

Semiannual report

John Hancock Alternative Asset Allocation Fund

Alternative

February 28, 2023

A *message* to shareholders



Dear shareholder,

Global equities posted slightly positive returns during the six months ended February 28, 2023. A modest downturn in inflation prompted investors to look ahead to the point at which the U.S. Federal Reserve (Fed) and other central banks could stop raising interest rates, boosting the performance of risk assets. The markets were also cheered by China's decision to move off of its zero-COVID policy. As the period ended, however, investor sentiment deteriorated amid signs of reaccelerating inflation and concerns that the Fed and other central banks would need to continue raising interest rates.

Bond yields generally rose during the period, leading to declining bond prices. Short-term bond yields increased the most, reflecting the central bank rate hikes. From a sector perspective, high-yield corporate bonds largely posted gains for the period, while government securities lagged.

In these uncertain times, your financial professional can assist with positioning your portfolio so that it's sufficiently diversified to help meet your long-term objectives and to withstand the inevitable bouts of market volatility along the way.

On behalf of everyone at John Hancock Investment Management, I'd like to take this opportunity to welcome new shareholders and thank existing shareholders for the continued trust you've placed in us.

Sincerely,

A handwritten signature in black ink that reads "Andrew Arnott". The signature is fluid and cursive, with the first name and last name clearly distinguishable.

Andrew G. Arnott

Global Head of Retail,
Manulife Investment Management

President and CEO,
John Hancock Investment Management
Head of Wealth and Asset Management,
United States and Europe

This commentary reflects the CEO's views as of this report's period end and are subject to change at any time. Diversification does not guarantee investment returns and does not eliminate risk of loss. All investments entail risks, including the possible loss of principal. For more up-to-date information, you can visit our website at jhinvestments.com.

John Hancock

Alternative Asset Allocation Fund

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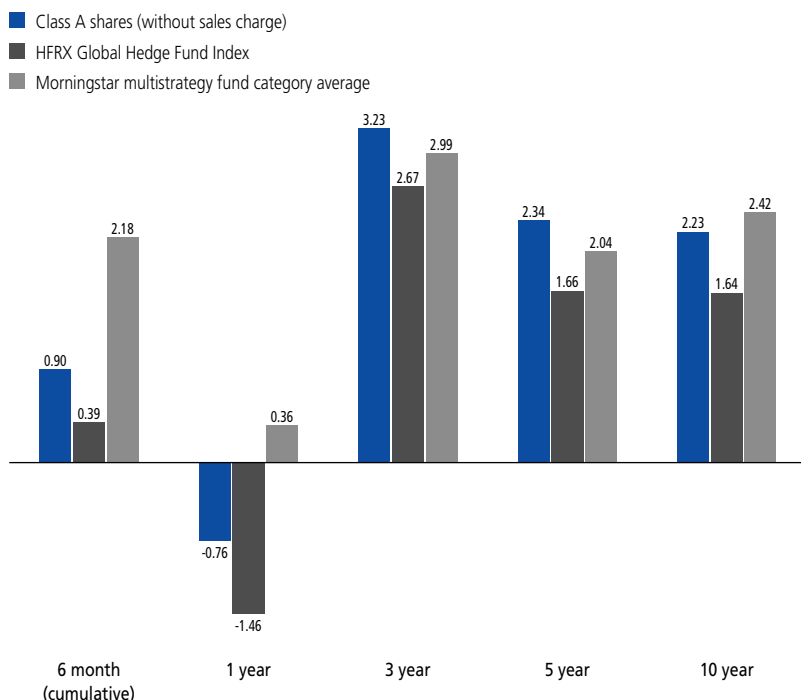
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Your fund at a glance

INVESTMENT OBJECTIVE

The fund seeks long-term growth of capital.

AVERAGE ANNUAL TOTAL RETURNS AS OF 2/28/2023 (%)



The HFRX Global Hedge Fund Index comprises funds representing all main hedge fund strategies, with underlying asset-weighted strategies based on the distribution of assets in the hedge fund industry. It is not possible to invest directly in an index. Index figures do not reflect expenses or sales charges, which would result in lower returns.

The fund's Morningstar category average is a group of funds with similar investment objectives and strategies and is the equal-weighted return of all funds per category. Morningstar places funds in certain categories based on their historical portfolio holdings. Figures from Morningstar, Inc. include reinvested distributions and do not take into account sales charges. Actual load-adjusted performance is lower.

The past performance shown here reflects reinvested distributions and the beneficial effect of any expense reductions, and does not guarantee future results. Performance of the other share classes will vary based on the difference in the fees and expenses of those classes. Shares will fluctuate in value and, when redeemed, may be worth more or less than their original cost. Current month-end performance may be lower or higher than the performance cited, and can be found at jhinvestments.com or by calling 800-225-5291. For further information on the fund's objectives, risks, and strategy, see the fund's prospectus.

Portfolio summary

ASSET ALLOCATION AS OF 2/28/2023 (% of net assets)

Affiliated investment companies	66.4
Absolute return strategies	40.1
Alternative investment approaches	18.6
Alternative markets	7.7
Unaffiliated investment companies	30.0
Absolute return strategies	14.8
Alternative investment approaches	12.8
Alternative markets	2.4
Short-term investments and other	3.6

Notes about risk

The fund is subject to various risks as described in the fund's prospectus. Political tensions and armed conflicts, including the Russian invasion of Ukraine, and any resulting economic sanctions on entities and/or individuals of a particular country could lead such a country into an economic recession. The COVID-19 disease has resulted in significant disruptions to global business activity. A widespread health crisis such as a global pandemic could cause substantial market volatility, exchange-trading suspensions, and closures, which may lead to less liquidity in certain instruments, industries, sectors, or the markets, generally, and may ultimately affect fund performance. For more information, please refer to the "Principal risks" section of the prospectus.

Your expenses

These examples are intended to help you understand your ongoing operating expenses of investing in the fund so you can compare these costs with the ongoing costs of investing in other mutual funds.

Understanding fund expenses

As a shareholder of the fund, you incur two types of costs:

- **Transaction costs**, which include sales charges (loads) on purchases or redemptions (varies by share class), minimum account fee charge, etc.
- **Ongoing operating expenses**, including management fees, distribution and service fees (if applicable), and other fund expenses.

We are presenting only your ongoing operating expenses here.

Actual expenses/actual returns

The first line of each share class in the table on the following page is intended to provide information about the fund's actual ongoing operating expenses, and is based on the fund's actual return. It assumes an account value of \$1,000.00 on September 1, 2022, with the same investment held until February 28, 2023.

Together with the value of your account, you may use this information to estimate the operating expenses that you paid over the period. Simply divide your account value at February 28, 2023, by \$1,000.00, then multiply it by the "expenses paid" for your share class from the table. For example, for an account value of \$8,600.00, the operating expenses should be calculated as follows:

Example

$$\left[\frac{\text{My account value}}{\$8,600.00} / \$1,000.00 = 8.6 \right] \times \$ \left[\begin{array}{c} \text{"expenses paid"} \\ \text{from table} \end{array} \right] = \text{My actual expenses}$$

Hypothetical example for comparison purposes

The second line of each share class in the table on the following page allows you to compare the fund's ongoing operating expenses with those of any other fund. It provides an example of the fund's hypothetical account values and hypothetical expenses based on each class's actual expense ratio and an assumed 5% annualized return before expenses (which is not the class's actual return). It assumes an account value of \$1,000.00 on September 1, 2022, with the same investment held until February 28, 2023. Look in any other fund shareholder report to find its hypothetical example and you will be able to compare these expenses. Please remember that these hypothetical account values and expenses may not be used to estimate the actual ending account balance or expenses you paid for the period.

Remember, these examples do not include any transaction costs, therefore, these examples will not help you to determine the relative total costs of owning different funds. If transaction costs were included, your expenses would have been higher. See the prospectus for details regarding transaction costs.

SHAREHOLDER EXPENSE EXAMPLE CHART

		Account value on 9-1-2022	Ending value on 2-28-2023	Expenses paid during period ended 2-28-2023 ¹	Annualized expense ratio ²
Class A	Actual expenses/actual returns	\$1,000.00	\$1,009.00	\$3.74	0.75%
	Hypothetical example	1,000.00	1,021.10	3.76	0.75%
Class C	Actual expenses/actual returns	1,000.00	1,005.20	7.21	1.45%
	Hypothetical example	1,000.00	1,017.60	7.25	1.45%
Class I	Actual expenses/actual returns	1,000.00	1,010.00	2.24	0.45%
	Hypothetical example	1,000.00	1,022.60	2.26	0.45%
Class R2	Actual expenses/actual returns	1,000.00	1,008.60	4.23	0.85%
	Hypothetical example	1,000.00	1,020.60	4.26	0.85%
Class R4	Actual expenses/actual returns	1,000.00	1,009.60	2.99	0.60%
	Hypothetical example	1,000.00	1,021.80	3.01	0.60%
Class R6	Actual expenses/actual returns	1,000.00	1,010.90	1.70	0.34%
	Hypothetical example	1,000.00	1,023.10	1.71	0.34%

¹ Expenses are equal to the annualized expense ratio, multiplied by the average account value over the period, multiplied by 181/365 (to reflect the one-half year period).

² Ratios do not include fees and expenses indirectly incurred by the underlying funds and can vary based on mixed of underlying funds held by the fund.

Fund's investments

AS OF 2-28-23 (unaudited)

	Shares	Value
Affiliated investment companies (A) 66.4%		\$474,643,493
(Cost \$484,297,995)		
Absolute return strategies 40.1%		286,835,201
Credit Suisse Managed Futures Strategy Fund (B)	4,546,777	44,694,818
Diversified Macro, Class NAV, JHIT (Graham)	6,060,351	57,512,727
IQ Merger Arbitrage ETF (B)(C)(D)	895,773	28,010,822
Multi-Asset Absolute Return, Class NAV, JHF II (NIMNAI)	9,642,423	92,567,263
The Arbitrage Fund, Class I (B)	5,039,305	64,049,571
Alternative investment approaches 18.6%		132,841,495
Seaport Long/Short, Class NAV, JHIT (Wellington)	7,135,071	79,127,935
Strategic Income Opportunities, Class NAV, JHF II (MIM US) (E)	5,566,172	53,713,560
Alternative markets 7.7%		54,966,797
Infrastructure, Class NAV, JHIT (Wellington)	2,648,306	33,448,110
Invesco DB Precious Metals Fund (B)	459,801	21,518,687
Unaffiliated investment companies 30.0%		\$214,066,677
(Cost \$208,335,485)		
Absolute return strategies 14.8%		105,280,854
Calamos Market Neutral Income Fund	3,449,596	48,363,337
Victory Market Neutral Income Fund	6,618,316	56,917,517
Alternative investment approaches 12.8%		91,583,336
JPMorgan Hedged Equity Fund	3,601,390	91,583,336
Alternative markets 2.4%		17,202,487
Invesco Optimum Yield Diversified Commodity Strategy No K-1 ETF (D)	631,607	8,987,768
Vanguard Real Estate ETF	95,832	8,214,719
	Yield (%)	Shares
Short-term investments 4.2%		\$29,960,126
(Cost \$29,948,051)		
Short-term funds 4.2%		29,960,126
John Hancock Collateral Trust (F)	4.5832(G)	2,997,361
		29,960,126
Total investments (Cost \$722,581,531) 100.6%		\$718,670,296
Other assets and liabilities, net (0.6%)		(4,025,132)
Total net assets 100.0%		\$714,645,164

The percentage shown for each investment category is the total value of the category as a percentage of the net assets of the fund.

Security Abbreviations and Legend

JHF II John Hancock Funds II

JHIT John Hancock Investment Trust

- (A) The underlying funds' subadvisor is shown parenthetically.
- (B) The fund owns 5% or more of the outstanding voting shares of the issuer and the security is considered an affiliate of the fund. For more information on this security refer to the Notes to financial statements.
- (C) Non-income producing.
- (D) All or a portion of this security is on loan as of 2-28-23.
- (E) The subadvisor is an affiliate of the advisor.
- (F) Investment is an affiliate of the fund, the advisor and/or subadvisor. A portion of this security represents the investment of cash collateral received for securities lending. Market value of this investment amounted to \$5,636,694.
- (G) The rate shown is the annualized seven-day yield as of 2-28-23.

At 2-28-23, the aggregate cost of investments for federal income tax purposes was \$732,486,818. Net unrealized depreciation aggregated to \$13,816,522, of which \$13,574,349 related to gross unrealized appreciation and \$27,390,871 related to gross unrealized depreciation.

Subadvisors of Affiliated Underlying Funds

Graham Capital Management, L.P.	(Graham)
Manulife Investment Management (US) LLC	(MIM US)
Nordea Investment Management North America, Inc.	(NIMNAI)
Wellington Management Company LLP	(Wellington)

Financial statements

STATEMENT OF ASSETS AND LIABILITIES 2-28-23 (unaudited)

Assets	
Unaffiliated investments, at value (Cost \$208,335,485) including \$5,540,036 of securities loaned	\$214,066,677
Affiliated investments, at value (Cost \$514,246,046)	504,603,619
Total investments, at value (Cost \$722,581,531)	718,670,296
Dividends and interest receivable	253,828
Receivable for fund shares sold	1,368,245
Receivable for investments sold	24,047,765
Receivable for securities lending income	1,454
Other assets	139,889
Total assets	744,481,477
Liabilities	
Due to custodian	227,986
Payable for investments purchased	23,079,145
Payable for fund shares repurchased	682,007
Payable upon return of securities loaned	5,656,566
Payable to affiliates	
Investment management fees	1,335
Accounting and legal services fees	60,434
Transfer agent fees	60,622
Distribution and service fees	198
Trustees' fees	345
Other liabilities and accrued expenses	67,675
Total liabilities	29,836,313
Net assets	\$714,645,164
Net assets consist of	
Paid-in capital	\$760,561,031
Total distributable earnings (loss)	(45,915,867)
Net assets	\$714,645,164

STATEMENT OF ASSETS AND LIABILITIES 2-28-23 (unaudited) (continued)

Net asset value per share	
Based on net asset value and shares outstanding - the fund has an unlimited number of shares authorized with no par value	
Class A (\$70,046,535 ÷ 4,775,655 shares) ¹	\$14.67
Class C (\$8,604,922 ÷ 584,496 shares) ¹	\$14.72
Class I (\$607,977,350 ÷ 41,433,416 shares)	\$14.67
Class R2 (\$976,622 ÷ 66,645 shares)	\$14.65
Class R4 (\$126,039 ÷ 8,578 shares)	\$14.69
Class R6 (\$26,913,696 ÷ 1,833,621 shares)	\$14.68
Maximum offering price per share	
Class A (net asset value per share ÷ 95%) ²	\$15.44

¹ Redemption price per share is equal to net asset value less any applicable contingent deferred sales charge.

² On single retail sales of less than \$50,000. On sales of \$50,000 or more and on group sales the offering price is reduced.

STATEMENT OF OPERATIONS For the six months ended 2-28-23 (unaudited)

Investment income	
Dividends from affiliated investments	\$16,305,101
Dividends	3,317,106
Securities lending	36,090
Total investment income	19,658,297
Expenses	
Investment management fees	1,552,773
Distribution and service fees	158,238
Accounting and legal services fees	65,713
Transfer agent fees	373,143
Trustees' fees	8,363
Custodian fees	15,151
State registration fees	67,672
Printing and postage	28,946
Professional fees	35,129
Other	18,257
Total expenses	2,323,385
Less expense reductions	(632,342)
Net expenses	1,691,043
Net investment income	17,967,254
Realized and unrealized gain (loss)	
Net realized gain (loss) on	
Unaffiliated investments	(1,461,203)
Affiliated investments	368,764
Capital gain distributions received from unaffiliated investments	4,174,240
Capital gain distributions received from affiliated investments	7,317,772
	10,399,573
Change in net unrealized appreciation (depreciation) of	
Unaffiliated investments	(1,067,316)
Affiliated investments	(18,352,979)
	(19,420,295)
Net realized and unrealized loss	(9,020,722)
Increase in net assets from operations	\$8,946,532

STATEMENTS OF CHANGES IN NET ASSETS

	Six months ended 2-28-23 (unaudited)	Year ended 8-31-22
Increase (decrease) in net assets		
From operations		
Net investment income	\$17,967,254	\$8,806,233
Net realized gain	10,399,573	6,847,520
Change in net unrealized appreciation (depreciation)	(19,420,295)	(31,014,064)
Increase (decrease) in net assets resulting from operations	8,946,532	(15,360,311)
Distributions to shareholders		
From earnings		
Class A	(2,173,302)	(1,158,179)
Class C	(198,996)	(144,223)
Class I	(20,633,976)	(7,749,131)
Class R2	(27,745)	(15,564)
Class R4	(3,724)	(1,362)
Class R6	(924,684)	(444,124)
Total distributions	(23,962,427)	(9,512,583)
From fund share transactions	88,134,465	184,838,183
Total increase	73,118,570	159,965,289
Net assets		
Beginning of period	641,526,594	481,561,305
End of period	\$714,645,164	\$641,526,594

Financial highlights

CLASS A SHARES Period ended	2-28-23 ¹	8-31-22	8-31-21	8-31-20	8-31-19	8-31-18
Per share operating performance						
Net asset value, beginning of period	\$14.98	\$15.70	\$14.57	\$14.66	\$14.51	\$14.55
Net investment income ^{2,3}	0.35	0.23	0.07	0.09	0.25	0.13
Net realized and unrealized gain (loss) on investments	(0.22)	(0.69)	1.17	0.31	0.17	0.01
Total from investment operations	0.13	(0.46)	1.24	0.40	0.42	0.14
Less distributions						
From net investment income	(0.34)	(0.24)	(0.03)	(0.27)	(0.17)	(0.11)
From net realized gain	(0.10)	(0.02)	(0.08)	(0.22)	(0.10)	(0.07)
Total distributions	(0.44)	(0.26)	(0.11)	(0.49)	(0.27)	(0.18)
Net asset value, end of period	\$14.67	\$14.98	\$15.70	\$14.57	\$14.66	\$14.51
Total return (%)^{4,5}	0.90⁶	(2.95)	8.55	2.74	3.05	0.95
Ratios and supplemental data						
Net assets, end of period (in millions)	\$70	\$73	\$68	\$62	\$73	\$95
Ratios (as a percentage of average net assets):						
Expenses before reductions ⁷	0.93 ⁸	0.90	0.88	0.88	0.77	0.72
Expenses including reductions ⁷	0.75 ⁸	0.72	0.66	0.66	0.64	0.59
Net investment income ³	2.45 ⁸	1.47	0.47	0.63	1.73	0.86
Portfolio turnover (%)	23	13	25	37	39	18

¹ Six months ended 2-28-23. Unaudited.

² Based on average daily shares outstanding.

³ Net investment income is affected by the timing and frequency of the declaration of dividends by the underlying funds in which the fund invests.

⁴ Total returns would have been lower had certain expenses not been reduced during the applicable periods.

⁵ Does not reflect the effect of sales charges, if any.

⁶ Not annualized.

⁷ Ratios do not include expenses indirectly incurred from underlying funds and can vary based on the mix of underlying funds held by the fund.

⁸ Annualized.

CLASS C SHARES Period ended	2-28-23¹	8-31-22	8-31-21	8-31-20	8-31-19	8-31-18
Per share operating performance						
Net asset value, beginning of period	\$14.98	\$15.70	\$14.58	\$14.67	\$14.51	\$14.56
Net investment income (loss) ^{2,3}	0.28	0.13	(0.03)	(0.01)	0.15	0.02
Net realized and unrealized gain (loss) on investments	(0.21)	(0.69)	1.16	0.31	0.18	0.01
Total from investment operations	0.07	(0.56)	1.13	0.30	0.33	0.03
Less distributions						
From net investment income	(0.23)	(0.14)	—	(0.17)	(0.07)	(0.01)
From net realized gain	(0.10)	(0.02)	(0.01)	(0.22)	(0.10)	(0.07)
Total distributions	(0.33)	(0.16)	(0.01)	(0.39)	(0.17)	(0.08)
Net asset value, end of period	\$14.72	\$14.98	\$15.70	\$14.58	\$14.67	\$14.51
Total return (%)^{4,5}	0.52⁶	(3.62)	7.77	2.04	2.37	0.19
Ratios and supplemental data						
Net assets, end of period (in millions)	\$9	\$11	\$17	\$31	\$42	\$57
Ratios (as a percentage of average net assets):						
Expenses before reductions ⁷	1.63 ⁸	1.60	1.58	1.58	1.47	1.42
Expenses including reductions ⁷	1.45 ⁸	1.41	1.36	1.36	1.34	1.29
Net investment income (loss) ³	1.57 ⁸	0.86	(0.21)	(0.06)	1.02	0.17
Portfolio turnover (%)	23	13	25	37	39	18

¹ Six months ended 2-28-23. Unaudited.

² Based on average daily shares outstanding.

³ Net investment income is affected by the timing and frequency of the declaration of dividends by the underlying funds in which the fund invests.

⁴ Total returns would have been lower had certain expenses not been reduced during the applicable periods.

⁵ Does not reflect the effect of sales charges, if any.

⁶ Not annualized.

⁷ Ratios do not include expenses indirectly incurred from underlying funds and can vary based on the mix of underlying funds held by the fund.

⁸ Annualized.

CLASS I SHARES Period ended	2-28-23¹	8-31-22	8-31-21	8-31-20	8-31-19	8-31-18
Per share operating performance						
Net asset value, beginning of period	\$15.01	\$15.73	\$14.59	\$14.68	\$14.53	\$14.58
Net investment income ^{2,3}	0.39	0.26	0.12	0.14	0.29	0.17
Net realized and unrealized gain (loss) on investments	(0.25)	(0.67)	1.17	0.30	0.18	— ⁴
Total from investment operations	0.14	(0.41)	1.29	0.44	0.47	0.17
Less distributions						
From net investment income	(0.38)	(0.29)	(0.07)	(0.31)	(0.22)	(0.15)
From net realized gain	(0.10)	(0.02)	(0.08)	(0.22)	(0.10)	(0.07)
Total distributions	(0.48)	(0.31)	(0.15)	(0.53)	(0.32)	(0.22)
Net asset value, end of period	\$14.67	\$15.01	\$15.73	\$14.59	\$14.68	\$14.53
Total return (%)⁵	1.00⁶	(2.66)	8.92	3.04	3.39	1.18
Ratios and supplemental data						
Net assets, end of period (in millions)	\$608	\$529	\$374	\$347	\$423	\$510
Ratios (as a percentage of average net assets):						
Expenses before reductions ⁷	0.63 ⁸	0.60	0.58	0.58	0.49	0.42
Expenses including reductions ⁷	0.45 ⁸	0.42	0.36	0.36	0.35	0.30
Net investment income ³	3.02 ⁸	1.67	0.76	0.95	2.04	1.16
Portfolio turnover (%)	23	13	25	37	39	18

¹ Six months ended 2-28-23. Unaudited.

² Based on average daily shares outstanding.

³ Net investment income is affected by the timing and frequency of the declaration of dividends by the underlying funds in which the fund invests.

⁴ Less than \$0.005 per share.

⁵ Total returns would have been lower had certain expenses not been reduced during the applicable periods.

⁶ Not annualized.

⁷ Ratios do not include expenses indirectly incurred from underlying funds and can vary based on the mix of underlying funds held by the fund.

⁸ Annualized.

CLASS R2 SHARES Period ended	2-28-23¹	8-31-22	8-31-21	8-31-20	8-31-19	8-31-18
Per share operating performance						
Net asset value, beginning of period	\$14.95	\$15.67	\$14.55	\$14.64	\$14.49	\$14.53
Net investment income ^{2,3}	0.33	0.22	0.06	0.08	0.24	0.11
Net realized and unrealized gain (loss) on investments	(0.21)	(0.69)	1.16	0.31	0.17	0.01
Total from investment operations	0.12	(0.47)	1.22	0.39	0.41	0.12
Less distributions						
From net investment income	(0.32)	(0.23)	(0.02)	(0.26)	(0.16)	(0.09)
From net realized gain	(0.10)	(0.02)	(0.08)	(0.22)	(0.10)	(0.07)
Total distributions	(0.42)	(0.25)	(0.10)	(0.48)	(0.26)	(0.16)
Net asset value, end of period	\$14.65	\$14.95	\$15.67	\$14.55	\$14.64	\$14.49
Total return (%)⁴	0.86⁵	(3.04)	8.41	2.65	2.95	0.85
Ratios and supplemental data						
Net assets, end of period (in millions)	\$1	\$1	\$1	\$1	\$2	\$3
Ratios (as a percentage of average net assets):						
Expenses before reductions ⁶	1.03 ⁷	0.99	0.95	0.96	0.87	0.83
Expenses including reductions ⁶	0.85 ⁷	0.81	0.74	0.75	0.74	0.70
Net investment income ³	2.26 ⁷	1.45	0.38	0.54	1.67	0.78
Portfolio turnover (%)	23	13	25	37	39	18

¹ Six months ended 2-28-23. Unaudited.

² Based on average daily shares outstanding.

³ Net investment income is affected by the timing and frequency of the declaration of dividends by the underlying funds in which the fund invests.

⁴ Total returns would have been lower had certain expenses not been reduced during the applicable periods.

⁵ Not annualized.

⁶ Ratios do not include expenses indirectly incurred from underlying funds and can vary based on the mix of underlying funds held by the fund.

⁷ Annualized.

CLASS R4 SHARES Period ended	2-28-23¹	8-31-22	8-31-21	8-31-20	8-31-19	8-31-18
Per share operating performance						
Net asset value, beginning of period	\$15.01	\$15.73	\$14.60	\$14.69	\$14.54	\$14.58
Net investment income ^{2,3}	0.36	0.21	0.10	0.07	0.27	0.15
Net realized and unrealized gain (loss) on investments	(0.22)	(0.64)	1.16	0.35	0.18	0.01
Total from investment operations	0.14	(0.43)	1.26	0.42	0.45	0.16
Less distributions						
From net investment income	(0.36)	(0.27)	(0.05)	(0.29)	(0.20)	(0.13)
From net realized gain	(0.10)	(0.02)	(0.08)	(0.22)	(0.10)	(0.07)
Total distributions	(0.46)	(0.29)	(0.13)	(0.51)	(0.30)	(0.20)
Net asset value, end of period	\$14.69	\$15.01	\$15.73	\$14.60	\$14.69	\$14.54
Total return (%)⁴	0.96⁵	(2.78)	8.70	2.91	3.22	1.10
Ratios and supplemental data						
Net assets, end of period (in millions)	\$— ⁶	\$— ⁶	\$— ⁶	\$— ⁶	\$— ⁶	\$1
Ratios (as a percentage of average net assets):						
Expenses before reductions ⁷	0.88 ⁸	0.84	0.83	0.81	0.73	0.67
Expenses including reductions ⁷	0.60 ⁸	0.56	0.51	0.50	0.50	0.44
Net investment income ³	2.58 ⁸	1.41	0.68	0.45	1.76	1.05
Portfolio turnover (%)	23	13	25	37	39	18

¹ Six months ended 2-28-23. Unaudited.

² Based on average daily shares outstanding.

³ Net investment income is affected by the timing and frequency of the declaration of dividends by the underlying funds in which the fund invests.

⁴ Total returns would have been lower had certain expenses not been reduced during the applicable periods.

⁵ Not annualized.

⁶ Less than \$500,000.

⁷ Ratios do not include expenses indirectly incurred from underlying funds and can vary based on the mix of underlying funds held by the fund.

⁸ Annualized.

CLASS R6 SHARES Period ended	2-28-23¹	8-31-22	8-31-21	8-31-20	8-31-19	8-31-18
Per share operating performance						
Net asset value, beginning of period	\$15.02	\$15.74	\$14.60	\$14.69	\$14.54	\$14.58
Net investment income ^{2,3}	0.38	0.27	0.13	0.14	0.32	0.18
Net realized and unrealized gain (loss) on investments	(0.22)	(0.66)	1.18	0.32	0.16	0.02
Total from investment operations	0.16	(0.39)	1.31	0.46	0.48	0.20
Less distributions						
From net investment income	(0.40)	(0.31)	(0.09)	(0.33)	(0.23)	(0.17)
From net realized gain	(0.10)	(0.02)	(0.08)	(0.22)	(0.10)	(0.07)
Total distributions	(0.50)	(0.33)	(0.17)	(0.55)	(0.33)	(0.24)
Net asset value, end of period	\$14.68	\$15.02	\$15.74	\$14.60	\$14.69	\$14.54
Total return (%)⁴	1.09⁵	(2.55)	9.02	3.15	3.49	1.34
Ratios and supplemental data						
Net assets, end of period (in millions)	\$27	\$27	\$21	\$22	\$26	\$18
Ratios (as a percentage of average net assets):						
Expenses before reductions ⁶	0.53 ⁷	0.49	0.48	0.46	0.37	0.32
Expenses including reductions ⁶	0.34 ⁷	0.31	0.26	0.25	0.24	0.20
Net investment income ³	2.91 ⁷	1.74	0.88	1.01	2.23	1.26
Portfolio turnover (%)	23	13	25	37	39	18

¹ Six months ended 2-28-23. Unaudited.

² Based on average daily shares outstanding.

³ Net investment income is affected by the timing and frequency of the declaration of dividends by the underlying funds in which the fund invests.

⁴ Total returns would have been lower had certain expenses not been reduced during the applicable periods.

⁵ Not annualized.

⁶ Ratios do not include expenses indirectly incurred from underlying funds and can vary based on the mix of underlying funds held by the fund.

⁷ Annualized.

Notes to financial statements (unaudited)

Note 1 — Organization

John Hancock Alternative Asset Allocation Fund (the fund) is a series of John Hancock Funds II (the Trust), an open-end management investment company organized as a Massachusetts business trust and registered under the Investment Company Act of 1940, as amended (the 1940 Act). The investment objective of the fund is to seek long-term growth of capital.

The fund operates as a “fund of funds”, investing in affiliated underlying funds of the Trust, other series of the Trust, other funds in John Hancock group of funds complex, non-John Hancock funds and certain other permitted investments.

The fund may offer multiple classes of shares. The shares currently outstanding are detailed in the Statement of assets and liabilities. Class A and Class C shares are offered to all investors. Class I shares are offered to institutions and certain investors. Class R2 and Class R4 shares are available only to certain retirement and 529 plans. Class R6 shares are only available to certain retirement plans, institutions and other investors. Class C shares convert to Class A shares eight years after purchase (certain exclusions may apply). Shareholders of each class have exclusive voting rights to matters that affect that class. The distribution and service fees, if any, and transfer agent fees for each class may differ.

The accounting policies of the underlying funds in which the fund invests are outlined in the underlying funds’ shareholder reports, which include the underlying funds’ financial statements. These are available on the Securities and Exchange Commission (SEC) website at sec.gov. John Hancock underlying funds’ shareholder reports are also available without charge by calling 800-225-5291 or visiting jhinvestments.com. The underlying funds are not covered by this report.

Note 2 — Significant accounting policies

The financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America (US GAAP), which require management to make certain estimates and assumptions as of the date of the financial statements. Actual results could differ from those estimates and those differences could be significant. The fund qualifies as an investment company under Topic 946 of Accounting Standards Codification of US GAAP.

Events or transactions occurring after the end of the fiscal period through the date that the financial statements were issued have been evaluated in the preparation of the financial statements. The following summarizes the significant accounting policies of the fund:

Security valuation. Investments are stated at value as of the scheduled close of regular trading on the New York Stock Exchange (NYSE), normally at 4:00 P.M., Eastern Time. In case of emergency or other disruption resulting in the NYSE not opening for trading or the NYSE closing at a time other than the regularly scheduled close, the net asset value (NAV) may be determined as of the regularly scheduled close of the NYSE pursuant to the Advisor’s Valuation Policies and Procedures.

In order to value the securities, the fund uses the following valuation techniques: Investments by the fund in underlying affiliated funds and other open-end mutual funds, including John Hancock Collateral Trust (JHCT), are valued at their respective NAVs each business day. ETFs held by the fund are valued at the last sale price or official closing price on the exchange or principal market where the security trades. In the event there were no sales during the day or closing prices are not available, the securities are valued using the last available bid price.

In certain instances, the Pricing Committee of the Advisor may determine to value equity securities using prices obtained from another exchange or market if trading on the exchange or market on which prices are typically obtained did not open for trading as scheduled, or if trading closed earlier than scheduled, and trading occurred as normal on another exchange or market.

Other portfolio securities and assets, for which reliable market quotations are not readily available, are valued at fair value as determined in good faith by the Pricing Committee following procedures established by the Advisor and adopted by the Board of Trustees. The frequency with which these fair valuation procedures are used cannot be predicted and fair value of securities may differ significantly from the value that would have been used had a ready market for such securities existed.

The fund uses a three tier hierarchy to prioritize the pricing assumptions, referred to as inputs, used in valuation techniques to measure fair value. Level 1 includes securities valued using quoted prices in active markets for identical securities, including registered investment companies. Level 2 includes securities valued using other significant observable inputs. Observable inputs may include quoted prices for similar securities, interest rates, prepayment speeds and credit risk. Prices for securities valued using these inputs are received from independent pricing vendors and brokers and are based on an evaluation of the inputs described. Level 3 includes securities valued using significant unobservable inputs when market prices are not readily available or reliable, including the Advisor's assumptions in determining the fair value of investments. Factors used in determining value may include market or issuer specific events or trends, changes in interest rates and credit quality. The inputs or methodology used for valuing securities are not necessarily an indication of the risks associated with investing in those securities. Changes in valuation techniques and related inputs may result in transfers into or out of an assigned level within the disclosure hierarchy.

As of February 28, 2023, all investments are categorized as Level 1 under the hierarchy described above.

Security transactions and related investment income. Investment security transactions are accounted for on a trade date plus one basis for daily NAV calculations. However, for financial reporting purposes, investment transactions are reported on trade date. Capital gain distributions from underlying funds are recorded on ex-date. Dividend income is recorded on ex-date, except for dividends of certain foreign securities where the dividend may not be known until after the ex-date. In those cases, dividend income, net of withholding taxes, is recorded when the fund becomes aware of the dividends. Non-cash dividends, if any, are recorded at the fair market value of the securities received. Gains and losses on securities sold are determined on the basis of identified cost and may include proceeds from litigation. Return of capital distributions from underlying funds, if any, are treated as a reduction of cost.

Securities lending. The fund may lend its securities to earn additional income. The fund receives collateral from the borrower in an amount not less than the market value of the loaned securities. The fund may invest its cash collateral in JHCT, an affiliate of the fund, which has a floating NAV and is registered with the SEC as an investment company. JHCT is a prime money market fund and invests in short-term money market investments. The fund will receive the benefit of any gains and bear any losses generated by JHCT with respect to the cash collateral.

The fund has the right to recall loaned securities on demand. If a borrower fails to return loaned securities when due, then the lending agent is responsible and indemnifies the fund for the lent securities. The lending agent uses the collateral received from the borrower to purchase replacement securities of the same issue, type, class and series of the loaned securities. If the value of the collateral is less than the purchase cost of replacement securities, the lending agent is responsible for satisfying the shortfall but only to the extent that the shortfall is not due to any decrease in the value of JHCT.

Although the risk of loss on securities lent is mitigated by receiving collateral from the borrower and through lending agent indemnification, the fund could experience a delay in recovering securities or could experience a lower than expected return if the borrower fails to return the securities on a timely basis. During the existence of the loan, the fund will receive from the borrower amounts equivalent to any dividends, interest or other distributions on the loaned securities, as well as interest on such amounts. The fund receives compensation for lending its securities by retaining a portion of the return on the investment of the collateral and compensation

from fees earned from borrowers of the securities. Securities lending income received by the fund is net of fees retained by the securities lending agent. Net income received from JHCT is a component of securities lending income as recorded on the Statement of operations.

Obligations to repay collateral received by the fund are shown on the Statement of assets and liabilities as Payable upon return of securities loaned and are secured by the loaned securities. As of February 28, 2023, the fund loaned securities valued at \$5,540,036 and received \$5,656,566 of cash collateral.

Overdraft. The fund may have the ability to borrow from banks for temporary or emergency purposes, including meeting redemption requests that otherwise might require the untimely sale of securities. Pursuant to the fund's custodian agreement, the custodian may loan money to the fund to make properly authorized payments. The fund is obligated to repay the custodian for any overdraft, including any related costs or expenses. The custodian may have a lien, security interest or security entitlement in any fund property that is not otherwise segregated or pledged, to the extent of any overdraft, and to the maximum extent permitted by law. Overdrafts at period end are presented under the caption Due to custodian in the Statement of assets and liabilities.

Line of credit. The fund and other affiliated funds have entered into a syndicated line of credit agreement with Citibank, N.A. as the administrative agent that enables them to participate in a \$1 billion unsecured committed line of credit. Excluding commitments designated for a certain fund and subject to the needs of all other affiliated funds, the fund can borrow up to an aggregate commitment amount of \$750 million, subject to asset coverage and other limitations as specified in the agreement. A commitment fee payable at the end of each calendar quarter, based on the average daily unused portion of the line of credit, is charged to each participating fund based on a combination of fixed and asset-based allocations and is reflected in Other expenses on the Statement of operations. For the six months ended February 28, 2023, the fund had no borrowings under the line of credit. Commitment fees for the six months ended February 28, 2023 were \$2,438.

Expenses. Within the John Hancock group of funds complex, expenses that are directly attributable to an individual fund are allocated to such fund. Expenses that are not readily attributable to a specific fund are allocated among all funds in an equitable manner, taking into consideration, among other things, the nature and type of expense and the fund's relative net assets. Expense estimates are accrued in the period to which they relate and adjustments are made when actual amounts are known.

Class allocations. Income, common expenses and realized and unrealized gains (losses) are determined at the fund level and allocated daily to each class of shares based on the net assets of the class. Class-specific expenses, such as distribution and service fees, if any, and transfer agent fees, for all classes, are charged daily at the class level based on the net assets of each class and the specific expense rates applicable to each class.

Federal income taxes. The fund intends to continue to qualify as a regulated investment company by complying with the applicable provisions of the Internal Revenue Code and will not be subject to federal income tax on taxable income that is distributed to shareholders. Therefore, no federal income tax provision is required.

For federal income tax purposes, as of August 31, 2022, the fund has a short-term capital loss carryforward of \$11,944,831 and a long-term capital loss carryforward of \$25,467,091 available to offset future net realized capital gains. These carryforwards do not expire.

As of August 31, 2022, the fund had no uncertain tax positions that would require financial statement recognition, derecognition or disclosure. The fund's federal tax returns are subject to examination by the Internal Revenue Service for a period of three years.

Distribution of income and gains. Distributions to shareholders from net investment income and net realized gains, if any, are recorded on the ex-date. The fund generally declares and pays dividends annually. Capital gain distributions, if any, are typically distributed annually.

Distributions paid by the fund with respect to each class of shares are calculated in the same manner, at the same time and in the same amount, except for the effect of class level expenses that may be applied differently to each class.

Such distributions, on a tax basis, are determined in conformity with income tax regulations, which may differ from US GAAP. Distributions in excess of tax basis earnings and profits, if any, are reported in the fund's financial statements as a return of capital. The final determination of tax characteristics of the fund's distribution will occur at the end of the year and will subsequently be reported to shareholders. Short-term gains from underlying funds are treated as ordinary income for tax purposes.

Capital accounts within the financial statements are adjusted for permanent book-tax differences. These adjustments have no impact on net assets or the results of operations. Temporary book-tax differences, if any, will reverse in a subsequent period. Book-tax differences are primarily attributable to partnerships and wash sale loss deferrals.

Note 3 — Guarantees and indemnifications

Under the Trust's organizational documents, its Officers and Trustees are indemnified against certain liabilities arising out of the performance of their duties to the Trust, including the fund. Additionally, in the normal course of business, the fund enters into contracts with service providers that contain general indemnification clauses. The fund's maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the fund that have not yet occurred. The risk of material loss from such claims is considered remote.

Note 4 — Fees and transactions with affiliates

John Hancock Investment Management LLC (the Advisor) serves as investment advisor for the fund. John Hancock Investment Management Distributors LLC (the Distributor), an affiliate of the Advisor, serves as principal underwriter of the fund. The Advisor and the Distributor are indirect, principally owned subsidiaries of John Hancock Life Insurance Company (U.S.A.), which in turn is a subsidiary of Manulife Financial Corporation.

Management fee. The fund pays the Advisor a management fee for its services to the fund. The Advisor has a subadvisory agreement with Manulife Investment Management (US) LLC, an indirectly owned subsidiary of Manulife Financial Corporation and an affiliate of the Advisor. The fund is not responsible for payment of the subadvisory fees.

The management fee has two components: (1) a fee on assets invested in a fund of the Trust or John Hancock Funds III (JHF III); and (2) a fee on assets invested in investments other than a fund of the Trust or JHF III (Other assets).

Management fees are determined in accordance with the following schedule:

	First \$5.0 billion of average net assets	Excess over \$5.0 billion of average net assets
Assets in a fund of the Trust or JHF III	0.100%	0.075%
Other assets	0.550%	0.525%

The Advisor has contractually agreed to reduce its management fee and/or make payment to the fund in an amount equal to the amount by which "Other expenses" of the fund exceed 0.04% of the average net assets of the fund. "Other expenses" means all of the expenses of the fund, excluding: management fees, taxes, brokerage commissions, interest expense, litigation and indemnification expenses and other extraordinary expenses not incurred in the ordinary course of the fund's business, class specific expenses, underlying fund expenses (acquired fund fees), and short dividend expense. The current expense limitation agreement expires on December 31, 2023, 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.

The Advisor has contractually agreed to reduce its management fee by 0.05% of the fund’s average daily net assets up to \$5 billion, and by 0.025% of the fund’s average daily net assets over \$5 billion. The current expense limitation agreement expires on December 31, 2023, 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.

The Advisor has contractually agreed to waive its management fee for the fund so that the aggregate advisory fee retained by the Advisor with respect to both the fund and its underlying investments (after payment of subadvisory fees) does not exceed 0.55% of the fund’s first \$5 billion of average daily net assets and 0.525% of the fund’s average daily net assets in excess of \$5 billion. This agreement expires on December 31, 2023, 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.

For the six months ended February 28, 2023, the expense reductions described above amounted to the following:

Class	Expense reduction	Class	Expense reduction
Class A	\$66,733	Class R4	\$109
Class C	8,326	Class R6	24,703
Class I	531,517	Total	\$632,282
Class R2	894		

Expenses waived or reimbursed in the current fiscal period are not subject to recapture in future fiscal periods.

The investment management fees, including the impact of the waivers and reimbursements as described above, incurred for the six months ended February 28, 2023, were equivalent to a net annual effective rate of 0.27% of the fund’s average daily net assets.

Accounting and legal services. Pursuant to a service agreement, the fund reimburses the Advisor for all expenses associated with providing the administrative, financial, legal, compliance, accounting and recordkeeping services to the fund, including the preparation of all tax returns, periodic reports to shareholders and regulatory reports, among other services. These expenses are allocated to each share class based on its relative net assets at the time the expense was incurred. These accounting and legal services fees incurred, for the six months ended February 28, 2023, amounted to an annual rate of 0.02% of the fund’s average daily net assets.

Distribution and service plans. The fund has a distribution agreement with the Distributor. The fund has adopted distribution and service plans for certain classes as detailed below pursuant to Rule 12b-1 under the 1940 Act, to pay the Distributor for services provided as the distributor of shares of the fund. In addition, under a service plan for certain classes as detailed below, the fund pays for certain other services. The fund may pay up to the following contractual rates of distribution and service fees under these arrangements, expressed as an annual percentage of average daily net assets for each class of the fund’s shares:

Class	Rule 12b-1 Fee	Service fee
Class A	0.30%	—
Class C	1.00%	—
Class R2	0.25%	0.25%
Class R4	0.25%	0.10%

The fund’s Distributor has contractually agreed to waive 0.10% of Rule12b-1 fees for Class R4 shares. The current waiver agreement expires on December 31, 2023, unless renewed by mutual agreement of the fund and the Distributor based upon a determination that this is appropriate under the circumstances at the time. This contractual waiver amounted to \$60 for Class R4 shares for the six months ended February 28, 2023.

Sales charges. Class A shares are assessed up-front sales charges, which resulted in payments to the Distributor amounting to \$49,150 for the six months ended February 28, 2023. Of this amount, \$7,930 was retained and used for printing prospectuses, advertising, sales literature and other purposes and \$41,220 was paid as sales commissions to broker-dealers.

Class A and Class C shares may be subject to contingent deferred sales charges (CDSCs). Certain Class A shares purchased, including those that are acquired through purchases of \$1 million or more, and redeemed within one year of purchase are subject to a 1.00% sales charge. Class C shares that are redeemed within one year of purchase are subject to a 1.00% CDSC. CDSCs are applied to the lesser of the current market value at the time of redemption or the original purchase cost of the shares being redeemed. Proceeds from CDSCs are used to compensate the Distributor for providing distribution-related services in connection with the sale of these shares. During the six months ended February 28, 2023, CDSCs received by the Distributor amounted to \$244 for Class C shares. There were no CDSCs received by the Distributor for Class A shares.

Transfer agent fees. The John Hancock group of funds has a complex-wide transfer agent agreement with John Hancock Signature Services, Inc. (Signature Services), an affiliate of the Advisor. The transfer agent fees paid to Signature Services are determined based on the cost to Signature Services (Signature Services Cost) of providing recordkeeping services. It also includes out-of-pocket expenses, including payments made to third-parties for recordkeeping services provided to their clients who invest in one or more John Hancock funds. In addition, Signature Services Cost may be reduced by certain fees that Signature Services receives in connection with retirement and small accounts. Signature Services Cost is calculated monthly and allocated, as applicable, to five categories of share classes: Retail Share and Institutional Share Classes of Non-Municipal Bond Funds, Class R6 Shares, Retirement Share Classes and Municipal Bond Share Classes. Within each of these categories, the applicable costs are allocated to the affected John Hancock affiliated funds and/or classes, based on the relative average daily net assets.

Class level expenses. Class level expenses for the six months ended February 28, 2023 were as follows:

Class	Distribution and service fees	Transfer agent fees
Class A	\$109,751	\$40,954
Class C	45,803	5,115
Class I	—	325,810
Class R2	2,473	44
Class R4	211	5
Class R6	—	1,215
Total	\$158,238	\$373,143

Trustee expenses. The fund compensates each Trustee who is not an employee of the Advisor or its affiliates. The costs of paying Trustee compensation and expenses are allocated to the fund based on its net assets relative to other funds within the John Hancock group of funds complex.

Note 5 — Fund share transactions

Transactions in fund shares for the six months ended February 28, 2023 and for the year ended August 31, 2022 were as follows:

	Six Months Ended 2-28-23		Year Ended 8-31-22	
	Shares	Amount	Shares	Amount
Class A shares				
Sold	375,165	\$5,532,818	1,244,419	\$18,972,407
Distributions reinvested	146,858	2,122,095	72,236	1,116,043
Repurchased	(642,992)	(9,483,407)	(763,300)	(11,698,023)
Net increase (decrease)	(120,969)	\$(1,828,494)	553,355	\$8,390,427
Class C shares				
Sold	39,730	\$586,986	295,681	\$4,503,368
Distributions reinvested	13,666	198,423	9,254	143,625
Repurchased	(184,710)	(2,728,658)	(686,749)	(10,496,959)
Net decrease	(131,314)	\$(1,943,249)	(381,814)	\$(5,849,966)
Class I shares				
Sold	14,873,334	\$220,486,510	18,592,993	\$283,634,391
Distributions reinvested	1,377,863	19,910,119	487,798	7,536,474
Repurchased	(10,082,709)	(148,849,284)	(7,602,455)	(116,191,625)
Net increase	6,168,488	\$91,547,345	11,478,336	\$174,979,240
Class R2 shares				
Sold	4,078	\$60,135	13,996	\$213,182
Distributions reinvested	1,667	24,067	882	13,616
Repurchased	(6,484)	(95,568)	(8,996)	(137,741)
Net increase (decrease)	(739)	\$(11,366)	5,882	\$89,057
Class R4 shares				
Sold	497	\$7,363	5,136	\$78,964
Distributions reinvested	257	3,724	88	1,361
Repurchased	(1)	(19)	(453)	(6,966)
Net increase	753	\$11,068	4,771	\$73,359
Class R6 shares				
Sold	369,101	\$5,460,906	1,007,464	\$15,367,183
Distributions reinvested	63,992	924,684	28,746	444,124
Repurchased	(407,628)	(6,026,429)	(567,668)	(8,655,241)
Net increase	25,465	\$359,161	468,542	\$7,156,066
Total net increase	5,941,684	\$88,134,465	12,129,072	\$184,838,183

Affiliates of the fund owned 1% of shares of Class R6 on February 28, 2023.

Note 6 — Purchase and sale of securities

Purchases and sales of securities, other than short-term investments, amounted to \$227,223,388 and \$156,835,070, respectively, for the six months ended February 28, 2023.

Note 7 — Investment in affiliated underlying funds

The fund invests primarily in affiliated underlying funds that are managed by the Advisor and its affiliates. The fund does not invest in the affiliated underlying funds for the purpose of exercising management or control; however, the fund's investment may represent a significant portion of each affiliated underlying funds' net assets. At February 28, 2023, the fund held 5% or more of the net assets of the affiliated underlying funds shown below:

Fund	Underlying fund's net assets
John Hancock Funds II Multi-Asset Absolute Return Fund	19.6%
John Hancock Funds Seaport Long/Short Fund	9.7%
John Hancock Funds Diversified Macro Fund	5.5%

Information regarding the fund's fiscal year to date purchases and sales of the affiliated underlying funds as well as income and capital gains earned by the fund, if any, is as follows:

Affiliate	Ending share amount	Beginning value	Cost of purchases	Proceeds from shares sold	Realized gain (loss)	Change in unrealized appreciation (depreciation)	Dividends and distributions		Ending value
							Income distributions received	Capital gain distributions received	
Absolute Return Currency	—	\$48,348,931	—	\$(49,137,942)	\$292,463	\$496,548	—	—	—
Diversified Macro	6,060,351	50,223,383	\$24,716,215	(11,836,179)	(267,834)	(5,322,858)	\$5,945,325	—	\$57,512,727
Infrastructure	2,648,306	30,221,348	9,485,395	(5,670,373)	(287,764)	(300,496)	336,082	—	33,448,110
John Hancock Collateral Trust*	2,997,361	15,756,778	121,130,257	(106,934,933)	(6,028)	14,052	435,231	—	29,960,126
Multi-Asset Absolute Return	9,642,423	83,590,963	18,301,142	(7,092,550)	(409,829)	(1,822,463)	3,272,596	—	92,567,263
Seaport Long/Short	7,135,071	71,052,319	15,298,846	(6,689,934)	(892,281)	358,985	2,596,800	—	79,127,935
Strategic Income Opportunities	5,566,172	48,139,779	11,150,686	(4,796,636)	(734,173)	(46,096)	1,160,203	—	53,713,560
					\$(2,305,446)	\$6,622,328)	\$13,746,237	—	\$346,329,721

* Refer to the Securities lending note within Note 2 for details regarding this investment.

Note 8 — Transactions in securities of affiliated issuers

Affiliated issuers, as defined by the 1940 Act, are those in which the fund's holdings of an issuer represent 5% or more of the outstanding voting securities of the issuer. A summary of the fund's transactions in the securities of these issuers during the six months ended February 28, 2023, is set forth below:

Affiliate	Ending share amount	Beginning value	Cost of purchases	Proceeds from shares sold	Realized gain (loss)	Change in unrealized appreciation (depreciation)	Dividends and distributions		Ending value
							Income distributions received	Capital gain distributions received	
Credit Suisse Managed Futures Strategy Fund	4,546,777	\$34,982,689	\$28,368,425	\$(10,469,670)	\$1,278,455	\$(9,465,081)	\$1,742,687	\$5,527,957	\$44,694,818
Invesco DB Gold Fund	—	16,837,070	9,953,049	(28,479,403)	1,864,775	(175,491)	172,829	—	—
Invesco DB Precious Metals Fund	459,801	—	21,569,173	—	—	(50,486)	—	—	21,518,687
IQ Merger Arbitrage ETF*	895,773	25,224,517	5,624,909	(2,417,362)	(134,560)	(286,682)	—	—	28,010,822
The Arbitrage Fund, Class I*	5,039,305	52,083,600	20,309,716	(6,256,374)	(334,460)	(1,752,911)	679,438	1,789,815	64,049,571
					\$2,674,210	\$(11,730,651)	\$2,594,954	\$7,317,772	\$158,273,898

* The security was not an affiliate at the beginning of the period.

SPECIAL SHAREHOLDER MEETING

(Unaudited)

The fund held a Special Joint Meeting of Shareholders on Friday, September 9, 2022. The following proposals were considered by the shareholders:

Proposal 1: To elect eight Trustees as members of the Board of Trustees of the Trust.

THE PROPOSAL PASSED ON September 9, 2022.

	Total votes for the nominee	Total votes withheld from the nominee
Independent Trustees		
James R. Boyle	4,554,825,588.937	109,369,198.953
Noni L. Ellison	4,545,310,789.674	118,883,998.216
Dean C. Garfield	4,542,518,756.422	121,676,031.468
Patricia Lizarraga	4,547,597,042.403	116,597,745.487
Frances G. Rathke	4,553,474,902.143	110,719,885.747
Non-Independent Trustees		
Andrew G. Arnott	4,548,263,383.010	115,931,404.880
Marianne Harrison	4,552,282,391.834	111,912,396.056
Paul Lorentz	4,546,227,532.263	117,967,255.627

Proposal 2: To approve an amendment to the Declaration of Trust revising merger approval requirements.

THE PROPOSAL PASSED ON September 9, 2022.

	Shares voted	% Of shares voted	% Of outstanding shares
For	4,061,202,897.967	87.072%	64.635%
Against	75,620,339.593	1.622%	1.203%
Abstain/Withheld	92,916,059.460	1.992%	1.478%
Broker Non-Vote	434,455,490.870	9.314%	6.914%

More information

Trustees

Hassell H. McClellan, *Chairperson*
Steven R. Pruchansky, *Vice Chairperson*
Andrew G. Arnott[†]
James R. Boyle
William H. Cunningham^{*}
Grace K. Fey
Noni L. Ellison[^]
Dean C. Garfield[^]
Marianne Harrison[†]
Deborah C. Jackson
Patricia Lizarraga^{†,^}
Paul Lorentz[†]
Frances G. Rathke^{*}
Gregory A. Russo

Officers

Andrew G. Arnott
President
Charles A. Rizzo
Chief Financial Officer
Salvatore Schiavone
Treasurer
Christopher (Kit) Sechler
Secretary and Chief Legal Officer
Trevor Swanberg
Chief Compliance Officer

[†] Non-Independent Trustee

^{*} Member of the Audit Committee

[^] Elected to serve as Independent Trustee effective as of September 9, 2022.

[‡] Elected to serve as Non-Independent Trustee effective as of September 9, 2022.

The fund's proxy voting policies and procedures, as well as the fund proxy voting record for the most recent twelve-month period ended June 30, are available free of charge on the Securities and Exchange Commission (SEC) website at [sec.gov](https://www.sec.gov) or on our website.

All of the fund's holdings as of the end of the third month of every fiscal quarter are filed with the SEC on Form N-PORT within 60 days of the end of the fiscal quarter. The fund's Form N-PORT filings are available on our website and the SEC's website, [sec.gov](https://www.sec.gov).

We make this information on your fund, as well as **monthly portfolio holdings**, and other fund details available on our website at jhinvestments.com or by calling 800-225-5291.

Investment advisor

John Hancock Investment Management LLC

Subadvisor

Manulife Investment Management (US) LLC

Portfolio Managers

Nathan W. Thooft, CFA
Christopher Walsh, CFA

Principal distributor

John Hancock Investment Management Distributors LLC

Custodian

State Street Bank and Trust Company

Transfer agent

John Hancock Signature Services, Inc.

Legal counsel

K&L Gates LLP

You can also contact us:

800-225-5291

jhinvestments.com

Regular mail:

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P.O. Box 219909
Kansas City, MO 64121-9909

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You may revoke your consent at any time by simply visiting jhinvestments.com/login and following the instructions above. You may also revoke consent by calling 800-225-5291 or by writing to us at the following address: John Hancock Signature Services, Inc., P.O. Box 219909, Kansas City, MO 64121-9909. We reserve the right to deliver documents to you on paper at any time should the need arise.

Brokerage account shareholders

If you receive statements directly from your bank or broker and would like to participate in eDelivery, go to icsdelivery/live or contact your financial representative.

Get your questions answered by using our shareholder resources

ONLINE

- Visit **jhinvestments.com** to access a range of resources for individual investors, from account details and fund information to forms and our latest insight on the markets and economy.
- Use our **Fund Compare** tool to compare thousands of funds and ETFs across dozens of risk and performance metrics—all powered by Morningstar.
- Visit our online **Tax Center**, where you'll find helpful taxpayer resources all year long, including tax forms, planning guides, and other fund-specific information.
- Follow us on **Facebook, Twitter, and LinkedIn** to get the latest updates on the markets and what's trending now.

BY PHONE

Call our customer service representatives at 800-225-5291, Monday to Thursday, 8:00 A.M. to 7:00 P.M., and Friday, 8:00 A.M. to 6:00 P.M., Eastern time. We're here to help!

John Hancock family of funds

U.S. EQUITY FUNDS

Blue Chip Growth
Classic Value
Disciplined Value
Disciplined Value Mid Cap
Equity Income
Financial Industries
Fundamental All Cap Core
Fundamental Large Cap Core
Mid Cap Growth
New Opportunities
Regional Bank
Small Cap Core
Small Cap Growth
Small Cap Value
U.S. Global Leaders Growth
U.S. Growth

INTERNATIONAL EQUITY FUNDS

Disciplined Value International
Emerging Markets
Emerging Markets Equity
Fundamental Global Franchise
Global Environmental Opportunities
Global Equity
Global Shareholder Yield
Global Thematic Opportunities
International Dynamic Growth
International Growth
International Small Company

FIXED-INCOME FUNDS

Bond
California Municipal Bond
Emerging Markets Debt
Floating Rate Income
Government Income
High Yield
High Yield Municipal Bond
Income
Investment Grade Bond
Money Market
Municipal Opportunities
Opportunistic Fixed Income
Short Duration Bond
Short Duration Municipal Opportunities
Strategic Income Opportunities

ALTERNATIVE FUNDS

Alternative Asset Allocation
Diversified Macro
Infrastructure
Multi-Asset Absolute Return
Real Estate Securities
Seaport Long/Short

A fund's investment objectives, risks, charges, and expenses should be considered carefully before investing. The prospectus contains this and other important information about the fund. To obtain a prospectus, contact your financial professional, call John Hancock Investment Management at 800-225-5291, or visit our website at jhinvestments.com. Please read the prospectus carefully before investing or sending money.

EXCHANGE-TRADED FUNDS

John Hancock Corporate Bond ETF
John Hancock International High Dividend ETF
John Hancock Mortgage-Backed Securities ETF
John Hancock Multifactor Developed International ETF
John Hancock Multifactor Emerging Markets ETF
John Hancock Multifactor Large Cap ETF
John Hancock Multifactor Mid Cap ETF
John Hancock Multifactor Small Cap ETF
John Hancock Preferred Income ETF
John Hancock U.S. High Dividend ETF

ASSET ALLOCATION/TARGET DATE FUNDS

Balanced
Multi-Asset High Income
Lifestyle Blend Portfolios
Lifetime Blend Portfolios
Multimanager Lifestyle Portfolios
Multimanager Lifetime Portfolios
Preservation Blend Portfolios

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE FUNDS

ESG Core Bond
ESG International Equity
ESG Large Cap Core

CLOSED-END FUNDS

Asset-Based Lending
Financial Opportunities
Hedged Equity & Income
Income Securities Trust
Investors Trust
Preferred Income
Preferred Income II
Preferred Income III
Premium Dividend
Tax-Advantaged Dividend Income
Tax-Advantaged Global Shareholder Yield

John Hancock ETF shares are bought and sold at market price (not NAV), and are not individually redeemed from the fund. Brokerage commissions will reduce returns.

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We serve investors globally through a unique multimanager approach: We search the world to find proven portfolio teams with specialized expertise for every strategy we offer, then we apply robust investment oversight to ensure they continue to meet our uncompromising standards and serve the best interests of our shareholders.

Results for investors

Our unique approach to asset management enables us to provide a diverse set of investments backed by some of the world's best managers, along with strong risk-adjusted returns across asset classes.

"A trusted brand" is based on a survey of 6,651 respondents conducted by Medallia between 3/18/20 and 5/13/20.



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