

Target-date fund Investment professional fact sheet

John Hancock Multimanager 2045 Lifetime Portfolio

A: JLJAX I: JHROX R2: JLJEX R4: JLJGX R5: JLJHX R6: JLJIX

Objective

High total return through its target retirement date

Strategy summary

Morningstar: Target-Date 2045

Benchmark: S&P Target Date 2045 Index

Strategy inception: 10/30/2006

Total net assets: \$742.30 m

Strategy

Open-architecture structure

Using a multimanager approach to tap a broad range of industry talent in and outside of John Hancock

Longevity-risk management

Implementing a lifelong glide path strategy that seeks to maximize wealth and help make it last throughout retirement

Diversification potential

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

Managed by



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



Robert E. Sykes, CFA
On the fund since 2018.
Investing since 2001



Nathan W. Thooft, CFA
On the fund since 2013.
Investing since 1999

Investment process

Select underlying asset classes

- Begin with an eligible universe unparalleled in its breadth of styles and asset types
- Include underrepresented niche styles that behave differently than traditional equity and fixed income
- Research the market to determine which underlying investment categories are needed for each portfolio

Determine an optimal mix of assets

- Use proprietary risk-and-return forecasts
- Incorporate qualitative research and a thoughtfully developed market view
- Identify the best combinations and proportions of asset classes to meet the portfolio's objectives

Choose an appropriate arrangement of managers

- Combine correlation studies and quantitative modeling tools with an informed judgment
- Aim to maximize the probability of achieving portfolio objectives and minimize prospective shortfalls
- Decide how much capital to allocate to each manager

Review, monitor, adjust, and repeat

- Continually test convictions and adjust portfolio allocations as the markets change
- Introduce new asset classes to the portfolio when appropriate

Average annual total returns^{1,2,3}

	Qtd	Ytd	1 yr	3 yr	5 yr	10 yr	Life of fund	Life of fund date	%
Class R6 without sales charge	-6.63	-26.16	-22.77	3.80	4.21	7.42	5.42	10/30/06	
Class R4 without sales charge	-6.77	-26.34	-23.02	3.53	3.93	7.15	5.34	10/30/06	
S&P Target Date 2045 Index	-6.01	-23.33	-18.70	3.25	4.27	7.40	5.50	—	
John Hancock 2045 Lifetime Index	-6.45	-25.09	-20.07	4.25	5.37	8.40	6.69	—	
Target-date 2045 category	-6.28	-24.36	-20.15	2.95	4.00	6.88	—	—	
Expense ratios⁴							Net	Contractual	
							(what you pay)	through	
Class R6		0.89%					0.59%	12/31/2022	
Class R4		1.24%					0.84%	12/31/2022	

The past performance shown here reflects reinvested distributions and the beneficial effect of any expense reductions, and does not guarantee future results. Returns for periods shorter than one year are cumulative, and results for other share classes will vary. Shares will fluctuate in value and, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance cited. For the most recent month-end performance, visit jhinvestments.com. Performance, especially for short time periods, should not be the sole factor in making your investment decision.

1 10/30/06 is the inception date for the oldest class of shares, Class R1 shares. Class R6 shares were first offered on 9/1/11. Returns prior to this date are those of Class R1 shares and have not been adjusted for expenses; otherwise, returns would vary. **2** The S&P Target Date 2045 Index represents a broadly derived consensus of asset class exposure and glide path for target-date year 2045. The index allocates to equities and fixed income at varying levels according to a predetermined schedule related to the respective target date. It is not possible to invest directly in an index. **3** Each of the John Hancock Lifetime Indexes is a customized blended index comprising some or all of the following component indices (ordered alphabetically): Bloomberg U.S. Aggregate Bond Index, Bloomberg U.S. Corporate Bond 1-5 Year Index, Bloomberg U.S. Treasury TIPS 1-5 Year Index, ICE BofA Long U.S. Treasury Principal STRIPS Index, ICE BofA U.S. High Yield Index, JP Morgan Emerging Markets Bond Index Global, MSCI Emerging Markets Index, MSCI World Energy Index, MSCI World ex-USA Index, MSCI World Metals & Mining Index, Russell 2500 Index, S&P 500 Index, S&P Global ex-U.S. REIT Index, S&P Global Infrastructure Index, S&P U.S. REIT Index, and S&P/LSTA Leveraged Loan Index. It is not possible to invest in an index. **4** "Net (what you pay)" represents the effect of a contractual fee waiver and/or expense reimbursement and is subject to change.

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Quarterly commentary

Highlights

- Rising interest rates continued to weigh on investor sentiment, leading to negative returns for most segments of the financial markets.
- The portfolio posted a loss and underperformed its benchmark.
- Underlying manager performance was the primary detractor from results.

Market review and outlook

Stocks and bonds both posted losses in 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 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 the quarter near multi-year lows.

Contributors and detractors

The portfolio lagged its benchmark, largely due to the effect of the underlying managers' underperformance relative to their respective benchmarks. All of the adverse effect occurred on the equity side, with the U.S. large-cap and international managers accounting for the majority of the shortfall.

Asset allocation had a neutral effect on results. The portfolio's dedicated sector portfolio and absolute return strategies made modest contributions, as did its underweight in international equities.

On the other hand, a position in U.S. Treasury Separate Trading of Registered Interest and Principal of Securities, or STRIPS, was a key detractor. The category's high degree of interest-rate sensitivity was a significant headwind in the recent market environment.

This commentary reflects the views of the named portfolio managers and is subject to change as market and other conditions warrant. No forecasts are guaranteed. This commentary is provided for informational purposes only and is not an endorsement of any security, mutual fund, sector, or index. The subadvisor, the advisor (John Hancock Investment Management LLC), and their affiliates, employees, and clients, may hold or trade the securities mentioned in this commentary. Diversification does not guarantee a profit or eliminate the risk of a loss.

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 following the sell-off during the first nine months of the 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 has led to us to boost our assumptions for longer-term returns across many segments of the financial markets.

In terms of activity, we continued to reduce the portfolio's equity allocation in a gradual fashion while rotating the proceeds into fixed income in an effort to capitalize on rising yields. Within the bond portfolios, we've been moving toward U.S. core (investment-grade) bonds and away from senior loans. On the equity side, we remain light in domestic small caps compared with our longer-term targets. While the asset class is inexpensive on a historical basis, it typically underperforms late in the economic cycle. International stocks also feature compelling valuations, although they continue to face both macroeconomic and geopolitical headwinds.

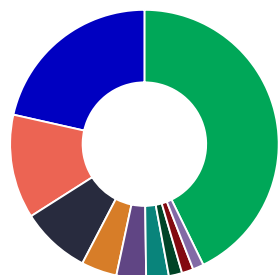
The portfolio remains tilted toward the value style; however, we're alert for the opportunity to add back to growth following its significant underperformance over the past year. We've also been gradually increasing the portfolio's weighting in the real assets category due to its ability to help offset the effects of inflation. The portfolio retains a meaningful position in defensive equities on the belief that the category should hold up better than the broader market in a period of high volatility.

Strategy allocation

Strategy allocation						
Category	Fund and asset manager	%	Category	Fund and asset manager	%	
U.S. large-cap equity	U.S. Sector Rotation Large Cap Sleeve (MIM)	16.05	Sector	Health Sciences Fund (T. Rowe Price)	1.50	
	Equity Income Fund (T. Rowe Price)	6.20		Financial Industries Fund (MIM)	1.39	
	Blue Chip Growth Fund (T. Rowe Price)	5.58		Science & Technology Fund (Allianz/T. Rowe Price)	0.74	
	Disciplined Value Fund (Boston Partners)	4.66		Diversified Real Asset Fund (MIM/Deutsche/Wellington)	0.66	
	Fundamental Large Cap Core Fund (MIM)	3.61		Subtotal	4.29	
	Capital Appreciation Fund (Jennison)	3.49		U.S. small-cap equity	Small Cap Index Fund (Fidelity)	1.74
	Capital Appreciation Value Fund (T. Rowe Price)	3.18			Small Cap Value Fund (Wellington)	0.97
	Subtotal	42.77			Small Cap Growth Fund (Redwood)	0.85
Subtotal	42.77	Subtotal	3.56			
International equity	International Strategic Equity Allocation Fund (MIM)	11.57	Long-term bond	STRIPS SP 0 05/15/50	1.11	
	Disciplined Value International Fund (Boston Partners)	4.05		SP 0 08/15/51	0.79	
	International Growth Fund (Wellington)	2.23		STRIPS SP 0 11/15/48	0.60	
	International Small Company Fund (Dimensional)	1.74		STRIPS SP 0 05/15/47	0.22	
	International Dynamic Growth Fund (Axiom)	1.22	Subtotal	2.72		
	International Index Fund (Fidelity)	0.67	Absolute return	Absolute Return Currency Fund (First Quadrant)	1.39	
	Subtotal	21.48		Subtotal	1.39	
U.S. mid-cap equity	Mid Value Fund (T. Rowe Price)	5.45	Intermediate-term bond	Bond Fund (MIM)	1.31	
	JHF Mid Cap Growth (Wellington)	4.63		Subtotal	1.31	
	Mid Cap Index Fund (Fidelity)	2.45	Emerging markets debt	Emerging Markets Debt Fund (MIM)	0.88	
	Subtotal	12.53		Subtotal	0.88	
Emerging-market equity	Emerging Markets Equity Fund (MIM)	6.69	High-yield bond	High Yield Fund (MIM)	0.72	
	Emerging Market Index Fund (Fidelity)	1.66		Subtotal	0.72	
	Subtotal	8.35				

Asset mix⁷

%

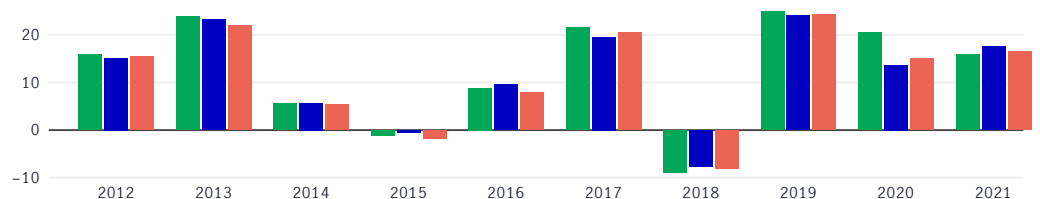


■ U.S. large-cap equity	42.77
■ International equity	21.48
■ U.S. mid-cap equity	12.53
■ Emerging-market equity	8.35
■ Sector	4.29
■ U.S. small-cap equity	3.56
■ Long-term bond	2.72
■ Other	1.60
■ Absolute return	1.39
■ Intermediate-term bond	1.31

Calendar year returns⁸

%

Class R6 without sales charge



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
■ Multimanager 2045 Lifetime Portfolio	15.87	23.84	5.65	-1.22	8.82	21.52	-8.86	24.84	20.45	15.87
■ S&P Target Date 2045 Index	15.15	23.14	5.67	-0.46	9.54	19.56	-7.74	24.02	13.66	17.51
■ Target-date 2045 category	15.52	22.01	5.34	-1.81	7.96	20.42	-8.08	24.32	15.11	16.56

What you should know before investing

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. Each portfolio's name refers to the approximate retirement year of the investors for whom the portfolio's asset allocation strategy is designed. The portfolios with dates further off initially allocate more aggressively to stock funds. As a portfolio approaches and passes its target date, the allocation will gradually migrate to more conservative, fixed-income funds. The principal value of each portfolio is not guaranteed, and you could lose money at any time, including at, or after, the target date. 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. Hedging and other strategic transactions may increase volatility and result in losses if not successful. Please see the portfolio's prospectus for additional risks.

Clients should carefully consider a fund's investment objectives, risks, charges, and expenses before investing. To request a prospectus or summary prospectus with this and other important information, call us at 800-225-6020, or visit us at jhinvestments.com.

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5 Fund characteristics will vary over time. **6** Listed holdings reflect the largest portions of the fund's total and may change at any time. They are not recommendations to buy or sell any security. Data is expressed as a percentage of net assets and excludes cash and cash equivalents. Fund characteristics will vary over time. **7** Excludes any negative exposures that may result from the use of futures or forward contracts. **8** Performance data shown excludes fees and expenses. The performance data would be lower if such fees and expenses were included. Past performance does not guarantee future results.

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Risk and performance measures

5 year	Morningstar	
	Fund	category
Alpha	-0.22	-0.23
Beta	1.06	0.99
Sharpe ratio	0.25	0.26
Sortino ratio	0.36	0.36
Standard deviation (%)	16.51	15.39
Information ratio	0.05	-0.31
Tracking error (%)	1.91	0.89
Upside capture ratio (%)	104.61	98.67
Downside capture ratio (%)	105.43	99.79
R-squared (%)	98.98	99.67

Based on Class R6 shares.

Key facts

Portfolio composition ⁵ (%)	
Equity	88.69
Alternative and specialty	5.68
Fixed income	5.63
Number of underlying funds	33
Number of unique managers	11

10 largest holdings⁶

	%
1. U.S. Sector Rotation Large Cap Sleeve (MIM)	15.98
2. International Strategic Equity Allocation Fund (MIM)	11.52
3. Emerging Markets Equity Fund (MIM)	6.66
4. Equity Income Fund (T. Rowe Price)	6.17
5. Blue Chip Growth Fund (T. Rowe Price)	5.56
6. Mid Value Fund (T. Rowe Price)	5.42
7. Disciplined Value Fund (Boston Partners)	4.64
8. JHF Mid Cap Growth (Wellington)	4.61
9. Disciplined Value International Fund (Boston Partners)	4.03
10. Fundamental Large Cap Core Fund (MIM)	3.59