

John Hancock USA

All financial obligations under the group annuity contract are the sole obligation of John Hancock Life Insurance Company (U.S.A.).

- ▶ John Hancock is a unit of Manulife Financial Corporation, a leading international financial services provider that helps people make their decisions easier and lives better by providing financial advice, insurance, and wealth and asset management solutions. Manulife Financial Corporation trades as MFC on the TSX, NYSE, and PSE, and under 945 on the SEHK. Manulife can be found at manulife.com.
- ▶ One of the largest life insurers in the United States, John Hancock supports more than ten million Americans with a broad range of financial products, including life insurance and annuities. John Hancock also supports US investors by bringing leading investment capabilities and retirement planning and administration expertise to individuals and institutions. Additional information about John Hancock may be found at johnhancock.com.

Western Asset Management Co. (WAMCO)

- ▶ Western Asset is one of the world's leading investment management firms. Its sole business is managing fixed-income portfolios, an activity the Firm has pursued since 1971. From offices in Pasadena, New York, Sao Paulo, London, Dubai, Singapore, Hong Kong, Tokyo and Melbourne, Western Asset performs investment services for a wide variety of global clients. The Firm's clients include charitable, corporate, health care, insurance, mutual fund, public and union organizations, and client portfolios range across an equally wide variety of mandates, from money markets to emerging markets.

Allocating assets to only one or a small number of the investment options (other than the Target Date 'Lifecycle' or Target Risk 'Lifestyle' options) should not be considered a balanced investment program. In particular, allocating assets to a small number of options concentrated in particular business or market sectors will subject your account to increased risk and volatility. Examples of business or market sectors where this risk may be particularly high include: a) technology-related businesses, including Internet-related businesses, b) small-cap securities and c) foreign securities. John Hancock does not provide advice regarding appropriate investment allocations.

Risks Applicable to All Funds

Merger and Replacement Transition Risk for Sub-Account. It is possible that the Fund will be replaced with or merged into another investment option offered under your plan's group annuity contract. In the case of fund mergers and replacements, the affected funds that are being merged or replaced may implement the redemption of your interest by payment in cash or by distributing assets in kind. In either case, the redemption of your interest by the affected fund, as well as the investment of the redemption proceeds by the "new" fund, may result in transaction costs to the funds because the affected funds may find it necessary to sell securities and the "new" funds will find it necessary to invest the redemption proceeds. Also, the redemption and reinvestment processes, including any transition period that may be involved in completing such mergers and replacements, could be subject to market gains or losses, including those from currency exchange rates. The transaction costs and potential market gains or losses could have an impact on the value of your investment in the affected fund and in the "new" fund, and such market gains or losses could also have an impact on the value of any existing investment that you or other investors may have in the "new" fund. Although there can be no assurances that all risks can be eliminated, the portfolio manager(s) of the affected funds will use their best efforts to manage and minimize such risks and costs.

Risk of Increase in Expenses for Sub-Account. Your actual costs of investing in the fund may be higher than the expenses shown in "Annual fund operating expenses" for a variety of reasons. For example, expense ratios may be higher than those shown if a fee limitation is changed or terminated or if average net assets decrease. Net assets are more likely to decrease and fund expense ratios are more likely to increase when markets are volatile.

Risk Disclosures: Additional Risks

Cash Drag The portfolio may fail to meet its investment objective because of positions in cash and equivalents.

Credit and Counterparty The issuer or guarantor of a fixed-income security, counterparty to an OTC derivatives contract, or other borrower may not be able to make timely principal, interest, or settlement payments on an obligation. In this event, the issuer of a fixed-income security may have its credit rating downgraded or defaulted, which may reduce the potential for income and value of the portfolio.

Derivatives Investments in derivatives may be subject to the risk that the advisor does not correctly predict the movement of the underlying security, interest rate, market index, or other financial asset, or that the value of the derivative does not correlate perfectly with either the overall market or the underlying asset from which the derivative's value is derived. Because derivatives usually involve a small investment relative to the magnitude of liquidity and other risks assumed, the resulting gain or loss from the transaction will be disproportionately magnified. These investments may result in a loss if the counterparty to the transaction does not perform as promised.

Emerging Markets Investments in emerging- and frontier-markets securities may be subject to greater market, credit, currency, liquidity, legal, political, and other risks compared with assets invested in developed foreign countries.

Extension The issuer of a security may repay principal more slowly than expected because of rising interest rates. In this event, short- and medium-duration securities are effectively converted into longer-duration securities, increasing their sensitivity to interest-rate changes and causing their prices to decline.

Foreign Securities Investments in foreign securities may be subject to increased volatility as the value of these securities can change more rapidly and extremely than can the value of U.S. securities. Foreign securities are subject to increased issuer risk because foreign issuers may not experience the same degree of regulation as U.S. issuers do and are held to different reporting, accounting, and auditing standards. In addition, foreign securities are subject to increased costs because there are generally higher commission rates on transactions, transfer taxes, higher custodial costs, and the potential for foreign tax charges on dividend and interest payments. Many foreign markets are relatively small, and securities issued in less-developed countries face the risks of nationalization, expropriation or confiscatory taxation, and adverse changes in investment or exchange control regulations, including suspension of the ability to transfer currency from a country. Economic, political, social, or diplomatic developments can also negatively impact performance.

Hedging Strategies The advisor's use of hedging strategies to reduce risk may limit the opportunity for gains compared with unhedged investments, and there is no guarantee that hedges will actually reduce risk.

High Portfolio Turnover Active trading may create high portfolio turnover, or a turnover of 100% or more, resulting in increased transaction costs. These higher costs may have an adverse impact on performance and generate short-term capital gains, creating potential tax liability even if an investor does not sell any shares during the year.

Inflation/Deflation A change of asset value may occur because of inflation or deflation, causing the portfolio to underperform. Inflation may cause the present value of future payments to decrease, causing a decline in the future value of assets or income. Deflation causes prices to decline throughout the economy over time, impacting issuers' creditworthiness and increasing their risk for default, which may reduce the value of the portfolio.

Interest Rate Most securities are subject to the risk that changes in interest rates will reduce their market value.

Leverage Leverage transactions may increase volatility and result in a significant loss of value if a transaction fails. Because leverage usually involves investment exposure that exceeds the initial investment, the resulting gain or loss from a relatively small change in an underlying indicator will be disproportionately magnified.

Loss of Money Because the investment's market value may fluctuate up and down, an investor may lose money, including part of the principal, when he or she buys or sells the investment.

Management Performance is subject to the risk that the advisor's asset allocation and investment strategies do not perform as expected, which may cause the portfolio to underperform its benchmark, other investments with similar objectives, or the market in general. The investment is subject to the risk of loss of income and capital invested, and the advisor does not guarantee its value, performance, or any particular rate of return.

Market/Market Volatility The market value of the portfolio's securities may fall rapidly or unpredictably because of changing economic, political, or market conditions, which may reduce the value of the portfolio.

Mortgage-Backed and Asset-Backed Securities Investments in mortgage-backed and asset-backed securities may be subject to increased price volatility because of changes in interest rates, issuer information availability, credit quality of the underlying assets, market perception of the issuer, availability of credit enhancement, and prepayment of principal. The value of ABS and MBS may be adversely affected if the underlying borrower fails to pay the loan included in the security.

Not FDIC Insured The investment is not a deposit or obligation of, or guaranteed or endorsed by, any bank and is not insured by the Federal Deposit Insurance Corporation, the Federal Reserve Board, or any other U.S. governmental agency.

Other The investment's performance may be impacted by its concentration in a certain type of security, adherence to a particular investing strategy, or a unique aspect of its structure and costs.

Portfolio Diversification Investments that concentrate their assets in a relatively small number of issuers, or in the securities of issuers in a particular market, industry, sector, country, or asset class, may be subject to greater risk of loss than is a more widely diversified investment.

Prepayment (Call) The issuer of a debt security may be able to repay principal prior to the security's maturity because of an improvement in its credit quality or falling interest rates. In this event, this principal may have to be reinvested in securities with lower interest rates than the original securities, reducing the potential for income.

Pricing Some investments may not have a market observed price; therefore, values for these assets may be determined through a subjective valuation methodology. Fair values determined by a subjective methodology may differ from the actual value realized upon sale. Valuation methodologies may also be used to calculate a daily net asset value.

Restricted/Illiquid Securities Restricted and illiquid securities may fall in price because of an inability to sell the securities when desired. Investing in restricted securities may subject the portfolio to higher costs and liquidity risk.

Shareholder Activity Frequent purchases or redemptions by one or multiple investors may harm other shareholders by interfering with the efficient management of the portfolio, increasing brokerage and administrative costs and potentially diluting the value of shares. Additionally, shareholder purchase and redemption activity may have an impact on the per-share net income and realized capital gains distribution amounts, if any, potentially increasing or reducing the tax burden on the shareholders who receive those distributions.


Temporary Defensive Measures Temporary defensive positions may be used during adverse economic, market, or other conditions. In this event, up to 100% of assets may be allocated to securities, including cash and cash equivalents that are normally not consistent with the investment objective.

U.S. Government Obligations Investments in U.S. government obligations are subject to varying levels of government support. In the event of default, some U.S. government securities, including U.S. Treasury obligations and Ginnie Mae securities, are issued and guaranteed as to principal and interest by the full faith and credit of the U.S. government. Other securities are obligations of U.S. government-sponsored entities but are neither issued nor guaranteed by the U.S. government.

Sub-Account Details

Risk/Return Category^{1A}

Income

Low  High

Asset Class/Investment Style^{5A}

Domestic Fixed Income

			High
			Medium
			Low
Short	Int	Long	

Performance**

Returns (as of 9-30-24)

	Fund	Index	Peer Group
1 year	12.79%	11.57%	11.56%
3 year	-2.71%	-1.39%	-1.39%
5 year	-0.06%	0.33%	0.43%
10 year	2.13%	1.84%	1.75%

Expense Ratio (as of 9-30-24)****

Expense Ratio****	0.30%
Cost Per \$1,000	\$3.00

Sub-Account Inception Date: November 6, 2017
Underlying fund Inception Date: September 4, 1990

¥See important notes.

**The performance data presented represents past performance. Past performance is no guarantee of future results and current performance may be lower or higher than the performance quoted. An investment in a sub-account will fluctuate in value to reflect the value of the sub-account's underlying portfolio and, when redeemed, may be worth more or less than original cost. Performance does not reflect any applicable contract-level or certain participant-level charges, or any redemption fees imposed by an underlying collective trust or other investment vehicle in which the sub-account invests. These charges, if included, would otherwise reduce the total return for a participant's account. Performance information current to the most recent month-end is available on our website myplan.johnhancock.com.

Performance data for a sub-account for any period prior to the date introduced is shown in bold and is hypothetical based on the performance of the underlying fund.

The Index is Bloomberg Barclays US Aggregate Bond.¹⁵

The peer group is Intermediate Core Bond.⁸⁷⁸

Principal risks include: emerging markets; risk of increase expenses; merger and replacement transition; interest rate; prepayment (call); credit and counterparty; temporary defensive measures; portfolio diversification; inflation/deflation; pricing; extension; mortgage-backed and asset-backed securities; foreign securities; U.S. government obligations; loss of money; hedging strategies; management; leverage; cash drag; market/market volatility; restricted/illiquid securities; other; high portfolio turnover; derivatives; not FDIC insured and shareholder activity. For more details, see Risk Disclosures section of this booklet.



WELLS CAPITAL MANAGEMENT



Western Asset Core Bond Fund

Investing solely in Western Asset Core Bond Fund (Class I)

Managed by Western Asset Management Co. (WAMCO)

Ticker Symbol*: WATFX

Fund Highlights

Investment Objective and Policies ▶ Seeks to maximize total return, consistent with prudent investment and liquidity needs, by investing to obtain the average duration specified.

Why Consider this Fund

▶ You want a portfolio of securities with the potential to produce both a steady stream of investment income and capital appreciation while offering some protection against stock market volatility

Holdings, Weightings and Allocations of the underlying fund

Top Holdings (as of 08-31-24)⊠

Western Asset Prem Instl Govtt Rsrv Pref	19.8%
Federal National Mortgage Association	2.6%
Federal National Mortgage Association	1.9%
United States Treasury Bonds 4.75%	1.4%
United States Treasury Bonds 4.75%	1.3%
United States Treasury Bonds 4%	1.2%
Federal National Mortgage Association	1.2%
United States Treasury Bonds 1.875%	1.1%
United States Treasury Bonds 3.375%	1.0%
United States Treasury Bonds 1.625%	0.9%
Totals	32.4% of assets

Asset Allocation (as of 08-31-24)⊠

US Bond	79.8%
Non US Bond	13.3%
Cash	6.9%

Key Statistics (as of 9-30-24 unless noted)⊠

- ▶ **Number of Holdings:** 2085
- ▶ **Beta:** 1.23 (Bloomberg US Agg Bond TR USD)
- ▶ **R²:** 98.69 (Bloomberg US Agg Bond TR USD)
- ▶ **Effective Duration:** 6.43
- ▶ **YTM (Yield to Maturity):** 4.49
- ▶ **Average Credit Quality:** AAA
- ▶ **Turnover (annualized):** 68.00
- ▶ **Net Assets:** \$7.3 billion
- ▶ **Underlying fund expense ratios:**
 - Gross* 0.53%
 - Net* 0.45%
- ▶ **Effective Maturity:** 11.21

Top Country Holdings (as of 08-31-24)⊠

United States	85.8%
Cayman Islands	3.3%
Switzerland	1.4%
United Kingdom	1.3%
Mexico	1.2%
Colombia	0.7%
France	0.7%
Macao	0.6%
Canada	0.5%
Ireland	0.5%

Top Sector Weightings (as of 08-31-24)⊠

Securitized	52.5%
Corporate	28.0%
Government	12.5%
Cash & Equivalents	6.8%
Derivative	0.3%

Morningstar Information*** (as of 9-30-24)⊠

- ▶ **Overall Morningstar Rating™:** ★★
- ▶ **Overall # of Funds in Category:** 414
- ▶ **Morningstar Category^{6A}:** Intermediate Core Bond
- ▶ **No. of funds:** 3yr 414; 5yr 373; 10yr 268

The Overall Morningstar Rating™ for the underlying fund is derived from a weighted average of the performance figures associated with its three-, five- and 10-year (if applicable) Morningstar Rating™ metrics. The rating formula most heavily weights the three year rating, using the following calculation: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. Rating does not include the effects of sales charges, loads, and redemption fees. Past performance does not guarantee future results. Ratings are as follows: 3yr=1; 5yr=1; 10yr=3. See Important Notes for the rating criteria.

* The Net expense ratio shown is for the underlying fund and reflects any fee waivers or expense reimbursements and is subject to change. Please refer to the underlying prospectus or offering documents for additional information.^A

¥ Important notes

Please call 800-395-1113 to obtain the Fund Sheet for the group annuity investment option sub-accounts and/or to obtain a prospectus (or Offering Memorandum/Trust Document) for the sub-accounts' underlying fund, that are available on request. The prospectuses (or Offering Memorandum/Trust Documents) for the sub-accounts' underlying funds contain complete details on investment objectives, risks, fees, charges and expenses as well as other information about the underlying funds which should be carefully considered before investing.

John Hancock conducts business in English.

Fees and expenses are only one of several factors that you should consider when making investment decisions. The cumulative effect of fees and expenses can substantially reduce the growth of your retirement account. You can visit the Employee Benefit Security Administration's Web site for an example demonstrating the long-term effect of fees and expenses.

Contributions under a group annuity contract issued by John Hancock Life Insurance Company (U.S.A.) (John Hancock USA) are allocated to investment options which: (a) invest solely in shares of an underlying mutual fund, collective trust, ETF, or other investment vehicle in which the sub-account invests; (b) invest in a combination of these; or (c) are Guaranteed Interest Accounts and which will be held in the John Hancock USA general account. For more information on a particular investment option, please refer to John Hancock USA's fund sheets, available through our web site myplan.johnhancock.com or your John Hancock USA representative.

Allocating assets to only one or a small number of the investment options (other than an asset allocation investment option such as a target date or target risk option) should not be considered a balanced investment program. In particular, allocating assets to a small number of investment options concentrated in particular business or market sectors could subject an account to increased risk and volatility.

* When contributions are allocated to funds under your employer's group annuity contract with John Hancock, they will be held in a sub-account (also referred to as "Fund"), which invests in shares of the specified underlying mutual fund, collective trust, ETF, or other investment vehicle in which the sub-account invests. The ticker symbols shown are for the underlying mutual fund, collective trusts, ETFs, or other investment vehicle in which the sub-account is invested. The ticker symbols do not directly apply to the John Hancock sub-account and therefore any public information accessed using these symbols will not reflect the unit value of the subaccount, nor will such information reflect sub-account, contract-level or participant-level charges under your plan's group annuity contract.

Information Concerning John Hancock's Short-Term Trading Policy

The group annuity contract is not designed for short-term trading. The effect of short-term trading may disrupt or be potentially disruptive to the management of the fund underlying an investment option and may thereby adversely impact the underlying fund's performance, either by impacting fund management practices or by increasing fund transaction costs. These impacts are absorbed by other fund investors, including retirement plan participants. For the protection of the participants, account changes are subject to the following short-term trading guidelines when exchanging investment options under your company's qualified retirement plan account with John Hancock. Requests may be cancelled if not within our guidelines.

Participants are allowed a **maximum of two exchanges per calendar month**. An **exchange** is defined as the full rebalance of a participant's account, or single or multiple fund-to-fund transfers that involve multiple investment options (also referred to as "inter-account transfers") on one day, and may be made online or with a client account representative.

Recognizing that there may be extreme market or other circumstances requiring a participant to make a further change, John Hancock will allow a participant to move **100% of their assets to a Money Market or Stable Value Fund (as available under the contract) after the exchange limit has been reached;**

no subsequent exchanges may be made for 30 days. Once the 30-day hold has expired, participants can trade again in accordance with the above guidelines.

The guidelines **do not** apply to regular allocations, loans, or withdrawals.

In addition, on an ongoing basis, participant account activity is reviewed for trading activity that, though within the monthly exchange limit, could be detrimental to an underlying fund and/or contrary to its exchange policies, as described in the fund's prospectus. As a result of this review, or if requested by a fund company, additional restrictions may be imposed on a participant's retirement account, including but not limited to:

- Applying redemption fees and/or trade restrictions as requested by the underlying fund manager. Such trade restrictions may be more restrictive than the above guidelines
- Restricting the number of exchanges made during a defined period
- Restricting the dollar amount of exchange
- Restricting the method used to submit exchanges (e.g., requiring exchange requests to be submitted in writing via U.S. mail)
- Restricting exchanges into and out of certain investment options

Participants can read about the short-term trading policy at myplan.johnhancock.com under the "modify your account - change account" feature. Redemption fees or market value adjustments associated with exchanges from particular investment options are described on applicable fund sheets, which are available online. For more information or to order prospectuses for the underlying investments, call 800-395-1113 and speak to a client account representative.

± Weightings - Applicable to only the Target Date (Lifecycle Portfolio) and Target Risk (Lifestyle Portfolios)

Each Target Risk/Target Date Portfolio has a target percentage allocation designed to meet the investment objectives of a corresponding investment orientation. Allocation percentages may vary or be adjusted due to market or economic conditions or other reasons as set out in the prospectus. Due to abnormal market conditions or redemption activity the fund may temporarily invest in cash and cash equivalents.

The underlying mutual fund, collective trust, ETF, or other investment vehicle in which the sub-account invests has the right to restrict trade activity without prior notice if a participant's trading is determined to be in excess of their exchange policy, as stated in an underlying fund's offering document.

⊖ The information shown is based on the most recent available information for the underlying mutual fund, collective trust, ETF, or other investment vehicle in which the sub-account invests (collectively referred to as underlying fund) as of the date of printing and is subject to change. Listed holdings do not represent all of the holdings in the underlying fund.

⊖ Average Credit Quality is from a Nationally Recognized Statistical Rating Organization (NRSRO).

1A. Your company's qualified retirement plan offers participants the opportunity to contribute to investment options available under a group annuity contract with John Hancock Life Insurance Company (U.S.A.) (John Hancock USA). These investment options may be sub-accounts (pooled funds) investing directly in underlying mutual fund, collective trusts, ETFs, or other investment vehicles, or they may be Guaranteed Interest Accounts.

The funds offered on the JH Signature platform are classified into five risk categories. The risk category in which a fund is placed is determined based on where the 10 year Standard Deviation (defined below) of the underlying fund's Morningstar Category falls on the following scale: if the 10 year Standard

Deviation of the underlying fund's Morningstar Category is 17.00 or higher, the Fund is classified as "Aggressive;" between 11.50 and 16.99 as "Growth;" between 7.00 and 11.49 as "Growth & Income;" between 2.50 and 6.99 as "Income;" and 2.49 and below as "Conservative." If a 10 year Standard Deviation is not available for a Morningstar Category, then the 5 year Standard Deviation of the underlying fund's Morningstar Category is used to determine the Fund's risk category. If a 5 year Standard Deviation is not available for a Morningstar Category, then the 5 year Standard Deviation of the underlying fund's Morningstar Category Index is used to determine the Fund's risk category. Standard Deviation is defined by Morningstar as a statistical measurement of dispersion about an average, which, for an underlying fund, depicts how widely the returns varied over a certain period of time.

The placement of each investment option's risk/return category is subject to change. This information is not intended as investment advice and there can be no assurance that any investment option will achieve its objectives or experience less volatility than another.

2A. Manager or Sub-Adviser refers to the manager of the underlying fund, or to the sub-adviser of the underlying John Hancock Trust, John Hancock Funds II, or John Hancock Funds III fund in which the sub-account invests. "Underlying fund" includes the underlying mutual fund, collective trust, ETF, or other investment vehicle in which a sub-account invests.

3A. Date sub-account or Guaranteed Interest Account first available under group annuity contract. The Signature Menu was introduced December 8, 2014. If the sub-account inception date is after December 8, 2014, then the Signature Menu introduction date is the same as the sub-account inception date.

4A. The performance data for a sub-account for any period prior to the sub-account Inception Date is hypothetical based on the performance of the underlying investment since inception of the underlying investment. All other performance data is actual (except as otherwise indicated). Returns for any period greater than one year are annualized. Performance data reflects changes in the prices of a sub-account's investments (including the shares of an underlying mutual fund, collective trust, or ETF), reinvestment of dividends and capital gains and deductions for the sub-account charges.

The performance data presented represents past performance. Past performance is no guarantee of future results and current performance may be lower or higher than the performance quoted. An investment in a sub-account will fluctuate in value to reflect the value of the sub-account's underlying fund and, when redeemed, may be worth more or less than original cost. Performance does not reflect any applicable contract-level or participant-level charges, fees for guaranteed benefits if elected by participant, or any redemption fees imposed by an underlying mutual fund, collective trust or ETF. These charges, if included, would otherwise reduce the total return for a participant's account. Performance current to the most recent month-end is available at myplan.johnhancock.com.

5A. Asset class/Investment style : Asset class refers to the broad category of investments the portfolio, or underlying fund, currently holds. Fixed income, or bond funds are often categorized by the duration and credit quality of the bonds held in the underlying fund. Equity, or stock underlying funds may be categorized by the size of the securities in which the fund invests (market capitalization). Investment style tells you whether the underlying fund invests in securities of companies that exhibit growth-style characteristics, such as above-average revenue and earnings growth, or in securities that exhibit value-style characteristics, such as shares considered to be underpriced in relation to fundamental measures such as revenues, earnings and assets.

****Expense Ratio (ER)

This material shows expenses for a specific unit class for investment options available under a John Hancock group annuity contract. The Expense Ratio ("ER") shown represents the total annual operating expenses for the investment options made available by John Hancock. It is made up of John Hancock's (i) "Revenue from Sub-account", and (ii) the expenses of the underlying fund (based on expense ratios reported in the most recent prospectuses available as of the date of

printing; "FER"). In the case where an underlying fund has either waived a portion of, or capped, its fees, the FER used to determine the ER of the sub-account that invests in the underlying fund is the net expense ratio of the underlying fund. "Underlying fund" or "fund" refers to the underlying mutual fund, collective trust, or exchanged traded fund ("ETF") in which the investment option invests. The FER is determined by the underlying fund and may be subject to fluctuation. Any change in the FER of an underlying fund will affect the Expense Ratio of the investment option which invests in the underlying fund. The ER applies daily at a rate equivalent to the annual rate shown, and may vary to reflect changes in the expenses of an underlying fund and other factors. For Expense Ratio information current as of the most recent quarter end, please refer to the monthly "Return and Fees" listing available from John Hancock upon request. For more information, please contact your financial representative.

** Performance of the Sub-account

The performance data for a sub-account for any period prior to the sub-account Inception Date is hypothetical based on the performance of the underlying portfolio.* The Signature Menu was introduced December 8, 2014. If the sub-account inception date is after December 8, 2014, then the Signature Menu introduction date is the same as the sub-account inception date. Returns for any period greater than one year are annualized. Performance data reflects changes in the prices of a sub-account's investments (including the shares of an underlying fund), reinvestment of dividends and capital gains and deductions for the Expense Ratio (ER). Performance does not reflect any applicable contract-level or certain participant-level charges, fees for guaranteed benefits if elected by participant under the group annuity contract or redemption fees imposed by the underlying portfolio. These charges, if included, would otherwise reduce the total return for a participant's account. All performance calculations shown have been prepared solely by John Hancock USA. The underlying fund company has not reviewed the sub-account's performance.

6A. Morningstar Category:

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Morningstar assigns categories by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor Morningstar uses as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

***Morningstar Portfolio Ratings

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quarter-end. Although gathered from reliable sources, the information is not represented or warranted by Morningstar to be accurate, correct, complete or timely.

^AThe amounts displayed represent the gross and net expense ratios of the underlying fund in which the sub-account invests. Where the figures are different, the underlying fund has either waived a portion of, or capped its fees, and the result of such fee waiver or cap is reflected in the net expense ratio.

The waiver or cap is subject to expiration, in which case the Expense Ratio and performance of the sub account may be impacted. Refer to the prospectus of the underlying fund for details.

When calculating the Expense Ratio of the sub-account, the net expense ratio of the underlying fund is used. Returns shown reflect the Expense Ratio of the sub-account.

Index Performance:

With respect to the Funds that display an index performance. Index performance shown is for a broad-based securities market index. Indexes are unmanaged and cannot be invested in directly. Index returns were prepared using Morningstar Direct. The performance of an Index does not include any portfolio or insurance-related charges. If these charges were reflected, performance would be lower. Past performance is not a guarantee of future results.

i15. Bloomberg Barclays US Aggregate Bond Index: Made up of bonds from the Treasury, Government-Related, Corporate, Mortgage-Backed Security, Asset-Backed Security and Commercial Mortgage-Backed Security sectors. These include securities that are of investment-grade quality or better and have at least one year to maturity.

Peer Group Performance:

With respect to the Funds that display a Peer Group Performance. Source: Morningstar Direct for Mutual Funds, as of the most recent month end. Morningstar data is ©2024 by Morningstar, Inc. All rights reserved. Although gathered from reliable sources, the information is not represented or warranted by Morningstar to be accurate, correct, complete or timely. Peer groups are unmanaged and cannot be invested in directly.

p78. Intermediate-term core bond portfolios invest primarily in investment-grade U.S. fixed-income issues including government, corporate, and securitized debt, and hold less than 5% in below-investment-grade exposures. Their durations (a measure of interest-rate sensitivity) typically range between 75% and 125% of the three-year average of the effective duration of the Morningstar Core Bond Index.

Key Statistics

[§]The Turnover Ratio shown is based on the most recent available financial statements for the underlying mutual fund, collective trust, ETF, or other investment vehicle in which the sub-account invests, as of the date of printing and is subject to change.

[†]Wrap Provider Exposure

S&P

Credit ratings of AA- or better are considered to be high credit quality; credit ratings of BBB- are good credit quality and the lowest category of investment grade; credit ratings BB+ and below are lower-rated securities ("junk bonds"); and credit ratings of CCC+ or below have high default risk. The credit quality breakdown does not give effect to the impact of any credit derivative investments made by the fund.

Moody's

The rating scale, running from a high of Aaa to a low of C, comprises 21 notches. It is divided into two sections, investment grade and speculative grade. The lowest investment-grade rating is Baa3. The highest speculative-grade rating is Ba1. Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa.

Financial Strength Rating[†]

A.M. Best Rating

AM Best's methodologies for rating is a comprehensive overview of the credit rating process, which consists of quantitative and qualitative evaluations of balance sheet strength, operating performance, business profile, and enterprise risk management.

Fitch Ratings

The terms "investment grade" and "speculative grade" have established themselves over time as shorthand to describe the categories 'AAA' to 'BBB' (investment grade) and 'BB' to 'D' (speculative grade). The terms investment grade and speculative grade are market conventions and do not imply any recommendation or endorsement of a specific security for investment purposes. Investment grade categories indicate relatively low to moderate credit risk, while ratings in the speculative categories either signal a higher level of credit risk or that a default has already occurred.

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