

**Annual Report** | December 31, 2020

## Vanguard Variable Insurance Funds

International Portfolio

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## Your Portfolio's Performance at a Glance

- The International Portfolio of Vanguard Variable Insurance Funds returned 57.58% for the 12 months ended December 31, 2020, far outdistancing the 10.65% return of its benchmark, the MSCI All Country World Index ex USA. 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.
- The emergence of COVID-19 in early 2020 turned into a global health crisis, and aggressive attempts to contain it resulted in a sharp downturn in economic activity. Unemployment spiked, and sectors where social distancing isn't possible were hit hard. Stocks initially plummeted as infections surged, but they finished the year significantly higher. The gain was thanks in part to rapid and robust monetary and fiscal action by policymakers and the rollout of COVID-19 vaccines as the year drew to a close. Many central banks slashed short-term interest rates and expanded or extended asset-purchase programs.
- Returns were positive in nine of the ten sectors the portfolio invests in, most notably in consumer discretionary, the portfolio's largest sector. Materials holdings were the biggest net detractors.
- Over the decade ended December 31, 2020, the portfolio's average annualized return outperformed that of its spliced benchmark.

### Market Barometer

	Average Annual Total Returns Periods Ended December 31, 2020		
	One Year	Three Years	Five Years
<b>Stocks</b>			
Russell 1000 Index (Large-caps)	20.96%	14.82%	15.60%
Russell 2000 Index (Small-caps)	19.96	10.25	13.26
Russell 3000 Index (Broad U.S. market)	20.89	14.49	15.43
FTSE All-World ex US Index (International)	11.22	5.18	9.16
<b>Bonds</b>			
Bloomberg Barclays U.S. Aggregate Bond Index (Broad taxable market)	7.51%	5.34%	4.44%
Bloomberg Barclays Municipal Bond Index (Broad tax-exempt market)	5.21	4.64	3.91
FTSE Three-Month U.S. Treasury Bill Index	0.58	1.56	1.16
<b>CPI</b>			
Consumer Price Index	1.36%	1.85%	1.95%

## Advisors' Report

The International Portfolio of Vanguard Variable Insurance Funds returned 57.58% for the 12 months ended December 31, 2020. It far outdistanced the 10.65% return of its benchmark, the MSCI All Country World Index ex USA.

The portfolio is overseen by two independent advisors, a strategy that enhances its 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 prepared a discussion of the investment environment that existed during the period and of the effect it had on the portfolio's positioning. These reports were prepared on January 21, 2021.

### **Baillie Gifford Overseas Ltd.**

#### Portfolio Managers:

James K. Anderson, Partner  
Head of Global Equities

Thomas Coutts, Partner  
Head of International Growth

Lawrence Burns, Partner  
Investment Manager

Conviction and long-termism are two of the tenets essential to good returns. They should also ensure capital is allocated to companies that have the vision to tackle some of the biggest problems in our world and support them on the inevitable bumpy market ride to success.

The events that unfolded in 2020 could never have been imagined or modeled. While COVID-19 has brought great sadness and economic loss, this extreme-tail event has accelerated change

in the corporate world. It has also brought into sharp relief the sectors that have been resistant to change. Our long-term approach and desire to own outliers has helped the portfolio invest in some developing future trends already. Despite strong share price performance from many companies within the portfolio, the long-term prospects continue to look exciting.

Your portfolio has continually evolved, and you should expect that to continue. The holdings today are almost unrecognizable from ten years ago, and we have been investing increasingly in disruptive growth companies. We are now seeing an acceleration in many trends ranging from online food delivery to electric vehicles and e-commerce.

Strong contributors to recent performance included Chinese super app Meituan Dianping which, among other segments, has the lion's share of the food delivery market in China. In a country with densely populated cities and efficient delivery mechanisms, the company has grown considerably since we first held it as an unlisted security in 2015. To get some sense of the scale of the opportunity, U.S. company Grubhub delivers 650,000 meals per day while Meituan averages nearly 25 million.

Another standout performer was Latin America's leading e-commerce and payments company MercadoLibre. At the end of September, the group reached more than 76 million unique active users. Its digital payments were also accelerated by the pandemic, as indicated by the 92% rise in total payment volumes on the Mercado Pago platform. Recent estimates show digital engagement in Latin America has grown from 5% pre-pandemic to almost 10% today.

Tesla continues to execute well and deliver excellent returns, as does Chinese electric vehicle maker NIO. Although NIO

is nascent and still proving its business model, its year-on-year vehicle sales doubled despite the pandemic.

There weren't many detractors, but the pandemic weighed heavily on aerospace engine producer Rolls-Royce as the outlook for global travel remained bleak.

As the pace of change creates new opportunities for business models, so it enriches our opportunity set. Areas of the economy previously resistant to change including health care, education, and financial services are now opening, and new approaches are being adopted more rapidly. We reduced our holdings in Amazon following recent outperformance in order to invest in potentially larger and newer opportunities.

Among several new purchases and sales, we have pivoted away from core banking holdings BBVA and Svenska Handelsbanken and instead taken positions in Australian payments business Afterpay and the Dutch payment services company Adyen. We reduced our holdings in SoftBank to reflect concerns with corporate culture, specifically financial complexity, limited transparency, and shorter time horizons.

In the health care sector, we sold Swedish radiotherapy equipment maker Elekta as our conviction in the upside weakened. We added Belgian antibody-based drugs company argenx and added to our existing private holding in CureVac as it became a listed entity. Finally, we added biotechnology company Moderna because of its leading position in the field of mRNA therapeutics. The foundational nature of its technology platform means that the recent success of Moderna's COVID vaccine should translate to a high likelihood of success in other disease areas.

### **Schroder Investment Management North America Inc.**

## Portfolio Managers:

Simon Webber, CFA

James R. Gautrey, CFA

International equities made strong progress in 2020 despite a sharp sell-off at the start of the year as the economic impact of the COVID-19 pandemic became apparent. The recovery began in March, and news in November that a number of vaccines had proved effective against the virus led global stocks to rally on investor optimism that a return to normality could be on the horizon. Good stock selection supported performance through the year, with particularly strong contributions in industrials and information technology.

Danish wind turbine supplier Vestas was a top performer as the shift to renewable energy continued to accelerate. With onshore wind projects now offering some of the most cost-competitive power generation of any type, we expect the order book will remain strong. Vestas is also achieving solid growth from its service business, which enjoys attractive margins and provides good, stable revenues.

U.K. hotel operator Whitbread was a weaker performer as the pandemic hit the hospitality sector hard. Periods of stress for any industry are an opportunity for the strong to get stronger, and that is exactly

what Whitbread has done. Having strengthened its balance sheet and continued to invest in its properties, Whitbread is already taking market share and will be in a good position to recover profitability as the economy normalizes.

Measures to control the pandemic are embedding behavioral changes in work, social, and leisure activities, many of which are likely to end up being permanent. We feel that judging where things will revert to normal and where tipping points of no return have been reached is going to be one of the biggest sources of alpha generation in the months ahead. While we think considerable demand is building for personal travel and in-person social contact, we are convinced that in areas such as the shift to online goods and services, flexible home working, and digital enablement of businesses, the growth outlook has been sustainably strengthened.

However, many of our long-standing core holdings in e-commerce, gaming, consumer, and internet sectors have performed exceptionally well this year as they were well-prepared to capitalize on the shift in consumer behavior. Despite very strong long-term growth outlooks, toward the end of the 2020 we found that expectations for many of these growth companies were becoming extended.

In contrast, for the first time in many years we have been finding more compelling growth gaps (future growth that the market is missing) in traditional industries. We have initiated a new position in Equinor, a Norwegian oil and gas company that is very well-positioned to transition its business toward sustainable energy sources through the development of offshore wind resources in the North Sea.

We also added to several of our positions in European banks, where we believe the market is overestimating the credit losses from the pandemic and will be surprised at how quickly bank earnings bounce back in 2021.

It is very encouraging to us that, despite the distractions of a pandemic, government commitments to deal with climate change have been strengthening rapidly, with China, Japan, South Korea, and the European Union all pledging to reach net zero emission economies. In a few decades' time the energy, industrial, and transportation infrastructures of the world will look completely different, heralding a massive shift in investment from fossil fuels toward renewable energy, electric vehicles, and other low-emission technologies. We have attempted to position the portfolio well for this shift by investing in enablers of the clean energy transition in many different industries.

## International Portfolio Investment Advisors

Investment Advisor	Portfolio Assets Managed		Investment Strategy
	%	\$ Million	
Baillie Gifford Overseas Ltd.	66	3,864	Uses a bottom-up, stock-driven approach to select stocks that it believes have above-average growth rates and trade at reasonable prices.
Schroder Investment Management North America Inc.	31	1,855	Uses fundamental research to identify high-quality companies in developed and emerging markets that it believes have above-average growth potential.
Cash Investments	3	178	These short-term reserves are invested by Vanguard in equity index products to simulate investment in stocks. Each advisor also may 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, 2020

	Beginning Account Value 6/30/2020	Ending Account Value 12/31/2020	Expenses Paid During Period
International Portfolio			
Based on Actual Portfolio Return	\$1,000.00	\$ 1,417.83	\$2.31
Based on Hypothetical 5% Yearly Return	1,000.00	1,023.23	1.93

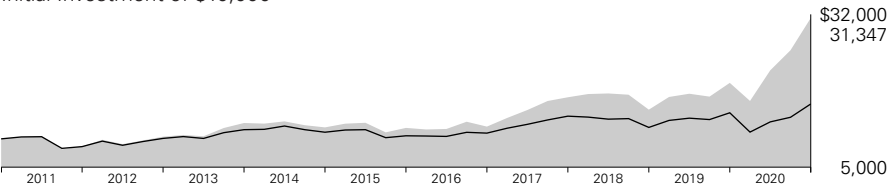
The calculations are based on expenses incurred in the most recent six-month period. The portfolio's annualized six-month expense ratio for that period is 0.38%. The dollar amounts shown as "Expenses Paid" are equal to the annualized expense ratio multiplied by the average account value over the period, 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 (184/366).

# International 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, 2010, Through December 31, 2020  
Initial Investment of \$10,000



	Average Annual Total Returns Periods Ended December 31, 2020			Final Value of a \$10,000 Investment
	One Year	Five Years	Ten Years	
International Portfolio	57.58%	21.30%	12.10%	\$31,347
MSCI All Country World Index ex USA	10.65	8.93	4.92	16,163

## Portfolio Allocation

As of December 31, 2020

Communication Services	7.9%
Consumer Discretionary	38.8
Consumer Staples	4.5
Energy	1.3
Financials	8.6
Health Care	13.2
Industrials	9.4
Information Technology	13.0
Materials	1.8
Utilities	0.9
Other	0.6

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.





# International Portfolio

	Shares	Market Value* (\$000)
Temenos AG (Registered)	158,609	22,099
Lonza Group AG (Registered)	32,189	20,735
Cie Financiere Richemont SA (Registered)	228,682	20,660
* Alcon Inc.	275,998	18,325
Chocoladefabriken Lindt & Spruengli AG Ptg. Ctf.	1,837	17,906
Sika AG (Registered)	44,289	12,073
Straumann Holding AG (Registered)	9,685	11,345
		<b>262,007</b>
<b>Taiwan (1.4%)</b>		
Taiwan Semiconductor Manufacturing Co. Ltd.	3,723,000	70,430
* Sea Ltd. ADR	66,924	13,321
		<b>83,751</b>
<b>United Kingdom (4.6%)</b>		
* Ocado Group plc	2,211,977	69,169
Diageo plc	916,146	36,251
Rolls-Royce Holdings plc	17,278,472	26,150
* Fiat Chrysler Automobiles NV	1,225,518	22,140
Whitbread plc	444,246	18,817
Burberry Group plc	733,087	17,902
National Grid plc	1,419,928	16,780
Bunzl plc	455,286	15,201
Next plc	154,603	14,908
Reckitt Benckiser Group plc	159,354	14,223
Barclays plc	5,568,822	11,171
Glaxo Smith Kline plc	572,594	10,477
		<b>273,189</b>
<b>United States (16.2%)</b>		
* Tesla Inc.	445,097	314,092
* MercadoLibre Inc.	158,215	265,045
* Spotify Technology SA	401,389	126,301
* Illumina Inc.	333,129	123,258
* Amazon.com Inc.	24,133	78,599
* Moderna Inc.	265,704	27,758
* Booking Holdings Inc.	8,714	19,408
		<b>954,461</b>
<b>Total Common Stocks (Cost \$2,792,437)</b>		<b>5,655,710</b>

	Shares	Market Value* (\$000)
<b>Preferred Stock (0.3%)</b>		
*.2,3,4 You & Mr. Jones PP (Cost \$5,200)	5,200,000	16,692
<b>Temporary Cash Investments (3.5%)</b>		
<b>Money Market Fund (3.4%)</b>		
<sup>5</sup> Vanguard Market Liquidity Fund 0.111%	2,041,331	204,133
	Face Amount (\$000)	
<b>U.S. Government and Agency Obligations (0.1%)</b>		
<sup>6</sup> U.S. Treasury Bill, 0.116%, 2/16/21	5,642	5,641
<b>Total Temporary Cash Investments (Cost \$209,774)</b>		<b>209,774</b>
<b>Total Investments (99.7%) (Cost \$3,007,411)</b>		<b>5,882,176</b>
<b>Other Assets and Liabilities—Net (0.3%)</b>		<b>15,079</b>
<b>Net Assets (100%)</b>		<b>5,897,255</b>

Cost is in \$000.

• See Note A in Notes to Financial Statements.

\* Non-income-producing security.

1 Security exempt from registration under Rule 144A of the Securities Act of 1933. Such securities may be sold in transactions exempt from registration, normally to qualified institutional buyers. At December 31, 2020, the aggregate value was \$308,918,000, representing 5.2% of net assets.

2 Restricted securities totaling \$33,622,000, representing 0.6% of net assets. See Restricted Securities table for additional information.

3 Security value determined using significant unobservable inputs.

4 Perpetual security with no stated maturity date.

5 Affiliated money market fund available only to Vanguard funds and certain trusts and accounts managed by Vanguard. Rate shown is the 7-day yield.

6 Securities with a value of \$5,641,000 have been segregated as initial margin for open futures contracts.

ADR—American Depositary Receipt.

PP—Private Placement.

Ptg. Ctf.—Participating Certificates.

## Restricted Securities as of Period End

Security Name	Acquisition Date	Acquisition Cost (\$000)
You & Mr. Jones PP	September 2015	5,200
CureVac GmbH	October 2015	3,559
ANI Technologies Private Ltd. PP	December 2015	5,969

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**Derivative Financial Instruments Outstanding as of Period End**


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## Futures Contracts

				(\$000)
	Expiration	Number of Long (Short) Contracts	Notional Amount	Value and Unrealized Appreciation (Depreciation)
Long Futures Contracts				
MSCI EAFE Index	March 2021	1,137	121,136	1,543
MSCI Emerging Markets Index	March 2021	913	58,806	1,567
				3,110

# Statement of Assets and Liabilities

As of December 31, 2020

(\$000s, except shares and per-share amounts)	Amount
<b>Assets</b>	
Investments in Securities, at Value	
Unaffiliated Issuers (Cost \$2,803,278)	5,678,043
Affiliated Issuers (Cost \$204,133)	204,133
Total Investments in Securities	5,882,176
Investment in Vanguard	218
Cash Collateral Pledged—Futures Contracts	7,788
Foreign Currency, at Value (Cost \$2,721)	2,732
Receivables for Investment Securities Sold	13,889
Receivables for Accrued Income	4,309
Receivables for Capital Shares Issued	2,792
Other Assets	48
<b>Total Assets</b>	<b>5,913,952</b>
<b>Liabilities</b>	
Due to Custodian	7,635
Payables for Investment Securities Purchased	1,562
Payables to Investment Advisor	2,501
Payables for Capital Shares Redeemed	2,449
Payables to Vanguard	602
Variation Margin Payable—Futures Contracts	1,074
Deferred Foreign Capital Gain Taxes	874
<b>Total Liabilities</b>	<b>16,697</b>
<b>Net Assets</b>	<b>5,897,255</b>

At December 31, 2020, net assets consisted of:

Paid-in Capital	2,600,461
Total Distributable Earnings (Loss)	3,296,794
<b>Net Assets</b>	<b>5,897,255</b>

<b>Net Assets</b>	
Applicable to 135,348,986 outstanding \$.001 par value shares of beneficial interest (unlimited authorization)	5,897,255
<b>Net Asset Value Per Share</b>	<b>\$43.57</b>

## Statement of Operations

	Year Ended December 31, 2020 (\$000)
<b>Investment Income</b>	
<b>Income</b>	
Dividends—Unaffiliated Issuers <sup>1</sup>	36,233
Dividends—Affiliated Issuers	—
Interest—Unaffiliated Issuers	47
Interest—Affiliated Issuers	595
Securities Lending—Net	1,147
Total Income	38,022
<b>Expenses</b>	
Investment Advisory Fees—Note B	
Basic Fee	6,656
Performance Adjustment	1,691
The Vanguard Group—Note C	
Management and Administrative	7,626
Marketing and Distribution	380
Custodian Fees	174
Auditing Fees	39
Shareholders' Reports	25
Trustees' Fees and Expenses	5
Total Expenses	16,596
<b>Net Investment Income</b>	<b>21,426</b>
<b>Realized Net Gain (Loss)</b>	
Investment Securities Sold—Unaffiliated Issuers	408,702
Investment Securities Sold—Affiliated Issuers	838
Futures Contracts	114
Forward Currency Contracts	(3,016)
Foreign Currencies	(47)
<b>Realized Net Gain (Loss)</b>	<b>406,591</b>
<b>Change in Unrealized Appreciation (Depreciation)</b>	
Investment Securities—Unaffiliated Issuers <sup>2</sup>	1,698,354
Investment Securities—Affiliated Issuers	(735)
Futures Contracts	3,365
Forward Currency Contracts	(592)
Foreign Currencies	113
<b>Change in Unrealized Appreciation (Depreciation)</b>	<b>1,700,505</b>
<b>Net Increase (Decrease) in Net Assets Resulting from Operations</b>	<b>2,128,522</b>

<sup>1</sup> Dividends are net of foreign withholding taxes of \$3,302,000.

<sup>2</sup> The change in unrealized appreciation (depreciation) is net of the change in deferred foreign capital gains taxes of (\$686,000).

## Statement of Changes in Net Assets

	Year Ended December 31, 2020                      2019 (\$000)                      (\$000)	
<b>Increase (Decrease) in Net Assets</b>		
<b>Operations</b>		
Net Investment Income	21,426	50,520
Realized Net Gain (Loss)	406,591	94,562
Change in Unrealized Appreciation (Depreciation)	1,700,505	807,454
Net Increase (Decrease) in Net Assets Resulting from Operations	2,128,522	952,536
<b>Distributions<sup>1</sup></b>		
Total Distributions	(147,347)	(159,172)
<b>Capital Share Transactions</b>		
Issued	673,953	469,443
Issued in Lieu of Cash Distributions	147,347	159,172
Redeemed	(928,547)	(507,332)
Net Increase (Decrease) from Capital Share Transactions	(107,247)	121,283
Total Increase (Decrease)	1,873,928	914,647
<b>Net Assets</b>		
<b>Beginning of Period</b>	<b>4,023,327</b>	<b>3,108,680</b>
<b>End of Period</b>	<b>5,897,255</b>	<b>4,023,327</b>

<sup>1</sup> Certain prior-period numbers have been reclassified to conform with the current-period presentation.

## Financial Highlights

For a Share Outstanding Throughout Each Period	Year Ended December 31,				
	2020	2019	2018	2017	2016
<b>Net Asset Value, Beginning of Period</b>	<b>\$29.00</b>	<b>\$23.14</b>	<b>\$27.34</b>	<b>\$19.54</b>	<b>\$19.80</b>
<b>Investment Operations</b>					
Net Investment Income <sup>1</sup>	.158	.371	.367	.224	.271
Net Realized and Unrealized Gain (Loss) on Investments	15.535	6.692	(3.644)	7.992	.075
Total from Investment Operations	15.693	7.063	(3.277)	8.216	.346
<b>Distributions</b>					
Dividends from Net Investment Income	(.397)	(.378)	(.212)	(.258)	(.280)
Distributions from Realized Capital Gains	(.726)	(.825)	(.711)	(.158)	(.326)
Total Distributions	(1.123)	(1.203)	(.923)	(.416)	(.606)
<b>Net Asset Value, End of Period</b>	<b>\$43.57</b>	<b>\$29.00</b>	<b>\$23.14</b>	<b>\$27.34</b>	<b>\$19.54</b>
<b>Total Return</b>	<b>57.58%</b>	<b>31.22%</b>	<b>-12.61%</b>	<b>42.60%</b>	<b>1.93%</b>
<b>Ratios/Supplemental Data</b>					
Net Assets, End of Period (Millions)	\$5,897	\$4,023	\$3,109	\$3,198	\$2,131
Ratio of Total Expenses to Average Net Assets <sup>2</sup>	0.38%	0.38%	0.37%	0.39%	0.39%
Ratio of Net Investment Income to Average Net Assets	0.49%	1.43%	1.36%	0.93%	1.40%
Portfolio Turnover Rate	22%	14%	16%	16%	29%

1 Calculated based on average shares outstanding.

2 Includes performance-based investment advisory fee increases (decreases) of 0.04%, 0.04%, 0.03%, 0.03%, and 0.03%.

## Notes to Financial Statements

The International 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. The portfolio invests in securities of foreign issuers, which may subject to investment risks not normally associated with investing in securities of U.S. corporations. Market disruptions associated with the COVID-19 pandemic have had a global impact, and uncertainty exists as to the long-term implications. Such disruptions can adversely affect assets of the portfolio and thus 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 at their fair values calculated according to procedures adopted 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. **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, 2020, 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.

4. **Forward Currency Contracts:** The portfolio enters into forward currency contracts to protect the value of securities and related receivables and payables against changes in future foreign exchange rates. The portfolio's risks in using these contracts include movement in the values of the foreign currencies relative to the U.S. dollar and the ability of the counterparties to fulfill their obligations under the contracts. The portfolio mitigates its counterparty risk by entering into forward currency contracts only with a diverse group of prequalified counterparties, monitoring their financial strength, entering into master netting arrangements with its counterparties, and requiring its counterparties to transfer collateral as security for their performance. In the absence of a default, the collateral pledged or received by the portfolio cannot be repledged, resold, or rehypothecated. The master netting arrangements provide that, in the event of a counterparty's default (including bankruptcy), the portfolio may terminate the forward currency contracts, determine the net amount owed by either party in accordance with its master netting arrangements, and sell or retain any collateral held up to the net amount owed to the portfolio under the master netting arrangements. The forward currency contracts contain provisions whereby a counterparty may terminate open contracts if the portfolio's net assets decline below a certain level, triggering a payment by the portfolio if the portfolio is in a net liability position at the time of the termination. The payment amount would be reduced by any collateral the portfolio has pledged. Any securities pledged as collateral for open contracts are noted in the Schedule of Investments. The value of collateral received or pledged is compared daily to the value of the forward currency contracts exposure with each counterparty, and any difference, if in excess of a specified minimum transfer amount, is adjusted and settled within two business days.

Forward currency contracts are valued at their quoted daily prices obtained from an independent third party, adjusted for currency risk based on the expiration date of each contract. 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 forward currency contracts.

During the year ended December 31, 2020, the portfolio's average investment in forward currency contracts represented 4% of net assets, based on the average of the notional amounts at each quarter-end during the period. The portfolio had no open forward currency contracts at December 31, 2020.

5. **Federal Income Taxes:** The portfolio intends to continue to qualify as a regulated investment company and distribute 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 \$4.3 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, 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; 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 either facility bear interest at a rate based upon the higher of the one-month London Interbank Offered Rate (or an acceptable alternate rate, if necessary), federal funds effective rate, or overnight bank funding rate plus an agreed-upon spread, except that 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, 2020, 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 dividend 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.

Taxes on foreign dividends and capital gains have been provided for in accordance with the portfolio's understanding of the applicable countries' tax rules and rates. Foreign capital gains tax, if any, is accrued daily based upon net unrealized gains. The portfolio has filed tax reclaims for previously withheld taxes on dividends earned in certain European Union countries. These filings are subject to various administrative and judicial proceedings within these countries. Such tax reclaims received during the year, if any, are included in dividend income. No other amounts for additional tax reclaims are reflected in the financial statements due to the uncertainty as to the ultimate resolution of proceedings, the likelihood of receipt of these reclaims, and the potential timing of payment.

B. The investment advisory firms Baillie Gifford Overseas Ltd. and Schroder Investment Management North America Inc. each provide 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 of Baillie Gifford Overseas Ltd. and Schroder Investment Management North America Inc. is subject to quarterly adjustments based on performance relative to the MSCI All Country World Index ex USA for the preceding three years.

Vanguard manages the cash reserves of the portfolio as described below.

For the year ended December 31, 2020, the aggregate investment advisory fee paid to all advisors represented an effective annual basic rate of 0.15% of the portfolio's average net assets, before an increase of \$1,691,000 (0.04%) 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, distribution, and cash management 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, 2020, the portfolio had contributed to Vanguard capital in the amount of

\$218,000, representing less than 0.01% of the portfolio's net assets and 0.09% of Vanguard's capital received pursuant to the FSA. The portfolio's trustees and officers are also directors and employees, respectively, of Vanguard.

D. 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.

The following table summarizes the market value of the portfolio's investments and derivatives as of December 31, 2020, 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—North and South America	1,003,365	20,783	—	1,024,148
Common Stocks—Other	374,888	4,253,843	2,831	4,631,562
Preferred Stock	—	—	16,692	16,692
Temporary Cash Investments	204,133	5,641	—	209,774
<b>Total</b>	<b>1,582,386</b>	<b>4,280,267</b>	<b>19,523</b>	<b>5,882,176</b>
<b>Derivative Financial Instruments</b>				
<b>Liabilities</b>				
Futures Contracts <sup>1</sup>	1,074	—	—	1,074

<sup>1</sup> Represents variation margin on the last day of the reporting period.

E. At December 31, 2020, the fair values of derivatives were reflected in the Statement of Assets and Liabilities as follows:

Statement of Assets and Liabilities Caption	Equity Contracts (\$000)	Foreign Exchange Contracts (\$000)	Total (\$000)
Variation Margin Payable—Futures Contracts	1,073	—	1,073
<b>Total Liabilities</b>	<b>1,073</b>	<b>—</b>	<b>1,073</b>

Realized net gain (loss) and the change in unrealized appreciation (depreciation) on derivatives for the year ended December 31, 2020, were:

Realized Net Gain (Loss) on Derivatives	Equity Contracts (\$000)	Foreign Exchange Contracts (\$000)	Total (\$000)
Futures Contracts	114	—	114
Forward Currency Contracts	—	(3,016)	(3,016)
<b>Realized Net Gain (Loss) on Derivatives</b>	<b>114</b>	<b>(3,016)</b>	<b>(2,902)</b>
<b>Change in Unrealized Appreciation (Depreciation) on Derivatives</b>			
Futures Contracts	3,365	—	3,365
Forward Currency Contracts	—	(592)	(592)
<b>Change in Unrealized Appreciation (Depreciation) on Derivatives</b>	<b>3,365</b>	<b>(592)</b>	<b>2,773</b>

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 foreign currency transactions, passive foreign investment companies, and tax expense on capital gains 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; the recognition of unrealized gains or losses from certain derivative contracts; and the recognition of unrealized gains from passive foreign investment companies. 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	14,771
Undistributed Long-Term Gains	408,341
Capital Loss Carryforwards	—
Qualified Late-Year Losses	—
Net Unrealized Gains (Losses)	2,873,682

The tax character of distributions paid was as follows:

	Year Ended December 31,	
	2020 Amount (\$000)	2019 Amount (\$000)
Ordinary Income*	63,225	51,642
Long-Term Capital Gains	84,122	107,530
Total	147,347	159,172

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

As of December 31, 2020, 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	3,007,931
Gross Unrealized Appreciation	2,979,391
Gross Unrealized Depreciation	(105,146)
Net Unrealized Appreciation (Depreciation)	2,874,245

G. During the year ended December 31, 2020, the portfolio purchased \$912,987,000 of investment securities and sold \$1,193,529,000 of investment securities, other than temporary cash investments.

H. Capital share transactions for each class of shares were:

	Year Ended December 31,	
	2020 Shares (000)	2019 Shares (000)
Issued	20,275	17,755
Issued in Lieu of Cash Distributions	6,412	6,218
Redeemed	(30,059)	(19,574)
Net Increase (Decrease) in Shares Outstanding	(3,372)	4,399

At December 31, 2020, 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 28% of the portfolio's net assets. If this shareholder was 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. Transactions during the period in investments where the issuer is another member of The Vanguard Group were as follows:

	Dec. 31, 2019 Market Value (\$000)	Current Period Transactions						Dec. 31, 2020 Market Value (\$000)
		Purchases at Cost (\$000)	Proceeds from Securities Sold (\$000)	Realized Net Gain (Loss) (\$000)	Change in Unrealized App. (Dep.) (\$000)	Income (\$000)	Capital Gain Distributions Received (\$000)	
Vanguard FTSE All-World ex-US ETF Shares	4,020	—	4,042	763	(741)	—	—	—
Vanguard Market Liquidity Fund	186,137	NA <sup>1</sup>	NA <sup>1</sup>	75	6	595	—	204,133
Total	190,157			838	(735)	595	—	204,133

<sup>1</sup> Not applicable—purchases and sales are for temporary cash investment purposes.

J. Management has determined that no events or transactions occurred subsequent to December 31, 2020, 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 International Portfolio

## Opinion on the Financial Statements

We have audited the accompanying statement of assets and liabilities, including the schedule of investments, of International Portfolio (one of the portfolios constituting Vanguard Variable Insurance Funds, referred to hereafter as the "Portfolio") as of December 31, 2020, the related statement of operations for the year ended December 31, 2020, the statement of changes in net assets for each of the two years in the period ended December 31, 2020, including the related notes, and the financial highlights for each of the five years in the period ended December 31, 2020 (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, 2020, 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, 2020 and the financial highlights for each of the five years in the period ended December 31, 2020 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, 2020 by correspondence with the custodians, 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 18, 2021

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

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**Special 2020 tax information (unaudited) for corporate shareholders only for International Portfolio, a portfolio of Vanguard Variable Insurance Funds**

This information for the fiscal year ended December 31, 2020, is included pursuant to provisions of the Internal Revenue Code for corporate shareholders only.

The portfolio distributed \$84,122,000 as capital gain dividends (20% rate gain distributions) to shareholders during the fiscal year.

The portfolio designates to shareholders foreign source income of \$39,390,000 and foreign taxes paid of \$2,501,000. Shareholders will receive more detailed information with their Form 1099-DIV in January 2021 to determine the calendar-year amounts to be included on their 2020 tax returns.

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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 211 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. Chairman of the board (2011–2017) and trustee (2009–2017) of the Children's Hospital of Philadelphia; and trustee (2018–present) and vice chair (2019–present) of The Shipley School.

## 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. 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.

### 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) and the Lumina Foundation. Director of the V Foundation. 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 (retired June 2020) and vice president (retired June 2020) 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 (retired June 2020). Member of the board of Catholic Investment Services, Inc. (investment advisors) 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: board chair (2020–present), 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 the individual life and disability division of Guardian Life. Member of the board of the American Council of Life Insurers and the board of the Economic Club of New York. Trustee of the Partnership for New York City (business leadership), Chief Executives for Corporate Purpose, NewYork-Presbyterian Hospital, Catalyst, 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 (private investment firm). Member of the board of advisors and member of the investment committee of the Museum of Fine Arts Boston. 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. Member of the board of directors (2012–2014) of Neighborhood Reinvestment Corporation. Director (2017–present) of i(x) Investments, LLC; director (2017–present) of Reserve Trust. Rubenstein Fellow (2017–present) of Duke University; trustee (2017–present) of Amherst College, and trustee (2019–present) of the Folger Shakespeare Library.

### 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).

<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

### John Bendl

Born in 1970. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Chief financial officer (2019–present) of each of the investment companies served by Vanguard. Chief accounting officer, treasurer, and controller of Vanguard (2017–present). Partner (2003–2016) at KPMG (audit, tax, and advisory services).

### Christine M. Buchanan

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

### David Cermak

Born in 1960. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Finance director (2019–present) of each of the investment companies served by Vanguard. Managing director and head (2017–present) of Vanguard Investments Singapore. Managing director and head (2017–2019) of Vanguard Investments Hong Kong. Representative director and head (2014–2017) of Vanguard Investments Japan.

### 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. Deputy assistant to the President of the United States (2015).

### Thomas J. Higgins

Born in 1957. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Finance director (2019–present), chief financial officer (2008–2019), 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. 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.

### John E. Schadl

Born in 1972. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Chief compliance officer (2019–present) of Vanguard and of each of the investment companies served by Vanguard. Assistant vice president (2019–present) of Vanguard Marketing Corporation.

## Vanguard Senior Management Team

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John T. Marcante  
Chris D. McIsaac

James M. Norris  
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All comparative mutual fund data are from Morningstar, Inc., unless otherwise noted.

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