

Vanguard ETF[®] strategic model portfolios | CRSP

Vanguard ETF strategic model portfolios offer:

- Broad-market equity and investment-grade¹ fixed income exposure, encompassing more than 25,000 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 at 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 December 31, 2021

Asset allocation (%)²

■ Equity / ■ Fixed income

| Vanguard ETF | Ticker | Expense ratio ³ | 20/80 |
|---------------------------------------|--------|----------------------------|--------------|
| Domestic equity | | | |
| Growth | VUG | 0.04% | 5.8% |
| Value | VTV | 0.04% | 4.5% |
| Small-Cap | VB | 0.05% | 1.5% |
| International equity | | | |
| FTSE Developed Markets | VEA | 0.05% | 5.9% |
| FTSE Emerging Markets | VWO | 0.10% | 1.9% |
| Domestic fixed income | | | |
| Short-Term Bond | BSV | 0.05% | 20.2% |
| Intermediate-Term Bond | BIV | 0.05% | 11.2% |
| Long-Term Bond | BLV | 0.05% | 12.4% |
| Mortgage-Backed Securities | VMBS | 0.05% | 11.1% |
| International fixed income | | | |
| Total International Bond | BNDX | 0.08% | 23.5% |
| Money market fund | | | 2.0% |
| Weighted average expense ratio | | | 0.06% |

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 ETFs in the Vanguard lineup. Some of the investable universe may be lost when moving from a broad ETF to a group of narrower ETFs. 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 December 31, 2021. 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 December 31, 2021

Asset allocation (%)¹

■ Equity / ■ Fixed income



20/80

| Domestic equity | |
|--------------------------------------|---------------|
| Equity—U.S. large-cap | 8.7% |
| Equity—U.S. mid-cap | 2.3% |
| Equity—U.S. small-cap | 0.8% |
| International equity | |
| Equity—Intl. developed markets | 5.9% |
| Equity—Intl. emerging markets | 1.9% |
| Domestic fixed income | |
| Fixed income—U.S. Treasury | 25.2% |
| Fixed income—U.S. government-related | 11.1% |
| Fixed income—U.S. corporate | 16.0% |
| Fixed income—U.S. securitized | 0.0% |
| Fixed income—Other | 0.5% |
| International fixed income | |
| Fixed income—International | 25.6% |
| Money market fund | |
| | 2.0% |
| Total | 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 December 31, 2021

Asset allocation (%)

■ Equity / ■ Fixed income



20/80

| | | |
|---------------------------------|-----------|----------|
| Quarter | Pre-tax | 1.19% |
| | After-tax | 0.72% |
| Year-to-date | Pre-tax | 2.06% |
| | After-tax | 1.19% |
| 1 year | Pre-tax | 2.06% |
| | After-tax | 1.19% |
| 3 year (annualized) | Pre-tax | 7.65% |
| | After-tax | 6.69% |
| 5 year (annualized) | Pre-tax | 5.73% |
| | After-tax | 4.77% |
| 10 year (annualized) | Pre-tax | 4.98% |
| | After-tax | 4.08% |
| Since inception (annualized) | Pre-tax | 5.31% |
| | After-tax | 4.38% |
| Inception date | | 1/1/2010 |

The performance data shown represent past performance, which is not a guarantee of future results, and reflect 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 is 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, and are net of expenses of the underlying funds. All figures are for periods ended December 31, 2021, except where noted. Performance figures for periods of less than one year are cumulative returns.

*The model portfolio performance data are calculated by obtaining the weighted monthly returns of the strategy component holdings for each period and are 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.

Please see last page for important information about after-tax returns.

Source: Vanguard.

Underlying fund performance

As of December 31, 2021

| Vanguard ETF | Ticker | Expense ratio ¹ | Annualized | | | | | | | | Inception date |
|---------------------------------------------|--------|----------------------------|--------------|--------------|--------|--------|--------|---------|-----------------|--------|----------------|
| | | | Quarter | Year-to-date | 1 year | 3 year | 5 year | 10 year | Since inception | | |
| FTSE All-World ex-US Small-Cap ² | VSS | | NAV | 2.09% | 12.81% | 12.81% | 15.41% | 10.31% | 8.56% | 10.70% | 04/02/2009 |
| | | | Market price | 2.14% | 13.03% | 13.03% | 15.33% | 10.32% | 8.59% | 10.69% | |
| FTSE Developed Markets | VEA | 0.05% | NAV | 2.99% | 11.49% | 11.49% | 14.50% | 10.18% | 8.53% | 3.26% | 07/20/2007 |
| | | | Market price | 2.74% | 11.66% | 11.66% | 14.56% | 10.13% | 8.45% | 3.23% | |
| FTSE Emerging Markets | VWO | 0.10% | NAV | -0.39% | 0.96% | 0.96% | 11.92% | 9.49% | 5.39% | 6.71% | 03/04/2005 |
| | | | Market price | -0.15% | 1.20% | 1.20% | 12.07% | 9.56% | 5.38% | 6.72% | |
| Growth | VUG | 0.04% | NAV | 10.73% | 27.26% | 27.26% | 34.78% | 24.78% | 19.30% | 12.14% | 01/26/2004 |
| | | | Market price | 10.75% | 27.20% | 27.20% | 34.79% | 24.77% | 19.30% | 12.14% | |
| Intermediate-Term Bond | BIV | 0.05% | NAV | -0.40% | -2.27% | -2.27% | 5.72% | 4.15% | 3.50% | 4.94% | 04/03/2007 |
| | | | Market price | -0.38% | -2.44% | -2.44% | 5.70% | 4.07% | 3.45% | 4.92% | |
| Long-Term Bond | BLV | 0.05% | NAV | 1.81% | -2.63% | -2.63% | 10.46% | 7.38% | 5.68% | 7.08% | 04/03/2007 |
| | | | Market price | 1.72% | -2.92% | -2.92% | 10.20% | 7.25% | 5.58% | 7.05% | |
| Mortgage-Backed Securities | VMBS | 0.05% | NAV | -0.52% | -1.32% | -1.32% | 2.83% | 2.34% | 2.15% | 2.63% | 11/19/2009 |
| | | | Market price | -0.49% | -1.29% | -1.29% | 2.84% | 2.37% | 2.15% | 2.64% | |
| Short-Term Bond | BSV | 0.05% | NAV | -0.74% | -1.00% | -1.00% | 2.82% | 2.20% | 1.68% | 2.67% | 04/03/2007 |
| | | | Market price | -0.76% | -1.09% | -1.09% | 2.81% | 2.19% | 1.68% | 2.66% | |
| Small-Cap | VB | 0.05% | NAV | 3.86% | 17.72% | 17.72% | 21.32% | 13.48% | 14.16% | 10.26% | 01/26/2004 |
| | | | Market price | 3.87% | 17.67% | 17.67% | 21.35% | 13.48% | 14.16% | 10.26% | |
| Total International Bond | BNDX | 0.08% | NAV | -0.19% | -2.20% | -2.20% | 3.34% | 3.07% | — | 3.45% | 05/31/2013 |
| | | | Market price | -0.17% | -2.28% | -2.28% | 3.33% | 3.04% | — | 3.46% | |
| Value | VTV | 0.04% | NAV | 9.32% | 26.47% | 26.47% | 17.62% | 12.51% | 13.74% | 9.02% | 01/26/2004 |
| | | | Market price | 9.30% | 26.41% | 26.41% | 17.62% | 12.50% | 13.74% | 9.02% | |
| Money market fund ³ | | | | 0.01% | 0.05% | 0.05% | 0.95% | 1.11% | 0.59% | — | |

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.

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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.



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Important after-tax performance information

Vanguard after-tax returns

After-tax returns are calculated using the highest individual federal income tax rates in effect at the time of each distribution. They do not reflect the impact of state and local taxes. You also should know that:

- Your after-tax return depends on your individual tax situation and may differ from the figures presented here.
- If you own fund or exchange-traded funds (ETF) shares in a tax-deferred account such as an IRA or 401(k) plan, this information does not apply to your investment because these accounts are not subject to current taxes.
- After-tax returns for Vanguard funds and ETFs reflect the reduced tax rates on ordinary income, qualified dividend income, and short-term and long-term capital gains that went into effect in 2003.
- After-tax returns for non-Vanguard funds and ETFs are provided by Morningstar, Inc., based on data provided by the fund companies. Recent changes in tax law may cause after-tax returns to be calculated inconsistently across different fund families. Accordingly, after-tax returns for peer groups have been removed.
- Past performance, whether before or after taxes, does not guarantee future results.
- If a fund or ETF incurs a loss that generates a tax benefit, the post-liquidation after-tax return may exceed the fund's or ETF's other return figures.
- After-tax returns are quarter-end adjusted for fees and loads, if applicable.

After-tax returns for most funds and ETFs are calculated using the tax liability implied by each fund's or ETF's declared distributions. However, the exact tax characteristics of many distributions are not known until after the close of the calendar year.

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.

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.

Vanguard does not, and will not, make any representations about whether a model portfolio is in the best interest of any investor, is not, and will not be, responsible for the determination of whether a model portfolio is in the best interest of any investor, and is not acting as an investment advisor to any investor.

Examples are for hypothetical purposes only.

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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.

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- ETFs for potential tax efficiency, transparency, and low costs.
- Remarkably low costs, with weighted average expense ratios at 0.05%, 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 December 31, 2021

Asset allocation (%)²

■ Equity / ■ Fixed income

| Vanguard ETF | Ticker | Expense ratio ³ | Asset allocation (%) ² |
|---------------------------------------|--------|----------------------------|----------------------------------------------------------------------------------------------|
| | | |  40/60 |
| Domestic equity | | | |
| Growth | VUG | 0.04% | 11.7% |
| Value | VTV | 0.04% | 9.1% |
| Small-Cap | VB | 0.05% | 2.7% |
| International equity | | | |
| FTSE Developed Markets | VEA | 0.05% | 11.8% |
| FTSE Emerging Markets | VWO | 0.10% | 3.9% |
| Domestic fixed income | | | |
| Short-Term Bond | BSV | 0.05% | 15.1% |
| Intermediate-Term Bond | BIV | 0.05% | 8.4% |
| Long-Term Bond | BLV | 0.05% | 9.3% |
| Mortgage-Backed Securities | VMBS | 0.05% | 8.4% |
| International fixed income | | | |
| Total International Bond | BNDX | 0.08% | 17.6% |
| Money market fund | | | 2.0% |
| Weighted average expense ratio | | | 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 ETFs in the Vanguard lineup. Some of the investable universe may be lost when moving from a broad ETF to a group of narrower ETFs. 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 December 31, 2021. 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 December 31, 2021

Asset allocation (%)¹

■ Equity / ■ Fixed income



40/60

| Category | Allocation (%) |
|--------------------------------------|----------------|
| Domestic equity | |
| Equity—U.S. large-cap | 17.7% |
| Equity—U.S. mid-cap | 4.4% |
| Equity—U.S. small-cap | 1.4% |
| International equity | |
| Equity—Intl. developed markets | 11.7% |
| Equity—Intl. emerging markets | 4.0% |
| Domestic fixed income | |
| Fixed income—U.S. Treasury | 18.8% |
| Fixed income—U.S. government-related | 8.4% |
| Fixed income—U.S. corporate | 12.0% |
| Fixed income—U.S. securitized | 0.0% |
| Fixed income—Other | 0.4% |
| International fixed income | |
| Fixed income—International | 19.2% |
| Money market fund | 2.0% |
| Total | 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 December 31, 2021

Asset allocation (%)

■ Equity / ■ Fixed income



40/60

| | | |
|---------------------------------|-----------|----------|
| Quarter | Pre-tax | 2.48% |
| | After-tax | 2.07% |
| Year-to-date | Pre-tax | 5.97% |
| | After-tax | 5.17% |
| 1 year | Pre-tax | 5.97% |
| | After-tax | 5.17% |
| 3 year (annualized) | Pre-tax | 10.94% |
| | After-tax | 10.06% |
| 5 year (annualized) | Pre-tax | 8.02% |
| | After-tax | 7.14% |
| 10 year (annualized) | Pre-tax | 7.03% |
| | After-tax | 6.21% |
| Since inception (annualized) | Pre-tax | 7.01% |
| | After-tax | 6.17% |
| Inception date | | 1/1/2010 |

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Please see last page for important information about after-tax returns.

Source: Vanguard.

Underlying fund performance

As of December 31, 2021

| Vanguard ETF | Ticker | Expense ratio ¹ | Annualized | | | | | | | | Inception date |
|---------------------------------------------|--------|----------------------------|--------------|--------------|--------|--------|--------|---------|-----------------|--------|----------------|
| | | | Quarter | Year-to-date | 1 year | 3 year | 5 year | 10 year | Since inception | | |
| FTSE All-World ex-US Small-Cap ² | VSS | | NAV | 2.09% | 12.81% | 12.81% | 15.41% | 10.31% | 8.56% | 10.70% | 04/02/2009 |
| | | | Market price | 2.14% | 13.03% | 13.03% | 15.33% | 10.32% | 8.59% | 10.69% | |
| FTSE Developed Markets | VEA | 0.05% | NAV | 2.99% | 11.49% | 11.49% | 14.50% | 10.18% | 8.53% | 3.26% | 07/20/2007 |
| | | | Market price | 2.74% | 11.66% | 11.66% | 14.56% | 10.13% | 8.45% | 3.23% | |
| FTSE Emerging Markets | VWO | 0.10% | NAV | -0.39% | 0.96% | 0.96% | 11.92% | 9.49% | 5.39% | 6.71% | 03/04/2005 |
| | | | Market price | -0.15% | 1.20% | 1.20% | 12.07% | 9.56% | 5.38% | 6.72% | |
| Growth | VUG | 0.04% | NAV | 10.73% | 27.26% | 27.26% | 34.78% | 24.78% | 19.30% | 12.14% | 01/26/2004 |
| | | | Market price | 10.75% | 27.20% | 27.20% | 34.79% | 24.77% | 19.30% | 12.14% | |
| Intermediate-Term Bond | BIV | 0.05% | NAV | -0.40% | -2.27% | -2.27% | 5.72% | 4.15% | 3.50% | 4.94% | 04/03/2007 |
| | | | Market price | -0.38% | -2.44% | -2.44% | 5.70% | 4.07% | 3.45% | 4.92% | |
| Long-Term Bond | BLV | 0.05% | NAV | 1.81% | -2.63% | -2.63% | 10.46% | 7.38% | 5.68% | 7.08% | 04/03/2007 |
| | | | Market price | 1.72% | -2.92% | -2.92% | 10.20% | 7.25% | 5.58% | 7.05% | |
| Mortgage-Backed Securities | VMBS | 0.05% | NAV | -0.52% | -1.32% | -1.32% | 2.83% | 2.34% | 2.15% | 2.63% | 11/19/2009 |
| | | | Market price | -0.49% | -1.29% | -1.29% | 2.84% | 2.37% | 2.15% | 2.64% | |
| Short-Term Bond | BSV | 0.05% | NAV | -0.74% | -1.00% | -1.00% | 2.82% | 2.20% | 1.68% | 2.67% | 04/03/2007 |
| | | | Market price | -0.76% | -1.09% | -1.09% | 2.81% | 2.19% | 1.68% | 2.66% | |
| Small-Cap | VB | 0.05% | NAV | 3.86% | 17.72% | 17.72% | 21.32% | 13.48% | 14.16% | 10.26% | 01/26/2004 |
| | | | Market price | 3.87% | 17.67% | 17.67% | 21.35% | 13.48% | 14.16% | 10.26% | |
| Total International Bond | BNDX | 0.08% | NAV | -0.19% | -2.20% | -2.20% | 3.34% | 3.07% | — | 3.45% | 05/31/2013 |
| | | | Market price | -0.17% | -2.28% | -2.28% | 3.33% | 3.04% | — | 3.46% | |
| Value | VTV | 0.04% | NAV | 9.32% | 26.47% | 26.47% | 17.62% | 12.51% | 13.74% | 9.02% | 01/26/2004 |
| | | | Market price | 9.30% | 26.41% | 26.41% | 17.62% | 12.50% | 13.74% | 9.02% | |
| Money market fund ³ | | | | 0.01% | 0.05% | 0.05% | 0.95% | 1.11% | 0.59% | — | |

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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.



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Vanguard after-tax returns

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- After-tax returns for Vanguard funds and ETFs reflect the reduced tax rates on ordinary income, qualified dividend income, and short-term and long-term capital gains that went into effect in 2003.
- After-tax returns for non-Vanguard funds and ETFs are provided by Morningstar, Inc., based on data provided by the fund companies. Recent changes in tax law may cause after-tax returns to be calculated inconsistently across different fund families. Accordingly, after-tax returns for peer groups have been removed.
- Past performance, whether before or after taxes, does not guarantee future results.
- If a fund or ETF incurs a loss that generates a tax benefit, the post-liquidation after-tax return may exceed the fund's or ETF's other return figures.
- After-tax returns are quarter-end adjusted for fees and loads, if applicable.

After-tax returns for most funds and ETFs are calculated using the tax liability implied by each fund's or ETF's declared distributions. However, the exact tax characteristics of many distributions are not known until after the close of the calendar year.

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.

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.

Vanguard does not, and will not, make any representations about whether a model portfolio is in the best interest of any investor, is not, and will not be, responsible for the determination of whether a model portfolio is in the best interest of any investor, and is not acting as an investment advisor to any investor.

Examples are for hypothetical purposes only.

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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.

Vanguard ETF[®] strategic model portfolios | CRSP

Vanguard ETF strategic model portfolios offer:

- Broad-market equity and investment-grade¹ fixed income exposure, encompassing more than 25,000 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 at 0.05%, 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 December 31, 2021

Asset allocation (%)²

■ Equity / ■ Fixed income

| Vanguard ETF | Ticker | Expense ratio ³ | 60/40 |
|---------------------------------------|--------|----------------------------|--------------|
| Domestic equity | | | |
| Growth | VUG | 0.04% | 17.5% |
| Value | VTV | 0.04% | 13.6% |
| Small-Cap | VB | 0.05% | 4.2% |
| International equity | | | |
| FTSE Developed Markets | VEA | 0.05% | 17.6% |
| FTSE Emerging Markets | VWO | 0.10% | 5.9% |
| Domestic fixed income | | | |
| Short-Term Bond | BSV | 0.05% | 10.1% |
| Intermediate-Term Bond | BIV | 0.05% | 5.6% |
| Long-Term Bond | BLV | 0.05% | 6.2% |
| Mortgage-Backed Securities | VMBS | 0.05% | 5.5% |
| International fixed income | | | |
| Total International Bond | BNDX | 0.08% | 11.8% |
| Money market fund | | | |
| Weighted average expense ratio | | | 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 ETFs in the Vanguard lineup. Some of the investable universe may be lost when moving from a broad ETF to a group of narrower ETFs. 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 December 31, 2021. 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 December 31, 2021

Asset allocation (%)¹

■ Equity / ■ Fixed income



60/40

| Domestic equity | |
|--------------------------------------|---------------|
| Equity—U.S. large-cap | 26.4% |
| Equity—U.S. mid-cap | 6.7% |
| Equity—U.S. small-cap | 2.2% |
| International equity | |
| Equity—Intl. developed markets | 17.5% |
| Equity—Intl. emerging markets | 6.0% |
| Domestic fixed income | |
| Fixed income—U.S. Treasury | 12.6% |
| Fixed income—U.S. government-related | 5.5% |
| Fixed income—U.S. corporate | 8.0% |
| Fixed income—U.S. securitized | 0.0% |
| Fixed income—Other | 0.3% |
| International fixed income | |
| Fixed income—International | 12.9% |
| Money market fund | |
| | 2.0% |
| Total | 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 December 31, 2021

Asset allocation (%)

■ Equity / ■ Fixed income



60/40

| | | |
|---------------------------------|-----------|----------|
| Quarter | Pre-tax | 3.76% |
| | After-tax | 3.42% |
| Year-to-date | Pre-tax | 10.01% |
| | After-tax | 9.28% |
| 1 year | Pre-tax | 10.01% |
| | After-tax | 9.28% |
| 3 year (annualized) | Pre-tax | 14.20% |
| | After-tax | 13.40% |
| 5 year (annualized) | Pre-tax | 10.26% |
| | After-tax | 9.47% |
| 10 year (annualized) | Pre-tax | 9.04% |
| | After-tax | 8.30% |
| Since inception (annualized) | Pre-tax | 8.63% |
| | After-tax | 7.90% |
| Inception date | | 1/1/2010 |

The performance data shown represent past performance, which is not a guarantee of future results, and reflect 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 is 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, and are net of expenses of the underlying funds. All figures are for periods ended December 31, 2021, except where noted. Performance figures for periods of less than one year are cumulative returns.

*The model portfolio performance data are calculated by obtaining the weighted monthly returns of the strategy component holdings for each period and are 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.

Please see last page for important information about after-tax returns.

Source: Vanguard.

Underlying fund performance

As of December 31, 2021

| Vanguard ETF | Ticker | Expense ratio ¹ | Annualized | | | | | | | | Inception date |
|---------------------------------------------|--------|----------------------------|--------------|--------------|--------|--------|--------|---------|-----------------|--------|----------------|
| | | | Quarter | Year-to-date | 1 year | 3 year | 5 year | 10 year | Since inception | | |
| FTSE All-World ex-US Small-Cap ² | VSS | | NAV | 2.09% | 12.81% | 12.81% | 15.41% | 10.31% | 8.56% | 10.70% | 04/02/2009 |
| | | | Market price | 2.14% | 13.03% | 13.03% | 15.33% | 10.32% | 8.59% | 10.69% | |
| FTSE Developed Markets | VEA | 0.05% | NAV | 2.99% | 11.49% | 11.49% | 14.50% | 10.18% | 8.53% | 3.26% | 07/20/2007 |
| | | | Market price | 2.74% | 11.66% | 11.66% | 14.56% | 10.13% | 8.45% | 3.23% | |
| FTSE Emerging Markets | VWO | 0.10% | NAV | -0.39% | 0.96% | 0.96% | 11.92% | 9.49% | 5.39% | 6.71% | 03/04/2005 |
| | | | Market price | -0.15% | 1.20% | 1.20% | 12.07% | 9.56% | 5.38% | 6.72% | |
| Growth | VUG | 0.04% | NAV | 10.73% | 27.26% | 27.26% | 34.78% | 24.78% | 19.30% | 12.14% | 01/26/2004 |
| | | | Market price | 10.75% | 27.20% | 27.20% | 34.79% | 24.77% | 19.30% | 12.14% | |
| Intermediate-Term Bond | BIV | 0.05% | NAV | -0.40% | -2.27% | -2.27% | 5.72% | 4.15% | 3.50% | 4.94% | 04/03/2007 |
| | | | Market price | -0.38% | -2.44% | -2.44% | 5.70% | 4.07% | 3.45% | 4.92% | |
| Long-Term Bond | BLV | 0.05% | NAV | 1.81% | -2.63% | -2.63% | 10.46% | 7.38% | 5.68% | 7.08% | 04/03/2007 |
| | | | Market price | 1.72% | -2.92% | -2.92% | 10.20% | 7.25% | 5.58% | 7.05% | |
| Mortgage-Backed Securities | VMBS | 0.05% | NAV | -0.52% | -1.32% | -1.32% | 2.83% | 2.34% | 2.15% | 2.63% | 11/19/2009 |
| | | | Market price | -0.49% | -1.29% | -1.29% | 2.84% | 2.37% | 2.15% | 2.64% | |
| Short-Term Bond | BSV | 0.05% | NAV | -0.74% | -1.00% | -1.00% | 2.82% | 2.20% | 1.68% | 2.67% | 04/03/2007 |
| | | | Market price | -0.76% | -1.09% | -1.09% | 2.81% | 2.19% | 1.68% | 2.66% | |
| Small-Cap | VB | 0.05% | NAV | 3.86% | 17.72% | 17.72% | 21.32% | 13.48% | 14.16% | 10.26% | 01/26/2004 |
| | | | Market price | 3.87% | 17.67% | 17.67% | 21.35% | 13.48% | 14.16% | 10.26% | |
| Total International Bond | BNDX | 0.08% | NAV | -0.19% | -2.20% | -2.20% | 3.34% | 3.07% | — | 3.45% | 05/31/2013 |
| | | | Market price | -0.17% | -2.28% | -2.28% | 3.33% | 3.04% | — | 3.46% | |
| Value | VTV | 0.04% | NAV | 9.32% | 26.47% | 26.47% | 17.62% | 12.51% | 13.74% | 9.02% | 01/26/2004 |
| | | | Market price | 9.30% | 26.41% | 26.41% | 17.62% | 12.50% | 13.74% | 9.02% | |
| Money market fund ³ | | | | 0.01% | 0.05% | 0.05% | 0.95% | 1.11% | 0.59% | — | |

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.

¹ As reported in each ETF's most recent prospectus as of December 31, 2021. 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.



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Important after-tax performance information

Vanguard after-tax returns

After-tax returns are calculated using the highest individual federal income tax rates in effect at the time of each distribution. They do not reflect the impact of state and local taxes. You also should know that:

- Your after-tax return depends on your individual tax situation and may differ from the figures presented here.
- If you own fund or exchange-traded funds (ETF) shares in a tax-deferred account such as an IRA or 401(k) plan, this information does not apply to your investment because these accounts are not subject to current taxes.
- After-tax returns for Vanguard funds and ETFs reflect the reduced tax rates on ordinary income, qualified dividend income, and short-term and long-term capital gains that went into effect in 2003.
- After-tax returns for non-Vanguard funds and ETFs are provided by Morningstar, Inc., based on data provided by the fund companies. Recent changes in tax law may cause after-tax returns to be calculated inconsistently across different fund families. Accordingly, after-tax returns for peer groups have been removed.
- Past performance, whether before or after taxes, does not guarantee future results.
- If a fund or ETF incurs a loss that generates a tax benefit, the post-liquidation after-tax return may exceed the fund's or ETF's other return figures.
- After-tax returns are quarter-end adjusted for fees and loads, if applicable.

After-tax returns for most funds and ETFs are calculated using the tax liability implied by each fund's or ETF's declared distributions. However, the exact tax characteristics of many distributions are not known until after the close of the calendar year.

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.

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Examples are for hypothetical purposes only.

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7,925,573; 8,090,646; 8,417,623, and 8,626,636.
Vanguard Marketing Corporation, Distributor.

Vanguard ETF[®] strategic model portfolios | CRSP

Vanguard ETF strategic model portfolios offer:


- Broad-market equity and investment-grade¹ fixed income exposure, encompassing more than 25,000 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 at 0.05%, 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 December 31, 2021

Asset allocation (%)²

■ Equity / ■ Fixed income

| Vanguard ETF | Ticker | Expense ratio ³ | Asset allocation (%) ² |
|----------------------------------------------------------------------------------------------|--------|----------------------------|-----------------------------------|
|  80/20 | | | |
| Domestic equity | | | |
| Growth | VUG | 0.04% | 23.4% |
| Value | VTV | 0.04% | 18.2% |
| Small-Cap | VB | 0.05% | 5.4% |
| International equity | | | |
| FTSE Developed Markets | VEA | 0.05% | 23.5% |
| FTSE Emerging Markets | VWO | 0.10% | 7.9% |
| Domestic fixed income | | | |
| Short-Term Bond | BSV | 0.05% | 5.0% |
| Intermediate-Term Bond | BIV | 0.05% | 2.8% |
| Long-Term Bond | BLV | 0.05% | 3.1% |
| Mortgage-Backed Securities | VMBS | 0.05% | 2.8% |
| International fixed income | | | |
| Total International Bond | BNDX | 0.08% | 5.9% |
| Money market fund | | | |
| | | | 2.0% |
| Weighted average expense ratio | | | 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 ETFs in the Vanguard lineup. Some of the investable universe may be lost when moving from a broad ETF to a group of narrower ETFs. 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 December 31, 2021. 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 December 31, 2021

Asset allocation (%)¹

■ Equity / ■ Fixed income



80/20

| Category | Allocation (%) |
|--------------------------------------|----------------|
| Domestic equity | |
| Equity—U.S. large-cap | 35.3% |
| Equity—U.S. mid-cap | 8.8% |
| Equity—U.S. small-cap | 2.8% |
| International equity | |
| Equity—Intl. developed markets | 23.4% |
| Equity—Intl. emerging markets | 8.0% |
| Domestic fixed income | |
| Fixed income—U.S. Treasury | 6.3% |
| Fixed income—U.S. government-related | 2.8% |
| Fixed income—U.S. corporate | 4.0% |
| Fixed income—U.S. securitized | 0.0% |
| Fixed income—Other | 0.1% |
| International fixed income | |
| Fixed income—International | 6.4% |
| Money market fund | |
| | 2.0% |
| Total | 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 December 31, 2021

Asset allocation (%)

■ Equity / ■ Fixed income



80/20

| | | |
|---------------------------------|-----------|----------|
| Quarter | Pre-tax | 5.03% |
| | After-tax | 4.76% |
| Year-to-date | Pre-tax | 14.13% |
| | After-tax | 13.47% |
| 1 year | Pre-tax | 14.13% |
| | After-tax | 13.47% |
| 3 year (annualized) | Pre-tax | 17.40% |
| | After-tax | 16.69% |
| 5 year (annualized) | Pre-tax | 12.44% |
| | After-tax | 11.74% |
| 10 year (annualized) | Pre-tax | 11.01% |
| | After-tax | 10.35% |
| Since inception (annualized) | Pre-tax | 10.19% |
| | After-tax | 9.56% |
| Inception date | | 1/1/2010 |

The performance data shown represent past performance, which is not a guarantee of future results, and reflect 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 is 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, and are net of expenses of the underlying funds. All figures are for periods ended December 31, 2021, except where noted. Performance figures for periods of less than one year are cumulative returns.

*The model portfolio performance data are calculated by obtaining the weighted monthly returns of the strategy component holdings for each period and are 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.

Please see last page for important information about after-tax returns.

Source: Vanguard.

Underlying fund performance

As of December 31, 2021

| Vanguard ETF | Ticker | Expense ratio ¹ | Annualized | | | | | | | | Inception date |
|---------------------------------------------|--------|----------------------------|--------------|--------------|--------|--------|--------|---------|-----------------|--------|----------------|
| | | | Quarter | Year-to-date | 1 year | 3 year | 5 year | 10 year | Since inception | | |
| FTSE All-World ex-US Small-Cap ² | VSS | | NAV | 2.09% | 12.81% | 12.81% | 15.41% | 10.31% | 8.56% | 10.70% | 04/02/2009 |
| | | | Market price | 2.14% | 13.03% | 13.03% | 15.33% | 10.32% | 8.59% | 10.69% | |
| FTSE Developed Markets | VEA | 0.05% | NAV | 2.99% | 11.49% | 11.49% | 14.50% | 10.18% | 8.53% | 3.26% | 07/20/2007 |
| | | | Market price | 2.74% | 11.66% | 11.66% | 14.56% | 10.13% | 8.45% | 3.23% | |
| FTSE Emerging Markets | VWO | 0.10% | NAV | -0.39% | 0.96% | 0.96% | 11.92% | 9.49% | 5.39% | 6.71% | 03/04/2005 |
| | | | Market price | -0.15% | 1.20% | 1.20% | 12.07% | 9.56% | 5.38% | 6.72% | |
| Growth | VUG | 0.04% | NAV | 10.73% | 27.26% | 27.26% | 34.78% | 24.78% | 19.30% | 12.14% | 01/26/2004 |
| | | | Market price | 10.75% | 27.20% | 27.20% | 34.79% | 24.77% | 19.30% | 12.14% | |
| Intermediate-Term Bond | BIV | 0.05% | NAV | -0.40% | -2.27% | -2.27% | 5.72% | 4.15% | 3.50% | 4.94% | 04/03/2007 |
| | | | Market price | -0.38% | -2.44% | -2.44% | 5.70% | 4.07% | 3.45% | 4.92% | |
| Long-Term Bond | BLV | 0.05% | NAV | 1.81% | -2.63% | -2.63% | 10.46% | 7.38% | 5.68% | 7.08% | 04/03/2007 |
| | | | Market price | 1.72% | -2.92% | -2.92% | 10.20% | 7.25% | 5.58% | 7.05% | |
| Mortgage-Backed Securities | VMBS | 0.05% | NAV | -0.52% | -1.32% | -1.32% | 2.83% | 2.34% | 2.15% | 2.63% | 11/19/2009 |
| | | | Market price | -0.49% | -1.29% | -1.29% | 2.84% | 2.37% | 2.15% | 2.64% | |
| Short-Term Bond | BSV | 0.05% | NAV | -0.74% | -1.00% | -1.00% | 2.82% | 2.20% | 1.68% | 2.67% | 04/03/2007 |
| | | | Market price | -0.76% | -1.09% | -1.09% | 2.81% | 2.19% | 1.68% | 2.66% | |
| Small-Cap | VB | 0.05% | NAV | 3.86% | 17.72% | 17.72% | 21.32% | 13.48% | 14.16% | 10.26% | 01/26/2004 |
| | | | Market price | 3.87% | 17.67% | 17.67% | 21.35% | 13.48% | 14.16% | 10.26% | |
| Total International Bond | BNDX | 0.08% | NAV | -0.19% | -2.20% | -2.20% | 3.34% | 3.07% | — | 3.45% | 05/31/2013 |
| | | | Market price | -0.17% | -2.28% | -2.28% | 3.33% | 3.04% | — | 3.46% | |
| Value | VTV | 0.04% | NAV | 9.32% | 26.47% | 26.47% | 17.62% | 12.51% | 13.74% | 9.02% | 01/26/2004 |
| | | | Market price | 9.30% | 26.41% | 26.41% | 17.62% | 12.50% | 13.74% | 9.02% | |
| Money market fund ³ | | | | 0.01% | 0.05% | 0.05% | 0.95% | 1.11% | 0.59% | — | |

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.

1 As reported in each ETF's most recent prospectus as of December 31, 2021. 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.



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Important after-tax performance information

Vanguard after-tax returns

After-tax returns are calculated using the highest individual federal income tax rates in effect at the time of each distribution. They do not reflect the impact of state and local taxes. You also should know that:

- Your after-tax return depends on your individual tax situation and may differ from the figures presented here.
- If you own fund or exchange-traded funds (ETF) shares in a tax-deferred account such as an IRA or 401(k) plan, this information does not apply to your investment because these accounts are not subject to current taxes.
- After-tax returns for Vanguard funds and ETFs reflect the reduced tax rates on ordinary income, qualified dividend income, and short-term and long-term capital gains that went into effect in 2003.
- After-tax returns for non-Vanguard funds and ETFs are provided by Morningstar, Inc., based on data provided by the fund companies. Recent changes in tax law may cause after-tax returns to be calculated inconsistently across different fund families. Accordingly, after-tax returns for peer groups have been removed.
- Past performance, whether before or after taxes, does not guarantee future results.
- If a fund or ETF incurs a loss that generates a tax benefit, the post-liquidation after-tax return may exceed the fund's or ETF's other return figures.
- After-tax returns are quarter-end adjusted for fees and loads, if applicable.

After-tax returns for most funds and ETFs are calculated using the tax liability implied by each fund's or ETF's declared distributions. However, the exact tax characteristics of many distributions are not known until after the close of the calendar year.

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.

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.

Vanguard does not, and will not, make any representations about whether a model portfolio is in the best interest of any investor, is not, and will not be, responsible for the determination of whether a model portfolio is in the best interest of any investor, and is not acting as an investment advisor to any investor.

Examples are for hypothetical purposes only.

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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.

Vanguard ETF[®] strategic model portfolios | CRSP

Vanguard ETF strategic model portfolios offer:


- Broad-market equity and investment-grade¹ fixed income exposure, encompassing more than 25,000 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 at 0.05%, 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 December 31, 2021

Asset allocation (%)²

■ Equity / ■ Fixed income

| Vanguard ETF | Ticker | Expense ratio ³ | Asset allocation (%) ² |
|---------------------------------------|--------|----------------------------|----------------------------------------------------------------------------------------------|
| | | |  100/0 |
| Domestic equity | | | |
| Growth | VUG | 0.04% | 29.2% |
| Value | VTV | 0.04% | 22.7% |
| Small-Cap | VB | 0.05% | 6.9% |
| International equity | | | |
| FTSE Developed Markets | VEA | 0.05% | 29.4% |
| FTSE Emerging Markets | VWO | 0.10% | 9.8% |
| Domestic fixed income | | | |
| Short-Term Bond | BSV | 0.05% | 0.0% |
| Intermediate-Term Bond | BIV | 0.05% | 0.0% |
| Long-Term Bond | BLV | 0.05% | 0.0% |
| Mortgage-Backed Securities | VMBS | 0.05% | 0.0% |
| International fixed income | | | |
| Total International Bond | BNDX | 0.08% | 0.0% |
| Money market fund | | | 2.0% |
| Weighted average expense ratio | | | 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 ETFs in the Vanguard lineup. Some of the investable universe may be lost when moving from a broad ETF to a group of narrower ETFs. 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 December 31, 2021. 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 December 31, 2021

Asset allocation (%)¹

■ Equity / ■ Fixed income



100/0

| Domestic equity | |
|--------------------------------------|---------------|
| Equity—U.S. large-cap | 44.1% |
| Equity—U.S. mid-cap | 11.1% |
| Equity—U.S. small-cap | 3.6% |
| International equity | |
| Equity—Intl. developed markets | 29.2% |
| Equity—Intl. emerging markets | 10.0% |
| Domestic fixed income | |
| Fixed income—U.S. Treasury | 0.0% |
| Fixed income—U.S. government-related | 0.0% |
| Fixed income—U.S. corporate | 0.0% |
| Fixed income—U.S. securitized | 0.0% |
| Fixed income—Other | 0.0% |
| International fixed income | |
| Fixed income—International | 0.0% |
| Money market fund | |
| | 2.0% |
| Total | 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 December 31, 2021

Asset allocation (%)

■ Equity / ■ Fixed income



100/0

| | | |
|---------------------------------|-----------|----------|
| Quarter | Pre-tax | 6.30% |
| | After-tax | 6.09% |
| Year-to-date | Pre-tax | 18.37% |
| | After-tax | 17.80% |
| 1 year | Pre-tax | 18.37% |
| | After-tax | 17.80% |
| 3 year (annualized) | Pre-tax | 20.55% |
| | After-tax | 19.94% |
| 5 year (annualized) | Pre-tax | 14.56% |
| | After-tax | 13.96% |
| 10 year (annualized) | Pre-tax | 12.94% |
| | After-tax | 12.36% |
| Since inception (annualized) | Pre-tax | 11.69% |
| | After-tax | 11.16% |
| Inception date | | 1/1/2010 |

The performance data shown represent past performance, which is not a guarantee of future results, and reflect 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 is 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, and are net of expenses of the underlying funds. All figures are for periods ended December 31, 2021, except where noted. Performance figures for periods of less than one year are cumulative returns.

*The model portfolio performance data are calculated by obtaining the weighted monthly returns of the strategy component holdings for each period and are 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.

Please see last page for important information about after-tax returns.

Source: Vanguard.

Underlying fund performance

As of December 31, 2021

| Vanguard ETF | Ticker | Expense ratio ¹ | Annualized | | | | | | | | Inception date |
|---------------------------------------------|--------|----------------------------|--------------|--------------|--------|--------|--------|---------|-----------------|--------|----------------|
| | | | Quarter | Year-to-date | 1 year | 3 year | 5 year | 10 year | Since inception | | |
| FTSE All-World ex-US Small-Cap ² | VSS | | NAV | 2.09% | 12.81% | 12.81% | 15.41% | 10.31% | 8.56% | 10.70% | 04/02/2009 |
| | | | Market price | 2.14% | 13.03% | 13.03% | 15.33% | 10.32% | 8.59% | 10.69% | |
| FTSE Developed Markets | VEA | 0.05% | NAV | 2.99% | 11.49% | 11.49% | 14.50% | 10.18% | 8.53% | 3.26% | 07/20/2007 |
| | | | Market price | 2.74% | 11.66% | 11.66% | 14.56% | 10.13% | 8.45% | 3.23% | |
| FTSE Emerging Markets | VWO | 0.10% | NAV | -0.39% | 0.96% | 0.96% | 11.92% | 9.49% | 5.39% | 6.71% | 03/04/2005 |
| | | | Market price | -0.15% | 1.20% | 1.20% | 12.07% | 9.56% | 5.38% | 6.72% | |
| Growth | VUG | 0.04% | NAV | 10.73% | 27.26% | 27.26% | 34.78% | 24.78% | 19.30% | 12.14% | 01/26/2004 |
| | | | Market price | 10.75% | 27.20% | 27.20% | 34.79% | 24.77% | 19.30% | 12.14% | |
| Intermediate-Term Bond | BIV | 0.05% | NAV | -0.40% | -2.27% | -2.27% | 5.72% | 4.15% | 3.50% | 4.94% | 04/03/2007 |
| | | | Market price | -0.38% | -2.44% | -2.44% | 5.70% | 4.07% | 3.45% | 4.92% | |
| Long-Term Bond | BLV | 0.05% | NAV | 1.81% | -2.63% | -2.63% | 10.46% | 7.38% | 5.68% | 7.08% | 04/03/2007 |
| | | | Market price | 1.72% | -2.92% | -2.92% | 10.20% | 7.25% | 5.58% | 7.05% | |
| Mortgage-Backed Securities | VMBS | 0.05% | NAV | -0.52% | -1.32% | -1.32% | 2.83% | 2.34% | 2.15% | 2.63% | 11/19/2009 |
| | | | Market price | -0.49% | -1.29% | -1.29% | 2.84% | 2.37% | 2.15% | 2.64% | |
| Short-Term Bond | BSV | 0.05% | NAV | -0.74% | -1.00% | -1.00% | 2.82% | 2.20% | 1.68% | 2.67% | 04/03/2007 |
| | | | Market price | -0.76% | -1.09% | -1.09% | 2.81% | 2.19% | 1.68% | 2.66% | |
| Small-Cap | VB | 0.05% | NAV | 3.86% | 17.72% | 17.72% | 21.32% | 13.48% | 14.16% | 10.26% | 01/26/2004 |
| | | | Market price | 3.87% | 17.67% | 17.67% | 21.35% | 13.48% | 14.16% | 10.26% | |
| Total International Bond | BNDX | 0.08% | NAV | -0.19% | -2.20% | -2.20% | 3.34% | 3.07% | — | 3.45% | 05/31/2013 |
| | | | Market price | -0.17% | -2.28% | -2.28% | 3.33% | 3.04% | — | 3.46% | |
| Value | VTV | 0.04% | NAV | 9.32% | 26.47% | 26.47% | 17.62% | 12.51% | 13.74% | 9.02% | 01/26/2004 |
| | | | Market price | 9.30% | 26.41% | 26.41% | 17.62% | 12.50% | 13.74% | 9.02% | |
| Money market fund ³ | | | | 0.01% | 0.05% | 0.05% | 0.95% | 1.11% | 0.59% | — | |

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.

¹ As reported in each ETF's most recent prospectus as of December 31, 2021. 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.



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Important after-tax performance information

Vanguard after-tax returns

After-tax returns are calculated using the highest individual federal income tax rates in effect at the time of each distribution. They do not reflect the impact of state and local taxes. You also should know that:

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- After-tax returns for non-Vanguard funds and ETFs are provided by Morningstar, Inc., based on data provided by the fund companies. Recent changes in tax law may cause after-tax returns to be calculated inconsistently across different fund families. Accordingly, after-tax returns for peer groups have been removed.
- Past performance, whether before or after taxes, does not guarantee future results.
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Vanguard Marketing Corporation, Distributor.

Vanguard ETF[®] strategic model portfolios | CRSP

Vanguard ETF strategic model portfolios offer:


- Broad-market equity and investment-grade¹ fixed income exposure, encompassing more than 25,000 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 at 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 December 31, 2021

Asset allocation (%)²

■ Equity / ■ Fixed income

| Vanguard ETF | Ticker | Expense ratio ³ | Asset allocation (%) ² |
|-------------------------------------------------------------------------------------------|--------|----------------------------|-----------------------------------|
|  0/100 | | | |
| Domestic equity | | | |
| Growth | VUG | 0.04% | 0.0% |
| Value | VTV | 0.04% | 0.0% |
| Small-Cap | VB | 0.05% | 0.0% |
| International equity | | | |
| FTSE Developed Markets | VEA | 0.05% | 0.0% |
| FTSE Emerging Markets | VWO | 0.10% | 0.0% |
| Domestic fixed income | | | |
| Short-Term Bond | BSV | 0.05% | 25.2% |
| Intermediate-Term Bond | BIV | 0.05% | 14.0% |
| Long-Term Bond | BLV | 0.05% | 15.5% |
| Mortgage-Backed Securities | VMBS | 0.05% | 13.9% |
| International fixed income | | | |
| Total International Bond | BNDX | 0.08% | 29.4% |
| Money market fund | | | |
| Weighted average expense ratio | | | 0.06% |

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 ETFs in the Vanguard lineup. Some of the investable universe may be lost when moving from a broad ETF to a group of narrower ETFs. 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 December 31, 2021. 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 December 31, 2021

Asset allocation (%)¹

■ Equity / ■ Fixed income



0/100

| Domestic equity | |
|--------------------------------------|---------------|
| Equity—U.S. large-cap | 0.0% |
| Equity—U.S. mid-cap | 0.0% |
| Equity—U.S. small-cap | 0.0% |
| International equity | |
| Equity—Intl. developed markets | 0.0% |
| Equity—Intl. emerging markets | 0.0% |
| Domestic fixed income | |
| Fixed income—U.S. Treasury | 31.4% |
| Fixed income—U.S. government-related | 13.9% |
| Fixed income—U.S. corporate | 20.0% |
| Fixed income—U.S. securitized | 0.0% |
| Fixed income—Other | 0.7% |
| International fixed income | |
| Fixed income—International | 32.0% |
| Money market fund | 2.0% |
| Total | 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 December 31, 2021

Asset allocation (%)

■ Equity / ■ Fixed income



0/100

| | | |
|---------------------------------|-----------|----------|
| Quarter | Pre-tax | -0.10% |
| | After-tax | -0.64% |
| Year-to-date | Pre-tax | -1.80% |
| | After-tax | -2.72% |
| 1 year | Pre-tax | -1.80% |
| | After-tax | -2.72% |
| 3 year (annualized) | Pre-tax | 4.31% |
| | After-tax | 3.28% |
| 5 year (annualized) | Pre-tax | 3.39% |
| | After-tax | 2.34% |
| 10 year (annualized) | Pre-tax | 2.90% |
| | After-tax | 1.92% |
| Since inception (annualized) | Pre-tax | 3.55% |
| | After-tax | 2.53% |
| Inception date | | 1/1/2010 |

The performance data shown represent past performance, which is not a guarantee of future results, and reflect 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 is 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, and are net of expenses of the underlying funds. All figures are for periods ended December 31, 2021, except where noted. Performance figures for periods of less than one year are cumulative returns.

*The model portfolio performance data are calculated by obtaining the weighted monthly returns of the strategy component holdings for each period and are 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.

Please see last page for important information about after-tax returns.

Source: Vanguard.

Underlying fund performance

As of December 31, 2021

| Vanguard ETF | Ticker | Expense ratio ¹ | Annualized | | | | | | | | Inception date |
|---------------------------------------------|--------|----------------------------|--------------|--------------|--------|--------|--------|---------|-----------------|--------|----------------|
| | | | Quarter | Year-to-date | 1 year | 3 year | 5 year | 10 year | Since inception | | |
| FTSE All-World ex-US Small-Cap ² | VSS | | NAV | 2.09% | 12.81% | 12.81% | 15.41% | 10.31% | 8.56% | 10.70% | 04/02/2009 |
| | | | Market price | 2.14% | 13.03% | 13.03% | 15.33% | 10.32% | 8.59% | 10.69% | |
| FTSE Developed Markets | VEA | 0.05% | NAV | 2.99% | 11.49% | 11.49% | 14.50% | 10.18% | 8.53% | 3.26% | 07/20/2007 |
| | | | Market price | 2.74% | 11.66% | 11.66% | 14.56% | 10.13% | 8.45% | 3.23% | |
| FTSE Emerging Markets | VWO | 0.10% | NAV | -0.39% | 0.96% | 0.96% | 11.92% | 9.49% | 5.39% | 6.71% | 03/04/2005 |
| | | | Market price | -0.15% | 1.20% | 1.20% | 12.07% | 9.56% | 5.38% | 6.72% | |
| Growth | VUG | 0.04% | NAV | 10.73% | 27.26% | 27.26% | 34.78% | 24.78% | 19.30% | 12.14% | 01/26/2004 |
| | | | Market price | 10.75% | 27.20% | 27.20% | 34.79% | 24.77% | 19.30% | 12.14% | |
| Intermediate-Term Bond | BIV | 0.05% | NAV | -0.40% | -2.27% | -2.27% | 5.72% | 4.15% | 3.50% | 4.94% | 04/03/2007 |
| | | | Market price | -0.38% | -2.44% | -2.44% | 5.70% | 4.07% | 3.45% | 4.92% | |
| Long-Term Bond | BLV | 0.05% | NAV | 1.81% | -2.63% | -2.63% | 10.46% | 7.38% | 5.68% | 7.08% | 04/03/2007 |
| | | | Market price | 1.72% | -2.92% | -2.92% | 10.20% | 7.25% | 5.58% | 7.05% | |
| Mortgage-Backed Securities | VMBS | 0.05% | NAV | -0.52% | -1.32% | -1.32% | 2.83% | 2.34% | 2.15% | 2.63% | 11/19/2009 |
| | | | Market price | -0.49% | -1.29% | -1.29% | 2.84% | 2.37% | 2.15% | 2.64% | |
| Short-Term Bond | BSV | 0.05% | NAV | -0.74% | -1.00% | -1.00% | 2.82% | 2.20% | 1.68% | 2.67% | 04/03/2007 |
| | | | Market price | -0.76% | -1.09% | -1.09% | 2.81% | 2.19% | 1.68% | 2.66% | |
| Small-Cap | VB | 0.05% | NAV | 3.86% | 17.72% | 17.72% | 21.32% | 13.48% | 14.16% | 10.26% | 01/26/2004 |
| | | | Market price | 3.87% | 17.67% | 17.67% | 21.35% | 13.48% | 14.16% | 10.26% | |
| Total International Bond | BNDX | 0.08% | NAV | -0.19% | -2.20% | -2.20% | 3.34% | 3.07% | — | 3.45% | 05/31/2013 |
| | | | Market price | -0.17% | -2.28% | -2.28% | 3.33% | 3.04% | — | 3.46% | |
| Value | VTV | 0.04% | NAV | 9.32% | 26.47% | 26.47% | 17.62% | 12.51% | 13.74% | 9.02% | 01/26/2004 |
| | | | Market price | 9.30% | 26.41% | 26.41% | 17.62% | 12.50% | 13.74% | 9.02% | |
| Money market fund ³ | | | | 0.01% | 0.05% | 0.05% | 0.95% | 1.11% | 0.59% | — | |

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.

¹ As reported in each ETF's most recent prospectus as of December 31, 2021. 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.



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Important after-tax performance information

Vanguard after-tax returns

After-tax returns are calculated using the highest individual federal income tax rates in effect at the time of each distribution. They do not reflect the impact of state and local taxes. You also should know that:

- Your after-tax return depends on your individual tax situation and may differ from the figures presented here.
- If you own fund or exchange-traded funds (ETF) shares in a tax-deferred account such as an IRA or 401(k) plan, this information does not apply to your investment because these accounts are not subject to current taxes.
- After-tax returns for Vanguard funds and ETFs reflect the reduced tax rates on ordinary income, qualified dividend income, and short-term and long-term capital gains that went into effect in 2003.
- After-tax returns for non-Vanguard funds and ETFs are provided by Morningstar, Inc., based on data provided by the fund companies. Recent changes in tax law may cause after-tax returns to be calculated inconsistently across different fund families. Accordingly, after-tax returns for peer groups have been removed.
- Past performance, whether before or after taxes, does not guarantee future results.
- If a fund or ETF incurs a loss that generates a tax benefit, the post-liquidation after-tax return may exceed the fund's or ETF's other return figures.
- After-tax returns are quarter-end adjusted for fees and loads, if applicable.

After-tax returns for most funds and ETFs are calculated using the tax liability implied by each fund's or ETF's declared distributions. However, the exact tax characteristics of many distributions are not known until after the close of the calendar year.

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.

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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.
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