

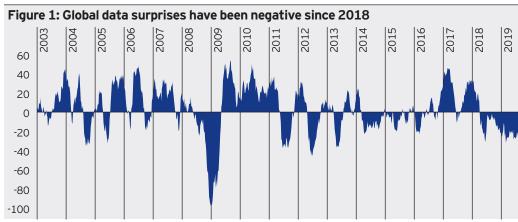
Contents

- Slower global growth and easier monetary policy - what is the upshot for emerging markets?
- 4 Interest rate outlook
- 6 Currency outlook
- 7 Global credit themes
- **11** Municipal bond performance gets a boost from high demand and low supply
- 13 Factor and fundamental investing: Blending approaches for global high yield portfolios

Global macro strategy

Slower global growth and easier monetary policy - what is the upshot for emerging markets?

Global growth has been slowing since the beginning of 2018 – but turn the clock back to 2017 and the world economy was in great shape. Growth was above-trend and synchronized across most parts of the world and global indicators were at cyclical highs. When data began to soften in early 2018, many analysts initially saw this as reversion to trend growth. But US-China trade tensions intensified in the spring of 2018 and the global economy has been disappointing ever since, as implied by the Citi Economic Surprise Index (Figure 1). This is one of the longest stretches of negative surprises in the series' history. Policy uncertainty is also running high (Figure 2).



Source: Bloomberg L.P., data from Jan. 3, 2003 to Aug. 9, 2019.



Source: Haver, Jan. 31, 1997 to July 31, 2019.

The global trading order that was decades in the making, and forged under the strong influence of the US, is now being challenged. The current environment makes it difficult for companies to make long-term investments such as building factories or buying expensive machinery as the rules of the game are changing. Data show the impact of this uncertainty. Global manufacturing, trade and investment, all highly correlated and drivers of global business cycles, have been in a downtrend since the first half of 2018. Forward looking sentiment and hard data suggest that this downtrend will likely continue for some time.

Domestic resilience

Despite weakness in the manufacturing-trade-investment nexus, the global economy has been resilient so far. Global growth has slowed from above-trend to slightly below-trend but is not in recession. We expect this resilience to continue, while noting that risks are to the downside. In major developed markets, decades low unemployment rates, strong private sector balance sheets and resilient consumer confidence are supporting domestic demand.

Policy makers to the rescue

The policy response to waning economic conditions has limited the downside risks, in our view. There has been a sea change in economic policy over the past three quarters. As of the end of 2018, the US Federal Reserve (Fed) was still tightening policy and signaling more, while the ECB was done with its quantitative easing (QE) program and markets were beginning to price in a hiking cycle. Fast forward to today and the Fed is easing for the first time in a decade and the ECB is widely expected to ease in September, potentially cutting rates for the first time in three years and re-launching its QE program. When the Fed opened the door to easing, many central banks followed suit and more is likely to come.

Global macro strategy (continued)

While there is some skepticism about the effectiveness of these policies, monetary policy has supported the global expansion until now. Time and again central banks have stabilized markets and stimulated economies successfully since the global financial crisis. Monetary policies cannot always offset major shocks, such as a full-fledged trade war, but we are not there, in our opinion. What is needed at this stage is the stabilization of sentiment and an orderly adjustment to the trade shock and uncertainty that are dampening the world economy. Monetary policy is the first line of defense. We believe central banks will act decisively, and probably more aggressively, than what is expected by markets, until we see signs of a recovery in the global economy.

We also believe that fiscal policy will be used more pragmatically in the coming quarters, especially in countries where there is fiscal space. In the eurozone, there is already modest fiscal stimulus in place, providing some downside insurance, and Germany is reportedly preparing a fiscal stimulus package in case the economy weakens further. Granted, eurozone fiscal policies are not aggressive or pro-active at this stage, but still they provide some downside insurance. China is using fiscal policy more proactively this year, in addition to its traditional monetary and credit easing policies.

Emerging markets: exposed but with buffers

How will the emerging economies fare in this changing world? They have weathered the turbulence quite well so far. Emerging markets growth has slowed compared to expectations, but in only a few cases have there been sharp slowdowns or recessions. Compared to the past, most emerging economies now have stronger macroeconomic balances. After the taper tantrum of 2013, the commodity price collapse of 2014-2015 and last year's sell-off, emerging economies have undergone significant economic adjustments. Current account and fiscal balances have improved, and monetary policies have tightened, all providing buffers against the current downturn. Meanwhile inflation, an old foe of emerging markets, is generally low in most emerging economies, with a few exceptions.

This environment suggests there is room for monetary stimulus in emerging markets. The mix of relatively high interest rates, low inflation, and improved macroeconomic balances mean that emerging markets have room to cut interest rates, providing potential opportunities in local rates markets. The large and growing stock of negative yielding bonds in advanced economies also makes emerging market yields attractive on a relative basis. In this environment, we find investing in local rates attractive in several countries, while being cautious on the currency side. In this space we like India, Indonesia and Brazil. We remain underweight Turkey as underlying inflation remains high and persistent, and the fiscal balance is deteriorating.

In currency markets, we believe value is emerging after recent sell-offs, but we see better opportunities in relative value trades until there are visible signs of stabilization in the global policy and economic outlook. As we expect aggressive policy easing from the ECB, we favor euro-funded positions on a selective basis. In this space we favor the ruble, given its strong external and fiscal balances, low funding needs and attractive carry.

While we see opportunities in local markets, we are watching the global economy closely, since growth risks are still to the downside. Our baseline expectation is for below-trend global growth in the coming quarters, but not a global recession or sharp slowdown. We are watching a range of leading indicators to continuously assess these risks to our baseline view. We are monitoring global manufacturing, trade and shipment data for signs of stabilization in those sectors. We also continuously assess whether domestically oriented sectors are resilient to trade jitters by monitoring service sectors, consumer confidence surveys, retail sales and residential construction.

Turgut Kisinbay, Director Fixed Income Research

Global macro strategy (continued) Interest rate outlook

US: Neutral. Interest rates have moved sharply lower and the US Treasury curve has flattened, reflecting increased pessimism about growth due to escalating trade tensions and other geopolitical turmoil. The market is most likely reflecting the increased chances of a sharper Fed easing cycle than forecast earlier in the year. However, rates have moved dramatically in a short period of time, so we remain cautious.

Europe: Neutral. The slowdown in eurozone growth in the second quarter largely reflected the unwind of temporary factors that generated higher than expected industrial output and construction activity in the first quarter. Most survey data have raised a red flag for the third quarter, with manufacturing indices pointing to a drop in industrial production. Yet, eurozone job growth continues to be buoyant, despite some signs of softening in hiring intentions. This should benefit the service sector, but any broad-based reacceleration is unlikely for the time being, due to lingering uncertainty related to trade and a potential hard Brexit.

China: Overweight. The People's Bank of China (PBoC) announced reform measures in August related to the prime loan rate. Market attention has now turned to potential rate cuts in the PBoC's medium-term lending facilities, which are expected to represent new lending benchmarks in China. We are positive on onshore rates bonds in the medium term thanks to accommodative Chinese monetary policy and generally dovish global central banks. Chinese onshore rates bonds may be subject to near-term volatility, however, given widely held long positions and uncertainty over the central bank's ability to deliver or beat expectations already priced in by the market. But we expect the significant yield pickup of Chinese onshore government bonds versus global peers (such as the US, Japan and Germany) to lead to further inflows into China.

Japan: Neutral. Japanese government bond (JGB) yields have lagged the sharp rally in other rates markets, as global growth fears have risen and risk sentiment collapsed in August. We have seen 10-year JGB yields break through -0.20% and the 10s-30s curve flatten further. The shrinking yield pickup offered by currency-hedged international bonds could lead to the repatriation of funds into JGBs.

UK: Neutral. Despite outperformance in terms of curve flattening and long-end yields, 10-year gilts have underperformed European core bonds this month. This was partially due to talk of an emergency government taking power to prevent a no-deal Brexit in the event of no confidence in Boris Johnson, and the market pricing relatively moderate easing by the Bank of England compared to other central banks.

Canada: Neutral. Canadian growth has been firm recently, partly due to its close trading ties with the US, although it remains subject to global growth concerns. 10-year Canadian sovereign bond yields are near the lows for the year at around 1.20% but are one of the few positive 10-year sovereign yields across the globe.² We expect Canadian rates to remain relatively range bound.

Australia: Neutral. The Reserve Bank of Australia (RBA) kept interest rates on hold this month, conveying it foresees an extended period of low rates and signalling the potential for more cuts in the cash rate to support inflation and employment. However, given easier fiscal policy, rising house prices and two RBA rate cuts already this year, we think there is a risk that the RBA will be slower to cut rates in the future than the market expects.

Global macro strategy (continued) Interest rate outlook

India: Overweight. The policy and macro environment is generally supportive of Indian bonds, in our view. Recent data paint a picture of softer inflation and growth, which will likely lead the Reserve Bank of India (RBI) to cut its policy rate in the coming months. Given this macro backdrop, and despite the bond rally since last October, we have decided to change our stance from neutral to overweight. We believe there is room for yields to decline further, and the steep yield curve provides the potential opportunity to pick up "roll-down" returns as longer-term bonds mature.

Rob Waldner, Chief Strategist and Head of Macro Research, James Ong, Director Derivative Portfolio Management, Noelle Corum, Associate Portfolio Manager, Reine Bitar, Portfolio Manager, Michael Siviter, Senior Fixed Income Portfolio Manager, Yi Hu, Senior Analyst, Brian Schneider, Head of North American Rates Portfolio Management, Scott Case, Portfolio Manager, Amritpal Sidhu, Quantitative Analyst

Source: Bloomberg L.P., Aug. 1, 2019 to Aug. 20, 2019.

² Source: Bloomberg L.P., Jan. 1, 2019 to Aug. 20, 2019.

Global macro strategy (continued)

Currency outlook

USD: Neutral. Fed rate-cutting is typically negative for the US dollar, as investors tend to leave the US for higher yielding opportunities elsewhere. However, other countries have also reduced rates, maintaining the dollar's attractiveness globally. In addition, much uncertainty remains over US-China trade, Brexit, Italy and Hong Kong tensions. These concerns will likely provide some support to the US dollar and keep it range-bound, since it is generally viewed as a safe haven currency.

EUR: Neutral. The ECB is likely to ease this year, which may weigh on the euro. We expect European growth to remain low for the foreseeable future due to increased trade tensions and slowing global growth. However, ECB easing is likely to be more than offset by Fed rate cuts, leading to declining interest rate differentials between the two regions. The combination of these factors should keep the euro range-bound against the US dollar in the near term.

RMB: Neutral. The renminbi/US dollar exchange rate traded in a range of 7.0-7.1 in August, as new levels have been tested following the re-escalation of US-China trade tensions.¹ Additional tariffs and geopolitical headlines have complicated the currency's outlook, in our view. Markets are closely watching trade-related headlines and investors preparing to increase allocations to Chinese assets may view renminbi deprecation as a buying opportunity. The currency's performance is expected to be event-driven in the near term and presents binary risks, in our view. We expect the Fed's monetary stance and US dollar performance to play key roles in the renminbi's performance in the medium term.

JPY: Overweight. The yen has been the best performing currency this month, boosted by global growth fears and softening equity markets.² Going forward, we expect the yen to be supported by a narrower rate differential versus the US dollar, safe haven demand driven by elevated trade tensions and a larger current account surplus due to lower commodity prices and higher savings boosted by the upcoming consumption tax hike.

GBP: Neutral. Sterling weakened further in August as Prime Minister Boris Johnson continued to call for the removal of the Irish backstop without providing an alternative solution. It now appears up to Remainers to stop a no-deal Brexit by bringing down the government with a no confidence vote. But with Labour Party leader Jeremy Corbyn pushing to be the only possible national unity candidate, that path seems even harder. This uncertainty and the slowdown in the UK economy will likely continue to undermine the appeal of sterling, in our view.

CAD: Neutral. The Canadian dollar has been soft since mid-July, due in part to the weak July payroll report and concerns that the Bank of Canada will have to match foreign central bank rate cuts. However, Canadian growth is currently on relatively solid ground and the BoC may be slow to signal any growth concerns. Nevertheless, we expect the currency to remain vulnerable to global swings in sentiment.

AUD: Overweight. The RBA retained its easing bias in August but appeared to tie any further easing to an "accumulation of additional evidence" that shows it is needed. This should limit the scope for global interest rate differentials to move against the Australian dollar. If global growth remains weak, the Australian dollar is unlikely to substantially outperform the US dollar, but we believe it can outperform other risk-sensitive currencies, such as the New Zealand dollar.

INR: Neutral. The Indian rupee has experienced significant volatility over the past few weeks, driven largely by movements in the Chinese renminbi. On the domestic front, slow growth and inflation are expected to prompt further policy easily by the RBI. Therefore, we do not expect meaningful appreciation of the rupee from its current level and we maintain a neutral stance.

Rob Waldner, Chief Strategist and Head of Macro Research, James Ong, Director Derivative Portfolio Management, Noelle Corum, Associate Portfolio Manager, Reine Bitar, Portfolio Manager, Michael Siviter, Senior Fixed Income Portfolio Manager, Yi Hu, Senior Analyst, Brian Schneider, Head of North American Rates Portfolio Management, Scott Case, Portfolio Manager, Amritpal Sidhu, Quantitative Analyst

¹ Source: Blomberg L.P., Aug. 22, 2019.

² Source: Bloomberg L.P., data from Aug. 1, 2019 to Aug. 20, 2019.

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 investment themes Global credit themes

Asset class themes

Investment grade (IG): Easier financial conditions are supportive but trade and earnings remain uncertain and supply concerns mount

We believe US corporate credit fundamentals will improve across most sectors in the second half of 2019. First-half operating results were dragged down by the government shutdown, trade policy uncertainty and a stronger US dollar but earnings growth is still positive and we expect companies to increasingly focus on deleveraging. Despite a potential delay in our thesis due to trade-related earnings pressure, we believe companies remain committed to decreasing their debt burdens following years of elevated merger, acquisition and share repurchase activity. We are now seeing pressure from shareholders to decrease leverage and limited appetite for below investment grade credit ratings. Additionally, the Fed's dovish language favors a lower federal funds rate, a favorable development for market stability as we enter the second half of the year.

The return of hawkish rhetoric from both sides of the US-China trade negotiations has injected volatility into credit markets recently. Most investors still expect an agreement to be reached, although the timeline is uncertain. The June G20 meetings did not produce meaningful progress in trade discussions, but policymakers in both countries are likely to implement easing measures to support their economies and financial markets in the short run.

Technical conditions for US dollar credit markets have turned less favorable. As global growth slows and the Fed considers an even more accommodative policy, we have witnessed increased opportunistic issuance. Along with funding bond tender activity, we expect an increase in large bond issues to fund mergers and acquisitions, although financed with a more prudent balance of debt and equity funding. Foreign investor demand for US IG has slowed as yields after currency hedging costs have declined. Longer term, we expect Fed policy to result in continued declines in hedging costs and a more balanced demand picture from overseas investors.

European credit markets are generally earlier in the credit cycle compared to the US and are less levered, though risk of a no-deal Brexit and political uncertainty in Italy and other countries remain elevated. European growth concerns and trade policy issues continue to present headwinds for large multinational issuers.

IFI strategy

We have moved to a more neutral credit market stance on the heels of escalating trade concerns, uncertain earnings outlooks and deteriorating technicals. A more accommodative Fed is required as we continue to monitor the impact of global trade policy on fundamentals, but risk exists in the timing and magnitude of Fed actions. We favor Europe and the US over the UK and Asia. Key market drivers we are monitoring include 1) the pace at which major central banks respond to slower global growth and the impact on the US dollar and global credit flows 2) potential US fiscal and regulatory policy changes and 3) the impact of still-uncertain trade policy with China and Europe on costs, margins, demand and investment and the potential for a more destabilizing global trade war.

High yield (HY): Technical backdrop remains strong as valuations hover toward the tighter end of the ranges

Rationale

We remain constructive on high yield as the search for income remains a dominant theme. The technical picture remains supportive, although it has weakened recently. Early indicators suggest that the consumer remains in good shape, but companies are hesitant to deploy and increase capital expenditure due to trade uncertainty. A potential benefit of slower economic growth is management teams tend to become more balance sheet focused, which is positive for creditors. We expect default rates in 2019 to remain below the historic average. While performance so far this year is unlikely to repeat itself in the second half, we think high yield's strong coupon income bodes well for a respectable full-year total return.

IFI strategy

Both technicals and fundamentals remain supportive of high yield. Excluding an exogenous event or a turn for the worse on the trade front, we expect high yield to provide strong income for the balance of the year.

Emerging markets (EM): Fed versus global central banks Rationale

Lower economic growth in Latin America, EM Europe and Asia sets the stage for more accommodative polices from EM countries. These actions combined with support from G3 policy makers should provide support for EM assets.

IFI strategy

While we await further clarity on global trade concerns, we continue to favor adding risk selectively, focusing on countries that are less externally vulnerable or that have solid policy anchors. We believe select EM high yield credits offer more compelling value than investment grade.

US commercial mortgage backed securities (US CMBS): Positioning is key as commercial real estate cycle progresses

Rationale

We expect commercial real estate rent growth and property price appreciation to continue. However, we believe the pace of appreciation will slow as new supply hinders space absorption. Further, we expect growth in e-commerce to remain a headwind for the retail property sector. On a positive note, today's relatively lower interest rate environment and favorable lending conditions should support investor demand. Lending conditions remain broadly accommodative across property markets despite moderately tighter credit standards. We expect modest new issuance volumes to be absorbed by investors.

IFI strategy

We believe senior non-agency US CMBS offer attractive carry and, in the near-term, potential for incremental spread tightening. In subordinate CMBS, we believe security selection will become increasingly important as the real-estate cycle continues to extend. We currently prefer seasoned subordinate credits that benefit from embedded property price appreciation and declining spread duration.

US residential mortgage backed securities (US RMBS): Credit profiles remain sound; senior classes offer potential value

Rationale

A robust labor market, positive demographic trends and lower mortgage rates are supporting housing demand and mortgage borrower performance. RMBS credit profiles are strong due to conservative capital structures and low default rates. Technicals have softened due to a meaningful increase in supply, driving modest widening in non-agency new issue spreads and presenting opportunities for compelling carry in securities with low credit risk and limited spread duration.

IFI strategy

We continue to favor AAA rated classes collateralized by non-qualified mortgages to take advantage of spread widening related to elevated primary market supply. We see less value in lower rated classes where demand has remained robust and spread widening has been limited. AAA rated prime jumbo securities also offer value, in our view, relative to similar coupon agency mortgage-backed securities. Meanwhile, we believe that credit risk transfer securities from Fannie Mae and Freddie Mac appear fairly valued versus comparable fixed income credits.

US asset backed securities (US ABS): Benchmark ABS have outperformed, esoteric ABS have underperformed on broader market volatility

Rationale

Recent performance has been mixed and, despite broader market volatility, both benchmark and non-benchmark ABS have held up quite well. Primary market supply continues to be met with strong investor demand. Positive technical trends are supported by favorable consumer fundamentals, near-term collateral performance expectations, rational late-cycle underwriting and robust structural features. Given the shape of the yield curve, we expect short-duration, benchmark and non-benchmark ABS to remain in high demand.

IFI strategy

We see value at the top of the capital structure in liquid, amortizing benchmark and certain non-benchmark sectors, which continue to benefit from an inverted short-end of the yield curve and relatively attractive all-in yields. We also see value in adding certain subordinate exposures where structures quickly de-lever. While the relative value proposition for several benchmark and non-benchmark ABS remains, opportunities to add select esoteric ABS has diminished given broader market volatility, reduced secondary market liquidity and, for some, a higher correlation to weakening global fundamentals. We expect these off-the-run asset classes to underperform over the near-term.

Sector themes

Commodities: Growth deceleration has softened sentiment, demand Rationale

Demand for commodities has softened on global growth deceleration, declining manufacturing indices, and inventory build-ups. Steel markets have been negatively affected by over-heating production in most regions, leading to sharp price declines over the last few quarters. Overall sentiment in commodities is especially negative given late cycle concerns and increased tariff-related uncertainties, especially the ongoing US-China trade war.

Shareholder-friendly capital allocation policies, including large dividend pay-outs and share repurchase programs have been predominantly neutral for corporate credit profiles, with funding often supported by asset sales and/or free cash flow generation. However, these shareholder-oriented policies have had limited incremental deleveraging capacity over the past year as shareholder returns have generally been prioritized over additional debt reduction.

IFI strategy

We favor copper producers as well as certain Russian steelmakers, which tend to benefit from better supply/demand dynamics or positioning on the cost curve and more attractive bond valuations. We like selective exploration and production oil companies located in Latin America as well as certain Russian oil and gas producers. We also remain constructive on select US exploration and production companies with low-cost shale assets and US midstream companies that are focused on cost of capital optimization and active deleveraging to stabilize or maintain investment grade ratings.

Consumer story nuanced globally, monitoring impact of US fiscal policy Rationale

The solid US labor market and consumer confidence are supportive of the consumer sector, but US consumers are more value and delivery conscious while international retail demand remains uneven. We are watching the European consumer for post-Brexit behavior shifts.

IFI strategy

We favor internet-resistant and value-based US consumer sectors, such as dollar stores and aftermarket auto part retailers, but remain cautious on department stores and mall-based retailers that lack differentiated products. In EM, we have turned slightly more defensive due to a relatively muted growth outlook. As such, we prefer investment grade credits with a global footprint and multi-product offering. We expect US automotive original equipment manufacturers (OEM) sector fundamentals to weaken, given an adverse trade environment. Longer-term, however, we favor the sector on the margin, given our confidence that OEMs will be able to maintain an IG profile. European auto demand is proving resilient, which creates some potential in the European crossover segment (the border between investment grade and high yield). We are cautious on European consumer goods companies, as low growth continues to pressure management toward shareholder returns and mergers and acquisitions, slowly deteriorating the credit quality of the sector.

Technology, media and telecommunications (TMT): Mergers and deleveraging in focus Rationale

Following the approval of both the US Federal Communications Commission and Department of Justice for a major telecom merger, we now await the outcome of the appeals process slated to start in November. Several states have joined forces to claim that the merger creates a less competitive environment which ultimately harms the consumer, however, we expect the merger to ultimately be approved with potentially more concessions rolled in.

IFI strategy

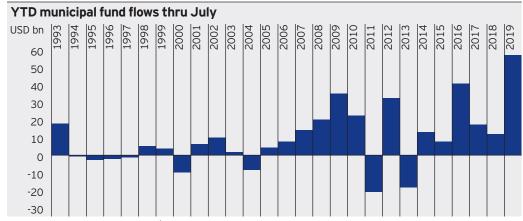
We prefer exposure to spectrum owners, equipment manufacturers, and tower owners, which, we believe, remain well-positioned to benefit from the rollout of 5G.

Tony Wong, Head Fixed Income Investments, Joe Portera, CIO High Yield and Multi-Sector Credit, Michael Hyman, CIO Global Investment Grade and Emerging Markets, Mario Clemente, Head of Structured Investments This section highlights the views of Invesco Fixed Income's credit analysts across a broad range of fixed income assets managed by Invesco.

Global credit strategy

Municipal bond performance gets a boost from high demand and low supply

Investor demand for municipal bonds has been robust in 2019, despite low absolute yields. Net new cash flows into municipal bond funds totaled USD62 billion as of Aug. 21, representing 33 consecutive weeks of inflows and the best start to a year since record-taking began in 1992.¹



Source: Strategic Insight Simfund/MF Desktop, data from Jan. 1, 1993 to July 31, 2019.

The bulk of increased demand has come on the heels of the Tax Cuts and Jobs Act (TCJA) of 2017. Under the new law, the USD10,000 cap on state and local tax deductions, the so-called "SALT cap," has resulted in surprisingly larger individual tax bills for people in states with high state income taxes (especially Democratic-leaning states like California, New York and New Jersey). The Inspector General for Tax Administration Audit of the TCJA estimates that around 11 million taxpayers have been affected by the SALT cap, to the tune of about USD323 billion in state and local taxes that are no longer deductible, boosting interest in municipals' tax-exempt status.²

These record inflows have come during a time of low supply. In 2018, new issuance fell by nearly 25% from the previous year, and that trend has continued in 2019.³ This combination of high demand and low supply has driven price appreciation across the municipal market and generated the longest streak of positive monthly performance in nearly three years.⁴

We expect positive market technicals to persist through the early fall. Given increased uncertainty about the US and global macroeconomic outlook, we believe municipals may benefit in the short-term as the asset class is often viewed as a safe haven and has historically experienced increased demand during flights to quality.

Fundamentals look solid

Fundamentals have also helped support municipal market performance. We view the credit quality of the municipal market as stable, heavily influenced by continued economic recovery and growth across many parts of the US. Growth of state and local property tax collections has been healthy, up 4.6% and 1.6%, respectively, through the end of March.⁵ The market experienced only one default in 2018, the lowest number since 1997 and the fifth year since 1986 with one or fewer defaults.⁶ Moody's reported that credit upgrades outnumbered downgrades in the second quarter of 2019 for the eighth quarter in a row and by the largest margin since the first quarter of 2017 (157 upgrades versus 64 downgrades); the volume of upgraded debt also exceeded downgraded debt by a wide margin (USD17.7 billion versus USD5.7 billion).⁷

Global credit strategy (continued)

Further boosting state fundamentals was the US Supreme Court decision in June 2018 to overturn a decades-old ban on state tax collection from online sellers. The 5-4 decision did away with the notion that governments can only collect sales taxes on purchases made from retailers with a physical presence in their state. Since this change, the District of Columbia and 42 of the 45 states with a sales tax have enacted laws or regulations requiring remote sellers to remit a sales tax.⁸ It was widely estimated that states were collectively missing out on anywhere from USD8.5-13.4 billion a year in potential online sales tax revenue.⁹ While it is still too early to determine if these are accurate estimates, we expect increased revenue to be net positive for state and local governments in the coming years.

In general, we believe states are better prepared now than they were in the past to face an economic downturn. The median "rainy day fund" balance as a share of "general fund" spending is projected to reach 7.5% in fiscal year 2019, which would be an all-time high according to the National Association of State Budget Officers' Spring 2019 Fiscal Survey of States.

Valuations appear tight

One of the results of historic inflows into the asset class has been yield and spread compression across the municipal yield curve. So far in 2019, municipal yields have fallen by around 75-100 basis points across the curve. ¹⁰ This lower yield environment has made it more challenging to find value.

Comparing benchmark municipal yields over the past 30-years reveals that 10-year and longer investment grade yields are currently 6-32 basis points away from their absolute lows, depending on maturity and rating category. The summer of 2016 was the last time yields were around current levels. Relative to taxable debt, however, we believe longer-dated municipals exhibit some value. High-grade 20-year municipals now yield around 110% of 10-year US Treasury benchmark yields. 12

By contrast, shorter-dated bonds remain expensive. At the five-year spot, for example, the AAA municipal-to-Treasury yield ratio is 68%, down from 72% on average over the past 12 months. Following the Fed's recent shift to an easier monetary policy, we believe longer-dated bonds (20-25 years) offer better value for new capital investments.

While high yield municipal spreads are tight from an historical perspective, we believe there is still room for further compression given the strength of the technical environment. The high yield municipal market could benefit from a boost in issuance from names outside of the usual issuers and sectors, in our view, since a diversity of issuers and sectors potentially promotes a more balanced market environment.

Stephanie Larosiliere, Senior Client Portfolio Manager

- 1 Source: Lipper US Fund Flows as of Aug. 16, 2019.
- 2 Source: Treasury Inspector General for Tax Administration Review of the Issuance Process for Notice 2018-54, as of Feb. 22, 2019. https://waysandmeans.house.gov/sites/democrats.waysandmeans.house.gov/files/documents/TIGTA%20REPORT-UNREDACTED%20FINAL.pdf
- 3 Source: BondBuyer, as of July 31, 2019.
- 4 Source: Bloomberg Barclays, covers period from Nov. 31, 2018 to July 31, 2019.
- 5 Source: US Census Bureau, as of March 31, 2019.
- 6 Source: Standard & Poor's Financial Services LLC, as of May 31, 2019.
- 7 Source: Moody's Investor Services as of June 30, 2019.
- 8 Source: Taxfoundation.org (https://taxfoundation.org/post-wayfair-options-for-states/) as of Aug. 19, 2018.
- 9 Source: Taxfoundation.org (https://taxfoundation.org/post-wayfair-options-for-states/)as of Aug. 19, 2018.
- 10 Source: Thomson Reuters The Municipal Market Monitor (TM3) as of Aug. 19, 2019.
- 11 Source: Bloomberg Barclays, covers period from Jan. 31, 1980 to July 31, 2019.
- 12 Source: Bloomberg Barclays, covers period from July 31, 2018 to July 31, 2019.



Jennifer Hartviksen Head of Global High Yield



Jay Raol Director Quantitative Research

The bottom line

Factor and fundamental investing: Blending approaches for global high yield portfolios

Allocators face difficult decisions when it comes to choosing investment strategies. Should they be active or passive? Factor-based or fundamental? At Invesco Fixed Income, we believe these questions are not a matter of "or" but "and." By combining fundamental and factor-based strategies we believe we can deliver more attractive return profiles than by utilizing one approach in isolation. Here we examine this belief in the global high yield universe. We speak to Jennifer Hartviksen, Head of Global High Yield, and Jay Raol, Director of Quantitative Research.

Q: Let's define fundamental and factor-based strategies as they relate to the global high vield market. How are they similar?

Jennifer: Let's start by defining the opportunity set. There are currently 3,317 bonds in the Bloomberg Barclays Global High Yield Index.² In both fundamental and factor-based strategies, we select a subset of these bonds to construct a portfolio that aims to provide a better return profile than the broad market. We consider the characteristics of the bonds and companies that issue those bonds when constructing our portfolios. We assess the relative valuation and market liquidity of each bond to ensure that we are not taking on undue risk. This process of security selection is similar in both the factor and fundamental approaches. However, the strength of combining the two approaches to construct a global high yield portfolio lies in accessing the benefits of their differences.

Q: What are the differences?

Jennifer: A fundamental credit strategy is premised on single-name security selection. Our team of global credit analysts identifies situations where we have an informational advantage (private company, small issuer size, lower credit quality, industry knowledge, covenant analysis) and do a deep dive into each company. This includes forecasting the earnings profile over the cycle, the quality of the management team, industry dynamics, the company's liquidity profile and asset valuation. Our analysts also consider the unique attributes of each individual bond issue like covenants, corporate structure, capital structure ranking and possible asset security. The portfolio managers then construct portfolios using analyst picks from across the platform, sizing each position based on its anticipated risk and return profile. They will also use macroeconomic data to calibrate the portfolio from a top-down perspective, taking into consideration sector exposures, overall portfolio risk and market technicals. Fundamental portfolio managers take discretionary views on the market, sectors or specific companies.

Jay: In a factor-based strategy, there are no analysts looking at each individual company. Instead, this strategy utilizes decades of academic research that has found certain characteristics that tend to drive higher returns and systematically selects bonds with those desired characteristics. For example, academic research suggests that lower volatility securities tend to offer better risk-adjusted returns than those with less stability. A factor-based strategy might systematically overweight more stable securities to pursue its objective of delivering better risk-adjusted returns than the benchmark. This is one of several characteristics that may be systematically targeted in a factor-based high yield strategy.³ Unlike a fundamental approach, finding many securities with the desired characteristic is more important than zeroing in on any single issuer. Ranking and rebalancing the securities in the portfolio happens systematically. The portfolio manager can change the system but will not take discretionary views on the market, sectors or specific companies.

Q: What do you believe is better - a fundamental or factor strategy?

Jennifer: All of the above! At Invesco we believe both fundamental and factor-based strategies have a place in clients' portfolios. The choice depends on the client's preference for systematic or fundamental strategies, or both, performance objectives and fee budget.

The bottom line (continued)

For example, if a client is highly benchmark constrained, has a low fee budget and is seeking access to the global high yield asset class, a factor strategy may be optimal. If he or she is willing to vary significantly from the benchmark or is benchmark agnostic, an active fundamental strategy may be a better approach since it offers the chance to outperform through idiosyncratic credit picks. Factor strategies can provide a highly diversified portfolio with exposure to a specific asset class, while fundamental strategies tend to be more convicted, concentrated portfolios with a higher degree of idiosyncratic risk.

Jay: We find that most investors are somewhere in between - they are willing to take some idiosyncratic risk versus their benchmark to gain credit alpha but are still fee conscious. For those investors, a combined factor-fundamental approach may be a good option. Although we would like to deliver a strategy that works all the time, both our active and factor-based solutions will likely undergo periods of underperformance. By diversifying a global high yield allocation to include both fundamental and factor-based approaches, it may lead to a more stable risk-return profile. Since the portfolio construction processes are related but independent, when factors are underperforming, the fundamental idiosyncratic strategy may be performing well, and vice versa.

Jennifer: That is a key reason why we believe constructing a global high yield portfolio that utilizes both approaches should deliver better results. The systematically constructed factor portion of the portfolio is highly diversified, providing exposure to factors and the broad asset class, while the fundamental portion contains concentrated, high conviction idiosyncratic investments where we think we have an information advantage. That portion of the portfolio should deliver alpha.

Q: How big is the factor-based fixed income market and how is it growing?

Jay: In the institutional segment, we estimate that the factor-based fixed income market is roughly USD120 billion dollars in size with USD17 billion of total net inflows in 2017 and 2018.⁴ There are also about USD80 billion of these strategies represented in mutual funds and ETFs.⁴ So relative to the fixed-income market broadly, it is still small. But as investors realize the benefits of adding factors to their current passive and fundamental approaches, we believe it is poised for growth.

Please read the Investment risk section at the end of this publication.

¹ There is no guarantee that these results will be realized.

² Source: Bloomberg L.P., Aug. 20, 2019.

³ See "Why should investors consider credit factors in fixed income?" from the June 29, 2018 Invesco Global Fixed Income Strategy report for more details on how fixed-income factor investing works in credit.

⁴ Source: eVestment and Morningstar Direct as of March 31, 2019.

Invesco Fixed Income

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Notes

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. The values of junk bonds fluctuate more than those of high quality bonds and can decline significantly over short time periods.

Junk bonds involve a greater risk of default or price changes due to changes in the issuer's credit quality. The values of junk bonds fluctuate more than those of high quality bonds and can decline significantly over short time periods.

The risks of investing in securities of foreign issuers, including emerging market issuers, can include fluctuations in foreign currencies, political and economic instability, and foreign taxation issues.

The performance of an investment concentrated in issuers of a certain region or country is expected to be closely tied to conditions within that region and to be more volatile than more geographically diversified investments.

Mortgage- and asset-backed securities, which 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.

Asset-backed securities are subject to prepayment or call risk, which is the risk that the borrower's payments may be received earlier or later than expected.

Commodities may subject an investor to greater volatility than traditional securities such as stocks and bonds and can fluctuate significantly based on weather, political, tax, and other regulatory and market developments.

Municipal securities are subject to the risk that legislative or economic conditions could affect an issuer's ability to make payments of principal and/ or interest.

Factor investing is an investment strategy in which securities are chosen based on certain characteristics and attributes that may explain differences in returns. Factor investing represents an alternative and selection index based methodology that seeks to outperform a benchmark or reduce portfolio risk, both in active or passive vehicles. Factor investing may underperform cap-weighted benchmarks and increase portfolio risk.

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