Invesco Fixed Income
Global Fixed Income Strategy

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The Federal Reserve plays it safe in September
Bond markets appear ready to absorb a December rate increase

The Federal Reserve (Fed) did not hike interest rates in September. Growth and inflation conditions in the US certainly fit the Fed's stated parameters for a hike; however, the Fed is not one to surprise markets, and markets would have been very surprised by a rate hike at this time. In the minds of Invesco Fixed Income, the most likely outcome was for a somewhat hawkish statement to prepare markets for a likely December hike. We think that message was delivered.

Bond markets are currently pricing in around a 60% chance of a rate increase in December.[1] We believe markets should be able to absorb a December rate increase if it materializes – risk markets appeared to trade relatively well following the Fed's statement, and we believe attaining a 100% probability of a rate hike in December would not entail too much in the way of bond market moves in the coming months. In other words, we believe bond market pricing is already fairly close to discounting this result, so we would not expect too much bond market volatility around a December hike.

Beyond December
The Fed indicated a shallow path for future interest rate hikes beyond December in its Sept. 21 statement, although it still indicated a steeper path than what is currently priced into the bond market. Over time, however, the Fed has gradually converged toward the market's view of future interest rates, and we believe this trend will continue.

The Fed's September meeting signaled a continued divergence between the US and most of the rest of the world.

The Fed expects the economy to grow by around 2% annually over the long term and expects inflation to converge to its 2% target. It suggested that the US economy is getting closer to full employment, but that some slack remains. At the Fed's June 2016 meeting, the three-month moving average of payroll growth was 116,000 new jobs per month and, through the August report, it is up to 232,000.[2] Despite this momentum, job growth has been volatile from month to month, and recent low readings could suggest pockets of weakness that must be monitored.

Our quantitative modeling and qualitative assessment of the US economy suggests that the recovery in the labor market and other sectors is likely to continue and is robust enough to sustain a shift from the Fed's very easy policy to a more neutral policy stance. If US economic data stay robust — especially labor market data — and December rate hike probabilities start to drift lower, we would expect the Fed to adopt stronger rhetoric promoting a rate hike in the near term. We think the Fed will want to see bond markets pricing in around a 75% chance of a rate hike before it acts.

Implications for global bond investors

The Fed's September meeting signaled a continued divergence between the US and most of the rest of the world. The Fed is paving the way for tightening while many other major developed and emerging market (EM) central banks are easing, which continues to create opportunities for active security selection and relative value across yield curves and currency markets.

This divergence arguably constrains how far the US yield curve can steepen. In contrast to the Fed, which is shifting back from quantitative easing (QE) to targeting and raising the cost of short-term funds in the banking system, the Bank of Japan (BoJ) has just switched from what it dubbed Quantitative and Qualitative Easing (QQE) to yield curve control, limiting the ten-year Japanese Government Bond (JGB) yield to zero, and raised its inflation target. This combination has increased the slope of the JGB yield curve, although at a low level. Indeed, higher US yields have attracted Japanese and European investors, given much lower or negative yields in their home markets.

The variety of policies around the world reflects an unusually unsynchronized global growth process, with Europe at risk of slowing with low inflation, the UK possibly slowing due to Brexit, but probably with rising inflation due to a weak currency, Japan in outright deflation, China growing (albeit more slowly) amid significant monetary stimulus and credit growth and most of the rest of EM facing weak growth, with the exceptions of India, Indonesia and a few others.

We expect this divergence to persist but also to encourage the Fed to continue to go slow and nudge the markets to gradually absorb the prospect of rate hikes. The Fed has already signaled that it wishes to avoid too sharp a rise in the US dollar or steepening of the US yield curve.

The main risks to this relatively benign view would likely be substantial upside surprises in the US or downside surprises in other major economies - mainly Europe, Japan or China - which would resurrect the threat of a more pronounced divergence or renewed, severe deflationary pressures around the world.

James Ong, Senior Macro Strategist, Arnab Das Head of EMEA and EM Macro Research

1 Source: Bloomberg L.P., Sept. 21, 2016.
2 US Department of Labor, Invesco, data as of Sept. 21, 2016

Interest rate outlook

US: The Fed kept interest rates steady at its September meeting, but conveyed the message that it may raise rates by the end of the year. If US economic data remain solid, especially labor market data, we believe a December rate hike is likely. Global deflationary forces, quantitative easing (QE) and negative interest rates across much of the world are generally supportive of US Treasuries and will likely keep rates below fair value. Very low term premia suggest that, in our view, any market dislocations are more likely to cause rates to rise than fall from current levels.

Europe: Core government yield curves have been steepening, as some term premium appears to be seeping back into markets. We believe the potential for sell-offs are limited though as the European Central Bank (ECB) continues its bond purchase program. Markets may factor in expectations of a possible modification of the ECB's QE program or yield targeting similar to the Bank of Japan's (BoJ).

Japan: The BoJ adjusted monetary policy at its September meeting, adding yield curve control to its existing toolkit of quantitative easing and negative interest rate policy. The BoJ continues to believe that its efforts are heading the Japanese economy back in the right direction and that, had it not been for declining oil prices and a slowdown in EM economies, inflation would be a lot closer to its 2% target than it currently is (the so called "core-core" measure of inflation remains in positive territory). That said, banks have found that a combination of negative interest rates and a flat yield curve has been damaging to profits and has encouraged consumers to save more. Plans to proactively manage the steepness of the yield curve could ease pressure in that regard and allow the BoJ to consider cutting short-term interest rates further in the coming months.

China: The central bank of China has recently guided short-term repurchase (repo) rates higher and sought to curb carry trades in the onshore Chinese bond market as it has aimed to squeeze out excessive leverage in the banking system. In the short to medium term, we expect the central bank to keep short-term interest rates at relatively high levels while maintaining ample liquidity in the financial system. With little inflationary pressure and rising short-term interest rates, we would expect the domestic government yield curve to remain relatively flat for the foreseeable future. We do not expect these targeted domestic monetary operations to drive global markets.

UK: There have been no material developments regarding the UK's membership in the European Union (EU). We believe this situation is unlikely to change before 2017. Recent economic data releases have disappointed, but not by as much as some had anticipated. The UK central bank and the government stand ready to ease policy further should material weakness transpire, but for now, we continue to expect moderate growth and firming inflation in the UK.

Canada: The expected third quarter growth rebound in Canada has been somewhat elusive so far. Retail sales have proven disappointing, employment has been weak and residential housing activity has turned down since the introduction of the foreign home buyer's tax in British Columbia. The Bank of Canada (BoC) has remained optimistic on growth, waiting for fiscal stimulus to be reflected in the economic data, but recently slightly downgraded its outlook on inflation. Despite this, Canadian interest rates moved higher in the first part of September, but they should settle down now as global steepening risks appear to have subsided for the moment.

Australia: At its September meeting, the Reserve Bank of Australia (RBA), held interest rates at their lowest point in history at 1.50%[1]. The RBA's statement was nearly identical to those from the previous two meetings and provided very little forward guidance. Second quarter GDP came in above trend. New RBA Governor Philip Lowe was a deputy for many years and is not expected to vary from existing monetary policy. With economic data continuing to be relatively strong, the RBA is not expected to lower rates further this year.

Rob Waldner, Chief Strategist, James Ong, Senior Macro Strategist, Sean Connery, Portfolio Manager, Brian Schneider, Head of US Rates, Scott Case, Portfolio Manager, Josef Portelli, Portfolio Manager, Ken Hu, CIO Asia Pacific, Alex Schwiersch, Portfolio Manager

1 Source: Reserve Bank of Australia, data as of Sept. 6, 2016.

Currency outlook

USD: US economic growth indicators continue to point to a solid consumer and strengthening labor market. We think this supports a growth outlook favorable for tighter monetary policy and a rate hike in December. A resumption of the hiking cycle would likely support the US dollar due to stronger foreign asset flows and greater uncertainty that could benefit perceived "safer" assets. However, the pace of US dollar appreciation is likely to be limited unless foreign central banks resume easing through their currency channels.

EUR: Outcomes from the recent BoJ and Fed meetings that were generally in line with consensus continue to suppress currency volatility. We expect volatility to rise into the fourth quarter as we approach the US election and a potential Fed hike. We expect the euro to decline into this period and are slowly rebuilding our positions.

JPY: We continue to favor a neutral bias in the yen versus the US dollar. The recent policy action by the Bank of Japan was insufficient to bring about a meaningful weakening of the yen, and with no policy meeting before November 1st, it is possible that market participants could push the yen higher as they question the ability of the central bank to push inflation higher. Upbeat US economic releases that could point to monetary tightening would likely be required to limit any such moves.

GBP: Sterling appears to have stabilized around 1.30[1] per US dollar in recent weeks. We remain neutral, but believe that there could be meaningful upside for the currency if there are positive developments regarding the status of the UK's membership in the EU. Such developments are likely to take some time to materialize, if they do at all. In the next few months, comments from the Conservative Party conference (early October), the Quarterly Inflation Report (November 3rd) and Autumn Statement (government spending announcement) in late November are likely to influence the performance of sterling.

CAD: The Canadian dollar has traded in a relatively small range over the last several months. The trade deficit continues to widen as exports are unable to rebound, despite a generally weaker currency. Canada's credit rating remains strong and positive yields are still attractive on a global basis. The recent bounce in oil prices has helped the Canadian dollar, but we remain negatively positioned as broad economic weakness is expected to continue.

AUD: As expected, the Reserve Bank of Australia (RBA) held its policy rate at 1.50% at its September meeting. Like the previous two meetings, the RBA provided very little forward guidance. Second quarter GDP came close to expectations and remains above trend on a year-over-year basis. With the policy rate at all-time lows, and the economy seeming to be in good shape, the RBA will likely not be under pressure to lower rates further in the near future. With the RBA on hold, we expect the Australian dollar to be supported at current levels.

Ray Uy, Head of Macro Research and Global Multi-Sector Portfolio Management, James Ong, Senior Macro Strategist, Brian Schneider, Head of US Rates, Sean Connery, Portfolio Manager, Scott Case, Portfolio Manager, Alex Schwiersch, Portfolio Manager

1 Source: Bloomberg, L.P., data as of Sept. 22, 2016.

This section highlights the key themes driving Invesco Fixed Income's global macro and credit research process and views. Themes are updated based on evolving trends and expectations.

Global investment themes

Global macro themes

Greater growth uncertainty

Rationale

Growth conditions in Asia are likely to weaken as Chinese stimulus is reduced. Central banks have been reluctant to get ahead of market expectations for easing.

IFI strategy

Markets at tight valuations will likely be vulnerable to risks. We favor keeping moderate risk budgets and trading ranges.

Asian deflation

Rationale

Financial stability in Asia has improved, giving policy makers time and flexibility to adjust policy. Chinese policy may begin to tighten in the fourth quarter.

IFI strategy

Our currency and interest rate risk positioning remains low while this deflationary theme pauses. We look to rebuild positions reflecting weakness in Asia ex-Japan and China.

Global credit themes

Geographical themes

Investment grade (IG): Global central bank forces, credit cycle differences remain

Rationale: US, Europe and Asia IG have seen strong investor demand due to easy global monetary policy. US fundamentals are challenging with leverage at cycle highs, though recent corporate actions have been credit supportive, especially in energy. European credit markets generally earlier in cycle, less levered, less growth challenged.

IFI strategy: Favor gaining exposure to selected higher quality issuers in energy, pipelines and metals where shorter-term maturities are well covered by liquid assets. Favor select industrials, consumer cyclical, and technology, media and telecommunications (TMT). Neutral financials.

Emerging markets (EM): Growth impulses peaking following duration rally

Rationale: Broad EM divergence remains overriding theme, with risk markets buoyed by favorable market technical support and major central bank actions/low interest rates. We see market underpricing risk of Fed rate hike. EM valuations are stretched.

IFI strategy: Prefer neutral positioning in US dollars, keeping China beta low. High-yield and commodity-related exposure likely well-supported in near term.

US commercial mortgage backed securities (US CMBS): Tighter financial conditions

Rationale: Transaction volume and property price appreciation are slowing. Early signs of tighter financial conditions have become apparent. Rent growth remains modest.

IFI strategy: Prefer seasoned US CMBS as cycle progresses. Credit-differentiation is accelerating, placing a premium on selection.

US residential mortgage backed securities (US RMBS): Favorable fundamentals, valuations mixed, liquidity inconsistent

Rationale: Legacy non-agency US RMBS offer opportunity where fundamentals are favorable. Credit risk transfer (CRT) deals show solid fundamentals, however, valuations are nearing stretched in below-investment grade segment. Liquidity remains inconsistent, but CRT market depth improving.

IFI strategy: Prefer higher quality legacy prime, alt-A, seasoned CRT. Avoiding sub-prime, option adjustable rate mortgages. Neutral BBB-rated CRT and below-investment grade.

US asset backed securities (US ABS): Value in off-the-run securities, fundamentals normalizing

Rationale: US ABS has been less volatile versus US IG. Fundamentals are strong but modestly weaker as collateral performance has moved off historical low delinquency and loss levels. Technicals are supportive. Concerns about deep sub-prime auto market.

IFI strategy: Prefer adding exposure to off-the-run tranches where collateral performance remains stable. Believe wider swap spreads provide opportunities. Believe senior auto US ABS and esoteric issuers can provide opportunities. Avoiding deep subprime auto US ABS.

Sector themes

Commodities: Global rebound in energy, metals but volatility remains

Rationale: Expect global IG credit risk premiums to improve as some energy and metals credits transition to high yield. Fundamental credit quality concerns due to modest economic growth and risk of volatility due to OPEC and Fed uncertainty.

IFI strategy: Favor gaining exposure to selected higher quality energy, pipeline and metals issuers where shorter-term maturities are well covered by liquid assets and positive corporate actions support financial profiles.

Consumer story more nuanced globally

Rationale: Solid US labor market and lower gas prices are supportive, but consumers more value-conscious and international retail demand remains uneven, due partly to volatile capital markets. Watching European consumer for post-Brexit behavior shift.

IFI strategy: Favor select US consumer sectors including autos, leisure and housing-related sectors. Negative on "big box" retailers that lack differentiated products. Favor EM consumer sectors on a selective basis.

Post-merger and acquisitions (M&A) deleveraging plays

Rationale: M&A activity remains elevated, driven by large cash balances, low all-in financing cost, lack of organic growth, and need to reposition business portfolios.

IFI strategy: Preference to play post-transaction bond issuance typically characterized by size, liquidity, concessions and plans to deleverage. Due to rise in M&A-related issuance, believe more discriminating approach to this strategy is warranted.

Global technology – big data

Rationale: Expect global use of data to grow and transition to cloud-based platforms.

IFI strategy: Prefer to gain exposure to software and services (SAAS), cell towers and select wireless issuers. Have avoided hardware original equipment manufacturers (OEM).

Yield curve themes

Credit curve positioning, value in long end

Rationale: Global zero interest rate policy has forced cash investors and sovereign wealth funds into 3-5 year part of the credit yield curve, creating steep 5-7 year part of the curve. Lately, sovereign wealth funds have targeted the 10-year part of the curve. Longer duration spreads remain wide and offer favorable carry, in our view. As prime money market reforms occur, we expect some increase in supply from the 1-3 year part of the curve, at a time when eventual Fed normalization could suppress demand for paper in this part of the curve. We expect demand for 5-10 year paper to be resilient.

IFI strategy: Prefer 7-10 and select 30-year points on US IG credit yield curve. New issuance at longer maturities has tended to come at healthy concessions.

Rob Waldner, Chief Strategist, Ray Uy, Head of Macro Research and Global Multi-Sector Portfolio Management, Tony Wong, Head of Global Research, Joe Portera, Head of Global High Income, Michael Hyman, Head of Investment Grade

...a new generation of securities designed to provide credit exposure to residential mortgage loans has emerged.

Global credit strategy

US non-agency residential mortgage-backed securities: Where do we go from here?

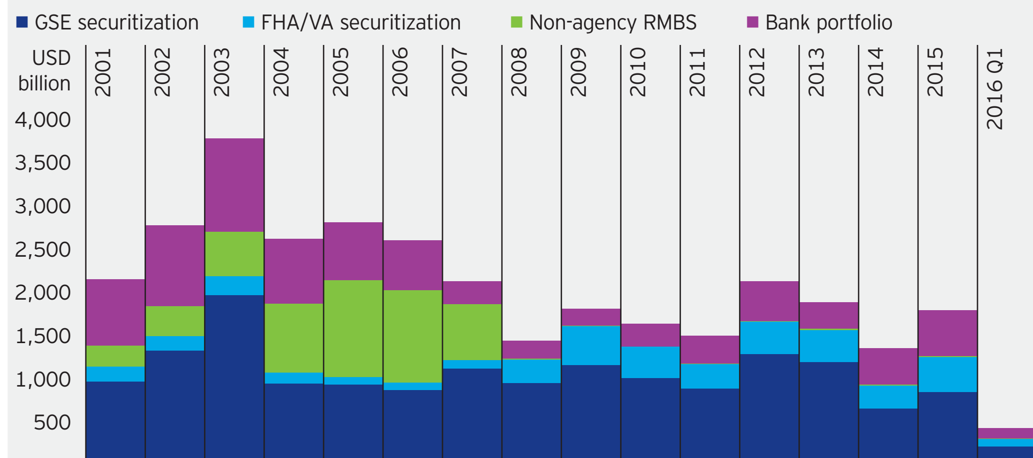
The market for US non-agency residential mortgage-backed securities (non-agency RMBS) changed dramatically as a result of the financial crisis of 2007-2009. During that period, many investors abandoned the asset class as underlying loan delinquencies accelerated and issuance came to an abrupt halt. Today, national house prices and home sales have nearly recovered to pre-crisis levels, but significant issuance of traditional non-agency RMBS has failed to materialize. Nevertheless, a new generation of securities designed to provide credit exposure to residential mortgage loans has emerged. These securities represent a growing sector of the fixed income market that warrants a closer look by investors.

RMBS during the global financial crisis

Total non-agency securitization of newly originated loans plummeted from USD923 billion in 2006 to USD13 billion in 2015.[1] Several catalysts were responsible for this decline:

- In the years leading up to the crisis, the majority of loans backing non-agency securitizations were of non-prime quality - most prime quality loans were either securitized by Fannie Mae or Freddie Mac (government sponsored enterprises, or GSEs) into Agency MBS or held in bank portfolios. Credit conditions have tightened dramatically since the crisis, and very little non-prime mortgage lending has occurred outside of programs administered by the Federal Housing Administration (FHA) and Department of Veterans Affairs (VA). Thus there has been limited raw material for non-agency RMBS.
- While a substantial volume of "jumbo" prime quality mortgage loans (those that exceed the size limits of the GSEs) have been originated in recent years, banks' appetite for these loans has been robust. As a result, it has generally been more profitable for originators to retain the loans or sell them in an unsecuritized form than to securitize them.
- Many high grade bond investors exited the non-agency RMBS market during the crisis and have not returned. Generally speaking, these investors are not satisfied that certain conflicts of interest among deal parties have been adequately resolved. For example, there is broad support for the inclusion of an independent third party that would ensure the proper review of delinquent loans for potential breaches of originator representations and warranties. Efforts are being made by industry groups and regulators to further address these issues, yet progress has been slow and many buyers remain on the sidelines.

Figure 1: RMBS origination volume has plummeted



Sources: Inside Mortgage Finance and Urban Institute, data from Dec. 31, 2001 to March 31, 2016.

...we believe that risk sharing transactions from government sponsored enterprises (GSE) Fannie Mae and Freddie Mac and banks hold great promise as these sectors continue to mature and play an increasingly important role in fixed income portfolios.

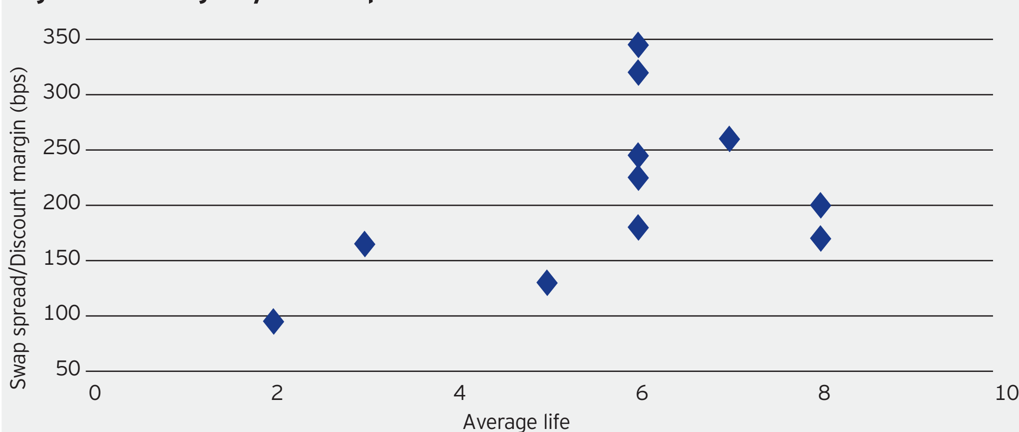
New generation of RMBS

As traditional non-agency RMBS issuance has languished, new types of residential credit securities have begun to fill the void and are on pace to represent significant markets in their own right. Credit risk transfer (CRT) securities issued by the GSEs were created in 2013 to shift much of the credit risk associated with guaranteed loans from US taxpayers to private sector investors. Since then, the GSEs have transferred risk on over USD1 trillion of loans as CRT issuance has reached over USD34 billion.[2] At the same time, the universe of active dealers and investors has continued to expand. Floating rate coupons and a range of options for both ratings and expected life have precipitated growing investor interest in the sector. Loans referenced by CRT securities have demonstrated strong credit performance to date, which has contributed to a cycle of rating upgrades in the sector.

Banks have also come to the market to shed a portion of the credit risk associated with loans they hold in their portfolios in order to maximize return on equity following recent regulatory reforms. In these transactions, loans are sold to a trust and securities are issued, with the bank retaining the senior classes and selling the majority of junior classes. Holding highly rated RMBS rather than unsecuritized whole loans achieves greater capital efficiency for the bank while allowing investors to gain credit exposure to recently originated prime quality loans by acquiring the subordinate tranches. In some cases, this structure may even represent better economics for the issuer on agency-conforming loans compared to sales to the GSEs. We have seen two such transactions this year, and we expect similar offerings in the future.

Finally, non-prime securitization may be experiencing a renaissance, now that much of the post-crisis regulatory regime has been implemented. Since last year, nearly USD1 billion of securities backed by non-prime loans have been issued, and have been well received by investors.[3] Origination volumes of non-prime loans outside of FHA/VA programs have been depressed, but as originators address underserved portions of the mortgage market, the volume of non-prime securitizations could rise substantially.

Figure 2: Non-Agency RMBS Spreads



Sources: Wells Fargo Sept. 12, 2016, JPMorgan, Sept. 14, 2016, Invesco estimates, Sept. 15, 2016. Sector estimates from Wells Fargo: Pre-Crisis Prime/Alt-A (Below IG), Pre-Crisis Subprime (Below IG), Post-Crisis Prime Jumbo (AAA), Post-Crisis Prime Jumbo (AA) Post-Crisis Prime Jumbo (A). Invesco estimates derived from weighted average pricing by class type: CRT (A), CRT (BBB), CRT (Below IG) and derived from JPM markets on CHASE deals as of Sept. 2014: PRT (A), PRT (BBB), PRT (Below IG).

We believe the market for residential fixed income securities provides a number of potentially attractive opportunities that we expect to expand in coming years. Politically, there is consensus that there must be a role for private capital in residential mortgage lending in the US. Improving housing market conditions and the strong performance of recently originated loans support our view of the sector's solid fundamentals. In particular, we believe that risk sharing transactions from government sponsored enterprises (GSE) Fannie Mae and Freddie Mac and banks hold great promise as these sectors continue to mature and play an increasingly important role in fixed income portfolios.

David Lyle, Head of RMBS Credit, Aaron Kemp, Senior Analyst

1 Source: BofA Merrill Lynch Global Research, August 2016. Includes securities collateralized by prime jumbo and non-prime loans only. Excludes Fannie Mae and Freddie Mac credit risk transfer securities, non-performing and re-performing transactions and single family rental securitizations.
2 Source: Fannie Mae and Freddie Mac, August 2016.
3 Source: BofA Merrill Lynch Global Research, August 2016.

Jennifer Hartviksen
Head of Fixed Income

Alexander Schwiersch
Portfolio Manager

The bottom line
We speak with Head of Invesco Fixed Income Canada, Jennifer Hartviksen, and portfolio manager, Alexander Schwiersch, about the Canadian fixed income market and how Canada Fixed Income leverages Invesco's broader resources.

Q1: What are the differences between Canada's fixed income market and other global fixed income markets?
Jennifer: In the corporate space, the Canadian market tends to be concentrated. Close to half of the corporate market is made up of several highly rated financial companies, while other sectors are considerably smaller and composed of a handful of companies. This means that idiosyncratic risks typically dominate sector risks. And notably, unlike an increasing portion of the global bond market, Canadian yields are still positive.

Alexander: Another big difference is the size. The Canadian bond market is far smaller than the US market, for example, and a very small portion of the global bond market, with implications for relative trading liquidity.

The largest sector in Canada is provincial government bonds (a product of the constitutional makeup of the country where Canadian provinces have much more autonomy in taxation, debt, and public policy than US states or German Bundesländer, for example). Alternatively, sectors such as mortgage backed securities are almost non-existent in Canada.

Q2: How does the structure of the Canadian market influence your team's approach?
Jennifer: Because Canada and its financial markets are relatively small, fixed income investment professionals tend to be less specialized than in bigger markets like the US, Europe or Asia. We also tend to wear multiple hats - analyst/trader/portfolio manager. We cover markets across the ratings spectrum from Canadian investment grade to high yield and bank loans.

Q3: How do you work with other investment teams in Canada?
Alexander: We regularly interact with the equity investment team in Canada. The equity team manages highly concentrated portfolios with a value-orientation based on rigorous bottom-up research. On the credit and high yield side, we share similar beliefs with the equity team and, given the interrelationship between credit and equity, we collaborate in multiple ways. Our teams have been a source of idea generation for one another and we share research and insights from both a credit and equity perspective.

Jennifer: We sometimes attend the same management meetings and calls. Collaboration with the equity team helps us develop a holistic view of a company's capital structure and better insight into the value of the "equity cushion," in other words, the amount of enterprise valuation in the capital structure beneath our bonds or loans which we factor into our credit decisions. We have found it useful to get the opinions of the equity teams about the direction of the equity value and what that means for the size of our equity cushion.

Q4: What are the benefits of your team's recent greater integration with the broader IFI platform?
Alexander: We are able to lever off of the bigger and specialized IFI team and its global footprint, which is a competitive advantage in the Canadian market where most fixed income teams are generalist in nature.

Jennifer: We have used IFI's local knowledge and specialization to identify ideas for our funds that we would not have otherwise found. For example, post-Brexit, we identified a UK company with the help of IFI's London analysts, which would have been challenging sitting in Canada and amid the uncertainty of that event. Research such as this may help us identify credits with attractive risk-return profiles that may fit many of our funds but that are outside of our benchmarks.

Q5: What is your outlook for Canadian fixed income for the remainder of 2016 and into 2017?

Alexander: The global macroeconomic backdrop of slow growth and softer commodity prices over the last few years will likely continue to weigh on Canada. However, as long as the US economy (by far our largest trading partner) continues to grow and the Canadian dollar remains competitive, the Canadian economy should see some increases in non-energy exports.

Over the longer term, structural factors, such as declining productivity, an overdependence on extractive industries and record high levels of personal debt to disposable income, could continue to impede domestic investment. Helpfully, the federal government appears to be stepping in with infrastructure investments (fiscal stimulus) to offset the lack of corporate investment.

Jennifer: Canadian consumers remain highly levered and exposed to what appears to be an overvalued housing market. This is one factor preventing the Bank of Canada from cutting interest rates and keeping it in a holding pattern for now. In an environment of heightened volatility, with macro risks in Canada tilted to the downside and with overall interest rates as low as they are, we will continue to attempt to manage our clients' fixed income allocations with a view toward capital preservation and sustainability of income.

Market monitors

Fixed income market monitor

	Coupon (%)	Yield to worst (%)	1 month change in YTW	Option-adjusted spread: current	Option-adjusted spread: 1 month change in spread	Option-adjusted spread: 10 year range min	Option-adjusted spread: 10 year range max	Returns: 1 mth (%)	Returns: 3 mth (%)	Returns: YTD (%)	Returns: 12 mth (%)
Global Aggregate (USD hedged)	2.78	1.14	0.00	44	-8	23	156	-0.05	2.46	6.45	7.19
U.S. Aggregate	3.11	1.95	0.03	47	-8	32	258	-0.11	2.32	5.86	5.97
U.S. Mortgage-backed	3.62	2.03	-0.04	15	-11	-16	181	0.12	1.14	3.44	3.93
Global Inv Grade Corporate (USD hedged)	3.75	2.22	-0.17	130	-24	55	515	0.42	3.93	8.72	9.07
U.S. Investment Grade Corporate	4.12	2.79	-0.09	135	-20	76	618	0.20	3.95	9.47	9.64
Emerging Market USD Sovereign	n/a	4.98	-0.18	337	-31	157	906	1.79	7.12	14.31	14.24
Emerging Market Corporate	n/a	4.50	-0.24	310	-38	120	1,032	1.32	4.76	10.95	10.13
Global High Yield Corporate (USD hedged)	6.34	5.76	-0.97	472	-102	231	1,845	1.99	5.33	12.96	8.90
U.S. High Yield Corporate	6.56	6.31	-0.96	490	-104	233	1,971	2.09	5.82	14.35	9.07
Bank Loans	4.86	5.11	-0.01	n/a	n/a	n/a	n/a	0.79	2.24	6.53	3.74
Municipal Bond	4.77	1.66	0.04	n/a	n/a	n/a	n/a	0.13	1.79	4.54	6.88
High Yield Municipal Bond	5.24	5.08	-0.92	n/a	n/a	n/a	n/a	0.36	4.16	9.08	13.38

Treasury market monitor

	Coupon (%)	Yield to worst (%)	1 month change in YTW	Returns in local currency: 1 mth (%)	3 mth (%)	YTD (%)	12 mth (%)
United States	2.04	1.26	0.13	-0.55	2.06	5.21	5.14
Canada	2.42	0.93	0.03	0.06	2.13	3.64	4.45
United Kingdom	3.67	0.71	-0.13	2.79	11.19	17.60	17.52
Germany	2.16	-0.31	0.04	-0.59	2.33	6.32	7.26
Italy	3.68	0.74	-0.01	0.31	2.49	4.43	7.65
Japan	1.12	-0.02	0.10	-1.14	-0.70	4.92	6.39
China	3.58	2.72	-0.06	0.75	2.30	3.64	7.33
EM Local Currency Governments	n/a	n/a	n/a	0.33	3.62	9.68	11.00

FX market monitor[1]

	Current	10 year range: min	10 year range: max	Returns: 1 mth (%)	Returns: 3 mth (%)	Returns: YTD (%)	Returns: 12 mth (%)
EURUSD	1.12	1.06	1.60	-0.04%	0.23%	2.73%	-0.47%
USDJPY	103.43	75.82	124.77	-0.99%	7.06%	16.27%	17.21%
GBPUSD	1.31	1.31	2.11	-0.31%	-9.29%	-10.84%	-14.38%
USDCNY	6.68	6.04	8.28	-0.54%	-1.43%	-2.76%	-4.52%
USDCHF	0.98	0.75	1.39	-1.58%	1.02%	1.87%	-1.68%
AUDUSD	0.75	0.60	1.10	-0.25%	3.91%	3.17%	5.68%
CADUSD	0.76	0.72	1.09	0.13%	-0.10%	5.58%	0.26%
EURJPY[2]	115.40	94.31	169.49	-0.95%	6.80%	13.21%	17.76%
EURGBP[2]	0.85	0.70	0.85	-0.26%	-9.49%	-13.21%	-13.97%

Sources: Barclays, J.P. Morgan, Bloomberg L.P., as of Aug. 31, 2015. Credit Suisse Leveraged Loan data as of Aug. 31, 2016. Within the Treasury monitor, United States is represented by Barclays US Treasury Index; Canada is represented by Barclays Global Treasury Canada Index; United Kingdom is represented by Barclays Sterling Gilts Index; Germany is represented by Barclays Global Treasury Germany Index; Italy is represented by Barclays Global Treasury Italy Index; Japan is represented by Barclays Global Treasury Japan Index; China is represented by Barclays China Aggregate Treasuries Index; EM Local Currency Governments is represented by J.P. Morgan GBI_EM Broad Diversified Index. In the Fixed Income Monitor, Global Aggregate is represented by Barclays Global Aggregate (US$ Hedged) Index; US Aggregate is represented by Barclays US Aggregate Index; US Mortgage-backed is represented by Barclays US Mortgaged-backed Index; Global Investment Grade Corporate is represented by Barclays Global Aggregate Corporate (US$ hedged) Index; U.S. Investment Grade Corporate is represented by Barclays Aggregate Corporate Index; Emerging Market USD Sovereign is represented by the J.P. Morgan EMBI Global Diversified Index; Emerging Market Corporate is represented by J.P. Morgan CEMBI Broad Diversified Index; Global High Yield Corporate is represented by the Barclays Global High Yield Corporate (US$ hedged) Index; U.S. High yield Corporate is represented by Barclays U.S. Corporate High Yield Index; Bank Loans is represented by the Credit Suisse Leveraged Loan Index; Municipal Bond is represented by Barclays Municipal Bond Index; High Yield Municipal Bond is represented by Barclays Municipal Bond High Yield Index.
Yield to Worst (YTW) is the lowest expected yield calculation given maturity and call features. Option Adjusted Spread (OAS) is the yield difference relative to similar maturity Treasuries that incorporates call, put, sinking fund or paydown features of a bond. Past performance cannot guarantee future results. An investment cannot be made directly in an index. Returns less than one year are cumulative.

1 Positive number represents the currency appreciated against USD, negative number represents currency depreciated against USD.
2 Positive number represents the currency appreciated against EUR, negative number represents currency depreciated against EUR.

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