Global macro strategy

Europe's economy may surprise in second half

There is no ignoring the fact that the eurozone economy has fallen short of expectations so far in 2018. However, looking through the gloom – we are upbeat on the outlook for the remainder of the year. Fundamentally, the European economy remains in good shape. Growth is above trend, the output gap continues to close, and inflation continues to firm. The corporate sector continues to run a healthy surplus, which is supporting continued employment gains. Therefore, domestic demand remains supported, and financial conditions remain favorable for borrowers. Going forward, we believe the forces that produced softer economic data in the first half of this year are likely to abate. Recent data are already corroborating this positive outlook for a reacceleration in the second half of 2018.
**Global macro strategy (continued)**

**Expecting an upside growth surprise in the second half**  
At the start of 2017, forecasts of gross domestic product (GDP) growth for the year ahead were around 1.4%.
This proved to be a low bar, and the eurozone ended the year with growth at 2.4%.

On the back of this upside surprise in 2017 growth, forecasts of 2018 growth at the start of the year were highly elevated, between 2.3%-2.4%.

So far, those lofty expectations have proved to be too optimistic, and first quarter growth was a weak 0.4%, quarter-over-quarter. This pullback in growth momentum was driven by weaker support from a previously very strong external trade environment, one-off supply side disruptions from harsh weather conditions, worker strikes in France and an overall increase in global uncertainty.

Despite this small bump in the road, domestic consumption has remained robust, corporate investment has exceeded expectations, and housing investment continues to increase. The global economy continues to grow at a healthy pace, which should support export growth.

The supply disruptions from the first half of the year have eased and the forward indicators affirm our view that the slowdown in European growth has moderated, leaving it still at, or above, trend. For instance, euro area composite purchasing managers index (PMI) data accelerated in August to a level that is consistent with the economy reaccelerating to a near 2% growth rate, based on our estimates.

**Inflation is incrementally strengthening, but the ECB will likely stay the course**  
Inflation continues to firm in a manner consistent with the improvements in the underlying economy, as labor slack continues to be eroded and the domestic demand impulse strengthens.

Headline inflation has accelerated sharply over the past few months, reaching 2.1% in July, mainly due to higher energy and food prices and favorable year-over-year comparisons. We expect headline inflation to soften as we move into next year as some of these positive effects drop out of the yearly comparisons.

Underlying core inflation continues to increase, although at a subdued pace. The European Central Bank’s (ECB) forecasts of year-over-year changes in core inflation are 1.6% for 2019 and 1.9% for 2020. While our own forecasts call for lower inflation, we agree that pressures should continue to firm as the economy strengthens over the next twelve months.

**Financial conditions remain highly accommodative and supportive of economic expansion**  
The ECB continues to ease monetary policy through its net asset purchases, but it is scheduled to end balance sheet expansion by year-end. We believe the ECB’s monetary policy stance will remain highly accommodative for the foreseeable future, supported by its stock of asset purchases and associated reinvestments, and its enhanced forward guidance that interest rates will remain low into 2019.

The most recent euro area bank lending survey reported that this policy is working, showing increasing demand across all loan categories in the second quarter of 2018.
While we have a positive outlook for Europe, the risks have clearly gone up

We believe the principle risks center around:
- Italian politics
- Continued turmoil in Turkey
- Brexit negotiations
- Global trade

**Italy** – As the Italian government begins its 2019 budget negotiations, our central view is that the Italian coalition will be able to deliver on its objectives in a way that is consistent with the spirit of the eurozone budgetary framework. However, financial market confidence in Italy was rocked in May after the Five Star Movement (M5S) and Northern League parties struggled to form a coalition. An increase in market-unfriendly headlines as we approach budget deadlines in Autumn could result in more market turbulence, undermining investor confidence in the eurozone.

**Turkey** – In August, concerns over Turkey’s economic stability roiled markets. However, our analysis indicates that Turkey is not a systemic risk for the eurozone. European bank exposures are limited (around 0.8% of European Union (EU) GDP)\(^7\), and total EU exports to Turkey represent only around 0.6% of GDP.\(^8\)

The bigger risk, in our view, is a potential decrease in confidence should contagion spread beyond Turkey and spill over into broader risk sentiment. The impact of such an event is much harder to quantify.

**Brexit** – We maintain our belief that an orderly compromise on Brexit will ultimately be reached, although likely at the last moment. However, as the deadline to reach a deal approaches, concerns will likely build that a no-deal outcome – and associated UK and EU market turbulence – could become a reality.

**Global trade** – While EU/US trade discussions appear to be amicable at the current time, a shift would likely impact financial markets. An escalation of global trade tensions in the coming quarters would likely have a direct impact on economic activity, potentially leading to uncertainty and market volatility.

Despite our positive macro outlook, given the presence of these risks, we believe it is likely that increased volatility will be a market feature for the remainder of the year.

_Gareth Isaac, CIO EMEA, Thomas Sartain, Senior Fixed Income Portfolio Manager, Reine Bitar, Macro Analyst_
Global macro strategy (continued)

Interest rate outlook

US: Neutral. We expect US rates to stay range-bound, caught between growing trade worries and above trend US growth. Core US inflation continues to be benign, and we expect it to peak in the next two months at around 2.4%. After peaking, we expect softer rental and service costs to drive it below 2%. Assuming no large trade-driven shocks, US growth is likely to remain above trend for the rest of the year, supported by stronger energy sector capital expenditure, and strong job growth and consumption. We expect 2018 gross domestic product (GDP) growth of around 2.8%, a percent above the long-term sustainable trend. The risk of tighter global financial conditions due to trade-related tensions and the possibility of further tariffs in the next few months may cause asset price volatility. Treasury prices may benefit if volatility picks up.

Europe: Underweight. The escalation of tensions in Turkey and the ECB's concerns over European banks' exposure to Turkish assets have driven German bund yields lower, although European peripheral bonds suffered with Italian bonds, which sold off aggressively in August. Euro area economic data continued to stabilize in August, and German growth exceeded expectations in the second quarter, leading to an upward revision of eurozone growth to 0.4%, quarter-over-quarter. We continue to believe the bond market will begin to price greater term premium into the European yield curve given the prevailing strength of the economy and current depressed valuations.

China: Neutral. We expect a flattening government bond yield curve and think short-term rates may underperform long-term rates. This is on the back of higher overnight funding costs, expectations of potential liquidity drainage by the central bank (PBoC), expectations of large scale fiscal stimulus and higher inflation ahead. However, the upcoming inclusion of Chinese onshore bonds into major global indices and the low correlation of this market with other markets should lead to continuous strong foreign demand for Chinese onshore bonds, especially those issued by governments and policy banks.

Japan: Neutral. 10-year Japanese government bond (JGB) yields have remained around 0.1%, while the yield curve continued to steepen in August. This comes as markets continue to digest the Bank of Japan's (BoJ) July policy adjustments, which increased the target for 10-year yields. However, concerns that a global upturn in yields would be triggered by the BoJ have faded. Instead, the focus has shifted to China and fears of contagion in emerging markets, sparked by the turmoil in Turkey. Meanwhile, Japanese growth data exceeded forecasts at 1.9% in the second quarter, boosted by stronger consumer spending and capital expenditure. Exports data, however, remain on the weak side, which could suggest that growth momentum might slow over the next quarter.

UK: Neutral. Prime Minister Theresa May's cabinet is struggling to adopt collective responsibility for the Brexit negotiating strategy drafted at the beginning of July. With only a few months until the departure date, we are no closer to understanding the UK's post-Brexit trade relationship with the EU. Multiple outcomes are still in play: a vote of no confidence in Theresa May, another general election, a second referendum, a deferred departure date, a hard Brexit or the possibility that the UK remains a member of the EU. Tensions may heighten when UK politicians return from summer vacation in September. Our base case remains that the UK will opt for a soft Brexit, but a resolution is unlikely to be achieved until the last minute.

Canada: Overweight. Economic data remain upbeat and should support a policy rate hike by the Bank of Canada (BoC) at its October meeting. The surge in July headline inflation to 3% was largely ignored by the interest rates market, as Canadian 10-year yields remain near the middle of the 2%-2.5% range seen this year. Growth appears to be on track to be above 2.0% in 2018, and the slowdown in the housing market has been offset by strong business investment and a pickup in exports. NAFTA negotiations are ongoing and are the primary cause of market uncertainty. Interest rates should be pressured lower from current levels due to overextended consumer balance sheets.
Australia: Neutral. The Reserve Bank of Australia (RBA) kept its policy rate stable at its August meeting and released an upbeat statement, shrugging off the cooling housing market. The RBA continues to believe that inflation will increase and return to its target level, but this increase is expected to be gradual. The latest employment report was mixed; the number of employed persons fell slightly, but the unemployment rate improved, falling to 5.3%, its lowest level since 2012. The sluggish tightening of the labor market is putting no upward pressure on wages, contributing to low interest rates and inflation. The RBA will likely leave its policy rate unchanged for some time.

India: Neutral. We expect Indian yields to stay range-bound, as has been the case for the past few months. Going forward, we believe macroeconomic risks are evenly balanced. We believe favorable growth numbers and a potential downside surprise in inflation in the coming months could put downward pressure on yields, while broad emerging market sell-offs, higher oil prices and concerns about the current account deficit could have the opposite effect. Additionally, we expect the Reserve Bank of India (RBI) to keep its policy rate unchanged, after two increases in the benchmark rate this year. It may, however, continue to engage in occasional open market operations, like those seen in recent months. This should help curb any significant sell-off in rates.

Global 10-year yields — G4 countries

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>UK</th>
<th>Japan</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


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

Global macro strategy (continued)

Currency outlook

USD: Neutral. We believe the US dollar is caught between two trends. Interest rate hikes by the US Federal Reserve (Fed) alongside its balance sheet reduction have increased US dollar funding costs and tightened financial conditions, spurring the US dollar rally. Uncertainty over trade policy has exacerbated the move. On the other hand, global growth has been strong and it appears that US economic activity, while buoyant, has peaked - a convergence that typically causes the US dollar to weaken.

EUR: Neutral. The euro/US dollar exchange rate breached a key support level of 1.15 in August, while risk aversion across emerging market currency markets, sparked by Turkey, continued to spur the US dollar higher. While the fundamental economic picture has improved in the euro area, exogenous factors driving sentiment across currency markets are unpredictable, keeping us sidelined for now.

RMB: Neutral. The renminbi/US dollar exchange rate traded between 6.80-6.95 in August. In addition to the counter-cyclical adjustment factored into the daily fixing rate and the reserve requirement of 20% on foreign exchange forwards, the PBoC has also banned interbank renminbi deposits and loans to the offshore market through free trade zones. This move led the exchange rate to quickly drop from 6.95 to 6.84. Capital controls for outflows remain tight, but financial opening, such as the inclusion of Chinese equities and onshore bonds in major global indices, will likely further increase overseas demand for Chinese onshore assets and could help maintain stable capital flows. We expect the exchange rate to hover around 6.8-6.9 in the near term. However, positive headlines related to US-China trade negotiations could cause the exchange rate to trade below 6.80.

JPY: Overweight. The yen has benefited from the recent spike in volatility and deteriorating risk sentiment caused by the sell-off of Turkish assets. The yen/US dollar exchange rate traded down from about 112 at the beginning of August to a low of 110.1 as the sell-off in the Turkish lira peaked. Looking ahead, we believe that the BoJ policy tweak, which increased the target for 10-year yields, will support the yen, and the current valuation looks attractive. The caveat to this view is the broader US dollar strength driven by Fed policy and a reduced global risk appetite as trade tensions escalate. We believe the yen may be sidelined against the US dollar in this scenario, but will likely outperform versus other currencies.

GBP: Neutral. Sterling is likely to be driven by developments in Brexit discussions and expectations for UK interest rate hikes. We do not expect a breakthrough on Brexit anytime soon, but the Bank of England (BoE) delivered a unanimous 0.25% rate hike to 0.75% in its August meeting, as widely expected. It also revised its growth and inflation forecasts upwards. However, Governor Carney signaled that policy tightening would remain gradual and that the chance of a no-deal Brexit is ‘uncomfortably high’, after which the sterling/US dollar exchange rate weakened below 1.30. Over the medium-term, we continue to expect sterling to appreciate, but we will need to see some positive developments from the Brexit negotiations for this to materialize.

CAD: Neutral. The Canadian dollar has remained in a slow decline this year, although it has outperformed other “dollar bloc” currencies such as the Australian and New Zealand dollars. The BoC policy rate hike to 1.50% in July did nothing to alter the path of the currency. Skepticism over resolving the ongoing NAFTA trade negotiations remains a huge hurdle. In addition, foreign demand for the currency driven by investment in Canadian real estate has been declining.

AUD: Underweight. The Australian dollar continues to struggle as Australia remains in the cross fire of the trade war between the US and China. The housing market continues to show signs of cooling, although at a gradual pace, and commodity prices remain under pressure. With the RBA in no rush to raise its policy rate and no end in sight to the trade disputes, we do not see a catalyst to drive the Australian dollar higher and think it will remain under pressure.
INR: Underweight. The rupee has experienced a significant sell-off, depreciating 8.64% year-to-date against the US dollar. This was largely driven by an increase in crude oil prices, foreign portfolio outflows and investor fears of a higher current account deficit. Looking ahead, we believe risks to the rupee continue to be tilted to the downside as India’s balance of payments remains under pressure from portfolio outflows, higher crude prices and higher trade deficits.

<table>
<thead>
<tr>
<th>Valuations of major currencies compared to purchasing power parity (PPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
</tr>
<tr>
<td>AUD</td>
</tr>
<tr>
<td>Overvalued</td>
</tr>
<tr>
<td>Undervalued</td>
</tr>
</tbody>
</table>


Ray Uy, Head of Macro Research and Currency Portfolio Management, James Ong, Senior Macro Strategist, Yi Hu, Senior Analyst, Brian Schneider, Head of North American Rates Portfolio Management, Scott Case, Portfolio Manager, Amritpal Sidhu, Quantitative Analyst
Geographical themes

Investment grade (IG): Fundamental outlook remains strong, but market technicals turning lukewarm

Rationale
Corporate credit fundamentals continue to improve across most geographies and sectors, with impressive earnings and revenue growth reported during the first half of 2018. Leverage has peaked from recent cycle highs, and we are now seeing more pressure from shareholders to decrease leverage in response to rising funding costs and tax reform, which penalizes excessive interest expense. In addition, the return to higher organic growth has limited the need for debt financed share repurchases or mergers and acquisition activity. As a result, we expect corporate balance sheets to improve going forward. Despite the constructive fundamental backdrop, global trade disputes have the potential to create cost pressures and delay investment following a strong trend in capital expenditures in 2018.

In terms of technicals, we have seen lower demand from foreign investors as tightening monetary policy drives currency hedging costs higher. Repatriation of overseas cash by US corporations, much of which has been invested in short-maturity IG corporates, is also putting downward pressure on demand for shorter-term bonds. We expect the uptick in US Treasury issuance to shift from US Treasury bills to longer maturities, posing another potential drag on technicals as the Fed scales back its bond reinvestment program. Fortunately, institutional demand for long-term corporate bonds remains robust, and domestic flows into mutual funds and exchange-traded funds (ETFs) remain positive, although they are slower compared to last year.

European credit markets are generally earlier in the credit cycle versus the US and are less levered, although risks from Brexit and political uncertainties in Italy and other countries remain. Given wider credit spreads in many asset classes and a supportive fundamental outlook, we expect IG credit market returns to stabilize.

IFI strategy
We continue to favor Europe over the US, the UK and Asia. Key drivers to monitor include 1) future changes in monetary policy from the Fed, ECB, BoJ and BoE, viewed on an aggregate basis for their impact on the US dollar and global credit flows 2) the development of US fiscal and regulatory policy changes and 3) the impact on demand and investment of announced tariffs and the potential for a more destabilizing global trade war.

Emerging markets (EM): Compelling valuations are supported by still-favorable macroeconomic fundamentals but geopolitical concerns and US dollar are headwinds

Rationale
Valuations continue to improve in sovereign EM credit, particularly in the high yield, growth-sensitive segments of the market. US dollar funding pressure has eased, but until short-term US interest rates are measurably lower, flows back into EM will likely remain limited. This leaves us with a slightly negative technical picture, although limited new issuance may offer some support.

Deceleration in Chinese growth has spurred the Chinese government to implement targeted easing measures via monetary and fiscal policy, which should also provide near-term support that offsets trade concerns. Aside from concerns over the rising US dollar and tighter financial conditions, antagonistic US foreign policy necessitates a higher risk premium in EM assets, in our view, but we think current spreads reflect this.

IFI strategy
We continue to believe the market has overpriced risks to EM coming from rising US interest rates and a stronger US dollar as well as geopolitical concerns. While some EM countries face significant challenges, we do not see context for a broader EM crisis. In addition, fundamentals remain broadly supportive. As such, we favor adding risk in a selective manner, focusing on those countries that are less externally vulnerable or that have solid policy anchors, especially at the lower end of the quality spectrum.
**Global investment themes** (continued)

| US commercial mortgage backed securities (US CMBS): Positioning is key as the commercial real estate cycle progresses |
| **Rationale** |
| We expect commercial real estate rent growth and property price appreciation to continue. However, we believe the pace will slow as new commercial real estate supply dampens space absorption. Furthermore, we expect growth in e-commerce to remain a headwind for the retail property sector. On the bright side, lending conditions remain accommodative across property markets despite slightly tighter credit standards and higher rates. Additionally, we expect modest new issuance volumes to be absorbed by investors. |
| **IFI strategy** |
| Given our neutral outlook on spreads, we prefer slightly seasoned credits that benefit from embedded property price appreciation and decreasing spread duration. Additionally, we expect to find opportunities in non-index, single asset/single borrower positions. Despite continued fundamental strength in the US commercial property sector, we are exercising caution in security selection as the real estate cycle continues to extend, central bank tailwinds have diminished and CMBS have recently outperformed corporate bonds. |

| US residential mortgage backed securities (US RMBS): Positioned to potentially weather market volatility as fundamentals and technicals remain favorable |
| **Rationale** |
| Thanks to favorable fundamental and technical dynamics, we believe residential credit investments stand to outperform other fixed income credit sectors in a risk-off environment. Though recent housing data reflect some weakness in construction and sales activity, the limited supply of homes against the backdrop of a strong labor market underpins our positive outlook for home prices and borrower performance. Meanwhile, issuance volumes continue to fall short of legacy paydowns, resulting in heavy competition for floating rate and limited duration assets prevalent in the sector. Nevertheless, the flatness of the credit curve warrants a measure of caution with respect to below-investment grade securities, with limited room for further spread tightening in these credits. |
| **IFI strategy** |
| We favor the IG portion of the credit curve in anticipation of continued deleveraging, rating agency upgrade activity, and spread sustainability. While we are cautious about non-IG spreads, our concerns about the ultimate credit quality of lower-rated classes are limited. As short-term rates continue to move higher, we see attractive opportunities in floating rate securities, including Single Family Rental securitizations and moderately seasoned Credit Risk Transfer (CRT) bonds issued by Government Sponsored Entities (GSE). Additionally, new issue Prime Jumbo spreads have recently widened following an increase in supply and, in our view, currently offer a material yield pickup relative to Agency MBS. |

| US asset backed securities (US ABS): Flat credit curve, contained credit risk; esoteric ABS potentially offer attractive yield and diversification |
| **Rationale** |
| Fundamentals are favorable as the US economy approaches its late cycle. This is a positive factor for the consumer and underlying ABS collateral performance in the near term. As the Fed continues to tighten and the yield curve flattens, shorter-term ABS should remain in high demand. We are somewhat cautious as we approach US mid-term elections and as trade negotiations intensify. However, uncertainty should be supportive of the relatively stable, shorter-duration ABS market. |
| **IFI strategy** |
| Relative attractiveness to corporate bonds has somewhat diminished but we still favor certain higher-yielding, lower-rated aircraft and container ABS for additional yield and diversification. Shorter-duration, non-benchmark triple-A ABS still offer good relative value, in our view, compared to benchmark credit card and auto loan ABS, benefiting from additional carry on the steeper, short end of the curve. We continue to focus on larger, seasoned sponsors as strong demand for ABS has significantly reduced spread tiering across asset types and servicers. |

(Diversification does not guarantee a profit or eliminate the risk of loss.)
**Global investment themes**

### Sector themes

#### Commodities: Global supply concerns have created energy volatility; we prefer pipelines

**Rationale**
Commodities have generally benefited from broad global growth, which has increased global commodity demand and pushed commodity prices higher over the past year. However, tariff-related uncertainties and recent US dollar strength pose near-term risks to the commodity space.

For example, signs of growth de-synchronization are now emerging, resulting in greater dispersion across commodity price performance. We still expect corporate and credit fundamentals to remain supportive, given anticipated organic de-levering driven by earnings growth. Additionally, certain commodities may benefit from the favorable demand flow-through impact of accelerated Chinese infrastructure investments, driven by credit easing and fiscal stimulus.

**IFI strategy**
We favor aluminum and copper producers, which tend to benefit from better supply/demand dynamics, and given more attractive bond valuations. We like exploration and production oil companies located in Latin America as well as certain Russian oil and gas producers. We also remain constructive on selective US midstream companies that are focused on cost of capital optimization and active de-levering to stabilize or maintain investment grade ratings.

#### Consumer story more nuanced globally, watching US fiscal policy influences

**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 any post-Brexit behavior shifts.

**IFI strategy**
We favor certain US consumer sectors, including leisure and housing-related sectors. We are negative on department stores and mall-based retailers that lack differentiated products. We favor EM consumer sectors on a selective basis. We are more cautious on the automotive original equipment manufacturer (OEM) sector given an adverse trade environment.

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

**Rationale**
M&A activity has moderated but remains a risk, driven by large overseas cash balances, cash repatriation potential due to tax law changes in the US, moderate financing costs, still modest organic revenue growth and the need to reposition business portfolios.

**IFI strategy**
We prefer to play post-transaction bond issuance typically characterized by size, liquidity, concessions and plans to deleverage. We believe a discriminating approach to this strategy is warranted due to a lower, but still large, M&A-related pipeline.

#### Technology, media and telecommunication (TMT): Data and connectivity

**Rationale**
We expect data usage growth trends to accelerate, requiring further advancement of distribution and network technologies.

**IFI strategy**
We prefer exposure to the long-term leaders in wireless, towers, and media. In technology, we favor distribution enablers with highly efficient cloud-based solutions.
## Yield curve themes

### Credit curve positioning, long-end valuations getting full

#### Rationale
The flattening of the US Treasury curve is making front-end cash more attractive to all-in yield investors. IG corporate credit curves have steepened to compensate for this flatter Treasury curve and to entice investors to move out the curve. The significant steepening of the corporate yield curve has stabilized recently as 30-year bonds are finding an equilibrium level, although at higher levels than earlier in the year. 10-year bond yields have risen to a lesser extent, but are experiencing similar technicals.

#### IFI strategy
With the credit curve steepening, 30-year bonds are beginning to look attractive from a spread standpoint, in our view. However, we favor the 7 to 10-year part of the curve to take advantage of some of the steeper yield curve while maintaining lower volatility compared to the 30-year part of the curve.

---

Tony Wong, Head of Global Research, Joe Portera, CIO High Yield and Multi-Sector Credit, Michael Hyman, CIO Global Investment Grade and Emerging Markets, Mario Clemente, Head of Structured Investments
Since early 2018, global credit markets have been impacted by a series of geopolitical events and a weak technical backdrop. The European credit market has been no exception. After reaching a tight of 79 basis points (bps) in early February 2018, the Bloomberg Barclays Pan-European Aggregate Corporate Bond Index Option Adjusted Spread (OAS) widened materially in the months that followed, peaking at 127 bps in July, before recovering somewhat to current levels of around 116 bps (Figure 1).

We saw an especially severe market reaction to the Italian election result in May, as the populist Five Star Movement and Northern League parties formed a ruling coalition. European investment grade credit spreads widened in sympathy with Italian government bonds, as the notion of an “Italexit” grew in investors’ minds.

![Figure 1: European credit spreads](image)


**Italy-related risks remain**

We view the main Italy-related risk to be aggressive changes in fiscal policy, which could put the populist government on a collision course with the EU when the country presents its draft budget in mid-October. However, while Italian sovereign bond volatility is likely to increase during these discussions, the risk of contagion to European investment grade should be limited, since we believe an Italian exit from the EU is remote. Neither the Northern League nor the Five Star Movement party has a popular mandate for an EU exit and neither ran an anti-euro campaign. This is reflected in recent polls showing that more than twice as many Italians favor the euro than not.1

**Negative technicals**

Such geopolitical headwinds have created a negative technical backdrop in the form of outflows from the asset class. Retail outflows, especially from long duration investment grade funds, have totalled approximately USD9 billion this year (as of end-July).2 This dynamic, coupled with a rise in net European investment grade bond issuance from around EUR60 billion in 2017 to around EUR90 billion year-to-date (as of end-July) and the reduction in ECB corporate bond purchases, appears to have led to more neutral investor positioning within the asset class.3

That being said, we view a reduction in crowded long positions as a positive development and retail flows have shown signs of stabilizing in recent months. With ECB deposit rates and the German government yield curve (up to the 7-year point) still well within negative territory, European investors are being penalized for remaining on the side lines, creating a sustained argument for staying invested in investment grade credit, in our view.
Reasons to be positive
We believe underlying fundamentals remain favorable given the mid-cycle characteristics that Europe exhibits in the form of bondholder-friendly corporate behavior, such as low capital expenditure trends, supportive interest coverage metrics and continued efforts to deleverage within the banking sector. On the macro side, economic growth remains robust and underlying inflation pressures are muted. Core eurozone inflation is stubbornly anchored below 1% (Figure 2) and falling unemployment is not currently feeding through to sustained wage pressure. Given these dynamics, the ECB can likely continue to normalize policy gradually, keeping financial conditions relatively easy. Furthermore, we believe the ECB will continue to use strong forward guidance to manage unintended risks of tapering. In its recent meeting, for example, it assured markets that it will seek to re-invest proceeds from quantitative easing “for as long as necessary” and aims to keep interest rates unchanged “through the summer of 2019.”

Figure 2: Headline inflation components

Market outlook
The fundamental and macroeconomic backdrop for European investment grade credit remains positive and valuations have become more attractive, in our view. However, we cannot ignore the geopolitical backdrop that includes US tariff threats, Italian budget risk and Brexit - all vying to take center stage in the next few months. We expect these uncertainties to generate greater volatility and we continue to utilize cost effective hedges to protect our portfolios from “tail risk” events where possible.

Looking ahead, we expect only modest tightening in the index level OAS spread from current levels through year-end. Therefore, excess returns will likely be predominantly carry-driven and active management will remain critical in navigating the market over the next 6-12 months, in our view.
IFI strategy
We remain underweight peripheral credit (especially Italian corporate credit) as we expect any “risk-off” driven volatility in Italian government bonds to be felt among domestic Italian issuers. From a technical perspective, we have been underweight eligible debt under the ECB’s Corporate Sector Purchasing Programme (CSPP), which we feel will underperform ineligible bonds as the “ECB buying premium” unwinds with tapering.

We continue to favor financial bonds over non-financial bonds and are comfortable moving down the capital structure in strong core banks in the Nordics and Switzerland. We feel these banks have become more “utility-like” following the global financial crisis as increased banking regulation has resulted in a notable improvement in balance sheet quality, as expressed through rising capital adequacy ratios and a reduction in non-performing loans.

Additionally, we continue to favor the corporate hybrid market, especially short-dated calls. These trade at an attractive yield multiple to comparable issuer and maturity-matched senior bonds, and have lower extension risk versus newly issued hybrid bonds due to higher back-end coupons. We believe this creates an economic incentive to call and replace at the first call date.

Lyndon Man, Co-Head European Investment Grade, Luke Greenwood, Co-Head European Investment Grade, Michael Booth, Associate Portfolio Manager

1 Source: Reuters, “Polls show most Italians want to stay in euro”, May 31, 2018.
2 Source: EPFR, Barclays, July 31, 2018.
3 Source: Barclays Euro / Sterling High Grade Supply Update & Citi Global Credit Survey, June 28, 2018.
At Invesco Fixed Income (IFI) we consider risk at every stage of the investment process, from the design of investment strategies to portfolio construction. We talk with Leyla Greengard, Head of Portfolio Risk for Fixed Income, about Invesco's independent risk oversight framework and how risk management techniques can help investors meet their objectives.

Q: What are the main aspects of IFI's risk management process and what is its goal?

Leyla: At Invesco, risk management has three lines of defense: The first line is the investment team, the second encompasses the risk and compliance teams and the third comprises the fund boards and the audit group.

As the second line of defense, the risk team continually monitors investment portfolios to measure how they are being impacted by macro and geopolitical events and the fortunes of specific issuers. We do a “deep dive” with investment teams on a regular basis, examining the alignment of portfolios with their objectives. Within that context, we examine past performance and potential future performance, which are dictated by current positioning. We look at the performance of various sectors and at “performance attribution,” which measures the impact of specific investment decisions on returns. We also examine whether portfolio positioning is in line with the portfolio manager’s outlooks on markets and securities. For example, if the manager believes that the US dollar is likely to appreciate, is the portfolio’s positioning reflective of this outlook? (Past performance is not indicative of future results.)

The main goal of our analysis is to understand the amount and types of risks being taken in portfolios and confirm that they match their investment objectives. If not, portfolio adjustments are made.

Q: What types of risks are considered?

Leyla: In asset management, risk often refers to “market risk,” which is the risk of an adverse return of individual securities or a portfolio of securities. But portfolios are subject to other risks, for example, concentration risk, which is the risk that a portfolio has exposure to a small number of securities or factors, liquidity risk, which is the risk that a manager has difficulty selling a security when he or she needs to, counterparty risk, which is the risk that a trading counterparty fails to meet its obligations and model risk, which is risk due to flaws in models used to estimate expected risk and returns.

Another important distinction we make is between systematic and idiosyncratic risk. Systematic risk is inherent to the entire market and affects fluctuations of all risky assets, such as broad changes in interest rates or market volatility. Idiosyncratic risk is specific to a certain security or set of securities, such as the risk that a biotech company’s new drug is approved or rejected by the US Food and Drug Administration.

Q: How do you measure risk?

Leyla: Different metrics are used to estimate a portfolio's risk. Some common ones are volatility, value at risk (VaR), expected shortfall (“tail loss”) and the maximum expected drawdown. Volatility is a measure of the fluctuation of returns, VaR measures larger investment losses and expected shortfall and maximum drawdown try to measure the most extreme cases of potential losses. Invesco’s risk team focuses on portfolio volatility and tail risk (the risk of the most negative outcomes), which we estimate with the help of risk models.
Q: How do risk models work and what do they tell you?

Leyla: We use statistical models to predict a portfolio’s volatility and potential “tail” losses. Different types of models are better at predicting different types of risk. To predict a portfolio’s volatility, we use “parametric” models. Our models assume a normal distribution of returns, allowing us to determine a return distribution by providing various “parameters,” such as its mean and standard deviation. These models also allow us to break down a portfolio’s returns into different risk factors. The resulting “risk profile” itemizes each potential source of risk in the portfolio and estimates each source’s contribution to overall portfolio volatility. Parametric modeling of volatility is the workhorse of our risk assessment process.

To estimate tail risk, we use historical simulations and perform stress tests. Historical simulations do not assume a normal distribution of returns but apply actual past returns to the portfolio as it is assembled. To “test” the portfolio’s behavior under different types of stress, we apply hypothetical shocks to the market and examine the portfolio’s resulting returns. We consider two types of stress: stress that would have occurred during a specific timeframe, such as during the global financial crisis, and stress due to hypothetical shocks, such as a spike in oil prices. We also look at the range of outcomes that could occur due to different asset class correlations that might prevail at the time of the shock.

Q: How is this model output used in investment decisions?

Leyla: Risk estimates generated by these models provide a feedback loop to portfolio managers about their investment decisions. Understanding the different sources and levels of risk in a portfolio helps portfolio managers remain within the levels defined by their objectives, calibrate the relative risks they take based on their levels of conviction (a higher level of risk should be associated with higher conviction) and make sure that the risks they are taking are not being diversified away by other positions. The feedback can also help ascertain whether any hedges that have been put on have reduced risk and by how much.

If there is a disconnect between the amount or type of risk being taken and the portfolio’s objective or level of conviction, for example, adjustments to the portfolio can be made to create better alignment. The ongoing examination of how portfolio returns relate to the risk taken, and how risk and portfolio positions are modulated over time, is a critical aspect of IFI’s overall risk management and investment process.

Please read the Investment risk section at the end of this publication.
### Fixed income market monitor

<table>
<thead>
<tr>
<th></th>
<th>Coupon (%)</th>
<th>Yield to worst (%)</th>
<th>1 month change in YTWT</th>
<th>1 month change in spread</th>
<th>10 year range</th>
<th>Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Current</td>
<td>-3</td>
<td>23</td>
<td>156</td>
</tr>
<tr>
<td>Global Aggregate (USD hedged)</td>
<td>2.67</td>
<td>2.05</td>
<td>0.06</td>
<td>-3</td>
<td>23</td>
<td>156</td>
</tr>
<tr>
<td>U.S. Aggregate</td>
<td>3.13</td>
<td>3.36</td>
<td>0.06</td>
<td>-4</td>
<td>32</td>
<td>258</td>
</tr>
<tr>
<td>U.S. Mortgage-backed</td>
<td>3.55</td>
<td>3.49</td>
<td>0.08</td>
<td>-2</td>
<td>16</td>
<td>181</td>
</tr>
<tr>
<td>Global Inv Grade Corporate</td>
<td>3.48</td>
<td>3.14</td>
<td>-0.01</td>
<td>-12</td>
<td>55</td>
<td>515</td>
</tr>
<tr>
<td>U.S. Investment Grade Corporate</td>
<td>3.96</td>
<td>3.99</td>
<td>-0.03</td>
<td>-14</td>
<td>76</td>
<td>618</td>
</tr>
<tr>
<td>Emerging Market USD Sovereign</td>
<td>n/a</td>
<td>6.22</td>
<td>-0.31</td>
<td>-42</td>
<td>157</td>
<td>906</td>
</tr>
<tr>
<td>Emerging Market Corporate</td>
<td>n/a</td>
<td>5.59</td>
<td>-0.20</td>
<td>-32</td>
<td>120</td>
<td>1032</td>
</tr>
<tr>
<td>Global High Yield Corporate</td>
<td>5.95</td>
<td>5.85</td>
<td>-0.25</td>
<td>-33</td>
<td>231</td>
<td>1845</td>
</tr>
<tr>
<td>U.S. High Yield Corporate</td>
<td>6.35</td>
<td>6.31</td>
<td>-0.19</td>
<td>-33</td>
<td>233</td>
<td>1971</td>
</tr>
<tr>
<td>Bank Loans</td>
<td>5.78</td>
<td>5.87</td>
<td>-0.03</td>
<td>-42</td>
<td>157</td>
<td>906</td>
</tr>
<tr>
<td>Municipal Bond</td>
<td>4.69</td>
<td>2.66</td>
<td>-0.01</td>
<td>-32</td>
<td>120</td>
<td>1032</td>
</tr>
<tr>
<td>High Yield Municipal Bond</td>
<td>5.08</td>
<td>4.79</td>
<td>-0.03</td>
<td>-42</td>
<td>157</td>
<td>906</td>
</tr>
</tbody>
</table>

### Treasury market monitor

<table>
<thead>
<tr>
<th></th>
<th>Coupon (%)</th>
<th>Yield to worst (%)</th>
<th>1 month change in YTWT</th>
<th>1 month change in spread</th>
<th>10 year range</th>
<th>Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Current</td>
<td>-3</td>
<td>23</td>
<td>156</td>
</tr>
<tr>
<td>United States</td>
<td>2.27</td>
<td>2.83</td>
<td>0.12</td>
<td>-0.42</td>
<td>0.50</td>
<td>-1.49</td>
</tr>
<tr>
<td>Canada</td>
<td>2.21</td>
<td>2.18</td>
<td>0.14</td>
<td>-0.75</td>
<td>0.44</td>
<td>-0.02</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3.40</td>
<td>1.37</td>
<td>0.06</td>
<td>-0.34</td>
<td>0.85</td>
<td>-0.13</td>
</tr>
<tr>
<td>Germany</td>
<td>1.83</td>
<td>0.05</td>
<td>0.09</td>
<td>-0.57</td>
<td>1.20</td>
<td>0.96</td>
</tr>
<tr>
<td>Italy</td>
<td>3.22</td>
<td>2.07</td>
<td>0.06</td>
<td>-0.28</td>
<td>-5.48</td>
<td>-3.03</td>
</tr>
<tr>
<td>Japan</td>
<td>1.00</td>
<td>0.13</td>
<td>0.02</td>
<td>-0.23</td>
<td>0.07</td>
<td>0.40</td>
</tr>
<tr>
<td>China</td>
<td>3.53</td>
<td>3.41</td>
<td>-0.12</td>
<td>0.65</td>
<td>1.43</td>
<td>5.18</td>
</tr>
<tr>
<td>EM Local Currency Governments</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

### FX market monitor

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>10 year range</th>
<th>Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>EURUSD</td>
<td>1.17</td>
<td>1.05</td>
<td>1.60</td>
</tr>
<tr>
<td>USDJPY</td>
<td>111.73</td>
<td>75.82</td>
<td>124.77</td>
</tr>
<tr>
<td>GBPUSD</td>
<td>1.31</td>
<td>1.22</td>
<td>2.11</td>
</tr>
<tr>
<td>USDCNY</td>
<td>6.82</td>
<td>6.04</td>
<td>8.28</td>
</tr>
<tr>
<td>USDCIF</td>
<td>0.99</td>
<td>0.75</td>
<td>1.39</td>
</tr>
<tr>
<td>AUDUSD</td>
<td>0.74</td>
<td>0.60</td>
<td>1.10</td>
</tr>
<tr>
<td>CADUSD</td>
<td>0.77</td>
<td>0.72</td>
<td>1.09</td>
</tr>
<tr>
<td>EURJPY²</td>
<td>130.27</td>
<td>94.31</td>
<td>169.49</td>
</tr>
<tr>
<td>EURGBP²</td>
<td>0.89</td>
<td>0.70</td>
<td>0.89</td>
</tr>
</tbody>
</table>

Sources: Bloomberg Barclays, J.P. Morgan, as July 31, 2018. 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 Mortgage-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 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
Team contributors
Senior Editor – Ann Ginsburg

Atlanta

Rob Waldner
Chief Strategist and Head of Multi-Sector Portfolio Management
+1 404 439 4844
robert.waldner@invesco.com

James Ong
Senior Macro Strategist
+1 404 439 4762
james.ong@invesco.com

Amritpal Sidhu
Quantitative Analyst
+1 404 439 4762
amritpal.sidhu@invesco.com

Ann Ginsburg
Head of Thought Leadership Fixed Income
+1 404 439 4860
ann.ginsburg@invesco.com

Scott Case
Portfolio Manager
+1 404 439 4775
scott_case@invesco.com

Mario Clemente
Head of Structured Investments
+1 404 439 4614
mario.clemente@invesco.com

Michael Hyman
CIO, Global Investment Grade and Emerging Markets
+1 404 439 4827
michael.hyman@invesco.com

Leyla Greengard
Head of Portfolio Risk, Fixed Income
+1 404 439 4812
leyla.greengard@invesco.com

Ray Uy
Head of Macro Research and Currency Portfolio Management
+1 404 439 4822
raymund.uy@invesco.com

Tony Wong
Head of Global Research
+1 404 439 4825
tony.wong@invesco.com

Joseph Portera
CIO, High Yield and Multi-Sector Credit
+1 404 439 4814
joseph.portera@invesco.com

Brian Schneider
Head of North American Rates
+1 404 439 4773
brian.schneider@invesco.com

Noelle Corum
Associate Portfolio Manager
+1 404 439 4836
noelle.corum@invesco.com

Paul English
Head of US IG Research
+1 404 439 4819
paul.english@invesco.com

Megan Heard
Research Associate
+1 404 479 2863
megan.heard@invesco.com
Invesco Fixed Income (continued)

Team contributors

London

Reine Bitar  
Macro Analyst  
+44 20 7959 1689  
reine.bitar@invesco.com

Thomas Sartain  
Senior Fixed Income Portfolio Manager  
+44 20 7034 3827  
thomas.sartain@invesco.com

Luke Greenwood  
Co-Head European IG  
+44 20 3219 2784  
luke.greenwood@invesco.com

Gareth Isaac  
CIO EMEA  
+44 20 7959 1699  
gareth.isaac@invesco.com

Lyndon Man  
Co-Head European IG  
+44 20 3219 2783  
lyndon.man@invesco.com

Michael Booth  
Associate Portfolio Manager  
+44 20 7543 3564  
michael.booth@invesco.com

Hong Kong

Ken Hu  
CIO Asia Pacific  
+852 3128 6886  
ken.hu@invesco.com

Yi Hu  
Senior Credit Analyst  
+852 3128 6815  
yi.hu@invesco.com

Recent IFI publications

1. **Responsible investing in focus: Emerging market bonds**, May 2018, Julie Salsbery, Senior Client Portfolio Manager and Shane Gallagher, Associate Client Portfolio Manager

2. **Do demographics explain structural inflation?** May 2018, Ray Janssen, Senior Analyst

3. **Why should investors consider credit factors in fixed income?** April 2018, Jay Raol, Ph.D., Director of Invesco Fixed Income Quantitative Research and Shawn Pope, Macro Quantitative Analyst, Invesco Fixed Income

4. **Implication of corporate repatriation on money markets**, March 2018, Matt Bubriski, Analyst

**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.

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.

The use of derivatives may give rise to a form of leverage. Leverage may cause the portfolio to be more volatile than if the portfolio had not been leveraged because leverage can exaggerate the effect of any increase or decrease in the value of securities held by the Portfolio.
Important information

All data as of Aug. 31, 2018 unless otherwise stated. All data is USD, unless otherwise stated.

This document has been prepared only for those persons to whom Invesco has provided it for informational purposes only. This document is not an offering of a financial product and is not intended for and should not be distributed to retail clients who are resident in jurisdiction where its distribution is not authorized or is unlawful. Circulation, disclosure, or dissemination of all or any part of this document to any person without the consent of Invesco is prohibited.

This document may contain statements that are not purely historical in nature but are “forward-looking statements”, which are based on certain assumptions of future events. Forward-looking statements are based on information available on the date hereof, and Invesco does not assume any duty to update any forward-looking statement. Actual events may differ from those assumed. There can be no assurance that forward-looking statements, including any projected returns, will materialize or that actual market conditions and/or performance results will not be materially different or worse than those presented.

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

You should note that this information:

- may contain references to amounts which are not in local currencies;
- may contain financial information which is not prepared in accordance with the laws or practices of your country of residence;
- may not address risks associated with investment in foreign currency denominated investments; and
- does not address local tax issues.

All material presented is compiled from sources believed to be reliable and current, but accuracy cannot be guaranteed. Investment involves risk. Please review all financial material carefully before investing. The opinions expressed are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco investment professionals.

The distribution and offering of this document in certain jurisdictions may be restricted by law. Persons into whose possession this marketing material may come are required to inform themselves about and to comply with any relevant restrictions. This does not constitute an offer or solicitation by anyone in any jurisdiction in which such an offer is not authorised or to any person to whom it is unlawful to make such an offer or solicitation.