

Target-date fund Investor fact sheet

John Hancock Multimanager 2045 Lifetime Portfolio

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

Summary

Objective

High total return through its target retirement date

Use for

One-stop retirement investment

Morningstar category

Target-Date 2045

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 by¹

Manulife

Investment Management

Robert E. Sykes, CFA

On the fund since 2018.

Investing since 2001

Nathan W. Thooff, CFA

On the fund since 2013.

Investing since 1999

David Kobuszewski, CFA

On the fund since 2023.

Investing since 1999

Geoffrey Kelley, CFA

On the fund since 2023.

Investing since 1994

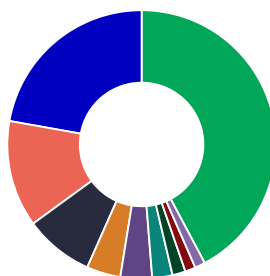
Morningstar ratings^{TM2}

Target-Date 2045

| | Overall | 3 year | 5 year | 10 year |
|-----------------|---------|--------|--------|---------|
| Class R6 | ★★★★ | ★★★ | ★★★ | ★★★★ |
| Class R4 | ★★★ | ★★★ | ★★ | ★★★ |
| Number of funds | 188 | 188 | 167 | 98 |

Overall rating is based on 3-, 5-, and 10-year Morningstar Risk-Adjusted Returns and accounts for variation in a fund's monthly performance. Other share classes may be rated differently. Hollow stars indicate Morningstar's extended performance rating.

Asset mix³



| | % |
|------------------------|-------|
| U.S. large-cap equity | 42.21 |
| International equity | 22.20 |
| U.S. mid-cap equity | 12.83 |
| Emerging-market equity | 8.34 |
| Sector | 4.09 |
| U.S. small-cap equity | 3.81 |
| Long-term bond | 2.44 |
| Other | 1.58 |
| Short-term bond | 1.26 |
| Intermediate-term bond | 1.24 |

10 largest holdings⁴

| | | % | |
|---|-------|---|------|
| 1. U.S. Sector Rotation Large Cap Sleeve (MIM) | 15.93 | 6. Blue Chip Growth Fund (T. Rowe Price) | 4.88 |
| 2. International Strategic Equity Allocation Fund (MIM) | 11.88 | 7. Disciplined Value Fund (Boston Partners) | 4.66 |
| 3. Emerging Markets Equity Fund (MIM) | 6.54 | 8. JHF Mid Cap Growth (Wellington) | 4.50 |
| 4. Equity Income Fund (T. Rowe Price) | 6.31 | 9. Disciplined Value International Fund (Boston Partners) | 4.32 |
| 5. Mid Value Fund (T. Rowe Price) | 5.68 | 10. Fundamental Large Cap Core Fund (MIM) | 3.53 |

1 Effective 1/1/23, Geoff Kelley and David Kobuszewski are added as portfolio managers of the fund. **2** For each managed product, including mutual funds, variable annuity and variable life subaccounts, exchange-traded funds, closed-end funds, and separate accounts, with at least a 3-year history, Morningstar calculates a Morningstar RatingTM based on a Morningstar Risk-Adjusted Return that accounts for variation in a fund's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. Exchange-traded funds and open-end mutual funds are considered a single population for comparative purposes. The top 10.0% of funds in each category, the next 22.5%, 35.0%, 22.5%, and bottom 10.0% receive 5, 4, 3, 2, or 1 star(s), respectively. The overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its 3-, 5-, and 10-year (if applicable) Morningstar Rating metrics. The rating formula most heavily weights the 3-year rating, using the following calculation: 100% 3-year rating for 36 to 59 months of total returns, 60% 5-year rating/40% 3-year rating for 60 to 119 months of total returns, and 50% 10-year rating/30% 5-year rating/20% 3-year rating for 120 or more months of total returns. Star ratings do not reflect the effect of any applicable sales load.

Morningstar's extended performance rating is calculated by adjusting the historical total returns of the oldest share class to reflect the fee structure of a younger share class, and then compounding the combined record of actual and adjusted performance into the 3-, 5-, and 10-year time periods necessary to produce Morningstar Risk-Adjusted Returns and a Morningstar Rating. Extended performance ratings do not affect actual Morningstar ratings; the overall ratings for multi-share class funds are based on actual performance only or extended performance only. Once a share class turns 3 years old, the overall Morningstar Rating will be based on actual ratings only. Adjusted historical performance is only an approximation of actual returns, and Morningstar's calculation methodology may differ from those used by other entities. Past performance does not guarantee future results. **3** Excludes any negative exposures that may result from the use of futures or forward contracts. **4** 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.

Average annual total returns^{5,6,7}

| | | | | | | | | % | |
|------------------------------------|------|--------|--------------|------|---------------------------|-------|----------------------------|-------------------|--|
| | Qtd | Ytd | 1 yr | 3 yr | 5 yr | 10 yr | Life of fund | Life of fund date | |
| Class R6 without sales charge | 9.10 | -19.43 | -19.43 | 3.99 | 5.05 | 8.14 | 5.91 | 10/30/06 | |
| Class R4 without sales charge | 9.08 | -19.65 | -19.65 | 3.72 | 4.77 | 7.87 | 5.82 | 10/30/06 | |
| S&P Target Date 2045 Index | 9.77 | -15.84 | -15.84 | 3.98 | 5.16 | 8.11 | 6.02 | — | |
| John Hancock 2045 Lifetime Index | 8.77 | -18.53 | -18.53 | 4.35 | 5.91 | 9.11 | 7.14 | — | |
| Target-date 2045 category | 8.76 | -17.73 | -17.73 | 3.35 | 4.75 | 7.54 | — | — | |
| Expense ratios ⁸ | | | Gross | | Net (what you pay) | | Contractual through | | |
| Class R6 | | | 0.90% | | 0.59% | | 12/31/2023 | | |
| Class R4 | | | 1.25% | | 0.84% | | 12/31/2023 | | |

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.

Key facts

| | |
|--|----------------------------|
| Portfolio composition ⁹ (%) | |
| Equity | 89.39 |
| Fixed income | 6.52 |
| Alternative and specialty | 4.09 |
| Total net assets | \$802.52 m |
| Number of underlying funds | 33 |
| Number of unique managers | 10 |
| Benchmark | S&P Target Date 2045 Index |
| Standard deviation ¹⁰ (%) | |
| Fund | 17.11 |
| Benchmark | 16.04 |
| Sharpe ratio ¹¹ | 0.30 |
| Beta ¹² | 1.06 |
| R-squared ¹³ (%) | 98.97 |
| Based on Class R6 shares for the five-year period. | |

Growth of a hypothetical \$10,000 investment¹⁴

Class R6 without sales charge – 11/1/06 – 12/31/22

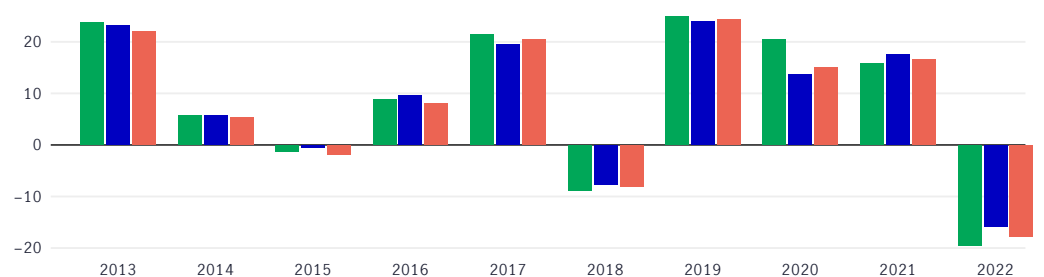


5 10/30/06 is the inception date for the oldest class of shares, Class R1 shares. Class R6 shares were first offered on 9/1/11. Returns prior to this date are those of Class R1 shares and have not been adjusted for expenses; otherwise, returns would vary. **6** The S&P Target Date 2045 Index represents 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. **7** 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. **8** "Net (what you pay)" represents the effect of a contractual fee waiver and/or expense reimbursement and is subject to change. **9** Fund characteristics will vary over time. **10** Standard deviation is a statistical measure of the historic volatility of a portfolio. It measures the fluctuation of a fund's periodic returns from the mean or average. The larger the deviation, the larger the standard deviation and the higher the risk. **11** Sharpe ratio is a measure of excess return per unit of risk, as defined by standard deviation. A higher Sharpe ratio suggests better risk-adjusted performance. **12** Beta measures the sensitivity of the fund to its benchmark. The beta of the market (as represented by the benchmark) is 1.00. Accordingly, a fund with a 1.10 beta is expected to have 10% more volatility than the market. **13** R-squared is a measurement that indicates how closely a fund's performance correlates with the performance of its benchmark index. R-squared can range from 0.00 to 1.00, with 1.00 indicating perfect correlation to the index. **14** 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.

Calendar year returns¹⁴

%

Class R6 without sales charge



| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|-------|------|-------|------|-------|-------|-------|-------|-------|--------|
| ■ Multimanager 2045 Lifetime Portfolio | 23.84 | 5.65 | -1.22 | 8.82 | 21.52 | -8.86 | 24.84 | 20.45 | 15.87 | -19.43 |
| ■ S&P Target Date 2045 Index | 23.14 | 5.67 | -0.46 | 9.54 | 19.56 | -7.74 | 24.02 | 13.66 | 17.51 | -15.84 |
| ■ Target-date 2045 category | 22.01 | 5.34 | -1.81 | 7.96 | 20.42 | -8.08 | 24.32 | 15.11 | 16.56 | -17.73 |

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.

Request a prospectus or summary prospectus from your financial professional, by visiting jhinvestments.com, or by calling us at 800-225-5291. The prospectus includes investment objectives, risks, fees, expenses, and other information that you should consider carefully before investing.

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