

Schroders

**Global market
perspective**
Economic and
asset allocation views
Q3 2018



July 2018

Contents

Introduction	3
Asset allocation views: Multi-Asset Group	4
Regional equity views.....	6
Fixed income views	7
Alternatives views	8
Economic views.....	9
Global strategy: Trade wars intensify	13
Research note: Why the dollar matters	18
Market returns.....	25
Disclaimer	Back page

Editors:

Keith Wade and Tina Fong

Introduction

Political risk returned to markets in the second quarter with President Trump ramping up trade tensions by imposing US tariffs on steel and aluminium and implementing tariffs on \$34 billion of imports from China. Those affected have responded with a series of tariffs on US goods and the president has threatened to escalate tariffs to autos and another \$200 billion of imports from China.

Markets have seen this as disruptive to trade and growth with the result that bond yields have eased lower and the US dollar has strengthened. Emerging markets have been particularly hard hit. We disentangle the fall out from these developments in the strategy note and consider the risks of escalation. We also take a more general look at the effect of a stronger dollar on global growth and the emerging markets in the research note.

In terms of asset allocation, we have moved in a more cautious direction by reducing our exposure to equities from overweight to neutral by cutting our holdings in Japan and the emerging markets. Although global growth continues, higher US interest rates and political risk point to more volatility ahead.

Keith Wade

Chief Economist and Strategist, 9th July 2018

Asset allocation views: Multi-Asset Group

Global overview

Economic overview

The latest forecast marks a turning point as it is the first time we have revised down our expectations for global growth since September 2016. The recovery in the world economy led to a series of upgrades with global growth reaching 3.3% in 2017, the strongest for six years. Alongside a benign inflation rate, this helped drive risk assets higher. The forecast for 2018 remains robust at 3.4%, so when combined with our forecast for rising inflation we would still say the world economy is in the expansion or reflation phase of the cycle. However, the outlook indicates that we are heading in a more stagflationary direction in late 2018 as growth cools and inflation rises.

In terms of our scenarios, the balance of risks remains tilted towards stagflation, which contains higher inflation but lower growth compared to the baseline. This would reflect the combination of three scenarios: "inflation accelerates", "global protectionism" and "oil at \$100" with the greatest risk to our central view being the "rise in global protectionism."

Central bank policy

For the US, the Federal Reserve (Fed) is expected to raise rates another two times this year and twice in 2019 to take the policy rate to 3%. The Bank of England (BoE) is assumed to hike rates once in 2018 and twice in 2019. The European Central Bank (ECB) is expected to end QE in Q4 this year and raise rates in 2019. In Japan, we expect a modification in yield curve control by the Bank of Japan (BoJ) in 2019 in the form of a 10bps increase in the target yield for 10-year Japanese government bonds (JGBs) from zero. In contrast, lower inflation and liquidity concerns means that China heads the other way with the PBoC easing the reserve requirement ratio (RRR) and policy rates lower.

Implications for markets

Against a backdrop of downward revisions to world growth and earnings expectations, along with tightening in global liquidity conditions, we have downgraded equities to neutral reflecting a more cautious stance. In addition, a number of political and policy events, particularly on trade tensions between US and rest of the world, present a challenging landscape for equities.

Within equities, we have reduced exposure to pro-cyclical markets like Japan and Europe ex UK. Instead, we prefer the US as the economy remains the most resilient in terms of growth and earnings momentum.

In comparison, we expect Europe ex UK, Pacific ex Japan and Japan to perform in-line with global equities. We have downgraded European equities to neutral over the quarter. Cyclical indicators reflect that the eurozone is in a slowdown and earnings momentum has weakened. Similarly, we have turned cautious on Japanese equities by downgrading the market to neutral. The recent weakness in the macroeconomic data and cyclical indicators suggest a slowdown in the economy. Further yen strengthening would also be a risk.

Meanwhile, we have stayed neutral on UK equities due to the continued uncertainty over the Brexit negotiations and the impact on the economy. The risk of sterling appreciation also presents a headwind to the market as UK multinationals dominate the FTSE 100 index.

We have also trimmed our overweight stance on emerging market equities to a single positive. This region still offers a valuation discount versus their developed peers. However, trade tensions, upcoming elections in some

emerging countries and a firm US dollar presents near-term headwinds to the performance prospects of this market.

With regard to the duration view, we remain negative on government bonds. Bond valuations have turned less rich but are still unattractive at current levels. Importantly, US economic data remains relatively robust along with rising inflationary pressures. Among the bond markets, we are negative on US Treasuries, German Bunds and UK Gilts but neutral on Japanese government bonds. We are also neutral on emerging market debt (EMD) bonds denominated in USD and local currency.

Turning to the credit markets, we have downgraded high yield (HY) to neutral but remain negative on investment grade (IG) bonds. Valuations are unattractive across the credit segments. For US HY, corporate fundamentals such as an elevated leverage ratio and strong M&A activity are pointing towards a credit market in late cycle.

Our outlook on the broad commodity complex has turned double positive given the supportive cyclical environment, carry continues to improve and there is on-going supply-side discipline among certain commodity segments.

Within the commodity universe, we have retained our overweight stance on energy as we expect the carry from a backwardated curve to deliver positive returns. Meanwhile, we have kept our positive stance on industrial metals given stable Chinese growth and strong supply-side discipline. On agriculture, we have remained positive driven by favourable supply/demand dynamics. On gold, we have upgraded this asset class to neutral as we believe that gold prices could range trade against an environment of stable real yields.

Table 1: Asset allocation grid – summary

Equity	0 (+)	Bonds	-	Alternatives	+	Cash	+ (0)
Region		Region		Sector		Sector	
US	+	US Treasury	-	Government	-	UK property EU property	- +
Europe ex UK	0 (+)	UK Gilts	- (0)	Index-linked	+	Commodities	++ (+)
UK	0	Eurozone Bunds	-	Investment grade corporate	-	Gold	0 (-)
Pacific ex Japan	0 (+)	Emerging market debt (USD)	0	High yield	0 (+)		
Japan	0 (++)	Emerging market debt (local currency)	0 (+)				
Emerging markets	+ (++)						

Key: +/- market expected to outperform/underperform (maximum ++ to minimum- -) 0 indicates a neutral position.
 Note: The above asset allocation is for illustrative purposes only. Actual client portfolios will vary according to mandate, benchmark, risk profile and the availability and riskiness of individual asset classes in different regions. For alternatives, due to the illiquid nature of the asset class, there will be limitations in implementing these views in client portfolios. The views for equities, government bonds and commodities are based on return relative to cash in local currency. The views for corporate bonds and high yield are based on credit spreads (i.e. duration-hedged). Source: Schroders, July 2018.

Regional equity views

Key points

0 (+) Equities		
+	US	<p>Despite elevated valuations historically and relative to other markets, US equities remain competitive due to strong earnings momentum supported by the strength in the economy and fiscal stimulus package.</p> <p>Nevertheless, the normalisation of monetary policy by the Fed is likely to put a squeeze on corporate margins and profitability. Overall, we expect US equities to outperform global equities.</p>
0	UK	<p>We remain neutral on UK equities due to the continued uncertainty over the Brexit negotiations and the impact on the economy. While the BoE is unlikely to hike interest rates until November this year, there is the risk of sterling appreciation given the improvement in the UK data and more hawkish comments from the central bank. This presents a headwind to the market as UK multinationals dominate the FTSE 100 index.</p>
0 (+)	Europe ex UK	<p>European equities are expected to perform in-line with the global market. From a valuation perspective, the region still offers reasonable value compared to other developed markets.</p> <p>However, we have downgraded this market to neutral over the quarter. Cyclical indicators reflect that the eurozone is in a slowdown and earnings momentum has weakened. Political risk, particularly in Italy, is also in focus again.</p>
0(++)	Japan	<p>Our outlook on Japanese equities has turned cautious which has resulted in the downgrade to neutral. Recent weakness in the macroeconomic data and cyclical indicators suggest a slowdown in the economy, which could put a dampener on top-line revenue growth.</p> <p>We also acknowledge that the strength of the yen remains a near-term headwind for the market. Nonetheless, we still expect the BoJ to retain an accommodative monetary policy, particularly when compared to other developed central banks.</p>
0 (+)	Pacific ex Japan (Australia, New Zealand, Hong Kong and Singapore)	<p>We expect Pacific ex Japan equities to perform in-line with global equities. Within the universe, we are neutral on Australian equity where valuations appear reasonable but earnings momentum is weak and the economy faces structural challenges. While Singapore equities offer attractive valuations and stronger earnings, we are neutral on the market given that the economy is vulnerable to the recent tightening in the property sector.</p> <p>In comparison, For Hong Kong equities, we remain positive on the market given robust earnings momentum although valuations are less compelling when compared to the other Pacific ex Japan countries.</p>
+(++)	Emerging markets	<p>Compared to last quarter, we have downgraded emerging market equities to a single positive. This region still offers a valuation discount versus their developed peers.</p> <p>However, trade tensions, upcoming elections in some emerging countries and a relatively firm US dollar presents near-term headwinds to the performance prospects of this market.</p>

Note: The scores for equities this quarter have been adjusted upwards to reflect the revised scoring framework which uses returns relative to cash, making scoring consistent across different markets. These do not reflect upgrades in our outlook.
Key: +/- market expected to outperform/underperform (maximum ++ minimum -) 0 indicates a neutral position.

Fixed income views

Key points

Bonds		
-	Government	<p>We remain negative on government bonds. Bond valuations have turned less rich but are still unattractive at current levels. Importantly, US economic data remains relatively robust along with rising inflationary pressures. Our cyclical indicators also continue to point towards a macro environment where government bonds could perform poorly.</p> <p>On US Treasuries, we have retained an underweight position. Treasuries still look expensive on valuation grounds through a combination of negative term premium, large supply increase and higher currency-hedged yields available in Europe.</p> <p>Despite the softer start to the year on the growth front, we have turned double negative on German Bunds as we expect a rebound in activity within the region. Importantly, the ECB is expected to end QE this year which should remove support from Bunds.</p> <p>Meanwhile, we have downgraded UK Gilts to negative to bring the score in-line with the other major markets. Moreover, the recent rhetoric from the BoE has turned more hawkish. On JGBs, we have kept our neutral positioning as the BoJ is expected to keep rates on hold and yields at the long-end well-anchored.</p>
-	Investment Grade (IG) Corporate	<p>We remain negative on US IG bonds given unconvincing valuations and deteriorating fundamentals. In particular, the increase in funding costs is likely to put pressure on coverage ratios.</p> <p>European IG spreads are highly correlated with the US such that we are also negative on this segment. Moreover, we continue to hold a cautious view due to unattractive valuations and the end of QE by the ECB this year.</p>
0 (+)	High Yield (HY)	<p>After strong performance this year, we have turned neutral on US high yield. Besides unattractive valuations, corporate fundamentals such as an elevated leverage ratio and strong M&A activity are pointing towards a credit market in late cycle.</p> <p>While corporate fundamentals in Europe remain generally stable, valuations remain stretched historically and spreads are vulnerable to the withdrawal of QE support. Furthermore, risk sentiment towards this segment is vulnerable to those companies with high exposure to Italy. Hence, we have turned negative on the European high yield sector.</p>
0	EMD USD-denominated	<p>We have maintained our neutral positioning on emerging market debt bonds denominated in USD. Valuations are still not compelling but carry is more attractive. Meanwhile, we have downgraded EMD local currency bonds to neutral. Downside risks have increased in this market including the bottoming of inflation, higher developed market yields leaves EM rates less attractive and several countries in the region have elections this year.</p>
0 (+)	EMD local currency-denominated	
+	Index-linked	<p>In the US, underlying inflation trends should remain supported by solid growth and the prospect of higher wages. However, we recognise that our initial profit targets have been hit and seasonality in the near-term is expected to turn negative. Inflation accruals are paid on non-seasonally-adjusted inflation which is typically higher in the summer.</p>

Note: The views for government bonds are based on return relative to cash in local currency. The views for corporate bonds and high yield are based on credit spreads (i.e. duration-hedged). Key: +/- market expected to outperform/underperform (maximum ++ minimum --) 0 indicates a neutral position.

Alternatives views

Key points

+ Alternatives	
++(+)	<p>Commodities</p> <p>Our outlook on the broad commodity complex has turned double positive given the supportive cyclical environment, carry continues to improve and there is on-going supply-side discipline among certain commodity segments. In addition, the negative sentiment associated with a further escalation of trade tensions has to some extent been priced into the commodity market. On the energy sector, we have retained our overweight stance. Global oil demand remains stable, particularly from China and India, while falling Venezuelan output and potential sanctions against Iran remain supportive. With the energy curve in backwardation, we expect positive total returns to be mostly due to carry.</p> <p>On agriculture, we have remained positive driven by favourable supply/demand dynamics. In particular, there has been a significant tightening in the global supply for grains such as corn and soybean. Meanwhile, we have kept our positive stance on industrial metals. We expect Chinese growth to remain stable and strong supply discipline has meant that the sector is likely to experience a small deficit this year. On gold, we have upgraded this asset class to neutral as we believe that gold prices could range trade against an environment of stable real yields.</p>
-	<p>UK property</p> <p>In the occupier market, we expect retail and industrial rental growth will fall over the next couple of years. On the latter, we expect that there will be a rise in the development of large warehouses and some second hand space will come back to the market from failed retailers. In the office sector, rents in general are unlikely to fall, as developments in most cities have already peaked and completions over the next two years should be lower. High residential prices and the relaxation of planning controls in 2013 also mean that many towns/cities are losing both office and industrial space.</p> <p>In the investment market, waning interest from investors has meant that retail accounted for only 11% of purchases by value in the first half of 2018, against a ten-year average of 22%. Prime shopping centre and retail park yields only rose by 0.25 to 0.35% so far this year.¹ Conversely, strong competition among investors pushed down yields on prime industrial estates by 0.25% in the first half of the year and industrial's share of purchases rose to 16%, from 11% in the previous ten years. Prime office yields were flat. We expect that both City office and retail capital values will fall by 10 to 15% between end-2017 and end-2019, whereas industrial and regional office capital values should increase, or hold steady.</p>
+	<p>European property</p> <p>The investment market remained active in the first quarter of 2018 with €35 billion of transactions, reflecting strong interest from domestic and international investors. While the prospect of higher German Bund yields could put upward pressure on eurozone property yields, we think that the increase in office and logistics yields between end-2019 and end-2022 will be limited to 0.25 to 0.4%, assuming that the eurozone continues to grow and prospects for rental growth remain favourable. The exception could be the retail sector where investors' concerns about on-line diversion and future rental growth could lead to an earlier and sharper increase in yields.</p> <p>We forecast total returns of 5 to 6% per annum on average for investment grade European real estate between end-2017 and end-2022. The main component will be an income return of 4%, while capital value growth should be generated by rental growth.</p>

Note: Property views based on comments from the Schroders Real Estate Research team. The views for commodities are based on return relative to cash in local currency. The views for corporate bonds and high yield are based on credit spreads (i.e. duration-hedged). Key: +/- market expected to outperform/underperform (maximum ++ minimum -) 0 indicates a neutral position.

¹ Source: CBRE.

Economic views

Central view

Growth peaking, inflation rising

Global growth remains robust, but we have revised down our forecast for 2018 to 3.4% from 3.5%. This largely reflects a soft start to the year in many economies, higher oil prices and increased concerns over trade relations between the US and China. The latter are expected to persist into 2019 and weigh on trade and capital investment spending even if a full trade war does not break out.

For this year, our forecast for US growth has been trimmed to 2.9% from 3.1%. We have also downgraded eurozone GDP growth from 2.6% to 2.4%. Our 2018 UK GDP growth forecast has been cut from 1.7% to 1.4%. In comparison, emerging economies are expected to see growth largely unchanged near 5% over 2018. China's GDP growth is forecast to continue its secular decline, but this is offset by recoveries in the rest of the BRICs.

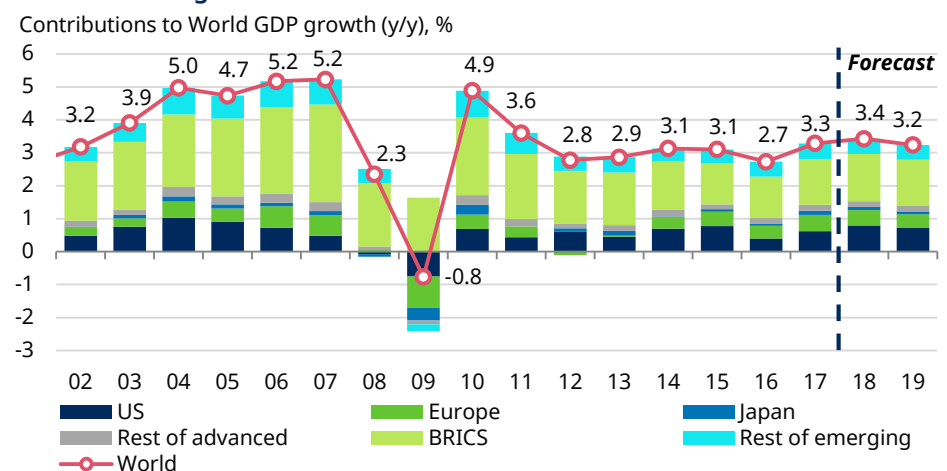
In 2019, we now expect 3.2% growth (previously 3.3%) with the pace of activity cooling through the year. Meanwhile, we have revised up our inflation forecast for 2018 to 2.7% (from 2.4%) largely as a result of higher oil prices. In the US, which is approaching full capacity, we still expect core inflation to move higher over the next two years.

In terms of monetary policy, led by the US Fed, developed market central banks are expected to tighten monetary policy over the forecast period. We expect two more 25bps rate hikes in the US this year and two next with the fed funds rate reaching 3% by the middle of 2019.

The ECB is expected to end QE in Q4 this year and raise rates in 2019. The BoJ is expected to adjust yield curve control in 2019 in the form of a 10bps increase in the target yield for 10-year JGBs from zero.

In contrast, lower inflation and liquidity concerns mean that China heads the other way with the PBoC easing the reserve requirement ratio and policy rates lower. The interest rate cycle is expected to turn upwards in India this year and Brazil next year. Against this backdrop the USD is expected to strengthen further in the near-term before weakening in 2019 as central banks outside the US begin to tighten.

Chart 1: Global growth and forecast for 2018 and 2019



Source: Thomson Datastream, Schroders Economics Group. 17 May 2018.

Macro risks: Rising risk of trade war

Full details of the scenarios can be found on page 12.

Scenario analysis

For this quarter, we have made two changes on the scenario side. Having been concerned about the risk of a “surge in bond yields” scenario from the unwinding of QE we now see this as less likely. Bond yields have risen lately, but have not reached the levels anticipated by this scenario. The Fed is expected to continue to reduce its balance sheet and the ECB is expected to end its QE programme in Q4 this year. We would expect this to add upward pressure to yields without necessarily causing a sharp spike, so believe the risk has diminished.

Instead, this scenario is replaced by a “**mid-cycle slowdown**” scenario where the soft growth in Q1 extends into Q2, with the world economy losing momentum altogether in the second half of the year. This results in a pause and some reversal in monetary tightening before activity strengthens again in 2019.

Remaining on the deflationary theme, we have kept our “**secular stagnation**” scenario where, although the risks have fallen, it should not be forgotten that without the support of loose monetary and fiscal policy economic growth would be considerably weaker.

However, we have dropped the “productivity revival” scenario. Whilst there were hopes of an acceleration a year ago, subsequent data releases have revealed no pick-up in output per hour, which came in at 1.3% y/y in Q1 and has been virtually unchanged over the past four quarters. This may change, but late cycle productivity revivals tend to be rare as firms hit capacity constraints and do not have the slack to easily raise output without taking on more workers. Instead they tend to raise prices, thus choking off demand and creating inflation.

The new scenario to replace this is “**oil back to \$100**”, where President Trump’s withdrawal from the Iran nuclear deal and imposition of sanctions results in one million barrels per day being removed from oil supply as the agreement collapses. The risk premium on oil rises as the threat of conflict in the region between Iran, Saudi Arabia and Israel spreads beyond that seen in Syria. Given the tightness of the oil markets, oil prices surge to \$100 where they remain over the forecast period. This amounts to a significant oil shock for the world economy with the result that inflation is higher and growth lower.

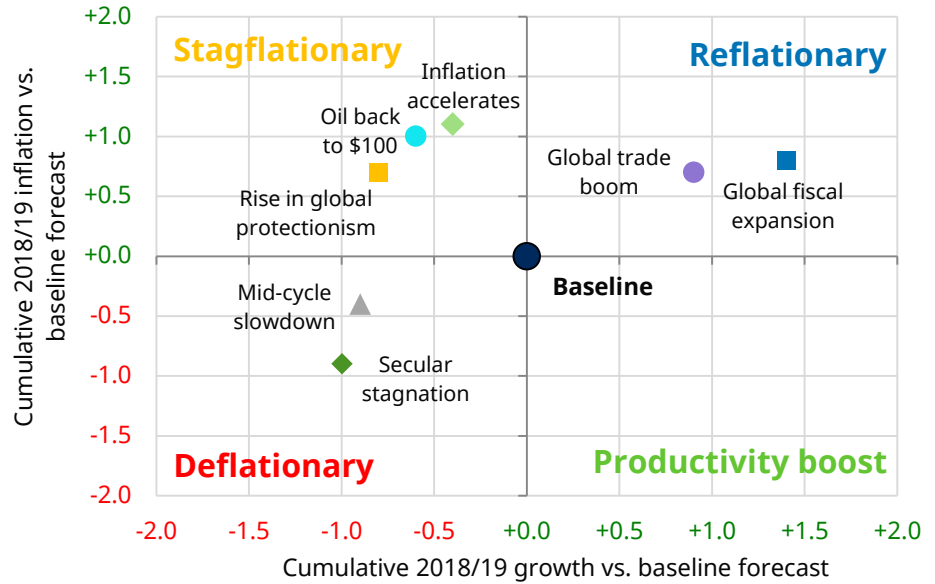
On the stagflationary side, we continue to include our “**inflation accelerates**” scenario, which captures the risk of a more upward sloping Phillips curve such that wages rise more rapidly as unemployment declines, thus pushing up prices. Although higher wages provide an initial boost to consumer spending, as inflation rises central banks are likely to tighten monetary policy more aggressively thus creating a period of economic weakness. The result is a spell of stagflation before inflation comes under control.

Staying on the stagflationary side, we have also retained our “**protectionism rises**” scenario, which includes a breakdown of the North American Free Trade Agreement (NAFTA) as well as a trade war between China and the US which spreads more widely. The increase in tariffs results in weaker activity and higher inflation as trade contracts and import prices rise.

Meanwhile, on the reflationary scenarios, we have kept “**global fiscal expansion**” where we assume a global expansion of fiscal policy including China, Japan and Europe. We also see reflationary risks to the world economy

in our “**global trade boom**” scenario where the pickup in trade volumes continues to accelerate, pushing growth and inflation higher. This would be largely driven by an increase in the trade multiplier helping to drive exports with spillovers into higher employment and capex.

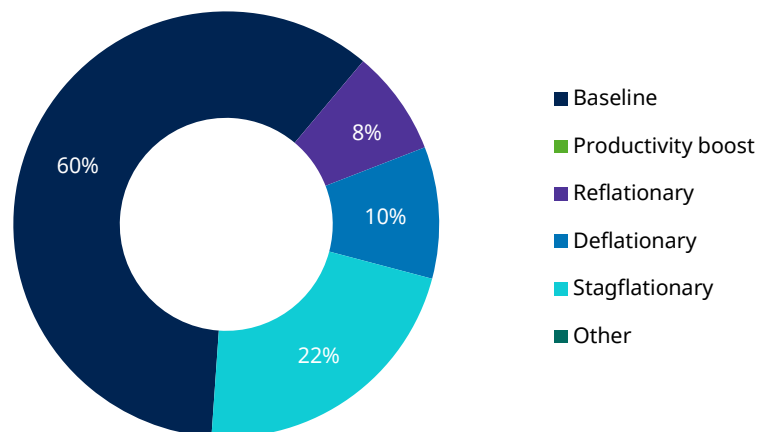
Chart 2: Scenario analysis – global growth and inflation impact



Source: Schroders Economics Group, 17 May 2018.

Chart 2 summarises the impact each scenario has on global growth and inflation relative to the baseline. Combining our scenarios with our assessment of probabilities, we see the greatest risks in a stagflationary direction with three scenarios in this quadrant: “inflation accelerates”, “global protectionism” and “oil at \$100”.

Chart 3: Scenario probabilities



Source: Schroders Economics Group, 17 May 2018.

Table 2: Scenario summary

Scenario	Summary	Macro impact
1. Secular stagnation	Weak demand weighs on global growth as households and corporates are reluctant to spend. Animal spirits remain subdued and capex and innovation depressed. Households prefer to de-lever rather than borrow. Adjustment is slow with over capacity persisting around the world, particularly in China, with the result that commodity prices and inflation are also depressed.	Deflationary: Weaker growth and inflation versus the baseline. The world economy experiences a slow grind lower in activity. As the effect from secular stagnation is more of a chronic than acute condition it takes policy makers time to identify the trend. However, as economic activity fails to accelerate, more stimulus is added. The US reverses its interest rate hikes, while the ECB and BoJ prolong their QE programmes.
2. Global fiscal expansion	Following the populist expansion in fiscal policy in the US, other countries decide to follow its lead either due to changes in governments, or in response to populist movements. The G7 and BRIC economies all loosen fiscal policy significantly through a combination of tax cuts and spending increases.	Reflationary: Fiscal loosening against a backdrop of above trend growth boosts confidence further, along with GDP growth. Some economies with low rates of unemployment see wage pressures rise, causing domestically generated inflation, while other with slack remaining, still see higher inflation through commodities and higher import prices. Central banks respond by tightening monetary policy more quickly, which eventually cools activity.
3. Rise in global protectionism	NAFTA talks breakdown, and the US loses patience with Chinese protectionism policy. The US applies 40% tariffs on all Chinese goods in 2018 Q2. China retaliates, but starts to divert and dump its now uncompetitive goods in Europe. By the end of 2018, Europe applies selective anti-dumping tariffs of 20%, which China reciprocates.	Stagflationary: It takes time for US and Chinese consumers to substitute away from the traded goods facing tariffs. Existing supply chains also take time to break-down, which means both profitability is hit, and prices rise at the same time. In Europe, dumping initially causes lower inflation, but the new tariffs cause inflation to quickly rise. Monetary policy is tightened faster to halt second round effects, causing the USD to rise against most currencies. However, the RMB falls 10%, while JPY also appreciates as growth is hit. World trade growth starts to contract and productivity weakens.
4. Oil back to \$100	President Trump's withdrawal from the Iran nuclear deal and imposition of sanctions results in one million barrels a day being removed from oil supply as the agreement collapses. Risk premium on oil rises as threat of conflict in the region between Iran, Saudi Arabia and Israel spreads beyond Syria. Given the tightness of the oil markets, oil prices surge to \$100 where they remain over the forecast period.	Stagflationary: Higher oil prices feed through rapidly into inflation putting a squeeze on oil consumers world wide. Oil producers benefit but do not increase spending rapidly enough to offset cut backs elsewhere. In the US, stronger shale gas capex and output initially offset the shock, but once this fades the effect on household budgets and global trade drag on growth. Policy tightening by the Fed is more limited as the central bank weighs higher inflation against weaker growth.
5. Global trade boom	After an extended period where global trade growth lagged behind global GDP, renewed global capex and a desire to rebuild inventories leads to a global trade boom. Trade tensions ease as Trump arrives at a deal over NAFTA and with China. Stronger trade boosts growth worldwide, but also raises inflation.	Reflationary: The additional activity due to global trade boosts productivity and income, but with spare capacity in short supply, the extra demand generates inflation too. Global monetary policy is tightened by more than in the baseline, but not by enough to slow growth in 2019.
6. Mid-cycle slowdown	The moderation in global growth seen at the end of Q1 becomes extended as concerns over trade wars dent business and consumer confidence. Global trade slows, capital spending plans are put on hold and consumers save the bulk of their tax cuts. The world economy hits a soft patch which extends into early 2019. Thereafter, activity begins to pick up again as relations between the US and the rest of the world improves thus lifting confidence and spending.	Deflationary: Lower oil prices and slower growth reduce inflation. After raising rates in June, the Fed reverses tack and eases at the end of the year. Rates are cut once more in 2019 before a modest recovery allows the Fed to resume hiking toward the end of the year. Rates are also lower in the UK, eurozone and China.
7. Inflation accelerates	After a considerable period where wages have been unresponsive to tightening labour markets, pay begins to accelerate in response to skill shortages. Wages accelerate around the world and economists revise their estimates of spare capacity considerably lower. Some economies such as Japan welcome the move as they seek to raise inflation expectations, others find they are facing stagflation as they effectively run out of capacity forcing the central bank to tighten policy.	Stagflationary: US inflation rises significantly by the end of 2019 on both headline and core measures. The Fed responds by tightening more aggressively taking its target rate to 4% by end 2019. Interest rates also rise more rapidly in the eurozone and UK whilst Japan returns rates into positive territory. Currency changes provide some cushion to the emerging markets which see a modest boost to growth alongside higher inflation in this scenario. Overall, global growth is slightly weaker and inflation considerably higher.

Source: Schroders Economics Group, 17 May 2018.

Global strategy: Trade wars intensify

Keith Wade
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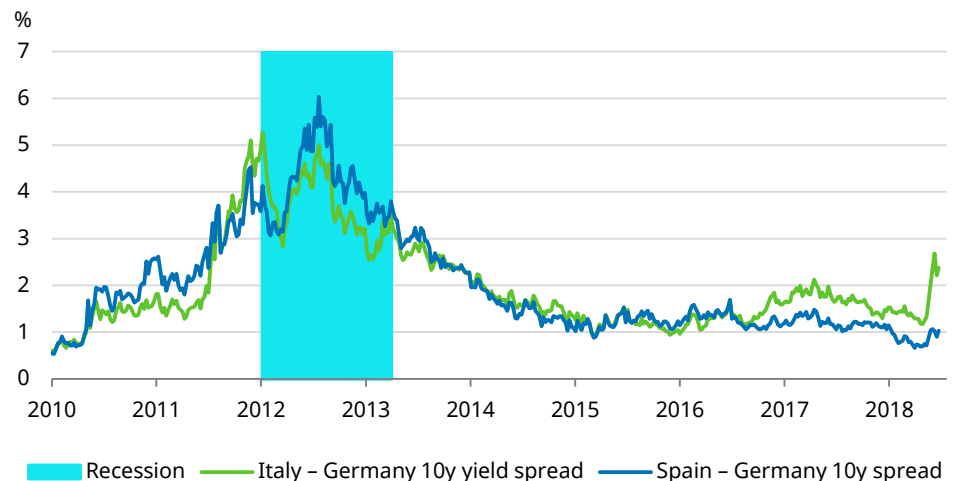
Fed hawks, ECB doves

The past month has brought a striking divergence in monetary policy between the US and eurozone. On 13 June, the US Federal Reserve (Fed) raised interest rates and alongside an upbeat assessment of the economy, delivered a more hawkish message by increasing its projections on future rate hikes. The following day the European Central Bank (ECB) announced it would taper in September and cease net asset purchases by the end of December 2018. However, in a dovish surprise it said key ECB interest rates would “remain at present levels at least through the summer of 2019”. ECB President Draghi refused to be drawn on when ‘summer’ began or ended, but it is clear that he has no intention of moving away from ultra-low (negative) policy rates for at least a year.

The divergence in activity between the US and eurozone explains some of the deviation in policy. Our suspicion is that the monetary policy-makers are concerned about the impact of ending QE on financial conditions.

For some time we have highlighted the impact of the ECB's asset purchase programme on European bond markets and capital flows with the scale of purchases being much greater relative to the bond market than in the US. The concern is that ending the programme will cause a significant rise in bond yields and a rise in the euro. Tighter financial conditions may then knock the recovery and push inflation down, or even worse set off a renewed widening of spreads in the periphery which could spiral into another crisis. Recent developments in Italy spring to mind, an economy which, unlike Greece, is too big to bail out.

Chart 4: Sovereign risk returns to the eurozone



Source: Thomson Datastream, Schroders Economics Group, 26 June 2018.

A return to currency wars?

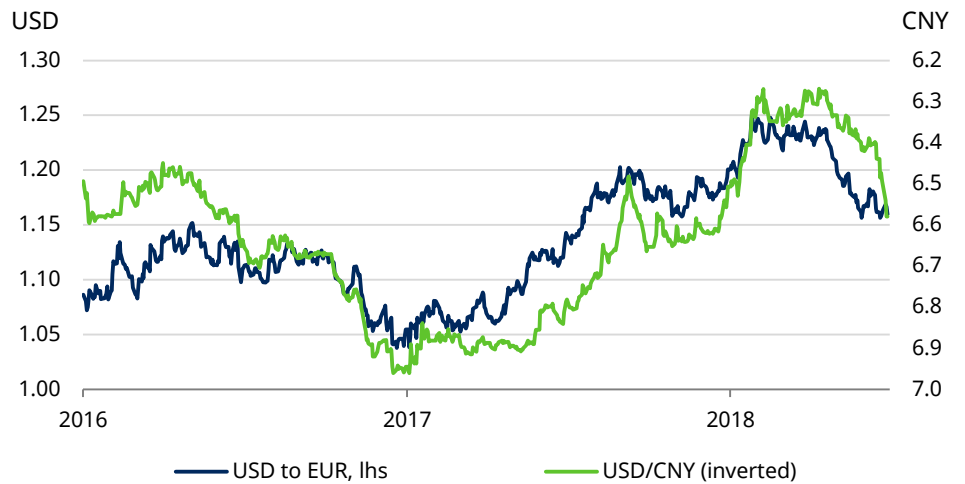
Trade tensions influencing monetary policy?

The desire to keep the euro competitive is an unspoken factor, but no doubt will have been increased as President Trump ramps up his trade policy. Europe has got off relatively lightly so far, with tariffs being implemented on steel and aluminium which amount to just over \$7 billion of EU trade. This compares with tariffs on \$34 billion of Chinese exports to the US, which come on top of steel and aluminium tariffs.

China recently announced an easing in monetary policy by cutting the reserve requirement ratio, seen as a response to the more difficult global environment

alongside slower domestic activity. Alongside the euro, the Chinese yuan (CNY) has weakened and fallen to its lowest level since last December. Trump's trade wars seem to have opened up a new chapter in the currency wars (chart 5).

Chart 5: Euro and Chinese yuan weaken against the dollar

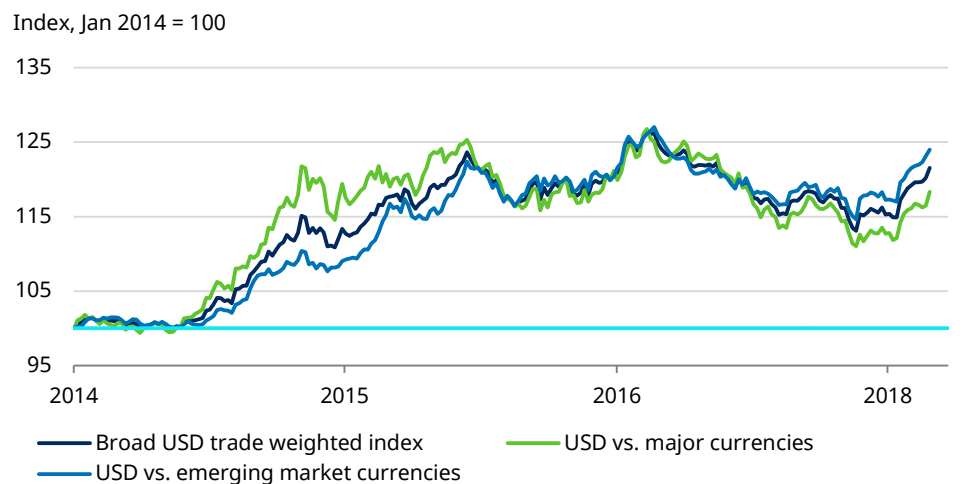


Source: Thomson Datastream, Schroders Economics Group, 27 June 2018.

Trade wars a central White House policy rather than a bargaining strategy

The dollar's move has caused stress in the emerging markets where selected currencies have been under pressure and the Fed's trade weighted index for the dollar against EM currencies is now close to the highs reached in 2016 (chart 6).

Chart 6: Dollar strength returns



Source: Thomson Datastream, Schroders Economics Group, 22 June 2018.

The EU is now braced for more action from the US, with Trump now threatening tariffs on cars. Germany is the fourth largest exporter of cars to the US with trade worth around 1% of German GDP. The president is also threatening tariffs on another \$200 billion of Chinese exports to the US.

Not surprisingly, markets are now waking up to the idea that tariffs are more than a bargaining chip to gain political support for the Republicans in the mid-terms. This was always an odd argument as the Republicans dislike tariffs and are generally free traders. Tariffs have more support on the Democrat side. The changes made in the White House to personnel suggest that there is genuine belief that this will help "make America great again". Staffed by people who see trade as a zero-sum game, the Trump team sees trade wars as a central policy rather than a bargaining strategy. Consequently, trade tensions could run well beyond the vote in November.

The power of the dollar on EM currency

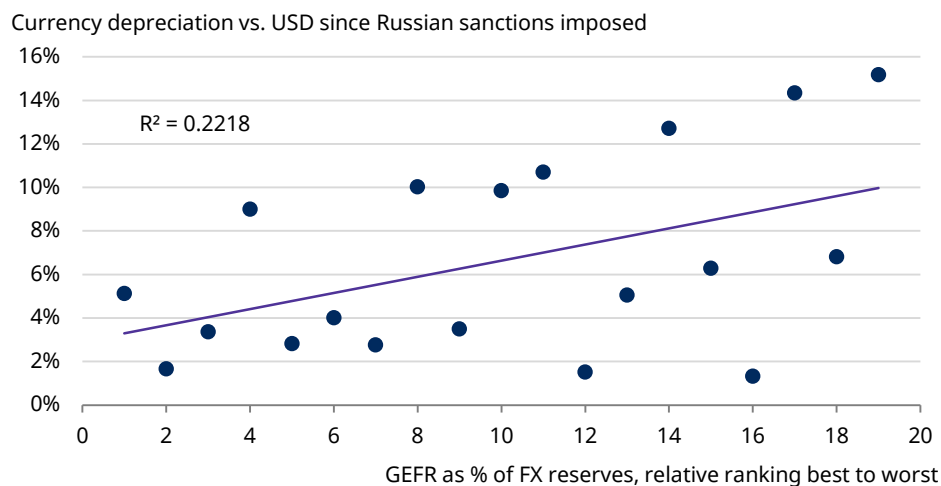
As highlighted in the previous section, currency performance has not been uniform. In some cases there are idiosyncratic factors for this; sanctions applied to Russia caused a significant sell-off, for example. But we also believe that differentiation in EM FX performance is linked in part to different sensitivities to the dollar.

Relative performance across EM likely depends on the degree of dollar exposure

There are a number of possible metrics to capture this sensitivity. Perennial favourites for external vulnerabilities in EM are the current account and the level of reserves, relative to imports. However, while these are useful for measuring vulnerability to a crisis, it is something of a non-linear relationship. There are levels at which reserve import coverage, or a current account deficit, become a concern, but until those levels are breached they may not serve as a good guide to relative performance within EM. Similar logic applies to the basic balance, which adjusts the current account deficit for foreign direct investment flows. It can tell you something about resilience to crisis, but seems not to hold much explanatory power for the developments seen this year.

Generally speaking we want to assess the reliance of a given EM economy on dollar financing, such that a more expensive dollar materially raises the cost of credit and tightens domestic conditions. Consequently, we consider the level of foreign debt exposures. Ranking EM economies by their total external debt as a share of GDP, private sector dollar debt as a share of GDP, and the gross external financing requirement² as a share of both GDP and reserves, we find that the latter holds the greatest explanatory power for the sell-off since April, particularly once we get past Russian sanctions (chart 7).

Chart 7: Currency weakness correlates with short term foreign debt worries



Source: Thomson Datastream, Schroders Economics Group. 20 June 2018.

Further dollar strength should see differentiation persist

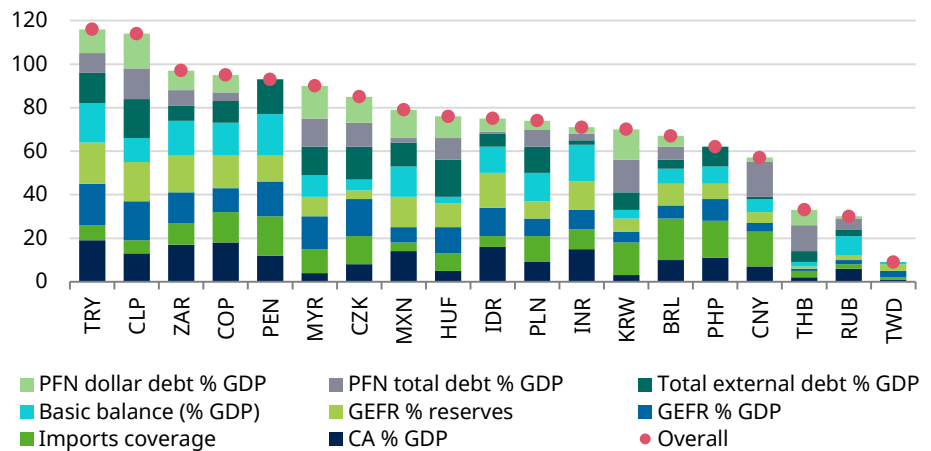
Of course, just because this relationship is the strongest so far does not mean this will be the case in the future. Other metrics for dollar exposure could come to the fore. With this in mind we have compared 20 EM economies on a range of metrics, ranking them relative to one another. Chart 8 shows the overall ranking score (arrived at by combining the economy's rank for each metric), with higher scores reflecting greater vulnerability. Bear in mind that this is chiefly a consideration of structural fundamentals – idiosyncratic factors could see some otherwise less vulnerable economies react more strongly to

² Current account deficit plus all short term foreign currency liabilities.

dollar moves, with one example being policy woes in Brazil – but it seems a good starting point if we are worried about further moves in the dollar.

Chart 8: Assessing structural vulnerability to dollar strength

Vulnerability to dollar strength, composite ranking



Source: Thomson Datastream, Schroders Economics Group. 20 June 2018. PFN stands for private non financial.

The role of trade tensions

While the dollar undeniably plays a big role in explaining the weakness we have seen, the currency weakness in EM has exceeded what might be inferred from the current level of the dollar or yield differentials in May.

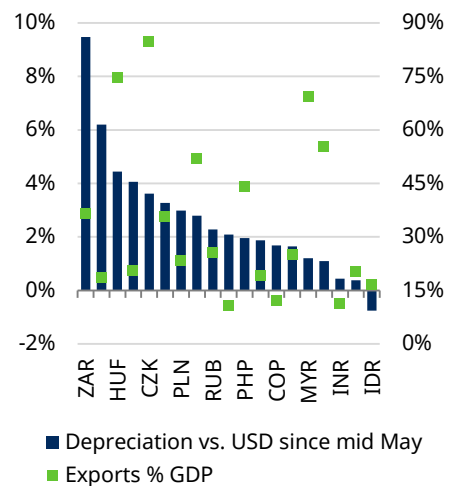
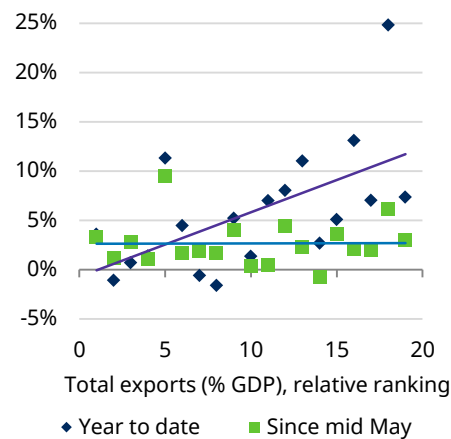
It seems plausible that growing tensions around global trade may have contributed to this additional weakness, with the US imposing tariffs on allies and rivals alike. Emerging market economies are typically more reliant on trade, so might be expected to suffer more in such an environment.

We looked at three metrics in assessing vulnerability to trade tensions: total exports as a share of GDP, exports to the US as a share of GDP, and value added in Sino-US trade as a share of GDP. Unfortunately for our hypothesis, there is no relationship between any of these measures and the move in exchange rates since May, when the divergence from the dollar trend began. If anything, the more trade exposed economies have enjoyed better currency performance this year as a whole, with the relationship breaking down in the last month or so (chart 9).

Markets do not seem to have distinguished within EM on the basis of trade yet

Chart 9 and 10: Currency markets not yet focusing on trade risk

Currency depreciation vs. USD



Source: Thomson Datastream, Schroders Economics Group. 21 June 2018. A similar picture emerges if we look at our other two metrics.

Meanwhile, chart 10 shows the individual currency performances since mid May. As is apparent from chart 9, most EM FX moved by a similar amount, with outliers at either end driven by idiosyncratic factors rather than trade risk: political concerns in Turkey, growth fears in South Africa, politics and NAFTA risk in Mexico for example. While Korea has moved to the weaker end of the pack, and India (a more closed economy) is performing relatively well, Taiwan is also an outperformer. It is difficult to argue that trade concerns are fully priced in at this stage. Instead, at this stage it may be more a case of general 'risk off' sentiment dominating.

It seems then that EM currency weakness so far this year is attributable chiefly to the dollar, with some idiosyncratic factors thrown in. The market is not yet pricing a global trade war, at least in currency space, which has the potential to prove more disruptive to EM Asia and potentially parts of EM Europe.

How might trade wars play out?

Regular readers will know that we have little time for Trump's assertion that "trade wars are good and easy to win". China may be limited in its ability to put tariffs on US goods, but as Korea has found, it holds many cards. The Chinese authorities targeted Korean owned businesses in China in the wake of the decision by South Korea to install a missile defence system. Strict application of fire regulations effectively closed one supermarket business (Lotte) from operating, with the result it is withdrawing from China.

The US is vulnerable in this respect. General Motors sold more cars in China than in the US in 2017 and there are twice as many active iPhones in China than in the US. Data from the Bureau of Economic Analysis in the US show that the US firms in China sold \$223 billion in 2015 and \$150 billion through exports from the US. China has not said it will target US business but a powerful option remains.

Another factor which might temper US enthusiasm for escalating the trade war is that by extending tariffs to another \$200 billion of Chinese exports, we will see higher inflation as the extra duties will have to fall more directly on consumer goods. The US was keen to avoid such an outcome when drawing up its list of \$50 billion of Chinese imports, but extending tariffs further will hit clothing, footwear and a number of white goods.

Consequences of escalation

Our central assumption is that the trade spat between the US and China stops with tariffs on \$50 billion of goods from both sides. We also assume that a NAFTA deal is signed at some point next year. These assumptions are in jeopardy.

In addition, an escalation means we would have to factor in a stronger USD as central banks outside the US seek to counter the effect of tariffs and investors seek the safe haven of the greenback. This will hit trade and the emerging markets further by tightening monetary conditions, as well as exacerbating the inflationary impact of higher oil prices across all non-dollar economies.

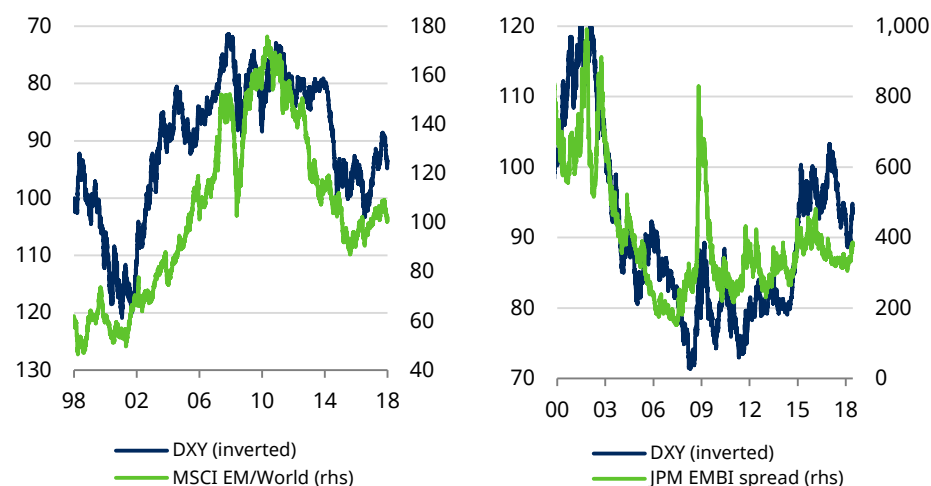
Overall, an escalation in the trade wars means we would have to reduce our growth and raise our inflation forecasts. Markets would have to contend with a stronger US dollar and a more stagflationary environment.

Research note: Why the dollar matters

Craig Botham
Emerging Markets
Economist

A resurgent dollar in 2018 has piled pressure on emerging market assets particularly. Historically, dollar strength is associated with the relative underperformance of EM equities, widening EM bond spreads, and weaker EM currencies (chart 11). While this relationship is widely accepted, we do not often discuss why it should be so. In some ways it seems counterintuitive; a stronger dollar should mean that foreign goods become cheaper in the US, boosting EM exports, and so providing a tailwind for EM equity earnings.

Chart 11: EM assets vs. the USD



Source: Thomson Datastream, Schroders Economics Group. 31 May 2018

The dollar's role is about more than just risk sentiment or interest rates

Sometimes this is explained as being a question of risk sentiment; in a risk-off environment, capital flows to the safe haven of the US dollar, and out of emerging markets, reversing direction when risk appetite rises. This may be part of the story, but it is rather unsatisfying because it relies on ambiguously determined "animal spirits" rather than anything we could potentially forecast.

Another narrative is that the dollar strengthens on interest rate moves, which are the real cause of EM pain. This makes sense; higher US rates draw capital from the rest of the world, buoying the dollar and weighing on other currencies. It certainly seems to fit the story this time round, with US rate differentials versus the rest of the world picking up. Again though, there are some problems. If the Fed is becoming more hawkish it is often because the US economy is gaining strength, which should be a positive for global demand. As emerging markets are typically a high beta play on global growth, it seems odd that this is negative for EM assets.

Perhaps it could be argued that risk sentiment and rate differentials between them can explain the relationships we see. However, we think that instead we can suggest a more causal relationship. That is, dollar strength itself causes problems for other economies, particularly emerging markets.

What we think we know about currencies

Traditional thinking about currencies suggests a stronger dollar should boost trade...

To begin, we should quickly recap how economists and markets normally view exchange rates. The most common way of thinking about the impact of currencies on macroeconomics is the Mundell Fleming model, or producer currency pricing. In this model, exporters sell goods in their own currency. Consequently, a weaker currency leads to cheaper exports and dearer imports. This then causes a reduction in imports, an increase in exports, and more consumption of domestic goods. Growth and inflation then both increase.

This informs the way we think about monetary policy and, as a result, investing. We tend to focus on how currencies move in trade weighted terms as this model implies that is what matters for the trade balance and inflation. As a result, a sharp move in the dollar can be offset by moves in other major currencies like the euro or yen, or the trade weighted basket as a whole. However, evidence increasingly suggests that this may not be the case.

A theory of dollar dominance

A series of papers have looked at whether exporters really do invoice goods in their own currencies. The chief finding, including the most recent, by Gopinath (2015) is that actually many exporters choose to price in a third country's currency. That is, they price in a currency that neither they nor their trade partner uses.

First and foremost among these "third country currencies" is the dollar. This dominance is above and beyond the dominance of the US in global demand: \$ invoicing is 4.7x the US import share, according to Gopinath. The comparable figure for the euro is just 1.2x. Nor is this dominance limited to EM; high \$ invoicing shares are found also in Japan, France, and other developed markets. Strikingly, Gopinath found that for many countries, the share of their own currency in their own trade is close to zero.

Simply, countries are trading with each other using dollars as the invoicing currency, even when neither country uses the dollar as a domestic medium of exchange.

This would suggest, on an empirical basis, that it is wrong to think about the world using the Mundell Fleming mindset. In the extreme, the euro/yen exchange rate should have no impact on European-Japanese trade if all trade goods are priced in dollars. Building on this, Gopinath suggests a new "dominant currency paradigm" (DCP) model, in which import prices are driven by the dominant invoicing currency and not the trade partner currency.

Choosing the right model

To see which model is a better approximation of the real world, we can look at how the prices of tradable goods react to changes in exchange rates. If the Mundell Fleming model is correct, we should find that import prices in most economies move in line with the bilateral (trade partner) exchange rate. If the DCP model is correct, import prices will move with the dollar exchange rate and ignore the trade partner exchange rate.

Happily, Gopinath (2017) has done this work for us. Specifically, she finds that across a large panel data set, the dollar exchange rate dominates the bilateral exchange rate in terms of inflation pass-through and trade volume elasticity. The DCP model turns out to be a better approximation of the world today than the Mundell Fleming model. This suggests we need to reframe our thinking.

Practical applications I: why do we care?

Pausing in our exposition of the model, let us consider why this matters to EM. Recall that we are trying to find a causal link from dollar strength to EM underperformance. When it comes to emerging market equities, a key driver for earnings is export performance. Normally, we would therefore expect weaker EM currencies, on a trade weighted basis, to boost exports and thereby support equities. But, in the DCP model, the bilateral exchange rate against the dollar dominates the trade partner exchange rate when it comes to movements in trade volumes and price pass-through. When investing then,

...actually the opposite may be true

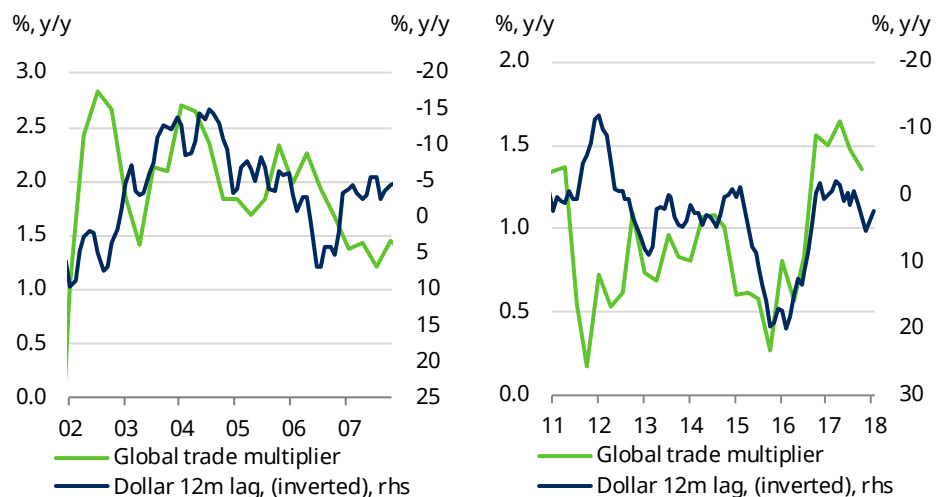
A currency's move against the dollar matters much more than its move against its trade partners

this suggests that we should focus on the exchange rate versus the dollar rather than versus the trade partner, or the trade weighted exchange rate.

However, remember that in this model imports and exports are all priced in dollars. So while we need to focus on the USD exchange rate, we also need to change how we think about it. Dollar appreciation makes imports more expensive, as before, but it does not make exports cheaper, because our trade partner is also facing dollar pricing. Dollar strength now means imports are more expensive for everyone (except the US), and no one receives a competitive advantage to their exports, even though their currencies are weaker against the dollar.

As with all models, this is a simplification, and it is recognised as such. Yet it does seem to be a better approximation of the world than prior models, as Gopinath's results indicate. We can see this for ourselves too, in comparing the dollar index to the global trade multiplier (chart 12), which controls trade growth for the level of global growth. To quantify this, Boz et al (2017) found that a 1% dollar appreciation predicts a 0.6 to 0.8% decline in global trade volumes within one year.

Chart 12: Dollar vs. trade multiplier



Source: Thomson Datastream, Schrodgers Economics Group. 31 May 2018.

This begins to explain why dollar strength is so painful for EM

This relationship would provide justification for EM underperformance during periods of dollar strength, as it predicts weaker earnings growth in the year ahead. It also suggests that the benefits to growth from currency weakness are much smaller than commonly assumed (and minimal in the extreme where all goods are invoiced in dollars), which implies that central banks may wish to intervene more aggressively against currency weakness, particularly as the dollar exchange rate also dominates price effects. If a weaker currency delivers more inflation and no growth, then a central bank targeting inflation, or even growth and inflation, has an incentive to lean against depreciation. As investors, this matters because we may be mis-specifying central bank reaction functions, and in doing so placing erroneous bets on central bank and market rate moves.

A dominant dollar increases the incentive to manage the currency

It is little secret that many EM central banks intervene to calm volatility in their exchange rates, even if this is not always made explicit. According to the IMF's 2016 report on exchange rate arrangements, there are currently 39 countries following an explicit dollar peg, with a further 40 following a "managed float", in which the currency floats but is subject to central bank intervention.

Perhaps one way to see this in EM is to look at the behaviour of central bank reserves in the face of dollar moves (chart 13 on the next page). Dollar weakness tends to be associated with reserve growth, and dollar strength with reserve shrinkage; this is consistent with buying dollars to prevent domestic currency appreciation when the dollar weakens, and selling them in periods of dollar strength to fight depreciation.

In buying dollars from the market, the central bank injects domestic currency, boosting system liquidity. The opposite is true when dollars are sold. In this way, dollar weakness and dollar strength lead to domestic monetary policy easing and tightening respectively, in a way which may not be captured by looking only at the headline policy rate.

Chart 13: Dollar strength impacts reserve accumulation



Source: Thomson Datastream, Schroders Economics Group. 31 May 2018.

This effect is known and understood. However, if the DCP model is the correct one, then this should mean we assume that dollar moves will drive domestic liquidity conditions in EM by exerting pressure on the central bank to intervene. As discussed above, if currency weakness yields no growth benefits, and higher inflation costs than commonly assumed, central banks will be incentivised to fight it. Conversely, currency strength in this model should have little negative effect on growth, while reducing inflation. This suggests an asymmetric response from central banks; dollar weakness should prompt less intervention than dollar strength. If we expect periods of dollar strength, we should also expect EM liquidity to tighten, and market rates to rise. It is not immediately clear that dollar weakness should see the opposite effect.

Interaction with banking and finance

Returning to the model, the next consideration is whether the dollar's dominance is limited to trade, or if there are more channels to be explored. As part of the DCP model, Gopinath argues that a currency's role as a unit of account for invoicing is complementary to its role as a safe store of value, which can lead to the emergence of a single dominant currency in both trade and finance. That is, the dominance of the dollar in trade can lead to its dominance in the global financial system, edging out the currencies of other major economies, and even leading to some use of dollar credit within non-dollar economies.

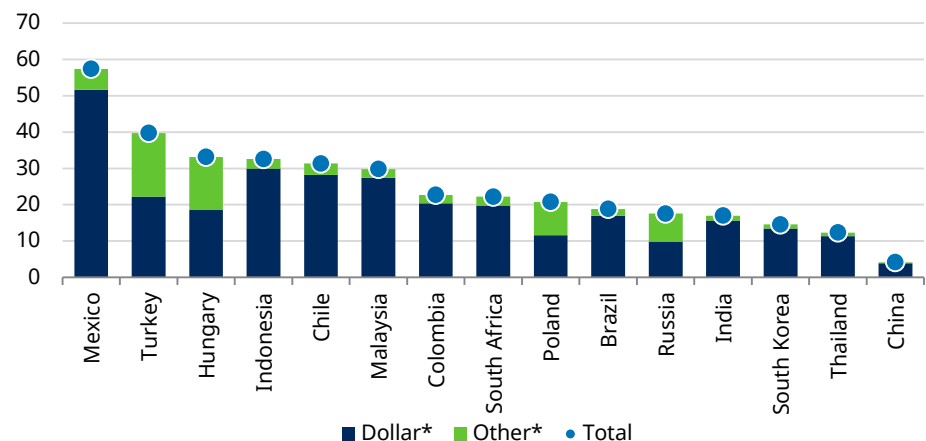
To see how this happens it is worth considering why firms may wish to invoice in a foreign currency. We will use dollars for ease of reference but the same could apply to the euro or RMB.

Dollar dominance in trade also leads to dollar dominance in finance

Faced with a large trade partner pricing in dollars, importers will wish to hold any cash reserves as dollars, to best hedge against exchange rate moves. This creates demand for dollar deposits, which domestic banks will seek to provide. To do this, however, banks must seek collateral for these dollar liabilities, and so will offer loans in dollars to other customers. As these customers will not have access to dollar revenues, they must be compensated for the exchange rate risk via a lower interest rate. (This has a certain appeal, as it provides an explanation for the ‘exorbitant privilege’ enjoyed by the US, whereby the US is able to borrow more cheaply). This also has the effect of reinforcing the dominance of the dollar in trade invoicing; any exporter taking advantage of the lower interest rates offered on dollar financing has a large incentive to price their goods in dollars to reduce the currency risk.

Chart 14: Dollar dominates some EM credit systems

Foreign currency debt as share of total, private sector (%)



Source: BIS, Thomson Datastream, Schroders Economics Group. 31 May 2018.

This is not to say that all financing in the economy becomes dollar denominated, but that dollar financing becomes more prominent than would be expected given the share of dollar revenues or dollar expenditures in the economy. It also means that foreign currency reserve holdings should be skewed towards dollars, rather than euros, yen or renminbi, including at the central bank given its need to provide support in times of stress.

A strong dollar weighs on credit growth, another headwind for EM

The data would generally seem to support this; work from the ECB in 2017³ found that 64% of worldwide official foreign exchange reserves were held in dollars, against 20% in euros and 4% in yen. Meanwhile, BIS data suggests that around 49% of all cross border bank claims, and 51% of cross border bank liabilities, are in dollars, with these numbers similar for the non-bank private sector rather than being distorted by interbank positions. For the EM private sector, foreign currency debt seems to constitute 15–40% of total debt, though China at 4% and Mexico at 60% are outliers (chart 14). Most of this foreign currency debt seems likely to be in dollars, as separate BIS data places the dollar share of total EM debt at around 80% (around 57% for developing Europe).

Practical implications II: the dollar and EM credit

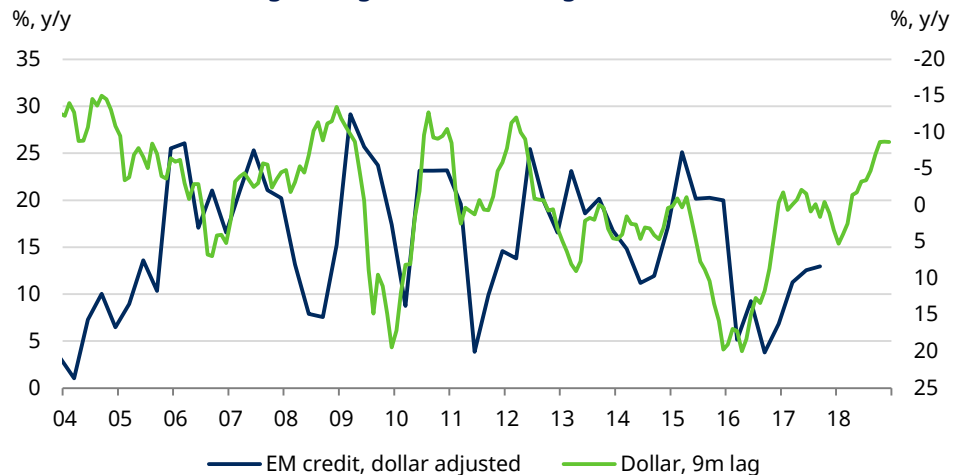
Pausing again to take stock, does this part of the model have any implications, investable or otherwise, for EM? We have touched already on how dollar strength could lead to credit tightening in EM as central banks sell reserves to reduce depreciation pressures, or even hike rates to defend their currency. We

³ ECB Staff (2017). The International Role of the Euro. Technical report, European Central Bank.

can now add to this that dollar credit plays a large and occasionally dominant role in total private sector financing in EM. If this is the case, then regardless of interest rate moves a stronger dollar will make debt service more expensive in local currency terms. Corporates will become less willing to borrow and banks less willing to lend.

On top of this, we also have the more familiar macroeconomic linkages occasioned by foreign currency debt; interest on that debt will be driven by foreign central banks, and so to the extent that dollar strength is driven by higher US rates, it will also be associated with slower EM credit growth. As with monetary policy, this might be expected to work with a lag, and this is what we can observe in the data. Chart 15 shows total EM credit data from the BIS, adjusted for moves in the dollar (otherwise currency moves would confound the moves in credit growth), plotted against the lagged trade weighted dollar. There appears to be some support for the idea that a stronger dollar should weigh on EM credit, though the opposite happily also holds. The literature offers some support here; Brauning and Ivashina (2017) found a typical US easing cycle sees a 32% loan volume increase for EM, with a similarly large effect on reversal.

Chart 15: Dollar strength weighs on EM credit growth



Source: Thomson Datastream, Schrodgers Economics Group. 31 May 2018.

The linkages we have explored can also offer insight into the possible link between the dollar and EM debt spreads, as measured by the EMBI. If a stronger dollar is generally associated with tougher credit conditions, it makes sense that investors would demand a higher risk premium for holding EM credits over the safer US alternative.

Implications of the dominant currency paradigm for investors

We have now considered both sides of the dollar's dominance; its role in trade and in finance. We have explained how dollar strength can negatively impact both, to the detriment of EM in particular. A stronger dollar reduces global import demand by raising the price of imports for all countries, excluding the US, simultaneously. Meanwhile, it also raises the cost of credit, particularly in economies where dollar denominated debt is more prevalent.

A stronger dollar is therefore a clear headwind to EM growth, weighing on trade and on credit, and generating inflationary pressure regardless of what trade weighted exchange rates may be doing. Central banks in impacted economies have a clear incentive to fight depreciation of their currencies versus the dollar, given that it offers little benefit to growth via exports, while generating higher inflation.

Investors need to re-evaluate how they think about, and trade, EM

For investors, this suggests a few lessons. One is that, with EM at least, it may be better to focus on the exchange rate versus the dollar rather than the trade weighted exchange rate when considering whether a currency is fairly valued, whether an adjustment is sufficient to correct external imbalances, and inflation pass-through. Further, currency devaluations should not be expected to have significant growth benefits. Beyond the currency, we may need to adjust our thinking on how central bank reaction functions look in EM, assigning more of a role to currency stability rather than just inflation and growth. Dollar strength may lead to more policy tightening than normally expected.

Market returns

	Total returns	Currency	June	Q2	YTD
Equity	US S&P 500	USD	0.6	3.4	2.6
	UK FTSE 100	GBP	-0.2	9.6	1.7
	EURO STOXX 50	EUR	-0.2	3.6	-0.3
	German DAX	EUR	-2.4	1.7	-4.7
	Spain IBEX	EUR	2.5	1.9	-2.1
	Italy FTSE MIB	EUR	-0.5	-1.2	1.6
	Japan TOPIX	JPY	-0.8	1.1	-3.7
	Australia S&P/ASX 200	AUD	3.3	8.5	4.3
	HK HANG SENG	HKD	-4.5	-2.5	-1.6
EM equity	MSCI EM	LOCAL	-2.4	-3.4	-2.7
	MSCI China	CNY	-5.1	-3.4	-1.4
	MSCI Russia	RUB	1.1	1.5	11.0
	MSCI India	INR	0.5	4.4	-0.7
	MSCI Brazil	BRL	-5.3	-14.8	-3.9
Governments (10-year)	US Treasuries	USD	-0.2	-0.6	-3.0
	UK Gilts	GBP	-0.4	0.8	-0.3
	German Bunds	EUR	0.3	1.9	1.9
	Japan JGBs	JPY	0.0	0.1	0.3
	Australia Bonds	AUD	0.3	0.0	1.7
	Canada Bonds	CAD	0.8	-1.1	0.2
Commodity	GSCI Commodity	USD	1.4	8.0	10.4
	GSCI Precious Metals	USD	-3.5	-5.0	-4.7
	GSCI Industrial Metals	USD	-4.6	1.5	-5.7
	GSCI Agriculture	USD	-10.1	-6.4	-3.3
	GSCI Energy	USD	5.3	13.8	19.7
	Oil (Brent)	USD	2.3	13.3	19.3
	Gold	USD	-4.1	-5.5	-4.0
Credit	Bank of America/Merrill Lynch US High Yield Master	USD	0.3	1.0	0.1
	Bank of America/Merrill Lynch US Corporate Master	USD	-0.6	-0.9	-3.1
EMD	JP Morgan Global EMBI	USD	-1.0	-3.5	-5.2
	JP Morgan EMBI+	USD	-1.0	-4.1	-6.1
	JP Morgan ELMI+	LOCAL	0.4	1.0	2.0
Currencies	EUR/USD		-0.3	-5.8	-3.9
	EUR/JPY		1.7	-1.3	-4.5
	JPY/USD		-1.9	-4.6	0.6
	GBP/USD		-0.8	-6.2	-3.0
	AUD/USD		-2.2	-3.6	-5.2
	CAD/USD		-1.4	-2.0	-4.5

Source: Thomson Datastream, Bloomberg, 30 June 2018.

Note: Blue to red shading represents highest to lowest performance in each time period.



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