



Semiannual Report | June 30, 2018

Vanguard Variable Insurance Fund

Diversified Value Portfolio

Vanguard's Principles for Investing Success

We want to give you the best chance of investment success. These principles, grounded in Vanguard's research and experience, can put you on the right path.

Goals. Create clear, appropriate investment goals.

Balance. Develop a suitable asset allocation using broadly diversified funds.

Cost. Minimize cost.

Discipline. Maintain perspective and long-term discipline.

A single theme unites these principles: Focus on the things you can control. We believe there is no wiser course for any investor.

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Please note: The opinions expressed in this report are just that—informed opinions. They should not be considered promises or advice. Also, please keep in mind that the information and opinions cover the period through the date on the front of this report. Of course, the risks of investing in your fund are spelled out in the prospectus.

See the Glossary for definitions of investment terms used in this report.

About the cover: Nautical images have been part of Vanguard's rich heritage since its start in 1975. For an incoming ship, a lighthouse offers a beacon and safe path to shore. You can similarly depend on Vanguard to put you first—and light the way—as you strive to meet your financial goals. Our client focus and low costs, stemming from our unique ownership structure, assure that your interests are paramount.

CEO's Perspective



Tim Buckley
President and Chief Executive Officer

Dear Planholder,

I feel extremely fortunate to have the chance to lead a company filled with people who come to work every day passionate about Vanguard's core purpose: to take a stand for all investors, to treat them fairly, and to give them the best chance for investment success.

When I joined Vanguard in 1991, I found a mission-driven team focused on improving lives—helping people retire more comfortably, put their children through college, and achieve financial security. I also found a company with purpose in an industry ripe for improvement.

It was clear, even early in my career, that the cards were stacked against most investors. Hidden fees, performance-chasing, and poor advice were relentlessly eroding investors' dreams.

We knew Vanguard could be different and, as a result, could make a real difference. We have lowered the costs of investing for our shareholders significantly. And we're proud of the performance of our funds.

Vanguard is built for Vanguard investors—we focus solely on you, our fund shareholders. Everything we do is designed to give our clients the best chance for investment success. In my role as CEO,

I'll keep this priority front and center. We're proud of what we've achieved, but we're even more excited about what's to come.

Steady, time-tested guidance

Our guidance for investors, as always, is to stay the course, tune out the hyperbolic headlines, and focus on your goals and what you can control, such as costs and how much you save. This time-tested advice has served our clients well over the decades.

Regardless of how the markets perform in the short term, I'm incredibly optimistic about the future for our investors. We have a dedicated team serving you, and we will never stop striving to make Vanguard the best place for you to invest through our high-quality funds and services, advice and guidance to help you meet your financial goals, and an experience that makes you feel good about entrusting us with your hard-earned savings.

Thank you for your continued loyalty.

Sincerely,

A handwritten signature in black ink, appearing to read "Mortimer J. Buckley".

Mortimer J. Buckley
President and Chief Executive Officer
July 13, 2018

Market Perspective

U.S. stocks continued to climb, even with periods of volatility

U.S. stocks advanced over the six months ended June 30, 2018, although their path forward was marked by significant bouts of volatility. Corporate earnings remained strong and the U.S. economy continued to indicate growth. Investors worried, however, about high stock valuations, the possibility of inflation, and continued tightening of monetary policy by the Federal Reserve.

The Fed's June increase in the federal funds target rate by a quarter percentage point, to 1.75%–2%, was its second in 2018. In announcing it, Fed Chair Jerome Powell offered a positive assessment of the U.S. economy. The Fed has also continued to shrink the \$4.5 trillion balance sheet it had amassed since it began providing monetary stimulus in the wake of the 2007–2009 recession.

For the six months, the broad U.S. stock market returned 3.22%. U.S. large- and mid-capitalization stocks trailed small-caps, while growth stocks exceeded value. Among sectors, information technology, consumer discretionary, and energy posted the strongest returns. Consumer staples, communication services, and industrials fared the worst.

For U.S. investors, a stronger dollar hurt international stocks, which returned –3.83%. Developed European and Pacific markets declined, as did emerging markets.

Bond returns were down as inflation concerns heightened

Bond yields rose and prices fell over the six months as inflation expectations rose, the labor market improved, and the Fed suggested that more rate hikes were in store for 2018. (Bond prices and yields move in opposite directions.)

The yield of the benchmark 10-year Treasury note closed the period at 2.86%, up from 2.41% at the end of December 2017. The broad U.S. bond market returned –1.62% for the period. U.S. Treasuries and mortgage-backed securities generally outpaced investment-grade corporate bonds.

International bonds returned –1.31%, as measured by the Barclays Global Aggregate Index ex USD. U.S. investors were hampered by the dollar's strengthening against many currencies. Without this currency impact, international bonds were up more than 1%.

Market Barometer

| | Total Returns Periods Ended June 30, 2018 | | |
|---|--|----------|-------------------------|
| | Six Months | One Year | Five Years ¹ |
| Stocks | | | |
| Russell 1000 Index (Large-caps) | 2.85% | 14.54% | 13.37% |
| Russell 2000 Index (Small-caps) | 7.66 | 17.57 | 12.46 |
| Russell 3000 Index (Broad U.S. market) | 3.22 | 14.78 | 13.29 |
| FTSE All-World ex US Index (International) | –3.83 | 7.28 | 6.35 |
| Bonds | | | |
| Bloomberg Barclays U.S. Aggregate Bond Index (Broad taxable market) | –1.62% | –0.40% | 2.27% |
| Bloomberg Barclays Municipal Bond Index (Broad tax-exempt market) | –0.25 | 1.56 | 3.53 |
| FTSE Three-Month U.S. Treasury Bill Index | 0.78 | 1.33 | 0.38 |
| CPI | | | |
| Consumer Price Index | 2.22% | 2.87% | 1.54% |

¹ Annualized.

Diversified Value Portfolio

Advisor's Report

The Diversified Value Portfolio returned -2.58% for the six months ended June 30, 2018. It trailed both the -1.69% return of its benchmark, the Russell 1000 Value Index, and the -1.35% average return of peer funds.

Please note that the returns for Vanguard Variable Insurance Fund are different from those of Vanguard Variable Annuity (and other plans that invest in the fund), which take into account insurance-related expenses.

The investment environment

After an extraordinary year for stocks in 2017, the first six months of 2018 produced periods of negative returns and a growing list of worries about the sustainability of the nine-year bull market.

Extreme optimism and lack of fear (volatility) were replaced by higher interest rates, a stronger U.S. dollar, higher energy prices, and escalating trade wars (which generated perhaps the most apprehension). While these were all valid concerns, they were offset (at least temporarily) by the benefits derived from tax cuts, repatriations, and higher government spending.

Each concern had a very different and uneven effect on individual industries and companies. This could lead to a future inflection point favoring active stock selection rather than the passive investing that has been so popular.

It may also call into question the popularity of growth stocks relative to value stocks, as many passive benchmarks (particularly the S&P 500 Index) have outsize weightings in a handful of "superstar" growth stocks. Although these stocks continue to outperform, the underpinnings of a value cycle—most notably faster economic growth and higher interest rates—are present and on the increase.

Our successes and shortfalls

Our overweight to and stock selection in energy added to results. Most of the energy stocks in the portfolio had leverage to higher oil prices and a strong fundamental story.

Occidental Petroleum, ConocoPhillips, and BP all did exceptionally well. Occidental's stock increased as its Permian Basin oil production surpassed anticipated levels and its midstream business (with excess

pipeline takeaway capacity) captured significant margins in a tight market. ConocoPhillips' stock increased as the company's cash flow was leveraged to higher oil prices. Further, management used the proceeds from last year's asset sale in Canada to delever the company, along with increasing production and cash flow, to institute a multiyear share repurchase program. BP stock increased as financial results for both its upstream and downstream assets exceeded expectations.

The health care sector detracted most, largely because of an overweighted position in Cardinal Health. One of the biggest pharmaceutical distributors in North America, Cardinal also has a dominant medical product distribution business. Distributors make a disproportionate amount of profits from generic drugs, whose pricing has been weaker than usual over the last two years.

Accelerating FDA approvals of new generics will keep pressuring prices, but the consolidation of purchasers into large organizations has run its course, which should lead to moderating price deflation. Another concern is that Amazon will join the health care distribution supply chain industry, but we believe this is overblown given the operational, regulatory, and clinical barriers to entry. We continue to hold Cardinal as the stock is trading at just 10 times forward earnings with a 3.5% dividend yield. The valuation should improve as the pharmaceutical business recovers and the medical business gets past its Cordis integration issues.

Total Returns

| | Six Months Ended June 30, 2018 |
|---|-----------------------------------|
| Diversified Value Portfolio | -2.58% |
| Russell 1000 Value Index | -1.69 |
| Variable Insurance Large-Cap Value Funds Average ¹ | -1.35 |

Expense Ratios²

Your Portfolio Compared With Its Peer Group

| | Portfolio | Variable Insurance Large-Cap Value Funds Average |
|-----------------------------|-----------|--|
| Diversified Value Portfolio | 0.27% | 0.83% |

¹ Derived from data provided by Lipper, a Thomson Reuters Company.

² The portfolio expense ratio shown is from the prospectus dated April 26, 2018, and represents estimated costs for the current fiscal year. For the six months ended June 30, 2018, the Diversified Value Portfolio's annualized expense ratio was 0.27%. The peer-group expense ratio is derived from data provided by Lipper Inc. and captures information through year-end 2017.

Our portfolio positioning

We are now in the ninth year of a growth-driven equity bull market. The valuation of the overall stock market is above average, corporate profit margins are near peak levels, and interest rates are rising. All of this suggests more modest returns going forward. If markets fall or moderate, our fundamental, defensive style of investing should provide downside protection because we invest in cheaper stocks with strong dividend support. Your portfolio is well-positioned for the sustained period of value stock outperformance that we expect to follow growth stocks' dominance.

We remain focused on buying a concentrated portfolio of good companies trading at valuations below the broad market for reasons that we believe to be temporary or overblown. These companies have higher-than-average returns on invested capital and free cash flow margins and return a greater-than-average amount of the free cash flow to shareholders, especially through dividends.

This bottom-up investing approach has led to today's portfolio positioning, with an overweight to the health care sector and underweights to financials, real estate investment trusts, and electric utilities. We are optimistic that the combination of a fundamental premium with a valuation advantage situates the portfolio well for the future.

Portfolio Managers:

Jeff Fahrenbruch, Managing Director

David Ganucheau, Managing Director

Barrow, Hanley, Mewhinney
& Strauss, LLC

July 19, 2018

Portfolio Profile

As of June 30, 2018

Portfolio Characteristics

| | Portfolio | Comparative Index ¹ | Broad Index ² |
|----------------------------|-----------|--------------------------------|--------------------------|
| Number of Stocks | 42 | 730 | 3,779 |
| Median Market Cap | \$92.9B | \$60.8B | \$64.B |
| Price/Earnings Ratio | 16.3x | 16.2x | 20.7x |
| Price/Book Ratio | 2.3x | 2.0x | 3.0x |
| Yield ³ | 2.6% | 2.5% | 1.8% |
| Return on Equity | 15.6% | 12.1% | 15.0% |
| Earnings Growth Rate | 5.2% | 5.6% | 8.3% |
| Foreign Holdings | 6.9% | 0.0% | 0.0% |
| Turnover Rate ⁴ | 27% | — | — |
| Expense Ratio ⁵ | 0.27% | — | — |
| Short-Term Reserves | 0.7% | — | — |

Volatility Measures

| | Portfolio Versus Comparative Index ¹ | Portfolio Versus Broad Index ² |
|-----------|---|---|
| R-Squared | 0.92 | 0.83 |
| Beta | 0.99 | 0.94 |

Sector Diversification (% of portfolio)

| | Portfolio | Comparative Index ¹ | Broad Index ² |
|----------------------------|-----------|--------------------------------|--------------------------|
| Consumer Discretionary | 12.3% | 8.3% | 13.2% |
| Consumer Staples | 7.5 | 7.3 | 6.2 |
| Energy | 14.6 | 11.1 | 6.1 |
| Financials | 17.5 | 23.3 | 14.3 |
| Health Care | 18.7 | 13.9 | 13.7 |
| Industrials | 10.0 | 7.9 | 10.2 |
| Information Technology | 9.0 | 9.9 | 24.7 |
| Materials | 6.3 | 4.1 | 3.1 |
| Real Estate | 0.0 | 4.9 | 3.8 |
| Telecommunication Services | 1.8 | 3.6 | 1.8 |
| Utilities | 2.3 | 5.7 | 2.9 |

Ten Largest Holdings⁶ (% of total net assets)

| | | |
|-------------------------------|----------------------------|-------|
| JPMorgan Chase & Co. | Diversified Banks | 3.5% |
| Wells Fargo & Co. | Diversified Banks | 3.5 |
| United Technologies Corp. | Aerospace & Defense | 3.4 |
| Lowe's Cos. Inc. | Home Improvement Retail | 3.3 |
| Air Products & Chemicals Inc. | Industrial Gases | 3.2 |
| Occidental Petroleum Corp. | Integrated Oil & Gas | 3.2 |
| Pfizer Inc. | Pharmaceuticals | 3.2 |
| Express Scripts Holding Co. | Health Care Services | 3.1 |
| Medtronic plc | Health Care Equipment | 3.1 |
| Dollar General Corp. | General Merchandise Stores | 3.1 |
| Top Ten | | 32.6% |

Investment Focus

| Style | | Value | Blend | Growth |
|------------|--------|-------|-------|--------|
| Market Cap | Large | | | |
| | Medium | | | |
| | Small | | | |

30-Day SEC Yield. A portfolio's 30-day SEC yield is derived using a formula specified by the U.S. Securities and Exchange Commission. Under the formula, data related to the portfolio's security holdings in the previous 30 days are used to calculate the portfolio's hypothetical net income for that period, which is then annualized and divided by the portfolio's estimated average net assets over the calculation period. For the purposes of this calculation, a security's income is based on its current market yield to maturity (for bonds), its actual income (for asset-backed securities), or its projected dividend yield (for stocks). Because the SEC yield represents hypothetical annualized income, it will differ—at times significantly—from the portfolio's actual experience. As a result, the portfolio's income distributions may be higher or lower than implied by the SEC yield.

Beta. A measure of the magnitude of a portfolio's past share-price fluctuations in relation to the ups and downs of a given market index. The index is assigned a beta of 1.00. Compared with a given index, a portfolio with a beta of 1.20 typically would have seen its share price rise or fall by 12% when the index rose or fell by 10%. For this report, beta is based on returns over the past 36 months for both the portfolio and the index.

Equity Exposure. A measure that reflects a portfolio's investments in stocks and stock futures. Any holdings in short-term reserves are excluded.

R-Squared. A measure of how much of a portfolio's past returns can be explained by the returns from the market in general, as measured by a given index. If a portfolio's total returns were precisely synchronized with an index's returns, its R-squared would be 1.00. If the portfolio's returns bore no relationship to the index's returns, its R-squared would be 0. For this report, R-squared is based on returns over the past 36 months for both the portfolio and the index.

¹ Russell 1000 Value Index.

² Dow Jones U.S. Total Stock Market Float Adjusted Index.

³ 30-day SEC yield for the portfolio; annualized dividend yield for the index.

⁴ Annualized.

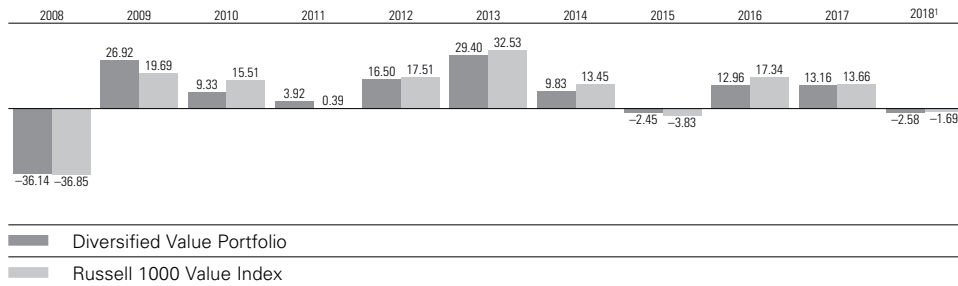
⁵ The expense ratio shown is from the prospectus dated April 26, 2018, and represents estimated costs for the current fiscal year. For the six months ended June 30, 2018, the Diversified Value Portfolio's annualized expense ratio was 0.27%.

⁶ The holdings listed exclude any temporary cash investments and equity index products.

Performance Summary

All of the returns in this report represent past performance, which is not a guarantee of future results that may be achieved by the portfolio. (Current performance may be lower or higher than the performance data cited. For performance data current to the most recent month-end, visit our website at vanguard.com/performance.) Note, too, that both investment returns and principal value can fluctuate widely, so an investor's shares, when sold, could be worth more or less than their original cost. The returns shown do not reflect taxes that a shareholder would pay on portfolio distributions or on the sale of portfolio shares. Nor do the returns reflect fees and expenses associated with the annuity or life insurance program through which a shareholder invests. If these fees and expenses were included, the portfolio's returns would be lower.

Fiscal-Year Total Returns (%): December 31, 2007–June 30, 2018



Average Annual Total Returns: Periods Ended June 30, 2018

| | Inception Date | One Year | Five Years | Ten Years |
|-----------------------------|----------------|----------|------------|-----------|
| Diversified Value Portfolio | 2/8/1999 | 3.23% | 8.54% | 8.10% |

¹ Six months ended June 30, 2018.

See Financial Highlights for dividend and capital gains information.

Financial Statements (unaudited)

Statement of Net Assets

As of June 30, 2018

The portfolio reports a complete list of its holdings in regulatory filings four times in each fiscal year, at the quarter-ends. For the second and fourth fiscal quarters, the lists appear in the portfolio's semiannual and annual reports to shareholders. For the first and third fiscal quarters, the portfolio files the lists with the Securities and Exchange Commission on Form N-Q. Shareholders can look up the portfolio's Forms N-Q on the SEC's website at sec.gov. Forms N-Q may also be reviewed and copied at the SEC's Public Reference Room (see the back cover of this report for further information).

| | Shares | Market Value* (\$000) | Shares | Market Value* (\$000) | Amount (\$000) |
|--|-----------|-----------------------|--------|-----------------------|------------------|
| Common Stocks (99.0%) | | | | | |
| Consumer Discretionary (12.2%) | | | | | |
| Lowe's Cos. Inc. | 355,397 | 33,965 | | | |
| Dollar General Corp. | 325,900 | 32,134 | | | |
| Comcast Corp. Class A | 890,564 | 29,219 | | | |
| Twenty-First Century Fox Inc. Class A | 360,616 | 17,919 | | | |
| Adient plc | 239,233 | 11,768 | | | |
| | | 125,005 | | | |
| Consumer Staples (7.4%) | | | | | |
| Philip Morris International Inc. | 338,264 | 27,311 | | | |
| Altria Group Inc. | 435,279 | 24,720 | | | |
| Imperial Brands plc ADR | 643,707 | 23,907 | | | |
| | | 75,938 | | | |
| Energy (14.4%) | | | | | |
| Occidental Petroleum Corp. | 390,308 | 32,661 | | | |
| Schlumberger Ltd. | 455,460 | 30,529 | | | |
| Phillips 66 | 251,530 | 28,249 | | | |
| BP plc ADR | 506,767 | 23,139 | | | |
| ConocoPhillips | 310,953 | 21,649 | | | |
| Chevron Corp. | 94,194 | 11,909 | | | |
| | | 148,136 | | | |
| Financials (17.4%) | | | | | |
| JPMorgan Chase & Co. | 346,048 | 36,058 | | | |
| Wells Fargo & Co. | 639,559 | 35,457 | | | |
| American Express Co. | 304,928 | 29,883 | | | |
| US Bancorp | 557,131 | 27,868 | | | |
| Citigroup Inc. | 300,331 | 20,098 | | | |
| American International Group Inc. | 320,198 | 16,977 | | | |
| Navient Corp. | 493,467 | 6,430 | | | |
| * SLM Corp. | 493,654 | 5,652 | | | |
| | | 178,423 | | | |
| Health Care (18.5%) | | | | | |
| Pfizer Inc. | 900,024 | 32,653 | | | |
| * Express Scripts Holding Co. | 417,065 | 32,202 | | | |
| Medtronic plc | 375,579 | 32,153 | | | |
| Johnson & Johnson | 213,371 | 25,890 | | | |
| CVS Health Corp. | 373,740 | 24,050 | | | |
| Sanofi ADR | 582,900 | 23,322 | | | |
| Cardinal Health Inc. | 400,710 | 19,567 | | | |
| | | 189,837 | | | |
| Industrials (9.9%) | | | | | |
| United Technologies Corp. | 275,630 | 34,462 | | | |
| Johnson Controls International plc | 869,765 | 29,094 | | | |
| General Electric Co. | 1,610,864 | 21,924 | | | |
| General Dynamics Corp. | 84,009 | 15,660 | | | |
| | | 101,140 | | | |
| Information Technology (8.9%) | | | | | |
| Oracle Corp. | 711,383 | 31,344 | | | |
| QUALCOMM Inc. | 532,742 | 29,897 | | | |
| Microsoft Corp. | 300,489 | 29,631 | | | |
| | | 90,872 | | | |
| Materials (6.2%) | | | | | |
| Air Products & Chemicals Inc. | 212,603 | 33,109 | | | |
| DowDuPont Inc. | 470,625 | 31,023 | | | |
| | | 64,132 | | | |
| Telecommunication Services (1.8%) | | | | | |
| Verizon Communications Inc. | 208,059 | 10,468 | | | |
| AT&T Inc. | 248,615 | 7,983 | | | |
| | | 18,451 | | | |
| Utilities (2.3%) | | | | | |
| Exelon Corp. | 286,154 | 12,190 | | | |
| Dominion Energy Inc. | 166,582 | 11,358 | | | |
| | | 23,548 | | | |
| Total Common Stocks (Cost \$931,962) | | 1,015,482 | | | |
| Temporary Cash Investment (0.7%) | | | | | |
| Money Market Fund (0.7%) | | | | | |
| ¹ Vanguard Market Liquidity Fund, 2.122% (Cost \$7,009) | 70,081 | 7,009 | | | |
| Total Investments (99.7%) (Cost \$938,971) | | 1,022,491 | | | |
| Other Assets and Liabilities (0.3%) | | | | | |
| Other Assets | | | | | |
| Investment in Vanguard | | 55 | | | |
| Receivables for Investment Securities Sold | | 7,791 | | | |
| Receivables for Accrued Income | | 2,372 | | | |
| Receivables for Capital Shares Issued | | 276 | | | |
| Other Assets | | 2 | | | |
| Total Other Assets | | 10,496 | | | |
| Liabilities | | | | | |
| Payables for Investment Securities Purchased | | (5,211) | | | |
| Payables for Capital Shares Redeemed | | (988) | | | |
| Payables to Investment Advisor | | (241) | | | |
| Payables to Vanguard | | (1,183) | | | |
| Total Liabilities | | (7,623) | | | |
| Net Assets (100%) | | | | | |
| Applicable to 66,771,381 outstanding \$0.01 par value shares of beneficial interest (unlimited authorization) | | | | | 1,025,364 |
| Net Asset Value Per Share | | | | | \$15.36 |
| At June 30, 2018, net assets consisted of: | | | | | |
| | | | | | Amount (\$000) |
| Paid-in Capital | | | | | 889,806 |
| Undistributed Net Investment Income | | | | | 12,148 |
| Accumulated Net Realized Gains | | | | | 39,890 |
| Unrealized Appreciation (Depreciation) | | | | | 83,520 |
| Net Assets | | | | | 1,025,364 |
| * See Note A in Notes to Financial Statements. | | | | | |
| * Non-income-producing security. | | | | | |
| ¹ Affiliated money market fund available only to Vanguard funds and certain trusts and accounts managed by Vanguard. Rate shown is the 7-day yield. | | | | | |
| ADR—American Depositary Receipt. | | | | | |

Statement of Operations

| | Six Months Ended June 30, 2018 (\$000) |
|--|--|
| Investment Income | |
| Income | |
| Dividends ¹ | 15,169 |
| Interest ² | 71 |
| Securities Lending—Net | 12 |
| Total Income | 15,252 |
| Expenses | |
| Investment Advisory Fees—Note B | |
| Basic Fee | 678 |
| Performance Adjustment | (172) |
| The Vanguard Group—Note C | |
| Management and Administrative | 838 |
| Marketing and Distribution | 74 |
| Custodian Fees | 10 |
| Shareholders' Reports | 2 |
| Trustees' Fees and Expenses | 1 |
| Total Expenses | 1,431 |
| Expenses Paid Indirectly | (12) |
| Net Expenses | 1,419 |
| Net Investment Income | 13,833 |
| Realized Net Gain (Loss) on Investment Securities Sold² | 39,884 |
| Change in Unrealized Appreciation (Depreciation) of Investment Securities² | (83,884) |
| Net Increase (Decrease) in Net Assets Resulting from Operations | (30,167) |

¹ Dividends are net of foreign withholding taxes of \$161,000.

² Interest income, realized net gain (loss), and change in unrealized appreciation (depreciation) from an affiliated company of the portfolio were \$71,000, \$1,000, and \$0, respectively. Purchases and sales are for temporary cash investment purposes.

Statement of Changes in Net Assets

| | Six Months Ended June 30, 2018 (\$000) | Year Ended December 31, 2017 (\$000) |
|--|---|---|
| Increase (Decrease) in Net Assets | | |
| Operations | | |
| Net Investment Income | 13,833 | 27,806 |
| Realized Net Gain (Loss) | 39,884 | 54,302 |
| Change in Unrealized Appreciation (Depreciation) | (83,884) | 58,076 |
| Net Increase (Decrease) in Net Assets Resulting from Operations | (30,167) | 140,184 |
| Distributions | | |
| Net Investment Income | (27,747) | (31,847) |
| Realized Capital Gain ¹ | (54,228) | (106,243) |
| Total Distributions | (81,975) | (138,090) |
| Capital Share Transactions | | |
| Issued | 53,795 | 83,423 |
| Issued in Lieu of Cash Distributions | 81,975 | 138,090 |
| Redeemed | (135,367) | (216,526) |
| Net Increase (Decrease) from Capital Share Transactions | 403 | 4,987 |
| Total Increase (Decrease) | (111,739) | 7,081 |
| Net Assets | | |
| Beginning of Period | 1,137,103 | 1,130,022 |
| End of Period² | 1,025,364 | 1,137,103 |

¹ Includes fiscal 2018 and 2017 short-term gain distributions totaling \$420,000 and \$14,464,000. Short-term gain distributions are treated as ordinary income dividends for tax purposes.

² Net Assets—End of Period includes undistributed (overdistributed) net investment income of \$12,148,000 and \$26,062,000.

Financial Highlights

| For a Share Outstanding Throughout Each Period | Six Months Ended June 30, 2018 | Year Ended December 31, | | | | |
|---|---|-------------------------|----------------|----------------|----------------|----------------|
| | | 2017 | 2016 | 2015 | 2014 | 2013 |
| Net Asset Value, Beginning of Period | \$17.04 | \$17.11 | \$16.55 | \$18.65 | \$18.10 | \$14.31 |
| Investment Operations | | | | | | |
| Net Investment Income | .205 ¹ | .401 ¹ | .496 | .471 | .447 | .412 |
| Net Realized and Unrealized Gain (Loss) on Investments | (.635) | 1.658 | 1.468 | (.901) | 1.248 | 3.731 |
| Total from Investment Operations | (.430) | 2.059 | 1.964 | (.430) | 1.695 | 4.143 |
| Distributions | | | | | | |
| Dividends from Net Investment Income | (.423) | (.491) | (.461) | (.466) | (.415) | (.353) |
| Distributions from Realized Capital Gains | (.827) | (1.638) | (.943) | (1.204) | (.730) | — |
| Total Distributions | (1.250) | (2.129) | (1.404) | (1.670) | (1.145) | (.353) |
| Net Asset Value, End of Period | \$15.36 | \$17.04 | \$17.11 | \$16.55 | \$18.65 | \$18.10 |
| Total Return | -2.58% | 13.16% | 12.96% | -2.45% | 9.83% | 29.40% |

Ratios/Supplemental Data

| | | | | | | |
|---|---------|---------|---------|---------|---------|---------|
| Net Assets, End of Period (Millions) | \$1,025 | \$1,137 | \$1,130 | \$1,060 | \$1,213 | \$1,116 |
| Ratio of Total Expenses to Average Net Assets ² | 0.27% | 0.27% | 0.27% | 0.28% | 0.34% | 0.35% |
| Ratio of Net Investment Income to Average Net Assets | 2.57% | 2.45% | 3.01% | 2.55% | 2.50% | 2.50% |
| Portfolio Turnover Rate | 27% | 18% | 34% | 13% | 16% | 20% |

The expense ratio, net investment income ratio, and turnover rate for the current period have been annualized.

¹ Calculated based on average shares outstanding.

² Includes performance-based investment advisory fee increases (decreases) of (0.03%), (0.03%), (0.03%), (0.03%), (0.01%), and (0.01%).

Notes to Financial Statements

Diversified Value Portfolio, a portfolio of Vanguard Variable Insurance Funds, is registered under the Investment Company Act of 1940 as an open-end investment company. The portfolio's shares are only available for purchase by separate accounts of insurance companies as investments for variable annuity plans, variable life insurance contracts, or other variable benefit insurance contracts.

A. The following significant accounting policies conform to generally accepted accounting principles for U.S. investment companies. The portfolio consistently follows such policies in preparing its financial statements.

1. Security Valuation: Securities are valued as of the close of trading on the New York Stock Exchange (generally 4 p.m., Eastern time) on the valuation date. Equity securities are valued at the latest quoted sales prices or official closing prices taken from the primary market in which each security trades; such securities not traded on the valuation date are valued at the mean of the latest quoted bid and asked prices. Securities for which market quotations are not readily available, or whose values have been materially affected by events occurring before the portfolio's pricing time but after the close of the securities' primary markets, are valued by methods deemed by the board of trustees to represent fair value. Investments in Vanguard Market Liquidity Fund are valued at that fund's net asset value.

2. Federal Income Taxes: The portfolio intends to continue to qualify as a regulated investment company and distribute all of its taxable income. Management has analyzed the portfolio's tax positions taken for all open federal income tax years (December 31, 2014–2017), and for the period ended June 30, 2018, and has concluded that no provision for federal income tax is required in the portfolio's financial statements.

3. Distributions: Distributions to shareholders are recorded on the ex-dividend date.

4. **Securities Lending:** To earn additional income, the portfolio lends its securities to qualified institutional borrowers. Security loans are subject to termination by the portfolio at any time, and are required to be secured at all times by collateral in an amount at least equal to the market value of securities loaned. Daily market fluctuations could cause the value of loaned securities to be more or less than the value of the collateral received. When this occurs, the collateral is adjusted and settled before the opening of the market on the next business day. The portfolio further mitigates its counterparty risk by entering into securities lending transactions only with a diverse group of prequalified counterparties, monitoring their financial strength, and entering into master securities lending agreements with its counterparties. The master securities lending agreements provide that, in the event of a counterparty's default (including bankruptcy), the portfolio may terminate any loans with that borrower, determine the net amount owed, and sell or retain the collateral up to the net amount owed to the portfolio; however, such actions may be subject to legal proceedings. While collateral mitigates counterparty risk, in the event of a default, the portfolio may experience delays and costs in recovering the securities loaned. The portfolio invests cash collateral received in Vanguard Market Liquidity Fund, and records a liability in the Statement of Net Assets for the return of the collateral, during the period the securities are on loan. Securities lending income represents fees charged to borrowers plus income earned on invested cash collateral, less expenses associated with the loan. During the term of the loan, the portfolio is entitled to all distributions made on or in respect of the loaned securities.

5. **Credit Facility:** The portfolio and certain other funds managed by The Vanguard Group ("Vanguard") participate in a \$3.1 billion committed credit facility provided by a syndicate of lenders pursuant to a credit agreement that may be renewed annually; each fund is individually liable for its borrowings, if any, under the credit facility. Borrowings may be utilized for temporary and emergency purposes, and are subject to the portfolio's regulatory and contractual borrowing restrictions. The participating funds are charged administrative fees and an annual commitment fee of 0.10% of the undrawn amount of the facility; these fees are allocated to the funds based on a method approved by the portfolio's board of trustees and included in Management and Administrative expenses on the portfolio's Statement of Operations. Any borrowings under this facility bear interest at a rate based upon the higher of the one-month London Interbank Offered Rate, federal funds effective rate, or overnight bank funding rate plus an agreed-upon spread.

The portfolio had no borrowings outstanding at June 30, 2018, or at any time during the period then ended.

6. **Other:** Dividend income is recorded on the ex-dividend date. Interest income includes income distributions received from Vanguard Market Liquidity Fund and is accrued daily. Security transactions are accounted for on the date securities are bought or sold. Costs used to determine realized gains (losses) on the sale of investment securities are those of the specific securities sold.

B. Barrow, Hanley, Mewhinney & Strauss, LLC, provides investment advisory services to the portfolio for a fee calculated at an annual percentage rate of average net assets. The basic fee is subject to quarterly adjustments based on the portfolio's performance relative to the MSCI Prime Market 750 Index for the preceding three years. For the six months ended June 30, 2018, the investment advisory fee represented an effective annual basic rate of 0.13% of the portfolio's average net assets before a decrease of \$172,000 (0.03%) based on performance.

C. In accordance with the terms of a Funds' Service Agreement (the "FSA") between Vanguard and the portfolio, Vanguard furnishes to the portfolio corporate management, administrative, marketing, and distribution services at Vanguard's cost of operations (as defined by the FSA). These costs of operations are allocated to the portfolio based on methods and guidelines approved by the board of trustees. Vanguard does not require reimbursement in the current period for certain costs of operations (such as deferred compensation/benefits and risk/insurance costs); the portfolio's liability for these costs of operations is included in Payables to Vanguard on the Statement of Net Assets. All other costs of operations payable to Vanguard are generally settled twice a month.

Upon the request of Vanguard, the portfolio may invest up to 0.40% of its net assets as capital in Vanguard. At June 30, 2018, the portfolio had contributed to Vanguard capital in the amount of \$55,000, representing 0.01% of the portfolio's net assets and 0.02% of Vanguard's capitalization. The portfolio's trustees and officers are also directors and employees, respectively, of Vanguard.

D. The portfolio has asked its investment advisor to direct certain security trades, subject to obtaining the best price and execution, to brokers who have agreed to rebate to the portfolio part of the commissions generated. Such rebates are used solely to reduce the portfolio's management and administrative expenses. For the six months ended June 30, 2018, these arrangements reduced the portfolio's expenses by \$12,000 (an annual rate of 0.00% of average net assets).

E. Various inputs may be used to determine the value of the portfolio's investments. These inputs are summarized in three broad levels for financial statement purposes. The inputs or methodologies used to value securities are not necessarily an indication of the risk associated with investing in those securities.

Level 1—Quoted prices in active markets for identical securities.

Level 2—Other significant observable inputs (including quoted prices for similar securities, interest rates, prepayment speeds, credit risk, etc.).

Level 3—Significant unobservable inputs (including the portfolio's own assumptions used to determine the fair value of investments). Any investments valued with significant unobservable inputs are noted on the Statement of Net Assets.

At June 30, 2018, 100% of the market value of the portfolio's investments was determined based on Level 1 inputs.

F. Distributions are determined on a tax basis and may differ from net investment income and realized capital gains for financial reporting purposes. Differences may be permanent or temporary. Permanent differences are reclassified among capital accounts in the financial statements to reflect their tax character. Temporary differences arise when certain items of income, expense, gain, or loss are recognized in different periods for financial statement and tax purposes. These differences will reverse at some time in the future. Differences in classification may also result from the treatment of short-term gains as ordinary income for tax purposes. The portfolio's tax-basis capital gains and losses are determined only at the end of each fiscal year.

At June 30, 2018, the cost of investment securities for tax purposes was \$938,971,000. Net unrealized appreciation of investment securities for tax purposes was \$83,520,000, consisting of unrealized gains of \$185,744,000 on securities that had risen in value since their purchase and \$102,224,000 in unrealized losses on securities that had fallen in value since their purchase.

G. During the six months ended June 30, 2018, the portfolio purchased \$144,332,000 of investment securities and sold \$217,380,000 of investment securities, other than temporary cash investments.

H. Capital shares issued and redeemed were:

| | Six Months Ended June 30, 2018 | Year Ended December 31, 2017 |
|---|-----------------------------------|---------------------------------|
| | Shares (000) | Shares (000) |
| Issued | 3,277 | 5,070 |
| Issued in Lieu of Cash Distributions | 5,292 | 8,835 |
| Redeemed | (8,513) | (13,222) |
| Net Increase (Decrease) in Shares Outstanding | 56 | 683 |

At June 30, 2018, two shareholders were each a record or beneficial owner of 25% or more of the portfolio's net assets, with a combined ownership of 66%. If one of these shareholders were to redeem its investment in the portfolio, the redemption might result in an increase in the portfolio's expense ratio or cause the portfolio to incur higher transaction costs.

I. Management has determined that no events or transactions occurred subsequent to June 30, 2018, that would require recognition or disclosure in these financial statements.

About Your Portfolio's Expenses

As a shareholder of the portfolio, you incur ongoing costs, which include costs for portfolio management, administrative services, and shareholder reports (like this one), among others. Operating expenses, which are deducted from a portfolio's gross income, directly reduce the investment return of the portfolio.

A portfolio's expenses are expressed as a percentage of its average net assets. This figure is known as the expense ratio. The following examples are intended to help you understand the ongoing costs (in dollars) of investing in your portfolio and to compare these costs with those of other mutual funds. The examples are based on an investment of \$1,000 made at the beginning of the period shown and held for the entire period.

The table below illustrates your portfolio's costs in two ways:

- **Based on actual portfolio return.** This section helps you to estimate the actual expenses that you paid over the period. The "Ending Account Value" shown is derived from the portfolio's actual return, and the third column shows the dollar amount that would have been paid by an investor who started with \$1,000 in the portfolio. You may use the information here, together with the amount you invested, to estimate the expenses that you paid over the period.

To do so, simply divide your account value by \$1,000 (for example, an \$8,600 account value divided by \$1,000 = 8.6), then multiply the result by the number given for your portfolio under the heading "Expenses Paid During Period."

- **Based on hypothetical 5% yearly return.** This section is intended to help you compare your portfolio's costs with those of other mutual funds. It assumes that the portfolio had a yearly return of 5% before expenses, but that the expense ratio is unchanged. In this case—because the return used is not the portfolio's actual return—the results do not apply to your investment. The example is useful in making comparisons because the Securities and Exchange Commission requires all mutual funds to calculate expenses based on a 5% return. You can assess your portfolio's costs by comparing this hypothetical example with the hypothetical examples that appear in shareholder reports of other funds.

Note that the expenses shown in the table are meant to highlight and help you compare *ongoing* costs only and do not reflect transaction costs incurred by the portfolio for buying and selling securities. The portfolio's expense ratio does not reflect additional fees and expenses associated with the annuity or life insurance program through which you invest.

The calculations assume no shares were bought or sold during the period. Your actual costs may have been higher or lower, depending on the amount of your investment and the timing of any purchases or redemptions.

You can find more information about the portfolio's expenses in the Financial Statements section. For additional information on operating expenses and other shareholder costs, please refer to the prospectus.

Six Months Ended June 30, 2018

| | Beginning Account Value 12/31/2017 | Ending Account Value 6/30/2018 | Expenses Paid During Period ¹ |
|--|--|--------------------------------------|--|
| Diversified Value Portfolio | | | |
| Based on Actual Portfolio Return | \$1,000.00 | \$974.17 | \$1.32 |
| Based on Hypothetical 5% Yearly Return | 1,000.00 | 1,023.46 | 1.35 |

¹ The calculations are based on expenses incurred in the most recent six-month period. The portfolio's annualized six-month expense ratio for that period is 0.27%. The dollar amounts shown as "Expenses Paid" are equal to the annualized expense ratio multiplied by the average account value over the period, multiplied by the number of days in the most recent six-month period, then divided by the number of days in the most recent 12-month period (181/365).

Trustees Approve Advisory Arrangement

The board of trustees of Vanguard Variable Insurance Fund Diversified Value Portfolio has renewed the portfolio's investment advisory arrangement with Barrow, Hanley, Mewhinney & Strauss, LLC (Barrow Hanley). The board determined that renewing the portfolio's advisory arrangement was in the best interests of the portfolio and its shareholders.

The board based its decision upon an evaluation of the advisor's investment staff, portfolio management process, and performance. This evaluation included information provided to the board by Vanguard's Portfolio Review Department, which is responsible for fund and advisor oversight and product management. The Portfolio Review Department met regularly with the advisor and made monthly presentations to the board during the fiscal year that directed the board's focus to relevant information and topics.

The board, or an investment committee made up of board members, also received information throughout the year during advisor presentations. For each advisor presentation, the board was provided with letters and reports that included information about, among other things, the advisory firm and the advisor's assessment of the investment environment, portfolio performance, and portfolio characteristics.

In addition, the board received monthly reports, which included a Market and Economic Report, a Fund Dashboard Monthly Summary, and a Fund Performance Report.

Prior to their meeting, the trustees were provided with a memo and materials that summarized the information they received over the course of the year. They also considered the factors discussed below, among others. However, no single factor determined whether the board approved the arrangement. Rather, it was the totality of the circumstances that drove the board's decision.

Nature, extent, and quality of services

The board reviewed the quality of the portfolio's investment management services over both the short and long term and took into account the organizational depth and stability of the advisor. The board considered that Barrow Hanley, founded in 1979, is known for its commitment to value investing. A subsidiary of Old Mutual Asset Management, Barrow Hanley remains independently managed. Using fundamental research, the advisor seeks to make long-term investments in quality or improving businesses that are undervalued because of short-term disappointments. Barrow Hanley seeks to construct a portfolio with strict adherence to valuation factors, below-average price/earnings and price/book value ratios, and above-average current yields. The firm has managed the portfolio since its inception in 1999.

The board concluded that the advisor's experience, stability, depth, and performance, among other factors, warranted continuation of the advisory arrangement.

Investment performance

The board considered the short- and long-term performance of the portfolio, including any periods of outperformance or underperformance compared with a relevant benchmark index and peer group. The board concluded that the performance was such that the advisory arrangement should continue. Information about the portfolio's most recent performance can be found in the Performance Summary section of this report.

Cost

The board concluded that the portfolio's expense ratio was well below the average expense ratio charged by funds in its peer group and that the portfolio's advisory fee rate was also well below the peer-group average. Information about the portfolio's expenses appears in the About Your Portfolio's Expenses section as well as in the Financial Statements section, which also includes information about the portfolio's advisory fee rate.

The board did not consider the profitability of Barrow Hanley in determining whether to approve the advisory fee, because Barrow Hanley is independent of Vanguard and the advisory fee is the result of arm's-length negotiations.

The benefit of economies of scale

The board concluded that the portfolio realizes economies of scale that are built into the advisory fee rate negotiated with Barrow Hanley without any need for asset-level breakpoints. The advisory fee rate is very low relative to the average rate paid by funds in the portfolio's peer group.

The board will consider whether to renew the advisory arrangement again after a one-year period.

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The People Who Govern Your Fund

The trustees of your mutual fund are there to see that the fund is operated and managed in your best interests since, as a shareholder, you are a part owner of the fund. Your fund's trustees also serve on the board of directors of The Vanguard Group, Inc., which is owned by the Vanguard funds and provides services to them on an at-cost basis.

A majority of Vanguard's board members are independent, meaning that they have no affiliation with Vanguard or the funds they oversee, apart from the sizable personal investments they have made as private individuals. The independent board members have distinguished backgrounds in business, academia, and public service. Each of the trustees and executive officers oversees 208 Vanguard funds.

Information for each trustee and executive officer of the fund appears below. The mailing address of the trustees and officers is P.O. Box 876, Valley Forge, PA 19482. More information about the trustees is in the *Statement of Additional Information*, which can be obtained, without charge, by contacting Vanguard at 800-662-7447, or online at vanguard.com.

Interested Trustees¹

F. William McNabb III

Born in 1957. Trustee since July 2009. Principal occupation(s) during the past five years and other experience: chairman of the board (January 2010–present) of Vanguard and of each of the investment companies served by Vanguard, trustee (2009–present) of each of the investment companies served by Vanguard, and director (2008–present) of Vanguard. Chief executive officer and president (2008–2017) of Vanguard and each of the investment companies served by Vanguard, managing director (1995–2008) of Vanguard, and director (1997–2018) of Vanguard Marketing Corporation. Director (2018–present) of UnitedHealth Group.

Mortimer J. Buckley

Born in 1969. Trustee since January 2018. Principal occupation(s) during the past five years and other experience: chief executive officer (January 2018–present) of Vanguard; chief executive officer, president, and trustee (January 2018–present) of each of the investment companies served by Vanguard; president and director (2017–present) of Vanguard; and president (February 2018–present) of Vanguard Marketing Corporation. Chief investment officer (2013–2017), managing director (2002–2017), head of the Retail Investor Group (2006–2012), and chief information officer (2001–2006) of Vanguard. Chairman of the board (2011–2017) of the Children's Hospital of Philadelphia.

Independent Trustees

Emerson U. Fullwood

Born in 1948. Trustee since January 2008. Principal occupation(s) during the past five years and other experience: executive chief staff and marketing officer for North America and corporate vice president (retired 2008) of Xerox Corporation (document management products and services). Former president of the Worldwide Channels Group, Latin America, and Worldwide Customer Service and executive chief staff officer of Developing Markets of Xerox. Executive in residence and 2009–2010 Distinguished Minett Professor at the Rochester Institute of Technology. Lead director of SPX FLOW, Inc. (multi-industry manufacturing). Director of the University of Rochester Medical Center, the Monroe Community College Foundation, the United Way of Rochester, North Carolina A&T University, and Roberts Wesleyan College. Trustee of the University of Rochester.

Amy Gutmann

Born in 1949. Trustee since June 2006. Principal occupation(s) during the past five years and other experience: president (2004–present) of the University of Pennsylvania. Christopher H. Browne Distinguished Professor of Political Science, School of Arts and Sciences, and professor of communication, Annenberg School for Communication, with secondary faculty appointments in the Department of Philosophy, School of Arts and Sciences, and at the Graduate School of Education, University of Pennsylvania. Trustee of the National Constitution Center.

JoAnn Heffernan Heisen

Born in 1950. Trustee since July 1998. Principal occupation(s) during the past five years and other experience: corporate vice president of Johnson & Johnson (pharmaceuticals/medical devices/consumer products) and member of its executive committee (1997–2008). Chief global diversity officer (retired 2008), vice president and chief information officer (1997–2006), controller (1995–1997), treasurer (1991–1995), and assistant treasurer (1989–1991) of Johnson & Johnson. Director of Skytop Lodge Corporation (hotels) and the Robert Wood Johnson Foundation. Member of the advisory board of the Institute for Women's Leadership at Rutgers University.

F. Joseph Loughrey

Born in 1949. Trustee since October 2009. Principal occupation(s) during the past five years and other experience: president and chief operating officer (retired 2009) and vice chairman of the board (2008–2009) of Cummins Inc. (industrial machinery). Chairman of the board of Hillenbrand, Inc. (specialized consumer services), Oxfam America, and the Lumina Foundation for Education. Director of the V Foundation for Cancer Research. Member of the advisory council for the College of Arts and Letters and chair of the advisory board to the Kellogg Institute for International Studies, both at the University of Notre Dame.

Mark Loughridge

Born in 1953. Trustee since March 2012. Principal occupation(s) during the past five years and other experience: senior vice president and chief financial officer (retired 2013) of IBM (information technology services). Fiduciary member of IBM's Retirement Plan Committee (2004–2013), senior vice president and general manager (2002–2004) of IBM Global Financing, vice president and controller (1998–2002) of IBM, and a variety of other prior management roles at IBM. Member of the Council on Chicago Booth.

Scott C. Malpass

Born in 1962. Trustee since March 2012. Principal occupation(s) during the past five years and other experience: chief investment officer (1989–present) and vice president (1996–present) of the University of Notre Dame. Assistant professor of finance at the Mendoza College of Business, University of Notre Dame, and member of the Notre Dame 403(b) Investment Committee. Chairman of the board of TIFF Advisory Services, Inc. Member of the board of Catholic Investment Services, Inc. (investment advisors), the board of advisors for Spruceview Capital Partners, and the board of superintendence of the Institute for the Works of Religion.

Deanna Mulligan

Born in 1963. Trustee since January 2018. Principal occupation(s) during the past five years and other experience: president (2010–present) and chief executive officer (2011–present) of The Guardian Life Insurance Company of America. Chief operating officer (2010–2011) and executive vice president (2008–2010) of Individual Life and Disability of The Guardian Life Insurance Company of America. Member of the board of The Guardian Life Insurance Company of America, the American Council of Life Insurers, the Partnership for New York City (business leadership), and the Committee Encouraging Corporate Philanthropy. Trustee of the Economic Club of New York and the Bruce Museum (arts and science). Member of the Advisory Council for the Stanford Graduate School of Business.

André F. Perold

Born in 1952. Trustee since December 2004. Principal occupation(s) during the past five years and other experience: George Gund Professor of Finance and Banking, Emeritus at the Harvard Business School (retired 2011). Chief investment officer and co-managing partner of HighVista Strategies LLC (private investment firm). Overseer of the Museum of Fine Arts Boston.

Sarah Bloom Raskin

Born in 1961. Trustee since January 2018. Principal occupation(s) during the past five years and other experience: deputy secretary (2014–2017) of the United States Department of the Treasury. Governor (2010–2014) of the Federal Reserve Board. Commissioner (2007–2010) of financial regulation for the State of Maryland. Member of the board of directors (2012–2014) of Neighborhood Reinvestment Corporation. Director of i(x) Investments, LLC.

¹ Mr. McNabb and Mr. Buckley are considered "interested persons," as defined in the Investment Company Act of 1940, because they are officers of the Vanguard funds.

Peter F. Volanakis

Born in 1955. Trustee since July 2009. Principal occupation(s) during the past five years and other experience: president and chief operating officer (retired 2010) of Corning Incorporated (communications equipment) and director of Corning Incorporated (2000–2010) and Dow Corning (2001–2010). Director (2012) of SPX Corporation (multi-industry manufacturing). Overseer of the Amos Tuck School of Business Administration, Dartmouth College (2001–2013). Chairman of the board of trustees of Colby-Sawyer College. Member of the Board of Hypertherm Inc. (industrial cutting systems, software, and consumables).

Executive Officers**Glenn Booraem**

Born in 1967. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Investment stewardship officer (2017–present), treasurer (2015–2017), controller (2010–2015), and assistant controller (2001–2010) of each of the investment companies served by Vanguard.

Christine M. Buchanan

Born in 1970. Principal occupation(s) during the past five years and other experience: principal of Vanguard and global head of Fund Administration at Vanguard. Treasurer (2017–present) of each of the investment companies served by Vanguard. Partner (2005–2017) at KPMG LLP (audit, tax, and advisory services).

Brian Dvorak

Born in 1973. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Chief compliance officer (2017–present) of Vanguard and each of the investment companies served by Vanguard. Assistant vice president (2017–present) of Vanguard Marketing Corporation. Vice president and director of Enterprise Risk Management (2011–2013) at Oppenheimer Funds, Inc.

Thomas J. Higgins

Born in 1957. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Chief financial officer (2008–present) and treasurer (1998–2008) of each of the investment companies served by Vanguard.

Peter Mahoney

Born in 1974. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Controller (2015–present) of each of the investment companies served by Vanguard. Head of International Fund Services (2008–2014) at Vanguard.

Anne E. Robinson

Born in 1970. Principal occupation(s) during the past five years and other experience: general counsel (2016–present) of Vanguard. Secretary (2016–present) of Vanguard and of each of the investment companies served by Vanguard. Managing director (2016–present) of Vanguard. Director and senior vice president (2016–2018) of Vanguard Marketing Corporation. Managing director and general counsel of Global Cards and Consumer Services (2014–2016) at Citigroup. Counsel (2003–2014) at American Express.

Michael Rollings

Born in 1963. Principal occupation(s) during the past five years and other experience: finance director (2017–present) and treasurer (2017) of each of the investment companies served by Vanguard. Managing director (2016–present) of Vanguard. Chief financial officer (2016–present) of Vanguard. Director (2016–present) of Vanguard Marketing Corporation. Executive vice president and chief financial officer (2006–2016) of MassMutual Financial Group.

Vanguard Senior Management Team

| | |
|----------------------------|---------------------------|
| Mortimer J. Buckley | James M. Norris |
| Gregory Davis | Thomas M. Rampulla |
| John James | Karin A. Risi |
| Martha G. King | Anne E. Robinson |
| John T. Marcante | Michael Rollings |
| Chris D. McIsaac | |

Chairman Emeritus and Senior Advisor**John J. Brennan**

Chairman, 1996–2009
Chief Executive Officer and President, 1996–2008

Founder**John C. Bogle**

Chairman and Chief Executive Officer, 1974–1996



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You can obtain a free copy of Vanguard's proxy voting guidelines by visiting vanguard.com/proxyreporting or by calling Vanguard at 800-662-2739. The guidelines are also available from the SEC's website, sec.gov. In addition, you may obtain a free report on how your fund voted the proxies for securities it owned during the 12 months ended June 30. To get the report, visit either vanguard.com/proxyreporting or sec.gov.

All comparative mutual fund data are from Lipper, a Thomson Reuters Company, or Morningstar, Inc., unless otherwise noted.

You can review and copy information about your portfolio at the SEC's Public Reference Room in Washington, D.C. To find out more about this public service, call the SEC at 202-551-8090. Information about your portfolio is also available on the SEC's website, and you can receive copies of this information, for a fee, by sending a request in either of two ways: via email addressed to publicinfo@sec.gov or via regular mail addressed to the Public Reference Section, Securities and Exchange Commission, Washington, DC 20549-1520.

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