

# MFS® Total Return Series

MFS® Variable Insurance Trust



## Initial Class

## ANNUAL SHAREHOLDER REPORT

This annual shareholder report contains important information about MFS Total Return Series for the period of January 1, 2024 to December 31, 2024. You can find additional information about the fund at [insurancefunds.mfs.com](https://insurancefunds.mfs.com). You can also request this information by contacting us at 1-800-225-2606 or by sending an e-mail request to [orderliterature@mfs.com](mailto:orderliterature@mfs.com).

### FUND EXPENSES

What were the fund costs for the last year?

<i>(based on a hypothetical \$10,000 investment)</i>		
Class Name	Costs of a \$10,000 investment	Costs paid as a percentage of a \$10,000 investment
Initial Class	\$63	0.61%

### MANAGEMENT'S DISCUSSION OF FUND PERFORMANCE

- For the twelve months ended December 31, 2024, Initial Class shares of the MFS Total Return Series (fund) provided a total return of 7.75%, at net asset value. This compares with returns of 25.02% and 1.25% for the fund's benchmarks, the Standard & Poor's 500 Stock Index and the Bloomberg U.S. Aggregate Bond Index, respectively. The fund's other benchmark, the MFS Total Return Blended Index (Blended Index), generated a return of 15.04%. The Blended Index reflects the blended returns of broad asset class indices, with percentage allocations to each index designed to resemble the broad asset class allocations of the fund. The market indices and related percentage allocations used to compile the Blended Index are set forth in the Fund Performance.
- Moderating inflation pressures allowed many global central banks to ease monetary policy during the period. However, the pace of disinflation slowed toward the end of the period, particularly in the United States.
- Geopolitical strains remained high amid ongoing conflicts in Ukraine and in the Middle East, while relations between China and the US remained tense. At the end of the period, China unveiled a sizable stimulus package aimed at shoring up its property sector and the finances of highly indebted local governments.
- Toward the end of the period, labor markets loosened modestly, particularly in the US, brightening the inflation outlook as economic growth remained solid.
- Global equity markets reached record levels during the period as they withstood the adversity of the unsettled geopolitical climate and a higher interest rate environment amid optimism over the wide-scale adoption of artificial intelligence and continued healthy earnings growth.
- Global bond yields climbed to close out the calendar year on the back of the US election result, resilient economic growth, and concerns that global disinflationary progress may have stalled. Reflecting increased inflation uncertainty, market expectations for future Federal Reserve interest rate cuts in 2025 have been pared back while already compressed credit spreads tightened further. Global bond market volatility, as measured by the Merrill Lynch Option Volatility Estimate (MOVE) index, declined in the fourth quarter after peaking before the US election.
- Top contributors to performance relative to the MFS Total Return Blended Index:
  - Within the equity portion of the fund, an overweight position and stock selection within the financials sector benefited relative performance.
  - Within the fixed income portion of the fund, the fund's exposure to collateralized mortgage obligations (CMOs), for which the benchmark has no exposure, and its underweight allocation to the treasury sector, contributed to relative performance. Additionally, favorable bond selection and an overweight allocation to the financial institutions sector, primarily across A-rated bonds, further strengthened relative results.

- Top detractors from performance relative to the MFS Total Return Blended Index:
  - Within the equity portion of the fund, stock selection and an underweight position within the information technology sector detracted from relative performance. Additionally, stock selection within both the communication services and consumer discretionary sectors also weakened relative results.
  - Within the fixed income portion of the fund, bond selection within the MBS agency fixed rate sector, particularly AA-rated securities, weighed on relative returns.

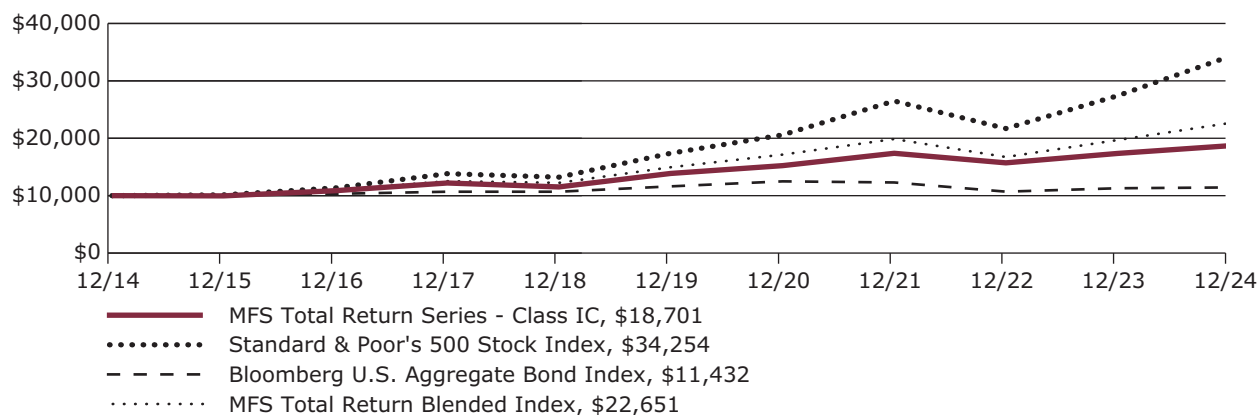
## FUND PERFORMANCE

***The fund's past performance is not a good predictor of the fund's future performance.***

The graph and table below do not reflect the deduction of taxes that a shareholder would pay on fund distributions or the redemption of fund shares. The graph and table below 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 through which the fund is offered. The graph and table below assume reinvestment of dividends and capital gain distributions.

### Growth of a Hypothetical \$10,000 Investment

This graph shows the performance of a hypothetical \$10,000 investment in Initial Class over a ten year period or since inception, if shorter, in comparison to (i) a broad measure of market performance and (ii) an additional index that MFS believes more closely reflects the market segments in which the fund invests.



### Average Annual Total Returns through 12/31/24

This table shows the average annual total returns of the class of shares noted for the periods shown. It also shows the average annual total returns of (i) a broad measure of market performance and (ii) an additional index that MFS believes more closely reflects the market segments in which the fund invests, over the same periods.

Share Class	1-yr	5-yr	10-yr
Initial Class	7.75%	6.16%	6.46%
<b>Comparative Benchmark(s)</b>			
Standard & Poor's 500 Stock Index Δ	25.02%	14.53%	13.10%
MFS Total Return Blended Index Δ	15.04%	8.67%	8.52%
Bloomberg U.S. Aggregate Bond Index Δ	1.25%	(0.33)%	1.35%

Δ Source: FactSet Research Systems Inc.

The MFS Total Return Blended Index (a custom index) was comprised of the following at the end of the reporting period:

**12/31/24**

Standard & Poor's 500 Stock Index	60%
Bloomberg U.S. Aggregate Bond Index	40%

## Notes to Fund Performance

Performance results reflect any applicable expense subsidies and waivers in effect during the periods shown. Without such subsidies and waivers the fund's performance results would be less favorable.

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

Visit [mfs.com/perf/ic](https://mfs.com/perf/ic) for more recent performance information.

## FUND STATISTICS AS OF 12/31/24

Net Assets (\$):	2,098,596,158	Total Management Fee (\$)#::	14,337,903
Total Number of Holdings:	968	Portfolio Turnover Rate (%):	58

# Includes the effect of any management fee waivers, if applicable.

Where the fund holds derivatives, they are not included in the total number of portfolio holdings.

## PORTFOLIO COMPOSITION (BASED ON TOTAL INVESTMENTS AS OF 12/31/24)

### Portfolio structure

Equities	60.1%
Fixed Income	38.8%
Money Market Funds	1.1%

### Equity sectors

Financials	16.8%
Health Care	9.8%
Industrials	8.2%
Consumer Staples	4.6%
Information Technology	4.4%
Communication Services	4.3%
Energy	4.0%
Utilities	3.2%
Consumer Discretionary	2.4%
Materials	2.4%

### Composition including fixed income credit quality

AAA	4.8%
AA	1.9%
A	5.3%
BBB	8.0%
CCC	0.0%
U.S. Government	7.1%
Federal Agencies	11.7%
Not Rated	0.0%
Non-Fixed Income	60.1%
Money Market Funds	1.1%

Ratings are assigned using Moody's, Fitch, and Standard & Poor's and applying a hierarchy: If all 3 agencies rate a security, the middle rating is assigned; if 2 agencies rate a security, the lower rating is assigned. If none of the 3 agencies rate a security, we use DBRS Morningstar. If none of the 4 agencies rate a security, we use Kroll Bond Rating Agency. Ratings are shown in the S&P and Fitch scale (e.g., AAA). All ratings are subject to change.

MFS uses the Global Industry Classification Standard (GICS®) for sector/industry reporting. MFS has applied its own internal sector/industry classification methodology for equity securities and non-equity securities that are unclassified by GICS.

## ADDITIONAL INFORMATION

You can find the fund's summary prospectus, prospectus, most recent annual and semiannual reports, financial information, portfolio holdings, and statement of additional information online at [insurancefunds.mfs.com](http://insurancefunds.mfs.com). Proxy voting information is available without charge by calling 1-800-225-2606, by visiting [mfs.com/proxyvoting](http://mfs.com/proxyvoting), or by visiting the SEC's website at <http://www.sec.gov>.

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