BNY MELLON

2020 Macro Themes

INFLATION INSURANCE IS UNDERRATED

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1.Global Inflation: Bottlenecks Echo Cracks in Global Value Chains

In 2019, US Treasury term premium reached new lows. This coincided with downside inflation surprises across the globe. Tariffs remain a core concern in emerging markets, which should push global inflation higher.

2.Fiscal Imbalances: Turn Color Blind: Green Is the New Red

Stimulus could be a catalyst for a normalization in term premium. A bear steepening will be a concern amid improving global activity.

3.US Elections: Battlegrounds in Big Tech, Trade War and Healthcare

According to iFlow data, foreign appetite for US Treasuries cooled in 2019. US elections will be another hurdle for Treasuries. All three topics imply additional interventionism should be expected.

4.UK Exit from the EU: Orderly Out of Fatigue

An election outcome supporting the Conservatives should present a roadmap for the UK's much-delayed exit from the European Union. This will provide guidance around an extraordinarily uncertain outcome.

5.Ugly Currencies: Ready to Sell the USD, Unsure on What to Buy

According to our models, the USD is 8% overvalued. The Japanese yen is 8% undervalued and the euro 6% undervalued. The valuation case for a weaker USD is in place, but it's unclear what currencies one should buy.

6.De-VOL-ution: FX Volatility Struggles to Pick Up

Historically low currency volatility has vexed FX investors for the past few years. Yield curve flattening and rates compression, as well as stable long-term fundamentals have conspired to reduce FX spot ranges. For FX volatility to pick up in 2020, we would need to see meaningful policy or real economic divergence.

1.GLOBAL INFLATION: BOTTLENECKS ECHO CRACKS IN GLOBAL VALUE CHAINS

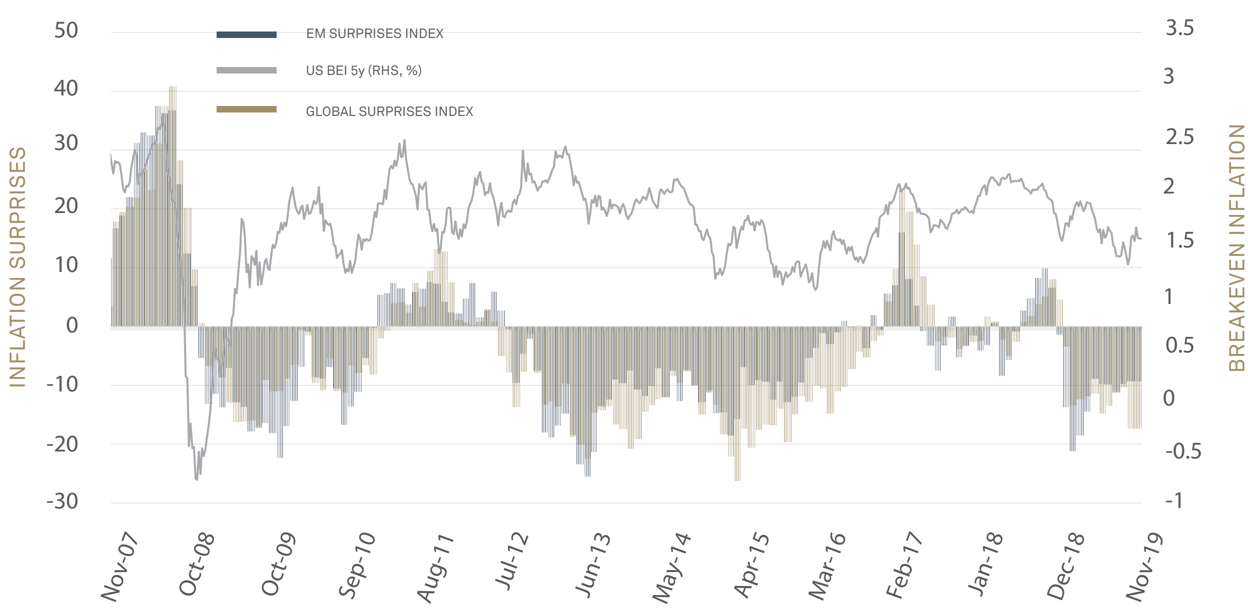
According to evolution theory, population bottlenecks take place when a sample size collapses. Genetic drift takes place more quickly to reduce genetic variation in smaller populations. Even if the bottleneck does not last for more than one generation, its impact lasts a long time.

This resembles the impact of tariffs on global value chains. Even if the trade war is resolved in the coming year or two, its impact should be long lasting. Entrepreneurs may well hesitate to rely on global value chains spread across too many countries for fear of disruptions. Production will likely switch closer to the final customer, whoever is ultimately signing the check.

The IMF forecasts global growth to recover slightly in 2020, mostly because emerging market growth is expected to climb from 3.9% to 4.6%. This growth recovery would only result in a mild increase in inflation from 1.5% to 1.8% in developed markets and from 4.7% to 4.8% in emerging economies. The risk to these inflation forecasts, in our opinion, is to the upside due to these bottleneck effects.

In the chart on the next page we show that inflation surprises have been on the downside since October last year. Downside price surprises are now close to decade lows, which is one of the more important backdrops to low implied and realized volatility across asset classes.

INFLATION SURPRISES AND BREAKEVEN INFLATION



SOURCE: BNY Mellon Markets, Bloomberg

Breakeven inflation is one of the more obvious transmission channels between the actual data and market prices. By definition, breakeven inflation is the differential between the real yield in inflation-linked instruments and the nominal yield in fixed coupon-paying bonds. Higher realized inflation, for instance, will pull investors away from nominal bond exposures to buy protection in inflation-linked instruments. This is the mechanism that would also steepen term structures and raise implied volatility in derivative instruments across asset classes.

Divergence from one region to the next has also been noteworthy. The spread between Italian and US five-year breakeven inflation was 78bps in May 2018 but is now 107bps. The market is mostly worried about a recession scenario in the eurozone, where Italian breakeven inflation is 50bps compared to 157bps in the US.

Meanwhile, peculiar patterns in actual inflation are already taking hold. Higher tariffs on China soybean imports may have been one important catalyst for the spread of swine flu and a spike in pork, meat and milk prices. This is a micro example of a pattern that may appear across much of the global value chain.

In the attached chart, we collected various commodity prices across energy, industrial metals and soft commodities. Three meaningful upward waves were observed in 2007-2008, 2009-2011 and 2016-2018. An interesting dispersion seems to be emerging: oil may not be an important driver of the commodity complex going forward.

Since March of this year, pork, milk and precious metals have been clear outperformers against almost every other commodity complex. This is happening by design. In the table below, we collected simple averages of applied most favored nation (MFN) tariffs across selected countries in emerging economies and developed markets. The EM countries add up to $23.5 trillion of GDP, or 27% of global GDP. The G3 add up to $40 trillion or 47% of the global economy. GDP-weighted EM MFN tariffs were 10.5% in 2018, compared to 4.2% in DM.

The starting point of the trade negotiations last year was disproportionately supportive for EM progress because existing tariffs were well over twice those observed in DM. For China, tariffs were 9.8%, against 3.5% for the US. Brazil, India and Turkey MFN tariffs are all in the double digits.

	SIMPLE AVERAGE APPLIED MFN TARIFF - 2018 (%)				FOOD INFLATION	
	All	Food	Electrical Machinery	Transport Equipment	Food Price Volatility	CPI Weight
Brazil	13.4	10.1	13.9	19.0	5.8	24.3
Mexico	7.0	13.9	3.5	8.5	1.4	23.2
Russia	6.8	11.2	4.4	8.2	4.8	29.0
Turkey	10.7	41.8	2.7	4.7	6.6	21.7
South Africa	7.7	8.7	4.5	6.6	2.8	19.2
India	17.1	38.8	8.8	31.1	4.2	45.9
Indonesia	8.1	8.6	6.0	13.5	2.6	18.9
China	9.8	15.6	8.4	12.3	3.2	20.0
GDP Weighted Avg	10.5	17.8	8.0	14.3		
US	3.5	5.3	1.5	2.9	0.9	13.2
European Union	5.2	12.0	2.4	4.7	1.0	13.7
Japan	4.4	15.7	0.1	0.0	1.3	26.2
GDP-Weighted Avg	4.2	8.9	1.6	3.1		

SOURCE: Haver Analytics, World Trade Organization

Food prices are particularly susceptible to an inflation outburst because this sector is extraordinarily protected across the globe. Turkey's average MFN tariffs are high because its agriculture sector is protected against European subsidies with a 42% average MFN tariff. All of this adds volatility to food prices. EM food weight in EM inflation baskets is about 25%, compared to 15% for DM.

Food price volatility is also higher in EM against DM because distribution in the former is inefficient. Brazil, for instance, runs relatively low tariffs on food. Tariffs on transport equipment and electric machinery are nevertheless near the highest in the world. Distribution in Brazil is inefficient because productivity there is weak.

Overall, MFN tariffs in transport equipment in EM are 14%, compared to only 3.1% in the developed world. This should evolve into an inevitable bottleneck once price pressures warrant more efficient distribution chains within EM, which may trigger an outburst in global inflation. Emerging markets must solve their own protectionist policies to avoid these disruptions.

2.FISCAL IMBALANCES TURN COLOR BLIND: GREEN IS THE NEW RED

In 2019, global monetary policy performed an impressive and simultaneous *volte-face* from normalizing rates after years of post-GFC extraordinary stimulus to lower rates and dovish guidance.

Now, in the fourth quarter of 2019, there are hints of stabilization in some economies, but downside risks remain elevated. Central banks look to be close to the limits of policy effectiveness. With policy space now nearly maxed out, economies around the world face both record low real interest rates and low long-term inflation expectations.

Against this backdrop, central bankers, investors, and policymakers have addressed the other side of the policy mix: the need for fiscal stimulus to prop up demand. Obviously, goes the argument, with long-term yields so low, the market is clamoring for government spending. Current budgetary and political arithmetic in Washington, DC, suggest such stimulus won't be coming from the United States in 2020. Furthermore, any fiscal propulsion that was achieved by the 2018 tax cuts looks to have faded.

In China, Beijing is aiming to offset both secular and cyclical demand weakness with yet another bout of policy stimulus, but in its present form is more domestically focused than previous rounds. The current account remains roughly in balance, despite a deterioration observed in 2018.

Nevertheless, a number of large economies feature fiscal metrics that would allow room for increased spending. It's a lack of political will so far that has kept deficit-financed fiscal policy off the table. Keynes weeps.

When we talk of fiscal stimulus, attention almost immediately turns to Germany. The economy is in rude budgetary health, features a large – excessively so in the eyes of many economists – national savings overhang, and has been flirting with negative growth for most of 2019. Ten-year bund yields reached a new low of -0.73% in August, well below their 2016 depths.

A case could be made that Berlin can actually create a debt-financed investment vehicle outside of the constraints of the federal budget and make money simply by issuing debt – never mind financing projects that could actually produce real returns. This would be the world's most-envied development bank

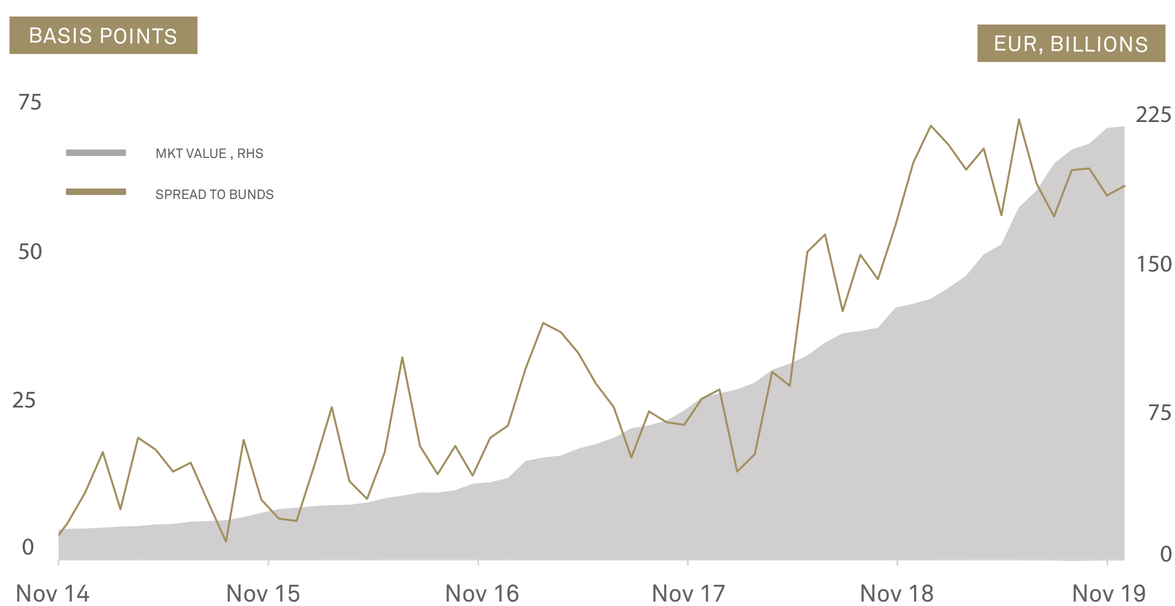
Of course, its excessive national savings and gaudy fiscal report card are thanks to the German government's explicit policy choices. After the GFC, legislation to create a "fiscal brake" was enacted, which limited any annual budget deficit to a mere 0.35% of GDP from fiscal year 2016. In the past decade, the finance ministry has strived to achieve a balanced budget or *schwarzer null* (literally, a black zero).

Ironically, when Q3 2019 GDP managed to surprise and eke out a 0.5% growth rate, observers were less impressed that Germany avoided a recession than disappointed that Berlin's incentive to open the coffers had been reduced.

Although the 2020 budget has been passed by the Bundestag, the result of the Social Democrats' leadership election – which has taken the party left and threatened the current composition of the coalition government – could recast the debate. In addition, new ECB President Christine Lagarde has doubled down on her predecessor's exhortations for European governments to augment monetary policy and spend money.

Into the breach, the political, social and economic zeitgeist appears to have presented green bonds an opportunity to play a meaningful role in policy. Whether it's the US Democrats' left wing pushing a Green New Deal, or President Lagarde orienting the ECB towards a role in combatting global warming, green bonds represent an attractive fiscal option, particularly in the eurozone. While issuance in the euro area is currently small, it has been growing.

EUR-DENOMINATED GREEN BONDS

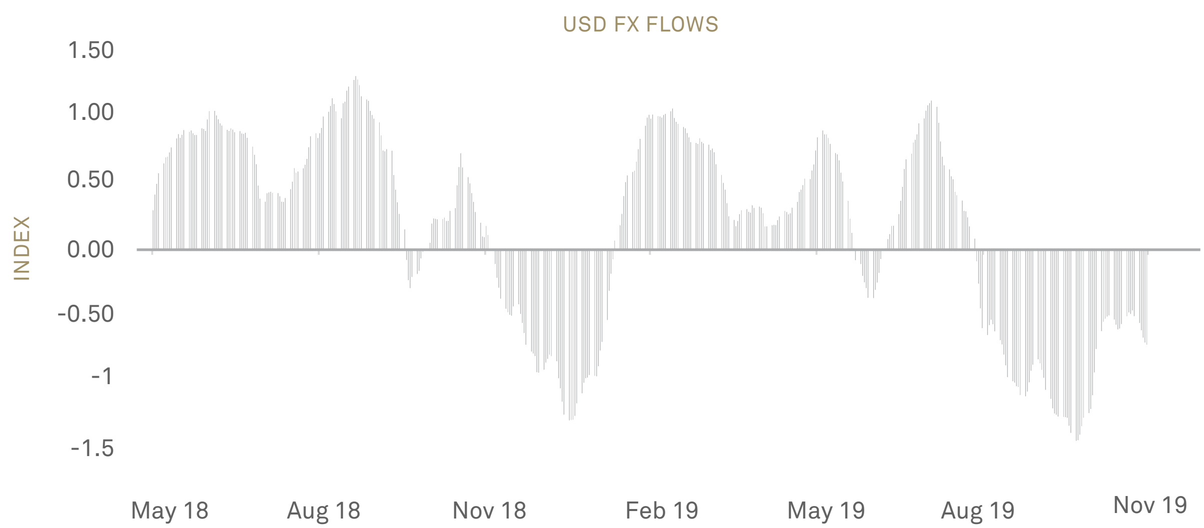


SOURCE: BNY Mellon Markets, Bloomberg

The market value of such instruments has more than quintupled since the end of 2016 and currently stands at nearly EUR 220 billion, or 1.7% of euro area GDP. Germany's share of the Bloomberg Euro-Aggregate market value is EUR 1.08 trillion, carrying a -0.43% yield. That translates into the German government charging its creditors EUR 4.6 billion for the next nine-and-a-half years, or expected EUR 43.2 billion over most of the next decade.

French bonds' share of the index is EUR 1.7 trillion, yielding -0.14% and earning Paris EUR 2.37 billion every year for the next ten-and-a-half years, or over EUR 25 billion in total.

Should Germany register a quarter or two of negative GDP growth, the black zero might finally go green instead of red. Private issuance is likely to increase as well, especially if the ECB is looking for both additional assets to purchase and a meaningful role in addressing climate change. It's also likely that yield-starved investors in the European government bond market will relish their attractive spreads (as shown in the chart). Modern Monetary Theory might have found a potential case study.



SOURCE: BNY Mellon Markets, iFlow®; data through 29th Nov 2019

As for the USD, we will discuss below the lack of obvious alternative currencies to buy next year. In the past year we have seen episodes of investor willingness to shed dollars, if only there were attractive alternatives. Green assets might offer a nearly ready-made asset to tempt those dollar flows.

3.US ELECTIONS: BATTLEGROUNDS IN BIG TECH, TRADE WAR AND HEALTHCARE

Since the middle of October, Real Clear Politics' Democratic presidential nomination betting average for Elizabeth Warren has declined from over 50% to just 23%. Meanwhile, Joe Biden's betting average increased from just below 20% to 25% and Pete Buttigieg's increased from 10% to 21%.

Many market participants believe some of the recent 8% rise in the S&P 500 should be attributed to a range of more pragmatic policies into next year's presidential elections. That may also include the addition of Michael Bloomberg into the Democratic primaries.

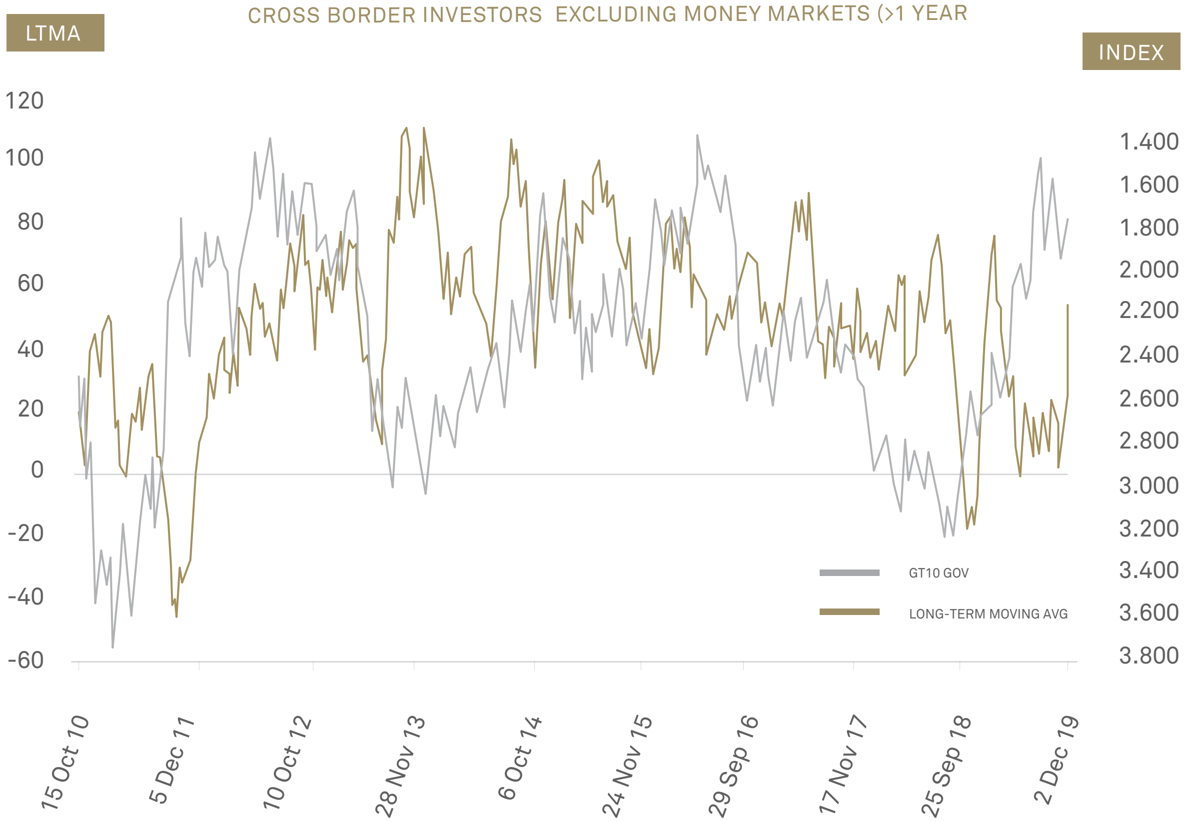
At the risk of oversimplifying the unfolding political landscape in 2020, we will be focusing on three main topics. First, affordable healthcare, which remains a key campaign plank for both Elizabeth Warren and Bernie Sanders, but which may well have eroded support for their respective candidacies.

Second, the tech debate seems to be an issue Republican candidates would rather stay away from. Big Tech will eventually be regulated in the US because it is quickly becoming a bipartisan issue. The main question to be answered into next year will therefore be whether Big Tech should be "broken up."

Third, President Donald Trump has cornered the issues of protectionism and the trade war with China. This topic has never been at the top of the Republican agenda — in fact, quite the opposite. All three topics may imply additional fiscal easing and interventionism.

This mix may explain foreign hesitation to add exposure to the US Treasury market. We show in the iFlow chart below that flows into US government securities have been close to nil for much of 2019, following strong inflows between 2011 and 2018.

UNITED STATES BOND LONG-TERM MA VS GT10 GOVT
CROSS BORDER INVESTORS EXCLUDING MONEY MARKETS (>1 YEAR



SOURCE: BNY Mellon Markets

Healthcare

The Affordable Care Act (ACA) is a concerning topic for the Democrats. Following the 2018 House elections, an analysis of the impact of a proposed "Medicare For All" system indicates that Democratic challengers and open seat candidates in competitive districts who endorsed a version of Medicare for All similar to that proposed by Bernie Sanders and Elizabeth Warren did significantly worse that those who did not.

A total of 155 million Americans have medical insurance through employer-sponsored programs. Thirty million US residents remain uninsured, but large as this number is, it is too small to move the electoral needle for most candidates. Moreover, out of the 90 million currently covered by non-employer sponsored programs, only 12 million are covered through ACA exchanges. The vast majority — 57 million — would remain covered under Medicaid.

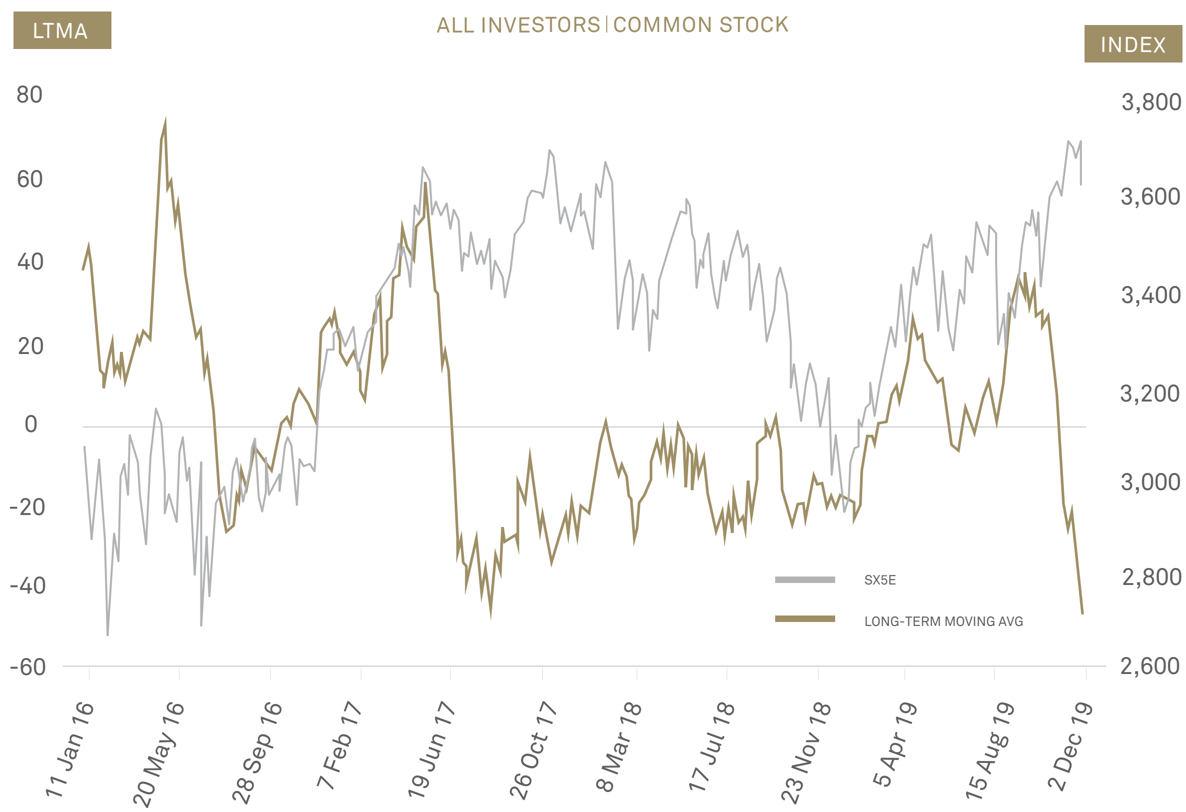
Big Tech

The tech debate will likely take over the political agenda in the coming months. Since early 2016, technology firms are up 300% against 70% for the S&P. Tech companies are important for three reasons. First, online advertising may have had a major impact on past election results. Demands for greater monitoring of such significant sources of revenue will be increasingly important in an election where Michael Bloomberg may emerge as one of the main contenders.

Second, such stock market outperformance is largely due to excess profits attributed to an increasingly concentrated number of companies.

Third, the break-up of these companies might be inevitable. The dismantling may take place horizontally or vertically. Horizontal break-up would imply multiple new search engines or social media interfaces. A vertical break-up would mean that search engines are segregated from mapping services, for example. Either way these regulatory changes will likely have meaningful consequences for equity markets.

EUROZONE EQUITY LONG-TERM MA VS SX5E
ALL INVESTORS | COMMON STOCK



SOURCE: BNY Mellon Markets

iFlow shows persistent outflows from European equities (see chart). This has been particularly the case for the past quarter. A turn in US Big Tech policy might just be the narrative required for investors to turn more optimistic on rest of the world equity markets versus US stocks.

Trade War

The trade war is the third key US topic to which we will be paying attention in 2020. Historically, Republicans have been the main driver of globalization. Richard Nixon pushed for the integration of China into the global economy through a ping-pong rapprochement in the 1970s. Ronald Reagan pushed for the fall of the Iron Curtain in the 1980s. George H.W. Bush laid the groundwork to establish the NAFTA free trade agreement in 1992.

President Trump has flipped this agenda, taking on protectionism and pushing for other economies to reduce tariffs, as discussed previously in Section 1: Global Inflation.

US farming and manufacturing sectors are facing economic strains from these policies. Agricultural output dropped between 2017 and 2018 in all but one battleground state. Manufacturing output increased in these states across the board between 2017 and 2018 but is now showing signs of weakness. Nevertheless, most of the states still seem to support protectionism at the expense of some form of economic hardship.

The bottom line: the 2020 elections will likely add volatility to equity markets for two main reasons. First, pressure to breakup Big Tech is likely only to increase and become a more bipartisan topic. Second, protectionism shall also turn into a topic championed by both sides of the aisle. The Affordable Care Act will likely receive less attention from both parties, which should be positive news for markets.

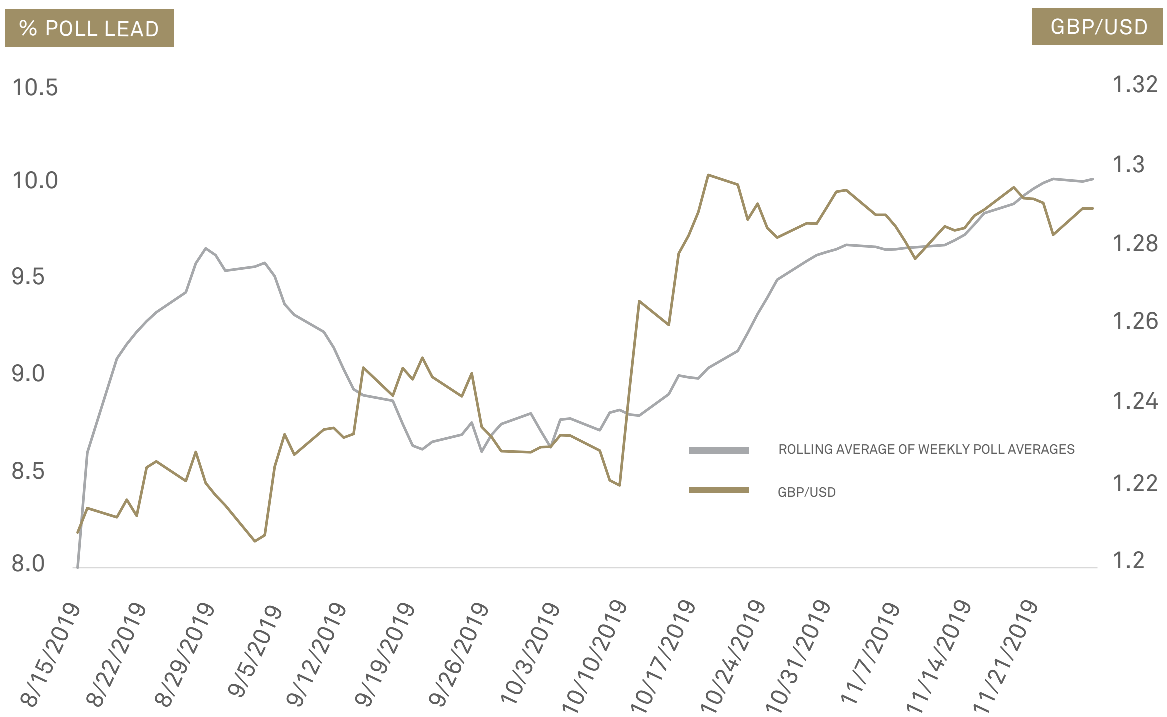
4.UK EXIT FROM THE EU: ORDERLY OUT OF FATIGUE

The choice before the British public in the UK's December 12 election means that, in theory, all Brexit options are back on the table. By ensuring a second Brexit referendum, a Labour victory – outright or in coalition with the Liberal Democrats – would theoretically constitute the basis for GBP to rally (given the market's long-held preference for Remain).

However, given the premium the market now attaches to clarity on the issue, we suspect the time for such an option to be lauded has come and gone. The fact that GBP/USD has broadly tracked the Conservative Party's poll ratings higher despite the party's affirmative stance on Brexit supports this view (see chart). But it also shows that there is more at stake here than the UK's exit from the EU.

Indeed, a Conservative majority would also be the market's favored election scenario given that Labour is standing on a truly radical, *dirigiste* manifesto entailing an extensive nationalization program. *Sky News* estimates that for every pound of extra day-to-day spending the Tories are promising, Labour is promising to spend an extra £28.

CONSERVATIVE PARTY % POINT POLL LEAD OVER LABOUR VERSUS GBP/USD



SOURCE: Bloomberg, Wikipedia-polling data

Anything other than a Tory majority is unlikely to be supportive of GBP therefore; but even then, the currency's upside may be limited if Brexit realities have been only temporarily set aside by the election.

Indeed, iFlow highlights steady GBP selling since cable arrived on the cusp of 1.30 – a push too far it would seem. After all, while a Tory majority would facilitate an EU exit by the January 31 deadline agreed to by the EU (and promised by Boris Johnson), Brexit would then segue into a protracted phase of trade talks.

There is not only profound uncertainty as to whether a deal can be agreed upon within the time allotted, but negotiations surrounding EU access for Britain's all-important financial services sector may prove to be fraught on the question of regulatory alignment.

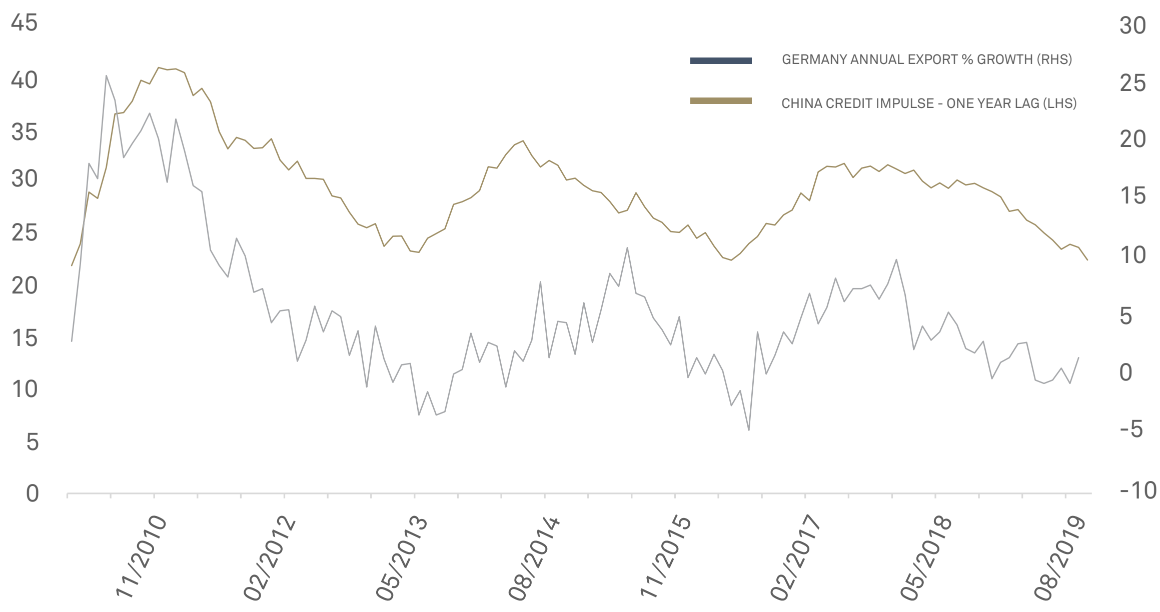
Yet progress is progress, and from the eurozone's standpoint at least, any reduction in political uncertainty is to be welcomed.

The EU's own projections depict the eurozone as settling into a "subdued" expansion; core inflation continues to hover around a lowly 1%; and there is no suggestion from bond flows that investors are particularly perturbed that Christine Lagarde's push for greater fiscal stimulus will prove successful.

Of course, a less uncertain route for Brexit post-election is unlikely to prove decisive as far as the path of the eurozone economy is concerned; but it would also coincide with tentative signs that the worst of the US-Sino trade-war uncertainty hit-to-growth is behind us. And much in the eurozone depends on China.

Germany's growing reliance on exports to China in recent years – described as a "dangerous addiction" by *Handelsblatt* – has been an integral factor in the eurozone's growth gyrations (see chart). But just as this explains why the bloc has been so badly afflicted by the uncertainty surrounding US-Sino trade, it also augurs positively for signs that trade hostilities are drawing to a close.

CHINA CREDIT-INDUCED GDP GROWTH VS GERMAN EXPORTS (% Y/Y)



SOURCE: Bloomberg

Of course, the latest news does not help this narrative, but then investors may content themselves that two steps forward, one step back has been the defining pattern throughout the US-Sino trade saga. Besides, proof that uncertainty is easing is already in the (Christmas) pudding. Although still implying contraction in the sector, Markit's manufacturing PMI for the eurozone has risen to a three-month high and business confidence in Germany is on the march alongside that felt by German households.

The latest German figures assure that any recovery is unlikely to ensue in a straight line; but there is here, we suspect, the basis for slightly higher yields and steeper curves in the eurozone in 2020, and it is a prospect that could certainly be given greater impetus in light of developments in China.

With Beijing conscious of an imperiled growth target, the PBOC financial stability report stressed that "China will continue to implement proactive fiscal policy, prudent monetary policy…China will implement tax cuts of a greater scale, [and] will increase local government special bonds quota by a large margin."

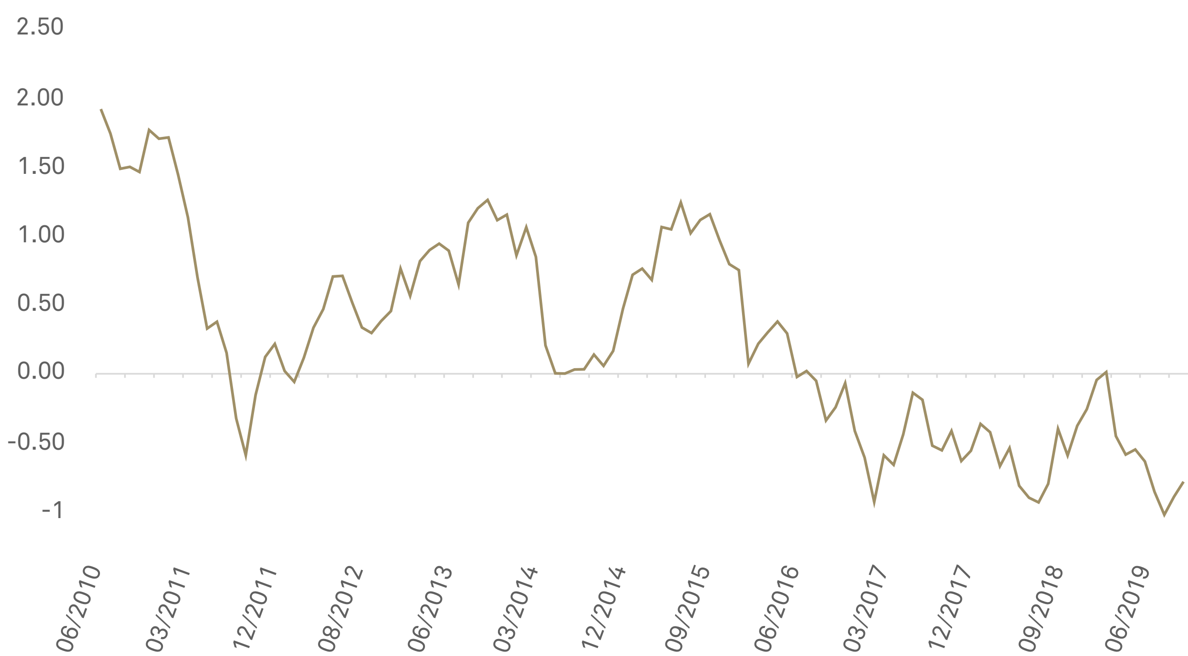
5.UGLY CURRENCIES: READY TO SELL THE USD, UNSURE ON WHAT TO BUY

Let us suppose for one moment that the USD turns south in 2020: which would be the obvious currency to buy in its stead? Well, nine years after Guido Mantega popularized the phrase "currency wars", the low interest rate environment and currency sensitivity that informed the former Brazilian finance minister's argument both remain central to this very conundrum as currency managers look to 2020.

The question of which other currencies to sell is rather more straightforward.

Investors' intensive quest for yield (see chart) means that any central bank allusion to higher rates rewards it with an appreciating currency – a risk that many policy committees quite pointedly avoid, given the pursuit of inflation targets in a world devoid of appreciable price pressures. Indeed, a currency "cold war" is still being fought, and central bank protagonists are not indisposed to more competitive currencies accordingly.

G7 AVERAGE REAL TEN-YEAR YIELDS (%)



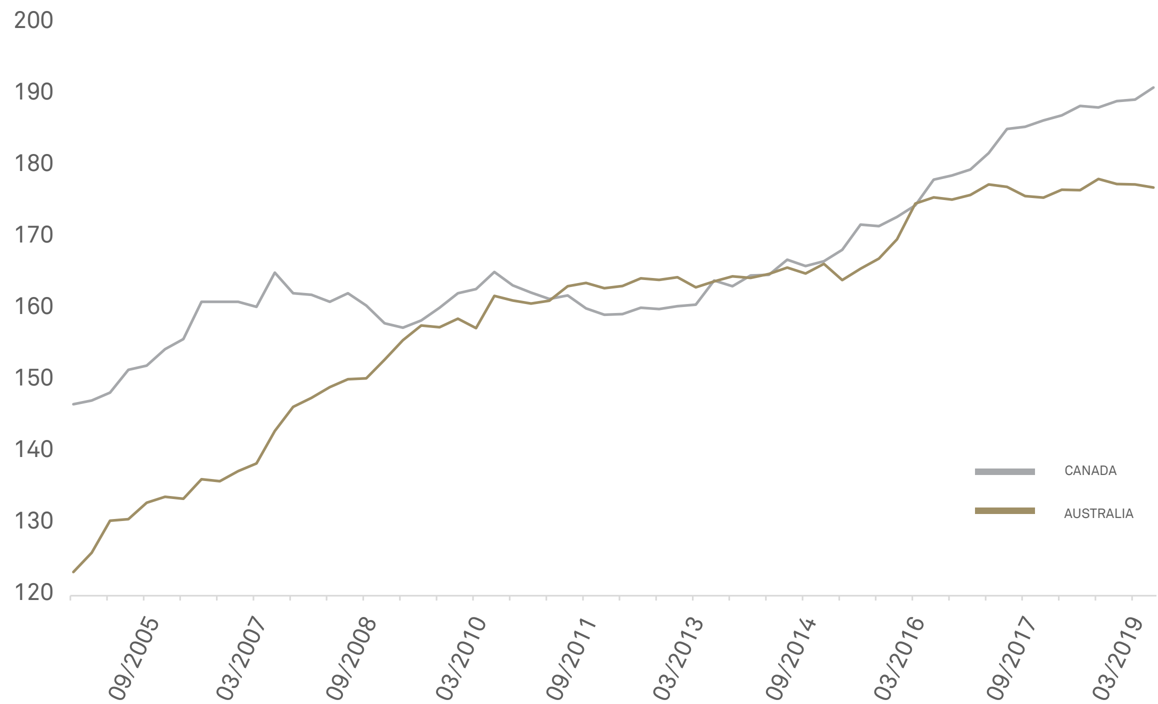
SOURCE: Bloomberg

The likes of Norges Bank have had little choice in the matter of course, with the NOK more closely reflecting investors' fears about position liquidation amid unrelenting uncertainty in the eurozone than its ostensibly positive credentials (underpinned by one of the few hawkish central banks).

But generally speaking, a protracted pursuit of higher inflation has come at a cost, with extraordinary monetary policies the basis for spiraling levels of world debt and higher risks to financial stability; and this too is a burden that may come to weigh heavily on many currencies, if only for the complications it entails for plans to normalize monetary policy in 2020 and beyond.

In Canada, for example, the household debt-to-income ratio has steadied at or around a record high of 177% (see chart) with households using 14.9% of their incomes to meet debt. A recent survey by tax and accounting consultancy MNP found that 48% of survey respondents said that this then left them with under CAD 200 at the end of each month.

HOUSEHOLD DEBT-TO-INCOME RATIO (%)



SOURCE: Bloomberg

But in Australia, the household debt-to-income ratio is above 190% — among the highest in the developed world – a fact, the Reserve Bank of Australia believes will prove to be more influential on economic developments this coming year than in times past.

The post-crisis accretion of sovereign debt to unprecedented levels (in many cases) is also a predicament hanging over many currencies — like the ZAR, for example. S&P downgraded its outlook on South Africa's credit rating to negative late last month, citing rapidly deteriorating "debt metrics...as a result of the country's low GDP growth and high fiscal deficits."

For precisely the same reason, Moody's cut India's rating outlook last month to negative just as its growth fell to a six-year low. And with Indonesia's economic growth widely expected to slow in 2020 (for the first time in four years) fueling a 2%-2.2% deficit, it too is at some risk of a less flattering visitation from the ratings agencies.

But in the emerging sphere generally, USD-denominated debt continues to rise. Brazil's USD non-financial sector debt to GDP is at 14% compared to 6.5% 10 years ago; Indonesia's is at 7.4% versus 5%; Mexico's is at 12.6% against 5.3% a decade ago; and Turkey's is at 17% versus 9% in 2009.

Although levels are of varying concern across EM, the sector shares one common feature: notoriously narrow exit doors. Credit to non-financial corporations and governments in the sector has soared over the last decade to record highs, and therein lies the risk of funding hiccups that could well be accentuated by any further softening in the global economic backdrop.

Of course, for many currencies, politics remain the Achilles' heel of choice. In Latin America, currencies have weakened markedly against the USD of late amid a volatile environment, with protests in Chile and Bolivia following unrest in Ecuador and a surprise election result in Argentina. And in Europe, the Syrian question and the Ukrainian question envelop their regional players in a febrile political atmosphere.

The examples go on, of course, but the point here is not to produce an exhaustive a list of currencies that warrant caution, but rather to highlight that, in looking to sell the USD – if this is what it comes to in 2020 – choosing an alternative is by no means a straightforward matter.

Indeed, the trick to the bears' case is likely to come down to the identification of a currency with the fewest blemishes – the least ugly on parade. Or as a famous investor once said: "picking the dog with the least fleas."

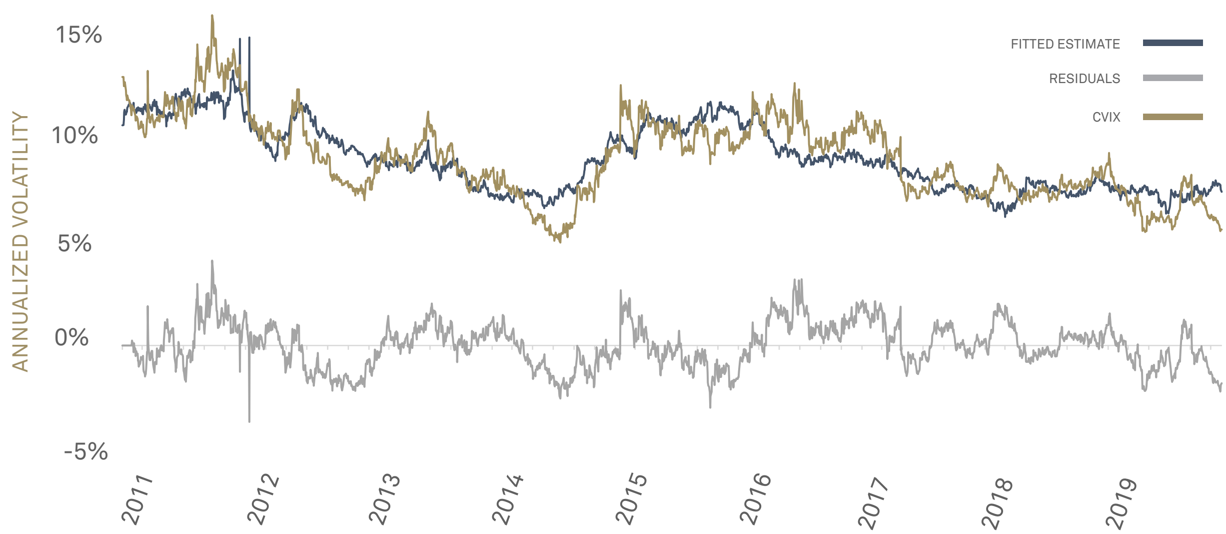
6.DE-VOL-UTION: FX VOLATILITY STRUGGLES TO PICK UP

Historically low currency volatility has vexed FX investors for most of the past few years. Both realized and implied volatility have ground lower throughout this period. Currency trading ranges are – by some measures – the narrowest they have been in the post-Bretton Woods era. Will 2020 display a reassertion of currency volatility or is FX as an asset class becoming less relevant?

As we explain here, this would require a reemergence of economic divergences – both in policy and economic fundamentals – around the globe.

In a recent piece, we constructed an intuitive – and empirically sound – estimate of FX implied volatility using global and US yield curve factors. It shows that the trend lower in volatility can be explained by yield compression, flattening curves around the world, and interest rate convergence among economies. These phenomena reduce carry opportunities, while flat term structures and term premia for risk-free assets lead to flatter option-implied volatility term structures in options markets (see chart below).

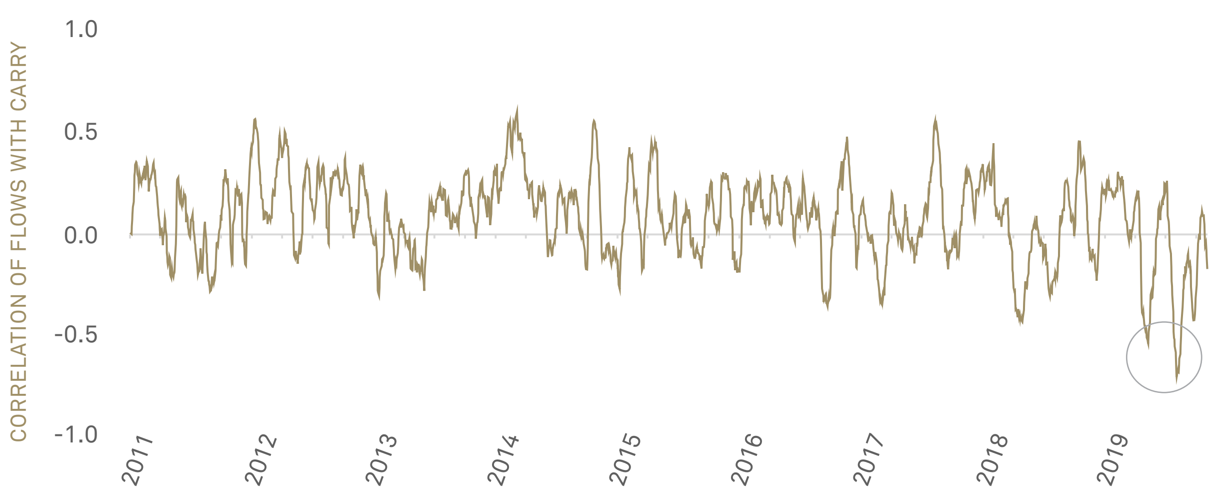
YIELD CURVE-BASED ESTIMATE OF CVIX



SOURCE: BNY Mellon Markets, Bloomberg, data through 29th Nov 2019

The impact of yield compression on FX trading strategies can be seen in the erosion of investor preferences for carry strategies from our iFlow Carry indicator. The general trend in FX flows toward higher-yield currencies has been falling since mid-2016, with more extreme episodes of low correlation of flow with interest rates, as shown in the circle in the chart. This has generated fewer profitable opportunities for carry in recent years.

IFLOW CARRY



SOURCE: BNY Mellon Markets, iFlow ®, Bloomberg, data through 29th Nov 2019

It's not just interest rates and monetary policy that have reduced FX volatility. International imbalances have been relatively stable, and real interest rate misalignments are less wide than they have been in the past.

For example, the most overvalued G10 currency (calculated by comparing current Bank for International Settlements broad trade-weighted real exchange rates to their three-year averages) is the yen, just 3% overvalued on this measure. The cheapest is the Swedish Krona, by about 5%. Just a few years ago, in mid-2016, the real misalignments ranged from 12.7% (USD) to -16% (CAD). The interquartile range of the same measure of dearness/cheapness for 21 EM currencies between 2010 and 2016 was 7.5%, while today it stands at only 5% and was as low as 2% earlier in 2019.

To the degree that real exchange rates measure structural differentials in medium-to-long-term fundamentals among currencies, there just isn't as much to choose from today as there typically had been earlier in the decade, and what misalignments there were have steadily fallen throughout the decades.

We don't presume to go as far as to say that currencies are "correctly" valued, but between shrinking interest rate differentials and smaller misvaluations, spot rates haven't had to move much to stabilize valuations.

This is remarkable. The last several years has challenged long-held articles of faith about economics, political economy and business cycles. In the past 12 months, consensus has moved nearly 180 degrees from stable – if low – growth to a clear downturn in economic momentum. Central banks have done a similar pirouette from rate normalization to policy easing, and the seemingly inexorable trend toward economic openness has undergone a significant backslide.

In our view, for FX volatility to start to pick up again in 2020, we would need to see meaningful policy divergence, or significant disruption in asset markets, leading to large reallocations of global capital.

This would cause exchange rates to move beyond the narrow ranges to which we have grown accustomed in recent years, as currencies readjust to reflect economic and policy disparities.

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