

Firm Brochure (Part 2A of Form ADV)

**Manulife Investment Management
(North America) Limited**

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This Brochure provides information about the qualifications and business practices of Manulife Investment Management (North America) Limited (Manulife IM (NA)). If you have any questions about the contents of this Brochure, please contact us at the number above. The information in this brochure has not been approved or verified by the United States Securities and Exchange Commission ("SEC") or by any state securities authority. Registration with the SEC does not imply a certain level of skill or training.

Additional information about Manulife Investment Management (North America) Limited also is available on the SEC's website at www.adviserinfo.sec.gov.

Material Changes

Manulife Investment Management (North America) Limited (“Manulife IM (NA)”) or the “Firm”) last updated its brochure on March 31, 2023. The following material updates have been made to the brochure.

- Item 4E—Assets Under Management. The Firm has updated its assets under management.
- Item 8— Methods of Analysis, Investment Strategies and Risk of Loss. The Firm has updated Item 8 to include a new Global Climate Equity Strategy that was launched in December 2023.

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I. Advisory Business

Advisory Business Overview

Manulife Investment Management (North America) Limited (“we” or “Manulife IM (NA)”) is a Toronto-based corporation, which was incorporated in January 2003 under the Canada Business Corporations Act and began commercial operations in May 2003. We also operate under the name “Manulife Investment Management.”

We are registered as an investment adviser under the United States Investment Advisers Act of 1940. We provide investment advisory services to non-Canadian clients, including persons and entities that are considered “U.S. persons” as defined in Regulation S under the Securities Act of 1933, as amended, (mainly affiliated U.S. registered investment advisers and investment companies registered under the Investment Company Act of 1940, as amended (“Investment Company Act”)), as well as certain non-US clients (together referred to as “Clients”).

We are a wholly-owned subsidiary of The Manufacturers Life Insurance Company (“MLI”), a Canadian life insurance company, which in turn is a wholly owned subsidiary of Manulife Financial Corporation (“Manulife”). Manulife is a leading Canadian-based financial services group with principal operations in Asia, Canada, and the United States. Manulife is a publicly-held company that is listed on the Toronto Stock Exchange, New York Stock Exchange, Hong Kong Stock Exchange, and the Philippine Stock Exchange. Its international network of employees, agents and distribution partners offers financial protection and wealth management products and services to millions of clients around the world. Manulife can be found on the Internet at www.manulife.com.

We are part of the Manulife Investment Management group of companies. Manulife Investment Management is the global asset management arm of Manulife Financial. Manulife Investment Management and its affiliates provide comprehensive asset management solutions for institutional investors and investment funds in key markets around the world. This investment expertise extends across a full range of asset classes including equity, fixed income and alternative investments such as real estate, timber, farmland, as well as asset allocation strategies. As a global organization with clients and employees located across the world, we have separate legal entities in various jurisdictions who are licensed to offer services in those countries, and together provide a globally integrated business to best meet our clients’ needs.

Manulife Investment Management¹ is a signatory to the United Nations Principles for Responsible Investment (PRI), and Manulife IM (NA)’s approach to responsible investment and Environmental, Social

¹ Formerly Manulife Asset Management, a UNPRI signatory since 2015.

and Governance, (“ESG”) integration in its investment processes aligns with the principles-based framework of the PRI.

As of December 31, 2022, Manulife Investment Management managed approximately \$442² billion globally, of which Manulife IM (NA) managed approximately \$13.54 billion. Additional information about Manulife Investment Management can be found at www.manulifeim.com.

We and our affiliates provide comprehensive asset management services for institutional investors, retirement and investment funds in key markets around the world. This investment expertise focuses on a full range of asset classes including equity, fixed income, balanced, index, money market, and asset allocation strategies and we offer supervisory services covering those strategies. We limit our investment management services to what is outlined in the client’s investment policy guidelines, fund prospectus and/or statement of additional information documentation. Manulife IM (NA) may, for certain of our investment strategies, to the extent permitted by its management contracts, delegate investment discretion or trade execution services to an affiliated sub-adviser who manages all or a portion of a portfolio. Our services are delivered with the support of two key service agreements:

The first is an arrangement with Manulife Investment Management Limited (“Manulife IM Limited”), a Canadian affiliate that provides investment advisory and other services to Canadian investors. Manulife IM Limited provides us office space, equipment, and personnel, including portfolio managers. We have appointed Manulife IM Limited, acting through certain investment personnel, as a “Participating Affiliate” in connection with advisory services on a portion of assets of the accounts under Manulife IM NA.

The second is a Global Trade Execution Support Agreement relating to fixed income, equities and derivatives dealing and trade execution between several regional trading desks situated in North America, Asia and Europe. Manulife IM (NA) affiliates participating in this agreement along with Manulife IM (NA) are Manulife Investment Management (US) LLC, Manulife Investment Management Limited, Manulife Investment Management (Europe) Limited, Manulife Investment Management (Hong Kong) Limited, Manulife Investment Management (Singapore) Pte. Limited and Manulife Investment Management (Taiwan) Co., Ltd.

In addition to these service agreements, Manulife (IM) NA also has in place a non-discretionary investment advisory services agreement with one of our affiliated U.S. registered investment advisers, Manulife Investment Management (US) LLC or “Manulife IM (US).” Manulife IM (US) provides certain asset

² MFC Statistical Information Package as of December 31, 2022. AUM is in USD. AUM includes assets internally managed by Manulife Investment Management on behalf of external clients, the Manulife General Account and other affiliated businesses. The methodologies used to compile the total AUM are subject to change and may not reflect regulatory AUM as reported on certain affiliates Form ADV. Manulife Investment Management AUMA at December 31, 2022 which includes US\$442.04 billion assets under management and US\$0.54 billion assets under administration.

management and related services to John Hancock Trust Company LLC (“JHTC”) for the purpose of assisting JHTC in carrying out its asset management business in connection with JHTC’s collective investment trust funds (the “CIT Funds”). The CIT Funds are subject to the Employee Retirement Income Security Act of 1974, as amended. Pursuant to this service agreement, Manulife IM (US) has engaged Manulife IM (NA) to assist Manulife IM (US) in providing non-discretionary investment advisory services for a selected number of CIT Funds.

Participation in Managed Account Programs

In general, we do not participate or provide investment management services for any wrap fee and/or model programs.

Discretionary Authority and Assets under Management

Clients can retain Manulife IM (NA) on a discretionary and/or non-discretionary basis. When we are retained on a discretionary basis, we have authority to provide continuous and regular supervisory and/or investment management services for the client’s account without prior consultation with the client. Pursuant to this discretionary authority, we determine which securities are purchased and sold for the account, the total amount of purchases and sales, the selection of brokers through which transactions are executed and the commissions paid in connection with these transactions, as applicable.

Some clients retain us on a non-discretionary basis, generally requiring that portfolio transactions be discussed in advance and executed at the client’s direction.

As of September 30, 2023, Manulife IM (NA) managed \$17,892,752,515, of which \$14,268,574,749 was managed on a discretionary basis and \$3,624,177,766 on a non-discretionary basis.

II. Fees and Compensation

Fees

Subject to applicable laws and regulations, Manulife IM (NA) retains complete discretion over the fees charged to clients, as well as any changes to those fees. Fees generally are non-negotiable; however, non-standard fees may be negotiated or modified in light of a client's special circumstances, asset levels, service requirement, or other factors as determined in our sole discretion. We may agree to offer certain clients a fee schedule that is lower than that of other comparable clients in the same investment strategy or we may agree to calculate fees based on the aggregate assets of related accounts which may provide the benefit of a lower effective fee due to the combined level of assets of the related accounts. We may also choose to waive all or a portion of our negotiated fee for a given period. Finally, we may enter into a commitment with certain clients to provide services at the lowest fee available for a particular investment strategy, and this fee may be lower than that paid by other comparably situated clients. Manulife IM (NA)'s clients are generally large institutional investors or qualified purchasers, as defined in section 2(a)(51)(A) of the Investment Company Act of 1940.

Our basic fee schedule is categorized by our investment strategies. Advisory fees, as a percentage of our assets under management, generally are applied to the aggregate market value of all assets in the client's account. The client receives a separate invoice for the advisory fees in accordance with the advisory agreement and the advisory fees are not charged directly to the portfolios.

Billing Methods

We typically bill clients directly for our advisory fee. We do not directly debit fees from client accounts unless instructed by the client. Based on the investment management agreement, fees are calculated and payable either monthly or quarterly. Clients are billed in arrears based on the net asset value of units in the clients account for each calendar day or on an average over the month or quarter. Fees are not prepaid. Accounts initiated or terminated during a calendar month are charged a prorated fee. We do not have fixed termination dates in our investment management agreements; however, we generally require at least sixty (60) days written notice from the client to terminate our services.

Other Fees and Expenses

In addition to the advisory fees discussed above, clients may incur additional fees related to the services we provide. Clients will incur the fees and expenses charged by their custodian in respect of those client assets managed by us, as well as brokerage and other transaction costs associated with securities trades that we order on behalf of the assets in a client's account. Please see the "Brokerage Practices" section in this Brochure for additional information about brokerage and brokerage fees.

III. Performance Based Fees and Side by Side Management

We do not manage any accounts from which we receive performance-based compensation. Our compliance program seeks to manage actual and potential conflicts associated with the contemporaneous management of all traditional fee accounts. We generally expect that traditional management fee accounts that pursue substantially the same investment objective and strategy and invest side by side in substantially the same positions, to participate in investment opportunities at the same time and in an equitable manner. We expect that any such allocation of investment opportunities will be performed on a basis that we believe is fair and equitable and we will use all reasonable efforts to ensure that no participating entity or account receives preferential treatment over another.

When an investment opportunity is suitable for more than one investment account, the investment opportunity will generally be allocated pro-rata among such investment accounts based on cash availability, account restrictions, regulatory requirements and other relevant factors.

There can be no assurance, however, that all conflicts associated with the contemporaneous management of these accounts have been addressed in all situations or that the allocation of investment opportunities will not be of an advantage to one client over another.

IV. Type of Clients

We provide advice to our affiliates, principally as sub-advisor to a number of affiliated mutual fund families that are sponsored by our affiliates, and to certain affiliated insurance companies. We also manage advisory accounts of affiliates. This includes separate account and pension assets for John Hancock Life Insurance Company (U.S.A.) and separate account assets for John Hancock Life & Health Insurance Company. Manulife IM (NA) also provides non-discretionary investment advisory services to Manulife IM (US), which is in turn assisting John Hancock Trust Company LLC (“JHTC”) in connection with a selected number of collective investment trust (“CIT”) funds. In addition to this, Manulife IM (NA) manages one separately managed institutional account.

Conditions for Managing Accounts

Minimum account size for institutional investors, other than investment companies, generally ranges from \$10,000,000 to \$50,000,000, depending upon the investment objectives of the account.

Establishing a New Customer Relationship

When Manulife IM (NA) establishes a fiduciary relationship with a client, we may ask for information which will allow us to verify the identity of each client and its source of funding. We will maintain records of each client who opens an account or establishes a relationship with us, in order to fulfil our requirement to assist the US Government in fighting the funding of terrorism and money laundering activities.

V. Methods of Analysis, Investment Strategies and Risk of Loss

Manulife IM (NA) provides investment supervisory services utilizing a range of equity, money market, index, and liability-driven investment strategies. Therefore, we use a wide range of research tools and analyses, depending to a large extent on the particular strategy and portfolio manager. Our portfolio managers' methods include macro and micro fundamental research of companies, industries, sectors, countries, local and global markets. The methods employed may also include quantitative analysis and investment instrument research which applies security scoring methodology for different factors expected to influence investment performance and risk and establishes a ranking of all securities or instruments in the investment universe. As part of this research and analysis our investment teams integrate consideration of environmental, social and corporate governance risks and opportunities into their investment processes and decision making. A dedicated team of sustainable investment professionals support portfolio manager integration of sustainability considerations in the investment process. The sustainable investment professionals also support investment teams as they exercise thoughtful stewardship over their portfolios through the exercise of rights and responsibilities associated with a given asset class. More details can be found in our [Sustainable Investing and Sustainability Risk Statement](#).

We may supplement internal research with quantitative and fundamental analysis, created primarily by third parties. Primary sources include financial newspapers and magazines, industry experts, research materials prepared by others, corporate rating services, annual reports, prospectuses, financial data services, and filings with the SEC. Our investment personnel may also participate in meetings with company management, customers, suppliers and competitors. They may also participate in industry conferences and academic seminars to obtain new perspectives.

We may employ any of the following for sources of information and analysis: consultants, industry and governmental authorities, experts in related fields, management consulting firms, specialists to evaluate technical developments, third party models, analysis and research, and internally generated portfolio management reports and risk metrics. We may utilize trading ideas generated by brokers or others. Trades may be executed with the broker that generated the idea, subject to best execution.

Investment Risks

The significant methods of analysis, significant strategies, and material risks, for each of our investment strategies are detailed below. With respect to all our investment strategies, investing in securities involves risk of loss that clients should be prepared to bear. The specific risks associated with each investment strategy discussed below are outlined in the discussion. A more detailed description of each risk can be found in Appendix A, "Glossary of Investment Risks."

A. Investment Approaches

Active Equity Strategies

Global Energy Strategy & Global Metals and Mining Strategy

Investment Objective

The portfolios seek to provide long-term capital appreciation by investing primarily in equity securities of companies located anywhere in the world. The companies are directly or indirectly engaged in or related to the metals & mining industry, with securities largely classified under one of eight GICS sub-industries: aluminum, diversified metals & mining, copper, gold, precious metals & minerals, silver, steel and coal & consumable fuels; or the companies are directly or indirectly involved in the exploration, development, production or distribution of energy, alternative/ renewable energy and supply chain or in related industries or sub-industries, such as Chemicals.

Principal Investment Strategies

These strategies emphasize on investing in high-quality assets and proven, capable management teams throughout the commodity cycle, producing results that have been consistent with their stated long-term approach. Long-term outperformance is believed to be the result of this consistent application of fundamental, bottom-up company analysis together with a view on the macro environment, providing investors the opportunity to capitalize on current and emerging opportunities seen occurring within resource markets. While this process involves under/overweighting certain sub-industries and/or securities based on the fundamental outlook for a commodity(ies) or company(ies) valuation, the strategies are not expected to deviate from their investment process in different market conditions.

The investment process is multi-faceted and involves using a variety of tools to identify candidates for investment. A top-down analysis of the macro environment permeates the entire investment process, influencing sector decisions and position weights. Larger companies in resource-related sectors are followed on an on-going basis, where new ideas related to smaller, less well-known companies typically originate from management meetings, discussions with peers and sell-side analysts, as well as industry conferences and relationships. Corporate actions including asset plays, restructurings, management changes and spin-offs can also present new opportunities for investment. Given the targeted nature of the mandates, many of the more significant investment candidate businesses are already well known to the investment team. As a result, ongoing and regular meetings with company management teams are an important component to the portfolio management process, whereby valuable information regarding the macro environment and industry trends are gathered, which often direct research activities towards specific companies and securities.

The highest stock weights in the portfolio are dedicated to larger and typically more diversified resource companies while less significant weights tend to be assigned to smaller, single commodity and/or single property companies.

Investment Risks

Investing in these strategies involves the risk that the market value of the securities will fluctuate, sometimes rapidly and unpredictably and often in conjunction with changes in the price of underlying commodities. Investment in these strategies is subject to the risk that the investment may not perform as expected over a certain period of time and may experience monetary losses.

Principal risk factors that have an impact on the performance of our equity strategies include risks arising from economic and market events, portfolio turnover rates, governmental regulations, local, national and international political events, volatility in the commodities and equity markets, and changes in interest rates and currency values as well as environmental, social and corporate governance factors.

The strategies' main risk factors are outlined below:

Active management risk, commodity risk, credit and counterparty risk, currency risk, economic and market events risk, equity securities risk, exchange-traded funds risk, foreign securities risk and industry or sector risk. Each of the risks listed above are further defined in Appendix A, "Glossary of Investment Risks."

Global Climate Equity Strategy

Investment Objective

The strategy seeks to provide long-term capital growth by investing primarily in a diversified portfolio of global equity securities of issuers who are also leaders in making positive contributions to climate change mitigation ("Climate Leaders").

Principal Investment Strategies

Climate Leaders are issuers that the manager determines are aligned with the principles of the Paris Agreement, an international treaty that aims to strengthen the global response to the threat of climate change with the key objective to limit the global temperature increase to 2 degrees Celsius while pursuing efforts to limit the increase to 1.5 degrees Celsius compared to pre-industrial levels.

The manager utilizes a two-step process to determine whether an issuer is a Climate Leader, as defined above.

First, the manager applies an exclusionary framework where certain issuers are removed from the investment universe. This framework excludes issuers from investment consideration if, at the time of investment, third-party data providers determine that an issuer:

- a) is in violation of one or more of the Ten Principles of the United Nations Global Compact (UNGC), a voluntary initiative based on issuers' commitment to implement universal sustainable principles; or
- b) derives more than 25% of revenue from fossil fuel-based power generation (except as noted below); or
- c) derives more than 5% of revenue from alcohol, tobacco, adult entertainment, gambling operations or conventional weapons; or
- d) derives any revenue from controversial weapons, thermal coal mining and sales or oil and gas extraction and production.

The exclusionary framework is subject to change based on third-party data provider(s)' assessment of each issuer.

Second, from the universe of potential issuers remaining after the application of the exclusionary screen, and where no data is available from the third-party provider(s) regarding an issuer pursuant to Step One above, the manager will select issuers that:

- (a) have signified commitment to develop "science-based targets" or have set science-based targets with the SBTi, a partnership among: the CDP (an international non-profit that operates a system for the disclosure of issuers' environmental impact); World Resources Institute; the WorldWide Fund for Nature; and the UNGC; or
- (b) have a relative carbon intensity (a measurement of the amount of greenhouse gas ("GHG") emissions released to produce electricity) that is within the lowest 35% of their given industry; or
- (c) derive a minimum of 20% of revenue from climate solutions including, but not limited to, renewable energy, energy efficiency or electric vehicles.

Finally, in selecting the fund's investments from the universe of Climate Leaders identified in Step One and Step Two, above, the manager utilizes a fundamental, bottom-up investment approach in the selection of securities and uses a proprietary analysis to construct and analyze the historical economic earnings of an issuer. Factors such as the magnitude and volatility of an issuer's earnings, competitive advantages, products and other performance drivers are also considered in constructing the fund's portfolio.

Over time, an issuer's status with respect to the relevant criteria (i.e., (i) the exclusionary framework; and (ii) the manager's climate leader determination process) may change, and some issuers who were eligible when purchased by the fund may become ineligible. When this occurs, the manager may engage with such issuers to improve factors that lead to ineligibility within the next 90 days. The fund may divest from the issuer at any time or for any reason during or after this 90-day period.

With respect to issuers that may be included in the portion of the fund's portfolio that is outside of the 80% investment universe, the fund will also consider other sustainability and/or environmental, social, governance ("ESG") attributes of issuers when choosing whether to invest in an issuer, subject to data availability. These attributes may include, but are not limited to, an issuer's performance on and management of certain environmental factors, such as natural resource use, social factors such as labor standards and diversity considerations, and governance factors such as board composition and business ethics.

Investment Risks

Principal risk factors that have an impact on the performance of our Global Climate Equity Strategy include risks arising from economic and market events, portfolio turnover rates, governmental regulations, local, national and international political events, volatility in equity and fixed income markets, changes in interest rates and currency values as well as environmental, social and corporate governance factors.

The strategies' main risk factors are outlined below:

Active management risk, credit and counterparty risk, currency risk, derivatives risk, economic and market events risk, emerging markets risk, equity securities risk, foreign securities risk, hedging, derivatives and other strategic transactions risk, large company risk, interest rate risk, issuer risk, medium and smaller company risk and sustainability risk.

Each of the risks listed above are further defined in Appendix A, "Glossary of Investment Risks."

Passive Equity Strategies

Investment Objective

The investment objective of our passive equity strategies is to track the total return performance of various equity index benchmarks. Assets are primarily invested in underlying index benchmark constituents in common stocks in U.S. and developed markets, with a small amount of emerging market exposure as well. Both full replication and stratified sampling methods are used to match returns. We may also invest in certain instruments, such as index futures, total return swaps and exchange-traded-funds (ETFs) that we believe have similar risk characteristics as securities that are included in the respective Index.

Principal Investment Strategies

The passive equity strategies do not perform research and analysis and do not seek to form an opinion on individual securities. Instead, we attempt to fully replicate the respective index by buying shares of each company in the index according to its relative weight in the index or match the performance of the index by holding a representative sample or subset of the benchmark index referred to as an optimized portfolio. The risk characteristics of the optimized portfolio match those of the benchmark in terms of sector composition and certain other factors.

Investment Risks

All investment strategies involve some risks. Investing in our passive equity strategies involve risks similar to the risks of investing directly in the equity securities included in the respective Index. Investing in equity securities involves risk that the market value of the securities will fluctuate, sometimes rapidly and unpredictably. The prices of equity securities change in response to many factors including the historical and prospective earnings of the issuer, the value of its assets and liabilities, general economic conditions, investor perceptions and market liquidity. Certain factors may cause a fund that is an index fund to track its target index less closely. For example, we may select securities that are not fully representative of the index, and the fund's transaction expenses, and the size and timing of its cash flows, may result in the fund's performance being different than that of its index. Moreover, the funds will generally reflect the performance of their target index even when the index does not perform well. In addition, for some funds, an investor will be subject to foreign securities risk. As compared to U.S. companies, there may be less publicly available information relating to foreign companies. Foreign securities may be subject to foreign taxes. The value of foreign securities is subject to currency fluctuations and adverse political and economic developments. For other funds, large-capitalization stocks as a group could fall out of favor with the market, causing the fund to underperform investments that focus on small- or medium-capitalization stocks. Larger, more established companies may be slow to respond to challenges and may grow more slowly than smaller companies. Conversely, share prices of medium and smaller sized companies can change more frequently and more dramatically than those of larger companies.

The strategies' main risk factors are listed below:

Credit and counterparty risk, economic and market events risk, hedging, derivatives and other strategic transactions risk, as well as issuer risk. Each of the risks listed above are further defined in Appendix A, "Glossary of Investment Risks."

U.S. Money Market

Investment Objective

The investment objective of our U.S. Money Market strategies is to obtain maximum current income consistent with preservation of principal and liquidity. The strategies invest only in U.S. dollar denominated

securities issued by U.S. and foreign companies; U.S. and foreign banks; U.S. and foreign governments; U.S. agencies, states and municipalities; and international organizations.

Principal Investment Strategies

The U.S. Money Market strategies use an active, disciplined management approach. The strategies do not sacrifice credit quality for the sake of added yield. In general, US treasury bills are purchased during periods of market weakness and are sold on market strength. This results in capturing realized gains for the portfolios.

Corporate paper could be, but is not typically, purchased for a maximum maturity of three to six months. The product is used in this way to add yield. In addition, the strategies can add yield and duration with the purchase of longer maturity securities with a maximum maturity of 13 months.

The investment philosophy of the U.S. Money Market strategies is that long term outperformance comes from focusing on an active disciplined approach to yield curve management and risk containment via credit analysis and issuer selection.

The strategies may hold a combination of Commercial Paper, US T-Bills, Government Sponsored Enterprises, and/or Corporate Short-Terms securities (maturing in 13 months or less).

Sector weights are driven by market conditions, relative spread levels, stage of the economic cycle, and credit analysis. With respect to credit and quality constraints for “investable” assets, commercial paper must have a minimum A1 rating by S&P, and a minimum P1 rating from Moody’s. Floating-rate notes, if permitted, must have a minimum A-Low rating.

Investments in the corporate names are limited to 5% per issuer (10% for overnight securities). The maximum average weighted term to maturity for the funds depends on the specific strategy.

Investment Risks

Investing in U.S. Money Market securities involves the risk that the market value of the securities will fluctuate, sometimes rapidly and unpredictably. The prices of money market securities change in response to many factors including the historical and prospective earnings of the issuer, the value of its assets, general economic conditions, investor perceptions and market liquidity.

The strategies’ main risk factors are listed below:

Changing distribution levels risk, fixed-income securities risk, foreign securities risk, and issuer risk. Each of the risks listed above are further defined in Appendix A, “Glossary of Investment Risks.”

Liability Driven Investment Strategies

Investment Objective

The quantitatively managed Manulife Investment Management Liability Driven Investment (“LDI”) strategies’ fundamental investment objective is to provide returns that closely track the returns of the Manulife Investment Management Liability Driven Investment customized benchmarks by investing primarily in investment grade corporate and government guaranteed fixed income securities.

Portfolio Construction

The Manulife Investment Management Liability Driven Investment strategies are based on customized benchmarks. These customized benchmarks are notional portfolios of fixed income securities constructed to hedge the target cash flow structures of each strategy. The target cash flow structures are established by Manulife IM (NA) using a proprietary methodology and are associated with typical pension plan profiles (“Target Cash Flow Structures”). The underlying demographic profiles are derived from external data and expected cash flows are projected based on assumptions representative of typical pension plans. The Target Cash Flow Structures are not expected to change frequently but are reviewed annually and may be revised by Manulife IM (NA) if necessary.

When permitted, Liability Driven Investment Strategies may also use derivatives, repurchase or reverse repurchase agreements in the portfolio construction, for the purposes of hedging, replication or income generation.

Principal risks

The strategies’ main risk factors are listed below:

Asset-backed and mortgage-backed securities risk, credit risk, interest rate risk, liquidity risk, prepayment risk, securities lending risk, substantial security holder risk, target Liability risk, tax risk.

Each of the risks listed above are further defined in Appendix A, “Glossary of Investment Risks.”

B. Consideration of ESG issues

We consider environmental, social and corporate governance (ESG) issues alongside many other factors that should be weighed appropriately to inform investment decision making. We believe ESG issues can impact the long-term success and profitability of a company so understanding them enables more informed investment decisions. As such, our investment professionals perform an assessment of ESG-related risks and opportunities on many issuers. Individual portfolio managers make the final decision on the extent to

which a particular investment is likely to be positively or negatively impacted financially across all subjects, including ESG related matters. We actively engage with companies in which we invest on material ESG issues and often take ESG factors into account when voting proxies.

Separately, some clients may have ESG-related investment objectives, and when implementing those client's investment strategies, we will seek to achieve those investment objectives along with financial factors when considering the investment opportunities in a given mandate or portfolio. In those circumstances ESG related guidelines or restrictions are agreed to in writing with clients.

We are a signatory to the United Nations Principles for Responsible Investment (the PRI). In addition, we are a signatory to or member of other ESG-related industry initiatives and stewardship codes. The PRI is an independent body which publishes six principles for Responsible Investment by which signatories contribute to a more sustainable global financial system. As a signatory to these initiatives, we are committed to considering financially relevant risks and opportunities, including those relating to ESG issues, where appropriate and consistent with our duties to clients. We do not exclude any investments from consideration in our portfolios as a result of our membership of any of these initiatives. We publish our exclusion policy transparently on our website at

<https://www.manulifeim.com/institutional/global/en/sustainability/cluster-munitions-policy>.

More details can be found in our [Sustainable Investing and Sustainability Risk Statement](#).

VI. Disciplinary Information

There have been no reportable legal or disciplinary events against the Company or its management persons.

VII. Other Financial Industry Activities and Affiliations

As discussed above, our services are principally delivered to our affiliates. We have material arrangements with Manulife Investment Management Limited regarding provision of personnel, equipment and facilities. We also have a service level agreement with several affiliated non-U.S. registered investment advisers, Manulife Investment Management (Hong Kong) Limited, Manulife Investment Management (Europe) Limited, Manulife Investment Management (Singapore) Pte. Ltd., Manulife Investment Management Limited, Manulife Investment Management (Taiwan) Co., Ltd. and one affiliated U.S. registered investment adviser, Manulife Investment Management (US) LLC for the provision of fixed income, equity and derivative dealing and trade execution for our clients. We also have a non-discretionary investment advisory services agreement with one of our affiliated U.S. registered investment advisers, Manulife Investment Management (US) LLC or “Manulife IM (US).” Manulife IM (US) provides certain asset management and related services to John Hancock Trust Company LLC (“JHTC”) for the purpose of assisting JHTC in carrying out its asset management business in connection with JHTC’s collective investment trust funds (the “CIT Funds”). Pursuant to this service agreement, Manulife IM (US) has engaged Manulife IM (NA) to assist Manulife IM (US) in providing non-discretionary investment advisory services for a selected number of CIT Funds.

Manulife IM (NA) is affiliated with several SEC registered and non-SEC registered investment advisers, located in both the U.S. and outside the U.S. We also are affiliated with and serve as a sub-adviser to a number of affiliated Funds. The majority of such Funds are registered under the U.S. Investment Company Act of 1940. We are deemed to be affiliated person of these Funds due to our role as their sub-adviser. Our key affiliates are as follows:

Entity	Type
John Hancock Distributors LLC	US broker-dealer
John Hancock Investment Management Distributors LLC	US broker-dealer
John Hancock Investment Management LLC	US investment adviser
John Hancock Variable Trust Advisers LLC	US investment adviser
John Hancock Life Insurance Company	US insurance company
John Hancock Life & Health Insurance Company	US insurance company
John Hancock Trust Company LLC	New Hampshire Non-depository Trust Company
Manulife Investment Management (US) LLC	US investment adviser
Manulife Investment Management Limited	non-US investment adviser
Manulife Investment Management Distributors Inc.	non-US broker-dealer
Manulife Investment Management (Hong Kong) Limited	non-US investment adviser
Manulife Investment Management (Europe) Limited	non-US investment adviser
The Manufacturers Life Insurance Company	non-US insurance company
Manulife Financial Corporation	non-US operating insurance company
Manulife Investment Management (Singapore) Pte. Ltd.	non-US investment adviser
Manulife Investment Management (Ireland) Limited	non-US investment adviser

Entity	Type
Manulife Investment Management (Taiwan) Co., Ltd.	non-US investment adviser

Manulife IM (NA) has material business relationships with some of our related persons. Often personnel from these entities work together to manage client portfolios and provide related services, including client liaison, investment monitoring, account administration, investment research and trading services.

Manulife IM (NA) provides sub-advisory services to certain U.S. registered investment companies advised by John Hancock Investment Management LLC, John Hancock Variable Trust Advisers LLC and certain U.S. registered insurance companies advised by John Hancock Life & Health Insurance Company (“JHLH”) and John Hancock Life Insurance Company U.S.A. (“JHUSA”), which are all wholly owned subsidiaries of Manulife.

All investment management arrangements are conducted on an arms-length basis so as to neither disadvantage nor advantage other clients or related parties.

Manulife IM (NA) is related to John Hancock Investment Management Distributors LLC and John Hancock Distributors, LLC (“JHD”), which are all U.S. registered broker-dealers and wholly-owned by Manulife Financial. John Hancock Investment Management Distributors LLC is the principal underwriter for certain U.S. registered investment companies for which Manulife IM (NA) serves as sub-adviser. JHD is the principal underwriter for John Hancock Variable Insurance Trust (“JHVIT”), a U.S. open end management Investment Company for which we serve as a sub-adviser with respect to certain series of the trust.

Additionally, Manulife IM (NA) is exempt from registration with the Commodity Futures Trading Commission (the “CFTC”) as a commodity trading adviser pursuant to CFTC rule 4.14(a)(8) under the Commodity Exchange Act, as amended and has filed a notice of exemption with the National Futures Association.

VIII. Code of Ethics, Participation or Interest in Client Transactions and Personal Trading

Code of Ethics

Manulife IM (NA) has adopted a written Code of Ethics (the “Code”) designed to prevent and detect personal trading activities that would interfere or conflict with client interests. The Code requires that our employees adhere to the highest ethical standards and comply with applicable federal securities laws. Our employees may, from time to time, acquire or sell securities for their personal accounts, which are also purchased or sold for the account of clients. The Code generally requires that all transactions in securities by our Investment Access Persons and Regular Access Persons (as each term is defined in the Code) and their Household Members (also defined in the Code) be cleared prior to execution through compliance department processes. Personal securities transactions also are subject to quarterly reporting requirements, annual certification requirements and related compliance obligations. Regarding mutual funds, employees are required to report their transactions in the mutual funds we advise or sub-advise on a post-trade basis. Employees are also required to report any violations of the Code that come to their attention.

A copy of our Code of Ethics will be provided to a client or prospective client upon request.

Clients should be aware that no set of rules can possibly anticipate or eliminate all potential conflicts of interest or ensure exemplary conduct in personal trading or all other matters, and that certain conflicts of interest inevitably exist in performing services such as providing investment advice. An overview of such conflicts of interest, and how we address conflicts, are discussed below.

Participation or Interest in Client Transactions

Manulife IM (NA) generally doesn't buy or sell securities for itself or maintain proprietary accounts. From time to time, a client portfolio may purchase a security in which a related person may have an ownership interest or a related person may purchase a security that is held in the client account. For example, our employees may incidentally hold in their own securities accounts one or more of the same securities that we also purchase or sell for clients. Due to this potential conflict of interest, personal trading by employees is substantially restricted by our Code of Ethics. Personal trading of employees and certain household members are monitored by the Compliance department.

MLI and certain of its subsidiaries distribute investment products for which they may receive management, advisory and related fees for services provided. Such products and relationships are disclosed to clients in offering documents in accordance with applicable laws, rules and regulations governing the sale of such products. Certain MLI subsidiaries are also clients of Manulife IM (NA) and we may from time to time advise other clients to buy securities which are held by related clients and vice versa.

IX. Brokerage Practices

Brokerage Discretion

Generally, clients grant us full discretionary authority over securities purchases and sales, subject to the client's investment objectives, guidelines and restrictions. We place orders for the purchase and sale of securities with the primary objective of obtaining the most favorable overall results for the client. All investment objectives, guidelines and restrictions are established by agreement between the Company and the client at the time the account is established and generally may only be amended by mutual agreement.

Approved Trading Counterparties

Manulife IM (NA) maintains and periodically updates a list of approved trading counterparties that are used to facilitate transactions. Traders are only allowed to execute securities transactions through approved broker-dealers/counterparties. A request to add a new broker-dealer/counterparty may be initiated at any time and is subject to an internal approval process.

Selection of Brokers, Dealers, and Counterparties

When placing orders for purchase and sale of securities and/or selecting trading counterparties to effect these transactions, we seek prompt execution of orders at the most favorable prices reasonably obtainable. We will consider a number of factors when selecting counterparties to implement transactions, price, dealer spread or commissions (if any), including the financial strength, reputation and stability of the counterparty, the efficiency with which the transaction is effected, the size of the transaction, the availability of the counterparty to stand ready to execute possibly difficult transactions in the future, and other matters involved in the receipt of brokerage and research services.

In seeking best execution, portfolio managers take reasonable care to obtain the best available price for the client in the relevant market at the time of the transaction. The determinative factor is not always the lowest possible commission price but whether the transaction represents the best qualitative execution for the client's account. In selecting a broker, dealer or trading venue, traders consider the full range of available trading platforms in seeking best execution.

Affiliated Brokers

Manulife IM (NA) does not execute trades or otherwise implement trading strategies through an intermediary that is an affiliate.

Cross Transactions

Manulife IM (NA) does not effect agency cross-transactions, nor do we effect cross trades between clients and our affiliates.

Best Execution

Our fundamental policy is to comply with our fiduciary duty to clients and seek to obtain the most advantageous execution terms reasonably available under the circumstances (Best Execution) with respect to trade orders placed on behalf of our clients with various dealers.

Best Execution is a process and we therefore regularly monitor our trade executions to assess our effectiveness and that of the dealers we use. In seeking Best Execution for our clients, we consider a number of elements, such as price, speed of execution, certainty of execution and the overall cost of the transaction.

Trading for our clients can only be conducted through approved dealers. We perform a thorough review of a dealer's financial strength and regulatory history before the dealer can be qualified for use. The factors considered when selecting a broker-dealer on any given trade include their ability to source liquidity, provide anonymity; willingness to commit capital, trading experience and reputation.

We negotiate a commission rate schedule with broker-dealers in advance based on the various types of trade execution that we expect we will require for our clients. This negotiation takes into consideration the overall level of services provided by the dealers. Under this approach, we periodically may classify different brokers in different categories based on execution abilities, the quality of research, brokerage services, block trading capability, speed and responsiveness, or other services provided by the brokers. Some examples of these categories may include, without limitation, full-service brokers, alternative trading systems, client commission and execution-only brokers.

Research and Other Soft Dollar Benefits

Our commission arrangements with broker dealers are in the form of bundled services where the dealer provides us with their proprietary research along with trade execution services, and commission sharing arrangements where the execution and third-party research commission costs are unbundled. The dealer's proprietary research services typically include sector and company research reports, economic reports, analyst calls, meetings with company management, analyst meetings, sales calls and financial models. We also use third party research services provided to us by third party vendors. We obtain these research services using client commissions in a manner designed to comply with applicable securities regulations. While the commissions on these trade executions are paid by our clients' accounts, the research services are provided to us, by third party vendors and thus benefit our clients indirectly, through their impact on

investment performance. We request dealers to accrue cash balances for payment of qualified third-party research services through client commission arrangements. Given the diversity of the investment styles in our firm, it is difficult to link a particular transaction directly to the research services obtained through client commission arrangements. Therefore, some research services benefit all our clients as a whole, while others primarily benefit a portion of our clients. As a result of these difficulties we do not track benefits from any particular research service to a specific client account.

Manulife IM (NA) considers three factors with respect to all third-party research and execution services received through soft dollars:

- Whether the product or service is eligible research or brokerage under SEC rules and regulations;
- Whether an eligible product or service actually provides “lawful and appropriate assistance” in the performance of our investment decision-making responsibilities.
- Whether the amount of the commission paid is reasonable in light of the value of the product or service provided by the broker-dealer (viewed in terms of the particular transaction or our overall responsibilities with respect to our client accounts).

Directed Brokerage

Manulife IM (NA) only engages in directed brokerage arrangements when instructed to do so by a client.

Trade Aggregation

Because investment decisions often affect more than one client, we frequently will attempt to acquire or dispose of the same security for more than one client at the same time. Manulife IM (NA), to the extent permitted by applicable law, regulations and advisory contracts, may aggregate purchases and sales of securities on behalf of its various clients for which it has discretion, provided that in our opinion, all client accounts are treated equitably and fairly, and that block trading will result in a more favorable overall execution. Trades will not be combined when a client has directed transactions to a particular broker-dealer or when we determine that combined orders would not be efficient or practical.

X. Review of Accounts

Internal Review of Client Accounts

Each client account is managed by a Manulife IM (NA) investment team which is assigned primary responsibility for the day-to-day management and ongoing monitoring of the client account. The portfolio management team's continuous review of a client account includes the review and appropriateness of portfolio holdings and transactions in light of the client account's investment objective, guidelines and restrictions within the context of market conditions.

The client accounts are also periodically reviewed by Manulife IM (NA)'s designated Chief Investment Officer, the Performance team, and the Investment Risk team. In all cases, accounts are also subject to review by compliance personnel, who monitor account trading on a daily basis utilizing the Firm's order management system that incorporates pre-trade, post-trade, and batch compliance testing across applicable account restrictions.

Client Reporting

On a quarterly and/or monthly basis, Manulife IM (NA) furnishes to our clients, or their agents, summary reports of portfolio transactions that were executed during the relevant period, portfolio holdings, characteristics, strategies, performance information, and other requested information about compliance matters. Meetings with clients are held as agreed upon with the client and generally occur annually.

XI. Client Referrals and Other Compensation

From time to time, we may enter into an agreement which provides cash compensation to solicitors who secure clients on our behalf. Generally, such an agreement:

1. provides the solicitation activities to be engaged in by the solicitor on our behalf and the compensation to be received therefrom;
2. contains an undertaking by the solicitor to perform their duties under the agreement in a manner consistent with our instructions and the provisions of applicable regulatory requirements;
3. requires that the solicitor, at the time of any solicitation activities for which compensation is paid or to be paid by us, provide the client with a current copy of our Form ADV Part 2 and this solicitation disclosure statement.

Manulife IM (NA) has a written solicitation agreement with its affiliate, Manulife IM (US), to act as solicitor and secure clients on behalf of Manulife IM (NA). Under the agreement, Manulife IM (US) may receive between five (5) and twenty-five (25) percent of the fee Manulife IM (NA) receives from a client referred by Manulife IM (US).

XII. Custody

Manulife IM (NA) does not have custody of clients' investment assets. Client assets are held in separate accounts maintained by independent third-party custodians who have been selected by our clients. As a fiduciary, Manulife IM (NA) seeks to safeguard client assets against unauthorized access or use. Manulife IM (NA) accomplishes this by separating investment management, trading, operations, and client relationship functions and responsibilities. We maintain access controls around the systems used by trading and by portfolio management to ensure that trades are duly authorized. We periodically reconcile records of client funds and securities to the client's custodian records.

Manulife IM (NA)'s affiliate, John Hancock Trust Company LLC, sponsors and serves as trustee of collective investment trust funds (the "CIT Funds"). Manulife IM (NA) assists Manulife IM (US) and provides non-discretionary investment advisory services for a selected number of CIT Funds. As such, Manulife IM (NA), pursuant to the Investment Advisers Act of 1940, may be deemed to have custody over the CIT Funds. The assets of the CIT Funds are held at a third-party custodian pursuant to a custodian agreement. The investors in the CIT Funds receive audited financial statements annually, generally within 120 days following the funds' fiscal year end.

XIII. Investment Discretion

Clients retain Manulife IM (NA) on a discretionary and non-discretionary basis. Clients that retain us on a discretionary basis grant us such authority by way of their investment management agreement with us. As such, we have the authority to supervise and direct the investments of and for those clients' account without prior consultation with the client, subject to the client's investment guidelines set forth in the agreement. Pursuant to this discretionary authority, we determine which securities are bought and sold for the account, the total amount of the purchases and sales, the brokers or dealers through which transactions are executed and the commission rates paid to effect the transactions, as applicable. The client may restrict or prohibit transactions in certain types of securities or direct that transactions be effected through specific brokers or dealers.

Some clients retain us on a non-discretionary basis, generally requiring that portfolio transactions be discussed in advance and executed at the client's direction.

XIV. Voting Client Securities

Under our discretionary investment management agreements, clients have the option to grant Manulife IM (NA) proxy voting authority over securities held in a client account. When clients grant such authority, Manulife IM (NA) seeks to vote proxies in the best economic interests of all of its clients for whom it has proxy voting authority and responsibilities. We believe that our proxy voting policies and procedures are reasonably designed to ensure that proxy voting is conducted in the best interest of clients, and in accordance with our fiduciary duties, applicable rules under the Advisers Act, and fiduciary standards and responsibilities applicable to our ERISA clients. When clients have granted us authority to vote securities in their account, we will vote in accordance with our proxy voting policy and procedures and clients cannot direct our vote in a particular proxy solicitation. Clients that have not provided us authority to vote securities in their accounts, should reach out to their other service providers. We will not generally provide advice on proxy voting to clients that have not granted us voting authority.

Manulife IM (NA) has contracted with an independent third- party service provider to execute voting instructions for clients' proxies in accordance with the Manulife IM (NA) proxy voting principles which are sustainability focused and which generally align with the service provider's sustainability focused proxy voting recommendations. Through this process, the proxy voting services provider populates initial recommended voting decisions that are aligned with the Manulife IM (NA) Voting Principles as outlined in our Proxy Voting Policy. These voting recommendations are then submitted, processed and ultimately tabulated. Manulife IM (NA) retains the authority and operational functionality to submit different voting instructions after these initial recommendations from the proxy voting services provider have been submitted, based on Manulife IM (NA)'s assessment of each situation. As Manulife IM (NA) reviews voting recommendations and decisions, Manulife IM (NA) will often change voting instructions based on those reviews. Except in instances when a Manulife IM (NA) client retains voting authority, Manulife IM (NA) will instruct custodians of client accounts to forward all proxy statements and materials received in respect of client accounts to the service provider.

Manulife IM (NA) has engaged its proxy voting service provider to:

1. Research and make voting recommendations;
2. Ensure proxies are voted and submitted in a timely manner;
3. Provide alerts when issuers file additional materials related to proxy voting matters;
4. Perform other administrative functions of proxy voting;
5. Maintain records of proxy statements and provide copies of such proxy statements promptly upon request;
6. Maintain and publish records of votes cast; and
7. Provide recommendations with respect to proxy voting matters in general.

Portfolio managers actively review voting options where Manulife Investment Management holds a significant ownership position in an investment. A significant ownership position in an investment is defined as those cases where Manulife Investment Management holds at least 2% of a company's issued share capital in aggregate across all Manulife Investment Management client accounts. The portfolio managers may also review other proxy voting items for their holdings and may make voting suggestions. Where Manulife Investment Management holds a significant ownership position in an issuer, the portfolio manager's voting decision is specifically recorded, including whether the vote cast aligns with the recommendations of the proxy voting services provider or has been voted differently.

If a Manulife IM (NA) portfolio manager suggests a vote inconsistent with the voting recommendations, the portfolio manager will submit new suggested voting instructions to a member of the sustainable investing team with rationale for the new instructions. The sustainable investing team will then submit the vote change to a proxy voting working group, which is composed of individuals from legal, compliance, risk, equity investment and the sustainable investing team. The proxy voting working group will review the suggestion and approve the change if the rationale is sound, and the decision will promote the long-term success of the issuer.

Manulife IM (NA) clients retain the authority, and may choose, to lend shareholdings. Manulife IM (NA), however, generally retains the ability to restrict shares from being lent and to recall shares on loan in order to preserve proxy voting rights and execute proxy votes. Manulife IM (MA) will, where feasible, weigh the benefit of casting votes at a given meeting when deciding whether to recall lent shares for voting. Manulife IM (NA) is focused in particular on preserving voting rights for issuers where client accounts hold 2% or more of an issuer as aggregated across funds within Manulife Investment Management. Manulife IM (NA) has a process in place instructing custodians who lend shares on our behalf to systematically restrict and recall shares on a best-efforts basis for those issuers where Manulife Investment Management owns an aggregate of 2% or more.

Manulife IM (NA) has an established infrastructure designed to identify conflicts of interest throughout all aspects of the business. Proxy voting proposals may raise conflicts between the interests of Manulife IM (NA) clients and the interests of Manulife IM (NA), its affiliates, or employees. Apparent conflicts are reviewed by the proxy voting working group to determine whether there is a conflict of interest and, if so, whether the conflict is material. Manulife IM (NA) shall consider any of the following circumstances a potential material conflict of interest:

- Manulife IM (NA) has a business relationship or potential relationship with the issuer;
- Manulife IM (NA) has a business relationship with the proponent of the proxy proposal; or
- Manulife IM (NA) members, employees, or consultants have a personal or other business relationship with managers of the business such as top-level executives, corporate directors, or director candidates.

In addressing any such potential material conflict, Manulife IM (NA) will seek to ensure proxy votes are cast in the advisory client's best interests and are not affected by Manulife IM (NA)'s potential conflict. In the event a potential material conflict of interest exists, the proxy voting working group or its designee will either (i) review the proxy voting decisions to ensure robust rationale, that the voting decision will protect or enhance shareholder value over the long term, and is in line with the best interest of the client; (ii) vote such proxy according to the specific recommendation of the proxy voting services provider; (iii) abstain; or (iv) request the client vote such proxy. The basis for the voting decision, including the process for the determination of the decision that is in the best interests of the client, is recorded.

Clients may obtain a copy of our proxy voting policies and procedures, a summary of the proxy voting service provider policies and procedures, and information about how we voted proxies during the past fiscal year by contacting Christopher Walker at Christopher.Walker@manulife.com. We also have policy information and voting records linked on our website.

<https://www.manulifeim.com/institutional/ca/en/sustainability>

XV. Financial Information

Manulife IM (NA) has no financial obligation that impairs its ability to meet contractual and fiduciary responsibilities to clients and has not been the subject of a bankruptcy proceeding.

APPENDIX A

Glossary of Investment Risk

- **Active management risk:** The subadvisor's investment strategy may fail to produce the intended result.
- **Changing distribution levels risk:** The distribution amounts paid by the fund generally depend on the amount of income and/or dividends received by the fund's investments. As a result of market, interest rate and other circumstances, the amount of cash available for distribution by the fund and the fund's distribution rate may vary or decline. The risk of such variability is accentuated in currently prevailing market and interest rate circumstances.
- **Commodity risk:** The market price of commodity investments may be volatile due to fluctuating demand, supply disruption, speculation and other factors
- **Convertible securities risk:** The market values of convertible securities tend to decline as interest rates increase and, conversely, to increase as interest rates decline. In addition, as the market price of the underlying common stock declines below the conversion price, the price of the convertible security tends to be increasingly influenced more by the yield of the convertible security.
- **Credit and counterparty risk:** The issuer or guarantor of a fixed-income security, the counterparty to an over-the-counter derivatives contract or a borrower of a fund's securities may be unable or unwilling to make timely principal, interest or settlement payments, or otherwise honor its obligations. Funds that invest in fixed-income securities are subject to varying degrees of risk that the issuers of the securities will have their credit rating downgraded or will default, potentially reducing a fund's share price and income level.
- **Credit risk.** The issuer or guarantor of a fixed-income security, the counterparty to an over-the-counter derivatives contract or a borrower of a client's securities, is unable or unwilling to make timely principal, interest or settlement payments, or otherwise to honor its obligations. Funds that invest in fixed-income securities are subject to varying degrees of risk that the issuers of the securities will have their credit rating downgraded or will default, potentially reducing a fund's share price and income level. U.S. government securities are subject to varying degrees of credit risk depending upon the nature of their support.
- **Currency risk:** Fluctuations in exchange rates may adversely affect the U.S. dollar value of a fund's investments. Currency risk includes both the risk that currencies in which a fund's investments are traded, or currencies in which a fund has taken an active position, will decline in value relative to the U.S. dollar.
- **Derivatives risk.** Hedging and other strategic transactions increase the volatility of an account and, if the transaction is not successful, could result in a significant loss to a client account. Counterparty risk, liquidity risk (i.e., the inability to enter into closing transactions) and risk of disproportionate loss are the

principal risks of engaging in transactions involving futures contracts, options, swaps and foreign currency forward contracts. Counterparty risk does not apply to exchange-traded options. Foreign currency forward contracts are also subject to foreign currency risk. The use of derivative instruments (such as options, futures and swaps) could produce disproportionate gains or losses, more than the principal amount invested. Investing in derivative instruments involves risks different from, or possibly greater than, the risks associated with investing directly in securities and other traditional investments and, in a down market, could become harder to value or sell at a fair price.

- **Distressed investment risk.** Many distressed investments, including loans, loan participations, bonds, notes and non-performing and sub-performing mortgage loans, are not publicly traded and involve a substantial degree of risk.
- **Economic and market events risk:** Events in the financial markets have resulted, and may continue to result, in an unusually high degree of volatility in the financial markets, both domestic and foreign. In addition, reduced liquidity in credit and fixed-income markets may adversely affect issuers worldwide.
- **Emerging markets risk:** The risks of investing in foreign securities are greater for investments in emerging markets. Emerging market countries may experience higher inflation, interest rates and unemployment as well as greater social, economic, regulatory and political uncertainties than more developed countries.
- **Equity securities risk:** The value of a company's equity securities is subject to changes in the company's financial condition, and overall market and economic conditions.
- **Exchange-traded funds ("ETF") risk:** Owning an ETF generally reflects the risks of owning the underlying securities it is designed to track.
- **Exchange-traded notes ("ETN") risk:** Similar to ETFs, owning an ETN generally reflects the risks of owning the assets that comprise the underlying market benchmark or strategy that the ETN is designed to reflect. ETNs also are subject to issuer and fixed-income risk.
- **Fixed-income securities risk:** Fixed-income securities are affected by changes in interest rates and credit quality. A rise in interest rates typically causes bond prices to fall. The longer the average maturity of the bonds held by the fund, the more sensitive the fund is likely to be to interest-rate changes. There is the possibility that the issuer of the security will not repay all or a portion of the principal borrowed and will not make all interest payments.
- **Foreign securities risk:** As compared to U.S. companies, there may be less publicly available information relating to foreign companies. Foreign securities may be subject to foreign taxes. The value of foreign securities is subject to currency fluctuations and adverse political and economic developments.
- **Fund of funds risk:** The fund is subject to the performance of the underlying funds in which it invests.
- **Greater China risk:** Investments in the Greater China region are subject to special risks, such as less developed or less efficient trading markets, restrictions on monetary repatriation and possible seizure,

nationalization or expropriation of assets. In particular, investment in Taiwan could be adversely affected by its relationship with China, and Hong Kong and Chinese markets could be hurt significantly by adverse government actions. A small number of companies and industries represent a relatively large portion of the Greater China market as a whole.

- **Hedging, derivatives and other strategic transactions risk:** Hedging and other strategic transactions may increase the volatility of a fund and, if the transaction is not successful, could result in a significant loss to a fund. The use of derivative instruments could produce disproportionate gains or losses, more than the principal amount invested. Investing in derivative instruments involves risks different from, or possibly greater than, the risks associated with investing directly in securities and other traditional investments and, in a down market, could become harder to value or sell at a fair price. The following is a list of certain derivatives and other strategic transactions in which the fund may invest and the main risks associated with each of them:
 - **Credit default swaps** Counterparty risk, liquidity risk (i.e., the inability to enter into closing transactions), interest-rate risk, risk of default of the underlying reference obligation and risk of disproportionate loss are the principal risks of engaging in transactions involving credit default swaps.
 - **Foreign currency forward contracts** Counterparty risk, liquidity risk (i.e., the inability to enter into closing transactions), foreign currency risk and risk of disproportionate loss are the principal risks of engaging in transactions involving foreign currency forward contracts.
 - **Futures contracts** Counterparty risk, liquidity risk (i.e., the inability to enter into closing transactions) and risk of disproportionate loss are the principal risks of engaging in transactions involving futures contracts.
 - **Interest-rate swaps** Counterparty risk, liquidity risk (i.e., the inability to enter into closing transactions), interest-rate risk and risk of disproportionate loss are the principal risks of engaging in transactions involving interest-rate swaps.
 - **Options** Counterparty risk, liquidity risk (i.e., the inability to enter into closing transactions) and risk of disproportionate loss are the principal risks of engaging in transactions involving options. Counterparty risk does not apply to exchange traded options.
 - **Swaps** Counterparty risk, liquidity risk (i.e., the inability to enter into closing transactions), interest-rate risk, settlement risk, risk of default of the underlying reference obligation and risk of disproportionate loss are the principal risks of engaging in transactions involving swaps.
- **High portfolio turnover risk:** Actively trading securities can increase transaction costs (thus lowering performance) and taxable distributions.
- **Illiquid investments risk.** The difficulties and delays associated with such transactions could result in the inability to realize a favorable price upon disposition, and at times might make disposition of such

securities impossible. In addition, an account may be unable to sell other illiquid investments when it desires to do so, resulting in obtaining a lower price or being required to retain the investment.

- **Index management risk:** Certain factors may cause a fund that is an index fund to track its target index less closely. For example, a subadvisor may select securities that are not fully representative of the index, and the fund's transaction expenses, and the size and timing of its cash flows, may result in the fund's performance being different than that of its index. Moreover, the fund will generally reflect the performance of its target index even when the index does not perform well.
- **Industry or sector risk:** Because the fund may focus on one or more industry or sector of the economy, its performance depends in large part on the performance of those sectors or industries. As a result, the value of your investment may fluctuate more widely than it would in a fund that is diversified across industries and sectors.
- **Inflation-indexed debt securities risk.** Inflation-indexed debt securities are subject to the effects of changes in market interest rates caused by factors other than inflation (real interest rates). There can be no assurance that the inflation index used will accurately measure the real rate of inflation in the prices of goods and services.
- **Initial public offerings ("IPO") risk:** IPO shares may have a magnified impact on fund performance and are frequently volatile in price. They can be held for a short period of time causing an increase in portfolio turnover.
- **Interest rate risk.** A rise in interest rates typically causes bond prices to fall. The longer the average maturity of the bonds held by an account or fund, the more sensitive it is likely to be to interest-rate changes. The yield earned by an account or fund will vary with changes in interest rates. Changes in interest rates cause adverse effects and volatility in equity prices.
- **Investment company securities risk:** The fund bears its own expenses and indirectly bears its proportionate share of expenses of the underlying funds in which it invests.
- **Issuer risk:** An issuer of a security may perform poorly and, therefore, the value of its stocks and bonds may decline. An issuer of securities held by the fund could default or have its credit rating downgraded.
- **Large company risk:** Large-capitalization stocks as a group could fall out of favor with the market, causing the fund to underperform investments that focus on small- or medium-capitalization stocks. Larger, more established companies may be slow to respond to challenges and may grow more slowly than smaller companies. For purposes of the fund's investment policies, the market capitalization of a company is based on its market capitalization at the time the fund purchases the company's securities. Market capitalizations of companies change over time.
- **Leverage risk.** The use of leverage magnifies both the favorable and unfavorable effects of price movements in the investments made by an account fund. To the extent the account or fund is leveraged in its investment operations, it will be subject to substantial risk of loss.

- **Lifecycle risk.** There is no guarantee that the adviser will correctly predict the market or economic conditions and, as with other fund investments, you could lose money even if a fund is at or close to its designated retirement year or in its post-retirement stage
- **Liquidity risk:** Exposure exists when trading volume, lack of a market maker or legal restrictions impair the ability to sell particular securities or close derivative positions at an advantageous price.
- **Loans (bank loans, floating rate loans, and loan participations) risk.** Investing in loans involves special types of risks, including credit risk, interest-rate risk, liquidity risk and the risks of being a lender.
- **Lower-rated fixed-income securities risk and high-yield securities risk:** Lower-rated fixed-income securities and high-yield fixed-income securities (commonly known as “junk bonds”) are subject to greater credit quality risk and risk of default than higher-rated fixed-income securities. These securities may be considered speculative and the value of these securities can be more volatile due to increased sensitivity to adverse issuer, political, regulatory, market or economic developments and can be difficult to resell.
- **Market disruption and geopolitical risk.** Events in the financial markets have resulted, and continue to result, in an unusually high degree of volatility in the financial markets, both domestic and foreign. In addition, reduced liquidity in credit and fixed-income markets adversely affects issuers worldwide.
- **Medium and smaller company risk:** The prices of medium and smaller company stocks can change more frequently and dramatically than those of large company stocks. For purposes of the fund’s investment policies, the market capitalization of a company is based on its market capitalization at the time the fund purchases the company’s securities. Market capitalizations of companies change over time.
- **Medium company risk.** The prices of medium company stocks can change more frequently and dramatically than those of large company stocks.
- **Mortgage-backed and asset-backed securities risk:** Different types of mortgage-backed securities and asset-backed securities are subject to different combinations of prepayment, extension, interest-rate and/or other market risks.
- **Municipal bond risk.** Municipal bond prices can decline due to fiscal mismanagement or tax shortfalls. Revenue bond prices can decline if related projects become unprofitable. An account or fund may hold bonds that are insured as to principal and interest payments. Because the value of an insured municipal bond depends in part on the claims-paying ability of the insurer, an account or fund would be subject to the risk that the insurer is unable to pay claims filed pursuant to the coverage. An account or fund may hold several investments covered by one insurer, which would increase the exposure to the claims-paying ability of that insurer. In addition, insurance does not guarantee the market value of the insured obligation.

- **Natural resources risk.** The natural resources industry can be significantly affected by events relating to international political and economic developments, energy conservation, the success of exploration projects, commodity prices, and taxes and other governmental regulations.
- **Non-diversified risk:** Overall risk can be reduced by investing in securities from a diversified pool of issuers and is increased by investing in securities of a small number of issuers. Investments in a non-diversified fund may magnify the fund's losses from adverse events affecting a particular issuer.
- **Prepayment risk.** Prepayment risk occurs when the issuer of a security can repay principal prior to the security's maturity. Securities subject to prepayment risk can offer less potential for gains when the credit quality of the issuer improves.
- **Real estate securities risk.** Investing in securities of companies in the real estate industry subjects an account or fund to the risks associated with the direct ownership of real estate. Real Estate Investment Trusts ("REITs") involve additional risk factors including poor performance by a REIT's manager, changes to the tax laws, and failure by the REIT to qualify for tax-free distribution of income or exemption under the Investment Company Act of 1940.
- **S&P 500 Index risk:** An investment in the fund involves risks similar to the risks of investing directly in the equity securities included in the S&P 500 Index.
- **Sector investing risk.** Where an account or fund focuses on a single sector of the economy, its performance depends in large part on the performance of that sector. As a result, the value of investments could fluctuate more widely than it would in an account or fund that is diversified across sectors.
- **Short sales risk.** Short sales involve costs and risk. A borrower of securities must pay the lender interest on the security it borrows, and the borrower will lose money if the price of the security increases between the time of the short sale and the date when the borrower replaces the borrowed security.
- **Small company risk.** Stocks of smaller companies can be more volatile and less liquid than stocks of larger companies.
- **Special risks related to preferred securities.** Generally, preferred security holders have no voting rights with respect to the issuing company unless preferred dividends have been in arrears for a specified number of periods, at which time the preferred security holders have the right to elect a number of directors to the issuer's board. Generally, once all the arrearages have been paid, the preferred security holders no longer have voting rights. In certain varying circumstances, an issuer of preferred securities redeems the securities prior to a specified date. For instance, for certain types of preferred securities, a redemption could be triggered by a change in federal income tax or securities laws. As with call provisions, a redemption by the issuer negatively impacts the return of the security held. Preferred securities can include provisions that permit the issuer, at its discretion, to defer distributions for a stated period without any adverse consequences to the issuer. Preferred securities are subordinated to bonds and other debt instruments in a company's capital structure in terms of priority to corporate income and liquidation payments, and therefore will be subject to greater credit risk

than more senior debt instruments. Preferred securities are typically substantially less liquid than many other securities, such as common stocks or U.S. government securities.

- **Spend-down risk:** Spend-down risk occurs in certain goal-based strategies or self-liquidating strategies (the “Portfolio(s)”) which are designed to maintain and maximize regular cash distributions through a pre-established period. The Portfolio(s)’ distributions are expected to result in a significant reduction in fund assets over time, which could result in an increase to the Portfolio(s)’ expenses as fixed fund expenses are spread over a smaller asset base. In order to generate sufficient cash for distributions, the fund may sell securities at times when it would not otherwise do so, which may result in a loss to the Portfolio(s). These transactions may result in higher portfolio turnover; accelerate the realization of taxable income if sales of securities resulted in capital gains or other income and increase transaction costs.
- **State/region risk.** Investing heavily in any one state or region increases exposure to losses in securities of that state’s or region’s issuers.
- **State-specific risk.** Where an account or fund invests mainly in bonds from a single state, its performance is affected by local, state and regional factors. These factors include economic or political changes, tax base erosion, state constitutional limits on tax increases, budget deficits and other financial difficulties, and changes in the credit ratings assigned to the state’s municipal issuers.
- **Sustainability risk.** Sustainability risks include those related to climate change impacts mitigation and adaptation, environmental management practices and duty of care, working and safety condition, respect for human rights, anti-bribery and corruption practices, and compliance to relevant laws and regulations
- **Target allocation risk.** From time to time, one or more of the underlying funds of target allocation accounts experience relatively large redemptions or investments due to reallocations or rebalancing of the assets of a portfolio, which could affect the performance of the underlying funds and, therefore, the performance of a fund.
- **Target Liability risk:** The return on its investments in one or a combination of the Liability Driven Investment strategies may not perfectly match the return of an investor’s (such as a pension plan’s) overall liabilities due to reasons that may include, but not be limited to:
 - the Liability Driven Investment strategies’ benchmarks are based on a number of assumptions which are not necessarily identical to an investor’s circumstances. These underlying assumptions include, but are not limited to, the plan’s underlying demographic profile, the underlying plan’s provisions, economic assumptions and, consequently, the underlying expected cash flows;
 - the investor’s target measure (“**Target Measure**”) used to allocate assets within each Liability Driven Investment strategy (e.g. the target duration, expected liability cash flows or other actuarial input) may be based on a sub-group of the plan’s liabilities (e.g. retirees);

- the amount invested in a Liability Driven Investment strategy may be higher or lower than the market value of the investor's plan liability;
- the Liability Driven Investment strategies are constructed assuming liability cash flows designed to mimic average pension plan profiles, which may not reflect an investor's circumstances;
- Manulife IM (NA) aims to hedge the interest rate sensitivity of the present value of the fund's assumed projected liability cash flows. Although this hedging strategy aims to reduce the long-term funding risk of a pension plan, it does not specifically hedge liabilities based on any actuarial valuation method, including going-concern, funding or accounting valuation methods;
- the experience of a pension plan, including but not limited to mortality, turnover, salary increases, inflation and expenses, may differ from actuarial assumptions used by the plan's actuary to value the plan's liabilities. These actuarial assumptions are reflected in the investor's Target Measure used to allocate assets within each Liability Driven Investment strategy;
- the pension plan provisions, actuarial assumptions and actuarial valuation methods may be changed over time by the plan's actuary;
- the projected liability cash flows are usually longer than 30 years, whereas the bond market has limited investment opportunities with maturities longer than 30 years;
- the Liability Driven Investment strategies include exposure to credit risks and, consequently, is subject to changes in credit spreads and defaults, whereas pension plan liabilities are not directly subject to these risks; and
- the Liability Driven Investment strategies are subject to client transactions and/or rebalancing, whereas liabilities are not. The liability driven strategy is applied by Manulife IM (NA) at the investment fund or separate account level in accordance with the investment objectives, guidelines and restrictions. These strategies do not take into consideration the specifics of the investor (though an investor can additionally contract to provide discretionary authority to manage the allocation between the Liability Driven Investment strategies). It is strongly recommended that an investor seek the advice of a pension or investment consultant to establish an appropriate asset allocation among these funds. Unless Manulife IM (NA) and/or its affiliates are granted discretionary authority as to asset allocation, Manulife IM (NA) shall not be responsible if inappropriate asset allocation is made by the investor.