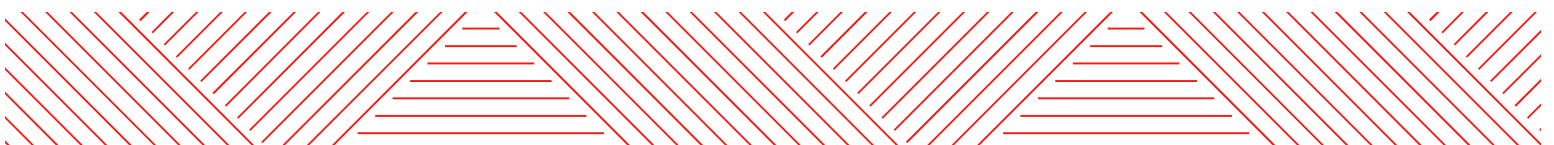


# Foundational investments

Vanguard ETF® strategic  
model portfolios





## A solid foundation

On the path to the retirement you envision, an adequately funded college account, or any other financial destination, obstacles are all too common. Some of them, such as competing demands for our time or our savings, may be unavoidable.

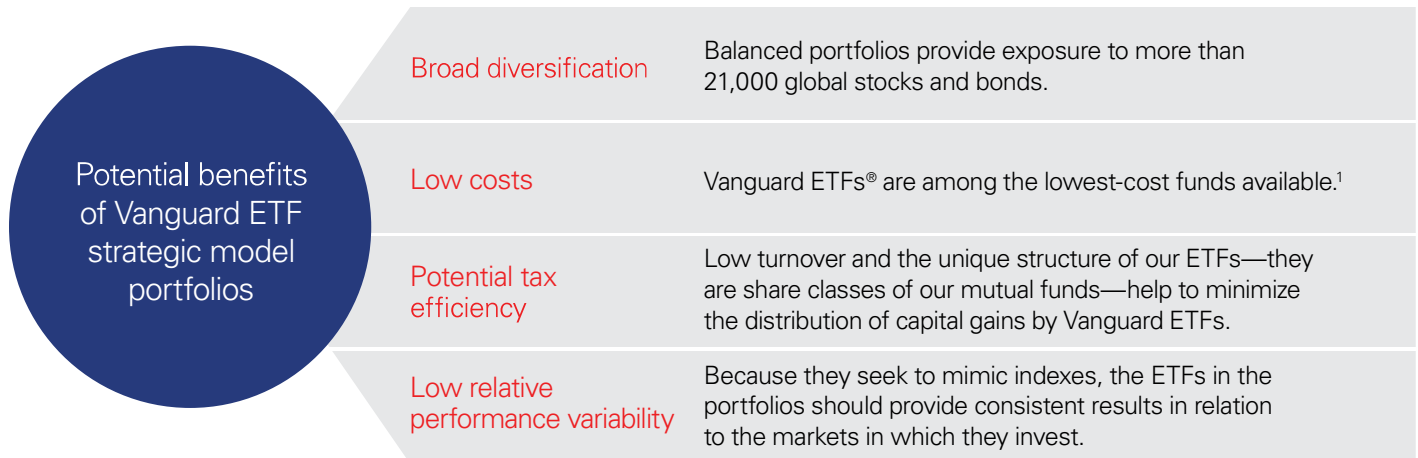
Others, in truth, are self-imposed. These include the tendency of investors to choose funds solely because of strong past performance, in hopes that it will persist, or to lose sight of the long term and abandon investment plans in periods of market downturns.

One way to avoid such obstacles and boost your chance of achieving your objectives is to partner with your financial advisor in choosing a Vanguard ETF strategic model portfolio that's right for you. Your advisor can help you establish explicit goals, monitor your progress, suggest adjustments as your circumstances change, and keep you focused on the long run. By providing diversified, low-cost exposure to stocks and bonds worldwide, a Vanguard model portfolio can serve as the foundation of your investment program.

<b>The value of Vanguard model portfolios</b>	<b>1</b>
<hr/>	
<b>The value of a good financial advisor</b>	<b>2</b>
Case study 1: Embracing a buy-and-hold approach	3
Case study 2: Staying the course amid market volatility	4
<hr/>	
<b>The philosophy behind Vanguard model portfolios</b>	<b>5</b>
It all starts with asset allocation	5
Diversification can work	6
Why bonds?	7
Why international?	8
Indexing: A solid approach	9
Active management and the wisdom of “settling for average”	10

# The value of Vanguard model portfolios

Vanguard ETF strategic model portfolios are designed specifically for financial advisors as complete investment solutions. Each invests in Vanguard exchange-traded funds (ETFs), holding stock and/or bond funds in an asset mix that you and your advisor select.



## Take advantage of the experience of a proven leader

### *One of the world's largest investment companies:*

\$5.7 trillion in assets under management globally as of September 30, 2019.

### *An indexing pioneer:*

Launched the first index mutual fund for individual investors in 1976.

### *A low-cost leader:*

Mutual fund and ETF expenses that are among the lowest anywhere—less than one-fifth of the industry averages as of December 31, 2018.<sup>1</sup>

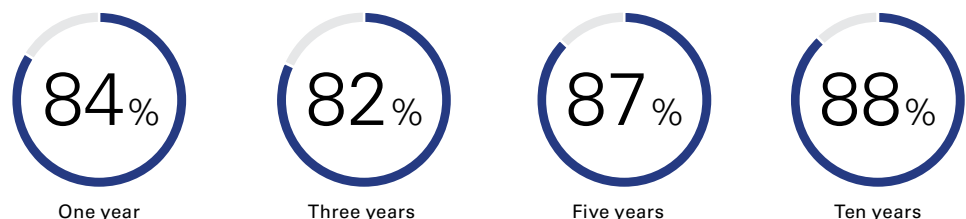
### *Deep expertise:*

Some 30 strategists and analysts in our Investment Strategy Group develop and maintain our investment methodology, including our model portfolios.

### A record of strong fund performance

At Vanguard, we do not believe that investors have to pay more to get better returns. Indeed, we believe the opposite is true: Controlling costs boosts the odds of investing success. The figure below outlines the percentage of Vanguard mutual funds that have outperformed the average returns of competing funds.

### Percentage of Vanguard mutual funds whose returns beat their peer-group average: Periods ended September 30, 2019



Notes: For the one-year period, 9 of 9 Vanguard money market funds, 100 of 116 bond funds, 33 of 43 balanced funds, and 129 of 221 stock funds—in all, 271 of 389 Vanguard funds—outperformed their peer-group averages. For the three-year period, 9 of 9 Vanguard money market funds, 103 of 114 bond funds, 42 of 43 balanced funds, and 170 of 220 stock funds—in all, 324 of 386 Vanguard funds—outperformed their peer-group averages. For the five-year period, 9 of 9 Vanguard money market funds, 90 of 100 bond funds, 25 of 25 balanced funds, and 166 of 198 stock funds—in all, 290 of 332 Vanguard funds—outperformed their peer-group averages. For the ten-year period, 9 of 9 Vanguard money market funds, 49 of 62 bond funds, 22 of 23 balanced funds, and 130 of 146 stock funds—in all, 210 of 240 Vanguard funds—outperformed their peer-group averages. Results will vary for other periods. Only funds with at least one-, three-, five-, and ten-year histories, respectively, were included in the comparison. For the most recent performance, visit [vanguard.com/performance](https://vanguard.com/performance).

Source: Lipper, a Thomson Reuters Company.

<sup>1</sup> Based on Vanguard's average asset-weighted expense ratio of 0.10% and the industry average asset-weighted expense ratio of 0.58%, as of December 31, 2018. Industry average excludes Vanguard.

Sources: Vanguard and Morningstar, Inc.

# The value of a good financial advisor

At Vanguard, we believe investors can benefit from sound financial advice. We believe financial advisors can add value by providing three major types of services:

**Portfolio construction**, selecting a mix of assets that is suitable in light of your goals, time horizon, and tolerance for risk; employing broadly diversified, low-cost funds; locating assets in taxable and tax-advantaged accounts to maximize after-tax returns; and investing with a total-return, rather than an income-oriented, approach.

**Wealth management**, including regularly rebalancing your portfolio to its target allocation and devising sound strategies for spending.

**Behavioral coaching**, helping you to tune out the noise of the markets and adhere to a well-considered financial plan.



Much of what advisors do for investors never appears on their quarterly statements. Yet advisory services can have significant benefits. Helping investors resist both the impulse to chase hot-performing funds and the urge to flee in down markets—the topics of the two case studies in good advice that appear on pages 3 and 4—are among them.

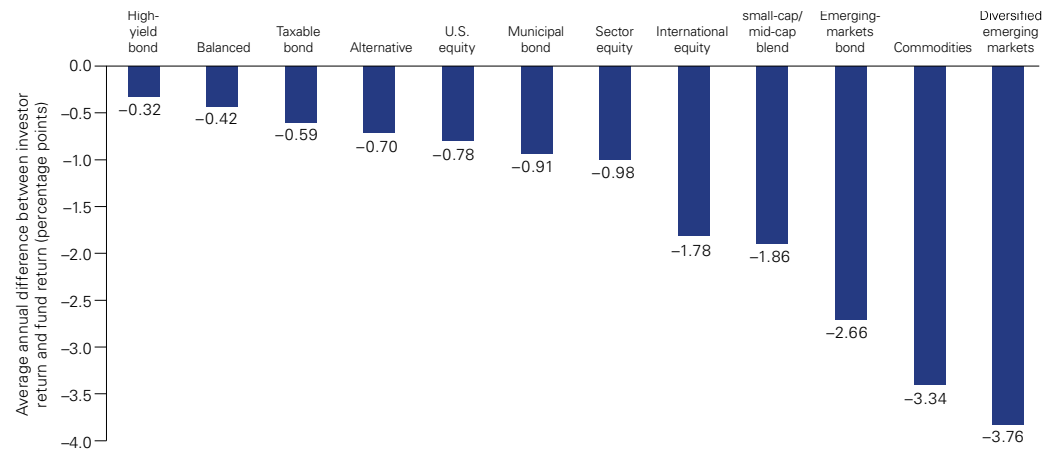
## Case study 1: Embracing a buy-and-hold approach

*“Don’t just sit there, do something!”* For investors seeking to improve their returns, this advice may seem reasonable. But Vanguard research demonstrates that investors are misguided when they take action by buying or selling funds on the sole basis of past performance. A buy-and-hold strategy is more likely to help you reach your long-term financial goals.

Consider that, as shown in the chart below, investors persistently earn less than the funds in which they invest. Attempts to time the stock market often drive these shortfalls. Some investors jump on the bandwagon of funds that have produced stellar returns and then bail out when the funds hit rough patches. Cash-flow data reflect this buy-high, sell-low pattern. Investors tend to have more dollars invested in funds when they are doing poorly and fewer dollars when the funds are doing well. In the role of behavioral coach, your advisor can act as an emotional circuit breaker by helping you stay the course during times of market duress, when sticking with an investment strategy can be difficult and abandoning it costly.

### How investors’ returns lagged their funds’ returns

When investors chase performance, they often get there late



Notes: The average difference is calculated based on Morningstar data for investor returns and fund returns. Morningstar Investor Return™ assumes that the change in a fund’s total net assets during a given period is driven by both market returns and investor cash flow. To calculate investor return, the change in net assets is discounted by the fund’s investment return to isolate the amount of the change driven by cash flow; then a proprietary model is used to calculate the rate of return that links the beginning net assets and the cash flow to the ending net assets.

Sources: Vanguard and Morningstar, Inc. Data cover the period January 1, 2004, through December 31, 2018.

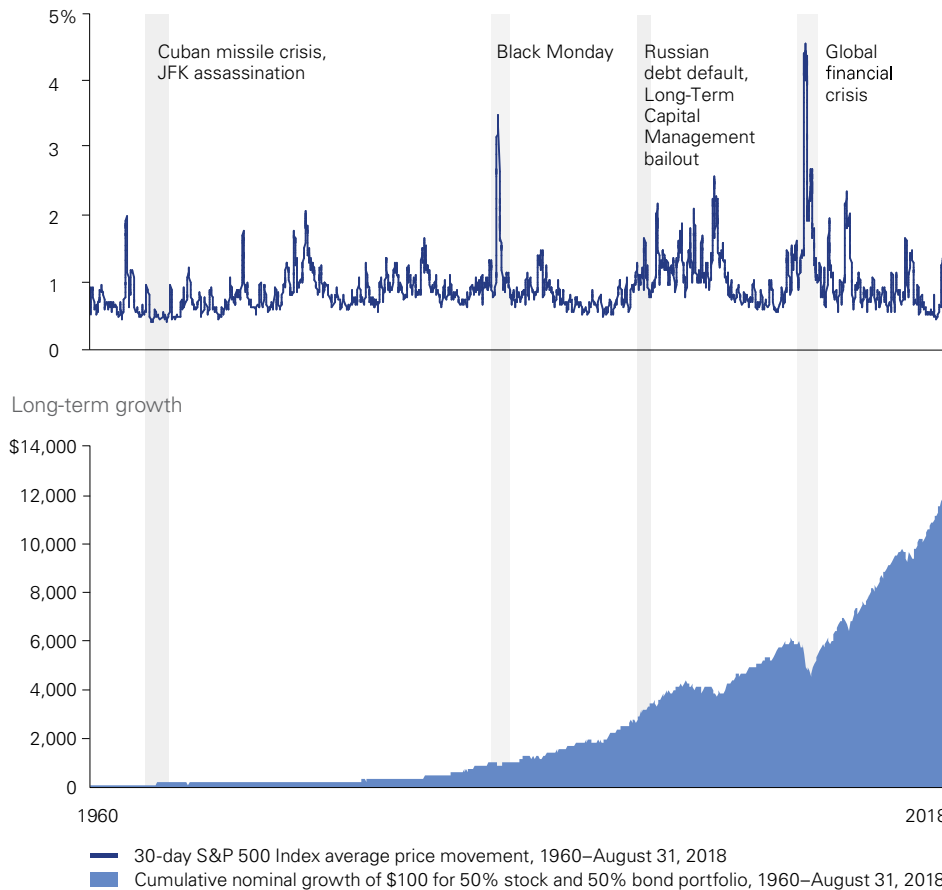
## Case study 2: Staying the course amid market volatility

The tendency for investors to buy and sell at the wrong times is well documented.<sup>2</sup> Across fund types, investors typically earn lower returns than the funds in which they invest, largely because of performance-chasing. The good news is that such shortfalls are avoidable.

Your advisor serves you well by helping you craft a well-considered investment plan—one that reflects your goals, time horizon, and tolerance for risk—and by helping you stick with that plan, especially during volatile times.

### Volatility is a fact of life—Stay the course

Short-term turbulence



Sources: Vanguard calculations, using data from S&P Dow Jones Indexes, Bloomberg, and Thomson Reuters Datastream.

Notes: Growth of \$100 begins at January 31, 1960. U.S. stocks are represented by the S&P 500 Index from March 4, 1957, to 1974; the Dow Jones Wilshire 5000 Index from 1975 to April 22, 2005; and the MSCI US Broad Market Index thereafter. U.S. bonds are represented by the S&P High Grade Corporate Index from 1926 to 1968, the Citigroup High Grade Index from 1969 to 1972, the Lehman Brothers U.S. Long Credit AA Index from 1973 to 1975, and the Bloomberg Barclays U.S. Aggregate Bond Index thereafter.

*Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.*

<sup>2</sup> Consider, for example, the Vanguard white paper *Advisor's alpha* (Bennyhoff and Kinniry Jr., 2018), and the Vanguard research note *Quantifying the impact of chasing fund performance* (Wimmer, Wallick, and Pakula, 2014).

### What it all means

A good advisor gives you the confidence to do things that can be difficult in a 24/7 world. He or she helps you establish goals and thoughtful plans to meet them—then the advisor helps you adhere to those plans and tune out the noise of the financial markets.

# The philosophy behind Vanguard model portfolios





## What it all means

Investors' goals, time horizons, and tolerance for risk vary. That's why Vanguard ETF strategic model portfolios are available in a number of asset mixes, ranging from all-stock to balanced to all-bond options.

## It all starts with asset allocation

We believe the most important decision you and your financial advisor can make is selecting the mix of assets to be held in your portfolio, not selecting individual investments. Asset allocation is one of the most important determinants of long-term returns.

The performance of various mixes of U.S. stocks and bonds, 1926–2018

Asset allocation	Average annual return (1926–2018)	Inflation-adjusted average annual return (1926–2018)	Number of years with a loss (1926–2018)	Best year	Worst year
 100% bonds	5.29%	2.34%	14 of 93	32.6% (1982)	–8.1% (1969)
 10% stocks and 90% bonds	5.94	2.97	12 of 93	31.3% (1982)	–8.1% (1969)
 20% stocks and 80% bonds	6.55	3.57	13 of 93	29.8% (1982)	–10.1% (1931)
 30% stocks and 70% bonds	7.13	4.13	15 of 93	28.4% (1982)	–14.2% (1931)
 40% stocks and 60% bonds	7.67	4.65	17 of 93	27.9% (1933)	–18.4% (1931)
 50% stocks and 50% bonds	8.17	5.14	18 of 93	32.3% (1933)	–22.5% (1931)
 60% stocks and 40% bonds	8.63	5.59	22 of 93	36.7% (1933)	–26.6% (1931)
 70% stocks and 30% bonds	9.06	6.00	23 of 93	41.1% (1933)	–30.7% (1931)
 80% stocks and 20% bonds	9.44	6.38	24 of 93	45.4% (1933)	–34.9% (1931)
 90% stocks and 10% bonds	9.79	6.71	24 of 93	51.3% (1933)	–39.4% (1931)
 100% stocks	10.09	7.01	26 of 93	54.2% (1933)	–43.1% (1931)

Notes: When determining which index to use and for what period, we selected the index that we deemed to be a fair representation of the characteristics of the referenced market, given the information currently available. For U.S. stock market returns we used S&P 90 Index, 1926–March 3, 1957; S&P 500 Index, March 4, 1957–1974; Dow Jones Wilshire 5000 Index, 1975–April 22, 2005; MSCI US Broad Market Index, April 23, 2005–June 2, 2013; and CRSP US Total Market Index thereafter. For U.S. bond market returns, we used S&P High Grade Corporate Index, 1926–1968; Citigroup High Grade Index, 1969–1972; Lehman Brothers U.S. Long Credit AA Index, 1973–1975; Bloomberg Barclays U.S. Aggregate Bond Index, 1976–2009; and Bloomberg Barclays U.S. Aggregate Float Adjusted Index thereafter. For cash, we used Ibbotson 30-Day U.S. Treasury Bill Index, 1926–1977, and Citigroup 3-Month U.S. Treasury Bill Index thereafter. The figures presented assume quarterly rebalancing to the target allocations.

*Past performance is no guarantee of future results. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index. There is no guarantee that any particular asset allocation or mix of funds will meet your investment objectives or provide you with a given level of income.*

Source: Vanguard, as of December 31, 2018.

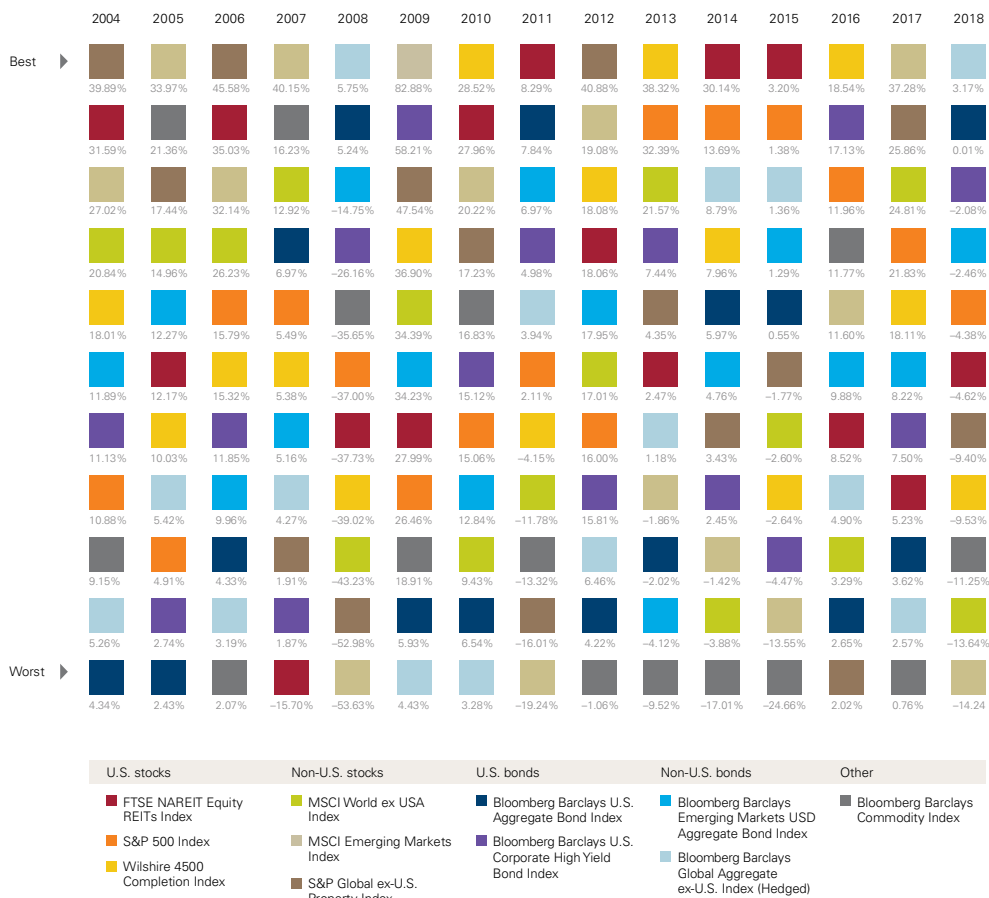


## Diversification can work

As this quilt of investment performance demonstrates, market leadership can change quickly. As a result, you may be best positioned for success when your portfolio includes a balance of stocks and bonds and is broadly diversified within those asset classes. Investing in both stocks and bonds limits your exposure to risks that are specific to a single asset class. Diversifying within the stock and bond markets limits sector- and company-specific risks. Spreading your investments widely may also limit volatility—making it easier to stick with your investment plan during rough periods.

## Market segments display seemingly random patterns of performance

Annual returns for various investment categories ranked by performance, best to worst, 2004–2018



Notes: Benchmarks reflect the following asset classes—for large-capitalization U.S. stocks, the S&P 500 Index; for mid- and small-cap U.S. stocks, the Wilshire 4500 Completion Index; for developed international stock markets, the MSCI World ex USA Index; for emerging markets, the MSCI Emerging Markets Index; for commodities, the Bloomberg Barclays Commodity Index; for U.S. real estate, by the FTSE NAREIT Equity REITs Index; for international real estate, the S&P Global ex-U.S. Property Index; for U.S. investment-grade bonds, the Bloomberg Barclays U.S. Aggregate Bond Index; for U.S. high-yield bonds, the Bloomberg Barclays U.S. Corporate High Yield Bond Index; for international bonds, the Bloomberg Barclays Global Aggregate ex-U.S. Index (Hedged); and for emerging-market bonds, the Bloomberg Barclays Emerging Markets USD Aggregate Bond Index.

*Past performance is no guarantee of future results. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.*

Source: Vanguard, using data from Morningstar, Inc., and Bloomberg Barclays.

## What it all means

Vanguard model portfolios take a strategic approach to investing. They offer constant, broad diversification, including exposure in balanced options to more than 19,000 stocks and bonds worldwide.

## What it all means

Balanced Vanguard ETF strategic model portfolios provide exposure to the entire U.S. market of investment-grade<sup>3</sup> taxable bonds, as well as investment-grade bonds issued outside the United States, except for our Tax-Efficient Series, whose fixed income allocation focuses on reducing taxes through U.S. municipal bonds.

<sup>3</sup> A bond whose credit quality is considered to be among the highest by independent bond-rating agencies.

## Why bonds?

Some investors consider historical market performance and wonder why they should hold bonds. Stocks, after all, have delivered roughly twice the annualized gains over the long term—an advantage that can compound over extended periods. Rather than looking at bonds in isolation, however, it's more beneficial to think about the potential risks and rewards of a balanced portfolio.

Bonds offer two distinct advantages. First, they can help to offset the volatility of stocks. Second, the regular interest payments that bonds generate can be an ideal way to produce a steady source of income.

### Bonds have never reached the depths of a bear market for stocks U.S. financial markets, 1926–2018



Notes: The following indexes were used for U.S. stock market returns: S&P 90 Index, 1926–March 3, 1957; S&P 500 Index, March 4, 1957–1974; Dow Jones Wilshire 5000 Index, 1975–April 22, 2005; MSCI US Broad Market Index, April 23, 2005–April 30, 2011; and CRSP US Total Market Index thereafter. For U.S. bond market returns: S&P High Grade Corporate Index, 1926–1968; Citigroup High Grade Index, 1969–1972; Lehman Brothers U.S. Long Credit AA Index, 1973–1975; Bloomberg Barclays U.S. Aggregate Bond Index, 1976–2009; and Bloomberg Barclays U.S. Aggregate Float Adjusted Index thereafter.

*Past performance is no guarantee of future results. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.*

Sources: Vanguard calculations, based on data from S&P Dow Jones Indexes, MSCI, Citigroup, and Bloomberg Barclays, as of September 30, 2019.

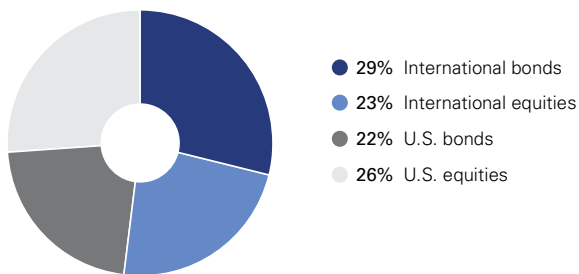
## Why international?

We all have our biases. When it comes to investing, a “home bias”—a tendency to invest exclusively or predominantly in domestic securities—is a global phenomenon. Shunning international stocks and bonds, however, can be counterproductive.

International stocks and bonds account for more than half the value of all stocks and bonds worldwide. Global investors give themselves a chance to tap opportunities in dozens of non-U.S. markets. Another reason to consider a global investment approach is to limit overall portfolio volatility. The U.S. and international markets can perform very differently. As a result, a global portfolio can provide smoother performance over the long term than a portfolio invested wholly in U.S. securities.

### International bonds are the world’s largest asset class

Global capital markets



Notes: U.S. equities are represented by the MSCI US Broad Market Index. International equities are represented by the MSCI AC World Ex USA IMI. U.S. bonds are represented by the Bloomberg Barclays US Aggregate Bond Index. International bonds are represented by the Bloomberg Barclays Global Aggregate ex-USD Index.

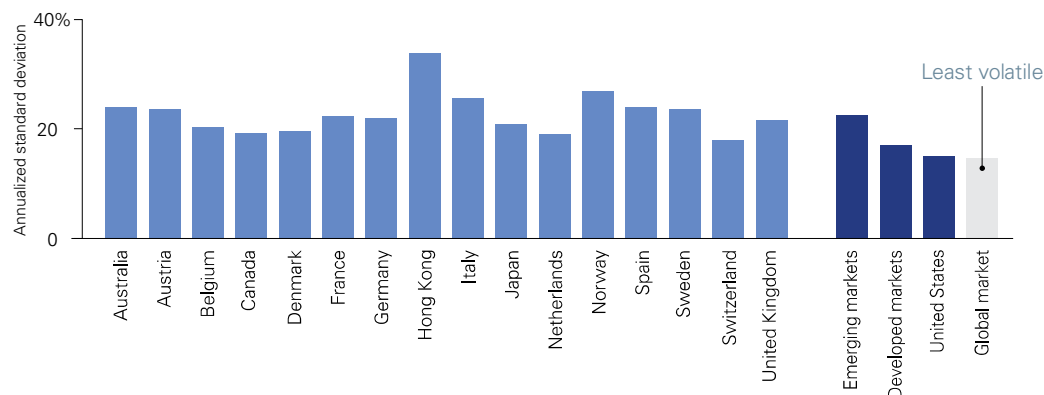
Sources: MSCI, Bloomberg Barclays, and Vanguard, as of December 31, 2018.

## What it all means

Vanguard ETF strategic model portfolios provide exposure to stocks of all sizes in developed international and emerging markets, as well as international bonds. Non-U.S. stocks account for 40% of the portfolios’ total stock allocations. Non-U.S. bonds account for 30% of total bond allocations. However, our Tax-Efficient Series focuses only on U.S. municipal bonds.

### Historically less volatile: A global approach to stocks

Volatility of returns for country and regional indexes, 1970–2018



Notes: Country returns represented by MSCI country indexes. Emerging markets represented by MSCI Emerging Markets Index. Developed markets represented by MSCI World Index ex USA. Global market, including both developed and emerging, represented by MSCI World Index until 1987 and MSCI AC World Index thereafter. Emerging market data begins in 1988. Data through December 31, 2018.

*Past performance is no guarantee of future results. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.*

Sources: Thomson Reuters Datastream and MSCI.

## What it all means

Long-term investors in Vanguard model portfolios should expect their returns to closely approximate those of the broad stock and bond markets. That's because the portfolios invest in ETFs that seek to track broad indexes of their markets or market segments. Close market-tracking—or the absence of wide deviations between your portfolio's performance and that of the broad markets—may make it easier to stick with your investment plan and achieve long-term goals.

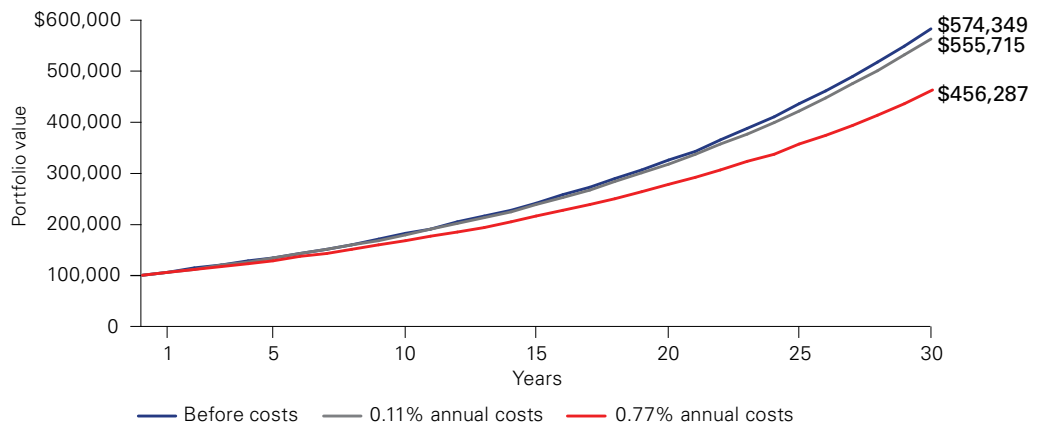
## Indexing: A solid approach

The power and appeal of indexing are undeniable. That is why investors have placed trillions of dollars in index funds. Here are five potential benefits of indexing:

1. **Low operating costs.** Employing an index approach helps to keep costs low, since few portfolio managers and analysts are needed relative to the average actively managed strategy.<sup>4</sup>
2. **Tax efficiency.** The rate at which securities are bought and sold in index funds is usually significantly lower than the turnover rate in actively managed funds. This low turnover tends to generate fewer capital gains distributions.
3. **Diversification.** Funds that seek to track broad markets or market segments tend to hold many—and sometimes even all—of the securities in their target indexes.<sup>5</sup>
4. **Risk control.** Index strategies, especially those that target broad-market exposure, tend to be less volatile than actively managed strategies.<sup>6</sup>
5. **Style consistency.** In most cases, an index ETF will closely track its benchmark.

### Costs matter: The long-term impact of costs on portfolio balances

Assuming \$100,000 initial investments and yearly returns of 6%, reinvested over 30 years



Notes: The portfolio balances shown are hypothetical and do not reflect any particular investment. The final account balances do not reflect any taxes or penalties that might be due upon distribution.

Source: Vanguard, based on data from Morningstar, Inc.

4 For example, as of September 30, 2019, the Vanguard ETF strategic model portfolios' average expense ratios—their operating expenses as a percentage of their net assets—ranged from 0.05% to 0.13%, or \$5 to \$13 per \$10,000 invested per year. The average actively managed equity mutual fund had an asset-weighted expense ratio of 0.81%, while the average index equity mutual fund charged 0.26% and the average ETF charged 0.27%. (Sources: Vanguard and Morningstar, Inc.)

5 Diversification does not ensure a profit or protect against a loss. Also, investors cannot invest directly in an index.

6 See the Vanguard white paper *The case for low-cost index-fund investing* (Rowley, Walker, and Ning, 2018).

## Active management and the wisdom of “settling for average”

Why settle for the near-market returns of indexing? Why not try to beat the market?

In theory, aiming for outperformance sounds great. Active money managers who are smart and disciplined can find compelling investment opportunities. Unfortunately, active managers also run a significant risk of underperforming their benchmarks—which, for investors, may mean leaving money on the table. Major contributors to that risk include the costs of research, analysis, and trading, which are higher for active funds than index funds. Beyond costs, investors inclined toward active management face another hurdle—the difficulty of identifying managers who will outperform. Unfortunately, outperforming funds have often faded, becoming underperformers.<sup>7</sup>

The upshot? By simply trying to track their benchmarks as closely as possible, low-cost index funds historically have outperformed most actively managed funds.<sup>8</sup>

### Percentage of active managers underperforming their style benchmark

	Value	Blend	Growth
Large	85%	88%	68%
	94	96	90
	–1.17	–1.06	–0.55
Medium	94%	96%	60%
	97	98	88
	–2.19	–1.78	–0.29
Small	93%	89%	79%
	97	95	93
	–1.15	–1.49	–0.76

- Percentage of funds underperforming benchmark
- Percentage underperforming adjusted for survivorship bias<sup>9</sup>
- Median fund excess return<sup>10</sup>

Sources: Vanguard calculations using data from Morningstar, Inc.; MSCI; and CRSP. Data from the 15 years ended December 31, 2018. Equity benchmarks are represented by the following indexes: large blend: S&P 500, 1/2000–11/2002; MSCI US Prime Market 750, 12/2002–1/30/2013; and CRSP US Large Cap thereafter; large value: S&P 500 Value, 1/2000–11/2002; MSCI US Prime Market Value, 12/2002–4/16/2013; and CRSP US Large Cap Value thereafter; large growth: S&P 500 Growth, 1/2000–11/2002; MSCI US Prime Market Growth, 12/2002–4/16/2013; and CRSP US Large Cap Growth thereafter; mid blend: S&P MidCap 400, 1/2000–11/2002; MSCI US Mid Cap 450, 12/2002–1/30/2013; and CRSP US Mid Cap thereafter; mid value: S&P MidCap 400 Value, 1/2000–11/2002; MSCI US Mid Cap Value, 12/2002–4/16/2013; and CRSP US Mid Cap Value thereafter; mid growth: S&P MidCap 400 Growth, 1/2000–11/2002; MSCI US Mid Cap Growth, 12/2002–4/16/2013; and CRSP US Mid Cap Growth thereafter; small blend: S&P SmallCap 600, 1/2000–11/2002; MSCI US Small Cap 1750, 12/2002–4/16/2013; and CRSP US Small Cap thereafter; small value: S&P SmallCap 600 Value, 1/2000–11/2002; MSCI US Small Cap Value, 12/2002–4/16/2013; and CRSP US Small Cap Value thereafter; small growth: S&P SmallCap 600 Growth, 1/2000–11/2002; MSCI US Small Cap Growth, 12/2002–4/16/2013; and CRSP US Small Cap Growth thereafter.

*Past performance is no guarantee of future results. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.*

<sup>7</sup> See, for example, *The case for low-cost index-fund investing* (Rowley, Walker, and Ning, 2018).

<sup>8</sup> See, for example, *Vanguard’s Principles for Investing Success*, 2017.

<sup>9</sup> Survivorship bias is the bias that exists when including only funds that are currently in existence.

<sup>10</sup> Excess return is the difference between the NAV return and the benchmark return over a given time period.

## What it all means

Vanguard model portfolios harness the power of indexing by investing in Vanguard ETFs.



Your advisor and Vanguard share the view that your odds of meeting your investing goals are maximized when your investments reflect certain key principles—principles that are embedded in the Vanguard ETF strategic model portfolios. These include the need for clear investment goals, the importance of broad diversification and low costs, and the power of a disciplined, long-term approach.

Your financial advisor can help you answer the critical questions that will lead to a model portfolio designed to meet your needs. Talk to your advisor today and put your investment program on a solid foundation for years to come.





Vanguard Financial  
Advisor Services™

P.O. Box 2900  
Valley Forge, PA 19482-2900

**For more information about Vanguard funds or Vanguard ETFs, contact your financial advisor to obtain a prospectus or, if available, a summary prospectus. Investment objectives, risks, charges, expenses, and other important information are contained in the prospectus; read and consider it carefully before investing.**

All investing is subject to risk, including the possible loss of principal.

*Vanguard ETF Shares are not redeemable with the issuing Fund other than in very large aggregations worth millions of dollars. Instead, investors must buy and sell Vanguard ETF Shares in the secondary market and hold those shares in a brokerage account. In doing so, the investor may incur brokerage commissions and may pay more than net asset value when buying and receive less than net asset value when selling.*

The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index. Bond funds are subject to the risk that an issuer will fail to make payments on time, and that bond prices will decline because of rising interest rates or negative perceptions of an issuer's ability to make payments. Prices of mid- and small-cap stocks often fluctuate more than those of large-company stocks. Investments in stocks or bonds issued by non-U.S. companies are subject to risks including country/regional risk and currency risk. These risks are especially high in emerging markets.

Vanguard does not, and will not, make any representations about the suitability of a model portfolio for any investor; is not, and will not be, responsible for the suitability of a model portfolio for any investor; and is not acting as an investment advisor to any investor.



# Vanguard ETF® strategic model portfolios • CRSP

The Center for Research in Security Prices (CRSP) index series

## Vanguard ETF strategic model portfolios offer:

- Broad-market equity and investment-grade<sup>1</sup> fixed income exposure, encompassing more than 21,000 global stocks and bonds.
- Diversified index investments that can help alleviate active manager risk in portfolios through lower return variability and low turnover.
- ETFs for potential tax efficiency, transparency, and low costs.
- Remarkably low costs, with weighted average expense ratios ranging from 0.05% to 0.06%, enabling investors to keep more of their returns.
- Vanguard's 40+ years of experience in portfolio construction and indexing.

## Strategic asset allocation by product

As of June 30, 2020

			Asset allocation (%) <sup>2</sup>										Equity / Fixed income
Vanguard ETF	Ticker	Expense ratio <sup>3</sup>	0/100	10/90	20/80	30/70	40/60	50/50	60/40	70/30	80/20	90/10	100/0
<b>Domestic equity</b>													
Growth	VUG	0.04%	0.0%	2.9%	5.8%	8.8%	11.7%	14.6%	17.5%	20.4%	23.3%	26.3%	29.2%
Value	VTV	0.04	0.0	2.3	4.6	6.8	9.1	11.4	13.7	16.0	18.3	20.5	22.8
Small-Cap	VB	0.05	0.0	0.7	1.4	2.0	2.7	3.4	4.1	4.8	5.4	6.1	6.8
<b>International equity</b>													
FTSE Developed Markets	VEA	0.05%	0.0%	2.9%	5.9%	8.8%	11.8%	14.7%	17.7%	20.6%	23.5%	26.5%	29.4%
FTSE Emerging Markets	VWO	0.10	0.0	1.0	1.9	3.0	3.9	4.9	5.8	6.8	7.9	8.8	9.8
<b>Domestic fixed income</b>													
Short-Term Bond	BSV	0.05%	24.9%	22.4%	19.9%	17.4%	14.9%	12.4%	10.0%	7.5%	5.0%	2.5%	0.0%
Inter-Term Bond	BIV	0.05	13.6	12.3	10.9	9.5	8.3	6.8	5.4	4.1	2.7	1.4	0.0
Long-Term Bond	BLV	0.05	14.7	13.2	11.8	10.3	8.8	7.4	5.9	4.4	2.9	1.5	0.0
Mortgage-Backed Sec	VMBS	0.05	15.4	13.8	12.3	10.8	9.2	7.7	6.1	4.6	3.1	1.5	0.0
<b>International fixed income</b>													
Total International Bond	BNDX	0.08%	29.4%	26.5%	23.5%	20.6%	17.6%	14.7%	11.8%	8.8%	5.9%	2.9%	0.0%
Money market fund			2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Weighted average expense ratio			0.06%	0.06%	0.06%	0.06%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%

1 A bond whose credit quality is considered to be among the highest by independent bond-rating agencies.

2 The weights were determined based on market characteristics, Vanguard philosophy, and the availability of the funds in the Vanguard lineup. Some of the investable universe may be lost when moving from a broad fund to a group of narrower funds. Portfolio weights were determined by dividing the market value of the underlying benchmark by the total market value of all the underlying benchmarks within the asset group. Because of rounding, weights may not add up to 100%.

3 As reported in each ETF's most recent prospectus as of June 30, 2020. The current expense ratio may be higher or lower than the figure shown.

Source: Vanguard calculations using data from FactSet

## Sub-asset allocation by category

As of June 30, 2020

Asset allocation (%)<sup>1</sup>

■ Equity / ■ Fixed income

	0/100	10/90	20/80	30/70	40/60	50/50	60/40	70/30	80/20	90/10	100/0
Domestic equity											
Equity—U.S. large-cap	0.0%	4.3%	8.6%	13.0%	17.3%	21.6%	25.9%	30.3%	34.6%	38.9%	43.2%
Equity—U.S. mid-cap	0.0	1.2	2.3	3.5	4.6	5.8	7.0	8.2	9.3	10.5	11.6
Equity—U.S. small-cap	0.0	0.4	0.8	1.1	1.5	1.9	2.3	2.8	3.1	3.5	3.9
International equity											
Equity—Intl. developed markets	0.0%	2.9%	5.8%	8.7%	11.7%	14.6%	17.5%	20.4%	23.3%	26.2%	29.1%
Equity—Intl. emerging markets	0.0	1.0	2.0	3.1	4.0	5.0	6.0	7.0	8.1	9.1	10.1
Domestic fixed income											
Fixed income—U.S. Treasury	28.3%	25.5%	22.6%	19.8%	17.0%	14.1%	11.3%	8.5%	5.6%	2.9%	0.0%
Fixed income—U.S. government-related	16.2	14.5	12.9	11.4	9.7	8.1	6.4	4.8	3.3	1.6	0.0
Fixed income—U.S. corporate	20.6	18.5	16.5	14.4	12.4	10.3	8.2	6.2	4.1	2.1	0.0
Fixed income—U.S. securitized	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fixed income—Other	3.6	3.2	2.9	2.5	2.1	1.8	1.4	1.1	0.7	0.4	0.0
International fixed income											
Fixed income—International	29.4%	26.5%	23.5%	20.6%	17.6%	14.7%	11.8%	8.8%	5.9%	2.9%	0.0%
Money market fund	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1 The weights for each model portfolio were determined using prior month product-level characteristic data and current month strategic allocations by product according to the “as-of” date provided, whereby a weighted average calculation is then applied in order to derive the sub-asset allocation percentage listed. Sub-asset allocations by category are provided for informational purposes only and are not intended to be utilized for constructing portfolios. Because of rounding, weights may not add up to 100%.

Source: Vanguard.

## Model portfolio performance\*

As of June 30, 2020

	0/100	10/90	20/80	30/70	40/60	50/50	60/40	70/30	80/20	90/10	100/0
Quarter	2.62%	4.29%	5.97%	7.67%	9.39%	11.11%	12.86%	14.62%	16.39%	18.19%	19.99%
Year-to-date	5.06	4.08	3.08	2.05	0.98	-0.13	-1.26	-2.41	-3.59	-4.78	-6.02
1 year	7.40	7.09	6.76	6.38	5.94	5.46	4.92	4.35	3.73	3.09	2.36
3 year (annualized)	5.18	5.44	5.67	5.87	6.04	6.19	6.30	6.39	6.43	6.47	6.46
5 year (annualized)	4.29	4.66	5.00	5.32	5.62	5.90	6.16	6.39	6.59	6.79	6.95
10 year (annualized)	3.79	—	5.30	—	6.76	—	8.13	—	9.43	—	10.66
Since inception (annualized)	4.09	4.58	5.30	5.24	6.45	5.81	7.50	8.37	8.47	6.73	9.36
Inception date	1/1/2010	1/1/2014	1/1/2010	1/1/2014	1/1/2010	1/1/2014	1/1/2010	1/1/2012	1/1/2010	1/1/2014	1/1/2010

The performance data shown represent past performance, which is not a guarantee of future results, and reflects the performance of the underlying products that comprise our strategies and our investment allocation methodology. Investment returns and principal value will fluctuate, so an investor's ETF shares, when sold, may be worth more or less than their original cost. Current performance may be higher or lower than the performance data cited. Performance of the model ETF components are based on net asset value (NAV) return and assumes a semi-annual rebalance from January 2010 through December 2012, a quarterly rebalance from January 2013 through December 2013, and a monthly rebalance thereafter. Performance figures assume the reinvestment of dividends and capital gains distributions; the figures are pre-tax and net of expenses of the underlying funds. All figures are for periods ended June 30, 2020, except where noted. Performance figures for periods of less than one year are cumulative returns.

Source: Vanguard.

## Underlying fund performance

As of June 30, 2020

Vanguard ETF	Ticker	Expense ratio <sup>1</sup>		Annualized							Inception date
				Quarter	Year-to-date	1 year	3 year	5 year	10 year	Since inception	
Growth	VUG	0.04%	NAV	29.04%	11.30%	24.77%	18.05%	14.93%	16.78%	10.11%	1/26/2004
			Market price	29.07	11.34	24.83	18.05	14.93	16.78	10.11	
Value	VTV	0.04%	NAV	12.74	-15.48	-7.48	3.88	6.44	11.22	7.08	1/26/2004
			Market price	12.82	-15.42	-7.40	3.88	6.45	11.23	7.08	
Small-Cap	VB	0.05%	NAV	26.66	-11.44	-5.62	3.99	5.40	11.59	8.18	1/26/2004
			Market price	26.86	-11.42	-5.55	4.00	5.40	11.60	8.18	
FTSE Developed Markets	VEA	0.05%	NAV	17.45	-10.75	-4.26	0.90	2.48	6.10	1.11	7/20/2007
			Market price	16.96	-11.05	-4.46	0.77	2.46	6.13	1.07	
FTSE Emerging Markets	VWO	0.10%	NAV	19.90	-9.53	-2.89	2.14	2.18	3.15	5.64	3/4/2005
			Market price	18.65	-10.37	-3.75	1.82	2.10	3.13	5.58	
FTSE AW ex-US Small-Cap <sup>2</sup>	VSS	0.11%	NAV	24.10	-12.74	-5.29	-0.81	1.83	5.50	8.58	4/2/2009
			Market price	23.42	-13.09	-5.84	-1.05	1.72	5.52	8.53	
Short-Term Bond	BSV	0.05%	NAV	1.78	3.99	5.41	3.44	2.57	2.13	3.00	4/3/2007
			Market price	1.64	4.04	5.48	3.46	2.58	2.12	3.01	
Inter-Term Bond	BIV	0.05%	NAV	4.61	7.83	10.34	6.19	5.01	4.79	5.56	4/3/2007
			Market price	4.87	7.97	10.57	6.22	5.06	4.78	5.57	
Long-Term Bond	BLV	0.05%	NAV	6.34	13.06	19.10	10.28	9.00	7.79	7.91	4/3/2007
			Market price	6.06	13.25	19.50	10.39	9.16	7.77	7.94	
Mortgage-Backed Sec	VMBS	0.05%	NAV	0.17	3.38	5.63	3.80	3.06	2.93	3.10	11/19/2009
			Market price	0.31	3.25	5.51	3.74	3.06	2.92	3.09	
Total International Bond	BNDX	0.08%	NAV	2.17	2.35	4.06	4.99	4.42	—	4.20	5/31/2013
			Market price	2.86	2.43	4.10	4.99	4.43	—	4.24	
Money market fund <sup>3</sup>				0.14	0.52	1.56	1.72	1.15	0.60	—	

The performance data shown represent past performance, which is not a guarantee of future results. Investment returns and principal value will fluctuate, so investors' ETF shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data cited. For performance data current to the most recent month-end, visit our website at [vanguard.com/performance](http://vanguard.com/performance).

1 As reported in each ETF's most recent prospectus as of June 30, 2020. The current expense ratio may be higher or lower than the figure shown.

2 Vanguard FTSE All-World ex-US Small-Cap ETF (VSS) was removed from the CRSP series of the model portfolios effective December 31, 2015. The performance of VSS through that date is embedded in historical model portfolio performance.

3 The FTSE 3-Month T-Bill Index is used to represent performance of a money market fund. The model performance does not include performance of any specific money market fund.

\*The model portfolio performance data referenced on the previous page is calculated by obtaining the weighted monthly returns of the strategy component holdings for each period and is based upon the historical asset allocations at the beginning of each month during the periods shown, which may differ from the current allocation. The holdings comprising the strategies and the allocations to those holdings have changed over time and may change in the future. The historical model performance has not been adjusted to reflect current allocations. Model performance does not reflect any transaction costs that an investor may incur in implementing the models.



Financial advisors: Visit [advisors.vanguard.com](https://advisors.vanguard.com) or call 800-997-2798.

**For more information on Vanguard funds and Vanguard ETFs, contact your financial advisor to obtain a prospectus or, if available, a summary prospectus. Investment objectives, risks, charges, expenses, and other important information are contained in the prospectus; read and consider it carefully before investing.**

*Vanguard ETF Shares are not redeemable with the issuing Fund other than in very large aggregations worth millions of dollars. Instead, investors must buy and sell Vanguard ETF Shares in the secondary market and hold those shares in a brokerage account. In doing so, the investor may incur brokerage commissions and may pay more than net asset value when buying and receive less than net asset value when selling.*

All Vanguard ETFs are subject to risk, including the possible loss of the money you invest.

Vanguard does not, and will not, make any representations about the suitability of a model portfolio for any investor; is not, and will not be, responsible for the suitability of a model portfolio for any investor; and is not acting as an investment advisor to any investor.

Examples are for hypothetical purposes only.

London Stock Exchange Group companies include FTSE International Limited ("FTSE"), Frank Russell Company ("Russell"), MTS Next Limited ("MTS"), and FTSE TMX Global Debt Capital Markets Inc. ("FTSE TMX"). All rights reserved. "FTSE®", "Russell®", "MTS®", "FTSE TMX®" and "FTSE Russell" and other service marks and trademarks related to the FTSE or Russell indexes are trademarks of the London Stock Exchange Group companies and are used by FTSE, MTS, FTSE TMX and Russell under license. All information is provided for information purposes only. No responsibility or liability can be accepted by the London Stock Exchange Group companies nor its licensors for any errors or for any loss from use of this publication. Neither the London Stock Exchange Group companies nor any of its licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the results to be obtained from the use of the FTSE Indexes or the fitness or suitability of the Indexes for any particular purpose to which they might be put.

*Model performance results are hypothetical and may have inherent limitations, some of which are described in this brochure. No representation is being made that any account will or is likely to achieve profits or losses similar to those shown. There are numerous other factors related to the markets in general or to the implementation of any specific trading strategy which cannot be fully accounted for in the preparation of model performance results and all of which can adversely affect actual trading results.*

© 2020 The Vanguard Group, Inc.  
All rights reserved.  
U.S. Patent Nos. 6,879,964; 7,337,138;  
7,720,749; 7,925,573; 8,090,646; 8,417,623; and  
8,626,636.  
Vanguard Marketing Corporation, Distributor.  
FAMPCSPA 072020