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# Vanguard Variable Insurance Fund

Equity Index Portfolio

### Vanguard's Principles for Investing Success

We want to give you the best chance of investment success. These principles, grounded in Vanguard's research and experience, can put you on the right path.

Goals. Create clear, appropriate investment goals.

Balance. Develop a suitable asset allocation using broadly diversified funds.

Cost. Minimize cost.

Discipline. Maintain perspective and long-term discipline.

A single theme unites these principles: Focus on the things you can control. We believe there is no wiser course for any investor.

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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.

See the Glossary for definitions of investment terms used in this report.

About the cover: No matter what language you speak, Vanguard has one consistent message and set of principles. Our primary focus is on you, our clients. We conduct our business with integrity as a faithful steward of your assets. This message is shown translated into seven languages, reflecting our expanding global presence.

### A Message from Vanguard's Chairman



### Dear Planholder,

Capital markets reacted in 2016 to two significant and unexpected events the United Kingdom's vote to exit the European Union and the election of Donald Trump as U.S. president. Despite some short-term volatility following both events, the markets' performance for the calendar year proved less dramatic. U.S. stocks posted healthy returns, and U.S. bond results were close to their long-term averages. International stocks and bonds also advanced, although returns for U.S. investors were reduced by the strength of the U.S. dollar.

The surprises of 2016 remind us to be skeptical of overly precise predictions about 2017. For example, market prognosticators often forecast where the Standard & Poor's 500 Index or the yield of the 10-year U.S. Treasury note will end up in 12 months. Such predictions can be attention-getting. They can also be dead wrong.

Investors are better off taking note of long-term trends that stand to influence our economies and markets. We're watching these trends closely, and we discuss our latest assessment in our 2017 economic and market outlook, which you can read at vanguard.com/research.

### Expect stabilization, not stagnation

One phenomenon in particular that we're watching is the low-growth, low-interestrate environment that has marked the global economy since the 2008–09 financial crisis. We don't think this economic backdrop is simply a result of cyclically weak demand or long-term stagnation. Instead, falling technology costs are restraining businesses' capital investment, an aging population is weighing on growth in the developed world, and the free movement of capital and products across the globe has restrained prices and wages.

In the near term, these forces will continue to dampen growth, inflation, and interest rates. They also make it unlikely that further monetary stimulus from central banks will do much to spur growth.

I realize this all may sound gloomy, but that's not how we see it. In fact, we believe that global growth could pick up modestly over time. Our expectation is based on a potential rebound in productivity as new digital technologies are used more effectively. We also anticipate a slight recovery in the U.S. labor force as the baby boom generation finishes its transition to retirement, nudging up demand for workers.

The U.S. economy remains firmly on a long-term growth path of about 2% per year. That's lower than the historical average of 3.25% since 1950. But we see such growth at the current level as fundamentally sound rather than abnormally low. Our evaluation takes into account lower U.S. population growth and the reality that the economic expansion that took place from the 1980s until the financial crisis was fueled by debt, distorting the numbers.

Turning to prices, we think that core U.S. inflation should modestly exceed 2% in 2017. That, in turn, will support further interest rate increases by the Federal Reserve, similar to the one it enacted in December. We expect the Fed to raise rates in 2017 before taking an extended pause, and we see the federal funds rate staying below 2% through at least 2018. Vanguard's outlook for global stocks and bonds remains the most guarded in ten years, given fairly high stock valuations and low interest rates. Our outlook for global equities isn't bearish but rather is fairly positive when you take into account the low-rate environment. And with global bonds, we don't expect yields to increase materially from their year-end 2016 levels.

### Focus on keys to investment success

Significant trends often happen gradually. Like shifting tides, they're sometimes barely noticeable at first but ultimately can change the landscape entirely. No matter what the future holds, we believe that investors have the best chance for success if they concentrate on what they can control: their goals, asset allocation, and investment costs, along with the discipline to stick to a plan.

As Tim Buckley, our chief investment officer, likes to say, this can be easy to say but harder to do, especially in times of uncertainty. Investors who can stay focused on these four keys will find themselves well-positioned to weather any market.

As always, thank you for investing with Vanguard.

Sincerely,

Hueliam M MelbIII

F. William McNabb III Chairman and Chief Executive Officer January 12, 2017

### **Market Perspective**

# Stocks ended 2016 with a rally, while bonds trimmed earlier gains

After posting modest gains in the first three quarters of 2016, stocks closed the year with a rally following the U.S. presidential election. In contrast, bonds started with notable price gains but reversed course by the fourth quarter, ending with annual returns that were positive, but lower than those compiled over the first nine months.

The broad U.S. stock market, as measured by the Russell 3000 Index, finished the year up 12.74%. The possibility of less government regulation, more fiscal stimulus in the form of infrastructure spending, and tax-law changes under a new administration contributed to stocks' late advance. Also, the economy continued expanding and corporate earnings began to rise as 2016 progressed.

### U.S. small-capitalization stocks outperformed their large- and mid-cap counterparts, while value stocks outpaced growth. Among sectors, only health care failed to post gains. Notable contributions came from financial and technology stocks, while energy stocks, helped by rising prices, posted the highest total return.

# U.S. bond prices went up, then fell amid economic optimism

Demand for U.S. bonds dropped sharply and yields rose after the election as the markets anticipated faster growth and higher inflation. The bond market's fourth-quarter slump came as job creation remained solid, wages trended higher, and commodity prices recovered modestly. The Federal Reserve, also expecting the economy to continue performing well, raised short-term interest rates in December for the first time in a year and only the second time in a decade.

The yield of the bellwether 10-year U.S. Treasury note, which tumbled over the first half of the year from 2.30% to 1.47%, ended December at 2.45%. The broad U.S. bond market returned 2.65%, as measured by the Bloomberg Barclays U.S. Aggregate Bond Index. Investment-grade corporate bonds outperformed Treasuries and mortgage-backed securities.

## For U.S. investors, a strong dollar muted international stock returns

Outside the United States, equity markets recorded modest gains despite unexpected political developments in 2016, most notably the United Kingdom's June vote to leave the European Union. Gains in non-U.S. stock markets were reduced for U.S. investors because many major currencies, especially the British pound, weakened in relation to the U.S. dollar. The FTSE All-World ex US Index returned 4.80%.

Among non-U.S. sectors, energy and materials performed strongly as they benefited from rising commodity prices. As in the United States, health care stocks globally lost ground.

International bond markets generated positive returns for U.S.-based investors, particularly if the impact of weakening foreign currencies was hedged away. (Currency hedging can have the reverse effect of reducing returns when the dollar weakens.) Continued aggressive stimulus by central banks, including those in Europe and Japan, kept pressure on yields, boosting bond prices. The Bloomberg Barclays Global Aggregate ex-USD Float Adjusted RIC Capped Index (USD Hedged) returned 4.90%.

Market Barometer						
		Average Annual Total Returr Periods Ended December 31, 201				
	One Year	Three Years	Five Years			
Stocks						
Russell 1000 Index (Large-caps)	12.05%	8.59%	14.69%			
Russell 2000 Index (Small-caps)	21.31	6.74	14.46			
Russell 3000 Index (Broad U.S. market)	12.74	8.43	14.67			
FTSE All-World ex US Index (International)	4.80	-1.16	5.52			
Bonds						
Bloomberg Barclays U.S. Aggregate Bond Index (Broad taxable market)	2.65%	3.03%	2.23%			
Bloomberg Barclays Municipal Bond Index (Broad tax-exempt market)	0.25	4.14	3.28			
Citigroup Three-Month U.S. Treasury Bill Index	0.27	0.09	0.08			
CPI						
Consumer Price Index	2.07%	1.18%	1.36%			

## Vanguard<sup>®</sup> Equity Index Portfolio

U.S. stocks posted solid returns in 2016 as the economy continued to slowly grow, corporate earnings improved, and investors were optimistic later in the year that President-elect Trump's policies would result in further economic expansion.

For the year ended December 31, 2016, Vanguard Equity Index Portfolio returned 11.81%, in line with its target index, the Standard & Poor's 500 Index, and nearly 2 percentage points higher than the average return of peer funds.

The table below shows the returns of your portfolio and its comparative standards for the year. For additional perspective, we also present their annualized returns for the past ten years.

Please note that the portfolio returns in Vanguard Variable Insurance Fund are different from those in Vanguard Variable Annuity (and other plans that invest in the fund), which take into account insurancerelated expenses.

# A wide variety of sectors registered robust returns

The Equity Index Portfolio is composed of 500 of the largest U.S. companies, encompassing about three-quarters of the U.S. stock market's value. Stocks of every style and from every industry sector are represented. Over the year, smallcapitalization stocks outpaced mid- and large-caps, and value stocks outperformed their growth counterparts.

Ten of the 11 industry sectors recorded gains, with seven over 10% and three of those over 20%. Information technology stocks, the portfolio's largest sector, climbed about 14% and added most to return. Communications equipment, internet, IT services, semiconductors, software, and hardware stocks all played a role in the sector's strong showing.

Financial stocks also lifted the portfolio as the anticipation of short-term interest rate hikes by the Federal Reserve, the improving economy, and the rising stock market contributed to the sector's overall strength. Banks, asset managers, consumer finance firms, and insurance companies enjoyed significant returns.

The rebound in oil prices helped the energy sector to returns of more than 27%. Industrials, materials, utilities, and telecommunication services stocks also produced strong results. Returns were more modest for consumer discretionary, consumer staples, and real estate companies.

Health care stocks, the only negative performer, stumbled as observers voiced concerns about rising health care costs and investors mulled the possibility that increased government regulation of prices could dim profits. Biotechnology companies, and to a lesser degree pharmaceuticals, suffered the most.

# Tight tracking prevailed during the previous decade

For the decade ended December 31, 2016, the Equity Index Portfolio recorded an average annual return of 6.84%. This result tightly tracked the portfolio's target index, which has no transaction costs or operating expenses, and exceeded the average annual return of its peers by about 1 percentage point.

First and foremost, the portfolio's objective is to track the index closely, and its success in doing so is a testament to the expertise and experience of the portfolio's advisor, Vanguard Equity Index Group. This group of professionals uses well-honed portfolio construction and trading methodologies that have allowed Vanguard to provide effective index tracking regardless of the market's volatility or direction. The portfolio has also benefited from its low costs, which help close the gap between the index's results and your returns.

### Total Returns

		Ten Years Ended December 31, 2016
	Year Ended December 31, 2016	Average Annual Return
Vanguard Equity Index Portfolio	11.81%	6.84%
S&P 500 Index	11.96	6.95
Variable Insurance Large-Cap Core Funds Average <sup>1</sup>	9.91	5.77

The figures shown represent past performance, which is not a guarantee of future results. (Current performance may be lower or higher than the performance data cited. For performance data current to the most recent monthend, 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.

### **Expense Ratios**

Your Portfolio Compared With Its Peer Group

	Portfolio <sup>2</sup>	Variable Insurance Large-Cap Core Funds Average <sup>3</sup>
Equity Index Portfolio	0.15%	0.40%

1 Derived from data provided by Lipper, a Thomson Reuters Company.

2 The portfolio expense ratio shown is from the prospectus dated April 29, 2016, and represents estimated costs for the current fiscal year. For the fiscal year ended December 31, 2016, the portfolio's expense ratio was 0.15%.

3 The peer-group expense ratio is derived from data provided by Lipper, a Thomson Reuters Company, and captures information through year-end 2015.

### Portfolio Profile As of December 31, 2016

### **Portfolio Characteristics**

		Target	Broad
	Portfolio	Index1	Index <sup>2</sup>
Number of Stocks	505	505	3,833
Median Market Cap	\$84.8B	\$84.8B	\$54.1B
Price/Earnings Ratio	23.0x	23.0x	24.4x
Price/Book Ratio	2.9x	2.9x	2.8x
Yield <sup>3</sup>	2.1%	2.1%	2.0%
Return on Equity	17.7%	17.4%	16.5%
Earnings Growth Rate	7.8%	8.1%	8.2%
Foreign Holdings	0.0%	0.0%	0.0%
Turnover Rate	7%	_	_
Expense Ratio <sup>4</sup>	0.15%	_	_
Short-Term Reserves	-0.1%	_	_

### Volatility Measures

	Portfolio Versus	Portfolio Versus
	Target Index <sup>1</sup>	Broad Index <sup>2</sup>
R-Squared	1.00	0.99
Beta	1.00	0.97

### Sector Diversification (% of equity exposure)

		Target	Broad
	Portfolio	Index <sup>1</sup>	Index <sup>2</sup>
Consumer			
Discretionary	12.0%	12.0%	12.5%
Consumer Staples	9.4	9.4	8.3
Energy	7.6	7.5	7.0
Financials	14.8	14.8	15.4
Health Care	13.6	13.6	13.0
Industrials	10.3	10.3	10.8
Information			
Technology	20.7	20.8	20.0
Materials	2.8	2.8	3.3
Real Estate	2.9	2.9	4.1
Telecommunication			
Services	2.7	2.7	2.4
Utilities	3.2	3.2	3.2

### Ten Largest Holdings<sup>5</sup> (% of total net assets)

Apple Inc.	Technology Hardware, Storage & Peripherals	3.2%
Microsoft Corp.	Systems Software	2.5
Alphabet Inc.	Internet Software & Services	2.4
Exxon Mobil Corp.	Integrated Oil & Gas	1.9
Johnson & Johnson	Pharmaceuticals	1.6
Berkshire Hathaway Inc.	Multi-Sector Holdings	1.6
JPMorgan Chase & Co.	Diversified Banks	1.6
Amazon.com Inc.	Internet & Direct Marketing Retail	1.5
General Electric Co.	Industrial Conglomerates	1.4
Facebook Inc.	Internet Software & Services	1.4
Top Ten		19.1%

### **Investment Focus**

S<sup>1</sup>

tyle		Value	Blend	Growth
larket Cap	Large			
	Medium			
	Small			

**30-Day SEC Yield.** A portfolio's 30-day SEC yield is derived using a formula specified by the U.S. Securities and Exchange Commission. Under the formula, data related to the portfolio's security holdings in the previous 30 days are used to calculate the portfolio's hypothetical net income for that period, which is then annualized and divided by the portfolio's estimated average net assets over the calculation period. For the purposes of this calculation, a security's income is based on its current market yield to maturity (for bonds) its actual income (for asset-backed securities), or its projected dividend yield (for stocks). Because the SEC yield represents hypothetical annualized income, it will differ—at times significantly—from the portfolio's actual experience. As a result, the portfolio's income distributions may be higher or lower than implied by the SEC yield.

Beta. A measure of the magnitude of a portfolio's past share-price fluctuations in relation to the ups and downs of a given market index. The index is assigned a beta of 1.00. Compared with a given index, a portfolio with a beta of 1.20 typically would have seen its share price rise or fall by 12% when the index rose or fell by 10%. For this report, beta is based on returns over the past 36 months for both the portfolio and the index.

Equity Exposure. A measure that reflects a portfolio's investments in stocks and stock futures. Any holdings in short-term reserves are excluded.

**R-Squared**. A measure of how much of a portfolio's past returns can be explained by the returns from the market in general, as measured by a given index. If a portfolio's total returns were precisely synchronized with an index's returns, its R-squared would be 1.00. If the portfolio's returns bore no relationship to the index's returns, its R-squared would be 0. For this report, R-squared is based on returns over the past 36 months for both the portfolio and the index.

1 S&P 500 Index.

- 2 Dow Jones U.S. Total Stock Market Float Adjusted Index.
- 3 30-day SEC yield for the portfolio; annualized dividend yield for the indexes.

4 The expense ratio shown is from the prospectus dated April 29, 2016, and represents estimated costs for the current fiscal year. For the fiscal year ended December 31, 2016, the expense ratio was 0.15%.

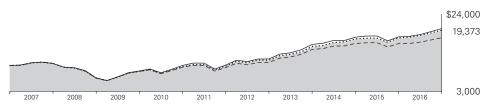
5 The holdings listed exclude any temporary cash investments and equity index products.

## Performance Summary

All of the returns in this report represent past performance, which is not a guarantee of future results that may be achieved by the portfolio. (Current performance may be lower or higher than the performance data cited. For performance data current to the most recent month-end, visit our website at vanguard.com/performance.) Note, too, that both investment returns and principal value can fluctuate widely, so an investor's shares, when sold, could be worth more or less than their original cost. The returns shown do not reflect taxes that a shareholder would pay on portfolio distributions or on the sale of portfolio shares. Nor do the returns reflect fees and expenses associated with the annuity or life insurance program through which a shareholder invests. If these fees and expenses were included, the portfolio's returns would be lower.

### Cumulative Performance: December 31, 2006–December 31, 2016

Initial Investment of \$10,000



	Peri	Final Value of a \$10,000				
	One Year	One Year Five Years Ten Years				
Equity Index Portfolio	11.81%	14.50%	6.84%	\$19,373		
S&P 500 Index	11.96	14.66	6.95	19,572		
Variable Insurance Large-Cap Core Funds Average <sup>1</sup>	9.91	13.15	5.77	17,520		
Dow Jones U.S. Total Stock Market     Float Adjusted Index	12.62	14.59	7.18	20,003		

### Fiscal Year Total Returns (%): December 31, 2006–December 31, 2016

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
5.38 5.49		26.44 26.46	14.91 15.06	1.93 2.11	15.86 16.00	32.18 32.39	13.51 13.69	1.27 1.38	11.81 11.96
	-36.93 -37.00								
Equi	ty Index Po	rtfolio							
S&P	500 Index								

1 Derived from data provided by Lipper, a Thomson Reuters Company. See Financial Highlights for dividend and capital gains information.

## **Financial Statements**

## Statement of Net Assets

As of December 31, 2016

The portfolio reports a complete list of its holdings in regulatory filings four times in each fiscal year, at the quarter-ends. For the second and fourth fiscal quarters, the lists appear in the portfolio's semiannual and annual reports to shareholders. For the first and third fiscal quarters, the portfolio files the lists with the Securities and Exchange Commission on Form N-Q. Shareholders can look up the portfolio's Forms N-Q on the SEC's website at sec.gov. Forms N-Q may also be reviewed and copied at the SEC's Public Reference Room (see the back cover of this report for further information).

			Market			Market			Market
		Shares	Value• (\$000)		Shares	Value• (\$000)		Shares	Value• (\$000)
Co	ommon Stocks (99.7%) <sup>1</sup>		(+++++)	DR Horton Inc.	76,027	2,078	General Mills Inc.	132,714	8,198
	onsumer Discretionary (12.0	0/ )		Interpublic Group of Cos.	,	_,	Kroger Co.	210,838	7,276
*	Amazon.com Inc.	88,342	66,245	Inc.	88,667	2,076	Sysco Corp.	112,308	6,218
	Comcast Corp. Class A	533,908	36,866	Darden Restaurants Inc.	27,449	1,996	Constellation Brands Inc.		
	Home Depot Inc.	272,911	36,592	Hasbro Inc.	25,190	1,960	Class A	39,805	6,103
	Walt Disney Co.	327,935	34,177	Kohl's Corp.	39,671	1,959	Archer-Daniels-Midland Co.	129,312	5,903
	McDonald's Corp.	186,091	22,651	Lennar Corp. Class A	43,945	1,887	Kellogg Co.	56,618	4,173
	Starbucks Corp.	326,002	18,100	Wyndham Worldwide Corp.	24,276	1,854	* Monster Beverage Corp.	90,866	4,029
	Time Warner Inc.	172,751	16,676	Tiffany & Co.	23,707	1,836	Tyson Foods Inc. Class A	64,832	3,999
*	Priceline Group Inc.	11,059	16,213	Hanesbrands Inc.	84,735	1,828	Molson Coors Brewing Co.		
	NIKE Inc. Class B	299,278	15,212	Goodyear Tire & Rubber Co.	57,984	1,790	Class B	41,060	3,996
*	Charter Communications			BorgWarner Inc.	44,550	1,757	Estee Lauder Cos. Inc.		
	Inc. Class A	48,504	13,965	Harman International			Class A	49,868	3,814
	Lowe's Cos. Inc.	194,901	13,861	Industries Inc.	15,652	1,740	Dr Pepper Snapple Group		
*	Netflix Inc.	96,141	11,902	PVH Corp.	17,705	1,598	Inc.	41,242	3,739
	TJX Cos. Inc.	145,925	10,963	* Michael Kors Holdings Ltd.	36,659	1,576	Conagra Brands Inc.	92,871	3,673
	General Motors Co.	310,727	10,826	Scripps Networks			Clorox Co.	28,887	3,467
	Ford Motor Co.	874,181	10,604	Interactive Inc. Class A	21,871	1,561	JM Smucker Co.	26,095	3,342
	Target Corp.	125,904	9,094	Wynn Resorts Ltd.	17,555	1,519	Hershey Co.	31,290	3,236
	Twenty-First Century Fox			Signet Jewelers Ltd.	15,420	1,453	Mead Johnson Nutrition Co.		2,914
	Inc. Class A	236,371	6,628	Leggett & Platt Inc.	29,544	1,444	Campbell Soup Co.	43,016	2,601
	Marriott International Inc.			Bed Bath & Beyond Inc.	34,108	1,386	Church & Dwight Co. Inc.	57,988	2,562
	Class A	71,721	5,930	Staples Inc.	147,351	1,333	McCormick & Co. Inc.	25,665	2,395
*	O'Reilly Automotive Inc.	21,097	5,874	* Discovery Communications			Whole Foods Market Inc.	71,340	2,194
	Ross Stores Inc.	88,852	5,829	Inc.	49,218	1,318	Hormel Foods Corp.	60,520	2,107
	CBS Corp. Class B	87,481	5,566	Garmin Ltd.	26,415	1,281	Coty Inc. Class A	104,384	1,911
*	AutoZone Inc.	6,473	5,112	Nordstrom Inc.	26,646	1,277	Brown-Forman Corp.		
	Yum! Brands Inc.	78,145	4,949	News Corp. Class A	110,723	1,269	Class B	40,350	1,813
	Carnival Corp.	93,525	4,869	PulteGroup Inc.	66,425	1,221			404,334
	Newell Brands Inc.	108,135	4,828	*^ Under Armour Inc. Class A	40,567	1,178	Energy (7.5%)		
	Omnicom Group Inc.	52,615	4,478	* TripAdvisor Inc.	25,217	1,169	Exxon Mobil Corp.	928,827	83,836
	Dollar General Corp.	56,688	4,199	Ralph Lauren Corp. Class A	12,932	1,168	Chevron Corp.	422,861	49,771
	Delphi Automotive plc	60,719	4,089	Gap Inc.	50,209	1,127	Schlumberger Ltd.	311,675	26,165
*	Dollar Tree Inc.	52,887	4,082	H&R Block Inc.	46,318	1,065	ConocoPhillips	277,587	13,918
	VF Corp.	73,840	3,939	TEGNA Inc.	49,632	1,062	EOG Resources Inc.	129,182	13,060
	L Brands Inc.	53,489	3,522	* Under Armour Inc.	40,752	1,026	Occidental Petroleum Corp.		12,198
*	Ulta Salon Cosmetics			* Discovery Communications	04.010	054	Halliburton Co.	193,670	10,476
	& Fragrance Inc.	13,133	3,348	Inc. Class A * AutoNation Inc.	34,818	954 739	Kinder Morgan Inc.	430,084	8,907
	Genuine Parts Co.	33,218	3,174	* Urban Outfitters Inc.	15,181 19,709	739 561	Anadarko Petroleum Corp.	125,209	8,731
	Royal Caribbean Cruises			Orban Outilitiers Inc.	19,709 _		Phillips 66	99,240	8,575
	Ltd.	37,392	3,068			519,272	Valero Energy Corp.	101,435	6,930
	Whirlpool Corp.	16,815	3,056	Consumer Staples (9.3%)	500 440	50.400	Pioneer Natural Resources	07.047	0.000
	Expedia Inc.	26,917	3,049	Procter & Gamble Co.	599,449	50,402	Co.	37,947	6,833
	Twenty-First Century Fox			Coca-Cola Co.	869,487	36,049	Spectra Energy Corp.	157,133	6,457
	Inc.	109,157	2,974	PepsiCo Inc.	321,300	33,618	Baker Hughes Inc.	94,785	6,158
*	Mohawk Industries Inc.	14,148	2,825	Philip Morris International	0.47 500	04 700	Marathon Petroleum Corp.	118,304	5,957
	Advance Auto Parts Inc.	16,476	2,786	Inc.	347,500	31,793	Apache Corp.	84,989	5,394
*	CarMax Inc.	42,687	2,749	Altria Group Inc.	436,875	29,541	Devon Energy Corp.	117,323	5,358
	Viacom Inc. Class B	77,826	2,732	Wal-Mart Stores Inc.	337,329	23,316	Williams Cos. Inc.	153,131	4,769
	Best Buy Co. Inc.	61,591	2,628	CVS Health Corp.	238,861	18,849	* Concho Resources Inc.	32,618	4,325
	Macy's Inc.	68,223	2,443	Walgreens Boots Alliance	101 705	15.000	Hess Corp.	60,043	3,740
*	Chipotle Mexican Grill Inc.	0.100	0.422	Inc.	191,735	15,868	Noble Energy Inc.	95,786	3,646
	Class A	6,436	2,428	Costco Wholesale Corp.	97,972	15,686	Marathon Oil Corp.	189,783	3,285
	Harley-Davidson Inc.	39,536	2,307	Mondelez International Inc.	245 CEE	15 202	National Oilwell Varco Inc.	84,222	3,153
	Tractor Supply Co.	29,546	2,240	Class A	345,655	15,323	Cimarex Energy Co.	21,306	2,895
	Coach Inc.	62,861	2,201	Colgate-Palmolive Co.	199,172	13,034	ONEOK Inc.	47,212	2,710
	Foot Locker Inc.	30,378	2,153	Kraft Heinz Co.	133,620	11,668	EQT Corp.	38,557	2,522
-	LKQ Corp.	68,918 76,659	2,112	Reynolds American Inc. Kimberly-Clark Corp.	185,256 80,112	10,382 9,142	Cabot Oil & Gas Corp. Tesoro Corp.	104,224	2,435
	Mattel Inc.	76,658	2,112	KINDENY-CIdik COIP.	00,112	3,142		26,263	2,297

		Markat			Markat			Markat
		Market Value•			Market Value•			Market Value•
	Shares	(\$000)		Shares	(\$000)		Shares	(\$000)
Helmerich & Payne Inc.	24,328	1,883	Cincinnati Financial Corp.	33,615	2,546	* Hologic Inc.	62,369	2,502
<ul> <li>* Newfield Exploration Co.</li> </ul>	24,328 43,938	1,003	Unum Group	51,923	2,540	* Mettler-Toledo	02,309	2,502
* FMC Technologies Inc.	49,910	1,773	XL Group Ltd.	60,843	2,267	International Inc.	5,858	2,452
Range Resources Corp.	41,581	1,429	* E*TRADE Financial Corp.	61,351	2,126	* Waters Corp.	18,107	2,433
* Transocean Ltd.	86,058	1,269	Arthur J Gallagher & Co.	39,874	2,072	* DaVita Inc.	35,204	2,260
* Chesapeake Energy Corp.	171,143	1,201	Zions Bancorporation	45,395	1,954	* Centene Corp.	38,303	2,164
<ul> <li>Southwestern Energy Co.</li> </ul>	109,175	1,181	Torchmark Corp.	24,634	1,817	Universal Health Services		_,
Murphy Oil Corp.	36,637	1,141	* Affiliated Managers Group			Inc. Class B	20,152	2,144
., .	· -	326,157	Inc.	12,308	1,788	Cooper Cos. Inc.	10,907	1,908
Financials (14.8%)		020,107	Leucadia National Corp.	74,314	1,728	* Varian Medical Systems		
JPMorgan Chase & Co.	801,532	69,164	Nasdaq Inc.	25,217	1,693	Inc.	20,872	1,874
* Berkshire Hathaway Inc.	001,002	00,101	People's United Financial			* Envision Healthcare Corp.	25,993	1,645
Class B	393,863	64,192	Inc.	71,626	1,387	PerkinElmer Inc.	24,856	1,296
	1,012,460	55,797	Assurant Inc.	12,587	1,169	* Mallinckrodt plc	23,761	1,184
	2,263,346	50,020	Navient Corp.	67,635	1,111	Patterson Cos. Inc.	19,000	780
Citigroup Inc.	638,327	37,936		-	639,141	* Endo International plc	43,812	722
Goldman Sachs Group	000,027	07,000	Health Care (13.6%)		000/111		-	588,313
Inc.	82,836	19,835	Johnson & Johnson	609,350	70,203	Industrials (10.2%)		000,010
US Bancorp	357,882	18,384		1,359,170	44,146	General Electric Co.	1,981,442	62,614
American International	007,002	10,001	Merck & Co. Inc.	617,561	36,356	3M Co.	134,737	24,060
Group Inc.	218,560	14,274	UnitedHealth Group Inc.	213,200	34,121	Boeing Co.	128,556	20,014
Chubb Ltd.	104,232	13,771	Amgen Inc.	166,646	24,365	Honeywell International	120,000	20,011
Morgan Stanley	323,016	13,647	AbbVie Inc.	364,074	22,798	Inc.	170,723	19,778
MetLife Inc.	246,268	13,271	Medtronic plc	307,547	21,907	Union Pacific Corp.	184,666	19,146
American Express Co.	172,290	12,763	Bristol-Myers Squibb Co.	374,396	21,880	United Technologies Corp.		18,804
PNC Financial Services	., 2,200	.2,, 00	Gilead Sciences Inc.	295,138	21,135	United Parcel Service Inc.	1,1,000	10,001
Group Inc.	108,996	12,748	* Celgene Corp.	173,680	20,103	Class B	154,495	17,711
Bank of New York Mellon	100,000	12,710	* Allergan plc	84,029	17,647	Lockheed Martin Corp.	56,436	14,106
Corp.	236,868	11,223	Eli Lilly & Co.	217,609	16,005	Caterpillar Inc.	131,133	12,161
Charles Schwab Corp.	270,261	10,667	* Biogen Inc.	48,678	13,804	General Dynamics Corp.	64,132	11,073
BlackRock Inc.	27,228	10,361	Abbott Laboratories	329,830	12,669	FedEx Corp.	54,655	10,177
Prudential Financial Inc.	96,365	10,028	Thermo Fisher Scientific		,	Raytheon Co.	65,610	9,317
Capital One Financial Corp.	108,028	9,424	Inc.	88,539	12,493	Northrop Grumman Corp.	39,487	9,184
CME Group Inc.	75,835	8,748	Danaher Corp.	136,392	10,617	Illinois Tool Works Inc.	70,810	8,671
BB&T Corp.	181,790	8,548	Aetna Inc.	78,686	9,758	Johnson Controls	,	-,
Travelers Cos. Inc.	63,651	7,792	* Express Scripts Holding Co.		9,501	International plc	210,132	8,655
Marsh & McLennan Cos.			Anthem Inc.	58,858	8,462	Delta Air Lines Inc.	164,932	8,113
Inc.	115,171	7,784	Stryker Corp.	69,688	8,349	Emerson Electric Co.	144,010	8,029
Intercontinental Exchange	- /		Becton Dickinson and Co.	47,447	7,855	CSX Corp.	210,249	7,554
Inc.	133,425	7,528	Cigna Corp.	57,509	7,671	Norfolk Southern Corp.	65,261	7,053
Aon plc	58,986	6,579	McKesson Corp.	50,674	7,117	Southwest Airlines Co.	137,789	6,867
Synchrony Financial	176,039	6,385	Humana Inc.	33,404	6,815	Eaton Corp. plc	101,077	6,781
Discover Financial Services	88,343	6,369	* Boston Scientific Corp.	305,062	6,598	Deere & Co.	64,791	6,676
Aflac Inc.	91,464	6,366	* Regeneron Pharmaceuticals			Waste Management Inc.	91,135	6,462
State Street Corp.	81,500	6,334	Inc.	16,933	6,216	American Airlines Group		
S&P Global Inc.	58,045	6,242	* Alexion Pharmaceuticals			Inc.	115,608	5,398
Allstate Corp.	82,584	6,121	Inc.	50,303	6,155	PACCAR Inc.	78,530	5,018
SunTrust Banks Inc.	109,531	6,008	Zoetis Inc.	110,671	5,924	Cummins Inc.	34,484	4,713
M&T Bank Corp.	34,859	5,453	* Intuitive Surgical Inc.	8,652	5,487	* United Continental		
* Berkshire Hathaway Inc.			Cardinal Health Inc.	71,769	5,165	Holdings Inc.	64,405	4,694
Class A	21	5,127	St. Jude Medical Inc.	64,079	5,138	Ingersoll-Rand plc	57,879	4,343
Progressive Corp.	129,579	4,600	Baxter International Inc.	109,693	4,864	Parker-Hannifin Corp.	29,812	4,174
Fifth Third Bancorp	168,614	4,548	* HCA Holdings Inc.	65,680	4,862	Roper Technologies Inc.	22,757	4,166
KeyCorp	240,882	4,401	Zimmer Biomet Holdings			Stanley Black & Decker Inc	. 33,827	3,880
Northern Trust Corp.	47,747	4,252	Inc.	44,915	4,635	Rockwell Automation Inc.	28,756	3,865
T. Rowe Price Group Inc.	54,339	4,090	* Edwards Lifesciences Corp.	47,922	4,490	Fortive Corp.	67,446	3,617
Citizens Financial Group Inc	. 114,215	4,069	<ul> <li>Illumina Inc.</li> </ul>	32,962	4,220	Equifax Inc.	26,920	3,183
Hartford Financial Services			* Vertex Pharmaceuticals Inc.	55,585	4,095	Nielsen Holdings plc	74,845	3,140
Group Inc.	84,264	4,015	* Mylan NV	103,132	3,934	Fastenal Co.	64,468	3,029
Regions Financial Corp.	274,753	3,945	CR Bard Inc.	16,374	3,679	Republic Services Inc.		
Ameriprise Financial Inc.	35,227	3,908	Agilent Technologies Inc.	72,731	3,314	Class A	52,002	2,967
Willis Towers Watson plc	28,931	3,538	* Cerner Corp.	67,676	3,206	Textron Inc.	60,590	2,942
Moody's Corp.	37,240	3,511	Dentsply Sirona Inc.	52,004	3,002	WW Grainger Inc.	12,300	2,857
Principal Financial Group Ind		3,452	* Laboratory Corp. of			* Verisk Analytics Inc.		
Lincoln National Corp.	50,950	3,376	America Holdings	23,078	2,963	Class A	34,772	2,822
Huntington Bancshares Inc.		3,213	AmerisourceBergen Corp.			TransDigm Group Inc.	11,238	2,798
Franklin Resources Inc.	78,324	3,100	Class A	37,506	2,933	Rockwell Collins Inc.	28,961	2,686
Loews Corp.	61,927	2,900	Quest Diagnostics Inc.	30,980	2,847	L-3 Communications		
Invesco Ltd.	91,554	2,778	* Henry Schein Inc.	18,250	2,769	Holdings Inc.	17,381	2,644
Comerica Inc.	38,428	2,617	Perrigo Co. plc	32,154	2,676	Dover Corp.	34,654	2,597

			Market			Market			Market
		0	Value•		0	Value•		0	Value•
		Shares	(\$000)		Shares	(\$000)		Shares	(\$000)
	AMETEK Inc.	51,404	2,498	* Fiserv Inc.	48,430	5,147	Real Estate (2.9%)	70.000	10 500
	Alaska Air Group Inc. CH Robinson Worldwide	27,614	2,450	<ul> <li>Micron Technology Inc.</li> <li>Analog Devices Inc.</li> </ul>	231,099 69,103	5,066 5,018	Simon Property Group Inc. American Tower Corporation	70,398 n 95,440	12,508 10,086
	Inc.	31,582	2,314	Amphenol Corp. Class A	69,103 69,100	4,644	Public Storage	33,409	7,467
	Masco Corp.	73,055	2,310	Paychex Inc.	72,099	4,389	Crown Castle International	00,400	7,407
	Acuity Brands Inc.	9,878	2,280	Western Digital Corp.	63,998	4,349	Corp.	80,829	7,014
	Snap-on Inc.	13,036	2,233	Lam Research Corp.	36,425	3,851	Prologis Inc.	118,421	6,251
	Cintas Corp.	19,150	2,213	Xilinx Inc.	56,576	3,415	Equinix Inc.	15,944	5,699
	Expeditors International			Linear Technology Corp.	53,897	3,360	AvalonBay Communities		
	of Washington Inc.	40,058	2,121	Symantec Corp.	139,652	3,336	Inc.	30,820	5,460
	Pentair plc	37,474	2,101	* Autodesk Inc.	43,571	3,225	Welltower Inc.	80,931	5,417
	Kansas City Southern	23,857	2,024	Microchip Technology Inc.	48,407	3,105	Equity Residential	81,904	5,271
*	United Rentals Inc.	19,058	2,012	* Citrix Systems Inc.	34,696	3,099	Weyerhaeuser Co.	167,625	5,044
	Xylem Inc.	40,248	1,993	Skyworks Solutions Inc.	41,487	3,097	Ventas Inc.	79,097	4,945
	JB Hunt Transport	40.000	4 004	Motorola Solutions Inc.	37,223	3,085	Boston Properties Inc.	34,487	4,338
	Services Inc.	19,380	1,881	Alliance Data Systems Corp.		2,959	Vornado Realty Trust	38,594	4,028
	Fortune Brands Home	24 622	1 050	Harris Corp. * Red Hat Inc.	27,759	2,844	Digital Realty Trust Inc. Essex Property Trust Inc.	35,641	3,502
	& Security Inc. Arconic Inc.	34,633 98,259	1,852 1,822	KLA-Tencor Corp.	40,068 35,093	2,793 2,761	Realty Income Corp.	14,677 58,009	3,412 3,334
	Fluor Corp.	30,776	1,616	* Akamai Technologies Inc.	38,652	2,577	General Growth Properties	56,003	3,334
*	Jacobs Engineering Group	30,770	1,010	Seagate Technology plc	66,050	2,521	Inc.	130,182	3,252
	Inc.	26,872	1,532	Juniper Networks Inc.	84,671	2,393	Host Hotels & Resorts Inc.	165,718	3,122
*	Stericycle Inc.	19,312	1,488	Global Payments Inc.	34,305	2,381	HCP Inc.	104,731	3,113
	Flowserve Corp.	29,644	1,424	Western Union Co.	107,899	2,344	Mid-America Apartment		-,
	Robert Half International	- , -	,	CA Inc.	70,247	2,232	Communities Inc.	25,447	2,492
	Inc.	28,739	1,402	NetApp Inc.	61,673	2,175	SL Green Realty Corp.	22,654	2,436
	Allegion plc	21,193	1,356	* F5 Networks Inc.	14,606	2,114	Kimco Realty Corp.	94,922	2,388
*	Quanta Services Inc.	34,894	1,216	Total System Services Inc.	37,148	1,821	Federal Realty Investment		
	Dun & Bradstreet Corp.	8,367	1,015	Xerox Corp.	188,344	1,644	Trust	16,098	2,288
	Ryder System Inc.	12,283	914	* VeriSign Inc.	20,550	1,563	UDR Inc.	59,878	2,184
	Pitney Bowes Inc.	43,058	654	* Qorvo Inc.	28,249	1,490	Extra Space Storage Inc.	28,182	2,177
			443,260	FLIR Systems Inc.	30,363	1,099	* CBRE Group Inc. Class A	67,316	2,120
In	formation Technology (20.7	7%)		CSRA Inc.	33,514	1,067	Macerich Co.	27,077	1,918
	Apple Inc.	1,194,359	138,331	* Teradata Corp.	30,008	815	Iron Mountain Inc.	54,169	1,759
	Microsoft Corp.	1,741,544	108,220	* First Solar Inc.	17,525	562	Apartment Investment		
*	Facebook Inc. Class A	524,288	60,319			896,231	& Management Co.	34,633 _	1,574
*	Alphabet Inc. Class A	66,322	52,557	Materials (2.8%)	054.040		-		1,574 124,599
* *	Alphabet Inc. Class A Alphabet Inc.	66,322 66,471	52,557 51,304	Dow Chemical Co.	251,248	<b>896,231</b> 14,376	Telecommunication Services	(2.7%)	124,599
* *	Alphabet Inc. Class A Alphabet Inc. Intel Corp.	66,322 66,471 1,061,489	52,557 51,304 38,500	Dow Chemical Co. El du Pont de Nemours		14,376	Telecommunication Services ( AT&T Inc.		,
* *	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc.	66,322 66,471 1,061,489 1,124,343	52,557 51,304 38,500 33,978	Dow Chemical Co. El du Pont de Nemours & Co.	194,712	14,376 14,292	Telecommunication Services AT&T Inc. Verizon Communications	- ( <b>2.7%)</b> 1,375,426	<b>124,599</b> 58,497
*	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A	66,322 66,471 1,061,489	52,557 51,304 38,500	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co.	194,712 98,180	14,376 14,292 10,330	Telecommunication Services AT&T Inc. Verizon Communications Inc.	(2.7%)	124,599
* *	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business	66,322 66,471 1,061,489 1,124,343 418,358	52,557 51,304 38,500 33,978 32,640	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc.	194,712	14,376 14,292	Telecommunication Services AT&T Inc. Verizon Communications Inc. * Level 3 Communications	- ( <b>2.7%)</b> 1,375,426 913,108	<b>124,599</b> 58,497 48,742
* *	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp.	66,322 66,471 1,061,489 1,124,343 418,358 193,852	52,557 51,304 38,500 33,978 32,640 32,178	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co.	194,712 98,180 63,934	14,376 14,292 10,330 7,492	Telecommunication Services AT&T Inc. Verizon Communications Inc.	- ( <b>2.7%)</b> 1,375,426 913,108 65,365	<b>124,599</b> 58,497 48,742 3,684
* * *	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277	52,557 51,304 38,500 33,978 32,640 32,178 25,811	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc.	194,712 98,180 63,934 48,735	14,376 14,292 10,330 7,492 7,009	Telecommunication Services AT&T Inc. Verizon Communications Inc. * Level 3 Communications Inc.	- ( <b>2.7%)</b> 1,375,426 913,108	<b>124,599</b> 58,497 48,742
* * *	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp.	66,322 66,471 1,061,489 1,124,343 418,358 193,852	52,557 51,304 38,500 33,978 32,640 32,178	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals	194,712 98,180 63,934	14,376 14,292 10,330 7,492	Telecommunication Services AT&T Inc. Verizon Communications Inc. Level 3 Communications Inc. CenturyLink Inc. Frontier Communications	- ( <b>2.7%)</b> 1,375,426 913,108 65,365	<b>124,599</b> 58,497 48,742 3,684
* *	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc.	194,712 98,180 63,934 48,735	14,376 14,292 10,330 7,492 7,009	Telecommunication Services AT&T Inc. Verizon Communications Inc. * Level 3 Communications Inc. CenturyLink Inc.	(2.7%) 1,375,426 913,108 65,365 122,474	124,599 58,497 48,742 3,684 2,912 915
* *	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries	194,712 98,180 63,934 48,735 58,775	14,376 14,292 10,330 7,492 7,009 6,890	Telecommunication Services AT&T Inc. Verizon Communications Inc. Level 3 Communications Inc. CenturyLink Inc. Frontier Communications	(2.7%) 1,375,426 913,108 65,365 122,474	<b>124,599</b> 58,497 48,742 3,684 2,912
* *	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co.	194,712 98,180 63,934 48,735 58,775 74,596	14,376 14,292 10,330 7,492 7,009 6,890 6,399	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474	124,599 58,497 48,742 3,684 2,912 915
* * *	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852	Telecommunication Services ( AT&T Inc. Verizon Communications Inc. Level 3 Communications Inc. CenturyLink Inc. * Frontier Communications Corp. Utilities (3.2%)	(2.7%) 1,375,426 913,108 65,365 122,474 270,802	124,599 58,497 48,742 3,684 2,912 915 114,750
*	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247	Telecommunication Services ( AT&T Inc. Verizon Communications Inc. Level 3 Communications Inc. CenturyLink Inc. Frontier Communications Corp. Utilities (3.2%) NextEra Energy Inc.	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689	<b>124,599</b> 58,497 48,742 3,684 2,912 915 <b>114,750</b> 12,506
* *	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,887 4,852 4,247 4,026	Telecommunication Services ( AT&T Inc. Verizon Communications Inc. Level 3 Communications Inc. CenturyLink Inc. Frontier Communications Corp. Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp.	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 _ 104,689 154,312	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978
•	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689 154,312 219,592	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802
•	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. * Freeport-McMoRan Inc.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,887 4,852 4,247 4,026	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp. American Electric Power</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689 154,312 219,592 140,468 206,823	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340
* * *	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,887 4,852 4,247 4,026 3,702 3,689	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc.</li> <li>CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp.</li> <li>American Electric Power Co. Inc.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 - 104,689 154,312 219,592 140,468 206,823 110,163	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936
•	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. * Freeport-McMoRan Inc. Martin Marietta Materials Inc.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134	14,376 14,292 10,330 7,492 7,009 6,890 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc.</li> <li>CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862
•	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. * Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637
	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256
· · ·	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc. Cognizant Technology	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140 242,104	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634 7,813	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co. Eastman Chemical Co.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340 33,006	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860 2,482	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International PPL Corp.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013 152,269	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256 5,185
· · · · · · · · · · · · · · · · · · ·	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140 242,104	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634 7,813 7,617	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co. Eastman Chemical Co. Mosaic Co.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340 33,006 78,543	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860 2,482 2,304	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International PPL Corp. Consolidated Edison Inc.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256
· · ·	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc. Cognizant Technology Solutions Corp. Class A	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140 242,104	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634 7,813	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co. Eastman Chemical Co.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340 33,006	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860 2,482	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International PPL Corp. Consolidated Edison Inc. Public Service Enterprise</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013 152,269 68,267	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256 5,185 5,030
•	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc. Cognizant Technology Solutions Corp. Class A Yahoo! Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140 242,104 135,944 196,679	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634 7,813 7,617 7,606	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co. Eastman Chemical Co. Mosaic Co. Albemarle Corp.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340 33,006 78,543	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860 2,482 2,304	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc.</li> <li>Level 3 Communications CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp.</li> <li>American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International PPL Corp. Consolidated Edison Inc. Public Service Enterprise Group Inc.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013 152,269 68,267 113,387	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256 5,185 5,030 4,975
•	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc. Cognizant Technology Solutions Corp. Class A Yahoo! Inc. eBay Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140 242,104 135,944 196,679 233,274	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634 7,813 7,617 7,606 6,926	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co. Eastman Chemical Co. Mosaic Co. Albemarle Corp. International Flavors	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340 33,006 78,543 25,240	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860 2,482 2,304 2,173	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc.</li> <li>Level 3 Communications CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International PPL Corp. Consolidated Edison Inc. Public Service Enterprise Group Inc. Xcel Energy Inc.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013 152,269 68,267 113,387 113,840	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256 5,185 5,030 4,975 4,633
•	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc. Cognizant Technology Solutions Corp. Class A Yahoo! Inc. eBay Inc. Intuit Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140 242,104 135,944 196,679 233,274 54,459	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634 7,813 7,617 7,606 6,926 6,242	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co. Eastman Chemical Co. Mosaic Co. Albemarle Corp. International Flavors & Fragrances Inc.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340 33,006 78,543 25,240 17,742	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,847 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860 2,482 2,304 2,173 2,091	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominon Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International PPL Corp. Consolidated Edison Inc. Public Service Enterprise Group Inc. Xcel Energy Inc. WEC Energy Group Inc.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013 152,269 68,267 113,387 113,840 70,302	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256 5,185 5,030 4,975 4,633 4,123
•	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc. Cognizant Technology Solutions Corp. Class A Yahoo! Inc. eBay Inc. Intuit Inc. HP Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140 242,104 135,944 196,679 233,274 54,459	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634 7,813 7,617 7,606 6,926 6,242	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co. Eastman Chemical Co. Mosaic Co. Albemarle Corp. International Flavors & Fragrances Inc. Sealed Air Corp.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340 33,006 78,543 25,240 17,742 43,496	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860 2,482 2,304 2,173 2,091 1,972	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc.</li> <li>Level 3 Communications Inc.</li> <li>CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp.</li> <li>American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International PPL Corp. Consolidated Edison Inc. Public Service Enterprise Group Inc. Xcel Energy Inc.</li> <li>WEC Energy Group Inc. DTE Energy Co.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013 152,269 68,267 113,387 113,840 70,302 40,248	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256 5,185 5,030 4,975 4,633 4,123 3,965
•	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc. Cognizant Technology Solutions Corp. Class A Yahoo! Inc. eBay Inc. Intuit Inc. HP Inc. Fidelity National	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140 242,104 135,944 196,679 233,274 54,459 383,240 73,574 153,215	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634 7,813 7,617 7,606 6,926 6,242 5,687	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. * Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co. Eastman Chemical Co. Mosaic Co. Albemarle Corp. International Flavors & Fragrances Inc. Sealed Air Corp. CF Industries Holdings Inc.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340 33,006 78,543 25,240 17,742 43,496 53,465	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860 2,482 2,304 2,173 2,091 1,972 1,683	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominon Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International PPL Corp. Consolidated Edison Inc. Public Service Enterprise Group Inc. Xcel Energy Inc. WEC Energy Group Inc.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013 152,269 68,267 113,387 113,840 70,302	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256 5,185 5,030 4,975 4,633 4,123
	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc. Cognizant Technology Solutions Corp. Class A Yahoo! Inc. eBay Inc. Intuit Inc. HP Inc. Fidelity National Information Services Inc. Activision Blizzard Inc. TE Connectivity Ltd.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140 242,104 135,944 196,679 233,274 54,459 383,240 73,574 153,215 79,679	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634 7,813 7,617 7,606 6,926 6,242 5,687 5,565 5,533 5,520	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co. Eastman Chemical Co. Mosaic Co. Albemarle Corp. International Flavors & Fragrances Inc. Sealed Air Corp. CF Industries Holdings Inc. FMC Corp.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340 33,006 78,543 25,240 17,742 43,496 53,465 29,594	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860 2,482 2,304 2,173 2,091 1,972 1,683 1,674	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International PPL Corp. Consolidated Edison Inc. Public Service Enterprise Group Inc. Xcel Energy Inc. WEC Energy Group Inc. DTE Energy Co. Eversource Energy</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013 152,269 68,267 113,387 113,840 70,302 40,248 70,634	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256 5,185 5,030 4,975 4,633 4,123 3,965 3,901
	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc. Cognizant Technology Solutions Corp. Class A Yahoo! Inc. eBay Inc. Intuit Inc. HP Inc. Fidelity National Information Services Inc. Activision Blizzard Inc. TE Connectivity Ltd. Electronic Arts Inc.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140 242,104 135,944 196,679 233,274 54,459 383,240 73,574 153,215 79,679 67,660	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634 7,813 7,617 7,606 6,926 6,242 5,687 5,565 5,533 5,520 5,329	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co. Eastman Chemical Co. Mosaic Co. Albemarle Corp. International Flavors & Fragrances Inc. Sealed Air Corp. CF Industries Holdings Inc. FMC Corp.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340 33,006 78,543 25,240 17,742 43,496 53,465 29,594	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860 2,482 2,304 2,173 2,091 1,972 1,683 1,674 1,378	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International PPL Corp. Consolidated Edison Inc. Public Service Enterprise Group Inc. Xcel Energy Inc. WEC Energy Group Inc. DTE Energy Co. Eversource Energy FirstEnergy Corp.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013 152,269 68,267 113,387 113,840 70,302 40,248 70,634 95,402	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256 5,185 5,030 4,975 4,633 4,123 3,965 3,901 2,955
	Alphabet Inc. Class A Alphabet Inc. Intel Corp. Cisco Systems Inc. Visa Inc. Class A International Business Machines Corp. Oracle Corp. Oracle Corp. Mastercard Inc. Class A QUALCOMM Inc. Texas Instruments Inc. Accenture plc Class A Broadcom Ltd. NVIDIA Corp. Adobe Systems Inc. Automatic Data Processing Inc. PayPal Holdings Inc. salesforce.com Inc. Hewlett Packard Enterprise Co. Applied Materials Inc. Cognizant Technology Solutions Corp. Class A Yahoo! Inc. eBay Inc. Intuit Inc. HP Inc. Fidelity National Information Services Inc. Activision Blizzard Inc. TE Connectivity Ltd.	66,322 66,471 1,061,489 1,124,343 418,358 193,852 671,277 213,250 330,863 223,869 138,965 89,024 120,806 111,379 101,133 251,374 143,020 373,140 242,104 135,944 196,679 233,274 54,459 383,240 73,574 153,215 79,679	52,557 51,304 38,500 33,978 32,640 32,178 25,811 22,018 21,572 16,336 16,277 15,737 12,895 11,466 10,394 9,922 9,791 8,634 7,813 7,617 7,606 6,926 6,242 5,687 5,565 5,533 5,520	Dow Chemical Co. El du Pont de Nemours & Co. Monsanto Co. Praxair Inc. Air Products & Chemicals Inc. Ecolab Inc. LyondellBasell Industries NV Class A PPG Industries Inc. International Paper Co. Sherwin-Williams Co. Nucor Corp. Newmont Mining Corp. Vulcan Materials Co. Freeport-McMoRan Inc. Martin Marietta Materials Inc. Ball Corp. WestRock Co. Eastman Chemical Co. Mosaic Co. Albemarle Corp. International Flavors & Fragrances Inc. Sealed Air Corp. CF Industries Holdings Inc. FMC Corp.	194,712 98,180 63,934 48,735 58,775 74,596 59,146 92,106 18,053 71,360 118,181 29,577 279,690 14,134 38,872 56,340 33,006 78,543 25,240 17,742 43,496 53,465 29,594	14,376 14,292 10,330 7,492 7,009 6,890 6,399 5,605 4,887 4,852 4,247 4,026 3,702 3,689 3,131 2,918 2,860 2,482 2,304 2,173 2,091 1,972 1,683 1,674 1,378	<ul> <li>Telecommunication Services ( AT&amp;T Inc. Verizon Communications Inc.</li> <li>Level 3 Communications Inc. CenturyLink Inc.</li> <li>Frontier Communications Corp.</li> <li>Utilities (3.2%) NextEra Energy Inc. Duke Energy Corp. Southern Co. Dominion Resources Inc. Exelon Corp. American Electric Power Co. Inc. PG&amp;E Corp. Sempra Energy Edison International PPL Corp. Consolidated Edison Inc. Public Service Enterprise Group Inc. Xcel Energy Inc. WEC Energy Group Inc. DTE Energy Co. Eversource Energy FirstEnergy Corp. Entergy Corp.</li> </ul>	(2.7%) 1,375,426 913,108 65,365 122,474 270,802 104,689 154,312 219,592 140,468 206,823 110,163 112,925 56,011 73,013 152,269 68,267 113,387 113,840 70,302 40,248 70,634 95,402	124,599 58,497 48,742 3,684 2,912 915 114,750 12,506 11,978 10,802 10,758 7,340 6,936 6,862 5,637 5,256 5,185 5,030 4,975 4,633 4,123 3,965 3,901 2,955

	Shares	Market Value• (\$000)
Ameren Corp. CMS Energy Corp. CenterPoint Energy Inc. SCANA Corp. Pinnacle West Capital Corp. Alliant Energy Corp. AES Corp. NiSource Inc. NRG Energy Inc.	54,211 62,560 96,489 32,051 24,957 51,053 145,770 72,451 71,474	2,844 2,604 2,378 2,349 1,947 1,934 1,694 1,604 876 136,897
Total Common Stocks (Cost \$3,179,177)		4,315,416
Temporary Cash Investments	(0.3%) <sup>1</sup>	
Money Market Fund (0.3%) 2.3 Vanguard Market Liquidity Fund, 0.823%	111,566 Face Amount	11,158
	(\$000)	
U.S. Government and Agency <sup>4,5</sup> Federal Home Loan Bank Discount Notes.	Obligatio	ns (0.0%)
0.390%, 2/1/17 <sup>5</sup> United States Treasury	100	100
Bill, 0.557%, 4/27/17 5 United States Treasury	700	699
Bill, 0.587%, 5/18/17 5 United States Treasury Bill, 0.577%–0.607%,	300	299
5/25/17	400	399
		1,497
Total Temporary Cash Investm (Cost \$12,655)	nents	12,655
Total Investments (100.0%) (Cost \$3,191,832)		4,328,071

	Amount
	(\$000)
Other Assets and Liabilities (0.0%)	
Other Assets	
Investment in Vanguard	319
Receivables for Investment Securities Sold	67
Receivables for Accrued Income	5,503
Receivables for Capital Shares Issued	2,239
Other Assets	7
Total Other Assets	8,135
Liabilities	
Payables for Investment Securities Purchase	ed (29)
Collateral for Securities on Loan	(452)
Payables for Capital Shares Redeemed	(2,868)
Payables to Vanguard	(3,450)
Other Liabilities	(76)
Total Liabilities	(6,875)
Net Assets (100%)	
Applicable to 121,503,479 outstanding	
\$.001 par value shares of beneficial	
interest (unlimited authorization)	4,329,331
Net Asset Value Per Share	\$35.63

At December 31, 2016, net assets consisted of:

Net Assets	4,329,331
Futures Contracts	(118)
Investment Securities	1,136,239
Unrealized Appreciation (Depreciation)	
Accumulated Net Realized Gains	145,558
Undistributed Net Investment Income	81,911
Paid-in Capital	2,965,741
	(\$000)
	Amount

• See Note A in Notes to Financial Statements.

\* Non-income-producing security.

^ Includes partial security positions on loan to broker-dealers. The total value of securities on loan is \$413,000.

1 The portfolio invests a portion of its cash reserves in equity markets through the use of index futures contracts. After giving effect to futures investments, the portfolio's effective common stock and temporary cash investment positions represent 100.0% and 0.0%, respectively, of net assets.

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

3 Includes \$452,000 of collateral received for securities on loan.

4 The issuer operates under a congressional charter; its securities are generally neither guaranteed by the U.S. Treasury nor backed by the full faith and credit of the U.S. government.

5 Securities with a value of \$768,000 have been segregated as initial margin for open futures contracts.

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

## Statement of Operations

### Year Ended December 31, 2016 (\$000)

	(2000)
Investment Income	
Income	
Dividends	91,541
Interest <sup>1</sup>	95
Securities Lending—Net	154
Total Income	91,790
Expenses	
The Vanguard Group—Note B	
Investment Advisory Services	607
Management and Administrative	4,601
Marketing and Distribution	822
Custodian Fees	70
Auditing Fees	35
Shareholders' Reports	27
Trustees' Fees and Expenses	2
Total Expenses	6,164
Net Investment Income	85,626
Realized Net Gain (Loss)	
Investment Securities Sold <sup>1</sup>	141,576
Futures Contracts	4,132
Realized Net Gain (Loss)	145,708
Change in Unrealized Appreciation (Depreciation)	
Investment Securities	236,319
Futures Contracts	(130)
Change in Unrealized Appreciation (Depreciation)	236,189
Net Increase (Decrease) in Net Assets Resulting from Operations	467,523
1 Interest income and realized not gain (less) from an	offiliated

1 Interest income and realized net gain (loss) from an affiliated company of the portfolio were \$88,000 and \$1,000, respectively.

## Statement of Changes in Net Assets

	Year Ended December 3	
	2016	2015
	(\$000)	(\$000)
Increase (Decrease) in Net Assets		
Operations		
Net Investment Income	85,626	91,367
Realized Net Gain (Loss)	145,708	74,917
Change in Unrealized Appreciation (Depreciation)	236,189	(119,916)
Net Increase (Decrease) in Net Assets Resulting from Operations	467,523	46,368
Distributions		
Net Investment Income	(91,047)	(63,303)
Realized Capital Gain <sup>1</sup>	(74,373)	(115,925
Total Distributions	(165,420)	(179,228)
Capital Share Transactions		
Issued	466,783	608,805
Issued in Lieu of Cash Distributions	165,420	179,228
Redeemed	(589,792)	(454,226)
Net Increase (Decrease) from Capital Share Transactions	42,411	333,807
Total Increase (Decrease)	344,514	200,947
Net Assets		
Beginning of Period	3,984,817	3,783,870
End of Period <sup>2</sup>	4,329,331	3,984,817

1 Includes fiscal 2016 and 2015 short-term gain distributions totaling \$600,000 and \$2,114,000, respectively. Short-term gain distributions are treated as ordinary income dividends for tax purposes.

2 Net Assets—End of Period includes undistributed (overdistributed) net investment income of \$81,911,000 and \$87,332,000.

## **Financial Highlights**

For a Share Outstanding			Year	Ended Dece	ember 31,
Throughout Each Period	2016	2015	2014	2013	2012
Net Asset Value, Beginning of Period	\$33.25	\$34.44	\$31.50	\$24.93	\$22.85
Investment Operations					
Net Investment Income	.704	.759 <sup>1</sup>	.587	.545	.512
Net Realized and Unrealized Gain (Loss) on Investments	3.055	(.338)	3.522	7.235	3.062
Total from Investment Operations	3.759	.421	4.109	7.780	3.574
Distributions					
Dividends from Net Investment Income	(.759)	(.569)	(.555)	(.505)	(.474)
Distributions from Realized Capital Gains	(.620)	(1.042)	(.614)	(.705)	(1.020)
Total Distributions	(1.379)	(1.611)	(1.169)	(1.210)	(1.494)
Net Asset Value, End of Period	\$35.63	\$33.25	\$34.44	\$31.50	\$24.93
Total Return	11.81%	1.27%	13.51%	32.18%	15.86%
Ratios/Supplemental Data					
Net Assets, End of Period (Millions)	\$4,329	\$3,985	\$3,784	\$3,199	\$2,418
Ratio of Total Expenses to Average Net Assets	0.15%	0.15%	0.16%	0.16%	0.17%
Ratio of Net Investment Income to Average Net Assets	2.08%	2.31% <sup>1</sup>	1.88%	1.96%	2.13%
Portfolio Turnover Rate	7%	4%	7%	8%	9%

1 Net investment income per share and the ratio of net investment income to average net assets include \$.13 and 0.35%, respectively, resulting from a special dividend from Medtronic plc in January 2015.

## Notes to Financial Statements

Vanguard Equity 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 materially 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 board of trustees to represent fair value. Investments in Vanguard Market Liquidity Fund are valued at that fund's net asset value. Temporary cash investments are valued using the latest bid prices or using valuations based on a matrix system (which considers such factors as security prices, yields, maturities, and ratings), both as furnished by independent pricing services.

2. Futures Contracts: The portfolio uses index futures contracts to a limited extent, with the objectives of maintaining full exposure to the stock market, enhancing returns, 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 portfolio may seek to enhance returns by using futures contracts instead of the underlying securities when futures are believed to be priced more attractively than the underlying securities. 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.

Futures contracts are valued at their quoted daily settlement prices. The aggregate settlement values of the contracts are not recorded in the Statement of Net Assets. Fluctuations in the value of the contracts are recorded in the Statement of Net Assets 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 futures gains (losses).

During the year ended December 31, 2016, 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 aggregate settlement values 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 all of its taxable income. Management has analyzed the portfolio's tax positions taken for all open federal income tax years (December 31, 2013–2016), and has concluded that no provision for federal income tax is required in the portfolio's financial statements.

4. Distributions: Distributions to shareholders are recorded on the ex-dividend date.

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 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 absence 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 Net Assets for the return of the collateral, during the period the securities are on loan. 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 Facility: The portfolio and certain other funds managed by The Vanguard Group ("Vanguard") participate in a \$3.1 billion committed credit facility provided by a syndicate of lenders pursuant to a credit agreement that may be renewed annually; each fund is individually liable for its borrowings, if any, under the credit facility. Borrowings may be utilized for temporary and emergency purposes, and are subject to the portfolio's regulatory and contractual borrowing restrictions. The participating funds are charged administrative fees and an annual commitment fee of 0.10% of the undrawn amount of the facility; these fees are allocated to the funds based on a method approved by the portfolio's board of trustees and included in Management and Administrative expenses on the portfolio's Statement of Operations. Any borrowings under this facility bear interest at a rate based upon the higher of the one-month London Interbank Offered Rate, federal funds effective rate, or overnight bank funding rate plus an agreed-upon spread.

The portfolio had no borrowings outstanding at December 31, 2016, or at any time during the period then ended.

7. Other: Dividend income is recorded on the ex-dividend date. Interest income includes income distributions received from Vanguard Market Liquidity Fund and is accrued daily. Premiums and discounts on debt securities purchased are amortized and accreted, respectively, to interest income over the lives of the respective securities. 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. Vanguard does not require reimbursement in the current period for certain costs of operations (such as deferred compensation/benefits and risk/insurance costs); the portfolio's liability for these costs of operations is included in Payables to Vanguard on the Statement of Net Assets.

Upon the request of Vanguard, the portfolio may invest up to 0.40% of its net assets as capital in Vanguard. At December 31, 2016, the portfolio had contributed to Vanguard capital in the amount of \$319,000, representing 0.01% of the portfolio's net assets and 0.13% of Vanguard's capitalization. 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. 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).

The following table summarizes the market value of the portfolio's investments as of December 31, 2016, based on the inputs used to value them:

Investments	Level 1 (\$000)	Level 2 (\$000)	Level 3 (\$000)
Common Stocks	4,315,416	—	_
Temporary Cash Investments	11,158	1,497	_
Futures Contracts—Liabilities <sup>1</sup>	(75)	_	_
Total	4,326,499	1,497	_

1 Represents variation margin on the last day of the reporting period.

**D.** At December 31, 2016, the aggregate settlement value of open futures contracts and the related unrealized appreciation (depreciation) were:

				(\$000)
		Number of Long (Short)	Aggregate Settlement Value	Unrealized Appreciation
Futures Contracts	Expiration	Contracts	Long (Short)	(Depreciation)
E-mini S&P 500 Index	March 2017	130	14,535	(118)

Unrealized appreciation (depreciation) on open futures contracts is required to be treated as realized gain (loss) for tax purposes.

E. Distributions are determined on a tax basis and may differ from net investment income and realized capital gains for financial reporting purposes. Differences may be permanent or temporary. Permanent differences are reclassified among capital accounts in the financial statements to reflect their tax character. Temporary differences arise when certain items of income, expense, gain, or loss are recognized in different periods for financial statement and tax purposes. These differences will reverse at some time in the future. Differences in classification may also result from the treatment of short-term gains as ordinary income for tax purposes.

For tax purposes, at December 31, 2016, the portfolio had \$88,211,000 of ordinary income and \$142,267,000 of long-term capital gains available for distribution.

At December 31, 2016, the cost of investment securities for tax purposes was \$3,191,832,000. Net unrealized appreciation of investment securities for tax purposes was \$1,136,239,000, consisting of unrealized gains of \$1,319,983,000 on securities that had risen in value since their purchase and \$183,744,000 in unrealized losses on securities that had fallen in value since their purchase.

F. During the year ended December 31, 2016, the portfolio purchased \$285,739,000 of investment securities and sold \$326,505,000 of investment securities, other than temporary cash investments.

G. Capital shares issued and redeemed were:

	Year Ended December 31,		
	2016 Shares (000)	2015 Shares (000)	
Issued	14,135	18,193	
Issued in Lieu of Cash Distributions	5,208	5,441	
Redeemed	(17,679)	(13,658)	
Net Increase (Decrease) in Shares Outstanding	1,664	9,976	

At December 31, 2016, three shareholders (including an insurance company separate account whose holdings in the portfolio represent the indirect investment of Vanguard Variable Annunity contract holders and Vanguard Total Stock Market Index Portfolio) were each a record or beneficial owner of 30% or more of the portfolio's net assets, with a combined ownership of 95%. If one of these shareholders were to redeem its investment in the portfolio, the redemption might result in an increase in the portfolio's expense ratio or cause the portfolio to incur higher transaction costs.

H. Management has determined that no material events or transactions occurred subsequent to December 31, 2016, that would require recognition or disclosure in these financial statements.

## Report of Independent Registered Public Accounting Firm

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

In our opinion, the accompanying statement of net assets and the related statements of operations and of changes in net assets and the financial highlights present fairly, in all material respects, the financial position of Equity Index Portfolio (constituting a separate portfolio of Vanguard Variable Insurance Funds, hereafter referred to as the "Portfolio") at December 31, 2016, 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 then ended, and the financial highlights for each of the five years in the period then ended, in conformity with accounting principles generally accepted in the United States of America. These financial statements and financial highlights (hereafter referred to as "financial statements") are the responsibility of the Portfolio's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits, which included confirmation of securities at December 31, 2016 by correspondence with the custodian and brokers and by agreement to the underlying ownership records of the transfer agent, provide a reasonable basis for our opinion.

/s/PricewaterhouseCoopers LLP Philadelphia, Pennsylvania February 13, 2017

Special 2016 tax information (unaudited) for corporate shareholders only for Vanguard Equity Index Portfolio, a portfolio of Vanguard Variable Insurance Funds

This information for the fiscal year ended December 31, 2016, is included pursuant to provisions of the Internal Revenue Code for corporate shareholders only.

The portfolio distributed \$73,773,000 as capital gain dividends (20% rate gain distributions) to shareholders during the fiscal year .

For corporate shareholders, 93% of investment income (dividend income plus short-term gains, if any) qualifies for the dividends-received deduction.

## 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 in the Financial Statements section. For additional information on operating expenses and other shareholder costs, please refer to the prospectus.

### Six Months Ended December 31, 2016

	Beginning	Ending	Expenses
	Account Value	Account Value	Paid During
Equity Index Portfolio	6/30/2016	12/31/2016	Period <sup>1</sup>
Based on Actual Portfolio Return	\$1,000.00	\$1,077.41	\$0.78
Based on Hypothetical 5% Yearly Return	1,000.00	1,024.38	0.76

<sup>1</sup> 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 0.15%. The dollar amounts shown as "Expenses Paid" are equal to the annualized expense ratio multiplied by the average account value over the period, multiplied by the number of days in the most recent six-month period, then divided by the number of days in the most recent 12-month period (184/366).

## 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 on an at-cost basis.

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.

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

### F. William McNabb III

Born 1957. Trustee Since July 2009. Chairman of the Board. Principal Occupation(s) During the Past Five Years and Other Experience: Chairman of the Board of The Vanguard Group, Inc., and of each of the investment companies served by The Vanguard Group, since January 2010; Director of The Vanguard Group since 2008; Chief Executive Officer and President of The Vanguard Group, and of each of the investment companies served by The Vanguard Group, since 2008; Director of Vanguard Marketing Corporation; Managing Director of The Vanguard Group (1995–2008).

### Independent Trustees

### Emerson U. Fullwood

Born 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); Executive in Residence and 2009–2010 Distinguished Minett Professor at the Rochester Institute of Technology; Lead Director of SPX FLOW, Inc. (multi-industry manufacturing); Director of the United Way of Rochester, the University of Rochester Medical Center, Monroe Community College Foundation, North Carolina A&T University, and Roberts Wesleyan College.

### Rajiv L. Gupta

Born 1945. Trustee Since December 2001.<sup>2</sup> Principal Occupation(s) During the Past Five Years and Other Experience: Chairman and Chief Executive Officer (retired 2009) and President (2006–2008) of Rohm and Haas Co. (chemicals); Director of Tyco International plc (diversified manufacturing and services), HP Inc. (printer and personal computer manufacturing), and Delphi Automotive plc (automotive components); Senior Advisor at New Mountain Capital.

#### Amy Gutmann

Born 1949. Trustee Since June 2006. Principal Occupation(s) During the Past Five Years and Other Experience: President of the University of Pennsylvania; Christopher H. Browne Distinguished Professor of Political Science, School of Arts and Sciences, and Professor of Communication, Annenberg School for Communication, with secondary faculty appointments in the Department of Philosophy, School of Arts and Sciences, and at the Graduate School of Education, University of Pennsylvania; Trustee of the National Constitution Center; Chair of the Presidential Commission for the Study of Bioethical Issues.

### JoAnn Heffernan Heisen

Born 1950. Trustee Since July 1998. Principal Occupation(s) During the Past Five Years and Other Experience: Corporate Vice President and Chief Global Diversity Officer (retired 2008) and Member of the Executive Committee (1997–2008) of Johnson & Johnson (pharmaceuticals/medical devices/consumer products); Director of Skytop Lodge Corporation (hotels) and the Robert Wood Johnson Foundation; Member of the Advisory Board of the Institute for Women's Leadership at Rutgers University.

#### F. Joseph Loughrey

Born 1949. Trustee Since October 2009. Principal Occupation(s) During the Past Five Years and Other Experience: President and Chief Operating Officer (retired 2009) of Cummins Inc. (industrial machinery); Chairman of the Board of Hillenbrand, Inc. (specialized consumer services), and of Oxfam America; Director of SKF AB (industrial machinery), Hyster-Yale Materials Handling, Inc. (forklift trucks), the Lumina Foundation for Education, and the V Foundation for Cancer Research; Member of the Advisory Council for the College of Arts and Letters and of the Advisory Board to the Kellogg Institute for International Studies, both at the University of Notre Dame.

#### Mark Loughridge

Born 1953. Trustee Since March 2012. Principal Occupation(s) During the Past Five Years and Other Experience: Senior Vice President and Chief Financial Officer (retired 2013) at IBM (information technology services); Fiduciary Member of IBM's Retirement Plan Committee (2004–2013); Director of the Dow Chemical Company; Member of the Council on Chicago Booth.

### Scott C. Malpass

Born 1962. Trustee Since March 2012. Principal Occupation(s) During the Past Five Years and Other Experience: Chief Investment Officer and Vice President at the University of Notre Dame; Assistant Professor of Finance at the Mendoza College of Business at Notre Dame; Member of the Notre Dame 403(b) Investment Committee, the Board of Advisors for Spruceview Capital Partners, and the Investment Advisory Committee of Major League Baseball; Board Member of TIFF Advisory Services, Inc., and Catholic Investment Services, Inc. (investment advisors).

### André F. Perold

Born 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 Managing Partner of HighVista Strategies LLC (private investment firm); Director of Rand Merchant Bank; Overseer of the Museum of Fine Arts Boston.

### Peter F. Volanakis

Born 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); Chairman of the Board of Trustees of Colby-Sawyer College; Member of the Advisory Board of the Norris Cotton Cancer Center.

The independent board members have distinguished backgrounds in business, academia, and public service. Each of the trustees and executive officers oversees 198 Vanguard funds.

The following table provides information for each trustee and executive officer of the fund. 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.

### Executive Officers

### Glenn Booraem

Born 1967. Treasurer Since May 2015. Principal Occupation(s) During the Past Five Years and Other Experience: Principal of The Vanguard Group, Inc.; Treasurer of each of the investment companies served by The Vanguard Group; Controller of each of the investment companies served by The Vanguard Group (2010–2015); Assistant Controller of each of the investment companies served by The Vanguard Group (2001–2010).

### Thomas J. Higgins

Born 1957. Chief Financial Officer Since September 2008. Principal Occupation(s) During the Past Five Years and Other Experience: Principal of The Vanguard Group, Inc.; Chief Financial Officer of each of the investment companies served by The Vanguard Group; Treasurer of each of the investment companies served by The Vanguard Group (1998–2008).

### Peter Mahoney

Born 1974. Controller Since May 2015. Principal Occupation(s) During the Past Five Years and Other Experience: Head of Global Fund Accounting at The Vanguard Group, Inc.; Controller of each of the investment companies served by The Vanguard Group; Head of International Fund Services at The Vanguard Group (2008–2014).

### Anne E. Robinson

Born 1970. Secretary Since September 2016. Principal Occupation(s) During the Past Five Years and Other Experience: Managing Director of The Vanguard Group, Inc.; General Counsel of The Vanguard Group; Secretary of The Vanguard Group and of each of the investment companies served by The Vanguard Group; Director and Senior Vice President of Vanguard Marketing Corporation; Managing Director and General Counsel of Global Cards and Consumer Services at Citigroup (2014–2016); Counsel at American Express (2003–2014).

### Vanguard Senior Management Team

Mortimer J. Buckley	Thomas M. Rampulla
Martha G. King	Glenn W. Reed
John T. Marcante	Karin A. Risi
Chris D. McIsaac	Michael Rollings
James M. Norris	

#### Chairman Emeritus and Senior Advisor

John J. Brennan Chairman, 1996–2009 Chief Executive Officer and President, 1996–2008

### Founder

John C. Bogle Chairman and Chief Executive Officer, 1974–1996

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

2 December 2002 for Vanguard Equity Income Fund, the Vanguard Municipal Bond Funds, and the Vanguard State Tax-Exempt Funds.



P.O. Box 2600 Valley Forge, PA 19482-2600

### **Connect with Vanguard**<sup>®</sup> > vanguard.com

Fund Information > 800-662-7447

Annuity and Insurance Services > 800-522-5555

Institutional Investor Services > 800-523-1036

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

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

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, 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 sec.gov. All comparative mutual fund data are from Lipper, a Thomson Reuters Company, or Morningstar, Inc., unless otherwise noted.

You can review and copy information about your portfolio at the SEC's Public Reference Room in Washington, D.C. To find out more about this public service, call the SEC at 202-551-8090. Information about your portfolio is also available on the SEC's website, and you can receive copies of this information, for a fee, by sending a request in either of two ways: via email addressed to publicinfo@sec.gov or via regular mail addressed to the Public Reference Section, Securities and Exchange Commission, Washington, DC 20549-1520.

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