

27 February 2020 – Market Update: Coronavirus: seeking to protect GBaR portfolios from tail risk

SOLUTIONS & MULTI-ASSET | GLOBAL BALANCED RISK CONTROL TEAM | MARKET PULSE | 27 February 2020

Over the last week, the impact of the coronavirus (COVID-19)¹ has escalated substantially outside China, with confirmed cases in over 30 countries, most notably South Korea, Japan, Italy and some Middle Eastern countries. Although the virus is contagious and unlikely to be contained, we believe that the situation is still manageable as seen in the case of Singapore. In addition, COVID-19 appears to have a low mortality rate compared with SARS, while the situation in China seems to be improving. Finally, the outbreak of a pandemic virus is disruptive, but not destructive like a natural disaster. Therefore, it is reasonable to believe that global economic growth recovery could be delayed, but not derailed completely.

If we see further deterioration, we could see more monetary and fiscal policies globally from central banks and governments to combat the impact of the virus. Furthermore, the decline in financial markets could provide potential investment opportunities. That said, we will monitor the situation closely to identify the appropriate point at which to move back into risk assets, but need to have evidence of stabilisation before we are comfortable making such a move.

In contrast to the short-term shock the virus may deliver to the global economy, longer-term growth may be more at risk from potential changes in US economic policy if a Democrat were to win the United States presidential election later this year. The impact would likely result in less business friendly policies such as the reversal of President Trump's tax cuts and further regulation. We believe that this outcome has yet to be priced in and the risk depends on how the US Presidential campaign develops from here.

More generally, looking through the virus impact we still expect the likely economic environment to remain benign - essentially non-recessionary, albeit with slow growth. However, we continue to see tail risk at elevated levels, which

AUTHORS



ANDREW HARMSTONE

*Managing Director,
Lead Global Portfolio Manager,
Global Balanced Risk Control
Team*



MANFRED HUI

*Managing Director,
Co-Lead Global Portfolio
Manager, Global Balanced Risk
Control Team*



CHRISTIAN GOLDSMITH

*Executive Director,
Portfolio Specialist,
Global Balanced Risk
Control Team*

¹ World Health Organization (WHO), www.who.int/emergencies/diseases/novel-coronavirus-2019

implies a portfolio allocation would benefit from tail risk hedges including gold, the US dollar and developed market government bonds. With respect to the last, we are cautious as they appear to be somewhat overpriced.

What actions have we taken in Global Balanced Risk Control (GBaR) portfolios?

We have reduced risk to protect our portfolios and are using options to hedge tail risk where permitted. We have recently experienced pronounced tail risk, in an environment of otherwise benign volatility. This tail risk is not only attributable to the impact of COVID-19, but also for example, associated with US-China trade negotiations. Therefore during the last months of 2019, to help protect GBaR portfolios from tail risks, we were relatively cautiously positioned in equities. However, when heightened risk failed to materialise, realised volatility remained low and our relatively low equity exposure meant that we did not capture as much upside as we would have liked.

During 2020, we have implemented an enhanced tail risk hedging strategy incorporating, when permitted in a portfolio, the use of options. Separate to our market views, this strategy enables us to have an equity weight more consistent with the mid-point of the volatility target ranges of our portfolios, whilst being confident that the tail risks are suitably hedged.

The strategy is not only designed to hedge portfolios against potential downside and tail risk by seeking to reduce equity exposure as a result of a sudden drop in equity markets, but also enables a measure of upside participation by increasing equity exposure were equity markets to suddenly rise.

For clients who may not use options or for advisory portfolios, adjusting volatility has still made sense, as keeping overall risk low to reduce the potential impact of tail risk events with a probability of well below 50% may impact longer term performance. As of 26 February we have reduced risk in portfolios where options are not permitted, so they are brought into line and there is consistency across our portfolios. For all our accounts we continue to rely on diversification of traditional assets to manage risk overall, which includes tail risk events.

RISK CONSIDERATIONS

There is no assurance that the Strategy will achieve its investment objective. Portfolios are subject to market risk, which is the possibility that the market values of securities owned by the portfolio will decline and that the value of portfolio shares may therefore be less than what you paid for them. Accordingly, you can lose money investing in this portfolio. Please be aware that this strategy may be subject to certain additional risks. There is the risk that the Adviser's **asset allocation methodology and assumptions** regarding the Underlying Portfolios may be incorrect in light of actual market conditions and the Portfolio may not achieve its investment objective. Share prices also tend to be volatile and there is a significant possibility of loss. The portfolio's investments in **commodity-linked notes** involve substantial risks, including risk of loss of a significant portion of their principal value. In addition to commodity risk, they may be subject to additional special risks, such as risk of loss of interest and principal, lack of secondary market and risk of greater volatility, that do not affect traditional equity and debt securities. **Currency fluctuations** could erase investment gains or add to investment losses. **Fixed-income securities** are subject to the ability of an issuer to make timely principal and interest payments (credit risk), changes in interest rates (interest-rate risk), the creditworthiness of the issuer and general market liquidity (market risk). In a rising interest-rate environment, bond prices may fall. **Equity and foreign securities** are generally more volatile than fixed income securities and are subject to currency, political, economic and market risks. Equity values fluctuate in response to activities specific to a company. Stocks of **small-capitalization companies** carry special risks, such as limited product lines, markets and financial resources, and greater market volatility than securities of larger, more established companies. The risks of investing in **emerging market** countries are greater than risks associated with investments in foreign developed markets. **Exchange traded funds (ETFs)** shares have many of the same risks as direct investments in common stocks or bonds and their market value will fluctuate as the value of the underlying index does. By investing in exchange traded funds ETFs and other **Investment Funds**, the portfolio absorbs both its own expenses and those of the ETFs and Investment Funds it invests in. Supply and demand for ETFs and Investment Funds may not be correlated to that of the underlying securities. **Derivative instruments** can be illiquid, may disproportionately increase losses and may have a potentially large negative impact on the portfolio's performance. A **currency forward** is a hedging tool that does not involve any upfront payment. The use of **leverage** may increase volatility in the Portfolio. **Diversification** does not protect you against a loss in a particular market; however, it allows you to spread that risk across various asset classes.

DISCLOSURES

The views and opinions are those of the author as of the date of publication and are subject to change at any time due to market or economic conditions and may not necessarily come to pass. Furthermore, the views will not be updated or otherwise revised to reflect information that subsequently becomes available or circumstances existing, or changes occurring, after the date of publication. The views expressed do not reflect the opinions of all portfolio managers at Morgan Stanley Investment Management (MSIM) or the views of the firm as a whole, and may not be reflected in all the strategies and products that the Firm offers.

Forecasts and/or estimates provided herein are subject to change and may not actually come to pass. Information regarding expected market returns and market outlooks is based on the research, analysis and opinions of the authors. These conclusions are speculative in nature, may not come to pass and are not intended to predict the future performance of any specific Morgan Stanley Investment Management product.

Except as otherwise indicated, the views and opinions expressed herein are those of the portfolio management team, are based on matters as they exist as of the date of preparation and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available or circumstances existing, or changes occurring, after the date hereof.

Certain information herein is based on data obtained from third party sources believed to be reliable. However, we have not verified this information, and we make no representations whatsoever as to its accuracy or completeness.

The information herein is a general communications which is not impartial and has been prepared solely for information and educational purposes and does not constitute an offer or a recommendation to buy or sell any particular security or to adopt any specific investment strategy.

The material contained herein has not been based on a consideration of any individual client circumstances and is not investment advice, nor should it be construed in any way as tax, accounting, legal or regulatory advice. To that end, investors should seek independent legal and financial advice, including advice as to tax consequences, before making any investment decision.

Past performance is no guarantee of future results. Charts and graphs provided herein are for illustrative purposes only.

This communication is not a product of Morgan Stanley's Research Department and should not be regarded as a research recommendation. The information contained herein has not been prepared in accordance with legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

This commentary is only intended for, and will be only distributed to, persons resident in jurisdictions where distribution or availability would not be contrary to local laws or regulations.

There is no guarantee that any investment strategy will work under all market conditions, and each investor should evaluate their ability to invest for the long-term, especially during periods of downturn in the market. Prior to investing, investors should carefully review the product's relevant offering document. There are important differences in how the strategy is carried out in each of the investment vehicles.

DISTRIBUTION

This communication is only intended for and will only be distributed to persons resident in jurisdictions where such distribution or availability would not be contrary to local laws or regulations.

EMEA: This communication has been issued by Morgan Stanley Investment Management Limited ("MSIM"). Authorised and regulated by the Financial Conduct Authority. Registered in England No. 1981121. Registered Office: 25 Cabot Square, Canary Wharf, London E14 4QA.

Hong Kong: This document has been issued by Morgan Stanley Asia Limited for use in Hong Kong and shall only be made available to "professional investors" as defined under the Securities and Futures Ordinance of Hong Kong (Cap 571). The contents of this document have not been reviewed nor approved by any regulatory authority including the Securities and Futures Commission in Hong Kong. Accordingly, save where an exemption is available under the relevant law, this document shall not be issued, circulated, distributed, directed at, or made available to, the public in Hong Kong.

Singapore: This publication should not be considered to be the subject of an invitation for subscription or purchase, whether directly or indirectly, to the public or any member of the public in Singapore other than (i) to an institutional investor under section 304 of the Securities and Futures Act, Chapter 289 of Singapore ("SFA"), (ii) to a "relevant person" (which includes an accredited investor) pursuant to section 305 of the SFA, and such distribution is in accordance with the conditions specified in section 305 of the SFA; or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA. This publication has not been reviewed by the Monetary Authority of Singapore. **Australia:** This publication is disseminated in Australia by Morgan Stanley Investment Management (Australia) Pty Limited ACN: 122040037, AFSL No. 314182, which accepts responsibility for its contents. This publication, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act.

Taiwan: This material is provided for information purposes only and does not constitute a solicitation where such a solicitation is unlawful. The products mentioned herein this material may or may not have been registered with the Securities and Futures Bureau of the Financial Supervisory Commission in Taiwan, Republic of China ("ROC") pursuant to relevant securities laws and regulations. Such products may only be made available in the ROC if they are (a) registered for public sale in the ROC or (b) availed on a private placement basis to specified financial institutions and other entities and individuals meeting specific criteria pursuant to the private placement provisions of the ROC Rules Governing Offshore Funds.

Korea: This material is not, and under no circumstances is to be construed as an offering of securities in Korea. No representation is being made with respect to the eligibility of any recipients of this material under the laws of Korea, including but without limitation, the Foreign Exchange Transaction Law and Regulations thereunder. The Fund's mentioned herein this material may or may not have been registered with the Financial Services Commission of Korea under the Financial Investment Services and Capital Markets Act and may not be offered directly or indirectly, in Korea or to any resident of Korea except pursuant to applicable laws and regulations of Korea.

Japan: For professional investors, this document is circulated or distributed for informational purposes only. For those who are not professional investors, this document is provided in relation to Morgan Stanley Investment Management (Japan) Co., Ltd. ("MSIMJ")'s business with respect to discretionary investment management agreements ("IMA") and investment advisory agreements ("IAA"). This is not for the purpose of a recommendation or solicitation of transactions or offers any particular financial instruments. Under an IMA, with respect to management of assets of a client, the client prescribes basic management policies in advance and commissions MSIMJ to make all investment decisions based on an analysis of the value, etc. of the securities, and MSIMJ accepts such commission. The client shall delegate to MSIMJ the authorities necessary for making investment. MSIMJ exercises the delegated authorities based on investment decisions of MSIMJ, and the client shall not make individual instructions. All investment profits and losses belong to the clients; principal is not guaranteed. Please consider the investment objectives and nature of risks before investing. As an investment advisory fee for an IAA or an IMA, the amount of assets subject to the

contract multiplied by a certain rate (the upper limit is 2.20% per annum (including tax)) shall be incurred in proportion to the contract period. For some strategies, a contingency fee may be incurred in addition to the fee mentioned above. Indirect charges also may be incurred, such as brokerage commissions for incorporated securities. Since these charges and expenses are different depending on a contract and other factors, MSIMJ cannot present the rates, upper limits, etc. in advance. All clients should read the Documents Provided Prior to the Conclusion of a Contract carefully before executing an agreement. This document is disseminated in Japan by MSIMJ, Registered No. 410 (Director of Kanto Local Finance Bureau (Financial Instruments Firms)), Membership: the Japan Securities Dealers Association The Investment Trusts Association, Japan, the Japan Investment Advisers Association and the Type II Financial Instruments Firms Association.

LatAm

BRAZIL. This document does not constitute a public offering of securities for the purposes of the applicable Brazilian regulations and has therefore not been and will not be registered with the Brazilian Securities Commission (Comissão de Valores Mobiliários) or any other government authority in Brazil. All information contained herein is confidential and is for the exclusive use and review of the intended addressee of this document, and may not be passed on to any third party.

CHILE. Neither the Fund nor the interests in the Fund are registered in the Registry of Offshore Securities (el Registro de Valores Extranjeros) or subject to the supervision of the Commission for the Financial Market (la Comisión para el Mercado Financiero). This document and other offering materials relating to the offer of the interests in the Fund do not constitute a public offer of, or an invitation to subscribe for or purchase, the Fund interests in the Republic of Chile, other than to individually identified purchasers pursuant to a private offering within the meaning of Article 4 of the Chilean Securities Act (la Ley del Mercado de Valores) (an offer that is not "addressed to the public at large or to a certain sector or specific group of the public").

COLOMBIA. This document does not constitute an invitation to invest or a public offer in the Republic of Colombia and is not governed by Colombian law. The interests in the Fund have not been and will not be registered with the National Register of Securities and Issuers (el Registro Nacional de Valores y Emisores) maintained by the Financial Supervisory Authority of Colombia (la Superintendencia Financiera de Colombia) and will not be listed on the Colombian Stock Exchange (la Bolsa de Valores de Colombia). The interests in the Fund are being offered under circumstances which do not constitute a public offering of securities under applicable Colombian securities laws and regulations. The offer of the interests in the Fund is addressed to fewer than one hundred specifically identified investors. Accordingly, the interests in the Fund may not be marketed, offered, sold or negotiated in Colombia, except under circumstances which do not constitute a public offering of securities under applicable Colombian securities laws and regulations. This document is provided at the request of the addressee for information purposes only and does not constitute a solicitation. The interests in the Fund may not be promoted or marketed in Colombia or to Colombian residents unless such promotion and marketing is carried out in compliance with Decree 2555 of 2010 and other applicable

rules and regulations related to the promotion of foreign financial and securities related products or services in Colombia.

Colombian eligible investors acknowledge that the interests in the Fund (i) are not financial products, (ii) are transferable only in accordance with the terms of the Fund's constitutional documents and (iii) do not offer any principal protection.

Colombian eligible investors acknowledge Colombian laws and regulations (in particular, foreign exchange, securities and tax regulations) applicable to any transaction or investment consummated in connection with an investment in the Fund, and represent that they are the sole liable party for full compliance with any such laws and regulations. In addition, Colombian investors acknowledge and agree that the Fund will not have any responsibility, liability or obligation in connection with any consent, approval, filing, proceeding, authorization or permission required by the investor or any actions taken or to be taken by the investor in connection with the offer, sale or delivery of the interests in the Fund under Colombian law.

MEXICO. Any prospective purchaser of the interests in the Fund must be either an institutional investor (*inversionista institucional*) or a qualified investor (*inversionista calificado*) within the meaning of the Mexican Securities Market Law (*Ley del Mercado de Valores*) (the "Securities Market Law") and other applicable Mexican laws in effect.

The interests in the Fund have not and will not be registered in the National Registry of Securities (*Registro Nacional de Valores*) maintained by the Mexican Banking and Securities Commission (*Comisión Nacional Bancaria y de Valores*). The interests in the Fund may not be offered or sold in the United Mexican States by any means except in circumstances which constitute a private offering pursuant to Article 8 of the Securities Market Law and its regulations. No Mexican regulatory authority has approved or disapproved the interests in the Fund or passed on the solvency of the Fund. All applicable provisions of the Securities Market Law must be complied with in respect of any sale, offer or distribution of, or intermediation in respect of, the Fund interests in, from or otherwise involving Mexico, and any resale of the interests in the Fund within Mexican territory must be made in a manner that will constitute a private offering pursuant to Article 8 of the Securities Market Law and its regulations.

PERU. The interests in the Fund have not been and will not be registered in Peru under Decreto Legislativo 862: *Ley de Fondos de Inversión y sus Sociedades Administradoras* or under Decreto Legislativo 861: *Ley del Mercado de Valores* (the "Securities Market Law"), and are being offered to institutional investors only (as defined in article 8 of the Securities Market Law) pursuant to a private placement, according to article 5 of the Securities Market Law. The interests in the Fund have not been registered in the securities market public registry (*Registro Público del Mercado de Valores*) maintained by, and the offering of the Fund interests in Peru is not subject to the supervision of, the Superintendencia del Mercado de Valores. Any transfers of the Fund interests shall be subject to the limitations contained in the Securities Market Law and the regulations issued thereunder.

URUGUAY. The offering of the Interests qualifies as a private placement pursuant to section 2 of Uruguayan law 18,627. The Interests will not be offered or sold to the public (Individuals or Companies) in Uruguay, except in circumstances which do not

constitute a public offering or distribution through a recognized Exchange under Uruguayan laws and regulations,. Neither the Fund nor the Interests are or will be registered with la Superintendencia de Servicios Financieros del Banco Central del Uruguay. The Fund corresponds to an investment fund that is not an investment fund regulated by Uruguayan law 16,774 dated September 27, 1996, as amended.

The whole or any part of this work may not be reproduced, copied or transmitted or any of its contents disclosed to third parties without MSIM's express written consent.

All information contained herein is proprietary and is protected under copyright law.

Morgan Stanley Investment Management is the asset management division of Morgan Stanley.