Agency MBS: A broad investment universe

Macquarie Investment Management

Ion Dan
Senior Portfolio Manager
September 2018

Introduction

The agency mortgage backed securities (MBS) market is often just associated with physical pass through pools, but the universe is much broader extending to structured securities in the form of agency Collateralised Mortgage Obligations (CMO) and forward contracts called To Be Announced (TBA). This diverse universe can provide opportunities and help address some of the challenges investors face in this low yield environment. This insight provides an overview of the investment universe, focusing on the unique features of the underlying security types and how when managed in an absolute return investment style, can help provide an attractive solution to address some of the headwinds in markets today.

Investment universe overview

The agency MBS universe is a diverse opportunity set comprising of physical pools, structured securities and derivates, each briefly explained below:

- **Pass through agency MBS pools** are constructed by pools of securitised mortgage loans issued and guaranteed by US government agencies. These pooled securities are typically comprised of fixed-rate loans with terms of 30, 20, or 15 years, as floating rate residential loans are less prevalent in the US.
- **Agency CMOs** are constructed from agency MBS pools by redistributing the principal and interest cash flows into tranches. Multiple structure types are available and include basic sequential, interest only / principal only and planned amortisation classes.

- **TBAs** are effectively forward agency MBS where the parties agree to buy or sell on a specific future date. The basic characteristics of the pool to be delivered are agreed upfront with the specific pool announced 48 hours prior to the trade settlement date.

While each of the securities above have different features that can play specific roles in a total portfolio setting, they all exchange credit risk (as the securities are government guaranteed) for prepayment risk. Prepayment risk reflects the optionality of these cashflows as US mortgage borrowers can repay the principal in full or part at any time without penalty. An enhanced yield over the risk-free rate is paid to compensate for this prepayment risk.

Seeking to address the challenges faced by investors

Portfolio diversification

Investors are increasingly seeking additional portfolio diversification tools as we enter the latter stages of an already extended economic cycle, where valuations are stretched, and yields are low.

The agency MBS universe can provide an additional source of diversification, from both a correlation and return perspective. Pass through securities, certain CMO structures and TBA's are uncorrelated to stocks providing total portfolio protection in a risk-off environment. From a return perspective, the universe is unique in that it provides the opportunity to add additional returns from managing prepayment risk.

An example of extracting this alpha is when investing in pass through securities, we have identified that pools with low loan balances generally exhibit less prepayment sensitivity (due to the lower dollar savings on rate decreases) and higher returns than equivalent pools with higher loan size balances. In CMO securities when rates are rising, Interest Only (IO) structures tend to perform well as prepayments fall resulting in interest being paid over a longer period on the principal outstanding.

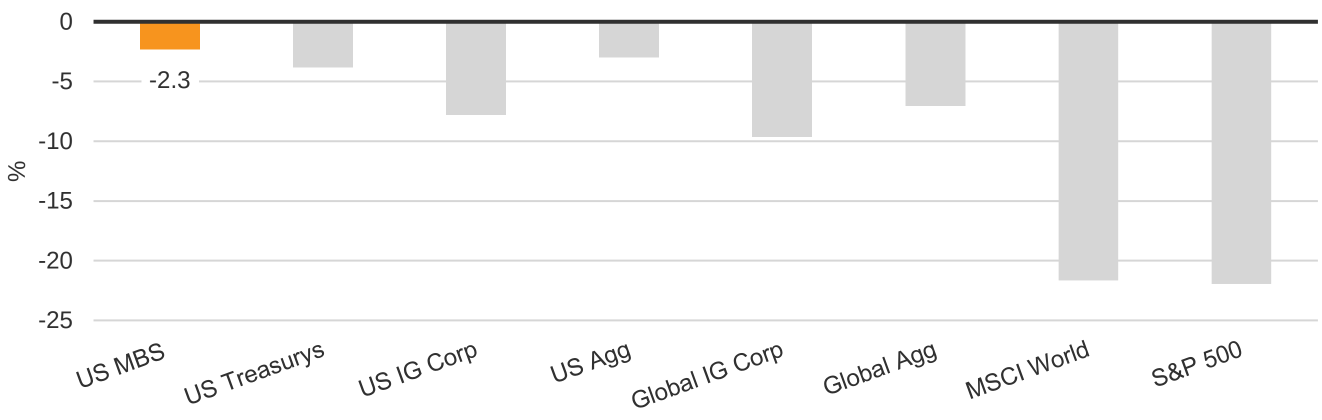
Capital preservation

In this low yield environment, many investors have had to move out the risk spectrum and down the capital structure to generate returns, even in their defensive allocations. The agency MBS universe can provide some relief for those challenged with low returns and riskier holdings.

The asset class is AAA rated, has an implicit and explicit backing of the US government and provides an enhanced yield over the risk-free rate to compensate for prepayment risk.

Focusing on pass through securities, when compared to the other major fixed income and equity indices over a 24-year period, these securities offer less downside risk with milder drawdowns and lower quarters of negative returns as illustrated below. Pass throughs are also very liquid, are the second largest fixed income asset class after US Treasuries and have high daily trading volumes.

Pass through securities - Milder quarterly drawdowns



Source: Bloomberg and Securities Industry and Financial Markets Association. Monthly Bloomberg Barclays index data 1994-2018 for: 1) US MBS, 2) US Treasury, 3) US Corporate Investment Grade, 4) US Aggregate, 5) Global Corporate Investment Grade, 6) Global Aggregate, 7) MSCI World, 8) S&P 500

The asset class can provide further risk management and protection benefits through the use of TBAs. This forward security allows portfolio managers to increase and decrease exposure to prepayment risk through a single transaction, allowing time to adjust the underlying security selection through fundamental research. This is particularly critical in times of rising prepayment rates.

Attractive return profile

Macquarie uses the agency MBS universe in an absolute return style investment solution (Macquarie Absolute Return Agency MBS) that targets LIBOR +3% through the cycle. The strategy uses a time-tested investment approach and has consistently delivered on this return objective[1] while achieving a high information ratio and low volatility of returns.

The portfolio is constructed with a core consisting of pass through pools and CMOs that have been selected through in-depth fundamental research, an overlay component for hedging and other alpha opportunities, and overall duration management to position for the prevailing interest rate environment. The portfolio capitalises on the management of prepayment risk, which is a differentiation relative to credit investments.

Conclusion

The agency MBS universe is diverse in nature. At the asset class level, it provides a high-quality AAA rated solution to investors with a government guarantee, and an additional alpha source in the form of managing prepayment risk. Each of the underlying security types offer their own unique features; from the highly liquid nature of pass throughs - to the ability to strip out principal and interest in CMOs - to the flexibility of the TBA market to effectively alter prepayment exposure or extract relative value.

Utilising the full spectrum of the agency MBS universe, with a focus on fundamental research and capital preservation can help investors with some of the return, risk and diversification challenges they face today.

[1] Strategy has delivered in excess of LIBOR +3% over 3 and 5 years as at 31 August 2018

This publication is intended for use only with institutional and professional investors. Not for public distribution.

IMPORTANT RISK CONSIDERATIONS

Investing involves risk, including the possible loss of principal.

Fixed income securities and bond funds can lose value, and investors can lose principal, as interest rates rise. They also may be affected by economic conditions that hinder an issuer's ability to make interest and principal payments on its debt.

The strategy may also be subject to prepayment risk, the risk that the principal of a bond that is held by a portfolio will be prepaid prior to maturity, at the time when interest rates are lower than what the bond was paying. A portfolio may then have to reinvest that money at a lower interest rate.

Securities in the lowest of the rating categories considered to be investment grade (that is, Baa or BBB) have some speculative characteristics.

An investment in the [Fund/Portfolio/Series/account] is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency.

Past performance does not guarantee future results.

For more information go to macquarie.com/investment-management

Americas
Market Street, Philadelphia
T: 215 255 1200
E: mim.americas@macquarie.com

Asia
Harbor View, Hong Kong
T: 852 3922 1256
E: macquarie.funds.hk@macquarie.com

Australia
Martin Place, Sydney
T: 1800 814523
E: mim@macquarie.com

Europe/Middle East/Africa
Ropemaker Place, London
T: 44 020 3037 2049
E: mim.emea@macquarie.com

This information is confidential and intended for the audiences as indicated below. It is not to be distributed to, or disclosed to retail investors.

The views expressed represent the Manager's as of the date indicated, and should not be considered a recommendation to buy, hold, or sell any security, and should not be relied on as research or investment advice. Views are subject to change without notice.

The information in this document is not, and should not be construed as, an advertisement, an invitation, an offer, a solicitation of an offer or a recommendation to participate in any investment strategy or take any other action, including to buy or sell any product or security or offer any banking or financial service or facility by any member of the Macquarie Group. The information presented is not intended and should not be construed to be a presentation of information for any U.S. mutual fund nor an offer for any product or service in any jurisdiction where it would be unlawful to do so. This document has been prepared without taking into account any person's objectives, financial situation or needs. Recipients should not construe the contents of this document as financial, investment or other advice. It should not be relied on in making any investment decision.

Future results are impossible to predict. This document contains opinions, conclusions, estimates and other forward-looking statements which are, by their very nature, subject to various risks and uncertainties. Actual events or results may differ materially, positively or negatively, from those reflected or contemplated in such forward-looking statements. Past performance information shown herein, is not indicative of future results.

This presentation does not contain all the information necessary to fully evaluate any investment program, and reliance should not be placed on the contents of this document. Any decision with respect to any investment program referred to herein should be made based solely upon appropriate due diligence by the prospective investor. The investment capabilities described herein involve risks due, among other things, to the nature of the underlying investments. All examples herein are for illustrative purposes only and there can be no assurance that any particular investment objective will be realized or any investment strategy seeking to achieve such objective will be successful.

No representation or warranty, express or implied, is made as to the accuracy or completeness of the information, opinions and conclusions contained in this presentation. In preparing this presentation, reliance has been placed, without independent verification, on the accuracy and completeness of all information available from external sources.

Macquarie Investment Management (MIM) is the marketing name for the following registered investment advisers: Macquarie Investment Management Business Trust, Macquarie Funds Management Hong Kong Limited, Macquarie Investment Management Austria Kapitalanlage AG, Macquarie Investment Management Global Limited, Macquarie Investment Management Europe Limited, and Macquarie Capital Investment Management LLC.Other than Macquarie Bank Limited (MBL), none of the entities noted in this presentation are authorised deposit-taking institutions for the purposes of the Banking Act 1959 (Commonwealth of Australia). The obligations of these entities do not represent deposits or other liabilities of MBL. MBL does not guarantee or otherwise provide assurance in respect of the obligations of these entities, unless noted otherwise.

Diversification may not protect against market risk.

For recipients in the United States, this document is provided by Macquarie Investment Management Business Trust (MIMBT). Institutional investment management is provided by Macquarie Investment Management Advisers (MIMA), a series of MIMBT. MIMBT is a U.S. registered investment advisor, and may not be able to provide investment advisory services to certain clients in certain jurisdictions.

For recipients the European Economic Area, this document is a financial promotion distributed by Macquarie Investment Management Europe Limited (MIMEL) to Professional Clients or Eligible Counterparties defined in the Markets in Financial Instruments Directive 2004/39/EC. MIMEL is authorised and regulated by the Financial Conduct Authority. MIMEL is incorporated and registered in England and Wales (Company No. 09612439, Firm Reference No. 733534). The registered office of MIMEL is Ropemaker Place, 28 Ropemaker Street, London, EC2Y 9HD. The investment capabilities described herein are managed by MIMEL, with day-to-day management responsibilities sub-delegated to relevant affiliated managers.

This document 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.

For recipients in Switzerland, this document is distributed by Macquarie Investment Management Switzerland GmbH. In Switzerland this document is directed only at qualified investors (the "Qualified Investors"), as defined in the Swiss Collective Investment Schemes Act of 23 June 2006, as amended ("CISA") and its implementing ordinance.

For recipients in Australia, this document is provided by Macquarie Investment Management Global Limited (ABN 90 086 159 060 Australian Financial Services Licence 237843) solely for general informational purposes. This document does not constitute a recommendation to acquire, an invitation to apply for, an offer to apply for or buy, an offer to arrange the issue or sale of, or an offer for issue or sale of, any securities in Australia. This document has been prepared, and is only intended, for 'wholesale clients' as defined in section 761G of the Corporations Act and applicable regulations only and not to any other persons. This document does not constitute or involve a recommendation to acquire, an offer or invitation for

This publication is intended for use only with institutional and professional investors. Not for public distribution.

issue or sale, an offer or invitation to arrange the issue or sale, or an issue or sale, of interests to a 'retail client' (as defined in section 761G of the Corporations Act and applicable regulations) in Australia.

For recipients in PRC, Macquarie is not an authorized securities firm or bank in the People's Republic of China and does not conduct securities or banking business in the People's Republic of China.

For recipients in Hong Kong, this document is provided by Macquarie Funds Management Hong Kong Limited (CE No. AGZ772) (MFMHK), a company licensed by the Securities and Futures Commission for the purpose of giving general information in relation to the strategy(ies) described herein. The information contained in this presentation is provided on a strictly confidential basis for your benefit only and must not be disclosed to any other party without the prior written consent of MFMHK. If you are not the intended recipient you are not authorised to use this information in any way. This presentation does not, and is not intended to, constitute an invitation or an offer of securities, units of collective investments schemes or commodities (or any interests in any index thereof) for purchase or subscription in Hong Kong. The information in this presentation is prepared and only intended for professional investors and not to any other person. This presentation has not been approved or reviewed by the Securities and Futures Commission.

For recipients in Korea, this document is provided at the specific request of the recipient who is a person specified under Article 101(2) of the Presidential Decree of the Financial Investment Services and Capital Markets Act (Act) without any solicitation by Macquarie. Therefore, this document may not be distributed, either directly or indirectly, to others in Korea. The person receiving this document represents and warrants that if it receives this document, it is a professional investor as defined under the Act. No member of the Macquarie Group makes any representation with respect to the eligibility of any recipients of this presentation to acquire the products or services therein under the laws of Korea, including but without limitation the Foreign Exchange Transactions Act and Regulations thereunder. The products and services have not been registered under the Act, and none of the interests may be offered, sold or delivered, or offered or sold to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to applicable laws and regulations of Korea.

For recipients in Malaysia, Taiwan, The Philippines, this document is provided at the specific request of the recipient.

For recipients in Singapore, the Strategies which are the subject of this document do not relate to a collective investment scheme which is authorised under section 286 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA") or recognised under section 287 of the SFA. The Strategies are not authorised or recognised by the Monetary Authority of Singapore (the "MAS") and shares are not allowed to be offered to the retail public. Each of this document and any other document or material issued in connection with the document is not a prospectus as defined in the SFA. Accordingly, statutory liability under the SFA in relation to the content of prospectuses would not apply. You should consider carefully whether the investment is suitable for you. This document has not been registered as a prospectus with the MAS. Accordingly, this document and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares may not be circulated or distributed, nor may shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 304 of the SFA, (ii) to a relevant person pursuant to Section 305(1), or any person pursuant to Section 305(2), and 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.

For recipients in Japan, this document is provided by MFMHK. MFMHK is supported by Macquarie Asset Management Japan Co., Ltd., a Financial Instruments Business Operator: Director General of the Kanto Local Finance Bureau (Financial Instruments Business) No.2769 (Member of Japan Investment Advisers Association). This presentation does not, and is not intended to, constitute an invitation or an offer of securities in Japan. The securities have not been and will not be registered under the Financial Instruments and Exchange Act of Japan. None of the securities may be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except pursuant to an exemption from the registration requirements of, or otherwise in compliance with, the Financial Instruments and Exchange Act of Japan and in compliance with any other applicable laws and regulations of Japan.

Macquarie Group, its employees and officers may act in different, potentially conflicting, roles in providing the financial services referred to in this document. The Macquarie Group entities may from time to time act as trustee, administrator, registrar, custodian, investment manager or investment advisor, representative or otherwise for a product or may be otherwise involved in or with, other products and clients which have similar investment objectives to those of the products described herein. Due to the conflicting nature of these roles, the interests of Macquarie Group may from time to time be inconsistent with the Interests of investors. Macquarie Group entities may receive remuneration as a result of acting in these roles. Macquarie Group has conflict of interest policies which aim to manage conflicts of interest.

September 2018

ID# 601214