

Model portfolios Investor fact sheet

John Hancock Multimanager ETF 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

Cost-effective solution

Using ETFs and low-cost active asset allocation to reduce the impact of expenses on portfolio returns

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. Thooft, CFA
On the portfolios since 2019
Investing since 2000



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



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

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

61 investment professionals

- 34 CFA charterholders
- 3 Ph.D.s

Manager research team

Investment manager due diligence and oversight

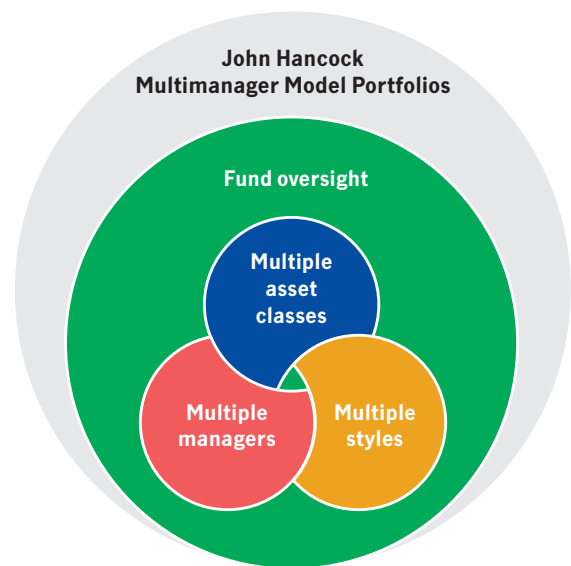
26 investment professionals

- 30 CFA charterholders
- 16 Ph.D.s

Blending complementary managers from around the world

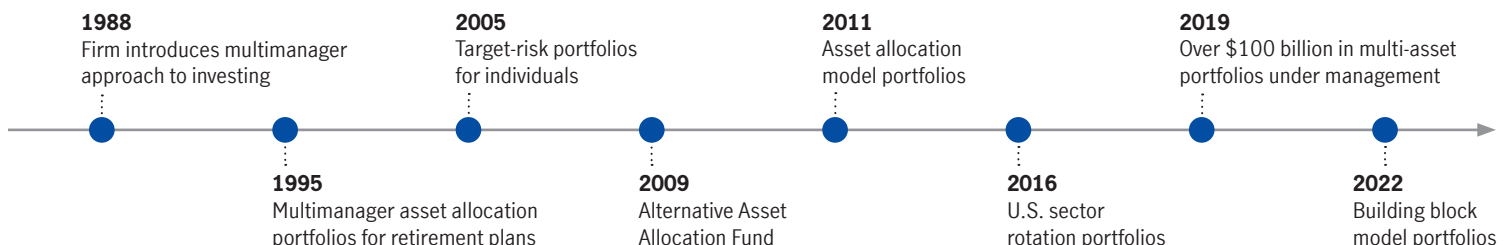
Our method delivers multiple layers of diversification for investors in our asset allocation portfolios.

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



A leader in asset allocation

Multimanager approach since 1988 and model portfolios since 2011



Quarterly commentary

Highlights

- Global financial markets produced mixed results in the fourth quarter amid the shifting outlook for economic growth and interest rates.
- The portfolios experienced a modest loss and slightly underperformed the blended benchmarks.

Market review and outlook

Broad-based measures of global equity performance, such as the MSCI World Index, were roughly flat in the fourth quarter. U.S. stocks strongly outperformed their developed-market peers due to faster economic growth in the United States, an election outcome perceived to be market friendly, and a continued rally in the country's mega-cap technology sector; on the other hand, the overseas markets posted sizable losses. European and emerging-market stocks lost ground, reflecting slowing global growth and rising protectionism in the United States. Developed Asia, while suffering a loss in absolute terms, outperformed Europe.

Bonds suffered negative total returns in the quarter amid waning optimism about the potential for significant interest-rate cuts by the U.S. Federal Reserve in 2025. Rate-sensitive assets generally produced the weakest returns, but credit-oriented market segments were well supported by the backdrop of positive economic growth and hearty investor risk appetites.

Contributors and detractors

The portfolios underperformed in the quarter, but this was within expectations given that market returns remained highly concentrated in a narrow group of U.S. technology stocks. In managing the portfolio, our goal is to deliver a portfolio that provides an appropriate risk and return profile over the long term; we therefore maintained a steady, diversified

approach rather than attempting to chase short-term momentum in certain areas of the market.

Along this line, the portfolios' underweight in U.S. large-cap stocks and corresponding overweights in defensive equities and the international markets detracted from relative performance. An allocation to a real assets portfolio, intended to provide a buffer against the impact of inflation over time, was an additional detractor due to weakness in real estate investment and commodities. The bond allocation within the portfolios experienced a loss and slightly underperformed the fixed-income portion of the benchmark. While positions in short-term bonds and the credit sectors contributed, a downturn in rate-sensitive longer duration bonds was a headwind for returns. Reflecting a lower anticipated diversification benefit as a higher term premium environment is likely to increase its correlation with equities, longer duration bonds have had an underweight position across the portfolios, which has dampened the negative impact from the asset class. Underlying manager results were a net positive, with most of the advantage occurring on the equity side.






Portfolio changes

We continued to trim the overweight in equities. We maintained a position in defensive equities, which we believe should provide ballast if the economy continues to slow. Although U.S. large-cap stocks still featured strong fundamentals and offered exposure to key innovation themes, we think much of the positive outlook has already been factored into prices. In our view, this makes the case for continued diversification in the portfolios. On the fixed-income side, we reduced the allocations to the credit sectors as yield spreads compressed toward historic lows. We believe an emphasis on higher-quality bonds is appropriate at this stage of the economic cycle.

Distinguishing features

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

Strategy allocation (%)

							
Manager	Underlying fund	Ticker	Conservative	Moderate	Balanced	Growth	Aggressive
Equity							
Dimensional Fund Advisors	John Hancock Multifactor Large Cap ETF	JHML	7.10	16.29	24.48	28.33	31.35
Dimensional Fund Advisors	John Hancock Multifactor Developed International ETF	JHMD	3.27	7.70	10.11	13.62	16.30
BlackRock Fund Advisors	iShares Global Infrastructure ETF	IGF	2.13	1.93	—	—	—
Dimensional Fund Advisors	John Hancock Multifactor Mid Cap ETF	JHMM	2.03	4.04	6.50	8.71	10.41
BlackRock Fund Advisors	iShares Core S&P 500 ETF	IVV	2.00	3.62	8.21	15.06	18.52
Dimensional Fund Advisors	John Hancock Multifactor Emerging Markets ETF	JHEM	1.41	3.10	4.40	6.08	7.94
Dimensional Fund Advisors	John Hancock Multifactor Small Cap ETF	JHSC	1.35	2.32	2.77	4.07	5.10
Vanguard	Vanguard FTSE All-World ex-US Small-Cap ETF	VSS	—	—	1.60	2.34	3.05
Total equity			19.29	39.01	58.07	78.21	92.67
Fixed income							
Vanguard	Vanguard Total Bond Market ETF	BND	24.68	18.15	10.63	4.78	—
Fidelity	Fidelity Total Bond ETF	FBND	17.94	12.49	7.80	3.92	—
Manulife Investment Management	John Hancock Corporate Bond ETF	JHCB	10.81	7.47	4.90	2.68	—
Marathon Asset Management	John Hancock High Yield ETF	JHHY	7.78	6.18	4.12	1.43	—
BlackRock Fund Advisors	iShares J.P. Morgan USD Emerging Markets Bond ETF	EMB	3.34	2.75	1.74	1.37	—
Vanguard	Vanguard Short Term Inflation-Protected Sec Index ETF	VTIP	3.29	2.24	2.30	—	—
State Street Global Advisors	Invesco Senior Loan ETF	BKLN	2.36	1.36	1.12	—	—
Vanguard	Vanguard Short-Term Bond ETF	BSV	2.10	2.14	1.08	—	—
Total fixed income			72.30	52.77	33.69	14.18	—
Alternatives							
Invesco	Invesco Optimum Yield Diversified Commodity Strategy No K-1 ETF	PDBC	1.77	1.72	1.74	1.43	1.23
iM Global	iMGP DBi Managed Futures Strategy ETF	DBMF	1.24	1.21	1.24	1.14	1.01
State Street Global Advisors	SPDR Gold MiniShares ETF	GLDM	1.06	1.12	1.16	1.06	1.13
BlackRock Fund Advisors	iShares Global REIT ETF	REET	1.06	0.96	1.00	0.98	0.99
Total alternatives			5.13	5.01	5.14	4.61	4.36
Cash			3.28	3.21	3.09	2.99	2.98
Total underlying expenses¹			0.26	0.28	0.28	0.28	0.28

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

¹ 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.

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							Since inception 11/1/19
Average annual total returns (%)	QTD	YTD	1 year	3 year	5 year	10 year	
Multimanager ETF Conservative Model Portfolio Wrap Composite, gross of fees	-2.12	5.40	5.40	0.38	2.79	—	3.04
Multimanager ETF Conservative Model Portfolio Wrap Composite, net of fees	-2.85	2.28	2.28	-2.59	-0.25	—	-0.01
Blended conservative benchmark ²	-1.92	5.51	5.51	0.31	2.71	—	2.91
Multimanager ETF Moderate Model Portfolio Wrap Composite, gross of fees	-2.08	7.47	7.47	1.61	4.58	—	4.97
Multimanager ETF Moderate Model Portfolio Wrap Composite, net of fees	-2.81	4.29	4.29	-1.40	1.48	—	1.87
Blended moderate benchmark ³	-1.53	8.56	8.56	1.80	4.83	—	5.21
Multimanager ETF Balanced Model Portfolio Wrap Composite, gross of fees	-1.84	9.92	9.92	2.82	6.38	—	6.94
Multimanager ETF Balanced Model Portfolio Wrap Composite, net of fees	-2.57	6.66	6.66	-0.22	3.23	—	3.77
Blended balanced benchmark ⁴	-1.14	11.66	11.66	3.26	6.91	—	7.47
Multimanager ETF Growth Model Portfolio Wrap Composite, gross of fees	-1.81	12.18	12.18	3.94	7.97	—	8.70
Multimanager ETF Growth Model Portfolio Wrap Composite, net of fees	-2.54	8.86	8.86	0.86	4.78	—	5.48
Blended growth benchmark ⁵	-0.75	14.83	14.83	4.69	8.95	—	9.69
Multimanager ETF Aggressive Model Portfolio Wrap Composite, gross of fees	-1.77	13.70	13.70	4.57	8.99	—	9.84
Multimanager ETF Aggressive Model Portfolio Wrap Composite, net of fees	-2.51	10.34	10.34	1.48	5.76	—	6.59
Blended aggressive benchmark ⁶	-0.52	17.15	17.15	5.70	10.39	—	11.28

All data is from Manulife Investment Management (a Manulife company) as of the date shown on page 1, unless otherwise indicated.

2 This custom blended benchmark comprises 60% Bloomberg U.S. Aggregate Bond Index, 15% ICE BofA US High Yield Constrained Index, 13% Russell 3000 Index, 5% MSCI ACWI ex USA Index, 5% Wilshire Liquid Alternative Index, and 2% FTSE 3-Month U.S. Treasury Bill Index. **3** This custom blended benchmark comprises 44% Bloomberg U.S. Aggregate Bond Index, 27% Russell 3000 Index, 11% ICE BofA US High Yield Constrained Index, 11% MSCI ACWI ex USA 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, 28% Bloomberg U.S. Aggregate Bond Index, 17% MSCI ACWI ex USA Index, 7% ICE BofA US High Yield Constrained 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, 5% Wilshire Liquid Alternative Index, 3% ICE BofA US High Yield Constrained 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 SEC registered investment advisers using the brand name John Hancock Investment Management.

Important performance information

Performance figures shown are of the Multimanager ETF Model Portfolio Wrap Composites 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 report that adheres to the GIPS, contact our institutional sales team at 888-332-7132. GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.

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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