

John Hancock
Alternative Asset Allocation Fund

Quarterly portfolio holdings 11/30/2022

John Hancock[®] Investment Management

Fund's investments

As of 11-30-22 (unaudited)

| | Shares | Value |
|---|------------------|----------------------|
| Affiliated investment companies (A) 57.8% | | \$424,492,357 |
| (Cost \$412,654,659) | | |
| Absolute return strategies 31.1% | | 228,542,302 |
| Credit Suisse Managed Futures Strategy Fund (B) | 3,837,765 | 45,746,154 |
| Diversified Macro, Class NAV, JHIT (Graham) | 5,603,357 | 58,555,077 |
| IQ Merger Arbitrage ETF (B)(C)(D) | 912,194 | 28,734,111 |
| Multi-Asset Absolute Return, Class NAV, JHF II (NIMNAI) (C) | 9,446,781 | 95,506,960 |
| Alternative investment approaches 18.5% | | 136,079,054 |
| Seaport Long/Short, Class NAV, JHIT (Wellington) | 7,184,396 | 81,183,669 |
| Strategic Income Opportunities, Class NAV, JHF II (MIM US) (E) | 5,653,490 | 54,895,385 |
| Alternative markets 8.2% | | 59,871,001 |
| Infrastructure, Class NAV, JHIT (Wellington) | 2,644,076 | 34,875,362 |
| Invesco DB Gold Fund (B)(C) | 502,223 | 24,995,639 |
| Unaffiliated investment companies 38.7% | | \$283,950,066 |
| (Cost \$278,601,079) | | |
| Absolute return strategies 23.5% | | 172,371,508 |
| Calamos Market Neutral Income Fund | 3,559,499 | 49,405,846 |
| The Arbitrage Fund, Class I | 5,020,919 | 65,874,462 |
| Victory Market Neutral Income Fund | 6,336,426 | 57,091,200 |
| Alternative investment approaches 12.8% | | 93,696,654 |
| JPMorgan Hedged Equity Fund | 3,808,807 | 93,696,654 |
| Alternative markets 2.4% | | 17,881,904 |
| Invesco Optimum Yield Diversified Commodity Strategy No K-1 ETF | 542,873 | 9,348,273 |
| Vanguard Real Estate ETF | 96,885 | 8,533,631 |
| | Yield (%) | Shares |
| Short-term investments 4.0% | | \$29,699,163 |
| (Cost \$29,692,279) | | |
| Short-term funds 4.0% | | 29,699,163 |
| John Hancock Collateral Trust (F) | 3.8739(G) | 2,971,789 |
| Total investments (Cost \$720,948,017) 100.5% | | \$738,141,586 |
| Other assets and liabilities, net (0.5%) | | (3,660,852) |
| Total net assets 100.0% | | \$734,480,734 |

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 fund's investments.

(C) Non-income producing.

(D) All or a portion of this security is on loan as of 11-30-22. The value of securities on loan amounted to \$4,975,429.

(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. Cash collateral received for securities lending amounted to \$5,056,404.

(G) The rate shown is the annualized seven-day yield as of 11-30-22.

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) |

Notes to Fund's investments (unaudited)

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 November 30, 2022, all investments are categorized as Level 1 under the hierarchy described above.

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.

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 | 5,603,357 | 50,223,383 | \$13,644,396 | (5,027,554) | 248,795 | (533,943) | — | — | \$58,555,077 |
| Infrastructure | 2,644,076 | 30,221,348 | 5,674,974 | (1,855,432) | (242,553) | 1,077,025 | \$142,345 | — | 34,875,362 |
| John Hancock Collateral Trust | 2,971,789 | 15,756,778 | 66,301,002 | (52,361,851) | (5,627) | 8,861 | 159,529 | — | 29,699,163 |
| Multi-Asset Absolute Return | 9,446,781 | 83,590,963 | 10,177,469 | (838,561) | (57,612) | 2,634,701 | — | — | 95,506,960 |
| Seaport Long/Short | 7,184,396 | 71,052,319 | 9,913,679 | (698,659) | (135,135) | 1,051,465 | — | — | 81,183,669 |
| Strategic Income Opportunities | 5,653,490 | 48,139,779 | 7,228,592 | — | — | (472,986) | 494,938 | — | 54,895,385 |
| | | | | | \$100,331 | \$4,261,671 | \$796,812 | — | \$354,715,616 |

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 period ended November 30, 2022, 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 | 3,837,765 | \$34,982,689 | \$18,602,226 | \$(7,795,906) | \$ 1,550,125 | \$(1,592,980) | — | — | \$ 45,746,154 |
| Invesco DB Gold Fund | 502,223 | 16,837,070 | 7,852,471 | (729,655) | (96,661) | 1,132,414 | — | — | 24,995,639 |
| IQ Merger Arbitrage ETF | 912,194 | 25,224,517 | 4,135,339 | (411,478) | (28,565) | (185,702) | — | — | 28,734,111 |
| | | | | | \$1,424,899 | \$ (646,268) | — | — | \$99,475,904 |

For additional information on the fund's significant accounting policies and risks, please refer to the fund's most recent semiannual or annual shareholder report and prospectus.