

# VANGUARD MAPPING STRATEGY

## Investment Options Not Changing

The balances in the following mutual funds at Vanguard will transfer in-kind to Fidelity at 4 p.m. Eastern time on January 14, 2019, and will remain invested in these options. Future contributions will be directed to the plan's default investment option, unless you make investment elections at Fidelity in the new investment lineup.

| VANGUARD MUTUAL FUND BALANCE WILL TRANSFER IN-KIND TO FIDELITY ON JANUARY 14, 2019 | TICKER SYMBOL |
|--|---------------|
| Janus Henderson Triton Fund Class N  | JGMNX         |
| MassMutual Select Mid Cap Growth Fund Class I                                      | MEFZX         |
| Metropolitan West Total Return Bond Fund Plan Class                                | MWTSX         |
| T. Rowe Price Growth Stock Fund I Class  | PRUFX         |
| Vanguard Emerging Markets Stock Index Fund Institutional Shares                    | VEMIX         |
| Vanguard Equity-Income Fund Admiral Shares   | VEIRX         |
| Vanguard Federal Money Market Fund Investor Shares                                 | VMFXX         |
| Vanguard Institutional Target Retirement 2015 Fund Institutional Shares            | VITVX         |
| Vanguard Institutional Target Retirement 2020 Fund Institutional Shares            | VITWX         |
| Vanguard Institutional Target Retirement 2025 Fund Institutional Shares            | VRIVX         |
| Vanguard Institutional Target Retirement 2030 Fund Institutional Shares            | VTTWX         |
| Vanguard Institutional Target Retirement 2035 Fund Institutional Shares            | VITFX         |
| Vanguard Institutional Target Retirement 2040 Fund Institutional Shares            | VIRSX         |
| Vanguard Institutional Target Retirement 2045 Fund Institutional Shares            | VITLX         |
| Vanguard Institutional Target Retirement 2050 Fund Institutional Shares            | VTRLX         |
| Vanguard Institutional Target Retirement 2055 Fund Institutional Shares            | VIVLX         |
| Vanguard Institutional Target Retirement 2060 Fund Institutional Shares            | VILVX         |
| Vanguard Institutional Target Retirement 2065 Fund Institutional Shares            | VSXFX         |
| Vanguard Institutional Target Retirement Income Fund Institutional Shares          | VITRX         |
| Vanguard International Growth Fund Admiral Shares                                  | VWILX         |
| Vanguard PRIMECAP Fund Admiral Shares  | VPMAX         |
| Vanguard Real Estate Index Fund Institutional Shares                               | VGSNX         |
| Vanguard Total Bond Market Index Fund Institutional Shares                         | VBTIX         |
| Vanguard Total International Stock Index Fund Institutional Shares                 | VTSNX         |

# VANGUARD MAPPING STRATEGY

## Investment Options Being Removed

When the market closes (generally 4 p.m. Eastern time) on January 14, 2019, the mutual funds listed below will no longer be available. As a result, all existing balances will be liquidated and transferred to the new investment options at Fidelity on January 15, 2019. See the following chart for details. Future contributions will be directed to the plan's default investment option, unless you make investment elections at Fidelity in the new investment lineup.

Balances in the closing investment options may transfer in-kind to a Fidelity BrokerageLink® account provided you establish a brokerage account prior to December 31, 2018. To view funds eligible to transfer in-kind, review the Optional One-Time Transfer In-Kind to BrokerageLink instructions at [fidelity.com/duke](https://www.fidelity.com/duke).

| VANGUARD FUND BALANCE AS OF 4 P.M. ET JANUARY 14, 2019                 | TICKER SYMBOL |   | WILL TRANSFER TO NEW INVESTMENT OPTION AT FIDELITY ON JANUARY 15, 2019  | TICKER SYMBOL |
|--|---------------|---|---|---------------|
| Vanguard Balanced Index Fund Institutional Shares                      | VBAIX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard Capital Opportunity Fund Admiral Shares                       | VHCAX         | ▶ | Fidelity® Contrafund® K6  | FLCNX         |
| Vanguard Capital Value Fund Investor Shares                            | VCVLX         | ▶ | Vanguard Extended Market Index Fund Institutional Plus Shares   | VEMPX         |
| Vanguard Convertible Securities Fund Investor Shares                   | VCVSX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard Developed Markets Index Fund Admiral Shares                   | VTMGX         | ▶ | Vanguard Total International Stock Index Fund Institutional Shares  | VTSNX         |
| Vanguard Diversified Equity Fund Investor Shares                       | VDEQX         | ▶ | Fidelity® Contrafund® K6  | FLCNX         |
| Vanguard Dividend Appreciation Index Fund Admiral Shares               | VDADX         | ▶ | Vanguard Institutional Index Fund Institutional Plus Shares   | VIIIX         |
| Vanguard Dividend Growth Fund Investor Shares                          | VDIGX         | ▶ | Vanguard Institutional Index Fund Institutional Plus Shares   | VIIIX         |
| Vanguard Energy Fund Admiral Shares                                    | VGELX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard European Stock Index Fund Admiral Shares                      | VEUSX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard Explorer Fund Admiral Shares                                  | VEXRX         | ▶ | Janus Henderson Triton Fund Class N   | JGMNX         |
| Vanguard Extended Market Index Fund Institutional Shares               | VIEIX         | ▶ | Vanguard Extended Market Index Fund Institutional Plus Shares   | VEMPX         |
| Vanguard FTSE All-World ex-US Index Fund Admiral Shares                | VFWAX         | ▶ | Vanguard Total International Stock Index Fund Institutional Shares  | VTSNX         |
| Vanguard FTSE All-World ex-US Small Capital Index Fund Investor Shares | VFSVX         | ▶ | Fidelity® International Small Cap Fund  | FISMX         |

# VANGUARD MAPPING STRATEGY

| VANGUARD FUND BALANCE AS OF 4 P.M. ET JANUARY 14, 2019            | TICKER SYMBOL |   | WILL TRANSFER TO NEW INVESTMENT OPTION AT FIDELITY ON JANUARY 15, 2019  | TICKER SYMBOL |
|---|---------------|---|---|---------------|
| Vanguard FTSE Social Index Fund Investor Shares                   | VFTSX         | ▶ | Vanguard FTSE Social Index I  | VFTNX         |
| Vanguard Global Equity Fund Investor Shares                       | VHGEX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard GNMA Fund Admiral Shares                                 | VFIJX         | ▶ | Metropolitan West Total Return Bond Fund Plan Class   | MWTSX         |
| Vanguard Growth and Income Fund Admiral Shares                    | VGIAX         | ▶ | Vanguard Institutional Index Fund Institutional Plus Shares   | VIIIX         |
| Vanguard Growth Index Fund Institutional Shares                   | VIGIX         | ▶ | Fidelity® Contrafund® K6  | FLCNX         |
| Vanguard Health Care Fund Admiral Shares                          | VGHAX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard High Dividend Yield Index Fund Investor Shares           | VHDYX         | ▶ | MFS® Value Fund Class R6  | MEIKX         |
| Vanguard High-Yield Corporate Fund Admiral Shares                 | VWEAX         | ▶ | Metropolitan West Total Return Bond Fund Plan Class   | MWTSX         |
| Vanguard Inflation-Protected Securities Fund Institutional Shares | VIPIX         | ▶ | Metropolitan West Total Return Bond Fund Plan Class   | MWTSX         |
| Vanguard Institutional Index Fund Institutional Shares            | VINIX         | ▶ | Vanguard Institutional Index Fund Institutional Plus Shares   | VIIIX         |
| Vanguard Intermediate-Term Bond Index Fund Institutional Shares   | VBIMX         | ▶ | Vanguard Total Bond Market Index Fund Institutional Shares  | VBTIX         |
| Vanguard Intermediate-Term Investment-Grade Fund Admiral Shares   | VFIDX         | ▶ | Metropolitan West Total Return Bond Fund Plan Class   | MWTSX         |
| Vanguard Intermediate-Term Treasury Fund Admiral Shares           | VFIUX         | ▶ | Metropolitan West Total Return Bond Fund Plan Class   | MWTSX         |
| Vanguard International Explorer Fund Investor Shares              | VINEX         | ▶ | Fidelity® International Small Cap Fund  | FISMX         |
| Vanguard International Value Fund Investor Shares                 | VTRIX         | ▶ | American Funds EuroPacific Growth Fund® Class R-6   | RERGX         |
| Vanguard Large Cap Index Fund Admiral Shares                      | VLCAx         | ▶ | Vanguard Institutional Index Fund Institutional Plus Shares   | VIIIX         |
| Vanguard LifeStrategy Conservative Growth Fund Investor Shares    | VSCGX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |

# VANGUARD MAPPING STRATEGY

| VANGUARD FUND BALANCE AS OF 4 P.M. ET JANUARY 14, 2019     | TICKER SYMBOL |   | WILL TRANSFER TO NEW INVESTMENT OPTION AT FIDELITY ON JANUARY 15, 2019  | TICKER SYMBOL |
|--|---------------|---|---|---------------|
| Vanguard LifeStrategy Growth Fund Investor Shares          | VASGX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard LifeStrategy Income Fund Investor Shares          | VASIX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard LifeStrategy Moderate Growth Fund Investor Shares | VSMGX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard Long-Term Bond Index Fund Institutional Shares    | VBLLX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard Long-Term Investment-Grade Fund Admiral Shares    | VWETX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard Long-Term Treasury Fund Admiral Shares            | VUSUX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard Mid-Cap Index Fund Institutional Shares           | VMCIX         | ▶ | Vanguard Extended Market Index Fund Institutional Plus Shares   | VEMPX         |
| Vanguard Mid-Cap Growth Index Admiral                      | VMGMX         | ▶ | MassMutual Select Mid Cap Growth Fund Class I   | MEFZX         |
| Vanguard Mid-Cap Value Index Fund Admiral Shares           | VMVAX         | ▶ | MFS® Mid Cap Value Fund Class R6  | MVCKX         |
| Vanguard Morgan Growth Fund Admiral Shares                 | VMRAX         | ▶ | Fidelity® Contrafund® K6  | FLCNX         |
| Vanguard Pacific Stock Index Fund Admiral Shares           | VPADX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard Global Capital Cycles Fund Investor Shares        | VGPMX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard PRIMECAP Core Fund Investor Shares                | VPCCX         | ▶ | Fidelity® Contrafund® K6  | FLCNX         |

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| VANGUARD FUND BALANCE AS OF 4 P.M. ET JANUARY 14, 2019         | TICKER SYMBOL |   | WILL TRANSFER TO NEW INVESTMENT OPTION AT FIDELITY ON JANUARY 15, 2019  | TICKER SYMBOL |
|--|---------------|---|---|---------------|
| Vanguard Selected Value Fund Investor Shares                   | VASVX         | ▶ | MFS® Mid Cap Value Fund Class R6  | MVCKX         |
| Vanguard Short-Term Bond Index Fund Institutional Shares       | VBITX         | ▶ | VALIC Fixed-Interest Option   | N/A           |
| Vanguard Short-Term Federal Fund Admiral Shares                | VSGDX         | ▶ | VALIC Fixed-Interest Option   | N/A           |
| Vanguard Short-Term Investment-Grade Fund Institutional Shares | VFSIX         | ▶ | VALIC Fixed-Interest Option   | N/A           |
| Vanguard Short-Term Treasury Fund Admiral Shares               | VFIRX         | ▶ | VALIC Fixed-Interest Option   | N/A           |
| Vanguard Small-Cap Growth Index Fund Institutional Shares      | VSGIX         | ▶ | Janus Henderson Triton Fund Class N   | JGMNX         |
| Vanguard Small-Cap Index Fund Institutional Shares             | VSCIX         | ▶ | Vanguard Extended Market Index Fund Institutional Plus Shares   | VEMPX         |
| Vanguard Small-Cap Value Index Fund Institutional Shares       | VSIIX         | ▶ | Goldman Sachs Small Cap Value Fund Class R6   | GSSUX         |
| Vanguard Star Fund Investor Shares                             | VGSTX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard Strategic Equity Fund Investor Shares                 | VSEQX         | ▶ | Vanguard Extended Market Index Fund Institutional Plus Shares   | VEMPX         |
| Vanguard Strategic Small-Cap Equity Fund Investor Shares       | VSTCX         | ▶ | Vanguard Extended Market Index Fund Institutional Plus Shares   | VEMPX         |
| Vanguard Total Stock Market Index Fund Institutional Shares    | VITSX         | ▶ | Vanguard Institutional Index Fund Institutional Plus Shares   | VIIIX         |
| Vanguard Total World Stock Index Inv                           | VTWSX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard U.S. Growth Fund Admiral Shares                       | VWUAX         | ▶ | Fidelity® Contrafund® K6  | FLCNX         |
| Vanguard U.S. Value Fund Investor Shares                       | VUVLX         | ▶ | MFS® Value Fund Class R6  | MEIKX         |
| Vanguard Value Index Fund Institutional Shares                 | VIVIX         | ▶ | MFS® Value Fund Class R6  | MEIKX         |
| Vanguard Wellesley Income Fund Admiral Shares                  | VWIAX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard Wellington Fund Admiral Shares                        | VWENX         | ▶ | The Vanguard Institutional Target Retirement Fund with the target retirement date closest to the year you turn age 65 | Varies        |
| Vanguard Windsor Fund Admiral Shares                           | VWNEX         | ▶ | MFS® Value Fund Class R6  | MEIKX         |
| Vanguard Windsor II Fund Admiral Shares                        | VWNAX         | ▶ | MFS® Value Fund Class R6  | MEIKX         |

# DEFAULT INVESTMENT OPTION

The Plan's Investment Committee has determined that certain current account balances transferring to the Duke Faculty and Staff Retirement Plan default investment option and future contributions to your account that you have not directed to a specific investment option in the new investment lineup at Fidelity will be invested in a Vanguard Institutional Target Retirement Fund.

Your applicable current balance and future contributions will be invested in the Vanguard Institutional Target Retirement Fund that has a target retirement date closest to the year you might retire and assumes a retirement age of 65. The date of birth range was selected by the Plan's Investment Committee. Simply find your date of birth range in the chart below to determine which fund your balance or contributions will be directed.

Target date funds are an asset mix of stocks, bonds, and other investments that automatically become more conservative as the fund approaches its target retirement date and beyond. Principal invested is not guaranteed.

| DATE OF BIRTH       | FUND NAME   |
|---------------------|---|
| Before 1/1/1948     | Vanguard Institutional Target Retirement Income Fund Institutional Shares |
| 1/1/1948–12/31/1952 | Vanguard Institutional Target Retirement 2015 Fund Institutional Shares   |
| 1/1/1953–12/31/1957 | Vanguard Institutional Target Retirement 2020 Fund Institutional Shares   |
| 1/1/1958–12/31/1962 | Vanguard Institutional Target Retirement 2025 Fund Institutional Shares   |
| 1/1/1963–12/31/1967 | Vanguard Institutional Target Retirement 2030 Fund Institutional Shares   |
| 1/1/1968–12/31/1972 | Vanguard Institutional Target Retirement 2035 Fund Institutional Shares   |
| 1/1/1973–12/31/1977 | Vanguard Institutional Target Retirement 2040 Fund Institutional Shares   |
| 1/1/1978–12/31/1982 | Vanguard Institutional Target Retirement 2045 Fund Institutional Shares   |
| 1/1/1983–12/31/1987 | Vanguard Institutional Target Retirement 2050 Fund Institutional Shares   |
| 1/1/1988–12/31/1992 | Vanguard Institutional Target Retirement 2055 Fund Institutional Shares   |
| 1/1/1993–12/31/1997 | Vanguard Institutional Target Retirement 2060 Fund Institutional Shares   |
| 1/1/1998 and after  | Vanguard Institutional Target Retirement 2065 Fund Institutional Shares   |

***Before investing in any mutual fund, consider the investment objectives, risks, charges, and expenses. Contact Fidelity for a prospectus or, if available, a summary prospectus containing this information. Read it carefully.***