

Model portfolios Investor fact sheet

# John Hancock Multimanager Active/Passive Model Portfolios

## Strategy

### Multimanager approach

Tapping a broad range of industry talent in and outside of John Hancock across a variety of asset classes and investment styles

### Diversification potential

Investing beyond traditional asset classes and investment styles, including exposure to nontraditional and alternative strategies

### Best of both worlds

Blending mutual funds, ETFs, and low-cost active asset allocation to reduce the impact of expenses on portfolio returns

## Integrating asset allocation and manager research

For more than 30 years, our multi-asset solutions team has combined asset allocation with manager research and oversight to seek better outcomes for investors.



### Multi-asset solutions team

- Portfolio managers/strategists
- Model portfolio construction and delivery

**59** investment professionals

- 33 CFA charterholders
- 2 Ph.D.s

### Manager research team

Investment manager due diligence and oversight

**28** manager research professionals

- 31 professional designations
- 19 advanced degrees

## Managed by

**Manulife** Investment Management

Established asset manager with global resources and expertise extending across equity, fixed-income, and alternative investments as well as asset allocation strategies



Nathan W. Thoof, CFA  
On the portfolio since 2019  
Investing since 2000



Bruce G. Picard, CFA  
On the portfolio since 2019  
Investing since 2000

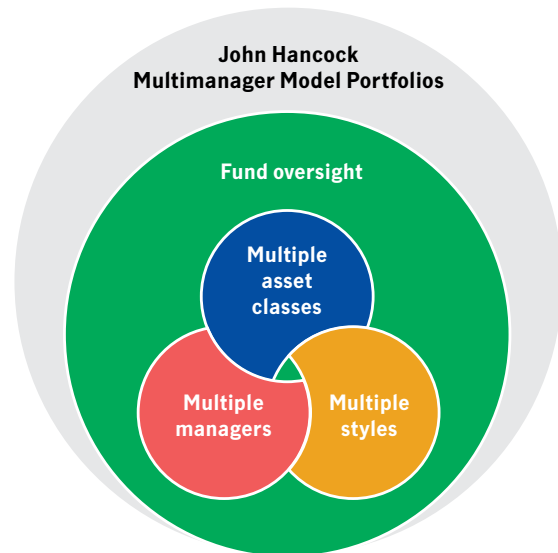


Robert E. Sykes, CFA  
On the portfolio since 2019  
Investing since 2001

## Blending complementary managers from around the world

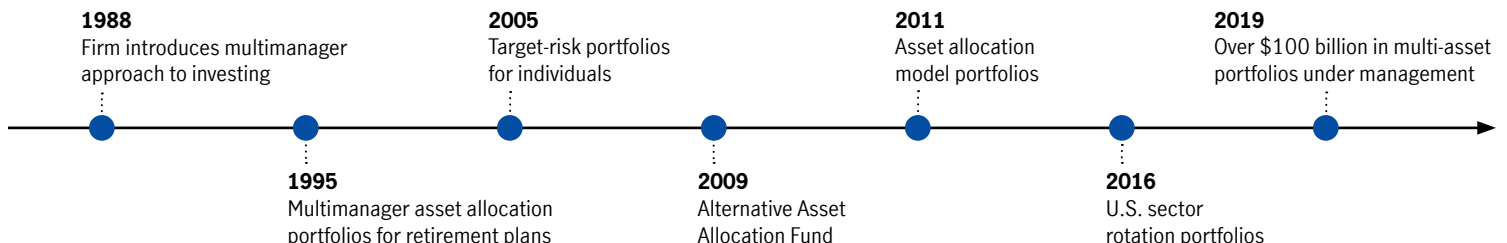
Our method delivers layers of diversification for investors in our asset allocation portfolios.

- Oversight
- Multiple asset classes
- Multiple managers
- Multiple styles



## A leader in asset allocation

Multimanager approach since 1988 and model portfolios since 2011



## Quarterly commentary

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### Highlights

- Rising interest rates continued to weigh on sentiment, leading to negative returns for most segments of the financial markets.
- John Hancock Multimanager Active/Passive Aggressive and Growth Portfolios underperformed their benchmarks.
- John Hancock Multimanager Active/Passive Balanced, Moderate, and Conservative Portfolios outperformed their benchmarks.

### Market review and outlook

Stocks and bonds both posted losses for the third quarter, continuing the trend that characterized the first half of 2022. Although central banks have been raising interest rates aggressively throughout the year, inflation has remained stubbornly high. Investors therefore continued to ratchet up their expectations for terminal rates (the levels at which central banks can stop hiking). The prospect of still higher rates, in turn, weighed on the outlook for economic growth and corporate earnings. A steady undercurrent of unfavorable geopolitical headlines, along with exceptionally high volatility in global currencies, further pressured investor sentiment. Together, these factors caused most major asset classes to finish September near multi-year lows.

### Contributors and detractors

In terms of active allocation decision, on the positive side, we benefited from being a slight overweight in small- and mid-cap U.S. stocks over large caps. The portfolios' allocations to alternative strategies and growth equities also made modest contributions. On the negative side, the portfolios' allocation to international developed, international small-cap, and emerging-market equities all detracted from results. Underlying managers' underperformance relative to their respective benchmarks were also a slight detraction.

### Portfolio changes






We believe near-term uncertainty and volatility are likely to persist due to the weakness in investor sentiment, but we're mindful that a good deal of negativity has already been priced into the equity and fixed-income markets in the sell-off so far this year. In addition, there are signs that both inflation drivers and risk are peaking. Notably, the combination of rising yields and improved stock market valuations have led us to boost our assumptions for longer-term returns across many segments of the financial markets.

As a result of the negative returns across equity and fixed-income markets, the portfolios have generally drifted to an underweight position in equities. Given this drift, the portfolios were rebalanced in October 2022. The rebalanced model target weights are slightly underweight equity and fixed income with an overweight in alternatives. Within fixed income, a reduction to bank loans funded an increased allocation to high-yield and U.S. core bonds. We believe the portfolios continue to be well positioned for an environment where inflation is front of mind for investors and policy makers. We'll continue to monitor developments.

## Distinguishing features

- Cost-efficient implementation of mutual fund and ETF strategies
- Diversified across multiple distinct asset managers

## Strategy allocation (%)

| Underlying fund   | Ticker | Manager                        |  |  |  |  |  |
|---|--------|--------------------------------|---|--|---|---|---|
|   |        |                                | Conservative  | Moderate   | Balanced  | Growth  | Aggressive  |
|   |        |                                | Current quarter   | Current quarter  | Current quarter   | Current quarter   | Current quarter   |
| <b>Equity</b>   |        |                                |   |  |   |   |   |
| John Hancock Multifactor Large Cap ETF                          | JHML   | Dimensional Fund Advisors      | 4.12  | 11.14  | 19.16   | 26.11   | 28.75   |
| John Hancock U.S. Growth Fund <sup>1</sup>                      | JSGIX  | Wellington Management          | 2.39  | 4.15   | 5.88  | 8.83  | 10.49   |
| John Hancock Multifactor Developed Int'l ETF                    | JHMD   | Dimensional Fund Advisors      | 1.11  | 3.35   | 5.62  | 6.74  | 8.39  |
| John Hancock Multifactor Emerging Markets ETF                   | JHEM   | Dimensional Fund Advisors      | 1.36  | 3.30   | 5.10  | 6.98  | 8.90  |
| John Hancock Multifactor Mid Cap ETF                            | JHMM   | Dimensional Fund Advisors      | 2.58  | 3.49   | 5.45  | 7.65  | 9.58  |
| John Hancock Disciplined Value Fund <sup>1</sup>                | JVLIX  | Boston Partners                | 2.17  | 3.98   | 4.91  | 6.09  | 8.43  |
| John Hancock International Dynamic Growth Fund <sup>1</sup>     | JJIX   | Axiom Investors                | —   | 2.14   | 3.01  | 4.37  | 3.93  |
| John Hancock Disciplined Value International Fund <sup>1</sup>  | JDVIX  | Boston Partners                | 2.13  | 2.30   | 2.52  | 3.36  | 3.92  |
| John Hancock Multifactor Small Cap ETF                          | JHSC   | Dimensional Fund Advisors      | —   | 2.58   | 2.77  | 3.21  | 4.46  |
| John Hancock Financial Industries Fund                          | JFIFX  | Manulife Investment Management | —   | —  | 2.34  | 2.31  | 2.50  |
| John Hancock International Small Company Fund <sup>1</sup>      | JSCIX  | Dimensional Fund Advisors      | —   | —  | 2.01  | 2.49  | 3.15  |
| John Hancock Infrastructure Fund                                | JEEIX  | Manulife Investment Management | 2.11  | 2.33   | —   | —   | —   |
| <b>Total equity</b>   |        |                                | <b>17.97</b>  | <b>38.76</b>   | <b>58.78</b>  | <b>78.13</b>  | <b>92.51</b>  |
| <b>Fixed income</b>   |        |                                |   |  |   |   |   |
| John Hancock Strategic Income Opportunities Fund <sup>1</sup>   | JIPIX  | Manulife Investment Management | 9.94  | 8.03   | 5.94  | 1.89  | —   |
| Vanguard Total Bond Market ETF                                  | BND    | Vanguard                       | 17.89   | 10.85  | 6.76  | 2.66  | —   |
| John Hancock Bond Fund <sup>1</sup>                             | JHBIX  | Manulife Investment Management | 21.66   | 13.96  | 6.92  | 3.09  | —   |
| John Hancock High Yield Fund <sup>1</sup>                       | JYHIX  | Manulife Investment Management | 5.38  | 4.58   | 3.25  | 1.97  | —   |
| John Hancock Floating Rate Income Fund <sup>1</sup>             | JFIIX  | Bain Capital Credit            | 2.87  | 2.42   | 1.91  | —   | —   |
| John Hancock Short Duration Bond Fund <sup>1</sup>              | JSNIX  | Manulife Investment Management | 7.01  | 6.29   | 3.81  | —   | —   |
| John Hancock Emerging Markets Debt Fund <sup>1</sup>            | JMKIX  | Manulife Investment Management | 3.67  | 3.35   | 2.15  | 2.08  | —   |
| Fidelity Inflation-Protected Bond Index Fund <sup>1</sup>       | FIPDX  | Fidelity                       | 4.22  | 2.82   | 1.91  | 1.89  | —   |
| <b>Total fixed income</b>                                       |        |                                | <b>72.63</b>  | <b>52.31</b>   | <b>32.66</b>  | <b>13.58</b>  | <b>—</b>  |
| <b>Alternatives</b>   |        |                                |   |  |   |   |   |
| John Hancock Alternative Asset Allocation Fund <sup>1</sup>     | JAAIX  | Manulife Investment Management | 6.26  | 5.89   | 5.55  | 5.54  | 4.49  |
| Invesco Optimum Yield Diversified Commodity Strategy No K-1 ETF | PDBC   | Invesco                        | 1.22  | 1.15   | 1.15  | 0.93  | 1.13  |
| <b>Total alternatives</b>                                       |        |                                | <b>7.47</b>   | <b>7.04</b>  | <b>6.70</b>   | <b>6.47</b>   | <b>5.62</b>   |
| <b>Cash</b>   |        |                                | <b>1.93</b>   | <b>1.90</b>  | <b>1.86</b>   | <b>1.82</b>   | <b>1.87</b>   |
| <b>Total underlying expenses<sup>2</sup></b>                    |        |                                | <b>0.44</b>   | <b>0.48</b>  | <b>0.50</b>   | <b>0.51</b>   | <b>0.52</b>   |

See the conflicts disclosure on the last page for further information.

<sup>1</sup> Denotes active strategies. <sup>2</sup> Morningstar, as of the date of the material. Weighted average annual net expense ratio is provided based on aggregation of the underlying fund fees. Share classes used for calculation may not be available to all investors, and expense ratios charged may vary.

| Average annual total returns  | QTD  | YTD    | 1 year | 3 year | 5 year | 10 year | Inception<br>11/1/19 |
|---|------|--------|--------|--------|--------|---------|----------------------|
| Multimanager Active/Passive Conservative Model Portfolio Composite, gross of fees | 1.26 | -13.76 | -13.33 | -0.04  | —      | —       | -0.04                |
| Multimanager Active/Passive Conservative Model Portfolio Composite, net of fees   | 1.01 | -15.89 | -15.89 | -2.99  | —      | —       | -2.99                |
| Blended conservative benchmark <sup>2</sup>                                       | 0.93 | -15.07 | -14.70 | -0.81  | —      | —       | -0.81                |
| Multimanager Active/Passive Moderate Model Portfolio Composite, gross of fees     | 2.85 | -14.73 | -14.06 | 1.72   | —      | —       | 1.72                 |
| Multimanager Active/Passive Moderate Model Portfolio Composite, net of fees       | 2.59 | -16.84 | -16.60 | -1.29  | —      | —       | -1.29                |
| Blended moderate benchmark <sup>3</sup>   | 2.35 | -16.06 | -15.48 | 1.13   | —      | —       | 1.13                 |
| Multimanager Active/Passive Balanced Model Portfolio Composite, gross of fees     | 4.43 | -15.64 | -14.77 | 3.52   | —      | —       | 3.52                 |
| Multimanager Active/Passive Balanced Model Portfolio Composite, net of fees       | 4.17 | -17.73 | -17.29 | 0.46   | —      | —       | 0.46                 |
| Blended balanced benchmark <sup>4</sup>   | 3.78 | -17.10 | -16.31 | 2.99   | —      | —       | 2.99                 |
| Multimanager Active/Passive Growth Model Portfolio Composite, gross of fees       | 5.88 | -17.21 | -16.05 | 4.68   | —      | —       | 4.68                 |
| Multimanager Active/Passive Growth Model Portfolio Composite, net of fees         | 5.61 | -19.25 | -18.54 | 1.58   | —      | —       | 1.58                 |
| Blended growth benchmark <sup>5</sup>   | 5.20 | -18.20 | -17.21 | 4.77   | —      | —       | 4.77                 |
| Multimanager Active/Passive Aggressive Model Portfolio Composite, gross of fees   | 6.97 | -17.54 | -16.20 | 5.76   | —      | —       | 5.76                 |
| Multimanager Active/Passive Aggressive Model Portfolio Composite, net of fees     | 6.70 | -19.58 | -18.68 | 2.63   | —      | —       | 2.63                 |
| Blended aggressive benchmark <sup>6</sup>   | 6.24 | -19.08 | -17.97 | 5.98   | —      | —       | 5.98                 |

Source: Manulife Investment Management (a Manulife company).

**2** This custom blended benchmark comprises 13% Russell 3000 Index, 5% MSCI ACWI ex USA Index, 60% Bloomberg U.S. Aggregate Bond Index, 15% ICE BofA U.S. High Yield Master II Index, 5% Wilshire Liquid Alternative Index, and 2% FTSE 3-Month U.S. Treasury Bill Index. **3** This custom blended benchmark comprises 27% Russell 3000 Index, 11% MSCI ACWI ex USA Index, 44% Bloomberg U.S. Aggregate Bond Index, 11% ICE BofA U.S. High Yield Master II Index, 5% Wilshire Liquid Alternative Index, and 2% FTSE 3-Month U.S. Treasury Bill Index. **4** This custom blended benchmark comprises 41% Russell 3000 Index, 17% MSCI ACWI ex USA Index, 28% Bloomberg U.S. Aggregate Bond Index, 7% ICE BofA U.S. High Yield Master II Index, 5% Wilshire Liquid Alternative Index, and 2% FTSE 3-Month U.S. Treasury Bill Index. **5** This custom blended benchmark comprises 55% Russell 3000 Index, 23% MSCI ACWI ex USA Index, 12% Bloomberg U.S. Aggregate Bond Index, 3% ICE BofA U.S. High Yield Master II Index, 5% Wilshire Liquid Alternative Index, and 2% FTSE 3-Month U.S. Treasury Bill Index. **6** This custom blended benchmark comprises 65% Russell 3000 Index, 28% MSCI ACWI ex USA Index, 5% Wilshire Liquid Alternative Index, and 2% FTSE 3-Month U.S. Treasury Bill Index.

A custom blended benchmark reflects the portfolio's asset allocation under normal conditions. It is not possible to invest directly in an index.

John Hancock Investment Management LLC and Manulife Investment Management (US) LLC are affiliated and SEC registered investment advisers using the brand name John Hancock Investment Management.

### Important performance information

Performance figures shown are of the Multimanager Model Portfolio Composite, managed by Manulife Investment Management, gross of fees, and represents a single, non-fee-paying affiliated seed capital account, which is representative of the investment strategy. Net performance results reflect the deduction of, from the respective gross-of-fee returns, the highest industry-applied bundled fees (3.00% annually). Actual fees may vary depending on, among other things, the applicable fee schedule and portfolio size. Performance may not be reflective of a full market cycle. The short-term results of a relatively new model portfolio are not necessarily indicative of its long-term prospects. Manulife Investment Management claims compliance with the Global Investment Performance Standards (GIPS). To receive a complete list and description of Manulife Investment Management's composites and/or a presentation that adheres to the GIPS, contact our institutional sales team at 888-332-7132.

Performance does not reflect the platform or program sponsor, trading costs, administrative management fees, or other expenses that would be incurred by a participant portfolio and would reduce returns. Performance does reflect the deduction of investment expenses for the underlying funds. The results do not represent actual trading, which is conducted by the platform or program sponsor on behalf of the client. It should not be assumed that investors would have obtained the performance shown had they invested in the manner shown and does not represent performance that any third-party investor actually attained. Actual performance may differ substantially from the performance presented. Returns for periods shorter than one year are cumulative. The performance presented is based on an assumption that the trades were executed at the same time as the model. The performance of your account may materially differ from the performance shown due to assumptions that include, but are not limited to, trade execution timing; your investment advisor, not John Hancock Investment Management, determines when to implement trade in the account; differences in market conditions; client-imposed investment restrictions; the timing of client investments and withdrawals; fees payable; foreign exchange rates; and account size.

Performance shown does not reflect the performance of model-based program accounts managed by your investment advisor using model portfolios. Your investment advisor may or may not add model portfolios in your account. John Hancock Investment Management is not responsible for determining the suitability or appropriateness of a strategy based on the model portfolios. John Hancock Investment Management does not have investment discretion of your account and does not place trade orders for your account. All information and data, including allocations, are subject to change.

*The portfolio's performance depends on the advisor's skill in determining asset class allocations, the mix of underlying funds, and the performance of those underlying funds. The portfolio is subject to the same risks as the underlying funds and exchange-traded funds in which it invests: Stocks and bonds can decline due to adverse issuer, market, regulatory, or economic developments; foreign investing, especially in emerging markets, has additional risks, such as currency and market volatility and political and social instability; the securities of small companies are subject to higher volatility than those of larger, more established companies; and high-yield bonds are subject to additional risks, such as increased risk of default. Liquidity—the extent to which a security may be sold or a derivative position closed without negatively affecting its market value, if at all—may be impaired by reduced trading volume, heightened volatility, rising interest rates, and other market conditions. Owning an ETF generally reflects the risks of owning the underlying securities it is designed to track, which may cause lack of liquidity, more volatility, and increased management fees. Hedging and other strategic transactions may increase volatility of a portfolio and could result in a significant loss. The principal value of each portfolio is not guaranteed, and you could lose money at any time.*

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### Conflicts disclosure

The information in the charts shown reflects the current portfolio allocations across the underlying model portfolios. Allocations are as of the date indicated, are subject to change, and should not be relied on as current thereafter.

Certain model portfolios may include ETFs and mutual funds that are managed by an unaffiliated investment manager (unaffiliated funds) or an affiliate (affiliated funds). Recommendation of the model portfolios that use affiliated funds raises conflicts of interest. To the extent that the advisor does use affiliated funds as the components of the model portfolios, this will generate advisory and other fees for John Hancock Investment Management (a Manulife company) and, in certain cases, our affiliates, when intermediary accounts and other persons use the model portfolios, and the management fees of affiliated funds may be higher than fees charged by other funds. Clients should review any information provided by the managed account program sponsor for further details regarding the extent to which model portfolios provided may include affiliated funds. In addition, affiliates may engage the investment managers that are recommended or included in the model portfolios as subadvisors to the John Hancock funds or have other business relationships with such investment managers. Some sponsors and intermediaries have other business relationships with John Hancock Investment Management or our affiliates.

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