Q-Series

Trade Wars: One step away from global recession – Are markets ready?

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UBS economists & strategists debate proximity to recession and market impact

US tariff escalation is NOT our base case. But if escalation is not averted in the next week or so (the legal process to impose tariffs on all Chinese goods should be completed on July 1), we anticipate making major changes to our forecasts. We estimate global growth would be 75bp lower over the subsequent six quarters and that the contours would resemble a mild "global recession"—similar in magnitude to the Eurozone crisis, the oil collapse in the mid-1980s and the 'Tequila' crisis of the 1990s.

If we are right on the growth impact, all major central banks would ease

The Fed would cut an additional 100bp (on top of an expected 50bp cut in July)—the US economy would be flying dangerously low to the ground but avoid recession (it would take adding a Mexico tariff shock to push them to the zero lower bound and restart asset purchases). The ECB and BoJ would push further into the negative territory (-70bp and -25bp) and China would add another 150bp of TSF growth (to 13% y/y), still short of the 2013 and 2016 stimulus episodes, with GDP growth falling below 6%.

Trade war escalation not priced in asset markets

The UBS Synthetic Trade War Monitor introduced in our last Q-Series report shows that the 'market' is less than half-way between complacency and last year's peak fear levels. There are big differences across assets, though. Rates (99th percentile of risk pricing over 18m) and industrial metals (75th percentile) are pricing high risks, while credit, currencies and equities are closer to complacency. However, the sectoral performance of equities reflects the same messages as the rates market.

Escalation of trade conflict could push global equities down by 20%

Through this fall, US equity outperformance vs Europe will be less than previously, given direct tariff impact. EM will likely suffer the most. Chinese stocks should hold up better, given their domestic orientation and policy support. Even with tariff escalation, global equities should find a bottom in Q1/Q2 next year as the initial shock fades and global growth recovers. From a bottom-up perspective, we highlight expensive trade-impacted stocks and crowded 'Growth' stocks vulnerable to slower growth.

Concern about policy effectiveness may take US 10-year yields to 1.3%

Once policymakers have delivered stimulus, investors will likely worry about them running out of options. Amidst liquidity trap fears, the global bid for duration will remain strong. If US-China tensions persist, we should see US 10y yields fall through their lows to 1.3% next year. Prior lows in yields were hit when Fed rates were at 0-50bp. This time it may happen with the Fed rate still at 1.0%—a much flatter curve.

Currencies: Trade war will keep the USD bid despite hurting US growth

As trade tensions escalate, growth and policy rates are likely to decline more in the US than in Europe. Such a scenario is typically negative for the USD, but growth differentials matter less for the dollar when we fall below the 30th percentile of global growth. As global growth and equities bottom in H1 next year, the USD should put in a gentle top against the EUR, but remain strong against the CNY.

If things get better: 'Right tail' trades – MSCI China, Energy, Pay US 2y rates

The bulk of this report is about risks to the global economy and asset markets from weaker trade and investment flows. However, we also address the best trades in a world where this shock does not come through. We use a 'trade-impacted' basket of securities to measure the penalty the trade war has imposed on each asset.

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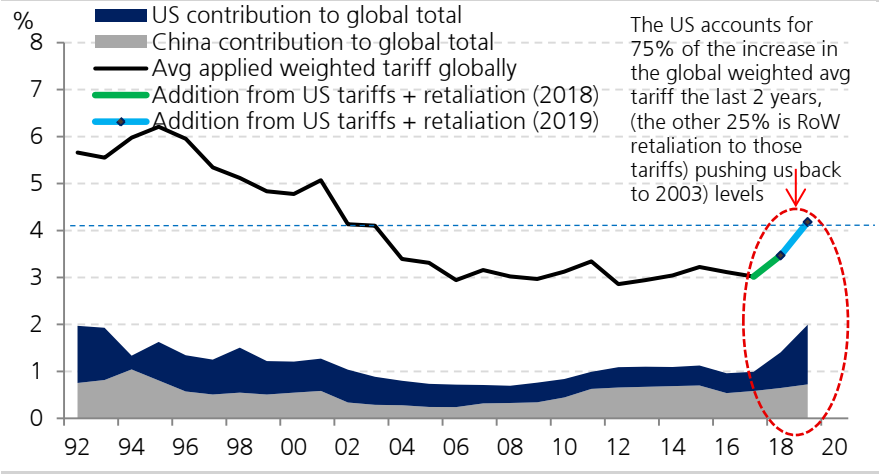
Executive Summary

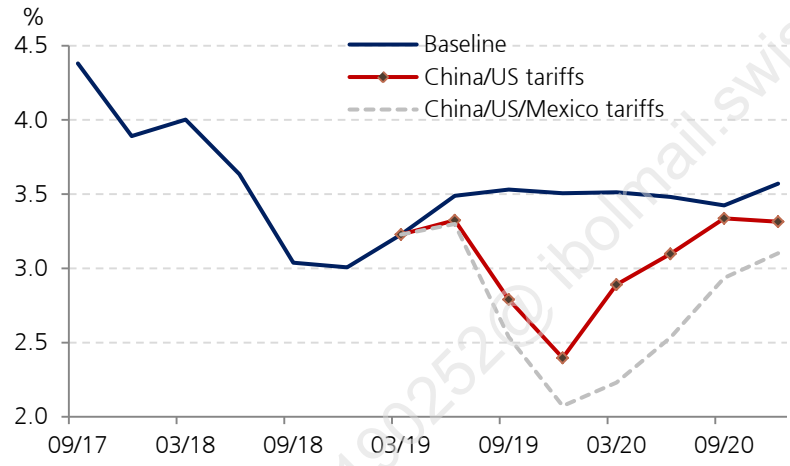
Figure 1: Global average applied weighted tariff across all products



Source: UBS, World Bank, Haver

Unless a deal is struck between the US and China in the coming weeks, the global weighted average tariffs will go back up to 2003 levels and the US weighted tariff back to 1947 levels. The US would account for 74% of the 116bp increase in the global weighted average import tariff.

Figure 2: Global growth – baseline vs trade disruption (QoQ annualized rates)

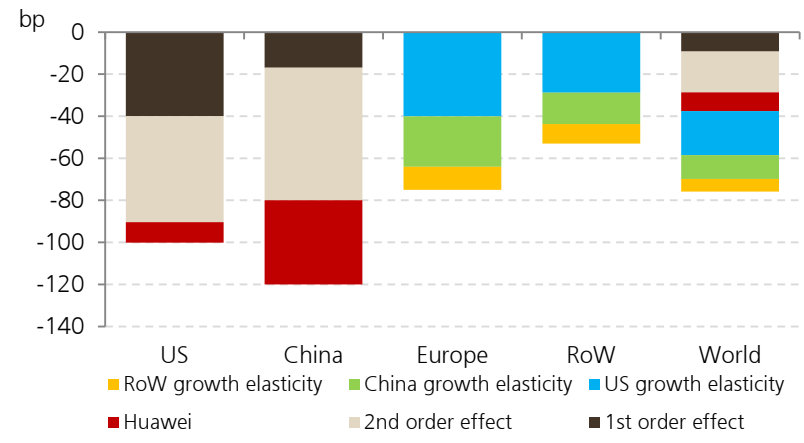


Source: UBS, Haver

We estimate this would lower the level of global GDP by 75bp over 6 quarters and create a 'global recession' similar in severity to the Eurozone crisis and the global slowdowns of the mid '80s (oil collapse) and mid '90s (Tequila crisis).

We would expect 100bp in Fed cuts (in addition to a 50bp in our baseline for July), 30bp in ECB cuts (further into negative territory) and China to push TSF growth up another 150bp (to 13% YoY).

Figure 3: Impact of US/China tariffs on level of growth by region (Q219 – Q420)



Source: UBS, Haver [Note this compares the index level of GDP at end 2020 with and without tariffs.]

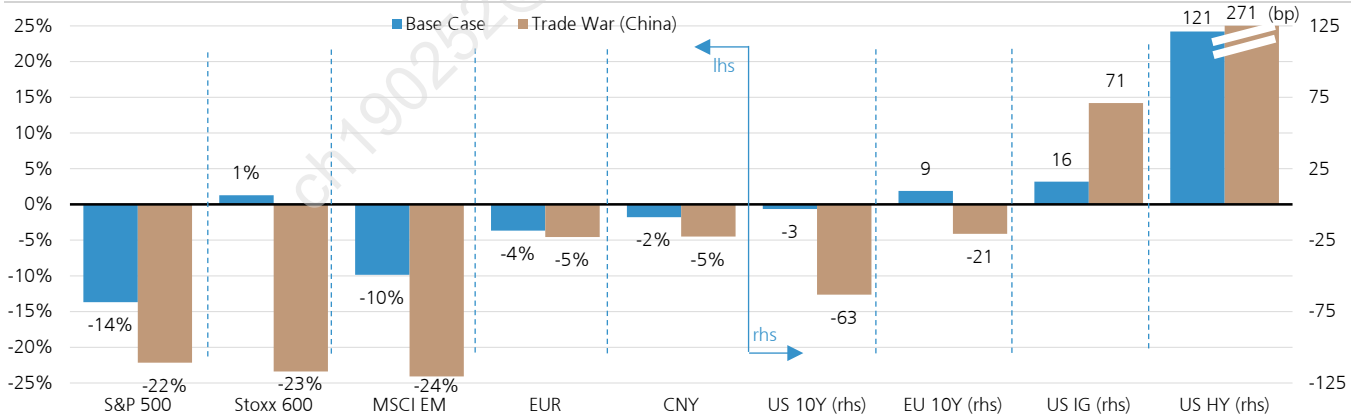
Over half of the global impact is on 'innocent bystanders' (spillovers from lower US/China growth on the rest of the world, supply chain disruption etc.). Restrictions on Huawei are an important feature of the China forecast (a third of the impact).

Figure 4: Key forecasts in baseline, narrow escalation (US, China) & broad escalation (US, China Mexico) scenarios

	End-2019			End-2020		
Asset class	**Base Case**	**Narrow escalation (China)**	**Broad escalation (China & Mexico)**	**Base Case**	**Narrow escalation (China)**	**Broad escalation (China & Mexico)**
Equity Markets				*(Earnings growth)*	*(Earnings growth)*	
S&P 500	2550	2300		-1%	-7%	
Stoxx 600	390	295		0%	-7%	
MSCI EM	950	800		5%	-10%	
Rates (%)						
Fed Funds	2.00	2.00	1.25	2.00	1.00	0.00
US 2-Year	1.80	1.10	0.25	2.00	1.00	0.35
US 10-Year	2.00	1.40	1.00	2.30	1.30	1.10
EU 10-year	-0.20	-0.50	-0.60	0.10	-0.40	-0.50
JN 10-Year	0.00	-0.30	-0.50	0.20	-0.10	-0.20
Currencies (level)						
EUR/USD	1.09	1.08	1.05	1.15	1.13	1.13
USD/CNY	7.00	7.20	7.20	7.00	7.30	7.30
USD/JPY	108	105	100	108	108	106
Credit (OAS, bps)						
US IG	135	190	270	175	175	235
US HY	475	660	955	575	610	835
EU IG	140	180	270	180	165	160
EU HY	440	665	900	540	640	600
Oil (Brent $/bbl)	66	60	50	71	60	50
Gold ($/oz)	1370	1390	1415	1450	1485	1525

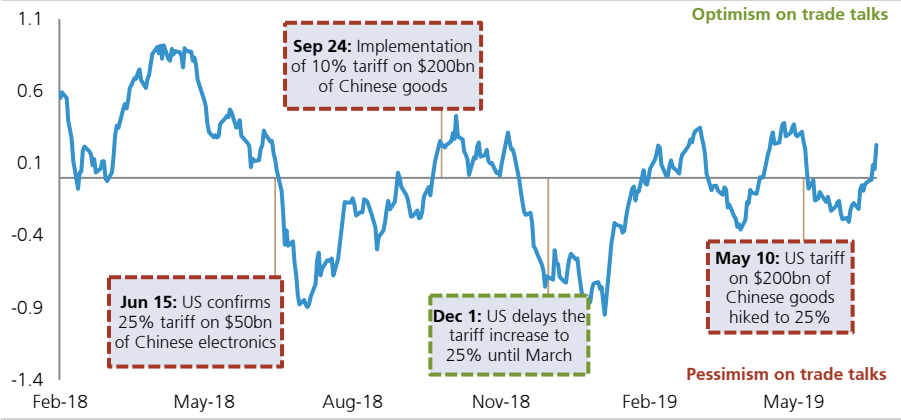
Source: UBS, Haver, Bloomberg

Figure 5: Forecast key asset performance till end'2019 for baseline and narrow escalation scenarios



Source: UBS, Haver, Bloomberg

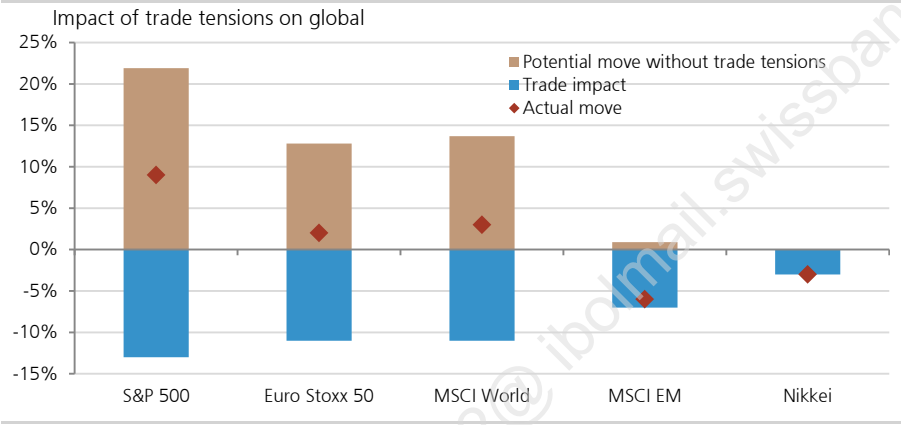
Figure 6: UBS Synthetic Trade War Monitor: An index of trade-sensitive prices across asset classes adjusted for the influence of a) the cycle and b) liquidity



Source: Haver, Bloomberg, MSCI, Datastream, UBS

UBS' Synthetic Trade War Monitor helps us track where the 'market' across all assets sits within the trade fear and complacency spectrum. It tells us that going into the G20 summit, the market is far from the peak fear levels even of last year, when 25% tariffs were still a threat. The simple message is that market prices see the trade war talk largely as posturing. We see the risks as asymmetric to the downside.

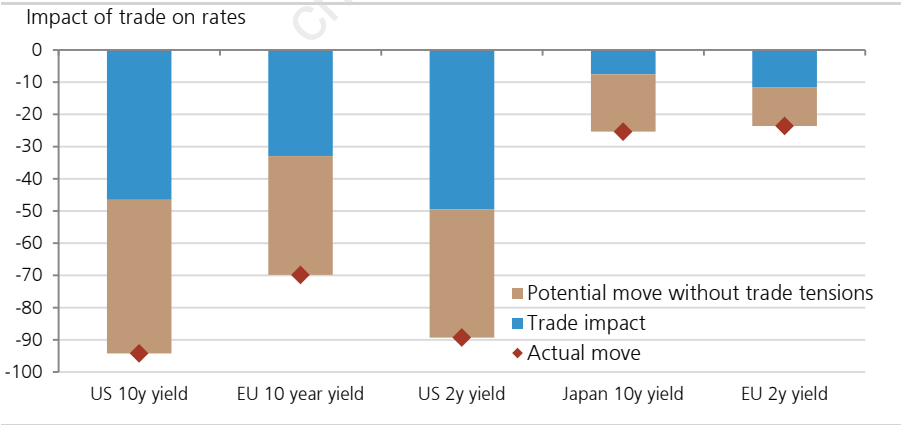
Figure 7: Estimated trade war 'penalty' paid by equities over the last 12m



Source: Bloomberg, UBS

Using a bottom up basket of stocks we define 'trade shock' days that help calculate the trade war penalty paid by any asset. Our numbers suggest that US and European equities have suffered a greater hit from the trade war than have EM stocks. The underperformance of EM equities at a benchmark level has been driven by factors other than the trade war, such as a weaker and less import intense stimulus from China.

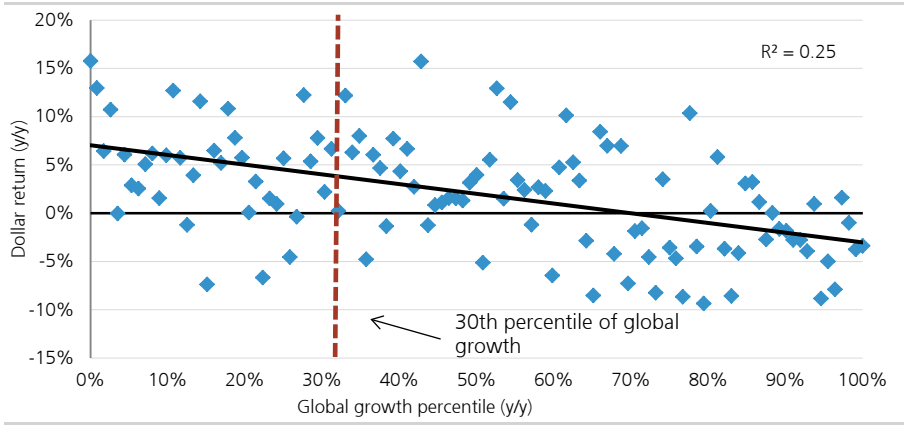
Figure 8: Estimated trade war 'penalty' paid by rates over the last 12m



Source: Bloomberg, UBS

Among global rates, US yields have been the most impacted by the trade war. The 2y rate has declined over the last 12m by 50bps directly because of the trade war, while the impact on 10y rates has been 45bp.

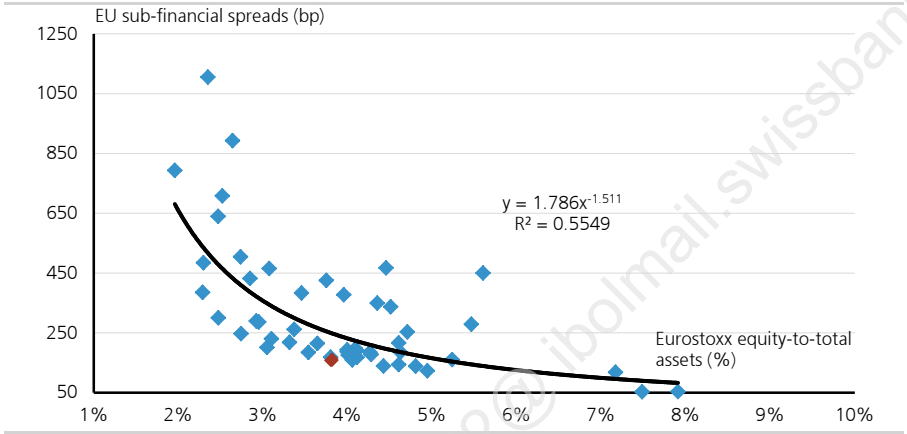
Figure 9: The USD and global growth



Source: Haver, UBS

In a trade escalation scenario US growth and policy rates will come down by more than those in Europe and the RoW. This is typically USD negative. However, this framework fails in roughly the bottom 30 percentile of global growth where the USD benefits as a safe haven. We expect trade escalation will push global growth into the bottom quartile. We believe the USD will top out against G10 currencies in the middle of 2020, as global growth bottoms.

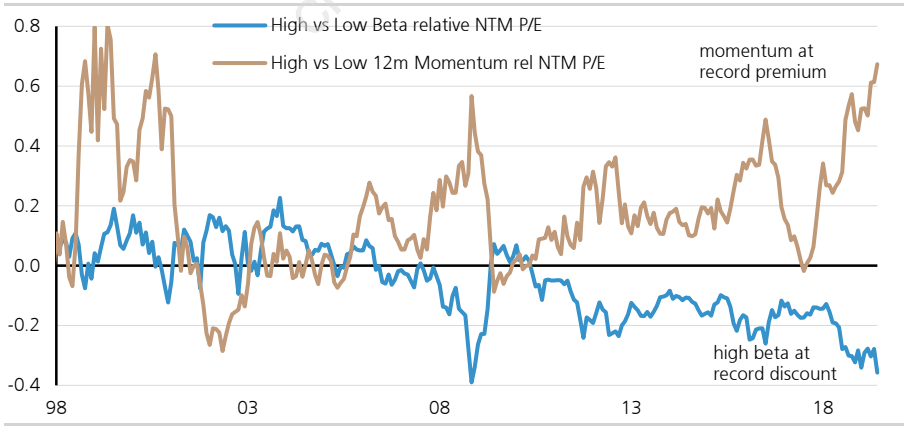
Figure 10: Non-linear relationship between sub-financial spreads (bp) and EU financials equity-to- assets (%)



Source: Bloomberg, UBS

Although we don't expect a balance sheet recession, there are some areas of vulnerability where a negative loop could be established between market prices and growth. Amongst these are European peripheral bonds and financials' credit, which has thus far been resilient in the face of declining financial equities. A further 10-15% decline in financials equities will take their market cap to assets ratio to level that typically sees a non-linear increase in credit spreads, tightening financial conditions.

Figure 11: External calm, stretched internals in the equity market



Source: IBES, Datastream, UBS quantitative research

While broader equity markets are not necessarily pricing the negative effects of a US-China tariff escalation, the internals underneath headline indices are pricing quite a bit more. High beta stocks are trading at a near record discount vs low beta stocks. Additionally, the relative valuations of high vs low momentum stocks are at extremes. While defensives will still likely outperform on escalation, the magnitude may be much less than seen historically.

Figure 12: Stocks with high growth and low FCF yields could be at risk

Company	Bloomberg ticker	Country	Sector	UBS rating	Mkt Cap (USDbn)	Upside to price target
Snap A	SNAP US	USA	Comm Services	Sell	19.9	-46%
Zayo Group	ZAYO US	USA	Comm Services	Neutral (CBE)	7.7	7%
JD.com	JD UW	China	Cons Disc	Neutral	42.3	10%
S-Oil	010950 KP	South Korea	Energy	Sell	8.0	-10%
Hess	HES US	USA	Energy	Neutral (CBE)	18.6	-2%
Genmab	GEN DC	Denmark	Health Care	Neutral	11.3	-3%
Sartorius Vorzug	SRT3 GY	Germany	Health Care	Neutral	15.0	-21%
Vifor Pharma	VIFN SE	Switzerland	Health Care	Sell	9.4	-16%
Dexcom	DXCM US	USA	Health Care	Neutral (CBE)	14.2	-10%
Perkinelmer	PKI US	USA	Health Care	Neutral	10.7	3%
China Sth Airlines H	1055 HK	China	Industrials	Sell	12.0	6%
China Eastern Airlines H	670 HK	China	Industrials	Neutral	11.7	34%
China State Const.	3311 HK	Hong Kong	Industrials	Neutral	5.4	-11%
AMD	AMD US	USA	IT	Neutral (CBE)	32.5	-20%
Hardie (James) Ind Cdi	JHX AT	Ireland	Materials	Neutral	5.8	3%
Crown Holdings	CCK US	USA	Materials	Neutral	8.1	2%
Crown Castle Intl.	CCI US	USA	Real Estate	Neutral	56.9	-5%
Fortum	FORTUM FH	Finland	Utilities	Neutral	19.0	7%
Gulf Energy Dev.	GULF TB	Thailand	Utilities	Neutral	8.0	-19%

Source: Bloomberg, UBS estimates and UBS Quantitative Research

Trade-impacted stocks will remain under pressure on further tariffs. We highlight 15 of those identified by analysts, with still relatively high multiples (Figure 125 in Appendix II).

In addition, in the table on the left (and also in its more detailed version in Figure 126 in Appendix II) we highlight stocks with higher growth, low FCF yields and lower quality that are at risk if growth slows further as these secondary effects are less priced than direct trade risk. Stocks with the highest sales growth and lowest FCF yields have been the worst performers at the last stages of a cycle.

Near-Term Signposts

Figure 13: In order to see where we end up on the trade escalation spectrum, here is what we will be tracking over the next months

	DATA RELEASE/EVENT DATE	WHAT WE EXPECT
Jun-07	**US & Mexico reach agreement to avoid tariffs over border issue**	The undisclosed deal is subject to a vote by Mexico's parliament and President Trump has noted that tariffs could be reinstated if approval is not forthcoming. However, we assume the issue is settled for now and that the escalation (from 5% initially to 25% tariffs on all Mexican imports by October) has been averted.
June 17-25	**Public hearings on China tariffs and deadline for written comments**	Public hearings for the increase in tariffs to all Chinese goods. The USTR formally began proceedings on May 13 to follow through on the administration's intent to apply 25% tariffs on all Chinese imports (a further 3805 items). The USTR filed the Federal Register Notice on May 17. Written comments are due by June 17, the date public hearings start. We expect this process to have no material impact on the scope of the tariffs being imposed, though there will be minor exemptions for select goods.
Jun-19	**FOMC meeting**	The Fed hints strongly at a rate cut in July. The data now need to convince them not to cut (i.e. would need to be much stronger). We now expect a 50bp 'insurance cut' in July.
June 27/28	**G20 Leaders Summit in Osaka, Japan**	Our baseline is that President Trump and President Xi make sufficient progress to forestall tariff escalation. Likely a 90 day delay for tariffs coming into effect.
Jul-01	**Earliest date on which tariffs can be announced**	Post hearing rebuttals must be received within 7 days of the last hearing date. The US is free to take action after this date and in past actions has announced tariffs within a few days of the post-hearing rebuttal deadline.Whether these tariffs get announced likely depends on progress at the G20.
End July	**Politburo meeting in China**	This meeting typically discusses the economic situation and policies. If tariffs have ratcheted up we may get signals on policy preparation.
Jul-31	**FOMC meeting**	We expect the Fed to cut its policy rate by 50bp unless there is a deal with China at this stage and the economic data materially improved. If, conversely, tariffs have been implemented we would envisage signals of possible future cuts.
November	**Car tariffs under Section 232 announced**	The May 18 deadline for the announcement of sanctions under Section 232 has come and gone. News reports suggest any action has been delayed for 6 months. We expect 25% tariffs on car imports from Europe and possibly Japan. The tariffs will initially likely be announced like the steel tariffs: across the board on all countries but with the option to apply for an exemption. The risk is that tariffs extend also to car parts but this is not our baseline.

Source: UBS

Tariff Escalation in Context

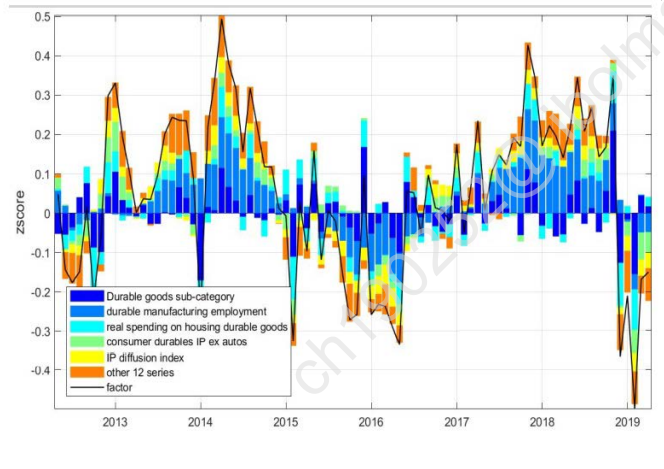
The impact of tariffs on global growth last year exceeded our pessimistic estimates

When we first modelled various 'trade war' scenarios in July last year (Q-series) we estimated that a full-blown trade war between the US and China (25% on all trade), coupled with global car tariffs, could take 100bp off of full year global growth over the subsequent 12 months. We ended up with about a 100bp QoQ annualized slowdown over the subsequent 6 months, which translated into about a 60bp slowdown in YoY growth (from roughly 4% to 3.4%). However, taking into account that the actual tariff escalation between the US and China was only a fraction of what we had modelled (US tariffs were only 23% of our worst case), that China only retaliated very partially, and that we don't yet have the car tariffs, we consider the effects much worse than what we had assumed. And our estimates at the time were perceived to be wildly pessimistic.

But difficult to disentangle tariffs from the tech cycle and other trade disruptors

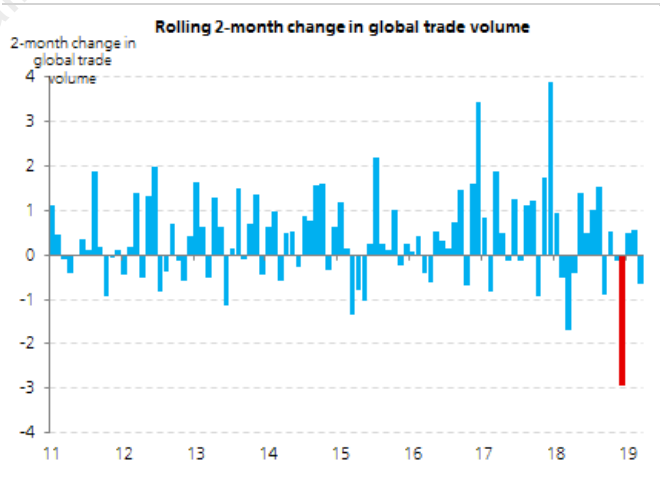
Now the problem with this story is of course that there was a lot more going on than just tariffs. In Why did global trade go into free-fall? we suggested the global economy had gotten caught up in a perfect storm of global trade deflators collapsing (the commodity and FX cycle running its course), tech cycle weakness (40% of the nominal global trade weakness) and, tariffs. But it wasn't just the tariffs. We also had Brexit concerns flare up in Europe which probably weighed on confidence. And we had a yield scare in the US in Q3 which did some financial market damage in Q4, and a self-induced slowdown in China due to shadow bank deleveraging.

Figure 14: The sharpest drop in US 'hard data' in 10 years occurred right after tariffs kicked in



Source: UBS, Haver [Note: the chart shows the contributions of 17 hard data series to a 'factor' that we use to model US recession probabilities as explained here.]

Figure 15: Coinciding with the largest drop in global trade volumes in 10 years



Source: UBS, Haver, CPB

However, only tariffs can explain the 'cliff' in the data

But the problem with all the alternative stories for the slowdown is that none can explain the 'cliff' in Q4: we witnessed the largest drop in global trade volumes in 10 years (half of which was due to the US/China; more than double their normal trade weight) and the largest drop in US consumption in 10 years (see the figure above left)--both roughly at the same time. The US is now formally in its 6th large non-recessionary slowdown in 60 years (our latest note on this is here) and despite earlier tariff effects dissipating, it has still not formally exited that 'contraction'.

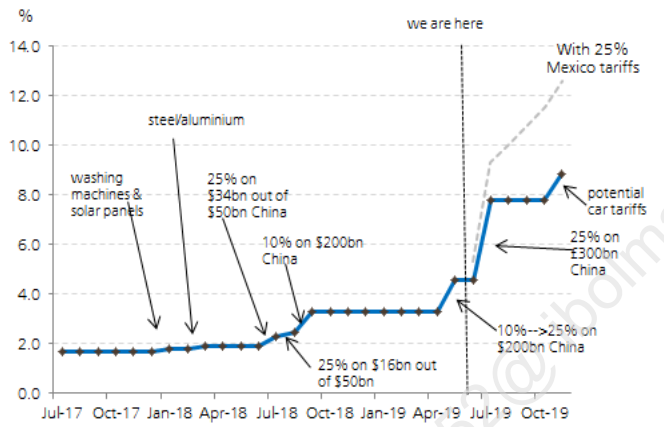
While we think we got the broad contours of the US slowdown right (a 70bp reduction in GDP so far), we underestimated the magnitude of the inventory build-up and vastly underestimated the elasticity of trade (e.g. 40% decline in

intermediate goods imports on a 10% tariff in the US), which helped boost headline growth numbers somewhat through larger net trade contributions. Also compositionally, it appears the 1st order effects (the inflation impact of tariffs) and the erosion of purchasing power were likely marginally lower than what we had modelled, but the 2nd order effects (supply chain disruption, non-linear disruptions to investment/consumption, weak firms going under) were higher than we anticipated. Despite this, we are applying more conservative multipliers to the potential next batch of tariff escalation for reasons explained in the next section.

An escalation of US tariffs on China is the legal default, though with delayed implementation to leave some room for future negotiation

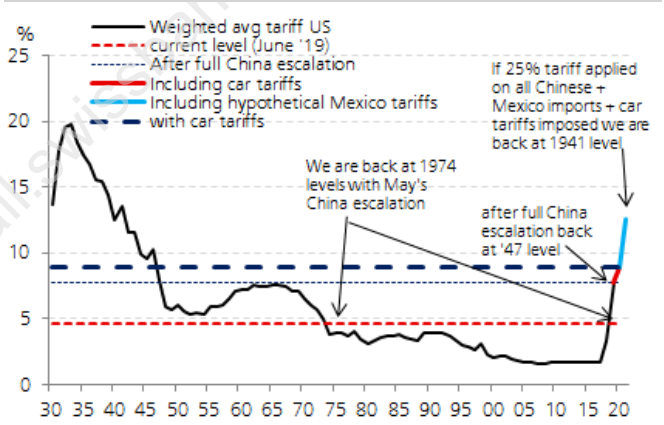
As shown on the 'Signpost' graphic (Figure 13), by July 1 the US will have completed the legal process to increase tariffs on all Chinese imports. Our baseline is that the US and China make sufficient progress around the time of the G20 meetings to prevent the tariffs from actually kicking in. That would then leave the weighted average US import tariff at about 4½%, up from about 1.8% early last year prior to the steel/aluminium/solar/washing machine and China tariffs. The level of trade restrictiveness (for goods) would be back at mid-1970s levels (the dotted red line in Figure 17 below right) but it would stop there.

Figure 16: Weighted Average US import tariff across all goods



Source: UBS, Peterson Institute, USTR

Figure 17: US weighted average tariff in historical perspective (1930-2020f)



Source: UBS, USITC

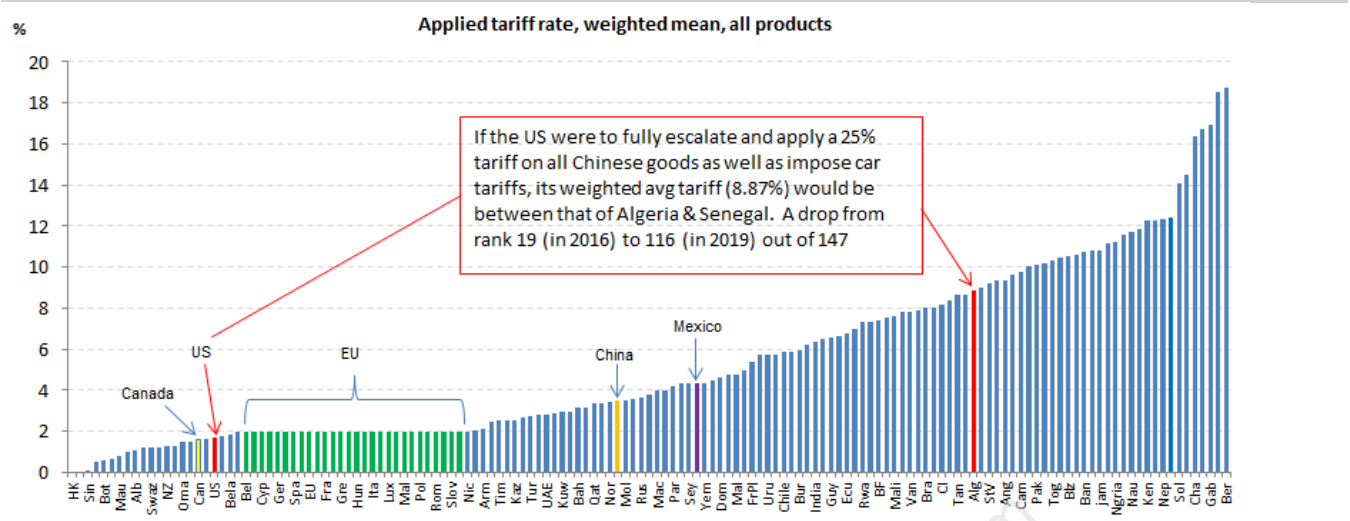
This would push US tariffs back to levels not seen since the 1940s

If we are wrong, and those tariffs actually end up being implemented, the weighted average US import tariff would increase by a further 320bp (25% * China imports/total imports). And if one adds the car tariffs (the 6-month delay in the announcement of possible sanctions under Section 232) we could see the US weighted average tariff increase further to 8.9% (see Figure 16).[1] That level of restrictiveness we have not seen since the 1940s (the dashed blue line in Figure 17).

Put into global context, this would move the US from one of the most open economies to one of the more restrictive. Figure 18 below shows the US falling from #19 to #116 out of the 147 countries for which we have tariff data.

[1] This is excluded from the scenario analysis later in this note but this would pose further downside risk to our forecast. Total US car imports were roughly $174bn in 2018, of which $32bn were from Europe ($40bn if you include parts) and $41bn from Japan ($49bn including parts). We assume that 25% tariffs are imposed on $100bn worth of car imports—most countries would get exemptions but Europe would not and possibly neither would Japan. We do not assume car parts are included given the potential disruption to US manufacturers, but the $100bn assumption leaves some room for either being too optimistic on the 'no parts' assumption or the limited scope of the car tariffs themselves.

Figure 18: US tariffs have moved it from one of the most open economies in the world to one of the more restrictive

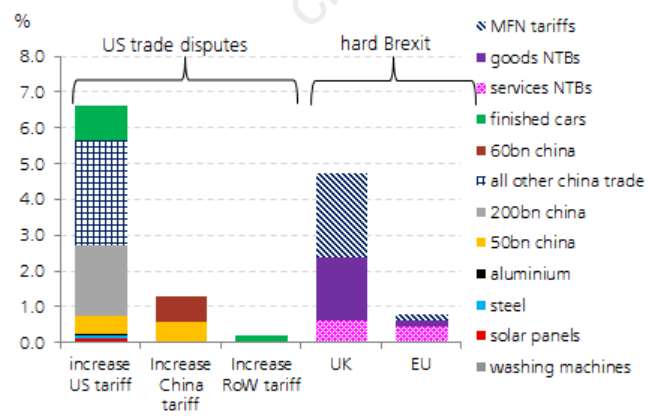


Source: World Bank (2016 data), UBS [Weighted mean applied tariff is the average of effectively applied rates weighted by the product import shares corresponding to each partner country. Data are classified using the Harmonized System of trade at the six- or eight-digit level. Tariff line data were matched to Standard International Trade Classification (SITC) revision 3 codes to define commodity groups and import weights. To the extent possible, specific rates have been converted to their ad valorem equivalent rates and have been included in the calculation of weighted mean tariffs. Import weights were calculated using the United Nations Statistics Division's Commodity Trade (Comtrade) database. Effectively applied tariff rates at the six- and eight-digit product level are averaged for products in each commodity group. When the effectively applied rate is unavailable, the most favored nation rate is used instead.]

The US has dropped from #19 to #116 out of 147 countries in terms of its level of trade openness

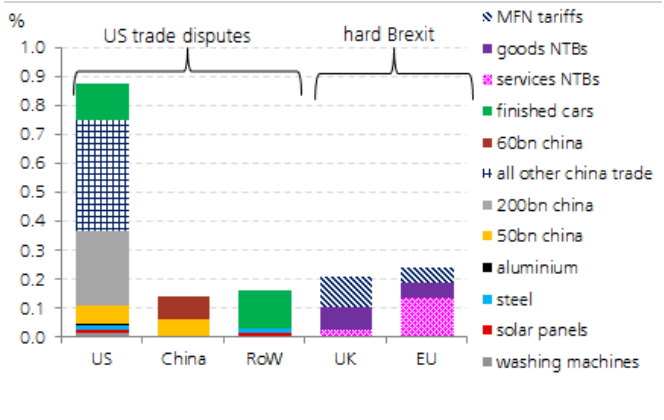
Tariffs in other countries are also increasing, but not nearly as much as in the US. Figure 19 below shows the increase in tariffs separately for China and, for illustrative purposes, also for the UK and the EU under a hard Brexit scenario (we show not just the MFN tariffs but also the ad valorem equivalent of non-tariff barriers). The 'delta' in tariffs for the US since early 2018 under a full escalation scenario would be 664bp, for China 129bp, for the rest of the world (assuming car tariffs and retaliation) about 21bp, and for the UK and EU roughly 472bp and 78bp in tariff equivalent increases under a hypothetical hard Brexit scenario. Figure 20 then takes those same tariffs and scales them by global trade. If we abstract from Brexit, then the US would have accounted for 74% of the 116bp increase in the global weighted average import tariff by the end of this year, taking the global tariff roughly back to 2003 levels.

Figure 19: Increase in weighted average tariff for each country/area (percentage points) since early '18



Source: UBS, calculations, World Bank

Figure 20: Contribution to increase in global weighted average tariff (percentage points) since early '18



Source: UBS calculations, World Bank

Estimating the Tariff Impact

There is material downside risk to our 'blue skies' (no further tariffs) baseline

Our baseline currently assumes no further tariff escalation, which would allow global growth to climb back towards trend (3.7% or so) in the 2nd half of this year on further diminishing 'external' drag (50bp out of the 80bp YTD improvement come from the bottoming in the trade cycle – see our latest Global growth now-cast). In that world, most central banks are not cutting policy rates but likely hiking, inflation breakevens are too low, positioning in equity markets is too skewed towards defensives (rather than cyclicals), oil is too low and the US dollar too strong. Our conviction level on this 'blue skies' scenario has progressively declined, however, given the US administration's apparent enthusiasm to keep resorting to protectionist trade policies.

Tariff & trade policy assumptions

In modelling the risk we make the important assumption that China's retaliation to US tariffs remains non-proportional (i.e. restrained)

So let's assume we are wrong and ask ourselves what the world (and assets) would look like if US/China trade tensions deteriorate further. In doing so, we make the following assumptions:

- The US imposes a 25% tariff on the final $270bn in imports from China, thus covering all Chinese trade (roughly $570bn at 25%).[2]
- China raises its tariffs on US imports by 25% but only on the $60bn tranche (from the current 18%); on the first $50bn the tariff was already at 25%. The suspended auto tariffs on the US go up by 25pp (i.e. from 15% to 40% on US cars). Importantly, however, our China team assumes that the rest of US imports (roughly $40bn) would not be tariffed (aircrafts, certain medicines, core inputs only the US makes etc.) and that Apple, for instance, would not be targeted.
- The US goes ahead with restrictions on exports to Huawei. Our tech team has identified this as a "going concern" risk to Huawei (the 7th largest technology company in the world—see Box below). We assume Huawei's $100bn in sales go down by half.
- We assume that China's response to the Huawei restrictions is restrained. China has announced an "unreliable entity list", with no details, but we believe aims to target companies/entities that "for political reasons" violate business contracts with Chinese companies or otherwise seek to harm China. We see this list as unlikely to be used pro-actively to harm US interest or companies (China's response so far has avoided putting up potential obstacles to FDI), but it serves as a deterrent/retaliation to those who halt supplies to China. It is thus more likely that intermediate suppliers (possibly from non-US countries) end up on the list rather than consumer companies like Apple or Starbucks. The threat by China to restrict rare earth supplies is difficult to implement in practice in a targeted way that doesn't hurt the whole supply chain—we assume no impact.

[2] The increase from 10% to 25% on the third $200bn tranche (following 25% on $34bn and $16bn) was announced on May 5 and went into effect May 10. The tariffs apply to items shipped from China after May 10. That in-transit exclusion was applied in lieu of the traditional notice period. The Administration's labelling refers to the final tranche as $300 billion. However, we find the total value of US imports from China for this tranche was $272 billion in 2018. Also, the tranche does not complete tariffs on all imports from China as pharmaceutical products, rare earth elements, and a handful of other items remain excluded.

- Notwithstanding the relatively small increment in Chinese tariffs we assume a large drop in imports from the US (-40% YoY in 2020 compared to -4% for imports from the rest of the world), on the back of a wave of nationalistic sentiment (consumers may choose to buy non-US brands and restrict travel to the US).

Calculation Method

We go through a 4-step process to calculate the impact of the tariffs on the global economy (Figure 25):

We go through a four-step process to estimate the growth drag from tariffs

1) First, we estimate the consumer price impact of the tariffs. For instance, the US economics team has released a detailed note in which they estimate the US inflation impact. They examine 10-digit HS commodity codes and assume differential pass-through rates for consumer and non-consumer goods and, within those categories, also line-by-line assumptions about differential pass-through rates for different product categories (these range from 7% to 96%) which are partially a function of China's market share in those goods.

   As a cross check, and to ensure global consistency, we also run a top down model in which the tariff passes through the supply chain and at each step we have to make an assumption about how much of the tariff gets absorbed in existing margins and how much gets passed on. We use input/output tables to gauge what % of marginal cost is affected by the tariffed imports, make adjustments for invoicing currency (most trade is invoiced in $ so we assume Chinese exporters take a larger hit in their margins), and use the import share to calculate the relative contributions to CPI coming from domestic and foreign deflators. Both the bottom up and top down estimates suggest about a 40bp inflation impact on the US (7bp from the 15% on $200bn and 33bp from the 25% on $300bn).

   The price effects we can calculate quite precisely…

   Once we have the estimate of inflation we assume that consumption responds with unit elasticity to the price increase. That then gives us the "1st order" growth impact of the tariff. For China we do the same thing and we get about a 17bp inflation and 1st order growth impact.[3]

2) The next step is to estimate "2nd order" effects: the disruption to supply chains, firm/store closures, investment impact from reduced business confidence, commodity effects and cross-country spill over effects. These are really little more than guestimates, and general equilibrium models are ill equipped to deal with these complexities (+ the reversal of trade openness is a relatively unique historical event). So this is where estimates are likely to vary most widely among researchers.

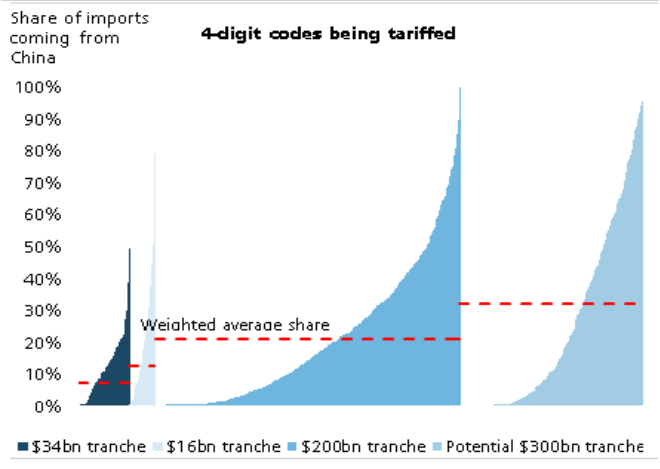
   …but the supply chain effects, firm closures and confidence/ investment effects are 'guestimates'

   We have scaled back our estimates of the magnitude of these effects for the final tranche of tariff escalation, in part because of the preponderance of consumer goods, which we assume will feed more directly into end consumer prices and do less damage to supply chains than disruption to capital and intermediate goods (see Figure 22 below right which shows the shifting composition of the different tariff tranches). Somewhat countering this is the

[3] Note that this inflation impact does not show up in our China team's forecast because it gets (i) overwhelmed by food prices, which will push up CPI inflation by an extra 0.5-0.6% near term but then this drops out of the base next year, (ii) disinflationary pressure coming from weaker aggregate demand; and (iii) downward pressure from producer prices (commodity effects largely) which will dominate the non-food core manufacturing goods prices.

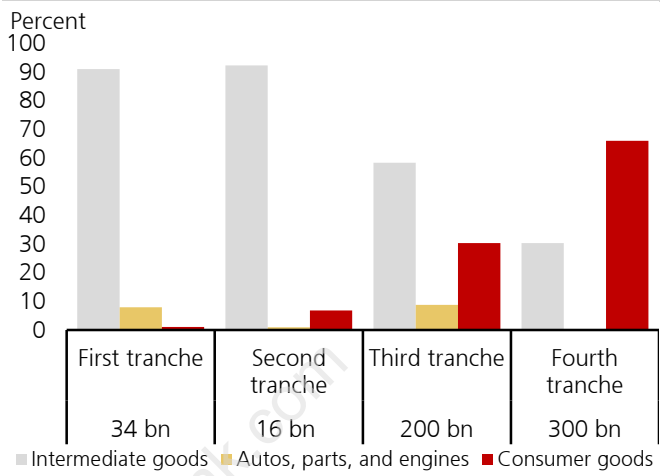
increasing market share of China in 4th tariff tranche (see Figure 21 below left) which makes it progressively more difficult (to substitute away from Chinese goods (or at least it may take longer).

Figure 21: Each tranche of tariffed goods has a higher share of US imports coming from China



Source: Census, UBS

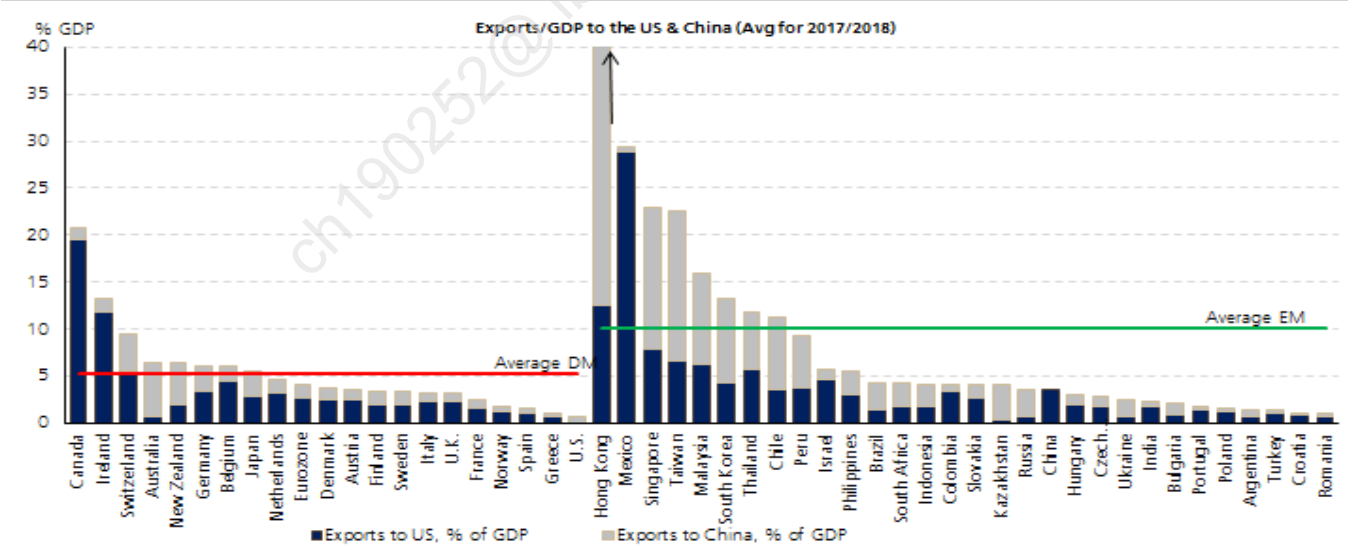
Figure 22: The share of consumer goods has increased with each tranche of imports from China



Source: Census, UBS

3) Once we have the 1st and 2nd order effects on China and the US, the third step is then to calculate cross-country spill-overs (Figure 23 below shows bilateral trade exposures vis-à-vis the US and China for each countries and Figure 24 shows those exposures vs historical growth elasticities).[4] A little under half of the global growth drag from the tariffs comes from these 'beta' effects on countries not subject to the tariff dispute.

Figure 23: Bilateral trade exposure to the US & China



Source: UBS, Haver

4) Finally, we add in ad hoc factors. The big one in this case is the impact of Huawei being put on the US Department of Commerce' Entity List (see Box). Our tech colleagues believe this amounts to a de facto US export ban to the

[4] Regressions based on quarterly YoY growth data back to 2000 with an AR1 term, a constant and US and China growth on the right hand side.

largest technology company in China, which could lead to as much as a 50% reduction in sales (again little more than a guestimate at this stage). That accounts for around a third of our China growth impact assessment.

Box: Huawei

Huawei is the world's 7th largest tech company

On May 17, the Bureau of Industry and Security (BIS) of the US Department of Commerce added Huawei to its so-called "Entity List" over "alleged violations of the International Emergency Economic Powers Act (IEEPA), conspiracy to violate IEEPA by providing prohibited financial services to Iran, and obstruction of justice in connection with the investigation of those alleged violations of U.S. sanctions" (see press release). Thus any sale or transfer of American technology to Huawei now requires a license by BIS, which could be denied on national security or foreign policy interest grounds. Our equity colleagues have noted that this is a de facto ban for US suppliers, and suppliers from outside the US have reacted as well (e.g. ARM).

Huawei is the 7th largest tech company in the world (after Apple, Samsung, Amazon, Hon Hai Precision Industry (i.e. Foxconn), Alphabet and Microsoft (source: Fortune 500). Huawei is also the largest telecommunications producer in the world, the 16th largest company in China overall, and the 72nd largest company in the world by sales.

Being put on the Entity List may make it de facto impossible to build smartphones

Although Huawei has become increasingly self-reliant, for instance in developing its own operating system, it is entirely dependent on US suppliers for a number of core components: for example RF front end (notably PA's i.e. the circuitry between a receiver's antenna input up to and including the mixer stage which converts the radio signal) needed to enable data and voice communication on phones; optical components, FPGAs/networks processors, and x86 processors. For Huawei it will essentially become impossible to make smartphones (at least in the short run), base stations and servers as there are no near term non-US alternatives. It could also have a negative impact on the 5G wireless networks rollout. In addition, Google's stated compliance with the order will eliminate access to Gmail, search and map functions and security updates—that is replaceable domestically but would significantly dent foreign sales (Google search has a 90% market share outside China).

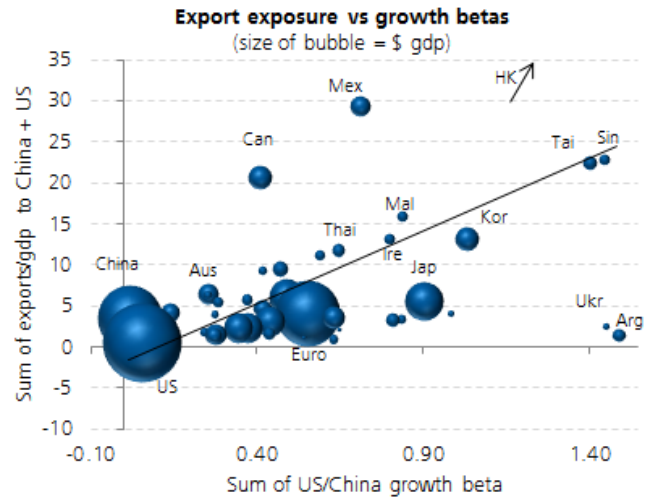
Our tech team has highlighted that Huawei had been aggressively building inventories which may last for 3-4 months, thus delaying the near term impact and offering scope for a negotiated solution between China and the US in the meantime. But after that the effects should become more visible and potentially have very negative effects on the supply chain.

Growth Impact

In total the tariffs reduce the level of global growth by about 75% by end 2020

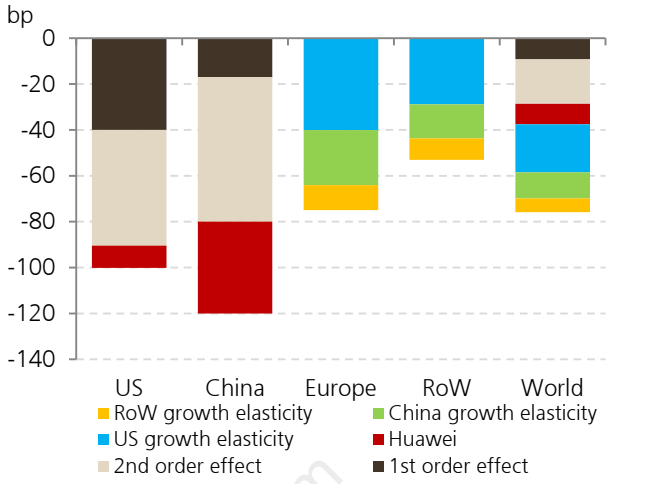
Putting all those pieces together gives us about a 75bp cumulative reduction in the level of global growth, of which 15bp comes from the US, 22bp from China, 12bp from the EU and 26bp from the rest of the World. The impact on individual countries is obviously larger: we estimate the cumulative reduction in US GDP at about 100bp over 6 quarters, in China at 120bp, and in Europe at 74bp. See Figure 25 below right for detail.

Figure 24: Exports to the US/China compared to historical growth 'betas'[5]



Source: UBS, Haver [betas are shown as the sum of the pp change of each country's YoY GDP growth for each 1pp change in US & China GDP, controlling for the country's growth in t-1. Quarterly data 2000-2018..]

Figure 25: Growth impact of US/China tariffs on world (Q219-Q420)

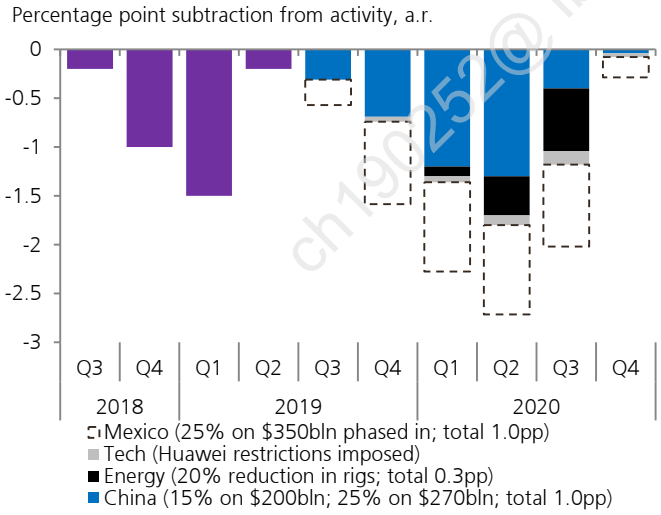


Source: UBS

The transmission mechanism and contributions from the different factors varies greatly between countries. This is already evident in the chart above right (the impact of 1st order effects is much larger in the US than in China)—reflecting in part much higher import tariffs—and China of course suffers more from the Huawei restrictions. But more fundamentally, the impact on China's growth comes largely through reduced exports while the US impact comes largely from reduced imports/supply disruption (China accounts for 20% of total US imports while the US accounts for only 8% of Chinese imports).

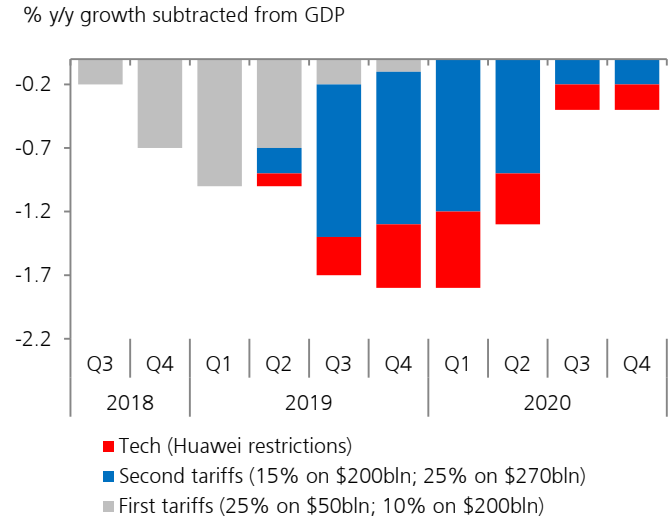
The hit to US growth comes from imports; the hit to China from exports

Figure 26: US growth drag decomposition



Source: UBS

Figure 27: China growth drag decomposition



Source: UBS

[5] Note that historical betas are not necessarily a guide to current growth sensitivity. In Australia and NZ, for instance, external shocks have historically been buffered by substantial fiscal and monetary policy flexibility (as well as currency flexibility). However, at present, the cash rate (in Australia) is already at a record low and AUD is at a post-GFC low. While significant fiscal stimulus is still possible, the lags are greater, and public demand growth is already the strongest on record. So the incremental growth contribution from this channel to offset net export and demand weakness may be limited.

Those different transmission channels also affect the profile of the growth impact, as shown in Figure 26 and Figure 27. One important feature of our US forecast comes from our consumer analysts: they estimate that 20% of listed firms are operating under a margin of less than 3% and that tariffs could accelerate 12,000 store closures. However, they also believe that it would likely take until early next year for this to start showing up in the data, which is why we've back loaded some of the impact a bit more than in the prior tariff tranches.

Finally, the table below shows the large impact on emerging markets. For Asia that's intuitive—there are strong linkages to China and most economies are very open and trade-cycle exposed. For Central Europe it's primarily due to these countries being 'high beta' to the Eurozone: if growth goes down there it goes down even more in the Central European supply chain. For Russia it's largely commodity effects, whereas for Brazil there are strong Chinese trade linkages. Turkey and South Africa are vulnerable to the global cycle via their foreign funding dependency and, in South Africa's case, also strong trade links with China/South East Asia.

Figure 28: Summary of growth impact (both US/China tariffs + what it would have looked like if Mexico tariffs had gone ahead)

	2019					2020				
	Base case (A)	US/China tariffs (B)	US/China/Mexico tariffs (C)	(B-A)	(C-A)	Base case (A)	US/China tariffs (B)	US/China/Mexico tariffs (C)	(B-A)	(C-A)
US	2.8	2.8	2.7	-0.03	-0.12	2.0	1.3	0.4	-0.62	-1.58
Canada	1.2	1.1	1.1	-0.01	-0.04	1.8	1.6	1.3	-0.22	-0.55
Japan	1.2	0.9	0.8	-0.32	-0.38	1.3	0.8	0.3	-0.50	-0.96
UK	1.5	1.4	1.4	-0.07	-0.11	1.3	1.0	0.7	-0.24	-0.51
Switzerland	1.3	1.2	1.1	-0.11	-0.16	1.6	0.9	0.8	-0.62	-0.73
Turkey	-2.0	-2.6	-2.7	-0.60	-0.71	2.0	1.3	0.6	-0.79	-1.43
Russia	0.8	0.4	0.3	-0.41	-0.51	2.2	1.2	0.6	-1.04	-1.61
South Africa	0.8	0.7	0.6	-0.17	-0.22	2.2	1.7	1.4	-0.53	-0.89
Kazakhstan	3.8	3.5	3.5	-0.27	-0.29	2.9	2.3	1.9	-0.62	-0.97
Czech Republic	2.8	2.5	2.4	-0.27	-0.38	3.1	2.2	1.6	-0.81	-1.40
Hungary	4.4	4.1	4.0	-0.24	-0.34	3.0	2.3	1.7	-0.72	-1.24
Poland	4.3	4.6	4.1	0.23	-0.24	3.7	3.6	2.9	-0.17	-0.89
Australia	1.9	1.6	1.6	-0.28	-0.23	2.4	1.2	1.2	-1.20	-1.25
New Zealand	2.4	2.1	2.1	-0.29	-0.29	2.7	1.5	1.5	-1.20	-1.25
Hong Kong	2.4	1.7	1.7	-0.67	-0.67	2.6	1.9	1.7	-0.72	-0.88
Singapore	2.2	2.0	1.9	-0.22	-0.30	2.4	0.9	0.6	-1.51	-1.79
South Korea	2.2	1.5	1.5	-0.71	-0.70	2.9	1.9	1.5	-1.00	-1.33
Taiwan	1.9	1.3	1.3	-0.54	-0.54	2.0	1.4	0.7	-0.60	-1.29
Malaysia	4.3	4.2	4.2	-0.13	-0.18	4.5	3.6	3.3	-0.92	-1.26
Thailand	3.1	3.1	3.0	-0.07	-0.10	3.3	2.8	2.5	-0.48	-0.71
Indonesia	5.0	5.0	5.0	-0.02	-0.05	5.2	5.0	4.9	-0.17	-0.33
Philippines	5.8	5.7	5.7	-0.02	-0.04	6.1	5.8	5.7	-0.30	-0.44
India	6.5	6.5	6.4	-0.03	-0.08	7.3	7.1	6.8	-0.23	-0.48
China	6.2	5.8	5.8	-0.43	-0.43	6.1	5.5	5.5	-0.61	-0.61
Vietnam	6.6	6.6	6.6	0.00	-0.03	6.8	6.9	6.6	0.15	-0.22
Mexico	1.0	1.0	0.4	-0.03	-0.59	1.8	1.3	-1.3	-0.54	-3.08
Brazil	0.9	0.8	0.8	-0.05	-0.06	2.2	1.5	1.3	-0.72	-0.90
Chile	3.7	3.6	3.5	-0.15	-0.18	3.4	2.8	2.5	-0.63	-0.97
Eurozone	1.2	1.1	1.0	-0.14	-0.20	1.3	0.7	0.4	-0.57	-0.88
Global	**3.5**	**3.3**	**3.3**	**-0.20**	**-0.26**	**3.8**	**3.2**	**2.8**	**-0.58**	**-1.00**

Source: UBS [Note: the China scenarios are inclusive of policy stimulus]

Central bank policy reaction

Last year's tariffs kicked in when the global economy was growing at 4%. These tariffs may kick in when we're growing at 3%. That has implications –if you are flying lower to the ground, your ability to withstand turbulence goes down. Faced with the growth slowdown shown in Figure 28, we would expect central banks to turn much more accommodative. We show our scenario analysis for a select group of central banks below. Under the baseline, only two central banks are projected to cut their policy rate in 2020 (Russia and Mexico which are both responding to the weakness in growth) and six central banks are forecast to hike. The central banks that are projected to hike would do so largely because most are still below neutral policy rate levels and, in our baseline, would see growth and inflation continue to recover back to trend.

However, in a scenario where US/China tariffs go up and extend to virtually all trade, we would expect 17 out of the 21 central banks in the table below to be cutting their policy rate and none of them to l be hiking. The median policy rate in 2020 falls from 2% in the baseline to 1.25% in the US/China tariff scenario. If one were to add on a hypothetical additional shock akin to the averted Mexico tariffs the median policy rate globally would be projected to fall as low as 1.0% (100bp below our baseline in 2020). We discuss some of the implications of this in the rates section further down.

Figure 29: Selected policy rates under two hypothetical tariff escalation scenarios

	2019					2020				
	Base case (A)	US/China tariffs (B)	US/China/ Mexico tariffs (C)	(B-A)	(C-A)	Base case (A)	US/China tariffs (B)	US/China/ Mexico tariffs (C)	(B-A)	(C-A)
US	2.00	2.00	1.75	0.00	-0.25	2.00	1.00	0.00	-1.00	-2.00
Canada	1.75	1.75	1.75	0.00	0.00	2.00	2.00	2.00	0.00	0.00
Japan	-0.05	-0.20	-0.20	-0.15	-0.15	0.00	-0.20	-0.20	-0.20	-0.20
UK	0.75	0.75	0.50	0.00	-0.25	0.75	0.50	0.25	-0.25	-0.50
Switzerland	-0.75	-0.95	-0.95	-0.20	-0.20	-0.75	-1.05	-1.15	-0.30	-0.40
Australia	0.75	0.75	0.50	0.00	-0.25	0.75	0.25	0.25	-0.50	-0.50
New Zealand	1.25	1.00	0.75	-0.25	-0.50	1.25	0.75	0.25	-0.50	-1.00
Hong Kong	2.00	2.00	1.75	0.00	-0.25	2.00	1.10	0.25	-0.90	-1.75
Singapore	1.70	1.50	0.75	-0.20	-0.95	1.80	0.80	0.10	-1.00	-1.70
South Korea	1.50	1.50	1.25	0.00	-0.25	2.00	1.25	0.75	-0.75	-1.25
Taiwan	1.38	1.38	1.38	0.00	0.00	1.38	1.25	1.00	-0.13	-0.38
Malaysia	2.75	2.75	2.75	0.00	0.00	3.25	2.50	2.50	-0.75	-0.75
Thailand	1.50	1.50	1.50	0.00	0.00	2.00	1.50	1.25	-0.50	-0.75
Indonesia	5.50	5.50	5.75	0.00	0.25	5.50	4.75	4.50	-0.75	-1.00
Philippines	3.75	3.75	3.75	0.00	0.00	3.75	3.50	3.25	-0.25	-0.50
India	5.50	5.50	5.50	0.00	0.00	5.50	5.25	5.00	-0.25	-0.50
China	1.50	1.25	1.25	-0.25	-0.25	1.50	1.25	1.25	-0.25	-0.25
Vietnam	6.25	6.25	6.25	0.00	0.00	6.25	6.25	5.75	0.00	-0.50
Mexico	7.75	7.75	8.75	0.00	1.00	6.75	6.25	6.25	-0.50	-0.50
Eurozone	-0.40	-0.50	-0.60	-0.10	-0.20	-0.40	-0.70	-0.80	-0.30	-0.40
Russia	7.00	7.50	7.50	0.50	0.50	6.75	6.75	7.00	0.00	0.25

Source: UBS

Box: Oil Sensitivity

Our oil team estimates that, as a rule of thumb, for every 50bp decline in global growth, demand for oil falls by 250 kb/d. So on the surface, that implies relatively limited downside to oil prices. However, China and the US account for half of the forecasted oil demand growth in 2019 (1.3 mb/d), and it is those two countries that are at the centre of the global slowdown if tariff escalation goes ahead. Moreover, the aforementioned rule of thumb is based on long-run regressions, and price effects during global slowdowns can be non-linear. The chart below left shows the WTI oil price in constant 2019 USD (to adjust history for inflation) against 8 major global slowdowns that have occurred since 1980 (the grey bars). On average—between the quarters preceding those slowdowns and the end of the slowdown—oil prices fell by -$17/bbl (within a range of +$2/bbl to -$62/bbl as shown in the table to the right).

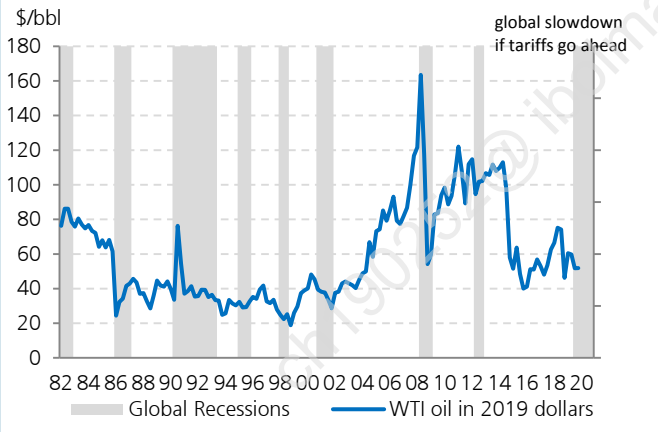
So for the purpose of this note, we've assumed that in a China tariff escalation scenario Brent falls to $60/bbl in 2020 and WTI falls to $53/bbl—that's roughly $11/bbl below our oil team's baseline but close to futures at $58.5/bbl and 51.5/bbl, respectively. Critically, that is still somewhat above the $50/bbl breakeven estimate for the majority of US producers—if we fall below that level we would expect potentially large amounts of production/investment to be taken off line which would pose additional downside risks to our forecast.

Figure 30: Oil price declines during global slowdowns (2019 $)

	Dates 1/	$
Latam debt crisis	Mar '82-Dec'82	-20.1
Oil collapse + DM slowdown	Mar'86-Mar'87	-18.8
Break-up Soviet Union/ERM crisis/US	June '90-June'93	-6.4
Tequilla crisis	Mar '95-Dec'95	2.2
Asia crisis	Mar '98-Sept '98	-2.7
Dot com/EM crises	Dec '00-Dec '01	-16.7
Global Financial Crisis	June '08-Mar '09	-61.9
Eurozone crisis/DM fiscal contractio	June '12-Dec '12	-12.6
average		-17.1
median		-14.6

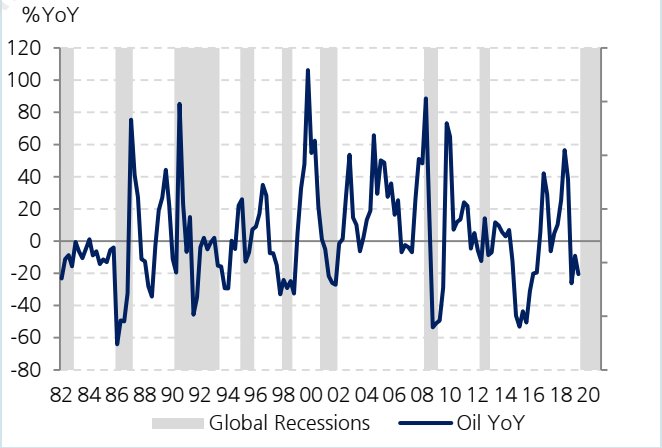
Source: UBS, Haver [Note: These are the dates identified by the turning point algorithm for global business cycle turning points. They do not strictly correspond to a particular crisis (e.g. the Asia crisis started in July '97).

Figure 31: WTI oil price in constant (2019) $dollars



Source: UBS, Bloomberg, Haver

Figure 32: Annual (YoY) change in WTI oil price (2019 constant currency $)



Source: UBS, Bloomberg, Haver

Actual outright declines in demand growth are historically rare and have occurred only four times in modern history (the 1973 and 1980 oil crisis, during the breakup of the Soviet Union in the early 1990s and during the 2009 global financial crisis). We don't think a 'China tariffs only' shock is large enough to generate that type of environment. The other point to make is that, to the extent the slowdown in oil prices is demand driven, those price shocks tend to recover relatively quickly. We are also in an environment where Saudi Arabia (and OPEC) is actively working to balance the market and where US shale production is taking up an ever larger proportion of global production. The supply side, as a result, has an increasing ability to respond to demand shifts and may help cap some of the downside relative to history.

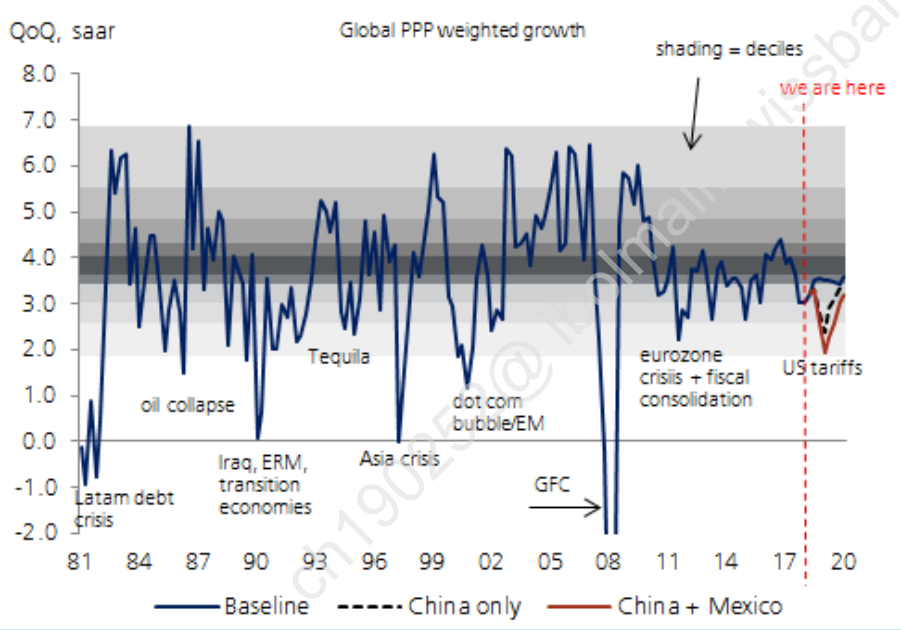
Box: How to Measure a Global Recession

There is no commonly accepted definition of 'a global recession'—indeed there is no commonly accepted definition of a recession even among developed countries. The NBER Business Cycle Dating Committee for the US identifies turning points in GDP ('peaks') as: "a peak is the point at which there is a significant decline in economic activity in an economy, lasting more than a few months, and visible in real GDP, real income, employment, industrial production, and wholesale retail sales"—in other words, this is a qualitative assessment; it's not as simple as simply finding two consecutive quarters of negative GDP growth.

You have to be careful in comparing global growth levels over time

Also, EM and DM have different base levels of growth (5.9% vs 1.9%, respectively, over the last 20 years) and so are going to spend a different amount of time below 0% (In our 50 country sample, EM has had negative YoY growth 10% of the time over the last 20 years vs 14% for DM). Moreover, once you start looking at large groups of countries the weighted average may never fall below zero unless a large number of recessions are synchronized. Indeed, if you look at the IMF's annual global growth series back to the late 1960s there is only 1 year in which PPP-weighted growth was negative (2009), and only barely (-0.1%).

Figure 33: Global growth in historical perspective



Source: UBS, Haver

An increasing weight for EM is creating 'higher troughs' in global growth

The chart above shows global PPP-weighted GDP growth since the early 1980s, and the horizontal bars represent deciles (the bottom of the lowest grey bar is the 10th historical percentile). On the surface, the baseline, and indeed the scenario showing a full escalation of US/China tariffs, does not look like a sharp GDP slowdown. However, with EM's weight progressively increasing (59% this year compared to 36% in 1980) the troughs in global growth are drifting higher over time (that 'rolling PPP weight' effect is worth about 6 basis points per year over the last decade). If we had fixed PPP weights at 1980 levels, for instance, the 2.5% trough in global growth we are forecasting in Q4-2019, would have been 1.5%, on par with some of the more severe global slowdowns seen historically.

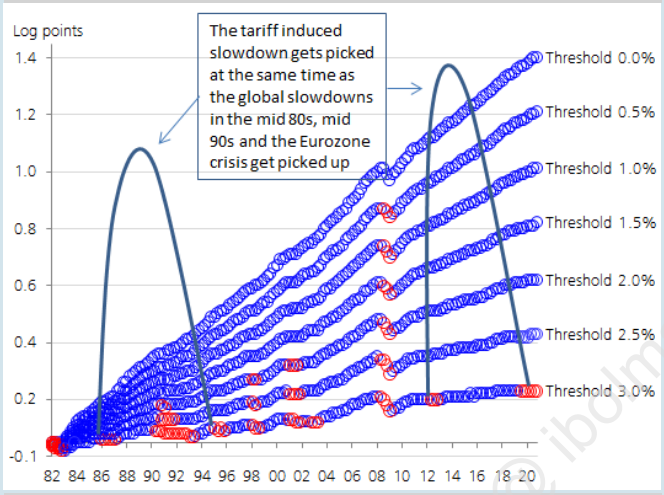
The IMF in the past has used global growth below 3% as shorthand for a global recession, but the Fund's April 2009 World Economic Outlook offered a more nuanced alternative definition: a global contraction in GDP per capita coupled with

an assessment of global industrial production, trade, capital flows, oil consumption and unemployment. That methodology confirms the large slowdowns in 1975, 1982, 1991 and 2009 but excludes other somewhat milder slowdowns.

We use a turning point algorithm to identify and compare global "recessions"

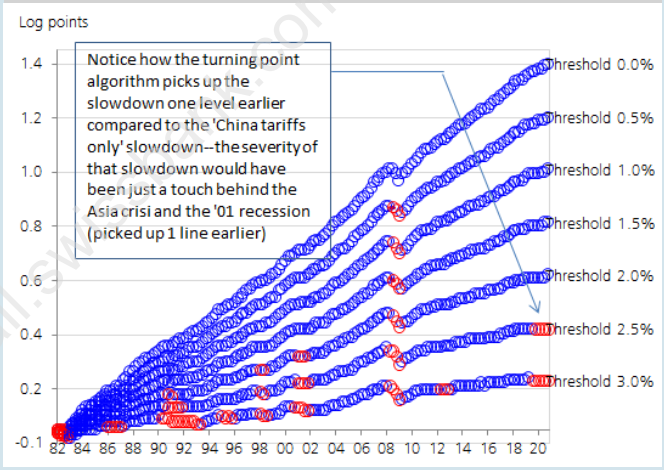
In order to compare the severity of the potential slowdown coming from tariff disruption, we want to be able to compare with *all* slowdowns—not just the most severe ones. So our approach is to use the turning point algorithm that we used to define business cycle peaks in our study of 'late cycle' economies. To recap: this algorithm identifies peaks and troughs from the level of GDP, essentially defining a local maximum and minimum within a small neighbourhood (say 2 quarters before and after), with a minimum of 2 quarters for a recession and a minimum of 5 quarters for a full cycle (recession + expansion).

Figure 34: Turning point algorithm for global business cycle suggests the 'tariff slowdown' is similar in severity to the Eurozone crisis and the mid-80s and mid-90s slowdown



Source: UBS, Haver

Figure 35: If we had added in the Mexico tariffs as well the global slowdown would have approached the level of severity in the Asia crisis and the 2001 slowdown



Source: UBS, Haver

Now to qualify as a 'recession' the algorithm requires growth to fall below zero in order to qualify as a 'peak' (the start of a recession). But at a global level that is a high bar. Indeed, if we cumulate global growth and make no adjustment, not even the global financial crisis meets that threshold under the algorithm (the top line in the two charts above is entirely blue, which means expansion; only 'red' would mean recession). What we then do, however, is lift the threshold in 50bp increments to see if it starts to identify recessions. With the first 50bp increase (the 2nd line in the chart) you can see it recognizes the global financial crisis in '08/'09 as well as the Latam debt crisis of the early1980s as a recession, but not yet any of the other ones. We then keep lifting the threshold and when you get to the 5th line it brings in the Asia crisis, the slowdown in 2001 and the early 1990s. At the sixth line it lengthens those early slowdowns (i.e. identifies them as deeper recessions).

US/China tariff escalation would generate a slowdown on par with the mid '80s, the Tequila crisis and the Eurozone crisis

Once you get to the 7th line it brings in the China tariff escalation (2019/2020) alongside the slowdowns in the mid'80s, the mid'90s (Tequila crisis) and the Eurozone crisis. So what we are modelling for tariff disruption is roughly on par with those slowdowns. We also, for illustrative purposes, show what the algorithm would have looked like with 25% Mexico tariffs (chart above right). The algorithm would have put that slowdown somewhere between the Eurozone crisis and the slowdowns in '98, '01 and '91/'92.

Impact on US Economy

Escalation with China slows the US economy and the Fed cuts

In contrast to our baseline, where further tariffs on China are postponed following the G20, we estimate that escalation to 25% tariffs on remaining imports would subtract about 90bp from the level of GDP. Slowing growth in the US and China weighs on the global economy and the energy sector, further damping activity. We see relatively small direct effects on the US economy from US initiatives to constrain Chinese tech firms. Figure 36 and Figure 37 show the forecast for real GDP growth and monetary policy under the baseline and the escalation scenario.

Channels of transmission

Tariffs are transmitted through a direct demand effect; firm closings; lower real income; uncertainty; and credit constraints

We see several channels of transmission, with non-linearities from firm closings. Businesses too face uncertainty over cost and demand, hitting hiring and investment spending, a temporary shock but one that could hit before tariffs are enacted. When the tariffs are enacted costs increase at exposed firms, some fail, shuttering production lines and retail outlets. We expect concentrated closures in Q1. Lower profitability reduces investment and wages at surviving firms. Increased unemployment and higher prices then reduce real income; this channel hits Q1 and early Q2 2020. Weaker overall demand—as even households begin to fear job loss—adds to the drag from modestly higher prices. General policy uncertainty dampens future investment.

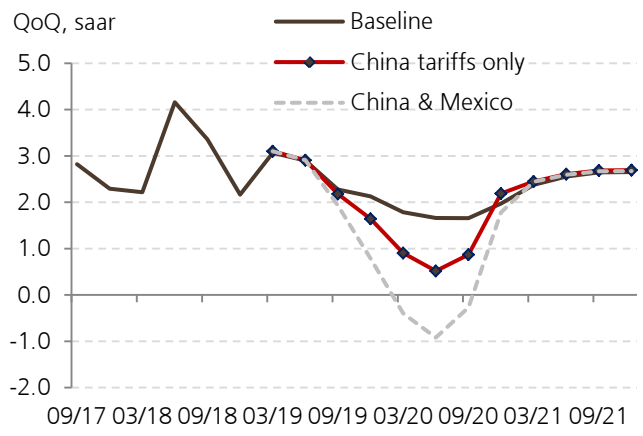
A shock to credit spreads is a decided risk to the outlook. A fall in profitability can impair speculative-grade credit and lower-rated, investment grade credit. Wider spreads and restricted credit supply would impinge further on investment spending. A widening in mortgage spreads would restrain the housing market.

Consumption and investment are hardest hit; inventories build

Consumption and investment spending are hit hardest

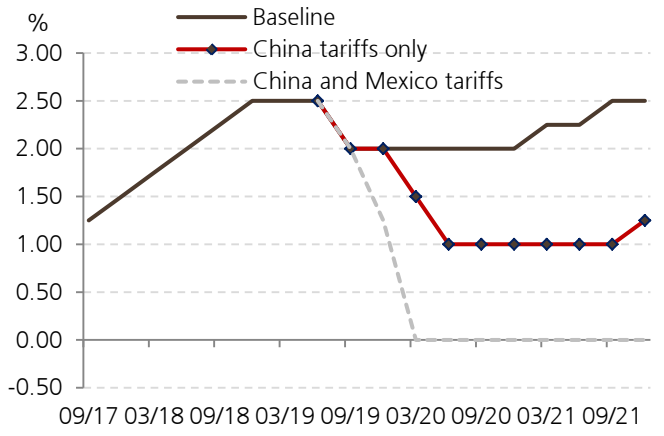
Consumption and investment spending both slow notably in 2019Q4 and trough in 2020Q2. For consumption spending, we see a rebound in 2020Q4 as firm closures halt and uncertainty abates. Investment spending turns only barely positive in 2020Q4, before picking up in 2021Q1, following the typical pattern of investment spending lagging aggregate demand. A weaker economy means less hiring and higher unemployment than in the baseline. Job growth slows to 60k per month in 2020Q2. The unemployment rate reaches 4.0 percent in 2020Q3.

Figure 36: QoQ growth: Escalation vs Baseline



Source: UBS, Haver

Figure 37: Policy rate: baseline vs escalation



Source: UBS, Haver

Tariffs boost the level of prices, with a notable near-term boost to inflation, followed by disinflationary effects of slower growth, which dominate in 2021. Core PCE inflation (YoY) gets to 2.4% by the Spring of 2020 (35bp above our baseline) before then slowing again due to weaker economic growth and rising unemployment rates. The higher unemployment rate removes the nonlinearity in the Philips curve we had previously assumed. As a result, core PCE inflation eases to 1.9 percent, respectively, in 2021.

Inflation is boosted in 2019, but depressed in 2020

The Fed looks through inflationary effect; cuts rates because of growth

Vice Chair Clarida has repeatedly said that the trade war has had "no material effect" on the economy to date. As a result, the slowing seen so far looks to them as an unexplained adverse shock that could result in a slump. At the June FOMC meeting, the Fed shifted to a "risk-management" reaction function and are poised to cut rates to avert such a slowdown. Full escalation of the trade war will exacerbate their concern, and so they will be quick to cut rates on additional signs of slowing.

The Fed is in risk management mode; evidence that the tariffs are slowing growth will prompt cuts

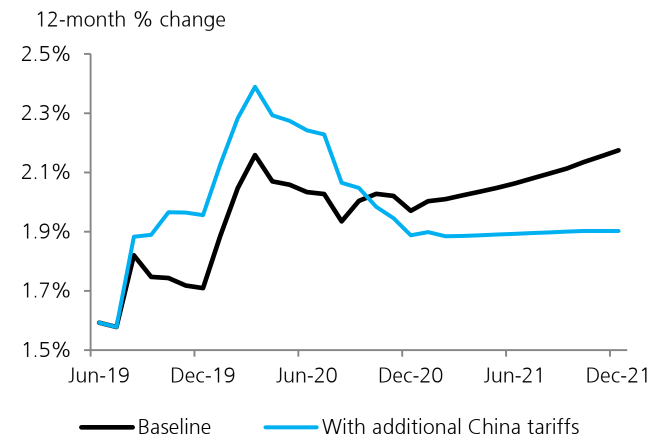
While the Committee uses many series to determine the state of the economy and the timing of that slowing, employment growth is a good proxy. Under escalation, job growth begins to slow in the transition from 2019Q4 to 2020Q1 as the rate of firm closure accelerates. The Fed tends to avoid monthly noise by using a measure such as the 3- or 6-month moving average, but in risk-management mode, they respond reasonably quickly, and cut rates another 50bps in March 2020. The economy continues to slow, and labour markets combine with other signals such as lower PMIs to convince the Committee to cut 50 bps again in June of 2020 (**Figure 39**). With growth resuming, they remain on hold through the end of 2020.

When the Fed cuts, it will cut at least 50 bps at a time

The Fed will know that inflationary effects from tariffs will be transitory. As Vice Chair Clarida said, "tariffs raise prices, not inflation." Moreover, Fed staff will be scouring the inflation data to confirm that the increases in inflation come in categories that can be ascribed to the tariffs. As a consequence, a short-term overshoot of the target will be of little consequence. The asymmetric risk of hitting the zero lower bound, however, will lead them to move the funds rate in big steps conditional on believing the economy is slowing. Indeed, we cannot rule out the Fed cutting rates in 75bp increments, nor can we rule out them cutting the funds rate to zero, based on the same logic.

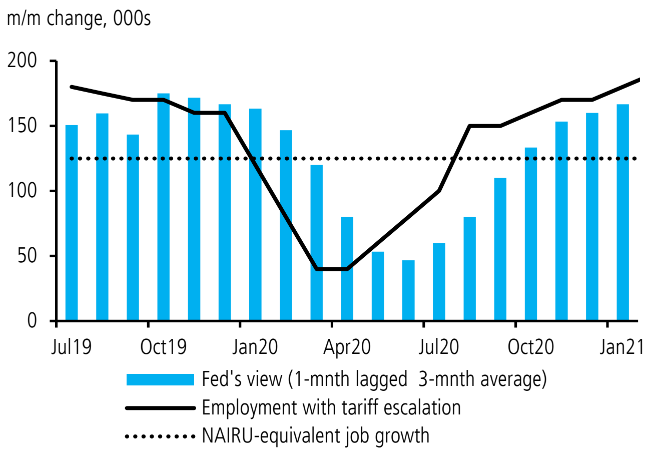
The Fed will ignore the transitory inflation shock

Figure 38: Tariffs boost inflation in near term and depress inflation in the longer term as economy weakens



Source: UBS

Figure 39: The FOMC prefers a 3- or 6-mth moving average of employment growth to avoid monthly noise.



Note: NAIRU equivalent is job growth that leaves U3 unchanged. Source: UBS

Box: The Case of the now missing Mexican Tariffs

Mexican tariffs are off the table for now, but the spectre lingers

The threat of Mexican tariffs has come and gone (for the moment) but the episode shows the President's willingness to use tariffs, even against a country where other talks—USMCA, the removal of steel and aluminium tariffs—have gone well. We lay out a scenario where 25% tariffs are imposed on imports from Mexico *in addition* to Chinese imports. The tariff on imports from Mexico, or similar tariffs, could resurface and the scenario we describe below helps illustrate the Fed's reaction function.

Trade war with Mexico and China would cause a recession

If the US applies 25% tariffs on imports from China and on $350bln from Mexico, we estimate that the level of US GDP will be reduced by a little more than 200bp. These combined effects—plus feedback from slowing global growth and a depressed energy sector—are sufficient to tip the US economy over into recession. The effects of tariffs on China and Mexico are roughly similar in size (80 and 100bp respectively) but we assume the Mexican tariffs are phased in gradually, along the lines of Trump's original plan. The disruption to economic activity also weighs on the energy sector, but Mexico is a source of US oil imports, and some of that disruption will be offset by higher US production.

The Fed would cut to zero and start asset purchases

Even with full escalation, given the Administration's willingness to start and stop tariffs, the Fed will wait to see if tariffs are affecting the economy. In our scenario, employment growth stays above 150k until October but then falls quickly (we lose 829k jobs vs our baseline—roughly double the impact of a 'China tariffs only' scenario-- and unemployment goes to 4½%). The Q4 deterioration is sufficient to have the Fed cut the federal funds rate target 75 basis points in January, another 75 bps in March, and then down to zero in June. Although the Fed has the option of putting the interest on excess reserves (IOER) rate negative, we do not think they will.

Aggressive policy: get to zero, then another "twist"

In the face of a contracting economy and the target rate at zero, the Fed immediately launches balance sheet policy. Because the Fed will have close to $900 billion in Treasury securities with 3 years or less remaining maturity, the first step would likely be a Maturity Extension Program ("Operation Twist"). The Fed believes that—however imperfectly—buying longer-dated securities helps to lower longer-term interest rates. Nevertheless, political pressure remains on the size of the Fed's balance sheet. Announcing a plan of buying $50 billion per month in Treasury securities of 5 to 30 year maturity would allow them to extract duration from the market while keeping their balance sheet largely unchanged. At the same time, the FOMC would likely shift to reinvesting the proceeds of prepaying MBS into newly issued MBS.

The Fed will be a bit late, but won't care—lower for longer

The initiation of the balance sheet policy comes just as the worst of the contraction is over. That timing mismatch is consistent with history, but also in real time, the Fed will not be able to tell when the economy is bottoming and thus will want to be aggressive. In our projection, the economy returns to positive growth in Q4 2020. The Fed would likely end its balance sheet policy at the January 2021 meeting, but commit to remaining accommodative. That time horizon would imply $300 billion of purchases of longer-dated securities. January 2021 is the time the Committee may implement some of its new tools from the framework review; they will seek tools that bind policy to be low for longer in an effort to boost inflation expectations. Moreover, the FOMC would be operating on in a framework where it would aim to hit 2% inflation "on average, over time" With the labor market recovering and interest rates well below neutral the Fed begins very gradually starting to raise interest rates with inflation at 1.8%.

Impact on China's economy

China's scope to raise tariffs is limited

More tariffs and tech restrictions on China. In a negative scenario, the US and China fail to reach a trade deal, and the US imposes additional 25% tariffs on the rest of Chinese exports to the US (about $270 bn) sometime in July. In response, China raises tariffs on most US exports to China by 25%, including on automobiles (i.e. tariffs on US cars goes up from 15% to 40%). But the scope is necessarily limited as most US exports to China (about $110 bn) are already subject to higher tariffs. In addition, the US proceeds with restricting exports to Huawei, a Chinese telecommunication equipment giant. The de-facto export ban will severely cripple Huawei's production and disrupt the global tech supply chain. China has announced a plan for an "unreliable entity list", supposedly targeting entities that cut off supplies to China for "political" reasons. We think US companies operating in China and US consumer brands are unlikely to be targeted.

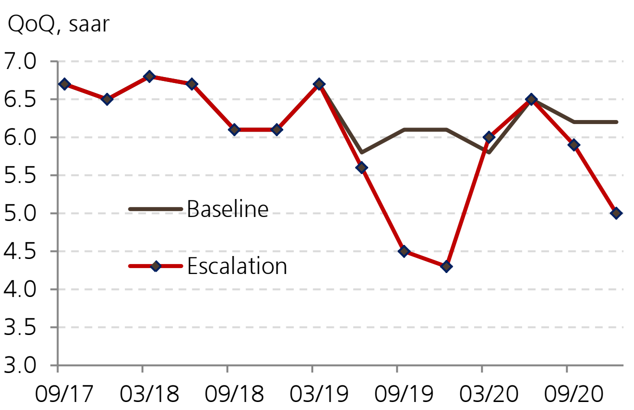
The combined impact of US tariffs and Huawei restrictions could reduce China's growth by 120bp before stimulus

Additional tariff hikes and tech restrictions will likely lower China's GDP growth by a further >120 bps. We estimate that additional 25% tariffs on $270 bn will be another >80 bps drag on GDP growth over a 12 month period. The negative impact will mainly come from weaker exports and associated multiplier effects on consumption and corporate investment. The impact of the Huawei restrictions is harder to quantify given the extensive supply chain linkages, but it can be 40 bps over the next few quarters. The biggest hit from higher tariffs will likely occur in Q3 and Q4 when front loading has ended, while the impact from tech restrictions has already started, but likely peaks later in Q4 and Q1 next year when related orders and capex are hit (our tech colleagues note that Huawei has been stockpiling supplies and may have 3-4 months of inventories).

We would expect an additional 150bp of TSF growth to help cushion the growth slowdown

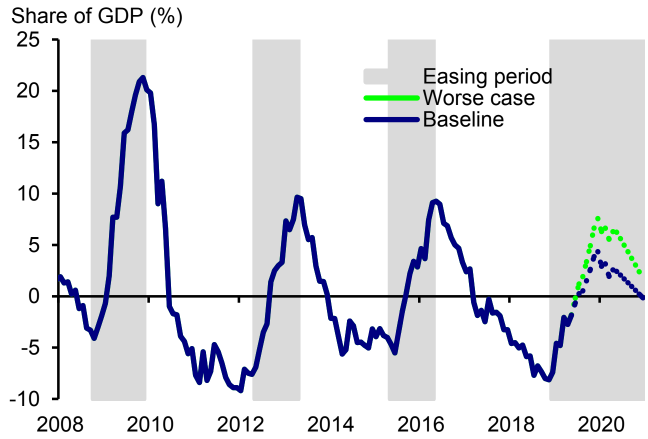
We expect more monetary and fiscal easing, combined with other support measures. As various Chinese officials have already stated, China still has policy room. We expect monetary policy to focus on increasing the quantity of liquidity (liquidity facilities such as MLF) – we also expect 200 bps RRR cuts in 2019 and another 100 bps in 2020, benchmark lending rates to be cut by 50 bps while money market rates and bond yields could see similar decline. These measures can help boost credit growth to accelerate to 13% this year (up from 11½% in our baseline) and in 2020. More credit will help fund more fiscal expansion, including infrastructure investment and social welfare support. In addition, property restrictions will likely be relaxed, and Hukou and SOE reforms accelerated. Specific measures to support consumption and tech industries will likely be rolled out.

Figure 40: QoQ growth: Escalation vs Baseline



Source: UBS, Haver [Note the 'escalation' profile reflects fading stimulus effects toward mid-2020.]

Figure 41: Credit impulse: baseline vs escalation



Source: CEIC, UBS estimates

The drag from net exports will be partially offset by stronger infrastructure investment. In a full-blown trade war scenario, China's exports to the US may shrink by 30% this year and next (goods that are subject to higher tariffs contracted 30% in Jan-Apr 2019), while total exports are expected to decline by 8% in USD terms. China's imports of export-related components and intermediate goods will likely decline sharply as well. In the meantime, imports of raw materials and commodities may be supported by stronger domestic stimulus, though such support will unlikely be sufficient to offset the negative price effect from weaker global growth. While trade war and related uncertainties will likely weaken corporate profitability and manufacturing capex further, policy stimulus should help stabilize property and services investment and boost infrastructure investment. On consumption, the downward pressure from job losses and slower wage growth should be partially offset by specific measures to support consumption (on appliances, cars and services), strengthen social safety net, and hukou reform.

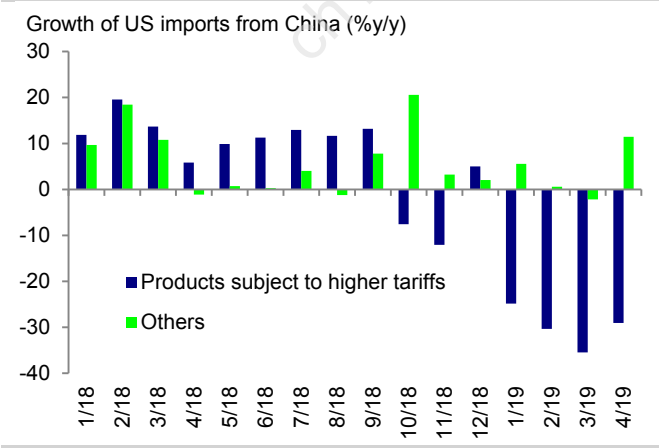
The stimulus would be aimed at boosting infrastructure and other investment

Weaker RMB but no sharp depreciation. As China's exports drop and external balance worsens, we expect the RMB to face increased depreciation pressure, which will likely be amplified by macro policy easing. Nevertheless, the Chinese government will unlikely allow for a sharp RMB depreciation for fear that it would lead to destabilizing outflows and more depreciation. With the help of its fixing strategy and tight controls on capital outflows, we forecast USDCNY to depreciate modestly to 7.2 in 2019 and 7.3 in 2020 in the case of a full-blown trade war.

We assume capital controls would contain depreciation (USD/CNY at 7.3 by end '20)

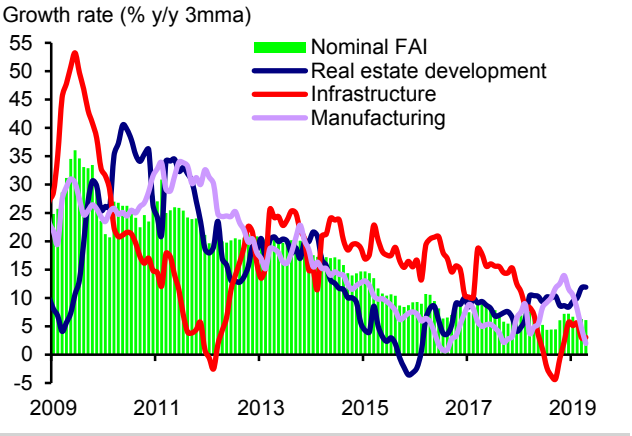
Property market and policy may be the biggest risk to our forecasts. We expect the government to relax property policies further in the negative scenario but not stimulate the property sector massively as they did in 2009. However, given the importance of the property sector and that many government officials focus more on short-term growth than medium-term sustainability, there is a significant risk of a larger property easing, helped and/or accompanied by a larger credit expansion. In such a case, TSF credit and GDP growth may be higher than our forecasts, China's imports (especially of commodities) may be stronger, the current account deficit may be larger, and investor worries on the RMB and financial sector stability will also be greater.

Figure 42: Higher tariffs hurt Chinese exports



Source: US Census, USTR, UBS estimates

Figure 43: Need stronger infrastructure investment



Source: CEIC, UBS estimates

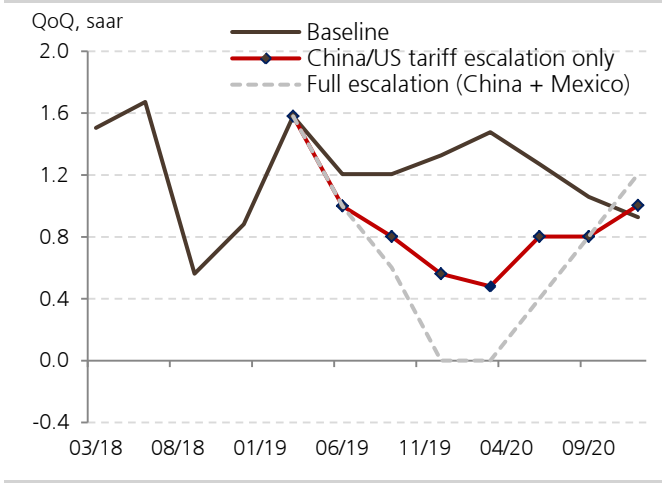
Impact on Eurozone

Europe is not a neutral observer

The main players in the escalating trade tensions are the US and China, but Europe is not a neutral observer. The Eurozone would likely suffer meaningful collateral damage, forcing policy makers to change course, perhaps substantially.

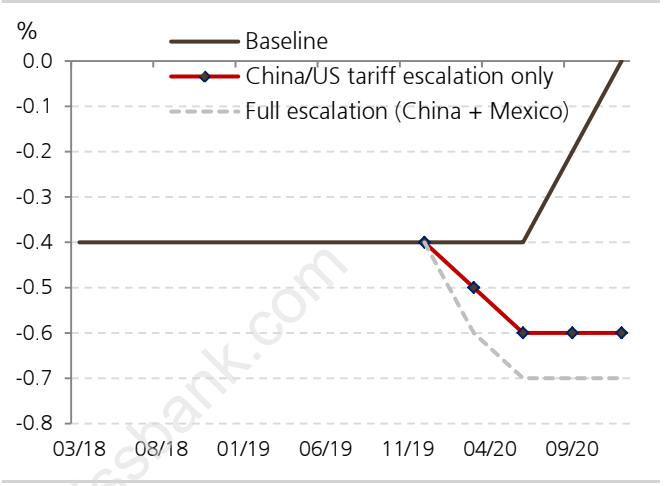
Europe likely to suffer meaningful "collateral damage" in a global trade war

Figure 44: Eurozone growth – baseline vs trade disruption



Source: UBS, Haver

Figure 45: ECB policy rate – baseline vs trade disruption



Source: UBS, Haver

Growth: meaningful slowdown, albeit no recession

In our **base-case scenario**, we expect Eurozone GDP to grow by 1.3% in each of 2019 and 2020. Our key hypothesis on Eurozone growth has been a weak external environment, but that domestic demand remains resilient – as it has up until now.

Base-case scenario: Eurozone to grow 1.3% in 2019 and 2020

Under the **scenario of a trade war between the US and China**, we would assume even greater weakness in foreign trade, which would increasingly undermine the resilience of domestic demand. In this scenario, we would still expect growth of around 1.1% in 2019, but only 0.7% in 2020. We assume escalating trade tensions would increasingly hit the Eurozone over H2 2019, exerting maximum damage in Q1 2020, followed by a degree of recovery later in 2020.

Trade war scenario: Eurozone to grow 1.1% in 2019 and 0.7% in 2020

We regard this forecast as a reasonable estimate of a negative scenario, but **not a worst-case scenario**. Our scenario does not include a hard Brexit (looming by 31 October), nor the introduction of US import tariffs on EU-produced cars (decision looming by mid-November), nor new turbulence in the Italian financial markets. We are also concerned that the relatively limited reaction of monetary and fiscal policy in the Eurozone could leave economic activity more vulnerable than we foresee.

Additional risk from hard Brexit, US car tariffs, Italy and a relatively limited policy reaction

Long-run regressions suggest that a 1pp reduction in US GDP growth tends to reduce Eurozone growth by around 0.4pp, while a 1pp reduction in Chinese growth would lower Eurozone growth c0.1-0.2pp (possibly more). We bore these sensitivities in mind when simulating the trade war implications for Europe, but acknowledge substantial uncertainty in estimating the impact of weaker confidence on volatile GDP components, such as fixed investment.

How badly will confidence suffer, and how will this affect economic activity?

Inflation: progress towards ECB target stalling

Base-case scenario: gradual rise in inflation

Our **base-case scenario** envisages Eurozone inflation moving from 1.2% in 2019 to 1.4% in 2020, driven by somewhat higher wage growth. As such, we think inflation will remain quite a bit below the ECB's target of "close to, but below 2%", but at least move in the right direction.

Trade war scenario: recovery in inflation would stall

However, under a **trade war scenario**, the inflation recovery would likely get stuck and fail to advance visibly above 1%. Profound scepticism about the recovery of Eurozone inflation is reflected in the markets: 5y5y inflation swap rates have dropped to an all-time low of 1.19% – even lower than in 2016, when inflation rates were negative and oil prices were US$10-15 lower than today.

Monetary (and fiscal) policy: does Europe have enough scope to ease?

Base-case scenario: rates on hold for a lot longer

According to our **base-case scenario**, the ECB would leave rates on hold (at -0.4%) for the foreseeable future.

Trade war scenario: ECB to ease policy again

Under a **trade war scenario**, the ECB would be forced to deliver fresh easing, as ECB President Mario Draghi indicated at the last ECB meeting on 6 June and – a lot more clearly – in his Sintra speech on 18 June.

ECB would have to cut rates further to avoid an unwelcome appreciation of the EUR as the Fed cuts rates aggressively

According to our US economists, the Fed would react to a trade war scenario by cutting rates by an additional 50bps each in March and June 2020. We think the ECB would respond with rate cuts of 10bps each in September 2019 and March and June 2020, bringing the depo rate to -0.7%. In this scenario, we think the ECB would also implement tiering. Even with tiering, however, the negative side effects of lower rates on the financial sector would be meaningful, so we would regard further rate cuts as problematic. However, if the ECB were not to cut rates amid Fed cuts, the Euro might appreciate sharply and trigger an unwarranted tightening in financial conditions – a risk Mr. Draghi acknowledged at the last meeting.

We think the ECB would hesitate to relaunch QE, given potential technical, legal and political complications

We think the ECB would trigger QE only in the event of more dramatic economic shocks. Although Mr Draghi has argued that the ECB now has "considerable headroom" for a new QE programme, we remain concerned about potential technical, legal, and political complications around Eurozone QE. Also, should the new ECB President (1 Nov 2019) be a hawk, he or she might not deem QE necessary as long as GDP growth and inflation remain positive.

Forward guidance, liquidity provisions

The ECB would prepare the markets via changes in its forward guidance; it would also stand ready to provide liquidity to banks, if and when needed.

Fiscal policy might have to step up

Limited policy space is a concern

In any event, given the arguably restricted scope of monetary policy to respond forcefully and pro-actively to new crises, fiscal policy might have to play a greater role in future downturns. Obviously, in the European context, this is not without challenges either. Hence, we regard limited anti-cyclical policy space as a clear downside risk for the Eurozone.

Impact on Japan's Economy

China-only tariff escalation takes GDP back below 1%, adding a Mexico shock would lead to technical recession and push growth close to zero

As an open manufacturing based economy, Japan is vulnerable to global headwinds

We estimate Japan's beta to global growth at 1.2; 0.5 to US GDP, 0.2 to the EU and 0.4 for China. Still, annual deviations can be material and country regressions are unstable. Japan's economy today is atypically tight as a result of sustained monetary support, two decades of underinvestment at the corporate level, and a labour market stretched by demographic aging and surging tourism. It also faces consumption tax increase from 8% to 10% this October, which the government intends to push ahead with. The impact should be modest as it has secured numerous exemptions which, along with a large infrastructure strengthening programme, will offset the entire fiscal drag for two years -- on paper at least.

Tariff disruption would take as much as 40bp off our 'core core' forecast for 2020

In an escalating US-China trade war, we think private consumption would weaken only modestly. Capex would slow more sharply around year-end before bouncing back, buoyed by relocation demand from third-party exporters shifting production out of China. Underlying inflation gets affected via the output gap with a 3-6 month lag, so we'd project it 20bp lower this year and a further 40bps down in 2020. That implies core-core CPI, the BoJ's preferred measure, averaging 0.8%YoY and 1.4%, respectively (ex-tax and education effects). That is roughly where policy board projections stand today; consensus merely flat-lines next year.

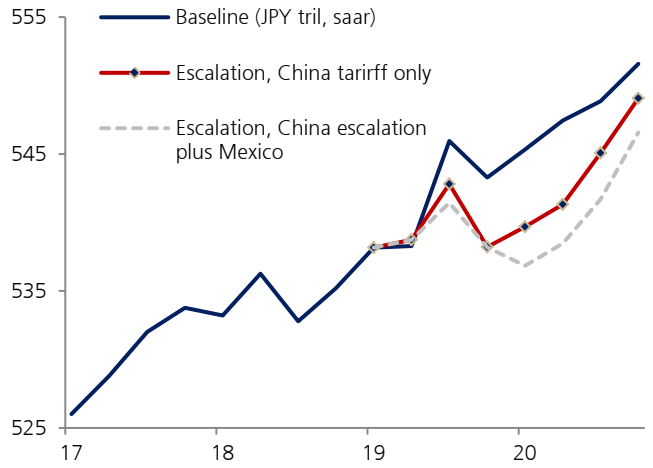
With China/US tariffs the VAT hike goes ahead but a larger shock could see it scrapped

With tariff escalation that includes a shock equivalent to the (now averted) Mexico tariffs, Japanese growth could fall a further 10bp this year and be 70bp weaker in 2020. We'd envisage quarterly growth contracting in 19Q4 and 20Q1, depressing full-year 2020 GDP to just 0.3%. If such a shock were to happen in the next few months, we assume Prime Minister Abe would call off the consumption tax hike while leaving numerous offsets in place. This creates a stimulatory impulse of about 30bp but requires convening an extraordinary Diet session in early September to pass associated legislation. In this scenario underlying inflation stagnates around 1.0% though headline and ex-fresh food CPI dip just below zero on more intense oil and yen spill-over in the first half of next year, as well as the one-off 60-80bp tax-uncompensated hit from education subsidies.

The BoJ has limited firepower to add additional stimulus

In either event, we think the BoJ can only react with extended forward guidance and a small reduction in the short-term rate in the order of 15bp (to -25bp). The primary rationale would be tempering downward pressure on USDJPY. Collateral damage to banks could be countered by tiering and a negative-rate lending scheme. We don't imagine the 10Y rate target would change, though its band may be widened. QQE is conducted flexibly under YCC, so extra issuance can be absorbed easily, and this would help keep the monetary base expanding in a more risk-averse environment. Funding for tax shortfalls as well as fresh SME support measures / export promotion initiatives would require a small autumn supplementary budget and modestly larger FY20 appropriations. Still, we don't envisage a serious spending splurge. That would require the prospect of larger and more protracted GDP declines coupled with the unemployment rate backing up beyond 4% (currently 2.4%). Also, finance minister Aso and BoJ governor Kuroda both remain strong advocates of fiscal consolidation and have been critical of the idea that Japan is dabbling in, or should experiment with, Modern Monetary Theory. Broader support for more radical anti-deflation initiatives is completely absent and would take time to build.

Figure 46: Japan real GDP forecast



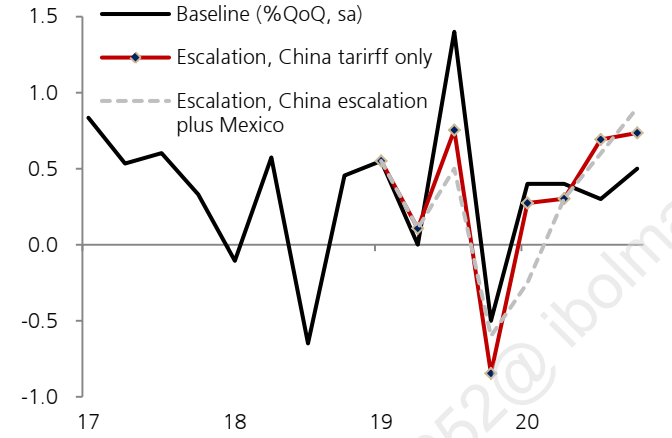
Source: Haver and UBS estimates

Figure 47: Forecast scenarios*

% y/y, unless indicated	2019F B	2019F E1	2019F E2	2020F B	2020F E1	2020F E2
Real GDP	1.3	1.0	0.9	1.3	0.8	0.3
Private consumption	0.5	0.2	0.4	0.9	0.7	1.0
Government consumption	0.8	0.7	0.7	0.7	0.7	0.7
Gross fixed capital formation	2.5	2.1	1.5	2.3	1.6	0.5
Residential investment	2.5	2.5	2.5	-2.0	-2.0	-2.0
Capex	2.7	2.0	1.2	2.1	1.1	-0.5
Public investment	1.8	1.8	1.8	5.3	5.3	5.3
Exports of goods & services	0.6	-0.9	-0.9	5.2	1.7	-0.8
Imports of goods & services	-1.2	-2.1	-2.1	3.7	1.8	1.2
Domestic demand (contribution)	1.1	0.8	0.8	1.0	0.8	0.7
Net exports (contribution)	0.3	0.2	0.2	0.3	0.0	-0.3
Nominal GDP	1.9	1.5	1.4	2.8	1.9	1.4
CPI ex-fresh food, energy, tax & edu chg	1.0	0.8	0.7	1.8	1.4	1.0
Overnight call rate (%, yr-end)	-0.1	-0.2	-0.2	0.0	-0.2	-0.2
10yr bond yld, (%, yr-end)	0.1	-0.2	-0.4	0.4	0.0	-0.1

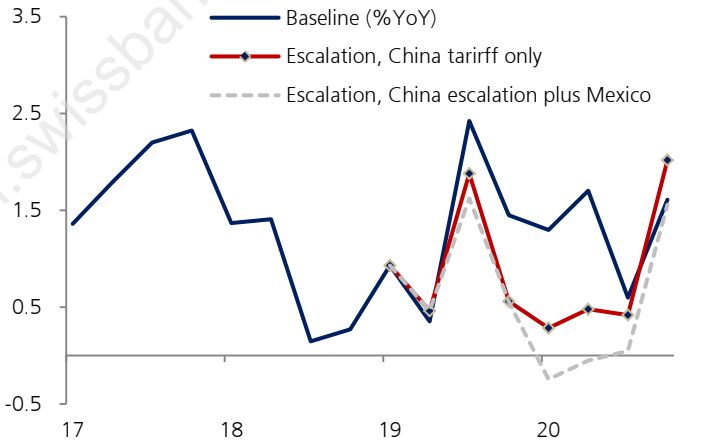
Source: UBS estimates, * B= baseline, E1 = China escalation, E2 adds Mexico

Figure 48: Real quarterly growth profiles



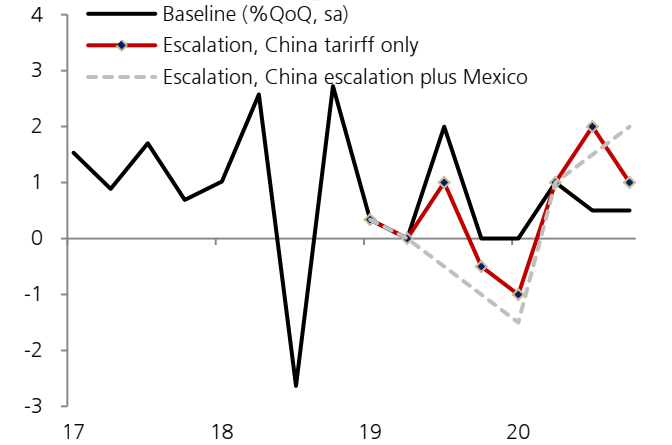
Source: Haver and UBS estimates

Figure 49: Real year-on-year growth profiles



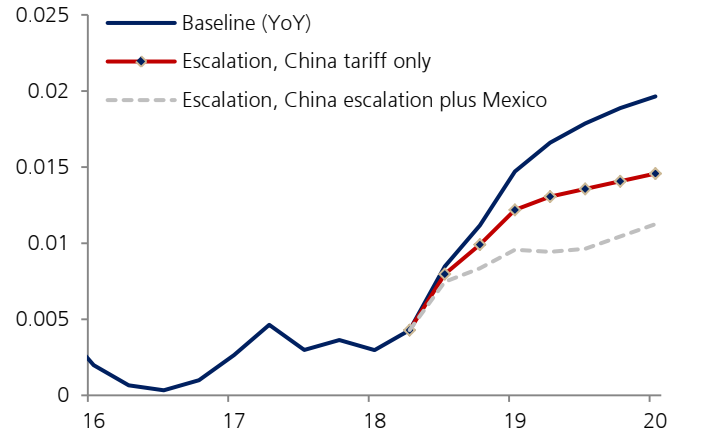
Source: Haver and UBS estimates

Figure 50: Real quarterly capex profiles



Source: Haver and UBS estimates

Figure 51: Monthly core-core CPI profiles*



Source: Haver and UBS estimates, *CPI ex-fresh food, energy, tax & public education fee changes

Impact on Rest of Asia – Pain and Gain

Not directly impacted, but growth will slow

The rest of Asia (ex-China, ex-Japan) is not directly impacted by higher tariffs or restrictions on Chinese corporate activity. The indirect impact will vary across the region, but has the potential to be significant via trade, confidence and financial market linkages. Survey (confidence) implied growth in Asia (ex India/China) had improved YTD from 2.6% to 4.1% but could now take another hit. Every Asian economy either has a trade surplus with the US, a sizable current account surplus or trade barriers – all characteristics that the US authorities have taken issue with recently. Under the 'China escalation' scenario we think real GDP in Asia ex China and Japan will end up 50bps below baseline by Q4 2020. If the Mexico tariffs had gone ahead, or we incur a similarly sized shock on top of the US/China tariffs, we would see the region's growth as much as 80bp lower.

Potential gain from shifting supply chains follows pain of trade disruption

We continue to look at the impact of the trade war on the rest of Asia through the prism of Pain and Gain. First the 'pain', indirectly, via the deterioration in G3 growth prospects and disruption to regional trade. Income available for consumption is reduced, while investment is hampered by lower confidence and edgy financial markets. Secondly, the 'gains' via shifts in supply chains and support from easier policy. We expect the impact of shifting supply chains to evolve gradually and initially be dominated by the pain of reduced G3 demand.

Policy response

Easier policy almost everywhere under escalation scenarios

Under the US/China escalation scenario we expect RBI, BoK, BSP and BNM to cut policy rates by 25bp more by end Q2 2020 than under the baseline scenario and for there to be no tightening in H2 2020. BI is expected to cut by 75bps more. The incremental policy rate cuts are less than the Fed's 100bps in part because of the easing we already see from these central banks. FX policy regimes mean HK and Singapore could "import" much of the Fed's reduction in policy rates. In Singapore, where the currency is the key policy tool, we expect the MAS to ease FX policy by both widening and reducing the slope of the S$NEER policy band. The SBV is likely an exception in not easing because of booming FDI. Conversely, Bank Indonesia policy easing in particular could be delayed by difficult financial market conditions. Fiscal policy may also be eased but substantial easing may take time or be subject to constraints due to politics (Malaysia) or policy space (India). Budget season is approaching in ASEAN but we are more optimistic about near term stimulus in Korea and infrastructure outlays in Taiwan post 2020 elections.

Figure 52: QoQ growth: Escalation vs Baseline

	2019			2020		
	Base case	US/China tariffs	Diff.	Base case	US/China tariffs	Diff.
Singapore	2.2	2.0	-0.2	2.4	0.9	-1.5
Korea	2.3	1.5	-0.8	2.9	1.9	-1.0
Malaysia	4.3	4.2	-0.1	4.5	3.6	-0.9
HK	2.4	1.7	-0.7	2.6	1.9	-0.7
Thailand	3.1	3.1	-0.1	3.3	2.8	-0.5
Taiwan	1.9	1.3	-0.5	2.0	1.4	-0.6
Philippines	5.8	6.1	0.3	6.1	5.8	-0.3
India	6.9	6.2	-0.7	7.2	7.3	0.1
Indonesia	5.0	5.0	0.0	5.2	5.0	-0.1
Vietnam	6.6	6.7	0.1	6.8	6.9	0.1

Source: UBS, Haver

Figure 53: Policy rate: baseline vs escalation

	2019			2020		
	Base case	US/China tariffs	Diff.	Base case	US/China tariffs	Diff.
Singapore	1.70	1.50	-0.20	1.80	0.80	-1.00
Korea	1.50	1.50	0.00	2.00	1.25	-0.75
Malaysia	2.75	2.75	0.00	3.25	2.50	-0.75
HK	2.00	2.00	0.00	2.00	1.10	-0.90
Thailand	1.50	1.50	0.00	2.00	1.50	-0.50
Taiwan	1.38	1.38	0.00	1.38	1.25	-0.13
Philippines	3.75	3.75	0.00	3.75	3.50	-0.25
India	5.50	5.50	0.00	5.50	5.25	-0.25
Indonesia	5.50	5.50	0.00	5.50	4.75	-0.75
Vietnam	6.25	6.25	0.00	6.25	6.25	0.00

Source: UBS, Haver

Uneven impact

The impact of the trade war escalation is not uniform across the region. It is useful to divide Asia into three groups: i) the North Asian economies of Taiwan and Korea – where the electronics cycle dominates the trade narrative; ii) HK and the open economies ASEAN (Singapore, Thailand, Malaysia and Vietnam); and iii) the region's more closed economies of India, Indonesia and Philippines.

Tech sector impact important in Korea and Taiwan

Korea and Taiwan are both key nodes in the global tech-supply chain, which is being disrupted by the Sino-US dispute escalation (the 'pain'). UBS Evidence Lab surveys suggest efforts are underway by Korean and, especially, Taiwanese companies to bring home production from China in part to avoid tariffs. Korea may gain from the restrictions on Huawei since Samsung also holds a leading position in 5G and the smart phone sector. However, weak overall external demand conditions will likely hinder the positive spillover in the coming quarters. In the case of the China escalation scenario we expect Q4 2020 GDP to end up around 130bps lower than baseline in Korea and 70bps lower in Taiwan.

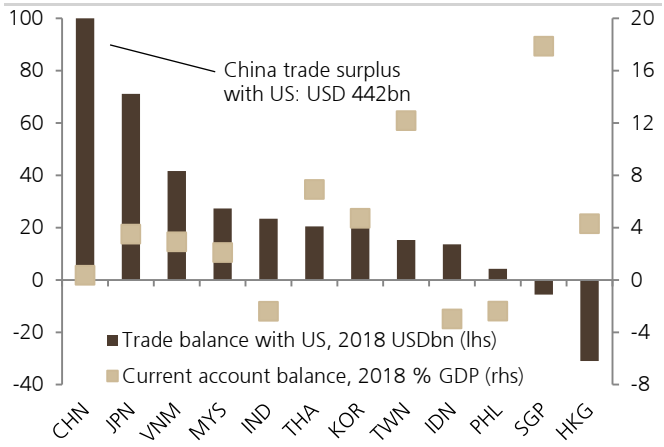
Open economy growth at risk. Vietnam could see biggest offset from shifting supply chains. Singapore + HK most direct beneficiaries of Fed easing

HK, S'pore, Malaysia, Thailand and Vietnam are more generally exposed to weaker G3 demand and trade disruption. At the same time, UBS Evidence Lab surveys suggest the intention of Chinese CFOs to invest in ASEAN has risen. For Vietnam in particular, the export overlap with Chinese exports to the US and booming FDI from shifting supply chains could mean 'gains' from the trade war offsets the 'pain'. Our China escalation scenario envisages GDP a little less than 200bps lower than baseline in Singapore and HK, and 100bp lower in Malaysia and 60bp in Thailand. Vietnam is the only economy which might see quicker growth under the China escalation scenario, but even Vietnam would likely slow if the downturn deepened with tariffs on Mexico. Conversely, Singapore and HK could see a faster H2 2020 recovery under a China+Mexico escalation scenario as monetary policy frameworks there 'import' the aggressive policy easing we expect from the Fed.

Less pain in closed economies. Does India have a second chance to replicate China?

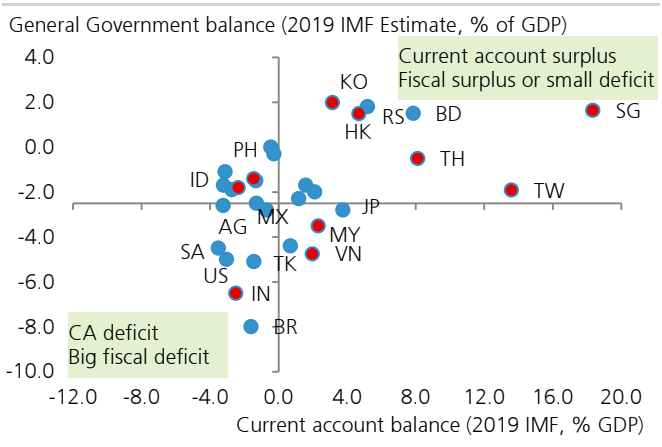
Less exposure to global supply chains mean the closed economies of India, Indonesia, and Philippines should experience less 'pain'. On average closed economy growth ends up 30bps lower than baseline in our escalation scenario. We believe India has, in time, the potential to be a key beneficiary of shifting supply chains (Does India have a second chance to replicate China?). That's because of the scale of its domestic market, power generating capacity and post-election reform potential but less because of the volume of its labour force.

Figure 54: Could the US target the rest of Asia?



Source: UBS, Haver

Figure 55: Less room for India to ease fiscal policy



Source: UBS, Haver, IMF Estimates

Market Implications of US-China Tariffs

1. **This is a supply shock—not a balance sheet recession:** Tariffs will lead to a sharp drop in global activity, but there should be limited contagion to banks and balance sheets. We see growth dipping into its bottom quartile, but by mid-2020 it should be recovering. The main question is how quickly and forcefully do US and Chinese policymakers respond. The US likely waits after providing a 50bp 'precautionary' cut in July before easing again next year, and China likely eases 'less forcefully and more domestically' than in the past given fear of a credit bubble.

2. **Weak growth may expose areas of structural vulnerability:** Even though trade escalation would constitute only a cyclical shock, there are a few areas where the hit to growth risks establishing a negative feedback loop between prices and growth. These are **US corporate credit, European peripheral spreads and the Renminbi**.

3. **Trade war escalation not priced in:** UBS' Synthetic Trade War Monitor shows that the market is just about half way between complacency and peak fear levels of last year. There are big differences across assets, though. Rates and industrial metals reflect nearly the highest trade fear over the last year, while most other markets don't show as much concern.

4. **Equities:** Continued trade tensions will likely see global equites down roughly 20% from current levels. US equity outperformance vs RoW is likely to be less than history would suggest, but EM equities will likely suffer the most including the FX impact. Within these Chinese equities should hold up better due to their domestic orientation and some policy help. In global sectors, Materials stands out as most vulnerable, but some defensive and crowded segments are also at risk amidst weaker growth. For a bottom up perspective, we lean on our prior work to highlight trade and crowded growth exposed stocks.

5. **Fixed income:** Once policy makers have delivered the limited stimulus, investors will likely worry about them running out of options. Amidst liquidity trap fears, the global bid for duration will remain strong. In the trade escalation case, we expect **US 10y** yields to fall through all-time lows to **1.3%** next year. The last time this happened, Fed rates were at 0-50bp. This time it may happen with the Fed rate at 1. 0%.

6. **Currencies:** In the escalation scenario, US growth and policy rates are likely to decline more than in Europe or China, but growth differentials matter less when global growth falls below the 25-30 percentile of its distribution. If trade tensions persist, **USDCNY** is likely to strengthen to **7.20**, **EURUSD** slip to **1.08** and **USDJPY** drift to **105** by **end '19**. As global growth rebounds from mid-2020, the USD should top out & weaken against the EUR. However, tepid growth and loose policy could sustain pressure on China's BoP, pushing **USDCNY** to **7.30** by **end '20**.

7. **Credit:** With initial valuations already rich, trade tensions could push **US HY** spreads to 660bp by end '19, and to **750bp at their widest** around mid-'20. IG spreads may widen through 200bp temporarily. As asset quality deteriorates amidst an advancing cycle, the subsequent spread tightening is likely to be limited to 610bp in USHY and to 175bp in US IG.

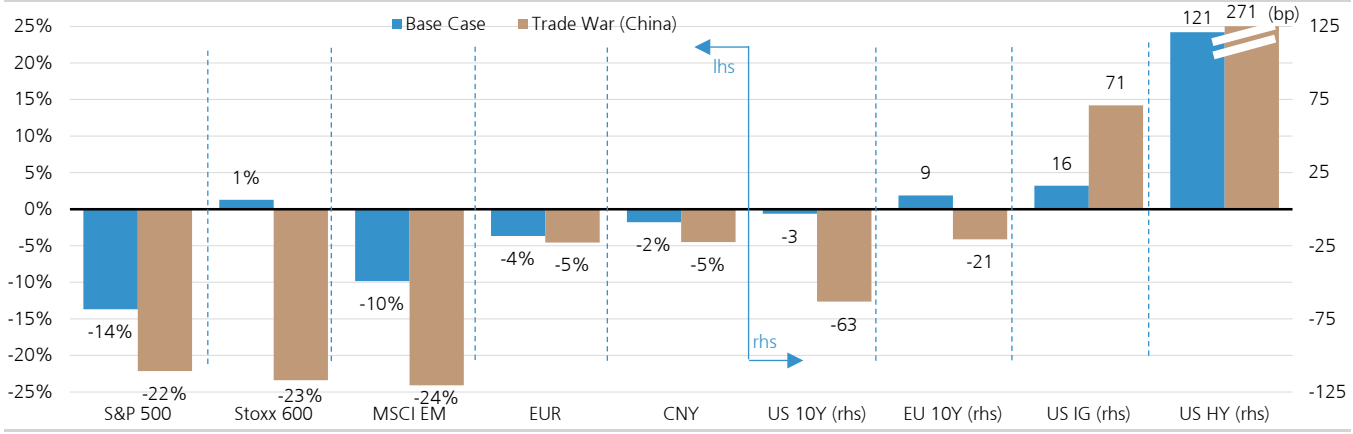
8. **Right tail trades:** The bulk of this document is about risks to the global economy and asset markets from weaker trade and investment flows. However, we also address best trade expressions in a world where this shock doesn't come through. We use a 'trade impacted' basket of stocks to define 'trade shock days' which help us to measure the penalty the trade war has imposed on each asset. Based on this we can assess where the repricing will be if trade concerns disappear. We see the following as the cleanest right tail trades: **Long Chinese equities**, **long energy relative to utilities,** and **pay US 2y rates**. (See box)

Figure 56: Key forecasts in baseline, narrow escalation (US, China) & broad escalation (US, China Mexico) scenarios

	End-2019			End-2020		
Asset class	**Base Case**	**Narrow escalation (China)**	**Broad escalation (China & Mexico)**	**Base Case**	**Narrow escalation (China)**	**Broad escalation (China & Mexico)**
Equity Markets				*(Earnings growth)*	*(Earnings growth)*	
S&P 500	2550	2300		-1%	-7%	
Stoxx 600	390	295		0%	-7%	
MSCI EM	950	800		5%	-10%	
Rates (%)						
Fed Funds	2.00	2.00	1.25	2.00	1.00	0.00
US 2-Year	1.80	1.10	0.25	2.00	1.00	0.35
US 10-Year	2.00	1.40	1.00	2.30	1.30	1.10
EU 10-year	-0.20	-0.50	-0.60	0.10	-0.40	-0.50
JN 10-Year	0.00	-0.30	-0.50	0.20	-0.10	-0.20
Currencies (level)						
EUR/USD	1.09	1.08	1.05	1.15	1.13	1.13
USD/CNY	7.00	7.20	7.20	7.00	7.30	7.30
USD/JPY	108	105	100	108	108	106
Credit (OAS, bps)						
US IG	135	190	270	175	175	235
US HY	475	660	955	575	610	835
EU IG	140	180	270	180	165	160
EU HY	440	665	900	540	640	600
Oil (Brent $/bbl)	66	60	50	71	60	50
Gold ($/oz)	1370	1390	1415	1450	1485	1525

Source: UBS, Haver, Bloomberg

Figure 57: Forecast key asset performance till end'2019 for baseline and narrow escalation scenarios



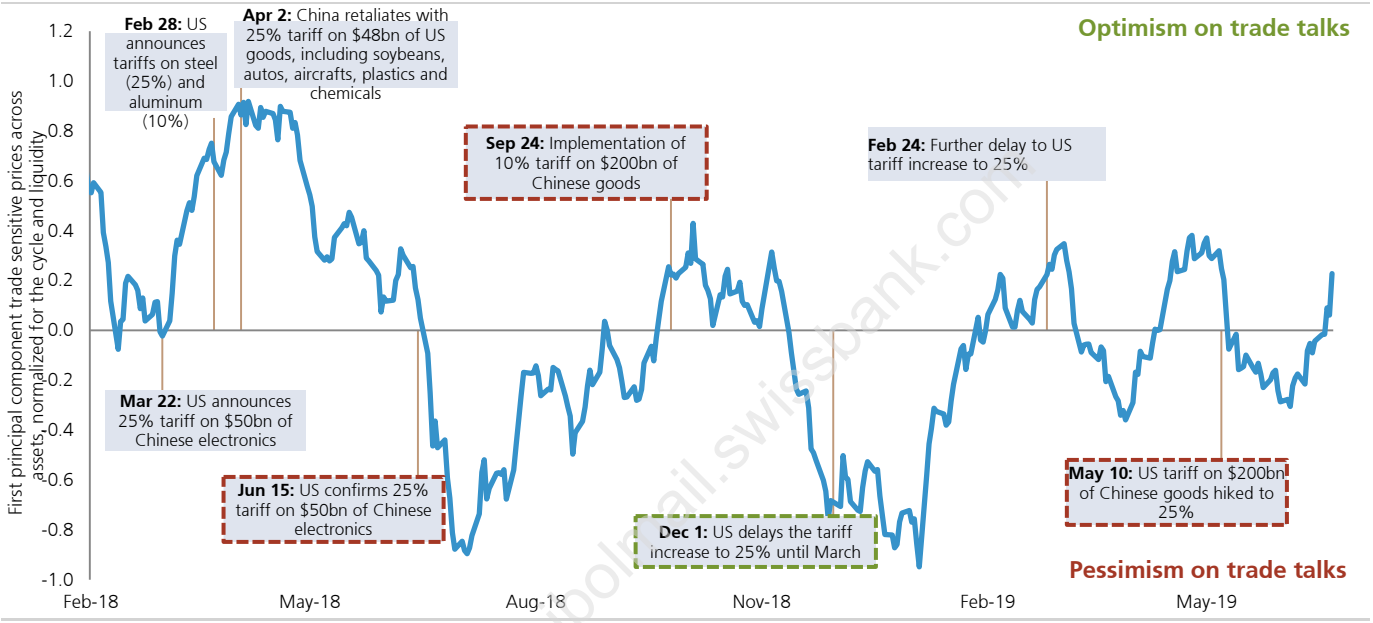
Source: UBS, Haver, Bloomberg

I. Trade war escalation is not priced

Our UBS Synthetic Trade War Monitor (Figure 58) helps us separate the different influences and distil how much of a "common trade shock" is priced in across asset classes. This shows us that the trade war has driven only up to 30% of the variation in returns in the last 18 months. Today, the market is less than half-way between pricing no trade risk and peak levels of trade fear of last year. It is a little less worried than it was a fortnight back, when we released the previous update of this monitor.

Going into the G20 meeting, investors evidently see trade war talk largely as posturing

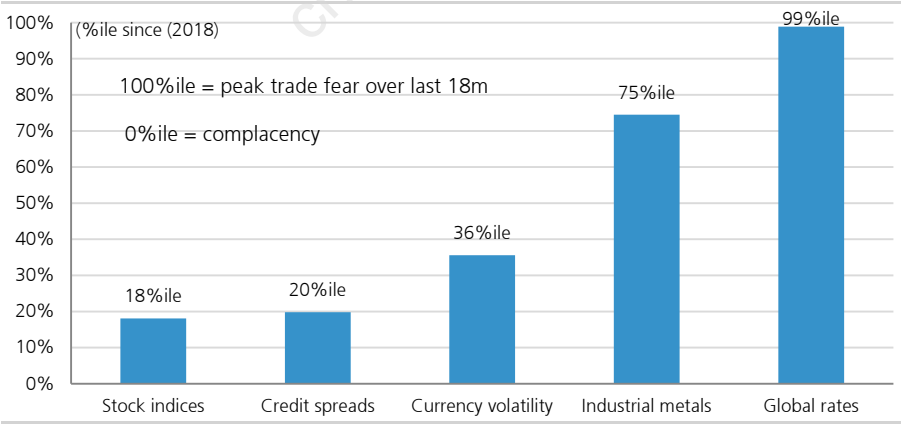
Figure 58: UBS Synthetic Trade War Monitor: An index of trade-sensitive prices across asset classes adjusted for the influence of a) the cycle and b) liquidity



Source: Haver, Bloomberg, MSCI, Datastream, UBS

There are big differences across assets, though. The rates and industrial metals markets reflect nearly the highest trade fear over last year, while most other markets don't show as much concern (Figure 59).

Figure 59: Breaking down UBS Synthetic Trade War Monitor by asset class



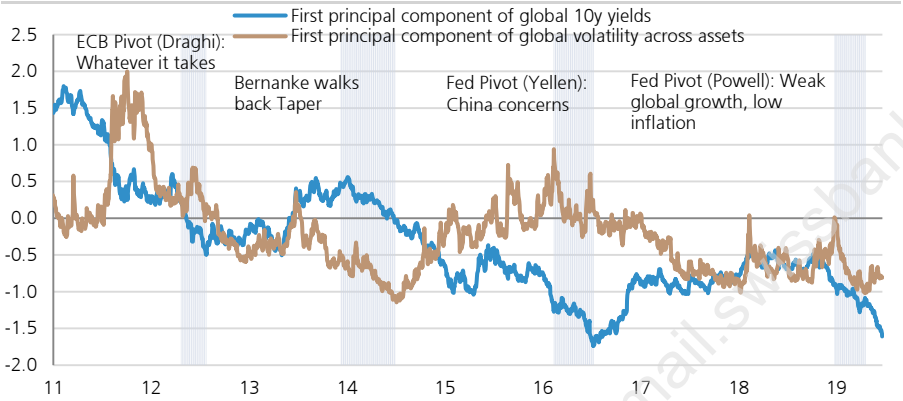
Source: Haver, Bloomberg, MSCI, Datastream, UBS

II. Why aren't markets more worried?

Simultaneous decline in rates and volatility give differing signals about the world. Hope for a big policy easing underlies both

Other than fickle trade negotiations, the answer lies in the hopeful extrapolation of market conditions seen earlier this year, when both rates and volatility fell sharply. This is a rare and very risk-friendly pattern, seen for limited spells after big central bank shifts such as 'whatever it takes' from Draghi (Q3 2012) and Yellen's pause (Q1 2016) (Figure 60). However, after those events global growth picked up smartly. Today, nearly 6 months after Powell's pivot (Q4 2018), the improvement in global growth is very modest, and it may be undermined by trade tensions. In simple terms, the market has remained stoic in the face of weak growth and rising trade risks because it expects strong liquidity support from policy makers; this is the message from the very tight pricing of 2y rates in the US and onshore credit spreads in China.

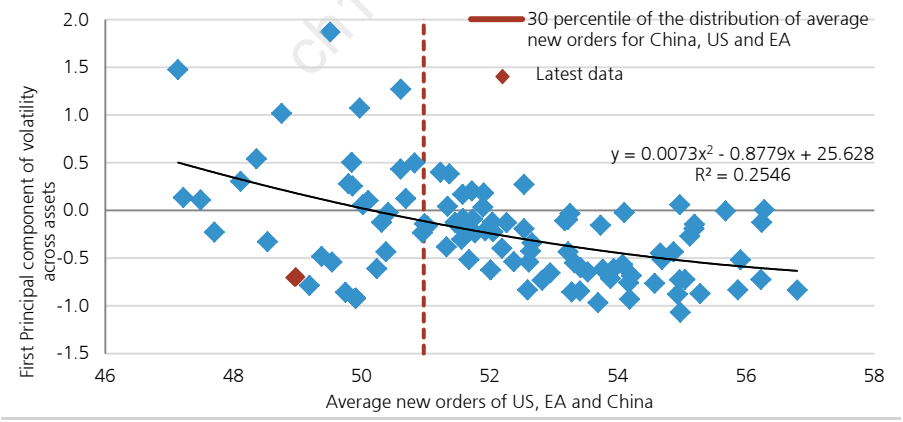
Figure 60: First principal components for global 10y nominal yields and global cross-asset volatility



Source: Haver, Bloomberg, UBS. Note: Shaded areas represent periods when global rates and volatility fell together.

Our view is that risks are being under-priced both because growth is at a very precarious level, with volatility much too low relative to it (Figure 61), and because policy support may not be as large and timely a manner as is being hoped for.

Figure 61: Avg. of US, EA and China new orders vs global cross-asset volatility



Source: Haver, Bloomberg, UBS

Box: Understanding asset market phases

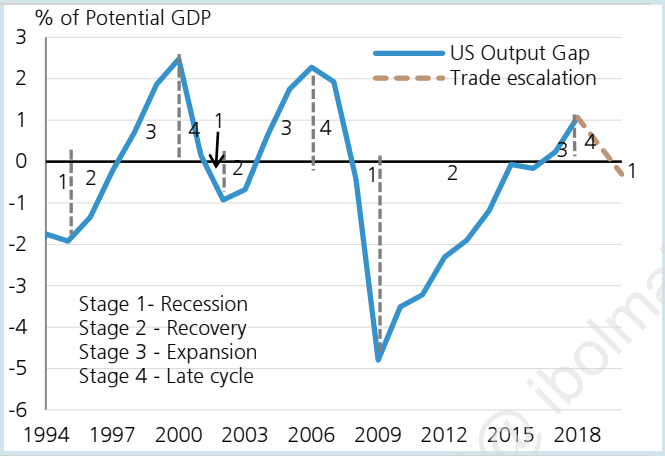
Our analysis of cycles (Figure 62) shows that in the phase in which a) output gaps are closed and b) growth first starts to decline below trend (phase 4 of the cycle, Figure 62), risk assets tend to pay the highest price.

Asset volatility typically picks up during this final phase of the cycle. Averaging out across cycles:

- Equities decline by roughly 15-20% from peak to trough (Figure 63);
- Rates have tended to decline by about 100bp over 6m, and
- The USD has been moderately strong for a quarter or two before topping out.

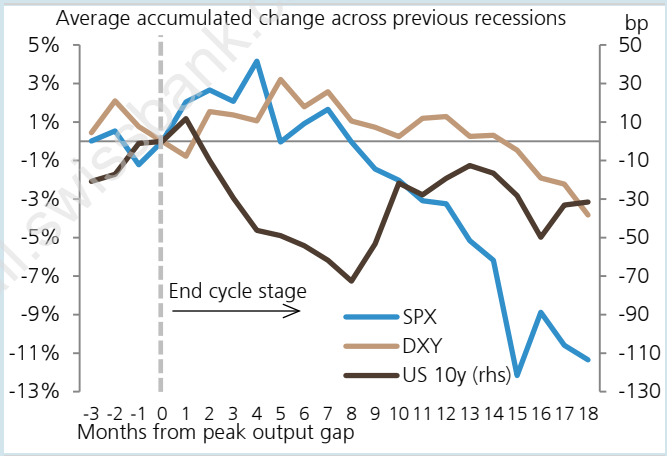
While many features of this cycle are very different from prior ones, the lack of inflation (and therefore strong monetary tightening from global central banks) being the key one, our asset forecasts (Figure 56) broadly align with this historical rhythm.

Figure 62: Phase 4 of the cycle sees growth decline amidst closed output gaps



Source: Haver, UBS

Figure 63: In Phase 4 risk assets have behaved poorly, and the USD has been moderately strong for a while



Source: Haver, Bloomberg, UBS

What may be different this time is that amidst low inflation and liquidity trap worries, the bid for duration may be stronger than usual. A low discount rate may also provide a greater support for risk assets once growth bottoms (mid 2020). But the more immediate worry for the market will be the closed output gap and loose financial conditions making the Fed reluctant to provide as much easing as is being priced by the market. Buying the market as growth bottoms will be the trade after the trade. For now, there is volatility to navigate.

Equities: Calm headline, frightened internals

There are typically two parts of a selloff related to slowdowns/recessions and the market often plays out in a "double" bottom accordingly: 1) the P/E de-rating in which the market prices the potential impact fairly quickly and 2) the EPS downgrade part of a selloff after multiples fall. The bottom in equities typically happens in or right around the worst GDP quarter of a recession. However the bulk of the selloff happens before that point as equities typically de-rate first and then earnings get downgraded as growth collapses.

P/E ratios have fallen by a median of 25% from peak levels around slowdowns/recessions for the MSCI World and S&P 500. The average is 30% with big outliers in the 1970s and Tech bubble. A 25% de-rating from the multiple highs of last year would point to a decline in DM equities of 15%+ prior to the impact of EPS downgrades that would likely peak in H1 2020. The fall in valuations since last year means that equities are pricing in some growth risk, particularly given lower rates, but they are not pricing a material slowdown.

We see support around 13-13.5x forward earnings for the market

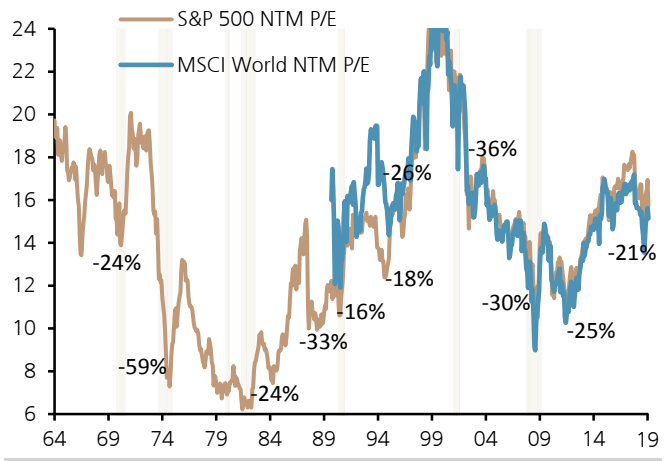
Valuation "lines in the sand" point to support at 13-13.5x forward earnings using a few different approaches: 1) the Dec low in the forward P/E was below 14x when a mild recession was arguably priced; 2) a 25% de-rating from the 2018 P/E peaks would be ~13.5x; 3) the extreme 2009 and 2011 lows of ~11x adjusted for lower rates currently adding ~2.5x to our fair P/E would point to 13.5x; 4) the earnings yield minus 10y spread peaks of 6% in 2009 and 2011-12 and a 10y of 1.4% would point to a peak EPS yield of 7.4% or a 13.5x forward P/E. The 2009 and 2011 lows in valuation are unlikely to be seen again in a world of such dramatically lower rates, QE and extraordinary CB responses.

The US is trading at nearly 17x and global equities are over 15x, which suggests there could be meaningful downside

Earnings will take a hit but maybe not by as much as feared. Energy, Materials, Financials and Industrials earnings are a much smaller share of the index and they are far from excessive. S&P 500 EPS is just 8% above trend levels and nearly all of that is because of tax, vs nearly 30% above in 2007 and 20% above in 2000. Europe earnings have also barely grown so it is tougher to say they are at risk of a big collapse. Our model points to a ~7% fall in MSCI DM earnings in the China escalation scenario and ~10% in a China+Mexico shock. UBS equity strategists estimate earnings in 2020 would decline by over 6% in Asia, ~7% in the US, and ~7% in Europe in our China escalation scenario as detailed below.

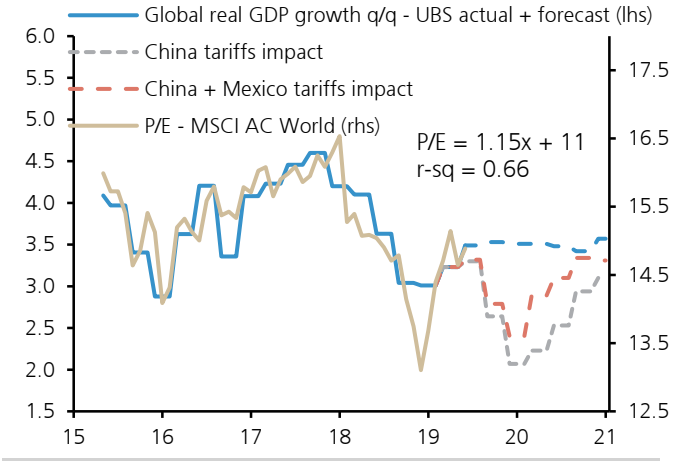
UBS strategists see earnings down ~7% in the US, Europe and Asia in an escalation scenario

Figure 64: P/E declines around recession/slowdowns



Source: IBES, Factset, UBS

Figure 65: Global equity NTM P/E vs global growth



Source: MSCI, IBES, Haver, UBS

The price for "safety" and "growth" within equities is already high. Though defensive, low vol and quality stocks are likely to outperform in a selloff, the magnitude of outperformance is likely to be notably less given outsized premiums for "safe" stocks. Cyclicals are fairly cheap already and thus downside from big de-ratings in the most cyclical part of the market may not be as large. Country and regional returns also reflect the slowdown already, where relative returns since Jan '18 have been about 70% of an average PMI peak to trough cycle (i.e. US outperformance vs EM, Swiss vs Germany). Lastly, styles reflect the fear of a recession with relative valuations of low vol vs high vol stocks currently in the 94th percentile versus history (link). On the other hand, Tech and related sectors are fairly expensive and growth stocks in many cases are relatively expensive vs history.

Defensive sectors are 1 stdev expensive on average on a relative basis globally, while cyclical sectors ex Tech are 1stdev cheap

Framing the downside for global equities

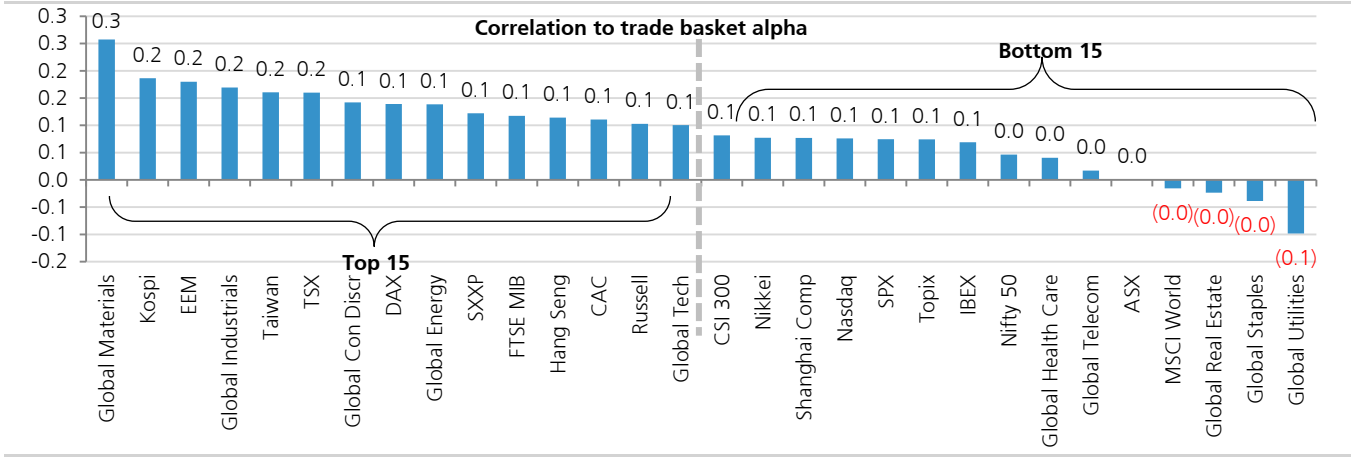
In our US/China tariff escalation scenario, we see global equites down ~20% from current levels with lows likely in the first half of 2020 when GDP growth bottoms, and risks of overshooting. This essentially assumes a 25% de-rating in the P/E from the highs, in line with the recession median, and a ~7% decline in earnings next year. Equities would likely rebound in H2 2020 as growth recovers.

EM equities would likely suffer most including FX performance, with Taiwan and Korea hurt by trade tensions but China benefiting domestically from the policy response. Outsized US equity outperformance is much less likely given the greater impact of tariffs on the US; accordingly, UBS equity strategists see similar downside for the US, Europe and Asia. As highlighted in prior Q-series on trade risks, Taiwan and Germany were two of the most attractive hedges against trade escalation within equities. We still see the two as very vulnerable to further tariffs as we discussed. Defensive sectors would outperform cyclicals notably, but as we highlighted above, a lot is already priced on a relative basis, unlike early last year.

EM is likely to underperform notably, with China doing relatively better on policy stimulus

Materials stand out as having the greatest potential downside in an escalation scenario. First and foremost, Materials has the highest correlation to the relative performance of stocks most exposed to trade tensions. Second, Materials has historically been the worst performing sector at the end of a cycle when PMIs fell below 52. Since Jan '18, Materials performed better than the typical PMI down cycle on a relative basis compared to the other value cyclical sectors (Energy, Fins, Industrials, etc) suggesting there is room to fall further. Valuations are indeed cheap, but likely not enough to offset such a significant global growth slowdown.

Figure 66: Equity index correlation to the relative returns of stocks most impacted by trade (i.e. trade basket alpha)



Source: Bloomberg, UBS

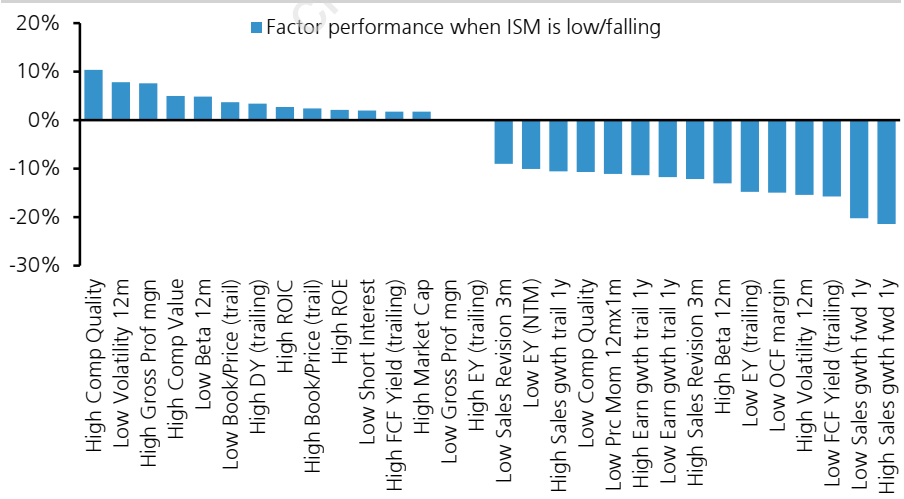
Trade sensitive stocks to avoid in further tariff escalation scenario: We highlight 15 stocks globally (Figure 125 in Appendix II) that were identified in our prior Q-Series report by UBS analysts as most impacted by trade (August 2018) and that have not re-rated lower by as much and that were Sell- or Neutral-rated by UBS analysts. We screened for stocks with the average five-year percentile of 12-month forward P/E and P/BV relative to the benchmark index above 50% – essentially trade-impacted stocks that were still trading at above average multiples relative to the market despite trade risks. These stocks have outperformed the MSCI World index by an average of 6% YTD through the rally and volatile re-pricings of trade risks. These stocks span the effected sectors and should stay under pressure on further escalation.

"Growth at any price" is at risk if growth slows further on escalation. Stocks with the highest sales growth and lowest FCF yields have been the worst performers at the last stages of a cycle when the ISM manufacturing PMI goes well below 52 and keep falling. Yet, these types of riskier growth stocks have done very well as the global economy slowed but did not collapse as trade tensions rose. Importantly, active fund redemptions are seasonal and accelerate through H2 to a peak in December, which could add fuel for a rotation out of crowded Growth stocks. Indeed, the end of 2018 saw some of the worst performance of stocks with the highest active ownership that we have ever seen (link). In Figure 126 in Appendix II we screen for stocks globally that are:

- in the bottom 30% based on FCF yield;
- in the top 30% based on sales growth and forward EPS growth expectations;
- in the bottom 60% based on the composite quality score;
- non-UBS-Buy-rated and have a market cap above $5bn USD.

Overall, we see markets pricing discounts into areas most obviously impacted by trade and China exposure, as discussed above and in previous notes. However, we don't see the market as fully pricing the effects of a growth slowdown into stocks that are high growth but still exposed to cycle risks. Even small downgrades to expectations amid slower growth can lead to big de-ratings when P/Es are high.

Figure 67: Factor performance when ISM is low and falling



Source: S&P, Compustat, IBES, UBS. Note: average annualized performance, 5th quintile (high) and 1st quintile (low) vs median, non sector neutral

Impact on US equity market

Our base case scenario for U.S. equities in 2019 is that the S&P 500 will close the year at 2550. While this is about 12% lower than current levels, it would still leave the index up 2% for the full year. The major issue we see for U.S. stocks aside from the trade concerns is a further deceleration in economic prospects, courtesy of the lagged effects of last year's Fed rate hikes.

To date, the ISM New Orders Index has trended lower since its peak of 67.4 in December of 2017 and currently sits at 52.7, just above the "contraction" level of 50. Amidst this deceleration in leading indicators, the S&P 500's return went from being up 24% on a year-over-year basis in early 2018 to a mere 5% at this time. Much of the change is attributable to P/Es which have compressed in the face of softer LEIs. The less-cyclical composition of the S&P 500 today and the stimulus in the pipeline elsewhere in the world should help mitigate the deceleration in LEIs for U.S. equities.

U.S. equities in a further escalation? Multiples versus earnings. Stocks are entering a phase of the cycle where P/Es tend to dominate returns. As Figure 69 below shows, a call on U.S. equities at the top of the cycle in LEIs is largely a call on earnings (i.e. a call on the economy). Conversely, a call on the S&P 500 near the end of the cycle is largely a call on P/Es (i.e. a call on investor psychology). This helps explain why markets are notoriously volatile when PMIs dip below the "contraction" threshold of 50. We believe the Fed's rate hikes would have gotten us to that level sooner or later, but the latest round of trade issues will likely accelerate that event and accentuate the pressure on LEIs.

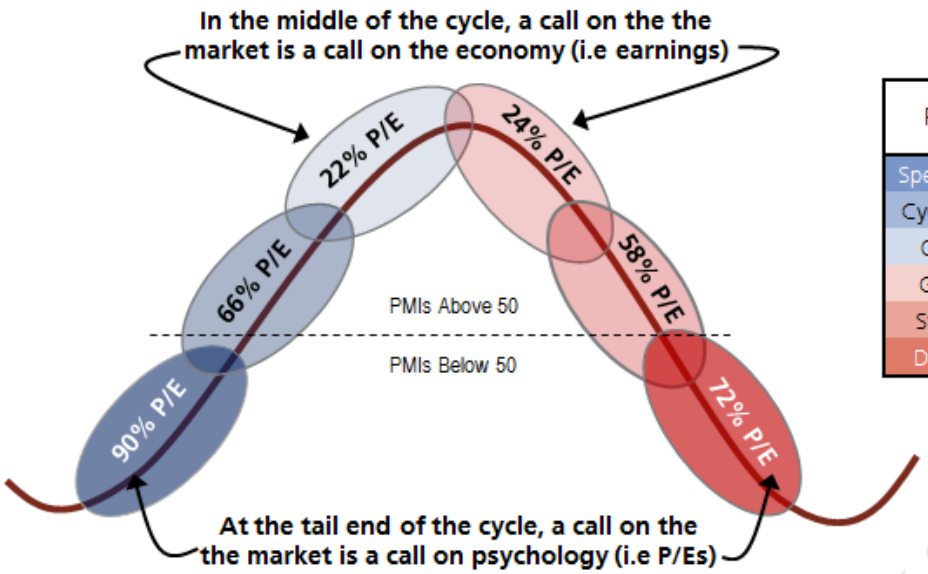
Multiples become even more important at the end of a cycle

Figure 68: US equity impact under a China trade escalation scenario

	Base Scenario	Escalation Scenario
S&P 500 Index Target	2,550	2,300
Downside	-14%	-22%
Earnings Growth		
2019E	2.0%	1.0%
2020E	-1.0%	-7.0%
Sectors to Own	Growth (DIS, TEC, CSV)	Counter-Cyclicals (STA, HLC)
	Counter-Cyclicals (STA, HLC)	Defense (UTL, REIT)
	Defense (UTL, REIT)	
Sectors to Avoid	Energy	Energy
	Financials	Financials
	Materials	Materials

Source: UBS estimates. Note: Data as of 13 June 2019.

Figure 69: Earnings and the multiple through the cycle



Phase	% of S&P 500 Return Explained
Speculation	90%
Cyclicality	66%
Quality	22%
Growth	24%
Stability	58%
Defense	72%

Source: FactSet, UBS

Source: UBS

There are two key questions that must be answered to figure out the impact on equities:

1) How much pressure will the tariffs put on LEIs and S&P 500 multiples? The UBS economics team estimates a drag of about 0.8% on U.S. GDP resulting from the additional tariffs. At current levels, this would lower our base case trajectory for PMIs like the ISM New Orders Index by about 3.5 points, resulting in a trough in PMIs in the spring of 2020. Based on the historical relationship between LEIs and the P/E of the S&P 500, our calculations suggest that the Index would lose about one additional point on the forward P/E. All other things equal, this would leave the Index somewhere around 2300 at year end 2019.

ISM New Orders falling in an escalation scenario points to an incremental 1x P/E hit, leaving the S&P 500 around 2300

2) What will be the consequences of additional Fed easing? The other element that would change our base case is the Fed's reaction to this scenario. The Fed would likely act to mitigate the trade tension escalation and the additional stimulus is bound to help equities at some stage. While the trough value in forward P/Es is likely lower than we had anticipated, any additional stimulus would sow the seeds of the next recovery and help sustain higher multiples in the latter half of 2020. While there are too many moving parts at this time to put an exact 2020 year-end target on the S&P 500 Index, we would expect the market to be up double-digits next year in the face of additional stimulus.

Fed easing would sow the seeds of a H2 rally in 2020

Sectors: Our base case scenario for a continuation of the pressure on LEIs like the ISM New Orders Index has us favouring risk-off segments at this time. These include counter-cyclicals like Consumer Staples and Healthcare, defensive sectors like Utilities and REITS and also the growth segments of the Technology and Communication Services sectors. Conversely, we have been wary of all things cyclical like the Energy and Financials sectors. The escalation scenario and the steeper drop in the PMIs it brings would likely change investor appetite away from the growth theme. As such, we see a narrower set of market leaders under this scenario, concentrated in counter-cyclicals and defensive sectors.

Impact on European equity market

What's the market pricing in? We believe that European equites are pricing in a c.8% cut to 12m forward earnings (How far through the correction?). This is likely slightly too pessimistic as our base scenario points to c.1% upside to European equities for end-2019, but our baseline scenario does not assume a full escalation in Chinese tariffs.

We believe European equities are pricing in a c.8% cut to consensus EPS

European equities could fall by over 20% on a ~7% earnings decline. Our top-down model for European earnings is based on US and EU GDP growth, Global IP growth, the change in capacity utilisation, the oil price and EUR/USD (for more details please see Outlook 2019: End of Cycle?). Inputting our economist forecasts in the China escalation scenario points to EPS growth of -7% in 2020. We also model the fair value P/E for the market based on the macro backdrop – we use the US ISM manufacturing new orders and the Eurozone BBB corporate credit spread. Our model points to a 12m forward P/E of c.12x compared to the long-run average of 14.5x. Taking the earnings and forecast P/E multiples together points to 295 Stoxx 600 by end-2019, c.23% downside from current levels.

Our base case remains 390 for the Stoxx 600 for end-2019

Further escalation could see the Stoxx 600 fall to 295, or over 20% by end-2019

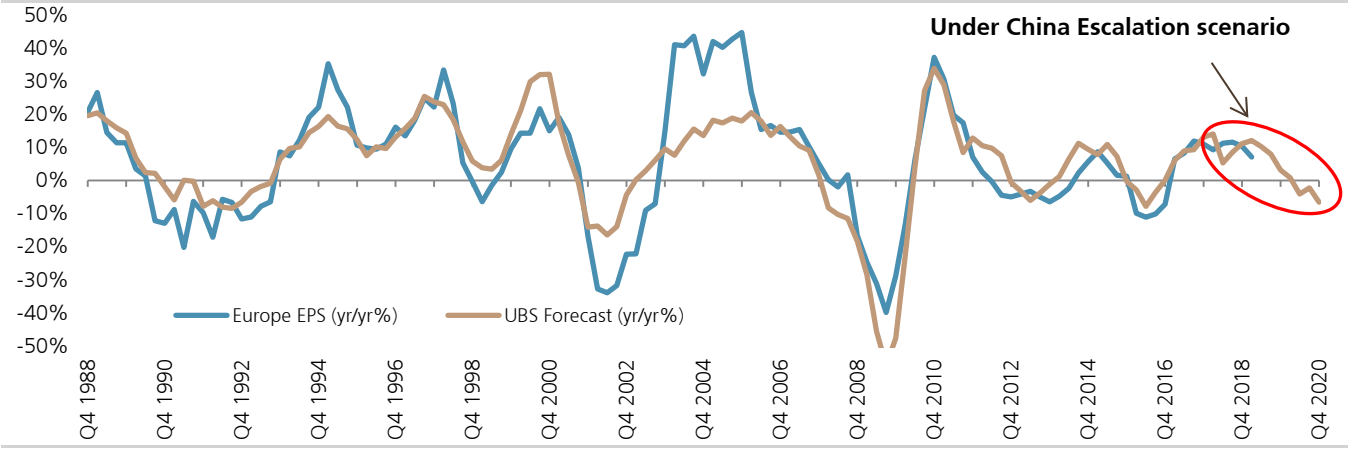
UK: We run similar analysis for the UK and in the China escalation scenario this points to 5,950 FTSE 100 at year end (c.20% downside from current levels). The UK has other macro drivers currently in the shape of Brexit, but it is likely to be slightly less exposed to an escalation in the trade wars than Europe ex-UK given the lower beta of the market to the US in previous downturns.

Figure 70: European equity impact under a China trade escalation scenario

	Base Scenario	Escalation Scenario
Stoxx 600 Index Target	390	295
Upside/Downside	1%	-23%
Earnings Growth		
2019E	4%	3%
2020E	0%	-7%
Sectors to Own	Energy	Pharma
	Luxury Goods	Food Retail
	Autos	Utilities
Sectors to Avoid	Food Producers	Mining
	Household Products	Industrials
	Beverages	Chemicals

Source: UBS estimates. * = we use real GDP growth in the Escalation scenario (rather than our usual nominal GDP) as the inflation is a "supply" side impact from tariffs rather than stronger demand.

Figure 71: European Earnings: Top-down Macro Model – China escalation scenario



Source: UBS European Equity Strategy

What might offset the downside risk? As mentioned in the Economics section, monetary and fiscal policy may "lean into" the slowdown and offset some of the macro impact. Additionally, the European equity market has some built-in stabilisers that might offset some, but not all, of the impact:

The starting point of the profit cycle is less extreme than in the past

(1) The stage of the profit cycle: The starting point in the profit cycle is far less extreme than in previous slowdowns: the current trailing RoE is 11.5% vs 18.0%, 15.6% and 14.8% at the last 3 cycle peaks.

European companies have balance sheet flexibility

(2) Balance sheet flexibility: Corporate balance sheets are relatively ungeared: net debt / Equity is at a 10 year low and gross cash on the balance sheet is approaching €900bn. This may allow companies more flexibility in a downturn and can give more protection for dividends as companies allow pay-out ratios to rise (for more details please see**:** Are Dividends at Risk? 3 June).

Investor positioning in Europe appears light

(3) Investor positioning: Investors appear to be underweight Europe. After a decade of underperformance vs the US and with the ETF data suggesting US investors have been persistent net sellers of European equities in the last 2 years, we suspect investor positioning is light.

Countries: Germany is likely the most exposed…but if there is no escalation valuations look attractive

Countries: Germany is likely to underperform in an escalation scenario. We turned more bullish on Germany at the beginning of March after the worst performance of any of main European markets over 15 months. Some valuations hit 10 year lows. We highlighted an escalation in trade wars as an external risk. Germany was the best performing European market in April but the third worst in May when trade concerns returned. In our base case scenario we are still constructive on Germany, but acknowledge the uncertainty surrounding trade war risks.

Sectors: Mining, Industrials and Chemicals have tended to be the most correlated to a slowdown in global trade

Sectors: Across sectors Mining, Industrials and Chemicals tend to show the highest correlations between global trade and performance. So in an escalation scenario we expect the 3 sectors to underperform significantly. Although not directly impacted, Banks would likely underperform as the ECB cut rates further into negative territory. Some of the less highly valued defensives such as Pharma, Food Retail and Utilities could outperform. Many of the sectors that tend to outperform when global trade weakens, however, such as the staples, are already richly priced in our view. In our base case we see Energy, Banks and Luxury Goods as sectors with large potential upside while expensive defensives such as Food Producers, Beverages and Household Products could see downside.

Impact on EM equity markets

How might EM earnings fare in a trade escalation? Our US and Chinese GDP escalation scenario numbers should lead to a 5% decline in MSCI EM EPS in 2019 and a further 10% contraction in 2020, which is significantly below the current consensus estimates of 5.5% and 14%, respectively. Moreover, the hit to EM earnings can be even worse if the second-order effects of the economic slowdown in the escalation scenario are stronger than anticipated or if rising protectionism morphs into a broader global phenomenon. To remind, earnings have been the key driver of EM equity returns through the index cycles.

MSCI EM earnings should fall by 5% in 2019 and 10% in 2020 in an escalation scenario

What is the downside for EM equities in an escalation scenario? We see the MSCI EM index falling to 800, roughly 24% % downside from current levels. Our assumptions and country preferences for the base case and an escalation scenario are presented in the table below (Figure 72).

Almost one-quarter of the MSCI EM index value could be shaved off in an escalation scenario

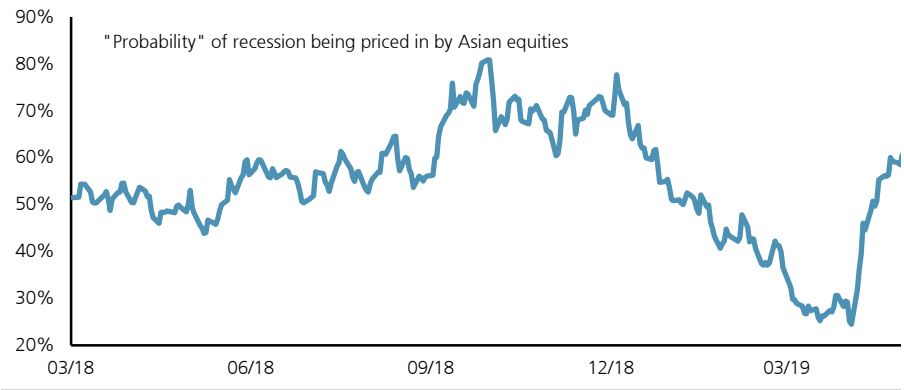
Figure 72: EM equity market impact under base case and escalation scenarios

	Base Scenario	Escalation Scenario
MSCI EM Index Target	950	800
Upside/Downside	-10%	-24%
	Earnings Growth	
2019E	0%	-5%
2020E	5%	-10%
Markets to Overweight	China, the Philippines, Indonesia	Indonesia, India, the Philippines
Markets to Underweight	Taiwan, India, Thailand, South Africa	Taiwan, Korea, South Africa, Mexico

Source: IBES, MSCI, Datastream, UBS

Where are valuations supportive? Our APAC strategy team's analysis suggests that equities are mid-way between pricing in a recession and recovery/removal of tariffs and comprehensive trade deal (Figure 73). As argued by our economists earlier in this piece, the slowdown induced by the potential 'trade escalation' would look very similar to past (somewhat milder) global recessions, which could take valuations towards typical recessionary levels. In recessions, EM equities have exhibited a strong tendency to trough at just below 1.2x price/book. Earnings multiples have been more varied, with earnings bottoming typically one-two quarters after the equity market has already troughed. For this reason, we believe that P/B gives a better gauge in terms of where the market might trough.

Figure 73: Asian equities have started to price in a greater chance of recession

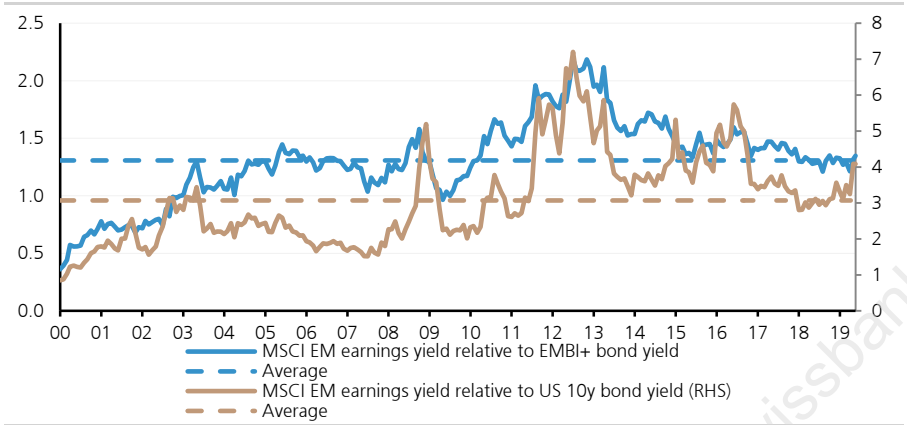


Source: MSCI, Datastream, UBS. Note: 'Probability' based on where market trades between two extremes of a recessionary levels based off 1.2x price book, and NTM P/Es slightly above longer run averages if a full trade resolution occurs.

Can US yield compression propel EM valuations? Unlikely, in our view, despite the fact that our EM earnings yield ratio – the reciprocal of the EM P/E dividend by the bond yield – shows that the valuations of the MSCI EM index have cheapened relative to the US 10-year bond yields (Figure 74). First, it is important to note that the relative valuation case for EM equities vs EM bonds has been virtually unaffected. Second, the recent US bond market rally was driven by credible concerns on the global growth outlook, an adverse set-up for EM. The current round of incremental dovishness from the Fed and ECB may support only a tactical positive call on EM equities, not trigger a change in our structurally cautious view.

EM equities have not cheapened vs EM bonds. The driver of the US bond rally – weak global growth – was EM-unfriendly

Figure 74: MSCI EM earnings yield ratio relative to US 10y and EMBI+ yields

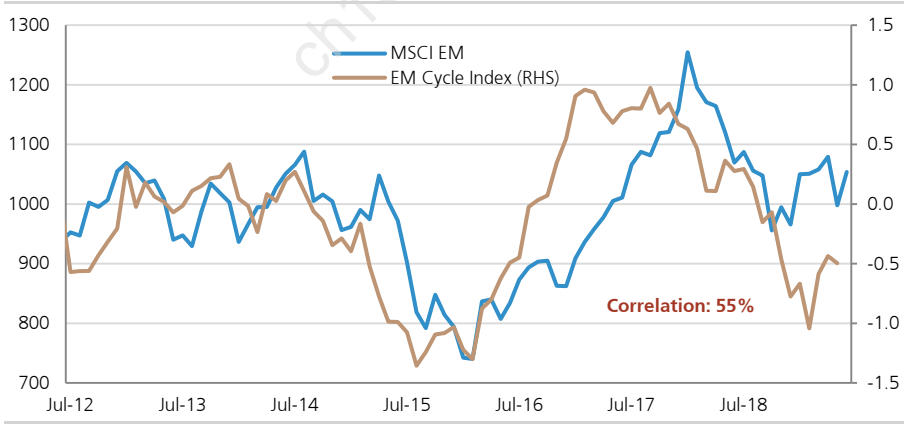


Source: IBES, MSCI, Datastream, UBS

Is trade the only constraint for EM EPS growth? No. Even before the recent escalation in trade tensions, we argued that the hopes of a growth rebound were running ahead of reality. Our EM Cycle Index entered its steady downward trajectory in late 2017 – several months before the 2018 market peak and the emergence of trade tensions as a new major global risk (Figure 75). Consistent weakness in DRAM prices has been the key drag on the EM IT stocks' earnings, while the current round of China stimulus is less helpful for EM EPS than it was in the past easing episodes.

Weakening Tech cycle and domestically-focused China stimulus add to the trade-related uncertainty

Figure 75: MSCI EM index vs UBS EM Cycle Index



Source: MSCI, Datastream, Bloomberg, Haver, UBS

Cyclical sectors and countries are more likely to suffer in this environment, and relative valuations can still fall to levels of past recessions. We think Taiwan is especially vulnerable and Korea would also likely underperform in this environment as both are cyclically-exposed economies *and* equity markets.

China should do relatively better despite being at the heart of the trade storm, with domestic policy easing helping to prop up growth. Despite the economies' sensitivity to exports, the direct impact of a global slowdown on Chinese earnings is smaller than in Taiwan for example. A risk to Chinese equities would come from a much more aggressive policy expansion and further de-rating of the Chinese Financials on heightened fears about the sustainability of the local credit expansion.

Policy support should help China weather the storm, while Taiwan and Korea could likely see the greatest downside

South Asia should benefit on a relative basis. On the other hand, global and local policy easing would likely set up a return of capital flowing into faster growing, less globally sensitive South Asia, at the expense of North Asian equities. Indonesia, the Philippines and India would likely benefit for a relative 'growth' re-rating on easier global policy and the ensuing hunt for growth. South Asian economies might also benefit from some degree of supply chain realignment, though our Evidence Lab studies have suggested that as a first port of call, most Korean, Japanese and Taiwanese companies are more likely to consider re-onshoring production at home. Nevertheless, India and Vietnam look better placed to capture some FDI, which could encourage investors to align their portfolio flows with fixed capital flows.

South Asian countries, such as India, the Philippines and Vietnam could benefit from better relative FDI flows

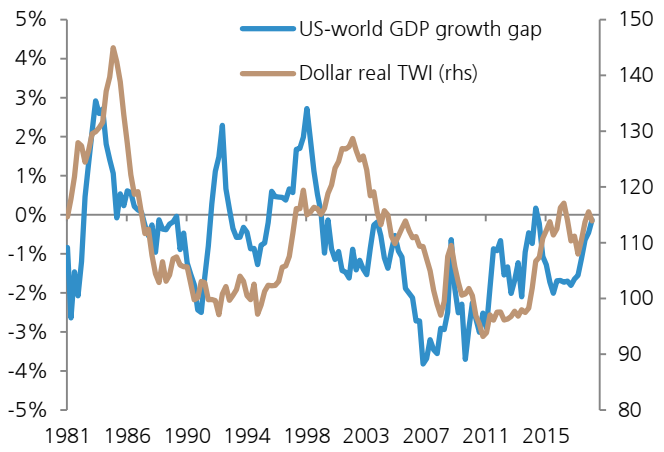
FX: Stronger dollar as global growth slows

Escalation will end US exceptionalism, but strengthen the $

The single most important driver of the USD over long periods of time has been the difference in growth rates between the US and the rest of the world (Figure 76 and Figure 77). In a reversal of last year's exceptional growth and rates patterns, US numbers are already converging onto those of the rest of the world. Yet, there has been no reversal of USD appreciation. Why?

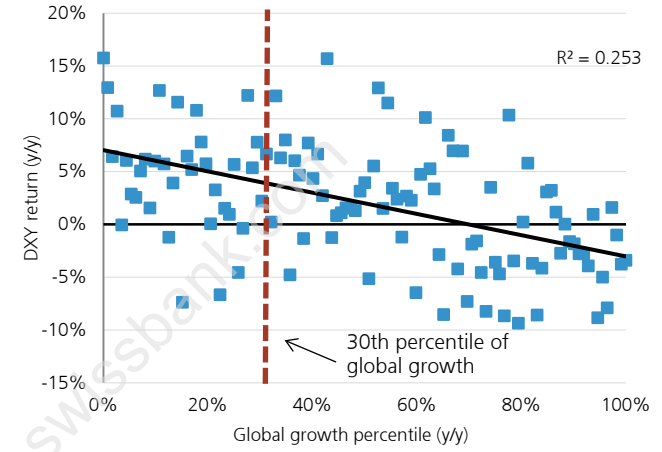
Growth differentials between the US and the rest of the world have been a good guide to the USD

Figure 76: USD real trade weighted index and US-world growth differentials



Source: Haver, UBS

Figure 77: USD strength amid lower global growth

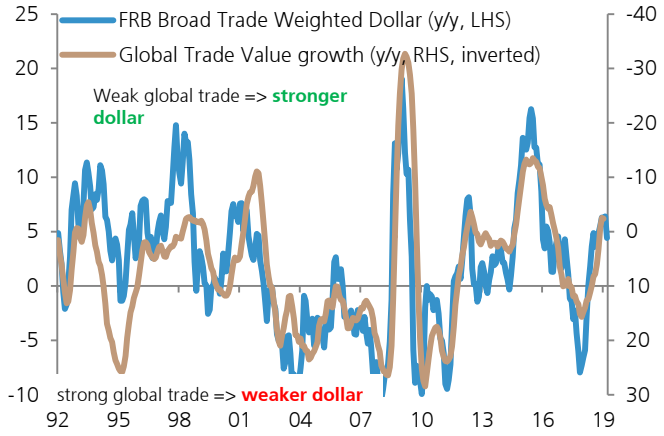


Source: Haver, Bloomberg, UBS calculations

The growth differential framework breaks down as we approach the left tail of the global growth distribution. Rough numbers suggest that the USD has been strong in the bottom 30th percentile of global growth outcomes in the last 40 years (Figure 77). The threshold below which this happens is 3-3.2% global growth, roughly where global growth was in early Q2. Then, the trade war re-started. This supply side shock comes at a very sensitive time for the global economy and threatens to prolong the weakness in trade (Figure 78) and the industrial output cycle. Even if uncertainty over trade policy just keeps global growth subdued at today's low level, let alone sustained imposition of tariffs pushing it weaker, US investors are likely to stay put at home (Figure 79), keeping the USD well bid.

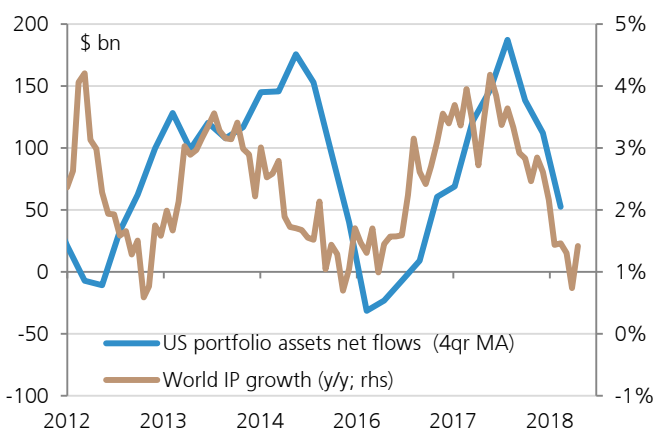
But this framework breaks down when global growth weakens to its bottom 30%ile. A world where US grows at 3% and the rest of the world at 5% is not the same for $ as one where US grows at 0% and the rest of the world at 2%

Figure 78: Global trade volumes growth and the USD



Source: Bloomberg, Haver, UBS

Figure 79: Global IP growth, US portfolio flows abroad

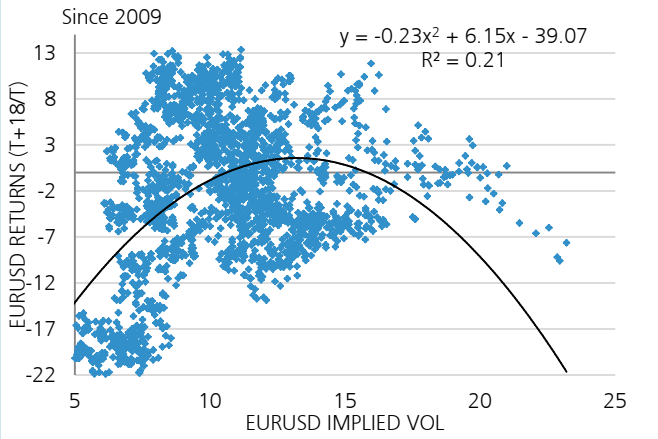


Source: Bloomberg, Haver, UBS

Box: How the USD can have its cake and eat it too

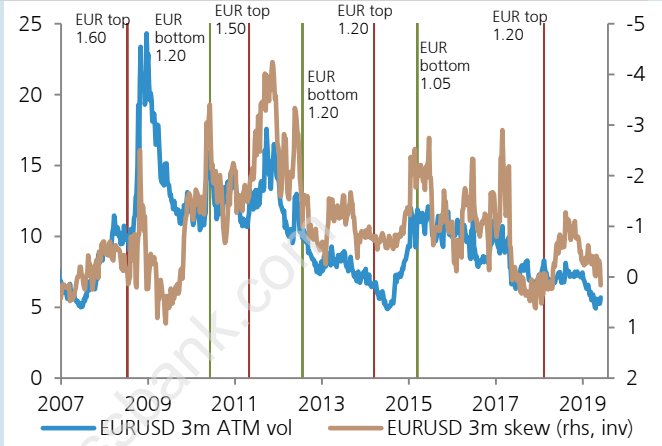
Similar to our point on growth, historically, low volatility periods are ones where the USD has been weak, while it has been strong through high volatility. Tops in the dollar are found post periods of market stress (Figure 80 and Figure 81). Amidst very low currency volatility, the EUR's volatility and skew profile today is one that more closely resembles EUR tops rather than EUR bottoms. But through this period of low volatility the EUR has not been strong, and the USD has not been weak. Why?

Figure 80: EUR/USD returns are negative in periods of very high and very low volatility



Source: Bloomberg, UBS

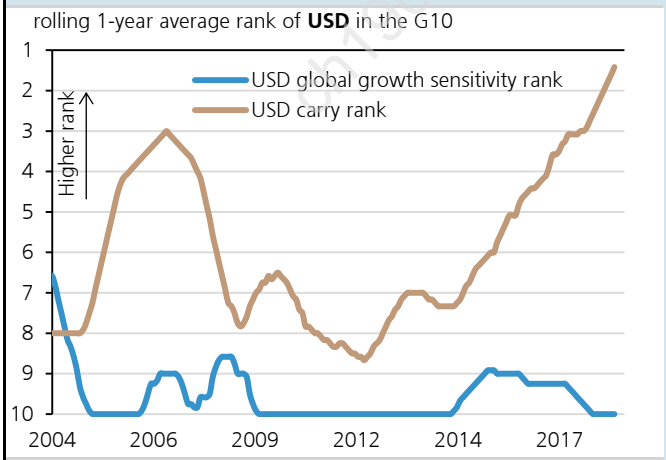
Figure 81: EUR/USD tends to peak (trough) during periods of low (high) volatility



Source: Bloomberg, UBS

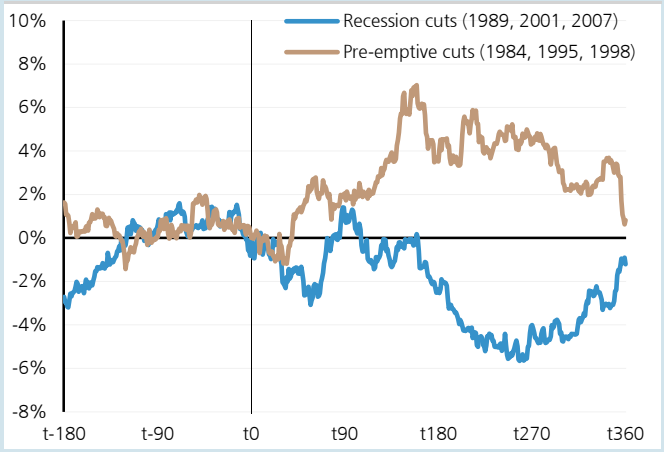
This is because this time the USD has a carry advantage over the others (the brown line in Figure 82). The Fed's dual mandate enabled it to hike rates when everyone else was singularly worried about inflation expectations, lifting the USD in this world. As growth deteriorates because of trade, and volatility picks up US' relative low growth sensitivity to the global cycle (the blue line in Figure 82) affords it 'safe-haven' status. The USD's carry advantage may disappear if the trade war prompts Fed to rapidly cut rates, but a) this is unlikely to happen without high volatility (USD-positive), b) is largely priced in (3.75 cuts by end'20), and c) has historically not hurt the USD, assuming a recession was avoided (Figure 83).

Figure 82: Today, the USD benefits from a combination of safe haven (low sensitivity to global growth) and high carry properties



Source: Bloomberg, UBS. Note: For carry, rank is based on short-term interest rates. For growth, high rank represents the strongest positive correlation with the OECD Leading Indicator.

Figure 83: DXY pre and post pre-emptive cuts and recessionary cuts. t0 = date of first cut in a cycle



Source: Bloomberg, UBS. Note: Pre-emptive cut = not followed by a recession within 18 months. Recession cut = followed by recession within 18 months.

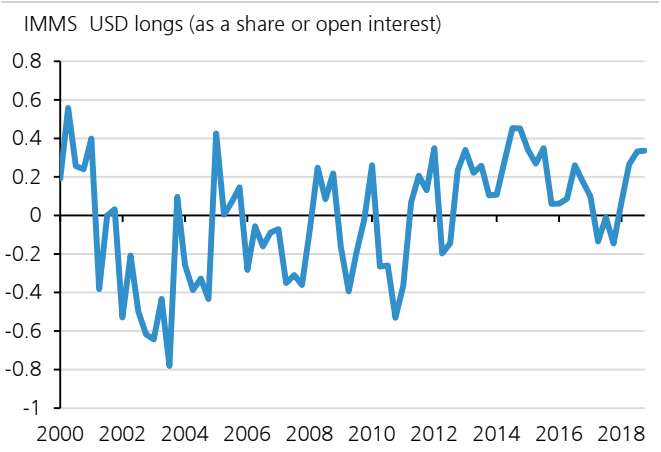
When and why will the USD top out?

The bulk of the strength is likely to be seen this year. We see a gentle top in the USD late this year/early next year as global growth slowly improves, but the EUR is likely to still underperform its forwards by end-2020.

The 'escape route' from USD strength is some combination of eroding yield advantage for the dollar **and** stronger global growth. This only happens when growth in the rest of the world is strong enough to push yields aggressively higher there. And in this regard, all eyes must turn to the father of global growth – China.

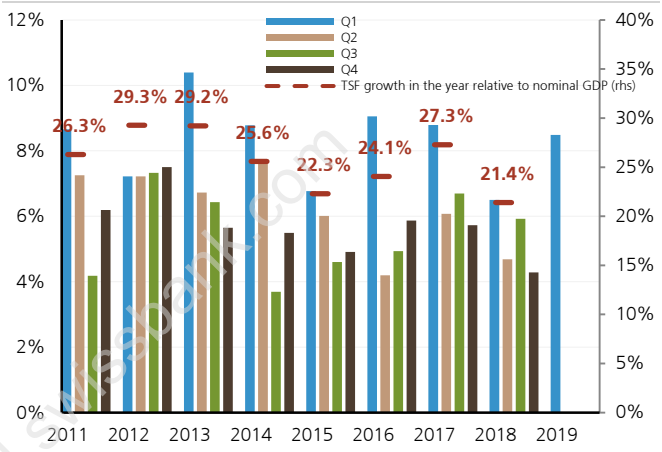
The escape route from USD strength is some combination of eroding US yield advantage 'and' stronger global growth

Figure 84: Long USD positioning is substantial but not extreme



Source: Bloomberg, Haver, UBS

Figure 85: China TSF accretion (% of nominal GDP)

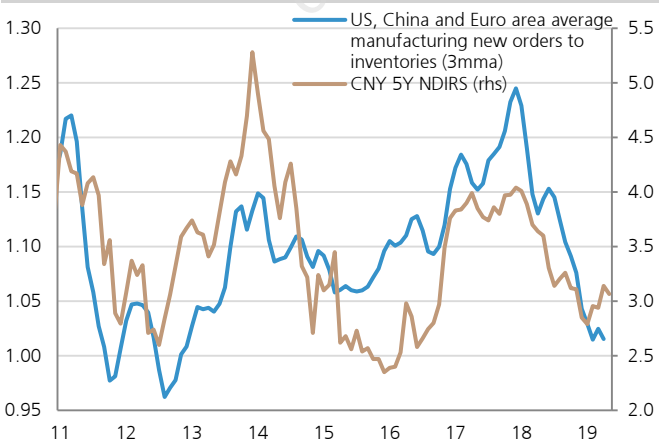


Source: Bloomberg, Haver, UBS

Chinese growth has stabilised as last year's liquidity tightening started to be swiftly reversed, but after strong total social financing (TSF) in Q1 (Figure 85), the Q2 numbers have once again come in on the soft side. While most of the focus remains on US rates, investors would do well to remember that Chinese rates (Figure 86) are not wildly optimistic about growth in China either, and this may ultimately be the more important call for the USD. If China can't kick-start a strong non-US growth cycle, the USD may not come off strongly.

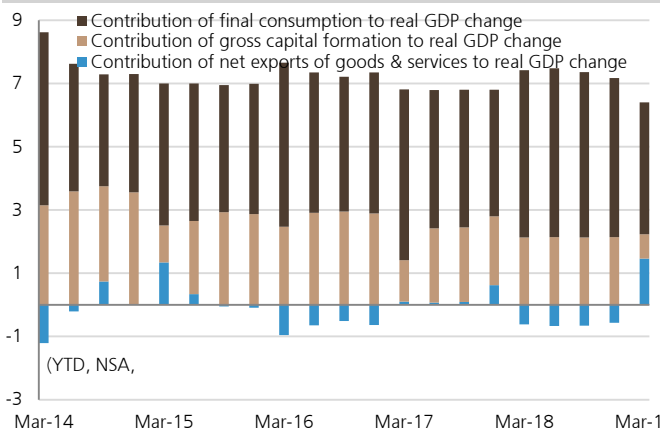
If China can't kick-start a strong non-US growth cycle, the USD may not come off strongly

Figure 86: Chinese rates have called the global cycle well



Source: Bloomberg, Haver, UBS

Figure 87: Weak imports (higher net exports) have made China GDP stronger than domestic demand



Source: Bloomberg, Haver, UBS

Also, it is not just a question of the quantity of credit in China. It is equally important to understand where that credit is headed. The hallmark of this stimulus cycle in China has been that imports have come down sharply despite the better credit impulse. Net exports, driven by collapsing imports, have been the biggest contributor to Chinese growth recently. If this continues, the same incremental credit from China may lead to weaker incremental growth in Australia, Brazil or Europe. Any USD selloff will then be quite mild.

Its declining import intensity, a trend independent of the trade war, is helpful for the USD medium term

Amidst trade escalation, we expect the **EUR** will stay weak, given it is a low beta cyclical asset, and fall towards **1.08** by year end 2019 as Eurozone growth remains soft. Only the **JPY** would perform better than the USD as a safe haven asset, hitting **105** if the trade war with China persists, and strengthening further to 100 if the trade war broadens out to include Mexico. After the initial phase of dollar strength, from Q2 2020 onwards we expect better European and Chinese growth to make for a bottom in global growth and push the momentum in the rest of world stronger than the US. As a result, the **broad dollar will** put in a gentle **top** against by **Q2 2020**. Aided by its favourable valuations and better growth, the **EUR** would then begin to rally back towards **1.15** by end 2020. This is still below the forwards.

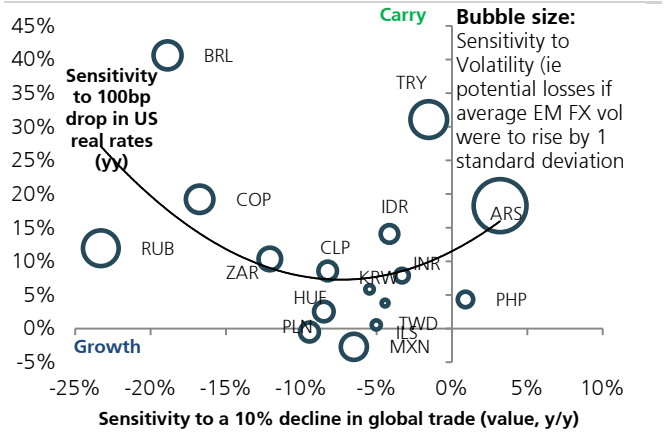
But, even as the dollar starts to give up its strength as global growth picks up in the second half of 2020, **CNY** is likely to remain weak at around **7.30** and struggle to gain back ground amidst weaker balance of payments (modestly weaker current account, potentially weaker FDI and higher capital outflows). Similar to the CNY, broader **EMFX** would come out of a sustained global trade war worse. For the impact of moves in USDCNY on other asset markets (see this section for details).

CNY will likely remain weak even as the USD tops out against the EUR next year

The current environment of low and falling yields amidst weak global economic growth has favoured owning carry against growth in currency portfolios. Figure 88 shows how we classify carry versus growth sensitive currencies. If global bond yields remain near current levels we expect that the FX carry factor will continue to outpace the growth factor (Figure 89). Tactically, we have proposed a portfolio of currency trades where we go long high carry currencies with reasonable valuations and balance of payments dynamics against shorting low carry growth sensitive currencies. On the long side, RUB, INR, BRL, IDR, COP and CLP all fit the bill of either reasonable valuation (BRL, COP and CLP); balance of payments dynamics (RUB, INR); or attractive real yields (IDR, RUB, INR and BRL). On the short side, we chose HUF, ILS, EUR, AUD and JPY as funders. We do not expect sustained EMFX appreciation until global growth rebounds, global growth is the most important driver of EMFX. We point to this as the reason why, despite a 160bp re-pricing in Dec 2020 Fed funds rate since Nov-18, 85% of major EM currencies have returned less than 2% vs. the dollar. The drivers behind this lacklustre performance are still intact. Policy support is coming from insurance and, in our view, should only be associated with pricing out of risk premia. We recommend sticking to USTs sensitive carry currencies instead of growth currencies. But, we remain watchful for an increase in currency volatility in response to an escalation of trade conflict.

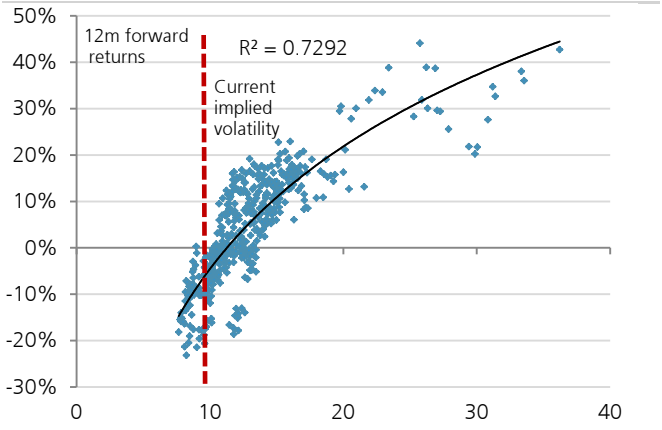
Currently long carry and short growth in FX, but an escalation in trade conflict will increase risk premia across all FX

Figure 88: Which EM is driven by liquidity and which is a pure growth asset?



Source: Bloomberg, UBS

Figure 89: Long carry tactically, but be mindful of negligible risk premia

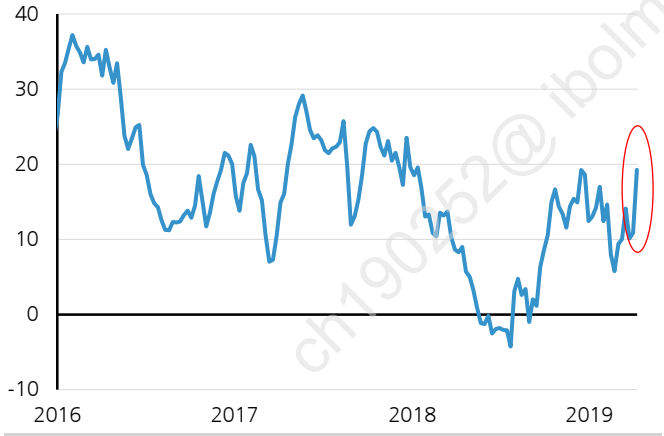


Source: Bloomberg, Haver, UBS

Gold is increasingly being viewed as a portfolio diversifier and hedge against tail risks – the decline in real rates makes this even more attractive. Further escalation in trade tensions, deterioration in economic data, and Fed easing are positive factors that would allow gold to withstand dollar strength. Broad investor positioning remains relatively lean (Figure 90), suggesting that there is room for exposure to grow (Figure 91). Gold faces upside risks, as the market enters the early stages of the next bull-run.

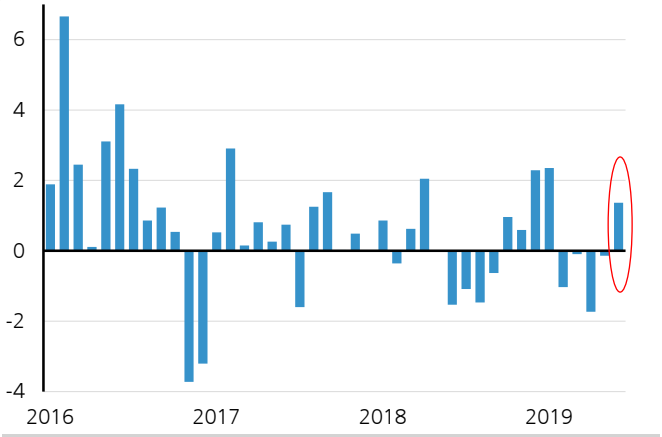
Gold safe haven flows would push prices even higher if trade risks escalate

Figure 90: Gold net positioning, moz



Source: Bloomberg, CFTC, UBS

Figure 91: Monthly change in gold holdings, moz



Source: Bloomberg, various funds, UBS

Rates: Asymmetric to the downside

Greater bid for duration amidst global liquidity trap worries

Global equities and non USD G10 currencies should post recoveries from the middle of next year as the global economy improves. But the profile of bond yields is likely to be more asymmetric – falling hard in a slowdown, but rising only modestly in a recovery.

As the trade war forces central banks to re-engage worn out tools, the markets will worry about monetary policy approaching its limits. Europe and Japan have shown limited ability to push inflation expectations higher. The US has room to stimulate compared to other regions today, but much less compared to its own cycles previously.

The gravity of leverage may beat policy thrust in its battle to achieve escape velocity

But the big call will be China's willingness and ability to continue to underwrite global growth again. Trade war induced weakness may compel a China policy reaction, effectively forcing the Chinese authorities to use more stimulus, which they would not have done otherwise. But the texture of China's stimulus may not be able to provide a strong lift to nominal growth expectations globally. The stimulus will remain non-import intensive, as it has been so far this year, focussed more on domestic infrastructure than on (import thirsty) housing. Stable balance of payments will also be a prerequisite for them to be able to continue stimulating. As we discuss here, this can't be taken for granted.

The trade war my force China to pull out the remaining rabbits out of its hat

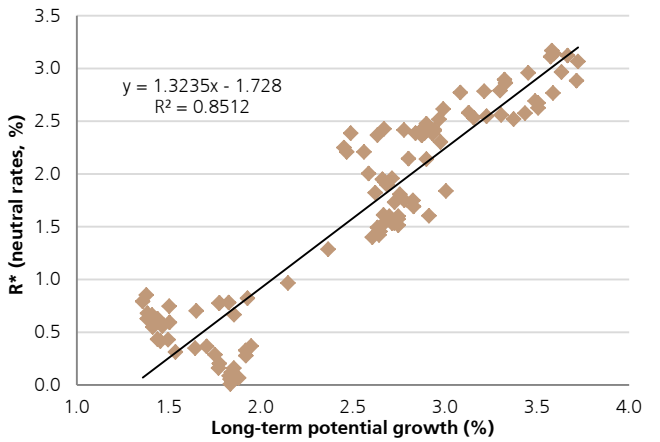
In this backdrop, even as growth stabilises the market will worry about the next downturn, keeping estimates of neutral rates (Figure 92), and term premia very low (Figure 93).

Estimates of neutral and term premium will remain low

Lastly, specifically for US rates, where rate expectations and term premia have the most space to decline relative to other "safe-havens", the bid for safety will disproportionately affect yields. Historical templates of a bull steepening through a US Fed cutting cycle may not apply. The curve may first bull flatten, and then shift lower in parallel, eventually being much flatter than in previous growth troughs.

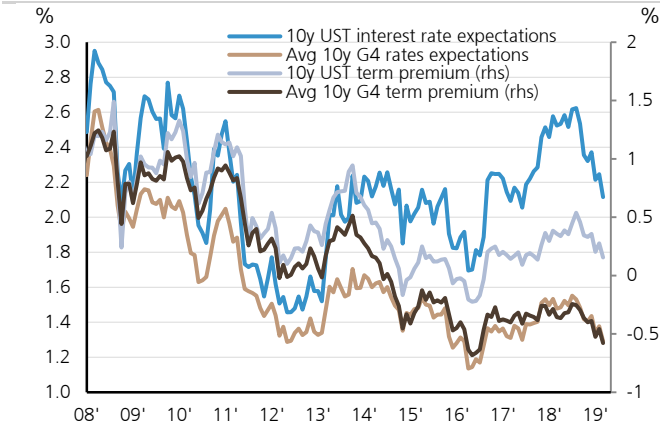
The bid for the only safe haven with yield will also compress US yields

Figure 92: US interest rate expectations historically drop more than estimates of long term growth



Source: UBS calculations. Note: this chart shows the relationship between estimates of trend growth and estimates of r* in our models

Figure 93: More space for US rates expectations and term premia to decline



Source: UBS calculations

Short rates a long way towards pricing the full Fed cuts in trade war…

USTs: front end a rare asset already pricing in the trade war

While a trade war escalation is not our base case, investors have seemingly positioned for a protracted stand-off between the US and China – with OIS markets pricing in close to 75 bps of cuts by end of this year and 25 bps more in 2020 (Figure 95 – our US economists pencil in a total of 100bps back-loaded cuts in 2020). Mirroring this, European and JGB rates are also stuck at all-time lows, as investors brace for a ramp up in easing across major central banks (Figure 94).

…but the long end can rally a lot further

Tariff uncertainty leads to a lower year-end US 10-year forecast to 2.00% (from 2.60%)

Heightened tariff uncertainty – and thus rising downside risks to the outlook – prompted us to lower our US 10-year end '19 **baseline** forecast to **2.00%** from 2.60% (Figure 56). This assumes no further escalation in trade tensions.

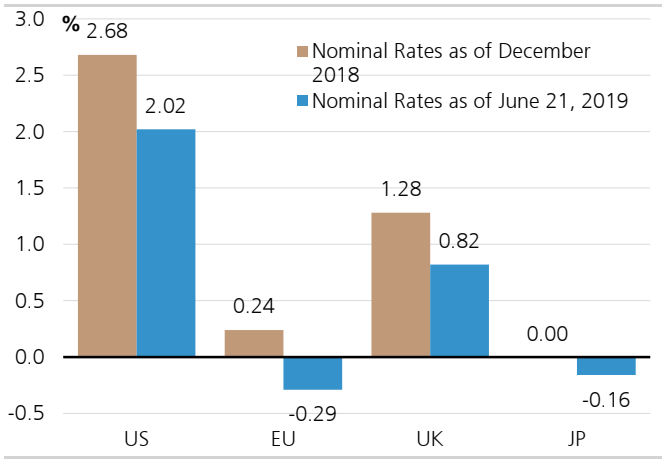
Notably:

- In a growth slowdown scenario on the back of US imposing tariffs on all Chinese goods, we see 10-year US rates edging down to **1.4%** by end-2019 and 1.3% by end- 2020, below its previous all-time lows. However, the last time markets were at this level, the US output gap was negative, and the Fed was at 0-0.5% policy rates. This time though, the US 10-year will slip to 1.3% by end-2020 even with the Fed at 1.0%, resulting in a much flatter curve (2y at 1.1%) compared to the last time the 10y hit its low;
- In a recession scenario where the US also imposes tariffs on Mexico, UST yields are likely to decline more sharply to **1.0%** by end 2019 and 1.1% by end 2020. The curve should bull steepen in this scenario as the Fed brings short rates down to its zero lower bound (0-25bp).

US long-end duration is a key beneficiary in a slowdown or a recession scenario

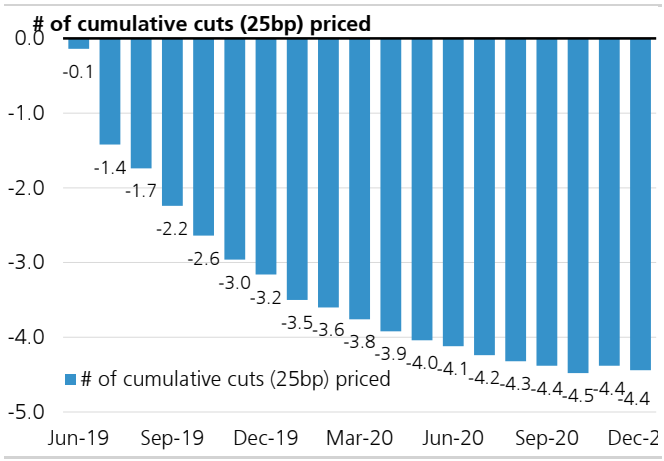
Overall, long-end US yields have substantial downside in the envisaged scenarios, making the impact on the curve less straightforward (Figure 97). Further, given the extent to which breakevens have already declined, any monetary policy easing is much more likely to be captured via lower real rates.

Figure 94: European and JGB rates are already stuck at zero lower bound; But USTs have room to rally materially



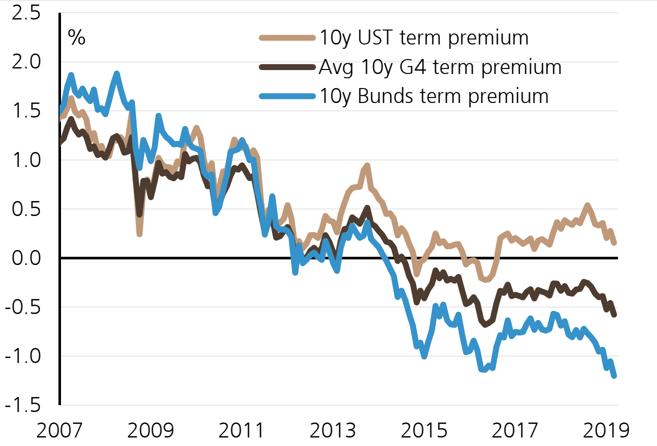
Source: UBS, Bloomberg

Figure 95: The market is pricing in close to three cuts by end of this year: Growth slowdown seems to be priced



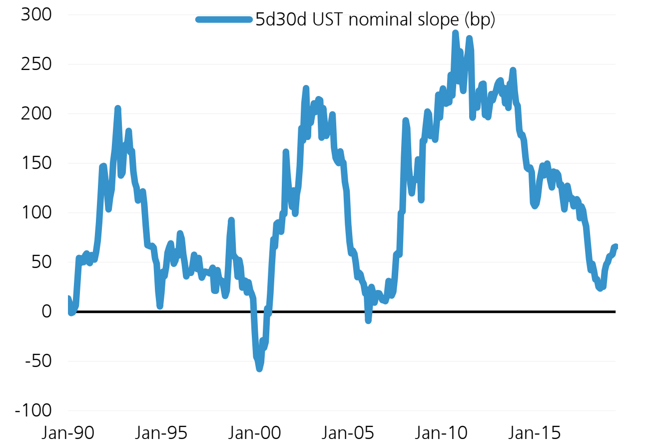
Source: UBS, Bloomberg

Figure 96: US term premium might decline as well if trade escalates further



Source: UBS, Bloomberg

Figure 97: US curve may resume flattening as growth slows down



Source: UBS, Bloomberg

Our new base-case for 10y bunds at end-2019 end-2020 is 0bp and 30bp, respectively

EUR: Trade and Brexit related uncertainties have been a persistent drag on Euro area economic activity, pulling Bund yields lower and lower. The ECB is already priced extremely dovishly (20bp depo rate cut by end-2020), 10y Bund yields are well below 0% and European curves have been flattening across the board as the market comes to grips with the left-tail of possible outcomes. In light of these developments, we are revising our end '19 **baseline** 10y Bund forecast to **-20bp** from 50bp for end-2019 and to 10bp from 90bp for end-2020.

Under an escalation scenario with China, we see 10y bunds dropping to -40bp by end-2019, and -30 bp by end 2020

However, this is not to say that European rates will be immune to a further **escalation** in trade risks. Under our risk scenario of US implementing tariffs on all Chinese goods and its implications for Euro area economy and ECB policy, we see 10y bund yields at **-50bp** by end-**2019** and **-40bp** by end-**2020**, c.30bp below current forwards, as Europe risks entering a 'liquidity trap'. We expect that the flight-to-quality and expectations of ECB easing through rate cuts will push the 2y point of the German curve closer to -80bp by end-19 and -90bp by end-20, thereby flattening the German 2s10s curve relative to our baseline. In a recession scenario, where the US also presses ahead with Mexico tariffs, we see 10y Bunds ending 2019 at -60bp and 2020 at -50bp.

We revise our 10y JGB forecasts lower to 10bp by end-2019. This could fall to -20bp by end of the year if trade war with china escalates

JGB: Factoring in the BoJ's extended forward guidance and the heightened global risks, we lower our 10y JGB forecast to 10bp for end-2019 and 40bp for end-2020. However, should the trade escalation risks with China come to materialise, the policy response from the BoJ as well as the flight-to-safety flows could potentially drive 10y JGBs lower and further flatten the long-end of the curve. In such a backdrop, we would expect 10y JGBs to drop to -20bp by end-2019 and rise to 0bp by end-2020. Further, we see 10y JGBs dropping to -40bp by end-2019 and -10bp by end-2020 in the case tariffs are imposed on Mexico also as Japan's own 'liquidity trap' becomes engrained.

Credit: Lack of profits will uncover true leverage

Given our expectations for DM sovereign bond yields to bottom at lower equilibrium levels, we assess the impact that an escalation of the trade war under two scenarios is likely to have on DM credit spreads, to evaluate the overall impact on funding costs for corporates. In Scenario 1, we assess the impact of a US/ China trade escalation and in Scenario 2, we assess the impact of US/China + Mexico trade escalation.

In US credit, we expect a US/China trade war to push US IG/HY spreads out to 190/660bp by end-2019, up from 124/389bp currently, while a US/China + Mexico trade war will likely push US IG/HY spreads out to 270/955bp

In the absence of a trade escalation, our base case is for US IG/ HY spreads to widen modestly to 150bp/525bp by end-2019, up from 124bp/389bp currently, followed by a move to 175bp/ 575bp by end-2020. The move wider will be driven in our view by slowing US economic growth, a tightening of lending standards and a modest deterioration in asset quality. In order to gauge the negative impact of a trade escalation on US credit markets, we translate our US economic growth forecasts under each scenario into ISM composite estimates and use our soft data models and a univariate regression between ISM and spreads to estimate US HY spreads. We generate our IG forecasts using our HY forecasts due to the very high and linear correlation between HY and IG credit spreads. This also enables us to ensure a high degree of consistency in our assumptions.

In Scenario 1, US real GDP growth of 1.0% LTM (Q4 2019 to Q3 2020) and 0.5% trough (Q2 2020) translates into an ISM of 51 and HY spreads at 700bp; in Scenario 2, US real GDP growth of -0.2% LTM and -0.9% trough translates into an ISM of 49 and HY spread at 825bp. Next, we make a few fundamental adjustments to help forecast the peak level of HY spreads in each scenario to get a sense of severity. These include:

1) Increasing the HY spread to account for the positive residual in stressed periods (+50bp and +125bp, respectively); second;

2) Raising the HY spread in Scenario 2 (shallow US recession) to incorporate our expectation for elevated speculative grade defaults, (Figure 98) led by loans (+100-150bp);

3) Increasing the HY spread to account for rising non-loss compensation due to market illiquidity, lower interest rates (ZIRP) and greater fallen angel risks (Figure 99: +100-150bp).

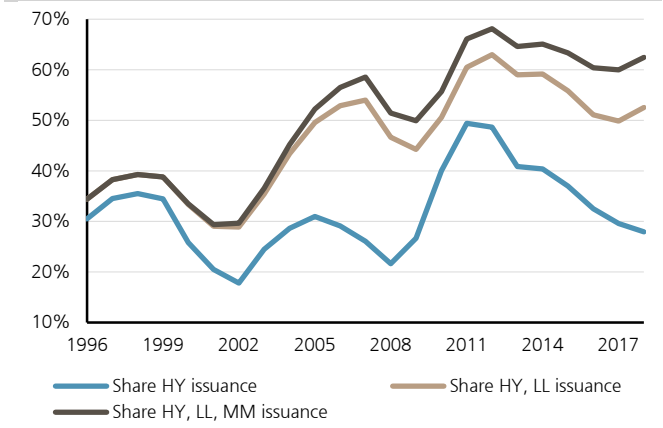
These adjustments lead to peak HY spread estimates for Scenarios 1 and 2 of 750bp and 1200bp, respectively.

Despite our expectations for Fed QE in a US/China + Mexico trade war scenario, we think that the current credit cycle will be elongated, meaning that HY spreads in particular will remain wider than most expect

In order to govern our end-2019 forecast, we assume investors anticipate 75% of the downside risk by end-2019, resulting in end-2019 HY estimates for Scenarios 1 and 2 of 660bp and 955bp, respectively. We expect the peak in spreads to occur in mid-2020, as US growth bottoms out, with credit outperforming other risk assets thereafter as the Q3 2020 recovery in growth kicks in. Historically, credit leads equities and recovers about half the trough to peak spread widening over the subsequent six months, but this time round we expect the credit cycle to be slightly more elongated (similar to the '01-'02 cycle) given the build-up of corporate debt and leverage in non-cyclical sectors. This is likely to mean that despite the prospect of rate cuts and QE by the Fed, any reversion in spreads is likely to be capped, leading to end-2020 HY estimates of 610bp and 835bp in Scenarios 1 and 2, firmly above our baseline forecasts. For US IG credit, adopting the same approach, we estimate end-2019 spreads at 190bp and 270bp in Scenarios 1 and 2. We estimate the peak in US IG spreads to be 215bp and 340bp

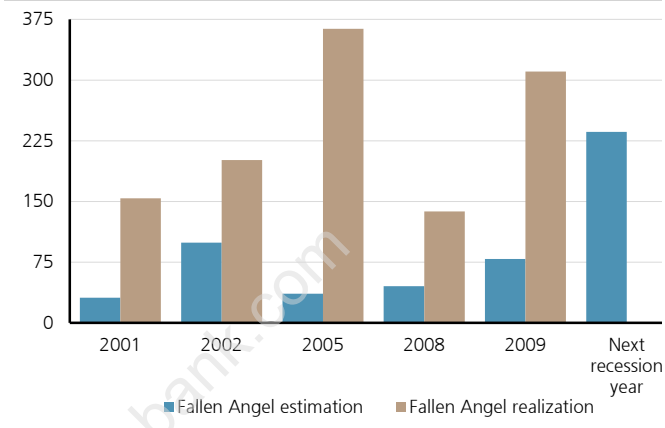
and occur in mid-2020, in line with US HY, and for spreads to tighten to 175bp and 235bp by end-2020 for Scenarios 1 and 2, again above our fair-value estimates.

Figure 98: The elevated share of high yield, leveraged loan and middle market issuance to non-financial corporate issuance* is likely to increase the severity of the next downturn



Source: UBS Estimates, SIFMA, UBS *3yr rolling average

Figure 99: Fallen angels: Estimates (current mix * transition rates) vs. Actual Volumes ($) - The current estimation contributes ~150bps of additional premium to our peak estimate of EU HY spreads in Scenario 2.



Source: UBS Estimates, S&P LCD

In Europe, in the absence of a trade escalation, our base case is for EU IG/HY spreads to widen modestly to 140bp/440bp by end-2019, up from 121bp/372bp currently, followed by a move to 180bp/540bp by end-2020. The move wider will be driven in our view by slowing EU economic growth, a tightening of lending standards at a time when bank profitability remains challenged and increased funding costs for Italian issuers on the back of wider peripheral spreads. In order to gauge the negative impact of a trade escalation on EU credit markets, we shock our multivariate regression models, which produce fair value estimates for EU IG/HY credit spreads based on the level of Global Composite PMI (proxy for growth), ECB Lending Standards (proxy for credit risk), EU TED spread (proxy for liquidity) and change in peripheral spreads (proxy for redenomination risk).

In EU credit, we expect a US/China trade war to push EU IG/HY spreads out to 180/665bps by end-2019, up from 121/372bp currently, while a US/China + Mexico trade war will likely push EU IG/HY spreads out to 270/900bps

In Scenario 1, we estimate that EU IG/HY spreads will widen to 180/665bp by end-2019, and then tighten marginally to 165/640bp by the end of 2020 as the ECB cuts rates. Given the high beta of EU real GDP growth to lower Global/China real GDP growth during periods of stress, we envisage the EU Composite PMI falling to 50 by Q4 2019 (based on a Global Composite PMI of 51.2), which is consistent with EU real GDP growth at 0.6%. This will undoubtedly put upward pressure on EU credit spreads, as investors' perceptions around a potential increase in downgrade risks rise in line with tighter lending standards, which we estimate to be ~+7.8 based on the level of EU growth. Given challenged liquidity in this scenario, we expect the EU TED spread to move back to its post-GFC average of ~40bp, while peripheral spreads (average of Spain & Italy) will likely widen to ~200bp. While we are not expecting loan losses to materially pick up, increased funding costs pressures for corporates will be driven by already stretched valuations (IG: -0.5 sd, HY: -0.8 sd), downward pressure on Italian issuers from wider peripheral spreads, while lower bund yields will put further pressure on bank profitability (Figure 100). Despite our expectations for a modest growth rebound in

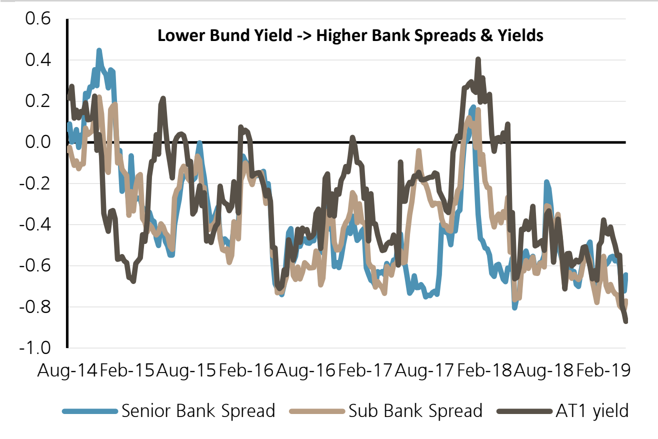
Despite expected rate cuts from the ECB in 2020 in either scenario, downside risks to growth will continue to drive investor caution, meaning that any rebound in spreads likely be capped

Q4 2020 (EU real GDP growth at 1.0%), we maintain the view that spreads will post a fairly shallow rebound. This view is centred on the fact that investors will continue to perceive the cycle as vulnerable to the downside as growth stays structurally lower post the trade shock (Figure 101). Global real GDP growth will likely settle at 3.5%, EU real GDP growth at 0.8% and Chinese real GDP growth at 5.9%, vs. current base forecasts of 3.8%, 1.3% and 6.2% respectively.

In Scenario 2, the downward revisions to our EU real GDP growth forecast to 0% by Q4 2019 has the ability to spark the structural and technical risks we have previously flagged, amplifying downside risks to spreads; EU IG/HY spreads would widen to 270/900bp, and then tighten marginally to 160/600bp by end-2020 as the ECB cuts rates and introduces "tiering" of the ECB deposit rate. Our end-2019 forecast is based on a >1sd move in the Global Composite PMI below 50, lending standards edging closer to +10, peripheral spreads (average of Spain & Italy) widening 1sd to 285bp and the EU TED spread widening 2sd to ~80bp in line with elevated credit/illiquidity risk. The main structural risk we expect to emerge in this scenario remains Italy, based on the fact that a move wider in peripheral spreads and the persistence of recessionary conditions will prove problematic for Italian issuers (particularly the banks where ongoing concerns around low NPL coverage ratios already point towards heightened credit risk). On the technical side credit market illiquidity will prove to be even more dysfunctional during periods of market stress (e.g., December 2018), and this will prove to be detrimental for broader EU credit spreads in a 0% EU real GDP growth scenario given that weakening fundamentals and market illiquidity are inextricably linked. With growth only expected to modestly rebound by Q4 2020 (EU real GDP growth at 1.2%) and the ECB set to ease policy further, we expect to see a moderate tightening in EU credit spreads. Within IG, the bulk of the tightening in spreads will be driven by modest asset quality deterioration and the expected introduction of ECB deposit "tiering" for EU banks, while our forecast of Bunds yields at -0.6% will incentivize investors into IG credit for yield as concerns ease. In HY, downside risk will persist from still challenged liquidity, lagged defaults, and the rotation of IG managers out of HY credit to obtain a safer yield; hence, spreads will continue to remain wider relative to our baseline forecasts.

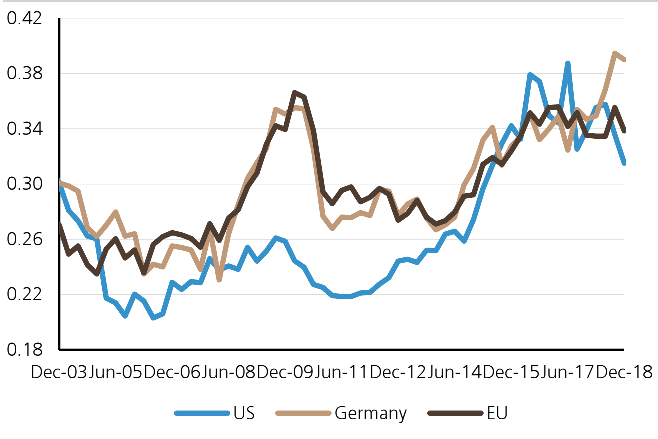
A US/China/Mexico trade war, and its impact on growth, will almost certainly reignite investor fears around Italy as well as credit market illiquidity. Both of these risks will exacerbate any move wider in spreads

Figure 100: Rolling 3-month correlation of changes in 10yr Bund Yields to EU Bank Spreads - A deeper negative correlation suggests that a move lower in Bund Yields from current levels will lead to financial credit spread widening



Source: Bloomberg Index Services Limited, UBS Estimates

Figure 101: EU vs US: Net Debt to Sales Ratio – Low growth has meant that net debt relative to sales is close to 2008 levels and in the case of Germany higher. In a world of 0% real EU GDP growth, this ratio will come under further pressure



Source: Worldscope, UBS Estimates

Where can cyclical weakness expose structural problems?

Tariffs will lead to a sharp drop in global activity as consumption, trade and investment respond to higher prices and supply disruption, but even in our escalation scenario we see limited contagion to banks and balance sheets.

During downturns, pockets of non-linear market risk tend to trigger vicious economic feedback loops

However, in every economic downturn there are pockets of non-linear market dynamics and pressures. Unattended by a policy backstop, these pockets of vulnerability can create their own vicious feedback loops between financial conditions and economic growth. It is never clear whether a specific set of economic pressures will trigger the weakness in key buckets of vulnerability, nor is any single list of vulnerabilities exhaustive; we can only deal in known-unknowns. Having said all this, we can confidently identify three main buckets of "trouble" that can trigger independent negative dynamics in a growth downturn here:

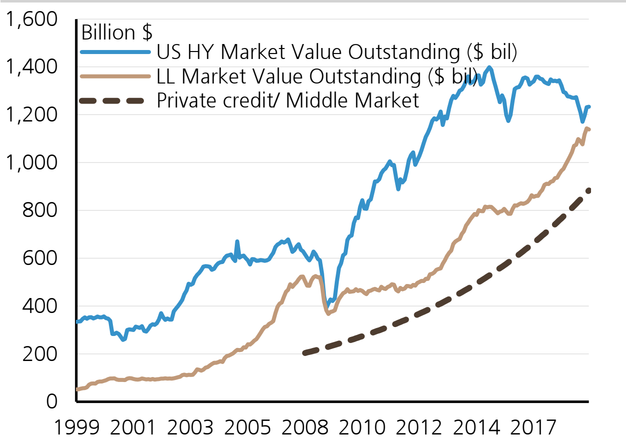
1. **Levered Loans, Oil and the Stretched US Consumer**

Even if we do get a trade escalation, we expect the US economy to be recovering nicely from this one off shock by H2 2020. However, there are 3 areas of weakness, which, if triggered, may hamper the recovery. Our analysis shows that a) leveraged and middle market loans, b) high yield energy sector credit and c) chunks of consumer credit (autos, credit cards, student credit etc) may suffer substantial losses in a severe growth shock.

Elevated US senior secured leverage may risk triggering a more severe earning recession and rating downgrade risks on levered loans

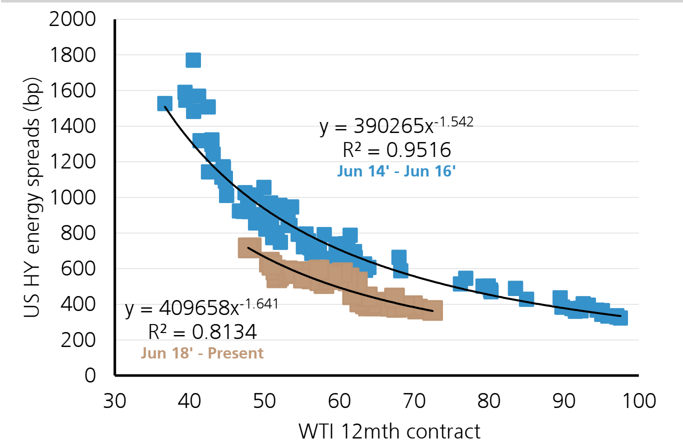
First, in US leveraged and middle market loans we forecast record credit losses (7-12%) due to the unprecedented increase in the level, growth and riskiness of loans. Due to the sharp rise in senior secured leverage (Figure 102), a conventional earnings recession (pre-tax earnings down 15-20%) can morph into a severe one (down 30-40%). The key transmission for forced sales in leveraged loans is credit rating downgrades from B2/B3 to CCC. The price correction could be violent given the lack of buyers between CLOs and distressed funds. Moreover, recovery rates will be materially lower; we estimate recoveries of 50% and 40% for leveraged and middle market loans. Lastly, concentration risks are high as the majority of LL/MM growth has occurred in intangible sectors (software, business service, healthcare), where collateral is harder to value.

Figure 102: Rapid growth in US speculative grade debt



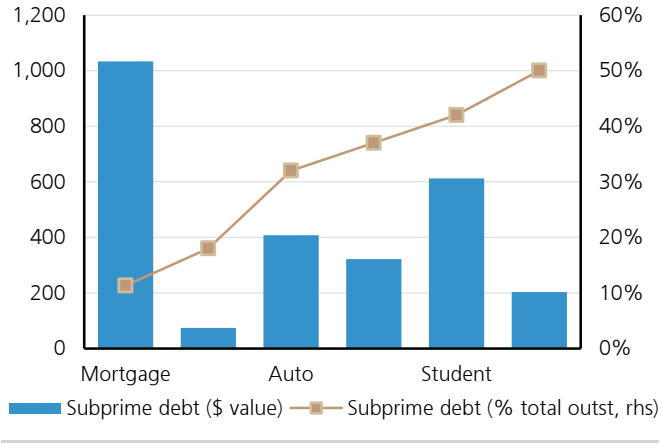
Source: Bloomberg Index Services, S&P LCD, UBS

Figure 103: Oil prices below $50 create non-linear downside risks to the HY energy sector



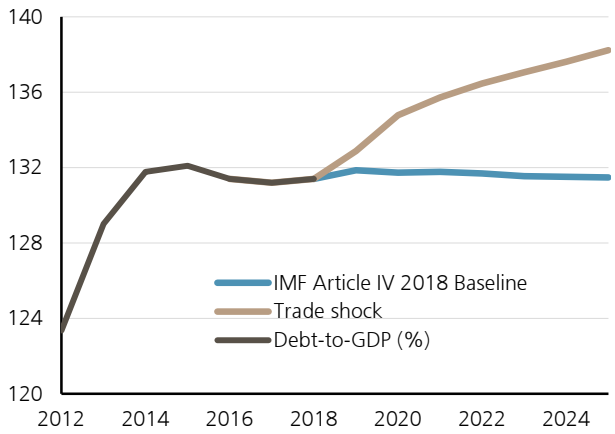
Source: Bloomberg, UBS. Note: Jun '14 to Jun '16 (blue) and Jun '18 to present (brown)

Figure 104: UBS estimates of subprime debt outstanding by loan type (below 660 credit score)



Source: Federal Reserve, UBS

Figure 105: Italy's debt dynamics are sensitive to a severe trade shock without a strong policy response



Source: Bloomberg, IMF, Italian Treasury, UBS calculations

Oil prices below $50 create non-linear risks to US HY (energy) credit

Second, the weakened credit quality of the (high yield) energy sector poses downside risks, particularly if oil (WTI) prices fall below $50 (Figure 103). This reflects the structural shift in investors' view of the sector to reflect shorter and more volatile cycles, rising costs of capital and full cycle returns where the terminal oil value is uncertain; the implication is WTI needs to be at or above $50 for many HY E&P and service firms to operate profitably, and HY energy spreads are increasingly non-linear with WTI below $50 (Figure 103).

US consumer credit pockets appear vulnerable

Third, in US consumer credit, 40-45% of US household finances have come under pressure due to rising wealth inequality, higher leverage, rising expenditures and sluggish cumulative wage growth (Figure 104). This is evident for example, in record debt-to-income ratios for FHA loan and auto loan delinquencies at the 80-90th percentile for consumers with scores sub 720. We have estimated this higher risk or subprime consumer carries $2.6tn in debt, mainly FHA mortgage ($1.0tn), student ($0.6tn), auto ($0.4tn), credit card ($0.3tn) and personal unsecured ($0.2tn) loans. And higher risk loans as a share of consumer debt outstanding by category are material for autos (30-35%), credit cards (35-40%), student (40-45%) and personal unsecured loans (c. 50%). Reliance on informal lending channels can prove to be an additional source of pressure, as banks are unlikely to step in.

2. Italy as the weakest link in the European Periphery

Italy's debt trajectory is highly vulnerable to a severe growth shock…

In the escalation scenario we expect growth of between 0.7%-1.1% in the Eurozone, but if Europe fails to grow at all, the Italian government's primary surplus falls from a projected 1% of GDP in 2019 (using the IMF's latest baseline inputs in its 2018 Article IV DSA for Italy) to 0.5% of GDP by 2020. Market interest rates are assumed to rise by only a modest 50bps across the curve in this scenario from current levels (c. 2.3% in 10y BTPs), as ECB policy response is not particularly aggressive. Even under those (fairly sanguine) assumptions, Italy's debt-to GDP ratio is projected to rise to c. 138% of GDP by 2025 (Figure 105).

Italy's debt trajectory is highly vulnerable to a severe growth shock…

…at a time when there is limited policy space for the ECB

Markets will be quick to factor in such a risk. And as it typically happens, markets will gauge the threshold of pain tolerance for policy makers. Only this time, the monetary policy space for the ECB, as well as the desire to extend measures proportional in scale to 2008 is a lot more limited.

Using the 2018 episode as our guide, the pain threshold for BTPs was c. 3% in the 10y tenor. As 10y BTPs breached this level, BTP curve inversion intensified. This absolute yield level could remain a relevant threshold this time around too, even as the recent rally in Bunds has given more breathing space to Italy in spread terms.

We see pain threshold of 10y BTPs at 3%…

In terms of contagion to the rest of periphery markets, the bulk of the spread widening also took place around the time of BTP curve inversion, first in May-2018 (when the issue of Euro-membership was in full swing); and then during the Autumn and ahead of the 2019 budget compromise with the EC. An inverted credit curve signals a high probability of an imminent credit event, with negative repercussions for Italy's perceived credit peers.

…with some contagion to the rest of the periphery markets…

In order for Italian credit risk to shift from being structural to systemic in nature, we would need to see a stark pick-up in Italian unemployment and evidence of deterioration in the outlook for the Italian consumer. This tends to have a negative feedback loop into BTP spreads and equity prices as we saw back in 2016 when the unemployment rate rose by ~30bp to 11.8% and BTP spreads widened 60bps to 130bps and the FTSEMIB fell -10%.

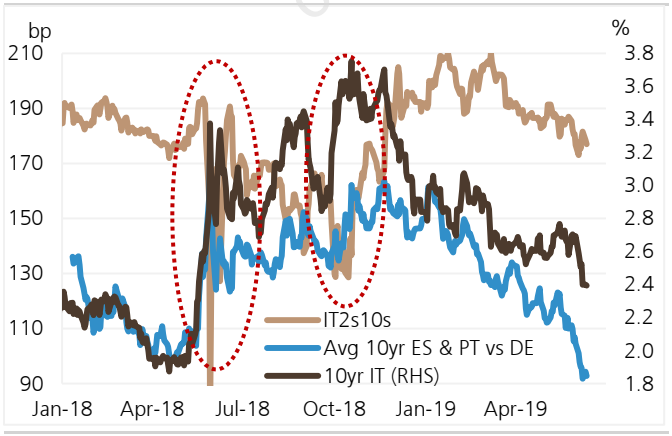
…Italian unemployment will be a key indicator in terms of Italian risk becoming potentially systemic…

Why is this important? A hit to Italian credit spreads more broadly, through wider BTP spreads, could begin to hurt Italian bank credits in particular. This is largely due to the fact that higher funding costs for banks will put greater pressure on margins, at a time when profitability remains challenged, while a recessionary growth backdrop will lead to potential new loan losses in addition to any realised losses from the already high existing stock of NPLs.

This issue in our view is unlikely to be isolated to Italy alone, and we would expect EU financial credit spreads more broadly to also face downward pressure on the back of a widening in BTP spreads (Figure 106), while lower EU equity prices on the back of downside risks to our growth forecast will also amplify any spread widening. Based on our analysis, EU sub-financial spreads in particular have exhibited a non-linear relationship to EU bank equity prices (Figure 107), with a 10%-15% fall in EU bank equity prices from current levels (170bp) implying EU sub-financial spreads at 290-320bp, and peak non-linearity occurring when the equity market cap to assets ratio is in the 3.4-3.6 range (~3.8 today).

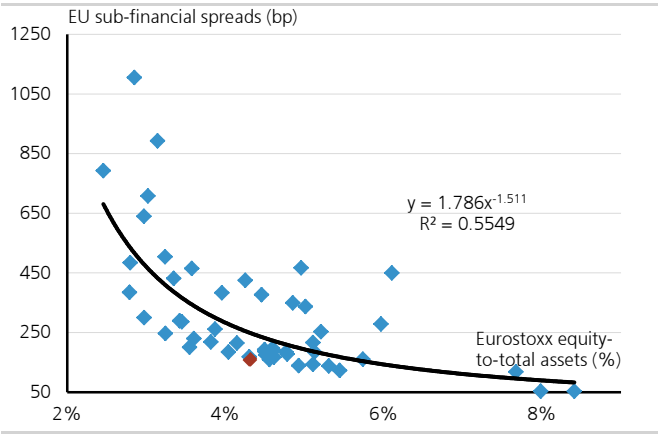
A 10%-15% fall in EU bank equity prices from current levels (170bp) implies EU sub-financial spreads at 290-320bp (+150bp) reflecting non-linearities

Figure 106: Historically, the BTP curve has tended to invert as 10y yields approach 3%; some contagion also follows



Source: Bloomberg, UBS

Figure 107: Non-linear relationship between sub-financial spreads (bp) and EU financials equity-to- assets (%)



Source: Bloomberg, UBS

3. Knock-on effects of a weaker CNY

Under a strong policy desire for FX stability, lies a worrying deterioration in the balance of payments.

As a base case we expect any depreciation in the CNY to remain orderly. The stability in China's FX reserves says there has been little stress on China's balance of payments at a headline level. However, external imbalances are building up and, if CNY depreciation is not contained, it could have a large impact on other assets.

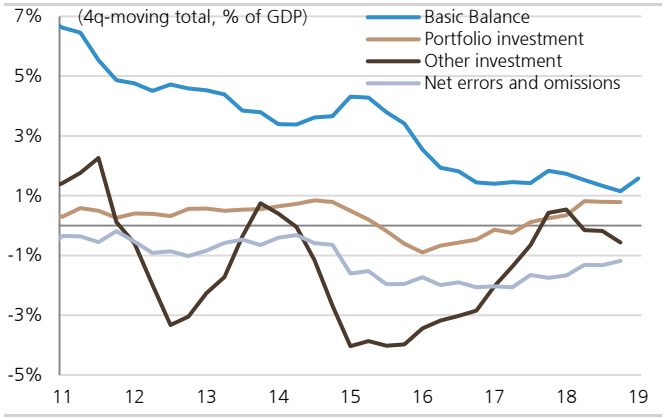
It is important to appreciate the undercurrents beneath the stable reserves headline. Portfolio inflows have grown to around 2% of GDP annually between end 2015 and end 2018. Against this, the current account has deteriorated by roughly the same amount (Figure 108). The first risk is that portfolio flows into China could stall, while trade tensions lead to current account and FDI deterioration of between 1.2-1.7% of GDP in 2019 and 2020, (relative to the starting point in 2018). The second and possibly more important risk is that, with USD27.5tn in M2 and only USD3.1tn in FX reserves, even a partial leakage of domestic liquidity abroad could test of the effectiveness of capital controls—if FX intervention is needed as a supplement to counteract such outflows, confidence in currency stability could be undermined potentially leading to further currency pressure. There is every sign that policymakers understand this, and will not use currency weakness in their trade dispute with the US. But a domestic slowdown in the coming quarters, particularly one centred around the housing market, could also put pressure on reserves. Over the past 5-7 years, housing cycles have correlated strongly with the degree of outflow from China's capital account (Figure 109). Importantly, at nearly 5% of GDP these swings (in the 'other investment' part of the capital account) have been much larger than portfolio flows, current account or FDI flows. China could of course clamp down harder to limit outflow, but Figure 109 shows that the cycle has mattered.

What would be the impact on global assets from a weaker CNY? We estimate sensitivities of global currencies, stocks, bonds and credit to higher USDCNY, controlling for moves in commodities, global equity and duration asset benchmarks. In this exercise we separated full sample betas (weekly data since 2011) from the spells of CNY weakness, during which USDCNY has trended higher for more than a continuous 12-week period.

Who gets hurt the most from a weaker CNY?

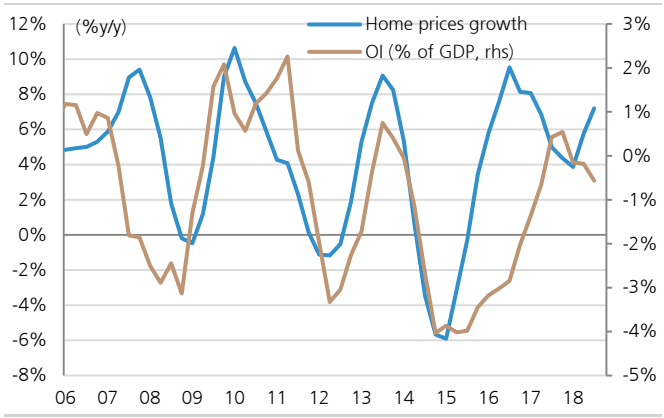
The results suggest that in **equities** (in local currency), some EM commodity exporters and Eurozone (EZ) stocks display a very high beta to CNY depreciation. The US beta is much lower, as shown in Figure 110. China's geographic & economic circle – North Asia, Australia and India – has not shown strong CNY sensitivity (low coefficients), driven as they are by global factors (both in the full sample and under spells of CNY depreciation). This likely also speaks to their lower sensitivity to tighter liquidity and weak risk appetite, which has often been coincident with a weaker CNY.

Figure 108: China Balance of payments (4qma, % of GDP)



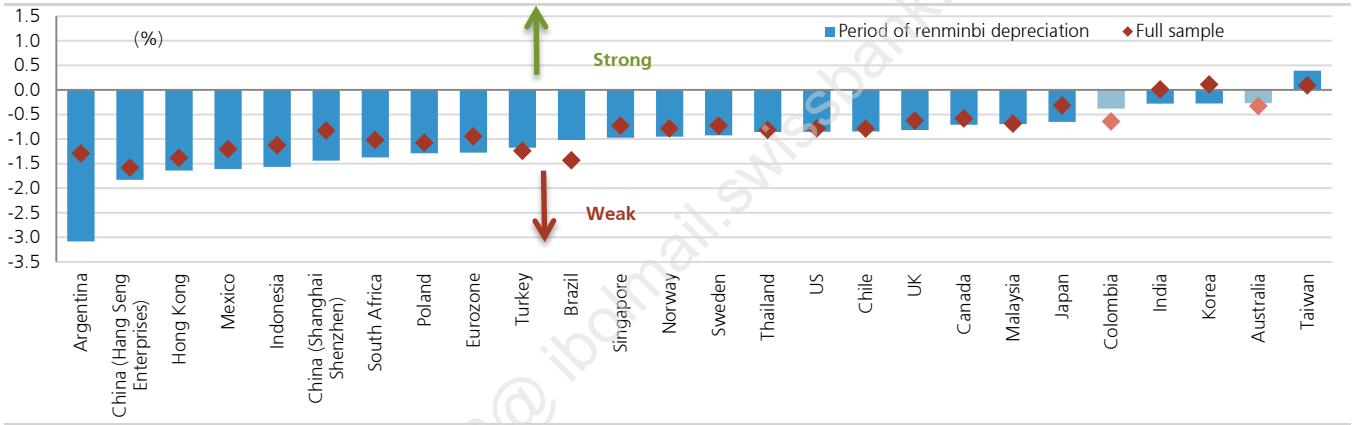
Source: Haver, UBS

Figure 109: 'Other Investment' on the capital account and house price growth



Source: Haver, UBS

Figure 110: Impact of a 1% change in USDCNY: Global equities

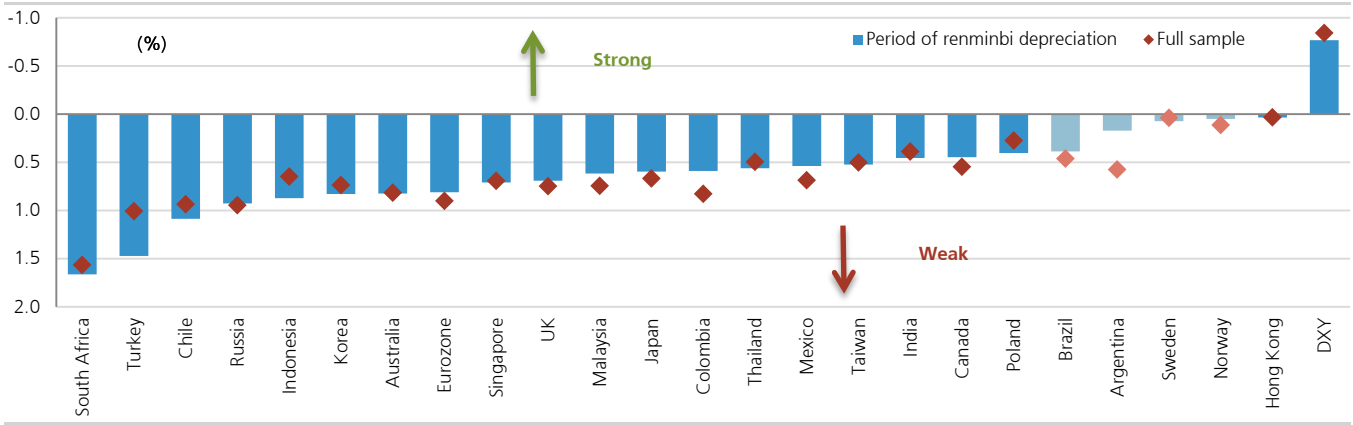


Source: Bloomberg, Haver, UBS. Note: Light bars indicate statistically insignificant betas. The periods of concentrated CNY weakness are: i) Apr-2015 to Dec-2016, ii) Apr-2018 to Nov-2018, iii) 10th Apr-2019 to present.

In **currencies,** commodity exporters and CA-deficit countries naturally screened as the most vulnerable with Malaysia and Indonesia most exposed in Asia. The EUR has exhibited a lower beta to USDCNY during concentrated CNY weakness. This implies that in periods of stress, the EUR has tended to hold its own (Figure 111). It is possible, therefore that the EUR benefits once the USD tops out in mid-2020, even in the context of weak CNY.

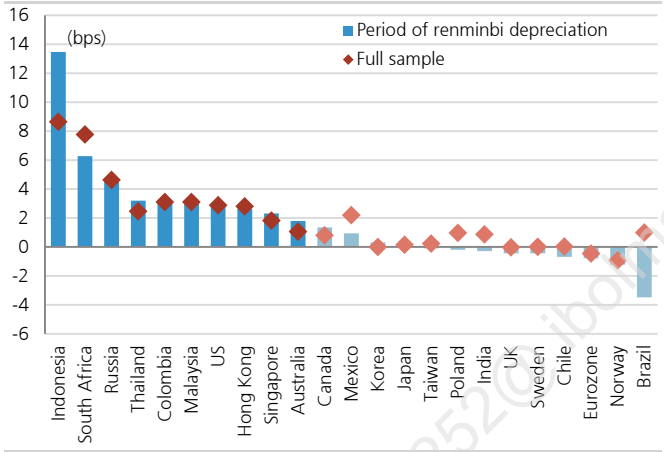
Thus far there has been an insignificant impact of USDCNY moves on core **bond** markets; but, we believe that as CNY volatility rises, the disinflationary impact globally could be felt in the core bond markets as well. For the US this may be compounded by it being the only safe haven with carry, and fears of a global liquidity trap (Figure 112). In **credit**, high-rated EU HY and US HY are most sensitive to CNY weakness, with lesser impact on EM sovereigns and EM corporates and little impact on IG markets (Figure 113).

Figure 111: Impact of a 1% change in USDCNY: Global currencies



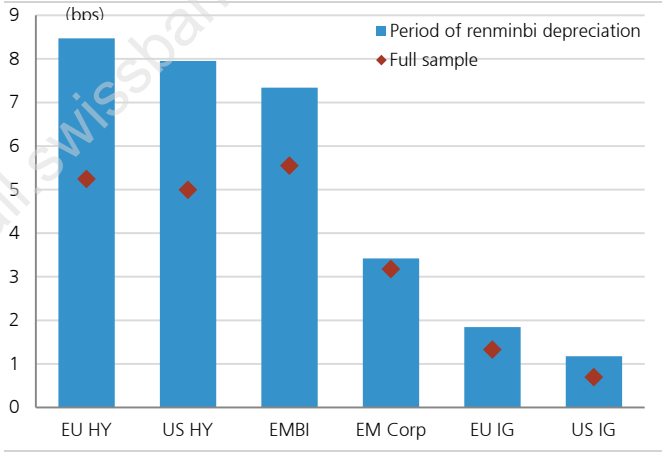
Source: Bloomberg, Haver, UBS. Note: Light bars indicate statistically insignificant betas. The periods of concentrated CNY weakness are: i) Apr-2015 to Dec-2016, ii) Apr-2018 to Nov-2018, iii) 10th Apr-2019 to present.

Figure 112: Impact of a 1% change in USDCNY: Global rates



Source: Bloomberg, Haver, UBS. Note: Light bars indicate statistically insignificant betas. The periods of concentrated CNY weakness are: i) Apr-2015 to Dec-2016, ii) Apr-2018 to Nov-2018, iii) 10th Apr-2019 to present.

Figure 113: Impact of a 1% change in USDCNY: Global Credit



Source: Bloomberg, Haver, UBS. Note: Light bars indicate statistically insignificant betas. The periods of concentrated CNY weakness are: i) Apr-2015 to Dec-2016, ii) Apr-2018 to Nov-2018, iii) 10th Apr-2019 to present.

Relationships and sensitivities are unstable, especially at extremes. That is why it is important to track factors such as China housing weakness, which may accelerate CNY depreciation. However, should the CNY break away weaker from the current level: a) the US equity markets may be better positioned than most in EM and European markets; b) the degree of EUR weakness may be limited; and c) China is unlikely to make any competitiveness gains as most EM currencies react with a high beta.

Box: Trades for things going right

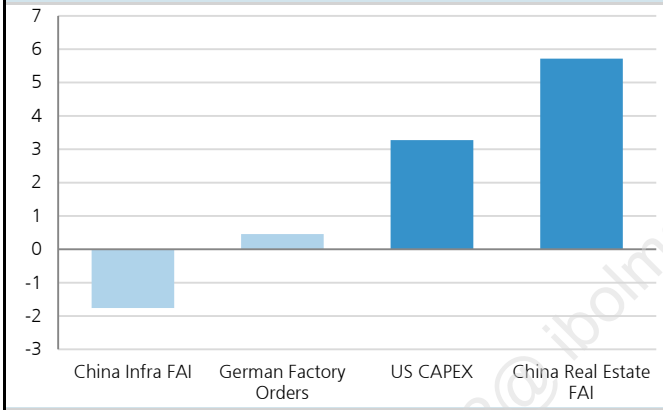
The bulk of this document has focussed on the impact of an escalation in the trade war, as we believe the market risks are skewed to the downside. But, which assets would react most positively if a sustainable trade truce were to be found?

'Right tail' trade #1: Long MSCI China

Chinese equities have been among our most preferred EM assets for 2019. We expected this year's China policy easing to be EPS-accretive domestically but be less helpful for the rest of EM. Our calculations show that EM earnings growth's beta to China infrastructure FAI is statistically insignificant, while that beta to China housing was positive and significant (Figure 114). Our country strategists think that benign liquidity conditions will persist in the coming months, which keeps us Overweight China in EM. A potential trade deal may constrain the Chinese monetary stimulus; however, we believe that in such scenario valuation re-rating should more than offset tighter financial conditions. MSCI China's P/E discount to EM has stretched the widest level since in three years (Figure 115). Despite the recent increase in US-China trade tensions, China has remained a small outperformer within MSCI EM YTD (Figure 116). Heightened uncertainty made our China strategists' recommendations more defensive, as they reduced their model portfolio's exposure to Internet, Financials and Autos.

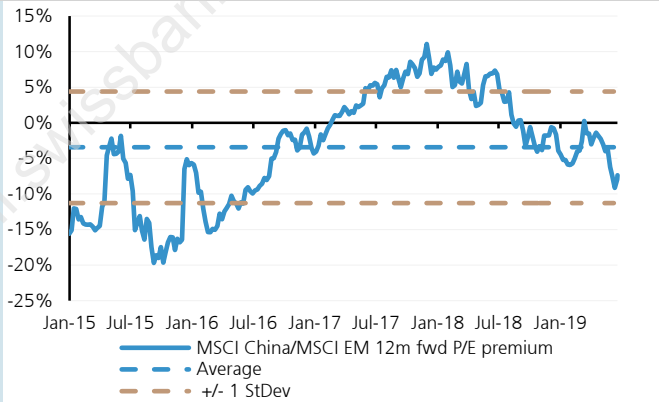
In the event of trade war de-escalation, we would naturally expect a broad rally in Chinese equities. Our recent EM stock screen for the 'right tail' protection (page 31 in our Q-Series report) is clearly dominated by Chinese companies, which represent 10 out of 11 GICS sectors.

Figure 114: T-stats of EM EPS across types of spending



Source: Haver, MSCI, Datastream, UBS; Note: Light-coloured bars indicate insignificant betas.

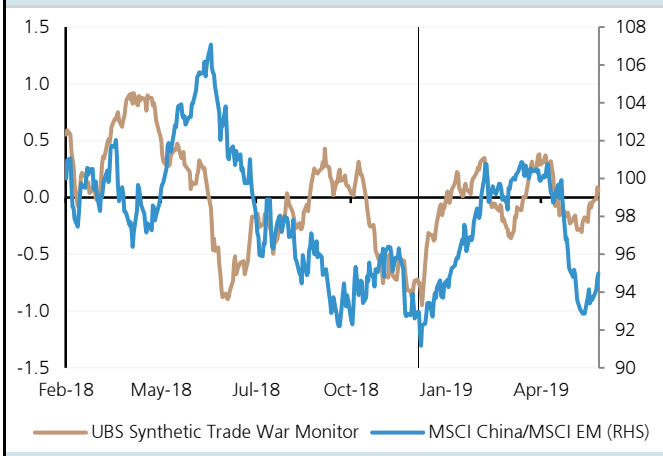
Figure 115: MSCI China/EM 12m forward P/E premium



Source: IBES, MSCI, Datastream, UBS

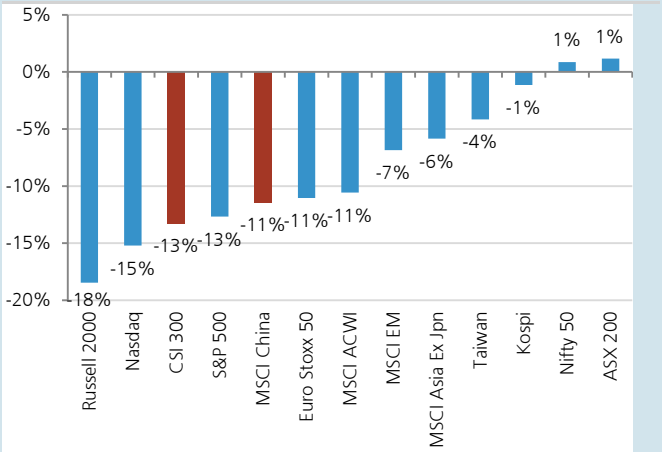
Our 'trade discount' analysis shows that the MSCI China and CSI 300 indices have been 'penalised' more than their EM and APAC peers, including Korea, Taiwan, India and Australia (Figure 117). We believe that results of this exercise add further support to our view that the Chinese equities have more room for a potential rebound if trade worries fade.

Figure 116: MSCI China/EM vs Synthetic Trade War Monitor



Source: Bloomberg, Haver, MSCI, Datastream, UBS

Figure 117: Penalty from trade tensions in last 12 months



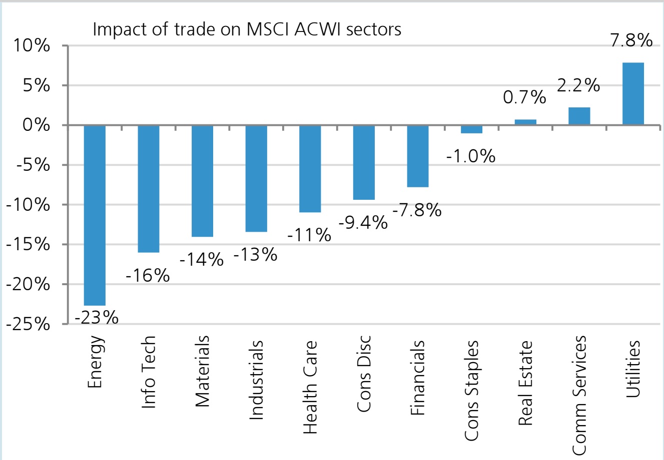
Source: Bloomberg, UBS

'Right tail' trade #2: Long MSCI ACWI Energy vs MSCI ACWI Utilities

The 31pp 'trade spread' should narrow on a potential resolution.

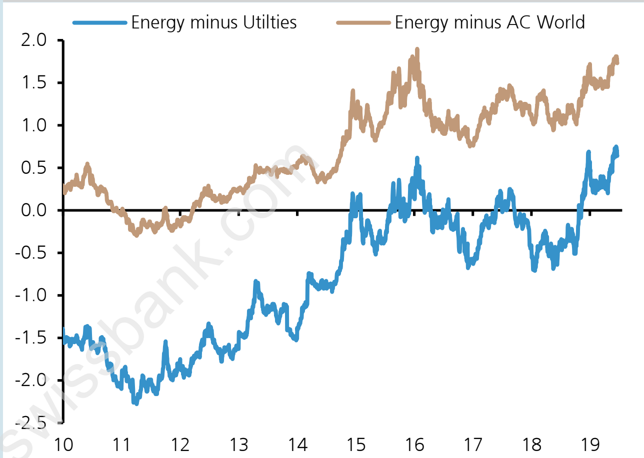
Energy has been hit the hardest by trade tensions based on our CFO survey work as well as our 'trade discount' framework, creating a counterfactual return series excluding 'trade shock' days (Figure 118). Using this approach, we estimate that Energy equities globally have a 23% trade discount. From a "value" perspective, Energy dividend yields are now 1.7pp above the market globally, at historical highs (Figure 119). On the other hand, Utilities has the most negative correlation to trade developments and has the largest premium for trade across equities at 8% currently. A trade resolution would see global growth, IP and trade activity improve, boosting oil prices, while a rise in rates would hurt Utilities.

Figure 118: Penalty from trade tensions in last 12 months



Source: Bloomberg, UBS

Figure 119: MSCI ACWI Energy relative dividend yield



Source: Bloomberg, UBS

Within the global energy sector, we screen for stocks that are: 1) Buy rated by UBS analysts, 2) in the top 30% in terms of FCF yield, and 3) in the top one-half based on a composite Quality score (Figure 120). While higher-beta Energy stocks would likely bounce on a resolution, we focus on the theme within the Energy sector that should do well through the volatility – stocks that are generating strong FCF and returning it to their shareholders.

Figure 120: Global Energy stock screen – UBS Buy-rated with FCF yield in the top 30% and above-median Quality score

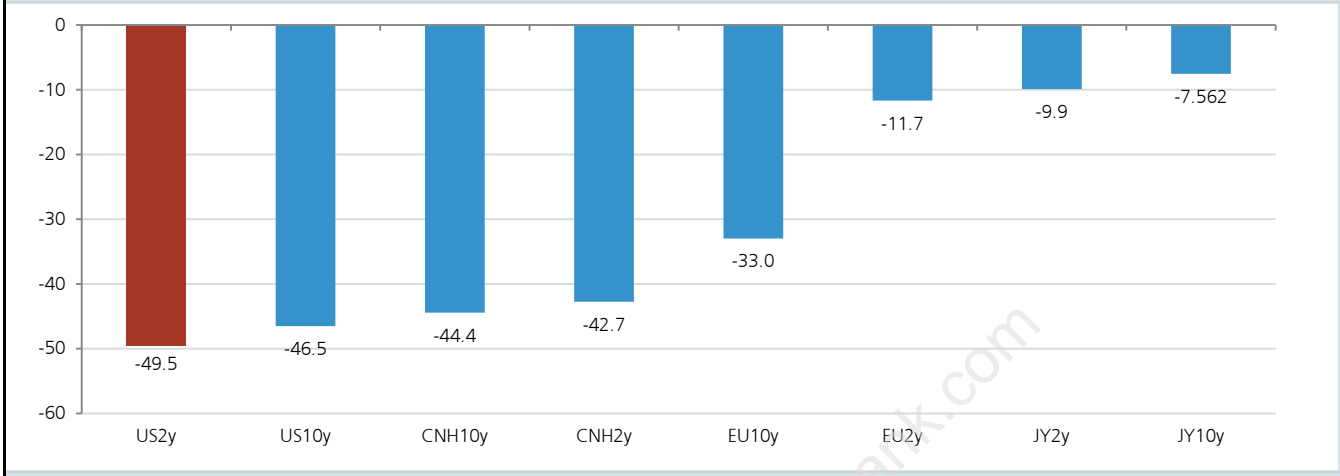
Company	Bloomberg ticker	Country	UBS rating	Mkt cap (USDbn)	Upside to price target	Trailing FCF yield	Sales growth	Forward EPS growth	Quality score
Royal Dutch Shell	RDSA LN	Netherlands	Buy	264.5	13%	10%	22%	10%	0.26
Chevron	CVX US	USA	Buy	236.7	8.6%	8%	18%	7%	0.31
PetroChina H	857 HK	China	Buy	177.3	61%	9%	21%	13%	0.39
Total	FP FP	France	Buy	146.5	25%	8%	18%	38%	0.19
Sinopec	386 HK	China	Buy	92.7	32%	15%	28%	-1%	0.46
Lukoil	LKOH RX	Russia	Buy	63.2	13%	14%	35%	-2%	0.85
Schlumberger	SLB US	USA	Buy	53.0	36%	7%	8%	9%	0.08
Suncor Energy	SU CT	Canada	Buy	50.0	26%	8%	20%	0%	0.38
Canadian Nat Resources	CNQ CT	Canada	Buy	33.3	50%	14%	26%	0%	0.49
Oil & Natural Gas	ONGC IS	India	Buy	31.0	40%	15%	156%	47%	0.59
Indian Oil	IOCL IS	India	Buy	20.8	28%	9%	49%	0%	0.1
OMV AG	OMV AV	Austria	Buy	15.8	41%	9%	13%	26%	0.27
Aker BP	AKERBP NO	Norway	Buy	10.3	47%	24%	42%	25%	0.92
Kunlun Energy	135 HK	Hong Kong	Buy	7.2	58%	15%	22%	36%	0.19
Hindustan Petroleum	HPCL IS	India	Buy	6.4	52%	9%	47%	-12%	0.24
Petronet LNG	PLNG IS	India	Buy	5.2	18%	7%	56%	19%	0.83

Source: Bloomberg, UBS estimates and UBS Quantitative Research

'Right tail' trade #3: Pay US 2-year rates

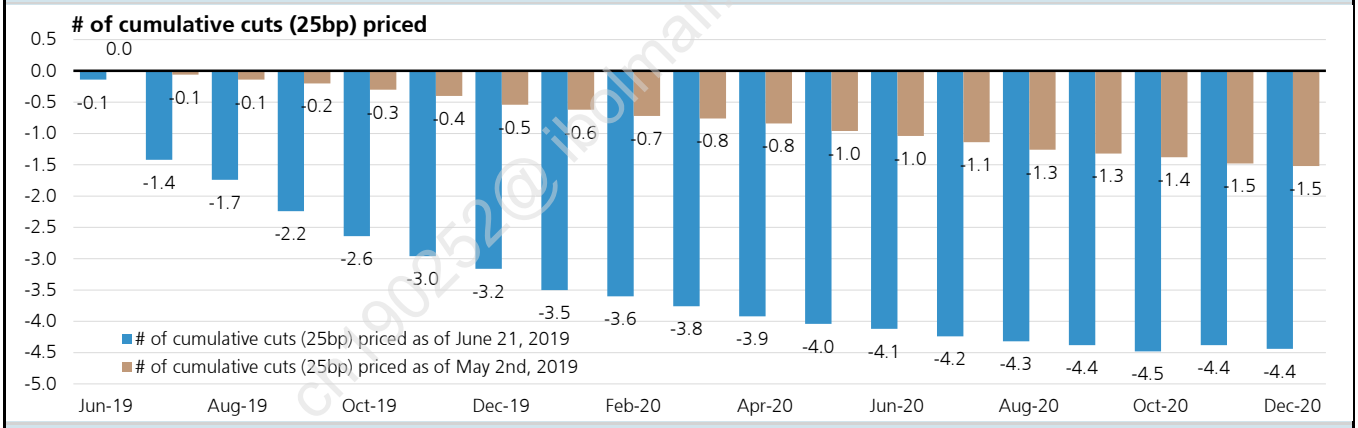
We have argued that rates and volatility across global markets are sending conflicting signals. In event that the trade negotiations are really just posturing, the message from (low) volatility would be right, and the fears in rates would have been proven wrong. In this event, paying front-end US rates would make sense.

Figure 121: Estimated rates rally caused by trade war tensions over the last 12 months



Source: Bloomberg, UBS

Figure 122: Cumulative Fed rate cuts priced-in as of 2nd May 2019 and today



Source: Bloomberg, UBS

On our estimates, the trade war has suppressed yields in the US bond market more than anywhere else, especially at the 2-year tenor (Figure 121). More simply, 2-year notes were trading at 2.35% in very early May, just ahead of the resurrection of the trade war and are now trading below 1.80%.

In the event of a trade resolution, the market will start to price-out most of the three 'pre-emptive' cuts. Our economists' base case is that the Fed will then stay on hold all through 2019 and 2020 before resuming a hiking cycle in 2021, with 50bp of hikes in H1. Amidst weakening growth and risks of another trade hit, the market will likely not completely de-price cuts, but we believe market could price-in around 50bp cuts over two years, as opposed to around 100bp in cuts today (Figure 122). This should make for 2-year notes rising towards 2.2-2.3%.

Appendix I: "What if" Mexico Tariffs had gone ahead?

A deal was struck, but what if the US ultimately imposes tariffs on Mexico?

The US and Mexico reached an agreement last week that defused the immediate threat of tariffs. However, the risk that the US will ultimately impose them is no longer negligible, in our view

The US and Mexico reached a migration agreement l that "suspended" the introduction of tariffs "indefinitely". The Trump administration had announced that it would impose 5% tariffs on all Mexican goods starting on June 10 increasing them on a monthly basis until a ceiling of 25% was reached, unless Mexico agreed to do more to control the flow of Central American migrants arriving in the US. Despite the new immigration deal, we see a non-negligible risk of the US revisiting the use of tariffs in the run-up to the presidential election, particularly if the number of migrants arriving at the border continues to rise.

A trade war with the US would have severe consequences for the Mexican economy, transformational if sustained

If the US were to impose up to 25% tariffs on imports from Mexico, the effects on the Mexican economy would be devastating. The effective tariff increases will actually be larger on account of the fact that many intermediate goods in manufacturing cross the border more than once before they are assembled. Moreover, if imposed, Mexico would retaliate, compounding the problem.

A 25% tariff could shave off as much as 4% off of Mexican GDP, but the peso could help mitigate this impact

Given the size of Mexican exports to the US (USD322bn in the past 12 months, roughly 25% of GDP), a 25% tariff could take a big bite off of Mexican GDP. True, Mexico is first and foremost a re-assembler, so if its exports fall, so do its imports. Moreover, Mexico has a floating exchange rate that can help mitigate the hit of higher tariffs. However, here the high import-component of exports (as much as 30% of Mexican exports to the US can be accounted for by US content) amplify the needed currency devaluation for a given tariff increase, especially if Mexico retaliates (see Fig 3). In a 25% tariff stress scenario, if the economy were to adjust by volume alone, we estimate that it would contract by some 4.0 percentage points of GDP. If the peso were to mitigate half of that impact, we think it would need to depreciate to around 24.50 against USD.

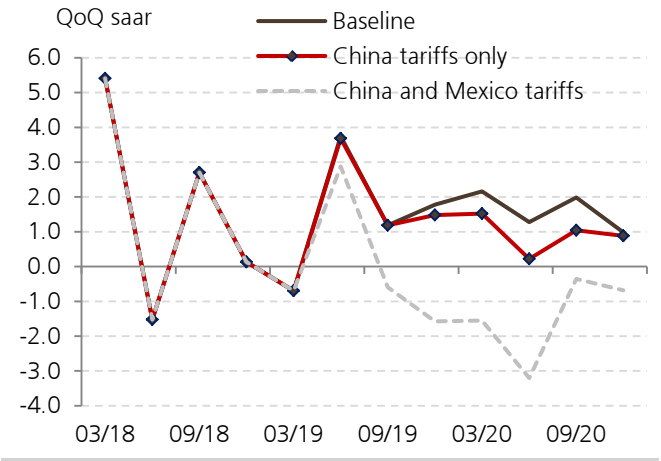
The trade war-induced recession in the US would only make things worse, with both investment and consumption slowing sharply

Other factors would make Mexico's economic downturn worse. For one thing, the US would also be falling into recession on account of China and Mexico tariffs, reducing demand for Mexican export goods further. Investment, already in negative territory, could fall by close to double digits if Mexico lost its competitive edge supplying the US market. Consumption, meanwhile, would be assailed by an accelerated increase in unemployment and falling real wages.

In our stress scenario, growth dips to 0.6% this year, but contracts by 1.4% next year. The hit, however, may well be larger on account of non-linearities. 25yr gains under NAFTA could be at risk

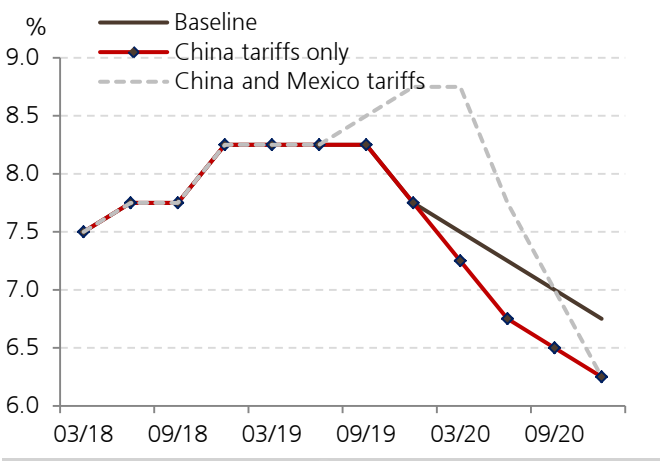
All told, in a 25% tariff stress scenario we think the economy would slow to 0.6% growth in 2019 vs our baseline of 1.2% and fall by 1.4% in 2020 (vs +1.7% baseline). That said, we recognize that the risks to these numbers could be skewed to the downside on account of non-linearities. A persistent imposition of a 25% tariff could essentially unwind the integration with the US achieved by NAFTA in the past quarter century, putting the survival of vital supply chains at risk. Not only would the manufacturing sector be negatively affected, but large segments of services that are closely intertwined with it such as transport would also suffer. Moreover, these tariffs would hit those sectors of the economy with the highest rates of productivity, reducing the country's potential growth rate in the process.

Figure 123: Mexico's growth would have been materially lower with US tariffs



Source: UBS

Figure 124: And Banxico would have been hiking to contain peso weakness



Source: UBS

Unfortunately for Mexico, the space for policy response is limited. The country had counted on more trade certainty with the US to help support investment, but the threat that the US may impose tariffs on an ad-hoc basis even if USMCA is ultimately ratified questions that assessment. With close to 80% of its exports still sold to the US, Mexico cannot diversify on a dime. On the fiscal front, the government already has its hands tied by the need to prop up the troubled oil company, Pemex, at a time when revenues are below budget. This leaves monetary policy as the most likely source of potential stimulus. But Banxico faces constraints of its own. Inflation, running above the CB's target at present, could increase by more than 200bps due to the depreciation of the peso to levels mentioned above coupled with the imposition of retaliatory tariffs. In fact, faced with a sharply weaker peso, we think Banxico's initial reaction relative to our baseline could well be to raise interest rates even if the Fed were easing at that point. However, once the currency stabilizes and base effects on inflation start to dissipate, we would expect large interest rate cuts to follow, much as was the case in 2009.

We see limited scope for policy to cushion the blow. Banxico would have to deal with a much weaker peso and higher inflation before embarking on aggressive interest rate cuts

Lastly, how do we see Mexico in a scenario where no tariffs are imposed on it but there is a ramp up in trade tensions between the US and China. In the scenario where the US imposes higher tariffs on China, Mexico would continue to capturing import market share in the US. However, we see this as a second-order effect. The first order-effect – the fact that the US would be slowing relative to baseline – is the more important impact and one that would be negative for Mexican growth. Moreover, if EM as an asset class came under stress, we think this would delay Banxico's ability to start its easing cycle.

In the vent that the US does not impose tariffs on Mexico but does so on China, Mexico would continue to capture market share north of the border but this effect would be trumped by the slowdown in US activity

Appendix II: Screens for stocks negatively impacted by trade

The stock list below is based on the 115 stocks identified by UBS analysts as most impacted by trade tensions in our last summer's Q-Series report. The 15 companies included in this screen are fundamentally vulnerable to a potential escalation in the trade war, are UBS Sell or Neutral rated and also trade at above-median valuations relative to the benchmark based on P/B and forward P/E compared to last the five years. Given the higher valuation and UBS rating, these stocks could underperform if the trade situation deteriorates further.

Figure 125: Trade-impacted stocks with above-median P/E and P/BV average valuation relative to the respective DM/EM MSCI index benchmark

Company	Bloomberg ticker	Country	Sector	UBS rating	Mkt Cap (USDbn)	Current price	UBS price target	Upside to price target	12m fwd P/E	P/BV	Average percentile of P/E & P/BV	YTD performance vs MSCI World	YTD performance
Qualcomm	QCOM US	USA	IT	Neutral	88.4	72.7	80.0	10%	15.3	22.8	85%	13%	30%
Illinois Tool Works	ITW US	USA	Industrials	Neutral	49.6	152.2	150	-1%	18.6	15.5	76%	4%	21%
Pernod Ricard	RI FP	France	Cons Staples	Neutral	49.3	163.8	150	-8%	23.3	2.8	92%	-3%	13%
Best Buy	BBY US	USA	Cons Disc	Neutral	18.3	68.4	72.0	5%	11.8	5.4	51%	13%	31%
Freeport-Mcmoran	FCX US	USA	Materials	Neutral (CBE)	16.5	11.4	14.0	23%	18.2	1.7	58%	-4%	11%
Burberry	BRBY LN	Britain	Cons Disc	Neutral	9.2	1,780	1,900	7%	20.5	5.0	51%	-12%	2%
Remy Cointreau	RCO FP	France	Cons Staples	Neutral	6.9	121	115	-5%	30.9	4.2	76%	4%	21%
ITT Inc	ITT US	USA	Industrials	Neutral	5.7	64.7	61.0	-6%	17.1	3.0	82%	16%	35%
Jiangsu Hengli-A	601100 CH	China	Industrials	Neutral	4.0	30.3	32.0	6%	20.8	5.6	54%	32%	53%
Fanuc	6954 JP	Japan	Industrials	Sell	37.9	19,860	15,800	-20%	36.6	2.7	55%	8%	25%
EMS-Chemie	EMSN SE	Switzerland	Materials	Sell	15.1	632	485	-23%	27.7	9.1	60%	17%	36%
Expeditors Intl.	EXPD US	USA	Industrials	Sell	13.1	76.3	66.0	-14%	21.1	6.2	65%	-3%	13%
Seek Ltd.	SEK AU	Australia	Industrials	Sell	5.3	21.9	18.5	-15%	34.6	5.5	88%	11%	29%
Ferragamo	SFER IM	Italy	Cons Disc	Sell	4.0	21.0	16.2	-23%	31.2	4.8	54%	3%	19%
Shandong Hi-Sp-A	600350 CH	China	Industrials	Sell	3.4	4.8	3.8	-21%	12.1	0.8	53%	-8%	7%

Source: Bloomberg, UBS estimates and UBS Quantitative Research. Note: P/E and P/BV percentiles were calculated based on the respective valuation premia to the MSCI World index for DM stocks are to the MSCI EM index for EM stocks over last five years. Average valuation percentile is the simple average of the P/E and P/BV percentiles. This list of securities contains stocks that may be impacted by a specific scenario. The scenario described herein might not necessarily be aligned with the base-case view of UBS equity analysts. Any reference to current rating is to the rating given in the latest published UBS research report relating to the relevant company. Such reports are available on UBS Neo.

We screen for Sell or Neutral rated stocks with higher growth and low FCF yields globally with at least $5bn in market cap that have historically underperformed at the last stages of an economic cycle when growth slows. We select stocks that are: 1) in the bottom 30% on FCF yield, 2) in the top 30% on sales and EPS growth, 3) in the bottom 60% on the UBS Quant team's Quality score.

Figure 126: 'Growth at any price' screen – Non-UBS-Buy-rated with FCF yield in the bottom 30%, Sales and EPS growth in top 30% and Quality score in bottom 60%

Region	Company	Bloomberg ticker	Country	Sector	UBS rating	Mkt Cap (USDbn)	Current price	UBS price target	Upside to price target	Trailing FCF yield	Sales growth	Forward EPS growth	Quality score
USA	Snap A	SNAP US	USA	Comm Services	Sell	19.9	14.8	8	-46%	-5%	43%	77%	-0.76
	Zayo Group	ZAYO US	USA	Comm Services	Neutral (CBE)	7.7	32.9	35	7%	2%	18%	68%	0.12
	Hess	HES US	USA	Energy	Neutral (CBE)	18.6	61.3	60	-2%	-1%	14%	136%	-0.02
	Dexcom	DXCM US	USA	Health Care	Neutral (CBE)	14.2	156	140	-10%	1%	44%	161%	-0.37
	Perkinelmer	PKI US	USA	Health Care	Neutral	10.7	96.1	99	3%	2%	23%	95%	-0.09
	Advanced Micro Devices	AMD US	USA	IT	Neutral (CBE)	32.5	30	24	-20%	0%	22%	154%	-0.17
	Crown Holdings	CCK US	USA	Materials	Neutral	8.1	59.6	61	2%	1%	28%	67%	-0.2
	Crown Castle Intl.	CCI US	USA	Real Estate	Neutral	56.9	137	130	-5%	1%	23%	26%	-0.17
Europe	Genmab	GEN DC	Denmark	Health Care	Neutral	11.3	1,211	1,180	-3%	1%	28%	30%	-0.48
	Sartorius Vorzug	SRT3 GY	Germany	Health Care	Neutral	15	187	147	-21%	0%	11%	47%	0.22
	Vifor Pharma	VIFN SE	Switzerland	Health Care	Sell	9.4	142	120	-16%	1%	18%	110%	0.22
	Hardie (James) Ind Cdi	JHX AT	Ireland	Materials	Neutral	5.8	19.1	19.7	3%	0%	29%	62%	-0.33
	Fortum	FORTUM FH	Finland	Utilities	Neutral	19	18.9	20.2	7%	1%	16%	42%	-0.22
APAC	JD.com	JD UW	China	Cons Disc	Neutral	42.3	29.1	32	10%	2%	30%	318%	-0.01
	S-Oil	010950 KP	South Korea	Energy	Sell	8	83,300	75,000	-10%	-24%	22%	313%	-0.52
	China Eastern Airlines H	670 HK	China	Industrials	Neutral	11.7	4.7	6.3	34%	-7%	16%	167%	-0.22
	China Sth Airlines H	1055 HK	China	Industrials	Sell	12	5.5	5.8	6%	-16%	16%	113%	-0.52
	China State Cons.	3311 HK	Hong Kong	Industrials	Neutral	5.4	8.3	7.4	-11%	-9%	11%	34%	-0.64
	Gulf Energy Dev.	GULF TB	Thailand	Utilities	Neutral	8	116	94	-19%	-7%	295%	36%	-0.43

Source: Bloomberg, UBS estimates and UBS Quantitative Research

Valuation Method and Risk Statement

Risks include macroeconomic variables (such as GDP growth rates and inflation), economic slowdown, a weakening currency, global economic events, and government policy changes, as well as company-specific risks, such as technology risk, financial risk and the competitive environment. Please refer to the links to individual stock notes for details on the respective valuation method.

Required Disclosures

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UBS Investment Research: Global Equity Rating Definitions

12-Month Rating	Definition	Coverage[1]	IB Services[2]
Buy	FSR is > 6% above the MRA.	47%	25%
Neutral	FSR is between -6% and 6% of the MRA.	39%	22%
Sell	FSR is > 6% below the MRA.	14%	19%
Short-Term Rating	**Definition**	**Coverage[3]**	**IB Services[4]**
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%

Source: UBS. Rating allocations are as of 31 March 2019.
1:Percentage of companies under coverage globally within the 12-month rating category.
2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.
3:Percentage of companies under coverage globally within the Short-Term rating category.
4:Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

KEY DEFINITIONS:Forecast Stock Return (FSR) is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months. In some cases, this yield may be based on accrued dividends. **Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium). **Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation. **Short-Term Ratings** reflect the expected near-term (up to three months) performance of the stock and do not reflect any change in the fundamental view or investment case. **Equity Price Targets** have an investment horizon of 12 months.

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Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
Advanced Micro Devices Inc[13, 16b, 20a]	AMD.O	Neutral (CBE)	N/A	US$29.10	21 Jun 2019
AIA Group[7, 16a, 22]	1299.HK	Buy	N/A	HK$82.70	21 Jun 2019
Aker BP	AKERBP.OL	Buy	N/A	NKr247.00	21 Jun 2019
Burberry[13]	BRBY.L	Neutral	N/A	1,783p	21 Jun 2019
Canadian Natural Resources Ltd[16b]	CNQ.TO	Buy	N/A	C$36.35	21 Jun 2019
Chevron[6b, 7, 16b, 26a]	CVX.N	Buy	N/A	US$124.93	21 Jun 2019
China Eastern Airlines[16b, 18a]	0670.HK	Neutral	N/A	HK$4.73	21 Jun 2019
China Southern Airlines[2, 4, 16a, 16b, 18a]	1055.HK	Sell	N/A	HK$5.56	21 Jun 2019
China State Construction International	3311.HK	Neutral	N/A	HK$8.36	21 Jun 2019
Crown Castle International Corp.[16b]	CCI.N	Neutral	N/A	US$135.78	21 Jun 2019
Crown Holdings Inc[16b]	CCK.N	Neutral	N/A	US$59.32	21 Jun 2019
DexCom Inc[16b, 20a]	DXCM.O	Neutral (CBE)	N/A	US$150.80	21 Jun 2019
Ems-Chemie[5]	EMSN.S	Sell	N/A	CHF627.00	21 Jun 2019
Expeditors International of Washington[16b]	EXPD.O	Sell	N/A	US$75.39	21 Jun 2019
Fanuc	6954.T	Sell	N/A	¥19,960	21 Jun 2019
Fortum	FORTUM.HE	Neutral	N/A	€18.94	20 Jun 2019
Freeport-McMoRan[16b, 20a]	FCX.N	Neutral (CBE)	N/A	US$11.34	21 Jun 2019
Genmab A/S	GEN.CO	Neutral	N/A	DKr1,201.00	21 Jun 2019
Gulf Energy Development[22]	GULF.BK	Neutral	N/A	Bt114.50	21 Jun 2019
Hess Corporation[7, 13, 16b, 20b]	HES.N	Neutral (CBE)	N/A	US$61.20	21 Jun 2019
Hindustan Petroleum	HPCL.BO	Buy	N/A	Rs291.90	21 Jun 2019
Illinois Tool Works[16b]	ITW.N	Neutral	N/A	US$151.93	21 Jun 2019
Indian Oil	IOC.BO	Buy	N/A	Rs153.95	21 Jun 2019
ITT Inc.[16b]	ITT.N	Neutral	N/A	US$64.56	21 Jun 2019
James Hardie Industries[13, 16b]	JHX.AX	Neutral	N/A	A$19.08	21 Jun 2019
JD.com[4, 5, 6a, 6b, 7, 13, 16b, 22]	JD.O	Neutral	N/A	US$29.06	21 Jun 2019
Jiangsu Hengli Hydraulic[13]	601100.SS	Neutral	N/A	Rmb30.97	21 Jun 2019
Kunlun Energy[16a]	0135.HK	Buy	N/A	HK$6.94	21 Jun 2019
Lukoil[18b]	LKOHyq.L	Buy	N/A	US$83.02	21 Jun 2019
MGM China[16a]	2282.HK	Buy	N/A	HK$13.16	21 Jun 2019
Oil & Natural Gas Corporation	ONGC.BO	Buy	N/A	Rs171.20	21 Jun 2019
OMV	OMVV.VI	Buy	N/A	€42.01	21 Jun 2019
PerkinElmer Inc[16b]	PKI.N	Neutral	N/A	US$95.35	21 Jun 2019
Pernod Ricard	PERP.PA	Neutral	N/A	€162.80	21 Jun 2019
PetroChina[16a, 16b, 18a]	0857.HK	Buy	N/A	HK$4.36	21 Jun 2019
Petronet LNG	PLNG.BO	Buy	N/A	Rs241.40	21 Jun 2019
Qualcomm Inc.[3, 16b]	QCOM.O	Neutral	N/A	US$72.72	21 Jun 2019
Remy Cointreau	RCOP.PA	Neutral	N/A	€120.50	21 Jun 2019
Royal Dutch Shell[2, 4, 5, 6a, 7, 12, 16b]	RDSa.L	Buy	N/A	2,584p	21 Jun 2019
Salvatore Ferragamo SPA	SFER.MI	Sell	N/A	€21.08	21 Jun 2019
Sartorius AG[13]	SATG_p.DE	Neutral	N/A	€185.70	21 Jun 2019

Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
Schlumberger Ltd.[16b, 26b]	SLB.N	Buy	N/A	US$38.88	21 Jun 2019
Seek Limited[7, 13]	SEK.AX	Sell	N/A	A$21.61	21 Jun 2019
Shandong Hi-speed Company	600350.SS	Sell	N/A	Rmb4.85	21 Jun 2019
Sinopec - H[16a, 16b, 18a]	0386.HK	Buy	N/A	HK$5.34	21 Jun 2019
Snap Inc[16b]	SNAP.N	Sell	N/A	US$14.56	21 Jun 2019
S-Oil	010950.KS	Sell	N/A	Won83,000	21 Jun 2019
Suncor Energy Inc[13, 16b, 26c]	SU.TO	Buy	N/A	C$41.75	21 Jun 2019
Tenaris[16b, 20a]	TS.N	Neutral (CBE)	N/A	US$25.98	21 Jun 2019
TOTAL[1, 2, 4, 5, 7, 16b]	TOTF.PA	Buy	N/A	€49.12	21 Jun 2019
Vifor Pharma[4, 5, 7]	VIFN.S	Sell	N/A	CHF139.95	21 Jun 2019
Zayo Group Holdings Inc[13, 16b, 19]	ZAYO.N	Neutral (CBE)	N/A	US$33.04	21 Jun 2019

Source: UBS. All prices as of local market close.
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