



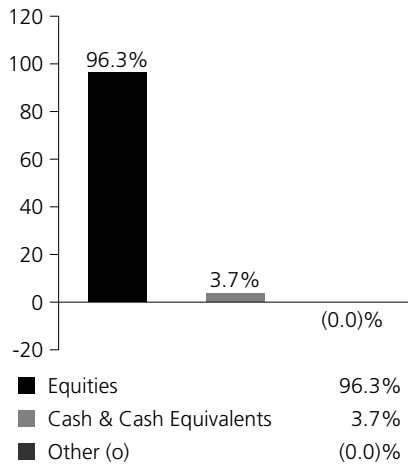
MFS[®] New Discovery Series

MFS[®] Variable Insurance Trust

MFS® New Discovery Series

PORTFOLIO COMPOSITION

Portfolio structure



Top ten holdings

| | |
|----------------------------------|------|
| GFL Environmental, Inc. | 2.1% |
| Summit Materials, Inc., "A" | 2.1% |
| Sensata Technologies Holding PLC | 1.9% |
| RB Global, Inc. | 1.8% |
| DoubleVerify Holdings, Inc. | 1.8% |
| Jacobs Solutions, Inc. | 1.7% |
| TopBuild Corp. | 1.7% |
| nVent Electric PLC | 1.7% |
| Five9, Inc. | 1.7% |
| Crane Co. | 1.7% |

MANAGEMENT REVIEW

Summary of Results

Management Review - continued

Respectfully,

Portfolio Manager(s)

Michael Grossman

(b) Security is not a benchmark constituent.

(h) Security was not held in the portfolio at period end.

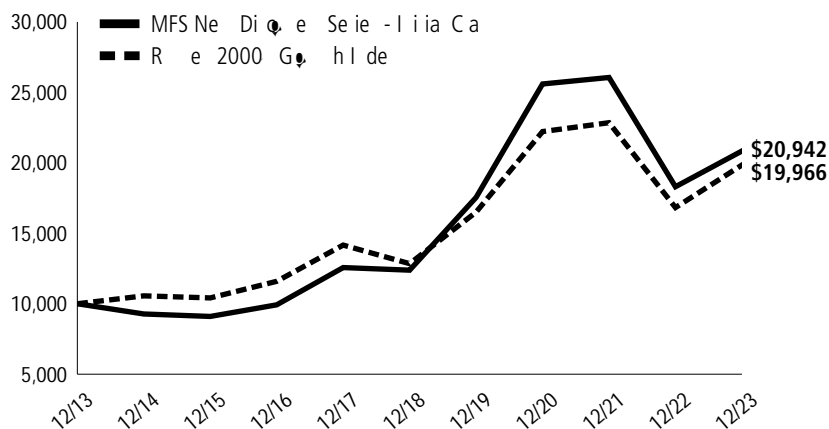
The views expressed in this report are those of the portfolio manager(s) only through the end of the period of the report as stated on the cover and do not necessarily reflect the views of MFS or any other person in the MFS organization. These views are subject to change at any time based on market or other conditions, and MFS disclaims any responsibility to update such views. These views may not be relied upon as investment advice or an indication of trading intent on behalf of any MFS portfolio. References to specific securities are not recommendations of such securities, and may not be representative of any MFS portfolio's current or future investments.

PERFORMANCE SUMMARY THROUGH 12/31/23

The following chart illustrates the historical performance of the fund in comparison to its benchmark(s). Benchmarks are unmanaged and may not be invested in directly. Benchmark returns do not reflect any fees or expenses. The performance of other share classes will be greater than or less than that of the class depicted below. (See Notes to Performance Summary.)

Performance data shown represents past performance and is no guarantee of future results. Investment return and principal value fluctuate so your shares, when sold, may be worth more or less than the original cost; current performance may be lower or higher than quoted. The performance shown does not reflect the deduction of taxes, if any, that a shareholder would pay on fund distributions or the redemption of fund shares. The returns for the fund shown also do not reflect the deduction of expenses associated with variable products, such as mortality and expense risk charges, separate account charges, and sales charges imposed by the insurance company separate accounts. Such expenses would reduce the overall returns shown.

Growth of a Hypothetical \$10,000 Investment



Total Returns through 12/31/23

Average annual total returns

| Share Class | Class Inception Date | 1-yr | 5-yr | 10-yr |
|---------------|----------------------|--------|--------|-------|
| Initial Class | 5/01/1998 | 14.41% | 11.08% | 7.67% |
| Service Class | 5/01/2000 | 14.25% | 10.81% | 7.41% |

Comparative benchmark(s)

| | | | |
|--|--------|-------|-------|
| Russell 2000 [®] Growth Index (f) | 18.66% | 9.22% | 7.16% |
|--|--------|-------|-------|

(f) Source: FactSet Research Systems Inc.

Benchmark Definition(s)

Russell 2000[®] Growth Index^(h) - constructed to provide a comprehensive barometer for growth securities in the small-cap segment of the U.S. equity universe. Companies in this index generally have higher price-to-book ratios and higher forecasted growth values.

It is not possible to invest directly in an index.

Performance Summary – continued

Performance results do not include adjustments made for financial reporting purposes in accordance with U.S. generally accepted accounting principles and may differ from amounts reported in the financial highlights.

From time to time the fund may receive proceeds from litigation settlements, without which performance would be lower.

PORTFOLIO OF INVESTMENTS – 12/31/23

The Portfolio of Investments is a complete list of all securities owned by your fund. It is categorized by broad-based asset classes.

| Issuer | Shares/Par | Value (\$) |
|--|------------|----------------------|
| Common Stocks – 96.3% | | |
| Aerospace & Defense – 3.7% | | |
| AeroVironment, Inc. (a) | 29,590 | \$ 3,729,524 |
| CACI International, Inc., "A" (a) | 33,807 | 10,948,735 |
| KBR, Inc. | 212,240 | 11,760,218 |
| | | <u>\$ 26,438,477</u> |
| Apparel Manufacturers – 1.9% | | |
| Deckers Outdoor Corp. (a) | 7,197 | \$ 4,810,691 |
| On Holding AG (a) | 92,600 | 2,497,422 |
| Skechers USA, Inc., "A" (a) | 99,974 | 6,232,379 |
| | | <u>\$ 13,540,492</u> |
| Automotive – 1.1% | | |
| Visteon Corp. (a) | 60,395 | \$ 7,543,336 |
| Biotechnology – 1.7% | | |
| Adaptive Biotechnologies Corp. (a) | 419,614 | \$ 2,056,109 |
| BioAtla, Inc. (a) | 105,598 | 259,771 |
| Immunocore Holdings PLC, ADR (a) | 60,076 | 4,104,392 |
| Lyell Immunopharma, Inc. (a) | 210,617 | 408,597 |
| MaxCyte, Inc. (a) | 491,000 | 2,307,700 |
| Oxford Nanopore Technologies PLC (a) | 663,620 | 1,761,129 |
| Prelude Therapeutics, Inc. (a) | 101,925 | 435,220 |
| Sana Biotechnology, Inc. (a) | 162,437 | 662,743 |
| | | <u>\$ 11,995,661</u> |
| Brokerage & Asset Managers – 2.6% | | |
| GCM Grosvenor, Inc., "A" | 637,985 | \$ 5,716,346 |
| Hamilton Lane, Inc., "A" | 57,675 | 6,542,652 |
| WisdomTree Investments, Inc. | 947,296 | 6,564,761 |
| | | <u>\$ 18,823,759</u> |
| Business Services – 6.7% | | |
| ExlService Holdings, Inc. (a) | 382,206 | \$ 11,791,055 |
| Keywords Studios PLC | 328,382 | 6,956,669 |
| Remitly Global, Inc. (a) | 432,054 | 8,390,489 |
| Thoughtworks Holding, Inc. (a) | 1,031,905 | 4,963,463 |
| TriNet Group, Inc. (a) | 41,858 | 4,978,172 |
| WNS (Holdings) Ltd., ADR (a) | 169,667 | 10,722,955 |
| | | <u>\$ 47,802,803</u> |
| Chemicals – 0.7% | | |
| Element Solutions, Inc. | 207,186 | \$ 4,794,284 |
| Computer Software – 9.4% | | |
| Alkami Technology, Inc. (a) | 304,614 | \$ 7,386,889 |
| AvidXchange Holdings, Inc. (a) | 343,722 | 4,258,716 |
| Definitive Healthcare Corp. (a) | 669,062 | 6,650,476 |
| DoubleVerify Holdings, Inc. (a) | 354,538 | 13,039,908 |
| Kinaxis, Inc. (a) | 58,751 | 6,593,609 |
| Pagerduty, Inc. (a) | 410,908 | 9,512,520 |
| Paylocity Holding Corp. (a) | 17,656 | 2,910,592 |
| Procore Technologies, Inc. (a) | 125,443 | 8,683,164 |
| Sabre Corp. (a) | 1,018,661 | 4,482,108 |

| Issuer | Shares/Par | Value (\$) |
|------------------------------------|------------|---------------|
| Common Stocks – continued | | |
| Computer Software – continued | | |
| Zeta Global Holdings Corp. (a) | 410,513 | \$ 3,620,725 |
| | | \$ 67,138,707 |
| Computer Software - Systems – 4.9% | | |
| Five9, Inc. (a) | 153,835 | \$ 12,105,276 |
| Guidewire Software, Inc. (a) | 58,623 | 6,392,252 |
| Q2 Holdings, Inc. (a) | 220,569 | 9,574,900 |
| Rapid7, Inc. (a) | 126,950 | 7,248,845 |
| | | \$ 35,321,273 |
| Construction – 3.0% | | |
| AZEK Co., Inc. (a) | 178,812 | \$ 6,839,559 |
| Summit Materials, Inc., "A" (a) | 381,504 | 14,672,644 |
| | | \$ 21,512,203 |
| Consumer Products – 0.9% | | |
| e.l.f. Beauty, Inc. (a) | 30,920 | \$ 4,462,993 |
| ODDITY Tech Ltd. (a) | 36,852 | 1,714,723 |
| | | \$ 6,177,716 |
| Consumer Services – 1.8% | | |
| Boyd Group Services, Inc. | 33,647 | \$ 7,071,697 |
| European Wax Center, Inc., "A" (a) | 424,147 | 5,764,158 |
| | | \$ 12,835,855 |
| Electrical Equipment – 4.6% | | |
| Littlefuse, Inc. | 27,262 | \$ 7,294,221 |
| nVent Electric PLC | 205,565 | 12,146,836 |
| Sensata Technologies Holding PLC | 359,173 | 13,494,129 |
| | | \$ 32,935,186 |
| Electronics – 5.5% | | |
| Advanced Energy Industries, Inc. | 98,091 | \$ 10,684,072 |
| Allegro MicroSystems, Inc. (a) | 208,762 | 6,319,226 |
| Formfactor, Inc. (a) | 187,499 | 7,820,583 |
| Nova Ltd. (a) | 33,209 | 4,562,584 |
| Onto Innovation, Inc. (a) | 66,421 | 10,155,771 |
| | | \$ 39,542,236 |
| Energy - Independent – 2.5% | | |
| Matador Resources Co. | 154,746 | \$ 8,798,858 |
| Permian Resources Corp. | 658,682 | 8,958,075 |
| | | \$ 17,756,933 |
| Energy - Renewables – 0.4% | | |
| Nextracker, Inc. "A" (a) | 58,499 | \$ 2,740,678 |
| Engineering - Construction – 4.2% | | |

Portfolio of Investments – continued

| Issuer | Shares/Par | Value (\$) |
|--|------------|---------------|
| Common Stocks – continued | | |
| Entertainment – 0.5% | | |
| Vivid Seats, Inc., “A” (a) | 624,053 | \$ 3,944,015 |
| Food & Beverages – 1.2% | | |
| Duckhorn Portfolio, Inc. (a) | 724,344 | \$ 7,134,788 |
| Oatly Group AB, ADR (a)(l) | 1,383,197 | 1,632,173 |
| | | \$ 8,766,961 |
| Gaming & Lodging – 0.9% | | |
| Genius Sports Ltd. (a) | 1,032,755 | \$ 6,382,426 |
| General Merchandise – 2.0% | | |
| Five Below, Inc. (a) | 37,707 | \$ 8,037,624 |
| Ollie’s Bargain Outlet Holdings, Inc. (a) | 86,741 | 6,582,775 |
| | | \$ 14,620,399 |
| Leisure & Toys – 1.9% | | |
| Brunswick Corp. | 78,714 | \$ 7,615,580 |
| Corsair Gaming, Inc. (a) | 269,334 | 3,797,609 |
| Funko, Inc., “A” (a) | 236,553 | 1,828,555 |
| | | \$ 13,241,744 |
| Machinery & Tools – 3.5% | | |
| Crane Co. | 102,093 | \$ 12,061,267 |
| RB Global, Inc. | 195,826 | 13,098,801 |
| | | \$ 25,160,068 |
| Medical & Health Technology & Services – 1.8% | | |
| Certara, Inc. (a) | 498,766 | \$ 8,773,294 |
| HealthEquity, Inc. (a) | 66,549 | 4,412,199 |
| | | \$ 13,185,493 |
| Medical Equipment – 10.7% | | |
| Bio-Techne Corp. | 97,282 | \$ 7,506,279 |
| Bruker BioSciences Corp. | 107,904 | 7,928,786 |
| CryoPort, Inc. (a) | 384,643 | 5,958,120 |
| Envista Holdings Corp. (a) | 240,663 | 5,790,352 |
| Gerresheimer AG | 72,953 | 7,598,616 |
| Inari Medical, Inc. (a) | 62,716 | 4,071,523 |
| Maravai Lifesciences Holdings, Inc., “A” (a) | 208,685 | 1,366,887 |
| Masimo Corp. (a) | 65,608 | 7,689,914 |
| Natera, Inc. (a) | 85,631 | 5,363,926 |
| OptiNose, Inc. (a) | 581,679 | 750,366 |
| Outset Medical, Inc. (a) | 135,860 | 735,002 |
| PROCEPT BioRobotics Corp. (a) | 110,295 | 4,622,463 |
| QIAGEN N.V. (a) | 200,881 | 8,724,262 |
| Shockwave Medical, Inc. (a) | 43,386 | 8,267,636 |
| | | \$ 76,374,132 |
| Oil Services – 2.3% | | |
| Cactus, Inc., “A” | 92,750 | \$ 4,210,850 |
| ChampionX Corp. | 99,607 | 2,909,521 |
| TechnipFMC PLC | 468,052 | 9,426,567 |
| | | \$ 16,546,938 |

| Issuer | Shares/Par | Value (\$) |
|------------------------------------|------------|--------------|
| Common Stocks – continued | | |
| Pharmaceuticals – 4.4% | | |
| Amicus Therapeutics, Inc. (a) | 442,083 | \$ 6,273,158 |
| Annexon, Inc. (a) | 157,851 | 716,644 |
| Ascendis Pharma, ADR (a) | 20,031 | 2,522,904 |
| Collegium Pharmaceutical, Inc. (a) | 128,893 | 3,967,326 |
| Harmony Biosciences Holdings (a) | 97,099 | 3,136,298 |
| Kymera Therapeutics, Inc. (a) | 81,476 | 2,074,379 |
| Legend Biotech Corp., ADR (a) | | |

Portfolio of Investments – continued

| Issuer | Shares/Par | Value (\$) |
|---|------------|----------------------|
| Investment Companies (h) – 3.7% | | |
| Money Market Funds – 3.7% | | |
| MFS Institutional Money Market Portfolio, 5.42% (v) (Identified Cost, \$26,801,172) | 26,802,330 | \$ 26,807,690 |
| Collateral for Securities Loaned – 0.3% | | |
| State Street Navigator Securities Lending Government Money Market Portfolio, 5.36% (j) (Identified Cost, \$1,858,865) | 1,858,865 | \$ 1,858,865 |
| Other Assets, Less Liabilities – (0.3)% | | (2,273,086) |
| Net Assets – 100.0% | | \$715,189,420 |

(a) Non-income producing security.

(h) An affiliated issuer, which may be considered one in which the fund owns 5% or more of the outstanding voting securities, or a company which is under common control. At period end, the aggregate values of the fund's investments in affiliated issuers and in unaffiliated issuers were \$26,807,690 and \$690,654,816, respectively.

(j) The rate quoted is the annualized seven-day yield of the fund at period end.

(l) A portion of this security is on loan. See Note 2 for additional information.

(v) Affiliated issuer that is available only to investment companies managed by MFS. The rate quoted for the MFS Institutional Money Market Portfolio is the annualized seven-day yield of the fund at period end.

The following abbreviations are used in this report and are defined:

ADR American Depositary Receipt

REIT Real Estate Investment Trust

See Notes to Financial Statements

FINANCIAL STATEMENTS | STATEMENT OF ASSETS AND LIABILITIES

This statement represents your fund's balance sheet, which details the assets and liabilities comprising the total value of the fund.

At 12/31/23

| Assets | |
|---|----------------------|
| Investments in unaffiliated issuers, at value, including \$1,468,955 of securities on loan (identified cost, \$616,799,028) | \$690,654,816 |
| Investments in affiliated issuers, at value (identified cost, \$26,801,172) | 26,807,690 |
| Receivables for | |
| Fund shares sold | 694,816 |
| Interest and dividends | 320,940 |
| Other assets | 2,608 |
| Total assets | \$718,480,870 |

| Liabilities | |
|--|----------------------|
| Payables for | |
| Fund shares reacquired | \$1,240,036 |
| Collateral for securities loaned, at value (c) | 1,858,865 |
| Payable to affiliates | |
| Investment adviser | 33,536 |
| Administrative services fee | 1,081 |
| Shareholder servicing costs | 468 |
| Distribution and/or service fees | 11,259 |
| Payable for independent Trustees' compensation | 15 |
| Accrued expenses and other liabilities | 146,190 |
| Total liabilities | \$3,291,450 |
| Net assets | \$715,189,420 |

Net assets consist of

| | |
|---|----------------------|
| Paid-in capital | \$798,760,117 |
| Total distributable earnings (loss) | (83,570,697) |
| Net assets | \$715,189,420 |
| Shares of beneficial interest outstanding | 64,113,324 |

| | Net assets | Shares outstanding | Net asset value per share |
|---------------|-------------------|-------------------------------|--------------------------------------|
| Initial Class | \$308,483,565 | 23,833,477 | \$12.94 |
| Service Class | 406,705,855 | 40,279,847 | 10.10 |

(c) Non-cash collateral is not included.

See Notes to Financial Statements

FINANCIAL STATEMENTS | STATEMENT OF OPERATIONS

This statement describes how much your fund earned in investment income and accrued in expenses. It also describes any gains and/or losses generated by fund operations.

Year ended 12/31/23

Net investment income (loss)

| | |
|---|-----------------------|
| Income | |
| Dividends | \$3,259,869 |
| Dividends from affiliated issuers | 1,628,942 |
| Income on securities loaned | 122,964 |
| Other | 62,895 |
| Foreign taxes withheld | (87,423) |
| Total investment income | \$4,987,247 |
| Expenses | |
| Management fee | \$6,144,508 |
| Distribution and/or service fees | 971,092 |
| Shareholder servicing costs | 10,786 |
| Administrative services fee | 108,730 |
| Independent Trustees' compensation | 13,445 |
| Custodian fee | 50,879 |
| Shareholder communications | 11,280 |
| Audit and tax fees | 70,180 |
| Legal fees | 3,760 |
| Miscellaneous | 30,594 |
| Total expenses | \$7,415,254 |
| Reduction of expenses by investment adviser | (495,888) |
| Net expenses | \$6,919,366 |
| Net investment income (loss) | \$(1,932,119) |
| Realized and unrealized gain (loss) | |
| Realized gain (loss) (identified cost basis) | |
| Unaffiliated issuers | \$(56,640,289) |
| Affiliated issuers | 7,529 |
| Foreign currency | (403) |
| Net realized gain (loss) | \$(56,633,163) |
| Change in unrealized appreciation or depreciation | |
| Unaffiliated issuers | \$151,093,063 |
| Affiliated issuers | (3,550) |
| Translation of assets and liabilities in foreign currencies | 5,459 |
| Net unrealized gain (loss) | \$151,094,972 |
| Net realized and unrealized gain (loss) | \$94,461,809 |
| Change in net assets from operations | \$92,529,690 |

See Notes to Financial Statements

FINANCIAL STATEMENTS | STATEMENTS OF CHANGES IN NET ASSETS

These statements describe the increases and/or decreases in net assets resulting from operations, any distributions, and any shareholder transactions.

| | Year ended | |
|---|-------------------|-----------------|
| | 12/31/23 | 12/31/22 |
| Change in net assets | | |
| From operations | | |
| Net investment income (loss) | \$(1,932,119) | \$(2,757,964) |
| Net realized gain (loss) | (56,633,163) | (88,725,335) |
| Net unrealized gain (loss) | 151,094,972 | (207,358,071) |
| Change in net assets from operations | \$92,529,690 | \$(298,841,370) |
| Total distributions to shareholders | \$— | \$(245,542,542) |
| Change in net assets from fund share transactions | \$(38,689,026) | \$200,448,615 |
| Total change in net assets | \$53,840,664 | \$(343,935,297) |
| Net assets | | |
| At beginning of period | 661,348,756 | 1,005,284,053 |
| At end of period | \$715,189,420 | \$661,348,756 |

See Notes to Financial Statements

FINANCIAL STATEMENTS | FINANCIAL HIGHLIGHTS

The financial highlights table is intended to help you understand the fund's financial performance for the past 5 years. Certain information reflects

NOTES TO FINANCIAL STATEMENTS

(1) Business and Organization

MFS New Discovery Series (the fund) is a diversified series of MFS Variable Insurance Trust (the trust). The trust is organized as a Massachusetts business trust and is registered under the Investment Company Act of 1940, as amended, as an open-end management investment company. The shareholders of each series of the trust are separate accounts of insurance companies, which offer variable annuity and/or life insurance products, and qualified retirement and pension plans.

The fund is an investment company and accordingly follows the investment company accounting and reporting guidance of the Financial Accounting Standards Board (FASB) Accounting Standards Codification Topic 946 Financial Services - Investment Companies.

(2) Significant Accounting Policies

General — The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of increases and decreases in net assets from operations during the reporting period. Actual results could differ from those estimates. In the preparation of these financial statements, management has evaluated subsequent events occurring after the date of the fund's Statement of Assets and Liabilities through the date that the financial statements were issued. The fund will generally focus on securities of small size companies which may be more volatile than those of larger companies. The fund invests in foreign securities. Investments in foreign securities are vulnerable to the effects of changes in the relative values of the local currency and the U.S. dollar and to the effects of changes in each country's market, economic, industrial, political, regulatory, geopolitical, environmental, public health, and other conditions.

Balance Sheet Offsetting — The fund's accounting policy with respect to balance sheet offsetting is that, absent an event of default by the counterparty or a termination of the agreement, the International Swaps and Derivatives Association (ISDA) Master

markets. Accordingly, the fund's foreign equity securities may often be valued at fair value. The adviser generally relies on third-party pricing services or other information (such as the correlation with price movements of similar securities in the same or other markets;

\$7,136 held by the custodian. The collateral on securities loaned exceeded the value of securities on loan at period end. The liability for cash collateral for securities loaned is carried at fair value, which is categorized as level 2 within the fair value hierarchy. A portion of the income generated upon investment of the collateral is remitted to the Borrowers, and the remainder is allocated between the fund and the lending agent. On loans collateralized by U.S. Treasury and/or federal agency obligations, a fee is received from the Borrower, and is allocated between the fund and the lending agent. Income from securities lending is separately reported in the Statement of Operationsagent. OnOnand the

The federal tax cost and the tax basis components of distributable earnings were as follows:

| As of 12/31/23 | |
|--|----------------|
| Cost of investments | \$658,274,228 |
| Gross appreciation | 149,173,556 |
| Gross depreciation | (89,985,278) |
| Net unrealized appreciation (depreciation) | \$59,188,278 |
| Capital loss carryforwards | (142,756,856) |
| Other temporary differences | (2,119) |
| Total distributable earnings (loss) | \$(83,570,697) |

As of December 31, 2023, the fund had capital loss carryforwards available to offset future realized gains. These net capital losses may be carried forward indefinitely and their character is retained as short-term and/or long-term losses. Such losses are characterized as follows:

| | |
|------------|-----------------|
| Short-Term | \$(54,227,495) |
| Long-Term | (88,529,361) |
| Total | \$(142,756,856) |

Multiple Classes of Shares of Beneficial Interest — The fund offers multiple classes of shares, which differ in their respective

MFS New Discovery Series

Notes to Financial Statements - continued

The fund's distribution plan provides that the fund will pay MFD distribution and/or service fees equal to 0.25% per annum of its average daily net assets attributable to Service Class shares as partial consideration for services performed and expenses incurred by MFD and financial intermediaries (including participating insurance companies that invest in the fund to fund variable annuity and variable life insurance contracts, sponsors of qualified retirement and pension plans that invest in the fund, and affiliates of these participating insurance companies and plan sponsors) in connection with the sale and distribution of the Service Class shares as well as shareholder servicing and account maintenance activities. MFD may subsequently pay all, or a portion, of the distribution and/or service fees to financial intermediaries. The distribution and/or service fees are computed daily and paid monthly.

Shareholder Servicing Agent — MFS Service Center, Inc. (MFSC), a wholly-owned subsidiary of MFS, receives a fee from the fund for its services as shareholder servicing agent. For the year ended December 31, 2023, the fee was \$7,270, which equated to 0.0011% annually of the fund's average daily net assets. MFSC also receives reimbursement from the fund for out-of-pocket expenses paid by MFSC on behalf of the fund. For the year ended December 31, 2023, these costs amounted to \$3,516.

Administrator — MFS provides certain financial, legal, shareholder communications, compliance, and other administrative services to the fund. Under an administrative services agreement, the fund reimburses MFS the costs incurred to provide these services. The fund is charged an annual fixed amount of \$17,500 plus a fee based on average daily net assets. The administrative services fee is computed daily and paid monthly. The administrative services fee incurred for the year ended December 31, 2023 was equivalent to an annual effective rate of 0.0159% of the fund's average daily net assets.

Trustees' and Officers' Compensation — The fund pays compensation to independent Trustees in the form of a retainer, attendance fees, and additional compensation to Board and Committee chairpersons. Independent Trustees' compensation is accrued daily and paid subsequent to each Trustee Board meeting. The fund does not pay compensation directly to Trustees or officers of the fund who are also officers of the investment adviser, all of whom receive remuneration from MFS for their services to the fund. Certain officers and Trustees of the fund are officers or directors of MFS, MFD, and MFSC.

Other — The fund invests in the MFS Institutional Money Market Portfolio which is managed by MFS and seeks current income consistent with preservation of capital and liquidity. This money market fund does not pay a management fee to MFS but does incur investment and operating costs.

During the year ended December 31, 2023, pursuant to a policy adopted by the Board of Trustees and designed to comply with Rule 17a-7 under the Investment Company Act of 1940 (the "Act") and relevant guidance, the fund engaged in purchase and sale transactions with funds and accounts for which MFS serves as investment adviser or sub-adviser ("cross-trades") which amounted to \$360,518 and \$1,726,457, respectively. The sales transactions resulted in net realized gains (losses) of \$(1,294,930).

The adviser has voluntarily undertaken to reimburse the fund from its own resources on a quarterly basis for the cost of investment research embedded in the cost of the fund's securities trades. This agreement may be rescinded at any time. For the year ended December 31, 2023, this reimbursement amounted to \$62,637, which is included in "Other" income in the Statement of Operations.

(4) Portfolio Securities

For the year ended December 31, 2023, purchases and sales of investments, other than short-term obligations, aggregated \$398,212,592 and \$435,928,424, respectively.

(5) Shares of Beneficial Interest

The fund's Declaration of Trust permits the Trustees to issue an unlimited number of full and fractional shares of beneficial interest. Transactions in fund shares were as follows:

| | Year ended 12/31/23 | | Year ended 12/31/22 | |
|---------------|------------------------|--------------|------------------------|---------------|
| | Shares | Amount | Shares | Amount |
| Shares sold | | | | |
| Initial Class | 2,137,934 | \$25,862,792 | 2,032,873 | \$34,222,306 |
| Service Class | 3,454,011 | 32,281,580 | 11,519,641 | 168,576,091 |
| | 5,591,945 | \$58,144,372 | 13,552,514 | \$202,798,397 |

| | Year ended 12/31/23 | | Year ended 12/31/22 | |
|---|------------------------|----------------|------------------------|-----------------|
| | Shares | Amount | Shares | Amount |
| Shares issued to shareholders in reinvestment of distributions | | | | |
| Initial Class | — | \$— | 8,064,609 | \$97,259,181 |
| Service Class | — | — | 15,707,983 | 148,283,361 |
| | — | \$— | 23,772,592 | \$245,542,542 |
| Shares reacquired | | | | |
| Initial Class | (3,664,075) | \$(44,513,823) | (3,327,692) | \$(53,400,187) |
| Service Class | (5,536,298) | (52,319,575) | (13,705,736) | (194,492,137) |
| | (9,200,373) | \$(96,833,398) | (17,033,428) | \$(247,892,324) |
| Net change | | | | |
| Initial Class | (1,526,141) | \$(18,651,031) | 6,769,790 | \$78,081,300 |
| Service Class | (2,082,287) | (20,037,995) | 13,521,888 | 122,367,315 |
| | (3,608,428) | \$(38,689,026) | 20,291,678 | \$200,448,615 |

The fund is one of several mutual funds in which certain MFS funds may invest. The MFS funds do not invest in the underlying funds for the purpose of exercising management or control. At the end of the period, the MFS Moderate Allocation Portfolio was the

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Trustees of MFS Variable Insurance Trust and the Shareholders of MFS New Discovery Series:

Opinion on the Financial Statements and Financial Highlights

We have audited the accompanying statement of assets and liabilities of MFS New Discovery Series (the "Fund"), including the portfolio of investments, as of December 31, 2023, the related statement of operations for the year then ended, the statements of changes in net assets for each of the two years in the period then ended, the financial highlights for each of the five years in the period then ended, and the related notes. In our opinion, the financial statements and financial highlights present fairly, in all material respects, the financial position of the Fund as of December 31, 2023, and the results of its operations for the year then ended, the changes in its net assets for each of the two years in the period then ended, and the financial highlights for each of the five years in the period then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements and financial highlights are the responsibility of the Fund's management. Our responsibility is to express an opinion on the Fund's financial statements and financial highlights based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Fund in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements and financial highlights are free of material misstatement, whether due to error or fraud. The Fund is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Fund's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements and financial highlights, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements and financial highlights. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements and financial highlights. Our procedures included confirmation of securities owned as of December 31, 2023, by correspondence with the custodian and brokers. We believe that our audits provide a reasonable basis for our opinion.

DELOITTE & TOUCHE LLP

Boston, Massachusetts
February 14, 2024

We have served as the auditor of one or more of the MFS investment companies since 1924.

MFS New Discovery Series

Trustees and Officers - continued

| Name, Age | Position(s) Held with Fund | Trustee/Officer Since^(h) | Number of MFS Funds for which the Person is an Officer | Principal Occupations During the Past Five Years |
|---|---|--|---|--|
| John W. Clark, Jr. ^(k) (age 56) | Assistant Treasurer | April 2017 | 136 | Massachusetts Financial Services Company, Vice President |
| David L. DiLorenzo ^(k) (age 55) | President | July 2005 | 136 | Massachusetts Financial Services Company, Senior Vice President |
| Heidi W. Hardin ^(k) (age 56) | Secretary and Clerk | April 2017 | 136 | Massachusetts Financial Services Company, Executive Vice President and General Counsel |
| Brian E. Langenfeld ^(k) (age 50) | Assistant Secretary and Assistant Clerk | June 2006 | 136 | Massachusetts Financial Services Company, Vice President and Managing Counsel |
| Rosa E. Licea-Mailloux ^(k) (age 47) | Chief Compliance Officer | March 2022 | 136 | Massachusetts Financial Services Company, Vice President (since 2018); Director of Corporate Compliance (2018-2021), Senior Director Compliance (2021-2022), Senior Managing Director of North American Compliance & Chief Compliance Officer (since March 2022) |
| Amanda S. Mooradian ^(k) (age 44) | Assistant Secretary and Assistant Clerk | September 2018 | 136 | Massachusetts Financial Services Company, Assistant Vice President and Senior Counsel |
| Susan A. Pereira ^(k) (age 53) | Assistant Secretary and Assistant Clerk | July 2005 | 136 | Massachusetts Financial Services Company, Vice President and Managing Counsel |
| Kasey L. Phillips ^(k) (age 53) | Assistant Treasurer | September 2012 | 136 | Massachusetts Financial Services Company, Vice President |
| Matthew A. Stowe ^(k) (age 49) | Assistant Secretary and Assistant Clerk | October 2014 | 136 | Massachusetts Financial Services Company, Vice President and Senior Managing Counsel |
| William B. Wilson ^(k) (age 41) | Assistant Secretary and Assistant Clerk | October 2022 | 136 | Massachusetts Financial Services Company, Assistant Vice President and Senior Counsel |
| James O. Yost ^(k) (age 63) | Treasurer | September 1990 | 136 | Massachusetts Financial Services Company, Senior Vice President |

(h) Date first appointed to serve as Trustee/Officer of an MFS Fund. Each Trustee has served continuously since appointment unless indicated otherwise. From January 2012 through December 2016, Messrs. DiLorenzo and Yost served as Treasurer and Deputy Treasurer of the Funds, respectively.

(j) Directorships or trusteeships of companies required to report to the Securities and Exchange Commission (i.e., "public companies").

(k) "Interested person" of the Trust within the meaning of the Investment Company Act of 1940 (referred to as the 1940 Act), which is the principal federal law governing investment companies like the fund, as a result of a position with MFS. The address of MFS is 111 Huntington Avenue, Boston, Massachusetts 02199-7618.

Each Trustee (other than Messrs. Jones, Kilman and Roberge) has been elected by shareholders and each Trustee and Officer holds office until his or her successor is chosen and qualified or until his or her earlier death, resignation, retirement or removal. Mr. Roberge became a Trustee of the Funds on January 1, 2021 and Messrs. Jones and Kilman became Trustees of the Funds on January 1, 2019. The Trust does not hold annual meetings for the purpose of electing Trustees, and Trustees are not elected for fixed terms. Under the terms of the Board's retirement policy, an Independent Trustee shall retire at the end of the calendar year in which he or she reaches the earlier of 75 years of age or 15 years of service on the Board (or, in the case of any Independent Trustee who joined the Board prior to 2015, 20 years of service on the Board).

Messrs. Buller, Caroselli, Jones and Otis are members of the Trust's Audit Committee.

Each of the Interested Trustees and certain Officers hold comparable officer positions with certain affiliates of MFS.

BOARD REVIEW OF INVESTMENT ADVISORY AGREEMENT

MFS New Discovery Series

The Investment Company Act of 1940 requires that both the full Board of Trustees and a majority of the non-interested (“independent”) Trustees, voting separately, annually approve the continuation of the Fund’s investment advisory agreement with MFS. The Trustees consider matters bearing on the Fund and its advisory arrangements at their meetings throughout the year, including a review of performance data at each regular meeting. In addition, the independent Trustees met several times over the course of three months beginning in May and ending in July, 2023 (“contract review meetings”) for the specific purpose of considering whether to approve the continuation of the investment advisory agreement for the Fund and the other investment

PROXY VOTING POLICIES AND INFORMATION

MFS votes proxies on behalf of the fund pursuant to proxy voting policies and procedures that are available without charge, upon request, by calling 1-800-225-2606, by visiting [f .c / /](http://www.fidelity.com), or by visiting the SEC's Web site at [://](http://www.sec.gov) . ec. .

Information regarding how the fund voted proxies relating to portfolio securities during the most recent twelve-month period ended June 30 is available by August 31 of each year without charge by visiting [f .c / /](http://www.fidelity.com), or by visiting the SEC's Web site at [://](http://www.sec.gov) . ec. .

QUARTERLY PORTFOLIO DISCLOSURE

The fund files a complete schedule of portfolio holdings with the SEC for the first and third quarters of each fiscal year as an exhibit to its reports on Form N-PORT. The fund's Form N-PORT reports are available on the SEC's Web site at [://](http://www.sec.gov) . ec. . A shareholder can obtain the portfolio holdings report for the first and third quarters of the fund's fiscal year at [f .c / /](http://www.fidelity.com) by choosing the fund's name and then scrolling to the "Resources" section and clicking on the "Prospectus and Reports" tab.

FURTHER INFORMATION

FACTS

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

