



Frugal Financial

Investment Monitoring Report For the quarter ending December 31, 2016

Frugal Financial is responsible for selecting and monitoring the investment menu for your retirement plan in accordance with ERISA standards of fiduciary care, which include duties of loyalty and prudence.

Our investment decisions are governed by an Investment Policy Statement (IPS). This IPS establishes guidelines for the selection, monitoring and evaluation of the investment alternatives made available under your plan. The investment menu for your plan is listed in the IPS.

Evaluation

Your plan's investment menu was selected based on three simple objectives:

1. *Diversification* – Investments must provide participants with different, internally diversified alternatives with materially different risk and return characteristics.
2. *Market returns* – Investments must offer returns that closely correlate to a target benchmark over time.
3. *Efficiency* – Investments must possess low expenses that reduce drag on returns.

This report evaluates how well your investment menu met these objectives.

1. *Diversification*

ERISA 404(c) states you must offer a broad range of investment alternatives with differing potential for investment risk and return. Only three investment alternatives are required to meet the requirements, and it is satisfied by offering funds that cover equity (stocks), fixed income (bonds), and capital preservation asset classes.

Your plan's investment menu met its Diversification objective by offering multiple equity and fixed income alternatives, which provide participants access to different investment categories, as well as a money market fund that provides participants with a capital preservation alternative.

2. *Market Returns*

Your plan's investment menu is composed of index funds. Index funds attempt to track the performance of a particular stock or bond index, such as the S&P 500 Index or the Barclays U.S. Aggregate Bond Index, by holding most or all of the securities that are included in that index.

Index funds do not attempt to outperform their benchmark, but rather match the benchmark's performance. Index funds generally have a lower fee structure than actively managed funds, because they're less costly to manage.

Historically, low-cost index funds have displayed a greater probability of outperforming higher-cost actively managed funds, even though index funds generally underperform their targeted benchmarks.

To measure whether or not your plan investments delivered returns for the quarter that closely correlated to their target benchmark, we evaluated each investment's Beta and R-Squared results.

- a. Beta is a measure of sensitivity to the correlated moves of a benchmark, a fund or asset. A beta of 1 indicates that the fund's price will move with the market. A beta of less than 1 means that the fund will be less volatile than the market. A beta of greater than 1 indicates that the fund's price will be more volatile than the market. For example, if a stock's beta is 1.2, it's theoretically 20% more volatile than the market.
- b. R-squared measures the percentage of a fund's movements that can be explained by movements in the benchmark index. R-squared values range from 0 to 1. An R-squared of 1 means that all movements of the fund are completely explained by movements in the index. Index funds should have a high R-squared vs. their benchmark.

General Range for R-Squared:

0.70-1.00 = good correlation between the portfolio's returns and the benchmark's returns

0.40-0.70 = average correlation between the portfolio's returns and the benchmark's returns

0.00-0.40 = low correlation between the portfolio's returns and the benchmark's returns

Generally, a higher R-squared will indicate a more useful beta figure. If the R-squared is lower, then the beta is less relevant to the fund's performance.

See the Investment Information table for investment return information related to the prior quarter. The target beta range for each non-cash alternative in your investment menu is 0.95-1.05, based on trailing 36-month returns vs. the benchmark. The target R-squared range for each non-cash alternative in your investment menu is 0.95-1.00, based on trailing 36-month returns vs. the benchmark. Your investment menu met its Market Returns objective for the quarter because both beta and R-squared results for each non-cash alternative were within their target ranges.

3. *Efficiency*

Plan fees and expenses are important considerations for all types of retirement plans. Understanding and evaluating plan fees and expenses associated with plan investments and services are an important part of a fiduciary's responsibility. This responsibility is ongoing.

The cumulative effect of fees and expenses on retirement savings can be substantial. Assume that you are an employee with 35 years until retirement and a current 401(k) account balance of \$25,000. If returns on investments in your account over the next 35 years average 7 percent and fees and expenses reduce your average returns by 0.5 percent, your account balance will grow to \$227,000 at retirement, even if there are no further contributions to your account. If fees and expenses are 1.5 percent, however, your account balance will grow to only \$163,000. The 1 percent difference in fees and expenses would reduce your account balance at retirement by 28 percent.

See the Investment Information table for investment expense information related to the prior quarter. Your investment menu met its Efficiency objective for the quarter because the expense ratio for each non-cash alternative ranked in the lowest quintile (20th percentile) of its peer group.

Investment Information
For the quarter ending December 31, 2016

Name	Symbol	Benchmark	Fund Return	Benchmark	Beta⁽¹⁾	R²⁽¹⁾	Exp Ratio	Morningstar Rating⁽²⁾
Vanguard Federal Money Market Fund	VMFXX	US Gov't Money Market Funds Average	0.08%	0.02%	N/A	N/A	0.11%	Not Rated
Vanguard Total Bond Market Index Fund	VBTLX	BloomBarc U.S. Aggregate Float Adjusted Bond Index	-3.17%	-3.05%	1.04	0.99	0.06%	Low
Vanguard 500 Index Fund	VFIAX	Standard & Poor's 500 Index	3.82%	3.82%	1.00	1.00	0.05%	Low
Vanguard Extended Market Index Fund	VEXAX	Standard & Poor's Completion Index	5.61%	5.55%	1.00	1.00	0.09%	Low
Vanguard Total International Stock Index Fund	VTIAX	FTSE Global All Cap ex US Index	-1.93%	-1.27%	0.95	0.98	0.12%	Low
Vanguard Inflation-Protected Securities Fund	VAIPX	BloomBarc U.S. Treasury Inflation Protected Index	-2.66%	-2.41%	1.02	0.99	0.10%	Low
Vanguard Total Stock Market Index Fund	VTSAX	CRSP U.S. Total Market Index	4.12%	4.11%	1.00	1.00	0.05%	Low
Vanguard Total International Bond Index Fund	VTABX	BloomBarc Global Aggregate ex-USD Float Adjusted RIC Capped Index (USD Hedged)	-2.04%	-2.00%	1.00	1.00	0.14%	Low
Vanguard Growth Index Fund	VIGAX	CRSP U.S. Large Cap Growth Index	-0.42%	-0.42%	1.00	1.00	0.08%	Low
Vanguard Value Index Fund	VVIAX	CRSP U.S. Large Cap Value Index	7.51%	7.53%	1.00	1.00	0.08%	Low
Vanguard Target Retirement Income Fund	VTINX	Target Retirement Income Composite Index	-0.99%	-0.90%	0.99	0.99	0.14%	Low
Vanguard Target Retirement 2010 Fund	VTENX	Target Retirement 2010 Composite Index	-1.02%	-0.85%	0.99	1.00	0.14%	Low

Investment Information
For the quarter ending December 31, 2016

Name	Symbol	Benchmark	Fund Return	Benchmark	Beta⁽¹⁾	R²⁽¹⁾	Exp Ratio	Morningstar Rating⁽²⁾
Vanguard Target Retirement 2015 Fund	VTXVX	Target Retirement 2015 Composite Index	-0.55%	-0.34%	0.98	1.00	0.14%	Low
Vanguard Target Retirement 2020 Fund	VTWNX	Target Retirement 2020 Composite Index	-0.18%	-0.01%	0.99	1.00	0.14%	Low
Vanguard Target Retirement 2025 Fund	VTTVX	Target Retirement 2025 Composite Index	0.11%	0.32%	0.98	1.00	0.15%	Low
Vanguard Target Retirement 2030 Fund	VTHRX	Target Retirement 2030 Composite Index	0.42%	0.67%	0.98	1.00	0.15%	Low
Vanguard Target Retirement 2035 Fund	VTTHX	Target Retirement 2035 Composite Index	0.78%	1.02%	0.99	1.00	0.15%	Low
Vanguard Target Retirement 2040 Fund	VFORX	Target Retirement 2040 Composite Index	1.13%	1.38%	0.98	1.00	0.16%	Low
Vanguard Target Retirement 2045 Fund	VTIVX	Target Retirement 2045 Composite Index	1.24%	1.48%	0.98	1.00	0.16%	Low
Vanguard Target Retirement 2050 Fund	VFIFX	Target Retirement 2050 Composite Index	1.25%	1.48%	0.98	1.00	0.16%	Low
Vanguard Target Retirement 2055 Fund	VFFVX	Target Retirement 2055 Composite Index	1.26%	1.48%	0.98	1.00	0.16%	Low
Vanguard Target Retirement 2060 Fund	VTTSX	Target Retirement 2060 Composite Index	1.25%	1.48%	0.98	1.00	0.16%	Low

⁽¹⁾Risk measures are calculated from trailing 36-month fund returns relative to the associated benchmarks.

⁽²⁾This is a proprietary Morningstar data point. Morningstar evaluates a mutual fund share class's expense ratio relative to other funds that invest in a similar asset class and have similar distribution characteristics. Within each Comparison Group, a fund share class' expense ratio is ranked against peers using five quintiles. A "Low" rating means fund's expense ratio ranks in the lowest quintile (20th percentile).

⁽³⁾Risk and volatility information is not available for a fund less than 3 years old.