How timberland and farmland can benefit a pension plan

Amy Haynes

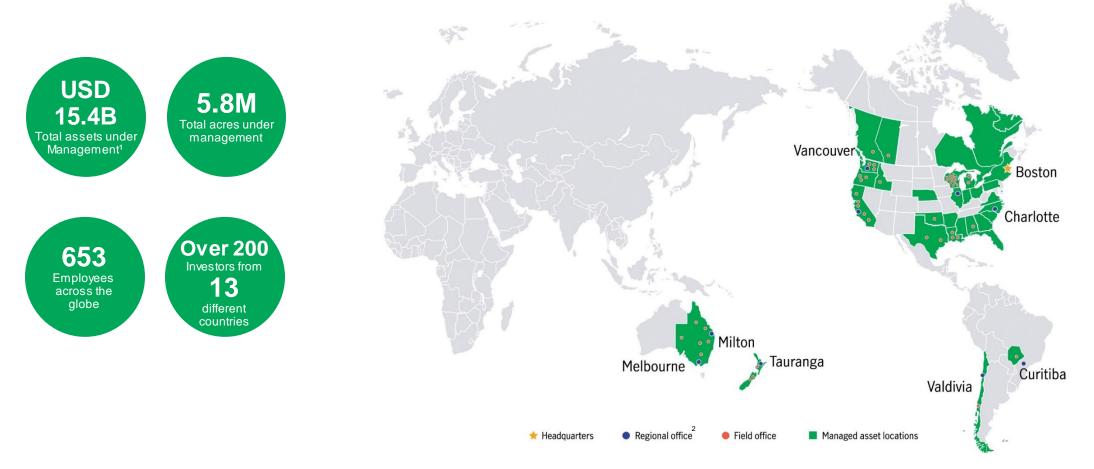
Director, Investor Relations, Timber and Agriculture

October 2, 2023

Manulife Investment Management

For Institutional/Investment Professional Use Only. Not for distribution to the public.

Global, integrated, sustainable timberland & agriculture investing



As of March 31, 2023. 1 Total AUM is managed on a discretionary and non-discretionary basis for the General Account, its affiliates and third party clients. 2 Includes offices associated with client owned operating companies.

Why timberland and agriculture?

Why timberland and agriculture?

Attractive risk/return characteristics

May provide stable total returns and moderate unlevered income with relatively low volatility

Long-term value potential

Long-lived assets with appreciation potential can match long-term investment horizons and provide current income

Thematic investing to address climate change

Provide opportunities to reduce GHG emissions and mitigate climate change

Why timberland and agriculture? Investments have historically experienced low volatility while providing attractive risk-adjusted returns

U.S. historical return and standard deviation (1998-2022)



Why timberland and agriculture?

Can provide diversification benefits Timberland and farmland returns are generally uncorrelated with returns to major asset classes

May help preserve value in a portfolio May provide inflation protection, particularly in periods of relatively high inflation

Timber and agriculture have exhibited moderate correlation

Lack of complete correlation with each other can provide added diversification benefits and an expanded opportunity set within a portfolio Why timberland and agriculture? Low correlation with traditional assets and moderate inflation protection in an institutional portfolio

Historical US\$ correlations Historical US\$ correlations with agriculture (1998-2022) with timberland (1998-2022)



See sourcing information on page 20. Past performance does not guarantee future results.

-0.50

For Institutional/Investment Professional Use Only. Not for distribution to the public.

Gaining exposure to core timber and agriculture Tangible assets that are planted, harvested and sold as sustainable food, fiber or shelter

$\mathbf{\Theta}$

Annual row crops may include: corn, soybeans, cotton, wheat, rice, potato, alfalfa, vegetables



(\mathbf{P})

Perennial permanent crops may

include: tree nuts (almonds, walnuts, pistachios, hazelnuts, pecans), cranberries, apples, citrus, blueberries, wine grapes





\$

Timberland may include: softwood plantations, hardwood plantations, mixed naturally-established forests





Potential of attractive nominal total returns Timberland and agriculture investments can maximize riskadjusted total return, generate income, preserve capital investment and realize long-term appreciation

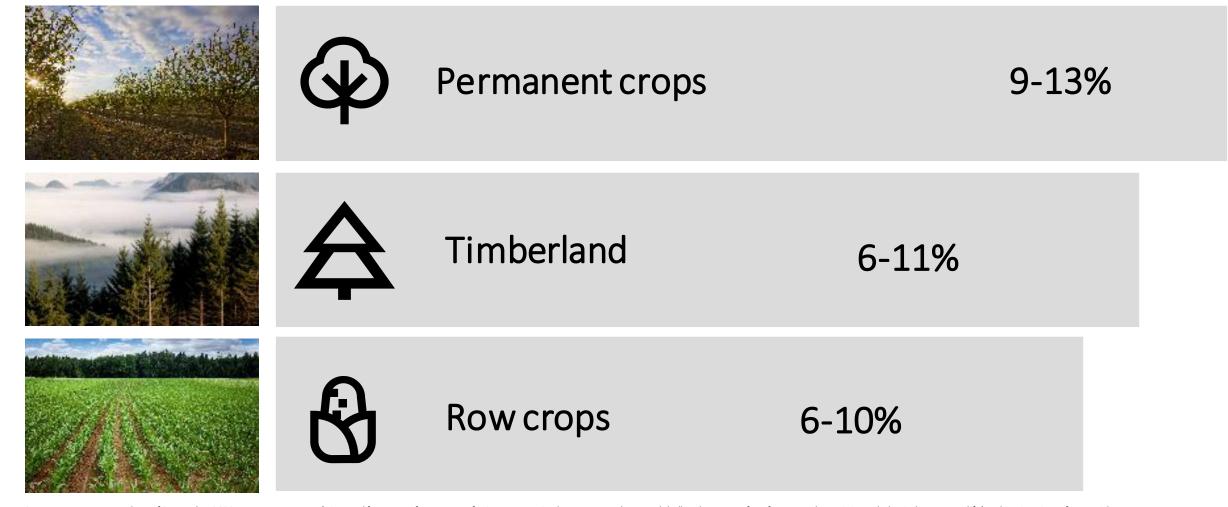
Appreciation

- Real crop and timber price changes
- Biological growth
- Gains in productivity
- Change in land values

Current Income

- Rental income from land leases
- Revenue from crop and timber sales
- Carbon/wetland mitigation banking credits
- Realizing conservation or higher and better use values

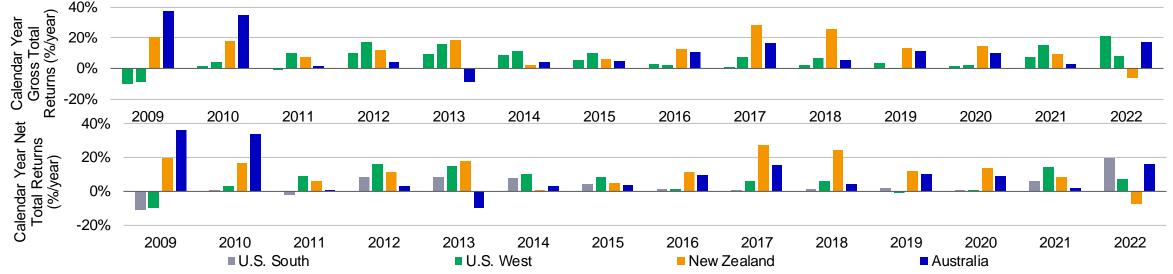
Potential of attractive nominal total returns Expected nominal total returns



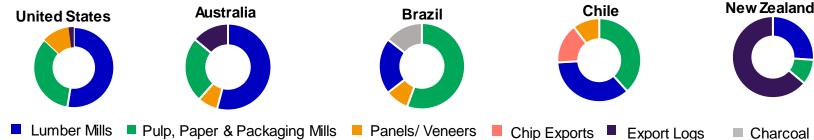
Source: MIMTA Research as of September 2022. Represents MIMTA's internal forecasts of pre-tax IRR for investments in the represented sector globally. The range of performance shown is intended to indicate Manulife's subjective view of potential outcomes in the sectors show. It is not targeted performance for any portfolio or investment to be managed by Manulife. Tim berland and famland plus are modeled over a 5-10-year period, permanent crops are modeled over a 10-15-year period, timberland is modeled over a 50-year period and row crops are modeled over a 10-year period. Figures presented are approximations and are used for illustrative purposes only. Figures do not represent targeted performance of any actual or anticipated portfolio of Manulife investments, nor have they been reduced to simulate the impact of expenses associated with a portfolio of investment s, acquisition and disposition transaction fees, operating expenses of the portfolio or individual investments, or the management of portfolio cash positions. Further information regarding these figures is available upon request.

Timberland: diversification seeks to create value and optimize returns

Uncorrelated performance across geographies¹



Annual sources of wood demand²

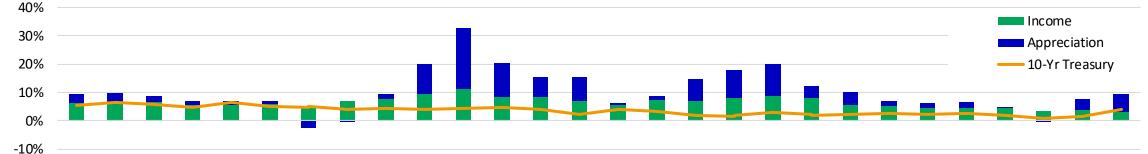


No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. Past performance does not guarantee future results. 1 USD Calendar Year Total Returns, gross and net of historical average fee of 1.04%. Sources: U.S. South and U.S. West returns are MIMTA performance calculated utilizing the NCREIF Timberland Index methodology. AU and NZ returns are MIMTA performance calculated using the modified Dietz methodology. 2 Sources: New Zealand: NZ MPI December 2021, Brazil: Poyry2018; Chile: INFOR 2020; U.S.: RISI 2021, 11 Australia ABARES 2019/20. Most current available data shown. For important information on the NCREIF Timberland Index methodology, see Appendix A. For important information on the methodology used to calculate historical MIMTA performance, see Appendix A.

For Institutional/Investment Professional Use Only. Not for distribution to the public.

Agriculture: diversification seeks to create value and optimize returns

U.S. NCREIF farmland property index returns by component¹



1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

NCREIF property level annual total returns by crop type²

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
41%	31%	50%	39%	37%	15%	14%	13%	11%	15%	11%	14%
19%	28%	45%	34%	16%	14%	5%	13%	10%	4%	9%	12%
15%	20%	22%	15%	12%	14%	4%	6%	8%	3%	4%	4%
9%	18%	16%	15%	12%	13%	3%	3%	4%	(1)%	1%	3%
8%	18%	14%	12%	5%	5%	2%	2%	2%	(3)%	1%	3%
3%	14%	11%	6%	(7)%	4%	0%	(7)%	0%	(7)%	(4)%	(2)%
Pistachios		Almonds		Citrus		Row crops		Wine grapes		Apples	

Past returns are not a guarantee of future results; potential for profit as well as for loss exists.

1 Data for Farmland refer to the NCREIF Farmland Property Index. Data for 10-Year Treasury refer to IA SBBI US LT Gov t TR USD. As of December 31, 2022. All data as of December 31, 2022. For important information on the NCREIF Farmland Property Index, see Appendix A. 2 USD Calendar Year Total Returns. Past performance does not guarantee future results. Sources: U.S. Returns: NCREIF Farmland Property Index, see Appendix A.

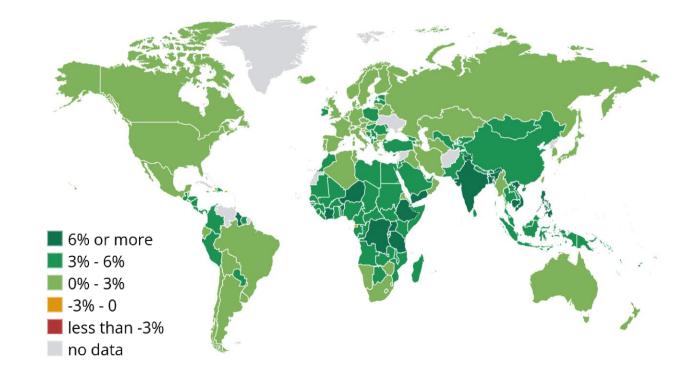
For Institutional/Investment Professional Use Only. Not for distribution to the public

The outlook for timberland and agriculture?

Favorable market fundamentals

Increasing consumption trends via global population and income growth should lead to increased demand for agriculture and timber products against a backdrop of finite land availability which should temper supply gains

Real per capita GDP growth – annual % change to 2025



The information in this slide may contain projections or other forward-looking statements regarding future events, targets, management discipline or other expectations, and is only as current as of the date indicated. There is no assurance that such events will occur and may be significantly different than that shown here. Source: International Monetary Fund, 2023

Underlying Positive Timberland Fundamentals Mitigate Near-term Headwinds

Timber benefits from demographics, underbuilt shelter demand, and global environmental and sustainability awareness

Headwinds

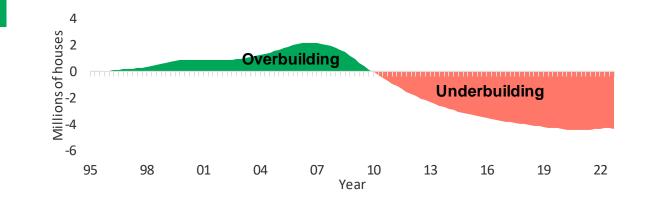
- Rising home prices and mortgage rates lead to deterioration of housing affordability globally
- · Slowing housing demand in the near term
- Rate hikes raise risk of recession
- · Set back in China after reopening from pandemic restrictions
- Labor availability, delivery logistic challenges
- Timber inventory overhang in the U.S. South

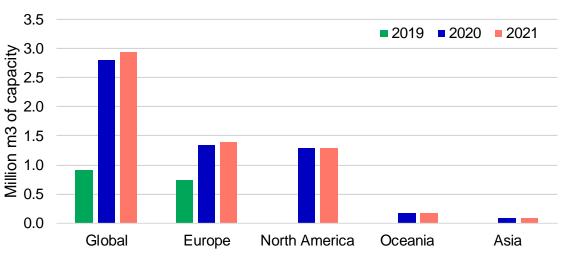
Tailwinds

- Favorable underlying demographics in the U.S., a decade of underbuilding, and aging housing stock
- Building product producers add substantial mill capacity in the U.S. South
- Mass timber products show promise as carbon friendly alternative to steel and cement in multi-story construction
- Rise in demand for green products, and investment in innovative products from trees
- Growing interest and value assigned to nature positive benefits inherent in sustainable timberland management including storing carbon in forests, building products, and soils which add optionality for timberland investors

Cumulative Over/Underbuilding of Conventional U.S. Homes

North America is Gaining Share of Mass Timber Capacity





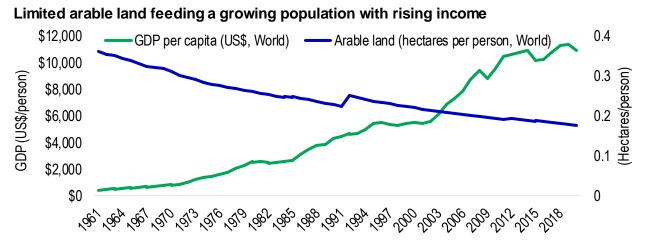
Source: Forest Economic Advisors September 2022, WoodWorks, September 2022

Long-term Positive Agricultural Fundamentals Mitigate Near-term Headwinds

Farmland benefits from growing population and increasing income levels, enhanced by global trade networks

Headwinds

- Input cost pressure remains despite recent moderate relief and cooling inflation, weighing on farm level financial performance
- Crop prices are forecast to trend down in the near term from recent historical high points
- Agricultural market outlook remains sensitive to international trade relationships, amid capricious geopolitical climate
- Weather and climate events cast uncertainties on production



Tailwinds

- · Overall demand for food products is expected to remain robust
- Normalized trade relations provide further boost to demand
- Global per capita income growth remains a long-term driver for improved and more sophisticated diets
- Arable land is finite and suitable water increasingly scarce; sustainable agricultural management provides additional benefits for investors
- Reduced agricultural GHG emissions and more efficient use of limited resources (energy, land, water) by deployment of ag tech, genetics and improved crop management
- Continued development of potential for carbon sequestration in soil

Emerging markets' demand for fruits and tree nuts continue to drive future growth



Source: World Bank, as of March 2023; USDA Production Supply and Distribution, accessed on August 21, 2023

Public pension plans investing in timberland and farmland

16¹ Florida Public Pensions have invested in farmland and/or timberland

248¹

Public Pensions across the U.S. have invested in farmland and/or timberland Investments in Florida²: •893,624 acres of timberland valuing US\$1.54 B •66,821 acres of agriculture valuing US\$656 M

Key takeaways

Why should your pension plan consider investing in farmland & timberland?

- fixed income diversifier
- limited correlation to equity and fixed income markets
- inflation hedge
- cash yield

Contact us

Amy Haynes

Director, Investor Relations, Timber and Agriculture Manulife Investment Management

E <u>ahaynes@manulife.com</u> T 617 275 9854

Scott Greenberg, CAIA

- Managing Director, Private Markets Business Development
- Manulife Investment Management
- E scott.greenberg@manulife.com T 617 784 1534





Appendix A – Notes and Disclosures

Sources

Slide 5 Sources: Data for Timberland refer to the NCREIF Timberland Index as of 12/31/22. Data for Farmland refer to the NCREIF Farmland Index as of 12/31/22. Data for Farmland refer to the NCREIF Farmland Index as of 12/31/22. Data for Commercial Real Estate refer to the NCREIF Property Index as of 12/31/22. Data for Small Cap Stocks refer to the Ibbotson series IA SBBI U.S. Small Stock TR USD as of 12/31/22. Data for International Equities refer to the MSCI/EAFE International Equities Index as of 12/31/22. Data for Corporate Bonds refer to the Ibbotson series IA SBBI U.S. LT Corp TR USD as of 12/31/22. Data for Treasury Bills refer to the Ibbotson series IA SBBI U.S. 30 Day Tbill TR USD as of 12/31/22. Data for Commodities refer to the Goldman Sachs Commodity Index as of 12/31/22. The S&P 500 series is from Standard & Poor's Financial Services LLC as of 12/31/22. Data for U.S. Private Equity refers to the Cambridge Associates Private Equity Index as of 12/31/22. Data for Public Forest Products refer to the S&P Composite 1500 Paper and Forest Products series as of 12/31/2022.

Slide 7 Sources: Data for U.S. Timberland refer to the NCREIF Timberland Index as of 12/31/22. Data for U.S. Farmland refer to the NCREIF Farmland Index as of 12/31/22. Data for U.S. Commercial Real Estate refer to the NCREIF Property Index as of 12/31/22. Data for U.S. Small Cap Stocks refer to the Ibbotson series IA SBBI U.S. Small Stock TR USD as of 12/31/22. Data for International Equities refer to the MSCI/EAFE International Equities Index as of 12/31/22. Data for U.S. Corporate Bonds refer to the Ibbotson series IA SBBI U.S. Treasury Bills refer to the Ibbotson series IA SBBI U.S. CPI refer to the Consumer Price Index from the U.S. Bureau of Labor Statistics as of 12/31/22. The S&P 500 series is from Standard & Poor's Financial Services LLC as of 12/31/22.

Benchmark Definition

The NCREIF Timberland benchmark is the National Council of Real Estate Investment Fiduciaries' Timberland Property Index which is published quarterly at www.ncreif.org. The NCREIF Timberland Property Index is comprised of U.S. domestic timberland investments held in a fiduciary investment environment. Returns are reported on a non-leveraged basis. After the year in which the property was purchased, the value of the property must be assessed at least quarterly (internally or externally), and at least once every three years by an independent, external appraiser. This 'marked to market' value is the value used to calculate the appreciation return component reported to NCREIF. A change in value from one quarter to another can be for one of several reasons: The property was externally appraised by an independent third party appraiser. Observed changes in market conditions as so determined by the manager to recognize any changes during the quarter in rental rates, capitalization rates, interest rates, a partial sale, capital expenditures, or changes in discount rates. All property Index. The Index represents investment returns from a single class of investor. As such, the Timberland Index may not be representative of the timberland investment market as a whole.

The NCREIF Farmland benchmark is the National Council of Real Estate Investment Fiduciaries' Farmland Property Index which is published quarterly at www.ncreif.org. The NCREIF Farmland Property Index is comprised of U.S. domestic farmland investments held in a fiduciary investment environment. Returns are reported on a non-leveraged basis. The Index is set at 100 starting fourth quarter of 1990. Calculations are based on quarterly returns of individual properties before the deduction of portfolio-level asset or investment management fees, but inclusive of property level management fees. Each property's return is weighted by its market value (value-weighted). Index values are calculated for income, appreciation and total. Observed changes in market conditions as so determined by the manager to recognize any changes during the quarter in rental rates, capitalization rates, interest rates, a partial sale, unexpected capital expenditures, or changes in discount rates. A property value may be adjusted only for capital expenditures made during the quarter -effectively, an accounting adjustment to reflect the amount of the capital expenditure. The value submitted can be the previous quarter's value because, in the judgment of the manager/owner, the property's value did not change during the period. All properties owned by the underlying investment vehicles of the Total Farmland Composite that meet the eligibility requirements of the NCREIF Farmland Property Index are included in the overall results of the NCREIF Farmland Property Index. The Index represents investment returns from a single class of investor. As such, the Farmland Index may not be representative of the agricultural investment market as a whole.

Appendix A – Notes and Disclosures

Historical Performance

Unless otherwise noted, the MIMTA historical performance presented herein is based on a hypothetical portfolio consisting of all discretionary timberland accounts managed by MIMTA from April 1985 (inception) to March 31, 2023. This portfolio and the historical returns described herein were not made in the context of a single fund with coordinated objectives, strategies, guidelines and restrictions. Historical returns represent investments by MIMTA sponsored funds and individually managed separate accounts for MIMTA clients with varying terms, including different fees and fee structures, different investment mandates, different uses of leverage or no use of leverage, and different diversification requirements, from those of any specific MIMTA fund or managed account. Timberland investments made by MIMTA managed accounts typically consist of commercial timberland including fee ownership or leasehold interests in timber producing real estate, timber cutting contracts and other rights related to timber and timberland and securities (both debt and equity) of a direct or indirect owner of commercial timberland. The historical returns presented herein do not reflect returns for portfolios of timberland that prioritize carbon sequestration over timber production.

MIMTA's historical returns are not representative of the past or future returns of any specific MIMTA fund or managed account or its investments and should not be relied upon as an indication of future returns or future results of such fund or managed account. The actual performance of any specific MIMTA fund or managed account may vary and such variance may be material.

Gross Historical Returns

Gross historical returns herein are presented using one of two methodologies.

Unless otherwise noted, total gross historical returns are presented using the Composite methodology and are calculated at the fund-level after investment and fund level taxes, property management fees and other fund level expenses, but otherwise before investment management fees, incentive fees, investor level taxes (including withholding taxes) and other expenses that an investor would incur.

Unless otherwise noted, component gross historical returns are presented using the NCREIF methodology and are calculated at the property-level after property management fees, property operating expenses and property taxes, but before investment management fees, fund-level taxes and other fund-level expenses.

Net Historical Returns

Unless otherwise noted, net historical returns are calculated after investment and fund level taxes, property management fees, other Fund expenses, investment management fees and incentive fees, but otherwise before investor level taxes (including withholding taxes) and other expenses that an investor would incur.

Investment management fees are estimated as a 1.00% reduction in total historical performance and incentive fees are estimated as a 0.04% reduction in total historical performance. These amounts are estimated based on the fact that investment management fees and incentive fees charged, and the base on which such fees are charged, varies across timberland accounts and over time. The 1.00% reduction represents MIMTA's good faith determination of the impact on the total returns from the payment of investment management fees in respect of discretionary timberland accounts managed by MIMTA over the last 15 years if charged at the highest applicable fee percentage and the 0.04% reduction for performance incentive fees reflects the average of the performance incentive fees paid to MIMTA in respect of discretionary timberland accounts managed by MIMTA over the last 15 years.

Investment Considerations

General Risks

Any characteristics, guidelines, constraints, or other information provided for this material was selected by the firm as representative of the investment strategy and is provided for illustrative purpose only, may change at any time, and may differ for a specific account. Each client account is individually managed; actual holdings will vary for each client and there is no guarantee that a particular client's account will have the same characteristics as described herein. Any information about the holdings, asset allocation, or sector diversification is historical and is not an indication of future performance or any future portfolio composition, which will vary. Portfolio holdings are representative of the strategy, are subject to change at any time, are not a recommendation to buy or sell a security, and do not represent all of the securities purchased, sold or recommended for the portfolio. It should not be assumed that an investment in these securities was or will be profitable. Top ten holdings information combines share listings from the same issuer, and related depositary receipts, into a singular holding to accurately present aggregate economic interest in the referenced company.

No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. Diversification or asset allocation does not guarantee a profit or protect against the risk of a loss in any market. The indices referenced herein are broad-based securities market indices and used for illustrative purposes only. The indices cited are widely accepted benchmarks for investment performance within their relevant regions, sectors or asset classes, and represent non-managed investment portfolios.

If derivatives are employed, note that 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.

GIPS Performance

Unless otherwise noted, all performance represents composite data. Gross of fees returns do not include advisory fees and other expenses an investor may incur, which when deducted will reduce returns. Changes in exchange rates may have an adverse effect. Actual fees may vary depending on, among other things, the applicable fee schedule, portfolio size and/or investment management agreement. Unless otherwise noted, returns greater than 1 year

are annualized; calendar year returns for each one-year period end in December. Discrepancies may occur due to rounding. Past performance does not guarantee future results.

Performance information shown is generally for discretionary strategies/solutions and managed by a Manulife entity which is GIPS compliant and falls under the definition of a corresponding Manulife GIPS firm. Some investment strategies/solutions may not be included in a GIPS compliant firm under certain circumstances, such as SMA/UMA business in Canada.

Asset class risks

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 principal risks associated with investing in a fixed income investment strategy include economic and market events, government regulations, geopolitical events, credit risk, interest rate risk, and risks associated with credit ratings, counterparties, foreign securities, currency exchange, hedging, derivatives and other strategic transactions, high portfolio turnover, liquidity, mortgage-backed and asset-backed securities, call or prepayment risk, and issuer stability along with environmental, social and corporate governance risk factors. The market value of fixed income securities will fluctuate in response to changes in interest rates, currency values and the credit worthiness of the issuer.

Principal risk factors that impact upon the performance of our asset allocation strategies include all the risks associated with the underlying funds and asset classes in which they are invested, in addition to overall asset allocation investment decisions. In addition, the underlying funds' performance may be lower than expected.

Information about SFDR

Unless otherwise noted, any references in this presentation to ESG or sustainability reflect the general approach of Manulife Investment Management to integrating sustainability risk considerations into our investment decisionmaking processes. Further details on Manulife Investment Management's

For Institutional/Investment Professional Use Only. Not for distribution to the public.

general approach to sustainability are available at www.manulifeim.com/institutional /global/en/sustainability.

The source for all information shown is Manulife Investment Management, unless otherwise noted.

ESG Integration and Engagement

Any ESG-related case studies shown here are for illustrative purposes only, do not represent all of the investments made, sold, or recommended for client accounts, and should not be considered an indication of the ESG integration, performance, or characteristics of any current or future Manulife Investment Management product or investment strategy.

Manulife Investment Management conducts ESG engagements with issuers but does not engage on all issues, or with all issuers, in our portfolios. We also frequently conduct collaborative engagements in which we do not set the terms of engagement but lend our support in order to achieve a desired outcome. Where we own and operate physical assets, we seek to weave sustainability into our operational strategies and execution. The relevant case studies shown are illustrative of different types of engagements across our in-house investment teams, asset classes and geographies in which we operate. While we conduct outcome-based engagements to enhance long term-financial value for our clients, we recognize that our engagements may not necessarily result in outcomes which are significant or quantifiable. In addition, we acknowledge that any observed outcomes may be attributable to factors and influences independent of our engagement activities.

We consider that the integration of sustainability risks in the decision-making process is an important element in determining long-term performance outcomes and is an effective risk mitigation technique. Our approach to sustainability provides a flexible framework that supports implementation across different asset classes and investment teams. While we believe that sustainable investing will lead to better long-term investment outcomes, there is no guarantee that sustainable investing will ensure better returns in the longer term. In particular, by limiting the range of investable assets through the exclusionary framework, positive screening and thematic investment, we may forego the opportunity to investin an investment which we otherwise believe likely to outperform over time. Please see our ESG policies for details.

Important Information

© 2023 Manulife Investment Management. All rights reserved. Manulife, Manulife Investment Management, Stylized M Design, and Manulife Investment Management & Stylized M Design are trademarks of The Manufacturers Life Insurance Company and are used by it, and by its affiliates under license.

This information is for the exclusive use of the intended institutional investors or their agents and may not be transmitted, reproduced or used in whole or in part for any other purpose, nor may it be disclosed or made available, directly or indirectly, in whole or in part, to any other person without our prior written consent.

About Manulife Investment Management

Manulife Investment Management is the brand for the global wealth and asset management segment of Manulife Financial Corporation. Our mission is to make decisions easier and lives better by empowering investors for a better tomorrow. Serving more than 17 million individuals, institutions, and retirement plan members, we believe our global reach, complementary businesses, and the strength of our parent company position us to help investors capitalize on today's emerging global trends. We provide our clients access to public and private investment solutions across equities, fixed income, multi-asset, alternative, and sustainability-linked strategies, such as natural capital, to help them make more informed financial decisions and achieve their investment objectives. Not all offerings are available in all jurisdictions. For additional information, please visit manulifeim.com.

This material has not been reviewed by, is not registered with any securities or other regulatory authority, and may, where appropriate, be distributed by the following Manulife entities in their respective jurisdictions. Additional information about Manulife Investment Management may be found at manulifeim.com/institutional

Australia: Manulife Investment Management Timberland and Agriculture (Australasia) Pty Ltd, Manulife Investment Management (Hong Kong) Limited. Canada: Manulife Investment Management Limited, Manulife Investment Management Distributors Inc., Manulife Investment Management (North

America) Limited, Manulife Investment Management Private Markets (Canada) Corp. Mainland China: Manulife Overseas Investment Fund Management (Shanghai) Limited Company. European Economic Area: Manulife Investment Management (Ireland) Ltd. which is authorised and regulated by the Central Bank of Ireland Hong Kong: Manulife Investment Management (Hong Kong) Limited. Indonesia: PT Manulife Aset Manajemen Indonesia. Japan: Manulife Investment Management (Japan) Limited. Malaysia: Manulife Investment Management (M) Berhad 200801033087 (834424-U) Philippines: Manulife Investment Management and Trust Corporation. Singapore: Manulife Investment Management (Singapore) Pte. Ltd. (Company Registration No. 200709952G) South Korea: Manulife Investment Management (Hong Kong) Limited. Switzerland: Manulife IM (Switzerland) LLC. Taiwan: Manulife Investment Management (Taiwan) Co. Ltd. United Kingdom: Manulife Investment Management (Europe) Ltd. which is authorised and regulated by the Financial Conduct Authority United States: John Hancock Investment Management LLC, Manulife Investment Management (US) LLC, Manulife Investment Management Private Markets (US) LLC and Manulife Investment Management Timberland and Agriculture Inc. Vietnam: Manulife Investment Fund Management (Vietnam) Company Limited.

No Manulife entity makes any representation that the contents of this presentation are appropriate for use in all locations, or that the transactions, securities, products, instruments or services discussed in this presentation are available or appropriate for sale or use in all jurisdictions or countries, or by all investors or counterparties. All recipients of this presentation are responsible for compliance with applicable laws and regulations.

This material is intended for the exclusive use of recipients in jurisdictions who are allowed to receive this information under their applicable law. The opinions expressed are those of the author(s) and are subject to change without notice. Our investment teams may hold different views and make different investment decisions. These opinions may not necessarily reflect the views of Manulife Investment Management or its affiliates There can be no assurance that actual outcomes will match the assumptions or that actual returns will match any

expected returns. The information and/or analysis contained in this material has been compiled or arrived at from sources believed to be reliable, but Manulife Investment Management does not make any representation as to their accuracy, correctness, usefulness or completeness and does not accept liability for any loss arising from the use of the information and/or analysis contained here. Neither Manulife Investment Management or its affiliates, nor any of their directors, officers or employees shall assume any liability or responsibility for any direct or indirect loss or damage or any other consequence of any person acting or not acting in reliance on the information contained here.

The information in this material may contain projections or other forward-looking statements regarding future events, targets, management discipline or other expectations, and is only current as of the date indicated. The information in this material including statements concerning financial market trends, are based on current market conditions, which will fluctuate and may be superseded by subsequent market events or for other reasons. This material was prepared solely for informational purposes and does not constitute, and is not intended to constitute, a recommendation, professional advice, an offer, solicitation or an invitation by or on behalf of Manulife Investment Management or its affiliates to any person to buy or sell any security or to adopt any investment strategy, and shall not form the basis of, nor may it accompany nor form part of, any right or contract to buy or sell any security or to adopt any investment strategy. Nothing in this material constitutes investment, legal, accounting, tax or other advice, or a representation that any investment or strategy is suitable or appropriate to vour individual circumstances, or otherwise constitutes a personal recommendation to you. Neither Manulife Investment Management nor its affiliates provide legal or tax advice, and you are encouraged to consult your own lawyer, accountant, or other advisor before making any financial decision. Prospective investors should take appropriate professional advice before making any investment decision. In all cases where historical performance is presented, note that past performance does not guarantee future results and you should not rely on it as the basis for making an investment decision.

Important Information (continued)

The distribution of the information contained in this presentation may be restricted by law and persons who access it are required to comply with any such restrictions. The contents of this presentation are not intended for distribution to, or use by, any person or entity in any jurisdiction or country in which such distribution or use would be contrary to any applicable laws or regulations. By accepting this material, you confirm that you are aware of the laws in your own jurisdiction relating to the provision and sale of the funds, portfolios or other investments discussed in this presentation and you warrant and represent that you will not pass on or use the information contained in this presentation in a manner that could constitute a breach of such laws by any Manulife entity or any other person.

Australia: Manulife Investment Management (Hong Kong) Limited (Manulife IM (HK)) is exempt from the requirement to hold an Australian financial services license under the Corporations Act in respect to the financial services being offered in this material. Manulife IM (HK) is regulated by the Securities and Futures Commission of Hong Kong ("SFC") under Hong Kong laws, which differ from Australian laws. This presentation is directed at wholesale investors only.

Mainland China: This material is prepared solely for informational purposes and does not constitute an offer to sell or the solicitation of an offer to buy any securities in Mainland China to any person to whom it is unlawful to make the offer or solicitation in Mainland China. The securities may not be offered, sold or delivered, or offered or sold or delivered to any person for reoffering or resale or redelivery, in any such case directly or indirectly, in Mainland China in contravention of any applicable laws.

The issuer does not represent that this material may be lawfully distributed, or that any securities may be lawfully offered, in compliance with any applicable registration or other requirements in Mainland China, or pursuant to an exemption available thereunder, or assume any responsibility for facilitating any such distribution or offering. In particular, no action has been taken by the issuer which would permit a public offering of any securities or distribution of this material in Mainland China. Accordingly, the securities are not being offered or sold within Mainland China by means of this material or any other document. Neither this material nor any advertisement or other offering material may be distributed or published in Mainland China, except under circumstances that will result in compliance with any applicable laws and

regulations.

Further, neither this material nor any funds/strategies mentioned in this material (if any) has been submitted to or approved by the China Securities Regulatory Commission or other relevant Chinese government authorities (which, for the purposes of this paragraph, does not include the authorities in Hong Kong SAR, Macau SAR or Taiwan Region), unless otherwise expressly indicated. Securities denominated in foreign exchange or with the underlying investments in the offshore markets may only be offered or sold to investors of Mainland China that are authorized and qualified to buy and sell such securities. Prospective investors resident in Mainland China are responsible for obtaining all relevant and necessary approvals from the Chinese government authorities, including but not limited to the State Administration of Foreign Exchange (if needed), before investing.

Hong Kong: This material is provided to Professional Investors, as defined in the Hong Kong Securities and Futures Ordinance and the Securities and Futures (Professional Investor) Rules, in Hong Kong only. It is not intended for and should not be distributed to, or relied upon, by members of the public or retail investors.

Malaysia: This material was prepared solely for informational purposes and is not an offer or solicitation by anyone in any jurisdictions or to any person to whom it is unlawful to make such an offer or solicitation.

Singapore: This material is intended for Accredited Investors and Institutional Investors as defined in the Securities and Futures Act.

South Korea: This material is intended for Qualified Professional Investors under the Financial Investment Services and Capital Market Act ("FSCMA"). Manulife Investment Management does not make any representation with respect to the eligibility of any recipient of these materials to acquire any interest in any security under the laws of Korea, including, without limitation, the Foreign Exchange Transaction Act and Regulations thereunder. An interest may not be offered, sold or delivered directly or indirectly, or offered, sold or delivered to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea, except in compliance with the FSCMA and any other applicable laws and regulations. The term "resident of Korea" means any natural person having his place of domicile or residence in Korea, or any corporation or other entity organized under the laws of Korea or having its main

office in Korea.

Switzerland: This material is intended for Professional Clients, including Institutional Clients, as defined in the Federal Financial Services Act ("FinSA") and its implementing ordinance, at the exclusion of Professional Clients with an opting-out pursuant to Art 5 (1) FinSA ("Opting-Out Clients"), and/or Qualified Investors pursuant to the Federal Collective Investment Schemes Act ("CISA") and its implementing ordinances, at the exclusion of Opting-Out Clients and Managed/Advisory Retail Clients pursuant to Art 10 (3ter) CISA where relevant. The information provided in this material is for information purpose only and does not constitute an offer, a solicitation or a recommendation to contract a financial instrument or a financial service as defined under FinSA. This material does not constitute an implicit or explicit investment advice. The information provided herein is general in nature and does not constitute an advertisement of financial products in Switzerland pursuant to FinSA and its implementing ordinance.

European Economic Area and **United Kingdom**: The data and information presented is directed solely at persons who are Professional Investors in accordance with the Markets in Financial Instruments Directive (2004/39/EC) as transposed into the relevant jurisdiction. Further, the information and data presented does not constitute, and is not intended to constitute, "marketing" as defined in the Alternative Investment Fund Managers Directive.

United States: Manulife Investment Management (US) LLC (Manulife IM US) and Manulife Investment Management (North America) Limited (Manulife IM NA) are indirect wholly owned subsidiaries of Manulife. John Hancock Investment Management LLC and Manulife Investment Management (US) LLC are affiliated SEC-registered investment advisors using the brand name John Hancock Investment Management. This material is not intended to be, nor shall it be interpreted or construed as, a recommendation or providing advice, impartial or otherwise.

Private Asset Investment Risks and Considerations

Investments in the strategies described herein (including infrastructure, real estate, private equity, and credit) include several risks and limitations, including but not limited to the risk of loss. Each of these investment strategies involves significant risks, any one of which could cause investors to lose all or part of the value of their investment. The following is a short summary of some but not all of the potential risks.

An investment in infrastructure and power assets is subject to certain risks associated with the ownership of infrastructure and power assets in general, including the burdens of ownership of infrastructure, local, national and international economic conditions, the supply and demand for services from, and access to, infrastructure and power assets, the financial condition of users and suppliers of infrastructure and power assets, changes in interest rates and the availability of funds which may render the purchase, sale or refinancing of infrastructure and power assets difficult or impracticable, changes in environmental laws and regulations, and planning laws and other governmental rules, environmental claims arising in respect of assets acquired with undisclosed or unknown environmental problems or as to which inadequate reserves have been established, changes in energy prices, changes in fiscal and monetary policies, negative developments in the economy that depress travel, uninsured casualties, acts of force majeure, terrorist events, underinsured or uninsurable losses, and other factors which are beyond the reasonable control of the investor or its investment manager.

Investors in private equity funds generally do not have an opportunity to evaluate for themselves the relevant economic, financial, and other information regarding the investments to be made by a fund sponsor and, accordingly, will be dependent upon the judgment and ability of the sponsor to source, evaluate, monitor, and exit investments. An investor in fund-of-funds will pay, in effect, two sets of management fees and carried interest fee: one directly at the fund level and one indirectly through the funds at the underlying fund level. These fees reduce the actual returns to investors both in the underlying fund and in the fund-of-funds.

Equity securities purchased in connection with the private equity co-investment program are typically subordinated to large amounts of senior and junior credit securities debt and are typically unsecured. This means that distributions to equity holders are available only after satisfaction of claims of senior and junior credit creditors and any senior classes of equity. Therefore, if a portfolio company does not generate adequate cash flow to service its debt Investments in equity securities of companies with substantial amounts of indebtedness involve a high degree of risk.

General investment risks related to the ownership of real property include, among others, declines in the value of real estate, negative changes in the climate for real estate, risks related to general and local economic conditions, decreases in property revenues (including financial failure of tenants), increases in proventing interest rates, property taxes and operating expenses, decreases in property revenue, changes in zoning laws and costs resulting from the cleanup of environmental problems. The value of real estate is typically dependent upon the ability or the potential for the applicable property to produce cash flow.

The basic risks of lending and direct ownership of commercial real estate mortgages include but are not limited to borrower default on the loan and declines in the value of the real estate collateral. Defaults can be complicated by borrower bankruptcy and other litigation including the costs and expenses associated with foreclosure which can decrease an investor's return.

Investments in debt instruments, whether senior or subordinated debt, public or private, secured or unsecured, or investment-grade or below investment-grade, include liquidity risk, interest rate/market value risk, credit risk/market risk, prepayment risk, ratings risk, exchange rate risk, and risk of bankruptcy. Investing in leveraged senior loans also involves additional risk that the collateral securing a loan decreases in value, is difficult to sell in a timely manner, is difficult to appraise and fluctuations in value based upon the success of the business and market conditions, including as a result of the

inability of the portfolio company to raise additional capital. Investments in subordinated debt/loans involve additional risks and can be highly speculative, involving a high degree of risk of credit loss.

Investing in timberland, farmland and Plus assets involves the risk of loss. Discretionary investment management accounts investing in farmland, timberland and Plus assets generally are subject to the following risks: fluctuating commodity prices, competition in the commodity markets, bad weather and natural disasters, loss of water rights, adverse government regulation, changes in SRI standards, changes in environmental protection regulation, and liability associated with environmental clean-up and remediation.

Investments in non-U.S. farmland, timberland and Plus assets, especially those investments located in emerging market countries, generally are subject to the following additional risks: political and economic factors causing disruptions in local markets, restrictions on investments, currency controls, and repatriation of investment proceeds, currency fluctuations, lack of developed property rights, and adverse changes in tax laws to disfavor foreign investment.

Plus assets also are subject to the following additional risks: limited experience investing in Plus assets, especially as a stand-alone or principal investment strategy, unexpected complications in implementing vertical integration of growing and processing operations, labor issues, regulations, food safety concerns, failure to maintain operating permits, competition, manufacturing disruptions, complications associated with the joint ownership.