

Annual Report | October 31, 2023

Vanguard Global Minimum Volatility Fund

See the inside front cover for important information about your fund's annual and semiannual shareholder reports.

Important information about shareholder reports

Beginning in July 2024, amendments adopted by the Securities and Exchange Commission will substantially impact the design, content, and transmission of shareholder reports. Shareholder reports will provide key fund information in a clear and concise format and must be mailed to each shareholder that has not elected to receive the reports electronically. Financial statements will no longer be included in the shareholder report but will be available at vanguard.com, can be mailed upon request, or can be accessed on the SEC’s website at www.sec.gov.

You may elect to receive shareholder reports and other communications from the fund electronically by contacting your financial intermediary (such as a broker-dealer or bank) or, if you invest directly with the fund, by calling Vanguard at one of the phone numbers on the back cover of this report or by logging on to vanguard.com.

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

Your Fund's Performance at a Glance

- For the 12 months ended October 31, 2023, Vanguard Global Minimum Volatility Fund returned 4.05% for Investor Shares and 4.15% for Admiral Shares, markedly underperforming its benchmark, which returned 10.12%.
- Early on, inflation continued to ease amid ongoing interest rate hikes by central banks. Unexpected resilience in labor markets and consumer spending helped dial back expectations of a sustained global recession, but the prospect of higher interest rates for longer and heightened geopolitical tensions weighed on market sentiment toward the close of the period.
- Of the fund's 11 industry sectors, information technology, communication services, and consumer staples detracted most from relative returns. Three sectors contributed positively to relative performance: Real estate, energy, and materials.
- By country, the fund's holdings in the United States, which accounts for more than 50% of fund assets, detracted most from relative performance. Its holdings in Japan, Switzerland, and the United Kingdom were bright spots.
- The fund's average volatility for the 12 months was 30.4% less than that of its benchmark.
- The fund regularly uses derivatives to hedge portfolio risks. Its holdings of forward currency contracts and futures helped its performance.

Market Barometer

	Average Annual Total Returns Periods Ended October 31, 2023		
	One Year	Three Years	Five Years
Stocks			
Russell 1000 Index (Large-caps)	9.48%	9.53%	10.71%
Russell 2000 Index (Small-caps)	-8.56	3.95	3.31
Russell 3000 Index (Broad U.S. market)	8.38	9.19	10.23
FTSE All-World ex US Index (International)	12.35	3.51	3.88
Bonds			
Bloomberg U.S. Aggregate Float Adjusted Index (Broad taxable market)	0.53%	-5.51%	0.03%
Bloomberg Municipal Bond Index (Broad tax-exempt market)	2.64	-2.48	1.00
FTSE Three-Month U.S. Treasury Bill Index	4.94	1.93	1.80
CPI			
Consumer Price Index	3.24%	5.72%	4.00%

Advisor's Report

For the 12 months ended October 31, 2023, Vanguard Global Minimum Volatility Fund returned 4.05% for Investor Shares and 4.15% for Admiral Shares, with an annualized weekly volatility of 8.00%. Its benchmark, the FTSE Global All Cap Index (USD Hedged), returned 10.12%, with annualized weekly volatility of 11.52%. (To determine annualized weekly volatility, we calculate the standard deviation of weekly returns and multiply it by the square root of 52, the number of weeks in a year.)

Investment objective

Our objective is to create a portfolio that has broad equity exposure with less volatility than that of the global equity market. We achieved this over the performance period, with the fund's weekly volatility averaging 30.4% less than that of its benchmark.

It is important to mention, as we have in the past, that we do not target a specific volatility level. Rather, we seek to provide an equity fund that has lower absolute risk than that of the broad global market. Thus, when the broad global equity market is experiencing periods of low volatility, you should expect this fund's volatility to be much closer to that of its benchmark.

We recognize that equity-like returns are also an important outcome of an investment in this fund, but achieving a total return higher than the benchmark's is not our objective. Although our research leads us to expect that, on average, a minimum volatility fund may hold up better than the overall global market in sharp downturns (while still experiencing

losses), the fund should be expected to trail in strong bull markets. With that in mind, because the fund is expected to have a lower level of risk than the global equity market, you should not expect it to outperform the market over the long run.

We think a reasonable comparative performance measure for the fund over the long term is its risk-adjusted return. This can be calculated by dividing the portfolio's total return for the period by the annualized standard deviation of monthly returns. Since inception, the risk-adjusted annual return for the fund was 0.68%, compared with the 0.66% risk-adjusted return of the benchmark.

Investment strategy

In building our portfolio, we use quantitative models that evaluate a variety of factors that drive a stock's volatility. These fundamental drivers include risk factors such as growth, value, dividend yield, size, volatility, and liquidity. In addition, our process includes estimates of each stock's correlation—or how its factors move in relation to one another. This approach allows us to make appropriate risk/diversification trade-offs without relying solely on volatility estimates.

We also consider the effect of currency exposure. We recognize that owning companies in foreign markets involves the risk of movements in exchange rates relative to the U.S. dollar. Because of this, an optimization process that focuses solely on volatilities tied to an investor's

home currency will tend to overweight exposures to that currency.

We aim to avoid currency-specific exposures by focusing on equity volatilities and correlations measured in local currency terms. We use currency forward contracts to hedge the resulting exposure for U.S. investors. We believe that this process can further reduce the overall volatility of the portfolio in the long run.

Finally, we apply constraints to reduce stock, sector, and country concentration risk. We find that these constraints, which allow for broader diversification and liquidity, reduce unnecessarily high-risk exposures without significantly affecting our ability to lower overall volatility.

The benefits of our strategy become even clearer when you remove some of the noise caused by short-term reversals in daily and weekly returns, which can increase volatility levels, and focus on monthly returns. Since inception, the fund has delivered a 23.4% volatility discount relative to its benchmark.

The investment environment

At the beginning of the 12 months, inflation eased off multidecade highs amid ongoing interest rate hikes by central banks. Unexpected resilience in labor markets and consumer spending helped dial back expectations of a sustained global recession. Even so, heightened geopolitical tensions and the prospect of higher interest rates for longer weighed on market sentiment toward the close of the period.

Within this environment, large-cap stocks outperformed small caps. Growth outpaced value, and stocks outside the United States outperformed their U.S. counterparts. Eight of the benchmark's 11 sectors gained ground. The exceptions were health care, real estate, and utilities.

The fund's successes and shortfalls

Our portfolio is designed to deliver equity-like returns with lower market volatility. Although the fund underperformed its benchmark, it did provide a significant discount to volatility.

Our heavier concentration of low-beta and small-cap stocks weighed on performance. At the sector level, the fund outperformed the benchmark in four of the 11 industry classifications. In general, stock selection in financials and overweight allocations to real estate and energy contributed most to relative performance. Information technology, communication services, and consumer staples were the biggest detractors.

Notable contributors included overweight positions in Sumitomo Mitsui Financial Group and Mizuho Financial Group in financials, Taiwan Semiconductor Manufacturing in information technology, BAE Systems in industrials, and Swisscom in communication services. On the other side of the ledger, overweight positions in Hormel Foods in consumer staples and Hawaiian Electric Industries in utilities, as well as underweight positions in Meta Platforms in communication services and NVIDIA and Microsoft in

information technology, detracted most from relative performance.

As for regional allocations, our positions in North America, which account for nearly 60% of the fund's holdings, detracted the most from relative performance. Positions in the Pacific and the Middle East helped results.

We remain convinced in the fund's ability to deliver a strong risk/return profile over the long term. Despite the challenging environment that we have seen since the pandemic began, the fund has delivered a significant volatility discount to the market.

We expect our approach to portfolio construction to pay off in reduced volatility over the long run, and we will continue to focus patiently on its long-term risk-adjusted returns.

John Ameriks, Ph.D., Principal, Global Head of the Quantitative Equity Group, and Portfolio Manager

Scott Rodemer, CFA, Head of Equity Factor Investments and Portfolio Manager

Vanguard Quantitative Equity Group

November 15, 2023

About Your Fund's Expenses

As a shareholder of the fund, 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 fund's gross income, directly reduce the investment return of the fund.

A fund'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 fund 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 fund's costs in two ways:

- **Based on actual fund 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 fund'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 fund. 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 fund under the heading "Expenses Paid During Period."

- **Based on hypothetical 5% yearly return.** This section is intended to help you compare your fund's costs with those of other mutual funds. It assumes that the fund 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 fund'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 fund'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 fund for buying and selling securities. Further, the expenses do not include any purchase, redemption, or account service fees described in the fund prospectus. If such fees were applied to your account, your costs would be higher. Your fund does not carry a "sales load."

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 fund'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 fund's current prospectus.

Six Months Ended October 31, 2023

	Beginning Account Value 4/30/2023	Ending Account Value 10/31/2023	Expenses Paid During Period
Based on Actual Fund Return			
Global Minimum Volatility Fund			
Investor Shares	\$1,000.00	\$978.40	\$1.05
Admiral™ Shares	1,000.00	978.80	0.70
Based on Hypothetical 5% Yearly Return			
Global Minimum Volatility Fund			
Investor Shares	\$1,000.00	\$1,024.15	\$1.07
Admiral Shares	1,000.00	1,024.50	0.71

The calculations are based on expenses incurred in the most recent six-month period. The fund's annualized six-month expense ratios for that period are 0.21% for Investor Shares and 0.14% for Admiral Shares. 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).

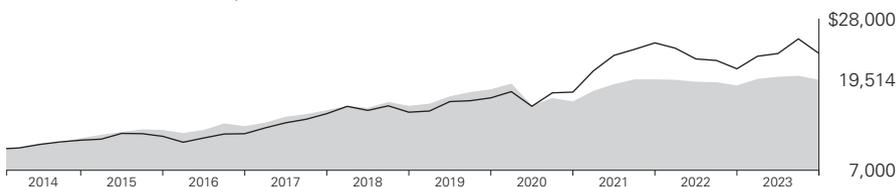
Global Minimum Volatility Fund

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 fund. (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 fund distributions or on the sale of fund shares.

Cumulative Performance: December 12, 2013, Through October 31, 2023

Initial Investment of \$10,000



	Average Annual Total Returns Periods Ended October 31, 2023			Final Value of a \$10,000 Investment
	One Year	Five Years	Since Inception (12/12/2013)	
Global Minimum Volatility Fund Investor Shares	4.05%	4.16%	7.00%	\$19,514
FTSE Global All Cap Index (USD Hedged)	10.12	9.03	8.88	23,182

"Since Inception" performance is calculated from the Investor Shares' inception date for both the fund and its comparative standard(s).

	One Year	Five Years	Since Inception (12/12/2013)	Final Value of a \$50,000 Investment
Global Minimum Volatility Fund Admiral Shares	4.15%	4.24%	7.08%	\$ 98,298
FTSE Global All Cap Index (USD Hedged)	10.12	9.03	8.88	115,910

"Since Inception" performance is calculated from the Admiral Shares' inception date for both the fund and its comparative standard(s).

Fund Allocation

As of October 31, 2023

United States	56.4%
Japan	10.9
India	4.0
Australia	3.7
Canada	3.7
United Kingdom	3.3
Taiwan	2.9
Switzerland	2.9
South Korea	2.7
China	2.3
Brazil	1.5
France	1.3
Hong Kong	1.2
Other	3.2

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

Financial Statements

Schedule of Investments

As of October 31, 2023

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

	Shares	Market Value* (\$'000)		Shares	Market Value* (\$'000)
Common Stocks (98.2%)			Great-West Lifeco Inc.	13,415	372
Australia (3.7%)					66,759
Wesfarmers Ltd.	544,551	17,520	China (2.3%)		
Transurban Group	1,374,724	10,349	Tencent Holdings Ltd.	246,000	9,104
Telstra Group Ltd.	3,526,720	8,552	China Shenhua Energy Co. Ltd. Class H	2,944,500	9,025
Medibank Pvt Ltd.	3,313,084	7,230	*.1 East Buy Holding Ltd.	1,939,021	7,910
Brambles Ltd.	860,113	7,178	¹ Nongfu Spring Co. Ltd. Class H	731,000	4,164
Coles Group Ltd.	526,098	5,106	Sinopharm Group Co. Ltd. Class H	1,217,200	2,911
Insurance Australia Group Ltd.	1,170,507	4,223	China Pacific Insurance Group Co. Ltd. Class H	863,600	2,127
QBE Insurance Group Ltd.	146,295	1,451	Yum China Holdings Inc.	34,500	1,808
Aurizon Holdings Ltd.	653,675	1,424	Tsingtao Brewery Co. Ltd. Class H	236,000	1,790
Computershare Ltd. (XASX)	69,174	1,092	Anhui Conch Cement Co. Ltd. Class H	455,414	1,133
Santos Ltd.	211,653	1,033	BYD Electronic International Co. Ltd.	241,000	1,006
Steadfast Group Ltd.	288,446	992	New China Life Insurance Co. Ltd. Class H	318,300	698
Atlas Arteria Ltd.	197,996	669	¹ Hygeia Healthcare Holdings Co. Ltd. Class C	113,600	686
Washington H Soul Pattinson & Co. Ltd.	30,785	656			42,362
carsales.com Ltd.	31,641	558	Finland (0.2%)		
Suncorp Group Ltd.	45,508	387	Sampo OYJ Class A	96,026	3,777
		68,420	Elisa OYJ	10,830	459
Belgium (0.1%)					4,236
Colruyt Group NV	42,922	1,776	France (1.3%)		
Brazil (1.5%)			Orange SA	1,530,292	17,999
Itau Unibanco Holding SA ADR	3,743,254	19,877	Edenred SE	67,452	3,591
Banco Bradesco SA ADR	2,186,695	6,101	Vivendi SE	211,154	1,894
Cia Energetica de Minas Gerais ADR	226,387	514	Bollore SE	68,388	373
Petroleo Brasileiro SA ADR	31,431	435			23,857
Centrais Eletricas Brasileiras SA ADR	53,774	368	Germany (0.1%)		
		27,295	SAP SE	6,501	872
Canada (3.6%)			¹ Scout24 SE	8,416	518
Dollarama Inc.	239,602	16,362	Fielmann Group AG	9,924	427
Intact Financial Corp.	103,014	14,474			1,817
¹ Hydro One Ltd.	465,817	12,079	Hong Kong (1.2%)		
BCE Inc.	212,479	7,888	CLP Holdings Ltd.	1,281,105	9,376
Fortis Inc. (XTSE)	117,802	4,677	Power Assets Holdings Ltd.	1,335,770	6,386
Enbridge Inc.	86,566	2,774	MTR Corp. Ltd.	737,000	2,755
Thomson Reuters Corp.	17,092	2,047	Chow Tai Fook Jewellery Group Ltd.	828,200	1,169
Metro Inc.	36,812	1,870			
² Emera Inc.	56,816	1,861			
TMX Group Ltd.	40,587	845			
Capital Power Corp.	26,491	678			
Definity Financial Corp.	16,587	459			
Atco Ltd. Class I	14,562	373			

Global Minimum Volatility Fund

	Shares	Market Value* (\$'000)		Shares	Market Value* (\$'000)
Want Want China Holdings Ltd.	1,567,000	974	Haseko Corp.	44,100	543
Hang Seng Bank Ltd.	70,200	803	Kyorin Pharmaceutical Co. Ltd.	43,300	511
CK Asset Holdings Ltd.	76,000	380	Shimizu Corp.	70,900	505
BOC Hong Kong Holdings Ltd.	143,000	378	Seino Holdings Co. Ltd.	34,000	495
		22,221	Iwatani Corp.	10,300	493
India (3.9%)			Citizen Watch Co. Ltd.	83,700	488
ICICI Bank Ltd. ADR	1,220,250	27,077	COMSYS Holdings Corp.	22,500	463
Infosys Ltd. ADR	1,281,536	21,043	Nagoya Railroad Co. Ltd.	31,700	444
Dr Reddy's Laboratories Ltd. ADR	252,194	16,425	Keio Corp.	13,100	389
HDFC Bank Ltd. ADR	108,796	6,153	Keisei Electric Railway Co. Ltd.	9,900	373
¹ Reliance Industries Ltd. GDR	30,291	1,655			198,800
Wipro Ltd. ADR	117,536	535	Mexico (0.6%)		
		72,888	Fomento Economico Mexicano SAB de CV ADR	58,672	6,654
Indonesia (0.2%)			America Movil SAB de CV ADR	205,845	3,417
Telkom Indonesia Persero Tbk PT ADR	157,981	3,476	Coca-Cola Femsa SAB de CV ADR	7,401	563
					10,634
Italy (0.1%)			Netherlands (0.1%)		
UnipolSai Assicurazioni SpA	589,372	1,397	Koninklijke KPN NV	742,373	2,495
Japan (10.7%)			New Zealand (0.1%)		
Softbank Corp.	2,495,500	28,216	Fisher & Paykel Healthcare Corp. Ltd.	52,654	639
East Japan Railway Co.	425,200	22,084	Infratil Ltd.	81,484	466
Canon Inc.	737,000	17,423			1,105
Central Japan Railway Co.	762,000	17,151	Norway (0.4%)		
Japan Post Holdings Co. Ltd.	1,271,400	11,253	Orkla ASA	975,472	6,723
Yamada Holdings Co. Ltd.	3,252,100	10,285	Equinor ASA	11,752	394
Skylark Holdings Co. Ltd.	664,100	9,798			7,117
West Japan Railway Co.	210,100	8,008	Singapore (0.7%)		
Japan Tobacco Inc.	327,500	7,624	Oversea-Chinese Banking Corp. Ltd.	892,661	8,276
Kyushu Railway Co.	293,200	5,995	Singapore Exchange Ltd.	607,126	4,204
Osaka Gas Co. Ltd.	316,000	5,959			12,480
McDonald's Holdings Co. Japan Ltd.	136,900	5,326	South Korea (2.2%)		
Hankyu Hanshin Holdings Inc.	141,500	4,452	Samsung Electronics Co. Ltd. (KRX)	334,747	16,662
Tobu Railway Co. Ltd.	178,600	4,299	KT&G Corp.	252,346	15,919
Tokyo Gas Co. Ltd.	158,600	3,562	Samsung Fire & Marine Insurance Co. Ltd.	16,666	3,187
Kagome Co. Ltd.	166,200	3,457	Samsung C&T Corp.	19,050	1,506
Tokyu Corp.	273,100	3,083	Samsung Life Insurance Co. Ltd.	20,362	1,090
Nintendo Co. Ltd.	73,200	3,024	S-Oil Corp.	14,790	730
Japan Post Bank Co. Ltd.	301,500	2,795	* Korea Electric Power Corp.	56,917	712
Shimamura Co. Ltd.	21,200	2,092	Maeil Dairies Co. Ltd.	19,678	660
Toho Co. Ltd.	59,200	2,022	Industrial Bank of Korea	60,581	501
Kintetsu Group Holdings Co. Ltd.	63,700	1,792	Korea Zinc Co. Ltd.	1,032	359
KDDI Corp.	58,500	1,750	LEENO Industrial Inc.	3,178	325
Takashimaya Co. Ltd.	119,700	1,628			41,651
Sawai Group Holdings Co. Ltd.	45,300	1,444	Spain (0.6%)		
ENEOS Holdings Inc.	386,200	1,431	Iberdrola SA (XMAD)	619,738	6,893
ABC-Mart Inc.	90,600	1,403	Industria de Diseno Textil SA	83,816	2,893
Obayashi Corp.	151,000	1,293	Enagas SA	63,122	1,056
MOS Food Services Inc.	49,900	1,089			10,842
Yamato Holdings Co. Ltd.	62,100	1,034	Switzerland (2.8%)		
Alfresa Holdings Corp.	58,800	931	Swisscom AG (Registered)	48,561	29,097
Oracle Corp. Japan	10,200	724	Novartis AG (Registered)	167,642	15,694
USS Co. Ltd.	33,200	580	¹ Galenica AG	32,533	2,458
Seven Bank Ltd.	275,300	545			
Chubu Electric Power Co. Inc.	45,000	544			

Global Minimum Volatility Fund

	Shares	Market Value* (\$000)
* CCC Intelligent Solutions Holdings Inc.	116,643	1,256
Oracle Corp.	11,611	1,201
TFS Financial Corp.	99,435	1,179
Loews Corp.	18,331	1,173
* Prestige Consumer Healthcare Inc.	18,953	1,125
* Enstar Group Ltd.	4,732	1,121
RLI Corp.	8,364	1,114
Graham Holdings Co. Class B	1,661	961
New Jersey Resources Corp.	22,104	897
Capitol Federal Financial Inc.	164,497	855
Exxon Mobil Corp.	7,214	764
PepsiCo Inc.	4,465	729
Chesapeake Utilities Corp.	6,103	541
CME Group Inc.	2,371	506
J & J Snack Foods Corp.	3,101	486
Rollins Inc.	10,999	414
Bristol-Myers Squibb Co.	7,700	397
Golden Ocean Group Ltd.	54,484	395
International Bancshares Corp.	8,592	377
* Akero Therapeutics Inc.	29,128	347
		1,028,297
Total Common Stocks (Cost \$1,640,078)		1,817,234
Preferred Stock (0.4%)		
Samsung Electronics Co. Ltd. Preference Shares (Cost \$8,175)	184,774	7,377

	Shares	Market Value* (\$000)
Temporary Cash Investments (1.8%)		
Money Market Fund (1.8%)		
^{5,6} Vanguard Market Liquidity Fund, 5.420% (Cost \$33,596)	336,037	33,600
Total Investments (100.4%) (Cost \$1,681,849)		1,858,211
Other Assets and Liabilities— Net (-0.4%)		(7,836)
Net Assets (100%)		1,850,375

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 October 31, 2023, the aggregate value was \$29,470,000, representing 1.6% of net assets.
- 2 Includes partial security positions on loan to broker-dealers. The total value of securities on loan is \$17,168,000.
- 3 Securities with a value of \$1,739,000 have been segregated as collateral for open forward currency contracts.
- 4 Securities with a value of \$1,381,000 have been segregated as initial margin for open futures contracts.
- 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 Collateral of \$19,156,000 was received for securities on loan. ADR—American Depositary Receipt. GDR—Global Depositary Receipt.

Derivative Financial Instruments Outstanding as of Period End

Futures Contracts

	Expiration	Number of Long (Short) Contracts	Notional Amount	Value and Unrealized Appreciation (Depreciation)
				(\$000)
Long Futures Contracts				
E-mini S&P 500 Index	December 2023	62	13,058	(120)
Euro Stoxx 50 Index	December 2023	32	1,378	(74)
S&P ASX 200 Index	December 2023	4	430	(29)
Topix Index	December 2023	9	1,338	(55)
				(278)

Forward Currency Contracts

Counterparty	Contract Settlement Date	Contract Amount (000)		Unrealized Appreciation (\$000)	Unrealized Depreciation (\$000)
		Receive	Deliver		
JPMorgan Chase Bank, N.A.	11/15/23	AUD 6,715	USD 4,250	12	—
JPMorgan Chase Bank, N.A.	11/16/23	BRL 5,383	USD 1,036	29	—
Deutsche Bank AG	11/15/23	EUR 1,076	USD 1,130	9	—

Global Minimum Volatility Fund

Forward Currency Contracts (continued)

Counterparty	Contract Settlement Date	Contract Amount (000)				Unrealized Appreciation (\$000)	Unrealized Depreciation (\$000)
		Receive		Deliver			
Bank of Montreal	11/15/23	GBP	822	USD	996	3	—
BNP Paribas	11/15/23	HKD	37,343	USD	4,776	—	(2)
State Street Bank & Trust Co.	11/15/23	HKD	10,271	USD	1,313	—	—
UBS AG	11/15/23	KRW	3,083,402	USD	2,280	5	—
Toronto-Dominion Bank	11/15/23	SGD	1,270	USD	927	1	—
Goldman Sachs International	11/15/23	TWD	90,578	USD	2,806	—	(8)
State Street Bank & Trust Co.	11/15/23	USD	74,527	AUD	117,552	—	(81)
Deutsche Bank AG	11/16/23	USD	28,001	BRL	144,940	—	(685)
Royal Bank of Canada	11/15/23	USD	70,792	CAD	97,214	676	—
State Street Bank & Trust Co.	11/15/23	USD	53,853	CHF	49,067	—	(177)
JPMorgan Chase Bank, N.A.	11/15/23	USD	51,039	EUR	48,426	—	(232)
State Street Bank & Trust Co.	11/15/23	USD	60,951	GBP	50,102	50	—
State Street Bank & Trust Co.	11/15/23	USD	70,207	HKD	549,130	9	—
State Street Bank & Trust Co.	11/15/23	USD	4,108	IDR	64,142,370	71	—
JPMorgan Chase Bank, N.A.	11/15/23	USD	670	ILS	2,576	32	—
Toronto-Dominion Bank	11/15/23	USD	70,508	INR	5,880,531	—	(98)
UBS AG	11/15/23	USD	198,384	JPY	29,354,813	4,241	—
UBS AG	11/15/23	USD	52,860	KRW	71,272,423	46	—
UBS AG	11/15/23	USD	11,059	MXN	199,423	26	—
BNP Paribas	11/15/23	USD	8,373	NOK	91,384	189	—
Toronto-Dominion Bank	11/15/23	USD	1,184	NZD	1,999	19	—
Toronto-Dominion Bank	11/15/23	USD	417	SEK	4,579	6	—
UBS AG	11/15/23	USD	14,153	SGD	19,356	7	—
JPMorgan Chase Bank, N.A.	11/15/23	USD	49,404	TWD	1,593,518	182	—
BNP Paribas	11/15/23	USD	9,430	TWD	304,230	33	—
						5,646	(1,283)

AUD—Australian dollar.

BRL—Brazilian real.

CAD—Canadian dollar.

CHF—Swiss franc.

EUR—euro.

GBP—British pound.

HKD—Hong Kong dollar.

IDR—Indonesian rupiah.

ILS—Israeli shekel.

INR—Indian rupee.

JPY—Japanese yen.

KRW—Korean won.

MXN—Mexican peso.

NOK—Norwegian krone.

NZD—New Zealand dollar.

SEK—Swedish krona.

SGD—Singapore dollar.

TWD—Taiwanese dollar.

USD—U.S. dollar.

At October 31, 2023, the counterparties had deposited in segregated accounts securities with a value of \$1,237,000 in connection with open forward currency contracts.

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

Statement of Assets and Liabilities

As of October 31, 2023

(\$000s, except shares, footnotes, and per-share amounts) Amount

Assets	
Investments in Securities, at Value ¹	
Unaffiliated Issuers (Cost \$1,648,253)	1,824,611
Affiliated Issuers (Cost \$33,596)	33,600
Total Investments in Securities	1,858,211
Investment in Vanguard	66
Cash	853
Cash Collateral Pledged—Forward Currency Contracts	570
Foreign Currency, at Value (Cost \$1,456)	1,445
Receivables for Accrued Income	6,161
Receivables for Capital Shares Issued	265
Variation Margin Receivable—Futures Contracts	87
Unrealized Appreciation—Forward Currency Contracts	5,646
Total Assets	1,873,304
Liabilities	
Payables for Investment Securities Purchased	892
Collateral for Securities on Loan	19,156
Payables for Capital Shares Redeemed	1,459
Payables to Vanguard	139
Unrealized Depreciation—Forward Currency Contracts	1,283
Total Liabilities	22,929
Net Assets	1,850,375

¹ Includes \$17,168,000 of securities on loan.

At October 31, 2023, net assets consisted of:

Paid-in Capital	1,635,931
Total Distributable Earnings (Loss)	214,444
Net Assets	1,850,375

Investor Shares—Net Assets

Applicable to 15,266,220 outstanding \$.001 par value shares of beneficial interest (unlimited authorization)	207,804
Net Asset Value Per Share—Investor Shares	\$13.61

Admiral Shares—Net Assets

Applicable to 60,311,231 outstanding \$.001 par value shares of beneficial interest (unlimited authorization)	1,642,571
Net Asset Value Per Share—Admiral Shares	\$27.23

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

Statement of Operations

Year Ended
October 31, 2023

(\$'000)

Investment Income	
Income	
Dividends ¹	61,272
Interest ²	534
Securities Lending—Net	2,452
Total Income	64,258
Expenses	
The Vanguard Group—Note B	
Investment Advisory Services	551
Management and Administrative—Investor Shares	377
Management and Administrative—Admiral Shares	1,787
Marketing and Distribution—Investor Shares	12
Marketing and Distribution—Admiral Shares	72
Custodian Fees	119
Auditing Fees	41
Shareholders' Reports—Investor Shares	22
Shareholders' Reports—Admiral Shares	21
Trustees' Fees and Expenses	1
Other Expenses	36
Total Expenses	3,039
Expenses Paid Indirectly	(20)
Net Expenses	3,019
Net Investment Income	61,239
Realized Net Gain (Loss)	
Investment Securities Sold ²	(15,363)
Futures Contracts	1,779
Forward Currency Contracts	8,816
Foreign Currencies	(522)
Realized Net Gain (Loss)	(5,290)
Change in Unrealized Appreciation (Depreciation)	
Investment Securities ²	36,079
Futures Contracts	(772)
Forward Currency Contracts	(3,280)
Foreign Currencies	268
Change in Unrealized Appreciation (Depreciation)	32,295
Net Increase (Decrease) in Net Assets Resulting from Operations	88,244

1 Dividends are net of foreign withholding taxes of \$3,635,000.

2 Interest income, realized net gain (loss), capital gain distributions received, and change in unrealized appreciation (depreciation) from an affiliated company of the fund were \$533,000, \$10,000, less than \$1,000, and (\$1,000), respectively. Purchases and sales are for temporary cash investment purposes.

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

Statement of Changes in Net Assets

	Year Ended October 31,	
	2023 (\$000)	2022 (\$000)
Increase (Decrease) in Net Assets		
Operations		
Net Investment Income	61,239	59,902
Realized Net Gain (Loss)	(5,290)	161,639
Change in Unrealized Appreciation (Depreciation)	32,295	(334,683)
Net Increase (Decrease) in Net Assets Resulting from Operations	88,244	(113,142)
Distributions		
Investor Shares	(12,533)	(10,057)
Admiral Shares	(89,062)	(83,618)
Total Distributions	(101,595)	(93,675)
Capital Share Transactions		
Investor Shares	(50,306)	(18,912)
Admiral Shares	(161,667)	(448,415)
Net Increase (Decrease) from Capital Share Transactions	(211,973)	(467,327)
Total Increase (Decrease)	(225,324)	(674,144)
Net Assets		
Beginning of Period	2,075,699	2,749,843
End of Period	1,850,375	2,075,699

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

Financial Highlights

Investor Shares

For a Share Outstanding Throughout Each Period	Year Ended October 31,				
	2023	2022	2021	2020	2019
Net Asset Value, Beginning of Period	\$13.72	\$14.83	\$12.77	\$14.71	\$13.78
Investment Operations					
Net Investment Income ¹	.407	.347	.252	.293	.428
Net Realized and Unrealized Gain (Loss) on Investments	.150	(.952)	2.085	(1.571)	1.403
Total from Investment Operations	.557	(.605)	2.337	(1.278)	1.831
Distributions					
Dividends from Net Investment Income	(.344)	(.505)	(.277)	(.397)	(.300)
Distributions from Realized Capital Gains	(.323)	—	—	(.265)	(.601)
Total Distributions	(.667)	(.505)	(.277)	(.662)	(.901)
Net Asset Value, End of Period	\$13.61	\$13.72	\$14.83	\$12.77	\$14.71
Total Return²	4.05%	-4.28%	18.51%	-9.22%	14.41%

Ratios/Supplemental Data

Net Assets, End of Period (Millions)	\$208	\$260	\$301	\$338	\$643
Ratio of Total Expenses to Average Net Assets	0.21 % ³	0.21 % ³	0.21 %	0.21 %	0.21 %
Ratio of Net Investment Income to Average Net Assets	2.96%	2.46%	1.77%	2.16%	3.09%
Portfolio Turnover Rate	45%	51 % ⁴	24%	58%	46%

1 Calculated based on average shares outstanding.

2 Total returns do not include account service fees that may have applied in the periods shown. Fund prospectuses provide information about any applicable account service fees.

3 The ratio of expenses to average net assets for the period net of reduction from custody fee offset arrangements was 0.21%.

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

Financial Highlights

Admiral Shares

For a Share Outstanding Throughout Each Period	Year Ended October 31,				
	2023	2022	2021	2020	2019
Net Asset Value, Beginning of Period	\$27.44	\$29.67	\$25.56	\$29.45	\$27.58
Investment Operations					
Net Investment Income ¹	.832	.712	.520	.608	.878
Net Realized and Unrealized Gain (Loss) on Investments	.310	(1.910)	4.177	(3.155)	2.819
Total from Investment Operations	1.142	(1.198)	4.697	(2.547)	3.697
Distributions					
Dividends from Net Investment Income	(.706)	(1.032)	(.587)	(.812)	(.624)
Distributions from Realized Capital Gains	(.646)	—	—	(.531)	(1.203)
Total Distributions	(1.352)	(1.032)	(.587)	(1.343)	(1.827)
Net Asset Value, End of Period	\$27.23	\$27.44	\$29.67	\$25.56	\$29.45
Total Return²	4.15%	-4.24%	18.60%	-9.18%	14.54%

Ratios/Supplemental Data

Net Assets, End of Period (Millions)	\$1,642	\$1,816	\$2,449	\$2,824	\$3,483
Ratio of Total Expenses to Average Net Assets	0.14% ³	0.14% ³	0.14%	0.14%	0.14%
Ratio of Net Investment Income to Average Net Assets	3.03%	2.52%	1.83%	2.26%	3.16%
Portfolio Turnover Rate	45%	51% ⁴	24%	58%	46%

1 Calculated based on average shares outstanding.

2 Total returns do not include account service fees that may have applied in the periods shown. Fund prospectuses provide information about any applicable account service fees.

3 The ratio of expenses to average net assets for the period net of reduction from custody fee offset arrangements was 0.14%.

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

Notes to Financial Statements

Vanguard Global Minimum Volatility Fund is registered under the Investment Company Act of 1940 as an open-end investment company, or mutual fund. The fund offers two classes of shares: Investor Shares and Admiral Shares. Each of the share classes has different eligibility and minimum purchase requirements, and is designed for different types of investors.

A. The following significant accounting policies conform to generally accepted accounting principles for U.S. investment companies. The fund 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 fund'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 fund's pricing time. When fair-value pricing is employed, the prices of securities used by a fund 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 fund'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 fund uses index futures contracts to a limited extent, with the objective of maintaining full exposure to the stock market while maintaining liquidity. The fund 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 fund 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 fund 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 fund'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 October 31, 2023, the fund's average investments in long and short futures contracts represented 1% 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 fund enters into forward currency contracts to protect the value of securities and related receivables and payables against changes in future foreign exchange rates. The fund'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 fund 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 fund cannot be repledged, resold, or rehypothecated. The master netting arrangements provide that, in the event of a counterparty's default (including bankruptcy), the fund 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 fund under the master netting arrangements. The forward currency contracts contain provisions whereby a counterparty may terminate open contracts if the fund's net assets decline below a certain level, triggering a payment by the fund if the fund is in a net liability position at the time of the termination. The payment amount would be reduced by any collateral the fund 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 October 31, 2023, the fund's average investment in forward currency contracts represented 47% of net assets, based on the average of the notional amounts at each quarter-end during the period.

5. **Federal Income Taxes:** The fund intends to continue to qualify as a regulated investment company and distribute virtually all of its taxable income. The fund'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 fund'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 fund'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 fund lends its securities to qualified institutional borrowers. Security loans are subject to termination by the fund 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 fund 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 fund 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 fund; however, such actions may be subject to legal proceedings. While collateral mitigates counterparty risk, in the event of a default, the fund may experience delays and costs in recovering the securities loaned. The fund 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 fund is entitled to all distributions made on or in respect of the loaned securities.

8. Credit Facilities and Interfund Lending Program: The fund 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 and are subject to the fund'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 fund's board of trustees and included in Management and Administrative expenses on the fund'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 fund and Vanguard.

In accordance with an exemptive order (the "Order") from the SEC, the fund 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 fund'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 October 31, 2023, the fund did not utilize the credit facilities or the Interfund Lending Program.

9. Other: Dividend income is recorded on the ex-dividend date. Non-cash dividends included in income, if any, are recorded at the fair value of the securities received. Interest income includes income distributions received from Vanguard Market Liquidity Fund and is accrued daily. 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 applicable countries' tax rules and rates. Deferred foreign capital gains tax, if any, is accrued daily based upon net unrealized gains. The fund 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.

Each class of shares has equal rights as to assets and earnings, except that each class separately bears certain class-specific expenses related to maintenance of shareholder accounts (included in Management and Administrative expenses) and shareholder reporting. Marketing and distribution expenses are allocated to each class of shares based on a method approved by the board of trustees. Income, other non-class-specific expenses, and gains and losses on investments are allocated to each class of shares based on its relative net assets.

B. In accordance with the terms of a Funds' Service Agreement (the "FSA") between Vanguard and the fund, Vanguard furnishes to the fund investment advisory, corporate management, administrative, marketing, and distribution services at Vanguard's cost of operations (as defined by the FSA). These costs of operations are allocated to the fund based on methods and guidelines approved by the board of trustees and are generally settled twice a month.

Upon the request of Vanguard, the fund may invest up to 0.40% of its net assets as capital in Vanguard. At October 31, 2023, the fund had contributed to Vanguard capital in the amount of \$66,000, representing less than 0.01% of the fund's net assets and 0.03% of Vanguard's capital received pursuant to the FSA. The fund's trustees and officers are also directors and employees, respectively, of Vanguard.

C. The fund's custodian bank has agreed to reduce its fees when the fund maintains cash on deposit in the non-interest-bearing custody account. For the year ended October 31, 2023, custodian fee offset arrangements reduced the fund's expenses by \$20,000 (an annual rate of less than 0.01% of average net assets).

D. Various inputs may be used to determine the value of the fund'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.).

Global Minimum Volatility Fund

Level 3—Significant unobservable inputs (including the fund’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 fund’s investments and derivatives as of October 31, 2023, 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	1,132,985	—	—	1,132,985
Common Stocks—Other	128,549	555,700	—	684,249
Preferred Stock	—	7,377	—	7,377
Temporary Cash Investments	33,600	—	—	33,600
Total	1,295,134	563,077	—	1,858,211
Derivative Financial Instruments				
Assets				
Forward Currency Contracts	—	5,646	—	5,646
Liabilities				
Futures Contracts ¹	278	—	—	278
Forward Currency Contracts	—	1,283	—	1,283
Total	278	1,283	—	1,561

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.

E. At October 31, 2023, the fair values of derivatives were reflected in the Statement of Assets and Liabilities as follows:

Statement of Assets and Liabilities	Equity Contracts (\$000)	Foreign Exchange Contracts (\$000)	Total (\$000)
Unrealized Appreciation—Forward Currency Contracts	—	5,646	5,646
Total Assets	—	5,646	5,646
Unrealized Depreciation—Futures Contracts ¹	278	—	278
Unrealized Depreciation—Forward Currency Contracts	—	1,283	1,283
Total Liabilities	278	1,283	1,561

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.

Realized net gain (loss) and the change in unrealized appreciation (depreciation) on derivatives for the year ended October 31, 2023, were:

	Equity Contracts (\$000)	Foreign Exchange Contracts (\$000)	Total (\$000)
Realized Net Gain (Loss) on Derivatives			
Futures Contracts	1,779	—	1,779
Forward Currency Contracts	—	8,816	8,816
Realized Net Gain (Loss) on Derivatives	1,779	8,816	10,595
Change in Unrealized Appreciation (Depreciation) on Derivatives			
Futures Contracts	(772)	—	(772)
Forward Currency Contracts	—	(3,280)	(3,280)
Change in Unrealized Appreciation (Depreciation) on Derivatives	(772)	(3,280)	(4,052)

F. Permanent differences between book-basis and tax-basis components of net assets are reclassified among capital accounts in the financial statements to reflect their tax character. These reclassifications have no effect on net assets or net asset value per share. As of period end, permanent differences primarily attributable to the accounting for applicable foreign currency transactions, passive foreign investment companies, and distributions in connection with fund share redemptions were reclassified between the following accounts:

	Amount (\$000)
Paid-in Capital	13
Total Distributable Earnings (Loss)	(13)

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 capital loss carryforwards; 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	50,212
Undistributed Long-Term Gains	—
Net Unrealized Gains (Losses)	175,624
Capital Loss Carryforwards	(11,392)
Qualified Late-Year Losses	—
Other Temporary Differences	—
Total	214,444

Global Minimum Volatility Fund

The tax character of distributions paid was as follows:

	Year Ended October 31,	
	2023 Amount (\$000)	2022 Amount (\$000)
Ordinary Income*	52,962	93,675
Long-Term Capital Gains	48,633	—
Total	101,595	93,675

* Includes short-term capital gains, if any.

As of October 31, 2023, gross unrealized appreciation and depreciation for investments and derivatives based on cost for U.S. federal income tax purposes were as follows:

	Amount (\$000)
Tax Cost	1,682,783
Gross Unrealized Appreciation	249,582
Gross Unrealized Depreciation	(73,946)
Net Unrealized Appreciation (Depreciation)	175,636

G. During the year ended October 31, 2023, the fund purchased \$893,908,000 of investment securities and sold \$1,129,434,000 of investment securities, other than temporary cash investments.

The fund purchased securities from and sold securities to other Vanguard funds or accounts managed by Vanguard or its affiliates, in accordance with procedures adopted by the board of trustees in compliance with Rule 17a-7 of the Investment Company Act of 1940. For the year ended October 31, 2023, such purchases were \$1,527,000 and sales were \$7,640,000, resulting in net realized loss of \$438,000; these amounts, other than temporary cash investments, are included in the purchases and sales of investment securities noted above.

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

	Year Ended October 31,			
	2023		2022	
	Amount (\$000)	Shares (000)	Amount (\$000)	Shares (000)
Investor Shares				
Issued	20,767	1,508	38,697	2,740
Issued in Lieu of Cash Distributions	11,654	854	9,216	633
Redeemed	(82,727)	(6,047)	(66,825)	(4,728)
Net Increase (Decrease)—Investor Shares	(50,306)	(3,685)	(18,912)	(1,355)

	Year Ended October 31,			
	2023		2022	
	Amount (\$000)	Shares (000)	Amount (\$000)	Shares (000)
Admiral Shares				
Issued	115,408	4,208	190,619	6,722
Issued in Lieu of Cash Distributions	79,820	2,926	73,352	2,518
Redeemed	(356,895)	(12,982)	(712,386)	(25,628)
Net Increase (Decrease)—Admiral Shares	(161,667)	(5,848)	(448,415)	(16,388)

I. 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 fund's investments and fund performance.

To the extent the fund's investment portfolio reflects concentration in a particular market, industry, sector, country or asset class, the fund may be adversely affected by the performance of these concentrations and may be subject to increased price volatility and other risks.

The use of derivatives may expose the fund to various risks. Derivatives can be highly volatile, and any initial investment is generally small relative to the notional amount so that transactions may be leveraged in terms of market exposure. A relatively small market movement may have a potentially larger impact on derivatives than on standard securities. Leveraged derivatives positions can, therefore, increase volatility. Additional information regarding the fund's use of derivative(s) and the specific risks associated is described under significant accounting policies.

J. Management has determined that no events or transactions occurred subsequent to October 31, 2023, that would require recognition or disclosure in these financial statements.

Report of Independent Registered Public Accounting Firm

To the Board of Trustees of Vanguard Whitehall Funds and Shareholders of Vanguard Global Minimum Volatility Fund

Opinion on the Financial Statements

We have audited the accompanying statement of assets and liabilities, including the schedule of investments, of Vanguard Global Minimum Volatility Fund (one of the funds constituting Vanguard Whitehall Funds, referred to hereafter as the "Fund") as of October 31, 2023, the related statement of operations for the year ended October 31, 2023, the statement of changes in net assets for each of the two years in the period ended October 31, 2023, including the related notes, and the financial highlights for each of the five years in the period ended October 31, 2023 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Fund as of October 31, 2023, 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 October 31, 2023 and the financial highlights for each of the five years in the period ended October 31, 2023 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Fund's management. Our responsibility is to express an opinion on the Fund'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 Fund 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 October 31, 2023 by correspondence with the custodian, transfer agent and brokers; when replies were not received from brokers, we performed other auditing procedures. We believe that our audits provide a reasonable basis for our opinion.

/s/PricewaterhouseCoopers LLP
Philadelphia, Pennsylvania
December 19, 2023

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

Tax information (unaudited)

For corporate shareholders, 39.0%, or if subsequently determined to be different, the maximum percentage allowable by law, of ordinary income (dividend income plus short-term gains, if any) for the fiscal year qualified for the dividends-received deduction.

The fund hereby designates \$45,452,000, or if subsequently determined to be different, the maximum amount allowable by law, as qualified dividend income for individual shareholders for the fiscal year.

The fund hereby designates \$143,000, 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 fund distributed \$48,633,000 as capital gain dividends (20% rate gain distributions) to shareholders during the fiscal year.

The fund hereby designates \$26,000, or if subsequently determined to be different, the maximum amount allowable by law, of qualified business income for individual shareholders for the fiscal year.

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The People Who Govern Your Fund

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

A majority of Vanguard's board members are independent, meaning that they have no affiliation with Vanguard or the funds they oversee, apart from the sizable personal investments they have made as private individuals. The independent board members have distinguished backgrounds in business, academia, and public service. Each of the trustees and executive officers oversees 205 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.

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, the advisory board of the University of California, Berkeley School of Engineering, and the advisory board of Santa Clara University's Leavey School of Business.

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). 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

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.

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 2020) and vice president (retired 2020) of the University of Notre Dame. Chair of the board of Catholic Investment Services, Inc. (investment advisors). Member of the board of superintendence of the Institute for the Works of Religion, the Notre Dame 403(b) Investment Committee, 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. Director of DuPont. 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 partner of HighVista Strategies (private investment firm). Member of the board of RIT Capital Partners (investment firm).

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, Duke Law School (2021–present); Rubenstein Fellow, Duke University (2017–2020); Distinguished Fellow of the Global Financial Markets Center, Duke Law School (2020–2022); and Senior Fellow, Duke Center on Risk

(2020–present). Partner of Kaya Partners (climate policy advisory services). Member of the board of directors of Arcadia (energy solution technology).

Grant Reid

Born in 1959. Trustee since July 2023. Principal occupation(s) during the past five years and other experience: chief executive officer and president (2014–2022) and member of the board of directors (2015–2022) of Mars, Incorporated (multinational manufacturer). Member of the board of directors of Marriott International, Inc. Chair of Agribusiness Task Force, Sustainable Markets Initiative.

David 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. Trustee of Common Fund.

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.

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.

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).

Jodi Miller

Born in 1980. Principal occupation(s) during the past five years and other experience: principal of Vanguard. Finance director (2022–present) of each of the investment companies served by Vanguard. Head of Enterprise Investment Services (2020–present), head of Retail Client Services and Operations (2020–2022), and head of Retail Strategic Support (2018–2020) 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 (2022–present) of the board of National Grid (energy).

Michael Rollings

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

Vanguard Senior Management Team

Matthew Benchener

Joseph Brennan

Mortimer J. Buckley

Gregory Davis

John James

Chris D. McIsaac

Thomas M. Rampulla

Karin A. Risi

Anne E. Robinson

Michael Rollings

Nitin Tandon

Lauren Valente



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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.

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