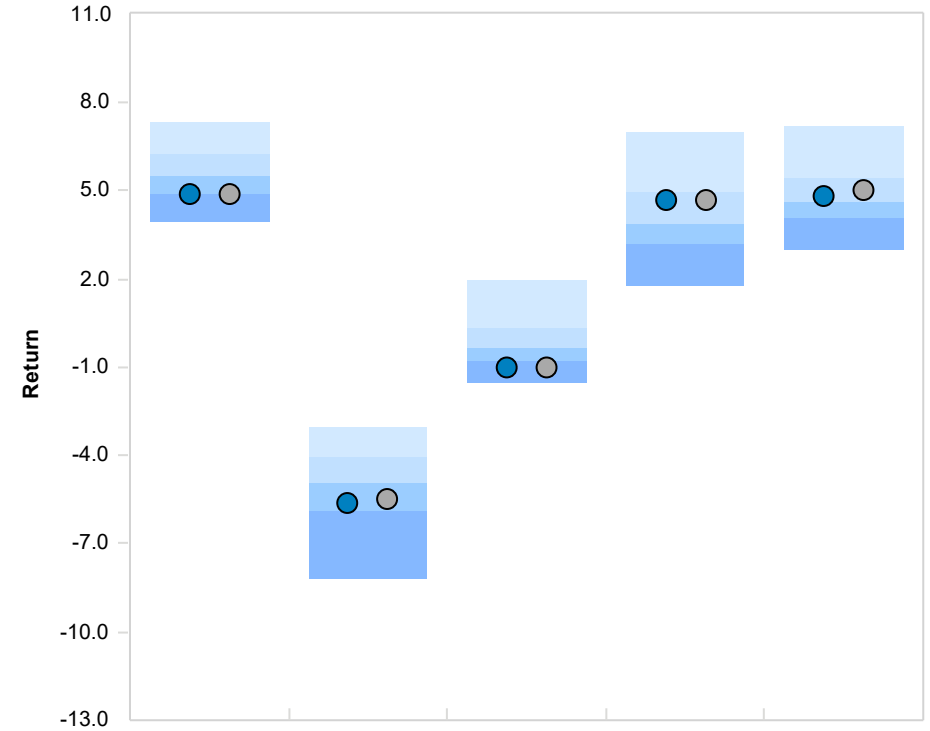
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	1 (5%)	4 (20%)	13 (65%)	2 (10%)
Index	20	2 (10%)	7 (35%)	11 (55%)	0 (0%)

Peer Group Analysis - Short-Term Bond



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	3.48 (24)	4.52 (79)	8.06 (61)	0.91 (80)	1.49 (79)	1.73 (64)
Index	3.50 (23)	4.50 (80)	8.10 (58)	0.94 (79)	1.54 (74)	1.77 (61)
Median	3.06	4.95	8.26	1.52	1.92	1.88

Peer Group Analysis - Short-Term Bond



	2023	2022	2021	2020	2019
Investment	4.88 (75)	-5.61 (66)	-0.97 (82)	4.71 (30)	4.84 (40)
Index	4.89 (74)	-5.50 (63)	-0.97 (82)	4.71 (30)	5.01 (35)
Median	5.51	-4.95	-0.30	3.90	4.62

Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 04/01/2013	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	10,001,804	-4,569,350	1,884,732	7,317,186

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	0.83	0.17	3.39	0.15	-0.64	1.93
Index	0.83	0.14	3.44	0.21	-0.62	1.82

Mutual Fund Holdings Analysis
Vanguard Short Term Bond Index (VBIRX)
September 30, 2024

Fund Information As of 09/30/2024

Fund Name :	Vanguard Short-Term Bond Index Adm	Portfolio Assets :	\$12,563 Million
Fund Family :	Vanguard	Portfolio Manager :	Barrickman,J
Ticker :	VBIRX	PM Tenure :	11 Years 7 Months
Inception Date :	11/12/2001	Fund Style :	Short-Term Bond
Fund Assets :	\$59,340 Million	Style Benchmark :	Bloomberg 1-3 Year Gov/Credit
Portfolio Turnover :	64%		

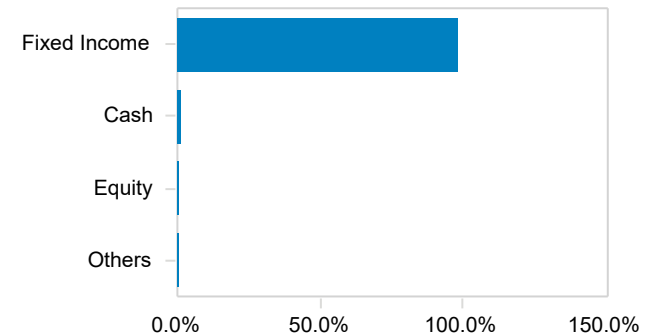
Fund Characteristics As of 09/30/2024

Avg. Coupon	3.1 %
Avg. Effective Maturity	2.8 Years
Avg. Effective Duration	2.63 Years
Avg. Credit Quality	AA
Yield To Maturity	4.41 %
SEC Yield	3.79 %

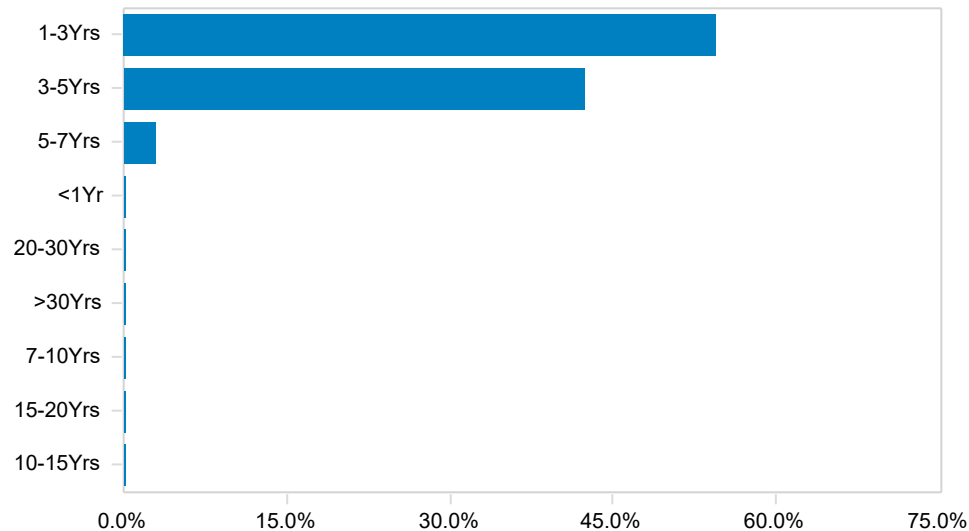
Top Ten Securities As of 08/31/2024

United States Treasury Notes	1.6 %
United States Treasury Notes	0.7 %
United States Treasury Notes	0.7 %
United States Treasury Notes	0.7 %
United States Treasury Notes	0.7 %
United States Treasury Notes	0.7 %
United States Treasury Notes	0.7 %
United States Treasury Notes	0.7 %
United States Treasury Notes	0.7 %
United States Treasury Notes	0.7 %
Total	7.9 %

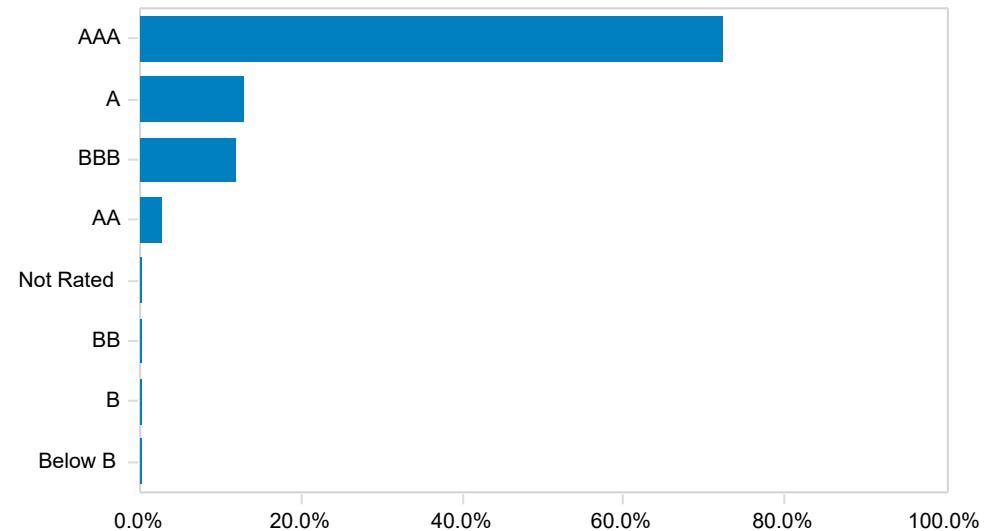
Asset Allocation As of 08/31/2024



Maturity Distribution As of 08/31/2024



Quality Allocation As of 07/31/2024



Strategy Review

Vanguard Total Bond Index (VBTIX) | Blmbg. U.S. Aggregate Index

As of September 30, 2024

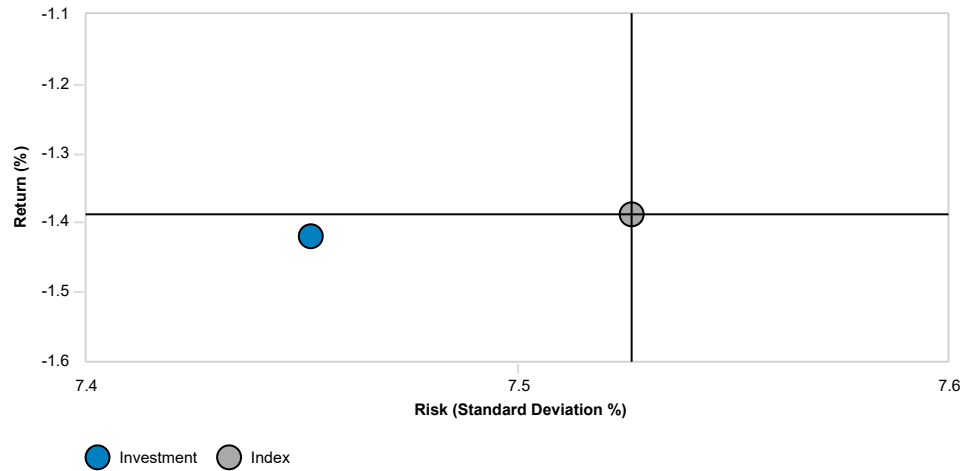
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.42	7.45	-0.63	98.83	5	99.29	7
Index	-1.39	7.53	-0.62	100.00	6	100.00	6

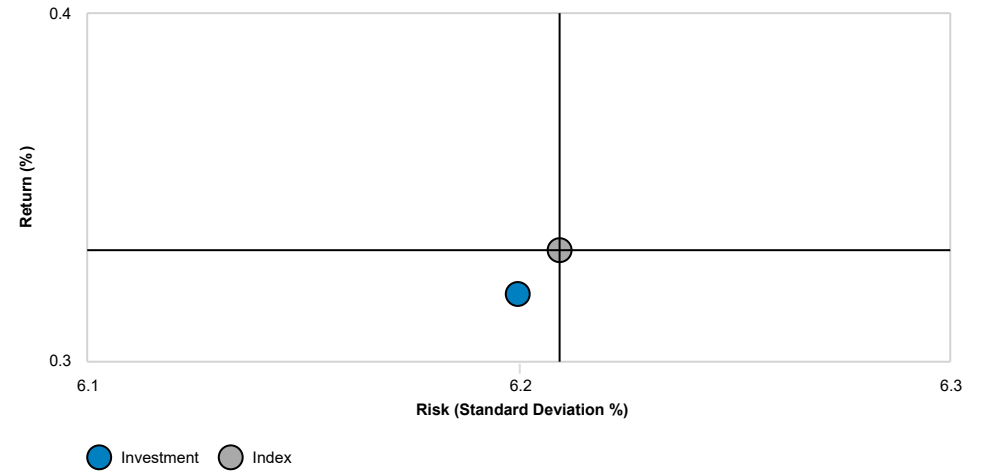
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.32	6.20	-0.29	100.60	12	100.80	8
Index	0.33	6.21	-0.29	100.00	13	100.00	7

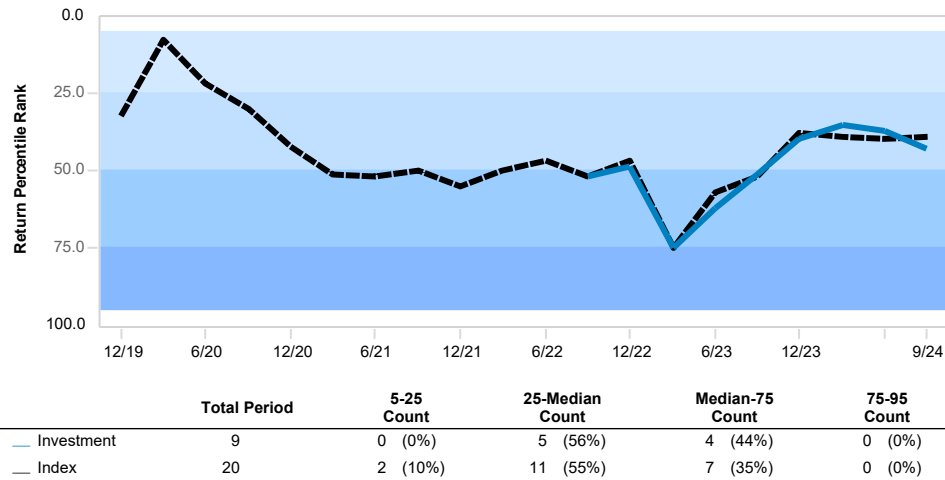
Risk and Return 3 Years



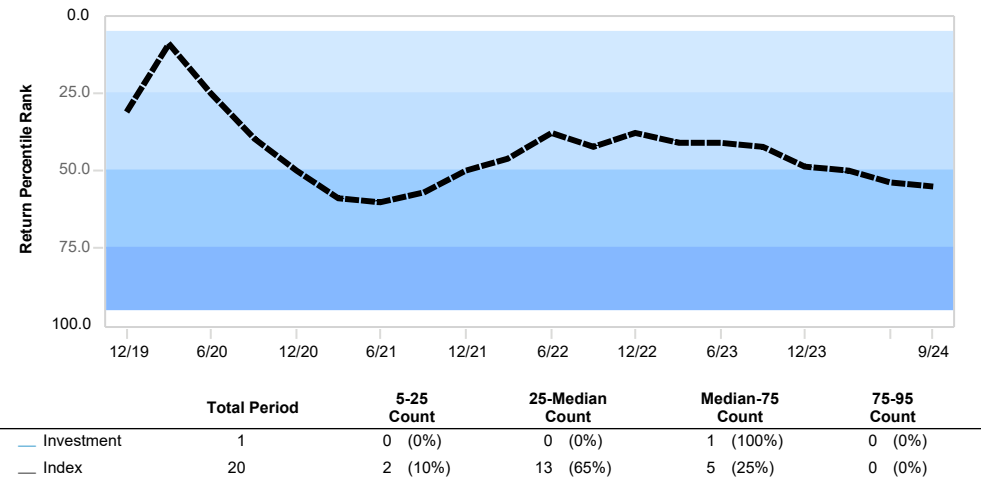
Risk and Return 5 Years



3 Year Rolling Percentile Rank Intermediate Core Bond

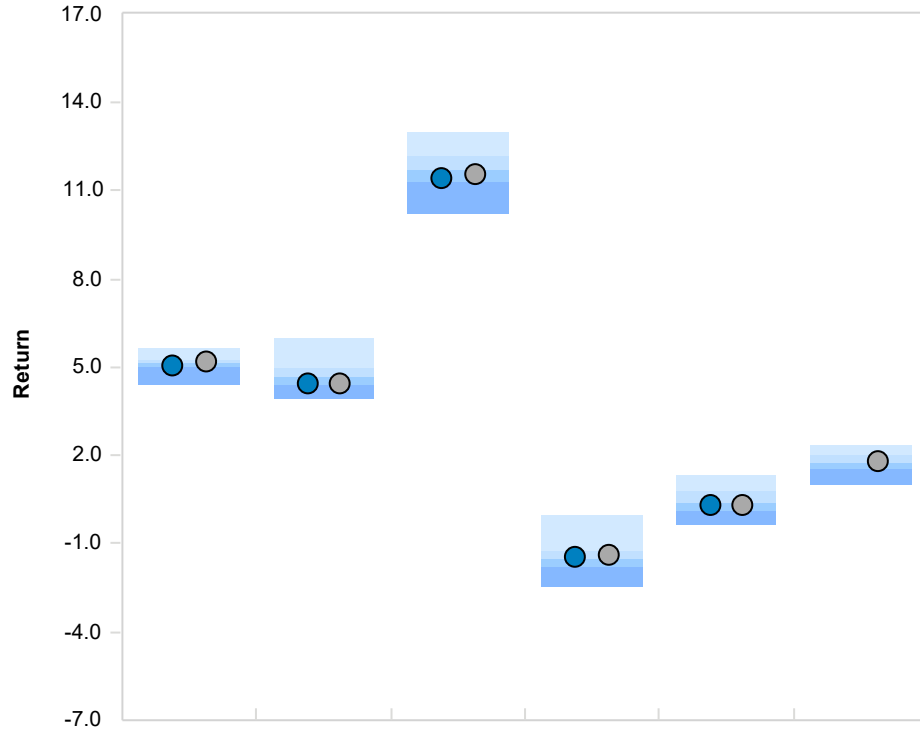


5 Year Rolling Percentile Rank Intermediate Core Bond

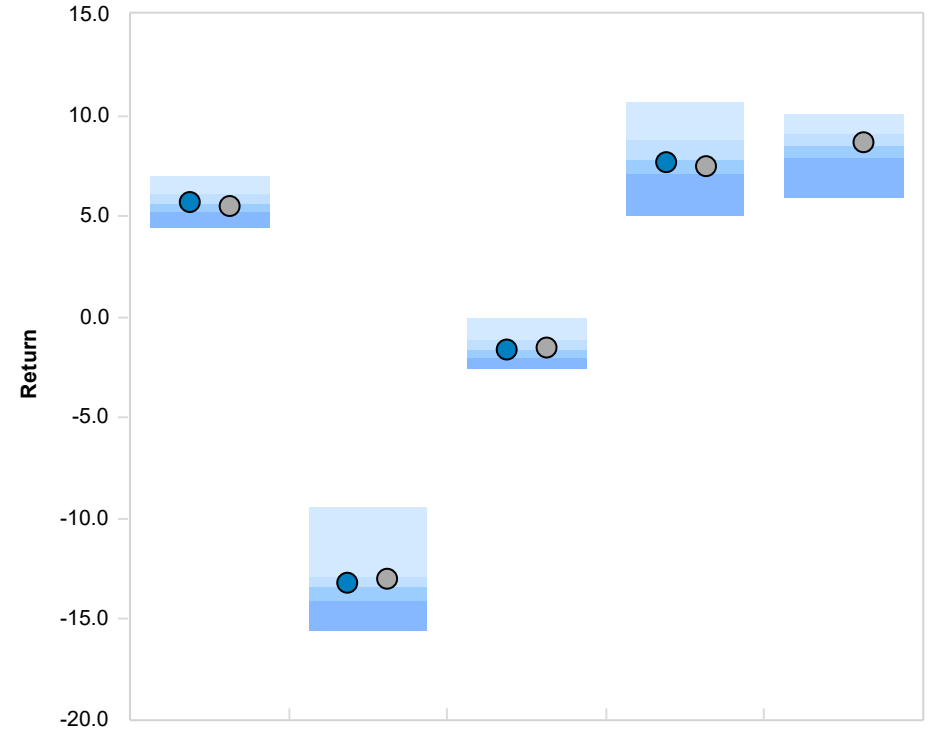


Inception Date for VBTIX is 9/2019. Manager returns for VBTIX have been used for this report.

Peer Group Analysis - Intermediate Core Bond



Peer Group Analysis - Intermediate Core Bond



Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 09/01/2019	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	5,041,017	75,803,437	3,262,427	84,106,881

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	0.18 (50)	-0.79 (73)	6.69 (52)	-3.08 (41)	-0.90 (59)	3.16 (43)
Index	0.07 (78)	-0.78 (71)	6.82 (37)	-3.23 (61)	-0.84 (50)	2.96 (66)
Median	0.18	-0.63	6.70	-3.15	-0.85	3.11

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

Fund Information As of 09/30/2024

Fund Name : Vanguard Total Bond Market Index I
Fund Family : Vanguard
Ticker : VBTIX
Inception Date : 09/18/1995
Fund Assets : \$343,379 Million
Portfolio Turnover : 36%

Portfolio Assets : \$45,611 Million
Portfolio Manager : Barrickman,J
PM Tenure : 11 Years 7 Months
Fund Style : Intermediate Core Bond
Style Benchmark : Bloomberg U.S. Aggregate

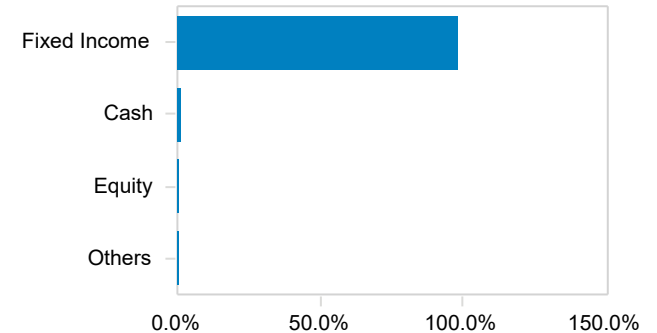
Fund Characteristics As of 09/30/2024

Avg. Coupon 3.47 %
Avg. Effective Maturity 8.4 Years
Avg. Effective Duration 5.97 Years
Avg. Credit Quality AA
Yield To Maturity 4.64 %
SEC Yield 4 %

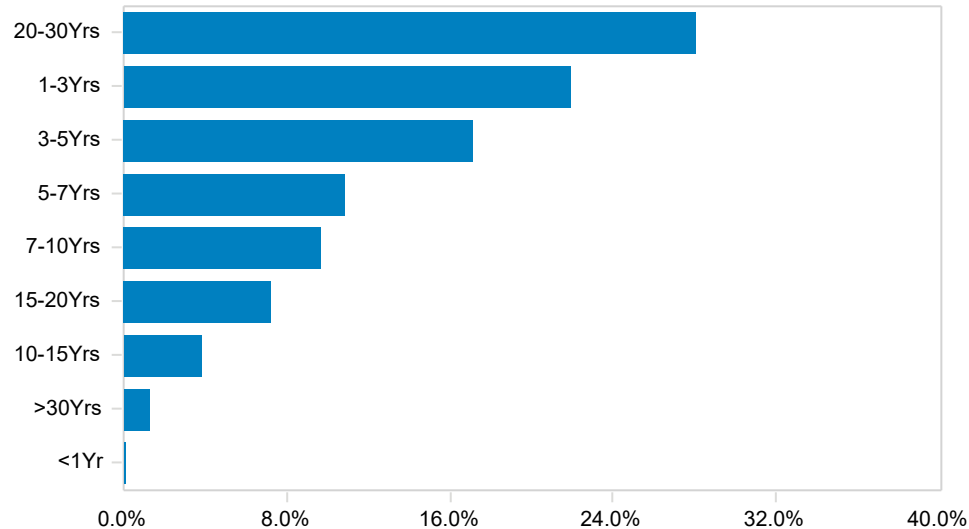
Top Ten Securities As of 08/31/2024

United States Treasury Notes	0.4 %
United States Treasury Notes	0.4 %
United States Treasury Notes	0.4 %
United States Treasury Notes	0.4 %
United States Treasury Notes	0.4 %
United States Treasury Notes	0.4 %
United States Treasury Notes	0.4 %
United States Treasury Notes	0.4 %
United States Treasury Notes	0.4 %
United States Treasury Notes	0.4 %
Total	4.1 %

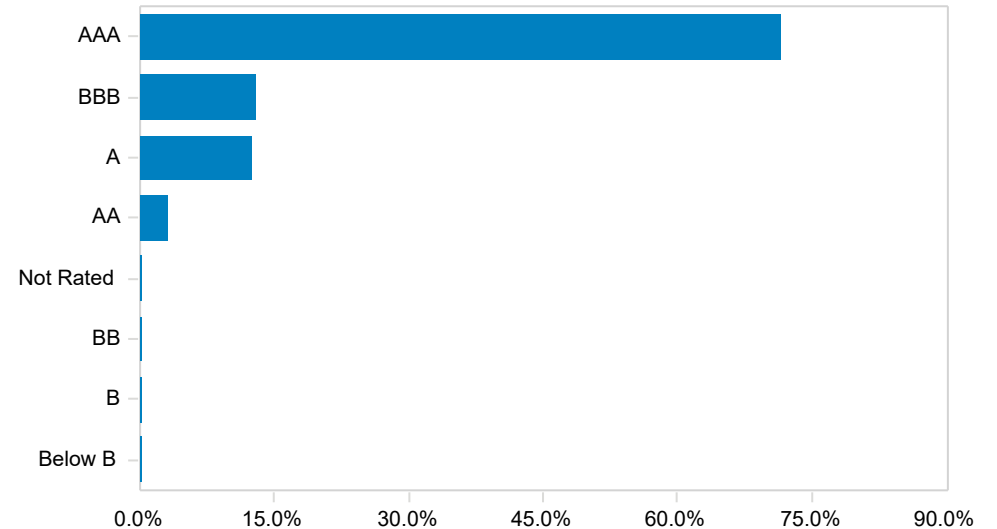
Asset Allocation As of 08/31/2024



Maturity Distribution As of 08/31/2024



Quality Allocation As of 07/31/2024



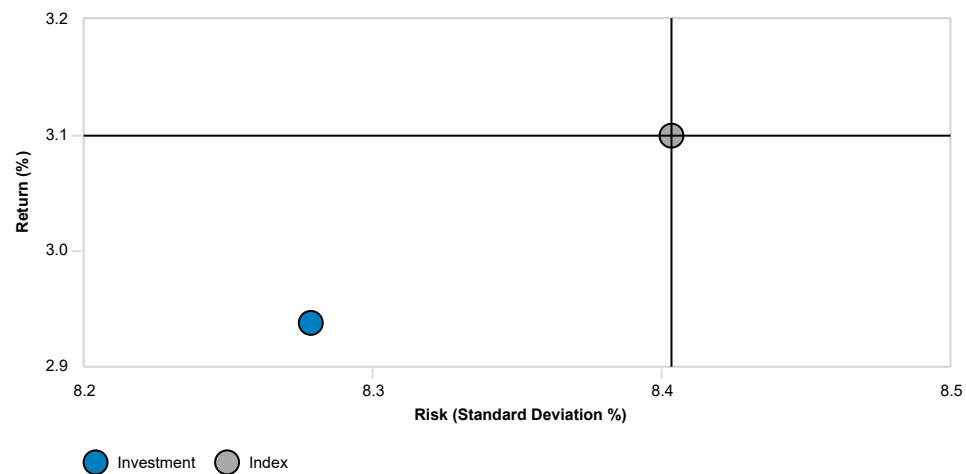
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.94	8.28	-0.02	97.29	8	98.08	4
Index	3.10	8.40	0.00	100.00	9	100.00	3

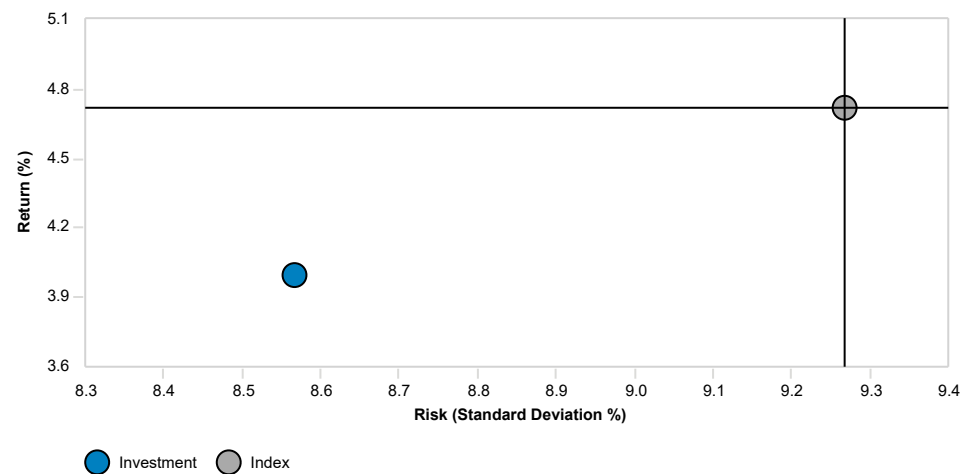
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.00	8.57	0.23	90.39	14	93.56	6
Index	4.72	9.27	0.30	100.00	16	100.00	4

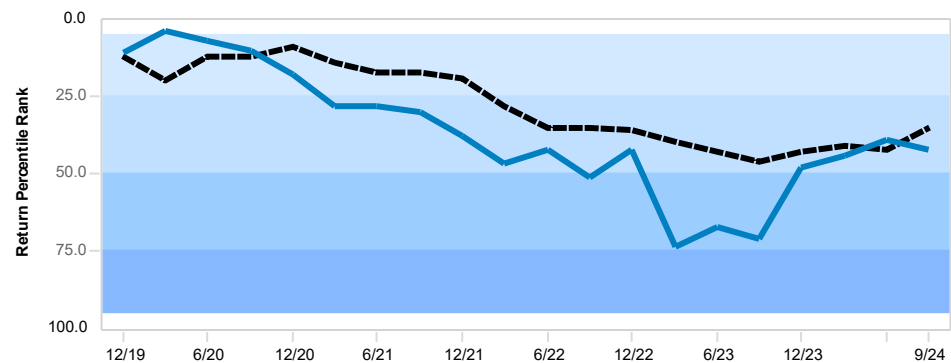
Risk and Return 3 Years



Risk and Return 5 Years

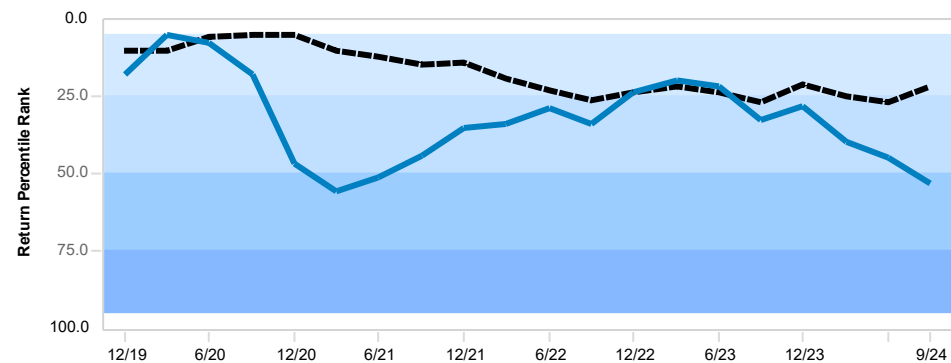


3 Year Rolling Percentile Rank High Yield Bond



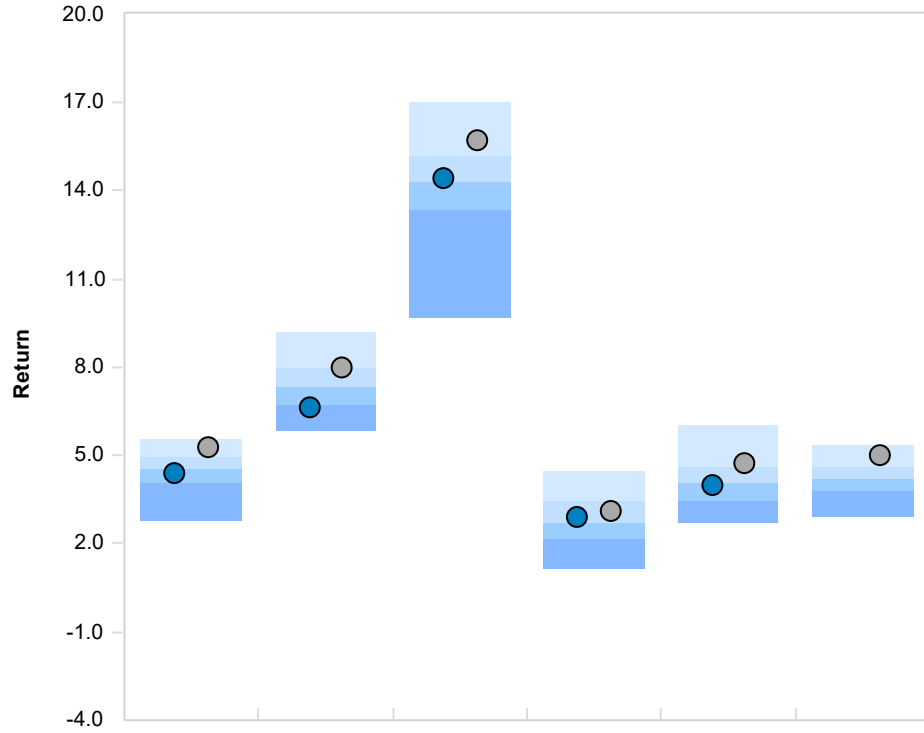
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	5 (25%)	11 (55%)	4 (20%)	0 (0%)
Index	20	9 (45%)	11 (55%)	0 (0%)	0 (0%)

5 Year Rolling Percentile Rank High Yield Bond

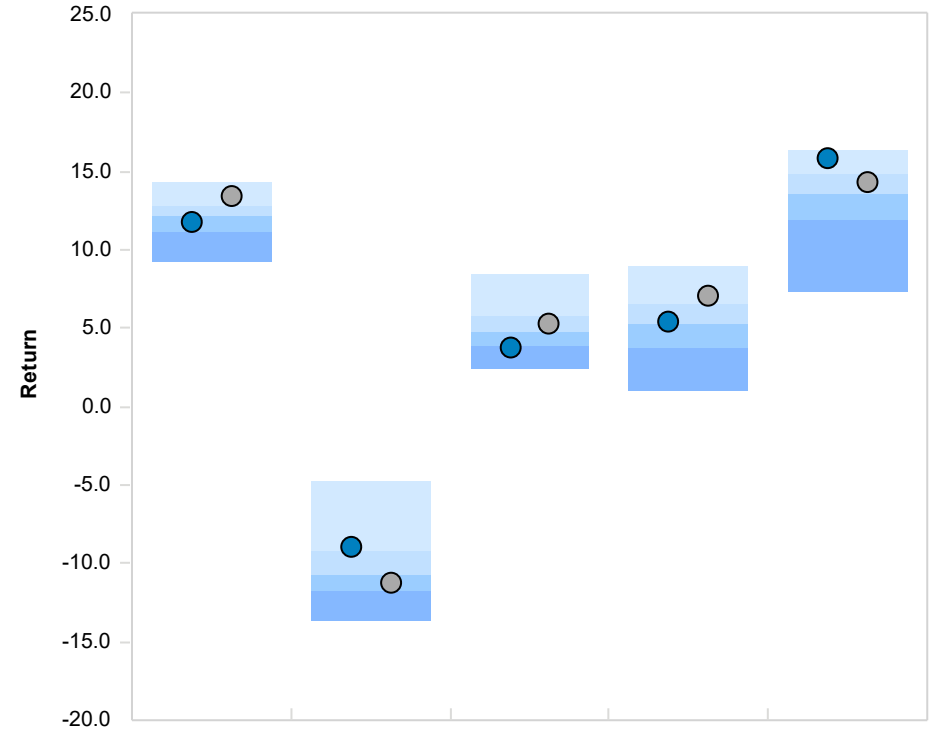


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	7 (35%)	10 (50%)	3 (15%)	0 (0%)
Index	20	17 (85%)	3 (15%)	0 (0%)	0 (0%)

Peer Group Analysis - High Yield Bond



Peer Group Analysis - High Yield Bond



Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 12/01/2014	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	12,642,764	5,350,000	9,553,371	27,546,135

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	1.39	0.77	7.30	-0.20	1.12	3.19
Index	1.09	1.47	7.16	0.46	1.75	3.57

Fund Information As of 09/30/2024

Fund Name :	Vanguard High-Yield Corporate Adm	Portfolio Assets :	\$21,868 Million
Fund Family :	Vanguard	Portfolio Manager :	Chang,M/Shortsleeve,E
Ticker :	VWEAX	PM Tenure :	2 Years 1 Month
Inception Date :	11/12/2001	Fund Style :	High Yield Bond
Fund Assets :	\$24,941 Million	Style Benchmark :	ICE BofAML US High Yield, Cash Pay Index
Portfolio Turnover :	36%		

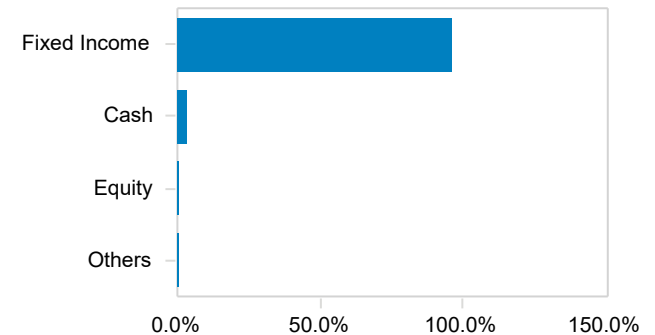
Fund Characteristics As of 09/30/2024

Avg. Coupon	5.54 %
Avg. Effective Maturity	4.1 Years
Avg. Effective Duration	3.03 Years
Avg. Credit Quality	BB
Yield To Maturity	6.88 %
SEC Yield	5.91 %

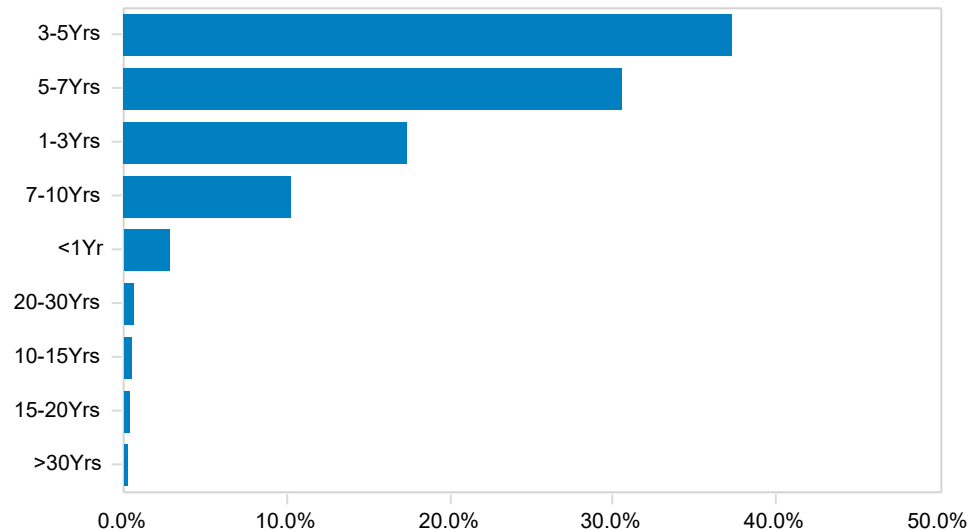
Top Ten Securities As of 06/30/2024

Imola Merger Corp.	0.8 %
United States Treasury Notes	0.7 %
United States Treasury Bills	0.7 %
Herc Holdings Inc	0.6 %
United States Treasury Notes	0.6 %
SS&C Technologies, Inc.	0.6 %
EMRLD Borrower LP / Emerald Co	0.5 %
United States Treasury Notes	0.5 %
1011778 B.C. Unlimited Liability	0.5 %
Boyd Gaming Corporation	0.5 %
Total	6.0 %

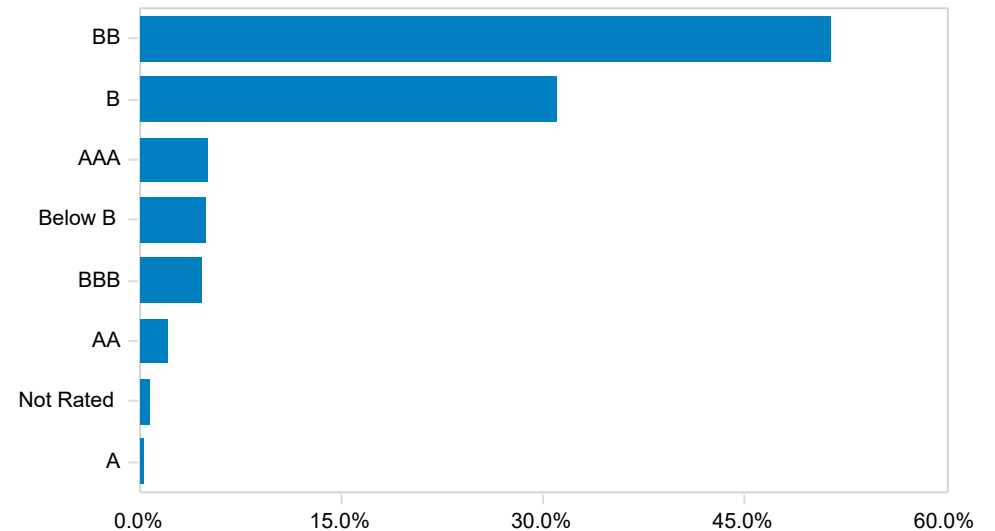
Asset Allocation As of 06/30/2024



Maturity Distribution As of 06/30/2024



Quality Allocation As of 06/30/2024



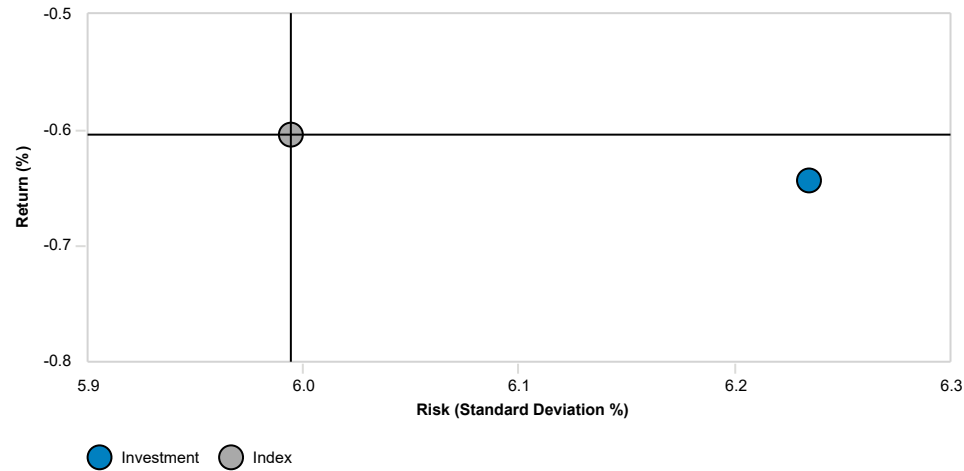
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.64	6.23	-0.64	102.55	5	102.73	7
Index	-0.60	5.99	-0.67	100.00	6	100.00	6

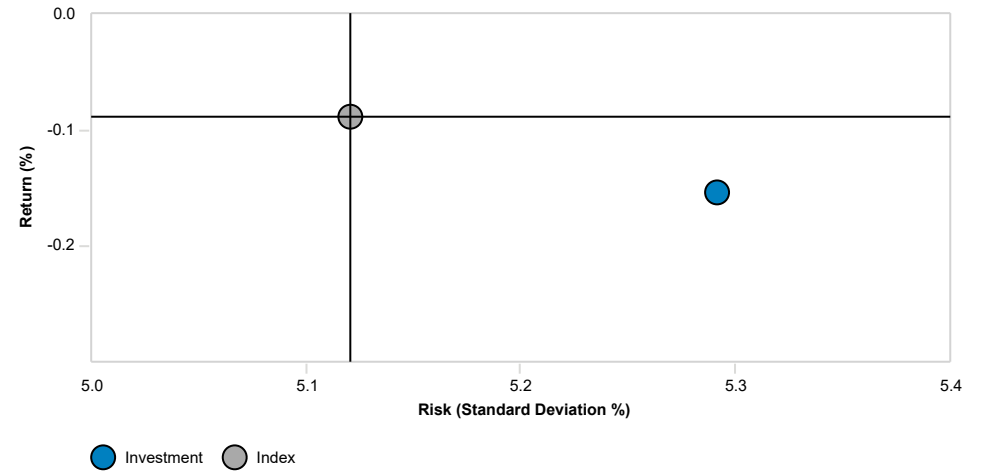
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.15	5.29	-0.44	101.10	11	101.94	9
Index	-0.09	5.12	-0.45	100.00	11	100.00	9

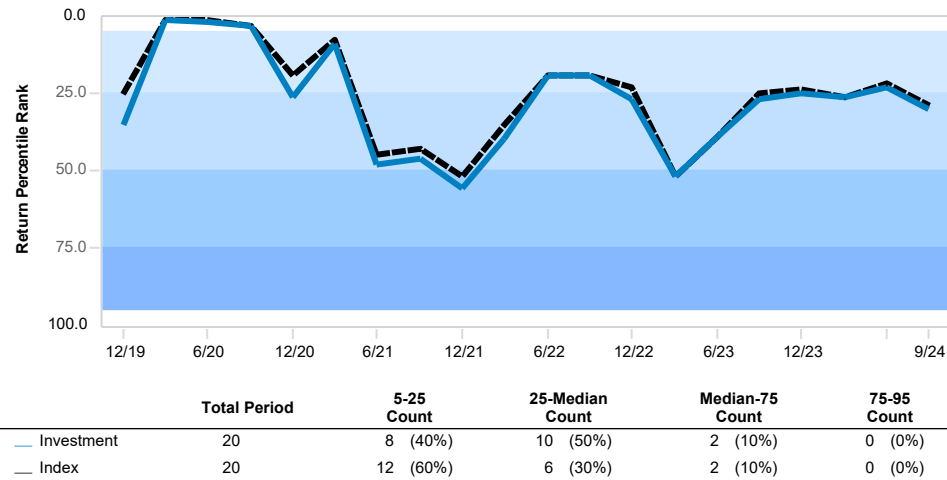
Risk and Return 3 Years



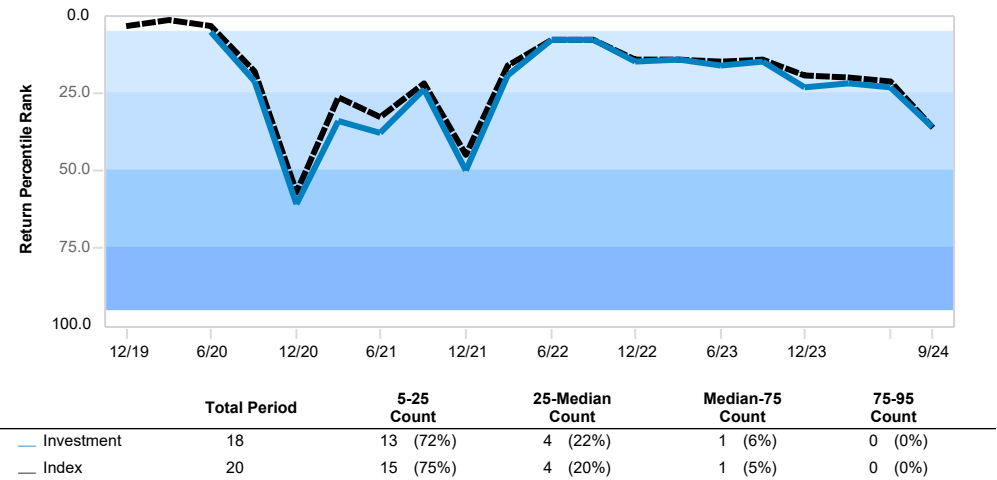
Risk and Return 5 Years



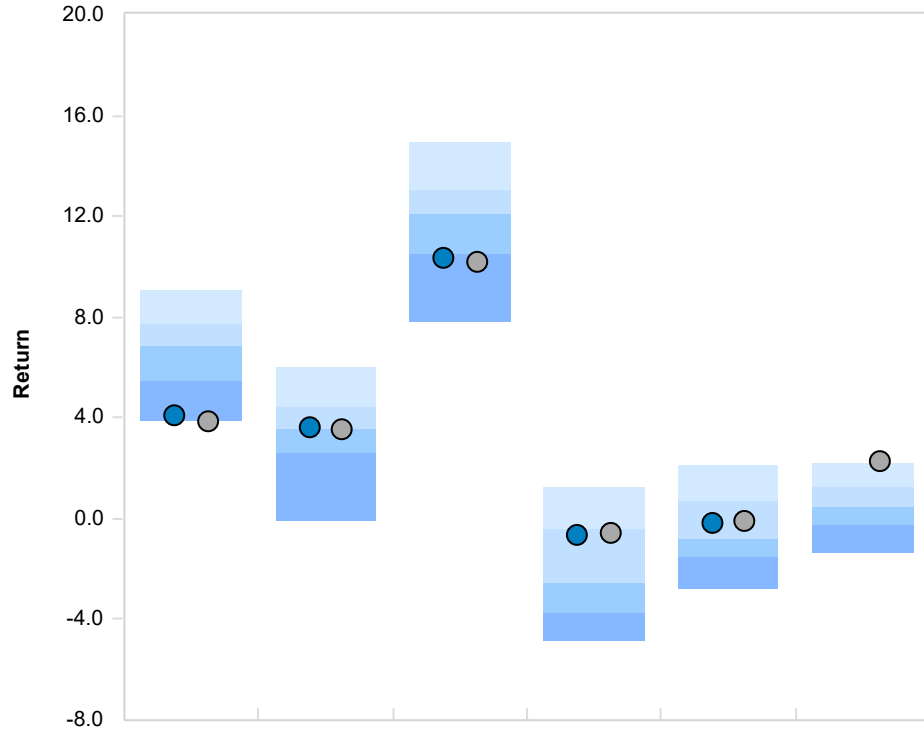
3 Year Rolling Percentile Rank Global Bond



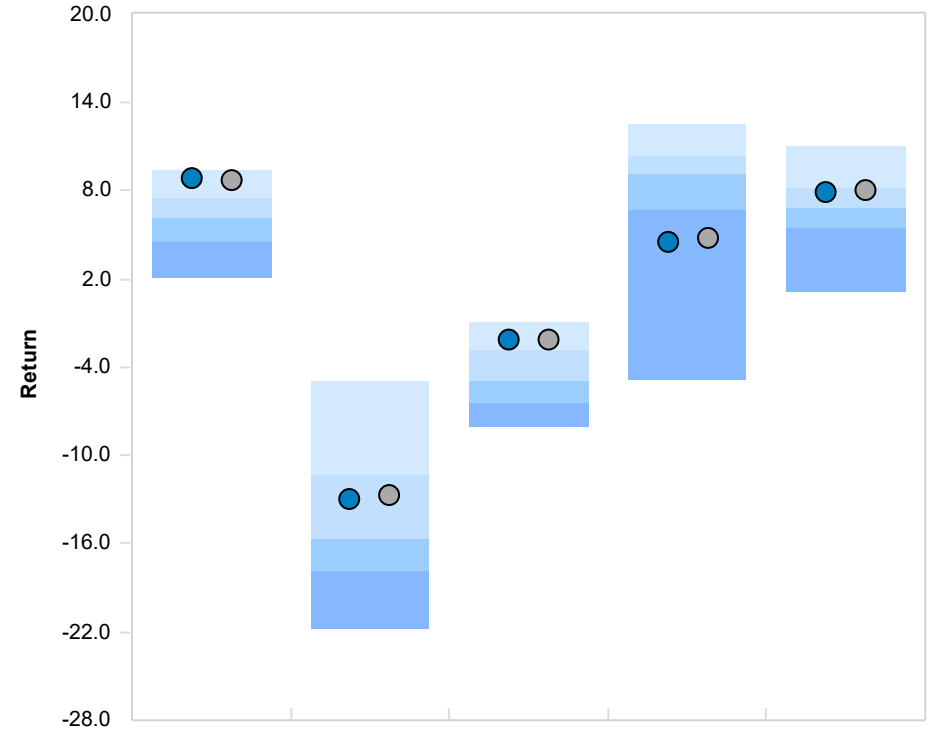
5 Year Rolling Percentile Rank Global Bond



Peer Group Analysis - Global Bond



Peer Group Analysis - Global Bond



Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 06/01/2015	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	9,329,282	-2,425,000	1,894,442	8,798,724

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	-0.55	0.06	6.50	-1.46	0.14	3.58
Index	-0.39	0.09	6.38	-1.29	0.37	3.18
Median	-0.39	0.09	6.38	-1.29	0.37	3.18

Fund Information As of 09/30/2024

Fund Name : Vanguard Total Intl Bd Idx Institutional
Fund Family : Vanguard
Ticker : VTIFX
Inception Date : 05/31/2013
Fund Assets : \$98,309 Million
Portfolio Turnover : 29%

Portfolio Assets : \$13,783 Million
Portfolio Manager : Barrickman,J/Talone,T
PM Tenure : 11 Years 4 Months
Fund Style : Global Bond-USD Hedged
Style Benchmark : Bloomberg Global Aggregate Index (Hedged)

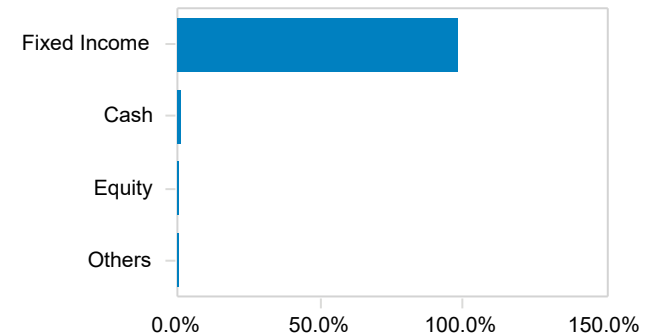
Fund Characteristics As of 09/30/2024

Avg. Coupon 2.44 %
Avg. Effective Maturity 9 Years
Avg. Effective Duration 7.24 Years
Avg. Credit Quality BBB
Yield To Maturity 4.97 %
SEC Yield 2.92 %

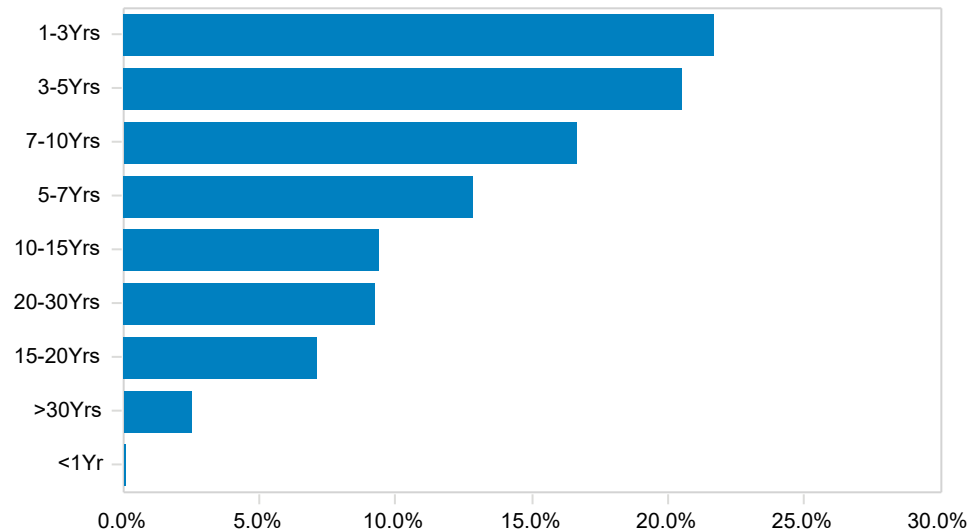
Top Ten Securities As of 08/31/2024

United Kingdom of Great Britain	0.4 %
France (Republic Of)	0.4 %
Germany (Federal Republic Of)	0.4 %
United Kingdom of Great Britain	0.3 %
France (Republic Of)	0.3 %
Spain (Kingdom of)	0.3 %
France (Republic Of)	0.3 %
Spain (Kingdom of)	0.3 %
Italy (Republic Of)	0.3 %
France (Republic Of)	0.3 %
Total	3.2 %

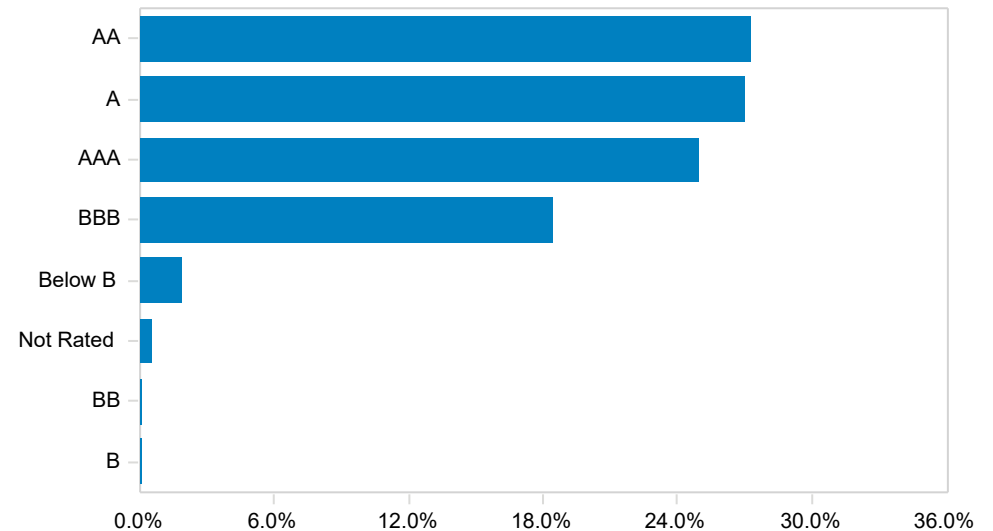
Asset Allocation As of 08/31/2024



Maturity Distribution As of 08/31/2024



Quality Allocation As of 07/31/2024



Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.53	21.91	0.07	99.87	6	100.16	6
Index	2.63	21.91	0.07	100.00	6	100.00	6

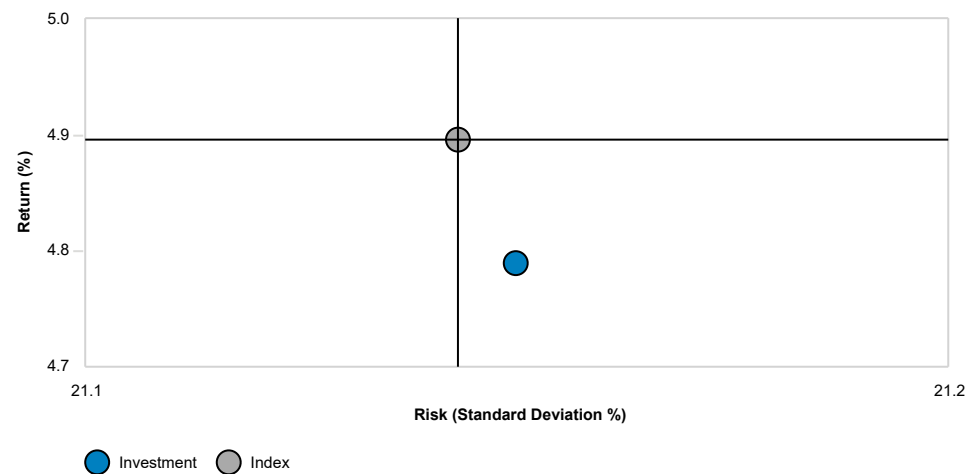
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.79	21.15	0.22	99.83	13	100.16	7
Index	4.90	21.14	0.23	100.00	13	100.00	7

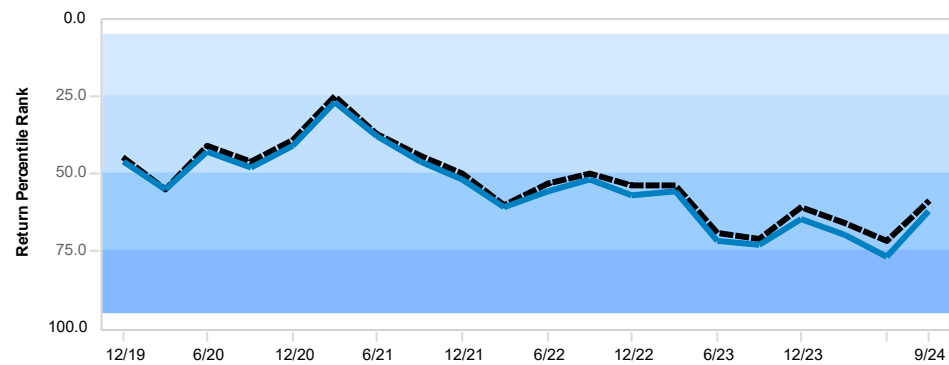
Risk and Return 3 Years



Risk and Return 5 Years

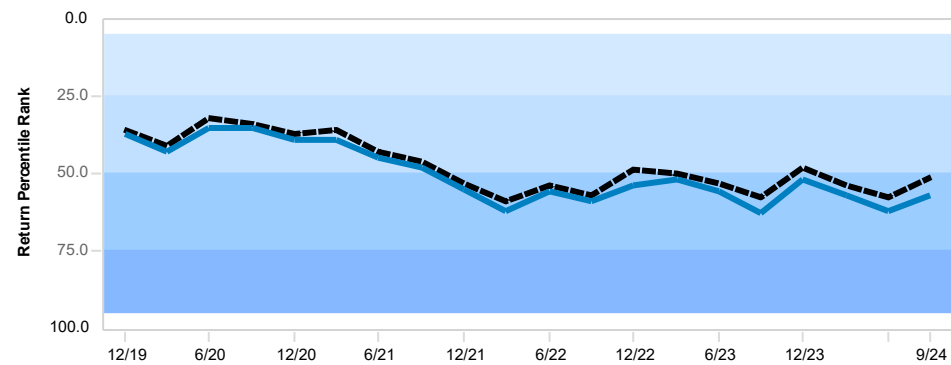


3 Year Rolling Percentile Rank Real Estate



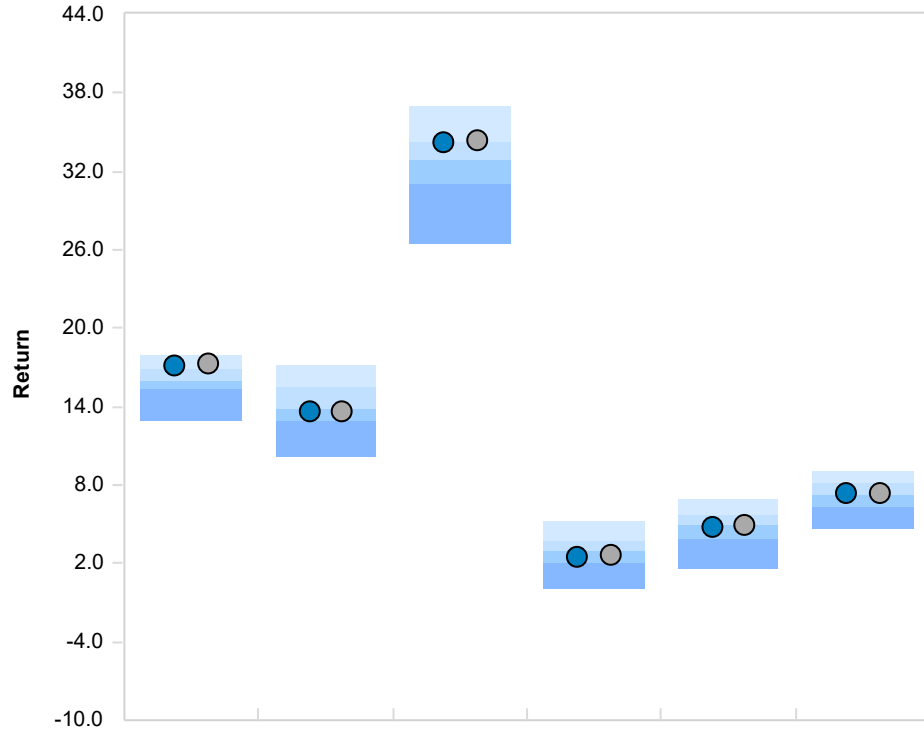
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	7 (35%)	12 (60%)	1 (5%)
Index	20	1 (5%)	8 (40%)	11 (55%)	0 (0%)

5 Year Rolling Percentile Rank Real Estate



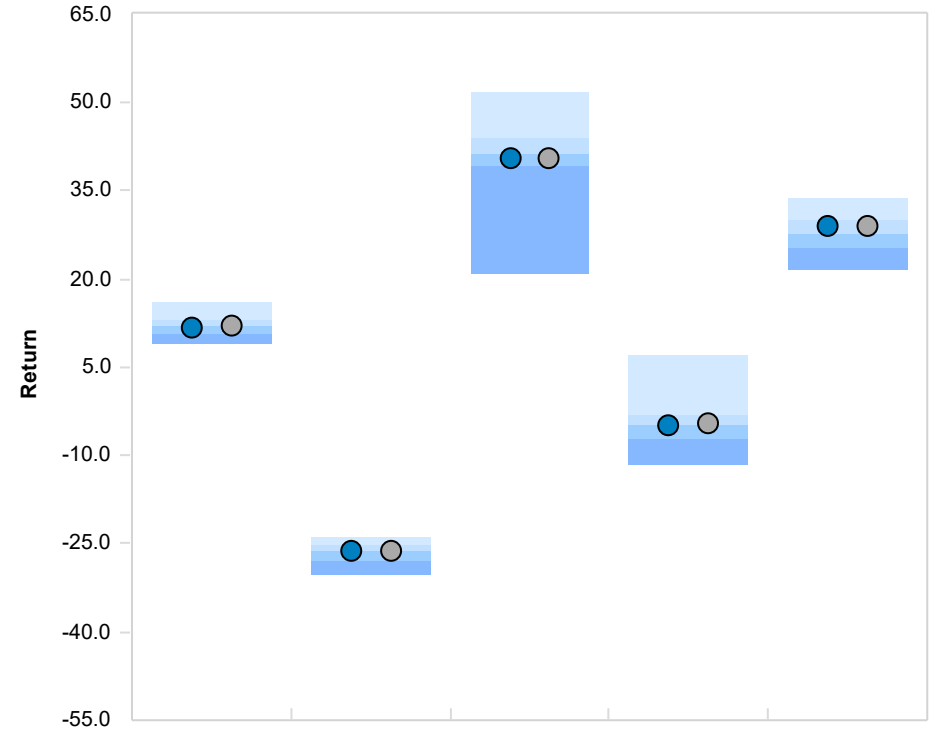
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	8 (40%)	12 (60%)	0 (0%)
Index	20	0 (0%)	11 (55%)	9 (45%)	0 (0%)

Peer Group Analysis - Real Estate



	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Investment	17.19 (13)	13.61 (56)	34.21 (27)	2.53 (62)	4.79 (57)	7.35 (47)
Index	17.23 (10)	13.71 (54)	34.38 (24)	2.63 (59)	4.90 (51)	7.44 (45)
Median	15.92	13.86	32.86	2.97	4.93	7.30

Peer Group Analysis - Real Estate



	2023	2022	2021	2020	2019
Investment	11.82 (57)	-26.20 (48)	40.47 (63)	-4.67 (48)	29.02 (35)
Index	11.96 (52)	-26.12 (45)	40.56 (62)	-4.55 (47)	29.03 (35)
Median	12.06	-26.29	41.44	-4.86	27.78

Financial Reconciliation Since Inception Ending September 30, 2024

	Market Value 10/01/2010	Net Flows	Return On Investment	Market Value 09/30/2024
Investment	4,801,552	-1,776,630	12,759,567	15,784,489

Comparative Performance

	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Investment	-1.91 (85)	-1.16 (57)	18.13 (12)	-8.50 (74)	1.63 (58)	1.79 (82)
Index	-1.88 (83)	-1.15 (56)	18.18 (10)	-8.50 (74)	1.68 (54)	1.83 (81)
Median	-0.75	-1.06	16.36	-7.80	1.79	2.65

Fund Information As of 09/30/2024

Fund Name :	Vanguard Real Estate Index Institutional	Portfolio Assets :	\$10,919 Million
Fund Family :	Vanguard	Portfolio Manager :	Nejman,W/O'Reilly,G
Ticker :	VGSNX	PM Tenure :	28 Years 4 Months
Inception Date :	12/02/2003	Fund Style :	Real Estate
Fund Assets :	\$71,527 Million	Style Benchmark :	S&P US REIT
Portfolio Turnover :	9%		

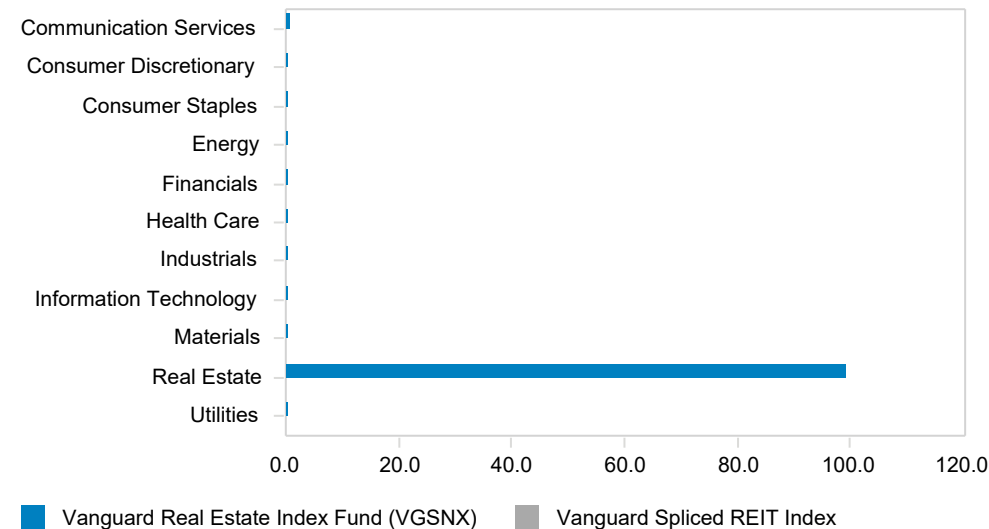
Portfolio Characteristics As of 08/31/2024

	Portfolio	Benchmark
Total Securities	159	N/A
Avg. Market Cap	-	-
Price/Earnings (P/E)	37.34	N/A
Price/Book (P/B)	2.42	N/A
Dividend Yield	3.67	N/A
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (5 Years, Monthly)	1.00	1.00

Top Ten Securities As of 08/31/2024

Vanguard Real Estate II Index	13.4 %
Prologis Inc	6.7 %
American Tower Corp	5.9 %
Equinix Inc	4.4 %
Welltower Inc	4.0 %
Simon Property Group Inc	3.1 %
Public Storage	3.1 %
Realty Income Corp	3.1 %
Digital Realty Trust Inc	2.8 %
Crown Castle Inc	2.8 %
Total	49.2 %

Sector Weights As of 08/31/2024



Region (%) As of 09/30/2024

No data found.

Benchmark History
Investment Policy Benchmarks
As of September 30, 2024

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	Nov-2014	
Bloomberg U.S. TIPS Index	15.00	CRSP U.S. Large Cap Value TR Index	8.00
Vanguard Spliced REIT Index	5.00	CRSP U.S. Large Cap Growth TR Index	8.00
Jun-2013		CRSP U.S. Mid Cap TR Index	10.00
CRSP U.S. Large Cap Value TR Index	15.00	CRSP U.S. Small Cap TR Index	5.00
CRSP U.S. Large Cap Growth TR Index	15.00	Vanguard Spliced Emerging Markets Index (Net)	4.00
CRSP U.S. Mid Cap TR Index	10.00	Vanguard Spliced Developed ex U.S. Index (Net)	9.00
CRSP U.S. Small Cap TR Index	10.00	Blmbg. U.S. Gov/Credit: 5-10 Yr	7.00
Vanguard Spliced Emerging Markets Index (Net)	5.00	Bloomberg U.S. TIPS Index	7.00
Vanguard Spliced Developed ex U.S. Index (Net)	10.00	Bloomberg 1-5 Year Gov/Credit Idx	7.00
Blmbg. U.S. Gov/Credit: 5-10 Yr	7.50	Bloomberg US TIPS 0-5 Year Index	7.00
Bloomberg U.S. TIPS Index	7.50	Vanguard Spliced REIT Index	5.00
Bloomberg 1-5 Year Gov/Credit Idx	7.50	90 Day U.S. Treasury Bill	1.00
Bloomberg US TIPS 0-5 Year Index	7.50	S&P 500 Index	15.00
Vanguard Spliced REIT Index	4.00	Blmbg. U.S. Corp High Yield	7.00
90 Day U.S. Treasury Bill	1.00		

Benchmark History
Investment Policy Benchmarks
As of September 30, 2024

Allocation Mandate	Weight (%)
Jun-2015	
CRSP U.S. Large Cap Value TR Index	5.00
CRSP U.S. Large Cap Growth TR Index	5.00
CRSP U.S. Mid Cap TR Index	10.00
CRSP U.S. Small Cap TR Index	5.00
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	5.00
Bloomberg 1-5 Year Gov/Credit Idx	7.50
Bloomberg US TIPS 0-5 Year Index	5.00
Vanguard Spliced REIT Index	5.00
90 Day U.S. Treasury Bill	2.50
S&P 500 Index	15.00
Blmbg. U.S. Corp High Yield	7.50
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	5.00
Dec-2018	
CRSP U.S. Large Cap Value TR Index	5.00
CRSP U.S. Large Cap Growth TR Index	5.00
S&P MidCap 400 Index	10.00
S&P SmallCap 600 Index	5.00
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	5.00
Bloomberg 1-5 Year Gov/Credit Idx	7.50
Bloomberg US TIPS 0-5 Year Index	5.00
Vanguard Spliced REIT Index	5.00
90 Day U.S. Treasury Bill	2.50
S&P 500 Index	15.00
Blmbg. U.S. Corp High Yield	7.50
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	5.00

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

Allocation Mandate	Weight (%)
May-2024	
S&P 500 Index	5.00
CRSP U.S. Large Cap Value TR Index	5.00
CRSP U.S. Large Cap Growth TR Index	5.00
S&P MidCap 400 Index	10.00
S&P SmallCap 600 Index	5.00
FTSE Developed All Cap ex-U.S. Index	7.50
FTSE Emerging Mkts All Cap China A Inclusion Index	5.00
FTSE Global ex U.S. Small Cap Index (Net)	2.50
Blmbg. U.S. Aggregate Index	30.00
Bloomberg 1-5 Year Gov/Credit Idx	2.50
Blmbg. U.S. Corp High Yield	10.00
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	5.00
Vanguard Spliced REIT Index	5.00
90 Day U.S. Treasury Bill	2.50

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 – Midsize 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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