

*Union Bank & Trust:
CollegeCounts Alabama's 529 Fund*

December 2022

Wilshire

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I. Quarterly Market Commentary

Wilshire Quarterly Market Commentary

Economic Highlights

GDP: Real GDP growth reversed course during the third quarter after two negative readings, expanding an annualized 3.2%. Growth was strong enough to push the economy into positive territory for the year, however modest. Consumer spending and net exports were sources of strength, while business spending fell. The Atlanta Fed's GDPNow forecast for the fourth quarter currently stands at 3.7%. Source: Bureau of Economic Analysis. -Source: Dept. of Commerce (BEA)

Interest Rates: The Treasury curve rose for maturities two years and lower during the fourth quarter but was mostly unchanged further out on the curve. The 10-year Treasury closed at 3.88%, up 5 basis points. The 10-year real yield (i.e., net of inflation) fell 10 basis points to 1.58%. The Federal Open Market Committee increased their overnight rate by a total of 1.25%, targeting a range of 4.25% to 4.50%. The committee's current median outlook is for a rate of approximately 5.1% by the end of 2023. -Source: US Treasury

Inflation: Consumer price changes have moderated as the Consumer Price Index rose 0.9% for the three months ending November. For the one-year period, the CPI was up 7.1%. The 10-year break-even inflation rate increased to 2.30% in December versus 2.15% in September. -Source: Dept. of Labor (BLS), US Treasury

Employment: Jobs growth remains solid, with an average of 272k jobs/month added during the three months ending in November. The unemployment rate was unchanged at 3.7%, as it was in August. Wages jumped 0.6% in November, which was double the forecasted rate and reinforces the Fed's aggressive action. -Source: Dept. of Labor

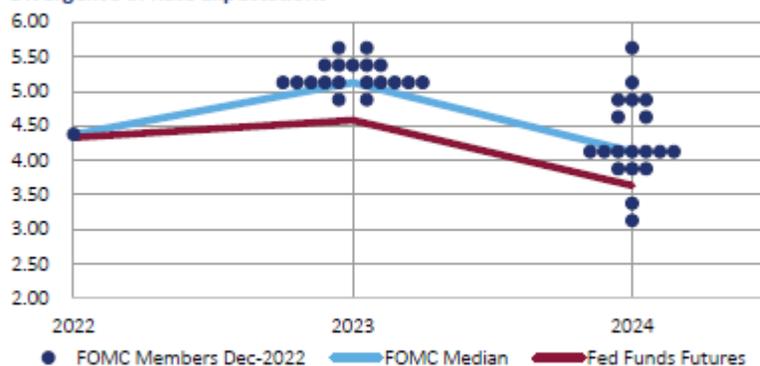
Housing: New data supports the notion that the housing market has cooled significantly since June. In fact, the S&P Case-Shiller 20-City Home Price Index was down -3.1% over the three-months through October, while maintaining an 8.7% gain over the trailing 12-months. -Source: S&P

The U.S. Equity Market

The U.S. stock market, represented by the FT Wilshire 5000 IndexSM, was up 7.10% for the fourth quarter but was down -19.04% for all of 2022. A majority of sectors were up for the quarter. The best performing were Energy (+19.9%), Industrials (+16.6%) and Materials (+14.6%). The two sectors producing losses were Consumer Discretionary (-8.0%) and Communication Services (-1.8%). From a size perspective, small-cap outperformed large-cap by 86 basis points. Growth stocks underperformed value for the quarter and also trailed meaningfully for the year.

U.S. Equity	MTD (%)	QTD (%)	YTD (%)	1 Year (%)
FT Wilshire 5000 Index SM	-5.87	7.10	-19.04	-19.04
Standard & Poor's 500	-5.76	7.56	-18.11	-18.11
Wilshire 4500 Completion Index SM	-6.27	5.34	-23.86	-23.86
U.S. Equity by Size/Style	MTD (%)	QTD (%)	YTD (%)	1 Year (%)
Wilshire US Large-Cap Index SM	-5.86	7.05	-19.03	-19.03
Wilshire US Large-Cap Growth Index SM	-7.98	0.75	-29.54	-29.54
Wilshire US Large-Cap Value Index SM	-3.77	13.75	-5.51	-5.51
Wilshire US Small-Cap Index SM	-6.11	7.91	-18.65	-18.65
Wilshire US Small-Cap Growth Index SM	-6.18	7.07	-23.07	-23.07
Wilshire US Small-Cap Value Index SM	-6.04	8.68	-14.22	-14.22
Wilshire US Micro-Cap Index SM	-4.21	4.93	-26.07	-26.07

Divergence in Rate Expectations



Source: Bloomberg.

The Federal Reserve's aggressive action to combat unacceptably high inflation is the story of 2022 with uncertainty around Fed policy poised to drive market volatility in 2023. The FOMC raised rates 4.25%, with increases becoming more dramatic in May. This marks the largest 12-month increase since 1981 (also a period of inflation near or above double-digits). Unsurprisingly, fixed income suffered but so did equities as investors repriced off a higher risk-free rate. The Fed is currently forecasting a rate 0.75% higher by the end of 2023. The open market does not agree - or perhaps doubts their credibility to continue tightening, with a modest change forecasted for the next year. How this disagreement plays out is likely to be a primary market driver this year.

Wilshire Quarterly Market Commentary

The Non-U.S. Equity Market

Performance results within international equity markets were positive for the fourth quarter, with developed outperforming emerging markets. The MSCI EAFE Index was up 17.34% for the quarter, while the MSCI Emerging Markets Index was up 9.70%. Europe faced similar headwinds as the United States. In 2022 – surging inflation and aggressive central bank tightening – but also had to more directly contend with the ongoing war in Ukraine. The labor market remains tight in the eurozone – including Germany where unemployment has fallen below 3% – and many businesses report that a labor shortage is limiting production. Despite China’s zero-COVID policies, including widespread lockdowns, infections continued to surge intermittently. Tension among the country’s citizens continued to rise and led to protests not seen in decades. In early December, the central government took definitive steps to ease restrictions.

Non-U.S. Equity	USD (%)				Local Currency (%)			
	MTD	QTD	YTD	1 Year	MTD	QTD	YTD	1 Year
MSCI AC World ex U.S.	-0.75	14.29	-16.00	-16.00	-2.89	7.82	-9.62	-9.62
MSCI ACWI ex USA Minimum Volatility	0.22	8.35	-12.75	-12.75	-1.61	3.57	-6.22	-6.22
MSCI EAFE	0.08	17.34	-14.45	-14.45	-3.01	8.72	-7.00	-7.00
MSCI EM (Emerging Markets)	-1.41	9.70	-20.09	-20.09	-2.00	6.57	-15.54	-15.54
MSCI ACWI ex U.S. Small Cap	0.17	13.31	-19.97	-19.97	-2.04	6.70	-12.76	-12.76

The Fixed Income Market

The U.S. Treasury yield curve was up in the short-end (below 3-years) by 50-135 basis points but largely unchanged across the remainder of the curve. The 10-year Treasury yield ended the quarter at 3.88%, up just 5 basis points from September. Credit spreads tightened during the quarter within both investment grade and high yield bonds (down 84 basis points within the speculative market). The Federal Open Market Committee met twice during the quarter, as scheduled, and increased the overnight rate by 0.75% in November and 0.50% in December, targeting a range of 4.25% to 4.50%. The Fed’s “dot plot” is messaging that the current intent is for another 75 basis points in increases before the end of 2023. Following the December meeting, Fed Chair Jerome Powell indicated that inflation data during the fourth quarter has been encouraging but that it will take “substantially more evidence” to ensure that modest price increases are sustainable.

U.S. Fixed Income	MTD (%)	QTD (%)	YTD (%)	1 Year (%)
Bloomberg U.S. Aggregate	-0.45	1.87	-13.01	-13.01
Bloomberg Long Term Treasury	-1.70	-0.59	-29.26	-29.26
Bloomberg U.S. TIPS	-1.02	2.04	-11.85	-11.85
Bloomberg U.S. Credit	-0.43	3.44	-15.26	-15.26
Bloomberg U.S. Corporate High Yield	-0.62	4.17	-11.19	-11.19
Global Fixed Income	MTD (%)	QTD (%)	YTD (%)	1 Year (%)
Bloomberg Global Aggregate	0.54	4.55	-16.25	-16.25
Bloomberg Global Aggregate (Hedged)	-1.18	0.99	-11.22	-11.22
Bloomberg EM LC Gov’t Unvrsl	2.23	4.66	-8.83	-8.83
Bloomberg EM LC Gov’t Unvrsl (Hdg)	0.70	1.77	-2.58	-2.58

The Real Estate & Commodity Markets

Real estate securities were up during the fourth quarter in both the United States and abroad. Commodity results also were positive for the quarter, with crude oil rising modestly by 1.0% to \$80.26 per barrel. Oil prices were quite volatile in 2022, with lows approaching \$70 and highs at nearly \$125, due to tightening supplies with the Ukraine invasion but then falling demand from China. Natural gas prices fell dramatically during the quarter due to relatively mild winter temperatures – despite the destruction done by Winter Storm Elliott. By quarter-end, natural gas was down -33.9%, closing at \$4.48 per million BTUs. Gold prices were up 9.8% during the quarter, finishing at approximately \$1,826 per troy ounce, as the Federal Reserve continued its hawkish stance toward inflation.

Real Estate / Commodity	MTD (%)	QTD (%)	YTD (%)	1 Year (%)
Wilshire US RESI SM	-5.61	4.09	-26.75	-26.75
Wilshire Global RESI SM	-3.91	6.35	-24.91	-24.91
Bloomberg Commodity Index	-2.45	2.22	16.09	16.09
FTSE Global Core Infrastructure 50/50	-2.11	9.24	-4.15	-4.15
Alerian Midstream Energy Index	-6.02	8.38	21.53	21.53

II. Direct Plan

Target Portfolios

The corresponding Age-Based portfolios are shown below

Report as of: December 31, 2022	Conservative	Moderate	Aggressive	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
CollegeCounts Target Fund Fixed Income Portfolio	19+			0.10%	1.11%	-2.85%	-2.85%	0.20%	1.22%	0.82%	1.25%
Target Fund Fixed Income Blended Benchmark				0.08%	1.16%	-2.80%	-2.80%	0.21%	1.18%	0.85%	1.28%
Excess Return				0.02%	-0.05%	-0.05%	-0.05%	-0.01%	0.04%	-0.04%	-0.03%
<i>CollegeCounts Target Fund Fixed Income Composite</i>				0.03%	1.11%	-2.81%	-2.81%	0.18%	1.20%	0.88%	1.30%
CollegeCounts Fund 10 Portfolio	17-18	19+		-0.70%	2.30%	-7.16%	-7.16%	0.35%	1.74%	n/a	1.83%
Fund 10 Blended Benchmark				-0.56%	2.35%	-6.71%	-6.71%	0.41%	1.77%	n/a	1.85%
Excess Return				-0.14%	-0.05%	-0.45%	-0.45%	-0.06%	-0.03%	n/a	-0.02%
<i>CollegeCounts Fund 10 Composite</i>				-0.66%	2.27%	-6.77%	-6.77%	0.37%	1.76%	n/a	1.83%
CollegeCounts Target Fund 20 Portfolio	15-16	17-18	19+	-1.18%	3.35%	-9.73%	-9.73%	0.68%	2.30%	2.86%	3.55%
Target Fund 20 Blended Benchmark				-1.04%	3.27%	-9.00%	-9.00%	0.81%	2.37%	2.97%	3.67%
Excess Return				-0.14%	0.08%	-0.73%	-0.73%	-0.13%	-0.06%	-0.11%	-0.12%
<i>CollegeCounts Target Fund 20 Composite</i>				-1.17%	3.18%	-9.12%	-9.12%	0.77%	2.35%	2.94%	3.61%
CollegeCounts Fund 30 Portfolio	13-14	15-16	17-18	-1.69%	4.20%	-11.61%	-11.61%	1.22%	2.85%	n/a	3.36%
Fund 30 Blended Benchmark				-1.52%	4.25%	-10.82%	-10.82%	1.30%	2.90%	n/a	3.43%
Excess Return				-0.17%	-0.05%	-0.79%	-0.79%	-0.09%	-0.05%	n/a	-0.06%
<i>CollegeCounts Fund 30 Composite</i>				-1.71%	4.19%	-10.91%	-10.91%	1.28%	2.89%	n/a	3.38%
CollegeCounts Target Fund 40 Portfolio	11-12	13-14	15-16	-2.11%	5.17%	-13.06%	-13.06%	1.64%	3.33%	4.62%	5.31%
Target Fund 40 Blended Benchmark				-1.89%	5.22%	-12.09%	-12.09%	1.77%	3.39%	4.73%	5.48%
Excess Return				-0.22%	-0.05%	-0.98%	-0.98%	-0.13%	-0.06%	-0.11%	-0.17%
<i>CollegeCounts Target Fund 40 Composite</i>				-2.13%	5.19%	-12.16%	-12.16%	1.76%	3.39%	4.70%	5.39%
CollegeCounts Fund 50 Portfolio	9-10	11-12	13-14	-2.49%	5.98%	-14.21%	-14.21%	2.14%	3.81%	n/a	4.89%
Fund 50 Blended Benchmark				-2.24%	5.99%	-13.46%	-13.46%	2.19%	3.87%	n/a	4.97%
Excess Return				-0.24%	0.00%	-0.75%	-0.75%	-0.06%	-0.06%	n/a	-0.07%
<i>CollegeCounts Fund 50 Composite</i>				-2.53%	6.00%	-13.49%	-13.49%	2.21%	3.88%	n/a	4.94%
CollegeCounts Target Fund 60 Portfolio	6-8	9-10	11-12	-2.94%	6.74%	-15.09%	-15.09%	2.65%	4.28%	6.03%	6.69%
Target Fund 60 Blended Benchmark				-2.60%	6.76%	-14.36%	-14.36%	2.66%	4.26%	6.11%	6.84%
Excess Return				-0.34%	-0.01%	-0.73%	-0.73%	-0.01%	0.02%	-0.07%	-0.16%
<i>CollegeCounts Target Fund 60 Composite</i>				-2.94%	6.80%	-14.39%	-14.39%	2.69%	4.31%	6.10%	6.74%

Target Portfolios

The corresponding Age-Based portfolios are shown below

Report as of: December 31, 2022	Conservative	Moderate	Aggressive	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
CollegeCounts Fund 70 Portfolio	3-5	6-8	9-10	-3.36%	7.43%	-16.00%	-16.00%	3.10%	4.67%	n/a	6.22%
Fund 70 Blended Benchmark				-3.01%	7.42%	-15.46%	-15.46%	3.03%	4.63%	n/a	6.21%
Excess Return				-0.35%	0.01%	-0.55%	-0.55%	0.07%	0.04%	n/a	0.01%
<i>CollegeCounts Fund 70 Composite</i>				-3.38%	7.49%	-15.64%	-15.64%	3.27%	4.79%	n/a	6.30%
CollegeCounts Target Fund 80 Portfolio	0-2	3-5	6-8	-3.74%	8.18%	-16.82%	-16.82%	3.67%	5.18%	7.59%	8.14%
Target Fund 80 Blended Benchmark				-3.34%	8.13%	-16.46%	-16.46%	3.66%	5.18%	7.65%	8.32%
Excess Return				-0.40%	0.05%	-0.37%	-0.37%	0.01%	0.00%	-0.06%	-0.18%
<i>CollegeCounts Target Fund 80 Composite</i>				-3.77%	8.22%	-16.54%	-16.54%	3.85%	5.32%	7.82%	8.16%
CollegeCounts Fund 90 Portfolio		0-2	3-5	-4.14%	8.87%	-17.52%	-17.52%	4.20%	5.63%	n/a	7.79%
Fund 90 Blended Benchmark				-3.61%	8.86%	-17.49%	-17.49%	4.02%	5.51%	n/a	7.74%
Excess Return				-0.53%	0.01%	-0.03%	-0.03%	0.18%	0.11%	n/a	0.05%
<i>CollegeCounts Fund 90 Composite</i>				-4.10%	8.99%	-17.51%	-17.51%	4.16%	5.63%	n/a	7.79%
CollegeCounts Target Fund 100 Portfolio			0-2	-4.48%	9.67%	-18.56%	-18.56%	4.27%	5.74%	8.90%	9.32%
Target Fund 100 Blended Benchmark				-3.94%	9.58%	-18.63%	-18.63%	4.08%	5.55%	8.84%	9.46%
Excess Return				-0.54%	0.10%	0.07%	0.07%	0.19%	0.19%	0.05%	-0.14%
<i>CollegeCounts Target Fund 100 Composite</i>				-4.48%	9.73%	-18.60%	-18.60%	4.19%	5.68%	8.88%	9.31%

Notes:
The Inception Date for all Target Portfolios is August 2, 2010. The Inception Date for all non-Target Portfolios is September 28, 2016.

Excess Return percentages, as displayed, may be affected by rounding.

Net performance excludes 529 Program Management fees (17 bps; fee was 25 bps prior to July 1, 2020).

The Blended Benchmarks for the Target and Age-Based Portfolios are comprised of the Asset Class Benchmarks according to the CollegeCounts 529 Plan Investment Policy Statement. The computation of Blended Benchmarks used in reports prior to that time employed individual fund benchmarks.

Individual Portfolios

	Inception Date	Assets (MM)	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Money Market & Bank Savings Funds										
Vanguard Cash Reserves Federal MM 529 Portfolio †	8/2/2010	\$38.1	0.83%	2.13%	2.83%	2.83%	1.18%	1.49%	0.90%	0.65%
Citigroup Global Markets - 3 Month T-Bill Index			0.34%	0.88%	1.51%	1.51%	0.71%	1.21%	0.72%	0.60%
Excess Return			0.49%	1.24%	1.32%	1.32%	0.47%	0.28%	0.17%	0.05%
Bank Savings 529 Portfolio										
Bank Savings 529 Portfolio	7/1/2020	\$17.4	0.84%	2.26%	3.18%	3.18%	n/a	n/a	n/a	1.36%
Citigroup Global Markets - 3 Month T-Bill Index			0.34%	0.88%	1.51%	1.51%	n/a	n/a	n/a	0.64%
Excess Return			0.50%	1.38%	1.67%	1.67%	n/a	n/a	n/a	0.71%
Fixed Income Funds										
PIMCO Short-Term 529 Portfolio	8/2/2010	\$143.5	0.78%	0.81%	-0.17%	-0.17%	0.84%	1.36%	1.51%	1.58%
Citigroup Global Markets 3-Month T-Bill Index			0.34%	0.88%	1.51%	1.51%	0.71%	1.21%	0.72%	0.60%
Excess Return			0.44%	-0.07%	-1.68%	-1.68%	0.13%	0.15%	0.78%	0.98%
Barclays - U.S. Gov't/Credit 1-3 Year Index			0.19%	0.88%	-3.70%	-3.70%	-0.32%	0.92%	0.88%	0.97%
Excess Return			0.59%	-0.07%	3.53%	3.53%	1.16%	0.44%	0.63%	0.61%
Vanguard Short-Term Infl-Protected 529 Portfolio †	9/30/2013	\$40.9	-0.25%	1.20%	-2.76%	-2.76%	2.44%	2.55%	n/a	1.60%
Barclays Capital - U.S. 0-5 Year TIPS Index			-0.20%	1.29%	-2.74%	-2.74%	2.49%	2.57%	n/a	1.63%
Excess Return			-0.05%	-0.09%	-0.02%	-0.02%	-0.05%	-0.02%	n/a	-0.03%
Vanguard Short Term Bond 529 Portfolio †	9/30/2013	\$61.8	0.01%	1.08%	-5.55%	-5.55%	-0.73%	0.79%	n/a	1.00%
Barclays 1-5 year Gov/Cred Float Adjusted Index			0.05%	1.20%	-5.50%	-5.50%	-0.68%	0.85%	n/a	1.04%
Excess Return			-0.04%	-0.12%	-0.05%	-0.05%	-0.05%	-0.06%	n/a	-0.04%
Vanguard Inflation-Protected Securities 529 Portfolio	8/2/2010	\$2.6	-1.33%	1.72%	-11.85%	-11.85%	1.13%	1.97%	1.04%	2.56%
Barclays Capital - U.S. TIPS Index			-1.02%	2.04%	-11.85%	-11.85%	1.21%	2.11%	1.12%	2.63%
Excess Return			-0.31%	-0.32%	-0.01%	-0.01%	-0.08%	-0.14%	-0.08%	-0.07%
PGIM Total Return Bond 529 Portfolio	4/28/2020	\$112.4	-0.42%	2.32%	-14.82%	-14.82%	n/a	n/a	n/a	-3.68%
Barclays Capital Aggregate Bond Index			-0.45%	1.87%	-13.01%	-13.01%	n/a	n/a	n/a	-4.80%
Excess Return			0.03%	0.45%	-1.81%	-1.81%	n/a	n/a	n/a	1.12%

Notes:

Excess Return percentages, as displayed, may be affected by rounding. Net performance excludes 529 Program Manager fees (17 bps; fee was 25 bps prior to July 1, 2020).

† Indicates fund is held in the Age-Based and Target Risk portfolios.

Individual Portfolios

	Inception Date	Assets (MM)	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Fixed Income Funds (continued)										
Fidelity Advisor Investment Grade Bond 529 Portfolio	10/10/2012	\$94.1	-0.69%	1.56%	-13.47%	-13.47%	-1.90%	0.61%	1.50%	1.50%
Barclays Capital Aggregate Bond Index			-0.45%	1.87%	-13.01%	-13.01%	-2.71%	0.02%	1.06%	1.04%
Excess Return			-0.24%	-0.31%	-0.46%	-0.46%	0.82%	0.58%	0.44%	0.46%
Vanguard Total Bond Market Index 529 Portfolio †	8/2/2010	\$120.4	-0.65%	1.64%	-13.19%	-13.19%	-2.75%	0.00%	1.01%	1.80%
Barclays Capital - U.S. Aggregate Float Adjusted Index			-0.45%	1.85%	-13.07%	-13.07%	-2.67%	0.06%	1.08%	1.84%
Excess Return			-0.20%	-0.21%	-0.12%	-0.12%	-0.08%	-0.06%	-0.07%	-0.04%
Vanguard High-Yield Corporate Fund †	8/10/2022	\$26.1	-0.50%	4.89%	n/a	n/a	n/a	n/a	n/a	7.71%
High-Yield Corporate Composite Index			-0.67%	4.41%	n/a	n/a	n/a	n/a	n/a	7.12%
Excess Return			0.17%	0.48%	n/a	n/a	n/a	n/a	n/a	0.58%
Vanguard Emerging Markets Government Bond Index †	8/10/2022	\$20.9	-0.69%	7.10%	n/a	n/a	n/a	n/a	n/a	6.61%
Bloomberg USD EmergMkt GovRIC Cap Index			-0.40%	8.06%	n/a	n/a	n/a	n/a	n/a	8.36%
Excess Return			-0.29%	-0.96%	n/a	n/a	n/a	n/a	n/a	-1.75%
Balanced Funds										
T. Rowe Price Balanced 529 Portfolio	8/2/2010	\$52.4	-3.22%	6.61%	-17.19%	-17.19%	2.49%	4.37%	7.02%	7.56%
T. Rowe Price Balanced Fund Blended Benchmark			-3.14%	6.90%	-15.56%	-15.56%	3.48%	5.40%	7.65%	8.11%
Excess Return			-0.07%	-0.29%	-1.63%	-1.63%	-0.99%	-1.04%	-0.63%	-0.55%
Domestic Equity Funds										
T. Rowe Price Large-Cap Growth 529 Portfolio	8/1/2014	\$107.0	-7.86%	-0.20%	-35.21%	-35.21%	5.10%	9.21%	n/a	11.27%
Russell - 1000 Growth Index			-7.66%	2.19%	-29.14%	-29.14%	7.78%	10.96%	n/a	12.41%
Excess Return			-0.20%	-2.39%	-6.07%	-6.07%	-2.69%	-1.75%	n/a	-1.14%
Vanguard Growth Index 529 Portfolio	8/2/2010	\$24.3	-8.45%	-0.16%	-33.14%	-33.14%	6.04%	9.62%	12.79%	13.04%
CRSP US Large Cap Growth Index			-8.47%	-0.15%	-33.13%	-33.13%	6.09%	9.65%	12.84%	13.12%
Excess Return			0.02%	0.00%	-0.01%	-0.01%	-0.05%	-0.03%	-0.05%	-0.08%

Notes:

Excess Return percentages, as displayed, may be affected by rounding. Net performance excludes 529 Program Manager fees (17 bps; fee was 25 bps prior to July 1, 2020).

† Indicates fund is held in the Age-Based and Target Risk portfolios.

Individual Portfolios

	Inception Date	Assets (MM)	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Domestic Equity Funds (continued)										
Vanguard Total Stock Market Index 529 Portfolio †	8/2/2010	\$227.3	-5.87%	7.16%	-19.52%	-19.52%	7.02%	8.75%	12.09%	12.24%
CRSP US Total Market Index			-5.87%	7.15%	-19.49%	-19.49%	6.99%	8.73%	12.10%	12.46%
Excess Return			0.00%	0.01%	-0.02%	-0.02%	0.03%	0.03%	-0.01%	-0.22%
Vanguard 500 Index 529 Portfolio	8/2/2010	\$51.6	-5.76%	7.54%	-18.11%	-18.11%	7.68%	9.42%	12.53%	12.53%
S&P 500 Index			-5.76%	7.57%	-18.11%	-18.11%	7.66%	9.43%	12.56%	12.59%
Excess Return			0.00%	-0.03%	-0.01%	-0.01%	0.01%	-0.01%	-0.03%	-0.06%
DFA U.S. Large Cap Value 529 Portfolio	8/1/2014	\$99.6	-4.61%	14.02%	-5.83%	-5.83%	5.37%	5.34%	n/a	7.61%
Russell - 1000 Value Index			-4.03%	12.42%	-7.54%	-7.54%	5.96%	6.67%	n/a	7.84%
Excess Return			-0.58%	1.60%	1.71%	1.71%	-0.59%	-1.33%	n/a	-0.23%
Vanguard Value Index 529 Portfolio	8/2/2010	\$9.6	-3.37%	14.65%	-2.08%	-2.08%	8.18%	8.55%	11.89%	11.74%
CRSP US Large Cap Value Index			-3.36%	14.68%	-2.01%	-2.01%	8.23%	8.58%	11.97%	11.81%
Excess Return			-0.01%	-0.03%	-0.06%	-0.06%	-0.05%	-0.03%	-0.08%	-0.07%
Vanguard Extended Market Index 529 Portfolio	8/2/2010	\$2.9	-6.53%	5.14%	-26.49%	-26.49%	2.99%	4.87%	9.60%	10.30%
S&P Completion Index			-6.53%	5.08%	-26.53%	-26.53%	2.94%	4.77%	9.52%	10.43%
Excess Return			0.00%	0.05%	0.05%	0.05%	0.04%	0.10%	0.08%	-0.13%
Vanguard Mid-Cap Index 529 Portfolio	8/2/2010	\$12.7	-5.37%	9.00%	-18.69%	-18.69%	6.20%	7.33%	11.09%	11.30%
CRSP US Mid Cap Index			-5.35%	9.02%	-18.69%	-18.69%	6.18%	7.34%	11.15%	11.66%
Excess Return			-0.02%	-0.02%	0.00%	0.00%	0.01%	-0.01%	-0.05%	-0.36%
Vanguard Explorer 529 Portfolio	8/1/2014	\$3.3	-5.15%	6.95%	-23.13%	-23.13%	4.28%	7.75%	n/a	9.20%
Russell - 2500 Growth Index			-5.95%	4.73%	-26.20%	-26.20%	2.88%	5.97%	n/a	8.42%
Excess Return			0.80%	2.23%	3.07%	3.07%	1.40%	1.78%	n/a	0.78%

Notes:

Excess Return percentages, as displayed, may be affected by rounding. Net performance excludes 529 Program Manager fees (17 bps; fee was 25 bps prior to July 1, 2020).

† Indicates fund is held in the Age-Based and Target Risk portfolios.

Individual Portfolios

	Inception Date	Assets (MM)	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Domestic Equity Funds (continued)										
Vanguard Small-Cap Growth Index 529 Portfolio	8/2/2010	\$8.6	-6.29%	3.06%	-28.35%	-28.35%	0.83%	5.13%	9.28%	10.39%
CRSP US Small Cap Growth Index			-6.31%	3.00%	-28.44%	-28.44%	0.79%	5.09%	9.26%	10.46%
Excess Return			0.02%	0.06%	0.09%	0.09%	0.03%	0.04%	0.02%	-0.07%
Vanguard Small-Cap Index 529 Portfolio	8/2/2010	\$5.8	-5.95%	7.93%	-17.63%	-17.63%	4.89%	5.92%	10.09%	10.72%
CRSP US Small Cap Index			-5.95%	7.95%	-17.64%	-17.64%	4.90%	5.92%	10.09%	10.95%
Excess Return			0.00%	-0.02%	0.01%	0.01%	-0.02%	0.01%	0.00%	-0.23%
DFA U.S. Small Cap Value 529 Portfolio	8/1/2014	\$3.1	-5.91%	13.41%	-3.49%	-3.49%	7.14%	4.24%	n/a	7.23%
Russell - 2000 Value Index			-6.56%	8.42%	-14.48%	-14.48%	4.70%	4.13%	n/a	6.60%
Excess Return			0.65%	4.98%	10.99%	10.99%	2.43%	0.12%	n/a	0.63%
Vanguard Small-Cap Value Index 529 Portfolio	8/2/2010	\$4.8	-5.68%	11.62%	-9.33%	-9.33%	7.00%	5.72%	10.23%	10.51%
CRSP US Small Cap Value Index			-5.68%	11.62%	-9.27%	-9.27%	7.13%	5.78%	10.30%	10.80%
Excess Return			0.00%	0.01%	-0.06%	-0.06%	-0.13%	-0.06%	-0.07%	-0.29%
International Equity Funds										
Dodge & Cox International Stock 529 Portfolio	8/1/2014	\$3.3	-1.70%	16.03%	-6.83%	-6.83%	0.84%	0.62%	n/a	1.89%
MSCI - EAFE Index			0.08%	17.34%	-14.45%	-14.45%	0.87%	1.54%	n/a	2.70%
Excess Return			-1.78%	-1.31%	7.62%	7.62%	-0.03%	-0.92%	n/a	-0.81%
Vanguard Total International Stock Index 529 Portfolio †	8/2/2010	\$118.7	-2.22%	14.67%	-16.03%	-16.03%	0.48%	1.06%	4.04%	4.23%
MSCI ACWI ex USA IMI Index			-0.62%	14.16%	-16.57%	-16.57%	0.20%	0.85%	3.98%	4.34%
Excess Return			-1.60%	0.51%	0.55%	0.55%	0.27%	0.21%	0.05%	-0.11%

Notes:

Excess Return percentages, as displayed, may be affected by rounding. Net performance excludes 529 Program Manager fees (17 bps; fee was 25 bps prior to July 1, 2020).

† Indicates fund is held in the Age-Based and Target Risk portfolios.

Individual Portfolios

	Inception Date	Assets (MM)	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Real Estate Funds										
Vanguard REIT Index 529 Portfolio †	8/2/2010	\$27.7	-5.05%	4.39%	-26.13%	-26.13%	-0.32%	3.74%	6.45%	7.82%
MSCI US IMI Real Estate 25/50 Index			-5.28%	5.07%	-23.95%	-23.95%	0.03%	3.47%	6.44%	8.16%
Excess Return			0.23%	-0.69%	-2.18%	-2.18%	-0.34%	0.27%	0.01%	-0.34%

Notes:

Excess Return percentages, as displayed, may be affected by rounding. Net performance excludes 529 Program Manager fees (17 bps; fee was 25 bps prior to July 1, 2020).

† Indicates fund is held in the Age-Based and Target Risk portfolios.

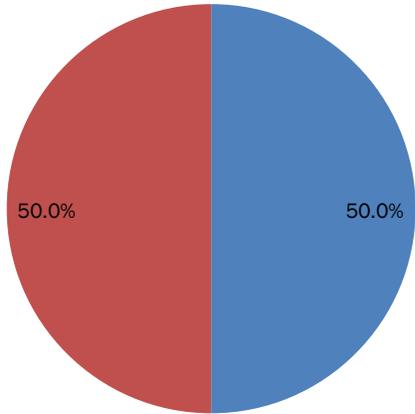
Asset Allocation

	Target Fund Fixed Income	Target Fund 20	Target Fund 40	Target Fund 60	Target Fund 80	Target Fund 100					
Allocation as of 12/31/2022											
Aggressive Age-Based Option			19 plus	17-18	15-16	13-14	11-12	9-10	6-8	3-5	0-2
Moderate Age-Based Option		19 plus	17-18	15-16	13-14	11-12	9-10	6-8	3-5	0-2	
Conservative Age-Based Option	19 plus	17-18	15-16	13-14	11-12	9-10	6-8	3-5	0-2		
Money Market Funds											
Vanguard Cash Reserves Federal Money Market	50.0%	23.0%	8.0%	-	-	-	-	-	-	-	-
Total Money Market Funds	50.0%	23.0%	8.0%	-	-	-	-	-	-	-	-
Fixed Income Funds											
Vanguard Short Term Bond Index	20.0%	22.0%	25.0%	22.0%	14.0%	11.0%	6.0%	-	-	-	-
Vanguard Short-Term Infl Protected Securities Index	15.0%	14.0%	12.0%	11.0%	9.0%	4.0%	4.0%	4.0%	3.0%	3.0%	-
Vanguard Total Bond Market Index	15.0%	25.0%	25.0%	27.0%	24.0%	23.0%	20.0%	18.0%	12.0%	5.0%	-
Vanguard High-Yield Corporate Fund	-	3.0%	5.0%	5.0%	7.0%	7.0%	6.0%	5.0%	3.0%	1.0%	-
Vanguard Emerging Markets Government Bond Index	-	3.0%	5.0%	5.0%	6.0%	5.0%	4.0%	3.0%	2.0%	1.0%	-
Total Fixed Income Funds	50.0%	67.0%	72.0%	70.0%	60.0%	50.0%	40.0%	30.0%	20.0%	10.0%	-
Domestic Equity Funds											
Vanguard Total Stock Market Index	-	7.0%	13.0%	20.0%	25.0%	30.0%	36.0%	42.0%	48.0%	52.0%	57.0%
Total Domestic Equity Funds	-	7.0%	13.0%	20.0%	25.0%	30.0%	36.0%	42.0%	48.0%	52.0%	57.0%
International Equity Funds											
Vanguard Total International Stock Index	-	2.0%	5.0%	8.0%	12.0%	16.0%	20.0%	23.0%	27.0%	32.0%	36.0%
Total International Equity Funds	-	2.0%	5.0%	8.0%	12.0%	16.0%	20.0%	23.0%	27.0%	32.0%	36.0%
Real Estate Funds											
Vanguard REIT Index	-	1.0%	2.0%	2.0%	3.0%	4.0%	4.0%	5.0%	5.0%	6.0%	7.0%
Total Real Estate Funds	-	1.0%	2.0%	2.0%	3.0%	4.0%	4.0%	5.0%	5.0%	6.0%	7.0%
Total Allocation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

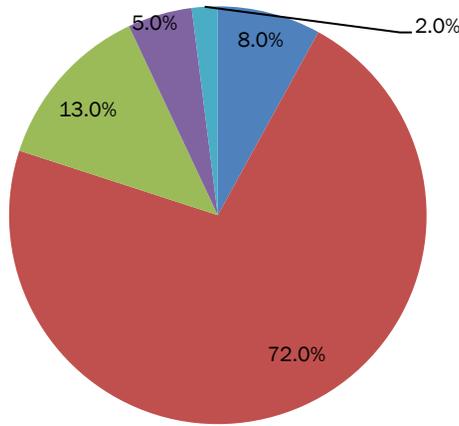
Asset Allocation

Allocation as of 12/31/2022

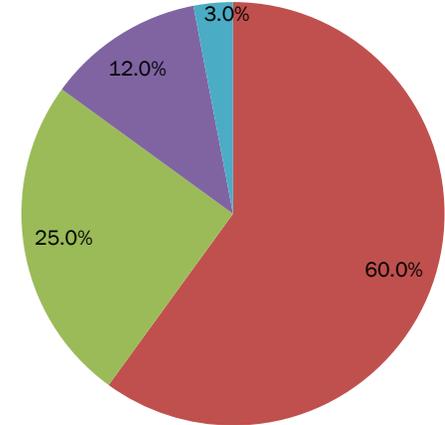
Target Fund
Fixed Income



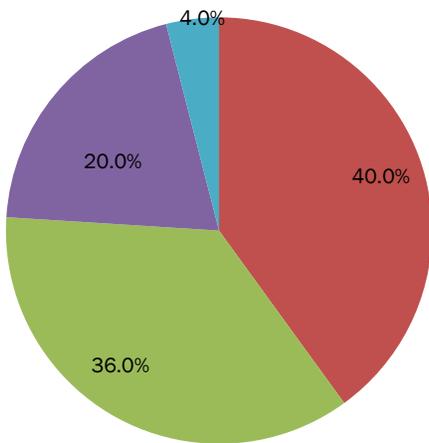
Target Fund
20



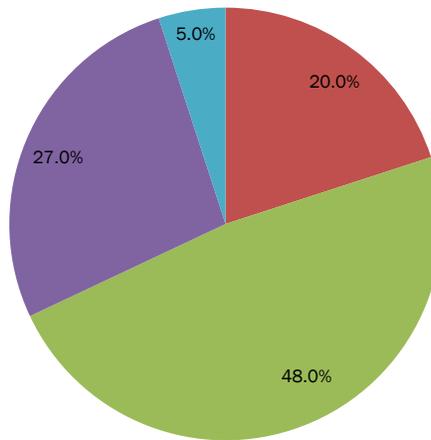
Target Fund
40



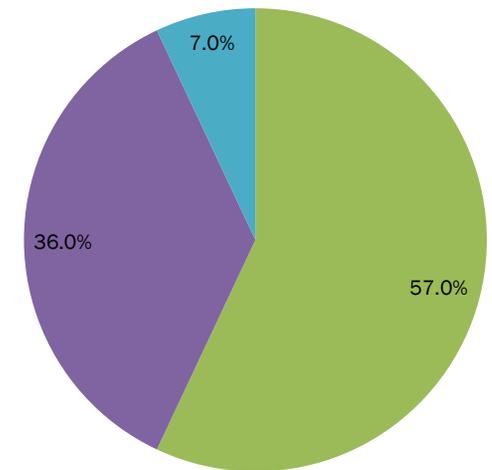
Target Fund
60



Target Fund
80



Target Fund
100



■ Money Market Funds

■ Fixed Income Funds

■ Domestic Equity Funds

■ International Equity Funds

■ Real Estate Funds

III. Advisor Plan

Target Portfolios

The corresponding Age-Based portfolios are shown below

Report as of: December 31, 2022

	Conservative	Moderate	Aggressive	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
CollegeCounts Target Fund Fixed Income Portfolio	19+			0.22%	1.19%	-1.83%	-1.83%	0.67%	1.38%	0.93%	1.38%
Target Fund Fixed Income Blended Benchmark				0.17%	0.93%	-1.41%	-1.41%	0.53%	1.31%	0.72%	1.17%
Excess Return				0.04%	0.26%	-0.43%	-0.43%	0.14%	0.06%	0.21%	0.21%
<i>CollegeCounts Target Fund Fixed Income Composite</i>				0.27%	0.95%	-1.78%	-1.78%	0.58%	1.31%	0.91%	1.36%
CollegeCounts Fund 10 Portfolio	17-18	19+		-0.53%	2.03%	-6.46%	-6.46%	0.71%	1.86%	n/a	2.20%
Fund 10 Blended Benchmark				-0.43%	1.96%	-5.32%	-5.32%	0.80%	1.93%	n/a	2.06%
Excess Return				-0.10%	0.07%	-1.14%	-1.14%	-0.09%	-0.06%	n/a	0.15%
<i>CollegeCounts Fund 10 Composite</i>				-0.33%	2.00%	-6.04%	-6.04%	0.63%	1.74%	n/a	2.07%
CollegeCounts Target Fund 20 Portfolio	15-16	17-18	19+	-0.95%	3.11%	-8.27%	-8.27%	1.25%	2.41%	3.03%	3.78%
Target Fund 20 Blended Benchmark				-0.84%	2.92%	-7.29%	-7.29%	1.14%	2.40%	2.86%	3.55%
Excess Return				-0.11%	0.19%	-0.98%	-0.98%	0.11%	0.01%	0.17%	0.23%
<i>CollegeCounts Target Fund 20 Composite</i>				-0.80%	2.98%	-8.06%	-8.06%	1.01%	2.27%	2.94%	3.65%
CollegeCounts Fund 30 Portfolio	13-14	15-16	17-18	-1.53%	3.85%	-10.56%	-10.56%	1.53%	2.75%	n/a	3.67%
Fund 30 Blended Benchmark				-1.31%	3.80%	-9.21%	-9.21%	1.54%	2.82%	n/a	3.46%
Excess Return				-0.23%	0.05%	-1.35%	-1.35%	-0.01%	-0.07%	n/a	0.21%
<i>CollegeCounts Fund 30 Composite</i>				-1.33%	3.90%	-10.05%	-10.05%	1.29%	2.62%	n/a	3.54%
CollegeCounts Target Fund 40 Portfolio	11-12	13-14	15-16	-1.94%	5.02%	-11.94%	-11.94%	1.94%	3.22%	4.50%	5.23%
Target Fund 40 Blended Benchmark				-1.66%	4.87%	-10.95%	-10.95%	1.79%	3.22%	4.43%	5.16%
Excess Return				-0.28%	0.15%	-0.99%	-0.99%	0.16%	0.00%	0.06%	0.07%
<i>CollegeCounts Target Fund 40 Composite</i>				-1.78%	4.97%	-11.77%	-11.77%	1.63%	3.04%	4.32%	5.10%
CollegeCounts Fund 50 Portfolio	9-10	11-12	13-14	-2.35%	5.79%	-13.88%	-13.88%	2.13%	3.52%	n/a	5.02%
Fund 50 Blended Benchmark				-1.95%	5.76%	-12.07%	-12.07%	2.34%	3.74%	n/a	4.92%
Excess Return				-0.40%	0.03%	-1.81%	-1.81%	-0.21%	-0.22%	n/a	0.10%
<i>CollegeCounts Fund 50 Composite</i>				-2.17%	5.90%	-13.28%	-13.28%	1.91%	3.39%	n/a	4.90%
CollegeCounts Target Fund 60 Portfolio	6-8	9-10	11-12	-2.74%	6.86%	-14.29%	-14.29%	2.67%	3.85%	5.76%	6.46%
Target Fund 60 Blended Benchmark				-2.29%	6.67%	-13.17%	-13.17%	2.56%	3.93%	5.68%	6.38%
Excess Return				-0.44%	0.19%	-1.12%	-1.12%	0.11%	-0.08%	0.08%	0.08%
<i>CollegeCounts Target Fund 60 Composite</i>				-2.62%	6.84%	-14.04%	-14.04%	2.31%	3.66%	5.64%	6.36%

Target Portfolios

The corresponding Age-Based portfolios are shown below

Report as of: December 31, 2022

	Conservative	Moderate	Aggressive	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
CollegeCounts Fund 70 Portfolio	3-5	6-8	9-10	-3.22%	7.67%	-15.30%	-15.30%	3.06%	4.17%	n/a	6.11%
Fund 70 Blended Benchmark				-2.65%	7.52%	-14.03%	-14.03%	2.90%	4.21%	n/a	5.90%
Excess Return				-0.57%	0.14%	-1.28%	-1.28%	0.15%	-0.03%	n/a	0.21%
<i>CollegeCounts Fund 70 Composite</i>				-3.08%	7.70%	-14.79%	-14.79%	2.80%	4.00%	n/a	5.96%
CollegeCounts Target Fund 80 Portfolio	0-2	3-5	6-8	-3.63%	8.49%	-16.31%	-16.31%	3.63%	4.68%	7.21%	7.80%
Target Fund 80 Blended Benchmark				-2.96%	8.43%	-14.91%	-14.91%	3.66%	4.86%	7.32%	7.89%
Excess Return				-0.67%	0.06%	-1.40%	-1.40%	-0.04%	-0.19%	-0.11%	-0.09%
<i>CollegeCounts Target Fund 80 Composite</i>				-3.47%	8.58%	-15.94%	-15.94%	3.32%	4.50%	7.09%	7.69%
CollegeCounts Fund 90 Portfolio		0-2	3-5	-3.94%	9.36%	-17.15%	-17.15%	4.00%	5.06%	n/a	7.57%
Fund 90 Blended Benchmark				-3.17%	9.35%	-15.18%	-15.18%	4.16%	5.30%	n/a	7.48%
Excess Return				-0.77%	0.01%	-1.97%	-1.97%	-0.16%	-0.24%	n/a	0.09%
<i>CollegeCounts Fund 90 Composite</i>				-3.79%	9.53%	-15.94%	-15.94%	4.21%	5.15%	n/a	7.56%
CollegeCounts Target Fund 100 Portfolio			0-2	-4.24%	10.27%	-18.15%	-18.15%	4.04%	5.11%	8.45%	8.92%
Target Fund 100 Blended Benchmark				-3.44%	10.25%	-17.10%	-17.10%	4.06%	5.32%	7.72%	8.21%
Excess Return				-0.80%	0.02%	-1.06%	-1.06%	-0.02%	-0.21%	0.73%	0.71%
<i>CollegeCounts Target Fund 100 Composite</i>				-4.14%	10.44%	-18.33%	-18.33%	3.83%	5.02%	7.41%	7.97%

Notes:

The Inception Date for all Target Portfolios is August 2, 2010. The Inception Date for all non-Target Portfolios is September 28, 2016.

Excess Return percentages, as displayed, may be affected by rounding.

Net performance excludes 529 Program Management fees (21 bps; fee was 32 bps prior to July 1, 2020) and State Administration fees (7 bps; fee was 10 bps prior to July 1, 2020).

The Blended Benchmarks for the Target and Age-Based Portfolios are comprised of the Asset Class Benchmarks according to the CollegeCounts 529 Plan Investment Policy Statement. The computation of Blended Benchmarks used in reports prior to that time employed individual fund benchmarks.

Individual Portfolios

	Inception Date	Assets (MM)	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Money Market & Bank Savings Funds										
State Street U.S. Government Money Market 529 Portfolio †	7/27/2016	\$74.0	0.82%	1.40%	2.13%	2.13%	n/a	n/a	n/a	0.89%
T-Bill			0.36%	0.84%	1.46%	1.46%	0.72%	1.26%	n/a	1.14%
Excess Return			0.46%	0.56%	0.67%	0.67%	n/a	n/a	n/a	-0.25%
Bank Savings 529 Portfolio	7/1/2020	\$17.4	0.82%	2.19%	2.98%	2.98%	n/a	n/a	n/a	1.37%
T-Bill			0.36%	0.84%	1.46%	1.46%	n/a	n/a	n/a	0.64%
Excess Return			0.46%	1.35%	1.52%	1.52%	n/a	n/a	n/a	0.73%
Fixed Income Funds										
PIMCO Short-Term 529 Portfolio †	8/2/2010	\$143.5	0.83%	0.89%	0.08%	0.08%	1.01%	1.45%	1.54%	1.59%
Citigroup Global Markets 3-Month T-Bill Index			0.34%	0.87%	1.50%	1.50%	0.71%	1.25%	0.74%	0.60%
Excess Return			0.49%	0.02%	-1.42%	-1.42%	0.31%	0.20%	0.80%	0.99%
Barclays - U.S. Gov't/Credit 1-3 Year Index			0.19%	0.89%	-3.69%	-3.69%	-0.32%	0.92%	0.88%	0.78%
Excess Return			0.63%	0.01%	3.77%	3.77%	1.33%	0.53%	0.66%	0.81%
American Century Short Duration Inflation Protection Bond 529 Portfolio †	9/26/2013	\$82.5	-0.44%	1.08%	-4.07%	-4.07%	2.45%	2.37%	n/a	1.33%
Barclays Capital - U.S. 1-5 Year TIPS Index			-0.31%	1.30%	-3.96%	-3.96%	2.32%	2.48%	n/a	1.59%
Excess Return			-0.13%	-0.23%	-0.12%	-0.12%	0.12%	-0.11%	n/a	-0.26%
Fidelity Advisor Investment Grade Bond 529 Portfolio †	10/10/2012	\$94.1	-0.69%	1.57%	-13.25%	-13.25%	-1.80%	0.68%	1.48%	1.45%
Barclays Capital - U.S. Aggregate Index			-0.45%	1.87%	-13.01%	-13.01%	-2.71%	0.02%	1.06%	1.06%
Excess Return			-0.23%	-0.31%	-0.24%	-0.24%	0.92%	0.66%	0.42%	0.39%

Notes:

Excess Return percentages, as displayed, may be affected by rounding. Net performance excludes 529 Program Manager fees (21 bps) and State Administration fees (7 bps).

† Indicates fund is held in the Age-Based and Target Risk portfolios.

Individual Portfolios

	Inception Date	Assets (MM)	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Fixed Income Funds (continued)										
Northern Funds Bond Index 529 Portfolio	8/2/2010	\$10.0	-0.40%	1.95%	-12.88%	-12.88%	-2.70%	-0.03%	0.96%	1.62%
Barclays Capital - U.S. Aggregate Index			-0.45%	1.87%	-13.01%	-13.01%	-2.71%	0.02%	1.06%	1.16%
Excess Return			0.06%	0.08%	0.13%	0.13%	0.02%	-0.05%	-0.10%	0.46%
PGIM Total Return Bond 529 Portfolio †	4/28/2020	\$112.4	-0.30%	2.38%	-14.67%	-14.67%	n/a	n/a	n/a	-3.74%
Barclays Capital - U.S. Aggregate Index			-0.45%	1.87%	-13.01%	-13.01%	n/a	n/a	n/a	-4.80%
Excess Return			0.16%	0.51%	-1.66%	-1.66%	n/a	n/a	n/a	1.06%
BlackRock High Yield Bond 529 Portfolio †	4/15/2021	\$47.2	-0.61%	4.16%	n/a	n/a	n/a	n/a	n/a	-4.97%
BBG Barc US Corp High Yield 2% Issuer Capped Index			-0.62%	4.17%	-11.18%	-11.18%	n/a	n/a	n/a	-5.06%
Excess Return			0.01%	-0.01%	n/a	n/a	n/a	n/a	n/a	0.10%
AB Global Bond Fund 529 Portfolio †	4/15/2021	\$38.8	-0.75%	1.25%	n/a	n/a	n/a	n/a	n/a	-6.68%
Bloomberg Barclays Global Agg Bond Index (USD hedged)			-1.18%	0.99%	-11.22%	-11.22%	n/a	n/a	n/a	-6.42%
Excess Return			0.43%	0.25%	n/a	n/a	n/a	n/a	n/a	-0.26%
Balanced Funds										
T. Rowe Price Balanced 529 Portfolio	8/2/2010	\$52.4	-3.20%	6.69%	-17.01%	-17.01%	2.70%	4.52%	7.11%	7.60%
T. Rowe Price Balanced Fund Blended Benchmark			-3.14%	6.90%	-15.57%	-15.57%	3.48%	5.40%	7.65%	6.44%
Excess Return			-0.05%	-0.21%	-1.44%	-1.44%	-0.78%	-0.88%	-0.54%	1.16%
Domestic Equity Funds										
T. Rowe Price Large Cap Growth 529 Portfolio †	8/2/2010	\$107.0	-7.86%	-0.18%	-35.12%	-35.12%	3.78%	8.42%	13.90%	13.77%
Russell 1000 Growth Index			-7.66%	2.20%	-29.14%	-29.14%	7.79%	10.96%	14.10%	11.25%
Excess Return			-0.20%	-2.38%	-5.98%	-5.98%	-4.01%	-2.54%	-0.20%	2.52%

Notes:

Excess Return percentages, as displayed, may be affected by rounding. Net performance excludes 529 Program Manager fees (21 bps) and State Administration fees (7 bps).

† Indicates fund is held in the Age-Based and Target Risk portfolios.

Individual Portfolios

	Inception Date	Assets (MM)	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Domestic Equity Funds (continued)										
Northern Stock Index 529 Portfolio †	8/2/2010	\$151.0	-5.75%	7.57%	-18.11%	-18.11%	7.69%	9.40%	12.50%	12.47%
S&P 500 Index			-5.76%	7.56%	-18.11%	-18.11%	7.66%	9.42%	12.56%	10.26%
Excess Return			0.02%	0.00%	0.01%	0.01%	0.03%	-0.03%	-0.06%	2.21%
DFA US Large Cap Value 529 Portfolio †	2/6/2018	\$99.6	-4.59%	13.97%	-5.81%	-5.81%	6.30%	n/a	n/a	5.61%
Russell 1000 Value Index			-4.03%	12.42%	-7.54%	-7.54%	5.96%	n/a	n/a	7.15%
Excess Return			-0.56%	1.55%	1.73%	1.73%	0.34%	n/a	n/a	-1.54%
Northern Mid-Cap Index 529 Portfolio †	8/2/2010	\$58.5	-5.55%	10.77%	-13.11%	-13.11%	7.21%	6.63%	10.65%	11.18%
S&P - Midcap 400 Index			-5.54%	10.78%	-13.06%	-13.06%	7.23%	6.71%	10.78%	8.93%
Excess Return			0.00%	-0.01%	-0.05%	-0.05%	-0.02%	-0.08%	-0.13%	2.25%
T. Rowe Price QM US Small-Cap Growth Equity 529 Portfolio †	9/28/2016	\$17.9	-5.40%	7.26%	-22.38%	-22.38%	2.43%	5.91%	n/a	8.38%
MSCI - U.S. Small Cap Growth Index			-5.93%	4.71%	-26.16%	-26.16%	4.08%	5.84%	n/a	8.49%
Excess Return			0.53%	2.55%	3.78%	3.78%	-1.65%	0.07%	n/a	-0.11%
Northern Small Cap Index 529 Portfolio	8/2/2010	\$8.3	-6.50%	6.31%	-20.34%	-20.34%	3.11%	4.05%	8.92%	9.56%
Russell - 2000 Index			-6.49%	6.23%	-20.44%	-20.44%	3.10%	4.13%	9.01%	7.49%
Excess Return			0.00%	0.08%	0.09%	0.09%	0.01%	-0.08%	-0.09%	2.07%

Notes:

Excess Return percentages, as displayed, may be affected by rounding. Net performance excludes 529 Program Manager fees (21 bps) and State Administration fees (7 bps).

† Indicates fund is held in the Age-Based and Target Risk portfolios.

Individual Portfolios

	Inception Date	Assets (MM)	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Domestic Equity Funds (continued)										
T. Rowe Price Small Cap Value 529 Portfolio	8/11/2021	\$6.8	-6.99%	4.67%	-18.42%	-18.42%	n/a	n/a	n/a	-11.02%
Russell 2000 Value Index			-6.56%	8.42%	-14.48%	-14.48%	4.70%	4.13%	8.47%	-10.05%
Excess Return			-0.42%	-3.74%	-3.94%	-3.94%	n/a	n/a	n/a	-0.97%
Northern Small Cap Value Fund †	8/2/2010	\$10.9	-6.08%	10.05%	-10.41%	-10.41%	3.42%	3.15%	8.27%	6.86%
Russell 2000 Value Index			-6.56%	8.42%	-14.48%	-14.48%	4.70%	4.13%	8.47%	7.25%
Excess Return			0.48%	1.63%	4.07%	4.07%	-1.28%	-0.98%	-0.20%	-0.40%
International Equity Funds										
Northern International Equity Index 529 Portfolio †	8/2/2010	\$55.5	-1.84%	18.38%	-14.05%	-14.05%	1.08%	1.68%	4.58%	4.70%
MSCI - EAFE Index (\$Net)			0.08%	17.34%	-14.45%	-14.45%	0.87%	1.54%	4.67%	4.22%
Excess Return			-1.91%	1.04%	0.40%	0.40%	0.21%	0.14%	-0.09%	0.48%
Neuberger Berman Int'l Large Cap 529 Portfolio †	8/2/2010	\$67.0	-2.31%	14.73%	-21.88%	-21.88%	1.04%	2.16%	4.84%	5.06%
MSCI - EAFE Index (\$Net)			0.08%	17.34%	-14.45%	-14.45%	0.87%	1.54%	4.67%	4.22%
Excess Return			-2.38%	-2.61%	-7.43%	-7.43%	0.18%	0.62%	0.17%	0.84%
DFA International Small Company 529 Portfolio †	10/10/2012	\$21.4	-0.43%	17.66%	-17.21%	-17.21%	0.77%	0.31%	5.75%	6.18%
MSCI - World Ex USA Small Index (\$Net)			0.60%	15.21%	-20.59%	-20.59%	-0.15%	0.45%	5.77%	6.09%
Excess Return			-1.03%	2.45%	3.38%	3.38%	0.92%	-0.14%	-0.02%	0.09%

Notes:

Excess Return percentages, as displayed, may be affected by rounding. Net performance excludes 529 Program Manager fees (21 bps) and State Administration fees (7 bps).

† Indicates fund is held in the Age-Based and Target Risk portfolios.

Individual Portfolios

	Inception Date	Assets (MM)	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
International Equity Funds (continued)										
Vanguard Emerging Mkt Sel Stk 529 Portfolio †	4/9/2019	\$29.4	-1.89%	11.58%	-18.04%	-18.04%	-2.04%	n/a	n/a	-0.34%
FTSE Emerging Index			-0.81%	8.56%	-16.91%	-16.91%	-1.34%	n/a	n/a	0.66%
Excess Return			-1.07%	3.01%	-1.13%	-1.13%	-0.70%	n/a	n/a	-1.00%
Real Estate Funds										
Principal Global Real Estate 529 Portfolio †	4/9/2019	\$20.0	-3.47%	5.30%	-26.63%	-26.63%	-4.49%	n/a	n/a	-1.39%
FTSE EPRA/NAREIT Developed Index (Net)			-2.79%	6.85%	-25.10%	-25.10%	-4.94%	n/a	n/a	-2.07%
Excess Return			-0.68%	-1.55%	-1.53%	-1.53%	0.45%	n/a	n/a	0.68%
DFA Real Estate 529 Portfolio	4/9/2019	\$3.8	-4.91%	4.00%	-24.82%	-24.82%	0.53%	n/a	n/a	2.91%
Dow Jones U.S. Select REIT Index			-5.24%	4.76%	-25.96%	-25.96%	-0.90%	n/a	n/a	1.00%
Excess Return			0.33%	-0.76%	1.15%	1.15%	1.43%	n/a	n/a	1.91%
Commodity Funds										
Credit Suisse Commodity Return Strategy 529 Portfolio †	10/10/2012	\$15.2	-2.30%	1.90%	15.48%	15.48%	13.24%	6.36%	-1.41%	-2.09%
Bloomberg Commodity - UBS Commodity Index (Total Return)			-2.45%	2.22%	16.09%	16.09%	12.65%	6.44%	-1.29%	-1.84%
Excess Return			0.15%	-0.32%	-0.61%	-0.61%	0.59%	-0.08%	-0.12%	-0.25%

Notes:

Excess Return percentages, as displayed, may be affected by rounding. Net performance excludes 529 Program Manager fees (21 bps) and State Administration fees (7 bps).

† Indicates fund is held in the Age-Based and Target Risk portfolios.

Asset Allocation

Allocation as of 12/31/2022

	Target Fund Fixed Income		Target Fund 20		Target Fund 40		Target Fund 60
Aggressive Age-Based Option			19 plus	17-18	15-16	13-14	11-12
Moderate Age-Based Option		19 plus	17-18	15-16	13-14	11-12	9-10
Conservative Age-Based Option	19 plus	17-18	15-16	13-14	11-12	9-10	6-8
Money Market Funds							
State Street U.S. Government Money Market	50.0%	23.0%	8.0%	-	-	-	-
Total Money Market Funds	50.0%	23.0%	8.0%	-	-	-	-
Fixed Income Funds							
PIMCO Short-Term	20.0%	22.0%	25.0%	22.0%	14.0%	11.0%	6.0%
Fidelity Advisor Investment Grade Bond Fund	7.0%	11.5%	11.5%	12.0%	11.0%	10.5%	9.0%
PGIM Total Return Bond Fund	8.0%	13.5%	13.5%	15.0%	13.0%	12.5%	11.0%
American Century Short Duration Inflation Protection Bond	15.0%	14.0%	12.0%	11.0%	9.0%	4.0%	4.0%
BlackRock High Yield Bond Fund	-	3.0%	5.0%	5.0%	7.0%	7.0%	6.0%
AB Global Bond Fund	-	3.0%	5.0%	5.0%	6.0%	5.0%	4.0%
Total Fixed Income Funds	50.0%	67.0%	72.0%	70.0%	60.0%	50.0%	40.0%
Domestic Equity Funds							
DFA U.S. Large Cap Value Portfolio	-	2.0%	3.0%	4.0%	5.0%	6.0%	7.5%
Northern Funds Stock Index	-	2.0%	5.0%	8.0%	10.0%	12.0%	14.0%
T. Rowe Price Large Cap Growth	-	2.0%	3.0%	4.0%	5.0%	6.0%	7.5%
Northern Mid-Cap Index	-	1.0%	2.0%	2.0%	3.0%	3.0%	4.0%
Northern Small Cap Value	-	-	-	1.0%	1.0%	1.5%	1.5%
T. Rowe Price QM U.S. Small-Cap Growth	-	-	-	1.0%	1.0%	1.5%	1.5%
Total Domestic Equity Funds	-	7.0%	13.0%	20.0%	25.0%	30.0%	36.0%
International Equity Funds							
Northern International Equity Index	-	1.0%	2.0%	2.5%	4.0%	5.0%	6.0%
Neuberger Berman Int'l Large Cap	-	1.0%	2.0%	3.5%	5.0%	6.5%	7.5%
DFA International Small Company	-	-	1.0%	1.0%	1.5%	2.0%	2.5%
Vanguard Emerging Markets Select Stock Fund	-	-	-	1.0%	1.5%	2.5%	4.0%
Total International Equity Funds	-	2.0%	5.0%	8.0%	12.0%	16.0%	20.0%
Real Estate Funds							
Principal Global Real Estate	-	1.0%	1.0%	1.0%	2.0%	2.5%	2.5%
Total Real Estate Funds	-	1.0%	1.0%	1.0%	2.0%	2.5%	2.5%
Credit Suisse Commodity Return Strategy	-	-	1.0%	1.0%	1.0%	1.5%	1.5%
Total Commodity Funds	-	-	1.0%	1.0%	1.0%	1.5%	1.5%
Total Allocation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

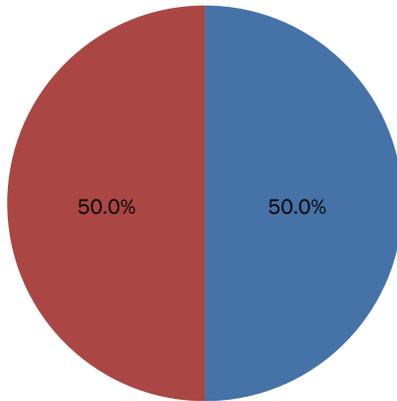
Asset Allocation

		Target Fund 80		Target Fund 100
Allocation as of 12/31/2022				
Aggressive Age-Based Option	9-10	6-8	3-5	0-2
Moderate Age-Based Option	6-8	3-5	0-2	
Conservative Age-Based Option	3-5	0-2		
Money Market Funds				
State Street U.S. Government Money Market	-	-	-	-
Total Money Market Funds	-	-	-	-
Fixed Income Funds				
PIMCO Short-Term	-	-	-	-
Fidelity Advisor Investment Grade Bond Fund	8.0%	5.5%	2.5%	-
PGIM Total Return Bond Fund	10.0%	6.5%	2.5%	-
American Century Short Duration Inflation Protection Bond	4.0%	3.0%	3.0%	-
BlackRock High Yield Bond Fund	5.0%	3.0%	1.0%	-
AB Global Bond Fund	3.0%	2.0%	1.0%	-
Total Fixed Income Funds	30.0%	20.0%	10.0%	-
Domestic Equity Funds				
DFA U.S. Large Cap Value Portfolio	8.5%	10.0%	10.5%	11.5%
Northern Funds Stock Index	17.0%	19.0%	21.0%	23.0%
T. Rowe Price Large Cap Growth	8.5%	10.0%	10.5%	11.5%
Northern Mid-Cap Index	4.0%	5.0%	5.0%	6.0%
Northern Small Cap Value	2.0%	2.0%	2.5%	2.5%
T. Rowe Price QM U.S. Small-Cap Growth	2.0%	2.0%	2.5%	2.5%
Total Domestic Equity Funds	42.0%	48.0%	52.0%	57.0%
International Equity Funds				
Northern International Equity Index	7.0%	8.0%	9.5%	10.5%
Neuberger Berman Int'l Large Cap	9.0%	10.5%	12.5%	14.0%
DFA International Small Company	3.0%	3.5%	4.0%	4.5%
Vanguard Emerging Markets Select Stock Fund	4.0%	5.0%	6.0%	7.0%
Total International Equity Funds	23.0%	27.0%	32.0%	36.0%
Real Estate Funds				
Principal Global Real Estate	3.0%	3.0%	3.5%	4.0%
Total Real Estate Funds	3.0%	3.0%	3.5%	4.0%
Credit Suisse Commodity Return Strategy	2.0%	2.0%	2.5%	3.0%
Total Commodity Funds	2.0%	2.0%	2.5%	3.0%
Total Allocation	100.0%	100.0%	100.0%	100.0%

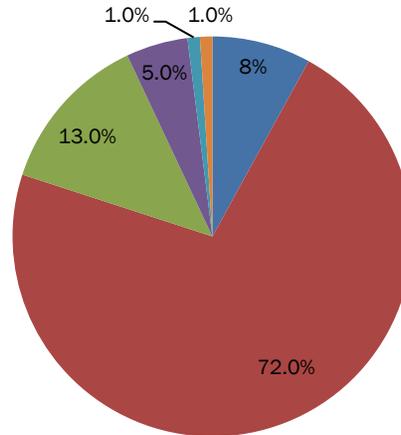
Asset Allocation

Allocation as of 12/31/2022

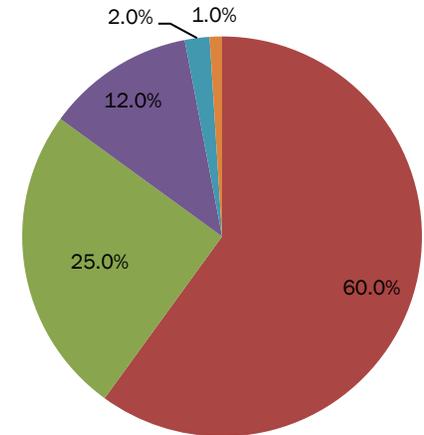
**Target Fund
Fixed Income**



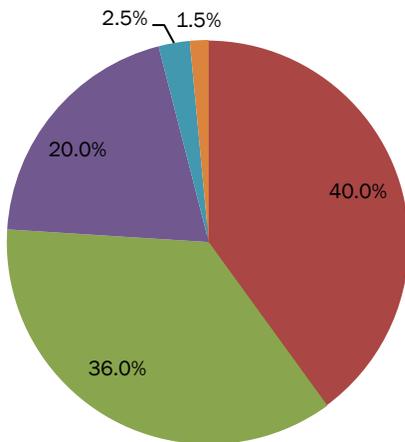
**Target Fund
20**



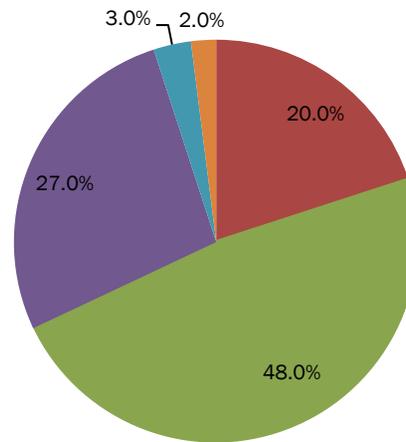
**Target Fund
40**



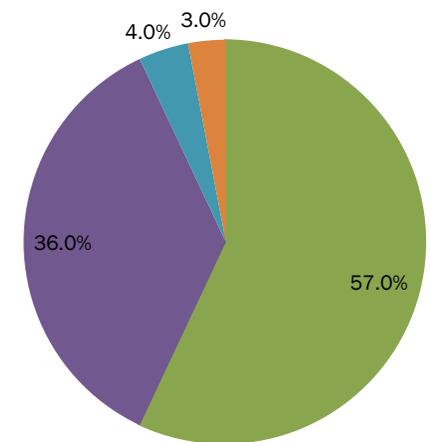
**Target Fund
60**



**Target Fund
80**



**Target Fund
100**



■ Money Market Funds

■ Fixed Income Funds

■ Domestic Equity Funds

■ International Equity Funds

■ Real Estate Funds

■ Commodity Funds

IV. Mutual Fund Evaluations

Mutual Fund Evaluations

		Ticker	Prior Manager Research Decile	Current Manager Research Decile
Advisor Plan:				
Fixed Income Funds	PIMCO Short-Term Fund	PTSHX	4	3
	American Century Short Duration Inflation Protected	APISX	4	4
	Fidelity Advisor Investment Grade Bond	FGBPX	2	2
	PGIM Total Return Bond	PTRQX	1	1
	BlackRock High Yield Bond	BHYRX	1	1
	AB Global Bond	ANAZX	2	2
Balanced Funds	T. Rowe Price Balanced Fund	RPBAX	1	2
Domestic Equity Funds	T. Rowe Price Large Cap Growth	TRLGX	2	2
	DFA US Large Cap Value	DFLVX	2	2
	T. Rowe Price QM U.S. Small-Cap Growth	TQAIX	3	3
	Northern Small Cap Value Fund	NOSGX	3	4
International Equity	Neuberger Berman Int'l Large Cap Fund	NILIX	1	1
	DFA International Small Company	DFISX	2	2
	Vanguard Emerging Markets Select Stock Fund	VMMSX	2	2
Real Estate Funds	Principal Global Real Estate	PGRSX	1	1
	DFA Real Estate	DFREX	3	4
Commodity Funds	Credit Suisse Commodity Return Strategy	CRSOX	3	3

Direct Plan:				
Fixed Income	PIMCO Short-Term Fund	PTSHX	4	3
	Fidelity Advisor Investment Grade Bond	FGBPX	2	2
Balanced Funds	T. Rowe Price Balanced Fund	RPBAX	1	2

	Rating									
Decile	1	2	3	4	5	6	7	8	9	10
Corresponding Grade	A		B		C		D		F	

Manager Research

AllianceBernstein L.P.

AB Global Plus Fixed Income

Rating Decile	Weight
2nd	100%

Summary

The AB Global Plus Fixed Income Fund is managed by AB's Scott DiMaggio, Co-Head of Fixed Income and Director of Global Fixed Income, Paul DeNoon PM of Income Strategies, CIO Doug Peebles, and Matthew Sheridan PM focused on global multi-sector fixed income. The firm announced that Paul DeNoon will retire in 2020. Mr. DeNoon is one of the senior investment professionals for the Emerging Markets Debt team at AB. The remaining portfolio managers are very experienced fixed income investors who are responsible for multi-sector or high income portfolios. In January 2020, it was announced that CIO Doug Peebles will retire from the firm in January 2021. Scott DiMaggio and Gershon Distenfeld, Co-Heads of Fixed Income, will assume his responsibilities but the CIO title will not be transferred.

Global Plus can hold up to 100% in government securities, up to 40% in US Agencies, up to 50% in residential MBS, up to 20% in CMBS and ABS, up to 50% in investment grade corporates, up to 20% in high yield debt, up to 10% in bank loans and up to 10% in structured notes.

Rating Decile	Weight
3rd	20%
5th	50%
1st	50%

I. Organization

<i>Firm</i>	3rd	20%
<i>Team</i>	5th	50%
	1st	50%

AllianceBernstein (AB), is a publicly-traded partnership (NYSE: AB) with a majority interest held by AXA Equitable Holdings (66%), a portion publicly traded (22%), and the remaining (12%) held by the firm's officers and employees. By way of background, Alliance Capital (a publicly traded partnership known for its growth equities and fixed income) bought Sanford C. Bernstein & Co, Inc. (a privately-owned firm known for its value equities and sell side research) in 2000. Peter Kraus was named Chairman and CEO of AB in 4Q08, replacing former CEO Lew Sanders. Between 2008 and 2012, AB experienced several key departures, transitions, and layoffs across the broader organization, which also coincided with a period of weak performance across various strategies. AUM and subsequently the firm's revenues and profits declined materially post-financial crisis. In recent years, the business has stabilized and firm AUM has grown and is much more diversified relative to the pre-Kraus era.

In early 2017, Mr. Kraus was abruptly terminated and the majority of the firm's Board of Directors were removed. Seth Bernstein, who formerly held several leadership positions at JPMorgan, was appointed as the new CEO. Robert Zoellick, formally President of the World Bank Group, was appointed Chairman of the Board. Six new Directors were added to the Board during May 2017 and three new independent Directors were added during November 2017. In May 2017, AXA SA announced its intention to sell a majority stake of AXA Equitable (US) (which includes AB) via an IPO on the NYSE to focus on other parts of its business. This was completed in 1Q19, which triggered a reconstitution of AB's Board. Effective 2Q19, AB replaced its Chairman (now Ramon de Oliveira) and two other board members from AXA SA with three board members from AXA Equitable (US). As a result of the changes, AB's Board has seven independent directors and four affiliated directors.

In May 2018, AB announced its intent to establish its corporate headquarters in Nashville, TN (to be completed in 2022) and to relocate over 1,000 jobs to this location. The firm will maintain a principal location in New York primarily for its investment teams, private wealth practice and sell side research.

The AB Global Plus Fixed Income Fund is managed by AB's Scott DiMaggio, Co-Head of Fixed Income and Director of Global Fixed Income, Paul DeNoon PM of Income Strategies, CIO Doug Peebles, and Matthew Sheridan PM focused on global multi-sector fixed income. AB announced that Paul DeNoon will retire in 2020. Mr. DeNoon is one of the senior investment professionals for the Emerging Markets Debt team at AB. In January 2020, it was announced that CIO Doug Peebles will retire from the firm in January 2021. Scott DiMaggio and Gershon Distenfeld, Co-Heads of Fixed Income, will assume his responsibilities but the CIO title will not be transferred. The remaining portfolio managers are very experienced fixed income investors who are responsible for multi-sector or high income portfolios. The Global Fixed Income portfolio team also includes members representing the London and Hong Kong offices.

The portfolio management team is supported by research and trading professionals. AB distinguishes itself from other fixed income managers with its well-developed quantitative analysis process which is melded with traditional fundamental economic, credit and securitized asset research. There are 9 global quantitative analysts that forecast expected returns, develop risk models and build and maintain portfolio optimization tools. The fundamental research teams include about 50 analysts.

Rating Decile	Weight
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II. Information

1st	20%
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AB uses a centralized, global research process with separate teams for credit, asset-backed, economics, emerging market, and quantitative research. The fundamental teams cover all sovereign issuers, 2/3's of the high yield universe, and 3/4's of the investment grade credit index. PRISM is the internal credit research database, which has the financial metrics, risk measures, and ESG ratings for over 1800 issuers. The quantitative team works alongside the traditional fundamental analysts and provides expected return analysis for over 2,600 corporate issuers and 17,000 fixed income securities. The company also models a broad universe of credit default swaps and many non-Index securities. This analysis helps focus the efforts of the fundamental analysts and portfolio managers.

The economic group provides forecasts that include both fundamental research and quantitative tools. The Fair Value Yield Curve framework and the Credit Impulse indicator are two tools the investment team uses to analyze opportunities. The economic group also utilizes a tool to fundamentally rank more than 50 countries on a range of variables to help identify credit rating migrations. The model provides an objective snapshot of absolute credit risk. The economic research group also maintains a Cyclical/Policy Outlook framework that subjectively assess the level of conviction for forecasts.

Wilshire typically talks about liquidity in the implementation section, but trading is fully integrated into the information gathering process at AB to a point that it is worth mentioning in this section. The trading system calculates a liquidity score for an issuer, and even measures whether or not it is a buyer's or seller's market for that issuer.

AB has deep fundamental, macro, technical, and quantitative capabilities, but the reason for such a high score is this section is AB's ability to collate all the inputs in real time into useful and actionable information. AB has put the industry on notice by creating a better system for valuing securities in real time and sourcing those bonds before the market realizes there is a mispricing.

Rating Decile	Weight
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III. Forecasting

4th	20%
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The strategy is designed to be an efficient and diversified approach to core fixed income that is global, flexible and risk-aware. The portfolio managers attempt to dynamically manage the beta of the strategy while taking advantage of systematic inefficiencies were possible in order to both generate positive returns and lower volatility for the portfolio. The Global Plus Fixed Income Fund maintains small individual positions to minimize idiosyncratic risks. While the portfolio is hedged, the portfolio managers will selectively take currency positions in order to generate alpha.

When looking at individual securities, the manager will consider the current rating, forward rating and a range of outcomes (downside and upside ratings). Using RAP the portfolio management team can compare securities' ratings and risk factor scores across industry sectors, geographies and credit spectrum. AB will focus on the downside risks as well as the convexity of a security.

On the quantitative side, AB uses a number of models which assist in quantifying risk, return and correlations across the global fixed income market. One portion looks at the beta measures and market cycle indicators. Another looks at alpha generation as it assists in security selection by analyzing and forecasting security level excess returns. Finally, there is a portfolio construction tool that optimizes portfolios. These are all used as tools and inputs in their process.

AB has created a multi-factor currency expected return model to forecast returns for all G-10 and major emerging market currencies. For developed market sovereigns, the portfolio management team employs a Global Yield Curve Model to generate a 6-month forward-looking total return forecast for sovereign bonds. Currently the quantitative team models 43 countries' yield curves and almost 10,000 local currency sovereign securities in both developed and emerging markets.

AB has also developed a probability of default model for corporate bonds in the US IG & HY universe. Separately there is a global credit model that examines IG and HY corporate bonds looking at momentum, mean reversion and macro to generate security level excess returns. AB also has a number of valuation models used for securitized assets.

AllianceBernstein L.P.

AB Global Plus Fixed Income

Rating Decile	Weight
3rd	20%

IV. Portfolio Construction

AB uses a proprietary tool called the Market Cycle Indicator which helps identify the overall level of credit risk to assume in credit-related portfolios at a given time. The tool uses indicators of liquidity and volatility to measure current risk premiums and helping identify in which phase the market is currently. The four phases are: expansion, moderation, contraction, and recovery.

The expected returns from the developed market sovereigns' model are optimized to create a best ideas portfolio. It is discussed and evaluated alongside the fundamental research of the economic research group. There is a separate version of the model to help select USD denominated emerging market sovereign securities.

Currency is managed as a separate overlay decision with a five factor quantitative model forecasting returns for eleven developed-market currencies. Expected tracking error of currency positions is monitored by the risk management system, and position sizes are scaled to ensure that the result of currency bets won't overly influence the portfolio performance.

The average portfolio quality for Global Plus Fixed Income Portfolio is typically A. The minimum credit quality for an individual issue is CCC. Also, the team limits the exposure to individual issuers, with investment-grade corporate issuers limited to 5% positions, high yield corporate issuers constrained to positions of 2% and high yield sovereigns to 5%.

Global Plus can hold up to 100% in government securities, up to 40% in US Agencies, up to 50% in residential MBS, up to 20% in CMBS and ABS, up to 50% in investment grade corporates, up to 20% in high yield debt, up to 10% in bank loans and up to 10% in structured notes.

Rating Decile	Weight
1st	10%

V. Implementation

The Global Plus Fixed Income Fund will use a large variety of instruments, depending on the market conditions. Securities range from US and Non-US government bonds, US and non-US investment grade and high yield corporates, and securitized product. The strategy will also employ derivatives, inflation or credit protection, forwards, options, swaps and futures.

The firm manages liquidity by using experienced traders who approach trading with a mindset of being a 'price maker' rather than a 'price taker.' The firm fully integrates traders into the investment process, working collaboratively with analysts and portfolio managers on security selection. AB has developed a trading tool ALFA (Automated Liquidity Filtering and Analytics) which enables it to aggregate all external fixed income trading platforms into a single view, giving them a real time picture of the entire bond market. The firm has also invested in tools that increase operational efficiency and reduce time consuming, manual processes, such as building trade orders across accounts while taking into account individual guidelines, benchmarks etc. This system called Abbie, was launched in 2018 and has increased the firm's speed to market in executing trade ideas. This has been a benefit, especially as market liquidity can be constrained.

Trading has oversight from the Risk Management Group which monitors liquidity on a macro level, by looking at liquidity across all holdings in aggregate. The team also monitors individual positions when they begin to approach internal limits.

Rating Decile	Weight
3rd	10%

VI. Attribution

Performance attribution is handled by the Global Analytics Group. It is a centralized resource providing standardized performance attribution and analytics across investment services. The analytics group uses quantitative and analytic methods to produce performance attribution, prospective simulations and other custom analyses for portfolio management teams.

The firm's global analytics group has developed proprietary multi-factor performance attribution for the Global Fixed Income team. The attribution system first breaks down the performance by factors, such as term structure effects, sector allocation, and security specific return. Then the total amount attributable to each of these three factors is broken down into finer levels. For example, returns attributable to term structure are broken down into duration and curve reshaping effects; returns attributable to sector and security selection are broken down by specific sector weightings and specific issues. The attribution system enables portfolio managers and risk management team to continuously monitor the portfolio and make adjustments accordingly.

Decile	Rating									
	1	2	3	4	5	6	7	8	9	10
Corresponding Grade	A		B		Proprietary and Confidential		D		F	

AllianceBernstein L.P.

AB Global Plus Fixed Income

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Manager Research

American Century Investment Management, Inc.

U.S. Short Duration Inflation Protection Bond

Rating Decile	Weight
4th	100%

Summary

The American Century Short Duration Inflation-Protected Bond strategy seeks to outperform the Bloomberg Barclays Capital US 1-5 Year TIPS Index by 25-75 bps with an expected tracking error of 50-150 bps over a normal market cycle. The team targets an information ratio of ~0.5. At a minimum, the strategy has to maintain 80% invested in inflation-linked securities. The rest of the portfolio can be invested in nominal fixed income securities, which may cause increased volatility relative to a more traditional “pure-play” inflation protection mandate. At the end of 2014, investment guidelines were adjusted to increase non-investment grade allocations to 20% maximum from 10%. Maximum exposure to nominal bonds remains at 20% maximum. Prior to August 2011, this strategy was managed to the Bloomberg Barclays US TIPS Index, which is roughly 5 years longer in inflation duration than the Bloomberg Barclays 1-5 Year Index.

The strategy is available as a separate account for qualified institutional investors, as well as, two mutual fund offerings (expense ratio), APOAX (82bps) and APISX (37bps).

Rating Decile	Weight
4th	20%
3rd	50%
4th	50%

I. Organization

<i>Firm</i>	3rd	50%
<i>Team</i>	4th	50%

American Century Investment Management, Inc. (“ACIM”) was founded in 1958 in Kansas City, MO, and originally operated under the name Twentieth Century Investors. The original founder, James Stowers, Jr., unfortunately passed away in 1Q14 and his family along with the Stowers Institute of Research (focused on cancer and gene-based diseases research), maintains a 44% equity stake and 70% of the voting rights. The firm pays out more than 40% of its dividends to the Stowers Institute. The next largest owner is Nomura Holdings Inc., with 40% economic interest and 10% of the voting stock. This stake was previously owned by CIBC, a leading Canadian financial institution, which had originally purchased its stake from JPM in August 2011. However, CIBC sold its stake to Nomura in 4Q15 for \$1B after unsuccessful attempts to acquire more ownership. The transaction closed in May 2016. Employees hold the remaining percentages.

The fixed income team is led by co-CIOs John Lovito and Charles Tan, and are supported by a team of experienced portfolio managers and analysts. The investment professionals are compensated with base salary, plus incentive bonus on trailing 1, 3 and 5 year performance against its respective benchmark and peer group. Restricted stocks are granted and vest over 3 years. The compensation plan was recently updated to increase the focus on longer term performance and appears adequate for minimizing investment personnel turnover.

The firm announced that Dave MacEwen, former CIO of Global Fixed Income, will retire at the end of 2018. Mr. MacEwen had been at American Century for almost 27 years, and was listed as a senior portfolio manager on several fixed income strategies. While it was telegraphed that Mr. MacEwen moved to a more managerial role four years prior to his retirement in preparation for his retirement, we viewed this as a loss to the team in terms of thought leadership, and the team score was downgraded. However, overall the organization is above average in terms of quality of the investment professionals, stability, and experience.

Rating Decile	Weight
3rd	20%

II. Information

The team does not seek unique sources of information. A starting point in the investment process is the team’s use of historical modeling to examine spread relationships over the most recent market cycle. Additionally, the team uses industry valuation databases to help identify changes between particular industries and credits in an effort to understand relative value.

The information gathering process is completely centered around the fair value trading level of sectors and individual securities based on mean reversion back to historical ranges. The team has significant experience that when combined with its information gathering process, helps exploit information inefficiencies across sectors. Risk to the integrity of this process would be turnover of senior members of the investment team as their industry experiences are central to this part of the process.

American Century Investment Management, Inc.

U.S. Short Duration Inflation Protection Bond

III. Forecasting

Rating Decile	Weight
4th	20%

The Short Duration Inflation-Protected Bond strategy implements an actively managed, multiple sector approach to hedge against U.S. inflation. The strategy attempts to exploit the mean reversion aspect of bond markets by actively managing sector allocation, yield curve and duration positioning. The strategy's main forecasting drivers are its sector specialists and the autonomous sector examination done by each team. Relative value is a key focus and a strong determinant factor at the time of security purchase. Securities for inclusion are assessed on fundamental credit analysis conducted by each respective sector team. Risk budgeting is loosely defined and could cause the strategy to lag its benchmark when losing trades aren't exited at predetermined levels. The forecasting process is not unique compared to its peer group; however, the personnel breadth does provide a clear and repeatable process.

The firm's Analytics Group, which was built to support the Global team, uses quantitative tools to put together heat maps, risk on/risk off models, momentum analysis, and inflation outlooks. Given the strategy's non-US exposure, we view these tools as a positive addition for the team's process, so the Forecasting score has been increased.

IV. Portfolio Construction

Rating Decile	Weight
4th	20%

The American Century Short Duration Inflation-Protected Bond strategy seeks to outperform the Bloomberg Barclays Capital US 1-5 Year TIPS Index by 25-75 bps with an expected tracking error of 50-150 bps, over a normal market cycle. Prior to Aug 2011, this strategy was managed to the Bloomberg Barclays US TIPS Index, which is roughly 5 years longer in inflation duration than the Bloomberg Barclays 1-5 Year Index. At least 80% of the fund's assets are invested in inflation-linked debt securities by prospectus. The fund may invest up to 20% of assets in nominal debt securities, including non-dollar and non-investment grade debt. The maximum allocation to non-investment grade debt was increased to 20% at the end of 2014. US Treasury futures and inflation swaps are frequently used in the portfolio to manage inflation and nominal durations, as well as express active yield curve positioning. The strategy limits futures and swaps notional exposures as a percentage of the portfolio's cash market value to 100% and 15%, respectively. As a reminder, the amount notional exposure employed is based on a contribution to duration basis. Finally, single issuer is limited to 5% max, excluding government/agency debentures and pass through securities.

The portfolio duration is maintained within $\pm 20\%$ of its benchmark duration. Active duration management has been sparsely utilized, as the team does not historically view this as a material source of alpha. However, the team is active in yield curve positioning to express its interest rate views. The team's historical attribution indicates excess returns were derived from security selection (50%), sector allocation (25%), and duration/yield curve positioning (25%).

The firm's Analytics Group, which was built to support the Global team, uses quantitative tools to put together heat maps, risk on/risk off models, momentum analysis, and inflation outlooks. Given the strategy's non-US exposure, we view these tools as a positive addition for the team's process, so the Portfolio Construction score has been increased.

V. Implementation

Rating Decile	Weight
3rd	10%

As a firm, American Century does not execute trades through a centralized trading desk. Portfolio managers within each respective sector teams conduct their own trading through direct contacts with the Street. Trades are entered using the Bloomberg Portfolio Order Management System. For the Short Duration Inflation-Protected Bond strategy, all transactions are approved and documented prior to execution by a multi-departmental Derivatives Committee comprised of personnel from the investment management, trading, investment accounting and legal departments. Relative to its peer group the firm has adequate resources dedicated to its trading process.

American Century Investment Management, Inc.

U.S. Short Duration Inflation Protection Bond

Rating Decile	Weight
2nd	10%

VI. Attribution

A dedicated risk management team provides oversight and daily monitoring of the firm’s strategies. At a macro level, risk management includes both forward-looking analysis to determine current and anticipated risk profiles, as well as, backward-looking analysis to provide feedbacks on its proprietary risk models reliability. These risk models provide tracking error, scenario analysis, and performance attribution. Different portfolio risks are managed and reviewed on a daily, weekly, and monthly basis. A variety of external tools such as Bloomberg and Yield Book, as well as, other internal proprietary systems are also utilized to complement this process. Portfolio duration, yield curve, and sector weighting risk relative to the benchmark are monitored daily by the portfolio managers.

In January 2018, the firm transitioned to Aladdin’s portfolio and risk management systems. Wilshire views these enhancements in their risk management as a positive and upgraded the Attribution rating.

	Rating										
Decile	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			Proprietary and Confidential		D		F	

American Century Investment Management, Inc.

U.S. Short Duration Inflation Protection Bond

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Manager Research

BlackRock

High Yield (F)

Rating Decile	Weight
1st	100%

Summary

BlackRock High Yield is a total return high yield strategy with the ability to invest across the credit quality spectrum and an issuer's capital structure (including bank loans and common stock). The strategy is co-managed by Mitch Garfin, and David Delbos, with the assistance of CIO Jimmy Keenan and the rest of the firm's Global Credit Group. The team uses a structured credit scoring model to evaluate securities and will opportunistically adjust the portfolio's positioning based on views of risk and relative value. Investors should be aware of the team's flexibility to invest in out-of-benchmark securities (bank loans, convertible bonds, common stock, etc.) and the heightened tracking error those positions may introduce.

Rating Decile	Weight
2nd	20%
4th	50%
1st	50%

I. Organization

<i>Firm</i>	4th	50%
<i>Team</i>	1st	50%

BlackRock, founded in 1988, is known for combining sophisticated analytical tools with a systematic process to manage fixed income, equity and alternative strategies. Through multiple mergers and acquisitions over the past twenty-plus years, BlackRock has grown to the world's largest asset manager with AUM of approximately \$8.86 trillion as of the end of 2020.

BlackRock was founded in 1988 with AUM of \$1b. In the 1990's, BlackRock became fixed-income investment manager for PNC Financial Services. BlackRock went public (NYSE: BLK) in 1999 with PNC as majority shareholder. In the 2000's, BlackRock launched BlackRock Solutions, acquired State Street Research and Management, SSR Realty and also acquired fund of funds business from Quellos Group, LLC. In 2008, BlackRock launched Financial Markets Advisory business as part of BlackRock Solutions. In 2009, BlackRock hired 29 investment professionals from R3 Capital Partners and purchased BGI. In May 2020, PNC announced that it would be divesting its 22.4% stake of BlackRock through a registered offering. BlackRock will buy back \$1.1 billion of the shares.

In 2009, BlackRock acquired 29 people from R3, a firm focused on credit. While the addition of new personnel was a sign of enhanced resources, the team experienced notable turnover as the groups were integrated. As a result, James Keenan is the only one of three original high-yield lead PMs remaining with the firm. Kevin Booth (focused on closed-end funds) and Mark Williams (focused on loan portfolios) both left in 2009, and one analyst from the R3 left in 2010. In Q1 2014, co-PM Charlie McCarthy left the firm for personal reasons. In addition to being the group's CIO, Mr. Keenan, headed the leveraged credit group by himself. In 2017, BlackRock hired Tim O'Hara from Credit Suisse to co-head the leveraged credit group along with Keenan. Mr. O'Hara will not be involved in investing, but instead is tasked with building out the business for the multi-sector and distressed products. Mr. O'Hara's hiring will not affect the high yield team. Mitch Garfin and David Delbos manage the High Yield strategy. Mr. Garfin provides the top-down input as well as takes on client facing responsibilities, and Mr. Delbos is the relative value expert. Robert Wartell leads the leveraged credit research team. Overall, team stability has improved in recent years and the strategy benefits from the experience of Mr. Keenan and the ample resources at BlackRock. In addition, the team is working on building out the next generation of portfolio managers in a thoughtful manner. BlackRock is grooming investment professionals on the team with diverse backgrounds under the leadership of those who have similar backgrounds. Wilshire sees the increased stability of the 40+ person team and improved depth as positives.

BlackRock

High Yield (F)

Rating Decile	Weight
1st	20%

II. Information

BlackRock places an emphasis on independent fundamental research. Along with information gathered from communications with company management and external sources such as Credit-Edge, Bloomberg, IBES, and SEC filings, BlackRock looks for unique sources of information including contact with customers, suppliers and competitors.

Information is also shared between the high yield team and the equity and investment grade analysts within BlackRock. State of the art proprietary information systems that incorporate external and internal research enable the team to easily store and share research reports. BlackRock's culture of sharing information and being judged on value added to other groups gives this structure more credibility compared to other shops claiming likewise.

The team's increased coverage of bank loans, distressed credit, and specialty areas such as aviation has also given them an information advantage as the team meets with more companies and institutional investments that would be overlooked by a pure high yield team. The product receives high marks for the breadth of information and depth of knowledge used in the research process.

Rating Decile	Weight
1st	20%

III. Forecasting

Jimmy Keenan and the other senior members of the group meet to define the team's macro views. Through weekly discussions with PMs from the various sector teams (IG, Bank Loans, Distressed Debt, Aviation, European Credit, etc.), Mr. Keenan, along with Mr. Delbos, and Mr. Garfin determine the strategy's risk positioning, sector decisions, and curve positioning.

BlackRock use a structured credit scoring model to evaluate securities. The model uses three factors: credit, risk/reward analysis, and market related data. Credit analysis is the most important part of the analysis and has a 50% weighting. It focuses on financial statement analysis based on proprietary models and qualitative information from the analyst's information sources. Risk/reward analysis has a 30% weighting and is based on the relative value of a security within its industry. Market related data has a 20% weighting and includes macro and industry factors that may influence an issuer.

Forecasts are updated on a consistent basis enabling the team to act appropriately. The team reassesses a bond when it is priced below \$80, or when negative information is reported by the company or obtained from independent sources, to determine if the bond is still favorable within its credit scoring process. Credit scores are reviewed by the entire team.

This product is considered as an all-weather strategy, as the PMs have the ability to invest across the quality spectrum and capital structure. The team employs a systematic and repeatable process and has shown the ability to add value from credit selection and sector rotation over various market environments.

BlackRock

High Yield (F)

	Rating Decile	Weight
IV. Portfolio Construction	2nd	20%

BlackRock has a disciplined portfolio construction process and a tight risk control system. When new names are considered for the portfolio, they must fit within target credit and industry exposures. The firm's proprietary system allows the team to quickly assess the impact of a new issue on portfolio risk relative to the benchmark.

A core satellite approach is also used where the portfolio will have 65 to 75% of its holdings in core positions with the rest allocated towards opportunistic names. Portfolios tend to have 225-275 issuers with a minimum size of \$150 Million. Issuer limits are capped at 3%, industry limits at 15%, and the firm will limit exposure to an issue at 20%. The team invests across the quality spectrum and may at times hold overweight allocations the lower quality segments of the market depending on their view of risk and relative value. Tracking error typically ranges between 150 and 300 bps.

Given client guidelines, BlackRock will invest in bank loans, convertible bonds, preferred stock, mezzanine securities, and common stocks in addition to high yield securities. The team also uses derivatives, such as calls, puts, and stock futures to manage/hedge portfolio risk exposure. The firm receives above average marks for its tiered approach to manage credit risk in the portfolio along with its ability to consistently maintain targeted portfolio exposures; however, clients should be aware of the tracking error that may result from the use of out-of-benchmark securities.

	Rating Decile	Weight
V. Implementation	2nd	10%

BlackRock has an advanced trading platform, and demonstrates a competitive advantage in this area. Fixed income trades are executed by the Investment Teams who use Aladdin, BlackRock's proprietary, centralized, and integrated investment system. Aladdin provides a platform with straight-through processing from analytics, to trade entry, compliance, operations, administration, and finally reporting. This database is used throughout the organization, thus eliminating redundant data input, enhancing integrity, reducing operational and compliance risks, and providing consistency.

Within Aladdin is a comprehensive suite of risk management reports (the Green Package®). These reports are produced daily, many on a real-time basis. All reports are available online, either through the BlackRock intranet or dedicated client websites. Reports can be easily customized, enabling each BlackRock professional to focus on the information most relevant to the individual. Overall, the firm receives high marks for its implementation effort; however, this is partially offset by their large high-yield AUM, which may hinder the strategy's maneuverability in difficult market environments.

	Rating Decile	Weight
VI. Attribution	1st	10%

BlackRock has developed a detailed performance attribution model to run on the high yield strategy. The model decomposes absolute and relative performance among credit, industry, and quality exposures, drilling down to the security level. BlackRock has a separate Risk and Quantitative Analysis Group (RQA) that works closely with the portfolio management team. RQA developed tools to compute active/absolute risk and performance decomposition to different risk factors (interest rate, inflation, FX, spread, etc.). RQA combines the risk/return analysis with stress tests under different market conditions to understand tail risk allocation within the portfolios. Output from the model is used as a feedback mechanism to the investment process to determine if returns are coming from expected sources. Overall, the firm receives above average marks for its integration and level of depth of performance attribution.

	Rating										
Decile	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			Proprietary and Confidential		D		F	

BlackRock

High Yield (F)

Firm Information

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Manager Research

Credit Suisse Asset Management

Credit Suisse Enhanced Commodity Fund

Rating Decile	Weight
3rd	100%

Summary

The Credit Suisse Total Commodity Return strategy serves as a suitable option for investors seeking diversified, enhanced-like index exposure to the commodities space. The commodity team, led by Chris Burton and Bryant Lie, implements a combination of mostly passive commodities exposure, gained through derivative securities, and a high quality short duration fixed income overlay that seeks to enhance alpha by a fractional amount. The portfolio is tightly risk-controlled with tracking error constrained to approximately 1-1.5%. The strategy emphasizes quantitative research and qualitative inputs to add value derived from the roll component of a commodity's total return.

The broader firm has experienced turnover and organizational change in recent years. In addition, the declining asset base in the firm's commodity strategies led to a reduction in the investment team in 3Q20.

Rating Decile	Weight
5th	20%
5th	50%
4th	50%

I. Organization

<i>Firm</i>	5th	20%
<i>Team</i>	4th	50%

Credit Suisse is wholly-owned by Credit Suisse Group AG, a global financial services company headquartered in Zurich. Within the organization, there are three operating divisions - Asset Management, Private Banking, and Investment Banking. On July 1, 2009, Credit Suisse announced that it had successfully completed the sale of part of its Global Investors traditional asset management business to Aberdeen Asset Management. In addition to a base salary, employees are eligible for an annual discretionary Incentive Performance Bonus (IPB) based on firm and department profitability, individual performance/contribution, and the strategic needs of the firm. The IPB is awarded in the form of cash or cash and shares and vests over a multi-year period. A portion of the IPB cash-based award will earn a return equal to Credit Suisse's return on equity in profitable environments, but will have a mechanism which will adjust any unvested awards downward if a business area is unprofitable.

Tidjane Thiam, CEO of the parent company, resigned in 2020 following allegations of a corporate spy ring. Although Mr. Thiam did not admit to knowing about the spy operations, Chairman of the Board Urs Rohner decided it was time to move on. Credit Suisse named Thomas Gottstein as Mr Thiam's successor effective immediately; previously Mr. Gottstein was the CEO of the Switzerland business at Credit Suisse. Eric Varvel will remain the Global Head of Asset Management, a position he has held since 2016. Peter Norley is the Americas Head of Asset Management, a position he has held since 2016. Wilshire downgraded the firm score to average in 2020 to reflect headline risk, both realized and possible in the future due to being a subsidiary of a Swiss banking conglomerate. Although the parent company has potential to bring volatility to the asset management subsidiary, CSAM's Credit business is a market leader. Wilshire balanced the potential for parent headline risk with the strength of the underlying credit business to come to an average firm score.

The Total Commodity Return product is led by Chris Burton and Bryan Lie and is supported by three dedicated to quantitative research and risk management analysts. Following the departure of Nelson Louie, Global Head of Commodities, in 3Q20, Mr. Burton assumed leadership of the commodities team and Mr. Lie was named co-portfolio manager. Mr. Burton and Mr. Lie are responsible for the monthly rolling of futures contracts and identifying other structural inefficiencies in the commodities marketplace. Timothy Boss, who had been the fixed income portfolio manager on the strategy, also left the firm in 3Q20, and was replaced by Fanny Chen. Mr. Burton and Mr. Lie have assumed trading responsibilities from Phil Mulholland, who also left the firm in 3Q20. Andrew Karsh, a former portfolio manager on the strategy, departed in 2010, having been with the team since 2007. Lastly, Frank Liu, a quantitative specialist on the team, left in 2018 to pursue another personal endeavor in the industry. The recent team changes are reflected in a lower team score.

Credit Suisse, as an organization, has undergone a considerable turnover and restructuring of its asset management business post-GFC. The team's leadership is seasoned, but several of the team's analysts have been recent additions, dating back to 2013. We acknowledge that stability has been achieved since 2009 but continue to express some caution on the commodities platform given the parent's company's grip on the asset management division.

Credit Suisse Asset Management

Credit Suisse Enhanced Commodity Fund

II. Information

Rating Decile	Weight
2nd	20%

The Credit Suisse Total Commodity Return strategy involves pure replication of the index beta with a fixed income overlay. In addition, the team attempts to take advantage of some structural inefficiencies in the commodities market and thus has a research effort dedicating to identifying these characteristics. The manager seeks to identify sources of value add by emphasizing quantitative research on the roll yield component of the investment process. Weekly meetings of Portfolio Managers, Analysts and Traders are held to discuss individual economic and strategic viewpoints leading to the adoption of the group's consensus investment strategy. The team also leverages the firm's strategic relationship with Glencore, which provides physical market information through its commodities desk.

The team does not demonstrate an ability to perform the type of sophisticated in depth fixed income research that is found at many peer firms. However, the collateral portion of the commodities portfolio is intended to generate only a fraction of the overall portfolio's alpha and exhibits a high quality orientation consisting primarily of short duration Treasury and Agency fixed income securities. Overall, the team is focused on discovering unique sources of value add through its quantitative work and qualitative inputs to the investment process.

III. Forecasting

Rating Decile	Weight
3rd	20%

The product's underlying commodities exposure is gained through single-commodity futures, index futures, total return swaps or commodity-linked structured notes. Futures are used predominantly as the team feels that significant value can be added through the monthly futures contract roll. In addition, the commodities team looks at other structural areas such as seasonal analysis to add additional alpha to the strategy without making explicit bets on one commodity versus another. This strategy is managed against the Bloomberg Commodity Index, though the firm has managed the strategy against the GSCI for a longer time period. For the enhanced cash fixed income process, the team uses a combination of top-down and bottom-up inputs. Using macroeconomic conditions and market-related technical factors as a backdrop, the team determines duration decisions that are then applied to the total portfolio. Yield curve exposures are then distributed in an optimized fashion. Sector allocation is determined based on relative value assessment across the major sectors. The team forecasts expected excess returns from each sector over the ensuing six months based on the general market environment. Sector specialists then execute the purchase or sale of individual issues that fit the macro investment themes and also provide potentially high risk-adjusted returns versus the benchmark. The team focuses its fixed income effort on selecting short duration Treasuries and Agency debt.

Overall, the forecasting process is logical and slightly differentiated. The product has historically added incremental value from both, its commodities management efforts and its short duration fixed income overlay, and the team has undertaken significant research to take advantage of structural anomalies in the futures market.

IV. Portfolio Construction

Rating Decile	Weight
1st	20%

Due to the index replication of the commodities index using futures and the very small bets taken by the short duration fixed income team, the portfolio construction score ranks well because the tracking error is managed effectively and relatively low given the fund's objective. The firm has limited disclosure of some of the key risk management processes used in the fixed income management portion of the portfolio, mitigating the firm's portfolio construction score. The team does use an optimization process to ensure the portfolio is efficiently positioned versus the benchmark, and they also utilize proprietary risk models to track principal at risk and to also assess forward-looking tracking error. Overall, the portfolio construction effort remains solid due to disciplined replication of the commodities portion of the strategy and adherence to targeted tracking error constraint.

Credit Suisse Asset Management

Credit Suisse Enhanced Commodity Fund

Rating Decile	Weight
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V. Implementation

3rd	10%
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Individual sector specialists at Credit Suisse execute trades based on opportunities they are observing in the marketplace. Mr. Burton and Mr. Lie are responsible in trading positions for the portfolio. This hands-on approach adds value relative to more silo-oriented functional approaches. Trading is segmented between commodities and collateral portfolios. Electronic futures trades are typically placed through the RediPlus trading system. Charles River is also leveraged as an order management system for their trading execution. Most of the trades are automated though in some cases manual engagement is necessary. Advent Geneva is utilized as the team's portfolio accounting system and for performance measurement purposes. Trading costs are not explicitly measured though the team will endeavor to achieve best execution as there is ample transparency in trading the derivative contracts for the strategy. The team estimates capacity to be near \$20 bn for the entire commodities platform.

Rating Decile	Weight
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VI. Attribution

3rd	10%
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The team reviews performance attribution on a daily basis to assess the various sources of portfolio performance relative to the benchmark and monitor the portfolio's risk exposures. The team relies on CSAM's Risk Management team to provide risk appraisals and inform the process. Attribution analysis is mainly utilized to track the success of portfolio decision-making and provide performance reporting to clients.

Decile	Rating									
	1	2	3	4	5	6	7	8	9	10
Corresponding Grade	A		B		C		D		F	

Credit Suisse Asset Management

Credit Suisse Enhanced Commodity Fund

Firm Information

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Manager Research

Dimensional Fund Advisors

World ex US Small Cap Strategy

Rating Decile	Weight
2nd	100%

Summary

Dimensional Fund Advisors offers an attractive World ex-US Small Cap strategy for investors seeking to gain an index-like exposure to the developed international small cap core equity space. The investment team quantitatively engineers its portfolios using sound fundamental rationales that are based on academic research. The investment process is team-driven and has been very stable since its inception. Any adjustments to the security selection model are carefully researched and thoroughly vetted by the firm's investment committee prior to implementation. This systematic approach also prevents impulsive decision-making as it relates changes in the investment process. Measured over a full market cycle, the strategy has been successful in adding value over the MSCI World ex-US Small Cap Index; however, performance is typically in-line with the index over shorter time periods. The result of the process is a very diversified, low turnover portfolio that exhibits a slight value tilt and a small cap bias. The firm continues to demonstrate an impressive ability to add value through its patient trading process, and the organization is well-respected as a privately held company of many talented investors. The strategy is a very low cost investment option for clients to gain exposure to the international small cap equity markets.

Rating Decile	Weight
1st	20%
1st	50%
1st	50%

I. Organization

<i>Firm</i>	1st	20%
<i>Team</i>	1st	50%

Founded in 1981, Dimensional Fund Advisors, Inc. (DFA) is a privately held company primarily owned by employees and directors. The firm is managed on a day-to-day basis by Co-CEOs Dave Butler and Gerard O'Reilly. Mr. Butler took over the role from David Booth in February 2017, while Mr. O'Reilly replaced Eduardo Repetto after his unexpected departure in September 2017. Mr. O'Reilly, who was also Co-CIO with Mr. Repetto, continues to operate as the firm's sole CIO and Mr. Booth, a co-founder of the firm, remains at DFA as Executive Chairman.

The firm moved its headquarters from Santa Monica, CA to Austin, TX in January 2009 and has investment operations in Austin, Charlotte, London, Santa Monica, Singapore, Sydney, and Tokyo, in addition to client service offices in Vancouver, Toronto, Amsterdam, Berlin, Melbourne, and Hong Kong. As of 1Q20, the firm had over \$450 billion in assets under management, including significant portions in domestic equity, international equity, emerging markets equity, and domestic fixed income. Compensation is tied to the financial success of the firm and performance, and it includes a base salary, semiannual bonus, and participation in the firm's long-term incentive plan (LTIP) that allows qualified employees the option of purchasing equity after a three-year vesting period of phantom equity units.

The World ex-US Small Cap strategy is managed by the Investment Committee (IC), the International Portfolio Managers, and the Investment Policy Committee (IPC) that meets on a quarterly basis. The Investment Committee has over 10 members and is comprised of senior management and the senior portfolio managers of the firm's various investment strategies. Arun Keswani, who is based in the firm's Austin office, is the portfolio manager primarily responsible for this strategy from a reporting standpoint. Despite this responsibility, it is more appropriate to reference the entire portfolio management team as responsible for the strategy as their role is to provide for the daily oversight of all portfolios. This team consists of over 30 PMs and is led by Joe Chi and Jed Fogdall who serve as Co-Heads of Portfolio Management. Both have been with DFA for over 10 years.

Historically, the firm has had very little employee turnover. However, it's worth noting that Henry Gray, Head of Equity Trading and member of the Investment Committee, departed the firm in March 2017 to pursue a career in teaching. Mr. Gray had been with the firm since 1995, and his position was quickly filled by Ryan Wiley, previously Head of Americas Trading, and John Romiza, previously Head of International Trading, as co-Heads of Global Equity Trading. Also of note, Eduardo Repetto, Co-CEO, Co-CIO, and member of the IC and IPC, decided to leave the firm in September 2017. After being with the firm for 17 years, the news of Mr. Repetto's departure was surprising, but it did not impact our team rating at the time. In these rare instances of departures, the team-driven investment approach and the quantitative investment process protects the portfolio from adverse outcomes as the portfolio is not dependent on a single individual. Overall, the organization rates highly due to independence, the quality of the investment professionals, and the relative stability of the senior professionals.

Dimensional Fund Advisors

World ex US Small Cap Strategy

Rating Decile	Weight
3rd	20%

II. Information

Information gathering on securities covers over 15,000 international stocks, and the firm analyzes data from a variety of sources including, but not limited to IDC, Bloomberg, Instinet Analytics, Compustat, OneSource, and Bridge Information systems. Specifically, the firm analyzes market capitalization, book-to-market value, and a number of company-, price discovery-, and liquidity-specific filters. In addition, qualitative filters are employed to screen out companies that are government held or have a tightly held ownership structure, companies in extreme financial distress, are REITs or highly regulated utilities, or have recently had an IPO. Information is gathered through relationships with local brokers, electronic data sources, country visits, and meetings with heads of the local exchanges. The investment committee reviews information gathered during country visits to assess country selection criteria such as quality of the legal system, treatment of foreign ownership, financial statement accounting rules, and the settlement system. These trips are used for country allocation decisions, including identifying countries that will be added to or removed from the fund's investable universe.

Ongoing information gathering is also performed around the dimensions of expected returns (factors) targeted in the process. Specifically, these factors are equity premium, market cap, value, and profitability. This research is performed both internally by researchers and externally by contracted academics, with the overall goal of finding dimensions that are sensible, persistent, present in all markets, robust in all markets (present in all securities), and cost-effective to capture.

While DFA may not have superior security specific information like bottom-up managers, they do perform significant research on the factors behind the investment thesis. New factors for investment have an extremely high hurdle to overcome before being implemented, with only the profitability dimension being introduced as a new factor in recent years. For these reasons, the strategy rates above average in information gathering.

Rating Decile	Weight
4th	20%

III. Forecasting

The World ex-US Small Cap strategy employs a clear and disciplined forecasting approach. The process begins with the size premium by targeting small companies in the 22 developed market-only countries approved by the firm. Size is defined as stocks in the lowest 12.5% of market cap by country, with at least a \$50 million minimum capitalization to avoid pure micro caps. The next step is to target the value premium by ranking stocks in each country by relative based on price-to-book ratio. Using these rankings, the profitability factor excludes stocks with the lowest profitability that are trading at the highest relative prices. Profitability is defined as the operating income before depreciation and amortization, minus interest expense, scaled by book value (EBTDA/BV). Throughout the process, exclusion rules prevent investments in REITs, investment companies, and highly regulated utilities. The fund will also not invest in most recent IPOs, merger or acquisition targets, and companies in distress or bankruptcy. Trading is halted in these securities as the team researches the situation and makes an investment decision.

The investment process is constantly reviewed for enhancements or new dimensions of expected returns to target. In 2010, for example, the firm introduced a momentum factor. Looking at midterm trends (from 1-2 months to 6-12 months) DFA research found that stocks with a large positive risk-adjusted return would continue to have positive returns in the next period. This factor was then implemented when making buy and sell decisions, but conversely, the firm is also willing to discontinue using a factor when they believe it will no longer lead to long-term excess returns.

While the process is designed to target the firm's dimensions of expected returns and not mimic a benchmark, the process results in a very diversified portfolio with a performance pattern very similar to that of the MSCI World ex USA Small Cap Index over short timeframes. Over the long-term, the process has been successful at marginally adding value, and given the disciplined nature of the approach, is expected to continue to add value while stocks with the factors targeted for investment - size, value, and profitability - provide alpha. For these reasons, the strategy rates slightly above average in forecasting for its consistency, but not as high as peers who have the ability to add more alpha.

Dimensional Fund Advisors

World ex US Small Cap Strategy

Rating Decile	Weight
3rd	20%

IV. Portfolio Construction

The World ex-US Small Cap strategy typically holds between 4,000 and 5,000 securities. While most commonly benchmarked to the MSCI World ex-US Small Cap Index, the strategy is not managed to any specific benchmark and does not target a specific tracking error. However, historical tracking error has been low and has ranged between 1-3% per year. The strategy's country allocations are driven by the size of the lowest 12.5% target weight set on the market cap (free-float adjusted) of each country. Individual security weights are limited to 5% of the portfolio at the time of purchase and sector weights are a byproduct of security selection, subject to a +/-10% relative weight to the benchmark. By rule, the strategy does not include REITs in its investible universe so the portfolio will always be underweight this sector relative to the benchmark. The strategy will be at least 99% invested at all times, keeping cash to a minimum.

In terms of risk management, the strategy excludes some of the smaller, less-liquid countries in the benchmark, as well as those that do not meet the investment committee's criteria. When building positions in countries that have increased risks or that DFA previously deemed un-investable, the fund will invest in ADRs, GDRs, and foreign shares, but not local market shares. This provides access to the market with a reduced exposure to risks specific to those countries. On the other hand, fundamental risks outside of the specifically targeted dimensions of expected return, do not appear to play an active role in portfolio construction. While this risk is mitigated by constructing a highly diversified portfolio, many fundamental factor exposures are not considered when adding to or removing names from the portfolio.

Overall, DFA's portfolio construction efforts are a manifestation of the investment process. Subjective decisions such as individual positioning and weighting are removed from the process and instead are a summation of all of the securities targeted for investment. As a result, portfolio construction rates above-average relative to peers for its ability to produce a portfolio that consistently exhibits the process employed.

Rating Decile	Weight
1st	10%

V. Implementation

The trading platform was developed in-house and is an integral part of the firm's investment process. The firm's proprietary trading system was designed specifically for its investment strategies and all trades are entered through an integrated, highly customized Order Management System based on the Charles River Investment Management System. Execution Management Systems is used for implementation and almost 100% of trades are executed via direct market access by a desk located in the region of the security's domicile. To do so, DFA has 24-hour trading capabilities through its global offices and maintains a cross-training program so that traders are able to operate in markets outside of their primary coverage when needed. This helps provide more seamless coverage in the situations ranging from heavy trading volume to contingency plans for disaster recovery. A virtual desk system has been put in place that allows trade instructions to be placed either with a specific person or to the entire desk where it can be assigned based on capacity. Team members can also use this system to remotely access their workstation.

Trade instructions and execution parameters are sent to the traders by the portfolio managers. These trades arrive daily as a list of potential securities to buy/sell based on their dimensions of expected return or that meet specific account objectives necessary (i.e. rebalances, cash build up for redemption, etc.). Traders are then able to work through this list to add to/sell from the portfolio those securities where they can provide the best execution for clients. Trading costs are extremely important to the firm, and through the traders' ability to "sit on an order" until given a suitable price, third party analysis has shown that DFA has been able to add considerable value for clients from trading and best execution practices. In recent years, as a result of the firm's research, the firm implemented a momentum screen that delays a purchase (sell) of a stock if it has experienced negative (positive) price momentum over the recent months. Turnover in the portfolio has historically been less than 20% and soft dollar relationships are not used at the firm.

Implementation practices at the firm are regarded as some of the best in the industry. Aside from the obvious benefit from this fact, strong implementation is particularly meaningful for a product in a relatively less-liquid space such as international small cap equity.

Rating Decile	Weight
1st	10%

VI. Attribution

DFA has sufficient systems in place to monitor portfolio performance attribution. The firm employs a proprietary six-factor model which identifies company size, value, and beta exposure in four markets. Each strategy has a portfolio advocate that regularly reviews the portfolios to ensure they are in compliance. The firm also has additional systems in place provided by external vendors to measure performance and multi-factor attribution. The addition of the momentum screen indicates that they are using these tools to identify areas of potential improvement. Due to the constant review of the investment process, the strategy rates highly in terms of attribution.

Decile	Rating										
	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			Proprietary and Confidential		D		F	

Dimensional Fund Advisors

World ex US Small Cap Strategy

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Manager Research

Dimensional Fund Advisors

US Large Cap Value Strategy

Rating Decile	Weight
2nd	100%

Summary

DFA US Large Cap Value is suitable for clients seeking structured and consistent value exposure to the large cap universe for a low fee base. The investment team is very experienced and is supported by some of the top academic researchers in the country. The investment process is top down oriented and focuses on asset class exposure. The team believes that focusing on value and size by eliminating stocks from the universe that don't meet their requirements should produce superior results over holding the entire universe. The resulting portfolios are highly diversified and can be relatively active. In addition, the team has impressive trading efforts that is key in adding additional alpha. Overall, the strategy follows a very disciplined approach and has generated consistent and predictable results.

Rating Decile	Weight
1st	20%
1st	50%
1st	50%

I. Organization

<i>Firm</i>	1st	20%
<i>Team</i>	1st	50%

Founded in 1981, Dimensional Fund Advisors, Inc. (DFA) is a privately held company primarily owned by employees and directors. The firm is managed on a day-to-day basis by Co-CEOs Dave Butler and Gerard O'Reilly, both of whom were recently appointed to the Co-CEO position. Mr. Butler took over the role from David Booth in February 2017, while Mr. O'Reilly replaced Eduardo Repetto after his unexpected departure in September 2017. Mr. O'Reilly, who was also Co-CIO with Mr. Repetto, will continue operating as the firm's sole CIO and Mr. Booth, a co-founder of the firm, remains at DFA as Executive Chairman.

The firm moved its headquarters from Santa Monica, CA to Austin, TX in January 2009 and has investment operations in Austin, Charlotte, London, Santa Monica, Singapore, Sydney, and Tokyo. As of the end of 2017, the firm had roughly \$570 billion in assets under management, including significant portions in domestic equity, international equity, emerging markets equity, and domestic fixed income. Compensation is tied to the financial success of the firm and performance, and it includes a base salary, semiannual bonus, and participation in the firm's long-term incentive plan (LTIP) that allows qualified employees the option of purchasing equity after a three year vesting period of phantom equity units.

Investment strategies are team managed by the firm's eleven member Investment Committee, Investment Policy Committee, and portfolio managers, who meet on a quarterly basis at a minimum. Joe Chi and Jed Fogdall are the co-heads of the Portfolio Management group, taking over for Stephen Clark after he replaced Dave Schneider as head of the firm's North American institutional Group in 2012.

Low historical employee attrition combined with a team investment approach and quantitative process protects the portfolio if they were to have a period of increased turnover. Overall, the investment team has experienced reasonable growth and exhibited above average stability during the past several years. The firm receives a well above average organizational score due to the ownership structure, as well as the stability and quality of the investment professionals.

Dimensional Fund Advisors

US Large Cap Value Strategy

Rating Decile	Weight
4th	20%

II. Information

DFA's research covers thousands of securities around the globe, and the firm analyzes data from a variety of sources including, but not limited to, IDC, Bloomberg, Instinet Analytics, Compustat, OneSource, and Bridge Information systems. Specifically, the firm analyzes market capitalization, book-to-market value, direct profitability, and a number of company specific filters, price discovery filters, and liquidity filters. In addition, qualitative filters are employed to screen out companies that are government held or have a tightly held ownership structure, companies in extreme financial distress, and investment companies. DFA works closely with several leading economists, including Eugene Fama, Ken French, and Bob Merton, in an effort to remain informed of the latest theories and investment research. Recent academic research on profitability, which has been replicated by DFA, shows that high profitability firms have higher average returns than lower profitability firms, leading DFA to add direct profitability as a fourth dimension of returns for its equity portfolios.

In addition to the impressive breadth of information DFA gathers on its investable universe, the continuous research on the factors underlying the firm's investment thesis is also valuable. While the firm's depth of knowledge about individual companies is not as impressive as that of its peers, the amount and type of information gathered by the team is sufficient to execute its investment strategy. As a result, the firm receives an average information score.

Rating Decile	Weight
3rd	20%

III. Forecasting

DFA employs a clear and disciplined forecasting approach. The firm begins by screening companies for market capitalization constraints. The strategy invests in companies with market capitalizations in approximately the top 90% of the investment universe which is defined as the aggregate of the NYSE, AMEX and NASDAQ NMS firms. Companies meeting the market capitalization constraints are then screened for valuation, primarily the company's book-to-market value as well as additional factors such as price-to-cash flow or price-to-earnings. The strategy seeks to invest in securities within the upper 20% of the investment universe sorted by book-to-market values. A number of filters are then applied to each eligible security. The firm's newest research regarding expected profitability is applied using a graded exclusion rule, where stocks with the lowest direct profitability (EBITDA minus interest expense, scaled by book equity) are excluded from the portfolio. By design, a lower number of exclusions are made at the lowest end of the relative price range to ensure the strategy preserves a somewhat deeper value focus. Research performed by DFA has also identified that extreme small cap growth stocks, defined as the lowest 25% by BtM ratio and the lowest 25% by either E/P or CF/P ratio, are a source of negative alpha. A screen has recently been added to remove these stocks from all domestic portfolios.

The firm has been successful in adding alpha through this forecasting approach, and as a result, a significant portion of the strategy's alpha appears to be the result of a consistent overweight to smaller caps and a value style bias. While this is the objective of the investment strategy, it is susceptible to periods of underperformance when smaller caps and value are out of favor. Due to the unique nature of the model and its historical ability to consistently produce alpha, Wilshire views the forecasting process as above average.

Rating Decile	Weight
3rd	20%

IV. Portfolio Construction

The Large Cap Value portfolio holds approximately 200-250 securities. DFA's portfolio construction process includes market capitalization criteria, value considerations, expected profitability, and a qualitative screening process. Securities that do not meet quantitative and qualitative screens are excluded from the eligible universe. Security weights are generally based on free-float adjusted market cap, but may also be adjusted based on liquidity and/or momentum. The team also incorporates price momentum tests, generally delaying buys or underweighting securities with downward momentum.

The strategy is not managed to any specific benchmark and thus, the firm does not have a specific targeted tracking error. However, the number of holdings serves to diversify the portfolio and the firm typically maintains a moderate tracking error against the benchmark. Overall, the construction of the portfolio is geared towards diversification to minimize risk while maintaining a strict sell discipline to keep turnover low. The strategy receives a slightly above average rating with respect to portfolio construction.

Dimensional Fund Advisors

US Large Cap Value Strategy

	Rating Decile	Weight
V. Implementation	1st	10%

The firm's trading platform was developed in-house and is an integral part of the investment process. The system was designed specifically for its investment strategies, and incorporates extensive compliance procedures, including eligibility, capacity, and trading entry. As this platform has been developed, the use of electronic trading has increased from less than 50% of all trades in 2006 to more than 95% of trades in 2014. This platform allows for direct market access through custom algorithms as opposed to traditional brokerage. DFA has 24 hour trading capability through its global offices in Austin, Santa Monica, London, and Sydney. The firm has recently started a cross-training program so that traders are able to operate in markets outside of their primary coverage when needed. This helps provide more seamless coverage in the situations ranging from heavy trading volume in any single market to contingency plans for disaster recovery. A virtual desk system has been put in place that allows trade instructions to be placed either with a specific person or to the entire desk where it can be assigned out based on capacity. Team members can also use this system to remotely access their workstation.

DFA has also built out a highly customized version of Charles River since adopting the tool in 2007. Continuing efforts are being made to increase the quantitative aspect of the trading process. DFA reviews the execution of every trade to evaluate effectiveness and look for areas of future improvement. In addition, the firm utilizes a variety of cost evaluation systems and independent cost-review consultants. The firm decided to wind down its soft dollar program by ceasing to accrue new credits after December 31, 2013. Any unused soft dollar credits will be used in a practical manner after this date.

DFA's implementation practices remain one the strongest and most distinguishing aspects of the firm's investment products. According to third party analysis, the firm is highly successful in adding value through its patient and price-conscious trading efforts. This, combined with a substantial commitment to technological trading resources and continued effort to refine/improve the trading practices, results in an extremely strong implementation score.

	Rating Decile	Weight
VI. Attribution	1st	10%

DFA has sufficient systems in place to monitor portfolio performance attribution. The firm employs a proprietary multi-factor model which performs attribution along multiple areas. Each strategy has a portfolio advocate that regularly reviews the portfolios to ensure they are in compliance. The firm also has additional systems in place provided by external vendors to measure performance and multi-factor attribution. The addition of the momentum screen indicates that they are using these tools to identify areas of potential improvement.

	Rating									
Decile	1	2	3	4	5	6	7	8	9	10
Corresponding Grade	A		B			Proprietary and Confidential		D		F

Dimensional Fund Advisors

US Large Cap Value Strategy

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Manager Research

Dimensional Fund Advisors

US Real Estate Strategy

Rating Decile	Weight
4th	100%

Summary

DFA's U.S. Real Estate strategy offers a rules-based approach to listed real estate investing. The focus on diversified exposure leads to index-like exposure to the asset class. Similar to other strategies at the firm, the investment team quantitatively engineers the portfolio using sound fundamental rationales that are based on academic research. The investment process is team-driven and has been very stable since its inception. Securities such as REOCs and mortgage, prison, and timber REITs, to name a few, are screened out of the investable universe in an effort to provide only core real estate exposure. Any other adjustments to the security selection model are carefully researched and thoroughly vetted by the firm's Investment Committee prior to implementation. This systematic approach also prevents impulsive decision-making as it relates to changes in the investment process. Measured over a full market cycle, the strategy has been successful in adding value over the Dow Jones U.S. Select REIT Index; however, performance is typically in-line with the index over shorter time periods. The result of the process is a diversified, very low turnover portfolio that exhibits value and small cap biases. The firm continues to demonstrate an impressive ability to add value through its patient trading process, and the organization is well-respected as a privately held company of many talented investors. The strategy is a very low cost investment option for clients to gain exposure to the U.S. listed real estate asset class.

Dimensional Fund Advisors

US Real Estate Strategy

	Rating Decile	Weight
I. Organization	3rd	20%
<i>Firm</i>	1st	50%
<i>Team</i>	5th	50%

Founded in 1981, Dimensional Fund Advisors, Inc. (DFA) is a privately held company primarily owned by employees and directors. The firm is managed on a day-to-day basis by Co-CEOs Dave Butler and Gerard O'Reilly, Mr. Butler took over the role from David Booth in February 2017, while Mr. O'Reilly replaced Eduardo Repetto after his unexpected departure in September 2017. Mr. O'Reilly, who was also Co-CIO with Mr. Repetto, continues to operate as the firm's sole CIO and Mr. Booth, a co-founder of the firm, remains at DFA as Executive Chairman.

The firm moved its headquarters from Santa Monica, CA to Austin, TX in January 2009 and has investment operations in Austin, Charlotte, London, Santa Monica, Singapore, Sydney, and Tokyo, in addition to client service offices in Vancouver, Toronto, Amsterdam, Berlin, Melbourne, and Hong Kong. As of 2Q20, the firm had over \$510 billion in assets under management, including significant portions in domestic equity, international equity, emerging markets equity, and domestic fixed income. Compensation is tied to the financial success of the firm and performance, and it includes a base salary, semiannual bonus, and participation in the firm's long-term incentive plan (LTIP) that allows qualified employees the option of purchasing equity after a three-year vesting period of phantom equity units.

The U.S. Real Estate strategy is managed by the Investment Committee that oversees the investment process and any enhancements, the Portfolio Management team that implements the portfolio daily, and the Investment Policy Committee that meets on a quarterly basis. The Investment Committee has roughly 14 members comprised of senior management and the senior portfolio managers of the firm's various investment strategies. The Global Equity Portfolio Management team is responsible for the daily oversight and implementation of all portfolios. This team consists of over 80 members and is led by Jed Fogdall. Mary Phillips, Allan Pu, and Joel Schneider are the Deputy Heads of Portfolio Management, North America.

Historically, the firm has had very little employee turnover. However, it's worth noting that Henry Gray, Head of Equity Trading and member of the Investment Committee, departed the firm in March 2017 to pursue a career in teaching. Mr. Gray had been with the firm since 1995, and his position was quickly filled by Ryan Wiley, previously Head of Americas Trading, and John Romiza, previously Head of International Trading, as co-Heads of Global Equity Trading. In addition, Eduardo Repetto, Co-CEO and Co-CIO, unexpectedly announced his departure from the firm in September 2017. Mr. Repetto had been with the firm since 2000 and was instrumental in the strategies given his role as Co-CIO and member of the Investment Committee. Gerard O'Reilly, another long-term employee of the firm who was Co-CIO alongside Mr. Repetto, will be functioning as the sole CIO going forward. Despite these departures, the team-driven investment approach and the quantitative investment process protects the portfolio from personnel losses as the portfolio is not dependent on a single individual.

Overall, the organization rates highly due to its independence, the quality of the investment professionals, and the relative stability of the senior professionals; however, DFA's team receives an average rating due to not having the same level of real estate-specific experience and backgrounds relative to peers in the asset class. This is mainly due to the academic nature of the firm's investment approach, but nonetheless, it is a differentiator relative to peers.

	Rating Decile	Weight
II. Information	7th	20%

The investment approach is structured to provide core exposure through a diversified portfolio of U.S. REITs. As a result, information gathering efforts are focused on most publicly traded U.S. REITs by analyzing data from a variety of sources including, but not limited to IDC, Bloomberg, Instinet Analytics, Compustat, OneSource, and Bridge Information systems. The research tasks are divided between the strategy, investment, and analytics research groups at the firm, with the analytics group being responsible for processing the vast quantity of securities data gathered. This group monitors and tests data as it feeds into investment systems by checking for outlier values and comparing data from multiple sources. After review, research from external data sources is updated to a proprietary database that covers over 40,000 securities across the entire equity universe. This data is used to assign eligibility for purchase and for asset class categorization across all products at the firm.

DFA excels at gathering publicly available security information and performing significant research on the factors behind their investment thesis. New factors for investment have an extremely high hurdle to overcome before being implemented, with only the profitability dimension being introduced as a new factor in recent years. That being said, real estate is a unique asset class that requires different inputs, analysis, and understanding relevant to traditional equities. Unlike most peers, DFA's information gathering efforts do not include property tours, meeting with management, or analyzing REITs through the lens of a typical real estate investor, to name a few, placing the firm at an informational disadvantage. For this reason, information gathering efforts at the firm receive a low rating relative to real estate peers.

Decile	Rating										
	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			Proprietary and Confidential		D		F	

Dimensional Fund Advisors

US Real Estate Strategy

Rating Decile	Weight
4th	20%

III. Forecasting

The U.S. Real Estate strategy employs a clear and disciplined rules-based forecasting approach that's based on the philosophy that current market prices reflect all available information about security fundamental values and expectations. Under this mindset, valuations and time horizons are not considered during stock selection as the portfolio is designed to hold securities for a long period of time while providing a highly diversified exposure.

The process begins by screening out those securities that DFA does not consider to be core real estate, such as REOCs, mortgage REITs, and prison REITs, and by excluding companies undergoing significant events, such as a merger or acquisition, recent IPO, or bankruptcy. The strategy may include certain specialized REITs such as tower, billboard, and data centers. From the remaining universe, the portfolio aims to gain exposure to each company through a rules-based approach. The strategy ranks all stocks on market capitalization and invests the portfolio with targeted security weights based on free-float adjusted market capitalization. The minimum market cap required for inclusion is \$10 million, a much lower threshold than the benchmark and peers, which can be a source of additional return for the portfolio. Traditional fundamental research is not performed on individual companies in the stock selection decision.

The forecasting approach achieves a diversified portfolio by sector and market cap for clients that has performed strongly relative to peers and the Dow Jones U.S. Select REIT Index over time. By basing selection on market capitalization and ignoring many of the common top-down and bottom-up inputs used by peers in investment processes, the strategy doesn't face many of the typical headwinds to returns such as styles being in/out of favor, performance drags from sector tilts in the portfolio, and so on. While the strategy may underperform peers when non-traditional real estate stocks rally that are excluded from the portfolio, the portfolio is expected to largely perform in-line with the index over the long term with potential opportunities for excess returns in small cap-driven markets. Forecasting receives an above-average rating.

Rating Decile	Weight
5th	20%

IV. Portfolio Construction

Given the characteristics of the securities targeted in the process, the most appropriate benchmark for the U.S. Real Estate strategy is the Dow Jones U.S. Select REIT Index. Over a full cycle, the team aims for approximately 0.3-0.5% of outperformance relative to this benchmark. Tracking error is not specifically targeted, but it has historically been low between 1-2% over the same time frame.

Exposures to individual securities and sectors are based on the free float adjusted market capitalization of the eligible stocks in the universe. This results in a portfolio of roughly 140-160 stocks up and down the capitalization spectrum, leading to a more diversified portfolio than most peers. Companies with at least \$10 million in market capitalization are eligible for inclusion. Sector exposures are typically within +/-5% of the benchmark and individual securities are capped at 10% of the strategy at time of purchase. The portfolio is rebalanced continually as flows go into or out of the strategy, buying underweights and selling overweights. Cash is typically between 0-2% as a result of these flows.

While the firm does employ several risk oversight groups, such as the Risk Committee, Investment Committee, and Investment Research Committee, risk management is lacking relative to peers because it is based on only two concepts: process adherence and strategy diversification. The team believes its rules-based approach helps to mitigate risk because clients will always know what to expect from the strategy, which is a market cap weighted exposure to core listed real estate. On a more fundamental level, risk is managed through the highly diversified portfolio that helps to mitigate stock specific risk. While both of these risk management claims are true, they are outcomes of the process itself and are not specific actions taken by the team to manage risk as are performed by most peers. DFA's portfolio construction efforts are viewed favorably for their ability to produce a portfolio that consistently exhibits the process employed, but dedicated risk management systems, tools, and processes are lacking. Portfolio construction receives an average rating.

Dimensional Fund Advisors

US Real Estate Strategy

Rating Decile	Weight
1st	10%

V. Implementation

The Global Equity Trading Team is headed by Ryan Wiley who oversees the approximately 20-person trading team. This team is located in offices in Santa Monica, Austin, Charlotte, London, Sydney, and Singapore, with the U.S.-based offices responsible for trading this product.

The firm's trading platform was developed in-house and is an integral part of the investment process. The proprietary trading system was designed specifically for DFA's investment strategies and all trades are entered through an integrated, highly customized Order Management System based on the Charles River Investment Management System. A virtual desk system has been put in place that allows trade instructions to be placed either with a specific person or to the entire desk where it can be assigned based on trading capacity. Team members can also use this system to remotely access their workstation.

Trade instructions and execution parameters are sent to the traders by the portfolio managers. These trades arrive daily as a list of potential securities to buy/sell based on changes in market capitalization and flows. Traders are then able to work through this list to add to/sell from the portfolio those securities where they can provide the best execution for clients. Trading costs are extremely important to the firm, and through the traders' ability to "sit on an order" until given a suitable price, third party analysis has shown that DFA has been able to add considerable value for clients from trading and best execution practices. In recent years, as a result of the firm's research, the firm implemented a momentum screen that delays a purchase (sell) of a stock if it has experienced negative (positive) price momentum over the recent months. Turnover in the portfolio has historically been less than 5% and soft dollar relationships are not used at the firm. While the assets in the strategy are higher than that of most peers, our concerns are lessened by the index-like, low turnover approach of the process.

Implementation practices at the firm are regarded as some of the best in the industry. Aside from the obvious benefit from this fact, strong implementation is particularly meaningful for a product in a relatively small asset class such as real estate. Implementation efforts of the firm receive a very high rating.

Rating Decile	Weight
1st	10%

VI. Attribution

Performance attribution is calculated monthly using an internally developed system that breaks down attribution on various metrics. The team utilizes the attribution to ensure the investment approach is being implemented properly, to understand sources of value add, and for long term strategy enhancement. Additionally, this attribution allows investment professionals to monitor risk factor exposures and portfolio performance across market segments. Each strategy has a portfolio advocate that regularly reviews the portfolios to ensure they are in compliance. The firm also has additional systems in place provided by external vendors to measure performance and multi-factor attribution. Due to the focus on and constant review of the investment process, the strategy rates highly in terms of attribution.

Decile	Rating										
	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			Proprietary and Confidential		D		F	

Dimensional Fund Advisors

US Real Estate Strategy

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Manager Research

Fidelity Institutional Asset Management (FIAM)

Broad Market Duration

Rating Decile	Weight
2nd	100%

Summary

FIAM Broad Market Duration attempts to outpace the Bloomberg Barclays US Aggregate Bond Index by 50-75 basis points per annum, with 100-150 basis points of ex-ante tracking error. The firm remains relatively duration neutral, limiting its duration exposure to +/- 10% of the benchmark. The product boasts one of the deepest and most talented research groups in the industry, generating qualitative and quantitative research. It also boasts a strong portfolio construction process that effectively manages its risk exposures while maintaining a bottom up framework. The overall exposure of the product makes it appropriate in a stand-alone mandate or as an anchor in a core satellite approach.

Rating Decile	Weight
3rd	20%
3rd	50%
3rd	50%

I. Organization

<i>Firm</i>	3rd	20%
<i>Team</i>	3rd	50%

Fidelity Global Advisors is a wholly owned subsidiary of Fidelity Management & Research Company (FMR Co.) and was spun off to become the institutional asset management division of Fidelity. Fidelity works closely with Fidelity and sub-advises many of the Fidelity mutual funds. FMR Corp is fully owned by its active employees (51%) and the Johnson family (49%).

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August 2011, Boyce Greer, Vice Chairman of Fidelity and Head of Institutional Investments for Fidelity passed away. Charlie Morrison was appointed as Vice Chairman and President of the Fixed Income division. Derek Young was also named Vice Chairman of Fidelity and President of Fidelity's Asset Allocation division. In October 2011, Doug Moore was promoted to CFO of Fidelity, replacing Bill Dailey who moved to become CFO of Fidelity. In October 2013, Fidelity announced a series of changes across the equity division, including the appointment of Pam Holding as CIO. Ron O'Hanley, Chairman of Fidelity, parted ways with the firm in early 2014. CEO Mike Jones left the firm at the end of 2014 and replaced by Jeff Lagarce. In January 2015, Bob Brown was named Head of Institutional Fixed Income, a new role reporting to President of Fidelity Fixed Income Nancy Prior. Recent changes have happened as part of the last steps in a long term succession planning appointment of Abigail Johnson as CEO of Fidelity Investments.

Fidelity employees are compensated through base salary, bonus, profit sharing, and equity ownership. Investment professional's compensation is largely based on investment recommendations and performance of the funds they work on.

Broad Market Duration is led by Portfolio Managers Ford O'Neil, Jeff Moore, Celso Munoz, and Michael Plage. Pramod Atluri left portfolio management team and the firm in July 2015 and George Fischer took on a new role within the firm in 2012. The PMs are supported by a large team of credit and quantitative analysts, as well as a large team of portfolio managers. In the past, turnover at the firm was a substantial issue with droves of analysts leaving for other opportunities over the years. However, in recent years, turnover has subsided as the firm began to develop a culture that encourages a career analyst path, versus the prior mentality of progressing to portfolio management. We like the effort being made by the firm to mitigate analyst turnover and hope this trend will continue. As a result, the team ranks above average.

Fidelity Institutional Asset Management (FIAM)

Broad Market Duration

Rating Decile	Weight
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II. Information

1st	20%
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FIAM has extensive resources dedicated to bottom-up fundamental research. The firm's research capabilities are divided into two platforms: credit research and securitized research. Both divisions utilize fundamental and quantitative components. Analysts are organized by sector and industry and are typically responsible for covering 1 to 4 total industries. Relative value rankings are assigned to each industry by the respective analyst.

All research notes, reports and financial models analyzed by the firm are placed on a global web-based research platform ("One Point") to facilitate communication amongst all analysts around the globe in both equity and fixed income. Analysts use a wide variety of information points including: trade publications/newspapers, primary financial documents (10-Qs, 10-Ks), relationships and meetings/calls with company management, competitors, and key industry contacts, enabling them to construct unique perspectives. While being able to deeply investigate credits, FIAM also covers a wide breadth of issuers having its 70+ credit analysts following 30 to 50 companies each. The Fixed income team is also able to leverage an additional 400 research analysts located around the globe who work for Fidelity's Equity division.

FIAM has also constructed a strong quantitative research group that has built a number of proprietary models used for credit, relative value, structured security, yield curve, and interest rate analysis. The securitized analysts use proprietary analytics to run the entire investable universe through specially designed models to evaluate risk. The internal models also provide the team unique insights into the market that allow them to quickly identify opportunities. The team has also built its in house risk model to better understand risks in the fixed income market.

Overall, the firm has one of the deepest research teams with numerous avenues to gather issuer specific information through fundamental and quantitative research methods. The depth and breadth of the firm's resources are well above average versus peers.

Rating Decile	Weight
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III. Forecasting

3rd	20%
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A team framework is incorporated within the decision making process. The team is responsible for all sector and security-level decisions within the portfolio. The team structure provides multiple inputs into the investment process, with final accountability resting on the lead PMs. The team remains vigilant to shifts in market liquidity and remains broadly diversified in government securities and mortgages to maintain liquidity. The team has ample resources and has developed many proprietary tools to stock portfolios by generating a distribution of probable returns. The results of these distributions influence portfolio positioning and risk exposure.

Credit analysis is based on a thorough understanding of the industry and company fundamentals versus peers. Each analyst covers 30-50 names, making it very manageable to gain a deep understanding of their credits. Mortgage analysis is based on expected returns using the firm's proprietary modeling to estimate prepayments and option adjusted spreads in order to identify securities with the most attractive risk/return characteristics. Overall, FIAM uses a structured process merging fundamental and quantitative research to expected return forecasts that is fairly transparent and repeatable.

Rating Decile	Weight
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IV. Portfolio Construction

1st	20%
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The Broad Market duration strategy attempts to outpace the Bloomberg Barclays US Aggregate Bond Index by 50-75 basis points per annum, with 100-150 basis points of ex-ante tracking error. The firm remains relatively duration neutral, limiting its duration exposure to +/- 10% of the benchmark. In general, the portfolio construction process focuses on sector allocation, security selection and yield curve positioning. Credit risk is diversified with no individual issues comprising more than one percent. As part of its risk management and relative value monitoring, the firm has constructed a number of reports tracking specific credit and mortgage issues to highlight potential credit concerns. FIAM receives an above average score for its defined portfolio construction process using its system to efficiently translate its forecasts into a portfolio while dissecting the allocation of risk.

FIAM employs a bottom-up portfolio construction process using its proprietary risk model to monitor risk exposures. Portfolios are constructed to exploit relative value opportunities at the security and sector level. The risk budgeting process seeks to maximize the expected IR of investment strategies within acceptable levels of tracking error. FIAM's risk model provides an ex-ante tracking error and decomposes how risk is being allocated to ensure that the portfolio reflects the expectations of the investment team. Scenario analysis and stress tests are also used to understand how the portfolio reacts under certain economic situations.

Fidelity Institutional Asset Management (FIAM)

Broad Market Duration

	Rating Decile	Weight
V. Implementation	1st	10%

FIAM has an extensive trading team that utilizes a trading database management process called "Point of Trade" that tracks all portfolio positions and its respective trading history. The trading systems are integrated for purposes of back office administration and compliance monitoring firm wide. The trading team is responsible for executing trades at the direction of the portfolio managers. However, the trading team does have limited discretion in execution, and have been integrated as such, to provide market color and the ability to pontificate on relative value with the portfolio management team. Traders have full discretion to seek the most optimal trading strategy that will minimize transaction costs and are compensated in-line with this expectation of best execution in all strategies. The firm's broad resource dedication to the implementation process gives is above average versus peers.

	Rating Decile	Weight
VI. Attribution	3rd	10%

FIAM uses a proprietary multivariate attribution model to identify the sources of performance, drilling down to the security level. Formal attribution reports are generated on a monthly basis which the team reviews to evaluate its investment strategies. Performance attribution is also generated by FIAM's systems on a daily basis and viewed by the investment team. Output from the attribution reports is used to decompose sources of performance by industry and security selection. The reports are used to confirm that sources of performance are coming from expected sources and to help evaluate research analysts and portfolio manager decisions. Overall, the firm receives above average marks for its integration and depth of performance attribution.

	Rating										
Decile	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			Proprietary and Confidential		D		F	

Fidelity Institutional Asset Management (FIAM)

Broad Market Duration

Firm Information

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Manager Research

Neuberger Berman

International Select

Rating Decile	Weight
1st	100%

Summary

The Neuberger Berman International Large Cap Equity strategy is a suitable investment option for clients seeking core-like exposure to the Non-US equity space. The strategy is grounded in bottom-up, fundamental analysis and tilted towards owning large-cap companies. The lead portfolio manager, Ben Segal, exhibits strong investment acumen and oversees a team that demonstrates a comprehensive understanding of the companies in the portfolio, having added considerable value through a competitive forecasting approach. The investment process ultimately results in a portfolio of approximately 50-70 securities with the ability to hold up to 15% in emerging markets. The strategy tends to exhibit a slight growth orientation, owed in part to its "quality at a reasonable price" approach.

Rating Decile	Weight
1st	20%
1st	50%
1st	50%

I. Organization

<i>Firm</i>	1st	20%
<i>Team</i>	1st	50%

Founded in 1939, Neuberger Berman is an independent asset management firm with global capabilities expanding over equity, fixed income and alternative investments. The firm experienced significant ownership change through the 2008 bankruptcy of its former parent Lehman Brothers. After a management buyout in 2009, the firm became employee controlled, but 51% of the firm was held by the Lehman Brothers estate. In 2013 Neuberger Berman accelerated forward a plan to purchase the equity stake held by the Lehman estate. In December 2014 the firm became 100% owned by current and former employees.

Currently about 500 of the 2000 employees are shareholders in the firm. As of 3Q18, the firm is at peak AUM of roughly \$310 billion, of which is comprised of about \$100 billion in equities, \$130 billion in fixed income and \$77 billion in alternatives.

The independence of an employee owned firm is a strength for Neuberger Berman which allows it to retain employees and attract new talent. This gives it an advantage as compared to many industry peers.

The International strategy is led by Ben Segal, who began co-managing the firm's International Equity product in 1998. He later took over full discretion for that product in 2001 and has been the Lead PM on International Large Cap product since 2005. He is supported by six Global Sector Analysts. Since 2003, Mr. Segal has built upon the product platform that was in place.

In 2008, the team witnessed the departure of Associate Portfolio Manager, Milu Komer, who joined the firm in 2001 and was promoted to Associate PM in 2005. She left to join CRM to head up their International Equity strategy. While Ms. Komer was serving as an Associate PM, Mr. Segal is without question the key to success for the strategy. Then in February 2011, Matt Chan, a Global Sector Analyst covering IT and Consumer Staples, resigned for another opportunity. In both of these cases it at least appears the driving force behind their decision to leave was to be part of a smaller team, and to have more decision making control. So, as analysts develop and expand their responsibilities, it is possible that from time to time the team will see further departures of individuals seeking out more portfolio management type responsibilities. These changes did not and should not adversely impact Mr. Segal and his team from executing their process successfully.

Overall, the senior members of the team have impressive educational backgrounds and work experience. Mr. Segal has demonstrated a strong passion for investing and a firm grasp of the day-to-day research and management of his team. The push to become 100% employee-owned by the end of 2016 further strengthens our conviction in the organization.

In early 2014, Ben Segal, lead portfolio manager, relocated to the firm's Singapore office to strengthen his knowledge of the ever expanding Asia Pacific opportunity set. This geographic change was intended to be temporary and last no more than two years. During the summer of 2016 Mr. Segal moved back to New York City as expected. We continue to believe having the team operate from one location bodes very well for the platform.

Neuberger Berman

International Select

II. Information

Rating Decile	Weight
1st	20%

The international equity team's investment philosophy is highly focused on in-depth, bottom-up, fundamental research. The team uses proprietary screens to narrow down its universe, which has very defined criteria within the categories of a company's operating track record, profitability, growth rate, and financial strength. Companies that meet the defined criteria are then evaluated through deep fundamental research, which includes meetings with management, suppliers, competitors, as well as government regulators. The team builds proprietary models on each company and stresses the use of discounted cash flow analysis. The team also incorporates external sources of information such as Factset, the International Monetary Fund, World Bank research, as well as research from the sell side community for additional perspectives.

Overall, the team has demonstrated a comprehensive understanding of the companies in the portfolio and how each company compares to competitors within its respective industry. Furthermore, the portfolio managers and analysts are thorough and meticulous in their research.

III. Forecasting

Rating Decile	Weight
1st	20%

The team excels in its forecasting approach, which is titled Quality at a Reasonable Price ("QuaRP"). In order for companies to be considered as a candidate for research, they need to exhibit a strong track record in operations for 3-5 years, return on invested capital greater than 12%, growth rates above 5%, and debt/equity less than 75%. The philosophy of the teams favors companies that grow organically through reinvestment in the business versus serial acquirers. The team fundamentally evaluates securities using common financial metrics such as PEG ratios, EV/EBITDA, and EV/Invested Capital, and complements this with discounted cash flow analysis to arrive at a price target for each company. The triangulation of multiple valuation methods provides a sanity check to the inherent assumptions to any one approach.

The team has demonstrated an ability to consistently add value through security selection, independent of its value added through biases in market capitalization and resulting country/sector bets. Although the forecasting approach itself is not unique in nature, the screening methodology and discipline in setting price targets leads to a strong forecasting approach.

IV. Portfolio Construction

Rating Decile	Weight
1st	20%

The strategy is benchmarked against the MSCI EAFE Index. The team builds portfolios of approximately 50-70 securities, with position sizes ranging from 1% to 5%, and the top ten positions make up approximately 30% of the total portfolio. The portfolios are constructed from the bottom-up, but have some country and sector constraints (+/- 15% of the index weights). While the firm's International Equity strategy is a true all-cap strategy, the International Large Cap product is limited to securities above \$2.5B. The team does not use any formal methods of optimization and maintains considerable latitude to move up and down the market cap spectrum and across countries/sectors. The portfolio manager employs BARRA for risk management however, and is very conscious of the risk in portfolio and tracking error. Tracking error for this strategy is predicted to 4-7% over a market cycle. Portfolios will maintain up to 15% exposure to emerging markets. The team has sufficient risk controls in place and the portfolio manager is very conscious of the portfolio's structure as well as exposures to macro factors such as interest rate exposure.

V. Implementation

Rating Decile	Weight
1st	10%

Neuberger Berman has a centralized trading desk comprised of 11 traders. ITG's Macgregor XIP Order Management System is used to route orders to the Equity Trading Desk from the investment team. Portfolio administrators stand ready to enter pre-allocated orders in the system and electronically route those orders to the trading desk. The Macgregor XIP Trading Platform is used to identify any trading restrictions prior to execution. ITS order formulation sub-system checks are conducted before any execution to ensure compliance and that these trades meet client guidelines. The firm's Asset Management Guideline Oversight (AMGO) group serves as an independent supervisory entity responsible for ensuring portfolios are managed in accordance with client investment guidelines. AMGO is managed by Stephen Wright and supported by eight additional team members located in New York and Chicago. The firm utilizes its proprietary Portfolio Management Reporting as its multi-currency portfolio accounting system. Trading costs are measured via ITG's Transaction Cost Analysis (TCA) system to evaluate the execution quality across a variety of industry benchmarks on a T+1 basis. Neuberger Berman is GIPS compliance and was last verified by Ernst & Young for 2010. The firm pays soft dollars for research products, but does not release the percentage of commissions tied to soft dollar arrangement as they deem this proprietary to the firm. Overall, the firm maintains a fine trading platform that allows for good execution of the international equity strategy.

Neuberger Berman

International Select

Rating Decile	Weight
1st	10%

VI. Attribution

The international equity team excels in performance attribution. The team has a number of systems in place to monitor the risk budget, perform multifactor attribution, as well as variance analysis. Specifically, the firm uses both BARRA and FactSet for performance and risk attribution, which is also incorporated as part of the portfolio construction process.

	Rating										
Decile	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			Proprietary and Confidential		D		F	

Neuberger Berman

International Select

Firm Information

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Manager Research

Northern Trust

NT Quality Small Cap Value Strategy

Rating Decile	Weight
4th	100%

Summary

Northern Trust offers a quantitative Small Cap Value strategy which is broadly diversified by number of holdings (400-600) and remains largely sector neutral which allows for stock selection to drive the alpha potential of the strategy. The strategy is led by Robert Bergson, who has managed the product since 2001. The quantitative platform is much more simplistic and subjective than many of its quantitative peers; however the process has historically led to a high level of repeatability as well as the ability to focus on minimizing transaction costs. The strategy has a long-term holding period with annual turnover of around 20-30%. The strategy tends to offer strong downside protection given its quality focus but has produced competitive investment results in a variety of market environments. Overall, the strategy is suitable for investors that are looking for a diversified, low turnover quantitative strategy which has historically produced attractive risk-adjusted returns.

Rating Decile	Weight
5th	20%
6th	50%
4th	50%

I. Organization

Firm

Team

Northern Trust Investments is a wholly-owned subsidiary of Northern Trust Corporation. Northern Trust was founded in 1889 and is headquartered in Chicago, IL. The parent company is a publicly traded firm that trades on the NASDAQ under ticker symbol NTRS. Approximately 5% of the corporation is held by active employees, directors, and retirees of the organization. Northern Trust offers equity, fixed income, and multi-manager solutions with meaningful AUM dedicated to passive investment strategies. The organization has built a solid reputation for custodial services and transition management.

Investment professionals are compensated through base salary, a special incentive plan, and other special investment programs. Incentive payments are based primarily on the group's short-term and long-term investment performance, in addition to client retention and revenue targets.

The management of the Small Cap Value product resides within Northern's Global Quantitative Active Equity Team which reports directly to the Head of Global Equity, Matthew Peron. The team is primarily responsible for managing the Small Cap Value, Small Cap Core, and International Small Cap strategies using the same quantitative investment philosophy. The team primarily consists of 5 individuals with Robert Bergson focusing on small caps since 1999 and leading the Small Cap Value effort since 2001. He is assisted by Senior PMs, Sri Kancharia and Mark Sodergren, as well as PM, Reed LeMar, and Associate PM, Steven Wang. The team is also able to leverage the firm's quantitative research group which is headed by Michael Hunstad, PhD. Mr. Hunstad replaced Joe Wolfe, who departed the organization during 2011.

While the overall Northern organization has experienced some personnel turnover over the years, the portfolio management team responsible for this strategy has been relatively stable. Mr. Bergson has managed this strategy for the past 15 years and brings meaningful leadership and continuity to the team. However, it should be noted that the overall size and talent level dedicated to quantitative active equity strategies is modest relative to peers.

Northern Trust

NT Quality Small Cap Value Strategy

Rating Decile	Weight
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II. Information

5th	20%
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The philosophy of the team is that a quantitative approach to portfolio management is the best way to consistently take advantage of investors' behavioral biases and the resulting inefficiencies within the small cap market. Thus, the team employs a systematic approach of gathering common, publicly available information from multiple external sources, including IBES, First Call and Bloomberg. The quant research team uses this information as inputs into the firm's multi-factor model to produce unique alpha scores that are binary in nature. The model is relatively simplistic and incorporates a small qualitative component to ensure data integrity. The portfolio managers typically conduct a brief check on the back end to look for corporate actions or other events that the quant model would not have identified. The overall model relies upon publicly available information and incorporates widely recognized quantitative factors within it which ultimately leads to an average information score.

Rating Decile	Weight
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III. Forecasting

3rd	20%
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The quantitative model begins with 5 equally weighted binary factors to rank the stocks within each sector in its investable universe. Within valuation, the team looks for high earnings and book yields (low P/E and P/B). The momentum factor looks at a 2-year momentum figure, which is somewhat unique as other strategies that use momentum factors typically use 1-year (or shorter) timeframes. However, the team is in the process of evaluating whether a 1-year momentum factor is more appropriate. The profitability factor considers both trailing and forecasted earnings (positive earnings are required to score well in this factor). Within each factor, the outliers of each distribution are also eliminated (e.g., quintiles 1 and 5 for the valuation factors) in an effort to reduce the most extreme data within each respective factor. The cumulative binary scores are added together and the top and bottom 30% of companies in the rankings are considered "buy" and "sell" rated, respectively.

A three-factor Quality "Distress" Overlay is next applied. To determine the level of a company's distress, the team looks at earnings quality (cash flow based metrics), sources of financing, and efficiency (margins of a business). The Quality "Distress" overlay can immediately downgrade a "buy" to a "hold", and a "hold" to a "sell". Thus, companies with distress ratings are not purchase candidates, which results in a higher quality portfolio.

Once the model outputs are known, the team manually eliminates the lowest ranked companies and purchases the highest ranked stocks in each sector on a cap weighted basis with an eye towards portfolio guidelines, desirable portfolio characteristics, and minimizing the impact of transaction costs. The model is executed quarterly and the trading team is given discretion and is extremely patient in their implementation efforts in order to reduce turnover and transaction costs. Overall, the team's approach to forecasting is relatively simplistic. However, the strategy has produced very competitive and consistent investment results relative to both the Russell 2000 Value Index as well as the peer group on a risk-adjusted basis.

Rating Decile	Weight
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IV. Portfolio Construction

2nd	20%
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Portfolio construction is a competitive advantage for this strategy. The buy and sell universes are very clear as they are completely dependent on the model rankings (stocks ranking in the top three deciles are purchase candidates while stocks in the bottom three deciles are sell candidates). In addition, the team will sell stocks once they become too large in market cap or when they become financially distressed. Individual stocks and sectors are both constrained to +/- 200bps from the benchmark weights, so the portfolio will closely follow the index from those perspectives. Stocks on the buy list are cap weighted with the benchmark such that larger holdings in the index will consequently result in larger holdings in the portfolio. The resulting portfolio is extremely diversified and typically holds 400-600 stocks and remains fully invested. The team utilizes linear optimization as opposed to quadratic optimization as the portfolio managers are somewhat cautious regarding the inputs within backward looking risk/optimization tools. Qualitative overrides by the portfolio managers can occur; however this is largely done to reduce specific risk exposures within the portfolio.

The portfolio tends to have higher margins/profitability (ROE, ROA), lower debt ratios, and modestly lower volatility relative to the benchmark. The weighted average market cap tends to resemble the Russell 2000 Value Index, but will likely have lower exposure in the more illiquid, smaller cap area of the benchmark. Tracking error has generally ranged between 2-4% historically. Overall, Northern Trust offers a highly diversified, risk controlled, quantitative, small cap value strategy.

Northern Trust

NT Quality Small Cap Value Strategy

	Rating Decile	Weight
V. Implementation	1st	10%

Implementation is a competitive advantage for this strategy. Given the diversification of the portfolio and the number of “buys” and “sells” that the model produces four times per year, the extremely low expected turnover ratio of 20-30% dictates that the traders are extremely patient and maintain significant discretion in their execution. Traders are willing to wait for the market to come to them and absorb excess liquidity in the market, serving more as a market maker or liquidity provider in many circumstances. They also utilize a variety of channels, taking advantage of both principal and agency trades in addition to heavy use of ECNs to keep commission costs minimal. In addition, the firm actively measures transaction costs to gain insight into how well the process is working. Overall, the team is focused on minimizing total portfolio transaction costs and has structured the entire investment process in such a way that trading can add value relative to peers. Total capacity for the strategy is expected to be in the \$4-5B range.

	Rating Decile	Weight
VI. Attribution	2nd	10%

The team uses attribution heavily to accurately pinpoint sources of return. They use both external and internal systems to break down performance at the stock/sector level in addition to the factor level. This focus on gaining a clear understanding on what is driving portfolio performance earns the strategy an above average score in this area.

	Rating										
Decile	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			C		D		F	

Northern Trust

NT Quality Small Cap Value Strategy

Firm Information

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Manager Research

PGIM Fixed Income

PGIM Fixed Inc Core Plus Fixed Income

Rating Decile	Weight
1st	100%

Summary

The Prudential Core Plus strategy is suitable for both stand alone and/or multi-manager assignments. The strategy seeks to add 150 basis points of alpha over the Bloomberg Barclays Capital Aggregate Index, with 250 basis points of tracking error. The strategy maintains duration of ± 0.5 . The firm implements the strategy through a pre-established risk budget that seeks modest increments of value from making small bets on multiple sources, such as sector allocation, subsector and industry allocation, security selection, and modest duration/yield curve positioning. The breadth and depth of the team, along with the robust risk managed investing style make this strategy stand out.

Rating Decile	Weight
1st	20%
1st	50%
1st	50%

I. Organization

<i>Firm</i>	1st	20%
<i>Team</i>	1st	50%

Prudential Fixed Income (PGIM) is a registered investment advisor established in 1984. PGIM is an indirect subsidiary of Prudential Financial that became a publicly held company in December 2001. PGIM's various units include Prudential Fixed Income and Prudential Real Estate Investors. In addition, PGIM owns other investment management subsidiaries including Jennison Associates, LLC. Compensation is received through a combination of base salary and performance-based incentive comp that consists of cash bonus, restricted stock and deferred grants (3Y cliff vesting). Many of the investment professionals have stock options and/or restricted stock in Prudential Financial, Inc., parent company. As of 2Q20, PGIM reported \$868 billion of AUM split between the insurance general account, institutional, and retail managed by over 300 investment professionals worldwide. Wilshire expresses a favorable opinion of the overall organization gives the stability it has maintained among its senior leadership ranks, particularly in its fixed income business.

Michael Lillard, CEO and CIO oversees all fixed income products. The Core Plus strategy is led by Senior Portfolio Managers Richard Piccirillo, Michael Collins and Greg Peters. Kay Wilcox, Portfolio Manager, retired from the team in 2014. Greg Peters was hired in early 2014 from Morgan Stanley following the announcement of Ms. Wilcox's retirement. The Senior Investment Team meets quarterly and establishes a single, firm-wide "top-down" outlook on the economy and interest rate as well each sector of the bond market. The strategy is supported by sector teams that actively select and trade securities to generate excess return in their sectors.

The strategy is also supported by Quantitative Research and Risk Management Groups that develop sector allocation models and analytics used in US Government and mortgage security selection; Credit Research Team performs fundamental credit research on investment grade corporate bonds and Structured Products Research Group focuses on fundamental credit research of ABS, and a senior level Credit Committee to monitor all credit positions across Prudential Fixed Income. Overall, the fixed income platform has around 100 portfolio managers and traders, around 90 fundamental analysts and over 50 quantitative and risk analysts.

The team is experienced with senior professionals averaging 20+ years of investment experience. The stability and experience of the team lead to a high score.

PGIM Fixed Income

PGIM Fixed Inc Core Plus Fixed Income

Rating Decile	Weight
1st	20%

II. Information

Research is internally generated and assisted by external perspectives. Prudential believes that direct contacts at issuing companies provide the most valuable sources of information. Analysts use Edgar and Disclosure systems which provide on-line access to SEC filed documents. The team also supplements market intelligence from broker/dealers, rating agencies and vendors such as CreditSights to identify credit risks.

The research is done by three dedicated teams: 1) A 50+ member Quantitative Research and Risk Management Groups develop asset allocation models and analytics used in US Government and mortgage security selection; 2) A 90-member Credit Research Team, with 29 members dedicated to investment grade bonds, conducts fundamental research on subsectors and issuers; 3) A 18-member structured product research group conducts fundamental research of ABS securities.

Several models are used by the Quant Team. In the US Government market, buy/sell decisions are made using a proprietary yield curve model (a Gaussian 2+ Arbitrage-Free option pricing construct) to identify attractive/unattractive securities. This model uses key parameters to fit prices simultaneously of actively traded, off-the-run US Treasuries and swaptions, defining each issue's "fundamental value" as the difference between its market yield and its fitted yield. In the Mortgage-Backed Securities market, buy/sell decisions result from evaluating the output of two proprietary models. One is an option-adjusted spread (OAS) model that provides OAS for every mortgage security in the universe versus both US Treasury and LIBOR curves. The second is an implied mortgage prepayment framework to analyze current mortgage market prices and interpret market prepayment expectations.

The strategy receives high marks relative to peers as the team's breadth is both large in personnel and seasoned in experience.

Rating Decile	Weight
1st	20%

III. Forecasting

Each quarter the senior investment team formally meets and establishes key themes including term structure and sector exposures. The key themes are reflected across all strategies taking into account mandate constraints. Once the sector allocation is set, the sector specialists select and trade securities.

Desktop-based quantitative models underpin individual security selections for the US Treasury, agency and mortgage-backed security markets, though the strategy does not rely exclusively on model outputs. The team may override models to reflect subjective views over technical supply factors or economic news. Corporate security selection is based on fundamental credit research. Research analysts conduct fundamental analysis on 38 corporate subsectors and approx. 600 issuers. PM contributes analyses from trading, spread and liquidity perspectives. Collectively, nine different scores (1-5 ranking, 5 being best) are assigned for each data point such as creditworthiness, liquidity, and yield spread. Each score is equally weighted to arrive at an overall weighted score on each issuer within each subsector. The relative value ranking produces a formal Corporate Bond Research List that provides a roadmap to over- and underweight recommendations.

The Quant Group continually evaluates the assumptions and other parameters behind the firm's models and revises or refits them as needed to maintain their relevancy and effectiveness in current markets. The firm notes that it has utilized these models for long periods of time because of theoretical soundness and empirical results of positive alpha generation over time.

PGIM Fixed Income

PGIM Fixed Inc Core Plus Fixed Income

Rating Decile	Weight
1st	20%

IV. Portfolio Construction

The Prudential Core Plus strategy is suitable for both stand alone and/or multi-manager assignments. The strategy seeks to add 150 basis points of alpha over the Bloomberg Barclays Capital Aggregate Index, with 250 basis points of tracking error. The strategy maintains duration of ± 0.5 . The firm implements the strategy through a pre-established risk budget that seeks modest increments of value from making small bets on multiple sources, such as sector allocation, subsector and industry allocation, security selection, and modest duration/yield curve positioning.

Portfolio construction begins with the senior investment team’s quarterly market outlook. Following that, the Portfolio Managers for the Core and Core Plus Fixed Income Strategies follow a disciplined process to construct the initial portfolios and then review them weekly. All Desk Heads, as well as the portfolio managers for the Core and Core Plus Strategies, meet weekly to discuss the latest market developments and trends. The senior members of the Core and Core Plus Fixed Income Strategy Teams then follow that meeting with a separate Weekly Sector Allocation meeting. Those meeting participants include the Chief Investment Officer, the Head of Quantitative Research and Risk Management, the Core and Core Plus Senior Portfolio Managers, the Chief Investment Strategist, and sector specialists for the Core and Core Plus sectors.

The team analyzes current portfolio positioning and sector allocations in the context of the current and expected market environment. The output of the Weekly Sector Allocation meetings is a clear “blueprint” for each client’s portfolio in Core and Core Plus strategies that spells out agreed-upon positioning regarding the portfolio’s risk profile, tracking error targets, duration and yield curve positioning, sector allocations, and other portfolio characteristics. The Senior PM is responsible for constructing the portfolio that effectively implements the risk budgets in the current market environment, while operating within both Prudential Fixed Income investment policy and client investment guidelines. The weight of each security in the portfolio is based on the credit analyst’s conviction and ranking from the Corporate Bond Research List.

The strategy ranks well among peers due to its systematic and repeatable process.

Rating Decile	Weight
1st	10%

V. Implementation

Trading is handled by portfolio management teams that specialize in the specific sectors of the market. The trading floor is centrally located, thereby putting the specialists in close contact with traders and in touch with broker/dealer information flow. The portfolio managers and traders typically use various electronic methods to obtain competitive prices from several “Approved List” brokers and counterparties for each trade. Senior management closely monitors all trading in client portfolios for best price and execution. Both the Head of Fixed Income and a member of the Compliance unit monitor quarterly trade volume by broker-dealer, from both an overall firm standpoint and individual portfolio manager standpoint. The compliance unit includes 14 associates specifically dedicated to Prudential Fixed Income. Automated pre-trade compliance checks are performed with restrictions coded in the system. Calculation based guidelines are reviewed on a daily back end basis, supplemented by manual tests where applicable. PGIM does not engage in soft dollar arrangements.

Rating Decile	Weight
1st	10%

VI. Attribution

Prudential maintains a very tight benchmark risk control. A pre-established risk budget specifies where active risk is to be taken and to what degree risks may be assumed. The following risks are analyzed and monitored daily: 1) Interest rate risk measured by key rate duration analysis; 2) Systematic risk measured by tracking error; 3) Residual risk, such as issuer and industry exposure; and 4) Intensive daily credit monitoring.

Prudential maintains a comprehensive proprietary performance attribution system (ARMS) that is fully integrated with trade capture, portfolio management, and risk management systems. The firm uses Aladdin as its trading system while PAM is used as its accounting and financial reporting system. Performance attribution for all portfolios is calculated daily and delivered monthly. Daily attribution includes sector, duration, yield curve, subsector, industry, and individual security. Portfolio managers review performance attribution monthly for the portfolios they manage evaluating each position to determine whether the result is as expected or whether repositioning is warranted. A separate Risk Manager also reviews these reports and discusses unusual items with the portfolio manager.

Decile	Rating										
	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			Proprietary and Confidential		D		F	

PGIM Fixed Income

PGIM Fixed Inc Core Plus Fixed Income

Firm Information

PGIM Fixed Income

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Manager Research

Pacific Investment Management Company LLC (PIMCO)

Short Term Full Authority

Rating Decile	Weight
3rd	100%

Summary

PIMCO's investment process is keyed off the Global Secular Forum discussion, where investment professionals debate the economy's underlying risks, and forecast turning points. With its top-down macro approach and its in-depth bottom-up security selection process, strategies are constructed to express PIMCO's best ideas.

The Short-Term fixed income mandates are benchmarked to the Citi 3-Month US Treasury Bill Index with the expectation of generating 35-60 bps of alpha with 35-60bps of tracking error. Portfolio durations usually range from 0-1 year, and the Full Authority accounts can invest up to 10% in below-investment-grade securities with minimum rating of B. Non-USD (max 10%) and foreign currency exposure (max 20%) can also be utilized in accounts with more liberal guidelines.

	Rating Decile	Weight
I. Organization	5th	20%
<i>Firm</i>	4th	50%
<i>Team</i>	5th	50%

Founded in 1971 as a subsidiary of Pacific Mutual, now Pacific Life, PIMCO has operated as an independent entity since 1982. In 2000, German financial services multinational, Allianz purchased the majority stake of PIMCO Advisors LP, the parent of PIMCO LLC.

Since 2010, many high profile personnel and material investment committee members have left PIMCO. The most notable and surprising was Bill Gross', Founder/CIO, abrupt departure and move to Janus in September 2014. At this time the firm implemented a CIO system with Group CIO, Dan Ivascyn, and five sector specific CIOs. It should be noted that in August 2015 the firm received a Wells notice relating to the ETF BOND. In November 2016 Manny Roman was hired from Man Group as the firm's new CEO, with Doug Hodge, former CEO, taking an advisory role. In 2017 it was announced that President Jay Jacobs would retire from the firm. While cautious at first of the continued senior level turnover, we now view the implementation of Mr. Roman's business plan as a positive change.

Prior to Mr. Gross' departure the firm had peak AUM of over \$2T, it reached a trough of \$1.44T in the fourth quarter of 2015 but by early 2018 it was back up to \$1.8T. During this redemption period the firm let a number of people go, primarily client facing as they were staffed for higher asset levels. Prior to Mr. Gross' departure the peak headcount was around 2,450, as assets left they brought headcount down to around 2,200 and they have since added more investment roles as well as rebuilt some of the client team to a level of around 2,300. The firm has also brought on a Global Advisory Board in December 2015 which has five economic and political leaders, including Ben Bernanke as Chair. PIMCO continues to have a deep bench of investment professionals and the firm can still attract industry talents.

Wilshire had reduced the rating for PIMCO to reflect the high level of turnover, concerns around continuity of investment style and large asset outflows. We actively monitored the firm over the following years and have seen stability in the investment style, increasing AUM and the firm continuing to attract high quality talent while returning to normal levels of turnover. The rating was brought back up as we saw more stability.

PIMCO employs a hub and spoke system. The Investment Committee (IC) is considered the "brain" of the organization, consisting of permanent and rotating members. They determine top-down, global macroeconomic directions for all firm's strategies. These members sit on the trading floor, and are also responsible for the day-to-day management of strategies. Sector specialists and research analysts construct specific portfolios according to guidelines, and select individual securities. Bonuses are based on contribution to investment process, client retention, portfolio consistency, relative performance, and peer comparison. This organizational structure has been refined over the years.

PM Jerome Schneider has been actively involved in the management of Short-Term strategies since 2008.

Pacific Investment Management Company LLC (PIMCO)

Short Term Full Authority

Rating Decile	Weight
1st	20%

II. Information

The firm’s internal analyses, coupled with external inputs, provide breadth and depth to its research. The data warehouse infrastructure ensures efficient communication of research and information.

PIMCO devotes significant resources to gather, compile, and process information; thus it has established one of the top proprietary analytic and data distribution systems among its peers. As a large consumer of external data, PIMCO has access to numerous sources. It uses these sources both as a sounding board against their own independent research, as well as to develop and improve internal models. Credit analysts supplement external data with independently acquired information. Sources include qualitative information from industry roadshows and on-site conversations with senior company management. An extensive warehouse centralizes data from internal and external sources. PIMCO maintains a library of information to support security evaluation, risk monitoring, and research distribution.

Rating Decile	Weight
3rd	20%

III. Forecasting

PIMCO employs a hub and spoke system. The Investment Committee (IC) is considered the “brain” of the organization, consisting of permanent and rotating members. Every May, PIMCO conducts a week-long Secular Forum to construct a three-to-five year outlook on fiscal and monetary policies, inflation, demographics, trades, and other factors that impact the global economy. Investment professionals together with external speakers present secular topics. The Forum serves as a backdrop for information exchange and debate, providing PIMCO’s investment professionals with insights to form their economic outlooks. The firm also conducts quarterly Economic Outlooks that forecast economic growth and inflation over six-to-nine month periods. Regional teams from North America, Europe, Japan, and Emerging Markets discuss their research and compare which regions will exceed or fall short of market expectations.

PIMCO’s financial engineering team has internally developed over 30 models to identify relative values. But the firm does not employ a black box approach. Rather than relying purely on derived values, the portfolio managers are also expected to use their own experience and judgment, evaluating the data to choose worthy trading opportunities.

Rating Decile	Weight
5th	20%

IV. Portfolio Construction

The model-portfolio approach provides consistency across all accounts and explicitly expresses the team’s strategies. However, it should be noted that usage of derivatives, large out-of-benchmark holdings, and sometimes more-aggressive-than-peers investment style could lead to larger variance versus the benchmark and return volatility.

Portfolio construction begins with a model portfolio. Macro themes are drawn from the Global Secular Forum and the Quarterly Economic Outlook. With a team approach, the Shadow Investment Committee, regional teams, and specialty desks set targets on duration, yield curve, convexity, sector concentration, and credit quality for the specific strategies. The model portfolio is built with all these inputs. Generalist portfolio managers, however, have some leeway to tilt their responsible portfolios toward or away from the model portfolio based on their own insight and research. Generalist and Specialist Portfolio Managers then perform security selection and implement the strategies.

Because of PIMCO’s large asset base, it is difficult to invest in less liquid securities and markets; thus derivatives are widely employed to gain duration, sector, and security exposures. CDS, currency futures, interest-rate futures, and total return swaps are the common instruments used in building portfolios. Since these instruments don’t always track their respective underlying securities, large variances have been observed from time to time; hence, volatilities are enlarged as a result. The Short-Term track records exhibited PIMCO’s value-added through a cycle; however, there have been times non-traditional instruments and riskier-than-normal strategies were employed, making the product a bit more aggressive than the usual risk taking investors are comfortable with for short-term strategies.

The Short-Term fixed income mandates are benchmarked to the Citi 3-Month US Treasury Bill Index with the expectation of generating 35-60 bps of alpha with 35-60bps of tracking error. Portfolio durations usually range from 0-1 year, and the Full Authority accounts can invest up to 10% in below-investment-grade securities with minimum rating of B. Non-USD (max 10%) and foreign currency exposure (max 20%) can also be utilized in accounts with more liberal guidelines.

Decile	Rating									
	1	2	3	4	5	6	7	8	9	10
Corresponding Grade	A		B		Proprietary and Confidential		D		F	

Pacific Investment Management Company LLC (PIMCO)

Short Term Full Authority

	Rating Decile	Weight
V. Implementation	4th	10%

PIMCO's internal systems helped the firm effectively implement and control its strategies despite substantial growth. Depending on the experience level, Generalist or Specialist Portfolio Managers execute trades. All block trades are allocated on a pro-rata basis. The firm analyzes trade allocation three times a year to determine whether it helped or hurt a portfolio. Trading costs average 0.125% or less expressed as bid/ask spread. Internal systems allow transparency necessary for the entire investment team to monitor portfolios. The Chief Risk Officer sits on the trading floor allowing quick and easy interaction with portfolio managers to ensure portfolios remain within the direction of the model portfolio.

Capacity and liquidity risks are a concern as the firm is one of the largest fixed income managers in the world. Derivatives are used to improve liquidity and obtain exposures. Performance and portfolio-holding dispersions warrant attention given the vast size variance between small separately-managed accounts (usually with a minimum of \$75 million) and large commingled products (in the billions).

Mr. Gross' departure raises the concern of potential outflows from the fund and the impact to performance that may have. Mutual fund performance may be more impacted than separate accounts due to the downward pressure outflows have on a fund.

	Rating Decile	Weight
VI. Attribution	1st	10%

PIMCO's risk management and attribution tools are state-of-the-art and continuously evolving.

PIMCO constantly develops extensive tools and analytic software for security modeling and risk management. These tools enable the investment team to effectively monitor portfolios and decompose performance across multiple dimensions. Internal systems consistently revalue securities versus potential investments for relative attractiveness. PIMCO can quickly identify risks as well as seek opportunities due to its ability to both analyze a portfolio as a whole and drill down to the individual security level.

Pacific Investment Management Company LLC (PIMCO)

Short Term Full Authority

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Important Information

	Rating										
Decile	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			Proprietary and Confidential		D		F	

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Manager Research

Principal Real Estate Investors

Global Real Estate Equity Securities (REIT)

Rating Decile	Weight
1st	100%

Summary

Principal Global Real Estate Securities is a broadly diversified, benchmark-aware strategy that has consistently provided strong risk-adjusted returns within the global real estate investment universe. The team focuses on high quality investments while closely monitoring over- and underweight benchmark exposures. As a result, the portfolio is typically comprised of 85-95 holdings with a goal of outperforming the FTSE EPRA/NAREIT Developed Index by 200 bps over rolling three-year periods with a tracking error of less than 300 bps. The 15-person investment team, led by longtime portfolio manager and developer of public real estate capabilities at the firm, Kelly Rush, resides in the Principal Real Estate Investors (PrinREI) group of the firm. As such, the team has access to information from all sides of the real estate market, public and private debt and equity, from these respective teams also housed under PrinREI at the firm.

Since 2013, several episodes of turnover on the investment team have occurred that Wilshire continues to monitor. This turnover included Local PMs and analysts on the strategy, but the three-person Global PM team has been stable for over 15 years and the Local PM and analyst teams remain very deep and experienced relative to peers to give us comfort. Additionally in 2013, Indraneel Karlekar, Ph.D, was hired as PrinREI's Head of Global Research, reporting directly to Randy Mundt, CIO of PrinREI since 2002. However, in September 2015, Mr. Mundt retired from the firm and distributed his CIO responsibilities to the four division heads (public and private debt and equity), making portfolio manager Kelly Rush the CIO for Global Real Estate Securities.

Overall, the team has made positive steps to replace departures and increase the net size of the team. Furthermore, the very experienced Global PMs and the risk controlled process have remained intact, and the strategy remains a strong investment option for clients seeking an active, benchmark-aware global REIT solution.

Principal Real Estate Investors

Global Real Estate Equity Securities (REIT)

Rating Decile	Weight
2nd	20%
4th	50%
1st	50%

I. Organization

<i>Firm</i>	4th	50%
<i>Team</i>	1st	50%

Principal Global Investors is a wholly-owned affiliate of the Principal Financial Group and was founded in 1879. Principal Financial Group traces its history back over more than six decades of real estate investment experience, starting with single property investments and commercial loans made on behalf of Banker's Life; now known as the Principal Financial Group. In October 2001, Principal Financial Group became a publicly listed company. Principal Real Estate Investors (PrinREI), created in May 1998, is the real estate platform within Principal Global Investors and is organized into "four quadrants" of public and private real estate equity and debt businesses. Together, the four quadrants within PrinREI manage over \$70 billion in real estate assets under management, with the majority of assets on the private side.

In September 2015, long-time CIO of PrinREI, Randy Mundt, retired. As a result, his CIO duties were split among the four real estate quadrant heads at the firm, Kelly Rush - Public Equity, Todd Everett - Private Debt, Jay Davis - Private Equity, and Marc Peterson - Public Debt. In addition, Indraneel Karlekar, who joined the firm in 2013 as Head of Global Research, works alongside the four quadrants to supplement the investment teams. Under this structure, PrinREI maintains extensive debt and equity real estate capabilities globally, and recently strengthened these capabilities by acquiring INTERNOS (now Principal Real Estate Europe), a pan-European private real estate specialist.

The compensation plan for investment professionals consists of a base salary and two variable components. The first variable component, constituting approximately 60% of variable compensation, is an incentive bonus based on rolling one-, three-, and five-year performance. The second component is a discretionary bonus tied to the business unit of the respective investment professionals. This compensation framework is designed to align team members with client interests by rewarding them, based on their contributions and team results, to the success and growth of the business. A portion of senior members' variable compensation is deferred in the form of direct investments in equity funds or Principal Financial Group restricted stock with three-year vesting schedules.

Kelly Rush, CIO of Global Real Estate Securities, has led the Global Real Estate Equity product since its launch in 2007. He is supported by two other Global PMs, Tony Kenkel, located in Chicago, and Simon Hedger, located in London. Together, the Global PMs are extremely experienced and possess over 95 years of combined real estate experience. This Global PM team is supported by five Local PMs and seven analysts located in the firm's offices in Des Moines (4 individuals in total), Chicago (4), London (3), Sydney (1), and Singapore (3) for a total of 15 investment professionals worldwide.

The global team was largely stable until recent years. In 2013, the team lost North American PM Matt Richmond, Asia-Pacific PM Alastair Gillespie, and Asia-Pacific analyst Alvin Chan, all to competitors. Mr. Richmond was replaced through the promotion of Keith Bokota from analyst to PM, Mr. Gillespie was replaced by new hires Shern-Ling Koh and Julian Mittag as co-PMs, and Mr. Chan was eventually replaced by analyst Eileen Goh, hired roughly one year later. After this span of turnover, the team began adding depth globally to prevent similar situations in the future. In 2013, Janine Yoong was hired as a portfolio manager and is based in Sydney. More additions came in 2014 when analysts John Minor and Matt Schilling were added to the North American team, and associate analyst Jay Jakhani was added in London. In 2015, Sydney-based analyst Benita Ong departed after eight years with the firm, but she was quickly replaced by analyst Ying Luo, also in Sydney. In 2016, analysts Cesar Bracho and Joseph Kearney were hired in Des Moines and London, respectively, but the previously mentioned analysts Mr. Minor, Mr. Jakhani, and Ms. Luo all departed in 2017 after 2-3 years with the team. Most recently, Dov Hellman joined in 2018 as a seasoned analyst in the Chicago office.

Overall, the size and experience of the team is viewed positively as the 15-person team averages over 10 years of experience for analysts and over 20 years for PMs. That being said, the number of departures witnessed since 2013 is notable and is something Wilshire continues to monitor. While the recent departures have consisted of newer members of the team and the Global PMs have been stable since inception, Wilshire would negatively view the loss of several senior investors in a short timeframe.

Decile	Rating									
	1	2	3	4	5	6	7	8	9	10
Corresponding Grade	A		B		Proprietary and Confidential		D		F	

Principal Real Estate Investors

Global Real Estate Equity Securities (REIT)

Rating Decile	Weight
1st	20%

II. Information

Information gathering is performed with the goal of performing deep, fundamental research to uncover views that differ from consensus. With the exception of lead PM Kelly Rush, each member of the team is an analyst and is responsible for generating company-specific research in his/her respective region. Typical sources of information include financial statements, management meetings, and property inspections. Company-related information is also sourced from the team's network of contacts within the industry. The vast majority of research is generated in-house, with the ability to utilize information produced by the other public and private teams in the firm's four quadrant structure. Until recently, these internal resources were primarily U.S.-focused as the firm was lacking in non-U.S. private capabilities, but this changed in 2018 through the acquisition of INTERNOS (now Principal Real Estate Europe), a pan-European private equity specialist.

In performing research, the team utilizes a proprietary model, the Global Research Platform (GRP), to manage information and rank all stocks objectively on performance potential. The model relies solely on fundamental factor inputs from the firm's internal teams, as well as from external data sources such as FactSet, Worldscope, Compustat, QSG, SNL Securities, and First Call. Each security is then assigned a quantitative rank as a result of its fundamentals, relative value, and potential catalysts for the team to use as a guide for where to spend time performing bottom-up research.

Overall, the team itself performs diligent research in addition to what is provided to them from the other private equity, private debt, public equity, and public debt resources internally. Information gathering rates above-average relative to global real estate peers.

Rating Decile	Weight
1st	20%

III. Forecasting

The process begins with an investable universe consisting of all FTSE EPRA/NAREIT Developed Index securities, as well as global securities issued by companies that derive at least 50% of their assets, income, or revenue from real estate related activities (typically an additional 700 names).

Deep fundamental research is then performed with a focus on risk-adjusted relative value at the regional level. Security valuation is primarily determined through a net asset value (NAV) process that examines both absolute and relative valuations on a levered and unlevered basis. The absolute valuation premium or discount to where a stock is trading is important, but the unlevered NAV relative to regional peers is crucial to finding mis-pricings for the team. Occasionally, price multiples or a DCF analysis is used to determine valuation, but these usually just provide a check on the primary NAV-based approach.

The fundamental research is coupled with the quantitative model ranking as described above to drive security selection. Analysts assign separate ratings to the management, business strategy, exposure, corporate governance, and other categories, to come to a blended single rating for every security. Securities chosen for investment are presented by the respective analyst to the PM team who makes a determination of the relative value of the security in the context of the global portfolio. Strategic, top-down direction is determined by the Global PM team by considering the macro outlook, valuation levels, and general security trends, but bottom-up security selection is expected to contribute over 75% of the portfolio's alpha.

The process is heavily dependent on the analysts' qualitative inputs, which is slightly concerning given the analyst turnover witnessed in recent years. However, we believe the firm's access to and ability to produce deep, fundamental research is above-average compared to peers. To this point, the strategy continues to produce attractive long-term performance with stock selection being the primary contributor. Overall, forecasting receives a very high rating.

Principal Real Estate Investors

Global Real Estate Equity Securities (REIT)

Rating Decile	Weight
1st	20%

IV. Portfolio Construction

The PrinREI Global Real Estate Securities portfolio, typically consisting of 85-95 holdings, strives to outperform the FTSE EPRA/NAREIT Developed Index by at least 200 bps over rolling three-year periods with tracking error of less than 300 bps. The team builds its portfolio from the bottom-up, but incorporates relatively tight risk controls relative to the benchmark to remain focused on stock selection. Country and individual stock weightings are limited to +/- 5% of the index, and sectors are limited to +/- 15% of the index. In reality, these exposures are even closer to the index than the ranges would imply, with individual securities typically +/- 2% of their index weighting and countries and sectors within +/- 3% and +/- 5%, respectively. Non-index securities are typically around 5% and typically are very high conviction emerging market securities when held.

Position sizes are determined by comparing the team's conviction in a security versus its expected volatility. These two determinations are made subjectively by the PM team, but based on their assessment a weighting matrix is then employed to determine the size of the active weight. Securities with the highest conviction and lowest expected volatility receive the largest active weights, while securities with the lowest conviction and highest expected volatility are given the lowest active weight, assuming they are even purchased at all.

The firm uses APT and internally developed tools for risk analytics to assess the sources of risk in the portfolio. Tony Kenkel, Global PM, is formally responsible for risk monitoring and management. Currency forwards are used to hedge the active currency risk within the portfolio; however, this is done infrequently and to a low degree only when meaningful risk is present for a sustained period. Despite this, currency hedging is a unique aspect of the portfolio construction process, as most Global REIT managers do not employ hedges to currency exposures.

Overall, the portfolio construction process is clear and repeatable, employing the use of guidelines and processes that align with the team's focus on bottom-up stock selection. For these reasons, portfolio construction rates highly.

Rating Decile	Weight
1st	10%

V. Implementation

PrinREI's implementation allows for 24-hour trading capabilities from its roughly 10-person trading team located in Des Moines and Singapore. This team is tasked with trading for all PrinREI products, but is still very deep and located in the major markets. Additionally, the team averages over 20 years of trading experience. In-line with the global REIT market (50-60% U.S. securities), five of the traders are located in Des Moines while the Europe and Asia trading is performed in Singapore.

The trading desk employs the Charles River Investment Management System as their single trading and compliance tool. This system interacts with the firm's PORTIA accounting system to monitor trades and portfolios for compliance. The traders also use the Newport and Triton execution management systems to manage orders and measure trading costs real time.

Capacity is determined across all strategies managed by the team, not just on a product by product basis. With the current size of the real estate universe, the team believes they can manage \$20B in assets across all products they run. At current asset levels, this leaves the team with roughly \$5B in capacity. Annual turnover is expected to range between 50-100%. PrinREI participates in soft-dollar arrangements that have historically resulted in soft dollar commissions between 12-18%, although it is unclear how reliant the specific REIT team's research efforts are on these relationships.

The team's global trading presence, combined with ample trading systems and backed by the resources of the broader firm, result in an above-average rating for implementation relative to peers.

Rating Decile	Weight
3rd	10%

VI. Attribution

Performance attribution is conducted using FactSet Portfolio Analysis software. Attribution is run on a weekly, monthly, quarterly, and ad-hoc basis to evaluate the origin of excess return as well as the active risks taken to achieve those returns. Attribution results are primarily used to review the portfolio and monitor its overall tracking error. In addition, proprietary systems and tools from Advanced Portfolio Technologies (APT) are utilized to monitor common factor risks in the portfolio. These tools are used to monitor multiple style risks, such as size, liquidity, growth vs. value, etc., all with the intent of focusing on individual stock selection to drive the majority of risks and returns.

Relative to peers, attribution rates above-average due to the team's overarching focus on risk mitigation which is supported through this process.

Decile	Rating									
	1	2	3	4	5	6	7	8	9	10
Corresponding Grade	A		B		Proprietary and Confidential		D		F	

Principal Real Estate Investors

Global Real Estate Equity Securities (REIT)

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Manager Research

T ROWE PRICE ASSOCIATES INC

T Rowe Price Balanced Fund, Inc

Rating Decile	Weight
1st	100%

Summary

T. Rowe Price offers an attractive balanced fund that is risk-controlled with an approximate target of 65% Equity/35% Fixed Income exposure. The portfolio is split into several different sleeves, each of which is managed by senior investment professionals that have delivered strong long-term performance in their stand-alone strategies. The firm's Asset Allocation Committee has the latitude to tweak the fund's positioning around the target weights, but this is performed in a very risk-controlled incremental manner as the Committee does not attempt to time the market. Compared to some of the firm's other multi-asset class strategies which can be more opportunistic, the Balanced Fund seeks to serve as a core holding with relatively low tracking error. Overall, the fund has produced competitive investment returns with relatively low tracking error to the fund's custom benchmark over long-term periods.

Rating Decile	Weight
1st	20%
1st	50%
1st	50%

I. Organization

<i>Firm</i>	1st	20%
<i>Team</i>	1st	50%

Founded in 1937, T. Rowe Price represents one of the largest multi-product investment management firms with a significant presence in both the institutional and retail mutual fund markets. The firm has a diverse product lineup which includes equity, fixed income, and asset allocation capabilities. T. Rowe Price has built a global research platform with investment professionals located in various offices around the world. Approximately 80% of the firm's employees are shareholders in the company and combined with vested but unexercised options own approximately 15-20% of the firm's publicly traded equity (TROW). The firm has established a competitive franchise in both investment management and distribution due to its conservative culture and high emphasis on fiduciary standards.

T. Rowe Price has developed a good reputation for recruiting and retaining talented investment professionals throughout the organization. In terms of compensation for investment professionals, the firm provides a modest base salary and a performance bonus that can be multiples of the base salary. The firm also offers stock options and restricted stock to certain investment and key senior professionals. Restricted stock and options vest over a five-year period. Bonuses are tied closely to performance for both portfolio managers and research analysts, with an emphasis on three- and five-year relative and risk-adjusted results.

The Balanced Fund is managed by Charles Shriver who has been with T. Rowe Price since 1991. Mr. Shriver became co-PM of the fund effective May 1, 2011 and became lead PM during October 2011 as part of a planned transition from the previous PM, Ned Notzon, who retired at the end of 2011. Mr. Shriver had worked closely with Mr. Notzon for more than 15 years on the firm's asset allocation capabilities prior to taking over as PM of the strategy.

The fund is split into several investment sleeves, each of which is managed by an experienced portfolio manager. The equity allocation is divided into five sleeves, which are managed by Ann Holcomb, Jason Polun, Thomas Watson (core), Larry Puglia (growth), Mark Finn (value), Ray Mills (non-U.S.) and Wyatt Lee (real assets); and the fixed income allocation includes two sleeves, which are managed by Rob Larkins (investment grade bond) and Mark Vaselkiv (high yield). In addition, the firm's Asset Allocation Committee, which is comprised of over 10 of the firm's senior investment professionals, assist with portfolio positioning. The firm also boasts a deep team of analysts within both equity and fixed income. Compared to other large firms with deep analyst staffs, the firm has experienced a small amount of turnover, which is a testament to the organization and the investment culture.

Overall, this product receives a strong score from an organizational perspective. The quality and stability of the various product teams are top-notch, and the ownership incentives are stronger than most peers. The firm is strongly committed to both the retail and institutional marketplaces and has a consistent valuation-conscious theme across the entire organization.

T ROWE PRICE ASSOCIATES INC

T Rowe Price Balanced Fund, Inc

Rating Decile	Weight
1st	20%

II. Information

Information gathering for the Balanced strategy starts with the impressive analyst staff the firm has assembled in both equity and fixed income. T. Rowe currently employs over 200 Equity and Fixed Income analysts. Throughout the firm, bottom-up fundamental analysis is the key to the philosophy and process. Equity analysis typically focuses on balance sheet strength, sound operations, and a management team that is capable of executing a focused business strategy. Each analyst covers 30-50 companies and conducts multiple face-to-face meetings with the company, including on-site visits which forms the core of the research process. Fixed income analysts have access to the research produced by the firm's equity research staff and often travel with the equity analysts to take part in the on-site company visits. Contact with an issuer is maintained throughout the life of the investment to continue to assess potential shifts in earnings and/or cash flow.

Overall, T. Rowe Price possesses a very strong information gathering effort grounded in direct first-hand research revolving around direct contact with company management. As a result, the firm scores high in information gathering.

Rating Decile	Weight
1st	20%

III. Forecasting

The forecasting process for the Balanced fund is twofold: asset allocation and sleeve-specific security selection. The "neutral" asset allocation for the firm is 65% equity (US, Non US, and Real Assets), and 35% fixed income (including High Yield). The firm's Asset Allocation Committee has latitude to tilt the portfolio +/- 10% around these neutral allocations (though rarely exceeds 5-6%) and also can tilt the portfolio modestly toward growth or value. The Committee meets each month to discuss the market environment and determine which segments of the market offer the most attractive risk/reward potential. Much of the positioning changes stem from relative value analysis.

Each of the fund's investment sleeves has a different approach to security selection and alpha generation. The large cap value portfolio looks for stocks trading at the low end of their historical range versus the overall market and that possess a catalyst for revaluation. The large cap growth sleeve is GARP-y in approach and looks for large, stable, blue chip companies trading at a discount to intrinsic value. The large cap core sleeve is run by the firm's analysts and is enhanced index in approach - looking to add modest value versus the market solely through security selection. The international piece of the fund uses a core approach with a conservative usage of emerging markets. The investment grade fixed income portion of the fund takes very small bets against the BarCap Aggregate Bond index and aims to add incremental value over the index. Finally, the high yield portfolio is based on in-depth credit analysis and uses a proprietary rating system to forecast future returns with a focus on the B/BB space. As a more recent enhancement, the team initiated an allocation to Real Assets to improve the real risk and return profile in scenarios of high or rising inflation.

Overall, the forecasting process is disciplined and intuitive, and each of the underlying product teams have demonstrated the ability to add value over the long-term. For these reasons, the fund scores above average in forecasting.

Rating Decile	Weight
2nd	20%

IV. Portfolio Construction

Portfolio construction is another strong aspect of this fund. While the Asset Allocation Committee has the latitude to tilt the portfolio toward what they deem to be particularly attractive asset classes or styles, they do so in small incremental steps that ensures security selection is the main driver of relative performance. The Committee meets each month to review portfolio positioning and assess the risk of the portfolio. The "neutral" asset allocation for the firm is 65% equity (43.5% US, 18% Non-US, and 3.5% Real Assets), and 35% fixed income (31% Investment Grade, 4% High Yield). The portfolio will have modest (up to 6-7%) exposure to emerging markets through the non-US sleeve. Relative to this fund's custom benchmark (45% S&P 500, 20% MSCI EAFE, 35% BarCap Aggregate Bond), the tracking error of the portfolio has historically been relatively low. Overall, the product scores above average in portfolio construction.

T ROWE PRICE ASSOCIATES INC

T Rowe Price Balanced Fund, Inc

	Rating Decile	Weight
V. Implementation	5th	10%

T. Rowe Price has considerable resources for equity and fixed income trading, where most of the traders have significant trading backgrounds and experience. The firm has invested heavily in trading systems, using Charles River for automated pre-trade compliance monitoring and order management. The overall trading philosophy emphasizes below average turnover, which cuts down on transaction costs and market impact. However, AUM across the firm and especially within domestic equity is extremely high, so the product may not be as nimble as some of its peers. The firm does use soft dollars, but they are used in a very limited capacity and must undergo full review by the firm's Brokerage Control Committee. Overall, because of the firm's significant AUM in domestic equity, the product receives only an average implementation score.

	Rating Decile	Weight
VI. Attribution	3rd	10%

T. Rowe Price has developed an in-house performance attribution system that allows the team to capture the sources of returns for this fund at each level of portfolio construction: asset class decisions, sector/industry decisions, security selection, and rebalancing. The output of this attribution is reviewed by the allocation committee on a monthly basis to help inform the team's positioning and rebalancing decisions. Overall, the firm's use of attribution is very solid and receives an above average score.

	Rating									
Decile	1	2	3	4	5	6	7	8	9	10
Corresponding Grade	A		B		C		D		F	
	Proprietary and Confidential									

T ROWE PRICE ASSOCIATES INC

T Rowe Price Balanced Fund, Inc

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Manager Research

T. Rowe Price

QM US Small-Cap Growth Equity Strategy

Rating Decile	Weight
3rd	100%

Summary

T. Rowe Price's QM Small Cap Growth strategy provides clients with a diversified, lower tracking error small cap growth mandate. The strategy typically holds around 300 stocks and annual portfolio turnover has been low at 15-30%. The product incorporates a quantitative investment model with the firm's broader fundamental research resources as an overlay. The quantitative model ranks stocks on a variety of factors, including Valuation, Profitability and Capital Allocation, Earnings Quality, and Momentum. While this strategy is not as large as the firm's other small cap growth strategies, there is notable overlap in names. The firm has over \$40 billion in assets under management within its small cap growth products and all products, including the QM Small Cap Growth strategy, are essentially closed to new investors.

Rating Decile	Weight
2nd	20%
1st	50%
2nd	50%

I. Organization

<i>Firm</i>	1st	50%
<i>Team</i>	2nd	50%

Founded in 1937, T. Rowe Price represents one of the largest multi-product investment management firms with a significant presence in both the institutional and retail mutual fund markets. The firm has a diverse product lineup which includes equity, fixed income, and asset allocation capabilities. T. Rowe Price has built a global research platform with investment professionals located in various offices around the world. Approximately 80% of the firm's employees are shareholders in the company and combined with vested but unexercised options own approximately 15-20% of the firm's publicly traded equity (TROW). The firm has established a competitive franchise in both investment management and distribution due to its conservative culture and high emphasis on fiduciary standards.

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During 2020, T. Rowe Price announced its intentions to create a new investment adviser, T. Rowe Price Investment Management (TRPIM). TRPIM will have its own investment platform and investment leadership, which will be separate and distinct from existing investment adviser, T. Rowe Price Associates (TRPA). Six investment strategies will be moved to TRPIM which include U.S. Capital Appreciation, U.S. Mid-Cap Growth Equity, U.S. Small-Cap Core Equity, U.S. Small-Cap Value Equity, U.S. Smaller Companies Equity, and U.S. High Yield Bond. In total these six strategies represent \$167B in AUM, which is approximately 13% of total T. Rowe Price AUM as of September 30, 2020. Pending all approvals, the transition of these strategies to TRPIM is expected to take place during 2Q 2022. There are no planned portfolio management changes as part of this transition. TRPIM will be a wholly owned subsidiary of T. Rowe Price Associates.

The QM Small Cap Growth strategy is managed by Sudhir Nanda, who is also the Head of Quantitative Equity Research for T. Rowe Price. While Mr. Nanda is responsible for all investment decisions, he is supported by nine quantitative analysts: Prashant Jeyaganesh, Vidya Kadiyam, Navneesh Malhan, Anthony Zhu, PhD., Farris Shuggi, Jordan Pryor, George Gao, Ph.D., and Rinald Murataj, Ph.D. This team has grown considerably over the past few years, with Mr. Gao, Mr. Zhu, and Mr. Murataj being notable recent additions. Mr. Nanda works closely with the members of the Quantitative Equity Group and also utilizes the resources of the firm's very large global research analyst platform of over 150 industry analysts.

T. Rowe Price

QM US Small-Cap Growth Equity Strategy

Rating Decile	Weight
4th	20%

II. Information

The QM Small Cap Growth Fund adheres to a quantitative investment approach; however, the fundamental analysis conducted by the firm's vast research platform supports the quantitative research. The quantitative model receives data from outside vendors and stresses common factors such as free cash flow yield, forward P/E, and EV/EBITDA. In terms of fundamental research, the firm's sector-specific analysts conduct over 5,000 on-site visits a year and complement these visits with telephone conversations, participation in conference calls, and attending industry and investment conferences. In addition, the firm hosts over a 1,000 company meetings in their offices annually. The analysts primarily meet with senior- and mid-level managers but will also meet with competitors and various stakeholders up and down the supply chain to truly assess a company's position in the marketplace. During these visits, the analysts focus on gathering information about the viability and sustainability of a company's business model; the quality of the management team and alignment of interests with shareholders; and the company's financial position as well as the drivers and obstacles to continued financial success. Each of the firm's analysts are responsible for creating 3-5 year forecasts for 25-40 companies and for issuing a 1-5 rating on each company falling under their coverage. The firm has deepened its quantitative resources in recent years and the support of the firm's strong fundamental research platform brings the score in this category to above average.

Rating Decile	Weight
2nd	20%

III. Forecasting

The strategy primarily invests in small cap growth companies that fall within the market capitalization range of the MSCI US Small Cap Growth Index. The investment process incorporates quantitative analysis with a fundamental overlay. The majority of the process uses quantitative methods to identify and rank stocks within industry peer groups based primarily on factors in four broad categories: Valuation, Profitability and Capital Allocation, Earnings Quality, and Momentum. Valuation factors typically comprise ~45% of the stock's total rank, with an emphasis on cash flow metrics and a preference for low valuation relative to the sector. Capital Allocation and Profitability account for the second group of factors, with a preference for high ROE/ROIC, stock buybacks, and companies that have reasonable capital expenditure policies. Earnings Quality factors are the third group, with a preference for companies with cash flows exceeding accounting earnings. The second and third group of factors typically account for ~40% of the model weight. The fourth group of factors are momentum-based and are focused on positive price momentum and estimate revisions. The final ranking of each stock is a weighted average of each of the four categories.

The model ranks stocks from 1 to 10. Stocks rated 1-3 are purchase candidates, with stocks rated 6-10 being sell candidates. Ranking is performed daily, with the model producing a list of potential buys and sells. Prior to purchasing a name, PM Sudhir Nanda will evaluate the research conducted by the firm's fundamental analysts. Mr. Nanda will also discuss individual names with the firm's other small cap portfolio managers. It is important to note that names within the biotech industry are primarily identified and included in the portfolio as the result of fundamental research conducted by the firm's Health Care team.

The strategy adheres to a well-structured investment process. While recent relative results have been more challenged, longer-term numbers remain favorable with value being added primarily through stock selection.

Rating Decile	Weight
3rd	20%

IV. Portfolio Construction

The objective of the QM Small Cap Growth Fund is to outperform the MSCI Small Cap Growth Index, with a moderate to low tracking error of 2-3%. The portfolio is highly diversified, typically holding around 300 stocks. Individual positions are typically limited to 1% weights. The portfolio is broadly sector neutral, with the goal of adding alpha primarily through stock selection. It is important to note that the strategy will maintain a slightly higher market cap orientation than many peers within the small cap growth space.

In terms of risk management and portfolio monitoring, the firm utilizes tools such as Barra, StyleADVISOR, and FactSet to regularly monitor tracking error and other portfolio characteristics. While this strategy is not as large as the firm's other small cap growth strategies, there is a significant overlap in names. Capacity management should be monitored closely as assets between the small cap growth strategies are over \$40 billion.

T. Rowe Price

QM US Small-Cap Growth Equity Strategy

Rating Decile	Weight
5th	10%

V. Implementation

T. Rowe Price has over 30 equity traders with an average of 14 years of trading experience. The firm utilizes the Charles River Investment Management Solution (CRIMS) for their order management system and for pre-trade compliance. Once inputted into the system, the trade is placed with a broker via telephone or through one of the over 100 FIX connections on the network. To minimize trading costs, T. Rowe searches out alternative pools of liquidity and adapts their style, approach, and venue where appropriate. The firm trades with more than 200 regional and national broker-dealers, including several ECNs and alternative sources of liquidity. The firm internally monitors execution costs and subscribes to Virtu's Alpha Capture and Transaction Cost Analysis for third-party transaction cost analysis. The QM Small Cap Growth strategy has turnover of around 15-30% per year, which is low relative to its peer group. While the firm's small cap growth strategies are closed to new investors, it is important to note that the firm manages a significant amount of assets within the asset class. Effective January 1, 2020, the firm began paying for all third-party research costs globally.

Rating Decile	Weight
3rd	10%

VI. Attribution

The portfolio management team uses a series of comprehensive, daily, weekly, and monthly reports to monitor the risk factors, style consistency, portfolio characteristics, and to attribute performance of the portfolio. These reports are generated through a combination of internal and external systems, including the Barra equity risk model, Zephyr StyleADVISOR, and FactSet. These tools are primarily used to monitor risk factors such as security weights, sector weights, market capitalization, MPT statistics, and valuation measures versus the benchmark. In addition, each analyst is measured on their own predictive capabilities which are used to determine, in part, the compensation of each analyst. Formal risk meetings between the Investment Risk Management Group and portfolio managers typically occur on a monthly cycle (at the portfolio manager's discretion).

Decile	Rating										
	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			Proprietary and Confidential		D		F	

T. Rowe Price

QM US Small-Cap Growth Equity Strategy

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Manager Research

T. Rowe Price

US Large-Cap Core Growth Equity Strategy

Summary

Rating Decile	Weight
2nd	100%

The T. Rowe Price US Large-Cap Core Growth strategy is one of three large cap growth strategies offered by the firm. Relative to the firm's other large cap growth offerings, this strategy is more diversified, has a slightly lower growth profile, and has less flexibility to invest outside of the U.S. The strategy has been managed by Larry Puglia since its inception. He utilizes the firm's deep fundamental research platform to construct a diversified portfolio of 100-150 stocks. Annual portfolio turnover is fairly low for a growth strategy at 30-45%. It is important to note that the Large-Cap Core Growth product is the same strategy as the more retail-oriented Blue Chip Growth Fund.

In early 2021, T. Rowe Price announced that PM Larry Puglia will be retiring at the end of 2021. Effective October 1, 2021, Paul Greene, who is the associate portfolio manager on the strategy, will become the lead portfolio manager. Mr. Greene has been with the firm for 14 years. He has been a member of the strategy's Investment Advisory Committee since 2010 and has been an associate portfolio manager on the strategy since January 1, 2020. While Mr. Puglia's retirement later this year will be a significant change for the strategy, we maintain conviction in the strategy. The firm has telegraphed this transition for some time now and has had a history of successful portfolio manager transitions.

T. Rowe Price

US Large-Cap Core Growth Equity Strategy

	Rating Decile	Weight
I. Organization	1st	20%
<i>Firm</i>	1st	50%
<i>Team</i>	1st	50%

Founded in 1937, T. Rowe Price represents one of the largest multi-product investment management firms with a significant presence in both the institutional and retail mutual fund markets. The firm has a diverse product lineup which includes equity, fixed income, and asset allocation capabilities. T. Rowe Price has built a global research platform with investment professionals located in various offices around the world. Approximately 80% of the firm's employees are shareholders in the company and combined with vested but unexercised options own approximately 15-20% of the firm's publicly traded equity (TROW). The firm has established a competitive franchise in both investment management and distribution due to its conservative culture and high emphasis on fiduciary standards.

T. Rowe Price has developed a good reputation for recruiting and retaining talented investment professionals throughout the organization. In terms of compensation for investment professionals, the firm provides a modest base salary and a performance bonus that can be multiples of the base salary. The firm also offers stock options and restricted stock to certain investment and key senior professionals. Restricted stock and options vest over a five-year period. Bonuses are tied closely to performance for both portfolio managers and research analysts, with an emphasis on three- and five-year relative and risk-adjusted results.

During 2020, T. Rowe Price announced its intentions to create a new investment adviser, T. Rowe Price Investment Management (TRPIM). TRPIM will have its own investment platform and investment leadership, which will be separate and distinct from existing investment adviser, T. Rowe Price Associates (TRPA). Six investment strategies will be moved to TRPIM which include U.S. Capital Appreciation, U.S. Mid-Cap Growth Equity, U.S. Small-Cap Core Equity, U.S. Small-Cap Value Equity, U.S. Smaller Companies Equity, and U.S. High Yield Bond. In total these six strategies represent \$167B in AUM, which is approximately 13% of total T. Rowe Price AUM as of September 30, 2020. Pending all approvals, the transition of these strategies to TRPIM is expected to take place during 2Q 2022. There are no planned portfolio management changes as part of this transition. TRPIM will be a wholly owned subsidiary of T. Rowe Price Associates.

T. Rowe offers three different U.S. large cap growth strategies (Growth Stock, Large-Cap Growth, and Large-Cap Core Growth). The Large Cap Growth Portfolio Management team consists of Larry Puglia, Joe Fath, Taymour Tamaddon, Eric DeVilbiss, and Paul Greene, who was recently added as an associate PM on the Large-Cap Core Growth strategy. All research ideas and key information are vetted within the group. Larry Puglia, CFA, CPA serves as the lead PM for the Large-Cap Core Growth Strategy. He has been with the firm since 1990 and has been managing this product since its inception. Paul Greene was formally added as an associate PM on the strategy at the beginning of 2020. We think highly of Mr. Puglia and the rest of the Large Cap Growth Portfolio Management team.

In early 2021, T. Rowe Price announced that PM Larry Puglia will be retiring at the end of 2021. Effective October 1, 2021, associate PM Paul Greene will become the lead PM. Mr. Greene has been with the firm for 14 years. He has been a member of the strategy's Investment Advisory Committee since 2010 and has a strong track record picking stocks within the media and technology space, many of which are large positions in the strategy. While Mr. Puglia's retirement later this year will be a significant change for the strategy, we maintain a favorable opinion of Mr. Greene and the broader team resources. The firm has telegraphed this transition for some time now and has had a history of successful portfolio manager transitions.

	Rating										
Decile	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			Proprietary and Confidential		D		F	

T. Rowe Price

US Large-Cap Core Growth Equity Strategy

Rating Decile	Weight
1st	20%

II. Information

T. Rowe's approach to fundamental research encompasses the same degree of Porter's Five Force analysis that other large firms with centralized research groups engage in. The firm's sector-specific analysts conduct over 4,000 on-site visits a year and complement these visits with telephone conversations, participation in conference calls, and attending industry and investment conferences. In addition, the firm hosts over a 1,000 company meetings in their offices annually. The analysts primarily meet with senior- and mid-level managers but will also meet with competitors and various stakeholders up and down the supply chain to truly assess a company's position in the marketplace. During these visits, the analysts focus on gathering information about the viability and sustainability of a company's business model; the quality of the management team and alignment of interests with shareholders; and the company's financial position as well as the drivers and obstacles to continued financial success. Each of the firm's analysts are responsible for creating 3-5 year forecasts for 30-50 companies and for issuing a 1-5 rating on each company falling under their coverage.

Research analysts in the firm can be career analysts and most of them have extensive prior industry experience. T. Rowe's analysts have historically been accurate, which is evident by the strong performance in the U.S. equity products and research portfolios. The portfolio managers' direct involvement with the research effort gives an edge to this product as the growth team does not solely rely on one-way data feeds or recommendations from the analysts. The drawback to this effort is one of information overload where scale of coverage reduces investment focus at the product level. This risk is partially mitigated by the fact that the Large Cap Growth Portfolio Management team primarily relies on 25-40 of the analysts as primary information sources from the 100+ global analyst pool. We continue to rank T. Rowe highly in information gathering due to the depth and the breath of the firm's research resources.

Rating Decile	Weight
2nd	20%

III. Forecasting

The Large-Cap Core Growth strategy's forecasting process begins with a quantitative model that screens for stocks with a market cap greater than \$8B, consistent earnings preferably above 10%, above average ROIC and attractive FCF. The fundamental analysts focus their research on management, business plans, and a company's competitive position. Based on the research, the analysts rank stocks from 1 to 5, with 1 and 2 ranked stocks considered for potential purchase. The analysts conduct traditional valuation exercises such as DCF and multiples analysis, but a lot of the judgment comes down to perceived disconnects between their models and Street expectations. Price targets for researched stocks are revisited quarterly at a minimum, with Mr. Puglia holding final decision making authority regarding what securities are included in the final portfolio.

According to our attribution analysis, the team's excess returns over the past several years have come from positive stock selection, primarily from within the Information Technology, Consumer Discretionary, and Communication Services sectors.

Rating Decile	Weight
3rd	20%

IV. Portfolio Construction

The Blue Chip Growth Fund and the Large-Cap Core Growth Strategy are the same strategy—just different vehicles—all managed by Larry Puglia via a master portfolio. These products all contain 100-150 holdings with sector weightings constrained to 0.5x to 2.0x the active S&P500 Index weight and 0.5x to 3.0x the active Russell 1000 Growth Index weight. Active risk for the Large-Cap Core Growth products has historically been around 3-4%, which is on the low end versus other large growth products, and active position sizes typically fall in the +/-1-3% range relative to the S&P 500 Index and +/-1-4% range relative to the Russell 1000 Growth Index. At times individual position sizes may breach these general guidelines due to appreciation (Amazon is a recent example of this). Buy/sell decisions solely rest with Mr. Puglia, although he will vet names with the other PMs. Overall, the portfolio has fairly loose constraints and is not benchmark centric, but in the portfolio construction process, the team has an appreciation for both absolute and benchmark relative risk. As a result, the strategy receives a slightly above average score in portfolio construction.

T. Rowe Price

US Large-Cap Core Growth Equity Strategy

Rating Decile	Weight
6th	10%

V. Implementation

T. Rowe Price has approximately 25 equity traders with an average of 15 years of trading experience. The firm utilizes the Macgregor Financial Trading Platform for their order management system and for pre-trade compliance. Once inputted into the system, the trade is placed with a broker via telephone or through one of the over 100 FIX connections on the Macgregor network. To minimize trading costs, T. Rowe searches out alternative pools of liquidity and adapts their style, approach, and venue where appropriate. The firm trades with more than 200 regional and national broker-dealers, including several ECNs and alternative sources of liquidity. The firm internally monitors execution costs and subscribes to ITG for third-party transaction cost analysis. The Large-Cap Core Growth Stock strategy has turnover of around 30-45% per year, which is low relative to its peer group. The firm has limited use of soft dollars. Overall, T. Rowe employs a state-of-the-art trading desk; however, assets in the strategy (over \$150 billion) and within large cap growth space (over \$350 billion) are somewhat concerning and the firm has not formally stated an asset limit. The strategy has a fairly high level of overlap with the manager's two other large growth products, and the firm maintains notable concentration in certain holdings. T. Rowe Price does monitor capacity closely and has formal allocation policies when the firm, as a whole, owns more than 7% of the float of a single company.

Rating Decile	Weight
3rd	10%

VI. Attribution

The portfolio management team uses a series of comprehensive, daily, weekly, and monthly reports to monitor the risk factors, style consistency, portfolio characteristics, and to attribute performance of the portfolio. These reports are generated through a combination of internal and external systems, including the Barra Aegis risk model, Zephyr StyleADVISOR, and a reputable third party attribution system. These tools are primarily used to monitor risk factors such as security weights, sector weights, market capitalization, MPT statistics, and valuation measures versus the benchmark. In addition, each analyst is measured on their own predictive capabilities which are used to determine, in part, the compensation of each analyst. Formal risk meetings between the Investment Risk Management Group and portfolio managers typically occur on a monthly cycle (at the portfolio manager's discretion).

Decile	Rating										
	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B			C		D		F	

T. Rowe Price

US Large-Cap Core Growth Equity Strategy

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Manager Research

VANGUARD GROUP INC

Vanguard Trustees' Equity Fund: Vanguard Emerging Markets Select Stock Fund

Rating Decile	Weight
2nd	100%

Summary

Vanguard's Emerging Markets Select Stock Fund is co-managed by four high quality asset management firms, Wellington Management Company (since 2011), Pzena Investment Management (since 2011), Oaktree Capital Management (since 2011), and Baillie Gifford Overseas (since 2018). The managers' allocations are fairly equitable, with each representing close to one-fourth of the total assets of the fund. While all four subadvisor utilize fundamental, bottom-up investment processes, there is notable differentiation in their investment styles. Baillie Gifford takes a more growth-oriented approach, while Pzena takes a more classic value-oriented approach. Wellington's approach is fairly style neutral and Oaktree adheres to a relative value-oriented approach. The resulting portfolio is well diversified with approximately 250-350 holdings spread across regions, countries, and sectors. The strategy is a solid option for investors seeking a diversified, low cost mutual fund within the emerging markets equity space.

Rating Decile	Weight
1st	20%
1st	50%
1st	50%

I. Organization

<i>Firm</i>	1st	20%
<i>Team</i>	1st	50%

Vanguard was founded in 1975 by legendary investor Jack Bogle. The firm is neither publically traded nor employee owned, but prides itself as being the only client-owned mutual fund organization in the world. It is owned by the Vanguard family of mutual funds, which are ultimately owned by their shareholders, the clients. This is a unique structure that allows Vanguard to provide services to its funds "at cost". As assets within the funds grow, the firm gains efficiencies which will ultimately result in lower fees to fund investors. Vanguard has a board of directors that ensures the funds are organized, operated, and managed in the clients' best interests. Most of these directors are independent and have no direct affiliation with Vanguard or the funds they oversee.

The organization is known as being one of the largest providers of passive investment solutions in mutual fund and ETF vehicles and has also built a reputation as being a low cost provider within this industry. Additionally, the firm has a large platform of active investment strategies primarily managed by external sub-advisors. Personnel turnover within the firm is relatively low for the size of the organization. Senior leadership has also been relatively stable with the vast majority of the senior management team being individuals who have worked for the organization for many years. There have been some senior level changes, however, including Chairman & CEO Bill McNabb, who retired at the end of 2017, and CIO Gus Sauter, who retired at the end of 2012. Tim Buckley initially replaced Gus Sauter as CIO and has now taken over for Bill McNabb as CEO. Greg Davis is now CIO of the organization.

Overall, the firm's unique ownership structure, commitment to minimizing management fees, and personnel stability within the organization have led to an organization that is well-aligned with its clients and ranks favorably.

The Emerging Markets Select Stock Fund is co-managed by four strong asset management firms: Wellington Management Company, Baillie Gifford Overseas, Pzena Investment Management, and Oaktree Capital Management. Wellington, Pzena, and Oaktree have been subadvisors on the fund since its inception in 2011. Baillie Gifford was added as a subadvisor in 2018, replacing M&G Investments. The managers allocations within the fund are fairly equitable, with each representing close to 25% of the assets. The Wellington sleeve is managed by the firm's global research analyst platform, with oversight from named portfolio managers Mark Mandel and May Pryshiak. Baillie Gifford's sleeve is co-managed by Richard Sneller, Andrew Stobart, and Mike Gush. Pzena's sleeve is co-managed by Caroline Cai, Allison Fisch, and John Goetz. Finally, Oaktree's sleeve is managed by Frank Carroll and Timothy Jensen. We maintain a high opinion of the subadvisors on this fund and each sleeve is managed by experienced, high-caliber investment teams.

VANGUARD GROUP INC

Vanguard Trustees' Equity Fund: Vanguard Emerging Markets Select Stock Fund

Rating Decile	Weight
1st	20%

II. Information

Wellington implements a fundamental, bottom-up, style neutral research approach to investing in emerging markets. The strategy is managed by an experienced team of fundamental research analysts, who manage individual sleeves based on their areas of coverage.

Baillie Gifford adheres to a fundamental, bottom-up, long-term growth-oriented investment approach. Through deep fundamental research, the team seeks well-managed businesses with above-average earnings growth potential.

Pzena utilizes a fundamental, bottom-up, classic value-driven approach that targets companies that are trading at low prices relative to their normalized earnings. In-depth fundamental research is conducted by all members of the investment team, with coverage divided up sectors.

Oaktree implements a bottom-up, relative value-oriented investment approach. The team travels extensively to meet with company managements and maintains detailed, proprietary cash flow models.

Rating Decile	Weight
2nd	20%

III. Forecasting

Wellington's forecasting process gives the global industry analysts full responsibility for selecting the securities within their respective industries. Thus, the analysts assigned to the Emerging Markets Research Equity strategy each have their own sub-portfolio of securities that they analyze and rank. Since each industry is driven by different dynamics, the forecasting process will vary from one analyst to the next.

Baillie Gifford's investment approach is best characterized as GARP (growth at a reasonable price) and based on the assumption that share prices will follow company fundamentals over the long term, with the fastest growers of earnings and cash flow ultimately outperforming the market. For these reasons, the team takes a fairly long-term forecasting view compared to most growth-oriented managers, and is not highly concerned with shorter term momentum dynamics. Due to its emphasis on balance sheet quality, the strategy is more biased towards long-term sustainable "quality growth" than to speculative potential.

Pzena forecasting efforts seek to arrive at a proprietary estimate of normalized earnings for a company. Ultimately, the investment team seeks to own a company if it is selling at a low price relative to normalized earnings, current earnings are below historic norms, management has a rational plan for earnings recovery, the company has a history of earning attractive long-term returns, and tangible downside protection is present. While the firm's forecasting approach is not necessarily unique relative to value investing peers, Pzena has demonstrated tremendous discipline in executing this approach in a consistent fashion throughout the entire market cycle.

Oaktree's disciplined investment process centers around deep fundamental research. The team seeks to capture mispriced securities caused by investor behavior. The analysts will follow close to 400 companies and a detailed discounted cash flow analysis and required before a company is added to the portfolio.

Each sleeve is expected to derive the majority of its alpha from stock selection. Baillie Gifford should benefit more when growth is in favor, while Pzena should benefit more when value is in favor. Wellington and Oaktree should have less style-biased relative performance. We maintain a favorable opinion of each investment manager's process and believe their combination in a single mutual fund solution should provide favorable results over time.

VANGUARD GROUP INC

Vanguard Trustees' Equity Fund: Vanguard Emerging Markets Select Stock Fund

Rating Decile	Weight
3rd	20%

IV. Portfolio Construction

The Emerging Markets Select Stock Fund seeks to outperform its benchmark, the FTSE Emerging Markets Index, over a full market cycle. The fund does not have specific excess return or tracking error targets. The subadvisors co-managing the fund build their respective portfolios from the bottom up, with the resulting fund portfolio being a combination of the four sleeves. As of September 2018, the allocation to each sub-advisor was as follows: Oaktree 26%, Wellington 25%, Pzena 25%, and Baillie Gifford 19%. The overall fund will typically own between 250-350 stocks diversified across regions, countries, and sectors.

Vanguard's Risk Management and Strategic Analysis (RMSA) team, which is an independent unit of the firm, enforces the daily portfolio risk management controls. This unit is mandated to work closely with the Vanguard PM teams and is tasked with understanding and managing both investment and operations risk for the overall strategy. In addition to the RMSA team performing high-level risk management, more nuanced risk management efforts are performed at the sub-advisor level by each team over their respective sleeve. While the risk management efforts of each of the subadvisors are robust in their own right, the co-managed nature of the strategy does not allow for common portfolio-level risk management practices such as pre-trade or scenario analysis that are performed by most single manager products. This is due to the lack of transparency between the subadvisors into each other's portfolios that could potentially prevent one sub-advisor from making a decision that counteracts a decision made elsewhere. Despite this, the sheer number of securities owned in the portfolio and the different investment approaches aids in risk management from a diversification standpoint. Portfolio construction efforts rate above average.

Rating Decile	Weight
3rd	10%

V. Implementation

All four subadvisors have well-established infrastructure for trading and implementation, with straight through processing, pre- and post-trade compliance, and strong back office and accounting. In addition, Vanguard's Portfolio Review Department (PRD) regularly reviews the trading policies and procedures used by the Emerging Markets Select subadvisors to select, compensate, and monitor brokers. PRD will compare the explicit and implicit brokerage costs the fund's subadvisors will incur relative to industry peers. The overall strategy tends to have fairly moderate portfolio turnover (30-50% annually). As of September 2018, assets in the strategy totaled only \$612 million, so product capacity is not an issue at this time.

Implementation efforts of the strategy are most appropriately considered with respect to the abilities of the four underlying subadvisors. Each subadvisor possesses above-average implementation abilities, resulting in an above-average rating for the fund.

Rating Decile	Weight
3rd	10%

VI. Attribution

Although each fund subadvisor to the Emerging Markets Select Stock Fund has its own attribution systems and processes, Vanguard employs its own Quantitative Equity Group (QEP) to perform performance attribution for all funds on a daily basis. The group also incorporates the use of a well-known third-party system for its multifactor performance attribution feature. Attribution results are gathered as an input to the QEP's weekly strategy meetings. The purpose is to gain some insight to the funds' absolute and relative contributions to performance, as well as the detractors from returns. With regards to the subadvisors, each of the managers have above-average systems and processes for attribution efforts on their strategy. For these reasons, the fund rates above average.

Decile	Rating										
	1	2	3	4	5	6	7	8	9	10	
Corresponding Grade	A		B		Proprietary and Confidential		C		D		F

VANGUARD GROUP INC

Vanguard Trustees' Equity Fund: Vanguard
Emerging Markets Select Stock Fund

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V. Direct Plan Fact Sheets

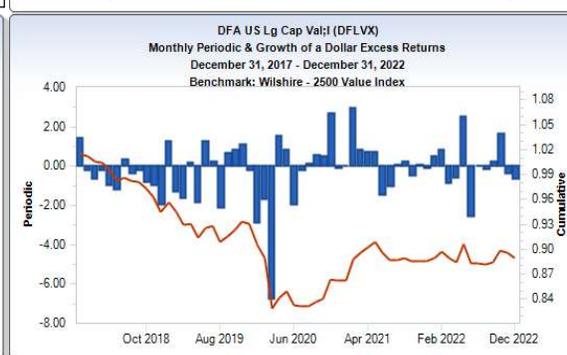
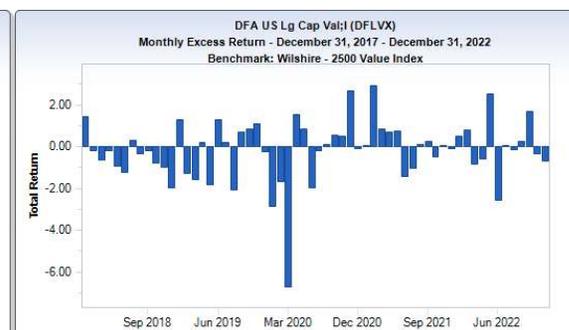
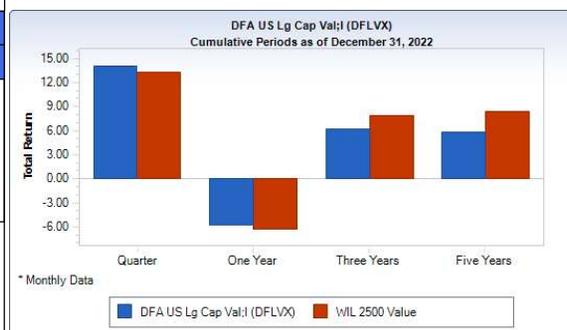
Performance Fact Sheet: DFA US Lg Cap Val;I (DFLVX)

Fund Family: Dimensional
 Asset Class: U.S. Equity
 Style Category: Multi-Cap Value Funds
 Objective Category: GROWTH & INCOME
 Ticker: DFLVX
 Share Class: I

Net Assets (\$MM): \$22,899.70
 Expense Ratio: 0.22
 Front Load:
 12B-1 Fee:
 Turnover: 10.00
 Mgr Tenure: 11

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
DFA US Lg Cap Val;I (DFLVX)	-5.76	6.25	5.86	10.86	-5.76	28.05	-0.61	25.47	-11.65	18.95	18.91	-3.49	10.08	40.31
WIL 2500 Value	-6.29	7.85	8.36	11.32	-6.29	24.80	7.28	27.32	-6.48	15.47	16.48	-1.09	12.63	30.59
Risk - Standard Deviation														
DFA US Lg Cap Val;I (DFLVX)	23.76	24.31	21.34	17.00	23.76	12.78	33.34	15.86	15.95	5.51	13.40	15.12	7.82	10.17
WIL 2500 Value	21.25	20.22	17.81	14.14	21.25	10.84	26.41	12.43	14.22	4.68	9.78	12.44	8.10	9.21
Risk - Semi-Variance														
DFA US Lg Cap Val;I (DFLVX)	16.02	18.06	16.00	12.80	16.02	9.23	25.02	12.35	12.75	4.00	9.67	9.32	6.29	7.92
WIL 2500 Value	14.07	14.88	13.39	10.63	14.07	8.14	19.71	9.73	11.58	3.00	6.70	7.80	6.39	7.31
Excess Returns														
Arithmetic Excess	0.53	-1.60	-2.50	-0.46	0.53	3.25	-7.89	-1.85	-5.17	3.48	2.43	-2.40	-2.55	9.72
Geometric Excess	0.57	-1.48	-2.31	-0.41	0.57	2.60	-7.35	-1.45	-5.53	3.01	2.09	-2.43	-2.26	7.44

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.48	5.94	5.14	4.65
Information Ratio	0.13	-0.25	-0.45	-0.09
Downside Deviation	3.09	4.80	4.03	3.56
Skewness	0.04	-1.53	-1.30	-1.00
Kurtosis	1.23	5.56	5.54	4.81
Alpha	1.43	-2.67	-3.44	-2.01
Beta	1.10	1.18	1.18	1.17
Residual Risk	3.87	4.29	3.78	3.87
R Squared	0.97	0.97	0.97	0.95



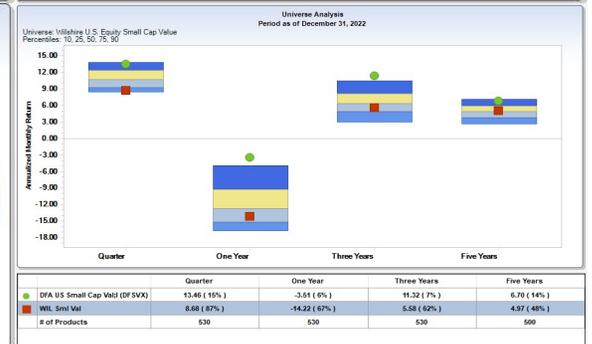
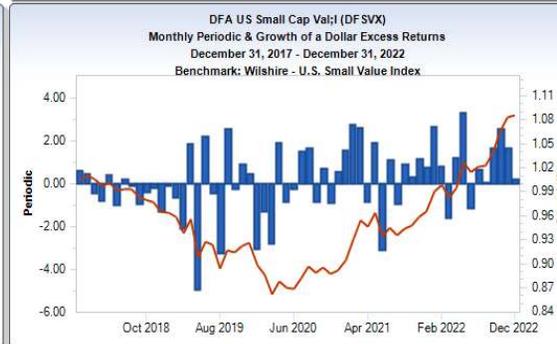
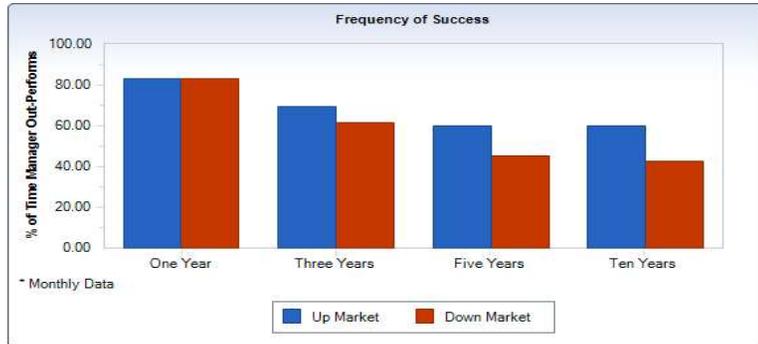
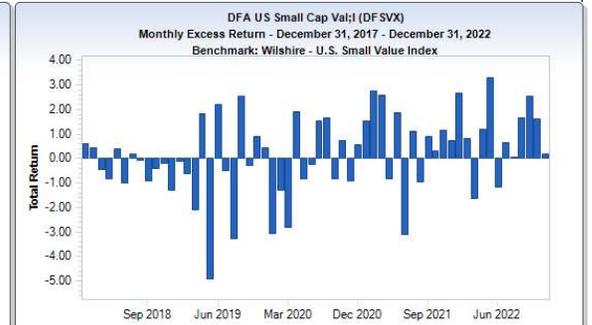
Performance Fact Sheet: DFA US Small Cap Val;I (DFSVX)

Fund Family: Dimensional
 Asset Class: U.S. Equity
 Style Category: Small-Cap Value Funds
 Objective Category: SMALL-CAP
 Ticker: DFSVX
 Share Class: I

Net Assets (\$MM): \$13,566.90
 Expense Ratio: 0.30
 Front Load:
 12B-1 Fee:
 Turnover: 22.00
 Mgr Tenure: 11

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
DFA US Small Cap Val;I (DFSVX)	-3.51	11.32	6.70	9.95	-3.51	39.86	2.24	18.11	-15.14	7.22	28.27	-7.82	3.48	42.38
WIL Sml Val	-14.22	5.58	4.97	9.33	-14.22	29.24	6.16	23.08	-12.04	7.42	27.68	-4.36	9.09	33.80
Risk - Standard Deviation														
DFA US Small Cap Val;I (DFSVX)	26.54	29.38	26.22	21.23	26.54	15.44	41.76	22.77	18.75	9.99	19.41	14.33	15.58	12.09
WIL Sml Val	24.79	27.10	23.63	18.76	24.79	12.58	38.63	16.95	17.88	8.04	15.05	11.79	13.25	11.28
Risk - Semi-Variance														
DFA US Small Cap Val;I (DFSVX)	17.59	22.39	19.95	15.87	17.59	10.45	32.86	17.89	15.38	5.91	12.12	9.77	11.82	9.63
WIL Sml Val	16.61	20.55	17.96	14.15	16.61	9.33	30.01	12.17	14.75	5.28	10.33	7.54	9.82	8.81
Excess Returns														
Arithmetic Excess	10.71	5.74	1.73	0.62	10.71	10.62	-3.92	-4.97	-3.10	-0.20	0.59	-3.46	-5.61	8.58
Geometric Excess	12.49	5.44	1.65	0.57	12.49	8.22	-3.69	-4.04	-3.52	-0.19	0.46	-3.62	-5.14	6.41

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	5.17	5.70	5.73	5.25
Information Ratio	2.41	0.95	0.29	0.11
Downside Deviation	3.79	4.34	4.32	3.79
Skewness	-0.26	-0.50	-0.57	-0.16
Kurtosis	-0.48	-0.28	0.60	0.88
Alpha	13.53	5.12	1.34	-0.21
Beta	1.05	1.07	1.09	1.10
Residual Risk	5.04	5.37	5.27	4.92
R Squared	0.96	0.97	0.96	0.95



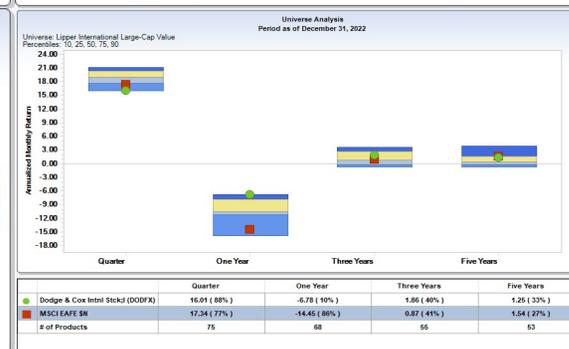
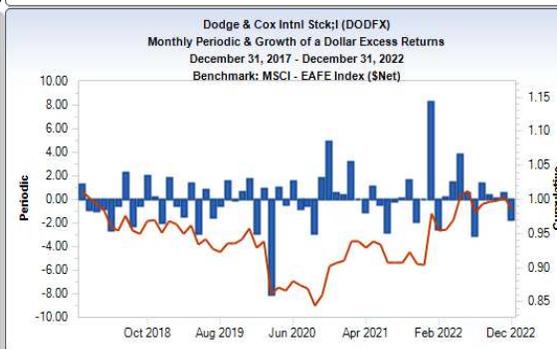
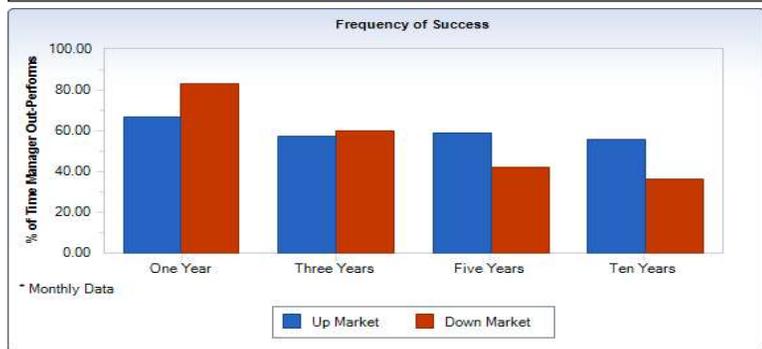
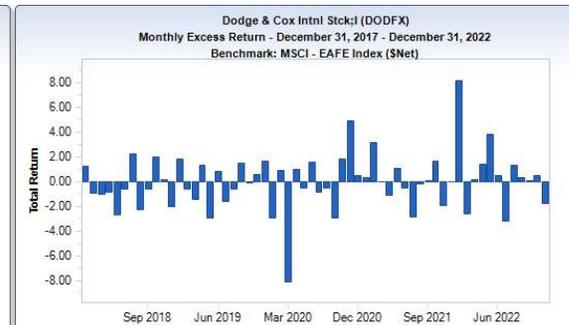
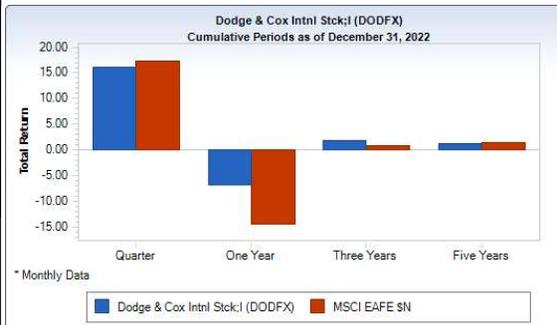
Performance Fact Sheet: Dodge & Cox Intl Stck;I (DODFX)

Fund Family: Dodge & Cox Funds
 Asset Class: Non U.S. Equity
 Style Category: International Large-Cap Value
 Objective Category: INTERNATIONAL
 Ticker: DODFX
 Share Class: Standard

Net Assets (\$MM):
 Expense Ratio: 0.62
 Front Load:
 12B-1 Fee:
 Turnover: 18.00
 Mgr Tenure:

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Dodge & Cox Intl Stck;I (DODFX)	-6.78	1.86	1.25	4.81	-6.78	11.03	2.11	22.79	-18.00	23.95	8.27	-11.37	0.07	26.30
MSCI EAFE \$N	-14.45	0.87	1.54	4.67	-14.45	11.26	7.81	22.01	-13.79	25.03	1.00	-0.81	-4.90	22.78
Risk - Standard Deviation														
Dodge & Cox Intl Stck;I (DODFX)	21.43	24.27	21.26	17.70	21.43	12.85	35.16	16.05	14.75	6.72	17.09	16.14	11.26	12.42
MSCI EAFE \$N	21.69	20.25	17.52	14.84	21.69	9.80	26.49	11.53	12.43	4.16	13.42	15.23	9.69	12.15
Risk - Semi-Variance														
Dodge & Cox Intl Stck;I (DODFX)	14.51	17.45	15.19	12.80	14.51	9.78	25.51	12.42	9.38	4.93	12.47	10.61	8.20	8.76
MSCI EAFE \$N	14.43	14.60	12.71	10.78	14.43	7.68	19.45	8.84	8.92	3.15	9.42	10.21	6.48	8.43
Excess Returns														
Arithmetic Excess	7.67	0.99	-0.29	0.14	7.67	-0.23	-5.70	0.78	-4.21	-1.08	7.27	-10.56	4.97	3.52
Geometric Excess	8.97	0.98	-0.29	0.13	8.97	-0.21	-5.29	0.64	-4.88	-0.86	7.20	-10.65	5.23	2.87

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	10.41	9.25	7.87	6.56
Information Ratio	0.86	0.11	-0.04	0.02
Downside Deviation	6.04	6.50	5.50	4.57
Skewness	1.35	0.06	0.14	0.13
Kurtosis	2.90	3.53	4.21	4.76
Alpha	6.58	0.97	-0.32	-0.31
Beta	0.88	1.12	1.14	1.12
Residual Risk	9.82	8.62	7.25	6.20
R Squared	0.79	0.87	0.88	0.88



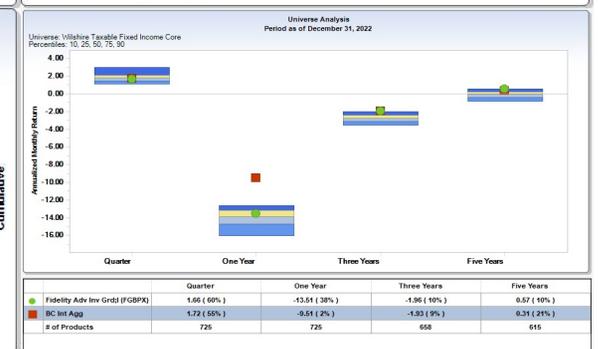
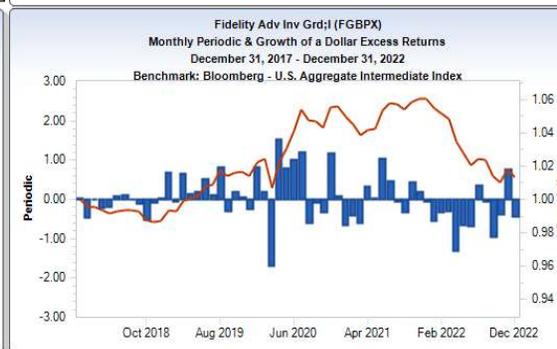
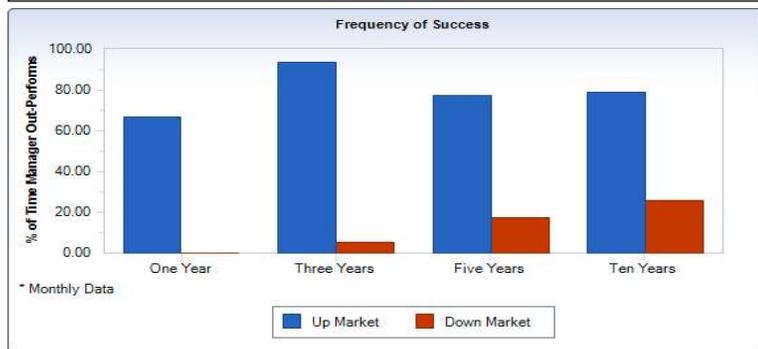
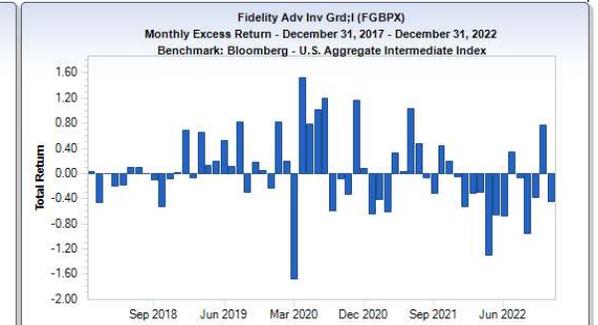
Performance Fact Sheet: Fidelity Adv Inv Grd;I (FGBPX)

Fund Family: Fidelity Investments
 Asset Class: Taxable Fixed Income
 Style Category: Core Bond Funds
 Objective Category: CORE BOND
 Ticker: FGBPX
 Share Class: I

Net Assets (\$MM): \$1,206.70
 Expense Ratio: 0.49
 Front Load:
 12B-1 Fee:
 Turnover: 75.00
 Mgr Tenure: 19

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Fidelity Adv Inv Grd;I (FGBPX)	-13.51	-1.96	0.57	1.41	-13.51	-0.93	9.99	9.63	-0.40	3.87	5.30	-1.61	5.76	-1.79
BC Int Agg	-9.51	-1.93	0.31	1.00	-9.51	-1.29	5.60	6.67	0.92	2.27	1.97	1.21	4.12	-1.02
Risk - Standard Deviation														
Fidelity Adv Inv Grd;I (FGBPX)	8.19	6.20	5.27	4.30	8.19	2.93	4.56	3.29	2.71	1.43	3.92	2.96	2.58	3.63
BC Int Agg	6.72	4.39	3.78	3.05	6.72	1.58	1.80	2.16	2.41	1.27	2.68	1.94	1.88	2.45
Risk - Semi-Variance														
Fidelity Adv Inv Grd;I (FGBPX)	5.00	4.50	3.89	3.22	5.00	2.05	3.51	2.17	1.85	1.04	3.15	1.76	1.97	2.76
BC Int Agg	4.22	3.33	2.88	2.32	4.22	1.07	1.14	1.39	1.59	0.92	2.08	1.16	1.37	1.79
Excess Returns														
Arithmetic Excess	-4.00	-0.03	0.26	0.41	-4.00	0.36	4.39	2.96	-1.32	1.60	3.33	-2.82	1.64	-0.77
Geometric Excess	-4.42	-0.03	0.26	0.41	-4.42	0.36	4.16	2.77	-1.31	1.56	3.27	-2.79	1.58	-0.78

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.90	2.52	2.08	1.80
Information Ratio	-2.33	-0.01	0.13	0.23
Downside Deviation	1.23	1.73	1.43	1.26
Skewness	0.57	0.09	0.06	0.01
Kurtosis	0.87	-0.17	0.72	0.96
Alpha	-2.03	0.90	0.59	0.33
Beta	1.20	1.34	1.33	1.33
Residual Risk	1.33	2.03	1.66	1.50
R Squared	0.97	0.89	0.90	0.88



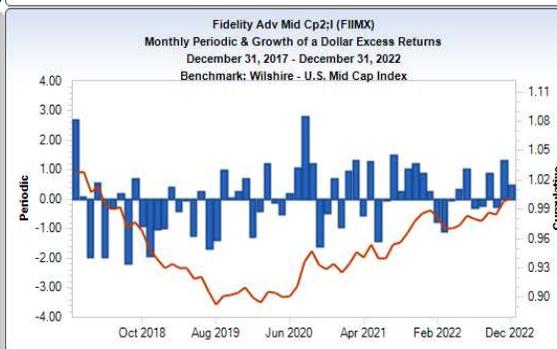
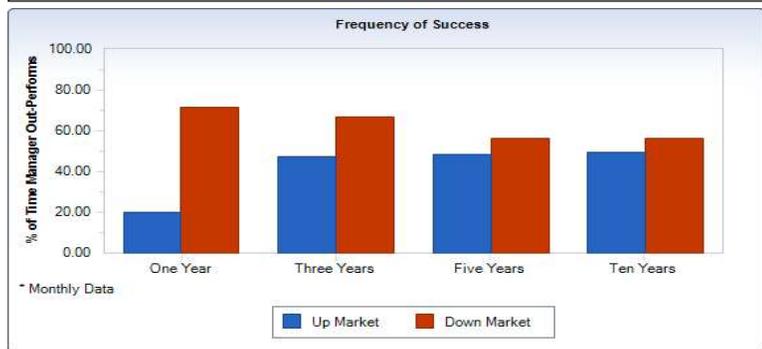
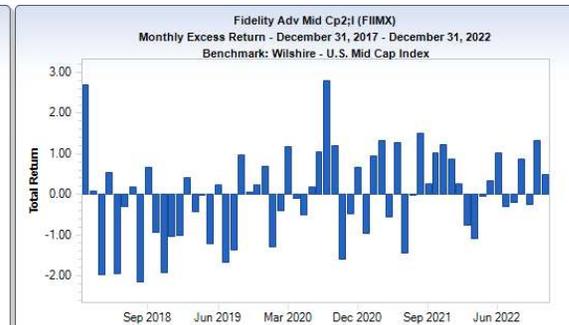
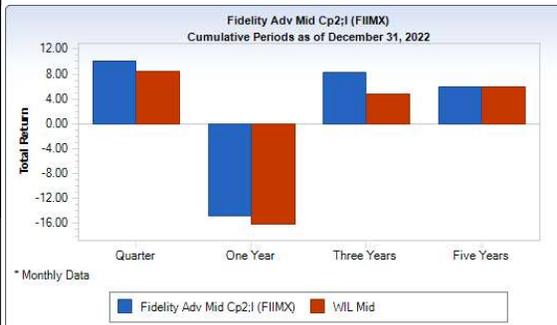
Performance Fact Sheet: Fidelity Adv Mid Cp2;I (FIIMX)

Fund Family: Fidelity Investments
 Asset Class: U.S. Equity
 Style Category: Mid-Cap Core Funds
 Objective Category: MID-CAP
 Ticker: FIIMX
 Share Class: I

Net Assets (\$MM): \$309.00
 Expense Ratio: 0.73
 Front Load:
 12B-1 Fee:
 Turnover: 42.00
 Mgr Tenure: 19

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Fidelity Adv Mid Cp2;I (FIIMX)	-14.78	8.21	5.94	9.83	-14.78	25.25	18.69	23.64	-14.81	20.55	11.89	-1.52	6.11	35.81
WIL Mid	-16.12	4.80	5.89	10.37	-16.12	18.69	15.62	27.62	-9.35	18.29	17.22	-2.63	9.03	36.78
Risk - Standard Deviation														
Fidelity Adv Mid Cp2;I (FIIMX)	23.71	24.73	22.00	17.52	23.71	11.77	34.13	17.16	16.97	5.29	14.51	13.28	11.03	11.12
WIL Mid	24.47	24.94	21.86	17.35	24.47	11.14	34.44	16.18	16.40	4.46	14.32	12.42	11.59	10.65
Risk - Semi-Variance														
Fidelity Adv Mid Cp2;I (FIIMX)	15.40	18.63	16.61	13.25	15.40	8.37	27.24	12.91	14.14	3.85	10.61	9.05	7.97	8.45
WIL Mid	16.26	18.96	16.69	13.21	16.26	8.18	27.50	11.42	13.73	3.15	10.10	8.28	8.51	7.88
Excess Returns														
Arithmetic Excess	1.34	3.41	0.05	-0.54	1.34	6.56	3.07	-3.98	-5.46	2.26	-5.33	1.11	-2.92	-0.97
Geometric Excess	1.60	3.25	0.05	-0.49	1.60	5.53	2.66	-3.12	-6.02	1.91	-4.55	1.14	-2.68	-0.71

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	2.48	3.39	3.81	3.33
Information Ratio	0.65	0.96	0.01	-0.15
Downside Deviation	1.74	2.40	2.71	2.41
Skewness	0.01	0.10	0.08	-0.09
Kurtosis	-0.59	-0.11	-0.08	0.45
Alpha	0.83	3.32	0.08	-0.41
Beta	0.96	0.98	0.99	0.99
Residual Risk	2.31	3.40	3.85	3.36
R Squared	0.99	0.98	0.97	0.96



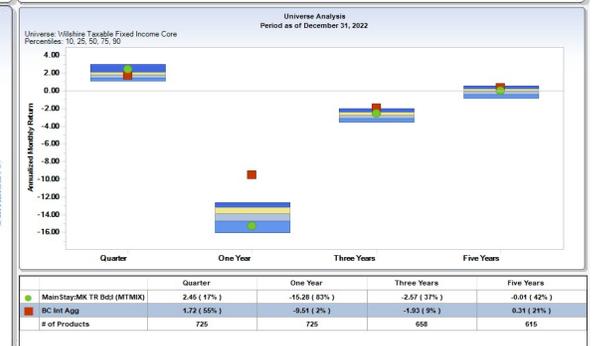
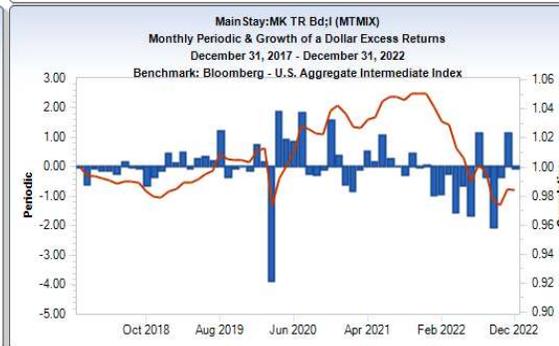
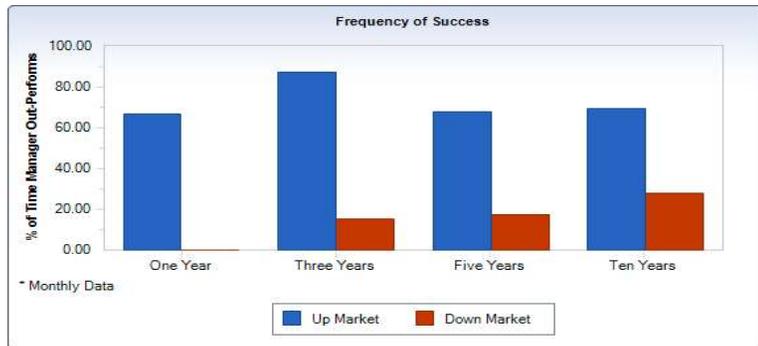
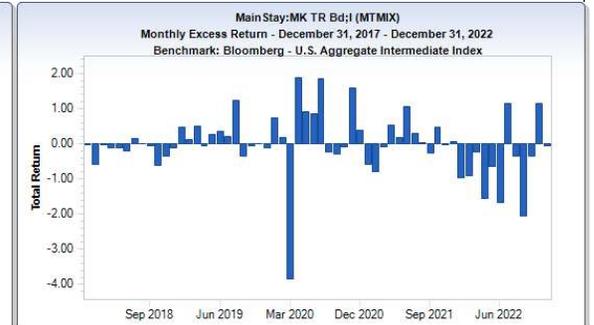
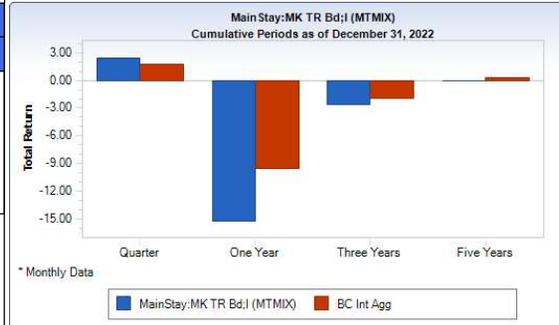
Performance Fact Sheet: MainStay:MK TR Bd;I (MTMIX)

Fund Family: MAINSTAY FUNDS
 Asset Class: Taxable Fixed Income
 Style Category: Core Bond Funds
 Objective Category: CORE BOND
 Ticker: MTMIX
 Share Class: I

Net Assets (\$MM): \$96.90
 Expense Ratio: 0.45
 Front Load:
 12B-1 Fee:
 Turnover: 111.00
 Mgr Tenure: 5

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
MainStay:MK TR Bd;I (MTMIX)	-15.28	-2.57	-0.01	1.16	-15.28	-0.50	9.71	9.39	-1.23	4.65	4.80	-1.47	4.76	-0.79
BC Int Agg	-9.51	-1.93	0.31	1.00	-9.51	-1.29	5.60	6.67	0.92	2.27	1.97	1.21	4.12	-1.02
Risk - Standard Deviation														
MainStay:MK TR Bd;I (MTMIX)	9.65	7.36	6.11	4.76	9.65	2.89	6.37	3.42	2.67	1.44	3.72	2.56	2.25	3.64
BC Int Agg	6.72	4.39	3.78	3.05	6.72	1.58	1.80	2.16	2.41	1.27	2.68	1.94	1.88	2.45
Risk - Semi-Variance														
MainStay:MK TR Bd;I (MTMIX)	5.92	5.48	4.62	3.66	5.92	2.07	5.27	2.15	1.82	1.04	2.93	1.59	1.73	2.86
BC Int Agg	4.22	3.33	2.88	2.32	4.22	1.07	1.14	1.39	1.59	0.92	2.08	1.16	1.37	1.79
Excess Returns														
Arithmetic Excess	-5.77	-0.64	-0.32	0.16	-5.77	0.79	4.11	2.72	-2.15	2.38	2.83	-2.68	0.64	0.23
Geometric Excess	-6.38	-0.65	-0.32	0.16	-6.38	0.80	3.89	2.55	-2.13	2.33	2.78	-2.65	0.61	0.23

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	3.44	3.88	3.10	2.46
Information Ratio	-1.86	-0.17	-0.10	0.06
Downside Deviation	2.30	3.01	2.40	1.89
Skewness	0.41	-1.02	-1.19	-1.26
Kurtosis	-0.22	2.78	5.28	7.50
Alpha	-1.59	0.79	0.15	0.06
Beta	1.40	1.53	1.50	1.41
Residual Risk	2.13	3.08	2.48	2.12
R Squared	0.95	0.83	0.83	0.80

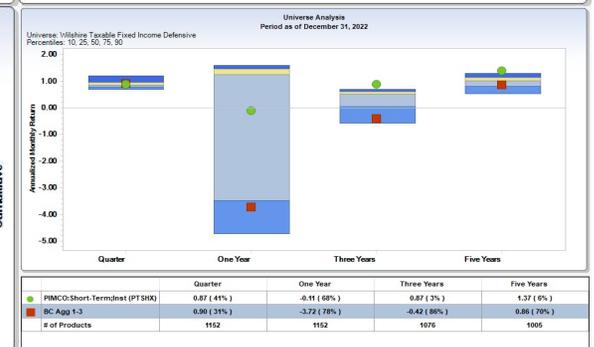
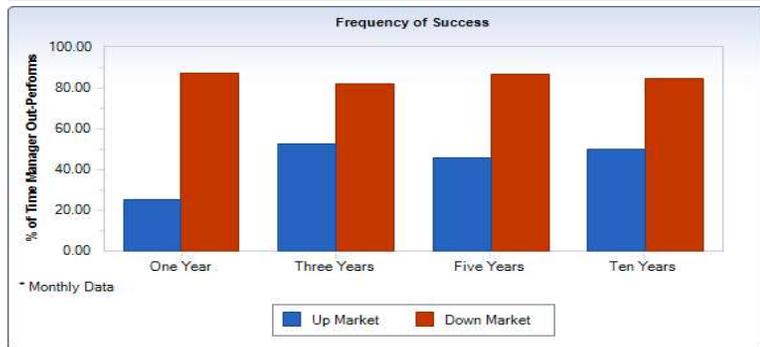


Performance Fact Sheet: PIMCO:Short-Term;Inst (PTSHX)

Fund Family:	PIMCO	Net Assets (\$MM):	\$8,175.20
Asset Class:	Taxable Fixed Income	Expense Ratio:	0.45
Style Category:	Ultra Sht Obligation Fds	Front Load:	
Objective Category:	ULTRA-SHORT OBLIG	12B-1 Fee:	
Ticker:	PTSHX	Turnover:	93.00
Share Class:	I	Mgr Tenure:	12

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
PIMCO:Short-Term;Inst (PTSHX)	-0.11	0.87	1.37	1.49	-0.11	0.02	2.74	2.72	1.50	2.44	2.55	1.34	0.96	0.82
BC Agg 1-3	-3.72	-0.42	0.86	0.86	-3.72	-0.49	3.08	4.04	1.60	0.86	1.31	0.66	0.82	0.64
Risk - Standard Deviation														
PIMCO:Short-Term;Inst (PTSHX)	1.42	2.46	1.96	1.53	1.42	0.49	4.06	0.67	0.85	0.57	1.25	1.22	0.55	0.96
BC Agg 1-3	2.50	1.72	1.54	1.18	2.50	0.47	0.92	1.01	0.98	0.51	0.96	0.71	0.57	0.52
Risk - Semi-Variance														
PIMCO:Short-Term;Inst (PTSHX)	0.89	1.98	1.59	1.23	0.89	0.36	3.50	0.45	0.67	0.40	0.98	0.81	0.46	0.78
BC Agg 1-3	1.67	1.34	1.19	0.90	1.67	0.35	0.53	0.69	0.60	0.39	0.63	0.43	0.44	0.39
Excess Returns														
Arithmetic Excess	3.61	1.29	0.51	0.63	3.61	0.51	-0.34	-1.32	-0.10	1.58	1.24	0.68	0.14	0.18
Geometric Excess	3.75	1.30	0.51	0.62	3.75	0.51	-0.33	-1.27	-0.10	1.57	1.22	0.68	0.14	0.18

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	2.44	2.75	2.36	1.89
Information Ratio	1.54	0.47	0.21	0.33
Downside Deviation	1.76	2.29	1.93	1.52
Skewness	-0.05	-2.49	-2.22	-2.21
Kurtosis	-0.97	11.74	11.60	14.44
Alpha	-1.07	0.50	0.16	0.71
Beta	0.09	0.31	0.15	0.08
Residual Risk	1.11	2.49	2.01	1.58
R Squared	0.04	0.04	0.01	0.00



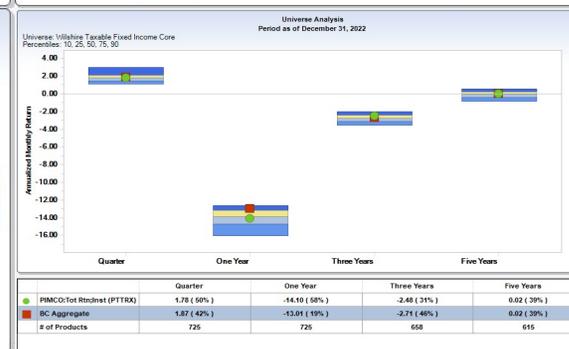
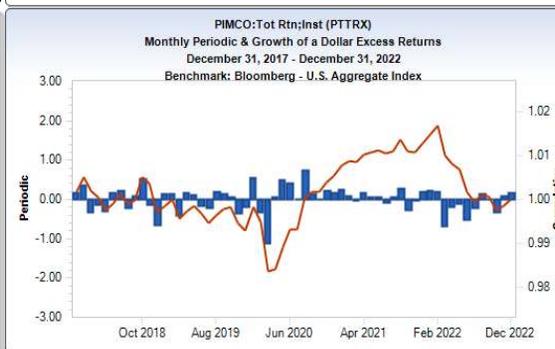
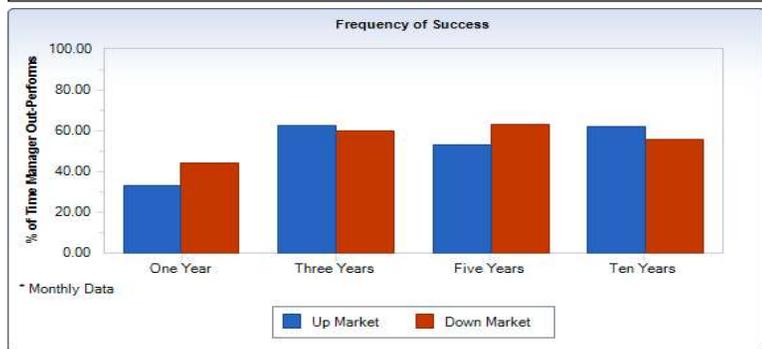
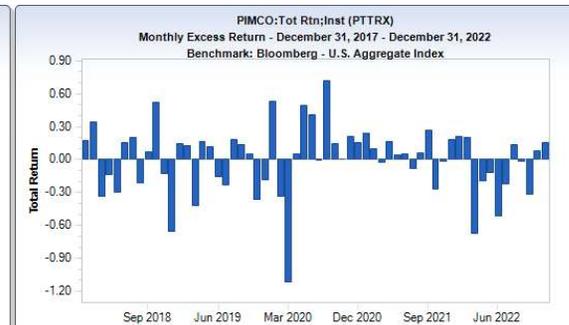
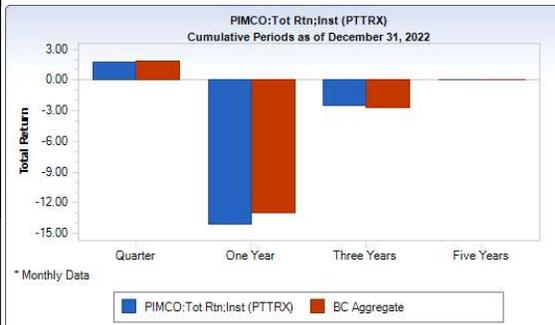
Performance Fact Sheet: PIMCO:Tot Rtn;Inst (PTTRX)

Fund Family: PIMCO
 Asset Class: Taxable Fixed Income
 Style Category: Core Plus Bond Funds
 Objective Category: CORE BOND
 Ticker: PTTRX
 Share Class: I

Net Assets (\$MM): \$43,859.30
 Expense Ratio: 0.46
 Front Load:
 12B-1 Fee:
 Turnover: 289.00
 Mgr Tenure:

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
PIMCO:Tot Rtn;Inst (PTTRX)	-14.10	-2.48	0.02	1.11	-14.10	-0.83	8.86	8.25	-0.27	5.12	2.60	0.72	4.69	-1.92
BC Aggregate	-13.01	-2.71	0.02	1.06	-13.01	-1.54	7.51	8.72	0.01	3.54	2.65	0.55	5.97	-2.02
Risk - Standard Deviation														
PIMCO:Tot Rtn;Inst (PTTRX)	8.51	6.16	5.21	4.40	8.51	2.74	3.94	3.53	2.24	1.80	3.87	3.57	2.79	4.61
BC Aggregate	8.33	5.85	5.09	4.11	8.33	2.84	3.41	3.43	3.12	1.52	3.71	2.95	2.31	3.19
Risk - Semi-Variance														
PIMCO:Tot Rtn;Inst (PTTRX)	5.27	4.62	3.94	3.36	5.27	1.98	3.03	2.16	1.61	1.34	3.18	1.88	2.15	3.57
BC Aggregate	5.14	4.32	3.78	3.09	5.14	2.07	2.39	2.12	2.06	1.10	2.94	1.75	1.71	2.37
Excess Returns														
Arithmetic Excess	-1.09	0.23	0.00	0.05	-1.09	0.71	1.35	-0.47	-0.28	1.58	-0.05	0.17	-1.28	0.10
Geometric Excess	-1.25	0.24	0.00	0.05	-1.25	0.72	1.26	-0.43	-0.28	1.53	-0.05	0.17	-1.21	0.10

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.00	1.17	1.08	1.29
Information Ratio	-1.26	0.20	0.00	0.04
Downside Deviation	0.77	0.93	0.84	1.02
Skewness	-0.75	-1.09	-0.82	-0.96
Kurtosis	-0.37	3.08	2.15	2.00
Alpha	-1.04	0.37	0.00	0.05
Beta	1.01	1.04	1.00	1.02
Residual Risk	0.97	1.14	1.08	1.29
R Squared	0.99	0.97	0.96	0.91



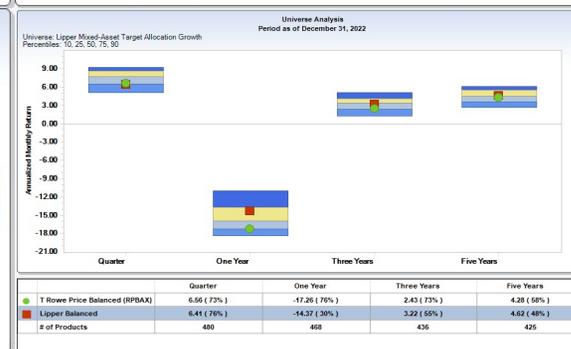
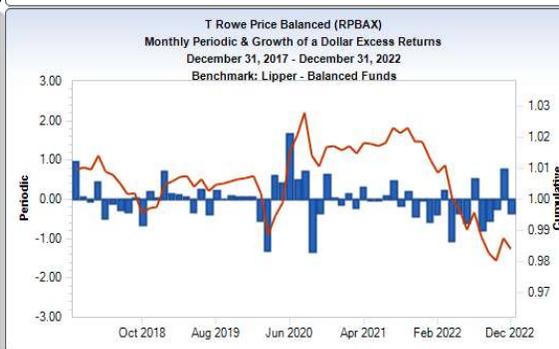
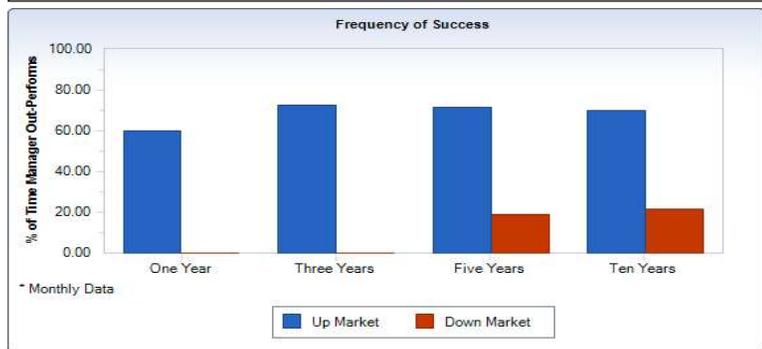
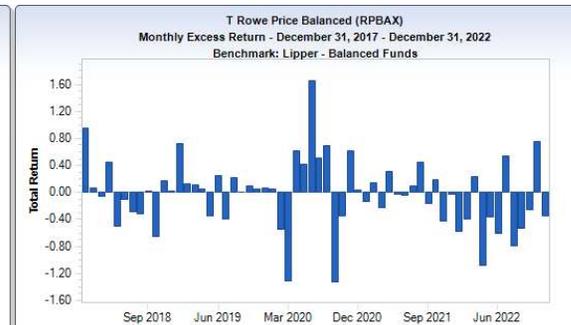
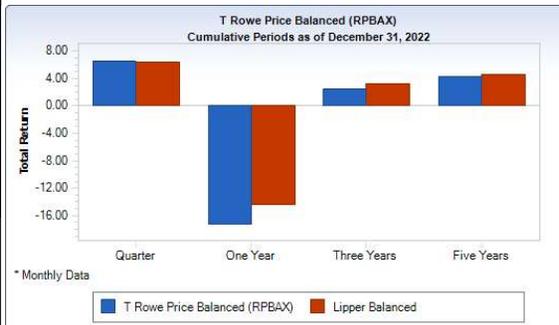
Performance Fact Sheet: T Rowe Price Balanced (RPBAX)

Fund Family: T. Rowe Price
 Asset Class: Balanced
 Style Category: Mixed-Asset Target Allocation Growth
 Objective Category: BALANCED
 Ticker: RPBAX
 Share Class: Standard

Net Assets (\$MM): \$2,342.00
 Expense Ratio: 0.57
 Front Load:
 12B-1 Fee:
 Turnover: 92.00
 Mgr Tenure: 12

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
T Rowe Price Balanced (RPBAX)	-17.26	2.43	4.28	6.96	-17.26	13.35	14.59	20.71	-4.92	18.00	5.91	0.65	5.97	19.24
Lipper Balanced	-14.37	3.22	4.62	6.66	-14.37	13.19	13.45	19.57	-4.68	14.11	7.21	-0.41	7.21	16.40
Risk - Standard Deviation														
T Rowe Price Balanced (RPBAX)	16.55	15.12	12.95	10.29	16.55	6.86	18.59	8.09	8.89	2.44	7.42	8.98	6.03	6.53
Lipper Balanced	15.00	13.53	11.65	9.17	15.00	6.31	16.48	7.30	8.26	1.92	6.30	7.64	5.48	5.84
Risk - Semi-Variance														
T Rowe Price Balanced (RPBAX)	10.74	11.35	9.82	7.83	10.74	5.46	14.52	5.82	6.96	1.76	5.11	5.92	4.24	5.02
Lipper Balanced	9.82	10.15	8.85	6.99	9.82	5.03	12.67	5.37	6.58	1.38	4.30	4.95	3.97	4.57
Excess Returns														
Arithmetic Excess	-2.89	-0.79	-0.34	0.30	-2.89	0.16	1.14	1.14	-0.24	3.89	-1.30	1.06	-1.24	2.84
Geometric Excess	-3.37	-0.77	-0.32	0.28	-3.37	0.14	1.00	0.95	-0.25	3.41	-1.21	1.06	-1.16	2.44

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.85	2.11	1.80	1.67
Information Ratio	-1.82	-0.36	-0.18	0.17
Downside Deviation	1.12	1.47	1.27	1.22
Skewness	0.78	0.18	0.12	-0.15
Kurtosis	0.07	0.93	1.55	0.88
Alpha	-1.54	-1.03	-0.65	-0.33
Beta	1.10	1.11	1.10	1.11
Residual Risk	1.05	1.43	1.31	1.32
R Squared	1.00	0.99	0.99	0.98



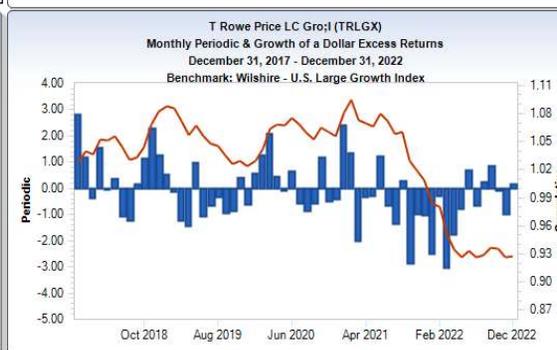
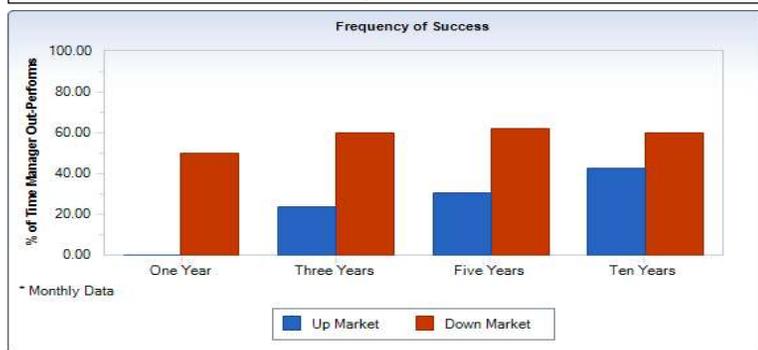
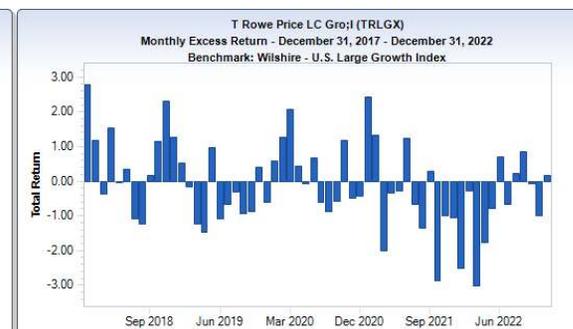
Performance Fact Sheet: T Rowe Price LC Gro:I (TRLGX)

Fund Family: T. Rowe Price
Asset Class: U.S. Equity
Style Category: Large-Cap Growth Funds
Objective Category: GROWTH
Ticker: TRLGX
Share Class: Standard

Net Assets (\$MM): \$14,139.50
Expense Ratio: 0.55
Front Load:
12B-1 Fee:
Turnover: 18.00
Mgr Tenure: 6

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
T Rowe Price LC Gro:I (TRLGX)	-35.18	3.67	8.35	13.85	-35.18	23.19	39.55	28.49	4.30	37.82	2.85	10.04	8.70	44.44
WIL Lrg Grwth	-29.54	7.11	9.98	13.56	-29.54	28.86	35.36	35.79	-3.58	27.71	8.97	3.54	13.96	34.95
Risk - Standard Deviation														
T Rowe Price LC Gro:I (TRLGX)	25.74	23.72	20.87	16.99	25.74	12.18	26.12	14.43	17.54	6.32	14.51	14.45	11.35	9.73
WIL Lrg Grwth	26.39	24.44	21.51	16.93	26.39	13.64	28.03	14.82	17.42	4.19	12.95	14.70	9.73	8.63
Risk - Semi-Variance														
T Rowe Price LC Gro:I (TRLGX)	16.28	17.10	15.29	12.65	16.28	8.61	19.47	10.20	13.04	4.57	11.35	9.26	8.01	7.07
WIL Lrg Grwth	16.47	17.68	15.91	12.61	16.47	9.68	21.15	11.32	13.46	2.85	9.57	9.14	6.78	6.81
Excess Returns														
Arithmetic Excess	-5.64	-3.44	-1.63	0.29	-5.64	-5.67	4.19	-7.30	7.88	10.11	-6.12	6.50	-5.26	9.49
Geometric Excess	-8.00	-3.21	-1.48	0.26	-8.00	-4.40	3.10	-5.38	8.17	7.92	-5.62	6.28	-4.62	7.03

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.24	4.37	4.26	4.34
Information Ratio	-1.89	-0.73	-0.35	0.06
Downside Deviation	3.33	3.16	2.95	3.13
Skewness	-0.74	-0.19	0.06	-0.24
Kurtosis	-0.28	0.10	0.14	0.07
Alpha	-9.50	-2.95	-1.10	0.59
Beta	0.96	0.95	0.95	0.97
Residual Risk	3.99	4.22	4.15	4.35
R Squared	0.98	0.97	0.96	0.93

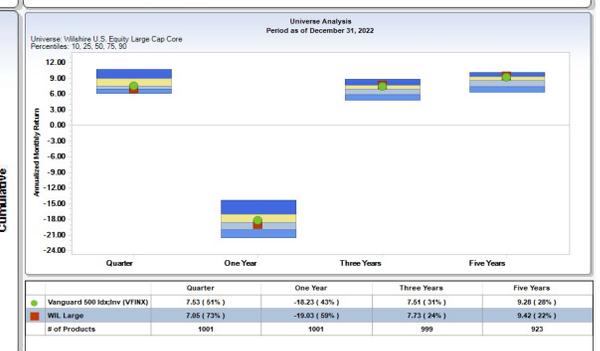
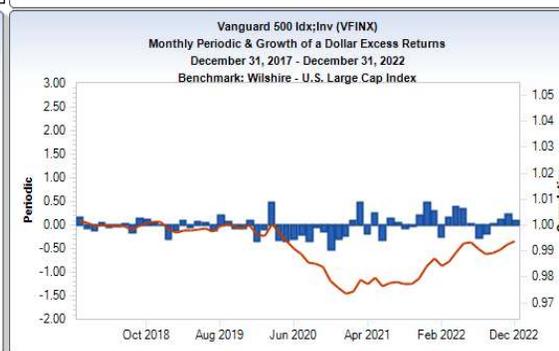
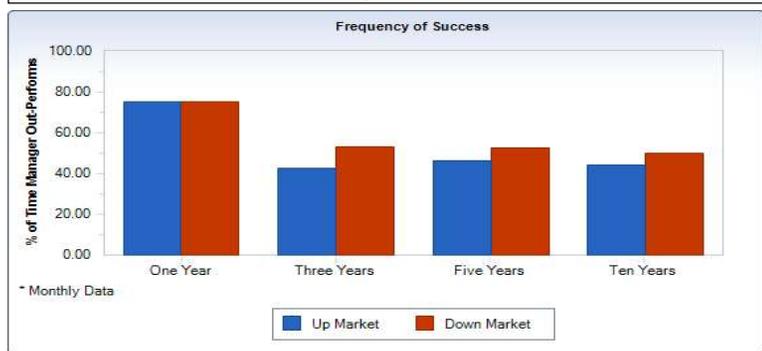
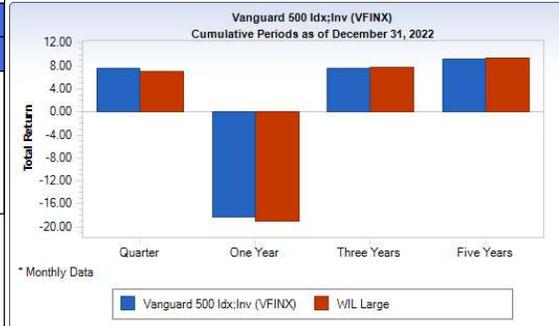


Performance Fact Sheet: Vanguard 500 Idx;Inv (VFINX)

Fund Family:	Vanguard	Net Assets (\$MM):	
Asset Class:	U.S. Equity	Expense Ratio:	0.14
Style Category:	S&P 500 Index Funds	Front Load:	
Objective Category:	S&P 500 INDEX FUNDS	12B-1 Fee:	0.00
Ticker:	VFINX	Turnover:	2.00
Share Class:	Investor	Mgr Tenure:	7

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard 500 Idx;Inv (VFINX)	-18.23	7.51	9.28	12.40	-18.23	28.52	18.26	31.34	-4.53	21.65	11.81	1.26	13.49	32.19
WIL Large	-19.03	7.73	9.42	12.57	-19.03	27.46	21.17	31.51	-4.64	21.84	12.49	1.27	13.46	32.33
Risk - Standard Deviation														
Vanguard 500 Idx;Inv (VFINX)	23.00	21.17	18.69	14.77	23.00	11.04	25.95	12.88	15.33	3.94	10.30	13.66	8.26	8.49
WIL Large	23.12	21.53	18.97	14.95	23.12	10.90	26.70	13.15	15.30	3.88	10.60	13.43	8.27	8.52
Risk - Semi-Variance														
Vanguard 500 Idx;Inv (VFINX)	14.81	15.64	14.13	11.19	14.81	8.55	19.45	10.07	12.19	2.59	7.17	8.52	6.20	6.87
WIL Large	14.89	15.87	14.30	11.30	14.89	8.40	20.10	10.24	12.19	2.53	7.43	8.37	6.17	6.83
Excess Returns														
Arithmetic Excess	0.80	-0.22	-0.14	-0.17	0.80	1.06	-2.91	-0.17	0.11	-0.19	-0.68	-0.01	0.03	-0.14
Geometric Excess	0.99	-0.20	-0.13	-0.15	0.99	0.83	-2.40	-0.13	0.12	-0.16	-0.60	-0.01	0.03	-0.11

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	0.77	0.94	0.76	0.59
Information Ratio	1.28	-0.22	-0.17	-0.25
Downside Deviation	0.58	0.63	0.53	0.41
Skewness	-0.40	0.28	0.21	0.26
Kurtosis	-0.94	-0.90	-0.11	1.06
Alpha	0.83	-0.09	-0.01	-0.01
Beta	0.99	0.98	0.98	0.99
Residual Risk	0.75	0.87	0.72	0.57
R Squared	1.00	1.00	1.00	1.00



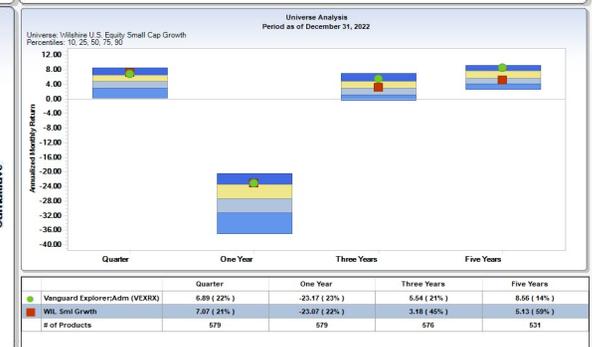
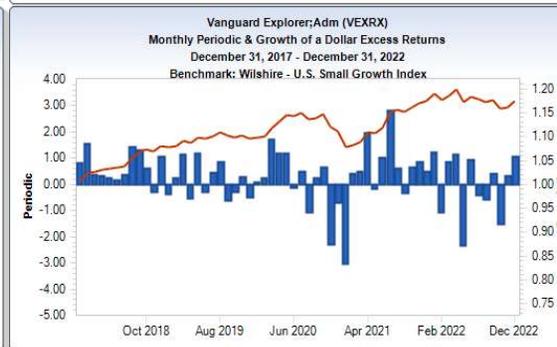
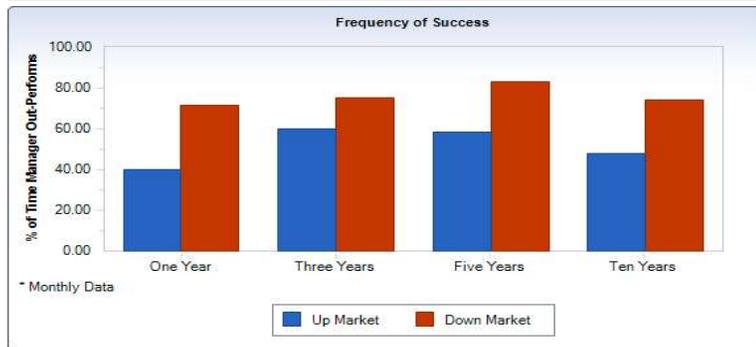
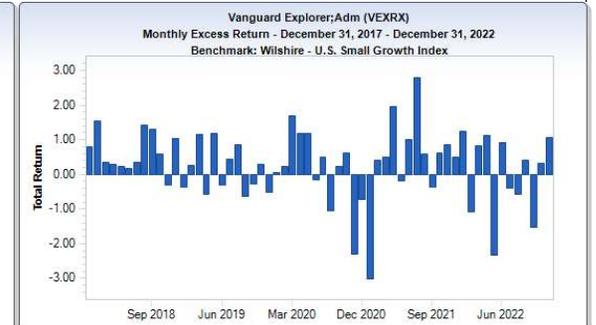
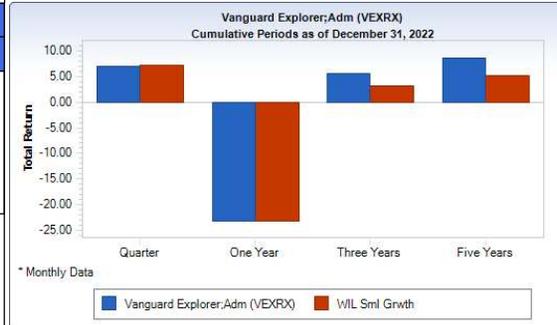
Performance Fact Sheet: Vanguard Explorer;Adm (VEXRX)

Fund Family: Vanguard
Asset Class: U.S. Equity
Style Category: Small-Cap Growth Funds
Objective Category: SMALL-CAP
Ticker: VEXRX
Share Class: Standard

Net Assets (\$MM):
Expense Ratio: 0.29
Front Load:
12B-1 Fee: 0.00
Turnover: 45.00
Mgr Tenure:

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard Explorer;Adm (VEXRX)	-23.17	5.54	8.56	11.65	-23.17	16.37	31.48	31.40	-2.39	23.10	12.48	-4.23	4.09	44.60
WIL Sml Grwth	-23.07	3.18	5.13	9.90	-23.07	10.12	29.66	29.49	-9.71	19.55	16.97	-5.28	4.23	45.00
Risk - Standard Deviation														
Vanguard Explorer;Adm (VEXRX)	24.17	25.31	22.85	18.47	24.17	10.59	34.49	17.63	20.22	4.82	16.40	15.09	13.17	10.14
WIL Sml Grwth	26.48	26.62	24.03	19.75	26.48	10.83	36.01	19.06	20.45	6.72	19.92	15.44	14.81	10.97
Risk - Semi-Variance														
Vanguard Explorer;Adm (VEXRX)	15.48	18.38	16.96	13.81	15.48	7.95	26.68	12.62	16.51	3.43	12.51	10.29	9.44	7.41
WIL Sml Grwth	17.51	19.36	17.84	14.71	17.51	7.96	27.95	13.99	16.82	4.14	14.38	10.66	10.74	7.94
Excess Returns														
Arithmetic Excess	-0.10	2.36	3.43	1.75	-0.10	6.25	1.82	1.91	7.32	3.55	-4.49	1.05	-0.14	-0.40
Geometric Excess	-0.13	2.29	3.26	1.59	-0.13	5.68	1.40	1.48	8.11	2.97	-3.84	1.11	-0.13	-0.28

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.08	4.19	3.55	3.45
Information Ratio	-0.03	0.55	0.92	0.46
Downside Deviation	3.22	3.29	2.77	2.66
Skewness	-0.79	-0.74	-0.83	-0.99
Kurtosis	-0.48	0.98	1.85	3.52
Alpha	-3.07	2.44	3.49	2.26
Beta	0.90	0.94	0.94	0.92
Residual Risk	3.14	3.99	3.34	3.20
R Squared	0.98	0.98	0.98	0.97



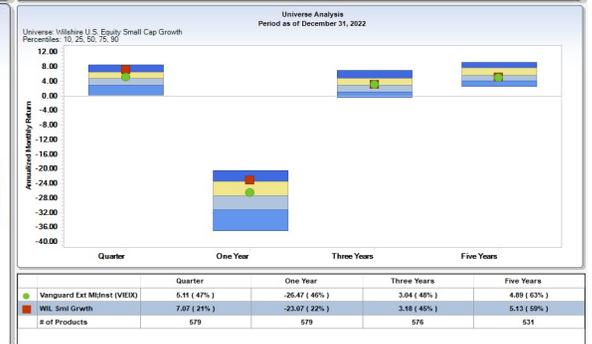
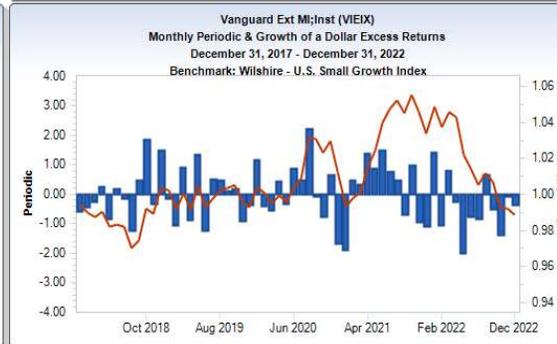
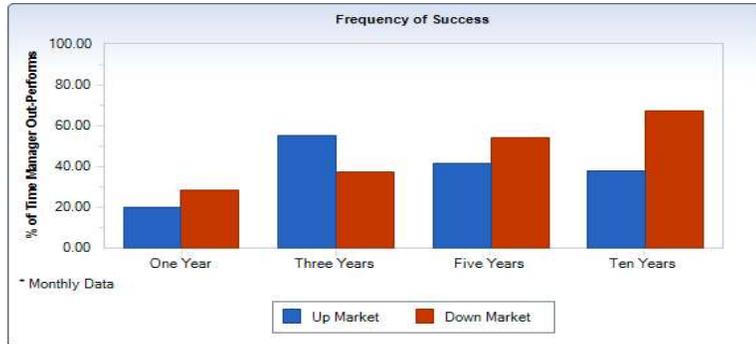
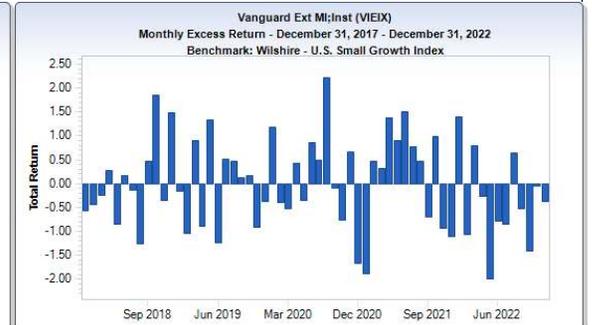
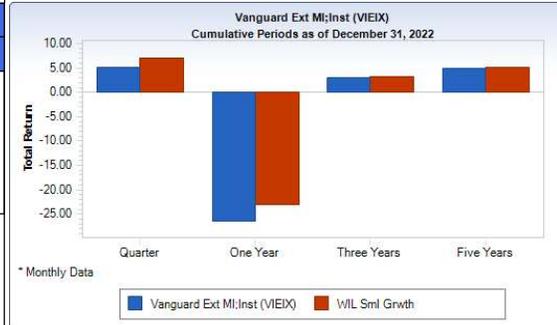
Performance Fact Sheet: Vanguard Ext MI;Inst (VIEIX)

Fund Family: Vanguard
 Asset Class: U.S. Equity
 Style Category: Small-Cap Growth Funds
 Objective Category: MID-CAP
 Ticker: VIEIX
 Share Class: I

Net Assets (\$MM):
 Expense Ratio: 0.05
 Front Load: 0.00
 12B-1 Fee: 0.00
 Turnover: 19.00
 Mgr Tenure: 26

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard Ext MI;Inst (VIEIX)	-26.47	3.04	4.89	9.63	-26.47	12.48	32.26	28.04	-9.36	18.11	16.15	-3.26	7.57	38.43
WIL Sml Grwth	-23.07	3.18	5.13	9.90	-23.07	10.12	29.66	29.49	-9.71	19.55	16.97	-5.28	4.23	45.00
Risk - Standard Deviation														
Vanguard Ext MI;Inst (VIEIX)	25.15	26.94	23.51	18.66	25.15	11.87	36.82	16.89	17.77	5.10	16.21	12.99	12.60	10.54
WIL Sml Grwth	26.48	26.62	24.03	19.75	26.48	10.83	36.01	19.06	20.45	6.72	19.92	15.44	14.81	10.97
Risk - Semi-Variance														
Vanguard Ext MI;Inst (VIEIX)	16.67	19.68	17.45	13.97	16.67	8.88	28.73	12.17	14.72	3.50	12.10	8.87	9.20	7.67
WIL Sml Grwth	17.51	19.36	17.84	14.71	17.51	7.96	27.95	13.99	16.82	4.14	14.38	10.66	10.74	7.94
Excess Returns														
Arithmetic Excess	-3.40	-0.14	-0.24	-0.27	-3.40	2.36	2.60	-1.45	0.35	-1.44	-0.82	2.02	3.34	-6.57
Geometric Excess	-4.42	-0.14	-0.23	-0.25	-4.42	2.14	2.01	-1.12	0.39	-1.20	-0.70	2.13	3.20	-4.53

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	3.35	3.56	3.30	3.46
Information Ratio	-1.32	-0.04	-0.07	-0.07
Downside Deviation	2.24	2.53	2.28	2.55
Skewness	0.29	-0.03	0.13	-0.39
Kurtosis	-0.18	-0.61	-0.48	0.34
Alpha	-6.11	-0.14	-0.12	0.33
Beta	0.94	1.00	0.97	0.93
Residual Risk	2.95	3.64	3.24	3.25
R Squared	0.99	0.98	0.98	0.97



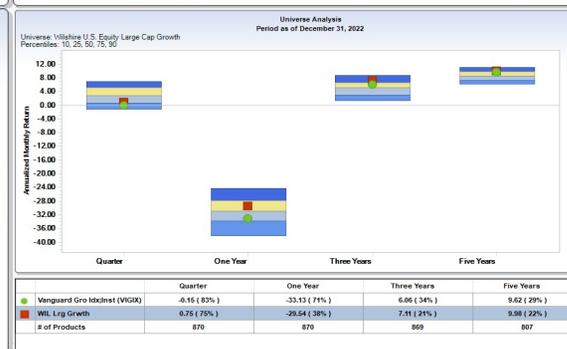
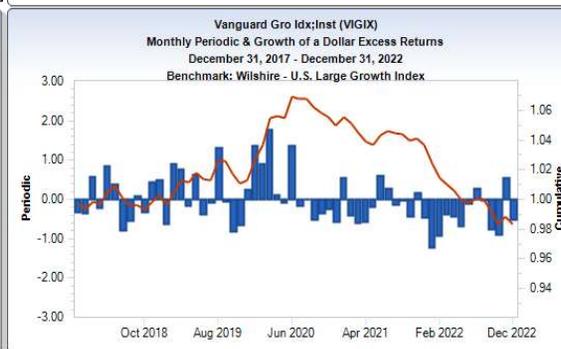
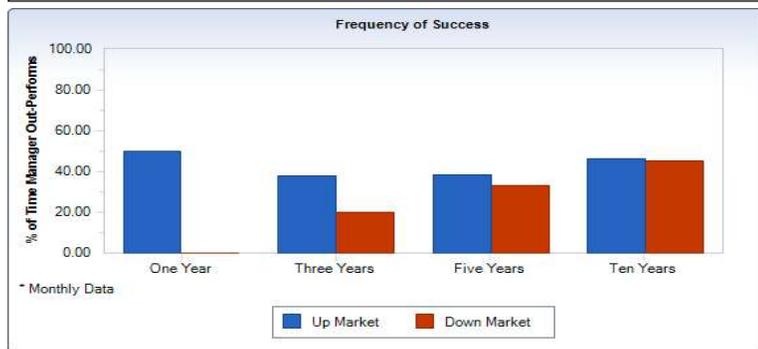
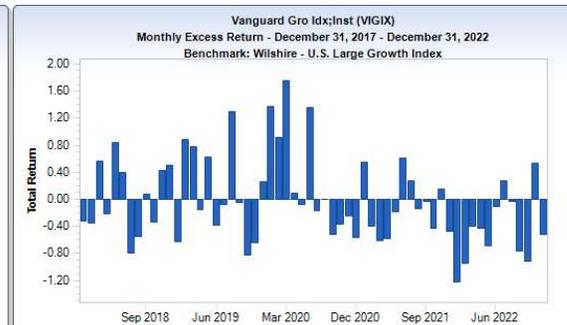
Performance Fact Sheet: Vanguard Gro Idx;Inst (VIGIX)

Fund Family: Vanguard
Asset Class: U.S. Equity
Style Category: Large-Cap Growth Funds
Objective Category: GROWTH
Ticker: VIGIX
Share Class: I

Net Assets (\$MM):
Expense Ratio: 0.04
Front Load:
12B-1 Fee: 0.00
Turnover: 8.00
Mgr Tenure: 23

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard Gro Idx;Inst (VIGIX)	-33.13	6.06	9.62	12.80	-33.13	27.25	40.19	37.25	-3.33	27.82	6.11	3.32	13.61	32.40
WIL Lrg Grwth	-29.54	7.11	9.98	13.56	-29.54	28.86	35.36	35.79	-3.58	27.71	8.97	3.54	13.96	34.95
Risk - Standard Deviation														
Vanguard Gro Idx;Inst (VIGIX)	27.15	24.59	21.40	16.76	27.15	13.28	26.97	13.45	17.07	4.69	11.56	14.39	10.11	8.32
WIL Lrg Grwth	26.39	24.44	21.51	16.93	26.39	13.64	28.03	14.82	17.42	4.19	12.95	14.70	9.73	8.63
Risk - Semi-Variance														
Vanguard Gro Idx;Inst (VIGIX)	16.77	17.78	15.91	12.47	16.77	9.40	20.37	10.42	13.33	3.42	7.88	8.82	7.07	6.54
WIL Lrg Grwth	16.47	17.68	15.91	12.61	16.47	9.68	21.15	11.32	13.46	2.85	9.57	9.14	6.78	6.81
Excess Returns														
Arithmetic Excess	-3.59	-1.05	-0.36	-0.76	-3.59	-1.61	4.83	1.46	0.25	0.11	-2.86	-0.22	-0.35	-2.55
Geometric Excess	-5.10	-0.98	-0.33	-0.67	-5.10	-1.25	3.57	1.08	0.26	0.09	-2.62	-0.21	-0.31	-1.89

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.81	2.31	2.21	2.21
Information Ratio	-2.82	-0.43	-0.15	-0.30
Downside Deviation	1.19	1.37	1.37	1.57
Skewness	0.44	1.03	0.74	-0.27
Kurtosis	-0.45	1.03	0.22	3.42
Alpha	-3.98	-1.00	-0.25	-0.45
Beta	1.03	1.00	0.99	0.98
Residual Risk	1.64	2.25	2.17	2.19
R Squared	1.00	0.99	0.99	0.98



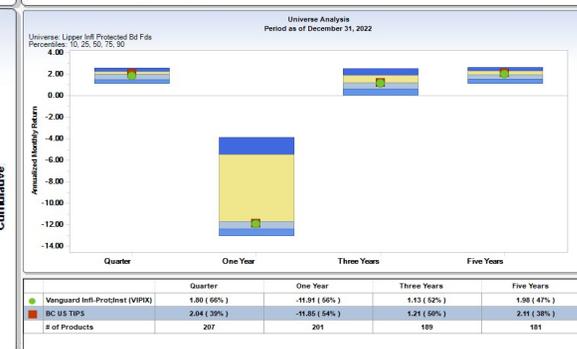
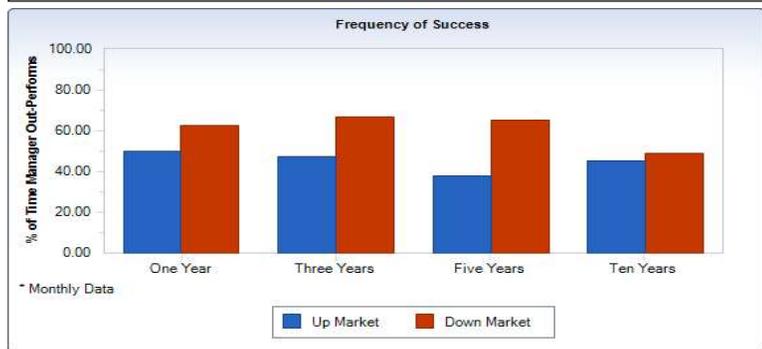
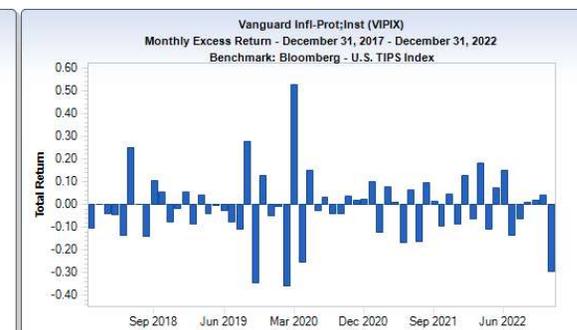
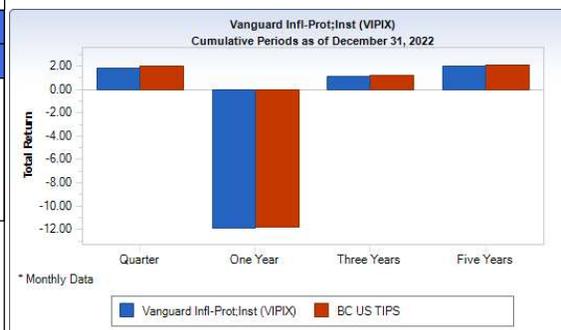
Performance Fact Sheet: Vanguard Infl-Prot;Inst (VIPIX)

Fund Family: Vanguard
Asset Class: Taxable Fixed Income
Style Category: Infl Protected Bd Fds
Objective Category: INFLATION PROTECTED
Ticker: VIPIX
Share Class: I

Net Assets (\$MM):
Expense Ratio: 0.07
Front Load:
12B-1 Fee: 0.00
Turnover: 24.00
Mgr Tenure: 2

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard Infl-Prot;Inst (VIPIX)	-11.91	1.13	1.98	1.04	-11.91	5.72	11.05	8.17	-1.41	2.97	4.66	-1.66	4.04	-8.84
BC US TIPS	-11.85	1.21	2.11	1.12	-11.85	5.96	10.99	8.43	-1.26	3.01	4.68	-1.44	3.64	-8.61
Risk - Standard Deviation														
Vanguard Infl-Prot;Inst (VIPIX)	9.62	6.85	5.67	5.17	9.62	3.74	4.05	3.36	2.77	2.17	4.36	4.24	4.44	6.52
BC US TIPS	9.74	7.01	5.81	5.16	9.74	3.84	4.53	3.48	2.85	2.11	4.03	4.08	4.45	6.18
Risk - Semi-Variance														
Vanguard Infl-Prot;Inst (VIPIX)	6.67	5.41	4.45	4.00	6.67	2.74	3.06	2.28	2.06	1.66	3.17	2.23	3.32	5.17
BC US TIPS	6.74	5.49	4.54	3.99	6.74	2.73	3.49	2.43	2.13	1.62	2.97	2.00	3.40	4.95
Excess Returns														
Arithmetic Excess	-0.06	-0.08	-0.13	-0.08	-0.06	-0.24	0.06	-0.26	-0.15	-0.04	-0.02	-0.22	0.40	-0.23
Geometric Excess	-0.07	-0.08	-0.13	-0.08	-0.07	-0.23	0.05	-0.24	-0.15	-0.04	-0.02	-0.22	0.39	-0.25

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	0.47	0.53	0.49	0.50
Information Ratio	-0.14	-0.15	-0.25	-0.16
Downside Deviation	0.36	0.36	0.33	0.34
Skewness	-0.63	0.64	0.52	0.42
Kurtosis	0.35	3.66	3.19	1.61
Alpha	-0.25	-0.07	-0.10	-0.08
Beta	0.99	0.98	0.97	1.00
Residual Risk	0.45	0.50	0.47	0.50
R Squared	1.00	0.99	0.99	0.99

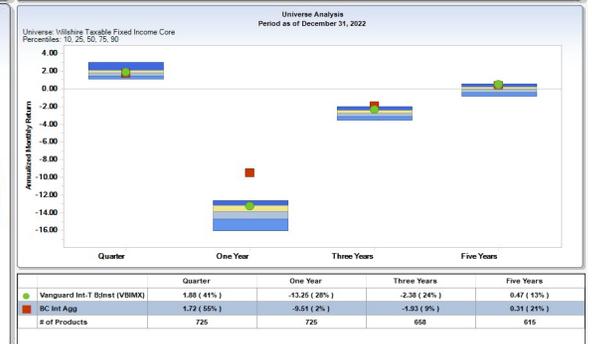
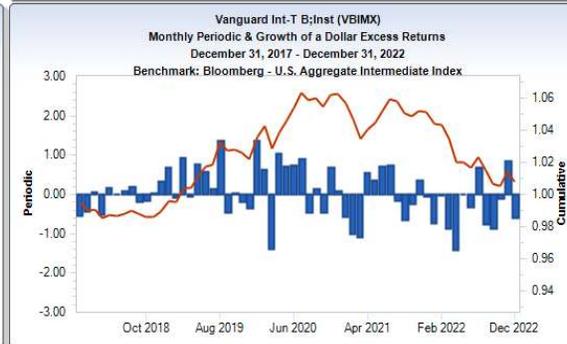
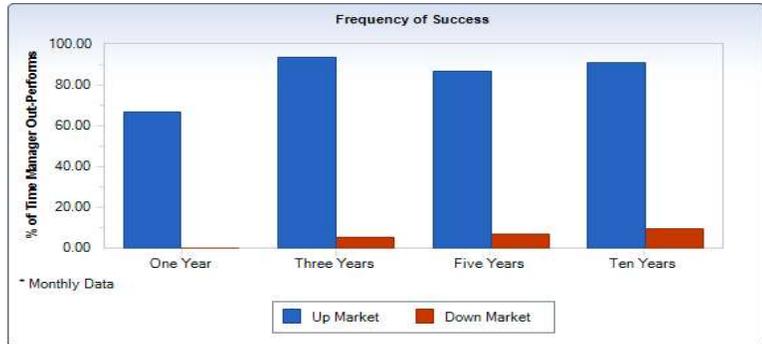
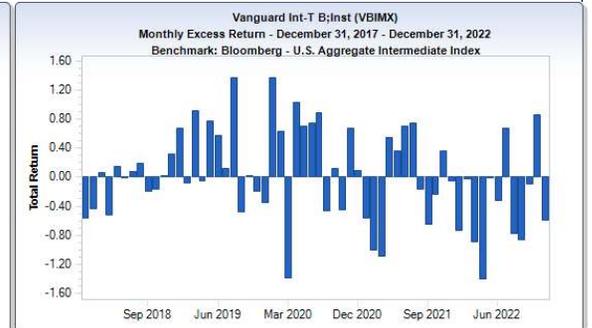
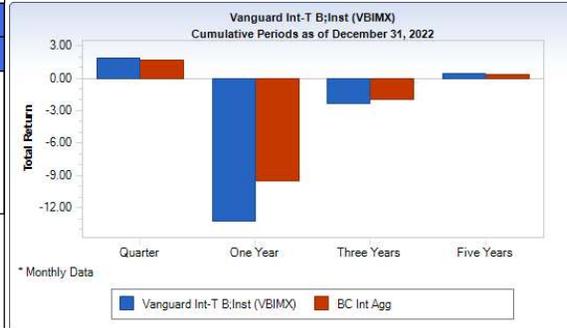


Performance Fact Sheet: Vanguard Int-T B;Inst (VBIMX)

Fund Family: Vanguard	Net Assets (\$MM):	
Asset Class: Taxable Fixed Income	Expense Ratio: 0.05	
Style Category: Core Bond Funds	Front Load:	
Objective Category: CORE BOND	12B-1 Fee: 0.00	
Ticker: VBIMX	Turnover: 46.00	
Share Class: I	Mgr Tenure: 15	

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard Int-T B;Inst (VBIMX)	-13.25	-2.38	0.47	1.36	-13.25	-2.35	9.81	10.22	-0.16	3.87	2.85	1.31	7.00	-3.42
BC Int Agg	-9.51	-1.93	0.31	1.00	-9.51	-1.29	5.60	6.67	0.92	2.27	1.97	1.21	4.12	-1.02
Risk - Standard Deviation														
Vanguard Int-T B;Inst (VBIMX)	8.84	6.51	5.68	4.97	8.84	3.71	4.27	4.11	3.34	2.10	5.17	4.46	3.36	5.09
BC Int Agg	6.72	4.39	3.78	3.05	6.72	1.58	1.80	2.16	2.41	1.27	2.68	1.94	1.88	2.45
Risk - Semi-Variance														
Vanguard Int-T B;Inst (VBIMX)	5.54	4.76	4.18	3.69	5.54	2.65	3.19	2.63	2.32	1.59	4.08	2.56	2.39	3.83
BC Int Agg	4.22	3.33	2.88	2.32	4.22	1.07	1.14	1.39	1.59	0.92	2.08	1.16	1.37	1.79
Excess Returns														
Arithmetic Excess	-3.74	-0.45	0.16	0.36	-3.74	-1.06	4.21	3.55	-1.08	1.60	0.88	0.10	2.88	-2.40
Geometric Excess	-4.13	-0.46	0.16	0.36	-4.13	-1.07	3.99	3.33	-1.07	1.56	0.86	0.10	2.77	-2.42

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	2.29	2.54	2.23	2.19
Information Ratio	-1.80	-0.18	0.07	0.16
Downside Deviation	1.50	1.82	1.57	1.60
Skewness	0.47	-0.09	-0.04	-0.22
Kurtosis	-0.22	-0.98	-0.40	0.54
Alpha	-0.37	0.72	0.61	0.22
Beta	1.31	1.44	1.46	1.58
Residual Risk	0.96	1.67	1.40	1.31
R Squared	0.99	0.93	0.94	0.93



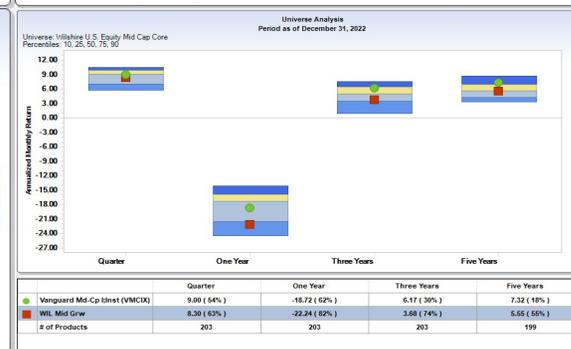
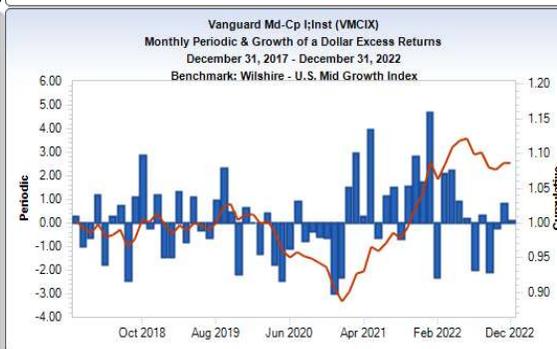
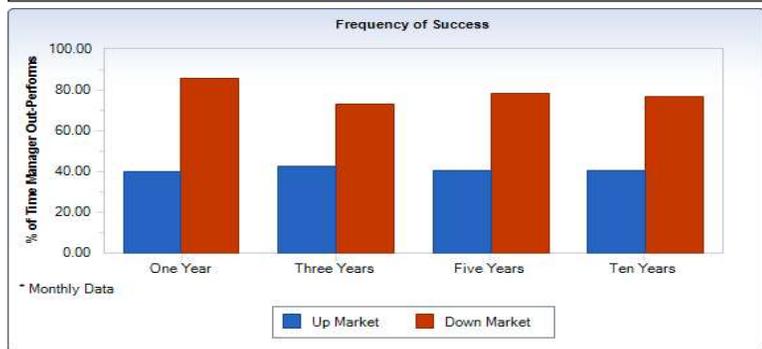
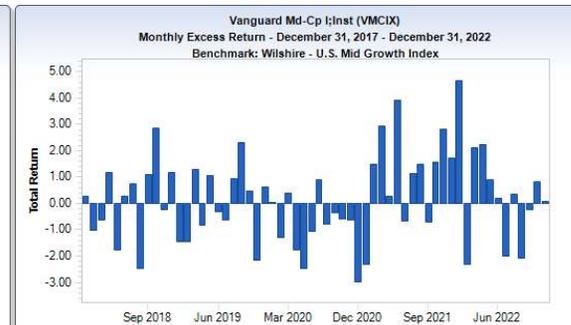
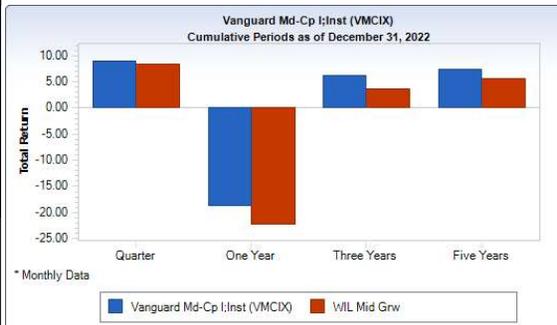
Performance Fact Sheet: Vanguard Md-Cp I;Inst (VMCIX)

Fund Family: Vanguard
Asset Class: U.S. Equity
Style Category: Mid-Cap Growth Funds
Objective Category: MID-CAP
Ticker: VMCIX
Share Class: I

Net Assets (\$MM):
Expense Ratio: 0.04
Front Load:
12B-1 Fee: 0.00
Turnover: 16.00
Mgr Tenure: 25

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard Md-Cp I;Inst (VMCIX)	-18.72	6.17	7.32	11.10	-18.72	24.52	18.25	31.02	-9.23	19.29	11.21	-1.34	13.77	35.18
WIL Mid Grw	-22.24	3.68	5.55	10.30	-22.24	8.86	31.65	31.32	-10.47	22.56	13.54	-3.85	6.61	42.59
Risk - Standard Deviation														
Vanguard Md-Cp I;Inst (VMCIX)	24.14	23.60	20.66	16.30	24.14	11.00	31.17	14.63	15.51	4.21	13.49	11.84	10.46	9.16
WIL Mid Grw	26.61	25.43	22.77	18.39	26.61	11.28	32.97	17.75	18.43	3.81	16.81	14.43	12.38	11.32
Risk - Semi-Variance														
Vanguard Md-Cp I;Inst (VMCIX)	15.96	17.76	15.68	12.37	15.96	8.30	24.24	10.45	12.98	2.93	9.85	7.53	7.39	6.82
WIL Mid Grw	17.62	18.56	16.84	13.69	17.62	8.69	25.53	12.46	15.20	2.61	12.34	9.55	8.88	8.12
Excess Returns														
Arithmetic Excess	3.52	2.49	1.77	0.80	3.52	15.66	-13.40	-0.30	1.24	-3.27	-2.33	2.51	7.16	-7.41
Geometric Excess	4.53	2.40	1.68	0.73	4.53	14.39	-10.18	-0.23	1.39	-2.67	-2.05	2.61	6.72	-5.20

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	6.99	6.36	5.73	4.96
Information Ratio	0.65	0.38	0.29	0.15
Downside Deviation	4.63	4.26	3.89	3.42
Skewness	0.55	0.39	0.34	0.24
Kurtosis	0.55	-0.13	0.00	0.34
Alpha	0.87	2.70	2.17	1.99
Beta	0.88	0.90	0.88	0.86
Residual Risk	5.81	5.78	5.01	4.21
R Squared	0.94	0.94	0.94	0.93

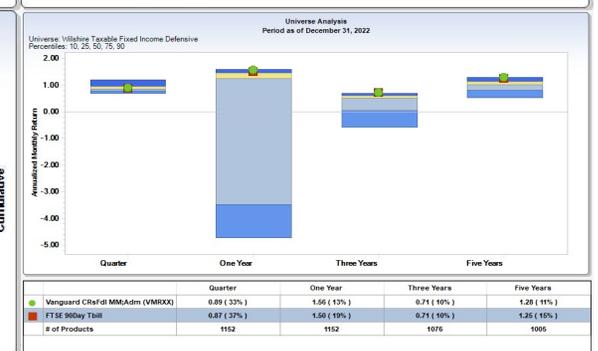
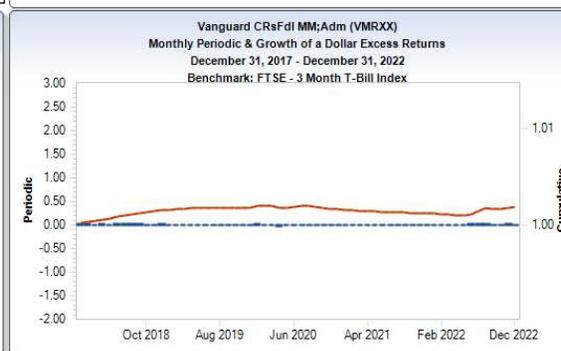
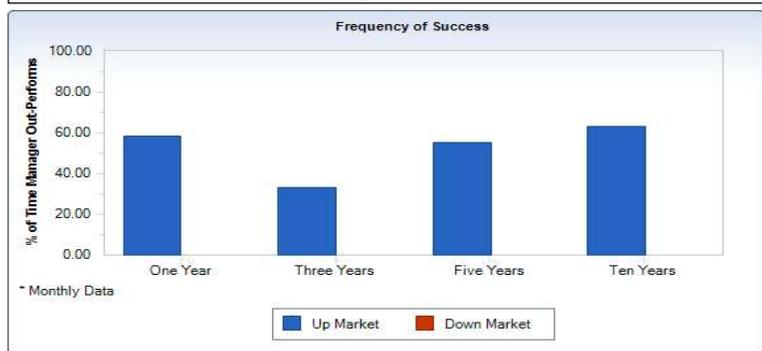
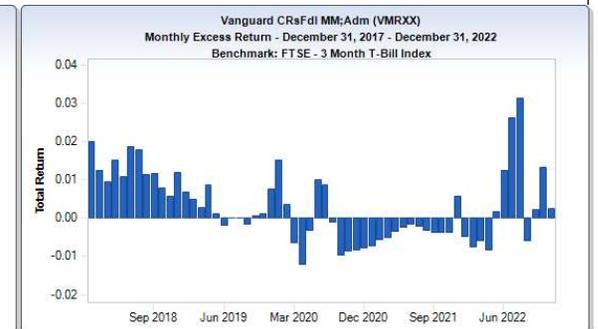
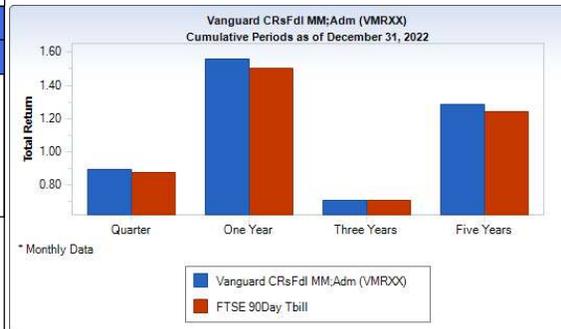


Performance Fact Sheet: Vanguard CRsFdl MM;Adm (VMRXX)

Fund Family:	Vanguard	Net Assets (\$MM):	
Asset Class:	Taxable Fixed Income	Expense Ratio:	0.10
Style Category:	Money Market Funds	Front Load:	
Objective Category:	MONEY MARKET	12B-1 Fee:	0.00
Ticker:	VMRXX	Turnover:	
Share Class:	I	Mgr Tenure:	6

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard CRsFdl MM;Adm (VMRXX)	1.56	0.71	1.28	0.82	1.56	0.01	0.56	2.28	2.02	1.11	0.54	0.13	0.02	0.05
FTSE 90Day Tbill	1.50	0.71	1.25	0.74	1.50	0.05	0.58	2.25	1.86	0.84	0.27	0.03	0.03	0.05
Risk - Standard Deviation														
Vanguard CRsFdl MM;Adm (VMRXX)	0.42	0.32	0.32	0.28	0.42	0.01	0.20	0.08	0.09	0.05	0.03	0.01	0.01	0.02
FTSE 90Day Tbill	0.41	0.31	0.31	0.27	0.41	0.01	0.18	0.08	0.10	0.08	0.02	0.01	0.00	0.01
Risk - Semi-Variance														
Vanguard CRsFdl MM;Adm (VMRXX)	0.27	0.16	0.23	0.16	0.27	0.00	0.11	0.06	0.07	0.04	0.02	0.00	0.01	0.01
FTSE 90Day Tbill	0.25	0.15	0.21	0.15	0.25	0.00	0.11	0.06	0.07	0.06	0.01	0.00	0.00	0.00
Excess Returns														
Arithmetic Excess	0.06	0.00	0.03	0.08	0.06	-0.04	-0.02	0.03	0.16	0.27	0.27	0.10	-0.01	0.00
Geometric Excess	0.06	0.00	0.03	0.08	0.06	-0.04	-0.02	0.03	0.16	0.27	0.27	0.10	-0.01	0.00

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	0.05	0.03	0.03	0.04
Information Ratio	1.25	0.03	1.15	2.09
Downside Deviation	0.03	0.02	0.02	0.02
Skewness	1.01	1.63	0.78	0.70
Kurtosis	-0.06	2.61	0.32	-0.20
Alpha	0.05	0.00	0.04	0.08
Beta	1.07	1.03	1.03	1.02
Residual Risk	0.05	0.03	0.03	0.04
R Squared	0.90	0.92	0.90	0.78

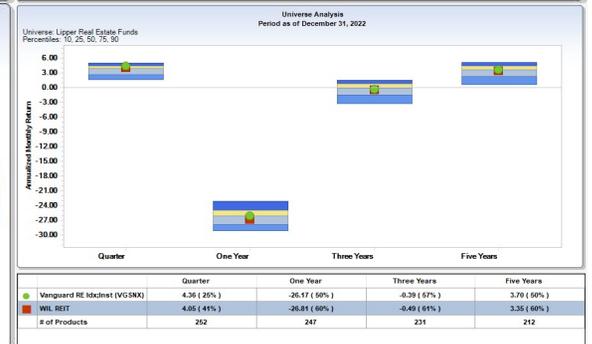
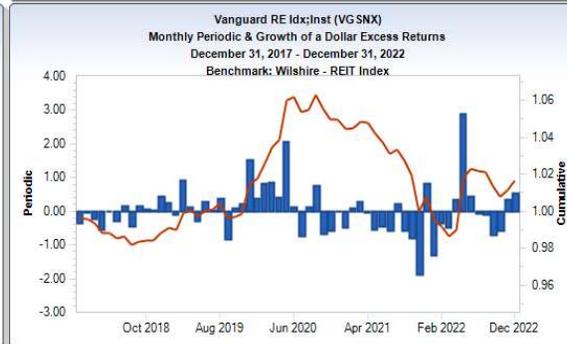
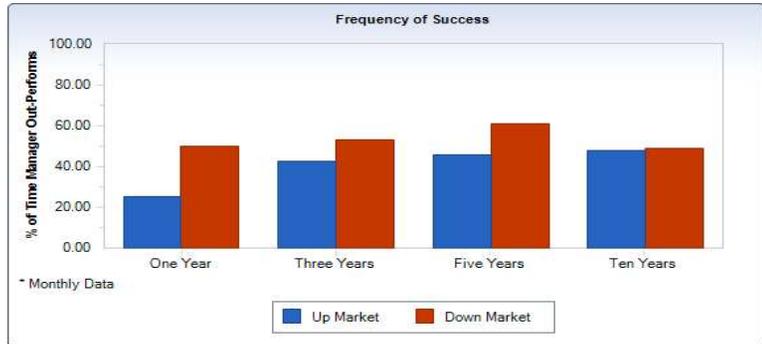
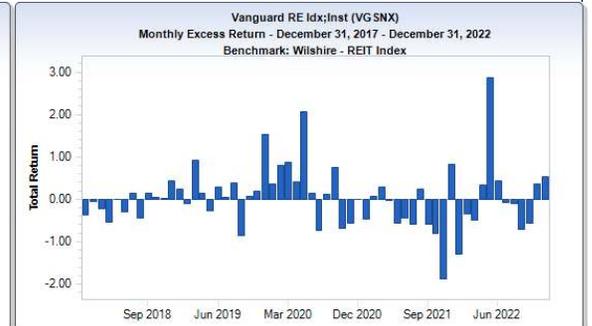
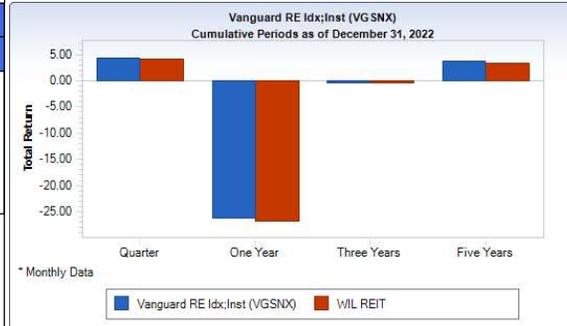


Performance Fact Sheet: Vanguard RE Idx;Inst (VGSNX)

Fund Family:	Vanguard	Net Assets (\$MM):	
Asset Class:	Real Estate	Expense Ratio:	0.10
Style Category:	Real Estate Funds	Front Load:	
Objective Category:	REAL ESTATE	12B-1 Fee:	0.00
Ticker:	VGSNX	Turnover:	7.00
Share Class:	I	Mgr Tenure:	20

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard RE Idx;Inst (VGSNX)	-26.17	-0.39	3.70	6.44	-26.17	40.42	-4.68	29.02	-5.94	4.85	8.52	2.44	30.27	2.47
WIL REIT	-26.81	-0.49	3.35	6.31	-26.81	46.18	-7.90	25.76	-4.84	4.18	7.24	4.23	31.78	1.86
Risk - Standard Deviation														
Vanguard RE Idx;Inst (VGSNX)	23.51	22.86	19.78	16.96	23.51	15.13	26.45	11.65	15.74	5.78	16.97	15.94	12.76	15.21
WIL REIT	23.81	23.27	20.06	17.12	23.81	13.90	27.35	11.57	16.19	6.21	16.95	15.68	13.10	14.92
Risk - Semi-Variance														
Vanguard RE Idx;Inst (VGSNX)	15.02	17.69	15.29	12.83	15.02	11.18	21.67	5.44	12.12	3.68	10.66	11.49	9.22	11.68
WIL REIT	14.89	18.04	15.54	12.96	14.89	10.27	22.20	5.59	12.51	3.95	10.60	11.32	9.18	11.54
Excess Returns														
Arithmetic Excess	0.64	0.10	0.35	0.13	0.64	-5.76	3.22	3.26	-1.10	0.67	1.28	-1.79	-1.51	0.61
Geometric Excess	0.87	0.10	0.34	0.12	0.87	-3.94	3.50	2.59	-1.16	0.64	1.19	-1.72	-1.15	0.60

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	3.59	3.00	2.53	1.90
Information Ratio	0.24	0.03	0.13	0.06
Downside Deviation	1.96	1.87	1.59	1.19
Skewness	1.81	1.05	1.08	1.33
Kurtosis	4.96	3.08	4.07	7.93
Alpha	-0.01	0.06	0.38	0.20
Beta	0.98	0.97	0.98	0.98
Residual Risk	3.31	2.85	2.43	1.84
R Squared	0.98	0.98	0.98	0.99



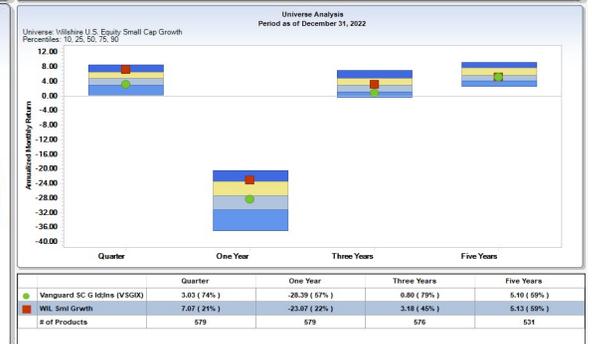
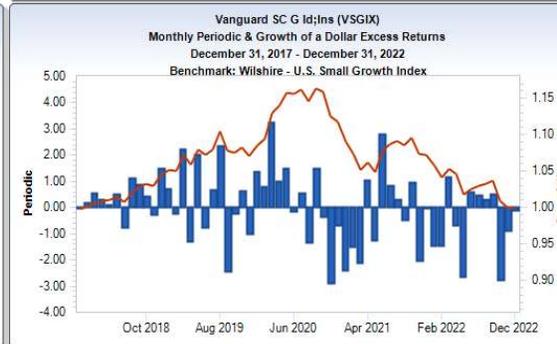
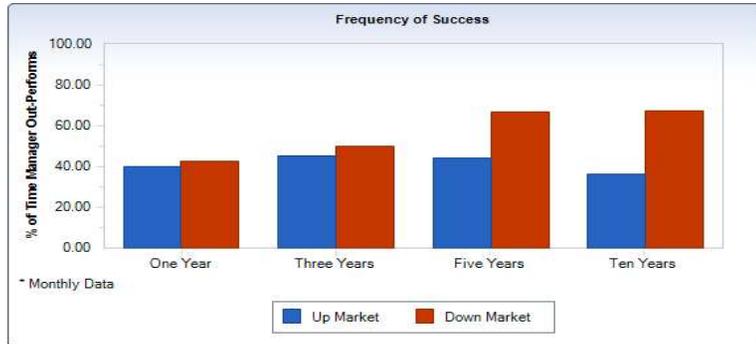
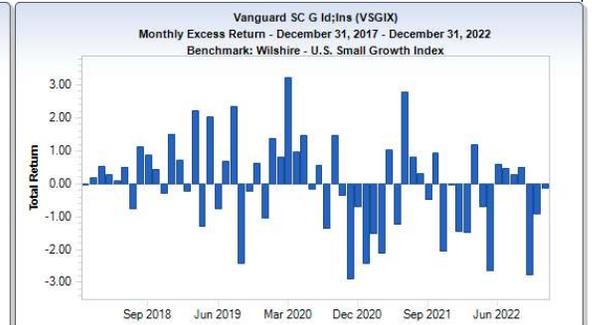
Performance Fact Sheet: Vanguard SC G Id;Ins (VSGIX)

Fund Family: Vanguard
Asset Class: U.S. Equity
Style Category: Small-Cap Growth Funds
Objective Category: SMALL-CAP
Ticker: VSGIX
Share Class: I

Net Assets (\$MM):
Expense Ratio: 0.06
Front Load: 0.00
12B-1 Fee: 0.00
Turnover: 29.00
Mgr Tenure: 19

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard SC G Id;Ins (VSGIX)	-28.39	0.80	5.10	9.27	-28.39	5.70	35.32	32.76	-5.69	21.91	10.75	-2.52	4.03	38.19
WIL Sml Grwth	-23.07	3.18	5.13	9.90	-23.07	10.12	29.66	29.49	-9.71	19.55	16.97	-5.28	4.23	45.00
Risk - Standard Deviation														
Vanguard SC G Id;Ins (VSGIX)	25.59	25.67	23.06	18.46	25.59	12.90	32.85	17.34	19.82	4.55	16.30	13.58	13.62	10.11
WIL Sml Grwth	26.48	26.62	24.03	19.75	26.48	10.83	36.01	19.06	20.45	6.72	19.92	15.44	14.81	10.97
Risk - Semi-Variance														
Vanguard SC G Id;Ins (VSGIX)	16.89	18.51	16.96	13.79	16.89	9.74	25.29	11.69	16.10	3.25	12.46	10.00	9.68	7.31
WIL Sml Grwth	17.51	19.36	17.84	14.71	17.51	7.96	27.95	13.99	16.82	4.14	14.38	10.66	10.74	7.94
Excess Returns														
Arithmetic Excess	-5.32	-2.38	-0.03	-0.63	-5.32	-4.42	5.66	3.27	4.02	2.36	-6.22	2.76	-0.20	-6.81
Geometric Excess	-6.92	-2.31	-0.03	-0.57	-6.92	-4.01	4.37	2.53	4.45	1.97	-5.32	2.91	-0.19	-4.70

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.49	5.23	4.77	4.34
Information Ratio	-1.54	-0.44	-0.01	-0.13
Downside Deviation	3.41	3.75	3.50	3.18
Skewness	-0.51	0.02	-0.16	-0.33
Kurtosis	-0.85	-0.37	-0.14	1.17
Alpha	-8.33	-2.18	0.19	0.16
Beta	0.95	0.95	0.94	0.91
Residual Risk	4.42	5.08	4.57	4.05
R Squared	0.97	0.96	0.96	0.95



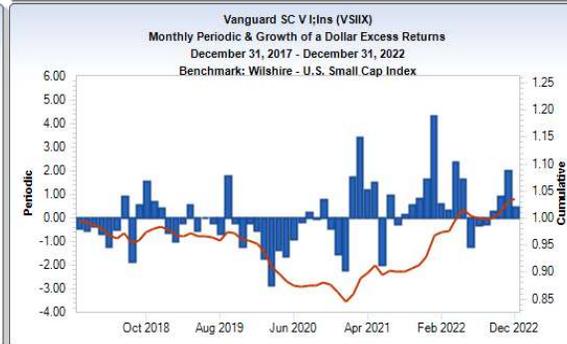
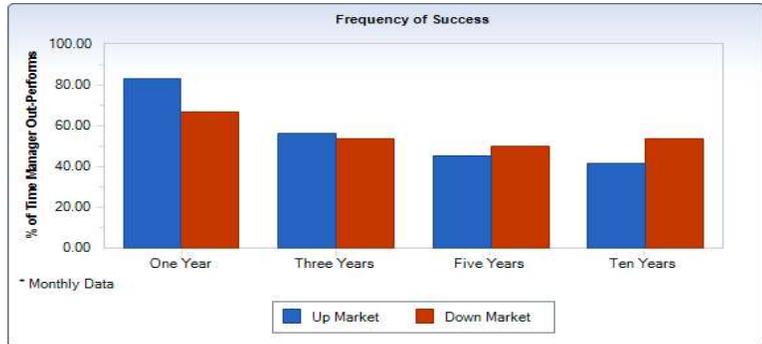
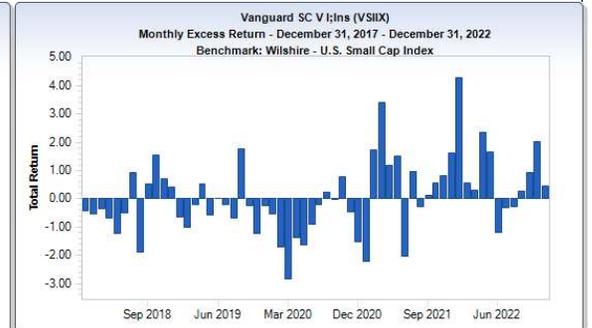
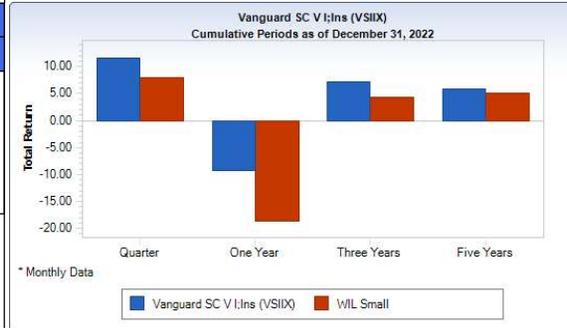
Performance Fact Sheet: Vanguard SC V I;Ins (VSIIX)

Fund Family: Vanguard
 Asset Class: U.S. Equity
 Style Category: Small-Cap Core Funds
 Objective Category: SMALL-CAP
 Ticker: VSIIX
 Share Class: I

Net Assets (\$MM):
 Expense Ratio: 0.06
 Front Load: 0.00
 12B-1 Fee: 0.00
 Turnover: 16.00
 Mgr Tenure: 7

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard SC V I;Ins (VSIIX)	-9.31	7.14	5.80	10.29	-9.31	28.11	5.87	22.80	-12.22	11.80	24.80	-4.69	10.59	36.55
WIL Small	-18.65	4.41	5.08	9.65	-18.65	19.17	17.42	26.21	-10.84	13.45	22.41	-4.86	6.80	39.01
Risk - Standard Deviation														
Vanguard SC V I;Ins (VSIIX)	25.21	26.83	23.49	18.74	25.21	12.48	38.08	17.89	17.14	6.89	15.82	13.01	13.07	11.11
WIL Small	25.35	26.52	23.52	18.96	25.35	11.08	37.21	17.75	18.97	7.24	17.26	13.35	13.79	10.75
Risk - Semi-Variance														
Vanguard SC V I;Ins (VSIIX)	16.91	20.65	18.08	14.30	16.91	8.89	30.37	13.47	14.38	4.66	10.62	8.25	10.04	8.76
WIL Small	16.74	19.78	17.76	14.25	16.74	8.32	29.00	13.01	15.73	4.62	12.11	9.01	10.11	8.18
Excess Returns														
Arithmetic Excess	9.34	2.73	0.72	0.64	9.34	8.94	-11.55	-3.41	-1.38	-1.65	2.39	0.17	3.79	-2.46
Geometric Excess	11.48	2.61	0.69	0.58	11.48	7.50	-9.84	-2.70	-1.55	-1.45	1.95	0.18	3.55	-1.77

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	5.10	5.37	4.59	3.58
Information Ratio	2.25	0.49	0.15	0.16
Downside Deviation	3.07	3.65	3.00	2.32
Skewness	1.00	0.36	0.60	0.70
Kurtosis	1.39	0.40	1.13	2.60
Alpha	10.85	2.64	0.76	0.81
Beta	0.98	0.99	0.98	0.97
Residual Risk	4.73	5.22	4.48	3.48
R Squared	0.96	0.96	0.96	0.97



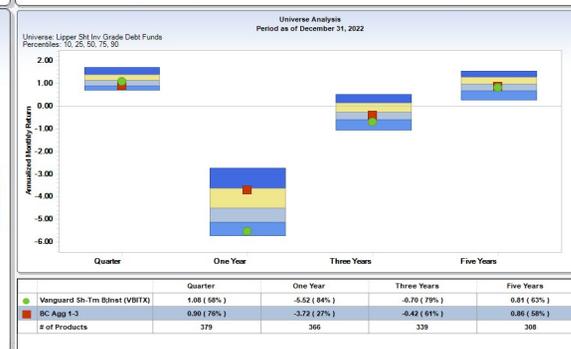
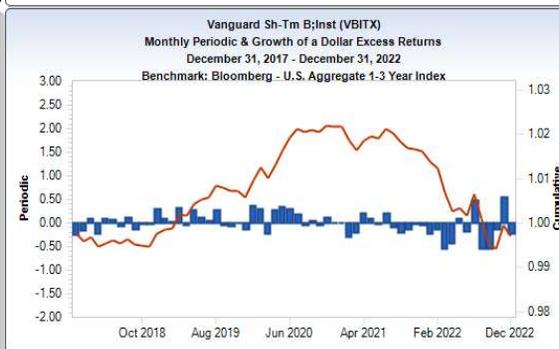
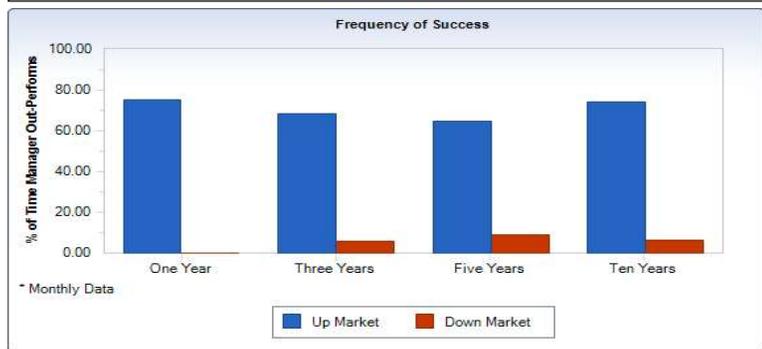
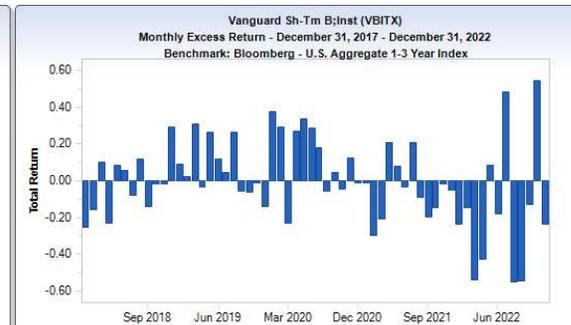
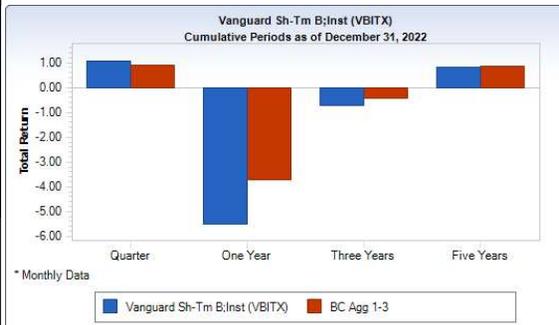
Performance Fact Sheet: Vanguard Sh-Tm B;Inst (VBITX)

Fund Family: Vanguard
Asset Class: Taxable Fixed Income
Style Category: Sht Inv Grade Debt Funds
Objective Category: SHORT INV GRADE DEBT
Ticker: VBITX
Share Class: I

Net Assets (\$MM):
Expense Ratio: 0.05
Front Load:
12B-1 Fee: 0.00
Turnover: 37.00
Mgr Tenure: 10

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard Sh-Tm B;Inst (VBITX)	-5.52	-0.70	0.81	0.92	-5.52	-1.04	4.71	4.89	1.37	1.19	1.52	0.95	1.28	0.18
BC Agg 1-3	-3.72	-0.42	0.86	0.86	-3.72	-0.49	3.08	4.04	1.60	0.86	1.31	0.66	0.82	0.64
Risk - Standard Deviation														
Vanguard Sh-Tm B;Inst (VBITX)	3.68	2.57	2.26	1.82	3.68	0.91	1.35	1.45	1.50	0.82	1.79	1.45	1.02	1.24
BC Agg 1-3	2.50	1.72	1.54	1.18	2.50	0.47	0.92	1.01	0.98	0.51	0.96	0.71	0.57	0.52
Risk - Semi-Variance														
Vanguard Sh-Tm B;Inst (VBITX)	2.38	1.94	1.72	1.36	2.38	0.58	0.83	0.92	0.97	0.62	1.27	0.85	0.77	0.92
BC Agg 1-3	1.67	1.34	1.19	0.90	1.67	0.35	0.53	0.69	0.60	0.39	0.63	0.43	0.44	0.39
Excess Returns														
Arithmetic Excess	-1.80	-0.28	-0.05	0.06	-1.80	-0.55	1.63	0.85	-0.23	0.33	0.21	0.29	0.46	-0.46
Geometric Excess	-1.87	-0.28	-0.05	0.06	-1.87	-0.55	1.58	0.82	-0.23	0.33	0.21	0.29	0.46	-0.46

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.28	0.96	0.82	0.74
Information Ratio	-1.45	-0.30	-0.07	0.07
Downside Deviation	0.77	0.67	0.58	0.53
Skewness	0.92	-0.01	-0.13	-0.14
Kurtosis	0.10	-0.30	0.24	0.55
Alpha	0.73	0.26	0.13	0.00
Beta	1.48	1.48	1.47	1.53
Residual Risk	0.58	0.51	0.43	0.42
R Squared	0.97	0.96	0.96	0.95



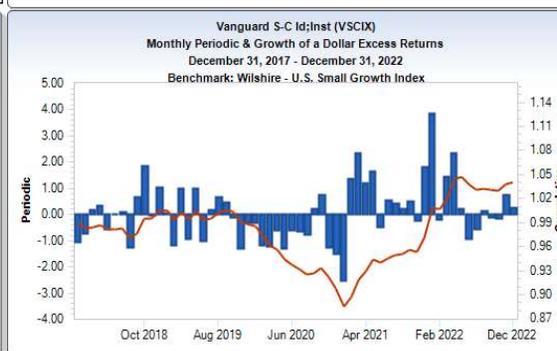
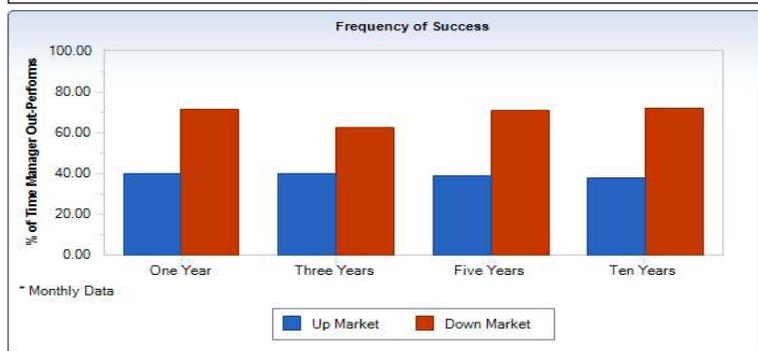
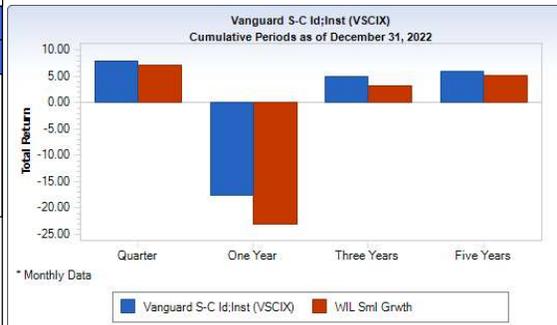
Performance Fact Sheet: Vanguard S-C Id;Inst (VSCIX)

Fund Family: Vanguard
Asset Class: U.S. Equity
Style Category: Small-Cap Growth Funds
Objective Category: SMALL-CAP
Ticker: VSCIX
Share Class: I

Net Assets (\$MM):
Expense Ratio: 0.04
Front Load: 0.00
12B-1 Fee: 0.00
Turnover: 17.00
Mgr Tenure: 7

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard S-C Id;Inst (VSCIX)	-17.60	4.94	5.96	10.12	-17.60	17.73	19.12	27.42	-9.30	16.24	18.33	-3.63	7.52	37.82
WIL Sml Grwth	-23.07	3.18	5.13	9.90	-23.07	10.12	29.66	29.49	-9.71	19.55	16.97	-5.28	4.23	45.00
Risk - Standard Deviation														
Vanguard S-C Id;Inst (VSCIX)	24.77	25.53	22.64	18.12	24.77	10.96	35.44	17.12	18.17	5.66	15.84	12.98	13.05	10.43
WIL Sml Grwth	26.48	26.62	24.03	19.75	26.48	10.83	36.01	19.06	20.45	6.72	19.92	15.44	14.81	10.97
Risk - Semi-Variance														
Vanguard S-C Id;Inst (VSCIX)	16.32	19.17	17.16	13.73	16.32	8.32	28.01	12.24	15.11	3.90	11.40	8.79	9.59	7.93
WIL Sml Grwth	17.51	19.36	17.84	14.71	17.51	7.96	27.95	13.99	16.82	4.14	14.38	10.66	10.74	7.94
Excess Returns														
Arithmetic Excess	5.47	1.76	0.83	0.22	5.47	7.61	-10.54	-2.07	0.41	-3.31	1.36	1.65	3.29	-7.18
Geometric Excess	7.11	1.71	0.79	0.20	7.11	6.91	-8.13	-1.60	0.45	-2.77	1.16	1.74	3.16	-4.95

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.72	4.41	3.87	3.73
Information Ratio	1.51	0.39	0.20	0.05
Downside Deviation	2.51	2.80	2.48	2.53
Skewness	1.52	0.70	0.73	0.38
Kurtosis	2.16	1.05	1.39	0.89
Alpha	4.61	1.83	1.04	1.01
Beta	0.93	0.95	0.93	0.90
Residual Risk	3.80	4.08	3.43	3.19
R Squared	0.98	0.97	0.98	0.97



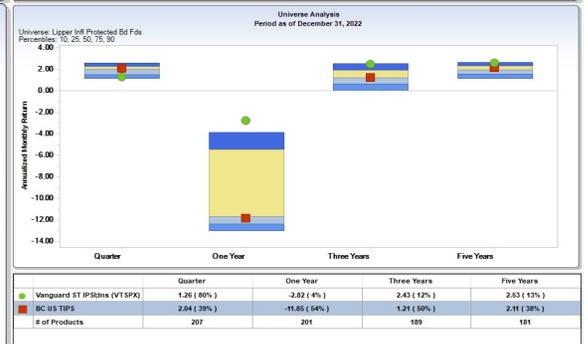
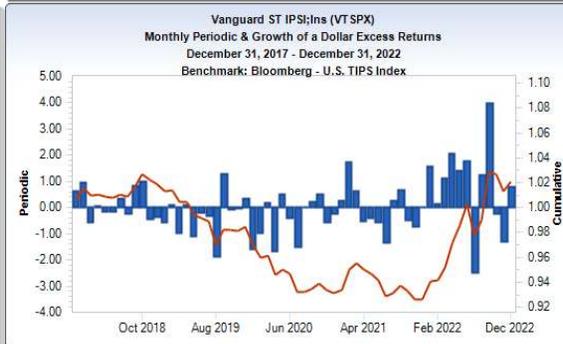
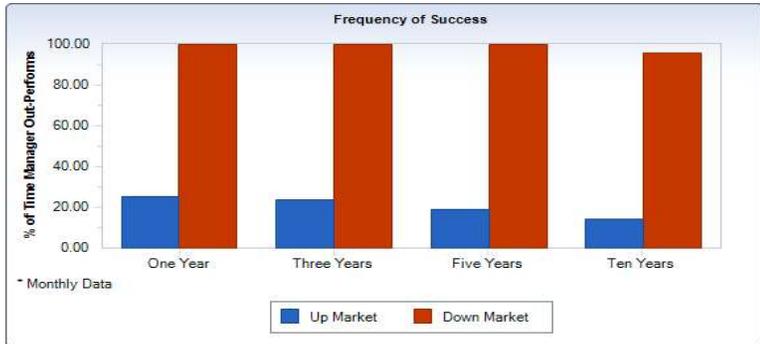
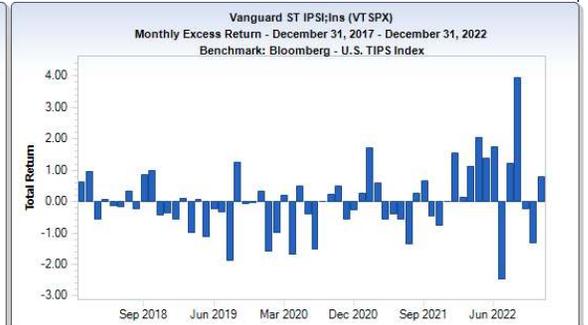
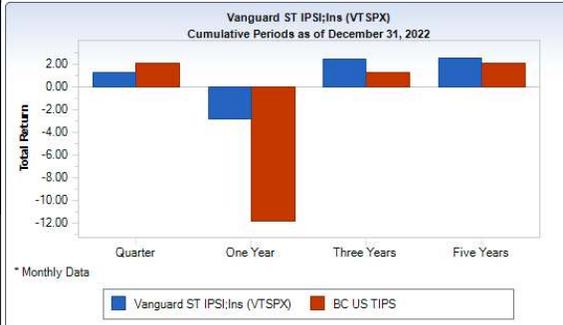
Performance Fact Sheet: Vanguard ST IPSI;Ins (VTSPX)

Fund Family: Vanguard
Asset Class: Taxable Fixed Income
Style Category: Infl Protected Bd Fds
Objective Category: INFLATION PROTECTED
Ticker: VTSPX
Share Class: I

Net Assets (\$MM):
Expense Ratio: 0.04
Front Load:
12B-1 Fee: 0.00
Turnover: 26.00
Mgr Tenure: 11

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard ST IPSI;Ins (VTSPX)	-2.82	2.43	2.53	1.33	-2.82	5.35	4.97	4.82	0.60	0.83	2.79	-0.16	-1.11	-1.53
BC US TIPS	-11.85	1.21	2.11	1.12	-11.85	5.96	10.99	8.43	-1.26	3.01	4.68	-1.44	3.64	-8.61
Risk - Standard Deviation														
Vanguard ST IPSI;Ins (VTSPX)	4.51	3.20	2.58	2.17	4.51	1.41	2.58	1.12	1.02	0.83	1.74	1.36	1.99	1.84
BC US TIPS	9.74	7.01	5.81	5.16	9.74	3.84	4.53	3.48	2.85	2.11	4.03	4.08	4.45	6.18
Risk - Semi-Variance														
Vanguard ST IPSI;Ins (VTSPX)	3.41	2.66	2.12	1.69	3.41	0.89	2.23	0.81	0.71	0.60	1.14	0.67	1.54	1.38
BC US TIPS	6.74	5.49	4.54	3.99	6.74	2.73	3.49	2.43	2.13	1.62	2.97	2.00	3.40	4.95
Excess Returns														
Arithmetic Excess	9.03	1.22	0.42	0.21	9.03	-0.61	-6.02	-3.61	1.86	-2.18	-1.89	1.28	-4.75	7.08
Geometric Excess	10.24	1.21	0.41	0.21	10.24	-0.58	-5.42	-3.33	1.88	-2.12	-1.81	1.30	-4.58	7.75

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	5.75	4.34	3.69	3.50
Information Ratio	1.78	0.28	0.11	0.06
Downside Deviation	4.32	2.85	2.43	2.25
Skewness	-0.32	0.62	0.66	0.80
Kurtosis	0.97	1.38	2.26	2.42
Alpha	1.71	1.48	0.91	0.44
Beta	0.44	0.43	0.41	0.37
Residual Risk	1.54	1.41	1.21	1.13
R Squared	0.89	0.82	0.80	0.74

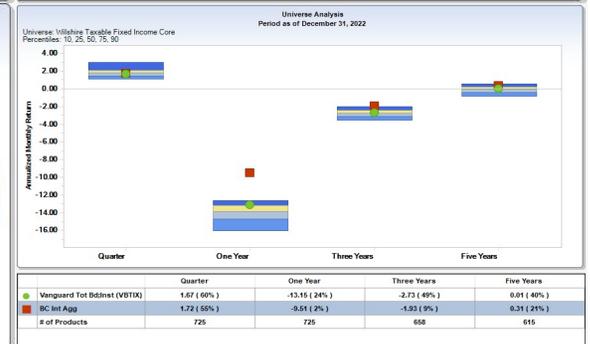
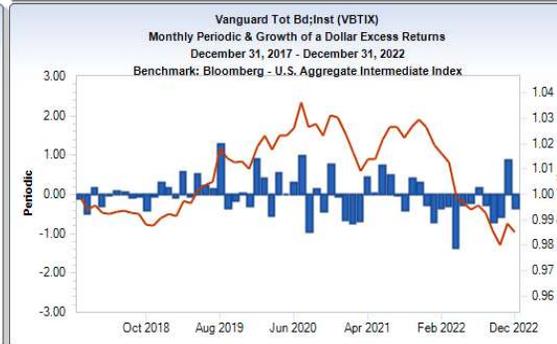
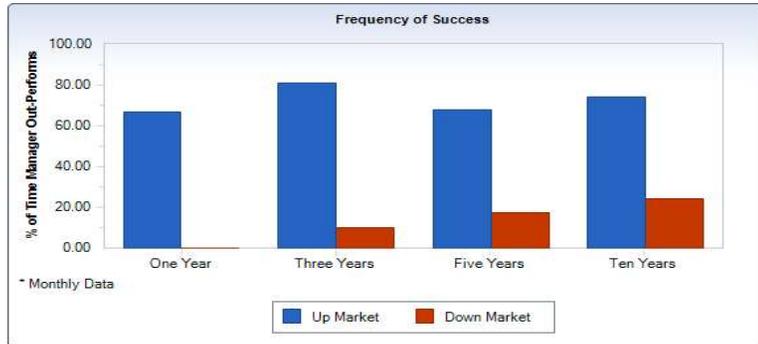
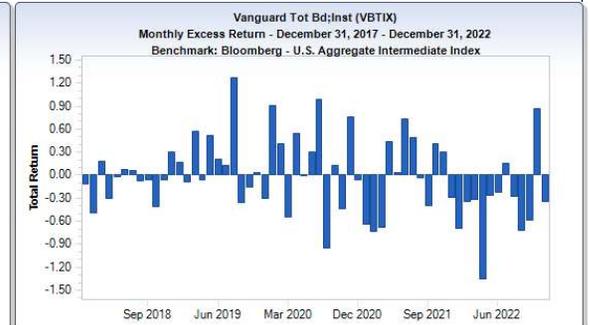
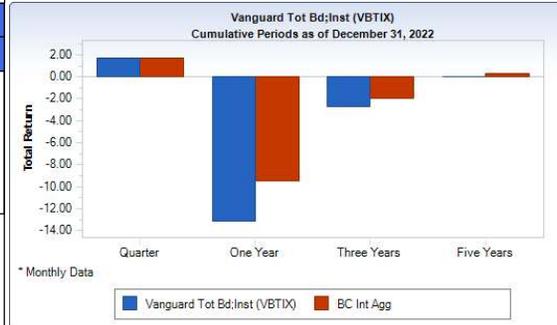


Performance Fact Sheet: Vanguard Tot Bd;Inst (VBTIX)

Fund Family:	Vanguard	Net Assets (\$MM):	
Asset Class:	Taxable Fixed Income	Expense Ratio:	0.04
Style Category:	Core Bond Funds	Front Load:	
Objective Category:	CORE BOND	12B-1 Fee:	0.00
Ticker:	VBTIX	Turnover:	69.00
Share Class:	I	Mgr Tenure:	10

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard Tot Bd;Inst (VBTIX)	-13.15	-2.73	0.01	1.01	-13.15	-1.65	7.74	8.73	-0.01	3.57	2.61	0.40	5.89	-2.15
BC Int Agg	-9.51	-1.93	0.31	1.00	-9.51	-1.29	5.60	6.67	0.92	2.27	1.97	1.21	4.12	-1.02
Risk - Standard Deviation														
Vanguard Tot Bd;Inst (VBTIX)	8.21	5.89	5.13	4.18	8.21	3.09	3.60	3.61	3.02	1.47	4.03	3.22	2.31	3.20
BC Int Agg	6.72	4.39	3.78	3.05	6.72	1.58	1.80	2.16	2.41	1.27	2.68	1.94	1.88	2.45
Risk - Semi-Variance														
Vanguard Tot Bd;Inst (VBTIX)	5.01	4.32	3.78	3.13	5.01	2.21	2.59	2.19	2.01	1.10	3.21	1.83	1.69	2.38
BC Int Agg	4.22	3.33	2.88	2.32	4.22	1.07	1.14	1.39	1.59	0.92	2.08	1.16	1.37	1.79
Excess Returns														
Arithmetic Excess	-3.64	-0.80	-0.30	0.01	-3.64	-0.36	2.14	2.06	-0.93	1.30	0.64	-0.81	1.77	-1.13
Geometric Excess	-4.02	-0.82	-0.30	0.01	-4.02	-0.36	2.03	1.93	-0.92	1.27	0.63	-0.80	1.70	-1.14

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.84	1.99	1.74	1.44
Information Ratio	-2.19	-0.41	-0.17	0.01
Downside Deviation	1.22	1.38	1.19	1.02
Skewness	0.54	0.06	0.17	0.01
Kurtosis	2.59	-0.61	0.31	1.06
Alpha	-1.55	-0.02	0.01	-0.06
Beta	1.21	1.30	1.32	1.33
Residual Risk	1.20	1.49	1.28	1.02
R Squared	0.98	0.94	0.94	0.94



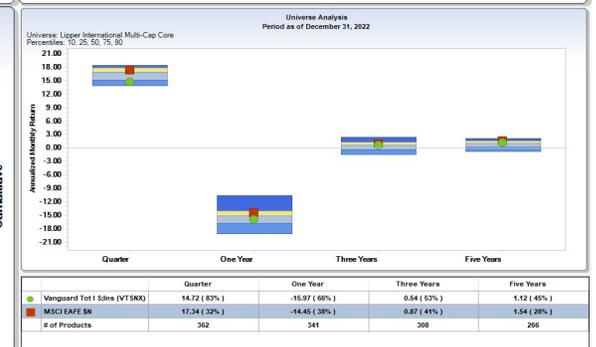
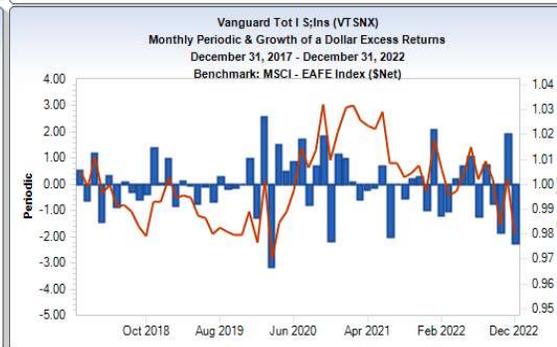
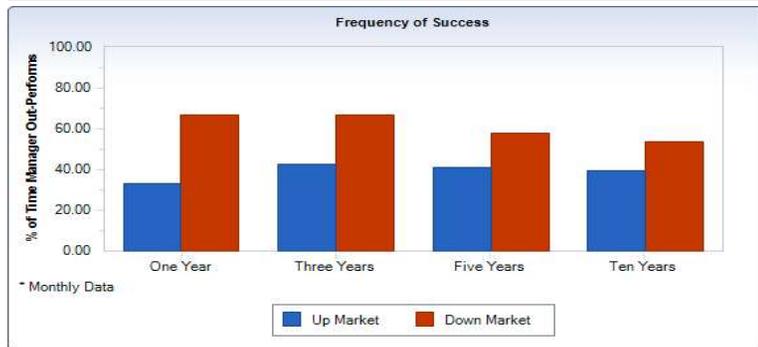
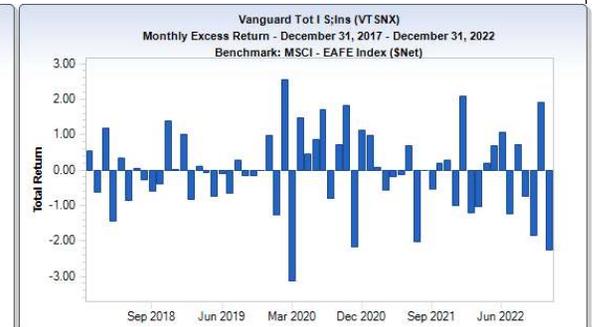
Performance Fact Sheet: Vanguard Tot I S;Ins (VTSNX)

Fund Family: Vanguard
Asset Class: Non U.S. Equity
Style Category: International Multi-Cap Core
Objective Category: INTERNATIONAL
Ticker: VTSNX
Share Class: I

Net Assets (\$MM):
Expense Ratio: 0.08
Front Load:
12B-1 Fee: 0.00
Turnover: 8.00
Mgr Tenure: 13

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard Tot I S;Ins (VTSNX)	-15.97	0.54	1.12	4.08	-15.97	8.68	11.29	21.55	-14.39	27.55	4.70	-4.25	-4.15	15.13
MSCI EAFE \$N	-14.45	0.87	1.54	4.67	-14.45	11.26	7.81	22.01	-13.79	25.03	1.00	-0.81	-4.90	22.78
Risk - Standard Deviation														
Vanguard Tot I S;Ins (VTSNX)	21.77	20.32	17.79	14.79	21.77	9.27	26.65	12.64	12.95	3.82	12.51	13.98	10.52	11.44
MSCI EAFE \$N	21.69	20.25	17.52	14.84	21.69	9.80	26.49	11.53	12.43	4.16	13.42	15.23	9.69	12.15
Risk - Semi-Variance														
Vanguard Tot I S;Ins (VTSNX)	13.45	14.78	12.96	10.78	13.45	7.35	20.92	9.48	9.39	2.64	8.08	8.98	7.71	7.96
MSCI EAFE \$N	14.43	14.60	12.71	10.78	14.43	7.68	19.45	8.84	8.92	3.15	9.42	10.21	6.48	8.43
Excess Returns														
Arithmetic Excess	-1.52	-0.33	-0.42	-0.59	-1.52	-2.58	3.48	-0.46	-0.60	2.52	3.70	-3.44	0.75	-7.65
Geometric Excess	-1.78	-0.33	-0.41	-0.56	-1.78	-2.32	3.23	-0.38	-0.70	2.02	3.66	-3.47	0.79	-6.23

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	5.01	4.72	3.94	3.55
Information Ratio	-0.36	-0.07	-0.10	-0.16
Downside Deviation	3.45	3.46	2.84	2.54
Skewness	0.17	-0.24	-0.19	-0.15
Kurtosis	-1.25	-0.45	0.22	0.61
Alpha	-2.20	-0.32	-0.41	-0.44
Beta	0.98	0.98	0.99	0.97
Residual Risk	5.05	4.66	3.91	3.52
R Squared	0.95	0.95	0.95	0.94



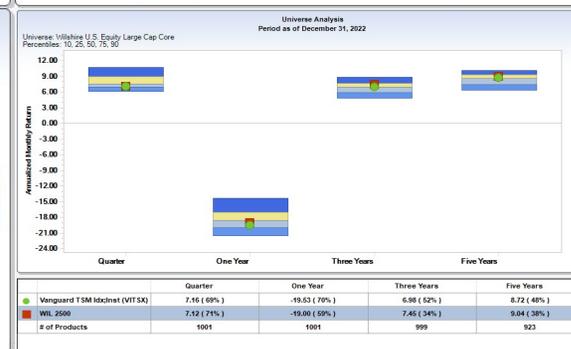
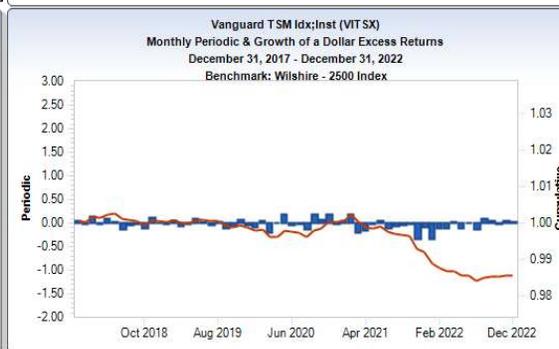
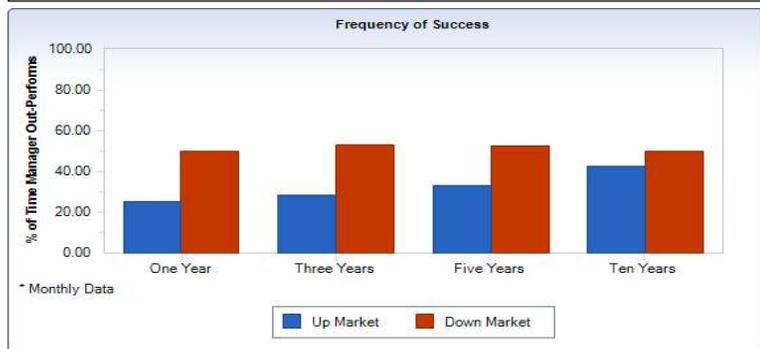
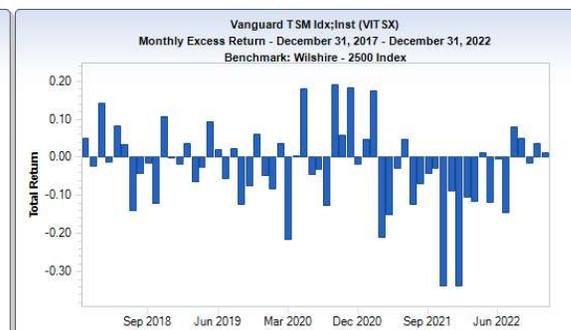
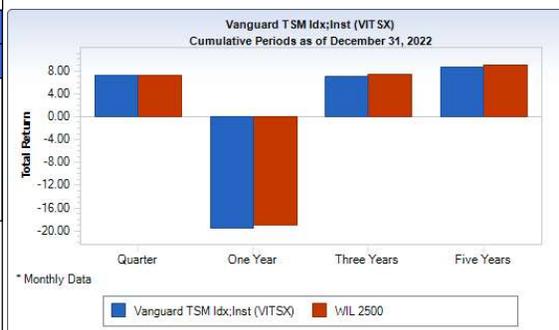
Performance Fact Sheet: Vanguard TSM Idx;Inst (VITSX)

Fund Family: Vanguard
Asset Class: U.S. Equity
Style Category: Multi-Cap Core Funds
Objective Category: GROWTH & INCOME
Ticker: VITSX
Share Class: I

Net Assets (\$MM):
Expense Ratio: 0.03
Front Load: 0.00
12B-1 Fee: 0.00
Turnover: 4.00
Mgr Tenure: 7

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard TSM Idx;Inst (VITSX)	-19.53	6.98	8.72	12.09	-19.53	25.74	21.00	30.83	-5.16	21.18	12.68	0.42	12.57	33.49
WIL 2500	-19.00	7.45	9.04	12.31	-19.00	26.76	20.84	31.06	-5.22	21.02	13.36	0.70	12.78	32.97
Risk - Standard Deviation														
Vanguard TSM Idx;Inst (VITSX)	23.15	21.80	19.22	15.19	23.15	10.56	27.50	13.44	15.54	3.85	11.27	13.23	8.74	8.67
WIL 2500	23.23	21.76	19.20	15.14	23.23	10.53	27.37	13.49	15.49	3.83	11.11	13.25	8.60	8.66
Risk - Semi-Variance														
Vanguard TSM Idx;Inst (VITSX)	14.91	16.08	14.50	11.49	14.91	8.17	20.80	10.34	12.52	2.55	8.03	8.34	6.41	6.90
WIL 2500	14.99	16.07	14.49	11.45	14.99	8.12	20.69	10.43	12.45	2.52	7.83	8.28	6.37	6.92
Excess Returns														
Arithmetic Excess	-0.53	-0.47	-0.32	-0.22	-0.53	-1.02	0.16	-0.23	0.06	0.16	-0.68	-0.28	-0.21	0.52
Geometric Excess	-0.65	-0.44	-0.29	-0.20	-0.65	-0.80	0.13	-0.18	0.06	0.13	-0.60	-0.28	-0.19	0.39

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	0.40	0.44	0.38	0.36
Information Ratio	-1.60	-1.00	-0.76	-0.55
Downside Deviation	0.33	0.32	0.28	0.27
Skewness	-1.33	-0.35	-0.51	-0.58
Kurtosis	2.12	0.49	1.13	0.62
Alpha	-0.74	-0.45	-0.30	-0.22
Beta	1.00	1.00	1.00	1.00
Residual Risk	0.38	0.44	0.38	0.36
R Squared	1.00	1.00	1.00	1.00

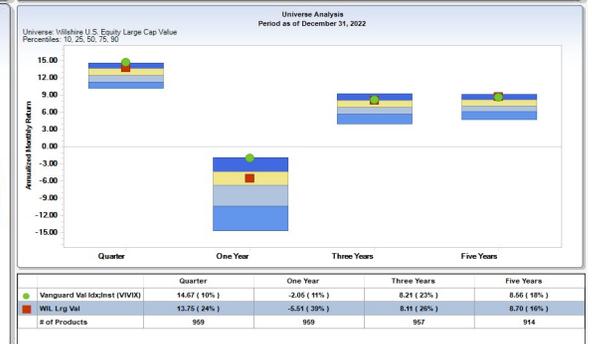
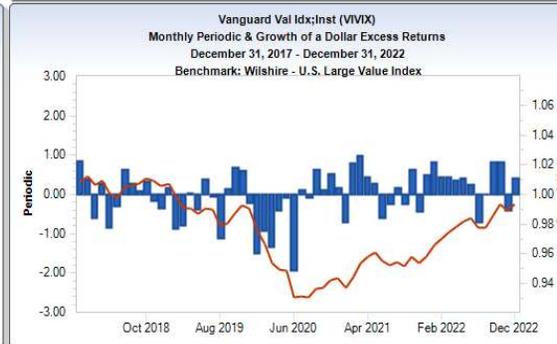
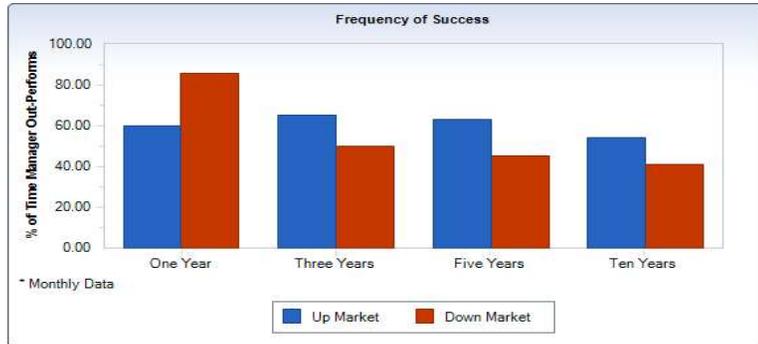
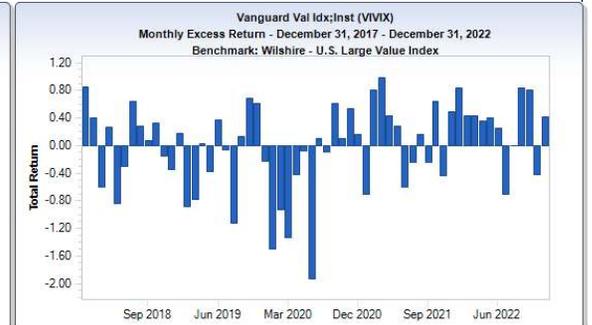
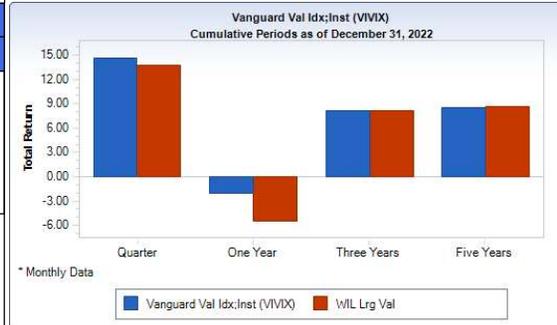


Performance Fact Sheet: Vanguard Val Idx;Inst (VIVIX)

Fund Family:	Vanguard	Net Assets (\$MM):	
Asset Class:	U.S. Equity	Expense Ratio:	0.04
Style Category:	Large-Cap Value Funds	Front Load:	
Objective Category:	GROWTH & INCOME	12B-1 Fee:	0.00
Ticker:	VIVIX	Turnover:	9.00
Share Class:	I	Mgr Tenure:	25

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard Val Idx;Inst (VIVIX)	-2.05	8.21	8.56	11.92	-2.05	26.48	2.29	25.83	-5.43	17.14	16.87	-0.86	13.20	33.08
WIL Lrg Val	-5.51	8.11	8.70	11.52	-5.51	24.53	7.37	27.72	-5.94	16.31	15.44	-0.79	13.00	30.24
Risk - Standard Deviation														
Vanguard Val Idx;Inst (VIVIX)	20.64	20.49	18.10	14.44	20.64	12.72	26.79	13.05	14.65	5.28	10.52	12.99	7.64	9.28
WIL Lrg Val	21.01	19.77	17.45	13.88	21.01	10.98	25.51	12.12	14.12	4.56	9.39	12.71	7.77	9.08
Risk - Semi-Variance														
Vanguard Val Idx;Inst (VIVIX)	13.57	14.96	13.47	10.80	13.57	9.40	19.81	10.29	11.52	3.67	7.29	8.35	6.03	7.27
WIL Lrg Val	13.88	14.49	13.08	10.42	13.88	8.23	18.93	9.56	11.34	2.94	6.38	8.04	6.19	7.19
Excess Returns														
Arithmetic Excess	3.46	0.10	-0.14	0.40	3.46	1.95	-5.08	-1.89	0.51	0.83	1.43	-0.07	0.20	2.84
Geometric Excess	3.66	0.09	-0.13	0.36	3.66	1.57	-4.73	-1.48	0.54	0.71	1.24	-0.07	0.18	2.18

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.66	2.41	2.19	2.08
Information Ratio	2.21	0.04	-0.06	0.17
Downside Deviation	1.34	1.93	1.72	1.53
Skewness	-1.00	-1.01	-0.83	-0.24
Kurtosis	0.63	0.76	0.50	2.02
Alpha	3.50	-0.10	-0.34	0.07
Beta	0.98	1.03	1.03	1.03
Residual Risk	1.65	2.32	2.12	2.04
R Squared	0.99	0.99	0.99	0.98



VI. Advisor Plan Fact Sheets

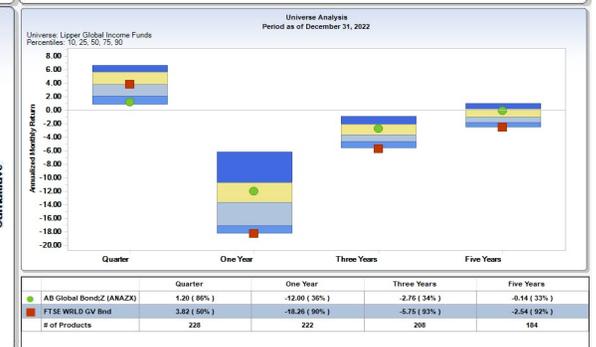
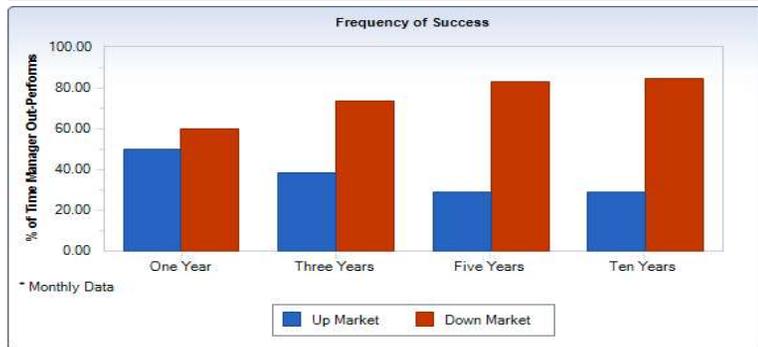
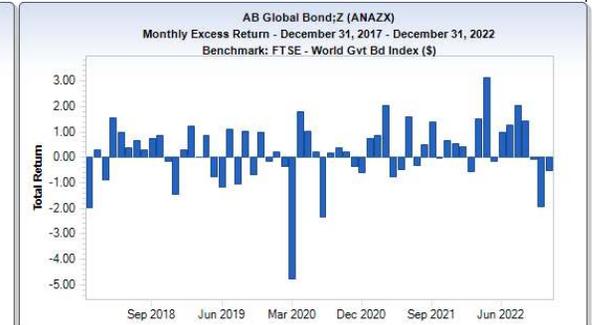
Performance Fact Sheet: AB Global Bond;Z (ANAZX)

Fund Family: AllianceBernstein
 Asset Class: Global Fixed Income
 Style Category: Global Income Funds
 Objective Category: GLOBAL INCOME
 Ticker: ANAZX
 Share Class: Z

Net Assets (\$MM): \$757.90
 Expense Ratio: 0.50
 Front Load:
 12B-1 Fee:
 Turnover: 159.00
 Mgr Tenure: 10

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
AB Global Bond;Z (ANAZX)	-12.00	-2.76	-0.14	1.39	-12.00	-0.58	5.11	7.63	0.33	3.16	5.81	0.72	7.46	-2.15
FTSE WRLD GV Bnd	-18.26	-5.75	-2.54	-1.22	-18.26	-6.97	10.11	5.90	-0.84	7.49	1.60	-3.57	-0.48	-4.00
Risk - Standard Deviation														
AB Global Bond;Z (ANAZX)	7.10	6.18	5.04	4.12	7.10	2.67	7.01	2.42	1.49	1.62	3.19	3.00	1.86	3.88
FTSE WRLD GV Bnd	10.40	7.64	6.67	6.06	10.40	4.61	4.14	4.78	4.55	3.30	8.73	3.98	4.50	5.13
Risk - Semi-Variance														
AB Global Bond;Z (ANAZX)	4.14	4.73	3.96	3.25	4.14	1.97	6.13	1.64	0.91	1.11	2.45	2.03	1.32	2.95
FTSE WRLD GV Bnd	6.88	5.72	4.96	4.56	6.88	3.14	2.57	3.27	2.81	2.47	6.65	3.09	3.66	3.68
Excess Returns														
Arithmetic Excess	6.26	2.99	2.40	2.61	6.26	6.39	-5.00	1.73	1.17	-4.33	4.21	4.29	7.94	1.85
Geometric Excess	7.66	3.17	2.46	2.64	7.66	6.87	-4.54	1.63	1.18	-4.03	4.14	4.45	7.98	1.93

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.73	4.83	4.26	4.42
Information Ratio	1.62	0.66	0.58	0.60
Downside Deviation	3.36	3.81	3.34	3.21
Skewness	-0.02	-1.28	-1.12	-0.31
Kurtosis	0.12	4.21	3.81	1.28
Alpha	-1.11	0.70	0.84	1.57
Beta	0.63	0.64	0.59	0.47
Residual Risk	2.69	3.92	3.25	3.02
R Squared	0.85	0.61	0.59	0.47

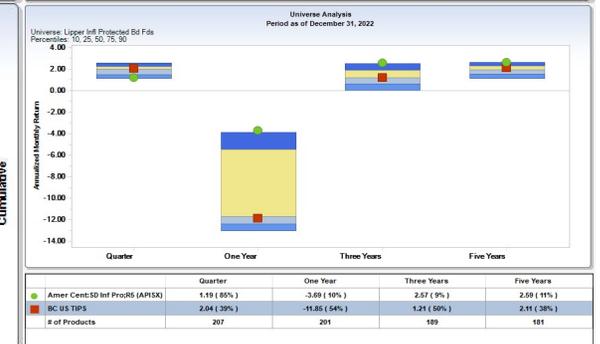
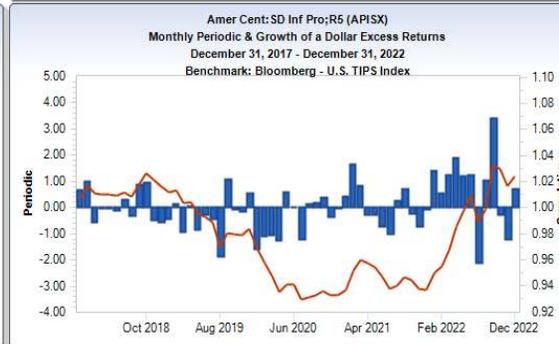
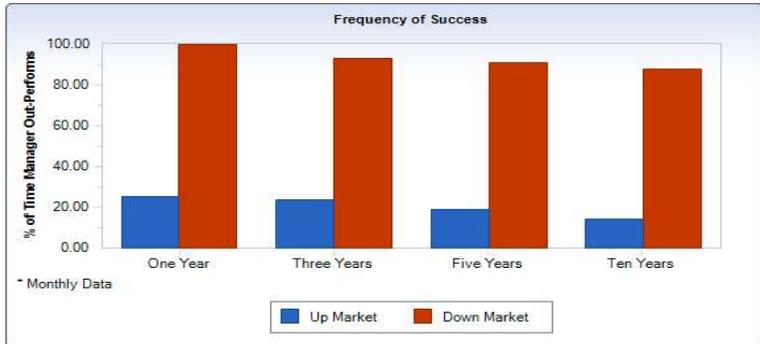
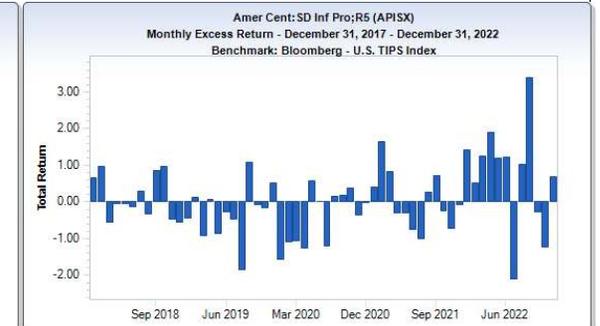
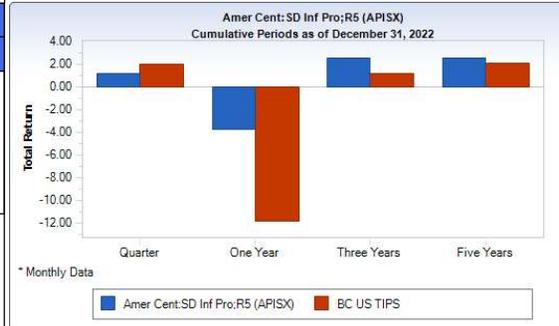


Performance Fact Sheet: Amer Cent:SD Inf Pro;R5 (APISX)

Fund Family:	American Century Investments	Net Assets (\$MM):	\$108.90
Asset Class:	Taxable Fixed Income	Expense Ratio:	0.36
Style Category:	Infl Protected Bd Fds	Front Load:	
Objective Category:	INFLATION PROTECTED	12B-1 Fee:	
Ticker:	APISX	Turnover:	71.00
Share Class:	I	Mgr Tenure:	18

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Amer Cent:SD Inf Pro;R5 (APISX)	-3.69	2.57	2.59	1.33	-3.69	6.47	5.25	4.93	0.36	0.91	3.45	-0.30	-1.50	-2.09
BC US TIPS	-11.85	1.21	2.11	1.12	-11.85	5.96	10.99	8.43	-1.26	3.01	4.68	-1.44	3.64	-8.61
Risk - Standard Deviation														
Amer Cent:SD Inf Pro;R5 (APISX)	5.34	4.10	3.28	2.72	5.34	1.89	4.01	1.46	1.04	1.12	2.03	1.74	2.18	2.48
BC US TIPS	9.74	7.01	5.81	5.16	9.74	3.84	4.53	3.48	2.85	2.11	4.03	4.08	4.45	6.18
Risk - Semi-Variance														
Amer Cent:SD Inf Pro;R5 (APISX)	4.01	3.38	2.67	2.11	4.01	1.23	3.51	1.06	0.70	0.81	1.33	0.82	1.72	1.92
BC US TIPS	6.74	5.49	4.54	3.99	6.74	2.73	3.49	2.43	2.13	1.62	2.97	2.00	3.40	4.95
Excess Returns														
Arithmetic Excess	8.16	1.36	0.48	0.21	8.16	0.51	-5.74	-3.50	1.62	-2.10	-1.23	1.14	-5.14	6.52
Geometric Excess	9.26	1.34	0.47	0.21	9.26	0.48	-5.17	-3.23	1.64	-2.04	-1.18	1.16	-4.96	7.13

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.99	3.88	3.36	3.20
Information Ratio	1.86	0.35	0.14	0.06
Downside Deviation	3.80	2.60	2.24	2.08
Skewness	-0.42	0.49	0.52	0.69
Kurtosis	0.93	0.82	1.44	1.78
Alpha	2.00	1.58	0.88	0.40
Beta	0.53	0.54	0.51	0.46
Residual Risk	1.69	1.95	1.66	1.46
R Squared	0.90	0.79	0.76	0.73

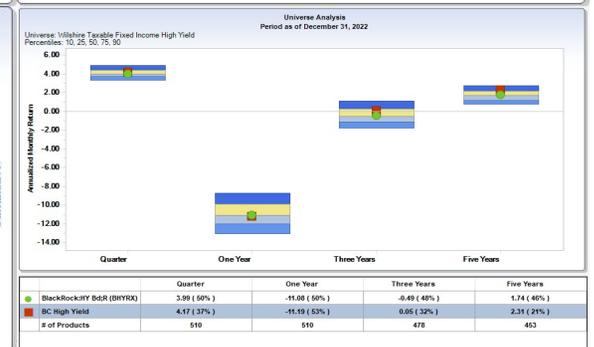
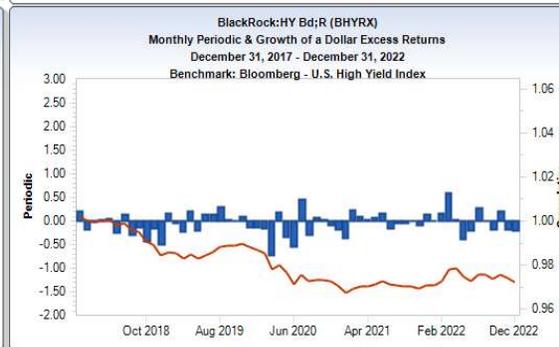
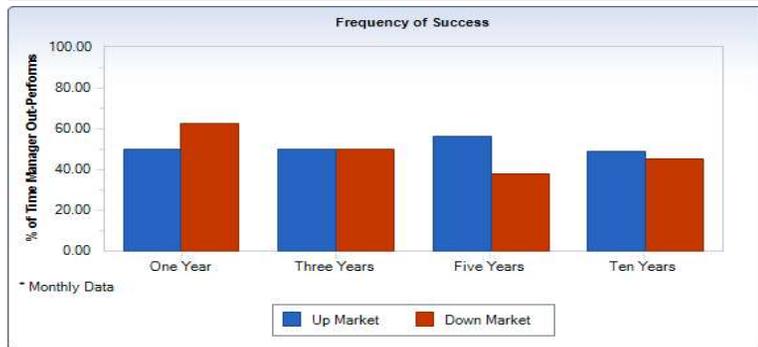
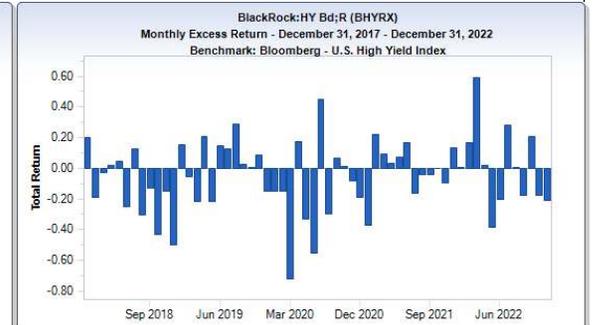
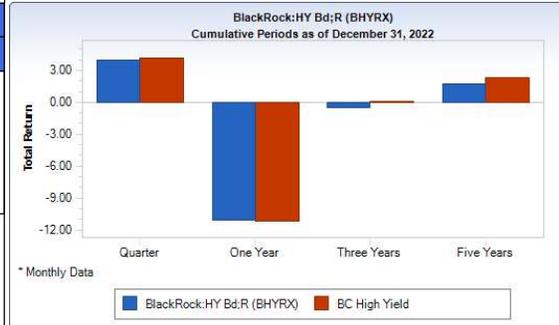


Performance Fact Sheet: BlackRock:HY Bd;R (BHYRX)

Fund Family:	BlackRock	Net Assets (\$MM):	\$92.10
Asset Class:	Taxable Fixed Income	Expense Ratio:	1.16
Style Category:	High Yield Funds	Front Load:	
Objective Category:	HIGH YIELD	12B-1 Fee:	0.00
Ticker:	BHYRX	Turnover:	67.00
Share Class:	R	Mgr Tenure:	

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
BlackRock:HY Bd;R (BHYRX)	-11.08	-0.49	1.74	3.51	-11.08	5.29	5.23	14.78	-3.63	7.52	13.18	-4.50	2.59	8.72
BC High Yield	-11.19	0.05	2.31	4.03	-11.19	5.28	7.11	14.32	-2.08	7.50	17.13	-4.47	2.45	7.44
Risk - Standard Deviation														
BlackRock:HY Bd;R (BHYRX)	12.01	11.50	9.46	7.51	12.01	2.82	15.85	5.12	4.10	2.14	4.62	6.35	4.76	4.83
BC High Yield	11.69	11.13	9.11	7.40	11.69	2.56	15.21	4.92	3.56	2.18	6.05	6.41	4.53	4.77
Risk - Semi-Variance														
BlackRock:HY Bd;R (BHYRX)	7.99	9.15	7.50	5.95	7.99	1.86	13.47	3.16	3.23	1.51	3.20	4.33	3.77	3.97
BC High Yield	7.74	8.86	7.22	5.78	7.74	1.70	12.99	3.00	2.77	1.55	4.00	4.22	3.51	3.82
Excess Returns														
Arithmetic Excess	0.11	-0.54	-0.57	-0.52	0.11	0.01	-1.88	0.46	-1.55	0.02	-3.95	-0.03	0.14	1.28
Geometric Excess	0.12	-0.54	-0.56	-0.50	0.12	0.01	-1.76	0.40	-1.58	0.02	-3.37	-0.03	0.14	1.19

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	0.93	0.90	0.82	1.08
Information Ratio	0.14	-0.61	-0.68	-0.46
Downside Deviation	0.59	0.65	0.60	0.84
Skewness	0.76	-0.14	-0.21	-1.37
Kurtosis	0.62	0.99	0.76	7.78
Alpha	0.50	-0.52	-0.60	-0.51
Beta	1.03	1.03	1.04	1.00
Residual Risk	0.88	0.82	0.74	1.10
R Squared	0.99	1.00	0.99	0.98

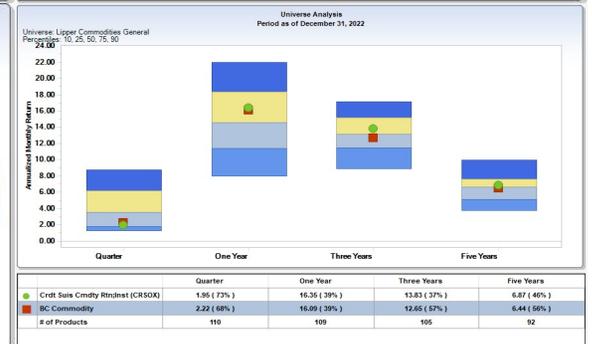
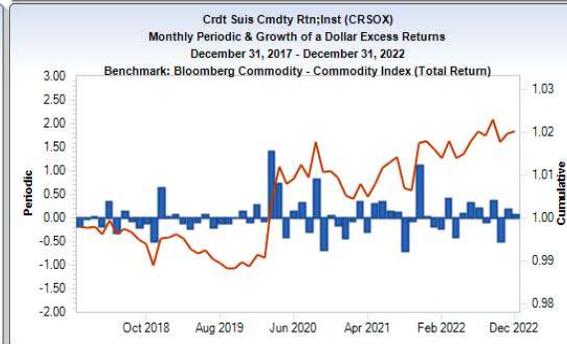
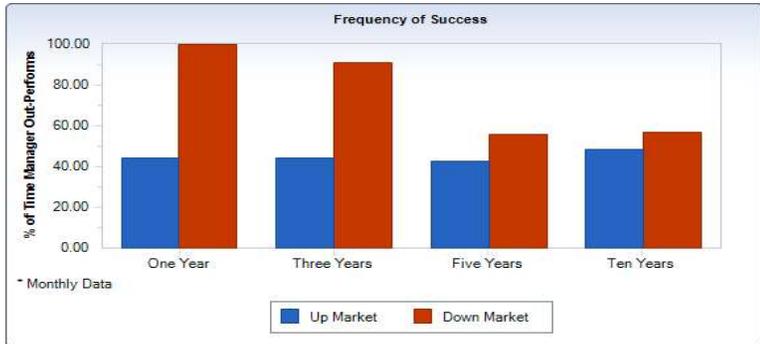
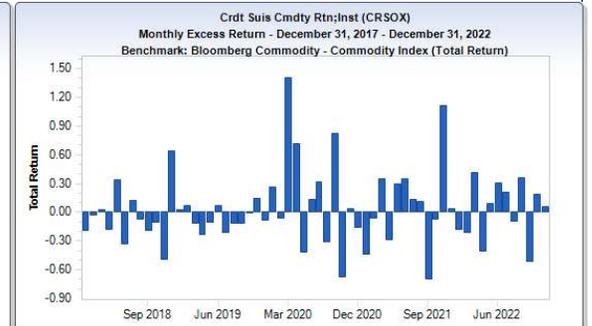
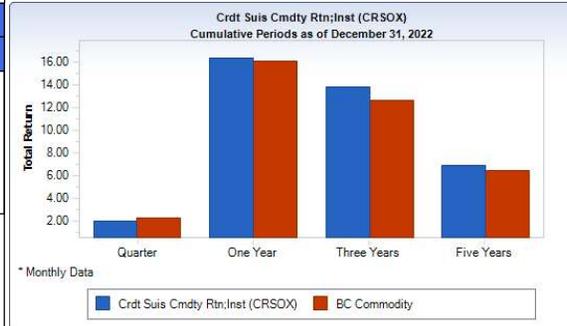


Performance Fact Sheet: Crdt Suis Cmdty Rtn;Inst (CRSOX)

Fund Family:	Credit Suisse	Net Assets (\$MM):	\$2,063.20
Asset Class:	U.S. Equity	Expense Ratio:	0.80
Style Category:	Commodities General	Front Load:	
Objective Category:	COMMODITIES	12B-1 Fee:	
Ticker:	CRSOX	Turnover:	22.00
Share Class:	I	Mgr Tenure:	18

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Crdt Suis Cmdty Rtn;Inst (CRSOX)	16.35	13.83	6.87	-1.10	16.35	28.17	-1.10	6.98	-11.65	1.73	12.42	-24.95	-16.87	-9.96
BC Commodity	16.09	12.65	6.44	-1.28	16.09	27.11	-3.12	7.69	-11.25	1.70	11.77	-24.66	-17.01	-9.52
Risk - Standard Deviation														
Crdt Suis Cmdty Rtn;Inst (CRSOX)	20.67	17.79	15.17	13.74	20.67	12.86	19.63	9.86	9.00	5.57	12.17	15.04	13.24	8.95
BC Commodity	20.98	18.64	15.76	14.13	20.98	14.06	20.85	9.77	9.40	5.72	12.45	15.31	13.53	9.02
Risk - Semi-Variance														
Crdt Suis Cmdty Rtn;Inst (CRSOX)	16.32	14.24	11.55	10.07	16.32	10.03	15.53	6.55	6.60	3.83	8.09	10.65	9.07	6.36
BC Commodity	16.72	15.02	12.15	10.44	16.72	11.07	16.57	6.52	7.07	3.83	8.25	10.82	9.43	6.24
Excess Returns														
Arithmetic Excess	0.26	1.18	0.43	0.18	0.26	1.06	2.02	-0.71	-0.40	0.03	0.65	-0.29	0.14	-0.44
Geometric Excess	0.22	1.05	0.40	0.18	0.22	0.83	2.09	-0.66	-0.45	0.03	0.58	-0.38	0.17	-0.49

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.04	1.57	1.32	1.09
Information Ratio	0.21	0.66	0.30	0.18
Downside Deviation	0.79	1.01	0.80	0.71
Skewness	-0.44	0.79	1.12	0.80
Kurtosis	-0.89	1.33	2.70	4.32
Alpha	0.43	1.55	0.59	0.13
Beta	0.98	0.95	0.96	0.97
Residual Risk	1.01	1.24	1.11	0.97
R Squared	1.00	1.00	0.99	1.00



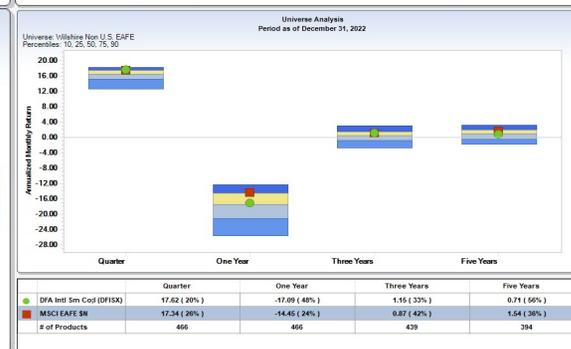
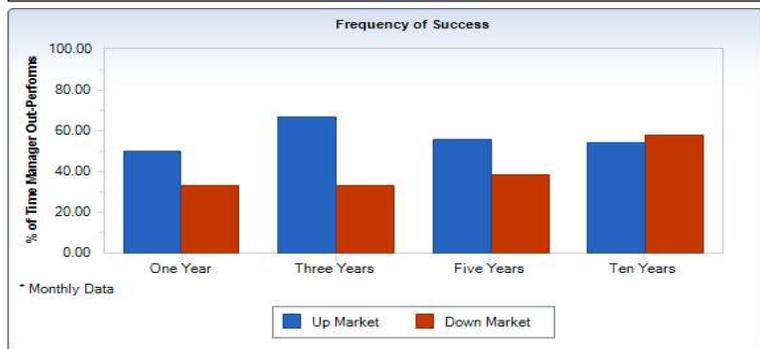
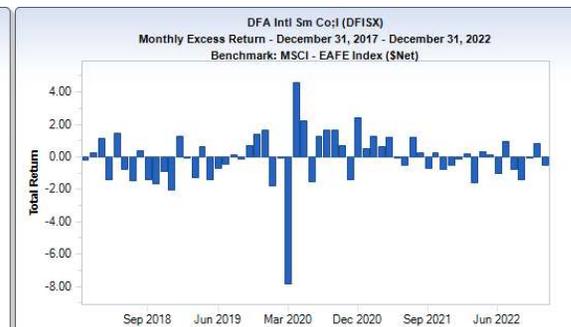
Performance Fact Sheet: DFA Intl Sm Co;I (DFISX)

Fund Family: Dimensional
Asset Class: Non U.S. Equity
Style Category: International Small/Mid-Cap Core
Objective Category: INTERNATL SMALL-CAP
Ticker: DFISX
Share Class: I

Net Assets (\$MM): \$10,255.40
Expense Ratio: 0.39
Front Load: 0.00
12B-1 Fee:
Turnover:
Mgr Tenure:

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
DFA Intl Sm Co;I (DFISX)	-17.09	1.15	0.71	6.09	-17.09	14.24	9.27	24.20	-19.41	30.25	5.79	5.91	-6.31	27.45
MSCI EAFE \$N	-14.45	0.87	1.54	4.67	-14.45	11.26	7.81	22.01	-13.79	25.03	1.00	-0.81	-4.90	22.78
Risk - Standard Deviation														
DFA Intl Sm Co;I (DFISX)	23.47	23.79	20.43	16.44	23.47	11.14	32.73	13.57	12.95	4.16	14.13	11.92	10.30	11.45
MSCI EAFE \$N	21.69	20.25	17.52	14.84	21.69	9.80	26.49	11.53	12.43	4.16	13.42	15.23	9.69	12.15
Risk - Semi-Variance														
DFA Intl Sm Co;I (DFISX)	15.43	17.90	15.27	12.26	15.43	9.11	25.81	10.57	10.10	3.01	9.75	7.34	6.86	7.68
MSCI EAFE \$N	14.43	14.60	12.71	10.78	14.43	7.68	19.45	8.84	8.92	3.15	9.42	10.21	6.48	8.43
Excess Returns														
Arithmetic Excess	-2.64	0.28	-0.83	1.42	-2.64	2.98	1.46	2.19	-5.62	5.22	4.79	6.72	-1.41	4.67
Geometric Excess	-3.09	0.28	-0.82	1.36	-3.09	2.68	1.35	1.79	-6.52	4.17	4.74	6.77	-1.48	3.80

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	2.83	6.51	5.58	5.07
Information Ratio	-1.09	0.04	-0.15	0.27
Downside Deviation	2.09	5.20	4.33	3.91
Skewness	-0.22	-1.74	-1.49	-1.20
Kurtosis	-0.82	8.84	9.05	6.81
Alpha	-1.66	0.26	-0.86	1.13
Beta	1.08	1.14	1.13	1.06
Residual Risk	2.25	5.47	4.82	4.87
R Squared	0.99	0.95	0.94	0.91



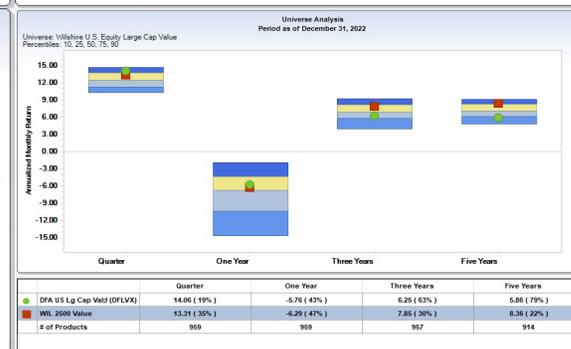
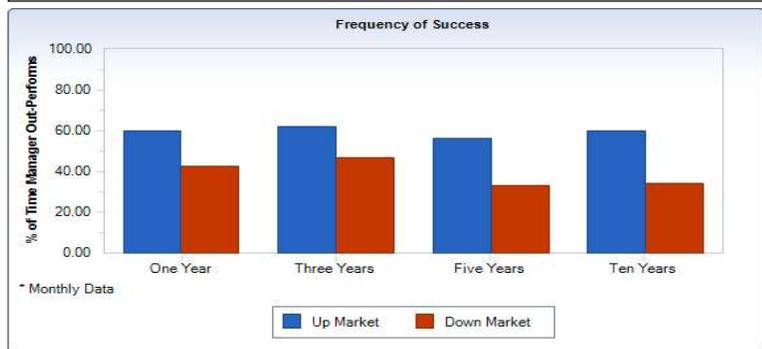
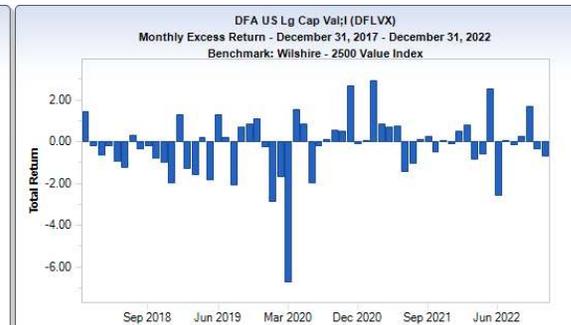
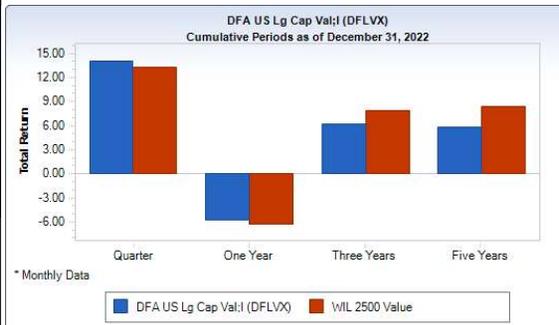
Performance Fact Sheet: DFA US Lg Cap Val;I (DFLVX)

Fund Family: Dimensional
 Asset Class: U.S. Equity
 Style Category: Multi-Cap Value Funds
 Objective Category: GROWTH & INCOME
 Ticker: DFLVX
 Share Class: I

Net Assets (\$MM): \$22,899.70
 Expense Ratio: 0.22
 Front Load:
 12B-1 Fee:
 Turnover: 10.00
 Mgr Tenure: 11

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
DFA US Lg Cap Val;I (DFLVX)	-5.76	6.25	5.86	10.86	-5.76	28.05	-0.61	25.47	-11.65	18.95	18.91	-3.49	10.08	40.31
WIL 2500 Value	-6.29	7.85	8.36	11.32	-6.29	24.80	7.28	27.32	-6.48	15.47	16.48	-1.09	12.63	30.59
Risk - Standard Deviation														
DFA US Lg Cap Val;I (DFLVX)	23.76	24.31	21.34	17.00	23.76	12.78	33.34	15.86	15.95	5.51	13.40	15.12	7.82	10.17
WIL 2500 Value	21.25	20.22	17.81	14.14	21.25	10.84	26.41	12.43	14.22	4.68	9.78	12.44	8.10	9.21
Risk - Semi-Variance														
DFA US Lg Cap Val;I (DFLVX)	16.02	18.06	16.00	12.80	16.02	9.23	25.02	12.35	12.75	4.00	9.67	9.32	6.29	7.92
WIL 2500 Value	14.07	14.88	13.39	10.63	14.07	8.14	19.71	9.73	11.58	3.00	6.70	7.80	6.39	7.31
Excess Returns														
Arithmetic Excess	0.53	-1.60	-2.50	-0.46	0.53	3.25	-7.89	-1.85	-5.17	3.48	2.43	-2.40	-2.55	9.72
Geometric Excess	0.57	-1.48	-2.31	-0.41	0.57	2.60	-7.35	-1.45	-5.53	3.01	2.09	-2.43	-2.26	7.44

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.48	5.94	5.14	4.65
Information Ratio	0.13	-0.25	-0.45	-0.09
Downside Deviation	3.09	4.80	4.03	3.56
Skewness	0.04	-1.53	-1.30	-1.00
Kurtosis	1.23	5.56	5.54	4.81
Alpha	1.43	-2.67	-3.44	-2.01
Beta	1.10	1.18	1.18	1.17
Residual Risk	3.87	4.29	3.78	3.87
R Squared	0.97	0.97	0.97	0.95



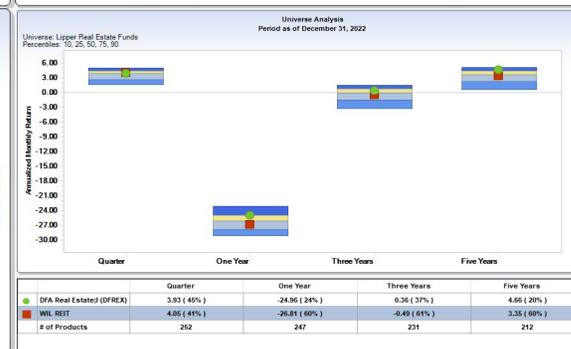
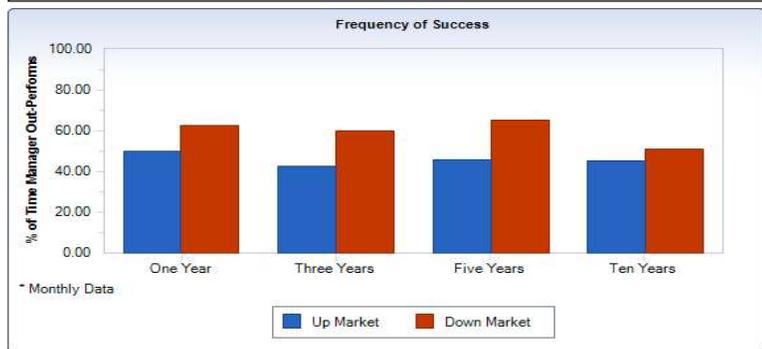
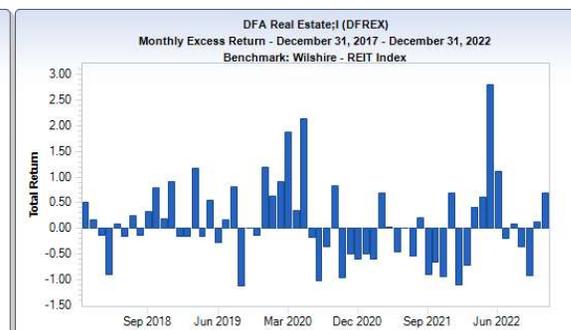
Performance Fact Sheet: DFA Real Estate;I (DFREX)

Fund Family: Dimensional
 Asset Class: Real Estate
 Style Category: Real Estate Funds
 Objective Category: REAL ESTATE
 Ticker: DFREX
 Share Class: I

Net Assets (\$MM): \$7,652.40
 Expense Ratio: 0.18
 Front Load:
 12B-1 Fee:
 Turnover: 5.00
 Mgr Tenure: 11

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
DFA Real Estate;I (DFREX)	-24.96	0.36	4.66	7.04	-24.96	41.84	-5.04	28.10	-3.00	5.71	8.38	3.23	31.11	1.39
WIL REIT	-26.81	-0.49	3.35	6.31	-26.81	46.18	-7.90	25.76	-4.84	4.18	7.24	4.23	31.78	1.86
Risk - Standard Deviation														
DFA Real Estate;I (DFREX)	23.28	22.49	19.40	16.75	23.28	15.06	25.70	11.54	15.29	5.56	16.95	15.95	13.09	15.19
WIL REIT	23.81	23.27	20.06	17.12	23.81	13.90	27.35	11.57	16.19	6.21	16.95	15.68	13.10	14.92
Risk - Semi-Variance														
DFA Real Estate;I (DFREX)	14.73	17.26	14.90	12.59	14.73	11.15	20.81	5.61	11.76	3.54	10.65	11.48	9.34	11.70
WIL REIT	14.89	18.04	15.54	12.96	14.89	10.27	22.20	5.59	12.51	3.95	10.60	11.32	9.18	11.54
Excess Returns														
Arithmetic Excess	1.85	0.85	1.31	0.73	1.85	-4.34	2.86	2.34	1.84	1.53	1.14	-1.00	-0.67	-0.47
Geometric Excess	2.53	0.85	1.27	0.69	2.53	-2.97	3.11	1.86	1.93	1.47	1.06	-0.96	-0.51	-0.46

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	3.67	3.19	2.76	2.04
Information Ratio	0.69	0.27	0.46	0.34
Downside Deviation	2.19	1.90	1.72	1.22
Skewness	1.25	1.12	0.93	1.35
Kurtosis	2.44	1.26	1.53	4.78
Alpha	1.25	0.80	1.35	0.84
Beta	0.97	0.96	0.96	0.97
Residual Risk	3.37	2.90	2.53	1.92
R Squared	0.98	0.98	0.98	0.99

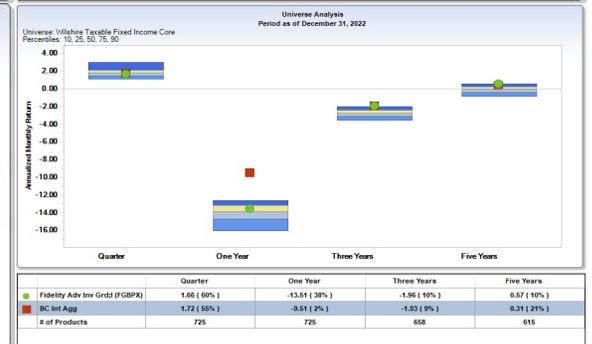
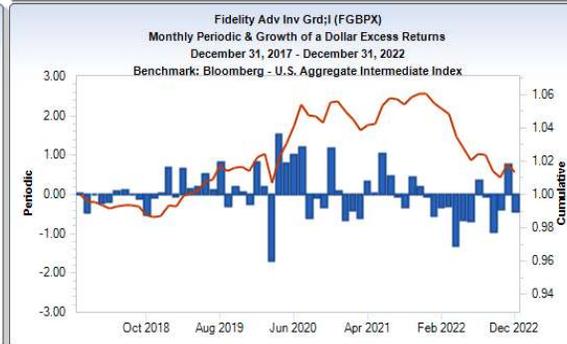
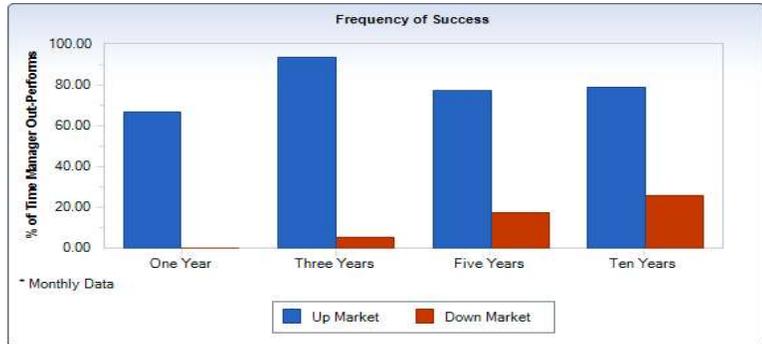
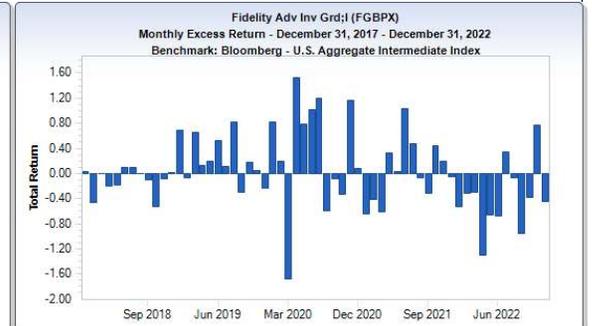
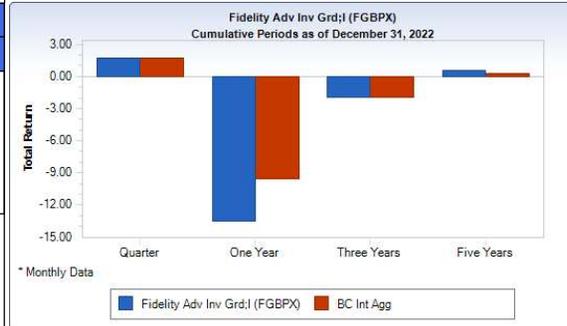


Performance Fact Sheet: Fidelity Adv Inv Grd;I (FGBPX)

Fund Family:	Fidelity Investments	Net Assets (\$MM):	\$1,206.70
Asset Class:	Taxable Fixed Income	Expense Ratio:	0.49
Style Category:	Core Bond Funds	Front Load:	
Objective Category:	CORE BOND	12B-1 Fee:	
Ticker:	FGBPX	Turnover:	75.00
Share Class:	I	Mgr Tenure:	19

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Fidelity Adv Inv Grd;I (FGBPX)	-13.51	-1.96	0.57	1.41	-13.51	-0.93	9.99	9.63	-0.40	3.87	5.30	-1.61	5.76	-1.79
BC Int Agg	-9.51	-1.93	0.31	1.00	-9.51	-1.29	5.60	6.67	0.92	2.27	1.97	1.21	4.12	-1.02
Risk - Standard Deviation														
Fidelity Adv Inv Grd;I (FGBPX)	8.19	6.20	5.27	4.30	8.19	2.93	4.56	3.29	2.71	1.43	3.92	2.96	2.58	3.63
BC Int Agg	6.72	4.39	3.78	3.05	6.72	1.58	1.80	2.16	2.41	1.27	2.68	1.94	1.88	2.45
Risk - Semi-Variance														
Fidelity Adv Inv Grd;I (FGBPX)	5.00	4.50	3.89	3.22	5.00	2.05	3.51	2.17	1.85	1.04	3.15	1.76	1.97	2.76
BC Int Agg	4.22	3.33	2.88	2.32	4.22	1.07	1.14	1.39	1.59	0.92	2.08	1.16	1.37	1.79
Excess Returns														
Arithmetic Excess	-4.00	-0.03	0.26	0.41	-4.00	0.36	4.39	2.96	-1.32	1.60	3.33	-2.82	1.64	-0.77
Geometric Excess	-4.42	-0.03	0.26	0.41	-4.42	0.36	4.16	2.77	-1.31	1.56	3.27	-2.79	1.58	-0.78

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.90	2.52	2.08	1.80
Information Ratio	-2.33	-0.01	0.13	0.23
Downside Deviation	1.23	1.73	1.43	1.26
Skewness	0.57	0.09	0.06	0.01
Kurtosis	0.87	-0.17	0.72	0.96
Alpha	-2.03	0.90	0.59	0.33
Beta	1.20	1.34	1.33	1.33
Residual Risk	1.33	2.03	1.66	1.50
R Squared	0.97	0.89	0.90	0.88



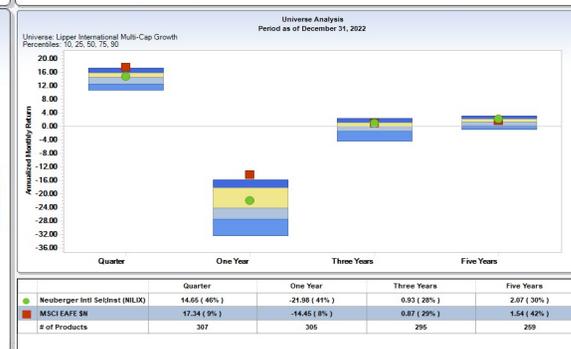
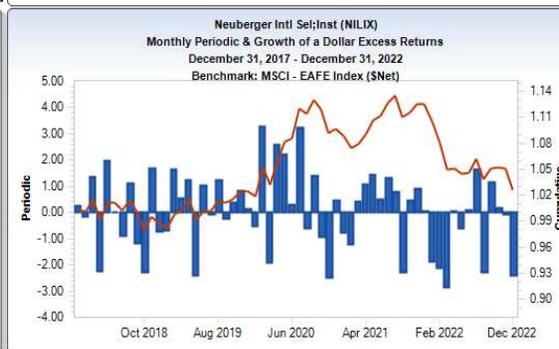
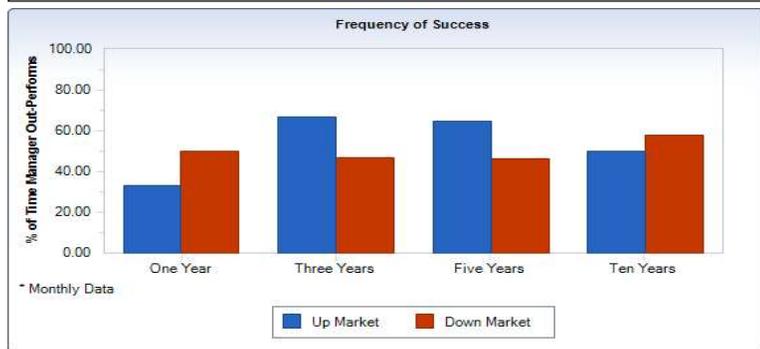
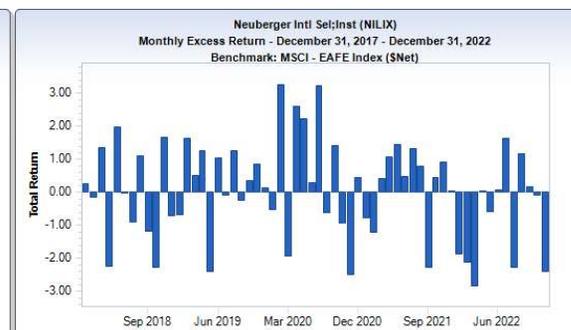
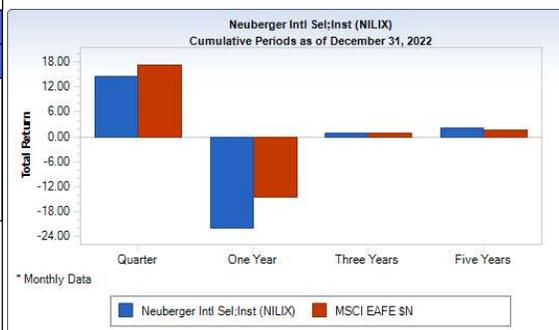
Performance Fact Sheet: Neuberger Intl Sel;Inst (NILIX)

Fund Family: Neuberger Berman Investment Advisers
 Asset Class: Non U.S. Equity
 Style Category: International Multi-Cap Growth
 Objective Category: INTERNATIONAL
 Ticker: NILIX
 Share Class: I

Net Assets (\$MM): \$124.10
 Expense Ratio: 0.81
 Front Load:
 12B-1 Fee:
 Turnover: 55.00
 Mgr Tenure: 17

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Neuberger Intl Sel;Inst (NILIX)	-21.98	0.93	2.07	4.80	-21.98	14.21	15.41	26.47	-14.79	27.54	-1.04	0.32	-2.90	17.26
MSCI EAFE \$N	-14.45	0.87	1.54	4.67	-14.45	11.26	7.81	22.01	-13.79	25.03	1.00	-0.81	-4.90	22.78
Risk - Standard Deviation														
Neuberger Intl Sel;Inst (NILIX)	22.67	21.31	18.71	15.13	22.67	11.55	26.63	13.28	13.62	5.20	13.16	12.22	9.97	9.56
MSCI EAFE \$N	21.69	20.25	17.52	14.84	21.69	9.80	26.49	11.53	12.43	4.16	13.42	15.23	9.69	12.15
Risk - Semi-Variance														
Neuberger Intl Sel;Inst (NILIX)	13.58	15.46	13.82	11.21	13.58	9.11	20.72	10.82	10.83	3.78	9.57	8.38	6.82	6.21
MSCI EAFE \$N	14.43	14.60	12.71	10.78	14.43	7.68	19.45	8.84	8.92	3.15	9.42	10.21	6.48	8.43
Excess Returns														
Arithmetic Excess	-7.53	0.06	0.53	0.13	-7.53	2.95	7.60	4.46	-1.00	2.51	-2.04	1.13	2.00	-5.52
Geometric Excess	-8.80	0.06	0.52	0.12	-8.80	2.65	7.05	3.66	-1.16	2.01	-2.02	1.14	2.10	-4.50

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	5.18	5.63	5.13	4.68
Information Ratio	-1.70	0.01	0.10	0.03
Downside Deviation	3.69	4.01	3.74	3.42
Skewness	0.07	0.05	-0.12	-0.18
Kurtosis	-1.36	-0.56	-0.46	-0.24
Alpha	-8.49	0.06	0.52	0.23
Beta	1.02	1.02	1.03	0.97
Residual Risk	5.10	5.62	5.09	4.67
R Squared	0.95	0.93	0.93	0.91

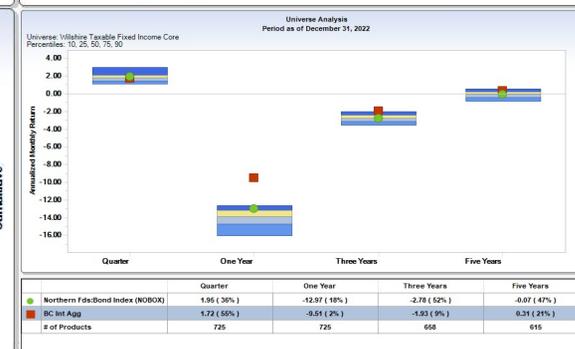
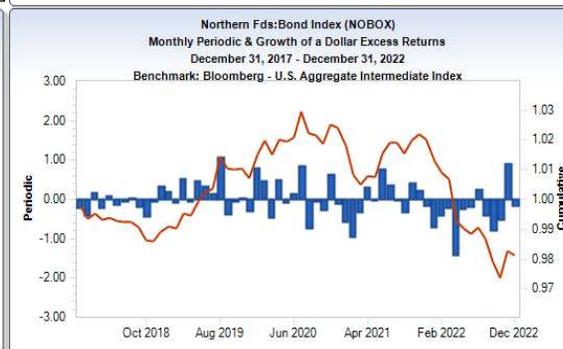
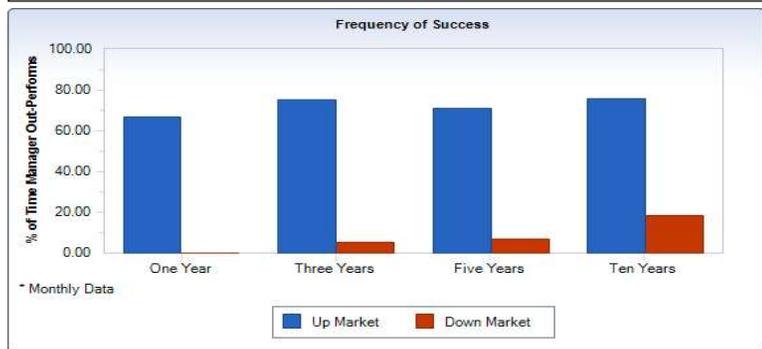
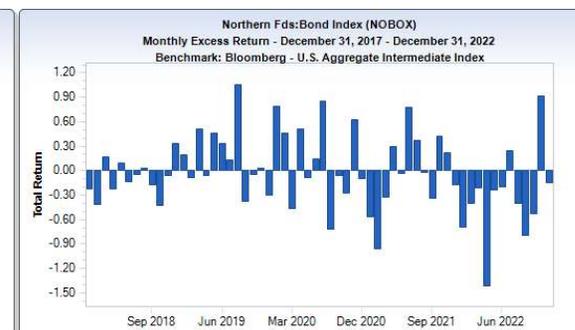
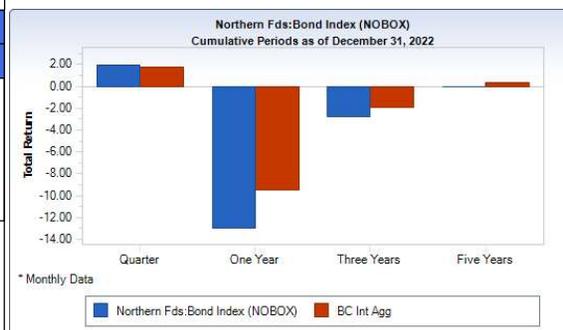


Performance Fact Sheet: Northern Fds:Bond Index (NOBOX)

Fund Family:	Northern Trust	Net Assets (\$MM):	\$2,042.50
Asset Class:	Taxable Fixed Income	Expense Ratio:	0.07
Style Category:	Core Bond Funds	Front Load:	
Objective Category:	CORE BOND	12B-1 Fee:	
Ticker:	NOBOX	Turnover:	49.00
Share Class:	Standard	Mgr Tenure:	10

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Northern Fds:Bond Index (NOBOX)	-12.97	-2.78	-0.07	0.94	-12.97	-1.66	7.36	8.63	-0.17	3.49	2.35	0.50	5.94	-2.28
BC Int Agg	-9.51	-1.93	0.31	1.00	-9.51	-1.29	5.60	6.67	0.92	2.27	1.97	1.21	4.12	-1.02
Risk - Standard Deviation														
Northern Fds:Bond Index (NOBOX)	8.36	5.85	5.09	4.12	8.36	2.91	3.34	3.44	3.11	1.65	3.79	2.90	2.37	3.13
BC Int Agg	6.72	4.39	3.78	3.05	6.72	1.58	1.80	2.16	2.41	1.27	2.68	1.94	1.88	2.45
Risk - Semi-Variance														
Northern Fds:Bond Index (NOBOX)	5.15	4.32	3.77	3.10	5.15	2.14	2.31	2.16	2.03	1.21	3.03	1.72	1.75	2.33
BC Int Agg	4.22	3.33	2.88	2.32	4.22	1.07	1.14	1.39	1.59	0.92	2.08	1.16	1.37	1.79
Excess Returns														
Arithmetic Excess	-3.46	-0.85	-0.38	-0.06	-3.46	-0.37	1.76	1.96	-1.09	1.22	0.38	-0.71	1.82	-1.26
Geometric Excess	-3.82	-0.87	-0.38	-0.06	-3.82	-0.37	1.67	1.84	-1.08	1.19	0.37	-0.70	1.75	-1.27

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.96	1.87	1.63	1.32
Information Ratio	-1.95	-0.47	-0.23	-0.04
Downside Deviation	1.33	1.31	1.13	0.96
Skewness	0.36	-0.09	-0.04	-0.23
Kurtosis	2.01	-0.10	0.63	1.47
Alpha	-1.08	-0.07	-0.08	-0.13
Beta	1.23	1.30	1.32	1.32
Residual Risk	1.22	1.33	1.12	0.89
R Squared	0.98	0.95	0.95	0.95



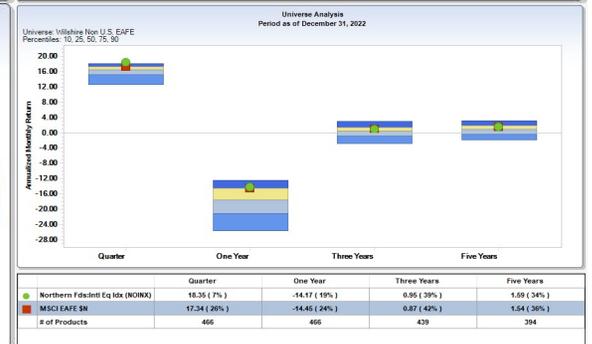
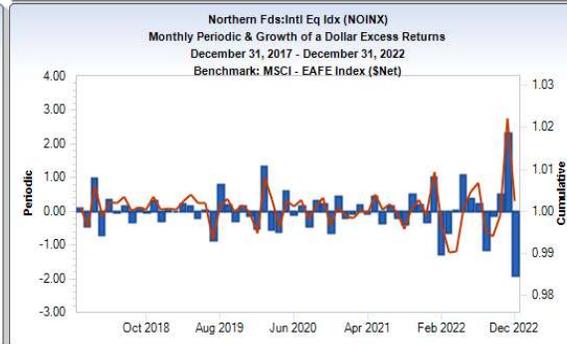
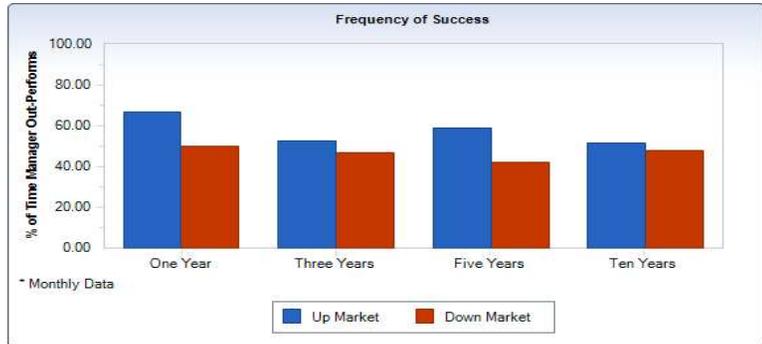
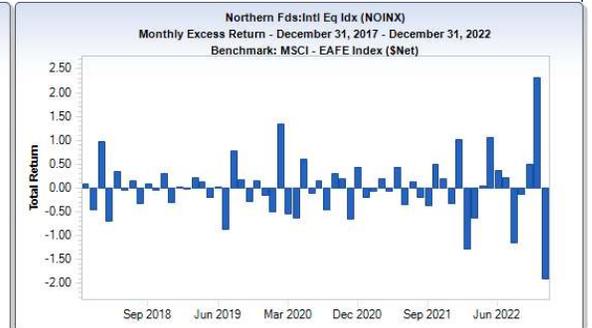
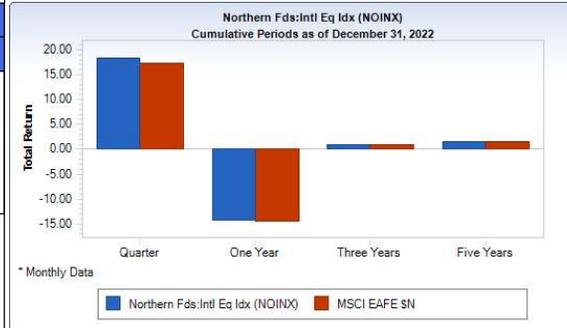
Performance Fact Sheet: Northern Fds: Intl Eq Idx (NOINX)

Fund Family: Northern Trust
Asset Class: Non U.S. Equity
Style Category: International Multi-Cap Core
Objective Category: INTERNATIONAL
Ticker: NOINX
Share Class: Standard

Net Assets (\$MM): \$4,088.50
Expense Ratio: 0.10
Front Load:
12B-1 Fee:
Turnover: 21.00
Mgr Tenure: 4

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Northern Fds: Intl Eq Idx (NOINX)	-14.17	0.95	1.59	4.53	-14.17	11.08	7.92	21.97	-13.76	25.29	1.10	-0.91	-5.78	21.73
MSCI EAFE \$N	-14.45	0.87	1.54	4.67	-14.45	11.26	7.81	22.01	-13.79	25.03	1.00	-0.81	-4.90	22.78
Risk - Standard Deviation														
Northern Fds: Intl Eq Idx (NOINX)	23.74	20.70	17.87	14.90	23.74	10.05	25.79	11.61	12.63	4.31	12.02	14.36	10.42	12.18
MSCI EAFE \$N	21.69	20.25	17.52	14.84	21.69	9.80	26.49	11.53	12.43	4.16	13.42	15.23	9.69	12.15
Risk - Semi-Variance														
Northern Fds: Intl Eq Idx (NOINX)	14.68	14.67	12.81	10.75	14.68	7.90	19.17	8.95	9.27	3.12	8.23	9.90	7.09	8.49
MSCI EAFE \$N	14.43	14.60	12.71	10.78	14.43	7.68	19.45	8.84	8.92	3.15	9.42	10.21	6.48	8.43
Excess Returns														
Arithmetic Excess	0.28	0.08	0.05	-0.14	0.28	-0.18	0.11	-0.04	0.03	0.26	0.10	-0.10	-0.88	-1.05
Geometric Excess	0.33	0.08	0.05	-0.13	0.33	-0.16	0.10	-0.03	0.03	0.21	0.10	-0.10	-0.93	-0.86

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.05	2.63	2.20	2.08
Information Ratio	0.08	0.03	0.02	-0.06
Downside Deviation	2.84	1.79	1.50	1.45
Skewness	0.18	0.37	0.40	0.24
Kurtosis	0.13	2.22	3.26	2.27
Alpha	1.87	0.08	0.05	-0.11
Beta	1.08	1.01	1.01	0.99
Residual Risk	3.79	2.67	2.23	2.09
R Squared	0.97	0.98	0.98	0.98

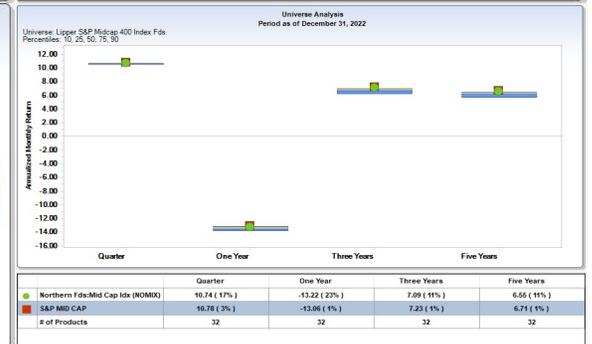
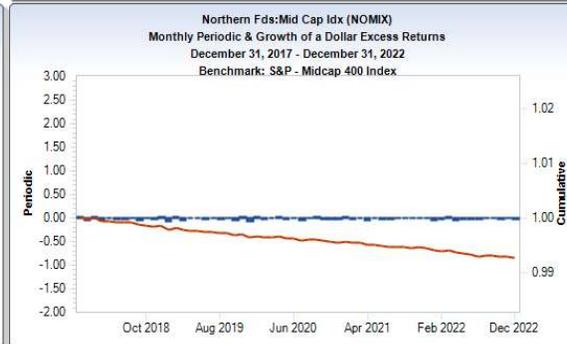
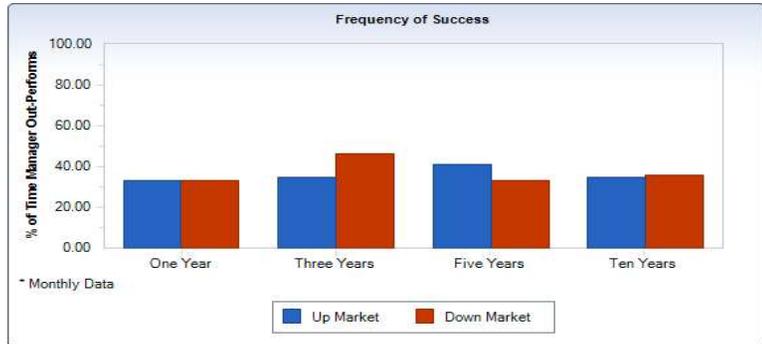
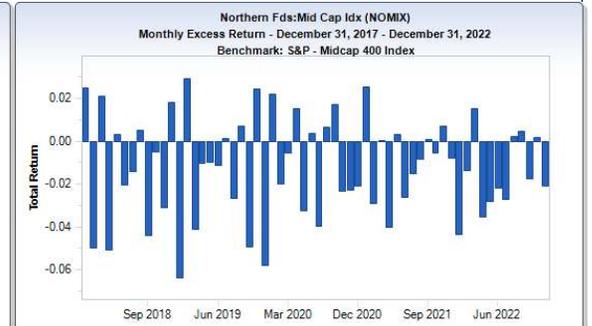


Performance Fact Sheet: Northern Fds:Mid Cap Idx (NOMIX)

Fund Family:	Northern Trust Investments Inc	Net Assets (\$MM):	\$1,957.30
Asset Class:	U.S. Equity	Expense Ratio:	0.10
Style Category:	S&P Midcap 400 Index Fds	Front Load:	
Objective Category:	MID-CAP	12B-1 Fee:	
Ticker:	NOMIX	Turnover:	15.00
Share Class:	Standard	Mgr Tenure:	17

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Northern Fds:Mid Cap Idx (NOMIX)	-13.22	7.09	6.55	10.60	-13.22	24.64	13.55	25.94	-11.21	16.03	20.58	-2.37	9.61	33.23
S&P MID CAP	-13.06	7.23	6.71	10.78	-13.06	24.76	13.66	26.20	-11.08	16.24	20.74	-2.18	9.77	33.50
Risk - Standard Deviation														
Northern Fds:Mid Cap Idx (NOMIX)	25.14	24.85	22.07	17.46	25.14	12.17	33.51	16.86	17.50	5.82	13.88	11.88	11.66	11.17
S&P MID CAP	25.14	24.86	22.08	17.46	25.14	12.20	33.53	16.87	17.50	5.82	13.86	11.85	11.65	11.23
Risk - Semi-Variance														
Northern Fds:Mid Cap Idx (NOMIX)	16.46	18.66	16.77	13.22	16.46	8.88	26.31	12.73	14.68	4.07	9.40	8.09	8.72	8.35
S&P MID CAP	16.45	18.66	16.77	13.22	16.45	8.89	26.32	12.73	14.70	4.08	9.40	8.08	8.72	8.40
Excess Returns														
Arithmetic Excess	-0.16	-0.14	-0.16	-0.18	-0.16	-0.12	-0.11	-0.26	-0.13	-0.21	-0.16	-0.19	-0.16	-0.27
Geometric Excess	-0.18	-0.13	-0.15	-0.16	-0.18	-0.10	-0.10	-0.21	-0.15	-0.18	-0.13	-0.19	-0.15	-0.20

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	0.06	0.06	0.08	0.09
Information Ratio	-2.98	-1.95	-1.83	-1.80
Downside Deviation	0.04	0.05	0.06	0.06
Skewness	0.24	0.10	-0.18	-0.20
Kurtosis	-0.85	-0.93	-0.69	-0.59
Alpha	-0.18	-0.12	-0.14	-0.16
Beta	1.00	1.00	1.00	1.00
Residual Risk	0.06	0.07	0.08	0.09
R Squared	1.00	1.00	1.00	1.00



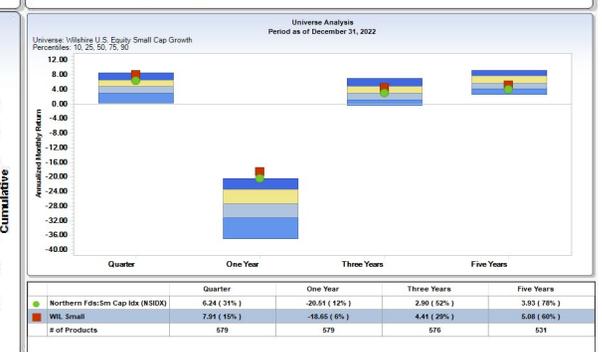
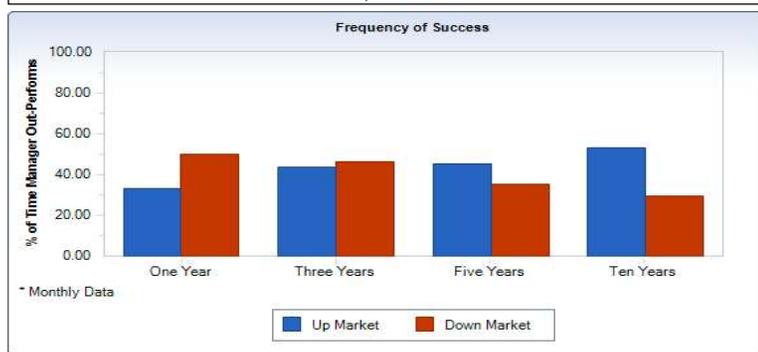
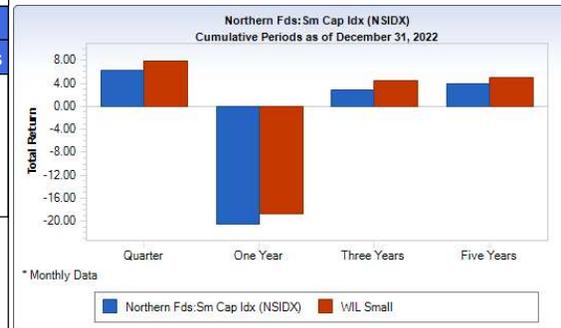
Performance Fact Sheet: Northern Fds:Sm Cap Idx (NSIDX)

Fund Family: Northern Trust
 Asset Class: U.S. Equity
 Style Category: Small-Cap Core Funds
 Objective Category: SMALL-CAP
 Ticker: NSIDX
 Share Class: Standard

Net Assets (\$MM): \$1,157.40
 Expense Ratio: 0.10
 Front Load:
 12B-1 Fee:
 Turnover: 26.00
 Mgr Tenure: 17

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Northern Fds:Sm Cap Idx (NSIDX)	-20.51	2.90	3.93	8.84	-20.51	14.67	19.52	25.23	-11.14	14.58	21.17	-4.54	4.69	38.66
WIL Small	-18.65	4.41	5.08	9.65	-18.65	19.17	17.42	26.21	-10.84	13.45	22.41	-4.86	6.80	39.01
Risk - Standard Deviation														
Northern Fds:Sm Cap Idx (NSIDX)	25.69	26.38	23.48	19.26	25.69	11.58	36.37	17.80	19.35	7.82	18.29	14.46	15.59	10.93
WIL Small	25.35	26.52	23.52	18.96	25.35	11.08	37.21	17.75	18.97	7.24	17.26	13.35	13.79	10.75
Risk - Semi-Variance														
Northern Fds:Sm Cap Idx (NSIDX)	16.96	19.48	17.66	14.48	16.96	8.75	28.26	13.34	16.03	4.80	13.20	10.09	11.35	8.16
WIL Small	16.74	19.78	17.76	14.25	16.74	8.32	29.00	13.01	15.73	4.62	12.11	9.01	10.11	8.18
Excess Returns														
Arithmetic Excess	-1.86	-1.51	-1.15	-0.81	-1.86	-4.50	2.10	-0.98	-0.30	1.13	-1.24	0.32	-2.11	-0.35
Geometric Excess	-2.29	-1.45	-1.09	-0.74	-2.29	-3.78	1.79	-0.78	-0.34	1.00	-1.01	0.34	-1.98	-0.25

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	2.80	2.41	1.97	1.93
Information Ratio	-0.81	-0.60	-0.55	-0.38
Downside Deviation	2.15	1.72	1.43	1.36
Skewness	-0.46	-0.03	-0.12	0.02
Kurtosis	-0.60	-0.42	0.49	0.12
Alpha	-2.08	-1.42	-1.08	-0.83
Beta	1.01	0.99	0.99	1.01
Residual Risk	2.62	2.31	1.92	1.90
R Squared	0.99	0.99	0.99	0.99

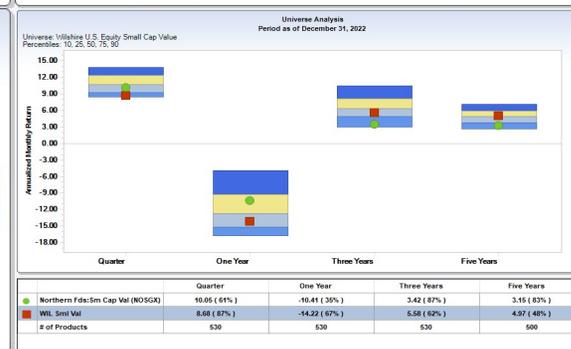
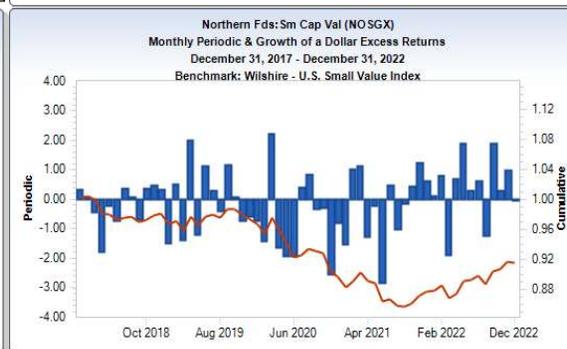
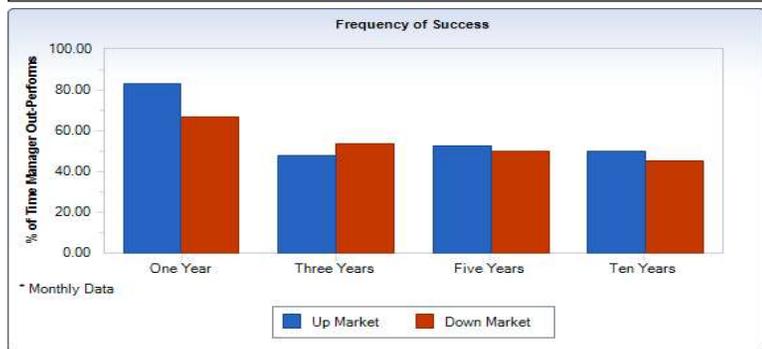


Performance Fact Sheet: Northern Fds:Sm Cap Val (NOSGX)

Fund Family:	Northern Trust	Net Assets (\$MM):	\$1,691.70
Asset Class:	U.S. Equity	Expense Ratio:	1.00
Style Category:	Small-Cap Value Funds	Front Load:	
Objective Category:	SMALL-CAP	12B-1 Fee:	
Ticker:	NOSGX	Turnover:	20.00
Share Class:	Standard	Mgr Tenure:	22

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Northern Fds:Sm Cap Val (NOSGX)	-10.41	3.42	3.15	8.27	-10.41	26.38	-2.29	22.27	-13.69	6.43	27.88	-4.62	7.08	36.44
WIL Sml Val	-14.22	5.58	4.97	9.33	-14.22	29.24	6.16	23.08	-12.04	7.42	27.68	-4.36	9.09	33.80
Risk - Standard Deviation														
Northern Fds:Sm Cap Val (NOSGX)	24.74	25.77	22.78	18.66	24.74	13.65	35.56	17.78	17.29	9.50	16.50	12.27	15.73	11.23
WIL Sml Val	24.79	27.10	23.63	18.76	24.79	12.58	38.63	16.95	17.88	8.04	15.05	11.79	13.25	11.28
Risk - Semi-Variance														
Northern Fds:Sm Cap Val (NOSGX)	16.16	19.45	17.30	13.99	16.16	9.17	27.84	13.64	14.10	5.80	10.52	8.47	11.52	8.88
WIL Sml Val	16.61	20.55	17.96	14.15	16.61	9.33	30.01	12.17	14.75	5.28	10.33	7.54	9.82	8.81
Excess Returns														
Arithmetic Excess	3.81	-2.16	-1.82	-1.06	3.81	-2.86	-8.45	-0.81	-1.65	-0.99	0.20	-0.26	-2.01	2.64
Geometric Excess	4.44	-2.05	-1.73	-0.97	4.44	-2.21	-7.96	-0.66	-1.88	-0.92	0.16	-0.27	-1.84	1.97

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	3.80	4.44	3.93	3.61
Information Ratio	1.17	-0.46	-0.44	-0.27
Downside Deviation	2.93	3.29	2.89	2.59
Skewness	-0.68	-0.24	-0.20	-0.08
Kurtosis	0.66	-0.65	-0.31	-0.07
Alpha	4.18	-1.77	-1.56	-0.77
Beta	0.99	0.94	0.95	0.98
Residual Risk	3.73	4.16	3.81	3.65
R Squared	0.98	0.97	0.97	0.96



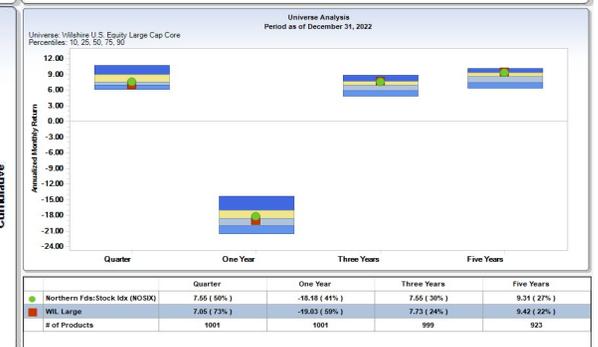
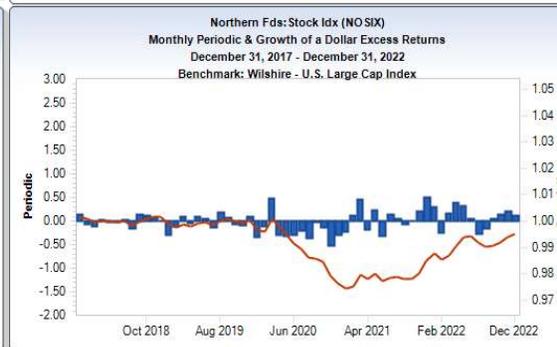
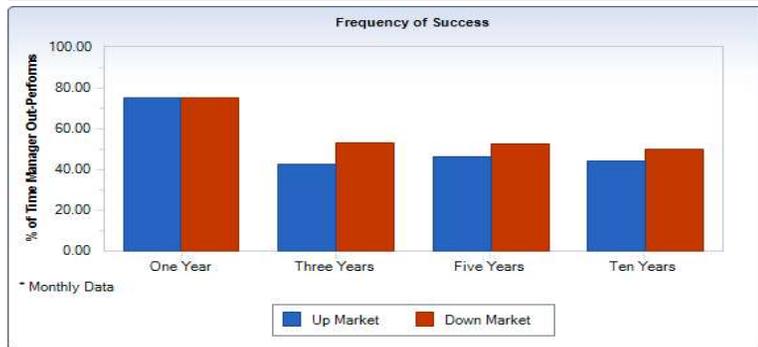
Performance Fact Sheet: Northern Fds:Stock Idx (NOSIX)

Fund Family: Northern Trust
Asset Class: U.S. Equity
Style Category: S&P 500 Index Funds
Objective Category: S&P 500 INDEX FUNDS
Ticker: NOSIX
Share Class: Standard

Net Assets (\$MM): \$10,170.30
Expense Ratio: 0.05
Front Load:
12B-1 Fee:
Turnover: 3.00
Mgr Tenure: 17

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Northern Fds:Stock Idx (NOSIX)	-18.18	7.55	9.31	12.44	-18.18	28.56	18.27	31.32	-4.48	21.69	11.86	1.29	13.53	32.23
WIL Large	-19.03	7.73	9.42	12.57	-19.03	27.46	21.17	31.51	-4.64	21.84	12.49	1.27	13.46	32.33
Risk - Standard Deviation														
Northern Fds:Stock Idx (NOSIX)	22.98	21.16	18.68	14.77	22.98	11.06	25.96	12.88	15.33	3.91	10.30	13.67	8.25	8.47
WIL Large	23.12	21.53	18.97	14.95	23.12	10.90	26.70	13.15	15.30	3.88	10.60	13.43	8.27	8.52
Risk - Semi-Variance														
Northern Fds:Stock Idx (NOSIX)	14.79	15.63	14.12	11.18	14.79	8.56	19.45	10.06	12.19	2.57	7.17	8.52	6.19	6.85
WIL Large	14.89	15.87	14.30	11.30	14.89	8.40	20.10	10.24	12.19	2.53	7.43	8.37	6.17	6.83
Excess Returns														
Arithmetic Excess	0.85	-0.18	-0.11	-0.13	0.85	1.10	-2.90	-0.19	0.16	-0.15	-0.63	0.02	0.07	-0.10
Geometric Excess	1.05	-0.17	-0.10	-0.12	1.05	0.86	-2.39	-0.14	0.17	-0.12	-0.56	0.02	0.06	-0.08

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	0.75	0.94	0.76	0.60
Information Ratio	1.40	-0.18	-0.13	-0.20
Downside Deviation	0.57	0.64	0.53	0.41
Skewness	-0.47	0.25	0.17	0.23
Kurtosis	-0.80	-0.88	-0.09	1.02
Alpha	0.88	-0.05	0.02	0.02
Beta	0.99	0.98	0.98	0.99
Residual Risk	0.73	0.87	0.72	0.58
R Squared	1.00	1.00	1.00	1.00



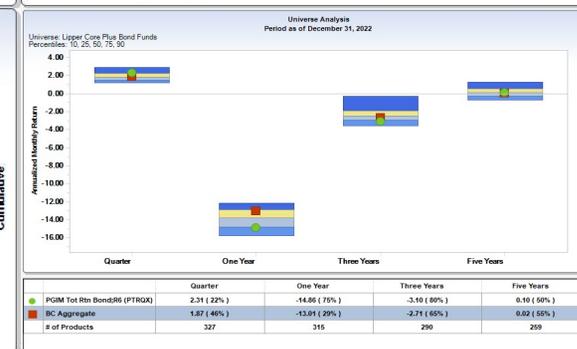
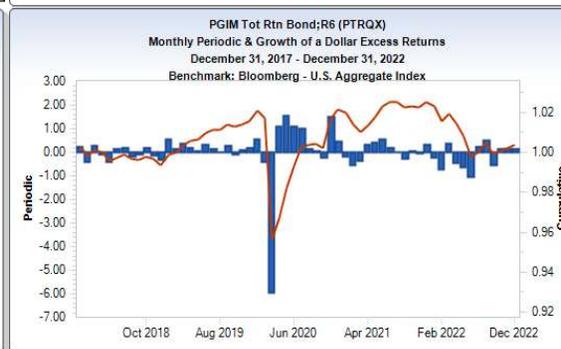
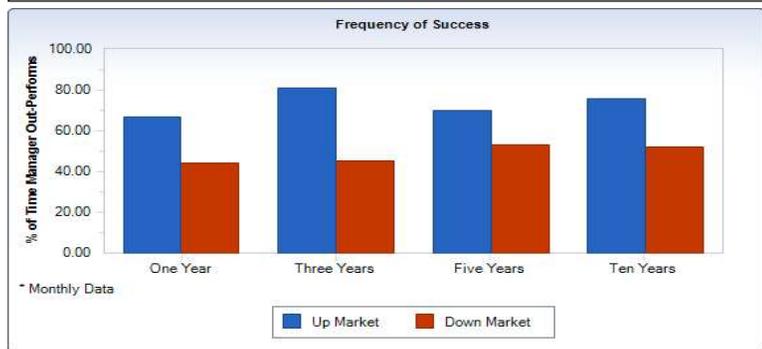
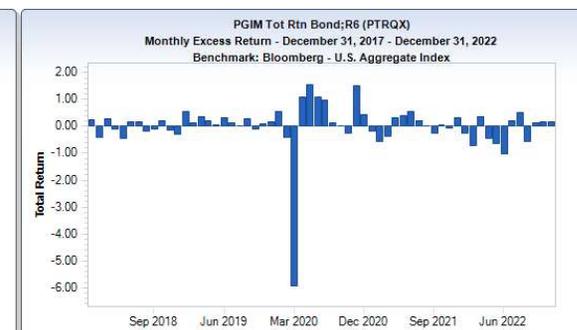
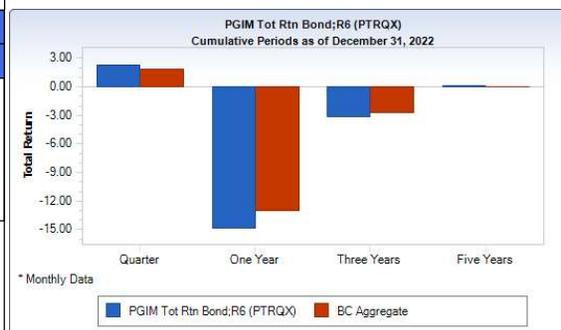
Performance Fact Sheet: PGIM Tot Rtn Bond;R6 (PTRQX)

Fund Family: PGIM Investments
 Asset Class: Taxable Fixed Income
 Style Category: Core Plus Bond Funds
 Objective Category: CORE BOND
 Ticker: PTRQX
 Share Class: Standard

Net Assets (\$MM): \$19,146.00
 Expense Ratio: 0.39
 Front Load:
 12B-1 Fee:
 Turnover: 130.00
 Mgr Tenure:

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
PGIM Tot Rtn Bond;R6 (PTRQX)	-14.86	-3.10	0.10	1.80	-14.86	-1.15	8.12	11.14	-0.64	6.70	4.83	0.09	7.26	-0.94
BC Aggregate	-13.01	-2.71	0.02	1.06	-13.01	-1.54	7.51	8.72	0.01	3.54	2.65	0.55	5.97	-2.02
Risk - Standard Deviation														
PGIM Tot Rtn Bond;R6 (PTRQX)	8.82	7.92	6.59	5.32	8.82	3.87	8.98	3.51	2.94	1.70	4.51	3.25	2.89	4.88
BC Aggregate	8.33	5.85	5.09	4.11	8.33	2.84	3.41	3.43	3.12	1.52	3.71	2.95	2.31	3.19
Risk - Semi-Variance														
PGIM Tot Rtn Bond;R6 (PTRQX)	5.38	6.02	5.11	4.17	5.38	2.89	7.80	2.22	2.05	1.28	3.61	1.87	2.25	3.76
BC Aggregate	5.14	4.32	3.78	3.09	5.14	2.07	2.39	2.12	2.06	1.10	2.94	1.75	1.71	2.37
Excess Returns														
Arithmetic Excess	-1.85	-0.39	0.08	0.74	-1.85	0.39	0.61	2.42	-0.65	3.16	2.18	-0.46	1.29	1.08
Geometric Excess	-2.13	-0.40	0.08	0.73	-2.13	0.40	0.57	2.23	-0.65	3.05	2.12	-0.46	1.22	1.10

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.71	4.07	3.19	2.43
Information Ratio	-1.24	-0.10	0.02	0.30
Downside Deviation	1.27	3.61	2.83	2.13
Skewness	-0.30	-3.67	-4.57	-5.25
Kurtosis	-1.21	18.85	30.33	45.32
Alpha	-1.52	0.28	0.27	0.69
Beta	1.04	1.19	1.16	1.17
Residual Risk	1.66	3.90	3.07	2.32
R Squared	0.96	0.76	0.78	0.81

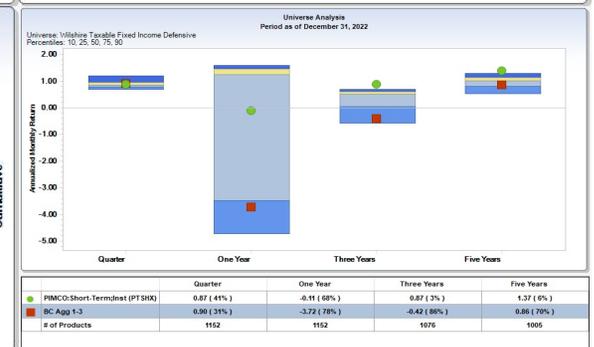
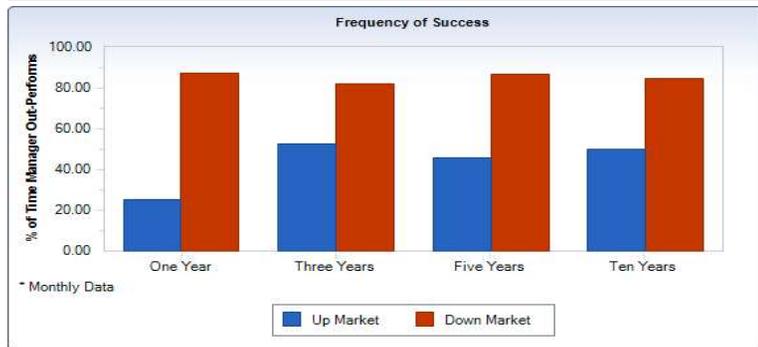


Performance Fact Sheet: PIMCO:Short-Term;Inst (PTSHX)

Fund Family:	PIMCO	Net Assets (\$MM):	\$8,175.20
Asset Class:	Taxable Fixed Income	Expense Ratio:	0.45
Style Category:	Ultra Sht Obligation Fds	Front Load:	
Objective Category:	ULTRA-SHORT OBLIG	12B-1 Fee:	
Ticker:	PTSHX	Turnover:	93.00
Share Class:	I	Mgr Tenure:	12

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
PIMCO:Short-Term;Inst (PTSHX)	-0.11	0.87	1.37	1.49	-0.11	0.02	2.74	2.72	1.50	2.44	2.55	1.34	0.96	0.82
BC Agg 1-3	-3.72	-0.42	0.86	0.86	-3.72	-0.49	3.08	4.04	1.60	0.86	1.31	0.66	0.82	0.64
Risk - Standard Deviation														
PIMCO:Short-Term;Inst (PTSHX)	1.42	2.46	1.96	1.53	1.42	0.49	4.06	0.67	0.85	0.57	1.25	1.22	0.55	0.96
BC Agg 1-3	2.50	1.72	1.54	1.18	2.50	0.47	0.92	1.01	0.98	0.51	0.96	0.71	0.57	0.52
Risk - Semi-Variance														
PIMCO:Short-Term;Inst (PTSHX)	0.89	1.98	1.59	1.23	0.89	0.36	3.50	0.45	0.67	0.40	0.98	0.81	0.46	0.78
BC Agg 1-3	1.67	1.34	1.19	0.90	1.67	0.35	0.53	0.69	0.60	0.39	0.63	0.43	0.44	0.39
Excess Returns														
Arithmetic Excess	3.61	1.29	0.51	0.63	3.61	0.51	-0.34	-1.32	-0.10	1.58	1.24	0.68	0.14	0.18
Geometric Excess	3.75	1.30	0.51	0.62	3.75	0.51	-0.33	-1.27	-0.10	1.57	1.22	0.68	0.14	0.18

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	2.44	2.75	2.36	1.89
Information Ratio	1.54	0.47	0.21	0.33
Downside Deviation	1.76	2.29	1.93	1.52
Skewness	-0.05	-2.49	-2.22	-2.21
Kurtosis	-0.97	11.74	11.60	14.44
Alpha	-1.07	0.50	0.16	0.71
Beta	0.09	0.31	0.15	0.08
Residual Risk	1.11	2.49	2.01	1.58
R Squared	0.04	0.04	0.01	0.00



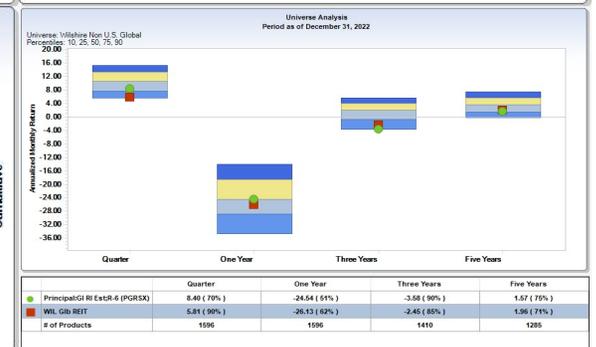
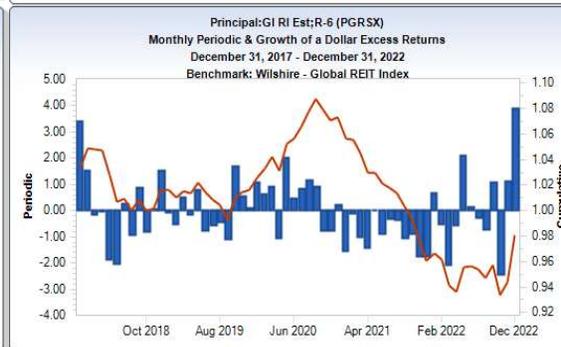
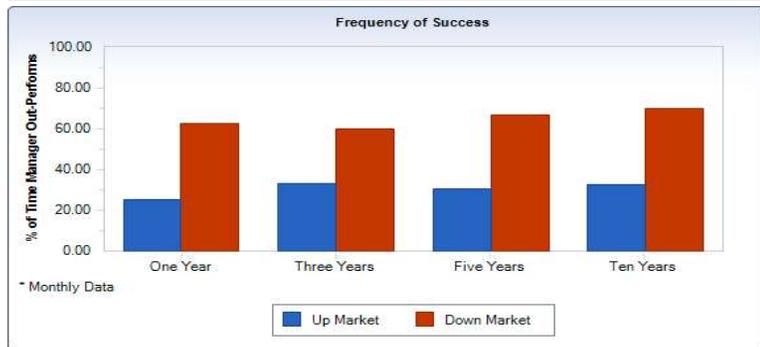
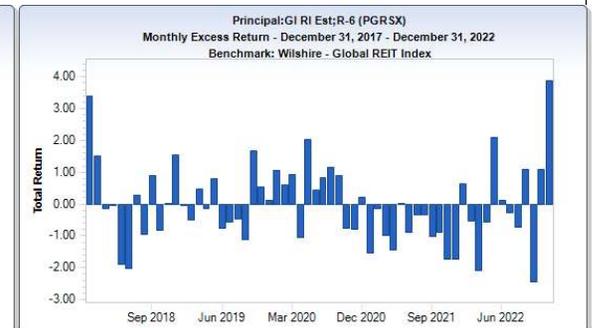
Performance Fact Sheet: Principal:GI RI Est;R-6 (PGRSX)

Fund Family: Principal
Asset Class: Real Estate
Style Category: Global Real Estate Funds
Objective Category: GLB REAL ESTATE
Ticker: PGRSX
Share Class: Standard

Net Assets (\$MM): \$716.40
Expense Ratio: 0.87
Front Load:
12B-1 Fee:
Turnover: 26.00
Mgr Tenure: 9

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Principal:GI RI Est;R-6 (PGRSX)	-24.54	-3.58	1.57	4.52	-24.54	23.52	-3.84	24.84	-3.41	14.78	0.30	1.58	16.28	5.84
WIL Glb REIT	-26.13	-2.45	1.96	5.05	-26.13	38.06	-8.98	24.90	-4.96	7.79	5.74	2.26	24.64	2.23
Risk - Standard Deviation														
Principal:GI RI Est;R-6 (PGRSX)	21.97	22.08	18.52	15.45	21.97	12.95	28.24	11.14	10.98	4.53	15.46	11.38	10.67	14.75
WIL Glb REIT	23.66	23.51	19.81	16.49	23.66	13.08	29.26	11.15	13.37	5.14	15.47	13.29	11.90	15.02
Risk - Semi-Variance														
Principal:GI RI Est;R-6 (PGRSX)	14.32	17.51	14.63	11.96	14.32	10.18	23.62	5.22	8.76	3.19	9.71	8.11	7.81	10.92
WIL Glb REIT	15.18	18.45	15.52	12.67	15.18	9.76	23.85	5.40	10.48	3.40	9.79	9.05	8.85	11.37
Excess Returns														
Arithmetic Excess	1.59	-1.13	-0.39	-0.53	1.59	-14.54	5.14	-0.06	1.55	6.99	-5.44	-0.68	-8.36	3.61
Geometric Excess	2.15	-1.16	-0.38	-0.50	2.15	-10.53	5.65	-0.05	1.63	6.48	-5.14	-0.66	-6.71	3.53

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	6.04	4.52	4.34	3.81
Information Ratio	0.36	-0.26	-0.09	-0.13
Downside Deviation	3.95	2.92	2.80	2.52
Skewness	0.56	0.71	0.69	0.54
Kurtosis	0.72	1.12	1.04	0.99
Alpha	-1.63	-1.41	-0.33	-0.14
Beta	0.90	0.92	0.91	0.91
Residual Risk	5.43	4.12	3.96	3.50
R Squared	0.94	0.97	0.95	0.95



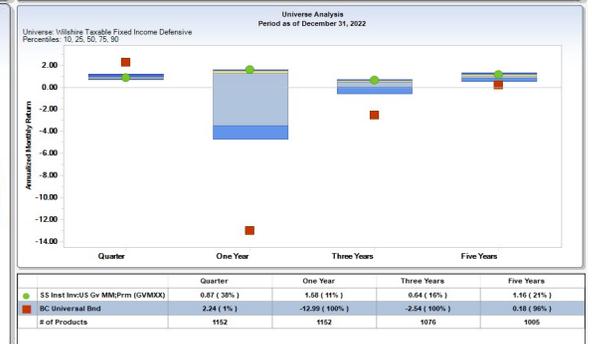
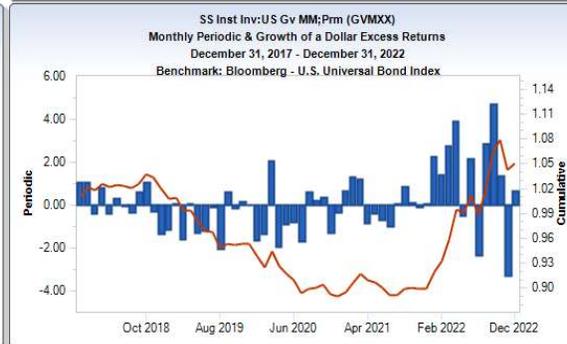
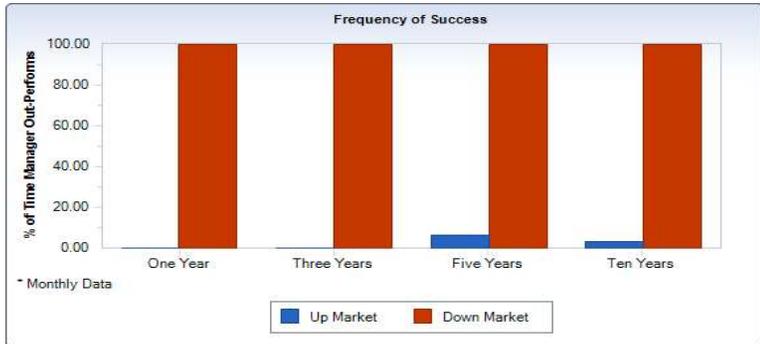
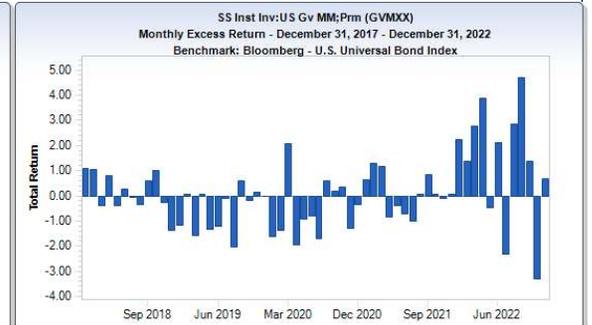
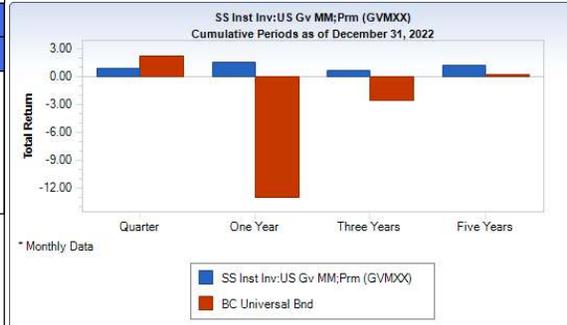
Performance Fact Sheet: SS Inst Inv:US Gv MM;Prm (GVMXX)

Fund Family: State Street Global Advisors
 Asset Class: Taxable Fixed Income
 Style Category: Instl US Govt MM Funds
 Objective Category: INSTL US GOVT MMKT
 Ticker: GVMXX
 Share Class: Standard

Net Assets (\$MM): \$74,919.80
 Expense Ratio: 0.12
 Front Load:
 12B-1 Fee:
 Turnover:
 Mgr Tenure:

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
SS Inst Inv:US Gv MM;Prm (GVMX)	1.58	0.64	1.16	0.68	1.58	0.00	0.36	2.14	1.75	0.80	0.24	0.00	0.00	0.00
BC Universal Bnd	-12.99	-2.54	0.18	1.33	-12.99	-1.10	7.58	9.29	-0.25	4.09	3.91	0.43	5.56	-1.35
Risk - Standard Deviation														
SS Inst Inv:US Gv MM;Prm (GVMX)	0.41	0.32	0.31	0.27	0.41	0.00	0.16	0.08	0.10	0.06	0.01	0.00	0.00	0.00
BC Universal Bnd	8.34	5.98	5.09	4.10	8.34	2.66	4.14	3.02	2.70	1.48	3.59	2.66	2.37	3.35
Risk - Semi-Variance														
SS Inst Inv:US Gv MM;Prm (GVMX)	0.27	0.15	0.21	0.14	0.27	0.00	0.08	0.07	0.07	0.05	0.01	0.00	0.00	0.00
BC Universal Bnd	5.06	4.41	3.82	3.13	5.06	1.95	3.25	1.95	1.82	1.08	2.92	1.60	1.79	2.51
Excess Returns														
Arithmetic Excess	14.57	3.18	0.98	-0.65	14.57	1.10	-7.22	-7.15	2.00	-3.29	-3.67	-0.43	-5.56	1.35
Geometric Excess	16.75	3.26	0.98	-0.64	16.75	1.11	-6.71	-6.54	2.01	-3.16	-3.53	-0.43	-5.27	1.37

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	8.26	6.05	5.09	4.12
Information Ratio	2.03	0.54	0.19	-0.16
Downside Deviation	6.49	3.97	3.28	2.59
Skewness	-0.73	0.47	0.68	0.92
Kurtosis	0.05	0.26	1.27	2.57
Alpha	0.17	-0.06	-0.10	-0.08
Beta	0.00	0.00	0.00	0.00
Residual Risk	0.16	0.16	0.13	0.09
R Squared	0.03	0.03	0.01	0.01



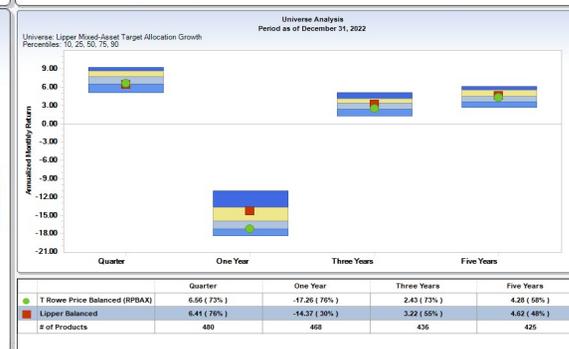
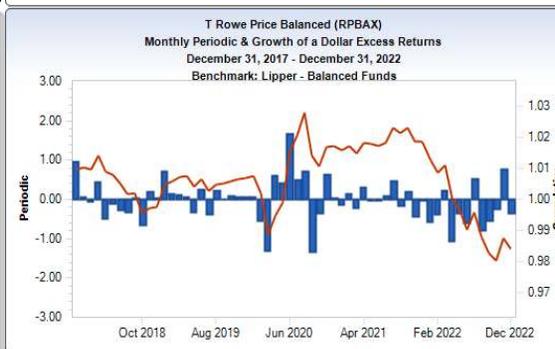
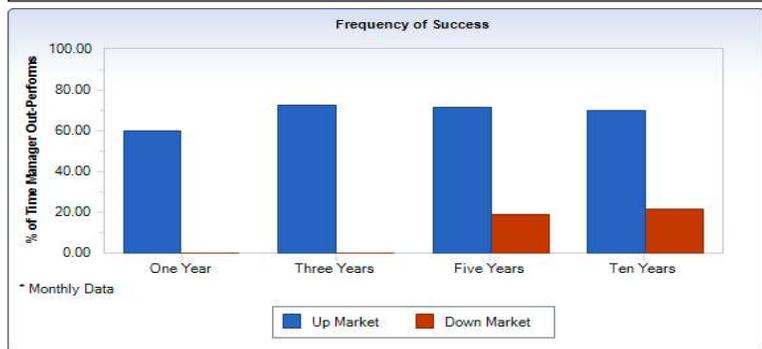
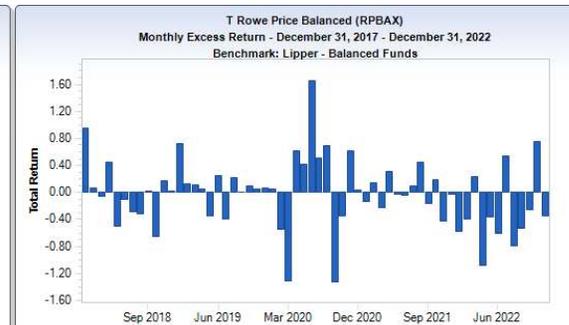
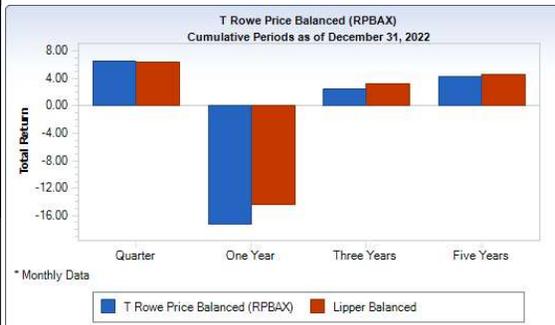
Performance Fact Sheet: T Rowe Price Balanced (RPBAX)

Fund Family: T. Rowe Price
Asset Class: Balanced
Style Category: Mixed-Asset Target Allocation Growth
Objective Category: BALANCED
Ticker: RPBAX
Share Class: Standard

Net Assets (\$MM): \$2,342.00
Expense Ratio: 0.57
Front Load:
12B-1 Fee:
Turnover: 92.00
Mgr Tenure: 12

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
T Rowe Price Balanced (RPBAX)	-17.26	2.43	4.28	6.96	-17.26	13.35	14.59	20.71	-4.92	18.00	5.91	0.65	5.97	19.24
Lipper Balanced	-14.37	3.22	4.62	6.66	-14.37	13.19	13.45	19.57	-4.68	14.11	7.21	-0.41	7.21	16.40
Risk - Standard Deviation														
T Rowe Price Balanced (RPBAX)	16.55	15.12	12.95	10.29	16.55	6.86	18.59	8.09	8.89	2.44	7.42	8.98	6.03	6.53
Lipper Balanced	15.00	13.53	11.65	9.17	15.00	6.31	16.48	7.30	8.26	1.92	6.30	7.64	5.48	5.84
Risk - Semi-Variance														
T Rowe Price Balanced (RPBAX)	10.74	11.35	9.82	7.83	10.74	5.46	14.52	5.82	6.96	1.76	5.11	5.92	4.24	5.02
Lipper Balanced	9.82	10.15	8.85	6.99	9.82	5.03	12.67	5.37	6.58	1.38	4.30	4.95	3.97	4.57
Excess Returns														
Arithmetic Excess	-2.89	-0.79	-0.34	0.30	-2.89	0.16	1.14	1.14	-0.24	3.89	-1.30	1.06	-1.24	2.84
Geometric Excess	-3.37	-0.77	-0.32	0.28	-3.37	0.14	1.00	0.95	-0.25	3.41	-1.21	1.06	-1.16	2.44

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	1.85	2.11	1.80	1.67
Information Ratio	-1.82	-0.36	-0.18	0.17
Downside Deviation	1.12	1.47	1.27	1.22
Skewness	0.78	0.18	0.12	-0.15
Kurtosis	0.07	0.93	1.55	0.88
Alpha	-1.54	-1.03	-0.65	-0.33
Beta	1.10	1.11	1.10	1.11
Residual Risk	1.05	1.43	1.31	1.32
R Squared	1.00	0.99	0.99	0.98



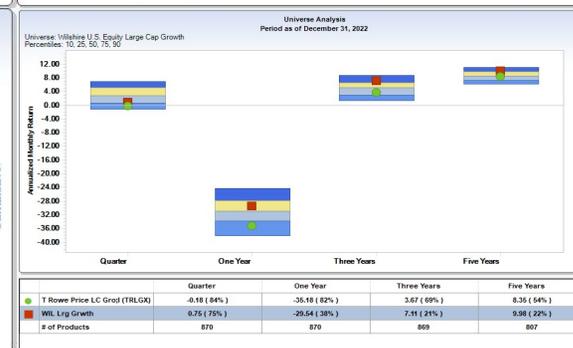
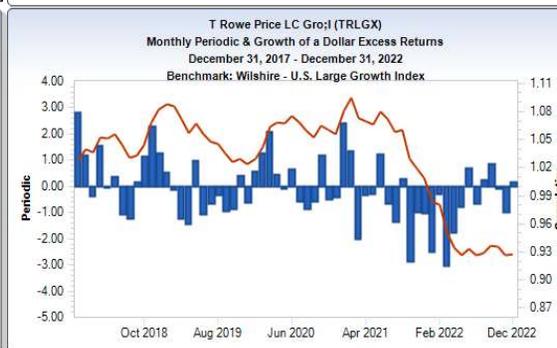
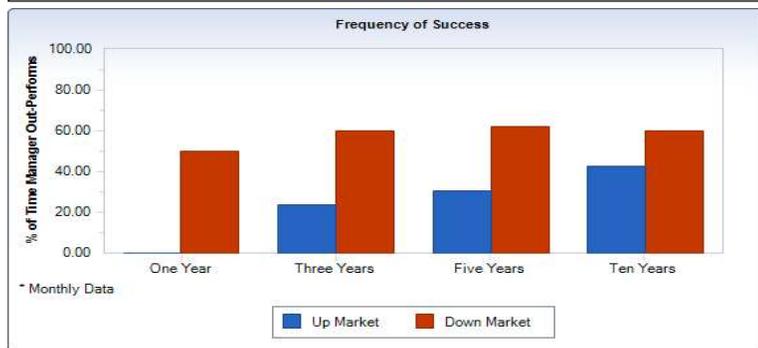
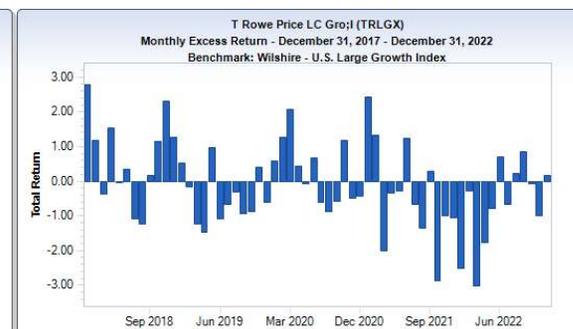
Performance Fact Sheet: T Rowe Price LC Gro:I (TRLGX)

Fund Family: T. Rowe Price
 Asset Class: U.S. Equity
 Style Category: Large-Cap Growth Funds
 Objective Category: GROWTH
 Ticker: TRLGX
 Share Class: Standard

Net Assets (\$MM): \$14,139.50
 Expense Ratio: 0.55
 Front Load:
 12B-1 Fee:
 Turnover: 18.00
 Mgr Tenure: 6

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
T Rowe Price LC Gro:I (TRLGX)	-35.18	3.67	8.35	13.85	-35.18	23.19	39.55	28.49	4.30	37.82	2.85	10.04	8.70	44.44
WIL Lrg Grwth	-29.54	7.11	9.98	13.56	-29.54	28.86	35.36	35.79	-3.58	27.71	8.97	3.54	13.96	34.95
Risk - Standard Deviation														
T Rowe Price LC Gro:I (TRLGX)	25.74	23.72	20.87	16.99	25.74	12.18	26.12	14.43	17.54	6.32	14.51	14.45	11.35	9.73
WIL Lrg Grwth	26.39	24.44	21.51	16.93	26.39	13.64	28.03	14.82	17.42	4.19	12.95	14.70	9.73	8.63
Risk - Semi-Variance														
T Rowe Price LC Gro:I (TRLGX)	16.28	17.10	15.29	12.65	16.28	8.61	19.47	10.20	13.04	4.57	11.35	9.26	8.01	7.07
WIL Lrg Grwth	16.47	17.68	15.91	12.61	16.47	9.68	21.15	11.32	13.46	2.85	9.57	9.14	6.78	6.81
Excess Returns														
Arithmetic Excess	-5.64	-3.44	-1.63	0.29	-5.64	-5.67	4.19	-7.30	7.88	10.11	-6.12	6.50	-5.26	9.49
Geometric Excess	-8.00	-3.21	-1.48	0.26	-8.00	-4.40	3.10	-5.38	8.17	7.92	-5.62	6.28	-4.62	7.03

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.24	4.37	4.26	4.34
Information Ratio	-1.89	-0.73	-0.35	0.06
Downside Deviation	3.33	3.16	2.95	3.13
Skewness	-0.74	-0.19	0.06	-0.24
Kurtosis	-0.28	0.10	0.14	0.07
Alpha	-9.50	-2.95	-1.10	0.59
Beta	0.96	0.95	0.95	0.97
Residual Risk	3.99	4.22	4.15	4.35
R Squared	0.98	0.97	0.96	0.93



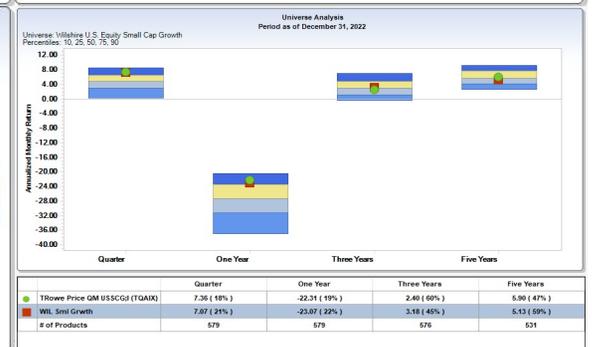
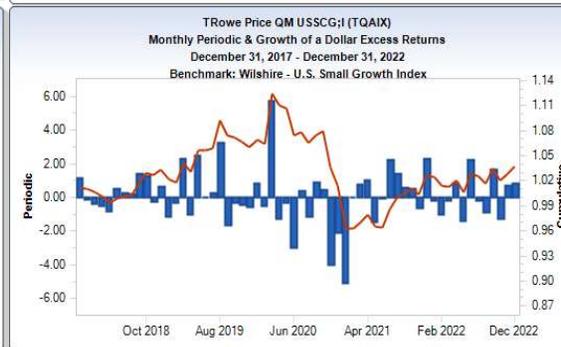
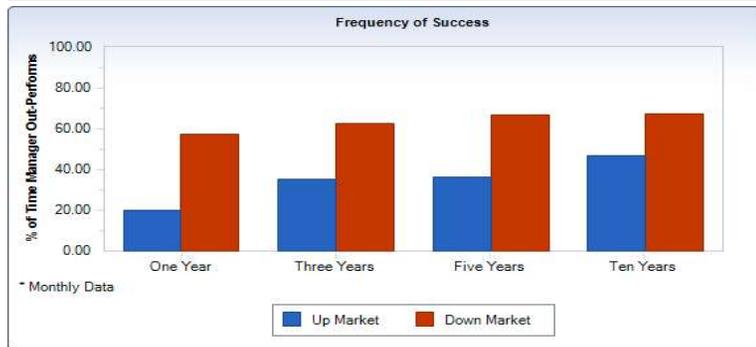
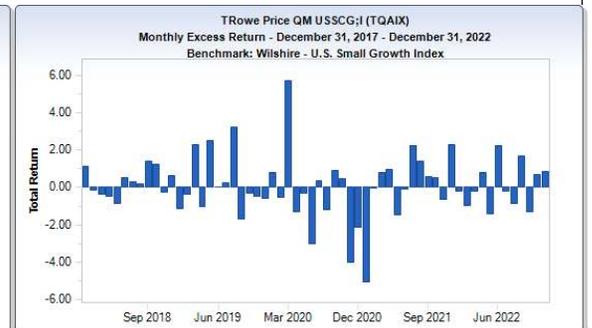
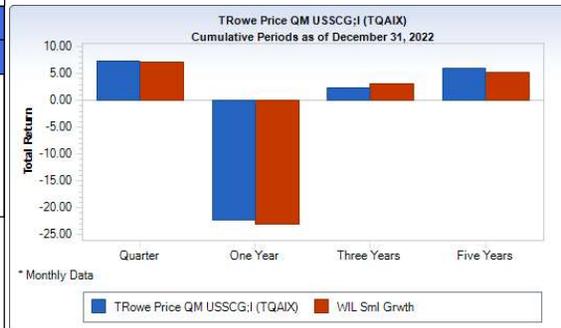
Performance Fact Sheet: TRowe Price QM USSCG;I (TQAIX)

Fund Family: T. Rowe Price
 Asset Class: U.S. Equity
 Style Category: Small-Cap Growth Funds
 Objective Category: SMALL-CAP
 Ticker: TQAIX
 Share Class: Standard

Net Assets (\$MM): \$3,269.60
 Expense Ratio: 0.64
 Front Load:
 12B-1 Fee:
 Turnover: 28.00
 Mgr Tenure: 7

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
TRowe Price QM USSCG;I (TQAIX)	-22.31	2.40	5.90	11.04	-22.31	11.47	23.99	32.92	-6.70	22.28	11.48	2.33	6.40	44.21
WIL Sml Grwth	-23.07	3.18	5.13	9.90	-23.07	10.12	29.66	29.49	-9.71	19.55	16.97	-5.28	4.23	45.00
Risk - Standard Deviation														
TRowe Price QM USSCG;I (TQAIX)	24.48	23.24	21.16	17.24	24.48	11.26	29.70	15.47	19.55	4.58	15.03	14.16	13.30	10.38
WIL Sml Grwth	26.48	26.62	24.03	19.75	26.48	10.83	36.01	19.06	20.45	6.72	19.92	15.44	14.81	10.97
Risk - Semi-Variance														
TRowe Price QM USSCG;I (TQAIX)	15.77	16.83	15.74	12.94	15.77	8.41	22.85	10.67	16.00	3.27	11.22	9.99	9.22	7.30
WIL Sml Grwth	17.51	19.36	17.84	14.71	17.51	7.96	27.95	13.99	16.82	4.14	14.38	10.66	10.74	7.94
Excess Returns														
Arithmetic Excess	0.76	-0.78	0.77	1.14	0.76	1.35	-5.67	3.43	3.01	2.73	-5.49	7.61	2.17	-0.79
Geometric Excess	0.99	-0.76	0.73	1.04	0.99	1.23	-4.37	2.65	3.33	2.28	-4.69	8.03	2.08	-0.54

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.05	6.55	5.69	5.04
Information Ratio	0.25	-0.11	0.13	0.21
Downside Deviation	2.67	4.71	4.01	3.61
Skewness	0.43	0.02	0.05	-0.09
Kurtosis	-0.79	2.57	2.98	2.56
Alpha	-1.65	-0.40	1.25	2.32
Beta	0.92	0.85	0.86	0.85
Residual Risk	3.20	5.11	4.50	4.05
R Squared	0.98	0.95	0.96	0.95



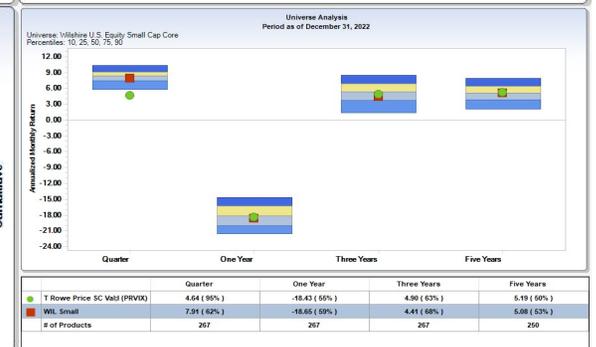
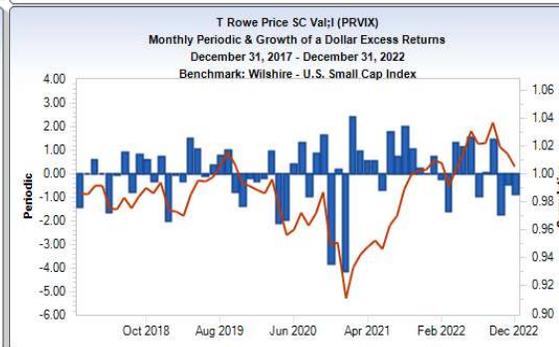
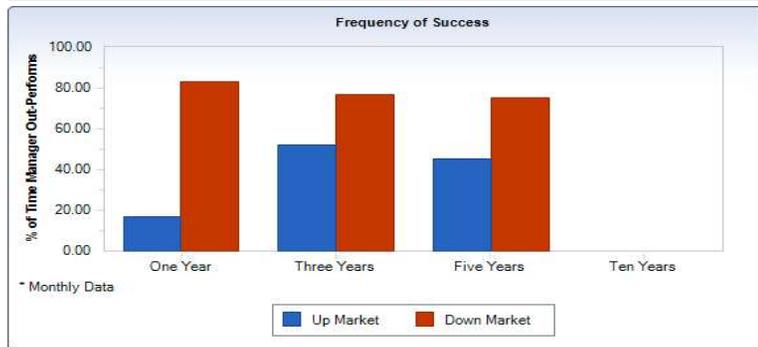
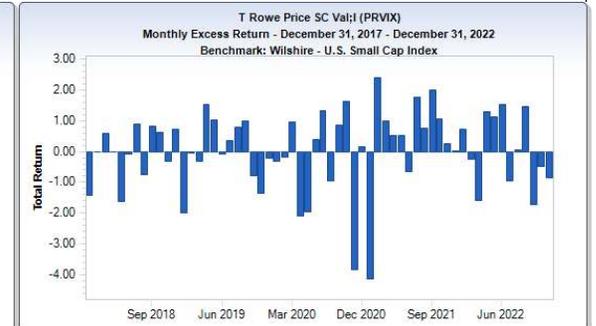
Performance Fact Sheet: T Rowe Price SC Val;I (PRVIX)

Fund Family: T. Rowe Price
 Asset Class: U.S. Equity
 Style Category: Small-Cap Core Funds
 Objective Category: SMALL-CAP
 Ticker: PRVIX
 Share Class: I

Net Assets (\$MM): \$2,902.60
 Expense Ratio: 0.68
 Front Load:
 12B-1 Fee:
 Turnover: 25.00
 Mgr Tenure: 8

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
T Rowe Price SC Val;I (PRVIX)	-18.43	4.90	5.19	N/A	-18.43	25.67	12.59	25.95	-11.40	13.55	29.10	N/A	N/A	N/A
WIL Small	-18.65	4.41	5.08	9.65	-18.65	19.17	17.42	26.21	-10.84	13.45	22.41	-4.86	6.80	39.01
Risk - Standard Deviation														
T Rowe Price SC Val;I (PRVIX)	22.35	24.19	21.45	N/A	22.35	11.63	33.70	15.79	17.35	7.31	15.29	N/A	N/A	N/A
WIL Small	25.35	26.52	23.52	18.96	25.35	11.08	37.21	17.75	18.97	7.24	17.26	13.35	13.79	10.75
Risk - Semi-Variance														
T Rowe Price SC Val;I (PRVIX)	14.69	18.64	16.66	N/A	14.69	7.56	27.52	11.87	14.69	4.44	10.10	N/A	N/A	N/A
WIL Small	16.74	19.78	17.76	14.25	16.74	8.32	29.00	13.01	15.73	4.62	12.11	9.01	10.11	8.18
Excess Returns														
Arithmetic Excess	0.22	0.49	0.11	N/A	0.22	6.50	-4.83	-0.26	-0.56	0.10	6.69	N/A	N/A	N/A
Geometric Excess	0.27	0.47	0.10	N/A	0.27	5.45	-4.11	-0.21	-0.63	0.09	5.47	N/A	N/A	N/A

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	4.10	5.22	4.49	N/A
Information Ratio	0.07	0.09	0.02	N/A
Downside Deviation	2.92	4.19	3.56	N/A
Skewness	-0.10	-1.06	-0.99	N/A
Kurtosis	-1.47	1.18	1.51	N/A
Alpha	-2.70	0.84	0.49	N/A
Beta	0.88	0.90	0.90	N/A
Residual Risk	2.58	4.77	4.05	N/A
R Squared	0.99	0.96	0.96	N/A



Performance Fact Sheet: Vanguard EM Sel Stk;Inv (VMMSX)

Fund Family: Vanguard
 Asset Class: Non U.S. Equity
 Style Category: Emerging Markets Funds
 Objective Category: EMERGING MARKETS
 Ticker: VMMSX
 Share Class: Investor

Net Assets (\$MM):
 Expense Ratio: 0.84
 Front Load:
 12B-1 Fee: 0.00
 Turnover: 48.00
 Mgr Tenure:

Historical Returns	Annualized Ended 12/31/2022				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vanguard EM Sel Stk;Inv (VMMSX)	-18.16	-2.19	-0.13	2.05	-18.16	-1.26	15.81	21.37	-12.52	32.00	16.87	-15.25	-6.64	1.00
MSCI Emerging \$N	-20.09	-2.69	-1.40	1.44	-20.09	-2.54	18.31	18.43	-14.58	37.28	11.18	-14.92	-2.19	-2.60
Risk - Standard Deviation														
Vanguard EM Sel Stk;Inv (VMMSX)	23.45	23.16	20.66	17.95	23.45	11.34	31.07	16.43	16.18	7.22	17.46	18.03	15.14	13.18
MSCI Emerging \$N	21.62	20.55	18.83	16.70	21.62	11.08	26.06	16.46	15.45	6.54	17.78	17.66	13.59	11.81
Risk - Semi-Variance														
Vanguard EM Sel Stk;Inv (VMMSX)	12.59	16.56	14.59	12.75	12.59	9.48	25.38	11.99	9.60	4.21	10.99	11.18	12.07	8.96
MSCI Emerging \$N	12.57	14.37	13.08	11.77	12.57	9.02	20.68	11.93	9.72	4.56	11.09	11.20	11.21	7.64
Excess Returns														
Arithmetic Excess	1.93	0.50	1.27	0.61	1.93	1.28	-2.50	2.94	2.06	-5.28	5.69	-0.33	-4.45	3.60
Geometric Excess	2.42	0.51	1.29	0.60	2.42	1.31	-2.11	2.48	2.41	-3.85	5.12	-0.39	-4.55	3.70

Excess Statistics Manager vs. Benchmark	Annualized Ended 12/31/2022			
	1 Year	3 Years	5 Years	10 Years
Tracking Error	5.62	5.40	4.48	3.71
Information Ratio	0.43	0.10	0.29	0.16
Downside Deviation	3.81	4.15	3.46	2.78
Skewness	0.24	-1.13	-1.28	-1.02
Kurtosis	0.10	4.54	6.35	6.70
Alpha	3.96	0.89	1.49	0.57
Beta	1.05	1.10	1.08	1.05
Residual Risk	5.42	4.63	4.01	3.46
R Squared	0.95	0.96	0.96	0.96

