Weekly Update

April 9, 2020

Invesco Fixed Income

Two credit markets may offer opportunities

The economic sudden stop and related spike in demand for credit caused some of the sharpest corrections ever seen across US credit asset classes. The growth slowdown was magnified by tightening financial conditions, resulting in indiscriminate spread widening across credit asset classes. The US Federal Reserve (Fed) has implemented a number of programs to ease financial conditions and support liquidity in high quality asset classes, such as agency mortgages and investment grade corporates. We see signs that the Fed's programs are starting to support the efficient functioning of these markets.

There are some credit markets where we believe fundamentals are largely solid, but have not received direct support from the Fed. These credit markets may offer opportunity to investors who are looking for assets with good fundamentals but that have been marked down in price during the recent correction. The municipal bond market and the mortgage credit market may be two areas to look at.

Sector focus: Municipals

Unprecedented moves in the municipal bond market and economic uncertainty have led to concerns over possible increases in municipal defaults. While this sentiment doesn't surprise us given the likely economic fallout of the coronavirus pandemic, we do not believe there will be a material rise in municipal defaults in the coming year. While there may be isolated pockets of default, we believe most municipal issuers will remain current on their scheduled principal and interest payments for the foreseeable future for the following reasons:

- Municipalities generally operate with reserves, borrowing authority and operational flexibility (in other words, they can cut services or raise fees and taxes), which allows them to navigate economic disruption.

- The federal government has acted in previous crises and is acting now. The recently passed CARES act offers USD400 billion in support to municipalities. The Fed has implemented multiple programs to provide liquidity to the municipal market and municipal issuers and is working on a plan to purchase municipal securities.[1]

- We expect additional federal action to come in the form of a fourth congressional bill and additional plans under consideration by the Fed.

- Many municipal issuers were in strong financial shape before the pandemic, as the economy was enjoying an unprecedented prolonged economic expansion.

While the possibility of defaults certainly increases in times of stress, a recent Standard & Poor's study uses nearly 50 years of data to show that municipal bonds have historically weathered storms.[2] The study, covering the period 1970-2018, showed that BBB rated municipal bonds defaulted less often than AAA rated corporate bonds. This was despite a significant number of dramatic market shocks over this timespan: the oil crisis of the 1970s, Black Monday in 1987, the bursting of the tech bubble in 2000, September 11, 2001, the global financial crisis in 2008, analyst Meredith Whitney's 2010 prediction of widespread municipal defaults and the European sovereign debt crisis of 2010-2012, to name a few.

Important information

This document is for Qualified Investors in Switzerland, Professional Clients only in Dubai, Jersey, Guernsey, Isle of Man, Ireland, Continental Europe and the UK; for Institutional Investors only in the United States and Australia; in New Zealand for wholesale investors (as defined in the Financial Markets Conduct Act); for Professional Investors in Hong Kong; for Qualified Institutional Investors in Japan; in Taiwan for Qualified Institutions/Sophisticated Investors; in Singapore for Institutional/Accredited Investors; for Qualified Institutional Investors and/or certain specific institutional investors in Thailand; in Canada, this document is restricted to Accredited Investors as defined under National Instrument 45-106. It is not intended for and should not be distributed to, or relied upon by, the public or retail investors. Please do not redistribute this document.

Market disruption can create opportunity
The municipal market is not a quoted marketplace but an over-the-counter market where, on average, approximately 1% of the over one million cusips trade on a given day.[3] Emotional responses to headlines and dramatic price movements can cause investors to sell into illiquid markets, resulting in many bonds being sold below their fair values. In the current environment, we believe this dynamic has created buying opportunities for investors who believe the municipal market and the US economy will recover.

We expect municipal issuers to adjust services, raise fees and tap reserves while federal programs begin to be implemented. We also believe that valuations have become attractive in many cases. In March, 10-year, AAA rated municipal bond yields traded as high as 350% of US Treasury yields, levels not even seen in 2008.[4] The historical average is below 100%.[4] We believe this ratio will eventually converge to historical levels, resulting in favorable municipal bond returns versus other haven assets.

Where does Invesco Fixed Income believe there are opportunities? We currently see potential opportunities across investment grade and high yield municipals. We believe picking correct bond structures and credits at spreads where we believe we are being compensated for the risk is a key tenet. We also believe Invesco Fixed Income's dedicated research team sets us apart. Our team places an internal rating on every bond we hold. This allows our portfolio managers to sell a bond that we internally rate lower than the rating agencies and seek bonds for which our outlook is more positive. In our view, this allows us to identify and potentially capture opportunities with attractive return potential.

Sector focus: Residential mortgage credit

As pandemic-related effects filter through the economy, the health of the US homeowner and housing market is being discussed more frequently in the media. Our residential mortgage investment team at Invesco Fixed Income shares its perspective on what we might expect to see for the housing sector in this downturn.

First, the mortgage market has undergone dramatic changes post-2008 that will likely have positive effects on borrower performance during this period of economic stress. Prospective homeowners must meet stringent underwriting standards due to post-crisis regulations, backed by thorough income and asset documentation. This has led to much higher borrower and loan quality in the mortgage market – some of the highest quality borrowers and loans we have seen in 30 years. The result has been much higher quality loans with less likelihood of default, in our view.

Second, housing fundamentals in the US were very strong going into the end of February. The rate of home price appreciation was increasing, inventories of existing homes for sale was near record lows, single-unit construction as a percentage of households was at 30-year lows and affordability was better than long-term averages on a national basis.[5]

However, we do not expect the US housing market to be immune in this downturn. The recession we are likely to experience will probably result in large year-over-year declines in home sales well into the summer. We expect delinquencies and defaults among existing homeowners to increase relative to our view in February, given a dramatic rise in unemployment and general economic contraction. But we do not think housing fundamentals will deteriorate to the point of posing a systemic risk to economic recovery.

The experiences of the global financial crisis will likely be instructive in guiding policies that prioritize keeping borrowers in their homes and reducing foreclosure activity. All three government-linked mortgage corporations, Ginnie Mae, Fannie Mae and Freddie Mac, have already responded by implementing forbearance programs to address potential borrower distress. These programs are very similar to the ones implemented in recent natural disasters and have been very effective in reducing defaults and giving borrowers time to rebuild lost income. Mortgage servicing practices have changed to prioritize keeping borrowers in their homes through forbearance, modification and foreclosure moratorium programs. This should prevent a wave of distressed inventory from coming to market and leading to lower home prices. One of the policy mistakes of the global financial crisis, in our view, was the strict enforcement of lender foreclosure

rights which created a negative feedback loop as distressed supply lowered prices and created more distressed supply as home values dropped. We believe the dominance of the government-linked corporations in post-global financial crisis lending will likely be a positive factor in the current environment, as we believe a coordinated policy response by the Federal Housing Finance Agency will be more effective in addressing borrower distress.

Below, we summarize why we believe the US housing sector was in a stronger position prior to this economic downturn, compared to 2008.

Lending standards after 2008 have been very restrictive compared to the years prior to the global financial crisis. Subprime lending is nearly non-existent today and, only recently, a small percentage of loan originations have gone to borrowers unable to conform to traditional income documentation standards.

The borrower underwriting process has been much more robust. Shortfalls in pre-2008 lending practices have been corrected and improved, resulting in the production of better-quality loans with less likelihood of default. One of the most substantial changes to mortgage underwriting is the implementation of the Ability-to-Repay (ATR) rule as part of the Dodd-Frank Act. Lenders are required to substantiate that a borrower can afford the mortgage payment based on their income, debts and a fully indexed/amortizing mortgage payment. This is a material improvement from the stated-income, affordability-product based lending that proliferated in the early 2000s. While this cannot completely avoid borrower issues related to job-loss, it has created some cushion to borrower financial distress.

The home ownership rate has only recently risen from its 50-year lows. The owner-occupant households that have been lost since the home ownership rate was 69% in 2004 have largely shifted to renter-occupied properties, which have, until recently, realized low vacancies and consistently rising rents.[6] While we expect rent growth to slow dramatically or even decline, vacancies should remain contained. Additionally, the post-crisis institutionalization of the single-family rental market effectively puts a floor on house prices, especially in the "entry-level" portion of the market.

Servicing practices have changed to prioritize keeping borrowers in their homes through forbearance, modification, and foreclosure moratorium programs. This should help keep distressed inventory from coming to market and leading to widespread home price declines. Fannie Mae and Freddie Mac have already implemented forbearance programs to address potential borrower distress during this crisis.

The dominance of Fannie Mae and Freddie Mac in post-global financial crisis lending will likely be a supportive development in the current environment as a coordinated policy response from the Federal Housing Finance Agency will likely be more effective in addressing borrower distress. The large percentage of Non-Agency lending and securitization prior to the global financial crisis had led to a dispersed and un-coordinated loss mitigation strategy among banks, securitization trusts, and investors, as delinquencies increased.

[1] Source: Coronavirus Aid, Relief, and Economic Security Act, March 27, 2020.
[2] Source: Standard & Poor's, data through Dec. 31, 2018.
[3] Source: Municipal Securities Rule Making Board: Analysis of Municipal Securities Pre-Trade Data from Alternative Trading Systems, Oct. 2018.
[4] Source: Thomson Reuters TM3, data as of March 31, 2020.
[5] Source: US Census Bureau, CoreLogic, Bureau of Economic Analysis, Feb. 29, 2020.
[6] Source: US Census Bureau, Dec. 31, 2004 to Dec. 31, 2019.

Rob Waldner
Chief Strategist, Head of Macro Research
+1 404 439 4844
rob.waldner@invesco.com

<u>Municipals</u>
Mark Paris
CIO, Head of Municipals
+1 212 652 4290
mark.paris@invesco.com

Eddie Bernhardt
Head of Managed Accounts
+1 503 444 3672
eddy.bernhardt@invesco.com

Tim Spitz
Product Director
+1 585 512 3159
tim.spitz@invesco.com

David Richardson
Client Portfolio Manager
+1 208 219 4390
david.richardson@invesco.com

Nick Henry
Client Portfolio Manager
+1 585 512 3117
nick.henry@invesco.com

<u>Residential mortgage credit</u>
Aaron Kemp
Senior Analyst
+1 404 439 3367
aaron.kemp@invesco.com

David Lyle
Head of Residential Credit
+1 404 439 4648
david.lyle@invesco.com

Greg Seals
Senior Client Portfolio Manager
+1 404 439 4843
greg.seals@invesco.com

Investment risks
The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested. Past performance is not a guide to future returns.

Fixed-income investments are subject to credit risk of the issuer and the effects of changing interest rates. Interest rate risk refers to the risk that bond prices generally fall as interest rates rise and vice versa. An issuer may be unable to meet interest and/or principal payments, thereby causing its instruments to decrease in value and lowering the issuer's credit rating.

Mortgage- and asset-backed securities are subject to call (prepayment) risk, reinvestment risk and extension risk. These securities are also susceptible to an unexpectedly high rate of defaults on the mortgages held by a mortgage pool, which may adversely affect their value. The risk of such defaults depends on the quality of the mortgages underlying such security, the credit quality of its issuer or guarantor, and the nature and structure of its credit support.

Important information
This document is for Qualified Investors in Switzerland, Professional Clients only in Dubai, Jersey, Guernsey, Isle of Man, Ireland, Continental Europe and the UK; for Institutional Investors only in the United States and Australia; in New Zealand for wholesale investors (as defined in the Financial Markets Conduct Act); for Professional Investors in Hong Kong; for Qualified Institutional Investors in Japan; in Taiwan for Qualified Institutions/Sophisticated Investors; in Singapore for Institutional/Accredited Investors; for Qualified Institutional Investors and/or certain specific institutional investors in Thailand; in Canada, this document is restricted to Accredited Investors as defined under National Instrument 45-106. It is not intended for and should not be distributed to, or relied upon by, the public or retail investors. Please do not redistribute this document.

For the distribution of this document, Continental Europe is defined as Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Portugal, Spain and Sweden This does not constitute a recommendation of any investment strategy or product for a particular investor. Investors should consult a financial professional before making any investment decisions.

This overview contains general information only and does not take into account individual objectives, taxation position or financial needs. Nor does this constitute a recommendation of the suitability of any investment strategy or product for a particular investor. Investors should consult a financial professional before making any investment decisions. It is not an offer to buy or sell or a solicitation of an offer to buy or sell any security or instrument or to participate in any trading strategy to any person in any jurisdiction in which such an offer or solicitation is not authorized or to any person to whom it would be unlawful to market such an offer or solicitation. It does not form part of any prospectus. While great care has been taken to ensure that the information contained herein is accurate, no responsibility can be accepted for any errors, mistakes or omissions or for any action taken in reliance thereon.

The opinions expressed are that of Invesco Fixed Income and may differ from the opinions of other Invesco investment professionals. Opinions are based upon current market conditions, and are subject to change without notice.

As with all investments, there are associated inherent risks. Please obtain and review all financial material carefully before investing. Asset management services are provided by Invesco in accordance with appropriate local legislation and regulations.

This material may contain statements that are not purely historical in nature but are "forward-looking statements." These include, among other things, projections, forecasts, estimates of income, yield or return or future performance targets. These forward-looking statements are based upon certain assumptions, some of which are described herein. Actual events are difficult to predict and may substantially differ from those assumed. All forward-looking statements included herein are based on information available on the date hereof and Invesco assumes no duty to update any forward-looking statement. Accordingly, there can be no assurance that estimated returns or projections can be realized, that forward-looking statements will materialize or that actual returns or results will not be materially lower than those presented.

By accepting this document, you consent to communicate with us in English, unless you inform us otherwise. All information is sourced from Invesco, unless otherwise stated.

All data as of March 27, 2020 unless otherwise stated. All data is USD, unless otherwise stated.

Restrictions on distribution

Australia
This document has been prepared only for those persons to whom Invesco has provided it. It should not be relied upon by anyone else. Information contained in this document may not have been prepared or tailored for an Australian audience and does not constitute an offer of a financial product in Australia. You may only reproduce, circulate and use this document (or any part of it) with the consent of Invesco.

The information in this document has been prepared without taking into account any investor's investment objectives, financial situation or particular needs. Before acting on the information the investor should consider its appropriateness having regard to their investment objectives, financial situation and needs.

You should note that this information:

— may contain references to dollar amounts which are not Australian dollars;
— may contain financial information which is not prepared in accordance with Australian law or practices;
— may not address risks associated with investment in foreign currency denominated investments; and
— does not address Australian tax issues

Issued in **Australia** by Invesco Australia Limited (ABN 48 001 693 232), Level 26, 333 Collins Street, Melbourne, Victoria, 3000, Australia which holds an Australian Financial Services License number 239916.

Canada

This document is restricted to accredited investors as defined under National Instrument 45-106. All material presented is compiled from sources believed to be reliable and current, but accuracy cannot be guaranteed. This is not to be construed as an offer to buy or sell any financial instruments and should not be relied upon as the sole factor in an investment making decision. As with all investments there are associated inherent risks. Please obtain and review all financial material carefully before investing.
Issued in **Canada** by Invesco Canada Ltd., 5140 Yonge Street, Suite 800, Toronto, Ontario, M2N 6X7.
Further information is available using the contact details shown:

— Issued in **Belgium, Denmark, Finland, France, Greece, Italy, Netherlands, Spain, Sweden, Luxembourg, Norway** and **Portugal** by Invesco Asset Management SA, 16-18, rue de Londres, 75009 Paris, France.
— Issued in **Dubai** by Invesco Asset Management Limited. PO Box 506599, DIFC Precinct Building No 4, Level 3, Office 305, Dubai, UAE. Regulated by the Dubai Financial Services Authority.
— Issued in **Austria** and **Germany** by Invesco Asset Management Deutschland GmbH, An der Welle 5, 60322 Frankfurt am Main, Germany.
— Issued in **Switzerland** by Invesco Asset Management (Schweiz) AG, Talacker 34, 8001 Zurich, Switzerland.
— Issued in **Ireland, Isle of Man, Jersey, Guernsey** and the **United Kingdom** by Invesco Asset Management Limited which is authorised and regulated by the Financial Conduct Authority. Invesco Asset Management Ltd, Perpetual Park, Perpetual Park Drive, Henley-on-Thames, RG9 1HH, UK.

Hong Kong

This document is provided to professional investors (as defined in the Securities and Futures Ordinance and the Securities and Futures (Professional Investor) Rules) only in Hong Kong. It is not intended for and should not be distributed to, or relied upon, by the members of public or the retail investors. Issued in **Hong Kong** by Invesco Hong Kong Limited 景順投資管理有限公司, 41/F, Champion Tower, Three Garden Road, Central, Hong Kong.

Japan

This document is only intended for use with Qualified Institutional Investors in Japan. It is not intended for and should not be distributed to, or relied upon, by members of the public or retail investors. Issued in **Japan** by Invesco Asset Management (Japan) Limited, Roppongi Hills Mori Tower 14F, 6-10-1 Roppongi, Minato-ku, Tokyo 106-6114; Registration Number: The Director-General of Kanto Local Finance Bureau (Kin-sho) 306; Member of the Investment Trusts Association, Japan and the Japan Investment Advisers Association.

New Zealand

This document is issued in **New Zealand** only to wholesale investors (as defined in the Financial Markets Conduct Act). This document has been prepared only for those persons to whom it has been provided by Invesco. Information contained in this document may not have been prepared or tailored for a New Zealand audience. This document does not constitute and should not be construed as an offer of, invitation or proposal to make an offer for, recommendation to apply for, an opinion or guidance on Interests to members of the public in New Zealand. Any requests for information from persons who are members of the public in New Zealand will not be accepted. Issued in **New Zealand** by Invesco Australia Limited (ABN 48 001 693 232), Level 26, 333 Collins Street, Melbourne, Victoria, 3000, Australia, which holds an Australian Financial Services Licence number 239916.

Singapore

This document may not be circulated or distributed, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 304 of the Securities and Futures

Act (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. This document is for the sole use of the recipient on an institutional offer basis and/ or accredited investors and cannot be distributed within Singapore by way of a public offer, public advertisement or in any other means of public marketing. Issued in **Singapore** by Invesco Asset Management Singapore Ltd, 9 Raffles Place, #18-01 Republic Plaza, Singapore 048619.

Taiwan

This material is distributed to you in your capacity as Qualified Institutions/Sophisticated Investors. It is not intended for and should not be distributed to, or relied upon, by members of the public or retail investors. Issued in **Taiwan** by Invesco Taiwan Limited, 22F, No.1, Songzhi Road, Taipei 11047, Taiwan (0800- 045-066). **Invesco Taiwan Limited is operated and managed independently.**

United States

Issued in the **US** by Invesco Advisers, Inc., Two Peachtree Pointe, 1555 Peachtree Street, N.E., Suite 1800, Atlanta, Georgia, 30309. All data are as of April 9, 2020 unless otherwise stated.

II-IFIWKLY-BRO-04-E 04/20 GL283