Invesco Fixed Income

Global Fixed Income Strategy

Feb. 27, 2017

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Global macro strategy

The future of ECB QE: Is the end in sight or is more needed?

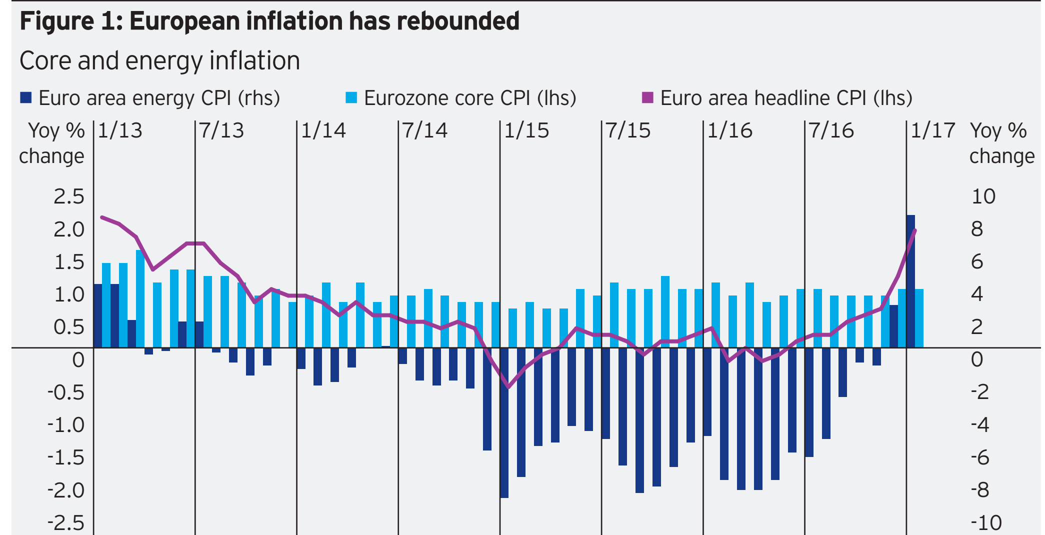
In recent months, consumer prices in the euro area have begun to align with the European Central Bank's (ECB) inflation target of just under 2%.[1] We expect January headline inflation to be around 1.8%, a far cry from the deflationary conditions that convinced the ECB to begin its asset purchase program (quantitative easing, or QE) in 2015 and then extend it in 2016. As we look forward to 2017 and beyond, we ask whether QE should extend beyond March 2018 or will the inflation hawks and external voices force the ECB to end it before the region is ready?

Why did the ECB adopt QE?

Unlike the US Federal Reserve (Fed), whose dual mandate is to foster both stable prices and sustainable employment, the ECB has one objective: price stability. In the past, this single mandate has led to some sub-optimal decisions by the ECB governing council, such as the move to raise interest rates shortly before the global financial crisis in 2008 and again before the European debt crisis in 2012. But in January 2015, it was in the name of price stability that ECB President Mario Draghi announced that the ECB would begin QE to shore up inflation expectations which had fallen sharply following a collapse in energy prices. It appears this move has paid off in terms of increased inflation and inflation expectations.

Figure 1: European inflation has rebounded

Core and energy inflation



Source: Macrobond, data from Jan. 1, 2013 to Jan. 1, 2017. CPI is consumer price inflation.

Critics suggest that QE has had limited direct impact on demand pull inflation, however. They argue that the primary transmission mechanism has been through the currency channel, meaning that any inflation rebound is likely to be temporary and due to higher imported prices fuelled by a weaker currency. Indeed, the ECB may have targeted a weaker euro to boost inflation expectations.

Should the ECB continue with QE?

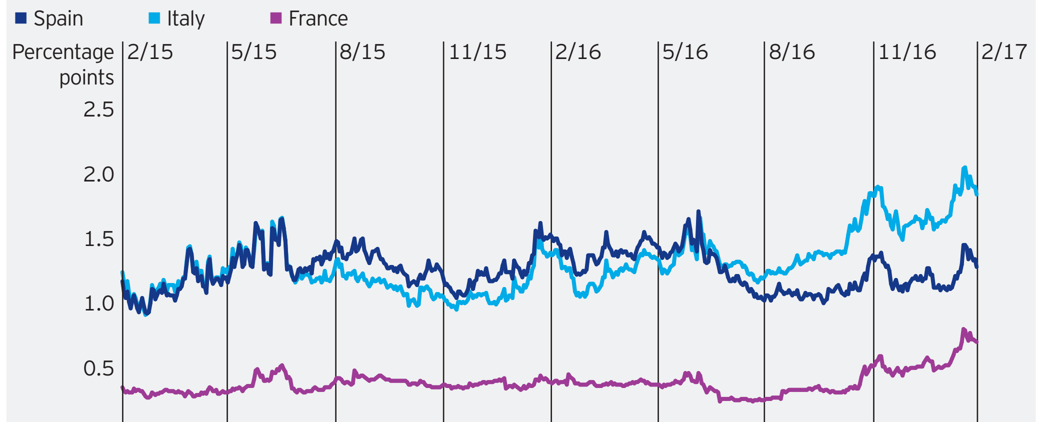
Over the longer term, we believe it is difficult to see how inflation could remain at or around 2% without a continued fall in the exchange rate or rising energy prices. Eurozone wages remain stagnant, demographics in the region are challenging and high youth unemployment has depressed demand among those with a higher propensity to consume. Output gaps, although slowly closing, remain wide.

Besides macroeconomic considerations, tapering QE could reverse the sovereign bond spread compression seen across the eurozone. Since QE began, government bond yields have collapsed across the region, allowing countries to abandon austerity and finance deficits through cheap bond offerings. More recently, however, a combination of taper talk and political event risk has begun to weigh on spreads, especially in Italy and France where government bonds have underperformed.

Upcoming elections in France, Germany and the Netherlands in 2017 have raised market concerns that the anti-establishment backlash reflected in the Brexit vote and the US presidential election could spread to Continental Europe. Budget deficits are still wide and although debt to GDP has stabilized in a number of indebted countries, higher interest rates could have a significant impact on debt sustainability in some countries. Since QE began in the second quarter of 2015, the ECB has been the primary buyer of European government debt. European pension funds have also been major buyers seeking to match increasingly onerous pension liabilities, but banks and asset managers have been selling. The popular peripheral Europe tightening trade favored by asset managers since the 2012 debt crisis has been exited, and only wider spreads will likely entice them back in without the backstop of ECB QE.

Figure 2: Peripheral European government bond spreads

10-year government spreads versus German bunds



Source: Macrobond, data from Feb. 20, 2015 to Feb. 16, 2017. Spread is over 10-year generic German bunds. France is 10-year Obligations Assimilables du Trésor. Italy is 10-year generic government bond. Spain is 10-year generic government bond.

What could stop ECB QE?

President Trump's administration has criticized some countries deemed to be targeting a weak exchange rate to improve the competitiveness of their domestic manufacturers. China has been the primary target but in recent weeks this theme has emerged regarding Germany. Germany's current account surplus was USD280 billion in 2016 (9% of its GDP), higher even than that of China.[2] The chief US trade advisor has suggested that Germany has been the main beneficiary of a weaker euro, having seen its trade surplus with the US more than triple since 2009 from EUR20 billion to almost EUR60 billion.[3] There will likely be some nervousness in Germany that the US may be preparing to cite Germany as a currency manipulator or at least continue to highlight the unfair advantage that German manufacturing enjoys due to a weak currency. The ECB may face pressure from Germany to rein in monetary policy to ensure that such calls are not made.

It is obvious that one single interest rate may not be appropriate for all countries; the current ECB deposit rate of -0.4% is likely far too low for Germany although it is probably appropriate for Italy and Portugal.[1] Because weaker countries may not devalue their currencies independently, they are forced to regain competitiveness by reducing wages. Lower wages have led to lower demand and lower growth. No amount of bond buying will likely reverse that cycle. In Europe, when it comes to policy, one-size does not fit all, and we believe that strains are beginning to show.

Conclusion

Over the coming months we will likely see whether Mr. Draghi can continue to convince the ECB of the merits of continued QE or whether the northern European members win the day. We think it is worth considering the example of Japan. We believe there are a number of similarities between Japan and Europe. Both have weak growth, challenging demographics, low levels of immigration and are focused on inflation targeting.

The Bank of Japan was the first central bank to begin using QE as an unconventional monetary policy tool in 2001 and it is still trying a variation of it in 2017. At several junctures in the past, the government either declared victory and stopped QE too soon or tightened fiscal policy prematurely and the economy turned down again. We believe Japan's experience should act as a salutary lesson to the ECB as it demands more austerity from Greece and deliberates on the future of QE in Europe. If not, the green shoots we have seen in terms of growth and inflation could wither very quickly when exposed to a post-QE reality.

Gareth Isaac, CIO, EMEA

1 Source: European Central Bank, Feb. 16, 2017.
2 Source: Bloomberg L.P., as of Dec. 31, 2016.
3 Source: US Census Bureau, data from Jan. 1, 2009 to Dec. 31, 2016.

Interest rate outlook

US: Near-term growth is likely to surprise to the upside, supporting the case for the Fed to raise interest rates further. We believe the Fed will hike interest rates three times in 2017 and could begin as soon as March. A non-press conference hike at the May meeting is also possible. Near-term core inflation should remain stable, but the fiscal policy regime remains uncertain. If fiscal stimulus is implemented amid full employment, inflation risks could rise in the second half of the year. We are looking for opportunities to short US rates, given our view that global growth will likely exceed expectations.

Europe: Data continue to indicate a recovery in the euro area in both growth and inflation. We expect a gradual rise in government bond yields in sympathy with the US, but we do not expect a sharp sell-off unless the ECB begins to discuss tapering its QE program, which we believe is unlikely until after the Dutch and French elections in Q2. The front end of the yield curve remains pinned down by negative interest rates and QE, but we expect the yield curve to steepen as global yields rise.

China: Onshore 10-year Chinese government bond (CGB) yields and interest rate swaps recovered strongly in February as liquidity conditions improved with the return of funds to the banking system after the Chinese New Year. Although monetary and regulatory tightening is expected to continue, we believe much of it has been priced in and we expect interest rates to recover further.

Japan: 10-year Japanese government bond yields continue to trade "around zero." With oil prices in the ascendancy and the yen weakening (relative to twelve months ago) there is likely to be little pressure on the Bank of Japan (BoJ) to adjust policy further at this time. We expect further adjustments in policy to be closely scrutinized by US officials as they focus on currency movements and seek to bring about a "fairer" marketplace for US corporates and consumers.

UK: We expect the pace of growth to slow over the coming months as the UK consumer starts to feel the impact of rising inflation, slowing house price increases and declining savings. Any loss in consumption is unlikely to be offset by rising net exports (driven by weaker sterling). Inflation is likely to push through the 2% threshold set by the Bank of England, but the overshoot is likely to be seen as transitory in nature and should not result in any tightening in policy. Therefore, recent interest rate trading ranges are likely to hold in the near term.

Canada: Yields on Canadian government bonds have hovered in a range this year as the global yield sell-off has paused. The yield curve remains in a steepening trend as the Bank of Canada has attempted to keep the possibility of a rate cut on the table, although a recent string of positive employment surprises has made that possibility less likely. Canadian government bond yields are likely to remain range-bound in the near term until more certainty emerges around global economic prospects.

Australia: The Reserve Bank of Australia (RBA) held rates at 1.5% in February as expected.[1] The statement was rather upbeat based on positive growth and inflation expectations of around 3% and 2%, respectively, for 2017.[1] The December trade surplus reached its highest in history with exports increasing by 32% year-over-year.[2] Given the apparent strength in the economy, it is highly unlikely that the RBA will need to lower the policy rate further. In fact, the market is now expecting that the next move will be higher rates. We expect Australian interest rates to be range bound in the near future and we maintain a neutral stance versus US rates.

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

1 Source: Statement by Philip Lowe, Governor Reserve Bank of Australia: Monetary Policy Decision, Feb. 7, 2017.
2 Source: HSBC, Feb. 1, 2017.

Global macro strategy

Currency outlook

USD: We expect US dollar performance to be mixed in the near term. While global growth indicators point to an upside surprise, we do not expect a significant hawkish shift in Fed rhetoric. Therefore, we expect financial conditions to remain somewhat benign. Inflation is also expected to be stable. Rising global growth against a backdrop of benign financial conditions and stable inflation will likely support emerging markets currencies versus the US dollar (US dollar weaker). US dollar performance versus developed market currencies will likely be more idiosyncratic and mixed overall.

EUR: While we continue to expect further euro weakness, crowded investment positioning has been trimmed during the course of this year. The political landscape globally remains unpredictable presenting varying cross currents for markets while the Fed patiently reassesses its path.

RMB: We expect the CNY/CHY currency pair to trade in the range of 6.80-6.99 ahead of the next Fed meeting in March. Policy makers have tightened outlets for capital outflows in support of the Chinese currency. The annual foreign exchange conversion limit of USD50 thousand allowed for individuals remains unchanged, but the process has become much more restrictive. Corporates are reportedly also facing more restrictive foreign exchange conversion policies and policy makers have reportedly begun to encourage companies and banks to issue more US dollar bonds offshore and remit proceeds back onshore.

JPY: The value of the yen will likely continue to be driven more by external than domestic developments in the near term. Recent communications from the Trump administration (regarding currency manipulation) could also make Japanese officials cautious about implementing policies that may be interpreted (rightly or wrongly) as trying to influence the level of the yen. The risk remains that the yen could continue to strengthen over the near term, while hard data may not confirm some of the more positive survey data that we have seen of late.

GBP: Sterling remains undervalued, in our view, but we do not see an obvious catalyst for a meaningful correction in the near term. Article 50 is due to be triggered by the end of March 2017. After this point, we expect to learn a lot more about the stance that the remaining EU countries are likely to take as meaningful Brexit discussions get underway. We expect sterling volatility to increase as a result.

CAD: The Canadian dollar has appreciated since the US presidential election in November. Some of the strength has been due to the higher price of oil on the back of promised cuts by OPEC producers in late 2016. In addition, a recent string of positive employment reports in Canada has supported the currency. Bank of Canada Governor Poloz attempted to limit further appreciation by mentioning that a rate cut was still possible at its January meeting with limited success. We believe the Canadian dollar remains overvalued.

AUD: The continuing increase in commodities prices plus signs that inflation may have troughed has put upward pressure on the Australian dollar recently. With the RBA keeping rates steady at 1.5% and the economy appearing to be doing quite well, we do not expect the RBA to lower interest rates further in the near future.[1] We remain neutral on the Australian dollar.

Ray Uy, Head of Macro Research and Currency Portfolio Management,
James Ong, Senior Macro Strategist, Brian Schneider, Head of North American Rates,
Sean Connery, Portfolio Manager, Scott Case, Portfolio Manager, Ken Hu, CIO Asia Pacific,
Yi Hu, Senior Credit Analyst, Alex Schwiersch, Portfolio Manager

1 Source: Statement by Philip Lowe, Governor Reserve Bank of Australia: Monetary Policy Decision, Feb. 7, 2017.

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

Global credit themes

Geographical themes

Investment grade (IG): Global central bank forces, Fiscal policy changes

Rationale

US, Europe and Asia IG have seen strong investor demand due to easy global monetary policy, and an improving global growth outlook should continue to support spreads in 2017. US fundamental trends have improved, yet leverage remains at cycle highs. That said, tax policy changes could lead to growth impulse and less issuance going forward. European credit markets are generally earlier in the cycle and less levered, however Brexit is providing uncertainty.

IFI strategy

Favor gaining exposure to selected higher quality issuers in energy and pipelines, financials, industrials, consumer cyclical, and technology, media and telecommunications (TMT). Remain cognizant of selective tight valuations.

Emerging markets (EM): Macro fundamental momentum steadies

Rationale

Expectations of material fiscal expansion and USD-supportive policy may get tested, as well as US rates shorts and dollar longs; supportive for EM risk even as there are several exogenous risk factors on the horizon; signs of pickup in global and EM growth momentum but China concerns, impact of higher inflation to keep bulls in check.

IFI strategy

EM assets should find some ground and EM spreads, currencies have scope to recover. We move long EM sovereign credit, and maintain neutral EM currency, corporate credit and EM rates. We will be quick to moderate this stance should valuations deteriorate or signs of upward pressure on core rates and the US dollar resurface.

US commercial mortgage backed securities (US CMBS): Notable decline in primary market issuance

Rationale

Given the significant move in spread tightening, we think AAA-rated CMBS looks less attractive, particularly as negative retail news has recently dominated the headlines. However, we generally are not advocates of selling stronger CMBS credits given it is often difficult to replace. Further, we think the space should continue to benefit from limited supply and higher absolute yields.

IFI strategy

Prefer seasoned US CMBS as cycle progresses. Credit-differentiation is accelerating, placing a premium on selection. Positive short-term technicals offset rich valuations and poor hedge adjusted carry.

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

Rationale

Mortgage underwriting quality remains high, the home price outlook remains supported by limited housing supply, and long-term negative net supply remains the dominant force in US RMBS. But following outperformance in recent months in legacy RMBS and below IG CRT, valuations appear stretched relative to other asset classes.

IFI strategy

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

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

Rationale

Normalization of credit underwriting and forecast for a healthier economy should support consumer credit performance in 2017. Recent widening in swap spreads and LIBOR rates provide an opportunity to add at fairly attractive levels. As the overall market continues to weigh the longer-term impact of a Trump administration and additional rate hikes this year such uncertainty should be supportive of a more stable, shorter-duration ABS 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 premia to improve as energy and metals credits stabilize with commodity and credit friendly financial engineering. Credit quality concerns remain due to modest economic growth and risk of volatility due to OPEC, US fiscal policy implementation 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 consumer confidence are supportive, but consumers more value-conscious and international retail demand remains uneven, due partly to the strong US dollar and volatile capital markets. Watching European consumer for post-Brexit behavior shift.

IFI strategy

Favor selected 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 has moderated but remains a risk, 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 lower but still large M&A-related pipeline, believe a 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, cell towers and select wireless issuers. Have avoided hardware original equipment manufacturers.

Yield curve themes

Credit curve positioning, value in long end diminishing

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 a steep 5-7 year part of the curve. Lately, sovereign wealth funds have targeted the 10-year 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 Currency Portfolio Management, Tony Wong, Head of Global Research, Joe Portera, CIO High Yield and Multi-Sector Credit, Michael Hyman, CIO Global Investment Grade and Emerging Markets

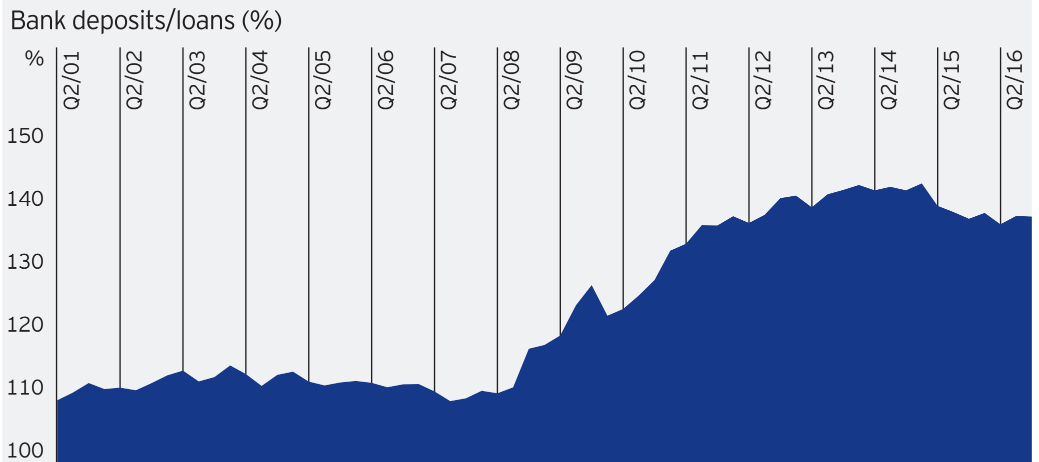
Global credit strategy

US government money market securities may offer greater value than bank deposits

With two Fed rate hikes since 2015 and expectations for more in 2017, Invesco Global Liquidity believes investors may be better rewarded by US government money market securities than by US bank deposits. Since the Fed began raising the target federal funds rate, bank deposit rates have not increased as quickly.[1] Indeed many banks have indicated that they do not intend to increase deposit rates significantly in the near term. As a result, we believe that investors interested in benefiting from rising short-term interest rates may be better served by investing in US government money market securities rather than US bank deposits.

US banks do not need to increase deposit rates aggressively in this interest rate cycle
Since the global financial crisis, US banks have enjoyed a surge in deposits due to new regulations designed to bolster their liquidity positions. Consumer preferences for federally insured bank deposits (Federal Deposit Insurance Corporation insurance) have also boosted demand. As a result, a common measure of bank liquidity, the deposit-to-loan ratio, has risen sharply, as shown in Figure 1.

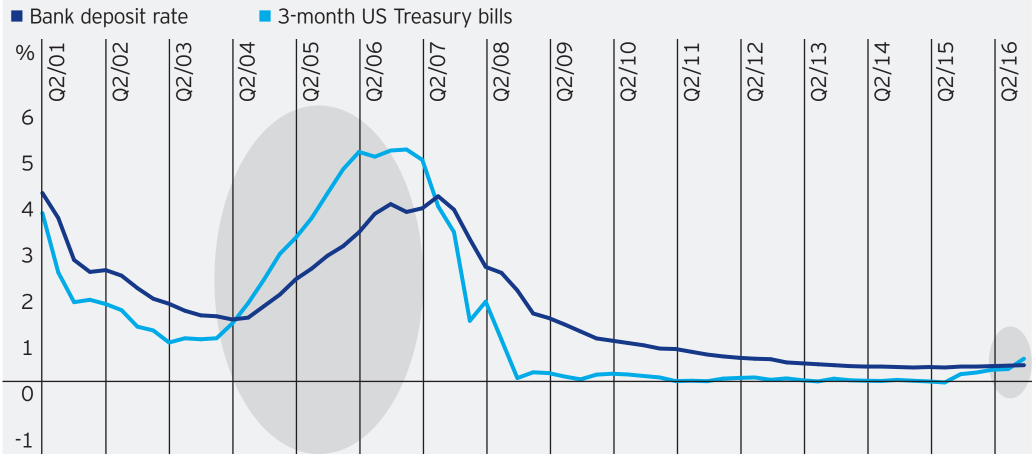
Figure 1: US banks enjoy significantly more liquidity in current rate hiking cycle and do not need to compete for it



Source: SNL, data from June 30, 2001 to Dec. 31, 2016.

Consequently, banks could be less aggressive in competing for deposits than they have in past hiking cycles. Indeed, Invesco Global Liquidity expects banks to keep deposit rates low in an effort to increase net interest margins and boost profitability. Therefore, as short-term interest rates rise, we expect bank deposit rates to lag US government money market rates.

Figure 2: Bank deposit rates have historically lagged 3-month US Treasury Bill yields in Fed rate hiking cycles



Source: Bloomberg L.P., data from June 30, 2001 to Dec. 31, 2016. Past performance is no guarantee of future results.

US government money market securities compare favorably to bank deposits

We believe institutional investors may be better served by government money market securities than bank deposits. US government money market securities, such as US Treasury bills, may offer the potential to capture higher interest rates as they adjust with Fed policy. As seen in Figure 2, US 3-month Treasury bill yields have already surpassed bank deposit rates.

Lucas Simmons, Analyst

1 Source: SNL, Bloomberg L.P., data from Dec. 31, 2015 to Dec. 31, 2016.

Stephanie Larosiliere
Senior Client Portfolio Manager

The bottom line

Municipal bond markets watch US fiscal policy

We speak with Senior Client Portfolio Manager, Stephanie Larosiliere, about the potential impact of US fiscal policy and rising global demand for municipals on the US municipal market.

The Trump Administration has discussed a number of initiatives that could impact the US municipal market, some potentially adversely. At the top of the list are tax reform and major increases in infrastructure spending. Concern over the impact of these policies - especially changes in tax exemptions enjoyed by US municipal investors - has caused some volatility in municipal bonds since the US election. However, while policy uncertainty remains, IFI believes the US municipal market may offer opportunity in 2017.

Q: How has the municipal market responded since the election and what are you watching for in terms of catalysts that might impact the market in the next few months?
Retail municipal investors reacted to the US presidential election with strong selling pressure. Concerns that the Trump administration would potentially lower income tax rates, cap municipal tax exemptions or eliminate the Alternative Minimum Tax (AMT) raised concerns that municipal bonds would drop in value. However, the investor exodus from the asset class has subsided this year and flows have turned modestly positive. At the current level of yields, we believe the municipal market offers opportunity. Supporting our positive outlook are this year's supply expectations. We expect USD350-370 billion in new issuance in 2017, around USD70-90 billion less than in 2016 and USD30-50 billion less than in 2015.[1] If we experience slight to moderate economic growth, as is our base case, fundamentals among municipal issuers should continue to improve. We believe this backdrop sets the stage for the municipal asset class to perform well this year, assuming there are no major negative surprises on the tax reform front.

Q: The Trump administration has indeed suggested that tax reform is a policy priority. While there is still much uncertainty, what is your baseline outlook for how tax policy will play out?
We believe there is a high probability that federal income tax rates, particularly at the highest tax brackets, will be adjusted down. However, we do not believe they will be cut as aggressively – for example to 33% - as has been discussed in the media. Nor do we foresee a significant impact on the municipal market. When President George W. Bush cut tax rates in 2001 and 2003 there was no discernable impact on the municipal market.[2] This is likely because the average tax rate of municipal bond holders was between 23%-28%, and this has not changed very much since the late 1980s.[3] Unless tax cuts are more aggressive than the often discussed "33%," we believe the final details on the tax plan will likely be met with muted response in the municipal market.

Q: Do you believe the tax-exempt status of municipal bonds is threatened?
We do not believe there is a true threat to the tax exemption of municipal bonds. During the Obama administration, this issue was raised regularly, either in the form of a 28% cap on the federal income tax rate or the elimination of the tax exemption altogether. During those years, the conversation never made it past the initial stages for two main reasons: (1) It became clear that the majority of municipal bond holders were not ultra-high earners as generally thought but comprised more middle income investors; (2) A cap on the exemption of tax-exempt interest would increase the borrowing costs for state and local governments. It was recognized that higher borrowing rates could result in less spending on infrastructure and fewer jobs, which could ultimately slow economic growth, place state and local finances under pressure and retard needed infrastructure improvement. As a result, this proposal was met with strong bipartisan and municipality opposition. We believe similar proposals today would face similar opposition.

Q: What are the Municipal team's views on President Trump's proposed infrastructure plan?
According to the American Society of Civil Engineers, the US needs massive investment in all essential infrastructure, from bridges and airports to dams and railways.[4] Much of the economic boom that the US experienced over the last 50 years was due to its network of highways, which made it easy to ship goods. It is believed that if American infrastructure remains in a state of disrepair, it will not only be dangerous, but could also hurt the economy in the long run.

For these reasons, we believe infrastructure was one of the only policies that President Trump discussed in detail on his campaign trail. His original plan called for USD1 trillion in infrastructure expenditure over a 10-year period.[5] While there are still very few details available on the plan, we envision that at least USD25-50 billion per year would be funded through the tax-exempt municipal bond market. We believe the municipal market could readily absorb this level of supply, especially if it were issued at a measured pace. This is because infrastructure bonds are the "building blocks" of the municipal market – they appeal to both retail and institutional investors.

Q: Non-US demand for municipals has increased recently. What are Invesco's thoughts on this new source of demand and how does it impact the municipal market?
Negative interest rate policies introduced by the ECB and the BoJ have led to increased global interest in the US municipal bond market. Although the US municipal asset class has historically been the investment of choice for US retail investors, in the last year yield-starved non-US investors have flocked to investment grade US municipal bonds.[6] They have likely been drawn to the asset class by its history of low volatility and near-zero default rates, the potential for diversification and attractive yields. Unlike US investors, non-US investors are not eligible to take advantage of the federal tax-exemption that municipals are known for. Nonetheless, these investors have piled into the USD3.8 trillion market.[7] At the end of 2015, foreign investors held around USD90 billion in US municipal bonds, up from USD72 billion in 2010.[8]

Municipal bonds have likely been attractive to non-US investors because they are a pure play on the US economy. They held up well as oil spiked and Brexit and other geopolitical events surprised markets. Municipal bonds issued by hospitals, universities, water, sewer and electric power authorities, bridges, tunnels, airports, senior living facilities and public transportation are truly tied to the performance of the US economy. Because these sectors have not historically been tied to the performance of US stocks, investment in the municipal asset class has allowed non-US investors to invest in the US economy without exposure to US equity market risk. If this new source of demand continues at the pace of the last two years, we believe it could provide support to the municipal market going forward and potentially help smooth volatility tied to US retail investment cycles.

1 Source: Bond Buyer, as of Jan. 31, 2017.
2 Source: Citigroup, as of Nov. 16, 2016.
3 Source: Brandeis/MIT Study by Bergstresser and Cohen, as of July 2015.
4 Source: American Society of Civil Engineers, as of March 2013. Most recent data available.
5 Source: Trump/Pence, "Thank You Tour", Des Moines, Iowa, Dec. 8, 2016.
6 Source: Reuters, "U.S. municipal market sales reach 6-year high in 2016", Dec. 30, 2016.
7 Source: SIFMA, Feb. 1, 2017.
8 Source: Federal Reserve Z1 Report, Dec. 8, 2016.

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)	2.73	1.65	0.05	45	1	23	156	-0.36	-1.74	-0.36	2.08
U.S. Aggregate	3.07	2.61	0.01	44	1	32	258	0.20	-2.04	0.20	1.45
U.S. Mortgage-backed	3.54	2.90	0.05	22	7	-16	181	-0.03	-1.75	-0.03	0.34
Global Inv Grade Corporate (USD hedged)	3.67	2.71	0.01	123	-3	55	515	0.13	-1.22	0.13	5.87
U.S. Investment Grade Corporate	4.08	3.36	-0.01	121	-2	76	618	0.31	-1.73	0.31	6.06
Emerging Market USD Sovereign	n/a	5.65	-0.14	328	-13	157	906	1.44	-1.39	1.44	12.00
Emerging Market Corporate	n/a	4.89	-0.16	277	-15	120	1,032	1.24	-0.09	1.24	11.40
Global High Yield Corporate (USD hedged)	6.26	5.38	-0.26	386	-23	231	1,845	1.38	2.71	1.38	18.79
U.S. High Yield Corporate	6.50	5.85	-0.27	388	-21	233	1,971	1.45	2.83	1.45	20.77
Bank Loans	4.89	5.03	-0.02	n/a	n/a	n/a	n/a	0.53	2.02	0.53	11.27
Municipal Bond	4.77	2.54	-0.11	n/a	n/a	n/a	n/a	0.66	-1.96	0.66	-0.28
High Yield Municipal Bond	5.23	6.33	-0.09	n/a	n/a	n/a	n/a	1.40	-3.31	1.40	3.85

Treasury market monitor

	Coupon (%)	Yield to worst (%)	1 month change in YTW	Returns in local currency: 1 mth (%)	Returns in local currency: 3 mth (%)	Returns in local currency: YTD (%)	Returns in local currency: 12 mth (%)
United States	2.05	1.88	0.00	0.23	-2.55	0.23	-0.85
Canada	2.32	1.35	0.00	-0.25	-3.20	-0.25	-1.57
United Kingdom	3.63	1.28	0.16	-1.90	-1.30	-1.90	4.63
Germany	2.10	-0.03	0.15	-1.28	-1.69	-1.28	0.12
Italy	3.56	1.46	0.34	-2.54	-3.08	-2.54	-2.92
Japan	1.09	0.13	0.03	-0.58	-1.90	-0.58	1.21
China	3.49	3.12	0.03	-0.11	-3.02	-0.11	1.59
EM Local Currency Governments	n/a	n/a	n/a	0.98	-0.03	0.98	8.66

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	1.08	1.05	1.60	3.28	-1.67	3.28	-0.83
USDJPY	112.80	75.82	124.77	4.22	-7.08	4.22	7.26
GBPUSD	1.26	1.22	2.11	2.45	2.75	2.45	-12.85
USDCNY	6.88	6.04	8.28	1.31	-1.45	1.31	-4.18
USDCHF	0.99	0.75	1.39	3.47	-0.04	3.47	3.07
AUDUSD	0.76	0.60	1.10	5.58	-0.32	5.58	6.62
CADUSD	0.77	0.72	1.09	3.16	2.90	3.16	7.03
EURJPY[2]	121.80	94.31	169.49	0.90	-5.50	0.90	8.16
EURGBP[2]	0.86	0.70	0.86	-0.78	4.48	-0.78	-12.11

Sources: Bloomberg Barclays, J.P. Morgan, as of Jan. 31, 2017. Credit Suisse Leveraged Loan data as of Jan. 31, 2017. Within the Treasury monitor, United States is represented by Bloomberg Barclays US Treasury Index; Canada is represented by Bloomberg Barclays Global Treasury Canada Index; United Kingdom is represented by Bloomberg Barclays Sterling Gilts Index; Germany is represented by Bloomberg Barclays Global Treasury Germany Index; Italy is represented by Bloomberg Barclays Global Treasury Italy Index; Japan is represented by Bloomberg Barclays Global Treasury Japan Index; China is represented by Bloomberg 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 Bloomberg Barclays Global Aggregate (US$ Hedged) Index; US Aggregate is represented by Bloomberg Barclays US Aggregate Index; US Mortgage-backed is represented by Bloomberg Barclays US Mortgaged-backed Index; Global Investment Grade Corporate is represented by Bloomberg Barclays Global Aggregate Corporate (US$ hedged) Index; U.S. Investment Grade Corporate is represented by Bloomberg 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 Bloomberg Barclays Global High Yield Corporate (US$ hedged) Index; U.S. High yield Corporate is represented by Bloomberg Barclays U.S. Corporate High Yield Index; Bank Loans is represented by the Credit Suisse Leveraged Loan Index; Municipal Bond is represented by Bloomberg Barclays Municipal Bond Index; High Yield Municipal Bond is represented by Bloomberg 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

Invesco Fixed Income

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Invesco Fixed Income

Global perspective and deep local market knowledge

Global presence

- Regional hubs in Atlanta, London and Hong Kong
- IFI is in ten locations with additional Invesco colleagues in two
- USD 272.4 billion in assets under management

Experienced team

- 165 investment professionals
- Averaging 18 years of industry experience
- Deep macro and credit research
- Focused and accountable portfolio management

Global locations

Source: Invesco. For illustrative purposes only.

Invesco Fixed Income teams

	Team members	Average years with Invesco	Average years in industry
Portfolio management and trading	75	12	21
Global research	90	9	16
Total investment professionals	165	10	18
Business professionals	62	14	19
Total fixed income employees	227	11	18

Source: Invesco.

As of Dec. 31, 2016. Subject to change without notice.
Investment specific experience for investment professionals.

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All information is sourced from Invesco, unless otherwise stated. All data as of Jan. 31, 2017 unless otherwise stated. All data is USD, unless otherwise stated.

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