

Annual Report | December 31, 2022

Vanguard Variable Insurance Funds

International Portfolio

Contents

Your Portfolio's Performance at a Glance	1
Advisors' Report	2
About Your Portfolio's Expenses	4
Performance Summary	5
Financial Statements	7

Your Portfolio's Performance at a Glance

- Despite some relief in midsummer and late fall, the 12 months ended December 31, 2022, were a volatile, challenging period for financial markets. The International Portfolio returned -30.12%, lagging the -16.00% return of the MSCI All Country World Index ex USA.
- Overall, the economic backdrop 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.
- With the exception of energy, all sectors posted negative returns for both the portfolio and the benchmark. The portfolio's energy stocks had stellar returns but they made up roughly only 2% of the portfolio's weighting. The biggest detractors from relative performance were an overweight to the poorly performing consumer discretionary sector and stock selection in that sector.
- For the decade ended December 31, 2022, the portfolio posted an annualized return of 7.58%, almost double 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
Stocks			
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
Bonds			
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
CPI			
Consumer Price Index	6.45%	4.92%	3.78%

Advisors' Report

The International Portfolio returned –30.12% for the 12 months ended December 31, 2022. That was lower than the –16.00% 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 6, 2023.

Baillie Gifford Overseas Ltd.

Portfolio Managers:

Thomas Coutts, Partner

Lawrence Burns, Partner

The year 2022 proved to be an exceptionally difficult period for investors in growth equities. Society's return toward normality after an unprecedented shutdown revealed supply chain disruptions that were more widespread and longer-lasting than expected. Russia's shocking invasion of Ukraine seriously exacerbated inflation through its impact on the energy sector. It also raised fears about geopolitical instability across the Taiwan Strait.

Concerns about geopolitical risk combined with the rise in interest rates reduced the valuations that investors were willing to pay for profits expected to be made years in the future. Many companies that had performed strongly during the pandemic returned to their share-price levels of several years ago, despite making considerable progress in the interim.

Our investment approach remains unchanged—to identify a small number of exceptional growth companies that can take advantage of long-lasting trends, often powered by technological advances. We back entrepreneurial companies that disrupt large target markets. We focus on their prospects over the next five to 10 years, with a particular emphasis on the financial return should the investment case reach its full potential. Many of our holdings that fit this description fared poorly in share-price terms in 2022. Businesses such as music-streaming leader Spotify, Latin American e-commerce leader MercadoLibre, and Dutch payment technology company Adyen fell sharply despite little deterioration in their long-term prospects.

Beneficiaries of the pandemic such as clothing e-commerce specialist Zalando, meal-kit company HelloFresh, and takeout delivery business Delivery Hero also sold off heavily as concerns increased about consumer spending and the changing balance between online and in-person activity. Our holding in Tesla also declined sharply because of concerns about future demand and the distraction of CEO Elon Musk's involvement in Twitter.

An extensive period of company meetings and analysis has reinforced our confidence in the position of the portfolio. The management teams of our holdings report that the growth drivers propelling their businesses remain generally intact. We are encouraging them to continue investing for the long term, while being mindful of the difficult economic conditions many are likely to face in the near future. We are also encouraged by our analysis of the financial resilience of our holdings. They have the profitability, cash flow, and balance sheet strength to navigate a cyclical downturn. Indeed, this should be a good period for our well-financed, long-term-oriented companies to strengthen their market positions.

We have initiated or increased our positions in attractive growth stocks that

have been particularly weak. We added South Korean e-commerce leader Coupang, Southeast Asian gaming and e-commerce company Sea, and money-transfer business Wise. In software, we invested in logistics specialist WiseTech and enterprise search provider Elastic. We are excited about the opportunities created by the energy transition and took new positions in cable manufacturer Prysmian and battery maker Ganfeng Lithium. We also added warehouse automation company AutoStore, semiconductor designer NVIDIA, and self-driving technology company Mobileye to the portfolio.

We funded these new holdings with reductions of slower-growth companies that have held up better, including Kering, Ping An, and L'Oreal. We reduced holdings of two large Chinese internet companies, Alibaba and Tencent. We sold out of the auto manufacturer Stellantis. We exited our position in Afterpay following its takeover by Block. We also sold TAL Education, MorphoSys, SoftBank, and CureVac after their investment cases deteriorated significantly.

Schroder Investment Management North America Inc.

Portfolio Managers:

Simon Webber, CFA

James R. Gautrey, CFA

International equities ended 2022 sharply lower, as the market contended with slowing economic growth, inflationary pressures, and tightening monetary policy. This was made worse by Russia's invasion of Ukraine, which exerted significant pressure on energy prices and supply, particularly in Europe. Geopolitical tensions between China and the West also remained high as Xi Jinping's consolidation of power raised concerns about increased government interference in the private sector and China's ambitions toward "reunification" with Taiwan. The euro, yen, and sterling pound fell to near multidecade lows against the U.S. dollar.

Cyclically exposed sectors such as consumer discretionary, technology, and industrials faced the most selling pressure while defensive sectors were more resilient. Commodity sectors benefited from the inflationary environment and both value stocks and the financial sector were supported by rising interest rates globally. The energy sector was the only major sector to post gains during the year as sanctions against Russian oil and gas kept upward pressure on prices. Our stock selection in the energy and financial sectors was particularly supportive during the year. However, our selection in industrials, consumer staples, and materials detracted from performance.

Our holding in Shell was a strong performer throughout 2022, driven by higher oil and gas prices. Shell continues to generate very strong cash flow, which has helped reduce debt, strengthen its balance sheet, and provide greater flexibility for capital allocation. We believe the company is managing its energy transition risk better than many of its industry peers through investments in electrification, hydrogen, wind, and alternative energy assets.

One of the major detractors during the year was our holding in Recruit, the global recruitment and human resources technology company. Fears that the looming global slowdown would lead to a slump in the global jobs market weighed on its shares. However, Recruit, which operates the Glassdoor and Indeed job recruitment websites, still has a large opportunity to grow by addressing inefficiencies in the global recruitment market. We have conviction that this growth will overcome the markets' cyclical worries.

Global equities remain under pressure entering 2023 amid geopolitical tensions, high inflation, tightening monetary policy, and, ultimately, earnings risks that look inevitable as the economic cycle slows. Inflationary pressures have strained consumer spending and, with central banks focused on combating inflation, interest rates have been rising rapidly, further weighing on consumer confidence. Supply chain pressures are easing, which is good news for both shortages and inflation.

We believe that low expectations in many parts of the economy will create

opportunities for patient and selective investors in 2023. The portfolio has good exposure to climate tech and companies well-positioned for the clean-energy transition across the materials, industrial, technology, and utilities sectors. We continue to find many good long-term core holdings in technology, where long-term structural drivers such as digitization, connectivity, and the energy transition are supporting growth, but where fears of a cyclical downturn have brought valuations back to attractive levels.

We are also finding interesting opportunities in financials, where the combination of low expectations, cheap valuations, strong capital buffers, and rising rates are creating an attractive opportunistic backdrop for earnings growth. Overall, we maintain a well-diversified portfolio that reflects a fluid outlook with a wide range of possible outcomes. At a stock level, we continue to emphasize revenue and earnings stability as well as balance sheet strength, which we expect to be rewarded during periods of elevated risk.

International Portfolio Investment Advisors

Investment Advisor	Portfolio Assets Managed		Investment Strategy
	%	\$ Million	
Baillie Gifford Overseas Ltd.	60	1,714	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.	36	1,023	Uses fundamental research to identify high-quality companies in developed and emerging markets that it believes have above-average growth potential.
Cash Investments	4	100	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, 2022

International 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	\$1,012.60	\$2.13
Based on Hypothetical 5% Yearly Return	1,000.00	1,023.09	2.14

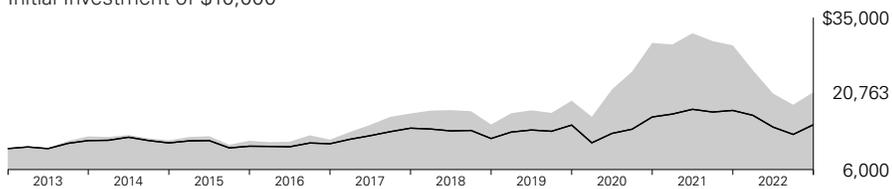
The calculations are based on expenses incurred in the most recent six-month period. The portfolio's annualized six-month expense ratio for that period is 0.42%. The dollar amounts shown as "Expenses Paid" are equal to the annualized expense ratio multiplied by the average account value over the period, 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).

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.) 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
International Portfolio	-30.12%	4.45%	7.58%	\$20,763
MSCI All Country World Index ex USA	-16.00	0.88	3.80	14,520

Portfolio Allocation

As of December 31, 2022

China	12.1 %
United States	12.0
Netherlands	9.8
United Kingdom	7.8
Japan	7.5
Germany	7.1
France	6.1
Denmark	5.9
Sweden	4.0
Belgium	3.8
Switzerland	3.7
Taiwan	2.9
Italy	2.8
Hong Kong	2.4
India	2.3
South Korea	1.9
Canada	1.6
Norway	1.2
Brazil	1.1
Spain	1.1
Israel	1.0
Other	1.9

The table reflects the portfolio's investments, except for short-term investments and derivatives.

International Portfolio

	Shares	Market Value* (\$000)		Shares	Market Value* (\$000)	
Switzerland (3.6%)						
Roche Holding AG	91,598	28,784	*	Tesla Inc.	210,883	25,976
Nestle SA (Registered)	199,990	23,101	*	NVIDIA Corp.	110,057	16,084
Lonza Group AG (Registered)	19,985	9,810	*	Elastic NV	237,764	12,245
Cie Financiere Richemont SA Class A (Registered)	73,156	9,485	*	Booking Holdings Inc. Lululemon Athletica Inc.	5,299	10,679
Chocoladefabriken Lindt & Spruengli AG Ptg. Ctf.	899	9,161	*.2	Oatly Group AB ADR	20,699	6,631
Temenos AG (Registered)	154,447	8,497	*	Meli Kaszek Pioneer Corp. Class A	1,376,931	2,396
Alcon Inc.	112,410	7,713			115,328	1,150
Sika AG (Registered)	21,831	5,248				325,794
		101,799		Total Common Stocks (Cost \$2,755,009)		2,721,278
Taiwan (2.8%)				Temporary Cash Investments (3.1%)		
Taiwan Semiconductor Manufacturing Co. Ltd.	5,462,000	79,327		Money Market Fund (3.1%)		
				^{5,6} Vanguard Market Liquidity Fund, 4.334% (Cost \$89,075)	890,812	89,072
United Kingdom (7.5%)				Total Investments (99.0%) (Cost \$2,844,084)		2,810,350
Shell plc	1,391,672	39,464		Other Assets and Liabilities—Net (1.0%)		26,994
*.3,4 The Brandtech Group LLC PP (Acquired 9/23/15, Cost \$5,200)	3,903,901	26,379		Net Assets (100%)		2,837,344
AstraZeneca plc	183,543	24,837		Cost is in \$000.		
* Ocado Group plc	2,924,862	21,711		• See Note A in Notes to Financial Statements.		
Reckitt Benckiser Group plc	227,154	15,746		* Non-income-producing security.		
HSBC Holdings plc	2,037,215	12,626		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, 2022, the aggregate value was \$246,180,000, representing 8.7% of net assets.		
Diageo plc	282,601	12,370		2 Includes partial security positions on loan to broker-dealers. The total value of securities on loan is \$4,345,000.		
National Grid plc	997,533	11,950		3 Restricted securities totaling \$31,572,000, representing 1.1% of net assets.		
Burberry Group plc	433,427	10,538		4 Security value determined using significant unobservable inputs.		
* Wise plc Class A	1,549,787	10,499		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.		
Bunzl plc	269,112	8,953		6 Collateral of \$4,690,000 was received for securities on loan.		
RELX plc	290,884	8,042		ADR—American Depositary Receipt.		
Whitbread plc	171,216	5,294		PP—Private Placement.		
* Haleon plc	795,113	3,146		Ptg. Ctf.—Participating Certificates.		
		211,555				
United States (11.5%)						
* Moderna Inc.	603,425	108,387				
* MercadoLibre Inc.	120,956	102,358				
* Illumina Inc.	197,269	39,888				

Derivative Financial Instruments Outstanding as of Period End

Futures Contracts

	Expiration	Number of Long (Short) Contracts	Notional Amount	Value and Unrealized Appreciation (Depreciation)
(\$000)				
Long Futures Contracts				
MSCI EAFE Index	March 2023	711	69,301	(1,420)
MSCI Emerging Markets Index	March 2023	602	28,878	(495)
				(1,915)

See accompanying Notes, which are an integral part of the Financial Statements.

Statement of Assets and Liabilities

As of December 31, 2022

(\$000s, except shares, footnotes, and per-share amounts)	Amount
Assets	
Investments in Securities, at Value ¹	
Unaffiliated Issuers (Cost \$2,755,009)	2,721,278
Affiliated Issuers (Cost \$89,075)	89,072
Total Investments in Securities	2,810,350
Investment in Vanguard	108
Cash Collateral Pledged—Futures Contracts	3,578
Foreign Currency, at Value (Cost \$2,343)	2,286
Receivables for Accrued Income	7,370
Receivables for Capital Shares Issued	25,164
Other Assets	48
Total Assets	2,848,904
Liabilities	
Due to Custodian	273
Payables for Investment Securities Purchased	1,018
Collateral for Securities on Loan	4,690
Payables to Investment Advisor	1,515
Payables for Capital Shares Redeemed	1,139
Payables to Vanguard	430
Variation Margin Payable—Futures Contracts	909
Deferred Foreign Capital Gains Taxes	1,586
Total Liabilities	11,560
Net Assets	2,837,344

¹ Includes \$4,345,000 of securities on loan.

At December 31, 2022, net assets consisted of:

Paid-in Capital	2,742,722
Total Distributable Earnings (Loss)	94,622
Net Assets	2,837,344
Net Assets	
Applicable to 125,983,150 outstanding \$.001 par value shares of beneficial interest (unlimited authorization)	2,837,344
Net Asset Value Per Share	\$22.52

Statement of Operations

	Year Ended December 31, 2022 (\$000)
Investment Income	
Income	
Dividends ¹	37,417
Non-Cash Dividends	6,440
Interest ²	1,373
Securities Lending—Net	459
Total Income	45,689
Expenses	
Investment Advisory Fees—Note B	
Basic Fee	4,759
Performance Adjustment	1,940
The Vanguard Group—Note C	
Management and Administrative	5,458
Marketing and Distribution	228
Custodian Fees	153
Auditing Fees	39
Shareholders' Reports	12
Trustees' Fees and Expenses	1
Other Expenses	202
Total Expenses	12,792
Net Investment Income	32,897
Realized Net Gain (Loss)	
Investment Securities Sold ²	124,228
Futures Contracts	(19,557)
Foreign Currencies	(536)
Realized Net Gain (Loss)	104,135
Change in Unrealized Appreciation (Depreciation)	
Investment Securities ^{2,3}	(1,393,214)
Futures Contracts	(3,598)
Foreign Currencies	(61)
Change in Unrealized Appreciation (Depreciation)	(1,396,873)
Net Increase (Decrease) in Net Assets Resulting from Operations	(1,259,841)

¹ Dividends include foreign tax reclaims of \$2,467,000 and are net of foreign withholding taxes of \$4,473,000.

² Interest income, realized net gain (loss), capital gain distributions received, and change in unrealized appreciation (depreciation) from an affiliated company of the portfolio were \$1,330,000, (\$35,000), less than \$1,000, and \$13,000, respectively. Purchases and sales are for temporary cash investment purposes.

³ The change in unrealized appreciation (depreciation) is net of the change in deferred foreign capital gains taxes of \$308,000.

Statement of Changes in Net Assets

	Year Ended December 31,	
	2022 (\$000)	2021 (\$000)
Increase (Decrease) in Net Assets		
Operations		
Net Investment Income	32,897	39,636
Realized Net Gain (Loss)	104,135	1,457,108
Change in Unrealized Appreciation (Depreciation)	(1,396,873)	(1,517,665)
Net Increase (Decrease) in Net Assets Resulting from Operations	(1,259,841)	(20,921)
Distributions		
Total Distributions	(657,944)	(424,362)
Capital Share Transactions		
Issued	372,085	808,340
Issued in Lieu of Cash Distributions	657,944	424,362
Redeemed	(521,400)	(2,438,174)
Net Increase (Decrease) from Capital Share Transactions	508,629	(1,205,472)
Total Increase (Decrease)	(1,409,156)	(1,650,755)
Net Assets		
Beginning of Period	4,246,500	5,897,255
End of Period	2,837,344	4,246,500

Financial Highlights

For a Share Outstanding Throughout Each Period	Year Ended December 31,				
	2022	2021	2020	2019	2018
Net Asset Value, Beginning of Period	\$39.70	\$43.57	\$29.00	\$23.14	\$27.34
Investment Operations					
Net Investment Income ¹	.269	.345	.158	.371	.367
Net Realized and Unrealized Gain (Loss) on Investments	(11.155)	(1.007)	15.535	6.692	(3.644)
Total from Investment Operations	(10.886)	(.662)	15.693	7.063	(3.277)
Distributions					
Dividends from Net Investment Income	(.398)	(.123)	(.397)	(.378)	(.212)
Distributions from Realized Capital Gains	(5.896)	(3.085)	(.726)	(.825)	(.711)
Total Distributions	(6.294)	(3.208)	(1.123)	(1.203)	(.923)
Net Asset Value, End of Period	\$22.52	\$39.70	\$43.57	\$29.00	\$23.14
Total Return	-30.12%	-1.54%	57.58%	31.22%	-12.61%

Ratios/Supplemental Data

Net Assets, End of Period (Millions)	\$2,837	\$4,247	\$5,897	\$4,023	\$3,109
Ratio of Total Expenses to Average Net Assets ²	0.41%	0.38%	0.38%	0.38%	0.37%
Ratio of Net Investment Income to Average Net Assets	1.06%	0.81%	0.49%	1.43%	1.36%
Portfolio Turnover Rate	17%	21% ³	22%	14%	16%

¹ Calculated based on average shares outstanding.

² Includes performance-based investment advisory fee increases (decreases) of 0.06%, 0.04%, 0.04%, 0.04%, and 0.03%.

³ 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 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 it to investment risks not normally associated with investing in securities of U.S. corporations. 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.

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, 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.

4. **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.

5. 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.

6. 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.

7. 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.

8. 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. 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. Deferred 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. Amounts related to these reclaims are recorded when there are no significant uncertainties as to the ultimate resolution of proceedings, the likelihood of receipt of these reclaims, and the potential timing of payment. Such tax reclaims and related professional fees, if any, are included in dividend income and other expenses, respectively.

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, 2022, 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 a net increase of \$1,940,000 (0.06%) 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, 2022, the portfolio had contributed to Vanguard capital in the amount of \$108,000, representing less than 0.01% of the portfolio's net assets and 0.04% 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, 2022, based on the inputs used to value them:

	Level 1 (\$000)	Level 2 (\$000)	Level 3 (\$000)	Total (\$000)
Investments				
Assets				
Common Stocks—North and South America	379,281	17,909	—	397,190
Common Stocks—Other	152,505	2,140,011	31,572	2,324,088
Temporary Cash Investments	89,072	—	—	89,072
Total	620,858	2,157,920	31,572	2,810,350
Derivative Financial Instruments				
Liabilities				
Futures Contracts ¹	1,915	—	—	1,915

¹ 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.

The determination of Level 3 fair value measurements is governed by documented policies and procedures adopted by the board of trustees. The timely analysis and valuation of Level 3 securities held by the portfolio in accordance with established policies and procedures is performed by the valuation designee under the oversight of the board. The valuation designee employs various methods for calibrating valuation approaches, including a regular review of key inputs and assumptions, transactional back-testing or disposition analysis, and reviews of any related market activity. A summary of valuation decisions made by the valuation designee is reported to the board

International Portfolio

on a quarterly basis for review. The board reviews the adequacy of the fair value measurement policies and procedures in place on an annual basis.

The following table summarizes changes in investments and derivatives valued based on Level 3 inputs during the year ended December 31, 2022. Transfers, if any, into or out of Level 3 are recognized based on values as of the beginning of the period.

Amount Valued Based on Level 3 Inputs	Investments in Common Stocks (\$000)
Balance as of December 31, 2021	42,682
Change in Unrealized Appreciation (Depreciation)	(11,110)
Balance as of December 31, 2022	31,572

Net change in unrealized appreciation (depreciation) from investments and derivatives still held as of December 31, 2022, was (\$11,110,000).

The following table provides quantitative information about the significant unobservable inputs used in fair value measurements as of December 31, 2022.

Security Type	Fair Value at 12/31/2022 (\$000)	Valuation Technique	Unobservable Input	Amount or Range/ Weighted Avg.
Common Stocks	26,379	Sum of the Parts: Trading Multiples & Cost	Reorganized Capitalization Structure/Indicative Offers	\$2.363 billion
	5,193	Comparable Companies and Benchmark Performance/ Probability Scenario	Implied Equity Valuation	\$6.414 billion

Significant increases or decreases in the significant unobservable inputs used in the fair value measurement of the portfolio's Level 3 securities, in isolation, could result in a significantly higher or lower fair value measurement at December 31, 2022.

E. 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 and passive foreign investment companies 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; the recognition of unrealized gains from passive foreign investment companies; and the classification of securities for tax purposes. 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	43,902
Undistributed Long-Term Gains	99,383
Capital Loss Carryforwards	—
Qualified Late-Year Losses	—
Net Unrealized Gains (Losses)	(48,663)

The tax character of distributions paid was as follows:

	Year Ended December 31,	
	2022 Amount (\$000)	2021 Amount (\$000)
Ordinary Income*	54,088	16,021
Long-Term Capital Gains	603,856	408,341
Total	657,944	424,362

* Includes short-term capital gains, if any.

International Portfolio

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	2,857,404
Gross Unrealized Appreciation	573,094
Gross Unrealized Depreciation	(620,148)
Net Unrealized Appreciation (Depreciation)	(47,054)

F. During the year ended December 31, 2022, the portfolio purchased \$508,775,000 of investment securities and sold \$616,311,000 of investment securities, other than temporary cash investments.

G. Capital shares issued and redeemed were:

	Year Ended December 31,	
	2022 Shares (000)	2021 Shares (000)
Issued	14,219	18,577
Issued in Lieu of Cash Distributions	24,242	10,657
Redeemed	(19,430)	(57,631)
Net Increase (Decrease) in Shares Outstanding	19,031	(28,397)

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 32% 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.

H. 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 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, 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 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 16, 2023

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

Tax information (unaudited)

The portfolio hereby designates \$320,000, 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 \$603,856,000 as capital gain dividends (20% rate gain distributions) to shareholders during the fiscal year.

The portfolio designates to shareholders foreign source income of \$45,874,000 and foreign taxes paid of \$3,629,000.

This page intentionally left blank.

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.

Interested Trustee¹

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.

¹ 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



Connect with Vanguard® > vanguard.com

Fund Information > 800-662-7447

Annuity and Insurance Services > 800-522-5555

Institutional Investor Services > 800-523-1036

Text Telephone for People Who Are Deaf or Hard of Hearing > 800-749-7273

This material may be used in conjunction with the offering of shares of any Vanguard fund only if preceded or accompanied by the fund's current prospectus.

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

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

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.

Source for Bloomberg indexes: Bloomberg Index Services Limited. Copyright 2023, Bloomberg. All rights reserved.

CFA® is a registered trademark owned by CFA Institute.