

# Prospectus Supplement

## **John Hancock Funds II Fundamental All Cap Core Fund (the fund)**

### **Supplement dated June 16, 2025 to the current Summary Prospectus, as may be supplemented (the Summary Prospectus)**

Effective June 12, 2025 (the Effective Date), Emory W. (Sandy) Sanders, Jr., CFA no longer serves as a portfolio manager of the fund. Accordingly, as of the Effective Date, all references to Emory W. (Sandy) Sanders, Jr. were removed from the Summary Prospectus. Effectively immediately, Michael J. Mattioli, CFA and Nicholas P. Renart are added as portfolio managers of the fund. Jonathan T. White, CFA will continue as a portfolio manager of the fund, and together with Michael J. Mattioli and Nicholas P. Renart are jointly and primarily responsible for the day-to-day management of the fund's portfolio. Accordingly, the following information is added under the heading "Portfolio management":

#### **Michael J. Mattioli, CFA**

*Portfolio Manager and Senior Investment Analyst*

Managed the fund since 2025

#### **Nicholas P. Renart**

*Portfolio Manager and Senior Investment Analyst*

Managed the fund since 2025

*You should read this supplement in conjunction with the Summary Prospectus and retain it for your future reference.*

## Summary prospectus

# John Hancock Fundamental All Cap Core Fund

Before you invest, you may want to review the fund's prospectus, which contains more information about the fund and its risks. You can find the fund's prospectus and other information about the fund, including the Statement of Additional Information and most recent reports, online at [www.jhinvestments.com/prospectuses](http://www.jhinvestments.com/prospectuses). You can also get this information at no cost by calling 800-225-5291 (Class A and Class C) or 888-972-8696 (Class I, Class R2, Class R4, and Class R6) or by sending an email request to [info@jhinvestments.com](mailto:info@jhinvestments.com). The fund's prospectus and Statement of Additional Information, both dated December 1, 2024, as may be supplemented, and most recent financial highlights information included in the shareholder report, dated July 31, 2024, are incorporated by reference into this summary prospectus.

### Tickers

A: JFCAX C: JFCCX I: JFCIX R2: JFACX R4: JFARX R6: JFAIX

### Investment objective

To seek long-term capital appreciation.

### Fees and expenses

This table describes the fees and expenses you may pay if you buy, hold, and sell shares of the fund. **You may pay other fees, such as brokerage commissions and other fees to financial intermediaries, which are not reflected in the tables and examples below.** You may qualify for sales charge discounts on Class A shares if you and your family invest, or agree to invest in the future, at least \$50,000 in the John Hancock family of funds. Intermediaries may have different policies and procedures regarding the availability of front-end sales charge waivers or contingent deferred sales charge (CDSC) waivers (See Appendix 1 - Intermediary sales charge waivers, which includes information about specific sales charge waivers applicable to the intermediaries identified therein). More information about these and other discounts is available from your financial professional and beginning on page 23 of the prospectus under "Sales charge reductions and waivers" or page 79 of the fund's Statement of Additional Information under "Sales Charges on Class A and Class C Shares."

Shareholder fees (%) (fees paid directly from your investment)	A	C	I	R2	R4	R6
Maximum front-end sales charge (load) on purchases, as a % of purchase price	5.00	None	None	None	None	None
Maximum deferred sales charge (load) as a % of purchase or sale price, whichever is less	1.00 (on certain purchases, including those of \$1 million or more)	1.00	None	None	None	None
Small account fee (for fund account balances under \$1,000) (\$)	20	20	None	None	None	None

**Annual fund operating expenses (%)** (expenses that you pay each year as a percentage of the value of your investment)

	A	C	I	R2	R4	R6
Management fee	0.67	0.67	0.67	0.67	0.67	0.67
Distribution and service (Rule 12b-1) fees	0.30	1.00	0.00	0.25	0.25	0.00
Other expenses						
Service plan fee	0.00	0.00	0.00	0.25 <sup>1</sup>	0.10 <sup>1</sup>	0.00
Additional other expenses	0.23	0.23	0.23	0.12	0.12	0.12
Total other expenses	0.23	0.23	0.23	0.37	0.22	0.12
<b>Total annual fund operating expenses</b>	<b>1.20</b>	<b>1.90</b>	<b>0.90</b>	<b>1.29</b>	<b>1.14</b>	<b>0.79</b>
Contractual expense reimbursement	-0.07 <sup>2</sup>	-0.07 <sup>2</sup>	-0.07 <sup>2</sup>	-0.07 <sup>2</sup>	-0.17 <sup>2,3</sup>	-0.07 <sup>2</sup>
<b>Total annual fund operating expenses after expense reimbursements</b>	<b>1.13</b>	<b>1.83</b>	<b>0.83</b>	<b>1.22</b>	<b>0.97</b>	<b>0.72</b>

<sup>1</sup> "Service plan fee" has been restated to reflect maximum allowable fees.

<sup>2</sup> The advisor contractually agrees to reduce its management fee or, if necessary, make payment to the fund in an amount equal to the amount by which expenses of the fund exceed 0.71% of average daily net assets of the fund. For purposes of this agreement, "expenses of the fund" means all fund expenses, excluding (a) taxes, (b) brokerage commissions, (c) interest expense, (d) litigation and indemnification expenses and other extraordinary expenses not incurred in the ordinary course of the fund's business, (e) class-specific expenses, (f) borrowing costs, (g) prime brokerage fees, (h) acquired fund fees and expenses paid indirectly, and (i) short dividend expense. This agreement expires on December 31, 2025, unless renewed by mutual agreement of the advisor and the fund based upon a determination that this is appropriate under the circumstances at that time. The advisor also contractually agrees to waive a portion of its management fee and/or reimburse expenses for the fund and certain other John Hancock funds according to an asset level breakpoint schedule that is based on the aggregate net assets of all the funds participating in the waiver or reimbursement, including the fund (the participating portfolios). This waiver equals, on an annualized basis, 0.0100% of that portion of the aggregate net assets of all the participating portfolios that exceeds \$75 billion but is less than or equal to \$125 billion; 0.0125% of that portion of the aggregate net assets of all the participating portfolios that exceeds \$125 billion but is less than or equal to \$150 billion; 0.0150% of that portion of the aggregate net assets of all the participating portfolios that exceeds \$150 billion but is less than or equal to \$175 billion; 0.0175% of that portion of the aggregate net assets of all the participating portfolios that

## John Hancock Fundamental All Cap Core Fund

exceeds \$175 billion but is less than or equal to \$200 billion; 0.0200% of that portion of the aggregate net assets of all the participating portfolios that exceeds \$200 billion but is less than or equal to \$225 billion; and 0.0225% of that portion of the aggregate net assets of all the participating portfolios that exceeds \$225 billion. The amount of the reimbursement is calculated daily and allocated among all the participating portfolios in proportion to the daily net assets of each participating portfolio. During its most recent fiscal year, the fund's reimbursement amounted to 0.01% of the fund's average daily net assets. This agreement expires on July 31, 2026, unless renewed by mutual agreement of the fund and the advisor based upon a determination that this is appropriate under the circumstances at that time.

- 3 The distributor contractually agrees to limit its Rule 12b-1 fees for Class R4 shares to 0.15%. This agreement expires on December 31, 2025, unless renewed by mutual agreement of the fund and the distributor based upon a determination that this is appropriate under the circumstances at that time.

### Expense example

This example is intended to help you compare the cost of investing in the fund with the cost of investing in other mutual funds. Please see below a hypothetical example showing the expenses of a \$10,000 investment for the time periods indicated and then, except as shown below, assuming you sell all of your shares at the end of those periods. The example assumes a 5% average annual return and that fund expenses will not change over the periods. Although your actual costs may be higher or lower, based on these assumptions, your costs would be:

Expenses (\$)	Shares Sold						Shares Not Sold
	A	C	I	R2	R4	R6	C
1 year	609	286	85	124	99	74	186
3 years	855	590	280	402	345	245	590
5 years	1,120	1,020	492	701	611	432	1,020
10 years	1,876	2,034	1,101	1,550	1,371	971	2,034

### Portfolio turnover

The fund pays transaction costs, such as commissions, when it buys and sells securities (or "turns over" its portfolio). A higher portfolio turnover rate may indicate higher transaction costs and may result in higher taxes when fund shares are held in a taxable account. These costs, which are not reflected in annual fund operating expenses or in the example, affect the fund's performance. During its most recent fiscal year, the fund's portfolio turnover rate was 12% of the average value of its portfolio.

### Principal investment strategies

Under normal market conditions, the fund invests at least 80% of its net assets (plus any borrowings for investment purposes) in equity securities. Market capitalizations of these companies will span the capitalization spectrum. Equity securities include common, convertible, and preferred securities and their equivalents.

The manager seeks to identify companies that are highly differentiated and demonstrate key growth drivers, sustainable cash flow production, high returns on capital, sustainable competitive advantages, high barriers to entry, strong management, and a focus on creating value for fund shareholders. The manager looks for both growth and value opportunities, using the present value of estimated future cash flows to measure intrinsic value. The fund may focus its investments in a particular sector or sectors of the economy.

The manager's fundamental research process produces bottom-up company assessments using key assumptions that drive sales, margins, and asset intensity. The manager seeks to purchase company shares that are selling at a significant discount to intrinsic value. Sell decisions are similarly driven by long-term fundamental analysis. The manager may sell a holding if the holding reaches its target valuation, the manager perceives deterioration in the business's underlying fundamentals, or a more attractive opportunity is identified.

The fund may invest up to 20% of its net assets in equity securities of foreign issuers, including American Depositary Receipts. Investments in exchange-traded funds (ETFs) and derivative instruments may be used to reduce risk and/or obtain efficient investment exposure, and may include options, futures contracts, and swaps (including interest-rate swaps). The fund may also invest in U.S. government securities and other short-term securities such as money market instruments and repurchase agreements.

The manager considers environmental, social, and/or governance (ESG) factors, alongside other relevant factors, as part of its investment process. ESG factors may include, but are not limited to, matters regarding board diversity, climate change policies, and supply chain and human rights policies. The ESG characteristics utilized in the fund's investment process may change over time and one or more characteristics may not be relevant with respect to all issuers that are eligible fund investments.

### Principal risks

An investment in the fund is not a bank deposit and is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Many factors affect performance, and fund shares will fluctuate in price, meaning you could lose money. The fund's investment strategy may not produce the intended results.

The fund's main risks are listed below in alphabetical order, not in order of importance. *Before investing, be sure to read the additional descriptions of these risks beginning on page 6 of the prospectus.*

**Cash and cash equivalents risk.** Under certain market conditions, such as during a rising stock market, rising interest rate or rising credit spread markets, the use of cash and/or cash equivalents, including money market instruments, could have a negative effect on the fund's ability to achieve its investment objective and may negatively impact the fund's performance.

**Credit and counterparty risk.** The counterparty to an over-the-counter derivatives contract or a borrower of fund securities may not make timely payments or otherwise honor its obligations. U.S. government securities are subject to varying degrees of credit risk depending upon the nature of their support. A downgrade or default affecting any of the fund's securities could affect the fund's performance.

**Economic and market events risk.** Events in the U.S. and global financial markets, including actions taken by the U.S. Federal Reserve or foreign central banks to stimulate or stabilize economic growth, may at times result in unusually high market volatility, which could negatively impact performance. Reduced liquidity in credit and fixed-income markets could adversely affect issuers worldwide. Banks and financial services companies could suffer losses if interest rates rise or economic conditions deteriorate.

**ESG integration risk.** The manager considers ESG factors that it deems relevant or additive, along with other material factors and analysis, when managing the fund. ESG factors may include, but are not limited to, matters regarding board diversity, climate change policies, and supply chain and human rights policies. The manager may consider these ESG factors on all or a meaningful portion of the fund's investments. Incorporating ESG criteria and making investment decisions based on certain ESG characteristics, as determined by the manager, carries the risk that the fund may perform differently, including underperforming, funds that do not utilize ESG criteria, or funds that utilize different ESG criteria.

**Equity securities risk.** The price of equity securities may decline due to changes in a company's financial condition or overall market conditions. Growth company securities may fluctuate more in price than other securities because of the greater emphasis on earnings expectations. Securities the manager believes are undervalued may never realize their full potential value, and in certain markets value stocks may underperform the market as a whole.

**Exchange-traded funds (ETFs) risk.** The risks of owning shares of an ETF include the risks of owning the underlying securities the ETF holds. Lack of liquidity in an ETF could result in the ETF being more volatile than its underlying securities. An ETF's shares could trade at a significant premium or discount to its net asset value (NAV). A fund bears ETF fees and expenses indirectly.

**Foreign securities risk.** Less information may be publicly available regarding foreign issuers, including foreign government issuers. Foreign securities may be subject to foreign taxes and may be more volatile than U.S. securities. Currency fluctuations and political and economic developments may adversely impact the value of foreign securities. Depositary receipts are subject to most of the risks associated with investing in foreign securities directly because the value of a depositary receipt is dependent upon the market price of the underlying foreign equity security. Depositary receipts are also subject to liquidity risk.

**Hedging, derivatives, and other strategic transactions risk.** Hedging, derivatives, and other strategic transactions may increase a fund's volatility and could produce disproportionate losses, potentially more than the fund's principal investment. Risks of these transactions are different from and possibly greater than risks of investing directly in securities and other traditional instruments. Under certain market conditions, derivatives could become harder to value or sell and may become subject to liquidity risk (i.e., the inability to enter into closing transactions). Derivatives and other strategic transactions that the fund intends to utilize include: futures contracts, interest-rate swaps, options, and swaps. Futures contracts, options, and swaps generally are subject to counterparty risk. In addition, swaps may be subject to interest-rate and settlement risk, and the risk of default of the underlying reference obligation.

**Investment company securities risk.** Fund shareholders indirectly bear their proportionate share of the expenses of any investment company in which the fund invests. The total return on such investments will be reduced by the operating expenses and fees of such other investment companies, including advisory fees.

**Large company risk.** Larger companies may grow more slowly than smaller companies or be slower to respond to business developments. Large-capitalization securities may underperform the market as a whole.

**Liquidity risk.** The extent (if at all) to which a security may be sold or a derivative position closed without negatively impacting its market value may be impaired by reduced market activity or participation, legal restrictions, or other economic and market impediments.

**Operational and cybersecurity risk.** Cybersecurity breaches may allow an unauthorized party to gain access to fund assets, customer data, or proprietary information, or cause a fund or its service providers to suffer data corruption or lose operational functionality. Similar incidents affecting issuers of a fund's securities may negatively impact performance. Operational risk may arise from human error, error by third parties, communication errors, or technology failures, among other causes.

**Preferred and convertible securities risk.** Preferred stock dividends are payable only if declared by the issuer's board. Preferred stock may be subject to redemption provisions. The market values of convertible securities tend to fall as interest rates rise and rise as interest rates fall. Convertible preferred stock's value can depend heavily upon the underlying common stock's value.

**Repurchase agreements risk.** The risk of a repurchase agreement transaction is limited to the ability of the seller to pay the agreed-upon sum on the delivery date. In the event of bankruptcy or other default by the seller, the instrument purchased may decline in value, interest payable on the instrument may be lost and there may be possible difficulties and delays in obtaining collateral and delays and expense in liquidating the instrument.

**Sector risk.** When a fund focuses its investments in certain sectors of the economy, its performance may be driven largely by sector performance and could fluctuate more widely than if the fund were invested more evenly across sectors.

**Small and mid-sized company risk.** Small and mid-sized companies are generally less established and may be more volatile than larger companies. Small and/or mid-capitalization securities may underperform the market as a whole.

**U.S. government agency obligations risk.** U.S. government-sponsored entities such as Federal National Mortgage Association (Fannie Mae), Federal Home Loan Mortgage Corporation (Freddie Mac) and the Federal Home Loan Banks, although chartered or sponsored by Congress, are not funded by congressional appropriations and the debt securities that they issue are neither guaranteed nor issued by the U.S. government. Such debt securities are subject to the risk of default on the payment of interest and/or principal, similar to the debt securities of private issuers. The maximum potential liability of the issuers of some U.S. government obligations may greatly exceed their current resources, including any legal right to support from the U.S. government. Although the U.S. government has provided financial support to Fannie Mae and Freddie Mac in the past, there can be no assurance that it will support these or other government-sponsored entities in the future.

## Past performance

The following information illustrates the variability of the fund's returns and provides some indication of the risks of investing in the fund by showing changes in the fund's performance from year to year and by showing how the fund's average annual returns compared with a broad-based securities market index. Past performance (before and after taxes) does not indicate future results. All figures assume dividend reinvestment. Performance information is updated daily, monthly, and quarterly and may be obtained at our website, [jhinvestments.com](http://jhinvestments.com), or by calling 800-225-5291 (Class A and Class C), Monday to Thursday, 8:00 A.M.—7:00 P.M., and Friday, 8:00 A.M.—6:00 P.M., Eastern time, or 888-972-8696 (Class I, Class R2, Class R4, and Class R6) between 8:30 A.M. and 5:00 P.M., Eastern time, on most business days.

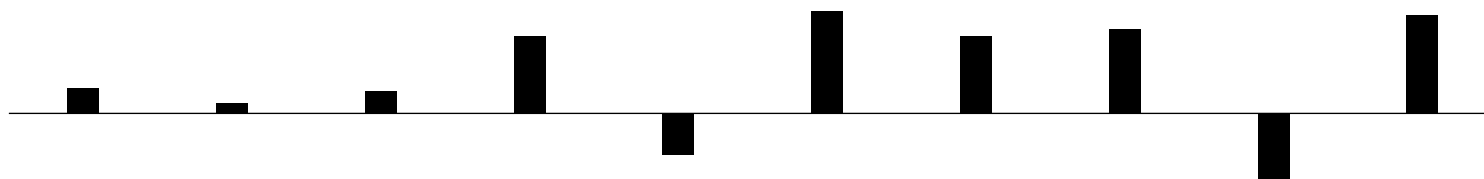
### A note on performance

Class A, Class C, Class R2, Class R4, and Class R6 shares commenced operations on June 1, 2011, June 27, 2014, March 27, 2015, March 27, 2015, and March 27, 2015, respectively. Returns shown prior to a class's commencement date are those of Class A shares, except that they do not include Class A sales charges and would be lower if they did. Returns for Class C, Class R2, Class R4, and Class R6 shares would have been substantially similar to returns of Class A shares because each share class is invested in the same portfolio of securities and returns would differ only to the extent that expenses of the classes are different. To the extent expenses of a class would have been higher than expenses of Class A shares for the periods shown, performance would have been lower.

Please note that after-tax returns (shown for Class A shares only) reflect the highest individual federal marginal income-tax rate in effect as of the date provided and do not reflect any state or local taxes. Your actual after-tax returns may be different. After-tax returns are not relevant to shares held in an IRA, 401(k), or other tax-advantaged investment plan. After-tax returns for other share classes would vary.

### Calendar year total returns (%)—Class A (sales charges are not reflected in the bar chart and returns would have been lower if they were)

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
9.06	3.70	7.96	27.14	-14.45	35.97	27.35	29.72	-23.58	34.41



Year-to-date total return through:	Q3 2024	20.10%
Best quarter:	Q2 2020	32.19%
Worst quarter:	Q1 2020	-24.35%

### Average annual total returns (%)—as of 12/31/2023

	1 year	5 year	10 year
<b>Class A</b> (before tax)	27.70	17.00	11.28
after tax on distributions	27.66	16.36	10.36
after tax on distributions, with sale	16.43	13.70	9.04
<b>Class C</b>	32.48	17.39	11.11
<b>Class I</b>	34.78	18.56	12.19
<b>Class R2</b>	34.28	18.10	11.83
<b>Class R4</b>	34.78	18.51	12.08
<b>Class R6</b>	34.96	18.70	12.25
Russell 3000 Index (reflects no deduction for fees, expenses, or taxes)	25.96	15.16	11.48

## Investment management

**Investment advisor** John Hancock Investment Management LLC

**Subadvisor** Manulife Investment Management (US) LLC

## Portfolio management

The following individuals are jointly and primarily responsible for the day-to-day management of the fund's portfolio.

**Emory W. (Sandy) Sanders, Jr., CFA**

Senior Portfolio Manager

Managed the fund since 2011

**Jonathan T. White, CFA**

Senior Portfolio Manager

Managed the fund since 2015

## **Purchase and sale of fund shares**

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The minimum initial investment requirement for Class A and Class C shares is \$1,000 (\$250 for group investments), except that there is no minimum for certain group retirement plans, certain fee-based or wrap accounts, or certain other eligible investment product platforms. The minimum initial investment requirement for Class I shares is \$250,000, except that the fund may waive the minimum for any category of investors at the fund's sole discretion. There are no minimum initial investment requirements for Class R2 or Class R4 shares. The minimum initial investment requirement for Class R6 shares is \$1 million, except that there is no minimum for: qualified and nonqualified plan investors; certain eligible qualifying investment product platforms; Trustees, employees of the advisor or its affiliates, employees of the subadvisor, members of the fund's portfolio management team and the spouses and children (under age 21) of the aforementioned. There are no subsequent minimum investment requirements.

Class A, Class C, Class I, and Class R6 shares may be redeemed on any business day by mail: John Hancock Signature Services, Inc., P.O. Box 219909, Kansas City, MO 64121-9909; or for most account types through our website: [jhinvestments.com](http://jhinvestments.com); or by telephone: 800-225-5291 (Class A and Class C); 888-972-8696 (Class I and Class R6). Class R2 and Class R4 shares may be redeemed on any business day by contacting your retirement plan administrator or recordkeeper.

## **Taxes**

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The fund's distributions are taxable, and will be taxed as ordinary income and/or capital gains, unless you are investing through a tax-deferred arrangement, such as a 401(k) plan or individual retirement account. Withdrawals from such tax-deferred arrangements may be subject to tax at a later date.

## **Payments to broker-dealers and other financial intermediaries**

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If you purchase the fund through a broker-dealer or other financial intermediary (such as a bank, registered investment advisor, financial planner, or retirement plan administrator), the fund and its related companies may pay the broker-dealer or other intermediary for the sale of fund shares and related services. These payments may create a conflict of interest by influencing the broker-dealer or other intermediary and your salesperson to recommend the fund over another investment. These payments are not applicable to Class R6 shares. Ask your salesperson or visit your financial intermediary's website for more information.









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