

**Annual Report** | December 31, 2022

# Vanguard Variable Insurance Funds

Equity Income Portfolio

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## Your Portfolio's Performance at a Glance

- For the 12 months ended December 31, 2022, the Equity Income Portfolio of Vanguard Variable Insurance Funds returned -0.66%, lagging the -0.32% return of its benchmark, the FTSE High Dividend Yield Index.
- Financial markets were challenged as inflation soared to its highest levels in decades because of increased government spending during the pandemic and higher energy and food prices resulting from Russia's invasion of Ukraine. To combat higher prices, central banks around the world tightened monetary policy, which caused fears of recession.
- The portfolio's positions in consumer discretionary, financials, and utilities boosted relative performance the most. Selection in energy and health care and an overweight to real estate detracted.
- For the decade ended December 31, 2022, the portfolio produced an average annual return of 11.58%, slightly below that of its benchmark.
- Please note that the portfolio's returns are different from those in Vanguard Variable Annuity (and other plans that invest in the portfolio), which take into account insurance-related expenses.

### Market Barometer

	Average Annual Total Returns Periods Ended December 31, 2022		
	One Year	Three Years	Five Years
<b>Stocks</b>			
Russell 1000 Index (Large-caps)	-19.13%	7.35%	9.13%
Russell 2000 Index (Small-caps)	-20.44	3.10	4.13
Russell 3000 Index (Broad U.S. market)	-19.21	7.07	8.79
FTSE All-World ex US Index (International)	-15.49	0.61	1.28
<b>Bonds</b>			
Bloomberg U.S. Aggregate Float Adjusted Index (Broad taxable market)	-13.07%	-2.67%	0.06%
Bloomberg Municipal Bond Index (Broad tax-exempt market)	-8.53	-0.77	1.25
FTSE Three-Month U.S. Treasury Bill Index	1.50	0.70	1.24
<b>CPI</b>			
Consumer Price Index	6.45%	4.92%	3.78%

## Advisors' Report

The Equity Income Portfolio returned -0.66% for the 12 months ended December 31, 2022, lagging the -0.32% return of its benchmark, the FTSE High Dividend Yield Index.

The portfolio is managed by two independent advisors, a strategy that enhances diversification by providing exposure to distinct yet complementary investment approaches. It is not uncommon for different advisors to have different views about individual securities or the broader investment environment.

The advisors, the amount and percentage of the portfolio's assets each manages, and brief descriptions of their investment strategies are presented in the accompanying table. Each advisor has also provided a discussion of the investment environment that existed during the 12 months and its effect on the portfolio's positioning. These comments were prepared on January 13, 2023.

### Wellington Management Company LLP

Portfolio Manager:

Matthew C. Hand, CFA,  
Senior Managing Director

### Investment environment

U.S. equities fell during the 12-month period ended December 31, 2022, amid rampant inflation, surging borrowing costs, uncertainty about corporate earnings, and an increased probability of recession.

Stocks opened the year lower as they registered their first quarterly loss since March 2020. Fears about the economic implications of Russia's large-scale military attack on Ukraine and the prospect of aggressive monetary policy tightening by the Federal Reserve drove the S&P 500 Index into correction territory in February. President Joe Biden signed into law a massive \$1.5 trillion spending bill, which included substantial increases in domestic and national security programs and \$13.6 billion in aid to Ukraine.

Equities continued to fall during a volatile second quarter. Growth stocks significantly underperformed their value counterparts as surging Treasury yields and disappointing earnings results from some of the largest technology companies drove the Nasdaq Composite Index to its largest quarterly loss since September 2001. The housing market was pressured by soaring mortgage rates, slowing demand, and elevated home prices.

In the third quarter, stocks continued their slide as risk sentiment deteriorated on fears that aggressive interest rate hikes and tighter financial conditions would constrain economic growth and drive the U.S. to recession.

Equities rallied in the fourth quarter. Greater optimism that the Fed would begin to scale back its aggressive pace of interest rate hikes, along with outsized short covering and hedging, helped to fuel a sharp rebound in October and November. But risk sentiment waned again in December amid recession fears, macroeconomic headwinds, and downside earnings risks. The Fed raised interest rates by 50 basis points (bps), snapping a streak of four consecutive hikes of 75 bps. (A basis point is one-hundredth of a percentage point.)

### Our successes and shortfalls

Throughout 2022, sector allocation, a result of our bottom-up stock selection process, drove relative performance in our portion of the portfolio. Our underweight positions in consumer discretionary and communication services and an overweight to health care contributed to results. Overweight positions in real estate and an underweight position in energy lagged.

Security selection was strong in financials, utilities, and consumer discretionary, while selection in energy and health care detracted.

Top contributors included U.S.-based exploration and production companies Pioneer Natural Resources and

ConocoPhillips. Not owning benchmark constituent Intel, a U.S.-based semiconductor chip manufacturer, also boosted relative performance.

Top detractors included not owning U.S.-based oil and gas companies ExxonMobil and Chevron, as well as our position in home improvement retailer Lowe's.

At the end of the period, we were most overweighted in health care, real estate, and information technology and most underweighted in financials, consumer staples, and communication services.

As we enter 2023, we continue to focus on finding high-quality businesses with strong balance sheets and sustainable dividends. We are confident in the sustainability of dividends and long-term value of holdings in the portfolio. As always, we appreciate your continued confidence in our team.

### Vanguard Quantitative Equity Group Portfolio Manager:

Sharon Hill, Ph.D.,  
Head of the Alpha Equity Global and  
Income Investment team

### Investment environment

Despite some relief in midsummer and late fall, the 12 months ended December 31, 2022, were a volatile, challenging period for financial markets. Overall, economic conditions deteriorated as inflation soared to multidecade highs, driven by government spending during the pandemic as well as higher energy and food prices in the wake of Russia's invasion of Ukraine. That prompted aggressive tightening by many central banks to bring inflation back in check, which increased fears of recession.

For the 12 months ended December 31, U.S. stocks returned -19.21%, as measured by the Russell 3000 Index. Stocks outside the U.S. returned -15.49%, as measured by the FTSE All-World ex US Index.

The broad U.S. bond market returned –13.07% for the 12-month period, as measured by the Bloomberg U.S. Aggregate Float Adjusted Index. Non-U.S. bonds, as measured by the Bloomberg Global Aggregate ex-USD Float Adjusted RIC Capped Index (USD Hedged), fell –12.72% for the year.

### Investment strategy

Although it's important to understand how overall performance is affected by macro factors, our approach to investing focuses on specific fundamentals. During the year, we initiated a transition away from our previous six-characteristic approach. Instead, we began to evaluate each stock's attractiveness based on four quantitative criteria that better allow us to construct a portfolio with an emphasis on dividends and cash flow rather than earnings expectations.

Our revised sub-factors are sustainable dividend growth—the ability to grow earnings year after year; strong market sentiment—market confirmation of our

view; high quality—healthy balance sheets and steady cash-flow generation; and reasonable yields valuation—our selection of stocks that offer sensible dividend payments.

Using these four themes, we generate a daily composite stock ranking. We then monitor our portfolio based on those rankings and adjust when appropriate to maximize expected returns while minimizing exposure to risks that our research indicates don't improve returns (such as industry selection and other risks relative to our benchmark).

### Successes and shortfalls

During the fiscal year, our market sentiment model added to relative performance, while our value and sustainable dividend growth models detracted. Our quality model was neutral.

Six of the fund's 11 industry sectors contributed to relative performance. Our positions in materials, consumer staples, and energy helped the most, while our positions in industrials, financials, and

utilities detracted the most. In materials, selection was particularly strong in metals and mining companies.

At the individual-stock level, some of the strongest results came from overweights to materials company Steel Dynamics and energy companies EOG Resources, APA, and SFL, as well as an underweight to financials company Blackstone.

The greatest shortfalls came from overweighting financials company Ally Financial, information technology company Qualcomm, and utilities company NRG Energy, as well as from underweighting energy companies ConocoPhillips and Schlumberger.

We continue to believe that constructing a portfolio focused on fundamentals will benefit investors over the long term, although we recognize that the market can reward or punish us in the near term. We believe our portfolio offers a strong mix of stocks with attractive valuations and value characteristics.

### Equity Income Portfolio Investment Advisors

Investment Advisor	Portfolio Assets Managed		Investment Strategy
	%	\$ Million	
Wellington Management Company LLP	62	1,235	Employs a fundamental approach to identify desirable individual stocks, seeking those that typically offer above-average dividend yields, below-average valuations, and the potential for dividend increases in the future.
Vanguard Quantitative Equity Group	34	664	Employs a quantitative approach that focuses on fundamental factors, using models that assess valuation, growth prospects, management decisions, market sentiment, and earnings and balance-sheet quality of companies as compared with their peers.
Cash Investments	4	79	These short-term reserves are invested by Vanguard in equity index products to simulate investment in stocks. Each advisor may also maintain a modest cash position.

## 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 accompanying table 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, including annual expense ratios, in the Financial Statements section of this report. For additional information on operating expenses and other shareholder costs, please refer to your portfolio's current prospectus.

### Six Months Ended December 31, 2022

Equity Income Portfolio	Beginning Account Value 6/30/2022	Ending Account Value 12/31/2022	Expenses Paid During Period
Based on Actual Portfolio Return	\$1,000.00	\$1,075.40	\$1.57
Based on Hypothetical 5% Yearly Return	1,000.00	1,023.69	1.53

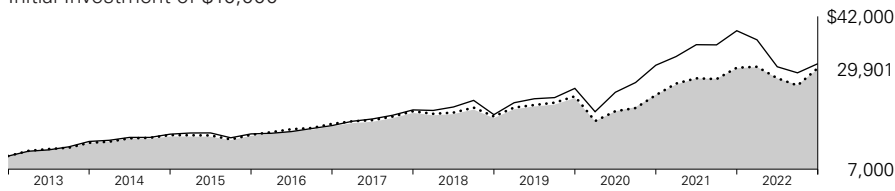
The calculations are based on expenses incurred in the most recent six-month period. The portfolio's annualized six-month expense ratio for that period is 0.30%. The dollar amounts shown as "Expenses Paid" are equal to the annualized expense ratio multiplied by the average account value over the period, 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 (184/365).

# Equity Income Portfolio

## 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](http://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.

Cumulative Performance: December 31, 2012, Through December 31, 2022  
Initial Investment of \$10,000



Average Annual Total Returns  
Periods Ended December 31, 2022

	One Year	Five Years	Ten Years	Final Value of a \$10,000 Investment
Equity Income Portfolio	-0.66%	8.51%	11.58%	\$29,901
FTSE High Dividend Yield Index	-0.32	8.28	11.66	30,140
Dow Jones U.S. Total Stock Market Float Adjusted Index	-19.53	8.65	12.03	31,151

## Portfolio Allocation

As of December 31, 2022

Communication Services	2.3%
Consumer Discretionary	5.9
Consumer Staples	12.4
Energy	9.7
Financials	18.4
Health Care	18.2
Industrials	9.9
Information Technology	9.6
Materials	4.2
Real Estate	1.4
Utilities	8.0

The table reflects the portfolio's investments, except for short-term investments and derivatives. Sector categories are based on the Global Industry Classification Standard ("GICS"), except for the "Other" category (if applicable), which includes securities that have not been provided a GICS classification as of the effective reporting period.

Global Industry Classification Standard ("GICS") was developed by and is the exclusive property and a service mark of MSCI Inc. ("MSCI") and Standard and Poor's, a division of McGraw-Hill Companies, Inc. ("S&P"), and is licensed for use by Vanguard. Neither MSCI, S&P nor any third party involved in making or compiling the GICS or any GICS classification makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P, any of its affiliates or any third party involved in making or compiling the GICS or any GICS classification have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.



## Financial Statements

## Schedule of Investments

As of December 31, 2022

The portfolio files its complete schedule of portfolio holdings with the Securities and Exchange Commission (SEC) for the first and third quarters of each fiscal year as an exhibit to its reports on Form N-PORT. The portfolio's Form N-PORT reports are available on the SEC's website at [www.sec.gov](http://www.sec.gov).

	Shares	Market Value* (\$000)		Shares	Market Value* (\$000)		Shares	Market Value* (\$000)
<b>Common Stocks (95.1%)</b>			Schlumberger Ltd.	30,404	1,625	CVS Health Corp.	92,758	8,644
<b>Communication Services (2.1%)</b>					<b>181,564</b>	Bristol-Myers Squibb Co.	87,975	6,330
Comcast Corp. Class A	838,595	29,326	<b>Financials (17.5%)</b>			Gilead Sciences Inc.	68,548	5,885
Verizon Communications Inc.	262,215	10,331	JPMorgan Chase & Co.	537,257	72,046	Viaticus Inc.	109,140	1,215
AT&T Inc.	147,422	2,714	Morgan Stanley	425,397	36,167			<b>343,340</b>
Sinclair Broadcast Group Inc. Class A	8,689	135	MetLife Inc.	413,487	29,924	<b>Industrials (9.4%)</b>		
		<b>42,506</b>	Chubb Ltd.	117,080	25,828	General Dynamics Corp.	84,593	20,988
<b>Consumer Discretionary (5.6%)</b>			Truist Financial Corp.	395,851	17,034	Emerson Electric Co.	175,699	16,878
Home Depot Inc.	131,048	41,393	M&T Bank Corp.	116,659	16,923	* Siemens AG (Registered)	115,181	15,878
TJX Cos. Inc.	233,885	18,617	Bank of America Corp.	428,152	14,180	L3Harris Technologies Inc.	76,216	15,869
Lennar Corp. Class A	149,786	13,556	Blackstone Inc.	182,743	13,558	Johnson Controls International plc	240,260	15,377
Lowe's Cos. Inc.	60,021	11,959	American International Group Inc.	201,247	12,727	Raytheon Technologies Corp.	150,495	15,188
McDonald's Corp.	32,045	8,445	Raymond James Financial Inc.	118,703	12,683	Honeywell International Inc.	69,804	14,959
Target Corp.	28,315	4,220	Royal Bank of Canada	133,149	12,518	Eaton Corp. plc	86,157	13,522
Williams-Sonoma Inc.	31,052	3,568	Wells Fargo & Co.	251,678	10,392	Canadian National Railway Co.	97,462	11,577
Advance Auto Parts Inc.	22,132	3,254	Citigroup Inc.	148,968	6,738	Lockheed Martin Corp.	18,410	8,956
Best Buy Co. Inc.	31,567	2,532	Goldman Sachs Group Inc.	17,413	5,979	Caterpillar Inc.	26,355	6,314
Starbucks Corp.	14,371	1,426	Ameriprise Financial Inc.	17,261	5,375	Waste Management Inc.	32,343	5,074
Macy's Inc.	40,959	846	Discover Financial Services	44,074	4,312	Triton International Ltd.	62,319	4,286
Wendy's Co.	37,288	844	Bank of New York Mellon Corp.	92,038	4,190	United Parcel Service Inc. Class B	24,069	4,184
Whirlpool Corp.	4,174	590	CNO Financial Group Inc.	176,761	4,039	ManpowerGroup Inc.	46,843	3,898
Travel & Leisure Co.	9,099	331	Hartford Financial Services Group Inc.	53,052	4,023	CH Robinson Worldwide Inc.	40,123	3,674
La-Z-Boy Inc.	12,852	293	SLM Corp.	224,021	3,719	Apogee Enterprises Inc.	79,342	3,528
		<b>111,874</b>	Radian Group Inc.	189,961	3,623	Cummins Inc.	10,027	2,429
<b>Consumer Staples (11.8%)</b>			MGIC Investment Corp.	274,582	3,570	3M Co.	18,797	2,254
Procter & Gamble Co.	220,784	33,462	Popular Inc.	53,304	3,535	Timken Co.	18,700	1,321
Philip Morris International Inc.	295,926	29,951	Zions Bancorp NA	61,034	3,000			<b>186,154</b>
Mondelez International Inc. Class A	399,038	26,596	Fidelity National Financial Inc.	78,585	2,956	<b>Information Technology (9.1%)</b>		
Unilever plc ADR	482,437	24,291	Ally Financial Inc.	117,593	2,875	Cisco Systems Inc.	705,924	33,630
Archer-Daniels-Midland Co.	236,523	21,961	First BanCorp. (XNYS)	179,057	2,278	QUALCOMM Inc.	276,028	30,347
Keurig Dr Pepper Inc.	428,432	15,278	Travelers Cos. Inc.	11,863	2,224	Broadcom Inc.	39,153	21,892
Kellogg Co.	192,929	13,744	Allstate Corp.	15,089	2,046	Analog Devices Inc.	115,748	18,986
Walmart Inc.	91,361	12,954	Jackson Financial Inc. Class A	56,662	1,971	Corning Inc.	427,419	13,652
Kimberly-Clark Corp.	87,198	11,837	Assurant Inc.	13,500	1,688	NXP Semiconductors NV	83,936	13,264
PepsiCo Inc.	43,425	7,845	Assured Guaranty Ltd.	21,834	1,359	TE Connectivity Ltd.	103,141	11,841
Coca-Cola Co.	119,721	7,615	BlackRock Inc.	1,846	1,308	Fidelity National Information Services Inc.	173,413	11,766
Altria Group Inc.	153,199	7,003	Heartland Financial USA Inc.	21,261	991	HP Inc.	160,689	4,318
Hershey Co.	22,394	5,186	Aflac Inc.	5,475	394	Texas Instruments Inc.	22,734	3,756
Kroger Co.	105,150	4,688	Synchrony Financial	10,373	341	Automatic Data Processing Inc.	14,014	3,347
Tyson Foods Inc. Class A	65,093	4,052			<b>346,514</b>	Western Union Co.	231,036	3,181
Colgate-Palmolive Co.	37,919	2,988	<b>Health Care (17.4%)</b>			NetApp Inc.	52,438	3,150
Ingredion Inc.	24,909	2,439	Pfizer Inc.	1,163,412	59,613	International Business Machines Corp.	17,534	2,470
Medifast Inc.	11,082	1,278	Johnson & Johnson	328,787	58,080	Avnet Inc.	59,269	2,464
		<b>233,168</b>	Merck & Co. Inc.	496,197	55,053	Intel Corp.	77,385	2,045
<b>Energy (9.2%)</b>			Eli Lilly & Co.	116,336	42,560			<b>180,109</b>
ConocoPhillips	411,676	48,578	AstraZeneca plc ADR	253,958	17,218	<b>Materials (4.0%)</b>		
EOG Resources Inc.	347,270	44,978	AbbVie Inc.	95,974	15,510	LyondellBasell Industries NV Class A	225,724	18,742
Coterra Energy Inc.	752,355	18,485	Roche Holding AG	46,435	14,592	Rio Tinto plc ADR	225,779	16,075
Exxon Mobil Corp.	162,017	17,871	UnitedHealth Group Inc.	24,928	13,216	PPG Industries Inc.	123,421	15,519
Chevron Corp.	70,750	12,699	Medtronic plc	166,920	12,973			
TC Energy Corp.	292,466	11,660	Becton Dickinson and Co.	45,673	11,615			
Phillips 66	95,598	9,950	Elevance Health Inc.	21,864	11,216			
Marathon Petroleum Corp.	56,099	6,529	Amgen Inc.	36,628	9,620			
Valero Energy Corp.	45,410	5,761						
APA Corp.	73,436	3,428						

Equity Income Portfolio

	Shares	Market Value* (\$000)
Celanese Corp. Class A	97,096	9,927
Steel Dynamics Inc.	44,601	4,358
Reliance Steel & Aluminum Co.	21,349	4,322
Linde plc	12,019	3,920
CF Industries Holdings Inc.	43,661	3,720
Nucor Corp.	12,821	1,690
Chemours Co.	50,639	1,551
		<b>79,824</b>
<b>Real Estate (1.4%)</b>		
Crown Castle Inc.	112,128	15,209
Welltower Inc.	180,355	11,822
		<b>27,031</b>
<b>Utilities (7.6%)</b>		
Exelon Corp.	649,364	28,072
American Electric Power Co. Inc.	282,984	26,869
NextEra Energy Inc.	289,107	24,169
Atmos Energy Corp.	176,910	19,826
Sempra Energy (XNYS)	111,214	17,187
WEC Energy Group Inc.	50,228	4,709
PPL Corp.	157,112	4,591
Hawaiian Electric Industries Inc.	88,019	3,684
Vistra Corp.	158,455	3,676
UGI Corp.	98,641	3,657
National Fuel Gas Co.	56,470	3,575
NRG Energy Inc.	110,628	3,520
Otter Tail Corp.	58,407	3,429
Duke Energy Corp.	12,850	1,323
Portland General Electric Co.	10,798	529
Eversource Energy	5,841	490
Southern Co.	4,418	316
MGE Energy Inc.	4,384	309
		<b>149,931</b>
<b>Total Common Stocks (Cost \$1,724,836)</b>		<b>1,882,015</b>

	Shares	Market Value* (\$000)
<b>Temporary Cash Investments (4.3%)</b>		
<b>Money Market Fund (4.0%)</b>		
<sup>1</sup> Vanguard Market Liquidity Fund, 4.334%	782,739	78,266
	Face Amount (\$000)	
<b>Repurchase Agreement (0.3%)</b>		
BNP Paribas Securities Corp. 4.300%, 1/3/23 (Dated 12/30/22, Repurchase Value \$5,803,000, collateralized by Fannie Mae 2.090%–6.000%, 10/1/36–12/1/52, and Freddie Mac 2.770%, 3/1/40, with a value of \$5,916,000)	5,800	5,800
<b>Total Temporary Cash Investments (Cost \$84,068)</b>		<b>84,066</b>
<b>Total Investments (99.4%) (Cost \$1,808,904)</b>		<b>1,966,081</b>
<b>Other Assets and Liabilities— Net (0.6%)</b>		<b>11,901</b>
<b>Net Assets (100%)</b>		<b>1,977,982</b>

Cost is in \$000.

• See Note A in Notes to Financial Statements.

\* Non-income-producing security.

<sup>1</sup> 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.

Derivative Financial Instruments Outstanding as of Period End

Futures Contracts

	Expiration	Number of Long (Short) Contracts	Notional Amount	Value and Unrealized Appreciation (Depreciation) (\$000)
<b>Long Futures Contracts</b>				
E-Mini S&P 500 Index	March 2023	422	81,467	(2,170)

## Statement of Assets and Liabilities

As of December 31, 2022

(\$000s, except shares, footnotes, and per-share amounts)	Amount
<b>Assets</b>	
Investments in Securities, at Value	
Unaffiliated Issuers (Cost \$1,730,636)	1,887,815
Affiliated Issuers (Cost \$78,268)	78,266
Total Investments in Securities	1,966,081
Investment in Vanguard	73
Cash	23
Cash Collateral Pledged—Futures Contracts	4,566
Receivables for Investment Securities Sold	7,462
Receivables for Accrued Income	3,265
Receivables for Capital Shares Issued	43
<b>Total Assets</b>	<b>1,981,513</b>
<b>Liabilities</b>	
Payables for Investment Securities Purchased	863
Payables to Investment Advisor	348
Payables for Capital Shares Redeemed	1,891
Payables to Vanguard	199
Variation Margin Payable—Futures Contracts	230
<b>Total Liabilities</b>	<b>3,531</b>
<b>Net Assets</b>	<b>1,977,982</b>

At December 31, 2022, net assets consisted of:

Paid-in Capital	1,670,199
Total Distributable Earnings (Loss)	307,783
<b>Net Assets</b>	<b>1,977,982</b>

<b>Net Assets</b>	
Applicable to 82,039,835 outstanding \$.001 par value shares of beneficial interest (unlimited authorization)	1,977,982
<b>Net Asset Value Per Share</b>	<b>\$24.11</b>

## Statement of Operations

	Year Ended December 31, 2022 (\$000)
<b>Investment Income</b>	
<b>Income</b>	
Dividends <sup>1</sup>	56,399
Interest <sup>2</sup>	1,181
Securities Lending—Net	18
<b>Total Income</b>	<b>57,598</b>
<b>Expenses</b>	
Investment Advisory Fees—Note B	
Basic Fee	1,552
Performance Adjustment	219
The Vanguard Group—Note C	
Management and Administrative	3,809
Marketing and Distribution	124
Custodian Fees	16
Auditing Fees	31
Shareholders' Reports	16
Trustees' Fees and Expenses	1
Other Expenses	8
<b>Total Expenses</b>	<b>5,776</b>
Expenses Paid Indirectly	(1)
<b>Net Expenses</b>	<b>5,775</b>
<b>Net Investment Income</b>	<b>51,823</b>
<b>Realized Net Gain (Loss)</b>	
Investment Securities Sold <sup>2</sup>	117,800
Futures Contracts	(12,877)
Foreign Currencies	(14)
<b>Realized Net Gain (Loss)</b>	<b>104,909</b>
<b>Change in Unrealized Appreciation (Depreciation)</b>	
Investment Securities <sup>2</sup>	(167,150)
Futures Contracts	(3,503)
Foreign Currencies	(27)
<b>Change in Unrealized Appreciation (Depreciation)</b>	<b>(170,680)</b>
<b>Net Increase (Decrease) in Net Assets Resulting from Operations</b>	<b>(13,948)</b>

<sup>1</sup> Dividends are net of foreign withholding taxes of \$287,000.

<sup>2</sup> Interest income, realized net gain (loss), capital gain distributions received, and change in unrealized appreciation (depreciation) from an affiliated company of the portfolio were \$937,000, \$1,000, less than \$1,000, and \$1,000, respectively. Purchases and sales are for temporary cash investment purposes.

## Statement of Changes in Net Assets

	Year Ended December 31,	
	2022 (\$000)	2021 (\$000)
<b>Increase (Decrease) in Net Assets</b>		
<b>Operations</b>		
Net Investment Income	51,823	47,641
Realized Net Gain (Loss)	104,909	404,635
Change in Unrealized Appreciation (Depreciation)	(170,680)	11,557
<b>Net Increase (Decrease) in Net Assets Resulting from Operations</b>	<b>(13,948)</b>	<b>463,833</b>
<b>Distributions</b>		
Total Distributions	(250,263)	(90,458)
<b>Capital Share Transactions</b>		
Issued	331,885	372,060
Issued in Lieu of Cash Distributions	250,263	90,458
Redeemed	(237,500)	(959,785)
<b>Net Increase (Decrease) from Capital Share Transactions</b>	<b>344,648</b>	<b>(497,267)</b>
<b>Total Increase (Decrease)</b>	<b>80,437</b>	<b>(123,892)</b>
<b>Net Assets</b>		
<b>Beginning of Period</b>	<b>1,897,545</b>	<b>2,021,437</b>
<b>End of Period</b>	<b>1,977,982</b>	<b>1,897,545</b>

## Financial Highlights

For a Share Outstanding Throughout Each Period	Year Ended December 31,				
	2022	2021	2020	2019	2018
<b>Net Asset Value, Beginning of Period</b>	<b>\$27.81</b>	<b>\$23.07</b>	<b>\$24.17</b>	<b>\$21.24</b>	<b>\$24.64</b>
<b>Investment Operations</b>					
Net Investment Income <sup>1</sup>	.665	.625	.595	.619	.620
Net Realized and Unrealized Gain (Loss) on Investments	(.756)	5.089	(.305)	4.319	(1.977)
Total from Investment Operations	(.091)	5.714	.290	4.938	(1.357)
<b>Distributions</b>					
Dividends from Net Investment Income	(.687)	(.506)	(.618)	(.586)	(.562)
Distributions from Realized Capital Gains	(2.922)	(.468)	(.772)	(1.422)	(1.481)
Total Distributions	(3.609)	(.974)	(1.390)	(2.008)	(2.043)
<b>Net Asset Value, End of Period</b>	<b>\$24.11</b>	<b>\$27.81</b>	<b>\$23.07</b>	<b>\$24.17</b>	<b>\$21.24</b>
<b>Total Return</b>	<b>-0.66%</b>	<b>25.33%</b>	<b>3.25%</b>	<b>24.43%</b>	<b>-5.96%</b>

### Ratios/Supplemental Data

Net Assets, End of Period (Millions)	\$1,978	\$1,898	\$2,021	\$1,834	\$1,374
Ratio of Total Expenses to Average Net Assets <sup>2</sup>	0.30% <sup>3</sup>	0.30%	0.30%	0.30%	0.29%
Ratio of Net Investment Income to Average Net Assets	2.73%	2.45%	2.86%	2.76%	2.69%
Portfolio Turnover Rate	46%	41% <sup>4</sup>	40%	33%	36%

<sup>1</sup> Calculated based on average shares outstanding.

<sup>2</sup> Includes performance-based investment advisory fee increases (decreases) of 0.01%, 0.01%, 0.01%, 0.01%, and (0.00%).

<sup>3</sup> The ratio of expenses to average net assets for the period net of reduction from broker commission abatement arrangements was 0.30%.

<sup>4</sup> Excludes the value of portfolio securities received or delivered as a result of in-kind purchases or redemptions of the portfolio's capital shares.

## Notes to Financial Statements

The Equity Income 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.

Significant market disruptions, such as those caused by pandemics (e.g., COVID-19 pandemic), natural or environmental disasters, war (e.g., Russia's invasion of Ukraine), acts of terrorism, or other events, can adversely affect local and global markets and normal market operations. Any such disruptions could have an adverse impact on the value of the portfolio's investments and portfolio performance.

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 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 valuation designee to represent fair value and subject to oversight by the board of trustees. These procedures include obtaining quotations from an independent pricing service, monitoring news to identify significant market- or security-specific events, and evaluating changes in the values of foreign market proxies (for example, ADRs, futures contracts, or exchange-traded funds), between the time the foreign markets close and the portfolio's pricing time. When fair-value pricing is employed, the prices of securities used by a portfolio to calculate its net asset value may differ from quoted or published prices for the same securities. Investments in Vanguard Market Liquidity Fund are valued at that fund's net asset value. Temporary cash investments are valued using the latest bid prices or using valuations based on a matrix system (which considers such factors as security prices, yields, maturities, and ratings), both as furnished by independent pricing services.

2. **Foreign Currency:** Securities and other assets and liabilities denominated in foreign currencies are translated into U.S. dollars using exchange rates obtained from an independent third party as of the portfolio's pricing time on the valuation date. Realized gains (losses) and unrealized appreciation (depreciation) on investment securities include the effects of changes in exchange rates since the securities were purchased, combined with the effects of changes in security prices. Fluctuations in the value of other assets and liabilities resulting from changes in exchange rates are recorded as unrealized foreign currency gains (losses) until the assets or liabilities are settled in cash, at which time they are recorded as realized foreign currency gains (losses).

3. **Repurchase Agreements:** The portfolio enters into repurchase agreements with institutional counterparties. Securities pledged as collateral to the portfolio under repurchase agreements are held by a custodian bank until the agreements mature, and in the absence of a default, such collateral cannot be repledged, resold, or rehypothecated. Each agreement requires that the market value of the collateral be sufficient to cover payments of interest and principal. The portfolio further mitigates its counterparty risk by entering into repurchase agreements only with a diverse group of prequalified counterparties, monitoring their financial strength, and entering into master repurchase agreements with its counterparties. The master repurchase agreements provide that, in the event of a counterparty's default (including bankruptcy), the portfolio may terminate any repurchase agreements with that counterparty, determine the net amount owed, and sell or retain the collateral up to the net amount owed to the portfolio. Such action may be subject to legal proceedings, which may delay or limit the disposition of collateral.

4. **Futures Contracts:** The portfolio uses index futures contracts to a limited extent, with the objective of maintaining full exposure to the stock market while maintaining liquidity. The portfolio may purchase or sell futures contracts to achieve a desired level of investment, whether to accommodate portfolio turnover or cash flows from capital share transactions. The primary risks associated with the use of futures contracts are imperfect correlation between changes in market values of stocks held by the portfolio and the prices of futures contracts, and the possibility of an illiquid market. Counterparty risk involving futures is mitigated because a regulated clearinghouse is the counterparty instead of the clearing broker. To further mitigate counterparty risk, the portfolio trades futures contracts on an exchange, monitors the financial strength of its clearing brokers and clearinghouse, and has entered into clearing agreements with its clearing brokers. The clearinghouse

imposes initial margin requirements to secure the portfolio's performance and requires daily settlement of variation margin representing changes in the market value of each contract. Any securities pledged as initial margin for open contracts are noted in the Schedule of Investments.

Futures contracts are valued at their quoted daily settlement prices. The notional amounts of the contracts are not recorded in the Statement of Assets and Liabilities. Fluctuations in the value of the contracts are recorded in the Statement of Assets and Liabilities as an asset (liability) and in the Statement of Operations as unrealized appreciation (depreciation) until the contracts are closed, when they are recorded as realized gains (losses) on futures contracts.

During the year ended December 31, 2022, the portfolio's average investments in long and short futures contracts represented 3% and 0% of net assets, respectively, based on the average of the notional amounts at each quarter-end during the period.

5. Federal Income Taxes: The portfolio intends to continue to qualify as a regulated investment company and distribute virtually all of its taxable income. The portfolio's tax returns are open to examination by the relevant tax authorities until expiration of the applicable statute of limitations, which is generally three years after the filing of the tax return. Management has analyzed the portfolio's tax positions taken for all open federal and state income tax years, and has concluded that no provision for income tax is required in the portfolio's financial statements.

6. Distributions: Distributions to shareholders are recorded on the ex-dividend date. Distributions are determined on a tax basis at the fiscal year-end and may differ from net investment income and realized capital gains for financial reporting purposes.

7. 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 Assets and Liabilities for the return of the collateral, during the period the securities are on loan. Collateral investments in Vanguard Market Liquidity Fund are subject to market appreciation or depreciation. 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.

8. Credit Facilities and Interfund Lending Program: The portfolio and certain other funds managed by The Vanguard Group ("Vanguard") participate in a \$4.4 billion committed credit facility provided by a syndicate of lenders pursuant to a credit agreement and an uncommitted credit facility provided by Vanguard. Both facilities may be renewed annually. Each fund is individually liable for its borrowings, if any, under the credit facilities. Borrowings may be utilized for temporary or emergency purposes and are subject to the portfolio's regulatory and contractual borrowing restrictions. With respect to the committed credit facility, the participating funds are charged administrative fees and an annual commitment fee of 0.10% of the undrawn committed amount of the facility, which 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 either facility bear interest at an agreed-upon spread plus the higher of the federal funds effective rate, the overnight bank funding rate, or the Daily Simple Secured Overnight Financing Rate inclusive of an additional agreed-upon spread. However, borrowings under the uncommitted credit facility may bear interest based upon an alternate rate agreed to by the portfolio and Vanguard.

In accordance with an exemptive order (the "Order") from the SEC, the portfolio may participate in a joint lending and borrowing program that allows registered open-end Vanguard funds to borrow money from and lend money to each other for temporary or emergency purposes (the "Interfund Lending Program"), subject to compliance with the terms and conditions of the Order, and to the extent permitted by the portfolio's investment objective and investment policies. Interfund loans and

borrowings normally extend overnight but can have a maximum duration of seven days. Loans may be called on one business day's notice. The interest rate to be charged is governed by the conditions of the Order and internal procedures adopted by the board of trustees. The board of trustees is responsible for overseeing the Interfund Lending Program.

For the year ended December 31, 2022, the portfolio did not utilize the credit facilities or the Interfund Lending Program.

9. Other: Dividend income is recorded on the ex-dividend date. Non-cash dividends included in income, if any, are recorded at the fair value of the securities received. Interest income includes income distributions received from Vanguard Market Liquidity Fund and is accrued daily. Premiums and discounts on debt securities are amortized and accreted, respectively, to interest income over the lives of the respective securities, except for premiums on certain callable debt securities that are amortized to the earliest call date. 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. Wellington Management Company LLP provides investment advisory services to a portion of the portfolio for a fee calculated at an annual percentage rate of average net assets managed by the advisor. The basic fee is subject to quarterly adjustments based on the portfolio's performance relative to the FTSE High Dividend Yield Index for the preceding three years.

Vanguard provides investment advisory services to a portion of the portfolio as described below; the portfolio paid Vanguard advisory fees of \$357,000 for the year ended December 31, 2022.

For the year ended December 31, 2022, the aggregate investment advisory fee paid to all advisors represented an effective annual basic rate of 0.08% of the portfolio's average net assets, before a net increase \$219,000 (0.01%) 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 investment advisory, 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 and 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 December 31, 2022, the portfolio had contributed to Vanguard capital in the amount of \$73,000, representing less than 0.01% of the portfolio's net assets and 0.03% of Vanguard's capital received pursuant to the FSA. The portfolio's trustees and officers are also directors and employees, respectively, of Vanguard.

D. The portfolio has asked its investment advisors 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 year ended December 31, 2022, these arrangements reduced the portfolio's expenses by \$1,000 (an annual rate of less than 0.01% of average net assets).

E. Various inputs may be used to determine the value of the portfolio's investments and derivatives. 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 and derivatives valued with significant unobservable inputs are noted on the Schedule of Investments.



## Equity Income Portfolio

The following table summarizes the market value of the portfolio's investments and derivatives as of December 31, 2022, based on the inputs used to value them:

	Level 1 (\$000)	Level 2 (\$000)	Level 3 (\$000)	Total (\$000)
<b>Investments</b>				
<b>Assets</b>				
Common Stocks	1,851,545	30,470	—	1,882,015
Temporary Cash Investments	78,266	5,800	—	84,066
<b>Total</b>	<b>1,929,811</b>	<b>36,270</b>	<b>—</b>	<b>1,966,081</b>
<b>Derivative Financial Instruments</b>				
<b>Liabilities</b>				
Futures Contracts <sup>1</sup>	2,170	—	—	2,170

<sup>1</sup> Includes cumulative appreciation (depreciation) on futures contracts and centrally cleared swaps, if any, as reported in the Schedule of Investments. Only current day's variation margin is reported within the Statement of Assets and Liabilities.

F. Permanent differences between book-basis and tax-basis components of net assets are reclassified among capital accounts in the financial statements to reflect their tax character. These reclassifications have no effect on net assets or net asset value per share. As of period end, permanent differences primarily attributable to the accounting for applicable foreign currency transactions were reclassified between the individual components of total distributable earnings (loss).

Temporary differences between book-basis and tax-basis components of total distributable earnings (loss) arise when certain items of income, gain, or loss are recognized in different periods for financial statement and tax purposes; these differences will reverse at some time in the future. The differences are primarily related to the deferral of losses from wash sales; and the recognition of unrealized gains or losses from certain derivative contracts. As of period end, the tax-basis components of total distributable earnings (loss) are detailed in the table as follows:

	Amount (\$000)
Undistributed Ordinary Income	49,588
Undistributed Long-Term Gains	101,807
Capital Loss Carryforwards	—
Qualified Late-Year Losses	—
<b>Net Unrealized Gains (Losses)</b>	<b>156,388</b>

The tax character of distributions paid was as follows:

	Year Ended December 31,	
	2022 Amount (\$000)	2021 Amount (\$000)
Ordinary Income*	99,454	47,031
Long-Term Capital Gains	150,809	43,427
<b>Total</b>	<b>250,263</b>	<b>90,458</b>

\* Includes short-term capital gains, if any.

As of December 31, 2022, gross unrealized appreciation and depreciation for investments and derivatives based on cost for U.S. federal income tax purposes were as follows:

	Amount (\$000)
Tax Cost	1,809,702
Gross Unrealized Appreciation	256,962
Gross Unrealized Depreciation	(100,583)
<b>Net Unrealized Appreciation (Depreciation)</b>	<b>156,379</b>

G. During the year ended December 31, 2022, the portfolio purchased \$937,024,000 of investment securities and sold \$830,230,000 of investment securities, other than temporary cash investments.

The portfolio purchased securities from and sold securities to other funds or accounts managed by its investment advisors or their affiliates, in accordance with procedures adopted by the board of trustees in compliance with Rule 17a-7 of the Investment Company Act of 1940. For the year ended December 31, 2022, such purchases were \$6,002,000 and sales were \$13,354,000, resulting in net realized gain of \$1,917,000; these amounts, other than temporary cash investments, are included in the purchases and sales of investment securities noted above.

## H. Capital shares issued and redeemed were:

	Year Ended December 31,	
	2022 Shares (000)	2021 Shares (000)
Issued	13,527	15,137
Issued in Lieu of Cash Distributions	10,112	3,683
Redeemed	(9,839)	(38,213)
Net Increase (Decrease) in Shares Outstanding	13,800	(19,393)

At December 31, 2022, one shareholder (an insurance company separate account whose holdings in the portfolio represent the indirect investment of Vanguard Variable Annuity contract holders) was the record or beneficial owner of 48% of the portfolio's net assets. If this shareholder were to redeem its investment in the portfolio, the redemption might result in an increase in the portfolio's expense ratio, cause the portfolio to incur higher transaction costs, or lead to the realization of taxable capital gains.

I. Management has determined that no events or transactions occurred subsequent to December 31, 2022, that would require recognition or disclosure in these financial statements.

# Report of Independent Registered Public Accounting Firm

To the Board of Trustees of Vanguard Variable Insurance Funds and Shareholders of Equity Income Portfolio

## Opinion on the Financial Statements

We have audited the accompanying statement of assets and liabilities, including the schedule of investments, of Equity Income Portfolio (one of the portfolios constituting Vanguard Variable Insurance Funds, referred to hereafter as the "Portfolio") as of December 31, 2022, the related statement of operations for the year ended December 31, 2022, the statement of changes in net assets for each of the two years in the period ended December 31, 2022, including the related notes, and the financial highlights for each of the five years in the period ended December 31, 2022 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Portfolio as of December 31, 2022, the results of its operations for the year then ended, the changes in its net assets for each of the two years in the period ended December 31, 2022 and the financial highlights for each of the five years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America.

## Basis for Opinion

These financial statements are the responsibility of the Portfolio's management. Our responsibility is to express an opinion on the Portfolio's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Portfolio in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our procedures included confirmation of securities owned as of December 31, 2022 by correspondence with the custodian, transfer agent and brokers; when replies were not received from brokers, we performed other auditing procedures. We believe that our audits provide a reasonable basis for our opinion.

/s/PricewaterhouseCoopers LLP  
Philadelphia, Pennsylvania  
February 16, 2023

We have served as the auditor of one or more investment companies in The Vanguard Group of Funds since 1975.

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**Tax information (unaudited)**

For corporate shareholders, 93.6%, or if subsequently determined to be different, the maximum percentage allowable by law, of ordinary income (dividend income plus short-term gains, if any) for the fiscal year qualified for the dividends-received deduction.

The portfolio hereby designates \$249,000, or if subsequently determined to be different, the maximum amount allowable by law, of interest earned from obligations of the U.S. government which is generally exempt from state income tax.

The portfolio distributed \$150,809,000 as capital gain dividends (20% rate gain distributions) to shareholders during the fiscal year.

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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.

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 206 Vanguard funds.

Information for each trustee and executive officer of the fund appears below. That information, as well as the Vanguard fund count, is as of the date on the cover of this fund report. 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](http://vanguard.com).

## Interested Trustee<sup>1</sup>

### Mortimer J. Buckley

Born in 1969. Trustee since January 2018. Principal occupation(s) during the past five years and other experience: chairman of the board (2019–present) of Vanguard and of each of the investment companies served by Vanguard; chief executive officer (2018–present) of Vanguard; chief executive officer, president, and trustee (2018–present) of each of the investment companies served by Vanguard; president and director (2017–present) of Vanguard; and president (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. Member of the board of governors of the Investment Company Institute and the board of governors of FINRA. Trustee and vice chair of The Shipley School.

## Independent Trustees

### Tara Bunch

Born in 1962. Trustee since November 2021. Principal occupation(s) during the past five years and other experience: head of global operations at Airbnb (2020–present). Vice president of AppleCare (2012–2020). Member of the board of directors of Out & Equal (2002–2006), the advisory board of the University of California, Berkeley School of Engineering (2020–present), and the advisory board of Santa Clara University's Leavey School of Business (2018–present).

### 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. Member of the board of directors of the University of Rochester Medical Center, the Monroe Community College Foundation, the United Way of Rochester, North Carolina A&T University, Roberts Wesleyan College, and the Rochester Philharmonic Orchestra. Trustee of the University of Rochester.

### 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). Director of the V Foundation. Member of the advisory council for the College of Arts and Letters at the University of Notre Dame. Chairman of the board of Saint Anselm College.

### 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: adjunct professor of finance at the University of Notre Dame (2020–present). Chief investment officer (retired 2020) and vice president (retired 2020) of the University of Notre Dame. Assistant professor (retired June 2020) of finance at the Mendoza College of Business, University of Notre Dame, and member of the Notre Dame 403(b) Investment Committee. Member of the board of Catholic Investment Services, Inc. (investment advisors), the board of superintendence of the Institute for the Works of Religion, and the board of directors of Paxos Trust Company (finance).

### Deanna Mulligan

Born in 1963. Trustee since January 2018. Principal occupation(s) during the past five years and other experience: chief executive officer of Purposeful (advisory firm for CEOs and C-level executives; 2021–present). Board chair (2020), chief executive officer (2011–2020), and president (2010–2019) 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 Economic Club of New York. Trustee of the Partnership for New York City (business leadership), Chief Executives for Corporate Purpose, and the NewYork-Presbyterian Hospital.

### 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 (private investment firm). Member of the board (2018–present) of RIT Capital Partners (investment firm). Member of the investment committee of Partners Health Care System.

### 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. Colin W. Brown Distinguished Professor of the Practice of Law (2021–present), professor (2020–present), Distinguished Fellow of the Global Financial Markets Center (2020–present), and Rubenstein Fellow (2017–2020) at Duke University. Trustee (2017–present) of Amherst College and member of Amherst College Investment Committee (2019–present). Member of the Regenerative Crisis Response Committee (2020–present).

### David A. Thomas

Born in 1956. Trustee since July 2021. Principal occupation(s) during the past five years and other experience: president of Morehouse College (2018–present). Professor of business administration, emeritus at Harvard University (2017–2018). Dean (2011–2016) and professor of management (2016–2017) at the Georgetown University McDonough School of Business. Director of DTE Energy Company (2013–present). Trustee of Common Fund (2019–present).

### 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). Member of the BMW Group Mobility Council.

<sup>1</sup> Mr. Buckley is considered an "interested person," as defined in the Investment Company Act of 1940, because he is an officer of the Vanguard funds.

## Executive Officers

### Jacqueline Angell

Born in 1974. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Chief compliance officer (November 2022–present) of Vanguard and of each of the investment companies served by Vanguard. Chief compliance officer (2018–2022) and deputy chief compliance officer (2017–2019) of State Street Corporation.

### Christine M. Buchanan

Born in 1970. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Chief financial officer (2021–present) and treasurer (2017–2022) of each of the investment companies served by Vanguard. Partner (2005–2017) at KPMG (audit, tax, and advisory services).

### John Galloway

Born in 1973. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Investment stewardship officer (September 2020–present) of each of the investment companies served by Vanguard. Head of Investor Advocacy (February 2020–present) and head of Marketing Strategy and Planning (2017–2020) at Vanguard. Special assistant to the President of the United States (2015).

### Ashley Grim

Born in 1984. Principal occupation(s) during the past five years and other experience: treasurer (February 2022–present) of each of the investment companies served by Vanguard. Fund transfer agent controller (2019–2022) and director of Audit Services (2017–2019) at Vanguard. Senior manager (2015–2017) at PriceWaterhouseCoopers (audit and assurance, consulting, and tax services).

### 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. Managing director and general counsel of Global Cards and Consumer Services (2014–2016) at Citigroup. Counsel (2003–2014) at American Express. Nonexecutive director of the board of National Grid (energy).

### 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

Matthew Benchener

Joseph Brennan

Mortimer J. Buckley

Gregory Davis

John James

Chris D. McIsaac

Thomas M. Rampulla

Karin A. Risi

Anne E. Robinson

Michael Rollings

Nitin Tandon

Lauren Valente



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You can review information about your fund on the SEC's website, and you can receive copies of this information, for a fee, by sending a request via email addressed to [publicinfo@sec.gov](mailto:publicinfo@sec.gov).

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