## Vanguard

Semiannual Report | June 30, 2023

# Vanguard Variable Insurance Funds

Mid-Cap Index Portfolio

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#### 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 June 30, 2023

Mid-Cap Index Portfolio	Beginning Account Value 12/31/2022	Ending Account Value 6/30/2023	Expenses Paid During Period
Based on Actual Portfolio Return	\$1,000.00	\$ 1,087.60	\$0.88
Based on Hypothetical 5% Yearly Return	1,000.00	1,023.95	0.85

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 0.17%. The dollar amounts shown as "Expenses Paid" are equal to the annualized expense ratio multiplied by the average account value over the period, multiplied by the number of days in the most recent six-month period, then divided by the number of days in the most recent 12-month period (181/365).

#### Mid-Cap Index Portfolio

#### **Portfolio Allocation**

As of June 30, 2023

Basic Materials	3.8%
Consumer Discretionary	14.1
Consumer Staples	5.0
Energy	5.1
Financials	11.8
Health Care	11.1
Industrials	17.5
Real Estate	8.6
Technology	14.1
Telecommunications	1.7
Utilities	7.2

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

The portfolio may invest in derivatives (such as futures and swap contracts) for various reasons, including, but not limited to, attempting to remain fully invested and tracking its target index as closely as possible.

The Industry Classification Benchmark ("ICB") is owned by FTSE. FTSE does not accept any liability to any person for any loss or damage arising out of any error or omission in the ICB.

### Financial Statements (unaudited)

#### Schedule of Investments

As of June 30, 2023

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

		Market Value•
	Shares	(\$000
Common Stocks (99.6%)		
Basic Materials (3.8%)		
Nucor Corp.	94,331	15,468
Fastenal Co.	214,502	12,654
Albemarle Corp.	44,046	9,826
LyondellBasell Industries NV Class A	97,727	8,974
International Flavors & Fragrances Inc.	95,867	7,630
Avery Dennison Corp.	30,351	5,214
CF Industries Holdings Inc. FMC Corp.	73,247	5,085
Mosaic Co.	46,997 124,801	4,904 4,368
Celanese Corp. Class A	36,767	4,300
International Paper Co.	130,372	4,250
Eastman Chemical Co.	44,725	3,744
Steel Dynamics Inc.	30,200	3,290
Westlake Corp.	6,047	722
	0,047	
Consumer Discretionary (14.0%)		90,284
Copart Inc.	161,160	14,699
DR Horton Inc.	115,287	14,029
Trade Desk Inc. Class A	167,149	12,907
Lennar Corp. Class A	93,434	11,708
Delta Air Lines Inc.	241,417	11,477
Dollar Tree Inc.	78,915	11,324
Chipotle Mexican Grill Inc. Class A	5,148	11,012
Aptiv plc	101,651	10,378
Warner Bros Discovery Inc.	823,800	10,330
Take-Two Interactive Software Inc.	63,493	9,344
Tractor Supply Co.	41,214	9,112
eBay Inc.	200,777	8,973
Genuine Parts Co.	52,783	8,932
Ulta Beauty Inc.	18,872	8,881
AutoZone Inc.	3,434	8,562
Royal Caribbean Cruises Ltd.	81,643	8,470
Southwest Airlines Co.	223,537	8,094
Darden Restaurants Inc.	45,483	7,599
NVR Inc.	1,163	7,386
Hilton Worldwide Holdings Inc.	49,700	7,234
Omnicom Group Inc.	75,003	7,137
Carnival Corp.	377,416	7,107
United Airlines Holdings Inc.	122,704	6,733
PulteGroup Inc.	83,828	6,512
Best Buy Co. Inc. Garmin Ltd.	73,895	6,056
	57,474	5,994
Expedia Group Inc.	53,549	5,858
LKQ Corp. ROBLOX Corp. Class A	100,338	5,847
Live Nation Entertainment Inc.	136,900	5,517
CarMax Inc.	60,519 50,477	5,514 4,978
MGM Resorts International	59,477 109,296	
Domino's Pizza Inc.	13,297	4,800 4,481
Rivian Automotive Inc. Class A	262,600	4,461
BorgWarner Inc.	88,040	4,376
Rollins Inc.	92,617	4,300
Etsy Inc.	46,300	3,907
Burlington Stores Inc.	24,444	3,847
Las Vegas Sands Corp.	64,600	3,747
News Corp. Class A	183,321	3,747
Fox Corp. Class A	101,100	0,070

		Shares	Market Value• (\$000)
1	Paramount Global Class B	183,941	2,927
	Interpublic Group of Cos. Inc.	72,301	2,789
	Pool Corp.	7,000	2,623
*	American Airlines Group Inc.	123,137	2,209
*,1	Lucid Group Inc.	297,543	2,050
*	Caesars Entertainment Inc.	38,400	1,957
	Vail Resorts Inc.	7,552	1,901
	Fox Corp. Class B	48,768	1,555
÷	Chewy Inc. Class A	34,920	1,378
	Endeavor Group Holdings Inc. Class A	56,426	1,350
	VF Corp.	65,685	1,254
1	Warner Music Group Corp. Class A	44,467	1,160
*	Sirius XM Holdings Inc.	215,900	978
	Liberty Media CorpLiberty SiriusXM Class C Advance Auto Parts Inc.	28,136 11,186	921 786
	Lennar Corp. Class B	6,899	730
*	Liberty Media CorpLiberty SiriusXM Class A	14,445	474
	News Corp. Class B	3,475	69
1	Paramount Global Class A	2,790	52
~		_/	335,368
Со	nsumer Staples (5.0%)	050.000	14 505
	Corteva Inc.	253,669	14,535
	AmerisourceBergen Corp.	64,595	12,430
	Kroger Co. Church & Dwight Co. Inc.	242,605 91,750	11,403 9,196
	McCormick & Co. Inc. (Non-Voting)	94,286	8,225
	Archer-Daniels-Midland Co.	102,318	7,731
	Clorox Co.	46,445	7,387
	Kellogg Co.	96,564	6,508
	Conagra Brands Inc.	179,215	6,043
	J M Smucker Co.	38,077	5,623
	Tyson Foods Inc. Class A	107,277	5,475
	Hormel Foods Corp.	102,687	4,130
	Walgreens Boots Alliance Inc.	137,800	3,926
	Brown-Forman Corp. Class B	54,600	3,646
	Campbell Soup Co.	73,166	3,344
	Lamb Weston Holdings Inc.	27,413	3,151
	Albertsons Cos. Inc. Class A	118,600	2,588
	Molson Coors Beverage Co. Class B	33,720	2,220
	Brown-Forman Corp. Class A	13,200	899
En	ergy (5.1%)		118,460
	Hess Corp.	103,836	14,116
	Cheniere Energy Inc.	86,720	13,213
	Baker Hughes Co. Class A	380,312	12,022
	Devon Energy Corp.	241,100	11,655
	ONEOK Inc.	168,082	10,374
	Halliburton Co.	305,055	10,064
	Diamondback Energy Inc.	68,000	8,932
*	Enphase Energy Inc.	51,460	8,618
	Williams Cos. Inc.	228,864	7,468
*	First Solar Inc.	38,100	7,242
	Coterra Energy Inc.	270,400	6,841
	Marathon Oil Corp.	232,000	5,341
	EQT Corp.	67,975	2,796
	Texas Pacific Land Corp.	1,200	1,580
*,1	Plug Power Inc.	112,800	1,172
		-	121,434

		Shares	Market Value• (\$000)
Fin	ancials (11.7%) Arthur J Gallagher & Co.	80,500	17,675
	MSCI Inc. Class A	28,529	13,388
	Ameriprise Financial Inc.	39,092	12,985
	Apollo Global Management Inc.	149,199	11,460
*	Discover Financial Services Arch Capital Group Ltd.	95,442 132,948	11,152 9,951
	T. Rowe Price Group Inc.	84,400	9,454
	Willis Towers Watson plc	39,967	9,412
	State Street Corp.	119,309	8,731
	Hartford Financial Services Group Inc.	116,512	8,391
	American International Group Inc.	135,900	7,820
	M&T Bank Corp. Raymond James Financial Inc.	62,286 71,687	7,709 7,439
	Nasdag Inc.	147,478	7,352
	Broadridge Financial Solutions Inc.	44,280	7,334
	Principal Financial Group Inc.	91,164	6,914
*	Fifth Third Bancorp	255,766	6,704
	Markel Group Inc. LPL Financial Holdings Inc.	4,764	6,589
	Regions Financial Corp.	29,144 352,593	6,337 6,283
	Prudential Financial Inc.	68,600	6,052
	Huntington Bancshares Inc.	542,433	5,847
	Ares Management Corp. Class A	60,400	5,820
	FactSet Research Systems Inc.	14,383	5,763
	Cincinnati Financial Corp. Everest Re Group Ltd.	59,104 16,333	5,752 5,584
	Northern Trust Corp.	74,362	5,513
	Cboe Global Markets Inc.	39,670	5,475
	Allstate Corp.	49,400	5,387
	Citizens Financial Group Inc.	172,750	4,505
	W R Berkley Corp.	73,534	4,380
*,1	Loews Corp. Coinbase Global Inc. Class A	72,733 56,200	4,319 4,021
	MarketAxess Holdings Inc.	14,170	3,704
	Fidelity National Financial Inc.	97,144	3,497
	KeyCorp	351,036	3,244
	Interactive Brokers Group Inc. Class A	36,650	3,045
	Franklin Resources Inc. Tradeweb Markets Inc. Class A	112,947 43,100	3,017 2,951
	Brown & Brown Inc.	42,500	2,926
	Annaly Capital Management Inc.	92,729	1,855
	Equitable Holdings Inc.	66,913	1,817
	Globe Life Inc.	16,207	1,777
*	Corebridge Financial Inc. Rocket Cos. Inc. Class A	61,354	1,084 392
	NOCKEL COS. INC. Class A	43,800 _	280,807
He	alth Care (11.0%)	145.057	
*	Dexcom Inc. IQVIA Holdings Inc.	145,657 69,673	18,718 15,660
*	Centene Corp.	206,160	13,907
	ResMed Inc.	55,238	12,070
	Zimmer Biomet Holdings Inc.	78,326	11,404
*	Veeva Systems Inc. Class A	54,705	10,817
*	West Pharmaceutical Services Inc.	27,900	10,671
*	Seagen Inc. Align Technology Inc.	52,826 27,300	10,167 9,654
	Cardinal Health Inc.	95,623	9,034 9,043
*	Alnylam Pharmaceuticals Inc.	46,833	8,895
*	Horizon Therapeutics plc	85,900	8,835
	Baxter International Inc.	189,900	8,652
	STERIS plc	37,300	8,392
*	Laboratory Corp. of America Holdings IDEXX Laboratories Inc.	33,292 15,606	8,034 7,838
*	Insulet Corp.	26,200	7,838 7,555
*	Hologic Inc.	92,489	7,489
	Cooper Cos. Inc.	18,607	7,134
*	Molina Healthcare Inc.	21,929	6,606
-	BioMarin Pharmaceutical Inc.	70,414	6,104

	Shares	Market Value (\$000
Quest Diagnostics Inc.	41,968	5,899
GE HealthCare Technologies Inc.	72,600	5,899
Revvity Inc.	47,100	5,595
Illumina Inc.	29,700	5,568
Avantor Inc.	253,700	5,211
Viatris Inc.	450,657	4,498
Incyte Corp.	71,281	4,437
Royalty Pharma plc Class A	142,804	4,390
Teleflex Inc.	17,618	4,264
Henry Schein Inc.	49,190	3,989
Bio-Rad Laboratories Inc. Class A	7,853	2,977
Charles River Laboratories International Inc.	9,600	2,018
Catalent Inc.	32,100	1,392
		263,781
dustrials (17.5%) TransDigm Group Inc.	10 502	17510
PACCAR Inc.	19,592	17,519
Cintas Corp.	196,359	16,425 16,146
Carrier Global Corp.	32,481 313,599	15,589
Rockwell Automation Inc.	43,119	14,205
AMETEK Inc.	86,610	14,020
Old Dominion Freight Line Inc.	37,044	13,697
WW Grainger Inc.	16,963	13,037
Verisk Analytics Inc. Class A	54,421	12,301
Ferguson plc	76,900	12,001
United Rentals Inc.	25,778	11,481
Vulcan Materials Co.	49,980	11,267
Keysight Technologies Inc.	66,920	11,206
Equifax Inc.	46,121	10,852
Mettler-Toledo International Inc.	8,256	10,829
Martin Marietta Materials Inc.	23,249	10,734
Quanta Services Inc.	54,600	10,726
Xylem Inc.	89,968	10,132
Ingersoll Rand Inc.	152,012	9,935
Fortive Corp.	132,811	9,930
Global Payments Inc.	98,400	9,694
Dover Corp.	52,543	7,758
Westinghouse Air Brake Technologies Corp.	67,555	7,409
Teledyne Technologies Inc.	17,700	7,277
Expeditors International of Washington Inc.	57,437	6,957
Otis Worldwide Corp.	77,596	6,907
Ball Corp.	118,142	6,877
FleetCorTechnologies Inc.	26,357	6,618
Cummins Inc.	26,600	6,521
Waters Corp.	22,228	5,925
Zebra Technologies Corp. Class A	19,360	5,727
Snap-on Inc.	19,857	5,723
TransUnion	72,603	5,687
Jacobs Solutions Inc.	47,675	5,668
JB Hunt Transport Services Inc.	31,132	5,636
DuPont de Nemours Inc.	77,600	5,544
Synchrony Financial	161,019	5,462
Stanley Black & Decker Inc.	57,539	5,392
Textron Inc.	75,718	5,121
Trimble Inc.	93,104	4,929
Masco Corp.	84,552	4,852
Packaging Corp. of America	33,799	4,467
BILL Holdings Inc.	37,900	4,429
CH Robinson Worldwide Inc.	43,790	4,132
HEICO Corp. Class A	27,999	3,937
Crown Holdings Inc.	45,163	3,923
Howmet Aerospace Inc.	73,700	3,652
Hubbell Inc. Class B	10,079	3,342
HEICO Corp.	15,269	2,702
Jack Henry & Associates Inc.	13,616	2,278
Westrock Co.	48,103	1,398
		418,412

		Shares	Market Value• (\$000)
Re	al Estate (8.6%)		
	Realty Income Corp.	252,991	15,126
*	Welltower Inc.	186,714	15,103
	CoStar Group Inc.	153,467	13,659
	Digital Realty Trust Inc. VICI Properties Inc. Class A	109,475 377,300	12,466 11,859
	AvalonBay Communities Inc.	53,359	10,099
	SBA Communications Corp. Class A	40,705	9,434
	Weyerhaeuser Co.	275,121	9,219
*	CBRE Group Inc. Class A	110,970	8,956
	Equity Residential	135,236	8,922
	Invitation Homes Inc.	229,874	7,908
	Extra Space Storage Inc.	50,792	7,560
	Alexandria Real Estate Equities Inc.	64,983 150,200	7,375
	Ventas Inc. Simon Property Group Inc.	150,300 58,333	7,105 6,736
	Mid-America Apartment Communities Inc.	43,838	6,657
	Iron Mountain Inc.	109,563	6,225
	Sun Communities Inc.	46,788	6,104
	Essex Property Trust Inc.	24,128	5,653
	WP Carey Inc.	80,375	5,430
	UDR Inc.	123,650	5,312
	Camden Property Trust	40,130	4,369
	Healthpeak Properties Inc.	205,509	4,131
	Zillow Group Inc. Class C	57,800	2,905
	Host Hotels & Resorts Inc.	133,558	2,248
	Regency Centers Corp. Boston Properties Inc.	31,999 26,474	1,977
*	Zillow Group Inc. Class A	14,900	1,525 733
			204,796
Te	chnology (14.0%)	000.050	40.000
	Amphenol Corp. Class A	223,652	18,999
*	Microchip Technology Inc. ON Semiconductor Corp.	205,778	18,436
*	ANSYS Inc.	162,261 32,542	15,347 10,748
*	MongoDB Inc. Class A	25,138	10,331
	Corning Inc.	287,445	10,072
*	Gartner Inc.	28,237	9,892
*	Palantir Technologies Inc. Class A	643,620	9,867
*	Datadog Inc. Class A	100,228	9,860
*	Marvell Technology Inc.	160,938	9,621
*	Atlassian Corp. Class A	57,100	9,582
*	Fortinet Inc.	125,350	9,475
	HubSpot Inc. CDW Corp.	17,700 50,662	9,418
	Monolithic Power Systems Inc.	16,908	9,296 9,134
*	DoorDash Inc. Class A	108,500	8,292
	Hewlett Packard Enterprise Co.	486,868	8,179
*	VeriSign Inc.	33,289	7,522
*	Cloudflare Inc. Class A	103,196	6,746
	Skyworks Solutions Inc.	59,829	6,622
*	Splunk Inc.	62,287	6,608
*	Tyler Technologies Inc.	15,700	6,539
	Teradyne Inc.	58,300	6,491
	Paycom Software Inc.	19,292	6,197
*	NetApp Inc.	80,380	6,141
*	Pinterest Inc. Class A Zoom Video Communications Inc. Class A	223,284 83,600	6,105 5,675
*	Akamai Technologies Inc.	58,752	5,675 5,280
	HP Inc.	166,600	5,280
*	EPAM Systems Inc.	21,800	4,900
	SS&C Technologies Holdings Inc.	79,561	4,821
*	Zscaler Inc.	32,600	4,769
	Bentley Systems Inc. Class B	84,718	4,594
	Seagate Technology Holdings plc	73,890	4,572
*	Western Digital Corp.	120,228	4,560
~	Snap Inc. Class A	380,000	4,499

	Shares	Marke Value (\$000
Match Crown Inc		
Match Group Inc. GoDaddy Inc. Class A	104,604	4,378
Twilio Inc. Class A	57,897	4,350 4,167
Unity Software Inc.	65,500	
Okta Inc. Class A	92,498	4,016
DocuSign Inc. Class A	57,877	4,014
Gen Digital Inc.	75,768	3,87
Qorvo Inc.	204,163	3,78
	37,078	3,783
ZoomInfo Technologies Inc. Class A Leidos Holdings Inc.	128,488	3,262
0	25,900	2,292
Black Knight Inc. Toast Inc. Class A	26,485	1,582
TOAST INC. CLASS A	64,891	1,46
		335,273
elecommunications (1.7%)		
Motorola Solutions Inc.	63,031	18,486
Arista Networks Inc.	86,860	14,076
Liberty Broadband Corp. Class C	45,039	3,608
Juniper Networks Inc.	60,439	1,894
Roku Inc. Class A	23,204	1,484
Liberty Broadband Corp. Class A	6,086	48
		40,033
Itilities (7.2%)	000 701	15 05
PG&E Corp.	882,791	15,25
Waste Connections Inc.	96,767	13,83
Consolidated Edison Inc.	130,239	11,774
Constellation Energy Corp.	122,771	11,240
WEC Energy Group Inc.	118,463	10,453
American Water Works Co. Inc.	73,062	10,430
Edison International	143,841	9,990
Eversource Energy	131,084	9,296
Ameren Corp.	98,606	8,053
FirstEnergy Corp.	204,478	7,950
Entergy Corp.	79,456	7,737
DTE Energy Co.	69,696	7,668
PPL Corp.	276,867	7,326
CenterPoint Energy Inc.	236,495	6,894
CMS Energy Corp.	109,592	6,438
Public Service Enterprise Group Inc.	93,700	5,866
AES Corp.	251,423	5,212
Evergy Inc.	86,265	5,040
Alliant Energy Corp.	94,398	4,954
NiSource Inc.	155,193	4,244
Vistra Corp.	70,026	1,838
Avangrid Inc.	29,410	1,108
		172,597
otal Common Stocks Cost \$1,912,256)		2,381,24
emporary Cash Investments (0.4%)		
Noney Market Fund (0.4%)		
<sup>3</sup> Vanguard Market Liquidity Fund, 5.150% (Cost \$9,858)	98,595	9,857
otal Investments (100.0%) Cost \$1,922,114)		2,391,102
Other Assets and Liabilities—Net (0.0%)		380
let Assets (100%)		2,391,482
ost is in \$000. See Note A in Notes to Financial Statements. Non-income-producing security. Includes partial security positions on Ioan to broker-dealers. Th		

Includes partial security positions on loan to broker-dealers. The total value of securities on loan is \$2,782,000.
Affiliated money market fund available only to Vanguard funds and certain trusts and accounts managed by Vanguard. Rate shown is the 7-day yield.
Collateral of \$3,015,000 was received for securities on loan.

Futures Contracts				
				(\$000)
	Expiration	Number of Long (Short) Contracts	Notional Amount	Value and Unrealized Appreciation (Depreciation)
Long Futures Contracts				
E-mini Russell 2000 Index	September 2023	21	1,999	17
E-mini S&P 500 Index	September 2023	18	4,039	67
E-mini S&P Mid-Cap 400 Index	September 2023	15	3,966	73
				157

# Statement of Assets and Liabilities As of June 30, 2023

(\$000s, except shares, footnotes, and per-share amounts)	Amount
Assets	
Investments in Securities, at Value <sup>1</sup>	
Unaffiliated Issuers (Cost \$1,912,256)	2,381,245
Affiliated Issuers (Cost \$9,858)	9,857
Total Investments in Securities	2,391,102
Investment in Vanguard	78
Cash Collateral Pledged—Futures Contracts	550
Receivables for Investment Securities Sold	802
Receivables for Accrued Income	2,731
Receivables for Capital Shares Issued	1,150
Variation Margin Receivable—Futures Contracts	78
Total Assets	2,396,491
Liabilities	
Due to Custodian	921
Payables for Investment Securities Purchased	14
Collateral for Securities on Loan	3,015
Payables for Capital Shares Redeemed	896
Payables to Vanguard	163
Total Liabilities	5,009
Net Assets	2,391,482

1 Includes \$2,782,000 of securities on loan.

#### At June 30, 2023, net assets consisted of:

Paid-in Capital	1,904,514
Total Distributable Earnings (Loss)	486,968
Net Assets	2,391,482
Net Assets	
Applicable to 106,444,721 outstanding \$.001 par value shares of beneficial interest (unlimited authorization)	2,391,482
Net Asset Value Per Share	\$22.47

### Statement of Operations

	Six Months Ended June 30, 2023
	(\$000)
Investment Income	
Income	
Dividends <sup>1</sup>	17,454
Interest <sup>2</sup>	61
Securities Lending—Net	229
Total Income	17,744
Expenses	
The Vanguard Group—Note B	
Investment Advisory Services	24
Management and Administrative	1,755
Marketing and Distribution	67
Custodian Fees	36
Shareholders' Reports	38
Trustees' Fees and Expenses	1
Other Expenses	4
Total Expenses	1,925
Net Investment Income	15,819
Realized Net Gain (Loss)	
Investment Securities Sold <sup>2</sup>	3,599
Futures Contracts	447
Realized Net Gain (Loss)	4,046
Change in Unrealized Appreciation (Depreciation)	
Investment Securities <sup>2</sup>	174,178
Futures Contracts	275
Change in Unrealized Appreciation (Depreciation)	174,453
Net Increase (Decrease) in Net Assets Resulting from Operations	194,318

1 Dividends are net of foreign withholding taxes of \$7,000.

2 Interest income, realized net gain (loss), and change in unrealized appreciation (depreciation) from an affiliated company of the portfolio were \$55,000, less than \$1,000, and (\$1,000), respectively. Purchases and sales are for temporary cash investment purposes.

### Statement of Changes in Net Assets

	Six Months Ended June 30, 2023	Year Ended December 31, 2022	
	(\$000)	(\$000)	
Increase (Decrease) in Net Assets			
Operations			
Net Investment Income	15,819	32,440	
Realized Net Gain (Loss)	4,046	41,605	
Change in Unrealized Appreciation (Depreciation)	174,453	(592,924)	
Net Increase (Decrease) in Net Assets Resulting from Operations	194,318	(518,879)	
Distributions			
Total Distributions	(73,871)	(277,011)	
Capital Share Transactions			
Issued	146,156	270,019	
Issued in Lieu of Cash Distributions	73,871	277,011	
Redeemed	(180,258)	(300,821)	
Net Increase (Decrease) from Capital Share Transactions	39,769	246,209	
Total Increase (Decrease)	160,216	(549,681)	
Net Assets			
Beginning of Period	2,231,266	2,780,947	
End of Period	2,391,482	2,231,266	

### **Financial Highlights**

	Six Months					
For a Share Outstanding	Ended June 30.	Year Ended December 31,				
Throughout Each Period	2023	2022	2021	2020	2019	2018
Net Asset Value, Beginning of Period	\$21.38	\$29.48	\$25.77	\$24.03	\$20.23	\$23.72
Investment Operations						
Net Investment Income <sup>1</sup>	.151	.319	.284	.325 <sup>2</sup>	.334	.343
Net Realized and Unrealized Gain (Loss) on Investments	1.659	(5.464)	5.642	3.047	5.621	(2.386)
Total from Investment Operations	1.810	(5.145)	5.926	3.372	5.955	(2.043)
Distributions						
Dividends from Net Investment Income	(.319)	(.282)	(.318)	(.344)	(.350)	(.286)
Distributions from Realized Capital Gains	(.401)	(2.673)	(1.898)	(1.288)	(1.805)	(1.161)
Total Distributions	(.720)	(2.955)	(2.216)	(1.632)	(2.155)	(1.447)
Net Asset Value, End of Period	\$22.47	\$21.38	\$29.48	\$25.77	\$24.03	\$20.23
Total Return	8.76%	-18.82%	24.36%	18.07%	30.87%	-9.33%
Ratios/Supplemental Data						
Net Assets, End of Period (Millions)	\$2,391	\$2,231	\$2,781	\$2,241	\$2,155	\$1,621
Ratio of Total Expenses to Average Net Assets	0.17%	0.17% <sup>3</sup>	0.17%	0.17%	0.17%	0.17%
Ratio of Net Investment Income to Average Net Assets	1.46%	1.39%	1.03%	1.50% <sup>2</sup>	1.49%	1.49%
Portfolio Turnover Rate	5%	16%	20%	28%	21%	21%

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

1 Calculated based on average shares outstanding.

2 Net investment income per share and the ratio of net investment income to average net assets include \$0.036 and 0.17%, respectively, resulting from a special dividend from NortonLifeLock Inc. in February 2020.

3 The ratio of expenses to average net assets for the period net of reduction from custody fee offset arrangements was 0.17%.

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

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

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

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

2. Futures Contracts: The portfolio uses index futures contracts to a limited extent, with the objectives of maintaining full exposure to the stock market, maintaining liquidity, and minimizing transaction costs. The portfolio may purchase futures contracts to immediately invest incoming cash in the market, or sell futures in response to cash outflows, thereby simulating a fully invested position in the underlying index while maintaining a cash balance for liquidity. 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 six months ended June 30, 2023, the portfolio's average investments in long and short futures contracts represented less than 1% and 0% of net assets, respectively, based on the average of the notional amounts at each quarter-end during the period.

3. 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.

4. 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.

5. 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.

6. Credit Facilities and Interfund Lending Program: The portfolio and certain other funds managed by The Vanguard Group ("Vanguard") participate in a \$4.3 billion committed credit facility provided by a syndicate of lenders pursuant to a credit agreement and an uncommitted credit facility provided by Vanguard. Both facilities may be renewed annually. Each fund is individually liable for its borrowings, if any, under the credit facilities. Borrowings may be utilized for temporary or emergency purposes 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 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 six months ended June 30, 2023, the portfolio did not utilize the credit facilities or the Interfund Lending Program.

7. 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.

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

Upon the request of Vanguard, the portfolio may invest up to 0.40% of its net assets as capital in Vanguard. At June 30, 2023, the portfolio had contributed to Vanguard capital in the amount of \$78,000, representing less than 0.01% of the portfolio's net assets and 0.03% of Vanguard's capital received pursuant to the FSA. The portfolio's trustees and officers are also directors and employees, respectively, of Vanguard.

**C.** 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.

At June 30, 2023, 100% of the market value of the portfolio's investments and derivatives was determined based on Level 1 inputs.

**D.** As of June 30, 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	1,922,528
Gross Unrealized Appreciation	660,407
Gross Unrealized Depreciation	(191,676)
Net Unrealized Appreciation (Depreciation)	468,731

E. During the six months ended June 30, 2023, the portfolio purchased \$123,601,000 of investment securities and sold \$136,160,000 of investment securities, other than temporary cash investments.

The portfolio 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 six months ended June 30, 2023, such purchases were \$13,862,000 and sales were \$65,163,000, resulting in net realized loss of \$14,047,000; these amounts, other than temporary cash investments, are included in the purchases and sales of investment securities noted above.

F. Capital shares issued and redeemed were:

	Six Months Ended June 30, 2023	Year Ended December 31, 2022	
	Shares (000)	Shares (000)	
Issued	6,741	11,614	
Issued in Lieu of Cash Distributions	3,576	11,188	
Redeemed	(8,224)	(12,791)	
Net Increase (Decrease) in Shares Outstanding	2,093	10,011	

**G.** 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.

To the extent the portfolio's investment portfolio reflects concentration in a particular market, industry, sector, country or asset class, the portfolio 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 portfolio 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 portfolio's use of derivative(s) and the specific risks associated is described under significant accounting policies.

At June 30, 2023, 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 33% 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 June 30, 2023, that would require recognition or disclosure in these financial statements.

#### Trustees Approve Advisory Arrangement

The board of trustees of Vanguard Variable Insurance Funds Mid-Cap Index Portfolio has renewed the portfolio's investment advisory arrangement with The Vanguard Group, Inc. (Vanguard), through its Equity Index Group. The board determined that continuing the portfolio's internalized management structure was in the best interests of the portfolio and its shareholders.

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

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

In addition, the board received periodic reports throughout the year, which included information about the portfolio's performance relative to its peers and benchmark, as applicable, and updates, as needed, on the Portfolio Review Department's ongoing assessment of the advisor.

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

#### Nature, extent, and quality of services

The board reviewed the quality of the portfolio's investment management services over both the short and long term, and took into account the organizational depth and stability of the advisor. The board considered that Vanguard has been managing investments for more than four decades. The Equity Index Group adheres to a sound, disciplined investment management process; the team has considerable experience, stability, and depth.

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

#### Investment performance

The board considered the short- and long-term performance of the portfolio, including any periods of outperformance or underperformance compared with its target index and peer group. The board concluded that the performance was such that the advisory arrangement should continue.

#### Cost

The board concluded that the portfolio's expense ratio was below the average expense ratio charged by funds in its peer group and that the portfolio's advisory expenses were also below the peer-group average.

The board does not conduct a profitability analysis of Vanguard because of Vanguard's unique structure. Unlike most other mutual fund management companies, Vanguard is owned by the funds it oversees.

#### The benefit of economies of scale

The board concluded that the portfolio's arrangement with Vanguard ensures that the portfolio will realize economies of scale as it grows, with the cost to shareholders declining as portfolio assets increase.

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

### Liquidity Risk Management

Vanguard funds (except for the money market funds) have adopted and implemented a written liquidity risk management program (the "Program") as required by Rule 22e-4 under the Investment Company Act of 1940. Rule 22e-4 requires that each fund adopt a program that is reasonably designed to assess and manage the fund's liquidity risk, which is the risk that the fund could not meet redemption requests without significant dilution of remaining investors' interests in the fund.

Assessment and management of a fund's liquidity risk under the Program take into consideration certain factors, such as the fund's investment strategy and the liquidity of its portfolio investments during normal and reasonably foreseeable stressed conditions, its short- and long-term cash-flow projections during both normal and reasonably foreseeable stressed conditions, and its cash and cash-equivalent holdings and access to other funding sources. As required by the rule, the Program includes policies and procedures for classification of fund portfolio holdings in four liquidity categories, maintaining certain levels of highly liquid investments, and limiting holdings of illiquid investments.

The board of trustees of Vanguard Variable Insurance Funds approved the appointment of liquidity risk management program administrators responsible for administering the Mid-Cap Index Portfolio's Program and for carrying out the specific responsibilities set forth in the Program, including reporting to the board on at least an annual basis regarding the Program's operation, its adequacy, and the effectiveness of its implementation for the past year (the "Program Administrator Report"). The board has reviewed the Program Administrator Report covering the period from January 1, 2022, through December 31, 2022 (the "Review Period"). The Program Administrator Report stated that during the Review Period the Program operated and was implemented effectively to manage the portfolio's liquidity risk.

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