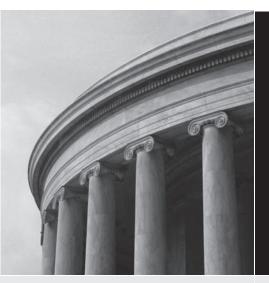
John Hancock.



# JOHN HANCOCK Variable Insurance Trust

Managed Volatility Growth Portfolio Managed Volatility Balanced Portfolio Managed Volatility Moderate Portfolio Managed Volatility Conservative Portfolio

Beginning on July 24, 2024, as required by regulations adopted by the U.S. Securities and Exchange Commission, open-end mutual funds and ETFs will transmit tailored annual and semiannual reports to shareholders that highlight key information deemed important for retail investors to assess and monitor their fund investments. Other information, including financial statements, will no longer appear in shareholder reports transmitted to shareholders, but must be available online, delivered free of charge upon request, and filed on a semiannual basis on Form N-CSR.

Annual report December 31, 2023

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#### Managers' commentary and portfolio performance

#### Trust performance

In the following pages, we have set forth information regarding the performance of each Managed Volatility Portfolio of John Hancock Variable Insurance Trust (the trust or JHVIT). There are several ways to evaluate a portfolio's historical performance. One can look at the total percentage change in value, the average annual percentage change, or the growth of a hypothetical \$10,000 investment. With respect to all performance information presented, it is important to understand that past performance does not guarantee future results. Return and principal fluctuate, and shares, when redeemed, may be worth more or less than their original cost.

#### Performance tables

The performance tables show two types of total return information: cumulative and average annual total returns. A cumulative total return includes dividend reinvestments and is an expression of a portfolio's total change in share value in percentage terms over a set period of time-one, five, and ten years (or since the portfolio's inception if less than the applicable period). An average annual total return takes the portfolio's cumulative total return for a time period greater than one year and shows what would have happened if the portfolio had performed at a constant rate each year. The tables show all cumulative and average annual total returns, net of fees and expenses of the trust, but do not reflect the insurance (separate account) expenses (including a possible contingent deferred sales charge) of the variable annuity and variable life products that invest in the trust. If these were included, performance would be lower.

## Graph—change in value of \$10,000 investment and comparative indexes

The performance graph for each portfolio shows the change in value of a \$10,000 investment over the life or 10-year period of each portfolio, whichever is shorter. Each portfolio's performance is compared with the performance of one or more broad-based security indexes as a benchmark. All performance information includes the reinvestment of dividends and capital gain distributions, as well as the deduction of ongoing management fees and portfolio operating expenses. The benchmarks used for comparison are unmanaged and include reinvestment of dividends and capital gain distributions, if any, but do not reflect any fees or expenses. Portfolios that invest in multiple asset classes are compared with a customized benchmark. This benchmark comprises a set percentage allocation from each of the asset classes in which the portfolio invests.

#### Portfolio managers' commentary

Finally, we have provided a commentary by the portfolio managers regarding each portfolio's performance during the year ended December 31, 2023. The views expressed are those of the portfolio managers as of December 31, 2023, and are subject to change based on market and other conditions. Information about a portfolio's holdings, asset allocation, or country diversification is historical and is no indication of future portfolio composition, which may vary. Information provided in this report should not be considered a recommendation to purchase or sell securities. The portfolios are not insured by the FDIC; are not deposits or other obligations of, or guaranteed by, banks; and are subject to investment risks, including loss of principal amount invested. For a more detailed discussion of the risks associated with the portfolios, see the trust prospectus.

#### Notes about risk

The portfolios may be subject to various risks as described in the portfolios' prospectus. Political tensions, armed conflicts, and any resulting economic sanctions on entities and/or individuals of a particular country could lead such a country into an economic recession. A widespread health crisis such as a global pandemic could cause substantial market volatility, exchange-trading suspensions, and closures, which may lead to less liquidity in certain instruments, industries, sectors or the markets generally, and may ultimately affect portfolio performance. For more information, please refer to the "Principal risks" section of the prospectus.

Standard & Poor's, Standard & Poor's 500, and S&P 500 are trademarks of The McGraw-Hill Companies, Inc. Bloomberg is a registered trademark of Bloomberg LP. The Managed Volatility Portfolios are not sponsored, endorsed, managed, advised, sold, or promoted by any of these companies, and none of these companies makes any representation regarding the advisability of investing in any Managed Volatility Portfolio.

### Portfolio Managers' Commentary

**Performance** ► For the year ended December 31, 2023, the Managed Volatility Growth Portfolio, Series I shares returned 13.69% and the Blended Index for the portfolio, as defined in the Performance Table below, returned 18.03%.

For the year ended December 31, 2023, the Managed Volatility Balanced Portfolio, Series I shares returned 11.99% and the Blended Index for the portfolio, as defined in the Performance Table below, returned 14.37%.

For the year ended December 31, 2023, the Managed Volatility Moderate Portfolio, Series I shares returned 10.64% and the Blended Index for the portfolio, as defined in the Performance Table below, returned 12.57%.

For the year ended December 31, 2023, the Managed Volatility Conservative Portfolio, Series I shares returned 5.47% and the Blended Index for the portfolio, as defined in the Performance Table below, returned 9.01%.

#### Environment >

Despite elevated and persistent worries about a wide range of macroeconomic issues, the financial markets posted strong gains in 2023. Global equities performed particularly well as investors were encouraged by economic data and corporate earnings results that exceeded the depressed expectations in place at the start of the year. In addition, major central banks slowed their pace of interest rate increases as inflation waned. Late in the year, investors began to anticipate that the U.S. Federal Reserve and other central banks would begin to cut rates in 2024, a favorable shift that propelled equities sharply higher in November and December on anticipation of a soft landing for the economy.

Mega-cap U.S. technology stocks outperformed the broader indexes for the full year, as investors continued to view this area as a relative safe haven due to its steady earnings, robust balance sheets, and potential ability to capitalize on the growth of artificial intelligence. On the other hand, the value style and smallto mid-sized companies delivered positive returns but didn't keep pace with the overall U.S. market. International equities performed well, with Europe leading the way higher as it came apparent that the conflict in Ukraine was not having as significant of an impact as investors had initially feared. However, international equities lagged the United States due in part to a lower representation of high-growth technology stocks.

Bonds logged gains, albeit not to the extent of equities. After providing lackluster returns for most of 2023, the fixed-income markets surged in the fourth quarter on the improving interest-rate outlook. The credit-oriented areas of the market—investment-grade corporates, high-yield bonds, senior loans, and emerging-market debt—outperformed government issues due to their lower degree of interest-rate sensitivity and a larger contribution from income.

While all four John Hancock Managed Volatility Portfolios posted gains, they trailed their blended benchmark.

Detractors for all portfolios included overweights to U.S. small cap, U.S. mid-cap and emerging-market equities. Holdings that detracted to performance included JHF Multifactor Mid Cap ETF and JHF Emerging Markets Equity Fund.

For all portfolios, the futures contracts, which seek to manage the volatility of returns and limit the magnitude of losses for the portfolios were detractors.

A contributor for all portfolios included an underweight to U.S. Large cap equities. For all portfolios except for Managed Volatility Conservative Portfolio an underweight to international developed equities was a contributor. Manager's performance within the fixed income portion of all the portfolios was a contributor as well. Holdings that contributed to performance included JHF Fundamental Large Cap Core Fund and JHVIT Select Bond Trust.

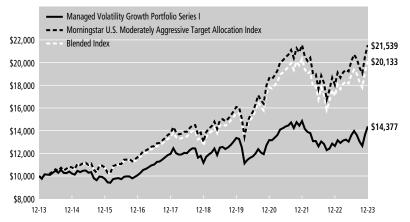
## **Managed Volatility Growth Portfolio**

Subadvisor: Manulife Investment Management (US) LLC

Portfolio Managers: Geoffrey Kelley, CFA, Robert Sykes, CFA, Nathan Thooft, CFA, Jeffrey Wu

**INVESTMENT OBJECTIVE & POLICIES** > The portfolio's investment objective is to seek long-term growth of capital while seeking to both manage the volatility of return and limit the magnitude of portfolio losses. The portfolio operates as a fund of funds and invests in both equity funds and fixed-income funds. The portfolio also may use certain risk management techniques to seek to manage the volatility of returns (i.e., standard deviation) and limit the magnitude of portfolio losses. The portfolio's exposure to equity securities (either directly or through investment in underlying funds or derivatives) normally will not exceed 77% of net assets.

#### CHANGE IN VALUE OF \$10,000 INVESTMENT AND COMPARATIVE INDEXES



#### **ASSET ALLOCATION (% of net assets)**

Affiliated investment companies	96.2
Equity	68.0
Large blend	31.1
U.S. large cap	16.5
Emerging-market equity	6.3
U.S. mid cap	6.1
U.S. small cap	4.2
International equity	3.8
Fixed income	28.2
Intermediate bond	28.2
Unaffiliated investment companies	2.6
Equity	2.6
Short-term investments and other	1.2

PERFORMANCE TABLE	Avera	ge Annual Total	Return	Cumulative	Total Return
Total returns for the period ended 12-31-23 (%)	1-year	5-year	10-year	5-year	10-year
Managed Volatility Growth Portfolio Series I	13.69	5.18	3.70	28.71	43.77
Managed Volatility Growth Portfolio Series II	13.54	4.98	3.50	27.52	41.06
Managed Volatility Growth Portfolio Series NAV	13.81	5.25	3.76	29.19	44.64
Morningstar U.S. Moderately Aggressive Target Allocation Index	19.46	10.61	7.97	65.57	115.39
Blended Index	18.03	9.66	7.25	58.60	101.33

Performance does not reflect any insurance-related charges. If these charges were reflected, performance would be lower. Past performance does not predict future results.

Morningstar U.S. Moderately Aggressive Target Allocation Index seeks 77.5% exposure to global equity markets from a diversified mix of stocks and bonds.

The Blended Index is 49% Russell 3000 Index, 21% MSCI EAFE Index and 30% Bloomberg U.S. Aggregate Bond Index.

It is not possible to invest directly in an index. Index figures do not reflect expenses, which would result in lower returns.

	Series I	Series II	Series NAV
Gross (%)	0.83	1.03	0.78
Net (%)	0.83	1.03	0.78

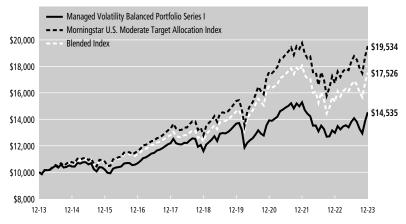
## **Managed Volatility Balanced Portfolio**

Subadvisor: Manulife Investment Management (US) LLC

Portfolio Managers: Geoffrey Kelley, CFA, Robert Sykes, CFA, Nathan Thooft, CFA, Jeffrey Wu

**INVESTMENT OBJECTIVE & POLICIES** ► The portfolio's investment objective is to seek growth of capital and current income while seeking to both manage the volatility of return and limit the magnitude of portfolio losses. The portfolio operates as a fund of funds and invests in both equity funds and fixed-income funds. The portfolio also may use certain risk management techniques to seek to manage the volatility of returns (i.e., standard deviation) and limit the magnitude of portfolio losses. The portfolio's exposure to equity securities (either directly or through investment in underlying funds or derivatives) normally will not exceed 55% of net assets.

#### CHANGE IN VALUE OF \$10,000 INVESTMENT AND COMPARATIVE INDEXES



ASSET ALLOCATION (% of net assets)

Affiliated investment companies	96.8
Equity	48.0
Large blend	22.1
U.S. large cap	13.0
Emerging-market equity	4.0
U.S. mid cap	3.8
U.S. small cap	2.9
International equity	2.2
Fixed income	48.8
Intermediate bond	48.8
Unaffiliated investment companies	2.0
Equity	2.0
Short-term investments and other	1.2

PERFORMANCE TABLE	Averag	ge Annual Total R	eturn	Cumulative T	otal Return
Total returns for the period ended 12-31-23 (%)	1-year	5-year	10-year	5-year	10-year
Managed Volatility Balanced Portfolio Series I Managed Volatility Balanced Portfolio Series II Managed Volatility Balanced Portfolio Series NAV Morningstar U.S. Moderate Target Allocation Index Blended Index	11.99 11.79 12.00 16.75 14.37	4.62 4.42 4.67 8.84 7.29	3.81 3.61 3.86 6.93 5.77	25.33 24.12 25.66 52.75 42.17	45.35 42.52 46.05 95.34 75.26

Performance does not reflect any insurance-related charges. If these charges were reflected, performance would be lower. Past performance does not predict future results.

Morningstar U.S. Moderate Target Allocation Index seeks 60% exposure to global equity markets from a diversified mix of stocks and bonds.

The Blended Index is 35% Russell 3000 Index, 15% MSCI EAFE Index, and 50% Bloomberg U.S. Aggregate Bond Index.

It is not possible to invest directly in an index. Index figures do not reflect expenses, which would result in lower returns.

	Series I	Series II	Series NAV
Gross (%)	0.80	1.00	0.75
Net (%)	0.80	1.00	0.75

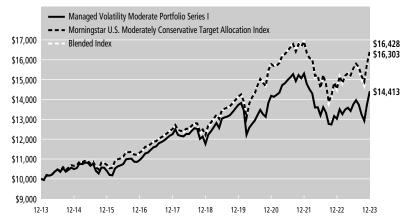
## **Managed Volatility Moderate Portfolio**

Subadvisor: Manulife Investment Management (US) LLC

Portfolio Managers: Geoffrey Kelley, CFA, Robert Sykes, CFA, Nathan Thooft, CFA, Jeffrey Wu

**INVESTMENT OBJECTIVE & POLICIES** ➤ The portfolio's investment objective is to seek current income and growth of capital while seeking to both manage the volatility of return and limit the magnitude of portfolio losses. The portfolio operates as a fund of funds and invests in both equity funds and fixed-income funds. The portfolio also may use certain risk management techniques to seek to manage the volatility of returns (i.e., standard deviation) and limit the magnitude of portfolio losses. The portfolio's exposure to equity securities (either directly or through investment in underlying funds or derivatives) normally will not exceed 44% of net assets.

#### CHANGE IN VALUE OF \$10,000 INVESTMENT AND COMPARATIVE INDEXES



#### ASSET ALLOCATION (% of net assets)

Affiliated investment companies	97.0
Equity	38.0
Large blend	18.0
U.S. large cap	11.4
Emerging-market equity	2.9
U.S. mid cap	2.9
U.S. small cap	1.9
International equity	0.9
Fixed income	59.0
Intermediate bond	59.0
Unaffiliated investment companies	1.9
Equity	1.9
Short-term investments and other	1.1

PERFORMANCE TABLE	Avera	Average Annual Total Return			Cumulative Total Return	
Total returns for the period ended 12-31-23 (%)	1-year	5-year	10-year	5-year	10-year	
Managed Volatility Moderate Portfolio Series I	10.64	4.15	3.72	22.55	44.13	
Managed Volatility Moderate Portfolio Series II	10.54	3.94	3.52	21.34	41.33	
Managed Volatility Moderate Portfolio Series NAV	10.79	4.21	3.78	22.92	44.91	
Morningstar U.S. Moderately Conservative Target Allocation Index	13.04	6.12	5.09	34.57	64.28	
Blended Index	12.57	6.08	5.01	34.34	63.03	

Performance does not reflect any insurance-related charges. If these charges were reflected, performance would be lower. Past performance does not predict future results.

Morningstar U.S. Moderately Conservative Target Allocation Index seeks 40% exposure to global equity markets from a diversified mix of stocks and bonds.

The Blended Index is 28% Russell 3000 Index, 12% MSCI EAFE Index, and 60% Bloomberg U.S. Aggregate Bond Index.

It is not possible to invest directly in an index. Index figures do not reflect expenses, which would result in lower returns.

	Series I	Series II	Series NAV
Gross (%)	0.80	1.00	0.75
Net (%)	0.80	1.00	0.75

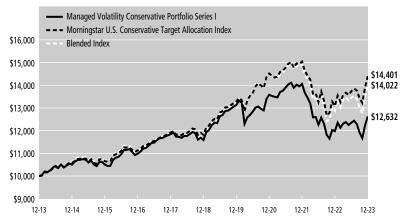
## **Managed Volatility Conservative Portfolio**

Subadvisor: Manulife Investment Management (US) LLC

Portfolio Managers: Geoffrey Kelley, CFA, Robert Sykes, CFA, Nathan Thooft, CFA, Jeffrey Wu

**INVESTMENT OBJECTIVE & POLICIES** ➤ The portfolio's investment objective is to seek current income and growth of capital while seeking to both manage the volatility of return and limit the magnitude of portfolio losses. The portfolio operates as a fund of funds and invests in both equity funds and fixed-income funds. The portfolio also may use certain risk management techniques to seek to manage the volatility of returns (i.e., standard deviation) and limit the magnitude of portfolio losses. The portfolio's exposure to equity securities (either directly or through investment in underlying funds or derivatives) normally will not exceed 22% of net assets.

#### CHANGE IN VALUE OF \$10,000 INVESTMENT AND COMPARATIVE INDEXES



#### ASSET ALLOCATION (% of net assets)

Affiliated investment companies	97.4
Equity	19.0
Large blend	9.0
U.S. large cap	6.2
U.S. mid cap	1.4
Emerging-market equity	1.3
U.S. small cap	1.1
Fixed income	78.4
Intermediate bond	78.4
Unaffiliated investment companies	0.8
Equity	0.8
Short-term investments and other	1.8

PERFORMANCE TABLE	Averag	ge Annual Total I	Return	Cumulative	Total Return
Total returns for the period ended 12-31-23 (%)	1-year	5-year	10-year	5-year	10-year
Managed Volatility Conservative Portfolio Series I	5.47	1.74	2.36	9.00	26.32
Managed Volatility Conservative Portfolio Series II	5.20	1.54	2.16	7.91	23.83
Managed Volatility Conservative Portfolio Series NAV	5.50	1.80	2.41	9.34	26.88
Morningstar U.S. Conservative Target Allocation Index	10.07	4.03	3.71	21.85	44.01
Blended Index	9.01	3.62	3.44	19.45	40.22

Performance does not reflect any insurance-related charges. If these charges were reflected, performance would be lower. Past performance does not predict future results.

Morningstar U.S. Conservative Target Allocation Index seeks 22.5% exposure to global equity markets from a diversified mix of stocks and bonds.

The Blended Index is 14% Russell 3000 Index, 6% MSCI EAFE Index, and 80% Bloomberg U.S. Aggregate Bond Index.

It is not possible to invest directly in an index. Index figures do not reflect expenses, which would result in lower returns.

	Series I	Series II	Series NAV
Gross (%)	0.78	0.98	0.73
Net (%)	0.78	0.98	0.73

### Shareholder expense example

As a shareholder of a John Hancock Variable Insurance Trust Managed Volatility Portfolio, you incur ongoing costs, including management fees, distribution and service (Rule 12b-1) fees and other expenses. In addition to the operating expenses which the portfolio bears directly, the portfolio indirectly bears a pro rata share of the operating expenses of the underlying funds in which the portfolio invests. Because the underlying funds have varied operating expenses and transaction costs and the portfolio may own different proportions of the underlying funds at different times, the amount of expenses incurred indirectly by the portfolio will vary. Had these indirect expenses been reflected in the following analysis, total expenses would have been higher than the amounts shown.

These examples are intended to help you understand your ongoing costs (in dollars) of investing in a portfolio so you can compare these costs with the ongoing costs of investing in other mutual funds. The examples are based on an investment of \$1,000 at the beginning of the period and held for the entire period (July 1, 2023 through December 31, 2023).

#### Actual expenses:

The first line of each share class in the following table provides information about actual account values and actual expenses. You may use the information in this line, together with the amount you invested, to estimate the expenses that you paid over the period. Simply divide your account value by 1,000 (for example, an 8,600 account value divided by 1,000 = 8.6), then multiply the result by the number in the first line under the heading entitled "Expenses paid during period ended" to estimate the expenses you paid on your account during this period.

#### Hypothetical example for comparison purposes:

The second line of each share class in the following table provides information about hypothetical account values and hypothetical expenses based on the actual expense ratio for the share class and an assumed annualized rate of return of 5% per year before expenses, which is not the actual return of the share class. The hypothetical account values and expenses may not be used to estimate the actual ending account balance or expenses you paid for the period. You may use this information to compare the ongoing costs of investing in a portfolio and other funds. To do so, compare this 5% hypothetical example with the 5% hypothetical examples that appear in the shareholder reports of the other funds. Please remember that these hypothetical account values and expenses may not be used to estimate the actual ending account balance or expenses you paid for the period.

Please note that the expenses shown in the table are meant to highlight your ongoing costs only and do not reflect any transactional costs and insurance-related charges. Therefore, the second line of each share class in the table is useful in comparing ongoing costs only, and will not help you determine the relative total costs of owning different funds. In addition, if these transactional costs were included, your costs would have been higher.

		Account value on 7-1-2023	Ending value on 12-31-2023	Expenses paid during period ended 12-31-2023 <sup>1</sup>	Annualized expense ratio <sup>2</sup>
Managed Vo	latility Growth Portfolio				
Series I	Actual expenses/actual returns	\$1,000.00	\$1,057.50	\$0.93	0.18%
	Hypothetical example	1,000.00	1,024.30	0.92	0.18%
Series II	Actual expenses/actual returns	1,000.00	1,056.70	1.97	0.38%
	Hypothetical example	1,000.00	1,023.30	1.94	0.38%
Series NAV	Actual expenses/actual returns	1,000.00	1,057.80	0.67	0.13%
	Hypothetical example	1,000.00	1,024.60	0.66	0.13%
Managed Vo	latility Balanced Portfolio				
Series I	Actual expenses/actual returns	\$1,000.00	\$1,052.50	\$0.93	0.18%
	Hypothetical example	1,000.00	1,024.30	0.92	0.18%
Series II	Actual expenses/actual returns	1,000.00	1,052.10	1.97	0.38%
	Hypothetical example	1,000.00	1,023.30	1.94	0.38%
Series NAV	Actual expenses/actual returns	1,000.00	1,052.80	0.67	0.13%
	Hypothetical example	1,000.00	1,024.60	0.66	0.13%
Managed Vo	latility Moderate Portfolio				
Series I	Actual expenses/actual returns	\$1,000.00	\$1,047.60	\$0.93	0.18%
	Hypothetical example	1,000.00	1,024.30	0.92	0.18%
Series II	Actual expenses/actual returns	1,000.00	1,047.10	1.96	0.38%
	Hypothetical example	1,000.00	1,023.30	1.94	0.38%
Series NAV	Actual expenses/actual returns	1,000.00	1,049.00	0.67	0.13%
	Hypothetical example	1,000.00	1,024.60	0.66	0.13%

### Shareholder expense example

		Account value on 7-1-2023	Ending value on 12-31-2023	Expenses paid during period ended 12-31-2023 <sup>1</sup>	Annualized expense ratio <sup>2</sup>
ivianaged vo	latility Conservative Portfolio				
Series I	Actual expenses/actual returns	\$1,000.00	\$1,022.80	\$0.97	0.19%
	Hypothetical example	1,000.00	1,024.20	0.97	0.19%
Series II	Actual expenses/actual returns	1,000.00	1,022.10	1.99	0.39%
	Hypothetical example	1,000.00	1,023.20	1.99	0.39%
Series NAV	Actual expenses/actual returns	1,000.00	1,022.20	0.71	0.14%
	Hypothetical example	1,000.00	1,024.50	0.71	0.14%

<sup>1</sup> Expenses are equal to the annualized expense ratio, multiplied by the average account value over the period, multiplied by 184/365 (to reflect the one-half year period).

<sup>2</sup> Ratios do not include expenses indirectly incurred by the underlying funds and can vary based on the mix of underlying funds held by the portfolios.

Change on

## Managed Volatility Growth Portfolio

AFFILIATED INVESTMENT COMPANIES (A) - 96.2%        Equity - 68.0%        Blue Chip Growth, Series NAV, JHVIT        (T. Rowe Price) (B)      8,359,787        Emerging Markets Equity, Class NAV, JHIT        (MIM US) (C)      25,376,330        Equity Income, Series NAV, JHVIT        (T. Rowe Price)      24,092,945        Statistic Equity, Class NAV, JHVIT      321,158,961        Fundamental Large Cap Core, Class NAV, JHIT      00,251,476        (MIM US) (C)      5,670,598        Fundamental Large Cap Core, Class NAV, JHVIT      10,251,476        (Wellington) (B)      10,251,476        Mid Cap Growth, Series NAV, JHVIT (T. Rowe Price)      12,233,047        HUTFF (DFA)      6,593,695        Multifactor Developed International ETF,      119,394,539        Multifactor Small Cap ETF, JHETF (DFA)      2,405,429        Multifactor Mid Cap ETF, JHETF (DFA)      3,220,450        Small Cap Dynamic Growth, Class NAV, JHVIT      110,664,080        (Axiom) (B)(D)      2,690,263        Strategic Equity Allocation, Series NAV, JHVIT      3,800,421,870        Fixed income - 28.2%      3,800,421,870        Bond, Class NAV, JHSB (MIM US) (C)      29,647,704 <th></th> <th>Shares or Principal Amount</th> <th>Value</th>		Shares or Principal Amount	Value
Blue Chip Growth, Series NAV, JHVIT    8,359,787    \$ 226,717,410      Emerging Markets Equity, Class NAV, JHIT    25,376,330    229,148,260      Equity Income, Series NAV, JHVIT    24,092,945    321,158,961      Fundamental Large Cap Core, Class NAV, JHIT    7    7      (MIM US) (C)    5,670,598    377,661,811      Mid Cap Growth, Series NAV, JHVIT    92,980,886    7      (Wellington) (B)    10,251,476    92,980,886      Mid Value, Series NAV, JHVIT (T. Rowe Price)    12,233,047    119,394,539      Multifactor Developed International ETF,    119,394,539    119,394,539      Multifactor Emerging Markets ETF,    119,19,34,539    119,394,539      Multifactor Small Cap ETF, JHETF (DFA)    2,20,450    117,767,348      Small Cap Dynamic Growth, Class NAV, JHF II    10,669,891    117,767,348      Small Cap Value, Series NAV,    JHVIT    101,664,080    1,737,439,131      (MIM US) (C)    101,664,080    1,737,439,131    3,800,421,870      Fixed income - 28.2%    8    3,800,421,870    1,737,439,131    3,800,421,870      Fixed income - 28.2%    8    1,034,636,680    1,579,046,674    1,034,636,680    1,579,0	AFFILIATED INVESTMENT COMPANIES (A	A) - 96.2%	
(T. Rowe Price) (B)    8,359,787    \$ 226,717,410      Emerging Markets Equity, Class NAV, JHIT    (MIM US) (C)    25,376,330    229,148,260      Equity Income, Series NAV, JHVIT    (T. Rowe Price)    24,092,945    321,158,961      Fundamental Large Cap Core, Class NAV, JHIT    (MIM US) (C)    5,670,598    377,661,811      Mid Cap Growth, Series NAV, JHVIT    (Wellington) (B)    10,251,476    92,980,886      Mid Value, Series NAV, JHVIT (T. Rowe Price)    12,233,047    119,394,539      Multifactor Developed International ETF,    JHETF (DFA)    6,593,695    214,987,425      Multifactor Emerging Markets ETF,    JHETF (DFA)    2,405,429    126,669,891      Multifactor Small Cap ETF, JHETF (DFA)    3,220,450    117,767,348      Small Cap Dynamic Growth, Class NAV, JHVIT    (MIM US) (C)    20,690,263    37,394,654      Small Cap Value, Series NAV,    JHVIT    (MIM US) (C)    101,664,080    1,737,439,131      (Axiom) (B)(D)    5,608,529    77,005,105    3,800,421,870      Fixed income - 28.2%    Bond, Class NAV, JHVIT    403,801,730    3,800,421,870      Fixed income - 28.2%    Bond, Class NAV, JHVIT    101,664,080    1,737,439,131 <td< td=""><td>Equity - 68.0%</td><td></td><td></td></td<>	Equity - 68.0%		
Emerging Markets Equity, Class NAV, JHIT (MIM US) (C)    25,376,330    229,148,260      Equity Income, Series NAV, JHVIT (T. Rowe Price)    24,092,945    321,158,961      Fundamental Large Cap Core, Class NAV, JHIT (MIM US) (C)    5,670,598    377,661,811      Mid Cap Growth, Series NAV, JHVIT (Wellington) (B)    10,251,476    92,980,886      Mid Value, Series NAV, JHVIT (T. Rowe Price)    12,233,047    119,394,539      Multifactor Developed International ETF, JHETF (DFA)    6,593,695    214,987,425      Multifactor Emerging Markets ETF, JHETF (DFA)    4,801,276    122,096,449      Multifactor Mid Cap ETF, JHETF (DFA)    3,220,450    117,767,348      Small Cap Dynamic Growth, Class NAV, JHVIT (MIM US) (C)    2,690,263    37,394,654      Small Cap Value, Series NAV, JHVIT (Wellington)    5,608,529    77,005,105      Strategic Equity Allocation, Series NAV, JHVIT (MIM US) (C)    101,664,080    1,737,439,131      MOMULUS C    29,647,704    403,801,730      Core Bond, Series NAV, JHVIT (Allspring Investments)    12,498,512    140,608,264      Select Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680      1,579,046,674    1,579,046,674    1,579,046,674	Blue Chip Growth, Series NAV, JHVIT		
(MIM US) (C)    25,376,330    229,148,260      Equity Income, Series NAV, JHVIT    24,092,945    321,158,961      Fundamental Large Cap Core, Class NAV, JHIT    5,670,598    377,661,811      Mid Cap Growth, Series NAV, JHVIT    92,980,886      Mid Value, Series NAV, JHVIT (T. Rowe Price)    12,233,047    119,394,539      Multifactor Developed International ETF,    119,394,539    214,987,425      Multifactor Emerging Markets ETF,    6,593,695    214,987,425      Multifactor Mid Cap ETF, JHETF (DFA)    2,405,429    126,669,891      Multifactor Small Cap ETF, JHETF (DFA)    3,220,450    117,767,348      Small Cap Dynamic Growth, Class NAV, JHVIT    101,664,080    1,737,439,131      (Axiom) (B)(D)    2,690,263    37,394,654      Small Cap Value, Series NAV,    JHVIT    101,664,080    1,737,439,131      (MIM US) (C)    101,664,080    1,737,439,131    3,800,421,870      Fixed income - 28.2%    Bond, Class NAV, JHVIT    403,801,730    403,801,730      Core Bond, Series NAV, JHVIT    10,464,080    1,737,439,131    3,800,421,870      Fixed income - 28.2%    Bond, Class NAV, JHVIT    10,04,636,680    1,034,636,680	(T. Rowe Price) (B)	8,359,787	\$ 226,717,410
Equity Income, Series NAV, JHVIT (T. Rowe Price)    24,092,945    321,158,961      Fundamental Large Cap Core, Class NAV, JHIT (MIM US) (C)    5,670,598    377,661,811      Mid Cap Growth, Series NAV, JHVIT (Wellington) (B)    10,251,476    92,980,886      Mid Value, Series NAV, JHVIT (T. Rowe Price)    12,233,047    119,394,539      Multifactor Developed International ETF, JHETF (DFA)    6,593,695    214,987,425      Multifactor Emerging Markets ETF, JHETF (DFA)    4,801,276    122,096,449      Multifactor Small Cap ETF, JHETF (DFA)    3,220,450    117,767,348      Small Cap Dynamic Growth, Class NAV, JHF II (Axiom) (B)(D)    2,690,263    37,394,654      Small Cap Value, Series NAV, JHVIT (Wellington)    5,608,529    77,005,105      Strategic Equity Allocation, Series NAV, JHVIT (MIM US) (C)    101,664,080    1,737,439,131      3,800,421,870    3,800,421,870    3,800,421,870      Fixed income - 28.2%    140,608,264    1,034,636,680      Solect Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680      1,579,046,674    1,579,046,674    1,579,046,674	Emerging Markets Equity, Class NAV, JHIT		
(T. Rowe Price)    24,092,945    321,158,961      Fundamental Large Cap Core, Class NAV, JHIT    (MIM US) (C)    5,670,598    377,661,811      Mid Cap Growth, Series NAV, JHVIT    (Wellington) (B)    10,251,476    92,980,886      Mid Value, Series NAV, JHVIT (T. Rowe Price)    12,233,047    119,394,539      Multifactor Developed International ETF,    119,394,539      JHETF (DFA)    6,593,695    214,987,425      Multifactor Emerging Markets ETF,    1122,096,449      Multifactor Small Cap ETF, JHETF (DFA)    2,405,429    126,669,891      Multifactor Small Cap ETF, JHETF (DFA)    3,220,450    117,767,348      Small Cap Value, Series NAV,    JHVIT    (MIM US) (D)    2,690,263    37,394,654      Small Cap Value, Series NAV,    JHVIT    (MIM US) (C)    101,664,080    1,737,439,131    3,800,421,870      Fixed income - 28.2%    Bond, Class NAV, JHVIT    10,046,63680    1,034,636,680    1,034,636,680      Select Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680    1,579,046,674	(MIM US) (C)	25,376,330	229,148,260
Fundamental Large Cap Core, Class NAV, JHIT (MIM US) (C)    5,670,598    377,661,811      Mid Cap Growth, Series NAV, JHVIT (Wellington) (B)    10,251,476    92,980,886      Mid Value, Series NAV, JHVIT (T. Rowe Price)    12,233,047    119,394,539      Multifactor Developed International ETF, JHETF (DFA)    6,593,695    214,987,425      Multifactor Emerging Markets ETF, JHETF (DFA)    4,801,276    122,096,449      Multifactor Small Cap ETF, JHETF (DFA)    3,220,450    117,767,348      Small Cap Dynamic Growth, Class NAV, JHF II (Axiom) (B)(D)    2,690,263    37,394,654      Small Cap Value, Series NAV, JHVIT (Wellington)    5,608,529    77,005,105      Strategic Equity Allocation, Series NAV, JHVIT (MIM US) (C)    101,664,080    1,737,439,131      Mode Cass NAV, JHSB (MIM US) (C)    29,647,704    403,801,730      Core Bond, Series NAV, JHVIT (Allspring Investments)    12,498,512    140,608,264      Select Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680      1,579,046,674    1,579,046,674    1,579,046,674	Equity Income, Series NAV, JHVIT		
(MIM US) (C)    5,670,598    377,661,811      Mid Cap Growth, Series NAV, JHVIT (Wellington) (B)    10,251,476    92,980,886      Mid Value, Series NAV, JHVIT (T. Rowe Price)    12,233,047    119,394,539      Multifactor Developed International ETF, JHETF (DFA)    6,593,695    214,987,425      Multifactor Emerging Markets ETF, JHETF (DFA)    4,801,276    122,096,449      Multifactor Small Cap ETF, JHETF (DFA)    3,220,450    117,767,348      Small Cap Dynamic Growth, Class NAV, JHF II (Axiom) (B)(D)    2,690,263    37,394,654      Small Cap Value, Series NAV, JHVIT (Wellington)    5,608,529    77,005,105      Strategic Equity Allocation, Series NAV, JHVIT (MIM US) (C)    101,664,080    1,737,439,131      Multi Action Socies NAV, JHVIT (Allspring Investments)    12,498,512    140,608,264      Select Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680      1,579,046,674    1,579,046,674    1,579,046,674	(T. Rowe Price)	24,092,945	321,158,961
Mid Cap Growth, Series NAV, JHVIT    10,251,476    92,980,886      Mid Value, Series NAV, JHVIT (T. Rowe Price)    12,233,047    119,394,539      Multifactor Developed International ETF,    119,394,539    119,394,539      Multifactor Emerging Markets ETF,    6,593,695    214,987,425      Multifactor Mid Cap ETF, JHETF (DFA)    4,801,276    122,096,449      Multifactor Small Cap ETF, JHETF (DFA)    3,220,450    117,767,348      Small Cap Dynamic Growth, Class NAV, JHF II    (Axiom) (B)(D)    2,690,263    37,394,654      Small Cap Value, Series NAV,    JHVIT (Wellington)    5,608,529    77,005,105      Strategic Equity Allocation, Series NAV, JHVIT    101,664,080    1,737,439,131    3,800,421,870      Fixed income - 28.2%    Bond, Class NAV, JHVIT    403,801,730    2,698,512    140,608,264      Select Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680    1,579,046,674      TOTAL AFFILIATED INVESTMENT COMPANIES    1,579,046,674    1,579,046,674	Fundamental Large Cap Core, Class NAV, JHIT		
(Wellington) (B)      10,251,476      92,980,886        Mid Value, Series NAV, JHVIT (T. Rowe Price)      12,233,047      119,394,539        Multifactor Developed International ETF, JHETF (DFA)      6,593,695      214,987,425        Multifactor Emerging Markets ETF, JHETF (DFA)      4,801,276      122,096,449        Multifactor Mid Cap ETF, JHETF (DFA)      2,405,429      126,669,891        Multifactor Small Cap ETF, JHETF (DFA)      3,220,450      117,767,348        Small Cap Dynamic Growth, Class NAV, JHF II (Axiom) (B)(D)      2,690,263      37,394,654        Small Cap Value, Series NAV, JHVIT (Wellington)      5,608,529      77,005,105        Strategic Equity Allocation, Series NAV, JHVIT (MIM US) (C)      101,664,080      1,737,439,131        Mond, Class NAV, JHSB (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT (Allspring Investments)      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        1,579,046,674      1,579,046,674      1,579,046,674		5,670,598	377,661,811
Mid Value, Series NAV, JHVIT (T. Rowe Price)    12,233,047    119,394,539      Multifactor Developed International ETF,    6,593,695    214,987,425      Multifactor Emerging Markets ETF,    6,593,695    214,987,425      Multifactor Mid Cap ETF, JHETF (DFA)    4,801,276    122,096,449      Multifactor Small Cap ETF, JHETF (DFA)    2,405,429    126,669,891      Multifactor Small Cap ETF, JHETF (DFA)    3,220,450    117,767,348      Small Cap Dynamic Growth, Class NAV, JHF II    7,7005,105    37,394,654      Small Cap Value, Series NAV,    5,608,529    77,005,105      Strategic Equity Allocation, Series NAV, JHVIT    101,664,080    1,737,439,131      MUMI US) (C)    29,647,704    403,801,730      Core Bond, Series NAV, JHVIT    10,4068,264    1,034,636,680      Select Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680      Select Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680      TOTAL AFFILIATED INVESTMENT COMPANIES    1,579,046,674			
Multifactor Developed International ETF, JHETF (DFA)    6,593,695    214,987,425      Multifactor Emerging Markets ETF, JHETF (DFA)    4,801,276    122,096,449      Multifactor Small Cap ETF, JHETF (DFA)    2,405,429    126,669,891      Multifactor Small Cap ETF, JHETF (DFA)    3,220,450    117,767,348      Small Cap Dynamic Growth, Class NAV, JHF II (Axiom) (B)(D)    2,690,263    37,394,654      Small Cap Value, Series NAV, JHVIT (Wellington)    5,608,529    77,005,105      Strategic Equity Allocation, Series NAV, JHVIT (MIM US) (C)    101,664,080    1,737,439,131      3,800,421,870    3,800,421,870    3,800,421,870      Fixed income - 28.2%    Bond, Class NAV, JHVIT (Allspring Investments)    12,498,512    140,608,264      Select Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680    1,579,046,674      TOTAL AFFILIATED INVESTMENT COMPANIES    1,579,046,674    1,579,046,674			· · · · ·
JHETF (DFA)      6,593,695      214,987,425        Multifactor Emerging Markets ETF, JHETF (DFA)      4,801,276      122,096,449        Multifactor Mid Cap ETF, JHETF (DFA)      2,405,429      126,669,891        Multifactor Small Cap ETF, JHETF (DFA)      3,220,450      117,767,348        Small Cap Dynamic Growth, Class NAV, JHF II (Axiom) (B)(D)      2,690,263      37,394,654        Small Cap Value, Series NAV, JHVIT (Wellington)      5,608,529      77,005,105        Strategic Equity Allocation, Series NAV, JHVIT (MIM US) (C)      101,664,080      1,737,439,131        3,800,421,870      3,800,421,870      3,800,421,870        Fixed income - 28.2%      403,801,730      3,800,421,870        Bond, Class NAV, JHSB (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT (Allspring Investments)      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        1,579,046,674      1,579,046,674      1,579,046,674		12,233,047	119,394,539
Multifactor Emerging Markets ETF, JHETF (DFA)      4,801,276      122,096,449        Multifactor Mid Cap ETF, JHETF (DFA)      2,405,429      126,669,891        Multifactor Small Cap ETF, JHETF (DFA)      3,220,450      117,767,348        Small Cap Dynamic Growth, Class NAV, JHF II (Axiom) (B)(D)      2,690,263      37,394,654        Small Cap Value, Series NAV, JHVIT (Wellington)      5,608,529      77,005,105        Strategic Equity Allocation, Series NAV, JHVIT (MIM US) (C)      101,664,080      1,737,439,131        Smod, Class NAV, JHSB (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT (Allspring Investments)      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        TOTAL AFFILIATED INVESTMENT COMPANIES      1,579,046,674			
JHETF (DFA)      4,801,276      122,096,449        Multifactor Mid Cap ETF, JHETF (DFA)      2,405,429      126,669,891        Multifactor Small Cap ETF, JHETF (DFA)      3,220,450      117,767,348        Small Cap Dynamic Growth, Class NAV, JHF II      (Axiom) (B)(D)      2,690,263      37,394,654        Small Cap Value, Series NAV,      JHVIT (Wellington)      5,608,529      77,005,105        Strategic Equity Allocation, Series NAV, JHVIT      101,664,080      1,737,439,131      3,800,421,870        Fixed income - 28.2%      Bond, Class NAV, JHSB (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        1,579,046,674      TOTAL AFFILIATED INVESTMENT COMPANIES      1,579,046,674		6,593,695	214,987,425
Multifactor Mid Cap ETF, JHETF (DFA)      2,405,429      126,669,891        Multifactor Small Cap ETF, JHETF (DFA)      3,220,450      117,767,348        Small Cap Dynamic Growth, Class NAV, JHF II      (Axiom) (B)(D)      2,690,263      37,394,654        Small Cap Value, Series NAV,      JHVIT (Wellington)      5,608,529      77,005,105        Strategic Equity Allocation, Series NAV, JHVIT      101,664,080      1,737,439,131        (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        TOTAL AFFILIATED INVESTMENT COMPANIES      1,579,046,674	6 6		
Multifactor Small Cap ETF, JHETF (DFA)      3,220,450      117,767,348        Small Cap Dynamic Growth, Class NAV, JHF II      (Axiom) (B)(D)      2,690,263      37,394,654        Small Cap Value, Series NAV,      JHVIT (Wellington)      5,608,529      77,005,105        Strategic Equity Allocation, Series NAV, JHVIT      101,664,080      1,737,439,131      3,800,421,870        Fixed income - 28.2%      Bond, Class NAV, JHSB (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        TOTAL AFFILIATED INVESTMENT COMPANIES      1,579,046,674      1,579,046,674			,,
Small Cap Dynamic Growth, Class NAV, JHF II    37,394,654      (Axiom) (B)(D)    2,690,263    37,394,654      Small Cap Value, Series NAV,    5,608,529    77,005,105      Strategic Equity Allocation, Series NAV, JHVIT    101,664,080    1,737,439,131      (MIM US) (C)    101,664,080    1,737,439,131 <b>Fixed income - 28.2%</b> Bond, Class NAV, JHSB (MIM US) (C)    29,647,704    403,801,730      Core Bond, Series NAV, JHVIT    (Allspring Investments)    12,498,512    140,608,264      Select Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680      TOTAL AFFILIATED INVESTMENT COMPANIES    1,579,046,674			· · · · ·
(Axiom) (B)(D)    2,690,263    37,394,654      Small Cap Value, Series NAV,    JHVIT (Wellington)    5,608,529    77,005,105      Strategic Equity Allocation, Series NAV, JHVIT    101,664,080    1,737,439,131    3,800,421,870      Fixed income - 28.2%    Bond, Class NAV, JHSB (MIM US) (C)    29,647,704    403,801,730      Core Bond, Series NAV, JHVIT    12,498,512    140,608,264      Select Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680      TOTAL AFFILIATED INVESTMENT COMPANIES    1,579,046,674		3,220,450	117,767,348
Small Cap Value, Series NAV, JHVIT (Wellington)      5,608,529      77,005,105        Strategic Equity Allocation, Series NAV, JHVIT (MIM US) (C)      101,664,080      1,737,439,131        Show and the equitive of the equilibrium of the equitive of the equitive of the equilibrium o			
JHVIT (Wellington)      5,608,529      77,005,105        Strategic Equity Allocation, Series NAV, JHVIT (MIM US) (C)      101,664,080      1,737,439,131        Strategic income - 28.2%      3,800,421,870      3,800,421,870        Fixed income - 28.2%      403,801,730      403,801,730        Core Bond, Class NAV, JHSB (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT (Allspring Investments)      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        TOTAL AFFILIATED INVESTMENT COMPANIES      1,579,046,674		2,690,263	37,394,654
Strategic Equity Allocation, Series NAV, JHVIT (MIM US) (C)      101,664,080      1,737,439,131 <b>Fixed income - 28.2%</b> 3,800,421,870        Bond, Class NAV, JHSB (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT (Allspring Investments)      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        TOTAL AFFILIATED INVESTMENT COMPANIES      1,579,046,674			
(MIM US) (C)      101,664,080      1,737,439,131        Fixed income - 28.2%      3,800,421,870        Bond, Class NAV, JHSB (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        TOTAL AFFILIATED INVESTMENT COMPANIES      1,579,046,674		5,608,529	77,005,105
Fixed income - 28.2%      3,800,421,870        Bond, Class NAV, JHSB (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        TOTAL AFFILIATED INVESTMENT COMPANIES      1      1		101 ((1000	1 505 100 101
Fixed income - 28.2%      403,801,730        Bond, Class NAV, JHSB (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        TOTAL AFFILIATED INVESTMENT COMPANIES      1,579,046,674	(MIM US) (C)	101,664,080	
Bond, Class NAV, JHSB (MIM US) (C)      29,647,704      403,801,730        Core Bond, Series NAV, JHVIT      12,498,512      140,608,264        Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        TOTAL AFFILIATED INVESTMENT COMPANIES      1,579,046,674			3,800,421,870
Core Bond, Series NAV, JHVIT (Allspring Investments)12,498,512Select Bond, Series NAV, JHVIT (MIM US) (C)88,129,1891,034,636,6801,579,046,674	Fixed income - 28.2%		
(Allspring Investments)    12,498,512    140,608,264      Select Bond, Series NAV, JHVIT (MIM US) (C)    88,129,189    1,034,636,680      TOTAL AFFILIATED INVESTMENT COMPANIES    1,579,046,674	Bond, Class NAV, JHSB (MIM US) (C)	29,647,704	403,801,730
Select Bond, Series NAV, JHVIT (MIM US) (C)      88,129,189      1,034,636,680        TOTAL AFFILIATED INVESTMENT COMPANIES      1,579,046,674	Core Bond, Series NAV, JHVIT		
TOTAL AFFILIATED INVESTMENT COMPANIES	(Allspring Investments)	12,498,512	140,608,264
TOTAL AFFILIATED INVESTMENT COMPANIES	Select Bond, Series NAV, JHVIT (MIM US) (C)	88,129,189	1,034,636,680
			1,579,046,674
	TOTAL AFFILIATED INVESTMENT COMPANI	ES	
	(Cost \$5,514,516,207)		\$ 5,379,468,544

## Managed Volatility Growth Portfolio (continued)

		Shares or Principal Amount		Value
UNAFFIL	JATED INVESTMENT COMPANIE	S - 2.6%		
Equity - 2	.6%			
Fidelity 50	0 Index Fund	623,039	\$	103,106,732
Fidelity In	ternational Index Fund	823,195		38,978,269
TOTAL U	NAFFILIATED INVESTMENT COMP	ANIES		
(Cost \$118	3,736,960)		\$	142,085,001
SHORT-T	ERM INVESTMENTS - 0.8%			
Short-terr	n funds - 0.8%			
John Hanc	ock Collateral Trust, 5.3645% (E)(F)	4,784,663		47,847,586
TOTAL SI	HORT-TERM INVESTMENTS (Cost \$	47,841,824)	\$	47,847,586
Total Inve	stments (Managed Volatility Growth			
	o) (Cost \$5,681,094,991) - 99.6%		\$	5,569,401,131
Other ass	ets and liabilities, net - 0.4%		_	21,159,230
TOTAL N	ET ASSETS - 100.0%		\$_	5,590,560,361
Security A	Abbreviations and Legend			
JHETF	John Hancock Exchange-Traded F	Fund Trust		
JHF II	John Hancock Funds II			
JHIT	John Hancock Investment Trust			
JHSB	John Hancock Sovereign Bond Fu	ind		
	John Hancock Variable Insurance	Trust		
JHVIT	JOHII HAIICOCK VAHADIE HISUTAIICE			
JHVIT (A)	The underlying portfolios' subady	isor is shown pa	aren	thetically.
	voim maneoen variable mouranee	risor is shown pa	aren	thetically.
(A)	The underlying portfolios' subadv	Ĩ	aren	thetically.
(A) (B)	The underlying portfolios' subadv Non-income producing.	he advisor.	aren	thetically.
(A) (B) (C)	The underlying portfolios' subadv Non-income producing. The subadvisor is an affiliate of th	he advisor. rowth Fund.		-

### DERIVATIVES

#### **FUTURES**

						Unrealized
	Number of		Expiration	Notional	Notional	appreciation
Open contracts	contracts	Position	date	basis^	value^	(depreciation)
Euro Currency Futures	239	Long	Mar 2024	\$32,331,423	\$33,086,563	\$755,140
Euro STOXX 50 Index Futures	682	Long	Mar 2024	34,495,793	34,203,975	(291,818)
FTSE 100 Index Futures	113	Long	Mar 2024	10,925,576	11,172,111	246,535
Japanese Yen Currency Futures	168	Long	Mar 2024	14,506,854	15,069,600	562,746
MSCI Emerging Markets Index Futures	795	Long	Mar 2024	39,136,261	41,089,575	1,953,314
Nikkei 225 Index Futures	66	Long	Mar 2024	15,582,857	15,570,851	(12,006)
Pound Sterling Currency Futures	136	Long	Mar 2024	10,653,520	10,838,350	184,830
Russell 2000 E-Mini Index Futures	198	Long	Mar 2024	18,869,672	20,272,230	1,402,558
S&P 500 E-Mini Index Futures	802	Long	Mar 2024	187,578,545	193,281,998	5,703,453
S&P Mid 400 E-Mini Index Futures	125	Long	Mar 2024	33,431,971	35,118,750	1,686,779
						\$12,191,531

^ Notional basis refers to the contractual amount agreed upon at inception of open contracts; notional value represents the current value of the open contract.

See Notes to financial statements regarding investment transactions and other derivatives information.

## Managed Volatility Balanced Portfolio

AFFILIATED INVESTMENT COMPANIES (A) - 96.8%      Equity - 48.0%      Blue Chip Growth, Series NAV, JHVIT      (T. Rowe Price) (B) $5,223,113$ Emerging Markets Equity, Class NAV, JHIT      (MIM US) (C) $12,311,161$ Equity Income, Series NAV, JHVIT      (T. Rowe Price) $15,113,900$ Equity Income, Series NAV, JHVIT      (T. Rowe Price) $3,225,842$ Fundamental Large Cap Core, Class NAV, JHIT      (MIM US) (C) $3,225,842$ Vidi Cap Growth, Series NAV, JHVIT      (Wellington) (B) $4,334,939$ Mid Cap Growth, Series NAV, JHVIT (T. Rowe Price) $5,710,822$ Mid Value, Series NAV, JHVIT (T. Rowe Price) $5,710,822$ Multifactor Developed International ETF, $7HETF$ (DFA)      JHETF (DFA) $2,364,005$ Multifactor Emerging Markets ETF, $91,938,275$ Multifactor Mid Cap ETF, JHETF (DFA) $1,322,628$ Multifactor Mid Cap ETF, JHETF (DFA) $1,322,628$ Multifactor Small Cap ETF, JHETF (DFA) $1,476,431$ S3,991,015    S3,991,015
Blue Chip Growth, Series NAV, JHVIT      5,223,113      141,650,813        Emerging Markets Equity, Class NAV, JHIT      12,311,161      111,169,780        Equity Income, Series NAV, JHVIT      12,311,161      111,169,780        Equity Income, Series NAV, JHVIT      15,113,900      201,468,287        Fundamental Large Cap Core, Class NAV, JHIT      111,169,780      141,650,813        MiM US) (C)      12,311,161      111,169,780        Vill Gap Growth, Series NAV, JHVIT      15,113,900      201,468,287        Mid Cap Growth, Series NAV, JHVIT      3225,842      214,841,072        Mid Cap Growth, Series NAV, JHVIT (T. Rowe Price)      5,710,822      55,737,621        Multifactor Developed International ETF,      2,819,760      91,938,275        Multifactor Emerging Markets ETF,      1      11322,628      69,649,590        Multifactor Mid Cap ETF, JHETF (DFA)      1,322,628      69,649,590      60,116,647        Multifactor Small Cap ETF, JHETF (DFA)      1,476,431      53,991,015      53,991,015
Blue Chip Growth, Series NAV, JHVIT      5,223,113      141,650,813        Emerging Markets Equity, Class NAV, JHIT      12,311,161      111,169,780        Equity Income, Series NAV, JHVIT      12,311,161      111,169,780        Equity Income, Series NAV, JHVIT      15,113,900      201,468,287        Fundamental Large Cap Core, Class NAV, JHIT      111,169,780      141,650,813        MiM US) (C)      12,311,161      111,169,780        Vill Gap Growth, Series NAV, JHVIT      15,113,900      201,468,287        Mid Cap Growth, Series NAV, JHVIT      3225,842      214,841,072        Mid Cap Growth, Series NAV, JHVIT (T. Rowe Price)      5,710,822      55,737,621        Multifactor Developed International ETF,      2,819,760      91,938,275        Multifactor Emerging Markets ETF,      1      11322,628      69,649,590        Multifactor Mid Cap ETF, JHETF (DFA)      1,322,628      69,649,590      60,116,647        Multifactor Small Cap ETF, JHETF (DFA)      1,476,431      53,991,015      53,991,015
(T. Rowe Price) (B)    5,223,113    \$ 141,650,813      Emerging Markets Equity, Class NAV, JHIT    (MIM US) (C)    12,311,161    111,169,780      Equity Income, Series NAV, JHVIT    15,113,900    201,468,287      Fundamental Large Cap Core, Class NAV, JHIT    15,113,900    201,468,287      Mid Cap Growth, Series NAV, JHVIT    3,225,842    214,841,072      Mid Cap Growth, Series NAV, JHVIT    4,334,939    39,317,892      Mid Value, Series NAV, JHVIT (T. Rowe Price)    5,710,822    55,737,621      Multifactor Developed International ETF,    JHETF (DFA)    2,364,005    60,116,647      Multifactor Emerging Markets ETF,    JHETF (DFA)    1,322,628    69,649,590      Multifactor Mid Cap ETF, JHETF (DFA)    1,476,431    53,991,015
Emerging Markets Equity, Class NAV, JHIT    111,169,780      (MIM US) (C)    12,311,161    111,169,780      Equity Income, Series NAV, JHVIT    15,113,900    201,468,287      Fundamental Large Cap Core, Class NAV, JHIT    0    0      (MIM US) (C)    3,225,842    214,841,072      Mid Cap Growth, Series NAV, JHVIT    0    0      (Wellington) (B)    4,334,939    39,317,892      Mid Value, Series NAV, JHVIT (T. Rowe Price)    5,710,822    55,737,621      Multifactor Developed International ETF,    2,819,760    91,938,275      Multifactor Emerging Markets ETF,    3HETF (DFA)    2,364,005    60,116,647      Multifactor Mid Cap ETF, JHETF (DFA)    1,322,628    69,649,590      Multifactor Small Cap ETF, JHETF (DFA)    1,476,431    53,991,015
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
(T. Rowe Price)      15,113,900      201,468,287        Fundamental Large Cap Core, Class NAV, JHIT      (MIM US) (C)      3,225,842      214,841,072        Mid Cap Growth, Series NAV, JHVIT      3,225,842      214,841,072        Mid Cap Growth, Series NAV, JHVIT      4,334,939      39,317,892        Mid Value, Series NAV, JHVIT (T. Rowe Price)      5,710,822      55,737,621        Multifactor Developed International ETF,      2,819,760      91,938,275        Multifactor Emerging Markets ETF,      2,364,005      60,116,647        Multifactor Mid Cap ETF, JHETF (DFA)      1,322,628      69,649,590        Multifactor Small Cap ETF, JHETF (DFA)      1,476,431      53,991,015
(T. Rowe Price)      15,113,900      201,468,287        Fundamental Large Cap Core, Class NAV, JHIT      (MIM US) (C)      3,225,842      214,841,072        Mid Cap Growth, Series NAV, JHVIT      3,225,842      214,841,072        Mid Cap Growth, Series NAV, JHVIT      4,334,939      39,317,892        Mid Value, Series NAV, JHVIT (T. Rowe Price)      5,710,822      55,737,621        Multifactor Developed International ETF,      2,819,760      91,938,275        Multifactor Emerging Markets ETF,      2,364,005      60,116,647        Multifactor Mid Cap ETF, JHETF (DFA)      1,322,628      69,649,590        Multifactor Small Cap ETF, JHETF (DFA)      1,476,431      53,991,015
(MIM US) (C)      3,225,842      214,841,072        Mid Cap Growth, Series NAV, JHVIT      4,334,939      39,317,892        Mid Value, Series NAV, JHVIT (T. Rowe Price)      5,710,822      55,737,621        Multifactor Developed International ETF, JHETF (DFA)      2,819,760      91,938,275        Multifactor Emerging Markets ETF, JHETF (DFA)      2,364,005      60,116,647        Multifactor Mid Cap ETF, JHETF (DFA)      1,322,628      69,649,590        Multifactor Small Cap ETF, JHETF (DFA)      1,476,431      53,991,015
Mid Cap Growth, Series NAV, JHVIT (Wellington) (B)4,334,939 4,334,93939,317,892Mid Value, Series NAV, JHVIT (T. Rowe Price)5,710,82255,737,621Multifactor Developed International ETF, JHETF (DFA)2,819,76091,938,275Multifactor Emerging Markets ETF, JHETF (DFA)2,364,00560,116,647Multifactor Mid Cap ETF, JHETF (DFA)1,322,62869,649,590Multifactor Small Cap ETF, JHETF (DFA)1,476,43153,991,015
(Wellington) (B)4,334,93939,317,892Mid Value, Series NAV, JHVIT (T. Rowe Price)5,710,82255,737,621Multifactor Developed International ETF, JHETF (DFA)2,819,76091,938,275Multifactor Emerging Markets ETF, JHETF (DFA)2,364,00560,116,647Multifactor Mid Cap ETF, JHETF (DFA)1,322,62869,649,590Multifactor Small Cap ETF, JHETF (DFA)1,476,43153,991,015
Mid Value, Series NAV, JHVIT (T. Rowe Price)5,710,82255,737,621Multifactor Developed International ETF, JHETF (DFA)2,819,76091,938,275Multifactor Emerging Markets ETF, JHETF (DFA)2,364,00560,116,647Multifactor Mid Cap ETF, JHETF (DFA)1,322,62869,649,590Multifactor Small Cap ETF, JHETF (DFA)1,476,43153,991,015
Multifactor Developed International ETF, JHETF (DFA)2,819,76091,938,275Multifactor Emerging Markets ETF, JHETF (DFA)2,364,00560,116,647Multifactor Mid Cap ETF, JHETF (DFA)1,322,62869,649,590Multifactor Small Cap ETF, JHETF (DFA)1,476,43153,991,015
JHETF (DFA)      2,819,760      91,938,275        Multifactor Emerging Markets ETF,
Multifactor Emerging Markets ETF,      2,364,005      60,116,647        JHETF (DFA)      2,364,005      69,649,590        Multifactor Small Cap ETF, JHETF (DFA)      1,476,431      53,991,015
JHETF (DFA)      2,364,005      60,116,647        Multifactor Mid Cap ETF, JHETF (DFA)      1,322,628      69,649,590        Multifactor Small Cap ETF, JHETF (DFA)      1,476,431      53,991,015
Multifactor Mid Cap ETF, JHETF (DFA)      1,322,628      69,649,590        Multifactor Small Cap ETF, JHETF (DFA)      1,476,431      53,991,015
Multifactor Small Cap ETF, JHETF (DFA) 1,476,431 53,991,015
Small Can Dynamic Growth Class NAV IHE II
(Axiom) (B)(D) 1,464,563 20,357,425
Small Cap Value, Series NAV,
JHVIT (Wellington) 3,516,191 48,277,298
Strategic Equity Allocation, Series NAV, JHVIT
(MIM US) (C) 55,060,204 940,978,888
2,049,494,603
Fixed income - 48.8%
Bond, Class NAV, JHSB (MIM US) (C) 39,170,285 533,499,279
Core Bond, Series NAV, JHVIT
(Allspring Investments) 16,488,960 185,500,805
Select Bond, Series NAV, JHVIT (MIM US) (C) 115,955,323 1,361,315,495
2,080,315,579
TOTAL AFFILIATED INVESTMENT COMPANIES
(Cost \$4,371,584,875) \$ 4,129,810,182

## Managed Volatility Balanced Portfolio (continued)

		Shares or Principal Amount		Value
UNAFFIL	JATED INVESTMENT COMPANIE	S - 2.0%		
Equity - 2	.0%			
	00 Index Fund	505,766	\$	83,699,276
TOTAL U	NAFFILIATED INVESTMENT COMP.	ANIES		
(Cost \$69,	223,908)		\$	83,699,276
SHORT-T	ERM INVESTMENTS - 0.9%			
Short-teri	n funds - 0.9%			
John Hanc	ock Collateral Trust, 5.3645% (E)(F)	3,969,083		39,691,627
TOTAL SI	HORT-TERM INVESTMENTS (Cost \$3	39,685,679)	\$	39,691,627
	stments (Managed Volatility			
Balance	ed Portfolio) (Cost \$4,480,494,462) -			
00 = 01			ф	
99.7%	ate and liabilities not 0.20%		\$	4,253,201,085
Other ass	ets and liabilities, net - 0.3%			12,839,118
Other ass	ets and liabilities, net - 0.3% ET ASSETS - 100.0%		\$ 	/ / /
Other ass TOTAL N	ET ASSETS - 100.0%			12,839,118
Other ass TOTAL N	· · · · · · · · · · · · · · · · · · ·	und Trust		12,839,118
Other ass TOTAL N Security A	ET ASSETS - 100.0%	und Trust		12,839,118
Other ass TOTAL N Security A JHETF	ET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F	und Trust		12,839,118
Other ass TOTAL N Security A JHETF JHF II	ET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II			12,839,118
Other ass TOTAL N Security A JHETF JHF II JHIT	ET ASSETS - 100.0% <u>Abbreviations and Legend</u> John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust	nd		12,839,118
Other ass TOTAL N Security A JHETF JHF II JHIT JHSB	ET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust John Hancock Sovereign Bond Fu	nd Trust	\$	12,839,118 4,266,040,203
Other ass TOTAL N Security A JHETF JHF II JHFI JHSB JHVIT	ET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust John Hancock Sovereign Bond Fu John Hancock Variable Insurance	nd Trust	\$	12,839,118 4,266,040,203
Other ass TOTAL N Security A JHETF JHF II JHIT JHSB JHVIT (A)	ET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust John Hancock Sovereign Bond Fu John Hancock Variable Insurance The underlying portfolios' subady	nd Trust isor is shown pa	\$	12,839,118 4,266,040,203
Other ass TOTAL N Security A JHETF JHF II JHIT JHSB JHVIT (A) (B)	ET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust John Hancock Sovereign Bond Fu John Hancock Variable Insurance The underlying portfolios' subady Non-income producing.	nd Trust isor is shown pa ne advisor.	\$	12,839,118 4,266,040,203
Other ass TOTAL N Security A JHETF JHF II JHIT JHSB JHVIT (A) (B) (C)	ET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust John Hancock Sovereign Bond Fu John Hancock Variable Insurance The underlying portfolios' subadv Non-income producing. The subadvisor is an affiliate of th	nd Trust isor is shown pa ne advisor. owth Fund.	\$	12,839,118 4,266,040,203

### DERIVATIVES

#### **FUTURES**

						Unrealized
	Number of		Expiration	Notional	Notional	appreciation
Open contracts	contracts	Position	date	basis^	value^	(depreciation)
Euro Currency Futures	135	Long	Mar 2024	\$18,281,043	\$18,689,063	\$408,020
Euro STOXX 50 Index Futures	369	Long	Mar 2024	18,664,195	18,506,256	(157,939)
FTSE 100 Index Futures	60	Long	Mar 2024	5,801,190	5,932,094	130,904
Japanese Yen Currency Futures	93	Long	Mar 2024	8,030,580	8,342,100	311,520
MSCI Emerging Markets Index Futures	421	Long	Mar 2024	20,724,989	21,759,385	1,034,396
Nikkei 225 Index Futures	35	Long	Mar 2024	8,263,637	8,257,270	(6,367)
Pound Sterling Currency Futures	71	Long	Mar 2024	5,561,764	5,658,256	96,492
Russell 2000 E-Mini Index Futures	116	Long	Mar 2024	11,054,959	11,876,660	821,701
S&P 500 E-Mini Index Futures	503	Long	Mar 2024	117,645,897	121,223,000	3,577,103
S&P Mid 400 E-Mini Index Futures	73	Long	Mar 2024	19,524,271	20,509,350	985,079
						\$7,200,909

^ Notional basis refers to the contractual amount agreed upon at inception of open contracts; notional value represents the current value of the open contract.

See Notes to financial statements regarding investment transactions and other derivatives information.

## Managed Volatility Moderate Portfolio

	Shares or Principal Amount	Value
AFFILIATED INVESTMENT COMPANIES (A)	- 97.0%	
Equity - 38.0%		
Blue Chip Growth, Series NAV, JHVIT		
(T. Rowe Price) (B)	1,231,900	\$ 33,409,117
Emerging Markets Equity, Class NAV, JHIT		
(MIM US) (C)	2,608,025	23,550,461
Equity Income, Series NAV, JHVIT		
(T. Rowe Price)	3,738,536	49,834,688
Fundamental Large Cap Core, Class NAV, JHIT		
(MIM US) (C)	737,726	49,132,558
Mid Cap Growth, Series NAV, JHVIT		
(Wellington) (B)	1,158,591	10,508,416
Mid Value, Series NAV, JHVIT (T. Rowe Price)	1,398,675	13,651,067
Multifactor Developed International ETF,		
JHETF (DFA)	322,027	10,499,690
Multifactor Emerging Markets ETF,		
JHETF (DFA)	401,042	10,198,498
Multifactor Mid Cap ETF, JHETF (DFA)	163,619	8,616,177
Multifactor Small Cap ETF, JHETF (DFA)	193,307	7,068,966
Small Cap Dynamic Growth, Class NAV, JHF II		
(Axiom) (B)(D)	339,858	4,724,031
Small Cap Value, Series NAV,		
JHVIT (Wellington)	738,661	10,141,821
Strategic Equity Allocation, Series NAV, JHVIT		
(MIM US) (C)	12,228,643	208,987,502
		440,322,992
Fixed income - 59.0%		
Bond, Class NAV, JHSB (MIM US) (C)	12,864,122	175,209,345
Core Bond, Series NAV, JHVIT		
(Allspring Investments)	5,417,447	60,946,283
Select Bond, Series NAV, JHVIT (MIM US) (C)	38,125,200	447,589,842
		683,745,470
TOTAL AFFILIATED INVESTMENT COMPANIE	S	
(Cost \$1,212,005,414)	-	\$ 1,124,068,462
······································		

## Managed Volatility Moderate Portfolio (continued)

		Shares or Principal Amount		Value
UNAFFII	LATED INVESTMENT COMPANIES	5 - 1.9%		
Equity - 1	.9%			
	00 Index Fund	133,350	\$	22,068,025
TOTAL U	NAFFILIATED INVESTMENT COMPA	ANIES		
(Cost \$18	250,867)		\$	22,068,025
SHORT-1	TERM INVESTMENTS - 0.8%			
Short-ter	n funds - 0.8%			
John Hand	cock Collateral Trust, 5.3645% (E)(F)	905,914		9,059,317
TOTAL S	HORT-TERM INVESTMENTS (Cost \$9	9,057,366)	\$	9,059,317
	estments (Managed Volatility			
	- 4- D 46-12-) (C4 \$1 320 212 (47)			
	ate Portfolio) (Cost \$1,239,313,647) -			
99.7%			\$	/ / /
99.7% Other ass	ets and liabilities, net - 0.3%		·	3,181,49
99.7% Other ass			\$ 	1,155,195,804 3,181,495 1,158,377,299
99.7% Other ass TOTAL N	ets and liabilities, net - 0.3%		·	3,181,49
99.7% Other ass TOTAL N	ets and liabilities, net - 0.3% IET ASSETS - 100.0%	und Trust	·	3,181,49
99.7% Other ass TOTAL N Security A	ets and liabilities, net - 0.3% IET ASSETS - 100.0% Abbreviations and Legend	und Trust	·	3,181,49
99.7% Other ass TOTAL N Security A JHETF	ets and liabilities, net - 0.3% IET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F	und Trust	·	3,181,49
99.7% Other ass TOTAL M Security 2 JHETF JHF II	ets and liabilities, net - 0.3% IET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II		·	3,181,49
99.7% Other ass TOTAL N Security A JHETF JHF II JHIT JHSB	ets and liabilities, net - 0.3% IET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust	nd	·	3,181,49
99.7% Other ass TOTAL M Security 2 JHETF JHF II JHIT	ets and liabilities, net - 0.3% IET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust John Hancock Sovereign Bond Fu	nd Trust	\$	3,181,49 1,158,377,29
99.7% Other ass TOTAL N Security A JHETF JHF II JHF II JHSB JHVIT	ets and liabilities, net - 0.3% IET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust John Hancock Sovereign Bond Fu John Hancock Variable Insurance	nd Trust	\$	3,181,49 1,158,377,29
99.7% Other ass TOTAL N Security A JHETF JHF II JHF II JHSB JHVIT (A)	ets and liabilities, net - 0.3% IET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust John Hancock Sovereign Bond Fu John Hancock Variable Insurance ' The underlying portfolios' subadvi	nd Trust isor is shown pa	\$	3,181,49 1,158,377,29
99.7% Other ass TOTAL N Security A JHETF JHF II JHIT JHSB JHVIT (A) (B)	ets and liabilities, net - 0.3% IET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust John Hancock Sovereign Bond Fu John Hancock Variable Insurance ' The underlying portfolios' subadvi Non-income producing.	nd Trust isor is shown pa e advisor.	\$	3,181,49 1,158,377,29
99.7% Other ass TOTAL N Security 2 JHETF JHF II JHIT JHSB JHVIT (A) (B) (C)	ets and liabilities, net - 0.3% IET ASSETS - 100.0% Abbreviations and Legend John Hancock Exchange-Traded F John Hancock Funds II John Hancock Investment Trust John Hancock Sovereign Bond Fu John Hancock Variable Insurance ' The underlying portfolios' subadvi Non-income producing. The subadvisor is an affiliate of th	nd Trust isor is shown pa e advisor. owth Fund.	\$	3,181,49 1,158,377,29

### DERIVATIVES

#### **FUTURES**

						Unrealized
	Number of		Expiration	Notional	Notional	appreciation
Open contracts	contracts	Position	date	basis^	value^	(depreciation)
Euro Currency Futures	26	Long	Mar 2024	\$3,517,226	\$3,599,375	\$82,149
Euro STOXX 50 Index Futures	72	Long	Mar 2024	3,641,787	3,610,977	(30,810)
FTSE 100 Index Futures	11	Long	Mar 2024	1,063,552	1,087,551	23,999
Japanese Yen Currency Futures	17	Long	Mar 2024	1,472,388	1,524,900	52,512
MSCI Emerging Markets Index Futures	79	Long	Mar 2024	3,889,012	4,083,115	194,103
Nikkei 225 Index Futures	6	Long	Mar 2024	1,409,319	1,415,532	6,213
Pound Sterling Currency Futures	14	Long	Mar 2024	1,096,686	1,115,713	19,027
Russell 2000 E-Mini Index Futures	21	Long	Mar 2024	2,001,329	2,150,085	148,756
S&P 500 E-Mini Index Futures	111	Long	Mar 2024	25,961,619	26,751,000	789,381
S&P Mid 400 E-Mini Index Futures	13	Long	Mar 2024	3,476,925	3,652,350	175,425
						\$1,460,755

^ Notional basis refers to the contractual amount agreed upon at inception of open contracts; notional value represents the current value of the open contract.

See Notes to financial statements regarding investment transactions and other derivatives information.

## Managed Volatility Conservative Portfolio

	Shares or Principal Amount		Value
AFFILIATED INVESTMENT COMPANIES (A	A) - 97.4%		
Equity - 19.0%			
Blue Chip Growth, Series NAV, JHVIT			
(T. Rowe Price) (B)	342,861	\$	9,298,390
Emerging Markets Equity, Class NAV, JHIT			
(MIM US) (C)	602,364		5,439,344
Equity Income, Series NAV, JHVIT			
(T. Rowe Price)	1,130,413		15,068,411
Fundamental Large Cap Core, Class NAV, JHIT	100 201		12 (00.0(5
(MIM US) (C)	190,391		12,680,065
Multifactor Emerging Markets ETF, JHETF (DFA)	80.060		2 297 012
Multifactor Mid Cap ETF, JHETF (DFA)	89,969 155,479		2,287,912 8,187,524
Multifactor Small Cap ETF, JHETF (DFA)	175,786		6,428,248
Strategic Equity Allocation, Series NAV, JHVIT	175,700		0,420,240
(MIM US) (C)	3,144,152		53,733,556
(	-,,	_	113,123,450
Fixed income - 78.4%			115,125,450
	0 010 772		120,002,722
Bond, Class NAV, JHSB (MIM US) (C) Core Bond, Series NAV, JHVIT	8,810,773		120,002,722
(Allspring Investments)	3.697.839		41.600.691
Select Bond, Series NAV, JHVIT (MIM US) (C)	26,039,463		305,703,293
Select Bolid, Seles 1111, JITTI (MINI 05) (C)	20,037,405	_	467,306,706
	120		407,500,700
TOTAL AFFILIATED INVESTMENT COMPANI	IES	¢	590 420 150
(Cost \$640,184,785)		\$	580,430,156
UNAFFILIATED INVESTMENT COMPANIE	S - 0.8%		
Equity - 0.8%			
Fidelity 500 Index Fund	29,682		4,912,008
TOTAL UNAFFILIATED INVESTMENT COMP.	ANIES		
(Cost \$4,088,011)		\$	4,912,008

## Managed Volatility Conservative Portfolio (continued)

		Principal Amount		Value
SHORT-1	TERM INVESTMENTS - 0.4%			
Short-terr	m funds - 0.4%			
John Hand	cock Collateral Trust, 5.3645% (D)(E)	250,577	\$	2,505,820
TOTAL S	HORT-TERM INVESTMENTS (Cost \$	2,505,978)	\$	2,505,820
Conser	estments (Managed Volatility vative Portfolio) (Cost \$646,778,774) ·		ф	
98.6%	ets and liabilities, net - 1.4%		\$	587,847,984 8,414,992
	,			, ,
TOTAL N	NET ASSETS - 100.0%		\$	596,262,976
Security A	Abbreviations and Legend			
JHETF	John Hancock Exchange-Traded F	Fund Trust		
JHIT	John Hancock Investment Trust			
JHSB	John Hancock Sovereign Bond Fu	ınd		
JHVIT	John Hancock Variable Insurance	Trust		
(A)	The underlying portfolios' subady	isor is shown pa	arent	hetically.
(B)	Non-income producing.			
(C)	The subadvisor is an affiliate of the	ne advisor.		
(D)	The rate shown is the annualized	seven-day yield	as o	f 12-31-23.
(E)	Investment is an affiliate of the fu	ind, the advisor	and/	or subadvisor.

Shares or

Unrealized

### DERIVATIVES

#### **FUTURES**

						Unrealized
	Number of		Expiration	Notional	Notional	appreciation
Open contracts	contracts	Position	date	basis^	value^	(depreciation)
Euro Currency Futures	64	Short	Mar 2024	\$(8,662,978)	\$(8,860,000)	\$(197,022)
Euro STOXX 50 Index Futures	176	Short	Mar 2024	(8,901,185)	(8,826,832)	74,353
FTSE 100 Index Futures	25	Short	Mar 2024	(2,417,542)	(2,471,706)	(54,164)
Japanese Yen Currency Futures	41	Short	Mar 2024	(3,548,980)	(3,677,700)	(128,720)
MSCI Emerging Markets Index Futures	192	Short	Mar 2024	(9,455,834)	(9,923,520)	(467,686)
Nikkei 225 Index Futures	15	Short	Mar 2024	(3,533,119)	(3,538,830)	(5,711)
Pound Sterling Currency Futures	32	Short	Mar 2024	(2,508,683)	(2,550,200)	(41,517)
Russell 2000 E-Mini Index Futures	58	Short	Mar 2024	(5,526,455)	(5,938,330)	(411,875)
S&P 500 E-Mini Index Futures	307	Short	Mar 2024	(71,874,510)	(73,987,000)	(2,112,490)
S&P Mid 400 E-Mini Index Futures	46	Short	Mar 2024	(12,314,918)	(12,923,700)	(608,782)
						\$(3,953,614)

^ Notional basis refers to the contractual amount agreed upon at inception of open contracts; notional value represents the current value of the open contract.

See Notes to financial statements regarding investment transactions and other derivatives information.

### **Investment companies**

## Subadvisors of Affiliated Underlying Funds

Allspring Global Investments, LLC(Allspring Investments)Axiom Investors LLC(Axiom)Dimensional Fund Advisors, LP(DFA)Manulife Investment Management (US) LLC(MIM US)T. Rowe Price Associates, Inc.(T. Rowe Price)Wellington Management Company LLP(Wellington)

### Statements of assets and liabilities — December 31, 2023

Assets Unaffiliated investments, at value Affiliated investments, at value Total investments, at value Receivable for futures variation margin Foreign currency, at value Collateral held at broker for futures contracts Dividends and interest receivable Receivable for fund shares sold Receivable for investments sold Other assets	Managed Volatility Growth Portfolio \$142,085,001 5,427,316,130 5,569,401,131 	Managed Volatility Balanced Portfolio \$83,699,276 4,169,501,809 4,253,201,085 1,853,930 2,500,451 8,877,436 2,065,846 	Managed Volatility Moderate Portfolio \$22,068,025 1,133,127,779 1,155,195,804 	Managed Volatility Conservative Portfolio \$4,912,008 582,935,976 587,847,984 421,019 1,595,426 6,386,000 449,110 53,365 162,522 31,003
Total assets	5,595,510,271	4,269,403,103	1,159,678,004	596,946,429
Liabilities				
Payable for futures variation margin Due to custodian Payable for investments purchased Payable for fund shares repurchased Payable to affiliates Accounting and legal services fees Trustees' fees Other liabilities and accrued expenses Total liabilities Net assets	518,822 	36,374 2,537,826 619,259 86,326 8,561 74,554 <b>3,362,900</b> <b>\$4,266,040,203</b>	155,737 152,788 623,359 307,319 23,478 2,181 35,843 1,300,705 \$1,158,377,299	82,540 433,720 123,731 12,219 1,053 30,190 <b>683,453</b> \$596,262,976
Net assets consist of				
Paid-in capital Total distributable earnings (loss) <b>Net assets</b> Unaffiliated investments, at cost Affiliated investments, at cost Foreign currency, at cost	\$5,813,857,764 (223,297,403) <b>\$5,590,560,361</b> \$118,736,960 \$5,562,358,031 \$4,018,841	\$4,581,839,094 (315,798,891) <b>\$4,266,040,203</b> \$69,223,908 \$4,411,270,554 \$2,478,567	\$1,283,169,909 (124,792,610) <b>\$1,158,377,299</b> \$18,250,867 \$1,221,062,780 \$457,885	\$700,219,623 (103,956,647) <b>\$596,262,976</b> \$4,088,011 \$642,690,763 \$1,579,477
Net asset value per share				
The portfolios have an unlimited number of shares authorized with \$0.01 per share. Net asset value is calculated by dividing the net as shares by the number of outstanding shares in the class.				
<b>Series I</b> Net assets Shares outstanding Net asset value, offering price and redemption price per share	\$451,191,564 42,921,472 \$10.51	\$359,407,148 35,926,057 \$10.00	\$140,782,951 14,612,918 \$9.63	\$95,286,926 9,870,572 \$9.65
<b>Series II</b> Net assets Shares outstanding Net asset value, offering price and redemption price per share	\$4,188,494,852 400,574,764 \$10.46	\$2,851,852,145 287,786,008 \$9.91	\$897,721,928 94,117,727 \$9.54	\$448,864,791 46,941,819 \$9.56
<b>Series NAV</b> Net assets Shares outstanding Net asset value, offering price and redemption price per share	\$950,873,945 90,247,539 \$10.54	\$1,054,780,910 105,024,857 \$10.04	\$119,872,420 12,422,799 \$9.65	\$52,111,259 5,381,388 \$9.68

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## Statements of operations — For the year ended December 31, 2023

Investment income	Managed Volatility Growth Portfolio	Managed Volatility Balanced Portfolio	Managed Volatility Moderate Portfolio	Managed Volatility Conservative Portfolio
Dividends from affiliated investments Dividends from unaffiliated investments Interest	\$109,190,934 2,649,434 2,165,760	\$101,388,505 1,300,008 1,254,961	\$30,001,957 346,065 290,220	\$18,818,959 80,217 192,150
Total investment income	114,006,128	103,943,474	30,638,242	19,091,326
Expenses				
Investment management fees	10,434,707	7,521,651	1,948,769	1,071,195
Distribution and service fees	10,622,655	7,369,989	2,340,439	1,230,581
Accounting and legal services fees	1,067,261	825,577	227,418	122,622
Trustees' fees Custodian fees	138,333 36,855	107,008 36,768	29,551 36,847	15,958 36,828
Printing and postage	112,482	104,531	37,326	27,758
Professional fees	196,444	158,924	67,437	51,335
Other	180,525	139,316	45,135	31,819
Total expenses	22,789,262	16,263,764	4,732,922	2,588,096
Less expense reductions	(4,977,583)	(3,527,340)	(898,097)	(479,384)
Net expenses	17,811,679	12,736,424	3,834,825	2,108,712
Net investment income	96,194,449	91,207,050	26,803,417	16,982,614
Realized and unrealized gain (loss)				
Net realized gain (loss) on				
Unaffiliated investments and foreign currency transactions	2,962,763	4,129,831	1,616,685	354,306
Affiliated investments	(46,199,247)	(43,556,164)	(22,035,256)	(17,126,969)
Capital gain distributions received from affiliated investments	168,504,274	94,280,600	21,729,829	5,275,100
Futures contracts	(88,450,172)	(36,660,693)	(9,748,824)	(13,743,440)
	36,817,618	18,193,574	(8,437,566)	(25,241,003)
Change in net unrealized appreciation (depreciation) of				
Unaffiliated investments and translation of assets and liabilities in				
foreign currencies	24,888,285	14,328,378	3,325,816	842,782
Affiliated investments	578,724,007	371,041,625	100,248,395	46,584,011
Futures contracts	(36,195,477)	(20,347,124)	(5,341,901)	(7,166,881)
	567,416,815	365,022,879	98,232,310	40,259,912
Net realized and unrealized gain (loss)	604,234,433	383,216,453	89,794,744	15,018,909
Increase in net assets from operations	\$700,428,882	\$474,423,503	\$116,598,161	\$32,001,523

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### Statements of changes in net assets

		l Volatility Portfolio Year ended		Volatility Portfolio Year ended	Managed Volatility Moderate Portfolio Year ended Year end		
	12-31-23	12-31-22	12-31-23	12-31-22	12-31-23	12-31-22	
Increase (decrease) in net assets							
From operations							
Net investment income	\$96,194,449	\$91,070,770	\$91,207,050	\$90,089,637	\$26,803,417	\$27,257,650	
Net realized gain (loss)	36,817,618	624,831,973	18,193,574	314,326,649	(8,437,566)	70,856,917	
Change in net unrealized appreciation							
(depreciation)	567,416,815	(1,781,532,434)	365,022,879	(1,249,517,918)	98,232,310	(333,664,771)	
Increase (decrease) in net assets resulting							
from operations	700,428,882	(1,065,629,691)	474,423,503	(845,101,632)	116,598,161	(235,550,204)	
Distributions to shareholders							
From earnings	()	<i>(</i>	( · ·	<i>(-</i>	(	<i>(</i> )	
Series I	(60,569,355)	(20,688,808)	(36,258,153)	(21,054,525)	(13,007,813)	(9,278,308)	
Series II	(557,037,654)	(188,720,320)	(286,763,525)	(168,108,762)	(80,641,699)	(56,172,680)	
Series NAV	(126,121,735)	(41,176,056)	(105,677,007)	(59,310,423)	(10,780,532)	(7,064,870)	
Total distributions	(743,728,744)	(250,585,184)	(428,698,685)	(248,473,710)	(104,430,044)	(72,515,858)	
From portfolio share transactions	47.000.044	(204 045 050)	(427 444 442)	(204.406.264)	(67 5 40 204)	(00.000.500)	
Portfolio share transactions	47,330,911	(391,915,950)	(127,411,142)	(294,196,264)	(67,548,201)	(93,298,506)	
Total increase (decrease)	4,031,049	(1,708,130,825)	(81,686,324)	(1,387,771,606)	(55,380,084)	(401,364,568)	
Net assets							
Beginning of year	5,586,529,312	7,294,660,137	4,347,726,527	5,735,498,133	1,213,757,383	1,615,121,951	
End of year	\$5,590,560,361	\$5,586,529,312	\$4,266,040,203	\$4,347,726,527	\$1,158,377,299	\$1,213,757,383	
						Volatility ve Portfolio	
					Year ended 12-31-23	Year ended 12-31-22	
Increase (decrease) in net assets							
From operations							
Net investment income					\$16,982,614	\$17,668,894	
Net realized gain (loss)					(25,241,003)	11,488,796	
Change in net unrealized appreciation (depr	reciation)						
					40,259,912	(156,894,826)	
Increase (decrease) in net assets resulting fro					40,259,912 <b>32,001,523</b>	(156,894,826) (127,737,136)	
					40,259,912 <b>32,001,523</b>		
Distributions to shareholders							
Distributions to shareholders						(127,737,136)	
Distributions to shareholders From earnings					32,001,523	( <b>127,737,136</b> ) (3,234,492)	
Distributions to shareholders From earnings Series I					<b>32,001,523</b> (5,169,047)	( <b>127,737,136</b> ) (3,234,492) (13,926,746)	
Distributions to shareholders From earnings Series I Series II Series NAV					<b>32,001,523</b> (5,169,047) (22,084,713)	( <b>127,737,136</b> ) (3,234,492) (13,926,746) (1,581,162)	
Distributions to shareholders From earnings Series I Series II Series NAV Total distributions					<b>32,001,523</b> (5,169,047) (22,084,713) (2,624,333)	( <b>127,737,136</b> ) (3,234,492) (13,926,746) (1,581,162)	
Distributions to shareholders From earnings Series I Series II Series NAV Total distributions From portfolio share transactions Portfolio share transactions					<b>32,001,523</b> (5,169,047) (22,084,713) (2,624,333) <b>(29,878,093)</b> (66,640,077)	(127,737,136) (3,234,492) (13,926,746) (1,581,162) (18,742,400) (82,479,687)	
Distributions to shareholders From earnings Series I Series II Series NAV Total distributions From portfolio share transactions Portfolio share transactions					<b>32,001,523</b> (5,169,047) (22,084,713) (2,624,333) <b>(29,878,093)</b>	(127,737,136) (3,234,492) (13,926,746) (1,581,162) (18,742,400) (82,479,687)	
Series II Series NAV Total distributions From portfolio share transactions					<b>32,001,523</b> (5,169,047) (22,084,713) (2,624,333) <b>(29,878,093)</b> (66,640,077)	(127,737,136) (3,234,492) (13,926,746) (1,581,162) (18,742,400)	
Distributions to shareholders From earnings Series I Series INAV Total distributions From portfolio share transactions Portfolio share transactions Total increase (decrease)					<b>32,001,523</b> (5,169,047) (22,084,713) (2,624,333) <b>(29,878,093)</b> (66,640,077)	(127,737,136) (3,234,492) (13,926,746) (1,581,162) (18,742,400) (82,479,687)	

### **Financial highlights**

Per share opera	ting performan	ce for a sha	re outstan	ding throug	hout each p	eriod				Ratios and	d suppleme	ntal data		
		Income (loss) investment o			Less distribut	ons				Ratios to av	verage net as	sets		
Period ended	Net asset value, beginning of period (\$)	Net investment income (loss) (\$) <sup>1, 2</sup>	Net real- ized and unrealized gain (loss) on invest- ments (\$)	Total from investment operations (\$)	From net investment income (\$)	From net realized gain (\$)	Total distribu- tions (\$)	Net asset value, end of period (\$)	Total return (%) <sup>3</sup>	Expenses before reductions (%) <sup>4</sup>	Expenses including reductions (%) <sup>4</sup>	Net invest- ment income (loss) (%) <sup>2</sup>	Net assets, end of period (in millions)	Portfolio turnover (%)
Managed Vo	latility Grov	wth Port	folio											
Series I	2													
12-31-2023 12-31-2022 12-31-2021 12-31-2020 12-31-2019 Series II 12-31-2023 12-31-2022	10.79 13.28 12.03 13.28 12.20 10.74 13.22	0.21 0.19 0.21 0.24 0.18 0.17	1.09 (2.17) 1.33 (0.46) 2.06 1.10 (2.16)	1.54 (0.25) 2.30 1.28	(0.20) (0.20) (0.21) (0.24) (0.21) (0.21) (0.18) (0.18)	(1.38) (0.31) (0.08) (0.76) (1.01) (1.38) (0.31)	(1.58) (0.51) (0.29) (1.00) (1.22) (1.56) (0.49)	10.51 10.79 13.28 12.03 13.28 10.46 10.74	13.69 (14.86) 12.82 (1.42) 19.56 13.54 (15.03)	0.27 0.27 0.25 0.28 0.27 0.47 0.47	0.18 0.18 0.16 0.15 0.13 0.38 0.38	1.89 1.64 1.64 1.75 1.85 1.85	451 450 589 545 627 4,188 4,246	8 14 12 13 8 8 8
12-31-2021 12-31-2020 12-31-2019	11.98 13.23 12.16	0.18 0.18 0.21	1.33 (0.46) 2.06	1.51 (0.28) 2.27	(0.19) (0.21) (0.19)	(0.08) (0.76) (1.01)	(0.27) (0.97) (1.20)	13.22 11.98 13.23	12.58 (1.60) 19.32	0.45 0.48 0.47	0.36 0.35 0.33	1.37 1.53 1.64	5,630 5,886 7,116	12 <sup>!</sup> 13 8
Series NAV														
12-31-2023 12-31-2022 12-31-2021 12-31-2020 12-31-2019	10.81 13.30 12.05 13.30 12.21	0.22 0.20 0.23 0.22 0.26	1.09 (2.17) 1.32 (0.47) 2.06	1.55	(0.20) (0.21) (0.22) (0.24) (0.22)	(1.38) (0.31) (0.08) (0.76) (1.01)	(1.58) (0.52) (0.30) (1.00) (1.23)	10.54 10.81 13.30 12.05 13.30	13.81 (14.79) 12.85 (1.37) 19.68	0.22 0.22 0.20 0.23 0.22	0.13 0.13 0.11 0.10 0.08	1.97 1.72 1.80 1.85 1.95	951 891 1,075 769 817	8 14 12 <sup>!</sup> 13 8

1. Based on average daily shares outstanding. 2. Net investment income is affected by the timing and frequency of the declaration of dividends by the underlying funds in which the portfolio invests. 3. Total returns exclude insurance-related fees and expenses and would have been lower had certain expenses not been reduced during the applicable periods. 4. Ratios do not include expenses indirectly incurred from underlying funds and can vary based on the mix of underlying funds held by the portfolio. 5. Excludes merger activity.

## Managed Volatility Balanced Portfolio

Series I														
12-31-2023	9.99	0.23	0.87	1.10	(0.23)	(0.86)	(1.09)	10.00	11.99	0.26	0.18	2.28	359	6
12-31-2022	12.48	0.22	(2.11)	(1.89)	(0.23)	(0.37)	(0.60)	9.99	(15.08)	0.25	0.17	2.01	360	11
12-31-2021	11.66	0.23	0.91	1.14	(0.25)	(0.07)	(0.32)	12.48	9.76	0.24	0.15	1.89	476	11
12-31-2020	12.41	0.25	(0.07)	0.18	(0.27)	(0.66)	(0.93)	11.66	1.81	0.26	0.15	2.11	498	12
12-31-2019	11.23	0.25	1.73	1.98	(0.23)	(0.57)	(0.80)	12.41	17.92	0.26	0.13	2.07	556	8
Series II														
12-31-2023	9.91	0.21	0.86	1.07	(0.21)	(0.86)	(1.07)	9.91	11.79	0.46	0.38	2.06	2,852	6
12-31-2022	12.38	0.20	(2.09)	(1.89)	(0.21)	(0.37)	(0.58)	9.91	(15.22)	0.45	0.37	1.79	2,969	11
12-31-2021	11.57	0.20	0.90	1.10	(0.22)	(0.07)	(0.29)	12.38	9.54	0.44	0.35	1.66	3,991	11
12-31-2020	12.33	0.22	(0.08)	0.14	(0.24)	(0.66)	(0.90)	11.57	1.55	0.46	0.35	1.89	4,288	12
12-31-2019	11.16	0.22	1.72	1.94	(0.20)	(0.57)	(0.77)	12.33	17.73	0.46	0.33	1.86	4,957	8
Series NAV														
12-31-2023	10.03	0.24	0.86	1.10	(0.23)	(0.86)	(1.09)	10.04	12.00	0.21	0.13	2.35	1,055	6
12-31-2022	12.52	0.23	(2.11)	(1.88)	(0.24)	(0.37)	(0.61)	10.03	(14.98)	0.20	0.12	2.08	1,019	11
12-31-2021	11.69	0.24	0.91	1.15	(0.25)	(0.07)	(0.32)	12.52	9.88	0.19	0.10	1.97	1,269	11
12-31-2020	12.45	0.26	(0.09)	0.17	(0.27)	(0.66)	(0.93)	11.69	1.77	0.21	0.10	2.20	1,217	12
12-31-2019	11.26	0.26	1.73	1.99	(0.23)	(0.57)	(0.80)	12.45	18.02	0.21	0.08	2.16	1,261	8

1. Based on average daily shares outstanding. 2. Net investment income is affected by the timing and frequency of the declaration of dividends by the underlying funds in which the portfolio invests. 3. Total returns exclude insurance-related fees and expenses and would have been lower had certain expenses not been reduced during the applicable periods. 4. Ratios do not include expenses indirectly incurred from underlying funds and can vary based on the mix of underlying funds held by the portfolio.

### **Financial highlights**

Per share opera	ting performan	ce for a sha	re outstan	ding throug	hout each p	eriod				Ratios and	d suppleme	ntal data		
		Income (loss) investment o			Less distribut	ons				Ratios to av	/erage net as	sets		
Period ended	Net asset value, beginning of period (\$)	Net investment income (loss) (\$) <sup>1, 2</sup>	Net real- ized and unrealized gain (loss) on invest- ments (\$)	Total from investment operations (\$)	From net investment income (\$)	From net realized gain (\$)	Total distribu- tions (\$)	Net asset value, end of period (\$)	Total return (%) <sup>3</sup>	Expenses before reductions (%) <sup>4</sup>	Expenses including reductions (%) <sup>4</sup>	Net invest- ment income (loss) (%) <sup>2</sup>	Net assets, end of period (in millions)	Portfolio turnover (%)
Managed Vo	latility Mod	derate Po	rtfolio											
Series I	2													
12-31-2023 12-31-2022 12-31-2021 12-31-2020 12-31-2019 Series II 12-31-2023 12-31-2022 12-31-2022	9.61 12.01 11.44 11.94 10.84 9.52 11.91 11.34	0.24 0.23 0.24 0.26 0.26 0.22 0.21 0.22 0.21	0.71 (2.03) 0.66 0.10 1.53 0.71 (2.02) 0.66	0.90 0.36 1.79 0.93 (1.81) 0.88	(0.24) (0.24) (0.25) (0.28) (0.24) (0.22) (0.22) (0.22) (0.23)	(0.69) (0.36) (0.08) (0.58) (0.45) (0.45) (0.69) (0.36) (0.85)	(0.93) (0.60) (0.33) (0.86) (0.69) (0.91) (0.58) (0.31) (0.31)	9.52 11.91	10.64 (14.87) 7.90 3.31 16.72 10.54 (15.10) 7.76	0.25 0.25 0.24 0.25 0.25 0.25 0.45 0.45 0.44	0.18 0.17 0.15 0.14 0.13 0.38 0.37 0.35	2.44 2.19 2.02 2.29 2.18 2.24 1.95 1.82	141 153 196 208 234 898 945 1,277	6 10 11 8 6 10 10
12-31-2020 12-31-2019	11.85 10.77	0.23 0.23	0.10 1.52	0.33 1.75	(0.26) (0.22)	(0.58) (0.45)	(0.84) (0.67)	11.34 11.85	3.05 16.43	0.45 0.45	0.34 0.33	2.06 1.97	1,379 1,552	11 8
Series NAV														
12-31-2023 12-31-2022 12-31-2021 12-31-2020 12-31-2019	9.62 12.03 11.45 11.96 10.85	0.25 0.24 0.25 0.27 0.27	0.71 (2.04) 0.67 0.08 1.54	0.96 (1.80) 0.92 0.35 1.81	(0.24) (0.25) (0.26) (0.28) (0.25)	(0.69) (0.36) (0.08) (0.58) (0.45)	(0.93) (0.61) (0.34) (0.86) (0.70)	9.65 9.62 12.03 11.45 11.96	10.79 (14.89) 8.03 3.27 16.85	0.20 0.20 0.19 0.20 0.20	0.13 0.12 0.10 0.09 0.08	2.52 2.27 2.12 2.38 2.29	120 116 142 139 137	6 10 10 11 8

1. Based on average daily shares outstanding. 2. Net investment income is affected by the timing and frequency of the declaration of dividends by the underlying funds in which the portfolio invests. 3. Total returns exclude insurance-related fees and expenses and would have been lower had certain expenses not been reduced during the applicable periods. 4. Ratios do not include expenses indirectly incurred from underlying funds and can vary based on the mix of underlying funds held by the portfolio.

## Managed Volatility Conservative Portfolio

Series I														
12-31-2023	9.64	0.28	0.23	0.51	(0.29)	(0.21)	(0.50)	9.65	5.47	0.27	0.19	2.90	95	5
12-31-2022	11.66	0.26	(1.99)	(1.73)	(0.28)	(0.01)	(0.29)	9.64	(14.80)	0.25	0.18	2.53	109	8
12-31-2021	11.62	0.28	0.12	0.40	(0.29)	(0.07)	(0.36)	11.66	3.48	0.25	0.16	2.33	145	7
12-31-2020	11.75	0.30	0.09	0.39	(0.33)	(0.19)	(0.52)	11.62	3.39	0.26	0.14	2.57	154	10
12-31-2019	10.61	0.29	1.13	1.42	(0.26)	(0.02)	(0.28)	11.75	13.38	0.25	0.14	2.50	166	8
Series II														
12-31-2023	9.56	0.26	0.22	0.48	(0.27)	(0.21)	(0.48)	9.56	5.20	0.47	0.39	2.63	449	5
12-31-2022	11.56	0.24	(1.97)	(1.73)	(0.26)	(0.01)	(0.27)	9.56	(14.93)	0.45	0.38	2.31	499	8
12-31-2021	11.52	0.25	0.13	0.38	(0.27)	(0.07)	(0.34)	11.56	3.31	0.45	0.36	2.10	683	7
12-31-2020	11.66	0.27	0.09	0.36	(0.31)	(0.19)	(0.50)	11.52	3.13	0.46	0.34	2.36	794	10
12-31-2019	10.53	0.25	1.14	1.39	(0.24)	(0.02)	(0.26)	11.66	13.18	0.45	0.34	2.23	888	8
Series NAV														
12-31-2023	9.67	0.29	0.23	0.52	(0.30)	(0.21)	(0.51)	9.68	5.50	0.22	0.14	2.93	52	5
12-31-2022	11.69	0.28	(2.00)	(1.72)	(0.29)	(0.01)	(0.30)	9.67	(14.72)	0.20	0.13	2.67	53	8
12-31-2021	11.65	0.29	0.12	0.41	(0.30)	(0.07)	(0.37)	11.69	3.52	0.20	0.11	2.44	62	7
12-31-2020	11.78	0.31	0.09	0.40	(0.34)	(0.19)	(0.53)	11.65	3.43	0.21	0.09	2.71	59	10
12-31-2019	10.64	0.29	1.14	1.43	(0.27)	(0.02)	(0.29)	11.78	13.50	0.20	0.09	2.55	56	8

1. Based on average daily shares outstanding. 2. Net investment income is affected by the timing and frequency of the declaration of dividends by the underlying funds in which the portfolio invests. 3. Total returns exclude insurance-related fees and expenses and would have been lower had certain expenses not been reduced during the applicable periods. 4. Ratios do not include expenses indirectly incurred from underlying funds and can vary based on the mix of underlying funds held by the portfolio.

### Notes to financial statements

#### 1. Organization

John Hancock Variable Insurance Trust (the Trust) is a no-load, open-end management investment company organized as a Massachusetts business trust. The Trust is registered under the Investment Company Act of 1940, as amended (the 1940 Act). It is a series company with multiple investment series, four of which are presented in this report (collectively, Managed Volatility Portfolios, or the portfolios and individually, the portfolio). The portfolios operate as "funds of funds" that may invest in affiliated underlying funds of the Trust, other funds in the John Hancock group of funds complex, non-John Hancock funds and certain other permitted investments.

The portfolios may offer multiple classes of shares: Series I, Series II, and Series NAV. The shares currently offered by each portfolio are shown on the Statements of assets and liabilities. Shares of the portfolios are presently offered only to certain affiliates of John Hancock Variable Trust Advisers LLC (the Advisor). Shareholders of each class have exclusive voting rights to matters that affect that class. The distribution and service fees, if any, for each class may differ.

The investment objectives of the portfolios are as follows:

#### Managed Volatility Growth Portfolio

To seek long term growth of capital while seeking to both manage the volatility of return and limit the magnitude of portfolio losses.

#### Managed Volatility Balanced Portfolio

To seek growth of capital and current income while seeking to both manage the volatility of return and limit the magnitude of portfolio losses.

#### Managed Volatility Moderate Portfolio

To seek current income and growth of capital while seeking to both manage the volatility of return and limit the magnitude of portfolio losses.

#### Managed Volatility Conservative Portfolio

To seek current income and growth of capital while seeking to both manage the volatility of return and limit the magnitude of portfolio losses.

The accounting policies of the underlying funds in which the portfolios invest are outlined in the underlying funds' shareholder reports, which include the underlying funds' financial statements. These are available on the Securities and Exchange Commission (SEC) website at sec.gov. John Hancock underlying funds' shareholder reports are also available without charge by calling 800-344-1029 or visiting jhannuities.com. The underlying funds are not covered by this report.

#### 2. Significant accounting policies

The financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America (US GAAP), which require management to make certain estimates and assumptions as of the date of the financial statements. Actual results could differ from those estimates and those differences could be significant. The portfolios qualify as investment companies under Topic 946 of Accounting Standards Codification of US GAAP.

Events or transactions occurring after the end of the fiscal period through the date that the financial statements were issued have been evaluated in the preparation of the financial statements. The following summarizes the significant accounting policies of the portfolios:

Security valuation. Investments are stated at value as of the scheduled close of regular trading on the New York Stock Exchange (NYSE), normally at 4:00 P.M., Eastern Time. In case of emergency or other disruption resulting in the NYSE not opening for trading or the NYSE closing at a time other than the regularly scheduled close, the net asset value (NAV) may be determined as of the regularly scheduled close of the NYSE pursuant to the Valuation Policies and Procedures of the Advisor, John Hancock Variable Trust Advisers LLC.

In order to value the securities, the portfolios use the following valuation techniques: Investments in affiliated underlying funds and/or other open-end management investment companies, other than exchange-traded funds (ETFs), are valued at their respective NAVs each business day. Equity securities, including exchange-traded or closed-end funds, are typically valued at the last sale price or official closing price on the exchange or principal market where the security trades. In the event there were no sales during the day or closing prices are not available, the securities are valued using the last available bid price. Futures contracts whose settlement prices are determined as of the close of the NYSE are typically valued based on the settlement price while other futures contracts are typically valued at the last traded price on the exchange on which they trade. Foreign equity index futures that trade in the electronic trading market subsequent to the close of regular trading may be valued at the last traded price in the electronic trading market as of 4:00 p.m. ET, or may be fair valued based on fair value adjustment factors provided by an independent pricing vendor in order to adjust for events that may occur between the close of foreign exchanges or markets and the close of the NYSE. Foreign securities are valued in U.S. dollars based on foreign currency exchange rates supplied by an independent pricing vendor.

In certain instances, the Pricing Committee of the Advisor may determine to value equity securities using prices obtained from another exchange or market if trading on the exchange or market on which prices are typically obtained did not open for trading as scheduled, or if trading closed earlier than scheduled, and trading occurred as normal on another exchange or market.

Other portfolio securities and assets, for which reliable market quotations are not readily available, are valued at fair value as determined in good faith by the Pricing Committee following procedures established by the Advisor and adopted by the Board of Trustees. The frequency with which these fair valuation procedures are used cannot be predicted and fair value of securities may differ significantly from the value that would have been used had a ready market for such securities existed.

The portfolios use a three tier hierarchy to prioritize the pricing assumptions, referred to as inputs, used in valuation techniques to measure fair value. Level 1 includes securities valued using quoted prices in active markets for identical securities, including registered investment companies. Level 2 includes securities valued using other significant observable inputs. Observable inputs may include quoted prices for similar securities, interest rates, prepayment

#### Significant accounting policies, continued

speeds and credit risk. Prices for securities valued using these inputs are received from independent pricing vendors and brokers and are based on an evaluation of the inputs described. Level 3 includes securities valued using significant unobservable inputs when market prices are not readily available or reliable, including the Advisor's assumptions in determining the fair value of investments. Factors used in determining value may include market or issuer specific events or trends, changes in interest rates and credit quality. The inputs or methodology used for valuing securities are not necessarily an indication of the risks associated with investing in those securities. Changes in valuation techniques and related inputs may result in transfers into or out of an assigned level within the disclosure hierarchy.

The following is a summary of the values by input classification of the portfolios' investments as of December 31, 2023, by major security category or type:

	Total value at 12-31-23	Level 1 quoted price	Level 2 significant observable inputs	Level 3 significant unobservable inputs
Managed Volatility Growth Portfolio		price		
Investments in securities:				
Assets				
Affiliated investment companies	\$5,379,468,544	\$5,379,468,544	_	_
Unaffiliated investment companies	142,085,001	142,085,001	_	_
Short-term investments	47,847,586	47,847,586	—	—
Total investments in securities	\$5,569,401,131	\$5,569,401,131	—	_
Derivatives:				
Assets				
Futures	\$12,495,355	\$12,495,355	—	—
Liabilities				
Futures	(303,824)	(303,824)		_
Managed Volatility Balanced Portfolio				
Investments in securities:				
Assets				
Affiliated investment companies	\$4,129,810,182	\$4,129,810,182	—	—
Unaffiliated investment companies	83,699,276	83,699,276	—	—
Short-term investments	39,691,627	39,691,627	_	
Total investments in securities	\$4,253,201,085	\$4,253,201,085	_	—
Derivatives:				
Assets				
Futures	\$7,365,215	\$7,365,215	_	_
Liabilities				
Futures	(164,306)	(164,306)	—	—
Managed Volatility Moderate Portfolio				
Investments in securities:				
Assets				
Affiliated investment companies	\$1,124,068,462	\$1,124,068,462	_	_
Unaffiliated investment companies	22,068,025	22,068,025	—	—
Short-term investments	9,059,317	9,059,317		
Total investments in securities	\$1,155,195,804	\$1,155,195,804	_	_
Derivatives:				
Assets				
Futures	\$1,491,565	\$1,491,565	_	—
Liabilities	(20.010)	(20.010)		
Futures	(30,810)	(30,810)		
Managed Volatility Conservative Portfolio				
Investments in securities:				
Assets				
Affiliated investment companies	\$580,430,156	\$580,430,156	—	—
Unaffiliated investment companies	4,912,008	4,912,008	—	_
Short-term investments	2,505,820	2,505,820	—	
Total investments in securities	\$587,847,984	\$587,847,984	—	—

#### Significant accounting policies, continued

	Total value at 12-31-23	Level 1 quoted price	Level 2 significant observable inputs	Level 3 significant unobservable inputs
Managed Volatility Conservative Portfolio (continued)				
Derivatives:				
Assets				
Futures	\$74,353	\$74,353	—	—
Liabilities				
Futures	(4,027,967)	(4,027,967)	—	—

Security transactions and related investment income. Investment security transactions are accounted for on a trade date plus one basis for daily NAV calculations. However, for financial reporting purposes, investment transactions are reported on trade date. Interest income is accrued as earned. Capital gain distributions from underlying funds are recorded on ex-date. Dividend income is recorded on ex-date, except for dividends of certain foreign securities where the dividend may not be known until after the ex-date. In those cases, dividend income, net of withholding taxes, is recorded when the portfolio becomes aware of the dividends. Non-cash dividends, if any, are recorded at the fair market value of the securities received. Gains and losses on securities sold are determined on the basis of identified cost and may include proceeds from litigation. Return of capital distributions from underlying funds, if any, are treated as a reduction of cost.

Foreign investing. Assets, including investments, and liabilities denominated in foreign currencies are translated into U.S. dollar values each day at the prevailing exchange rate. Purchases and sales of securities, income and expenses are translated into U.S. dollars at the prevailing exchange rate on the date of the transaction. The effect of changes in foreign currency exchange rates on the value of securities is reflected as a component of the realized and unrealized gains (losses) on investments. Foreign investments are subject to a decline in the value of a foreign currency versus the U.S. dollar, which reduces the dollar value of securities denominated in that currency.

Portfolios that invest internationally generally carry more risk than portfolios that invest strictly in U.S. securities. Risks can result from differences in economic and political conditions, regulations, market practices (including higher transaction costs), accounting standards and other factors.

**Overdraft**. The portfolios may have the ability to borrow from banks for temporary or emergency purposes, including meeting redemption requests that otherwise might require the untimely sale of securities. Pursuant to the portfolios' custodian agreement, the custodian may loan money to the portfolios to make properly authorized payments. The portfolios are obligated to repay the custodian for any overdraft, including any related costs or expenses. The custodian may have a lien, security interest or security entitlement in any portfolio property that is not otherwise segregated or pledged, to the extent of any overdraft, and to the maximum extent permitted by law. Overdrafts at period end, if any, are presented under the caption Due to custodian in the Statements of assets and liabilities.

Line of credit. The portfolios and other affiliated funds have entered into a syndicated line of credit agreement with Citibank, N.A. as the administrative agent that enables them to participate in a \$1 billion unsecured committed line of credit. Excluding commitments designated for a certain fund and subject to the needs of all other affiliated funds, a portfolio can borrow up to an aggregate commitment amount of \$750 million, subject to asset coverage and other limitations as specified in the agreement. A commitment fee payable at the end of each calendar quarter, based on the average daily unused portion of each line of credit, is charged to each participating portfolio based on a combination of fixed and asset-based allocations and is reflected in Other expenses on the Statements of operations. For the year ended December 31, 2023, the portfolios had no borrowings under the line of credit.

Commitment fees for the year ended December 31, 2023 were as follows:

Portfolio	Commitment fee
Managed Volatility Growth Portfolio	\$24,596
Managed Volatility Balanced Portfolio	19,840
Managed Volatility Moderate Portfolio	8,285
Managed Volatility Conservative Portfolio	6,259

**Expenses.** Within the John Hancock group of funds complex, expenses that are directly attributable to an individual portfolio are allocated to such portfolio. Expenses that are not readily attributable to a specific portfolio are allocated among all portfolios in an equitable manner, taking into consideration, among other things, the nature and type of expense and each portfolio's relative net assets. Expense estimates are accrued in the period to which they relate and adjustments are made when actual amounts are known.

**Class allocations.** Income, common expenses and realized and unrealized gains (losses) are determined at the portfolio level and allocated daily to each class of shares based on the net assets of the class. Class-specific expenses, such as distribution and service fees, if any, for all classes, are charged daily at the class level based on the net assets of each class and the specific expense rates applicable to each class.

Federal income taxes. Each portfolio intends to continue to qualify as a regulated investment company by complying with the applicable provisions of the Internal Revenue Code and will not be subject to federal income tax on taxable income that is distributed to shareholders. Therefore, no federal income tax provision is required.

For federal income tax purposes, as of December 31, 2023, certain portfolios have capital loss carryforwards available to offset future net realized capital gains. The following table details the capital loss carryforwards available as of December 31, 2023:

	No Expiration D	ate
Portfolio	Short Term	Long Term
Managed Volatility Moderate Portfolio	\$5,482,576	\$ 3,000,072
Managed Volatility Conservative Portfolio	8,262,830	19,436,391

#### Significant accounting policies, continued

As of December 31, 2023, the portfolios had no uncertain tax positions that would require financial statement recognition, derecognition or disclosure. The portfolios' federal tax returns are subject to examination by the Internal Revenue Service for a period of three years.

For federal income tax purposes, the costs of investments owned on December 31, 2023, including short-term investments, were as follows:

Portfolio	Aggregate cost	Unrealized appreciation	Unrealized (depreciation)	Net unrealized appreciation/ (depreciation)
Managed Volatility Growth Portfolio	\$5,848,744,742	\$271,228,499	\$(538,380,579)	\$(267,152,080)
Managed Volatility Balanced Portfolio	4,600,495,655	145,152,313	(485,245,974)	(340,093,661)
Managed Volatility Moderate Portfolio	1,274,833,904	27,073,573	(145,250,918)	(118,177,345)
Managed Volatility Conservative Portfolio	661,275,134	8,658,069	(86,038,833)	(77,380,764)

**Distribution of income and gains**. Distributions to shareholders from net investment income and net realized gains, if any, are recorded on the ex-date. The portfolios generally declare and pay dividends and capital gain distributions, if any, annually.

The tax character of distributions for the year ended December 31, 2023 was as follows:

	Ordinary	Long Term	
Portfolio	Income	Capital Gains	Total
Managed Volatility Growth Portfolio	\$147,760,190	\$595,968,554	\$743,728,744
Managed Volatility Balanced Portfolio	112,110,773	316,587,912	428,698,685
Managed Volatility Moderate Portfolio	31,298,659	73,131,385	104,430,044
Managed Volatility Conservative Portfolio	17,143,518	12,734,575	29,878,093

The tax character of distributions for the year ended December 31, 2022 was as follows:

Portfolio	Ordinary Income	Long Term Capital Gains	Total
Managed Volatility Growth Portfolio	\$128,489,087	\$122,096,097	\$250,585,184
Managed Volatility Balanced Portfolio	110,411,541	138,062,169	248,473,710
Managed Volatility Moderate Portfolio	32,421,411	40,094,447	72,515,858
Managed Volatility Conservative Portfolio	18,742,400	_	18,742,400

Distributions paid by the portfolios with respect to each class of shares are calculated in the same manner, at the same time and in the same amount, except for the effect of class level expenses that may be applied differently to each class. As of December 31, 2023, the components of distributable earnings on a tax basis were as follows:

Portfolio	Undistributed Ordinary Income	Undistributed Long Term Capital Gains
Managed Volatility Growth Portfolio	\$10,514,264	\$33,277,457
Managed Volatility Balanced Portfolio	7,610,960	16,674,306
Managed Volatility Moderate Portfolio	1,858,983	_
Managed Volatility Conservative Portfolio	1,107,389	—

Such distributions and distributable earnings, on a tax basis, are determined in conformity with income tax regulations, which may differ from US GAAP. Distributions in excess of tax basis earnings and profits, if any, are reported in the portfolios' financial statements as a return of capital. Short-term gains from underlying funds are treated as ordinary income for tax purposes.

Capital accounts within the financial statements are adjusted for permanent book-tax differences. These adjustments have no impact on net assets or the results of operations. Temporary book-tax differences, if any, will reverse in a subsequent period. Book-tax differences are primarily attributable to straddle loss deferrals, wash sale loss deferrals and derivative transactions.

#### 3. Derivative instruments

The portfolios may invest in derivatives in order to meet their investment objective. Derivatives include a variety of different instruments that may be traded in the over-the-counter (OTC) market, on a regulated exchange or through a clearing facility. The risks in using derivatives vary depending upon the structure of the instruments, including the use of leverage, optionality, the liquidity or lack of liquidity of the contract, the creditworthiness of the counterparty or clearing organization and the volatility of the position. Some derivatives involve risks that are potentially greater than the risks associated with investing directly in the referenced securities or other referenced underlying instrument. Specifically, the portfolios are exposed to the risk that the counterparty to an OTC derivatives contract will be unable or unwilling to make timely settlement payments or otherwise honor its obligations. OTC derivatives transactions typically can only be closed out with the other party to the transaction.

Certain derivatives are traded or cleared on an exchange or central clearinghouse. Exchange-traded or centrally-cleared transactions generally present less counterparty risk to a portfolio than OTC transactions. The exchange or clearinghouse stands between the portfolios and the broker to the contract and therefore, credit risk is generally limited to the failure of the exchange or clearinghouse and the clearing member.

**Futures**. A futures contract is a contractual agreement to buy or sell a particular currency or financial instrument at a pre-determined price in the future. Futures are traded on an exchange and cleared through a central clearinghouse. Risks related to the use of futures contracts include possible illiquidity of the futures markets and contract prices that can be highly volatile and imperfectly correlated to movements in the underlying financial instrument and potential losses in excess of the amounts recognized on the Statements of assets and liabilities. Use of long futures contracts subjects the portfolios to the risk of loss up to the notional value of the futures contracts. Use of short futures contracts subjects the portfolios to unlimited risk of loss.

#### Derivative instruments, continued

Upon entering into a futures contract, the portfolio is required to deposit initial margin with the broker in the form of cash or securities. The amount of required margin is set by the broker and is generally based on a percentage of the contract value. The margin deposit must then be maintained at the established level over the life of the contract. Cash that has been pledged by a portfolio, if any, is detailed in the Statements of assets and liabilities as Collateral held at broker for futures contracts. Securities pledged by the portfolios, if any, are identified in the Portfolios of investments. Subsequent payments, referred to as variation margin, are made or received by a portfolio periodically and are based on changes in the market value of open futures contracts. Futures contracts are marked-to-market daily and unrealized gain or loss is recorded by the portfolio. Receivable/Payable for futures variation margin is included in the Statements of assets and liabilities. When the contract is closed, a portfolio records a realized gain or loss equal to the difference between the value of the contract at the time it was opened and the value at the time it was closed.

The following table details how the portfolios used futures contracts during the year ended December 31, 2023. In addition, the table summarizes the range of notional contract amounts held by the portfolios, as measured at each quarter end:

Portfolio	Reason	USD Notional range
Managed Volatility Growth Portfolio	To manage volatility of returns and gain exposure to foreign currencies.	\$409.7 million to \$2.3 billion
Managed Volatility Balanced Portfolio	To manage volatility of returns and gain exposure to foreign currencies.	\$232.8 million to \$1.3 billion
Managed Volatility Moderate Portfolio	To manage volatility of returns and gain exposure to foreign currencies.	\$49.0 million to \$309.2 million
Managed Volatility Conservative Portfolio	To manage volatility of returns and gain exposure to foreign currencies.	\$4.1 million to \$145.9 million

#### Fair value of derivative instruments by risk category

The table below summarizes the fair value of derivatives held by the portfolios at December 31, 2023 by risk category:

Portfolio	Risk	Statements of assets and liabilities location	Financial instruments location	Assets derivatives fair value	Liabilities derivatives fair value
Managed Volatility Growth Portfolio	Currency	Receivable/payable for futures variation margin <sup>1</sup>	Futures	\$1,502,716	
	Equity	Receivable/payable for futures variation margin <sup>1</sup>	Futures	10,992,639	\$(303,824)
				\$12,495,355	\$(303,824)
Managed Volatility Balanced Portfolio	Currency	Receivable/payable for futures variation margin <sup>1</sup>	Futures	\$816,032	_
	Equity	Receivable/payable for futures variation margin <sup>1</sup>	Futures	6,549,183	\$(164,306)
				\$7,365,215	\$(164,306)
Managed Volatility Moderate Portfolio	Currency	Receivable/payable for futures variation margin <sup>1</sup>	Futures	\$153,688	_
	Equity	Receivable/payable for futures variation margin <sup>1</sup>	Futures	1,337,877	\$(30,810)
				\$1,491,565	\$(30,810)
Managed Volatility Conservative Portfolio	Currency	Receivable/payable for futures variation margin <sup>1</sup>	Futures	_	\$(367,259)
	Equity	Receivable/payable for futures variation margin <sup>1</sup>	Futures	\$74,353	(3,660,708)
				\$74,353	\$(4,027,967)

<sup>1</sup> Reflects cumulative appreciation/depreciation on open futures as disclosed in the Derivatives section of the Portfolios of investments. Only the year end variation margin receivable/payable is separately reported on the Statements of assets and liabilities.

#### Effect of derivative instruments on the Statements of operations

The table below summarizes the net realized gain (loss) included in the net increase (decrease) in net assets from operations, classified by derivative instrument and risk category, for the year ended December 31, 2023:

Statements o	f operations	location - N	let realized	gain (loss)	on:

Portfolio	Risk	Futures contracts
Managed Volatility Growth Portfolio	Currency	\$(10,366,137)
	Equity	(78,084,035)
	Total	\$(88,450,172)
Managed Volatility Balanced Portfolio	Currency	\$(4,778,321)
	Equity	(31,882,372)
	Total	\$(36,660,693)
Managed Volatility Moderate Portfolio	Currency	\$(1,209,960)
	Equity	(8,538,864)
	Total	\$(9,748,824)
Managed Volatility Conservative Portfolio	Currency	\$(438,834)
	Equity	(13,304,606)
	Total	\$(13,743,440)

#### Derivative instruments, continued

The table below summarizes the net change in unrealized appreciation (depreciation) included in the net increase (decrease) in net assets from operations, classified by derivative instrument and risk category, for the year ended December 31, 2023:

		Statements of operations location - Change in net unrealized appreciation (depreciation) of:
Portfolio	Risk	Futures contracts
Managed Volatility Growth Portfolio	Currency	\$7,557,311
	Equity	(43,752,788)
	Total	\$(36,195,477)
Managed Volatility Balanced Portfolio	Currency	\$3,862,346
	Equity	(24,209,470)
	Total	\$(20,347,124)
Managed Volatility Moderate Portfolio	Currency	\$886,900
	Equity	(6,228,801)
	Total	\$(5,341,901)
Managed Volatility Conservative Portfolio	Currency	\$(80,850)
	Equity	(7,086,031)
	Total	\$(7,166,881)

#### 4. Guarantees and indemnifications

Under the Trust's organizational documents, its Officers and Trustees are indemnified against certain liabilities arising out of the performance of their duties to the Trust, including the portfolios. Additionally, in the normal course of business, the Trust enters into contracts with service providers that contain general indemnification clauses. The Trust's maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the Trust that have not yet occurred. The risk of material loss from such claims is considered remote.

#### 5. Fees and transactions with affiliates

John Hancock Variable Trust Advisers LLC (the Advisor) serves as investment advisor for the portfolios. John Hancock Distributors, LLC (the Distributor), an affiliate of the Advisor, serves as principal underwriter of the portfolios. The Advisor and the Distributor are wholly owned subsidiaries of John Hancock Life Insurance Company (U.S.A.), which in turn is a subsidiary of Manulife Financial Corporation.

**Management fee.** The portfolios have an investment management agreement with the Advisor under which the portfolios pay a daily management fee to the Advisor as detailed below. The Advisor has a subadvisory agreement with Manulife Investment Management (US) LLC, an indirect, wholly owned subsidiary of Manulife Financial Corporation and an affiliate of the Advisor. The portfolios are not responsible for payment of the subadvisory fees.

The management fee has two components: (a) a fee on assets invested in affiliated funds (Affiliated funds assets) and (b) a fee on assets not invested in affiliated funds (Other assets). Affiliated funds are any fund of the Trust (excluding 500 Index Trust, International Equity Index Trust and Total Bond Market Trust), John Hancock Funds II (JHF II) and John Hancock Funds III. Aggregate net assets include the net assets of the portfolios and the net assets of similar funds of the Trust and JHF II.

Management fees are determined in accordance with the following schedule:

	First \$7.5 billion of aggregate net assets	Excess over \$7.5 billion of aggregate net assets	
Affiliated funds assets	0.050%	0.040%	
Other assets	0.500%	0.490%	

**Expense reimbursements.** The Advisor has voluntarily agreed to waive its management fee or reimburse the portfolios so that the aggregate management fee retained by the Advisor with respect to both the portfolios and the underlying investments does not exceed 0.50% of the portfolios' first \$7.5 billion of aggregate daily net assets and 0.49% of the portfolios' aggregate net assets in excess of \$7.5 billion. In addition, the Advisor voluntarily agreed to waive its management fees and/or reduce expenses by 0.01% of each portfolio's average net assets. These voluntary waivers may be terminated at any time by the Advisor upon notice to the Trust.

For the year ended December 31, 2023, the expense reductions described above amounted to the following:

	Expense reimbursement by class					
Portfolio	Series I	Series II	Series NAV	Total		
Managed Volatility Growth Portfolio	\$401,727	\$3,754,895	\$820,961	\$4,977,583		
Managed Volatility Balanced Portfolio	293,848	2,385,139	848,353	3,527,340		
Managed Volatility Moderate Portfolio	111,138	696,816	90,143	898,097		
Managed Volatility Conservative Portfolio	80,764	358,915	39,705	479,384		

Expenses waived or reimbursed in the current fiscal period are not subject to recapture in future fiscal periods.

The investment management fees, including the impact of the waivers and reimbursements as described above, incurred for the year ended December 31, 2023, were equivalent to a net annual effective rate of the portfolios' average daily net assets as follows:

Portfolio	Net Annual Effective Rate
Managed Volatility Growth Portfolio	0.10%
Managed Volatility Balanced Portfolio	0.09%

#### Portfolio

Managed Volatility Moderate Portfolio Managed Volatility Conservative Portfolio Net Annual Effective Rate 0.09% 0.09%

Accounting and legal services. Pursuant to a service agreement, the portfolios reimburse the Advisor for all expenses associated with providing the administrative, financial, legal, compliance, accounting and recordkeeping services to the portfolios, including the preparation of all tax returns, periodic reports to shareholders and regulatory reports, among other services. These expenses are allocated to each share class based on its relative net assets at the time the expense was incurred. These accounting and legal services fees incurred, for the year ended December 31, 2023, amounted to an annual rate of 0.02% of the portfolios' average daily net assets.

**Distribution and service plans**. The portfolios have a distribution agreement with the Distributor. The portfolios have adopted distribution and service plans for certain classes as detailed below pursuant to Rule 12b-1 under the 1940 Act, to pay the Distributor for services provided as the distributor of shares of the portfolios. The portfolios may pay up to the following contractual rates of distribution and service fees under these arrangements, expressed as an annual percentage of average daily net assets for each class of the portfolios' shares:

Class	Rule 12b-1 Fee
Series I	0.15%
Series II	0.35%

Currently only 0.05% for Series I shares and 0.25% for Series II shares are charged for 12b-1 fees.

Distribution and service fees for the year ended December 31, 2023 were as follows:

	Distribution and service fees by class					
Portfolio	Series I	Series II	Total			
Managed Volatility Growth Portfolio	\$222,501	\$10,400,154	\$10,622,655			
Managed Volatility Balanced Portfolio	177,183	7,192,806	7,369,989			
Managed Volatility Moderate Portfolio	72,367	2,268,072	2,340,439			
Managed Volatility Conservative Portfolio	52,986	1,177,595	1,230,581			

**Trustee expenses.** The portfolios compensate each Trustee who is not an employee of the Advisor or its affiliates. The costs of paying Trustee compensation and expenses are allocated to each portfolio based on their net assets relative to other funds within the John Hancock group of funds complex.

#### 6. Portfolio share transactions

Transactions in portfolios' shares for the years ended December 31, 2023 and 2022 were as follows:

1 ,					
Managed Volatility Growth Portfolio	Year Ended	12-31-23	Year Ended 12-31-22		
	Shares	Amount	Shares	Amount	
Series I shares					
Sold	136,650	\$1,509,613	259,078	\$2,984,326	
Distributions reinvested	6,305,804	60,569,355	1,918,864	20,688,808	
Repurchased	(5,184,294)	(57,114,553)	(4,880,461)	(57,921,518	
Net increase (decrease)	1,258,160	\$4,964,415	(2,702,519)	\$(34,248,384	
Series II shares					
Sold	—	—	78,113	\$959,213	
Distributions reinvested	58,439,200	\$557,037,654	17,599,553	188,720,320	
Repurchased	(53,199,453)	(582,849,752)	(48,297,668)	(562,034,353	
Net increase (decrease)	5,239,747	\$(25,812,098)	(30,620,002)	\$(372,354,820	
Series NAV shares					
Sold	872,222	\$9,683,748	1,073,406	\$12,537,510	
Distributions reinvested	13,084,498	126,121,735	3,812,191	41,176,056	
Repurchased	(6,110,094)	(67,626,889)	(3,334,321)	(39,026,312	
Net increase	7,846,626	\$68,178,594	1,551,276	\$14,687,254	
Total net increase (decrease)	14,344,533	\$47,330,911	(31,771,245)	\$(391,915,950	
Managed Volatility Balanced Portfolio	Year Ended	12-31-23	Year Endec	12-31-22	
	Shares	Amount	Shares	Amount	
Series I shares					
Sold	136,462	\$1,450,188	479,900	\$5,258,284	
Distributions reinvested	3,889,236	36,258,153	2,106,503	21,054,525	
Repurchased	(4,128,471)	(42,236,638)	(4,687,107)	(51,341,147	
Net decrease	(102,773)	\$(4,528,297)	(2,100,704)	\$(25,028,338	
Series II shares					
Sold	_	_	142,911	\$1,451,809	
Distributions reinvested	31,141,777	\$286,763,525	16,973,528	168,108,762	
Repurchased	(42,869,937)	(434,311,470)	(39,924,506)	(436,099,427	
Net decrease	(11,728,160)	\$(147,547,945)	(22,808,067)	\$(266,538,856	

#### Portfolio share transactions, continued

Managed Volatility Balanced Portfolio, Cont'd	Year Ended	12-31-23	Year Ended 12-31-22		
	Shares	Amount	Shares	Amount	
Series NAV shares					
Sold	217,524	\$2,247,535	315,779	\$3,499,099	
Distributions reinvested	11,281,416	105,677,007	5,916,577	59,310,423	
Repurchased	(8,083,655)	(83,259,442)	(5,978,105)	(65,438,592	
Net increase (decrease)					
	3,415,285	\$24,665,100	254,251	\$(2,629,070	
Total net decrease	(8,415,648)	\$(127,411,142)	(24,654,520)	\$(294,196,264	
Managed Volatility Moderate Portfolio	Year Ended	12-31-23	Year Ended	12-31-22	
	Shares	Amount	Shares	Amount	
Series I shares					
Sold	188,767	\$1,880,800	351,661	\$3,689,042	
Distributions reinvested	1,433,309	13,007,813	965,629	9,278,308	
Repurchased	(2,882,563)	(28,299,530)	(1,753,009)	(18,605,765	
Net decrease	(1,260,487)	\$(13,410,917)	(435,719)	\$(5,638,415	
Series II shares					
Sold	79,481	\$781,307	204,166	\$2,142,213	
Distributions reinvested	8,996,005	80,641,699	5,901,847	56,172,680	
Repurchased	(14,212,231)	(138,187,070)	(14,061,271)	(147,959,580	
Net decrease	(5,136,745)	\$(56,764,064)	(7,955,258)	\$(89,644,687	
Series NAV shares					
Sold	255,266	\$2,504,694	265,734	\$2,820,935	
Distributions reinvested	1,184,700	10,780,532	733,767	7,064,870	
Repurchased	(1,078,532)	(10,658,446)	(745,182)	(7,901,209	
•					
Net increase	361,434	\$2,626,780	254,319	\$1,984,596	
Total net decrease	(6,035,798)	\$(67,548,201)	(8,136,658)	\$(93,298,506	
Managed Volatility Conservative Portfolio	Year Ended		Year Ended 12-31-22		
Series I shares	Shares	Amount	Shares	Amount	
Sold	637,860	\$6,282,684	1,069,136	\$11,311,610	
Distributions reinvested	546,561	5,169,047	335,555	3,234,492	
Repurchased	(2,610,177)	(25,425,976)	(2,502,774)	(25,900,921	
Net decrease	(1,425,756)	\$(13,974,245)	(1,098,083)	\$(11,354,819	
Series II shares					
Sold	168,629	\$1,617,677	499,644	\$5,259,833	
Distributions reinvested	2,359,807	22,084,713	1,457,151	13,926,746	
Repurchased	(7,806,564)	(75,613,514) ¢(51,011,124)	(8,841,447)	(91,501,271 ¢(72,214,602	
Net decrease Series NAV shares	(5,278,128)	\$(51,911,124)	(6,884,652)	\$(72,314,692	
Sold	221,536	\$2,156,076	342,401	\$3,635,581	
Distributions reinvested	276,342	2,624,333	163,525	1,581,162	
Repurchased	(563,047)	(5,535,117)	(378,336)	(4,026,919	
Net increase (decrease)	(65,169)	\$(754,708)	127,590	\$1,189,824	
Total net decrease	(6,769,053)	\$(66,640,077)	(7,855,145)	\$(82,479,687	

Affiliates of the Trust owned 100% of shares of the portfolios on December 31, 2023. Such concentration of shareholders' capital could have a material effect on the portfolios if such shareholders redeem from the portfolios.

#### 7. Purchase and sale of securities

Purchases and sales of securities, other than short-term investments, amounted to the following for the year ended December 31, 2023:

Portfolio	Purchases	Sales
Managed Volatility Growth Portfolio	\$406,985,655	\$755,834,920
Managed Volatility Balanced Portfolio	254,645,200	575,523,851
Managed Volatility Moderate Portfolio	68,555,720	179,836,073
Managed Volatility Conservative Portfolio	31,858,495	120,334,314

#### 8. Investment in affiliated underlying funds

The portfolios invest primarily in affiliated underlying funds that are managed by the Advisor and its affiliates. The portfolios do not invest in the affiliated underlying funds for the purpose of exercising management or control; however, the portfolios' investment may represent a significant portion of each affiliated underlying funds' net assets. At December 31, 2023, the following portfolios held 5% or more of the net assets of the affiliated underlying funds shown below:

Portfolio	Affiliated Fund	Percentage of underlying fund net assets
Managed Volatility Growth Portfolio		
	Strategic Equity Allocation Trust	24.1%
	Equity Income Trust	23.1%
	Mid Value Trust	19.3%
	Core Bond Trust	17.6%
	Select Bond Trust	17.2%
	Small Cap Value Trust	16.7%
	Mid Cap Growth Trust	15.4%
	Emerging Markets Equity Fund	14.5%
	Blue Chip Growth Trust	12.7%
	Small Cap Dynamic Growth Fund	8.8%
	Fundamental Large Cap Core Fund	7.1%
Managed Volatility Balanced Portfolio		
	Core Bond Trust	23.2%
	Select Bond Trust	22.6%
	Equity Income Trust	14.5%
	Strategic Equity Allocation Trust	13.0%
	Small Cap Value Trust	10.5%
	Mid Value Trust	9.0%
	Blue Chip Growth Trust	7.9%
	Emerging Markets Equity Fund	7.0%
	Mid Cap Growth Trust	6.5%
Managed Volatility Moderate Portfolio		
	Core Bond Trust	7.6%
	Select Bond Trust	7.4%
Managed Volatility Conservative Portfolio		
	Core Bond Trust	5.2%
	Select Bond Trust	5.1%

Information regarding the portfolios' fiscal year to date purchases and sales of the affiliated underlying funds as well as income and capital gains earned by the portfolios, if any, is as follows:

		Ending share Beginning amount value					Dividends and distributions			
Affiliate			Cost of purchases	Proceeds from shares sold	Realized gain (loss)	Change in unrealized appreciation (depreciation)	Income distributions received	Capital gain distributions received	Ending value	
Managed Volat	ility Growth P	ortfolio								
Blue Chip										
Growth	8,359,787	\$225,414,175	\$7,409,378	\$(97,961,959)	\$(51,080,797)	\$142,936,613	—	—	\$226,717,410	
Bond	29,647,704	393,922,318	26,821,961	(24,982,660)	(3,815,206)	11,855,317	\$17,061,265	_	403,801,730	
Core Bond	12,498,512	137,251,685	8,690,697	(8,847,570)	(1,863,325)	5,376,777	4,236,747	_	140,608,264	
Emerging										
Markets Equity	25,376,330	246,575,823	10,133,357	(34,737,057)	(4,888,398)	12,064,535	3,777,990	—	229,148,260	
Equity Income	24,092,945	310,000,756	47,795,979	(31,048,133)	(4,400,553)	(1,189,088)	6,054,223	\$28,411,705	321,158,961	
Fundamental										
Large Cap Core	5,670,598	351,203,755	31,267,733	(86,542,324)	27,271,780	54,460,867	2,081,805	21,268,627	377,661,811	
John Hancock										
Collateral Trust	4,784,663	117,855,450	601,066,660	(671,106,067)	25,318	6,225	3,040,045	—	47,847,586	
Mid Cap										
Growth	10,251,476	88,502,091	1,429,308	(13,133,882)	(11,158,546)	27,341,915	—	—	92,980,886	
Mid Value	12,233,047	105,443,905	25,360,642	(14,015,929)	(1,109,317)	3,715,238	1,366,067	16,280,737	119,394,539	
Multifactor Developed										
International		107 205 251	20 702 000	(0 (72 707)	1 200 717	26 202 250	C 201 101		214 007 425	
ETF	6,593,695	167,365,251	28,782,986	(8,672,787)	1,309,717	26,202,258	6,301,181	_	214,987,425	

### Investment in affiliated underlying funds, continued

				Dividends and distributions					
Affiliate	Ending share amount	Beginning value	Cost of purchases	Proceeds from shares sold	Realized gain (loss)	Change in unrealized appreciation (depreciation)	Income distributions received	Capital gain distributions received	Ending value
Multifactor	amount	Value	purchases	3010	(1033)	(depreciation)	Teceiveu	receiveu	value
Emerging									
Markets ETF	4,801,276	\$125,731,565	\$2,049	\$(14,873,153)	\$278,707	\$10,957,281	\$3,574,958	—	\$122,096,449
Multifactor Mid Cap ETF	2,405,429	122,564,300	5,867,499	(17,849,694)	5,708,792	10,378,994	1,546,736	_	126,669,891
Multifactor	2,403,423	122,304,300	5,607,499	(17,049,094)	5,708,752	10,578,554	1,540,750	_	120,009,091
Small Cap ETF	3,220,450	113,408,081	6,386,022	(23,787,197)	5,673,805	16,086,637	1,216,104	_	117,767,348
Select Bond	88,129,189	1,010,373,238	61,780,206	(64,223,775)	(14,456,995)	41,164,006	32,870,032	—	1,034,636,680
Small Cap									
Dynamic Growth	2,690,263	33,961,098	2,856,805	(1,643,066)	(376,205)	2,596,022		_	37,394,654
Small Cap Value		64,986,863	17,854,604	(8,778,874)	1,893,293	1,049,219	328,504	\$6,677,702	77,005,105
Strategic Equity	5,000,525	0.,500,000	17,00 1,00 1	(0)0,0,	.,000,200	.,	520,501	\$0,077,7702	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Allocation	101,664,080	1,677,074,319	121,600,782	(279,745,844)	4,788,683	213,721,191	25,735,277	95,865,503	1,737,439,131
					\$(46,199,247)	\$578,724,007	\$109,190,934	\$168,504,274	\$5,427,316,130
Managed Volat	tility Balanced	l Portfolio							
Blue Chip Growth	5,223,113	\$143,501,447	\$5,767,513	\$(66,003,837)	\$(31,889,878)	\$90,275,568		_	\$141,650,813
Bond	39,170,285	539,030,673	25,209,045	(41,551,677)	(6,231,704)	17,042,942	\$22,822,498	_	533,499,279
Core Bond	16,488,960	187,375,576	6,692,534	(13,337,036)	(2,560,734)	7,330,465	5,604,959	_	185,500,805
Emerging									
Markets Equity	12,311,161	119,426,144	4,663,657	(16,533,669)	(2,172,940)	5,786,588	1,832,867	_	111,169,780
Equity Income	15,113,900	200,741,171	31,561,055	(27,532,901)	(2,257,644)	(1,043,394)	3,828,926	\$17,968,668	201,468,287
Fundamental	2 225 012	206 102 201	20 122 447	(50.049.702)	19,085,037	28 578 000	1 104 474	12 100 500	214 941 072
Large Cap Core John Hancock	3,225,842	206,103,381	20,122,447	(59,048,702)	19,065,057	28,578,909	1,184,424	12,100,590	214,841,072
Collateral Trust Mid Cap	3,969,083	72,390,026	348,623,476	(381,343,856)	16,202	5,779	1,995,536	—	39,691,627
Growth	4,334,939	38,234,440	466,808	(6,331,035)	(6,764,903)	13,712,582	_	_	39,317,892
Mid Value	5,710,822	48,113,770	14,585,917	(8,112,000)	(28,569)	1,178,503	642,837	7,661,311	55,737,621
Multifactor Developed									
International ETF	2,819,760	76,139,932	7,318,821	(3,707,651)	522,287	11,664,886	2,691,897	_	91,938,275
Multifactor Emerging									
Markets ETF	2,364,005	61,770,902	2,106	(7,290,640)	151,402	5,482,877	1,766,588	_	60,116,647
Multifactor Mid Cap ETF	1,322,628	68,636,680	3,332,751	(11,289,812)	3,614,459	5,355,512	859,459	_	69,649,590
Multifactor	1,522,620	00,030,000	5,552,751	(11,203,012)	5,611,155	3,333,312	000,100		03,013,330
Small Cap ETF	1,476,431	53,105,953	2,942,150	(12,152,568)	2,874,062	7,221,418	562,050	—	53,991,015
Select Bond	115,955,323	1,375,208,322	50,858,130	(100,953,885)	(20,045,359)	56,248,287	43,337,767	—	1,361,315,495
Small Cap									
Dynamic Growth	1,464,563	19,012,810	1,455,828	(1,374,041)	1,947	1,260,881	_	_	20,357,425
Small Cap Value		41,269,394	11,972,679	(6,889,588)	1,319,776	605,037	206,926	4,206,315	48,277,298
Strategic Equity									
Allocation	55,060,204	929,122,886	66,395,486	(175,684,664)	810,395 <b>\$(43,556,164)</b>	120,334,785 <b>\$371,041,625</b>	14,051,771 <b>\$101,388,505</b>	52,343,716 <b>\$94,280,600</b>	940,978,888 <b>\$4,169,501,809</b>
Managed Volat	tility Moderat	e Portfolio			. ,				
Blue Chip									
Growth	1,231,900	\$34,809,656	\$971,685	\$(16,354,742)	\$(8,832,397)	\$22,814,915		—	\$33,409,117
Bond Coro Bond	12,864,122	181,529,102	8,142,639	(18,084,815)	(2,574,673)	6,197,092	\$7,565,388	-	175,209,345
Core Bond Emerging	5,417,447	63,168,483	2,239,460	(6,063,020)	(1,209,279)	2,810,639	1,848,818	_	60,946,283
Markets Equity	2,608,025	23,107,086	2,805,980	(3,142,615)	(295,616)	1,075,626	388,279	_	23,550,461
Equity Income	3,738,536	51,193,151	8,368,644	(8,990,216)	(445,115)	(291,776)	954,122	\$4,477,576	49,834,688
Fundamental Large Cap Core	737,726	49,139,934	4,330,086	(15,541,411)	5,053,919	6,150,030	271,700	2,775,807	49,132,558
John Hancock		40.000		(00 <b>TF</b> / <b>T</b> - <b>T</b> - <b>T</b>					
Collateral Trust	905,914	18,389,625	83,418,341	(92,754,583)	4,047	1,887	515,586	—	9,059,317

### Investment in affiliated underlying funds, continued

						Dividends and distributions			
Affiliate	Ending share amount	Beginning value	Cost of purchases	Proceeds from shares sold	Realized gain (loss)	Change in unrealized appreciation (depreciation)	Income distributions received	Capital gain distributions received	Ending value
Mid Cap									
Growth	1,158,591	\$10,563,279	\$308,529	\$(2,261,128)	\$(3,222,680)	\$5,120,416	—	—	\$10,508,416
Mid Value	1,398,675	12,378,930	3,339,240	(2,398,460)	174,997	156,360	\$157,682	\$1,879,253	13,651,067
Multifactor Developed International									
ETF Multifactor Emerging	322,027	11,112,924	1,424,885	(3,737,178)	593,714	1,105,345	332,692	_	10,499,690
Markets ETF	401,042	9,716,077	696,133	(1,159,532)	29,350	916,470	301,050	_	10,198,498
Multifactor Mid			,	() - , - ,					
Cap ETF	163,619	8,745,704	443,983	(1,704,409)	541,645	589,254	106,981	_	8,616,177
Multifactor									
Small Cap ETF	193,307	7,160,599	418,678	(1,852,154)	430,553	911,290	74,051	_	7,068,966
Select Bond	38,125,200	463,737,362	16,355,742	(44,693,583)	(8,762,913)	20,953,234	14,298,916	_	447,589,842
Small Cap Dynamic									
Growth	339,858	4,519,197	348,145	(441,608)	(87,107)	385,404	—	—	4,724,031
Small Cap Value Strategic Equity	738,661	8,420,067	3,122,688	(1,767,731)	324,887	41,910	43,763	889,588	10,141,821
Allocation	12,228,643	212,747,460	14,850,534	(46,162,203)	(3,758,588)	31,310,299	3,142,929	11,707,605	208,987,502
					\$(22,035,256)	\$100,248,395	\$30,001,957	\$21,729,829	\$1,133,127,779
Managed Volat	ility Conserva	tive Portfolio							
Blue Chip									
Growth	342,861	\$10,559,819	\$602,219	\$(5,968,704)	\$(4,596,240)	\$8,701,296	—	—	\$9,298,390
Bond	8,810,773	132,513,178	5,695,519	(20,728,308)	(2,859,219)	5,381,552	\$5,450,043	—	120,002,722
Core Bond	3,697,839	45,937,623	1,453,862	(6,914,095)	(1,239,635)	2,362,936	1,322,598	—	41,600,691
Emerging									
Markets Equity	602,364	6,291,977	633,799	(1,694,388)	(317,096)	525,052	90,978	_	5,439,344
Equity Income Fundamental	1,130,413	15,524,399	3,662,306	(3,854,365)	450,242	(714,171)	301,751	\$1,416,079	15,068,411
Large Cap Core John Hancock	190,391	13,591,175	1,282,980	(5,270,984)	1,314,753	1,762,141	70,970	725,057	12,680,065
Collateral Trust Multifactor Emerging	250,577	7,838,254	62,531,482	(67,866,248)	2,484	(152)	260,244	_	2,505,820
Markets ETF Multifactor Mid	89,969	2,582,276	173,675	(701,895)	2,134	231,722	69,200	_	2,287,912
Cap ETF	155,479	8,809,696	1,014,444	(2,767,366)	839,129	291,621	103,679	—	8,187,524
Multifactor Small Cap ETF	175,786	6,955,921	860,024	(2,670,694)	1,240,436	42,561	69,001	_	6,428,248
Select Bond	26,039,463	337,573,471	10,575,893	(2,670,694)	(9,676,457)	42,561	10,239,177	—	305,703,293
Strategic Equity								_	
Allocation	3,144,152	57,614,450	5,679,084	(17,004,460)	(2,287,500) <b>\$(17,126,969)</b>	9,731,982 <b>\$46,584,011</b>	841,318 <b>\$18,818,959</b>	3,133,964 <b>\$5,275,100</b>	53,733,556 <b>\$582,935,976</b>

#### Report of Independent Registered Public Accounting Firm

To the Board of Trustees of John Hancock Variable Insurance Trust and Shareholders of Managed Volatility Growth Portfolio, Managed Volatility Balanced Portfolio, Managed Volatility Moderate Portfolio and Managed Volatility Conservative Portfolio

#### **Opinions on the Financial Statements**

We have audited the accompanying statements of assets and liabilities, including the portfolio of investments, of John Hancock Managed Volatility Growth Portfolio, John Hancock Managed Volatility Balanced Portfolio, John Hancock Managed Volatility Moderate Portfolio and John Hancock Managed Volatility Conservative Portfolio (four of the funds constituting John Hancock Variable Insurance Trust, hereafter collectively referred to as the "Portfolios") as of December 31, 2023, the related statements of operations for the year ended December 31, 2023, the statements of changes in net assets for each of the two years in the period ended December 31, 2023, including the related notes, and the financial highlights for each of the five years in the period ended December 31, 2023 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of each of the Two years in the period ended December 31, 2023 and each of the financial highlights for each of the five years in the period ended December 31, 2023, the results of each of the financial highlights for each of the five years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America.

#### **Basis for Opinions**

These financial statements are the responsibility of the Portfolios' management. Our responsibility is to express an opinion on the Portfolios' financial statements 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 Portfolios 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 of these financial statements 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 are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, 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. 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. Our procedures included confirmation of securities owned as of December 31, 2023 by correspondence with the custodian, transfer agents and brokers; when replies were not received from brokers, we performed other auditing procedures. We believe that our audits provide a reasonable basis for our opinions.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts

February 16, 2024

We have served as the auditor of one or more investment companies in the John Hancock group of funds since 1988.

### **Trustees and officers Information**

This chart provides information about the Trustees and Officers who oversee your John Hancock fund. Officers elected by the Trustees manage the day-to-day operations of the fund and execute policies formulated by the Trustees.

### INDEPENDENT TRUSTEES

INDEPENDENT TRUSTEES		
Name, year of birth Position(s) held with Trust Principal occupation(s) and other directorships during past 5 years	Trustee of the Trust since <sup>1</sup>	Number of John Hancock funds overseen by Trustee
Hassell H. McClellan, <sup>2</sup> Born: 1945 Trustee and Chairperson of the Board Director/Trustee, Virtus Funds (2008-2020); Director, The Barnes Group (2010-2021); Associate Professor, The Wallace Boston College (retired 2013). Trustee (since 2005) and Chairperson of the Board (since 2017) of various trusts within t		
James R. Boyle, Born: 1959	2015	178
<i>Trustee</i> Board Member, United of Omaha Life Insurance Company (since 2022). Board Member, Mutual of Omaha Investor Sernancial, Chief Executive Officer (2018–2022) and board member (2017–2022). Manulife Financial and John Hancock, as Chief Executive Officer, John Hancock and Senior Executive Vice President, Manulife Financial. Trustee of various true Complex (2005–2014 and since 2015).	more than 20 year	rs, retiring in 2012
William H. Cunningham, <sup>3</sup> Born: 1944	2012	180
<i>Trustee</i> Professor, University of Texas, Austin, Texas (since 1971); former Chancellor, University of Texas System and former Pretin, Texas; Director (since 2006), Lincoln National Corporation (insurance); Director, Southwest Airlines (since 2000). John Hancock Fund Complex (since 1986).		
Noni L. Ellison, Born: 1971	2022	178
<i>Trustee</i> Senior Vice President, General Counsel & Corporate Secretary, Tractor Supply Company (rural lifestyle retailer) (since 2 ance Officer & Corporate Secretary, Carestream Dental, L.L.C. (2017–2021); Associate General Counsel & Assistant Co (global industrial supplier) (2015–2017); Board Member, Goodwill of North Georgia, 2018 (FY2019)–2020 (FY2021); School of Law Board of Visitors (since 2021); Board Member, University of Chicago Law School Board of Visitors (since Healthcare of Atlanta Foundation Board (2021–2023). Trustee of various trusts within the John Hancock Fund Completed and School	rporate Secretary, Board Member, He 2016); Board mer	W.W. Grainger, Inc. oward University
Grace K. Fey, Born: 1946	2008	182
<i>Trustee</i> Chief Executive Officer, Grace Fey Advisors (since 2007); Director and Executive Vice President, Frontier Capital Manag tor, Fiduciary Trust (since 2009). Trustee of various trusts within the John Hancock Fund Complex (since 2008).	gement Company	(1988–2007); Direc-
Dean C. Garfield, Born: 1968	2022	178
<i>Trustee</i> Vice President, Netflix, Inc. (since 2019); President & Chief Executive Officer, Information Technology Industry Counce Board of Trustees (since 2021); Member, U.S. Department of Transportation, Advisory Committee on Automation (since Trade Advisory Council (2010–2018); Board Member, College for Every Student (2017–2021); Board Member, The See (2012–2017); Advisory Board Member of the Block Center for Technology and Society (since 2019). Trustee of various Complex (since 2022).	e 2021); President ed School of Washi	of the United States ngton, D.C.
Deborah C. Jackson, Born: 1952	2012	180
<i>Trustee</i> President, Cambridge College, Cambridge, Massachusetts (2011-2023); Board of Directors, Amwell Corporation (since setts Women's Forum (2018-2020); Board of Directors, National Association of Corporate Directors/New England (2015 American Red Cross of Massachusetts Bay (2002–2011); Board of Directors of Eastern Bank Corporation (since 2001); I Charitable Foundation (since 2001); Board of Directors of Boston Stock Exchange (2002–2008); Board of Directors of F benefits company) (2007–2011). Trustee of various trusts within the John Hancock Fund Complex (since 2008).	5-2020); Chief Exe Board of Directors	ecutive Officer, of Eastern Bank
Steven R. Pruchansky, Born: 1944	2012	178
<i>Trustee and Vice Chairperson of the Board</i> Managing Director, Pru Realty (since 2017); Chairman and Chief Executive Officer, Greenscapes of Southwest Florida, I dent, Greenscapes of Southwest Florida, Inc. (until 2000); Member, Board of Advisors, First American Bank (until 2010 (real estate) (since 2000); Partner, Right Funding, LLC (2014-2017); Director, First Signature Bank & Trust Company (r (until 1994); President, Maxwell Building Corp. (until 1991). Trustee (since 1992), Chairperson of the Board (2011–20 Board (since 2012) of various trusts within the John Hancock Fund Complex.	)); Managing Direc until 1991); Direct	tor, Jon James, LLC tor, Mast Realty Trust
Frances G. Rathke, <sup>3</sup> Born: 1960	2020	178
<i>Trustee</i> Director, Audit Committee Chair, Oatly Group AB (plant-based drink company) (since 2021); Director, Audit Committee tee Member, Green Mountain Power Corporation (since 2016); Director, Treasurer and Finance & Audit Committee Ch (since 2016); Director and Audit Committee Chair, Planet Fitness (since 2016); Chief Financial Officer and Treasurer, K retired 2015). Trustee of various trusts within the John Hancock Fund Complex (since 2020).	air, Flynn Center f	or Performing Arts

#### **Trustees and officers Information**

#### **INDEPENDENT TRUSTEES** (continued)

Name, year of birth	Trustee	Number of John
Position(s) held with Trust	of the	Hancock funds
Principal occupation(s) and other	Trust	overseen by
directorships during past 5 years	since <sup>1</sup>	Trustee
Gregory A. Russo, Born: 1949	2012	178

#### Trustee

Director and Audit Committee Chairman (2012-2020), and Member, Audit Committee and Finance Committee (2011-2020), NCH Healthcare System, Inc. (holding company for multi-entity healthcare system); Director and Member (2012-2018), and Finance Committee Chairman (2014-2018), The Moorings, Inc. (nonprofit continuing care community); Global Vice Chairman, Risk & Regulatory Matters, KPMG LLP (KPMG) (2002–2006); Vice Chairman, Industrial Markets, KPMG (1998–2002). Trustee of various trusts within the John Hancock Fund Complex (since 2008).

#### **NON-INDEPENDENT TRUSTEES<sup>4</sup>**

Name, year of birth	Trustee	Number of John
Position(s) held with Trust	of the	Hancock funds
Principal occupation(s) and other	Trust	overseen by
directorships during past 5 years	since <sup>1</sup>	Trustee
Andrew G. Arnott. Born: 1971	2017	180

#### Non-Independent Trustee

Global Head of Retail for Manulife (since 2022); Head of Wealth and Asset Management, United States and Europe, for John Hancock and Manulife (2018-2023); Director and Chairman, John Hancock Investment Management LLC (2005-2023, including prior positions); Director and Chairman, John Hancock Variable Trust Advisers LLC (2006-2023, including prior positions); Director and Chairman, John Hancock Investment Management Distributors LLC (2004-2023, including prior positions); President of various trusts within the John Hancock Fund Complex (2007-2023, including prior positions). Trustee of various trusts within the John Hancock Fund Complex (since 2017).

#### Paul Lorentz, Born: 1968

Non-Independent Trustee Global Head, Manulife Wealth and Asset Management (since 2017); General Manager, Manulife, Individual Wealth Management and Insurance (2013–2017); President, Manulife Investments (2010–2016). Trustee of various trusts within the John Hancock Fund Complex (since 2022).

#### PRINCIPAL OFFICERS WHO ARE NOT TRUSTEES

Name, year of birth Position(s) held with Trust Principal occupation(s) during past 5 years	Current Position(s) with the Trust since
Kristie M. Feinberg, Born: 1975	2023

#### Kristie M. Feinberg, Born: 1975

President

Head of Wealth and Asset Management, United States and Europe, for John Hancock and Manulife (since 2023); Director and Chairman, John Hancock Investment Management LLC (since 2023); Director and Chairman, John Hancock Variable Trust Advisers LLC (since 2023); Director and Chairman, John Hancock Investment Management Distributors LLC (since 2023); CFO and Global Head of Strategy, Manulife Investment Management (2021-2023, including prior positions); CFO Americas & Global Head of Treasury, Invesco, Ltd., Invesco US (2019-2020, including prior positions); Senior Vice President, Corporate Treasurer and Business Controller, Oppenheimer Funds (2001-2019, including prior positions); President of various trusts within the John Hancock Fund Complex (since 2023).

#### Charles A. Rizzo, Born: 1957

#### Chief Financial Officer

Vice President, John Hancock Financial Services (since 2008); Senior Vice President, John Hancock Investment Management LLC and John Hancock Variable Trust Advisers LLC (since 2008); Chief Financial Officer of various trusts within the John Hancock Fund Complex (since 2007).

#### Salvatore Schiavone, Born: 1965

#### Treasurer

Assistant Vice President, John Hancock Financial Services (since 2007); Vice President, John Hancock Investment Management LLC and John Hancock Variable Trust Advisers LLC (since 2007); Treasurer of various trusts within the John Hancock Fund Complex (since 2007, including prior positions).

#### Christopher (Kit) Sechler, Born: 1973

Secretary and Chief Legal Officer Vice President and Deputy Chief Counsel, John Hancock Investment Management (since 2015); Assistant Vice President and Senior Counsel (2009–2015), John Hancock Investment Management; Assistant Secretary of John Hancock Investment Management LLC and John Hancock Variable Trust Advisers LLC (since 2009); Chief Legal Officer and Secretary of various trusts within the John Hancock Fund Complex (since 2009, including prior positions).

#### 2012

## 2018

2007

178

2022

**Trustees and officers Information** 

#### PRINCIPAL OFFICERS WHO ARE NOT TRUSTEES (continued)

Name, year of birth Position(s) held with Trust Principal occupation(s) during past 5 years	Current Position(s) with the Trust since
Trevor Swanberg, Born: 1979	2020
Chief Compliance Officer	

Chief Compliance Officer, John Hancock Investment Management LLC and John Hancock Variable Trust Advisers LLC (since 2020); Deputy Chief Compliance Officer, John Hancock Investment Management LLC and John Hancock Variable Trust Advisers LLC (2019–2020); Assistant Chief Compliance Officer, John Hancock Investment Management LLC and John Hancock Variable Trust Advisers LLC (2016–2019); Vice President, State Street Global Advisors (2015–2016); Chief Compliance Officer of various trusts within the John Hancock Fund Complex (since 2016, including prior positions).

The business address for all Trustees and Officers is 200 Berkeley Street, Boston, Massachusetts 02116-5023.

The Statement of Additional Information of the fund includes additional information about members of the Board of Trustees of the Trust and is available without charge, upon request, by calling 800-344-1029.

- <sup>1</sup> Each Trustee holds office until his or her successor is duly elected and qualified, or until the Trustee's death, retirement, resignation, or removal. Mr. Boyle has served as Trustee at various times prior to the date listed in the table.
- <sup>2</sup> Member of the Audit Committee as of September 26, 2023.
- <sup>3</sup> Member of the Audit Committee.
- <sup>4</sup> The Trustee is a Non-Independent Trustee due to current or former positions with the Advisor and certain affiliates.

### For more information

The Statement of Additional Information, a separate document with supplemental information not contained in the prospectus, includes additional information on the Board of Trustees and can be obtained without charge by calling 800-344-1029 or on the Securities and Exchange Commission (SEC) website at www.sec.gov.

**PROXY VOTING POLICY** A description of the trust's proxy voting policies and procedures and information regarding how the trust voted proxies relating to portfolio securities during the most recent twelve-month period ended June 30 is available without charge, upon request, by calling 800-344-1029 or on the SEC website at www.sec.gov.

QUARTERLY PORTFOLIO DISCLOSURE All of each fund's holdings as of the end of the third month of every fiscal quarter are filed with the SEC on Form N-PORT within 60 days of the end of the fiscal quarter. Each fund's Form N-PORT filings are available on the SEC's website, www.sec.gov.

The report is certified under the Sarbanes-Oxley Act, which requires mutual funds and other public companies to affirm that, to the best of their knowledge, the information in their financial reports is fairly and accurately stated in all material respects.

John Hancock.

John Hancock Annuities Service Center P.O. Box 55444 Boston, MA 02205-5444

#### **More information**

#### Trustees

Hassell H. McClellan, Chairperson<sup> $\pi$ </sup> Steven R. Pruchansky, Vice Chairperson Andrew G. Arnott<sup>+</sup> James R. Boyle William H. Cunningham<sup>\*</sup> Noni L. Ellison Grace K. Fey Dean C. Garfield Deborah C. Jackson Paul Lorentz<sup>+</sup> Frances G. Rathke\* Gregory A. Russo

#### Officers

Kristie M. Feinberg<sup>#</sup>, *President* Charles A. Rizzo, Chief Financial Officer Salvatore Schiavone, Treasurer Christopher (Kit) Sechler, Secretary and Chief Legal Officer Trevor Swanberg, Chief Compliance Officer

 $\pi$  Member of the Audit Committee as of September 26, 2023.

- \* Non-Independent Trustee
- Member of the Audit Committee
  # Effective June 29, 2023.

#### Investment advisor

John Hancock Variable Trust Advisers LLC

**Principal distributor** John Hancock Distributors, LLC