

Third Quarter 2022

Asian Bond Absolute Return Strategy

Quarterly Market & Strategy Review

For a discussion of the risks associated with this strategy, please see the Investment Considerations page at the end of the presentation.



Asian Bond Absolute Return Strategy

Third Quarter Overview

Quarter's Overview – Asian Bond Absolute Return Strategy

Market Highlights

- US Treasury yields trended higher amid persistent inflation and a resilient job market. The Federal Reserve (Fed) hiked interest rates by 75bps in both July and September meeting. Over the quarter, the 10-year Treasury yield rose from 3.01% to 3.83%.
- Asian bond markets delivered negative performance in Q3 (JACI -3.51%, JADE Broad -5.39%).
 - Asian credit markets posted negative returns this quarter owing to higher US Treasury yields and wider credit spreads, though partially offset by the positive carry. In China property space, some consolidation are seen on the back of weaker sentiment and rating downgrades, as the market awaits signs of sector recovery from local government easing measures. In China asset management company (AMC) space, S&P downgraded all big four AMCs on deteriorating earnings prospects and revised their outlooks to stable.
 - Asian local bond markets posted negative returns amid rising US yields and monetary policy bias by some Asian central banks. Asian central banks such as India, Indonesia, and Thailand raised its interest rate over the period. On the other hand, the People's Bank of China (PBoC) lowered the 1-year medium-term lending facility rate and 7-day reverse repo rate by 10 basis points, as well as cut 1-year loan prime rate by 5bps and 5-year loan prime rate by 15bps.

Portfolio

- We establish macro-hedges amid growing recession and geopolitical risk. However, macro-hedges such as short USDJPY and AUDJPY positions did not work as expected, as policy divergence between BOJ-Fed and a shift higher in US yields weighed on JPY. In highlight, we took profit on the China sovereign CDS, a hedge for Asian credit, too early.
- Within interest rates, we added around 0.5yrs of KRW and USD duration amid relatively attractive yields and building recession risk for the global economy.
- Within currency, we closed the long KRW (c. 17%) and THB (c. 10%) positions amid broad USD strength. In addition, we established and took profit long USDCNH positions (c. 5%) over the period.
- Maintained long Asia credit position in view of upside potential from current valuations, with modest CDS protection.

Performance

- The Strategy returned -6.49% (gross) and -6.66% (net) in Q2.
- Main detractor to performance in absolute terms for the quarter came from exposure to Asian credit, as Asian credit markets saw negative returns amid global recession concerns, higher US yields and uncertainty surrounding China's zero-Covid policy.
- Main contributors to performance in absolute terms came short CNH positions vs USD, as monetary policy divergence between the Fed and PBoC continued to drive USDCNH to new highs

JACI = JP Morgan Asia Credit Index; it tracks total return performance of the Asia dollar bond market, reported in US dollar.

JADE Broad = J.P. Morgan Asia Diversified Broad Index; it tracks total return performance of the Asian local currency bond market, reported in US dollar.

Performance is shown in USD. Past performance is not indicative of future results. For complete performance please see page 10.

Asian Bond Absolute Return Strategy

Asian Local Currency Bond Market Underperformed Asian USD Credit Market

Asia Fixed Income Market Review

Asian Rates

- China (onshore) rates outperformed on monetary policy easing and low correlation to global bond markets.
- Hong Kong and Singapore rates underperformed due to relative higher correlation with US Treasury yield.

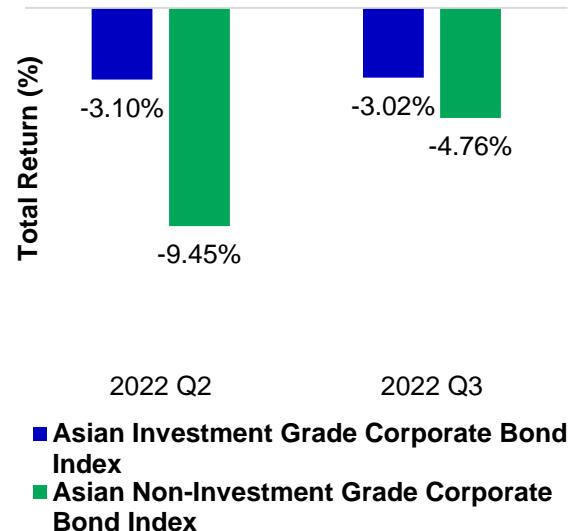
Asian Credit

- Asian IG credit traded on a cautious tone in line with global risk assets following hawkish central banks tightening.
- Asian high yield underperformed as China's property space saw consolidation on the back of weaker sentiment and rating downgrades.

Asian Currencies

- IDR outperformed supported by demand from strengthened domestic investor base.
- KRW underperformed amid domestic equity market outflows and broad US dollar strength.

10-Year Local Currency Bond	Q3-End % Yield	QTD Change (bps)
China (onshore)	2.75%	-7
India	7.40%	-5
Malaysia	4.41%	10
Indonesia	7.37%	15
Philippines	7.17%	22
Australia	3.89%	23
Taiwan	1.60%	35
Thailand	3.18%	36
New Zealand	4.30%	44
South Korea	4.08%	46
Singapore	3.48%	51
Hong Kong	3.57%	56



Currency (vs. USD)		QTD Spot Return (%)
Hong Kong Dollar	HKD	-0.04
Indonesian Rupiah	IDR	-2.17
Indian Rupee	INR	-2.92
Singapore Dollar	SGD	-3.12
Malaysian Ringgit	MYR	-4.94
Philippine Peso	PHP	-6.26
Chinese Renminbi	CNH	-6.27
Thai Baht	THB	-6.30
Taiwanese Dollar	TWD	-6.45
Australian Dollar	AUD	-7.29
South Korean Won	KRW	-9.25
New Zealand Dollar	NZD	-10.31

Source: Bloomberg, JP Morgan Asia Credit Index. Index performance data shown in US Dollar, as of 30 September 2022. Past performance is not indicative of future results. Asian Investment Grade Corporate Bond Index = JACI Investment Grade Corporate Index; it tracks total return performance of the investment grade Asia dollar bond market, reported in US dollar. Asian Non-Investment Grade Corporate Bond Index = JACI Non-Investment Grade Corporate Index; it tracks total return performance of the non-investment grade Asia dollar bond market, reported in US dollar.

Asian Bond Absolute Return Strategy

Added Asian Local & USD Duration and Reduced Asian Currency Positions

Key Portfolio Changes

Interest Rates

- Establish a pay China 5-year swap position and reduced CNY duration by around 1-year.
- Added around 0.5yrs of KRW and USD duration amid relatively attractive yields and building recession risk for the global economy.

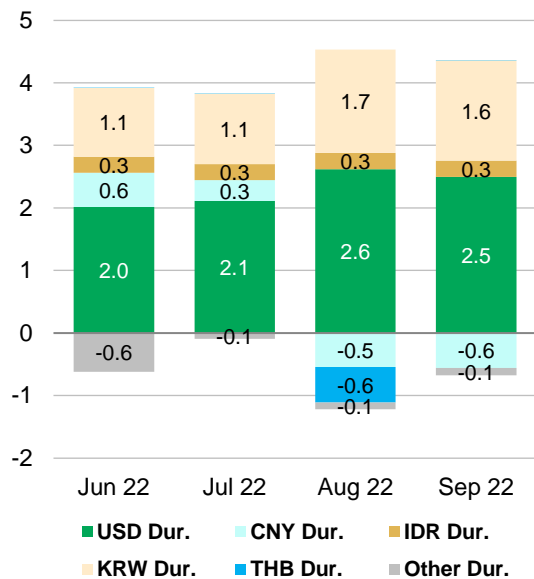
Credit

- Maintained long Asia credit position in view of upside potential from current valuations; modest credit protection via CDS.
- Continued to actively monitor and adjust portfolio's exposure to the China property sector.

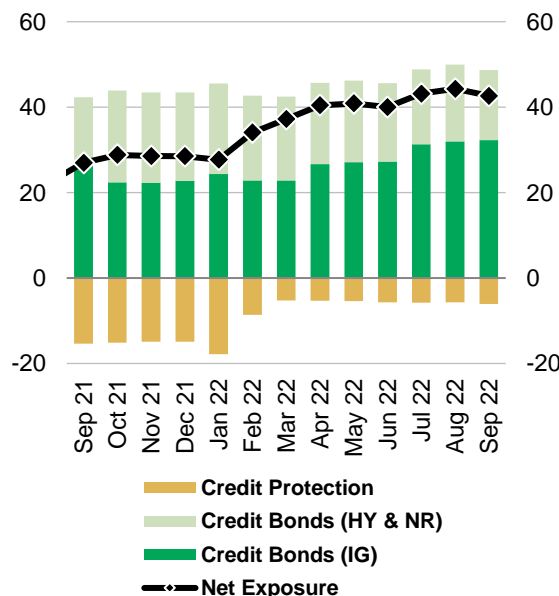
Currencies

- Closed the long KRW (c. 17%) and THB (c. 10%) positions amid broad USD strength.
- Established and took profit long USDCNH positions (c. 5%) over the period.
- Macro-hedges such as short USDJPY and AUDJPY was closed.

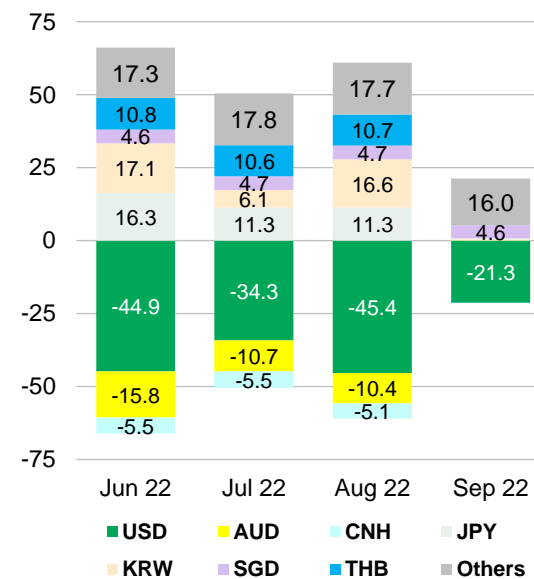
Contribution to Duration (Years)



Credit Changes (notional weights)



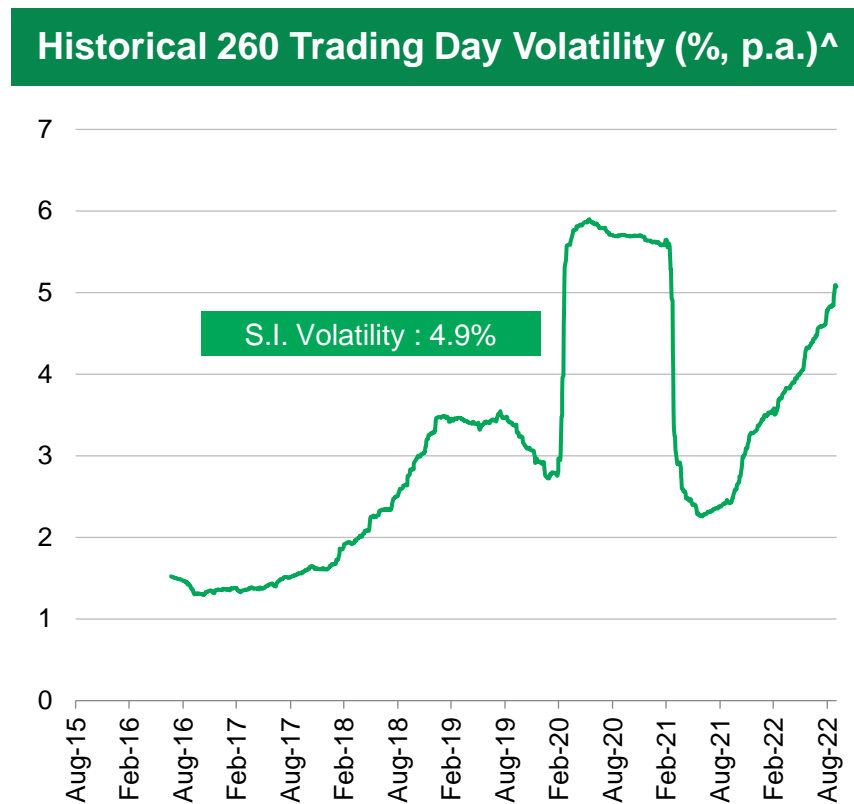
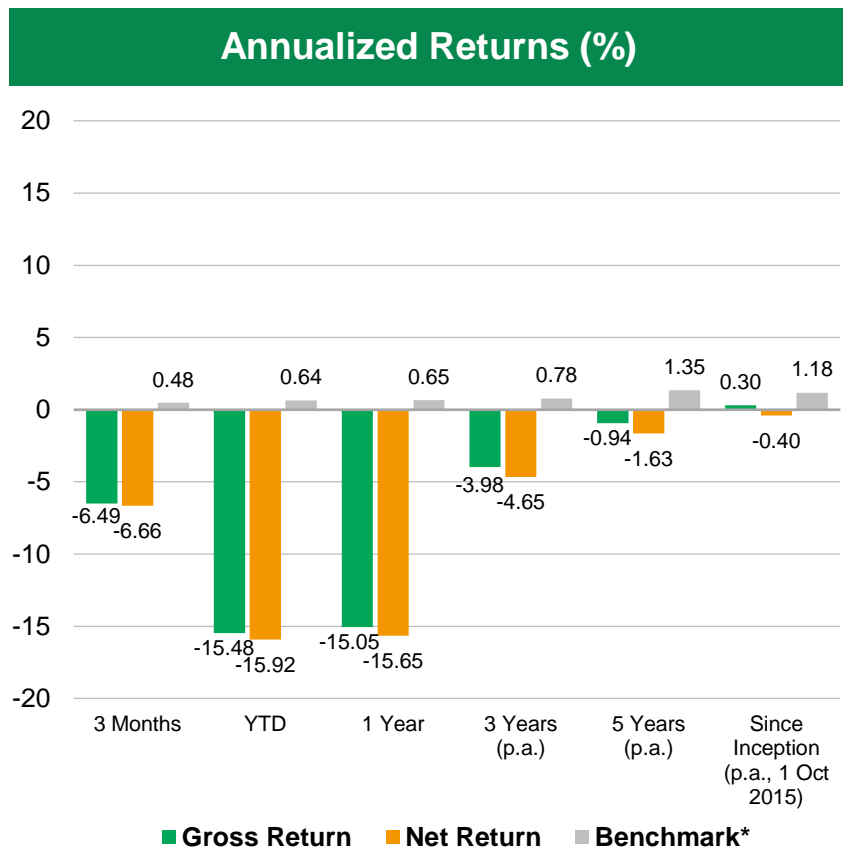
Active Currency Exposure (%)



As of 30 September 2022.

Asian Bond Absolute Return Composite

Investment Results as of 30 September 2022



As of 30 September 2022. Performance is shown in US dollar.

* Benchmark: The benchmark changed from BofA Merrill Lynch LIBOR 3-month Constant Maturity Index (USD) to ICE BofA 0-3 Month Treasury Bill Index on 1 April 2021.

Performance shown before this date relates to BofA Merrill Lynch LIBOR 3-month Constant Maturity Index (USD). Performance shown after 1 April 2021 relates to ICE BofA 0-3 Month Treasury Bill Index.

[^] Ex-post annualized volatility is the historical annualized standard deviation, based on the past 260 business days observation of the representative account.

Returns greater than one year are annualized. Past performance is not indicative of future results. Gross performance results do not include advisory fees and other expenses an investor may incur, which when deducted will reduce returns. Net performance results reflect the application of the highest incremental rate of the standard investment advisory fee schedule to gross performance results. Changes in exchange rates may have adverse effects.

Asian Bond Absolute Return Strategy

Performance Attribution Q3

Backdrop

- We establish macro-hedges amid growing recession and geopolitical risk. However, macro-hedges such as short USDJPY and AUDJPY positions did not work as expected, as policy divergence between BOJ-Fed and a shift higher in US yields weighed on JPY. In highlight, we took profit on the China sovereign CDS, a hedge for Asian credit, too early.

Main Contributors

- Long USDCNH – monetary policy divergence between the Fed and PBoC continued to drive USDCNH to new highs, despite PBoC's efforts to dampen the pace of depreciation through stronger daily fixings.
- Pay China 5-year swap – the position contributed to performance as China onshore yields retracted to higher levels towards the end of the period.

Main Detractors

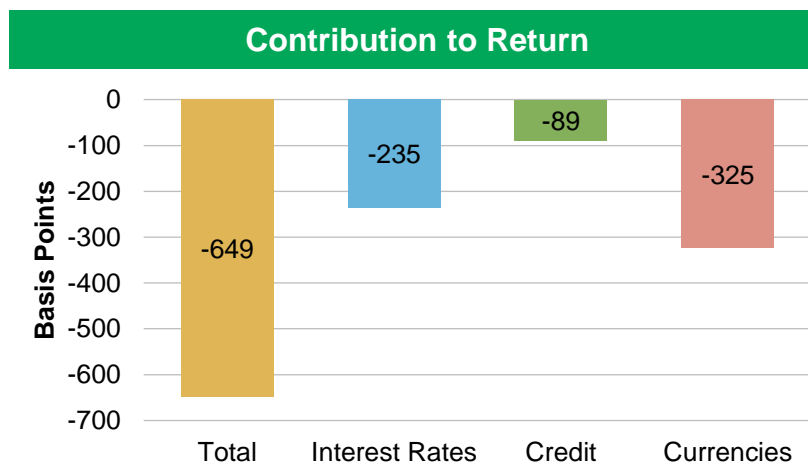
- Long exposure to Asian credit – global recession concerns and higher US yields weighed on global risk sentiment. Despite additional stimulus and liquidity support from China authorities, China's property market stress persisted over the period amid downgrades and uncertainty surrounding China's zero-Covid policy.
- Long KRW and other Asian FX positions – the positions weighed on performance amid broad US dollar strength, hawkish Fed and global growth concerns; Korean won traded at a 13-year low versus USD despite BOK's intervention in FX markets.
- Korea front-end rates and receive Korean swap rates – positions negatively impacted performance as front-end rates in Korea traded at decade highs in September. Rates surged as markets repriced in more hikes by year end following a hawkish BOK meeting, Korean government bonds sold off amid sharp US Treasury move higher.

Source: Manulife Investment Management, Bloomberg PORT system, as of 30 September 2022.

*The benchmark changed from BofA Merrill Lynch LIBOR 3-month Constant Maturity (USD) to ICE BofA 0-3 Month T Bill Index on 1 April 2021. Performance shown before this date relates to BofA Merrill Lynch LIBOR 3-month Constant Maturity (USD). Performance shown after 1 April 2021 relates to ICE BofA 0-3 Month T Bill Index.

Performance is shown in USD. Past performance is not indicative of future results. Returns greater than one year are annualized. Past performance is not indicative of future results. Gross performance results do not include advisory fees and other expenses an investor may incur, which when deducted will reduce returns. Net performance results reflect the application of the highest incremental rate of the standard investment advisory fee schedule to gross performance results. Changes in exchange rates may have adverse effects.

Performance (%)	Q3
Asian Bond Absolute Return Composite (Gross)	-6.49
Asian Bond Absolute Return Composite (Net)	-6.66
ICE BofA 0-3 Month T Bill Index*	0.48
Excess return (Gross)	-6.97
Excess Return (Net)	-7.14



Asian Bond Absolute Return Strategy

Asian Bond Markets Can Offer Opportunities For Active Managers

Risk	Market Factors	Investment Theme	Positioning
Interest Rates	<ul style="list-style-type: none"> Aggressive Fed and DM central bank monetary policy response to fight inflationary pressures. Relatively benign inflation environment and resilient supply-chain in Asia, allow Asian central banks to tighten its monetary policy at a more gradual pace than developed markets. 	<p>Volatile US yield environment</p> <p>Add selectively to Asian local curves</p>	<ul style="list-style-type: none"> Tactical US rate positioning Exposure to Indonesia and South Korea rates, offering relatively attractive yields for their respective credit rating. Relative value spread trade opportunities e.g., short Malaysia rates versus Korean rates, to capitalize on volatile interest rate environment
Credit	<ul style="list-style-type: none"> Demand for high quality Asian credits is well supported Compelling valuations are emerging in the Asian high yield space amid China property slump and negative investors sentiment 	<p>Embrace idiosyncratic credit opportunities rather than larger themes</p>	<ul style="list-style-type: none"> Focus on security selection Prefer Asian high yield corporate issuers with a straightforward business model, providing highly predictable liquidity profiles in various economic scenarios Moderate protection through Credit Default Swaps
Currencies	<ul style="list-style-type: none"> Fed's monetary tightening may provide dislocation opportunities in Asian currency bond markets. South Asian economies are opening their borders amid higher vaccination rates. 	<p>South Asian economies may experience catch up in growth trajectories</p>	<ul style="list-style-type: none"> Relative value spread trade opportunities to capitalize on currency volatility; adding directional positions where attractive on a risk-adjusted basis Opportunistically adding Asian local currency bond exposure e.g. THB which is reopening its economy.

As of 30 September 2022.

Asia Fixed Income Outlook

- Aggressive DM central bank monetary policy tightening will likely weigh on global growth outlook with risk of recession building.
- China's zero-COVID policy is making the 5.5% GDP target more challenging to achieve. We expect more aggressive monetary and fiscal policy response. The physical property sector remains stressed leading to dramatic repricing to the China property credit market.
- Asia ex-China region has generally adopted more flexible pandemic policies, which is expansionary for economic activity. Some Asian economies initiated various measures such as subsidies, tax cuts and trade restrictions to contain inflation. With relatively benign inflation environment and resilient supply-chain in Asia, we expect Asian central banks to tighten its monetary policy at a more gradual pace than developed markets.

For illustrative purposes only.

Source: Manulife Investment Management, as of 30 September 2022.

Asia ex-Japan Fixed Income Outlook			
Market	Rates	Credit	Currencies
China			-
Hong Kong			
India			
Indonesia	+	+	
Malaysia			
Philippines		-	
Singapore			
South Korea	+	+	+
Taiwan	-		
Thailand		+	+
Vietnam			

Key:

Positive outlook (+)

Neutral outlook

Negative outlook (-)

Why Manulife Asian Bond Absolute Return Strategy?

Why Asia Bonds?

- High quality, fast growing asset class in inefficient market structure

Why This Strategy?

- A liquid alternative strategy seeking to exploit market inefficiencies aiming to deliver positive returns, low correlation, whilst employing downside risk control

Why Manulife IM?

- We offer leading Asia fixed income capabilities leveraging the deep local expertise of our investment professionals

Diversification does not guarantee a profit nor protect against loss in any market.
Past performance is not indicative of future results.

Manulife Investment Management

Asian Bond Absolute Return Composite

GIPS® Report

Creation Date: January 1, 2018

Inception Date: October 1, 2015

Reporting Currency: USD

Schedule of Calendar Year Returns and Assets

Year End	Gross of Fees Return (%)	Net of Fees Return (%)	Benchmark Return (%)	Composite Net 3-Yr Std. Dev. (%)	Benchmark 3-Yr Std. Dev. (%)	Number of Portfolios End of Period	Composite Dispersion (%)	Total Assets End of Period (Millions)	Firm Assets End of Period (Millions)
2021	-0.03	-0.73	0.09	5.58	0.35	<=5	N/A	100	455,705
2020	3.29	2.57	1.08	5.64	0.28	<=5	N/A	99	421,097
2019	7.68	6.92	2.60	2.71	0.20	<=5	N/A	41	422,034
2018	1.16	0.45	2.08	1.99	0.19	<=5	N/A	28	392,058
2017	1.74	1.03	1.11	N/A	N/A	<=5	N/A	27	N/A
2016	4.09	3.36	0.66	N/A	N/A	<=5	N/A	26	N/A
Partial 2015	1.42	1.24	0.03	N/A	N/A	<=5	N/A	25	N/A

Schedule of Year End Returns

Date	Return	1 Year Gross (%)	5 Year Gross (%)	10 Year Gross (%)	SI Gross (%)	1 Year Net (%)	5 Year Net(%)	10 Year Net (%)	SI Net (%)
12/31/21	Composite	-0.03	2.73	N/A	3.07	-0.73	2.02	N/A	2.35
Date	Return	1 Year	5 Year	10 Year	SI				
12/31/21	Benchmark	0.09	1.39	N/A	1.22				

Firm Definition: For purposes of compliance with the Global Investment Performance Standards (GIPS®), our firm Manulife Investment Management "Manulife IM" was created on January 1, 2018 as a result of a consolidation of six firms that claimed compliance with GIPS®. Manulife IM comprises Manulife Investment Management (US) LLC, Manulife Investment Management (North America) Limited, Manulife Investment Management (Europe) Limited, Manulife Investment Management (Japan), Manulife Investment Management (Hong Kong) Limited, Manulife Investment Management (Singapore) Pte. Ltd., Manulife Investment Management Limited, Manulife Investment Management Private Markets (Canada) Corp. and John Hancock Trust Company. Effective January 1, 2021, the firm includes assets managed under contract by Manulife Investment Management Private Markets (US) LLC ("Manulife IM PM US") and the unaffiliated managers SMA/Wrap business from John Hancock Investment Management LLC, a Manulife IM company.

Compliance Statement: Manulife claims compliance with the Global investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Manulife has been independently verified for the periods 1/1/2018 through 12/31/2021. The verification report(s) is/are available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. Verification does not provide assurance on the accuracy of any specific performance report. Compliance with the GIPS® Standards for the predecessor firms were verified by a third party for the periods noted: MAM US 1/1/1993 to 12/31/2017, MAM UK 1/1/2008 to 12/31/2017, MAMJ 1/1/2006 to 12/31/2017, MAM HK 1/1/2006 to 12/31/2017, MAMS 6/5/2007 to 12/31/2017, and MAML 1/1/2007 to 12/31/2017. GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.

General Disclosure: A complete list of the Firm's composite and pooled funds descriptions as well as policies regarding valuing investments, calculating performance, and preparing GIPS reports are available upon request. All returns reflect the reinvestment of dividends and other earnings. Gross performance results do not reflect the deduction of investment management fees, and are net of commissions and foreign withholding tax. Net performance results reflect the application of the highest incremental rate of the standard investment advisory fee schedule to gross performance results. Actual fees may vary depending on, among other things, the applicable fee schedule and portfolio size. Advisory fees are available upon request. Dispersion of annual returns is measured by an equal weighted standard deviation calculation of gross of fee returns. From inception to December 31, 2019 dispersion was measured by an asset weighted standard deviation calculation of gross of fee returns. Dispersion is not presented when there are five or fewer accounts in the composite for the entire year. Past performance is not a guarantee of future results. For annual periods starting January 1, 2011, the 3-year annualized ex-post standard deviation is not shown for the composite or the benchmark when 36 monthly composite returns are not available. The 3-year standard deviation for composite returns is calculated using composite gross returns.

Composite Description: The Asian Bond Absolute Return strategy aims to provide a positive absolute return from a combination of capital appreciation and income generation by investing primarily in corporate and government bonds issued in the Asia Pacific region. In seeking to achieve its objective, the strategy has the flexibility to implement long and short positions via financial derivative instruments. There is a US\$5 million asset requirement to be eligible for inclusion in the strategy. As of December 31, 2015 the percentage of strategy assets that were non fee-paying affiliated seed capital was 100%, as of December 31, 2016 the percentage of strategy assets that were non fee-paying affiliated seed capital was 98.29%, as of December 31, 2017 the percentage of strategy assets that were non fee-paying affiliated seed capital was 96.77%, as of December 31, 2018 the percentage of strategy assets that were non fee-paying affiliated seed capital was 93.53%, as of December 31, 2019 the percentage of strategy assets that were non fee-paying affiliated seed capital was 68.68% and as of December 31, 2020 the percentage of strategy assets that were non-fee paying affiliated seed capital was 82.11%.

Fee Schedule: This report is intended for institutional investors and the standard investment advisory fee schedule is 0.70% on the first \$20 million; and 0.65% thereafter. From inception to June 30, 2019 the standard investment advisory fee schedule was 0.70% on the first \$50 million; 0.60% on the next \$50 million; and 0.50% thereafter

Benchmark Description: ICE BofA Merrill Lynch LIBOR® with a constant to zero to three-Month Average Maturity Index: This index represents the London interbank offered rate (LIBOR) with a constant three-month average maturity. Published by the British Bankers' Association, LIBOR is a composite of the rates of interest at which banks borrow from one another in the London market.

Derivatives Disclosure: As part of the investment process, financial derivatives may be used to manage risk, and to enhance returns. The strategy may engage in financial derivatives, such as forwards, futures and options for investment and hedging purposes. The strategy may employ a variety of hedging strategies with respect to specific portfolio holdings, or to the entire portfolio, or to both. Such strategies include "cross-hedging" and "proxy hedging." The strategy may also engage in exchange-traded financial derivatives, such as interest rate futures and options for investment and hedging purposes. Derivative instruments are only used when and as guidelines and regulations permit. The use of leverage magnifies both the favorable and unfavorable effects of price movements in an investment. To the extent that a strategy employs leverage, it will be subject to substantial risk of loss. The strategy may enter into repurchase and reverse repurchase agreements, and invest and trade in futures contracts, forward contracts, options, swaps and other derivative transactions, both for investment and hedging purposes.

Notice to Investors

BAHRAIN

The making available of this document is not intended to constitute, and should not be construed as amounting to, the conduct of a regulated investment service (as defined in volume 4 of the Rulebook issued by the Central Bank of Bahrain) within or from the Kingdom of Bahrain. All services described in this document are to be performed outside of Bahrain. This document has not been filed with or reviewed by the Central Bank of Bahrain, the Bahrain Bourse or the Ministry of Industry and Commerce of the Kingdom of Bahrain and accordingly those institutions take no responsibility for the accuracy of the statements and information contained in this document, nor shall they have any liability to any person for any loss or damage resulting from reliance on any statements or information contained herein.

KUWAIT

These confidential materials are not for general circulation to the public in Kuwait. Interests in any investment opportunities detailed are for information purposes only and have not been licensed for offering in Kuwait by the Capital Markets Authority, the Kuwait Central Bank or any other relevant Kuwaiti governmental agency. The offering of interests in any funds in Kuwait on the basis of a private placement or public offering is, therefore, restricted in accordance with Law No. 7 of 2010 and the bylaws thereto (as amended). No private or public offering of any investment opportunities detailed is being made in Kuwait, and no agreement relating to the entering into of any related agreement will be concluded in Kuwait. No marketing or solicitation or inducement activities are being used to offer or market interests in any funds in Kuwait.

OMAN

The information contained in this document neither constitutes a public offer of securities in the Sultanate of Oman as contemplated by the Commercial Companies Law of Oman (Sultani Decree 4/74) or the Capital Market Law of Oman (Sultani Decree 80/98), nor does it constitute an offer to sell, or the solicitation of any offer to buy Non-Omani securities in the Sultanate of Oman as contemplated by Article 139 of the Executive Regulations to the Capital Market Law (issued vide CMA Decision 1/2009). Additionally, this document is not intended to lead to the conclusion of any contract of whatsoever nature within the territory of the Sultanate of Oman. The Investor represents that he/she is a sophisticated investor (as described in Article 139 of the Executive Regulations of the Capital Market Law) and has such experience in business and financial matters that he/ she is capable of evaluating the merits and risks of an investment in securities. The investor acknowledges that an investment in securities is speculative and involves a high degree of risk.

QATAR

This document is provided on an exclusive basis to the specifically intended recipient thereof, upon that person's request and initiative, and for the recipient's personal use only.

Nothing in this document constitutes, is intended to constitute, shall be treated as constituting or shall be deemed to constitute, any offer or sale of securities in the State of Qatar or in the Qatar Financial Centre or the inward marketing of securities or an attempt to do business, as a bank, an investment company or otherwise in the State of Qatar or in the Qatar Financial Centre other than in compliance with any laws applicable in the State of Qatar or in the Qatar Financial Centre governing the issue, offering and sale of securities. This document and the underlying instruments have not been approved, registered or licensed by the Qatar Central Bank, the Qatar Financial Centres Regulatory Authority, the Qatar Financial Markets Authority or any other regulator in the State of Qatar.

Recourse against Manulife Asset Management and those involved with it, may be limited or difficult and may have to be pursued in a jurisdiction outside Qatar and the Qatar Financial Centre.

This document and any related documents have not been reviewed or approved by the Qatar Financial Centre's Regulatory Authority or the Qatar Central Bank. Any distribution of this document by the recipient to third parties in Qatar or the Qatar Financial Centre beyond the terms hereof is not authorised and shall be the liability of such recipient.

THE KINGDOM OF SAUDI ARABIA (THE "KINGDOM")

This document is not for general circulation to the public in the Kingdom and may not be distributed except to such persons as would be permitted under the Offers of Securities Regulations issued by the Capital Market Authority. Interests in any investment opportunities detailed are for information purposes only and have not been licensed for offering in the Kingdom by the Capital Markets Authority or any other relevant agency and the Capital Market Authority does not make any representation as to the accuracy or completeness of this document, and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of this document. All persons receiving this document should conduct their own due diligence in the accuracy of the information relating to the investment opportunities detailed herein. No private or public offering of any investment opportunities detailed are being made in the Kingdom by virtue of this document, and no agreement relating to the entering into of any related agreement will be concluded in the Kingdom. No marketing or solicitation or inducement activities are being used to offer or market interests in any funds in the Kingdom. If you do not understand the contents of this document you should consult an authorised financial advisor.

UNITED ARAB EMIRATES

This presentation has not been approved or licensed by the UAE Central Bank, the UAE Securities and Commodities Authority (SCA), the Dubai Financial Services Authority (DFSA) or any other relevant licensing authorities in the UAE, and does not constitute a public offer of securities in the UAE in accordance with the commercial companies law, Federal Law No. 8 of 1984 (as amended), SCA Resolution No.(37) of 2012 (as amended) or otherwise.

This presentation is strictly private and confidential and is being issued to a limited number of institutional and individual investors who qualify as sophisticated investors and must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose.

Investment Considerations

A widespread health crisis such as a global pandemic could cause substantial market volatility, exchange-trading suspensions and closures, and affect portfolio performance. For example, the novel coronavirus disease (COVID-19) has resulted in significant disruptions to global business activity. The impact of a health crisis and other epidemics and pandemics that may arise in the future, could affect the global economy in ways that cannot necessarily be foreseen at the present time. A health crisis may exacerbate other pre-existing political, social and economic risks. Any such impact could adversely affect the portfolio's performance, resulting in losses to your investment.

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. Net performance results reflect the application of the highest incremental rate of the standard investment advisory fee schedule to gross performance results. 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.

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.

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 decision-making processes. Further details on Manulife Investment Management's 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.

Important Information

© 2022 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 document 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 global wealth and asset management segment of Manulife Financial Corporation. We draw on more than a century of financial stewardship to partner with clients across our institutional, retail, and retirement businesses globally. Our specialist approach to money management includes the highly differentiated strategies of our fixed-income, specialized equity, multi-asset solutions, and private markets teams—along with access to specialized, unaffiliated asset managers from around the world through our multimanager model.

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 the material 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 your 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.