



# Economic and Strategy Viewpoint

May 2018

# 3

## Trade wars: An easy win for the US?



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- The US has raised tariffs on Chinese imports and China has responded in kind. However, the mood has improved lately, raising hopes of a deal between the two countries which we believe is president Trump's aim ahead of the mid-term elections in November.
- China is more limited in its scope to raise tariffs, but that does not rule out a host of measures it could take to make life difficult for US companies. Furthermore, China might be able to stick out the pain that a trade war would bring for longer than the US. It has more potential for fiscal support and, of course, President Xi's communist party will not be facing elections in the near future.

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## Trade wars and emerging markets



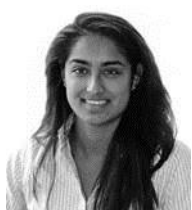
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- Trade wars will undoubtedly have EM casualties, but there could be scope for some limited gains too. For now, at least, the pain is likely to be concentrated in Asia, but that will not hold if the conflict engulfs the rest of the globe.

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## Japan: How vulnerable is Japan in trade wars?



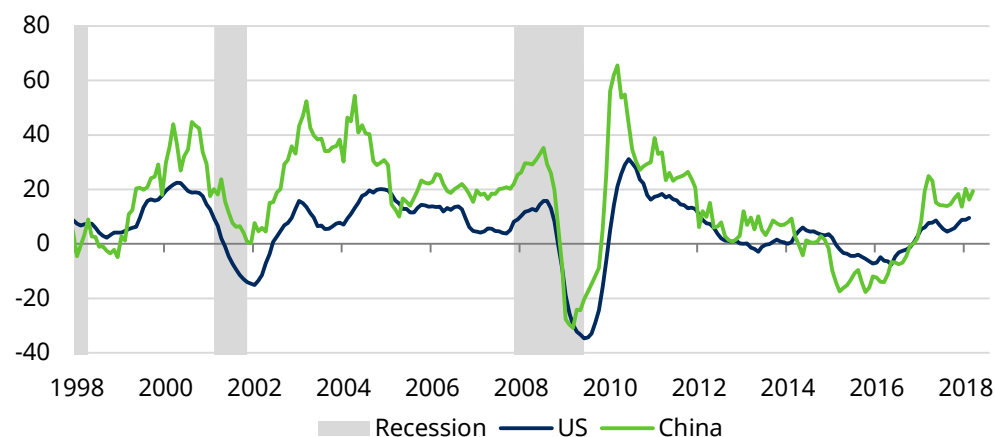
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- As long as US-China trade tensions remain contained, the impact on Japan is limited.
- The impact of US aluminium and steel tariffs on Japanese growth is minimal. Japan is the most exposed developed market economy to US-China trade wars due to its prominence in the Chinese supply chain. But as a proportion of Japanese GDP, again, the vulnerability is low.
- A surge in the yen as a safe haven asset would be a headwind to Japanese exports, inflation and earnings. Meanwhile, the cyclical nature of the equity market would likely lead to underperformance in Japanese equities.

### Chart: US and China trade remains buoyant...for now

Import value y/y % 3mma



Source: Thomson Reuters Datastream, Schroders Economics Group, 20 April 2018.

# Trade wars: An easy win for the US?

"Trade wars are good, and easy to win"

President Trump, 2 March 2018

**"America First" policy is driving the trade agenda**

Having cut taxes in 2017, the US president is now turning his attention to international trade. By increasing the pressure on China to open its markets he is fulfilling his pre-election promise to put "America First".

The US announced tariffs of 25% on \$50 billion of imports from China at the beginning of April. China responded almost immediately with 25% tariffs on \$50 billion of US exports. In reply President Trump has asked the US Trade Representative to consider whether a further \$100 billion of Chinese products could be targeted with tariffs.

The US tariffs follow a section 301 investigation which determined that "China has repeatedly engaged in practices to unfairly obtain America's intellectual property". The first wave of tariffs are targeted at China's "Made in 2025" programme and seek to avoid hitting US consumer goods. Note that at this stage the tariffs are not in effect: there will be a review period until 22 May (during which industry can comment) after which the USTR will consider all comments. There is no deadline by which tariffs must be imposed.

We do not know where the next set of proposed tariffs would fall on the \$100 billion of Chinese imports. However, both sides have said they do not want a trade war and judging from the targeted nature of the announcements, the US administration's plan would seem to be to achieve concessions from China in opening up its markets to US goods and services. The aim would be to have a "victory" ahead of the mid-term elections such that the president can claim that his robust approach to trade has been vindicated.

There is a long-established relationship between presidential approval ratings and the performance of the president's party in the mid-term elections going back to 1946. President Trump's approval rating has been rock bottom thus boding ill for Republican prospects in November, but it began to improve following the passing of the Tax Cuts and Jobs Act at the end of last year (chart 1).

**Chart 1: President Trump's approval rating**

**President Trump's approval rating is rising, but needs to improve ahead of the mid-terms**



Source: FiveThirtyEight, Schroders Economics Group, 19 April 2018.

Whether tariffs will help boost his approval rating and bring an increase in Republican votes in November remains to be seen. Most Republicans are free traders and opposed to tariffs (Democrats are more supportive). The difference in

**The tone has improved lately, suggesting potential for a deal**

view between the president and his party has certainly contributed to high profile departures at the White House and from Congress, such as economic advisor Gary Cohn and House Speaker Paul Ryan.

Meanwhile, China has yet to respond to the proposed extension of tariffs to an extra \$100 billion worth of its exports to the US. It may do so once the details are announced, but relations between the two countries seem to have warmed of late. The trigger was President Xi's speech at the Bo'ao Forum on 10 April where he pledged a more open China. There was little new in the speech, but President Trump subsequently tweeted "Very thankful for president Xi of China's kind words on tariffs and automobile barriers ...also his enlightenment on intellectual property and technology transfers. We will make great progress together!"

So at this point, the tariffs look like both sides setting out a bargaining position with the aim of doing a deal further down the road. Should we be wrong and the situation escalate into a full trade war between the US and China the implications are clearly bad for the world economy with global growth likely to be weaker and inflation higher. Our "global protectionism" scenario is broader than this, but captures the stagflationary consequences with global growth lower by 0.7% and inflation 1% higher compared to the baseline.

As a reminder, stronger trade played a significant part in the recent recovery in global growth last year and although the WTO recently said that the spat between the US and China was already damaging activity there is little sign of it in the data as yet (see chart front page).

### **How might a US-China trade war play out?**

**China has limited scope to pursue a conventional trade war...**

It has been said that China has not responded to the latest threat from the US because it is limited in its ability to extend tariffs as a result of its much lower import bill. Whilst the US imported just over \$500 billion of goods from China in 2017, China only bought \$130 billion from the US<sup>1</sup>. Adding in services increases the total but the point remains that China will struggle to match the US' threatened tariffs on \$150 billion of imports. Perhaps that is why president Trump has said that "trade wars are easy to win".

However, such thinking assumes that China can only respond by raising tariffs. China may have more leverage in financial markets, where it is one of the biggest holders of US Treasury bonds, for example. Selling these holdings has been mooted as a potential response by China with the aim of forcing up US bond yields and increasing the cost of US government borrowing. However, the result would be a Pyrrhic victory. The subsequent downturn in the US would significantly reduce demand for Chinese imports.

Another channel might be through the currency by devaluing the renminbi (RMB). Whilst this would help offset the costs of US tariffs, periods of weaker RMB have been associated with market volatility and concerns over capital flight from China. The People's Bank of China (PBoC) seems to be ruling out such a move at present, preferring to build a reputation for a stable currency.

**But China can make life difficult for foreign companies**

If tariffs or financial measures are not to be used then what options does China have? We would look at the recent experience of the Lotte group who operate 99 supermarkets in China. The Japanese-Korean company was targeted by China after it provided land for the installation of the THAAD<sup>2</sup> missile defence system in South Korea. China subsequently embarked on a strict enforcement of fire regulations at the companies' stores and whilst the authorities may have had in mind the safety of Lotte customers, the result was that the stores became unable to operate.

<sup>1</sup> US Census Bureau, 5 April 2018.

<sup>2</sup> Terminal High Altitude Area Defence.

According to the Financial Times, of its 99 hypermarkets, 87 have been closed since February last year, often on grounds of fire-code violations. Lotte is now in the process of pulling out of China.

The US has significant operations in China: since 1990 foreign direct investment from the US to China has totalled \$256.5 billion, with over 70% going into greenfield sites. As a result US companies are directly exposed to the China market. For example, Apple generates around 20% of its total sales in China, Boeing around 12% and Nike 15% of its revenue.

### **China might prove more resilient than the US**

#### **An easy win?**

To conclude, a trade war is not our central case. Should the situation deteriorate this would not be a trade war in a conventional sense, such as in the 1930's when there were widespread increases in tariffs. China is more limited in its scope to raise tariffs, but that does not rule out a host of measures it could take to make life difficult for US companies. Furthermore, China might be able to stick out the pain that a trade war would bring for longer than the US. It has more scope for fiscal support and, of course, President Xi's communist party will not be facing elections in the near future.

# Trade wars and emerging markets

"History shows that import restrictions hurt everyone, especially poorer consumers. Not only do they lead to more expensive products and more limited choices, but they also prevent trade from playing its essential role in boosting productivity and spreading new technologies"

Christine Lagarde, IMF Managing Director, 11 April 2018

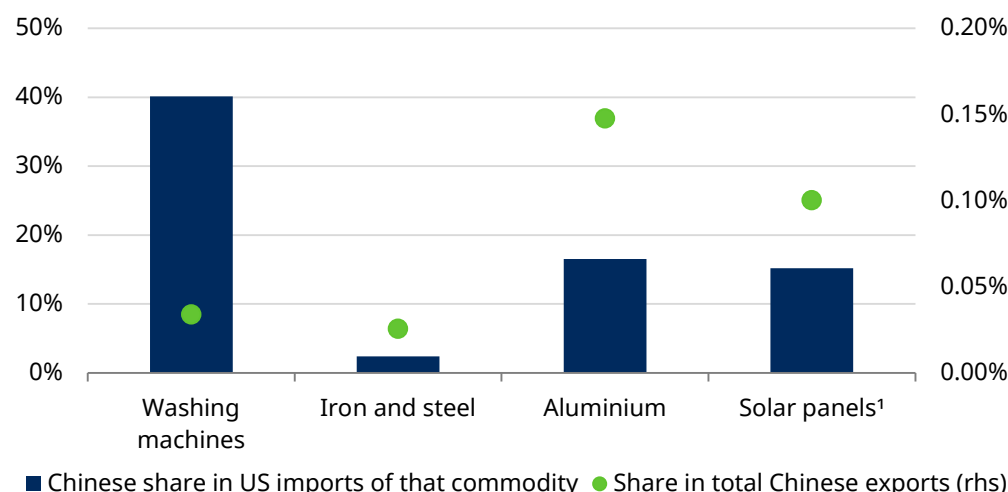
The latest shots in an escalating trade dispute were fired on 4 April, as China announced potential retaliation to US measures. Tensions are certainly higher than they have been for years, but we think it is important to remain objectively focused on how damaging the current measures are likely to be, for the rest of emerging markets (EM) as well as China.

## Early skirmishes dealt little real damage

As discussed above, the US has already taken a few pot shots at China, targeting tariffs against washing machines and solar panels first, and then steel and aluminium. However, while China may account for significant share of US imports of these goods, the combined total is still very minor in macroeconomic terms. It therefore seems unlikely to be a particularly painful blow to Chinese trade (chart 2).

China could easily shrug off the first wave of tariffs...

Chart 2: The relative (un)importance of early tariffs



<sup>1</sup>Note: Figures are for diodes including photovoltaics, which includes solar panels.  
Source: UN Comtrade, Schrodgers Economics Group. 23 March 2018.

In general, the dominant exporters to the US in steel and aluminium are developed market (DM) trade partners. Canada easily outstrips China in aluminium, while eleven countries rank ahead of China when it comes to combined iron and steel exports. The US has since exempted most of these countries from the new tariffs, limiting their already questionable impact on the US trade balance. Perhaps the strategy of a shrewd negotiator, but not a set of policies which will make much of a dent in global trade.

## First blood to the US?

The latest tariffs are unquestionably more significant, applied as they are to \$50 billion of Chinese trade with the US. The casus belli here was the finding of the US Treasury Section 301 investigation, which claims Chinese intellectual property practices cause \$50 billion of harm to the US economy every year. The tariffs are

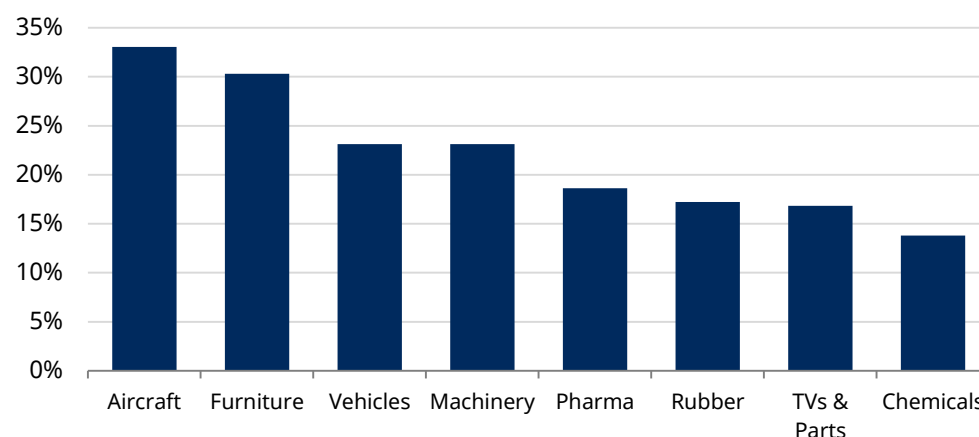
...but the latest measures deliberately target Chinese industrial policy

aimed at clawing back some of these losses, and will be set at a level of 25% on higher value added imports from China, particularly those laid out in the recently announced “Made in China 2025” plan. This strikes directly at Chinese industrial policy and looks to hinder the economy’s transition up the value chain.

The full list of tariffs covers over 1300 goods. While it is entertaining to focus on line items like flamethrowers, the main weight falls chiefly on industrial products like machinery and parts, as well as pharmaceuticals. The document detailing the tariffs spelt out the methodology behind the tariffs: “Trade analysts from several U.S. Government agencies identified products that benefit from Chinese industrial policies, including Made in China 2025. The list was refined by removing specific products identified by analysts as likely to cause disruptions to the U.S. economy, and tariff lines that are subject to legal or administrative constraints. The remaining products were ranked according to the likely impact on U.S. consumers”. This is borne out by the absence of consumer goods from the list. In general, the tariffs would seem to be quite punitive for the Chinese industries targeted, with the US typically accounting for a sizeable share of their total exports (chart 3).

**Chart 3: Bringing the pain – selected commodities subject to US tariffs**

US share of Chinese exports, by category



Source: UN Comtrade, Schrodgers Economics Group. 4 April 2018.

China has promised reciprocity in tariffs

Meanwhile, though the press reports that China has retaliated against US tariffs, there is some confusion. While China announced tariffs on imports of US pork, aluminium, steel pipes, fruit, and wine (targeting \$3 billion of goods in total) this was a response to the steel and aluminium tariffs, and not the Section 301 policies. As a separate response to the 25% US tariffs, China announced its own reciprocal tariff; 25% on \$50 billion of US trade, to commence simultaneously with US tariffs – which as yet lack a specified commencement date, although late May seems the earliest possible time.

As to whether these new tariffs have macroeconomic significance, we would note that even \$50 billion is a relatively small part of the US' overall import bill of \$2,900 billion, around 2% of Chinese exports or 2% of US goods imports. The overall impact will depend on how producers react to the tariff, and how consumers react to any price change. Producers may be able to absorb some of the tariff into profit margins, rather than pass the entirety on to consumers. The consumer response will then depend on the availability of substitutes and other factors, though consensus seems to estimate it will amount to 0.1–0.2% slower growth for China at most; even then, only if the tariffs are applied to a broader range of Chinese goods accounting for \$200 billion, or 40% of China’s exports to the US.

**Global value chains are long, complex, and involve much of EM**

All in all, the reduction in bilateral trade as a direct result of the tariff is going to fall far short of the \$100 billion adjustment President Trump ultimately wants to see in the bilateral trade balance.

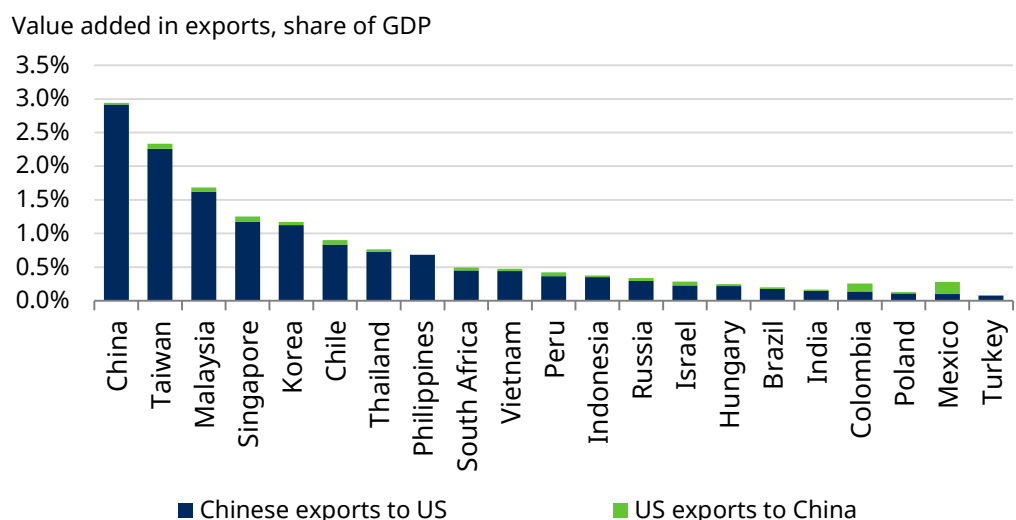
The pain will not be borne entirely by Chinese producers and American consumers. A good share of international trade is classified as “processing trade”, with each country plugged into a longer global supply chain, taking inputs from other economies and exporting them after some assembling or refining. Suppliers linked to China, likely Korea and Taiwan if tariffs focus on high tech exports, will also suffer.

### Winners and losers in the rest of EM

In an attempt to estimate which economies are likely to be most affected by the new tariffs proposed by both Washington and Beijing, we utilise data from the Organisation for Economic Co-operation and Development (OECD) on trade in value added (TiVA). This data looks at the origins of the value within each tradeable good. It captures information about global supply chains with the aim of reflecting that although a good may be exported from China to the US, most of the components within it actually originated elsewhere.

For Chinese trade, about 65% of the value added in exports to the US originates in China, leaving significant scope for damage to other economies from tariffs on those goods. For the US, domestic value added is closer to 85%, according to the TiVA data. In chart 4, based on methodology from The Economist, we extrapolate from TiVA data (which only runs to 2011) to obtain a rough estimate for 2017 across EM of value added as a share of US-China trade.

**Chart 4: Asian exporters would bear the brunt of higher tariffs**



Source: OECD, Thomson Datastream, The Economist Group, Schroders Economics Group. 9 April 2018.

**Competitors could see some benefits from the proposed tariffs**

We would note that this refers to all trade, not just that trade subject to the proposed tariffs. So this would overstate the damage to EM exporters from the measures announced so far. Still, it is apparent that tariffs on Chinese exports are much more consequential for EM than those on US exports, and that the pain is likely to be concentrated in Asian EM.

However, there could also be winners from any tariffs. China and the US will need to replace supplies of impacted goods given the cost increase; as reflected by a surge in the price of Brazilian soya beans since China announced a 25% tariff on imports of the produce from the US. Not all areas have the potential for significant gains; US whisky exports to China were around \$6 million in 2016, a tiny fraction of any



country's GDP. Still, the potential for increased market share elsewhere is meaningful.

**Table 1: Main sources of Chinese imports, by targeted commodity**

Cereals		Soya beans		Chemicals		Plastics		Vehicles		Aircraft	
Top 10 <sup>1</sup>	Value (\$bn)	Top 10	Value (\$bn)	Top 10	Value (\$bn)	Top 10	Value (\$bn)	Top 10	Value (\$bn)	Top 10	Value (\$bn)
USA	1.32	Brazil	14.39	USA	1.95	S Korea	9.01	Germany	22.10	USA	14.58
Australia	0.48	USA	14.18	Japan	1.67	Hong Kong	8.15	Japan	11.22	Germany	4.56
Canada	0.15	Argentina	2.79	Singapore	1.16	Japan	6.90	USA	11.03	France	3.90
Kazakhstan	0.05	Canada	0.72	Hong Kong	1.05	USA	4.93	UK	5.01	Singapore	0.88
Brazil	0.03	Uruguay	0.15	Germany	0.99	Singapore	4.14	S Korea	4.83	Canada	0.40
Thailand	0.02	Russia	0.12	S Korea	0.83	Thailand	2.63	UAE	1.34	Brazil	0.35
Russia	0.01			Indonesia	0.72	Germany	2.57	Mexico	1.17	Hong Kong	0.21
				Malaysia	0.53	UAE	1.43	Canada	1.11	United Kingdom	0.21
				France	0.29	Saudi Arabia	1.24	Italy	1.11	Austria	0.10
				UK	0.25	Malaysia	1.13	Slovakia	0.94	Italy	0.10

Source: UN Comtrade, Schrodgers Economics Group. 10 April 2018.

<sup>1</sup>We have not shown ten countries in cases where the value of trade falls below \$10million.

Table 1 shows the countries which could benefit if the US loses market share due to the proposed tariffs. We have focused on areas where US exports to China exceed \$1 billion, and considered only those economies already exporting to China, on the grounds that it would be easier for them to expand existing trade than for another country to open up a new trade route.

For the most part, the Chinese tariffs would seem to open up opportunities chiefly for DM economies: Japan and Germany appear frequently in the higher value added commodities, while Australia and Canada could benefit from tariffs on US wheat, sorghum and maize. However, there are some bright spots for EM; Brazil and potentially Argentina stand to benefit in soya beans, while South Korea, Mexico, Thailand and Indonesia could try to increase their market share in vehicles, plastics and chemicals.

Table 2 shows the same for the US, and here we see more scope for EM economies to benefit. This makes sense as economies at similar levels of development will tend to have similar export industries. Once again, Mexico, Thailand, South Korea, Malaysia and Brazil stand to gain, but this time perhaps face less DM competition.

We should note that this table will overstate the figures involved; we have used high level classifications from the UN database, and so captured goods beyond those included in the initial \$50 billion targeted by the US. However, it does give an idea of where Trump's threatened further \$100 billion of tariffs may be targeted.

**Table 2: Main sources of US imports, by targeted commodity group**

Rubber		Iron and steel		Aluminium		Machine parts		Vehicles		Electrical machinery	
Top 10	Value (\$bn)	Top 10	Value (\$bn)	Top 10	Value (\$bn)	Top 10	Value (\$bn)	Top 10	Value (\$bn)	Top 10	Value (\$bn)
China	3.2	China	9.5	Canada	7.0	China	79.5	Mexico	73.7	China	93.2
Canada	2.8	Canada	8.2	China	3.1	Mexico	54.1	Canada	60.1	Mexico	67.0
Thailand	2.3	Mexico	5.8	Russia	1.7	Japan	27.6	Japan	50.2	Hong Kong	15.5
Mexico	2.1	S Korea	3.5	Mexico	1.0	Germany	23.2	Germany	30.7	Japan	14.9
Japan	1.9	Japan	2.9	UAE	0.9	Canada	22.3	S Korea	22.1	S Korea	13.7
S Korea	1.8	Germany	2.6	Germany	0.6	S Korea	11.1	China	13.9	Germany	10.3
Indonesia	1.6	Brazil	2.4	Bahrain	0.6	UK	9.5	UK	9.7	Canada	9.4
Malaysia	1.3	India	1.5	Argentina	0.4	Italy	8.8	Italy	5.0	Malaysia	9.3
Germany	1.1	Italy	1.3	India	0.3	France	7.1	Sweden	1.8	Vietnam	7.6
France	0.5	Turkey	1.2	France	0.3	Thailand	6.4	India	1.3	Singapore	7.3

Source: UN Comtrade, Schrodgers Economics Group. 10 April 2018.

Note that Chinese exports exceed the \$50 billion level as broad categories include goods not yet targeted.

**A more global trade war would inevitably have more casualties**

## Cost of escalation

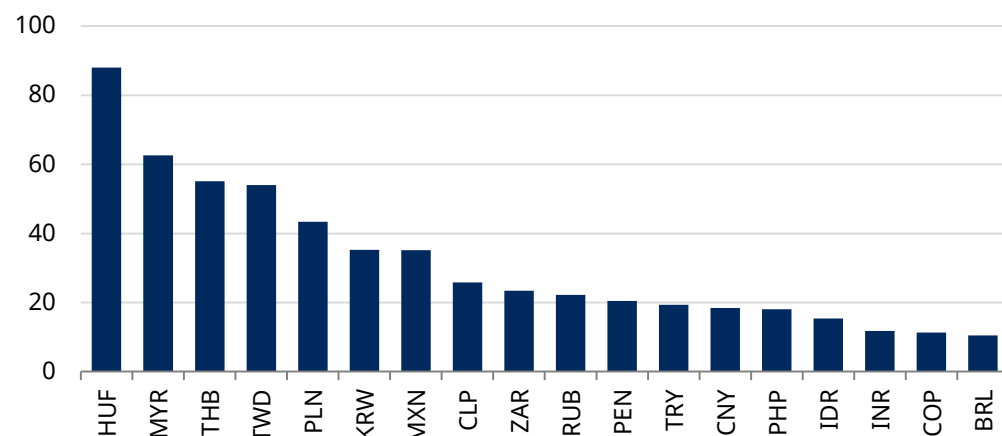
The analysis so far has assumed a fairly contained trade conflict. Chart 4 perhaps went furthest, in looking at the impact of tariffs on all US-China trade, but a true trade war would be more extensive. We do not think it beyond the realms of possibility that the current spat could escalate further and ultimately drag on other economies.

A news report on 9 April suggested China was looking at currency devaluation as a tool to counter the impact of US tariffs. Taking a simplistic approach, let us assume that China decided to aim for a 25% devaluation to directly offset the price effects of the tariff. This would not be an isolated move against the dollar, but would likely see the renminbi fall by similar amounts against the euro and yen (depending on how the central bank conducted its intervention). We might expect, in this scenario, European economies and Japan to implement their own defences against a suddenly much more competitive China. We might then also expect China to respond with tariffs against those countries. This would naturally have a greater impact on global trade flows, with many global supply chains adversely affected and even breaking down.

Chart 5 shows the relative importance of exports to EM GDP; a good way to rank vulnerability to a true trade war scenario. As might be expected, economies in Asia are among the most exposed, with Hungary and Poland also likely to be badly hit.

### Chart 5: Emerging market reliance on global trade

Total exports (% GDP)



Source: Thomson Datastream, Schroders Economics Group. 10 April 2018.

**EM does offer a few potential ports of safety if a storm begins to build**

However, there are some caveats. Malaysia, Mexico and Russia are all oil exporters, and it seems unlikely that oil will face tariffs in any scenario. This protects at least some of the exports for those economies. Similarly, we could argue that the risk to Hungary and Poland is overstated given that the bulk of their exports will be within the European Union, and so not subject to tariffs even in a trade war. They will still be hit, given they are part of the German export supply chain which will face tariffs outside the EU, but the pain will be less than the raw data might suggest. Meanwhile, economies like Brazil and India, with limited external demand exposure and large internal markets, should be better insulated from a downturn in trade.

### Collateral damage bears watching

While headlines focus on the damage to China in the event of any trade war, our analysis here shows that other EM economies could suffer almost as much. In some cases, governments in those other economies will also lack the resources of Beijing, and will face greater domestic political pressure to act.

However, we did also find some economies less exposed to the first round effects of tariffs; the immediate damage is focused chiefly on EM Asia, while relatively closed economies like Brazil and India should be more insulated than other economies in the event of a more global trade war. Furthermore, there can be some limited gains from tariffs. Mexico, Thailand, South Korea, Malaysia, Indonesia and Brazil all have potential gains to be realised in the event of tariffs, which could help offset some pain.

# How vulnerable is Japan in trade wars?

"Many of the products we export from Japan either cannot be made in the US or not in sufficient amounts, so we will be explaining that and seeking individual exemptions"

Kosei Shindo, Chairman of the Japan Iron and Steel Federation

Japan has benefited from the recent boost to global trade

With exports accounting for 18% of GDP, Japan is leveraged to the global economic cycle. In particular, Japan has benefited from the recent boost to global trade; in 2017, exports added 1.1 percentage points to GDP growth of 1.7% y/y. At first glance, escalating trade tensions between US and China is a particular concern, given these economies are significant trading partners for Japan. Specifically, the US and China are the two largest export partners of Japan accounting for 19.3% and 19.0% of Japanese exports in 2017. Moreover, the \$68.8bn trade surplus that Japan has with the US (as of 2017) has led President Trump to call for a bilateral free trade agreement and more "reciprocal" trade. Japan has said that it will not enter a bilateral free trade agreement with the US, although urges the US to consider also exempting Japan from steel and aluminium tariffs.

## How will tariffs on steel and aluminium hit the Japanese economy?

First, we look at the impact of US tariffs on Japanese goods. The 25% tariffs on the aluminium and steel products by the US are the only protectionist measures that have been announced that would be directly applied to Japanese goods.

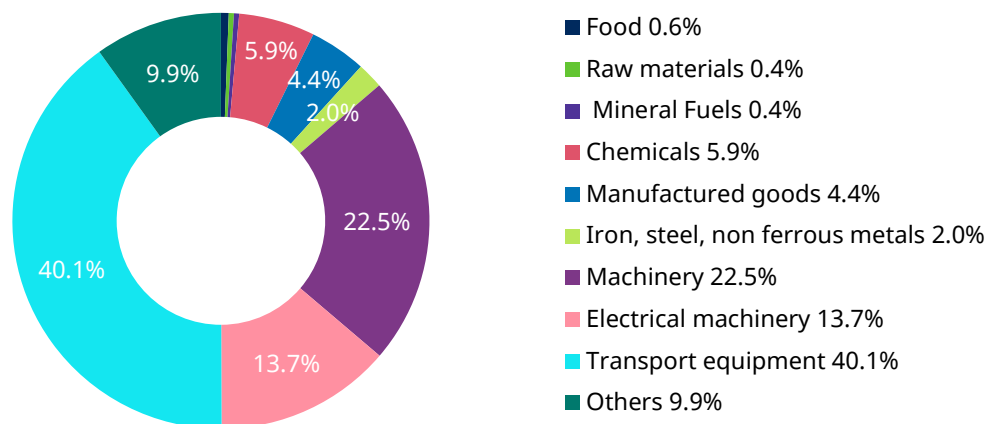
Steel and aluminium make up less than 2% of Japanese exports to the US

Breaking down Japanese exports to the US by sector (chart 6); iron, steel and non-ferrous metals make up only 2% of Japanese exports to the US. Therefore, the impact of these tariffs on GDP is minor as exports to the US of iron, steel and non-ferrous metals make up only 0.07% of GDP. Moreover, the impact of a tariff-induced price increase on demand depends on the elasticity of demand for Japanese goods. Although most likely biased and difficult to estimate, the Japan Iron and Steel Federation argues that this is low (see quote above).

Chart 6 also shows where Japan would be vulnerable to further US tariffs, namely machinery and transport equipment (including semiconductors etc.), which combined make up 76% of Japanese exports to the US.

**Chart 6: Steel and Aluminium a small proportion of Japanese exports to US**

Japanese exports to the US (2017), share %



Global supply chains mean Japan is also indirectly affected by tariffs

Source: Trade Statistics of Japan, Ministry of Finance, Schroders Economics Group, 13 March 2018.

## What is the impact of wider US and Chinese tariffs on Japan?

Japanese firms are also indirectly impacted by US tariffs on Chinese goods as Japanese producers feed into the supply chain. Of course, this also applies to Chinese tariffs on US goods and depends on the extent to which Japan feeds into the supply chain. This can be measured by the proportion of “value added” that Japan has in, for example, US exports to China.

Japan is prominent in both US and Chinese supply chain...

Using Trade in Value Added (TIVA) data, we can measure the value added by Japan in US exports to China (and vice versa), as a proportion of Japanese GDP. With value added data available only to 2011, we extrapolate the series to 2017 using the growth rate of US exports to China (and vice versa) between 2011 and 2017. This assumes that the value added from an individual economy in the supply chain of a good exported from China to the US grew at the same rate as exports from China to the US.

Looking at the value added data by country does not take into account that certain sectors have been targeted with tariffs, but nonetheless provides a rough guide to how Japan ranks compared to other economies in the supply chain. Chart 7 shows the countries with the highest value add (as a proportion of their own GDP) in the supply chain of US exports to China. Chart 8 is the equivalent for Chinese exports to the US.

### Top 10 countries most impacted by US and Chinese tariffs via supply chains

...in fact the most exposed in DM

Chart 7: Chinese tariffs on US – Japan ranked 22<sup>nd</sup> in supply chain

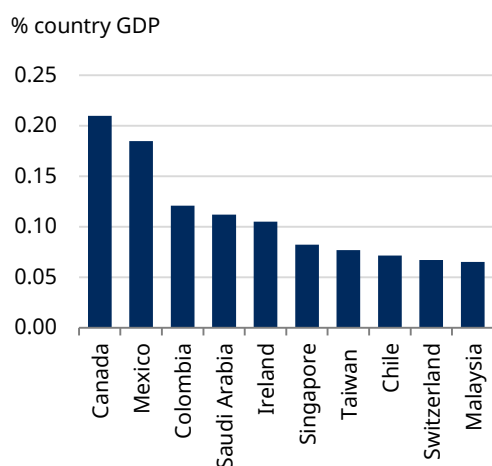
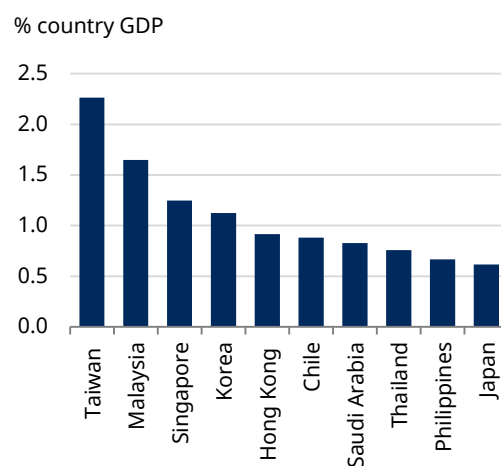


Chart 8: US tariffs on Chinese goods Japan largest DM supply chain exposure



■ Value added in US exports to China in 2017 ■ Value added in Chinese exports to US in 2017

Source: OECD, The Economist Group, Schroders Economics Group, 9 March 2018.

The first point to note is that a high proportion of value added in US exports to China comes from the US itself (US: 85% vs. Foreign: 15%) whereas foreign countries play a larger role in the supply chain of Chinese exports to the US (China: 65% vs. 35%). This can be seen by the lower numbers on the axis in chart 7 than chart 8.

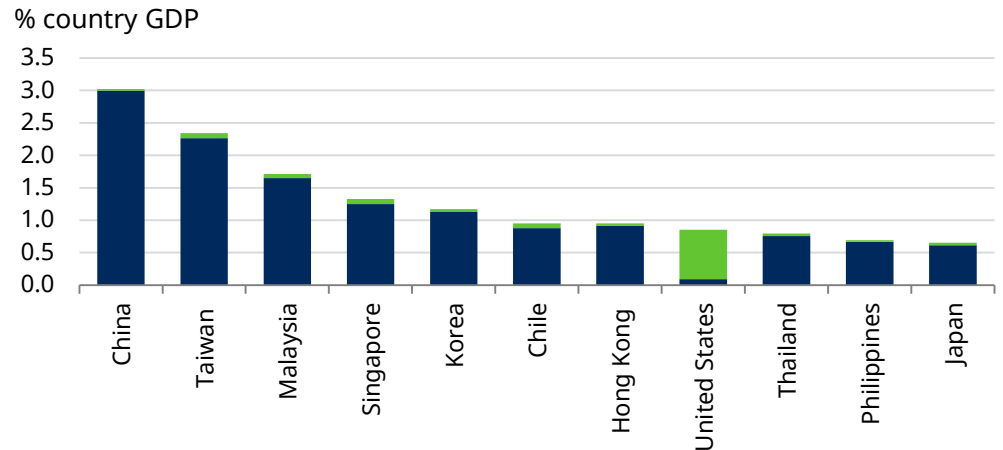
...but as a proportion of Japanese GDP, the exposure is minimal

Japan is prominent in both supply chains. Excluding the exporting economy itself, Japan has the highest *total* value added in Chinese exports to the US and fifth highest foreign country in US exports to China. However, when measured as a proportion of its own GDP, Japan is less exposed in the supply chain than other economies. Japan is less prominent in the supply chain of US exports to China

(ranked 22<sup>nd</sup>) than in the supply chain of Chinese exports to the US (ranked 10<sup>th</sup>). Therefore, Japan is indirectly more vulnerable to US tariffs on Chinese goods than vice versa.

Taking the two flows together (chart 9), Japan is the most exposed DM economy although the value added is minimal at 0.65% of GDP. On this measure, emerging market (EM) economies, such as Taiwan, Malaysia, Singapore and Korea are more vulnerable.

**Chart 9: Countries most exposed to US and Chinese tariffs via supply chain**



■ value add in Chinese exports to US in 2017 ■ value add in US exports to China in 2017

Source: OECD, The Economist Group, Schroders Economics Group, 9 March 2018.

### The yen as a safe haven – the implications of further strengthening

The Japanese yen (JPY) has attracted much attention in the market this year, strengthening by 4.8% since the beginning of the year and reaching a low of 105 in early March. A stronger yen has been, in part, due to higher expectations of tightening of policy by the Bank of Japan but also the role of the yen as a safe haven currency. In the case of escalation of US-China trade tensions, a “risk-off” move in markets would help strengthen the yen further. This would then have second round effects on the economy, for example on exports, inflation and earnings.

While an appreciation in currency is typically associated with a decrease in real net exports, the link between movements in the yen and export growth has been weak in the past, particularly following the sharp depreciation of the yen since late 2012<sup>3</sup> (see chart 10). The International Monetary Fund (IMF) finds that this was due to lower pass-through into export prices and a deep involvement in global value chains. Key here is whether trade wars would escalate enough to hit global trade volumes thereby reducing Japanese export demand.

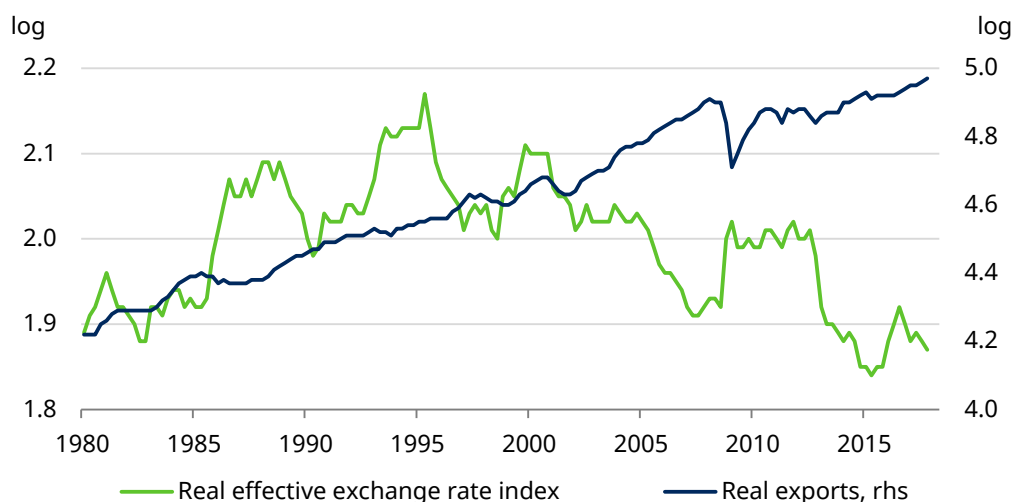
The Japanese yen has attracted much attention this year

A risk-off move in markets would help strengthen the yen further

<sup>3</sup> See IMF World Economic Outlook (Oct 2015), Box 3.3: Japanese exports: What’s the holdup?

**For exports, key is whether tensions escalate enough to hit global trade volumes**

**Chart 10: Weak relationship between JPY and exports**



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

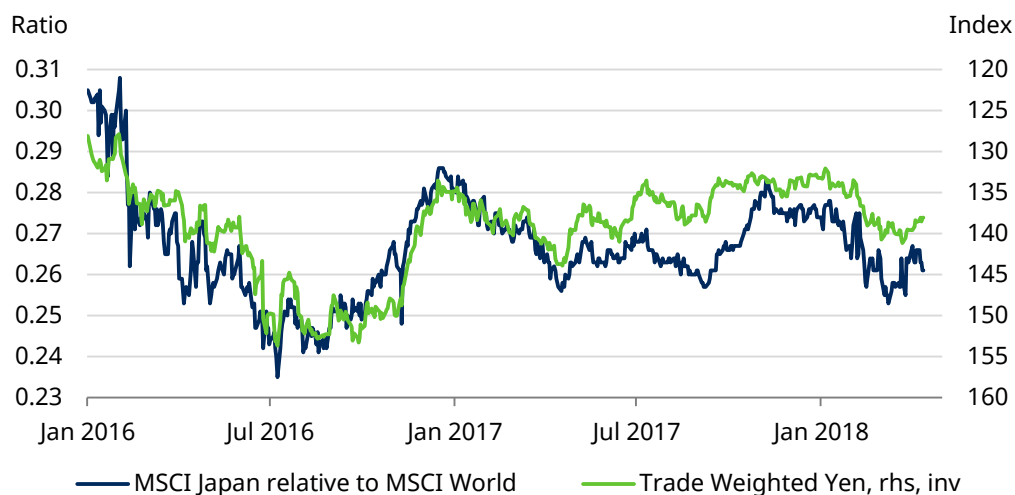
**A weaker yen has supported inflation**

Past yen depreciation has been a supportive factor in the recent increase in inflation. Inflation as measured by the Consumer Price Index basket excluding fresh food, turned positive at the beginning of 2017 and currently stands at 1% y/y. Further excluding energy, inflation is also edging up but remains low at 0.5% y/y. The weaker yen has supported core (predominately goods) inflation through import prices. A stronger yen would act to reverse this, albeit with a lag, putting downward pressure on prices. Our Monetary Conditions Indicator (MCI) suggests that the stronger yen experienced this year has already begun to tighten monetary conditions in Japan. An increase in real rates due to lower inflation would be a risk to our view that the Bank of Japan will adjust yield curve control in Q4 this year. Bank of Japan Governor, Haruhiko Kuroda, has already warned about the impact of trade wars in a recent press conference as he begins his second term.

A stronger yen also has implications for earnings and as a result, the equity market. With a significant foreign sales exposure, Japanese earnings (relative to global) are closely correlated with the yen. Indeed, the relative performance of Japanese equities has remained very tightly correlated to the yen (chart 11). Breakeven estimates of USDJPY from a Cabinet Office survey suggest that SMEs in particular, which have a breakeven of ¥105–106, would be the most impacted by a stronger USDJPY. Moreover, large firms would likely have to revise down profit guidance as according to the March Tankan survey, large manufacturing firms expect USDJPY to average 109.66. Finally, the share of Japanese market capitalisation in cyclicals is the highest of any major region so a move into defensive markets by investors would likely result in underperformance in Japanese equities.

**A move into defensive markets would likely result in Japanese equity underperformance**

**Chart 11: Japanese equities outperformance linked with yen**



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

**Conclusion**

**While US-China trade escalation remains contained, the impact on Japan is limited**

As long as US-China trade tensions remain contained, the economic impact on Japan is limited.

The impact of US aluminium and steel tariffs on Japanese growth is minimal as these goods account for only 2% of Japanese exports to the US. Via the supply chain, Japan is the most exposed developed market economy to trade wars between the US and China due to its prominence in the Chinese supply chain. But again the vulnerability is small; value added from supply chains in Chinese exports to the US and US exports to China total 0.65% of Japanese GDP.

An appreciation in the yen as a safe haven would present a headwind to Japanese exports, inflation and earnings. Meanwhile the cyclical nature of the equity market would likely lead to underperformance in the equity index relative to the global market.



# Schroders Economics Group: Views at a glance

## Macro summary – May 2018

### Key points

#### Baseline

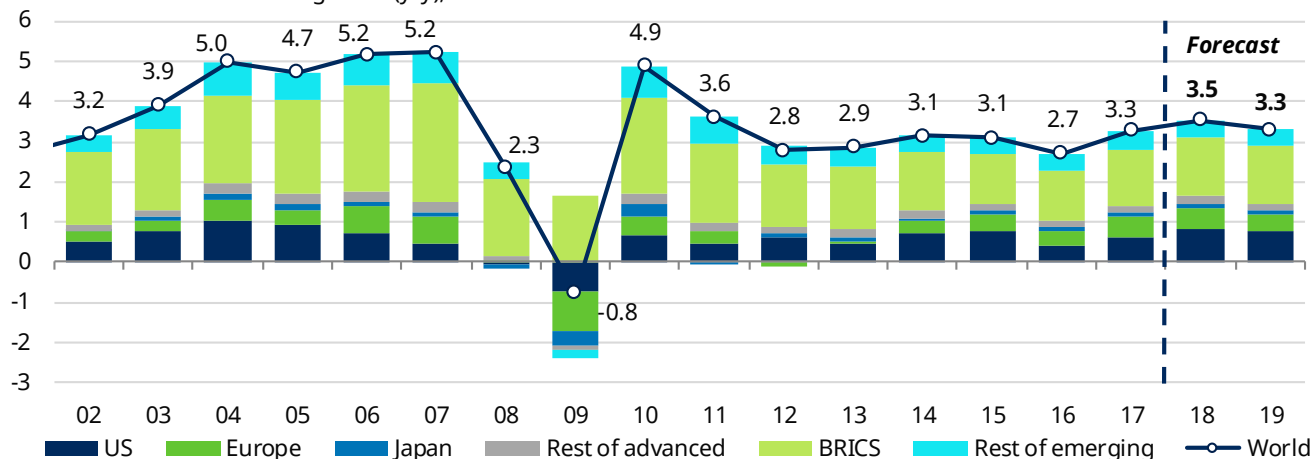
- Global growth is expected to reach 3.5% in 2018 after 3.3% in 2017. The pace of activity moderates to 3.3% in 2019. Inflation is forecast to tick up to 2.4% in 2018 and to 2.6% 2018. Core inflation in the US is expected to rise back above 2% in 2018 as the goldilocks environment is replaced by a more reflationary world economy.
- US growth is forecast at 3.1% in 2018 and 2.9% next, an upward revision to reflect higher fiscal stimulus. The Fed has now started balance sheet reduction (quantitative tightening) and with core inflation rising, we expect four rate hikes in 2018, and two in 2019, with the Fed funds ending the forecast at 3%.
- UK growth to remain broadly unchanged in 2018 with growth of 1.7%. Inflation is forecast to fall back slightly to 2.5%, as sterling depreciation effects are replaced with energy and domestically generated inflation. 2019 is very uncertain given Brexit, but we assume a transition period to be agreed with partial access to the single market. This means some disruption to trade, and higher inflation due to tariffs being introduced. The BoE is expected to hike once in 2018 and two more times in 2019 (to 1.25%).
- Eurozone growth to pick-up in 2018 to 2.6% following strong surveys and an easing in political risk. Growth is likely to remain strong in 2019, with enough spare capacity remaining to keep inflation subdued, but rising. The ECB is likely to end QE in September 2018, before raising interest rates three times in 2019, with the refinancing rate reaching 0.75%, and the deposit rate reaching 0.25%.
- Japanese growth forecast at 1.5% in 2018, similar to 2017, and inflation at 1.1%, an increase mainly due to a more positive outlook for oil prices. We expect a change to yield curve control in Q4 this year in the form of a 10bps increase in the target yield for 10 year JGBs from zero.
- Led by an increase in the forecast for China, growth in the emerging economies has been upgraded to 5.1% for 2018 and to 5% in 2019.

#### Risks

- Risks are closely balanced with fears of “secular stagnation” and “bond yields surge” providing deflationary scenarios, while “inflation accelerates” and “rise in global protectionism” would be stagflationary. Reflation risks centre on “global fiscal reflation” and a “global trade boom” scenario. Finally, there is a “productivity revival” scenario where growth is stronger, but inflation lower than in the baseline.

#### Chart: World GDP forecast

Contributions to World GDP growth(y/y), %



Source: Schroders Economics Group, 22 February 2018. Please note the forecast warning at the back of the document.

## Schroders Baseline Forecast

### Real GDP

y/y%	Wt (%)	2017	2018	Prev.	Consensus	2019	Prev.	Consensus
<b>World</b>	100	3.3	3.5	↑ (3.3)	3.3	3.3	↑ (3.0)	3.2
<b>Advanced*</b>	62.8	2.2	2.6	↑ (2.3)	2.4	2.3	↑ (2.0)	2.1
<b>US</b>	27.1	2.3	3.1	↑ (2.5)	2.8	2.9	↑ (2.2)	2.6
<b>Eurozone</b>	17.4	2.5	2.6	↑ (2.3)	2.4	2.2	↑ (1.9)	1.9
<b>Germany</b>	5.1	2.5	2.8	↑ (2.6)	2.4	2.4	↑ (2.0)	1.9
<b>UK</b>	3.8	1.7	1.7	↑ (1.6)	1.5	1.5	↑ (1.4)	1.5
<b>Japan</b>	7.2	1.6	1.5	↓ (1.8)	1.4	1.1	↓ (1.3)	1.1
<b>Total Emerging**</b>	37.2	5.0	5.1	↑ (4.9)	5.0	5.0	↑ (4.8)	4.9
<b>BRICs</b>	24.2	5.7	6.0	↑ (5.8)	5.8	5.9	↑ (5.7)	5.7
<b>China</b>	16.4	6.9	6.6	↑ (6.4)	6.6	6.5	↑ (6.3)	6.4

### Inflation CPI

y/y%	Wt (%)	2017	2018	Prev.	Consensus	2019	Prev.	Consensus
<b>World</b>	100	2.3	2.4	↑ (2.3)	2.5	2.6	↑ (2.5)	2.4
<b>Advanced*</b>	62.8	1.7	1.9	↑ (1.7)	1.9	2.1	↑ (1.9)	1.8
<b>US</b>	27.1	2.1	2.5	↑ (2.1)	2.5	2.6	↑ (2.4)	2.1
<b>Eurozone</b>	17.4	1.5	1.2	↓ (1.4)	1.5	1.5	↑ (1.4)	1.5
<b>Germany</b>	5.1	1.7	1.5	↓ (1.7)	1.7	1.8	↑ (1.8)	1.8
<b>UK</b>	3.8	2.7	2.5	↑ (2.2)	2.6	2.3	↑ (2.2)	2.2
<b>Japan</b>	7.2	0.5	1.1	↑ (0.9)	1.0	1.6	↑ (1.6)	1.1
<b>Total Emerging**</b>	37.2	3.2	3.4	↑ (3.4)	3.4	3.5	↑ (3.4)	3.4
<b>BRICs</b>	24.2	2.2	2.8	↓ (3.0)	2.7	3.0	↑ (2.9)	3.0
<b>China</b>	16.4	1.5	2.2	↓ (2.3)	2.3	2.3	↑ (2.2)	2.3

### Interest rates

% (Month of Dec)	Current	2017	2018	Prev.	Market	2019	Prev.	Market
<b>US</b>	1.75	1.50	2.50	↑ (2.25)	2.63	3.00	↑ (2.50)	2.94
<b>UK</b>	0.50	0.50	0.75	↑ (0.50)	1.03	1.25	↑ (1.00)	1.32
<b>Eurozone (Refi)</b>	0.00	0.00	0.00	(0.00)	-0.30	0.75	↑ (0.50)	0.02
<b>Eurozone (Depo)</b>	-0.40	-0.40	-0.40	(-0.40)	-	0.25	↑ (0.00)	-
<b>Japan</b>	-0.10	-0.10	-0.10	(-0.10)	0.09	-0.10	(-0.10)	0.11
<b>China</b>	4.35	4.35	4.35	(4.35)	-	4.00	↑ (3.50)	-

### Other monetary policy

(Over year or by Dec)	Current	2017	2018	Prev.	Y/Y(%)	2019	Prev.	Y/Y(%)
<b>US QE (\$Bn)</b>	4449	4449	4029	↑ (4006)	-9.4%	3429	↑ (3406)	-14.9%
<b>EZ QE (€Bn)</b>	2154	2154	2424	↓ (2453)	12.5%	2424	↓ (2453)	0.0%
<b>UK QE (£Bn)</b>	435	445	445	(445)	0.0%	445	(445)	0.0%
<b>JP QE (¥Tn)</b>	521	521	551	↓ (563)	5.7%	567	↓ (583)	2.9%
<b>China RRR (%)</b>	17.00	17.00	16.00	16.00	-	16.00	↑ 15.00	-

### Key variables

FX (Month of Dec)	Current	2017	2018	Prev.	Y/Y(%)	2019	Prev.	Y/Y(%)
<b>USD/GBP</b>	1.42	1.30	1.40	↑ (1.28)	7.7	1.36	↑ (1.25)	-2.9
<b>USD/EUR</b>	1.24	1.15	1.28	↑ (1.20)	11.3	1.25	(1.25)	-2.3
<b>JPY/USD</b>	107.2	115.0	105	↓ (112)	-8.7	110	(110)	4.8
<b>GBP/EUR</b>	0.87	0.88	0.91	↓ (0.94)	3.4	0.92	↓ (1.00)	0.5
<b>RMB/USD</b>	6.29	6.60	6.20	↓ (6.50)	-6.1	6.37	↓ (6.40)	2.7
<b>Commodities (over year)</b>								
<b>Brent Crude</b>	73.2	55.6	64.0	↑ (61.2)	15.2	59.7	↑ (58.7)	-6.7

Source: Schroders, Thomson Datastream, Consensus Economics, April 2018

Consensus inflation numbers for Emerging Markets is for end of period, and is not directly comparable.

Market data as at 18/04/2018

Previous forecast refers to January 2018

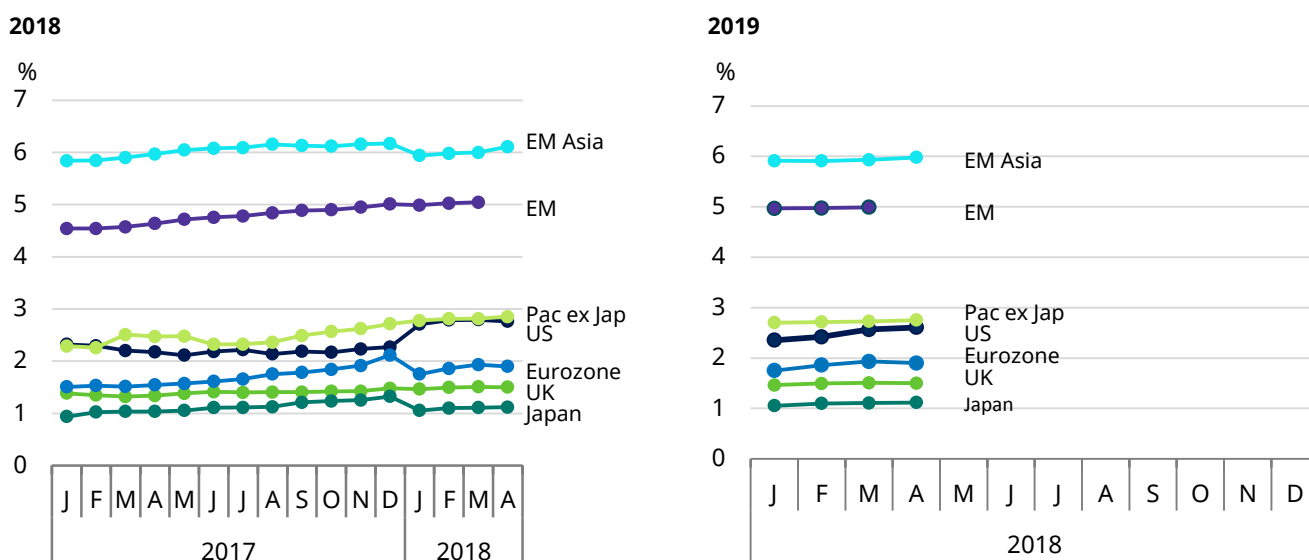
\* **Advanced markets:** Australia, Canada, Denmark, Euro area, Israel, Japan, New Zealand, Singapore, Sweden, Switzerland, United Kingdom, United States.

\*\* **Emerging markets:** Argentina, Brazil, Chile, Colombia, Mexico, Peru, China, India, Indonesia, Malaysia, Philippines, South Korea, Taiwan, Thailand, South Africa, Russia, Czech Rep., Hungary, Poland, Romania, Turkey, Ukraine, Bulgaria, Croatia, Latvia, Lithuania.

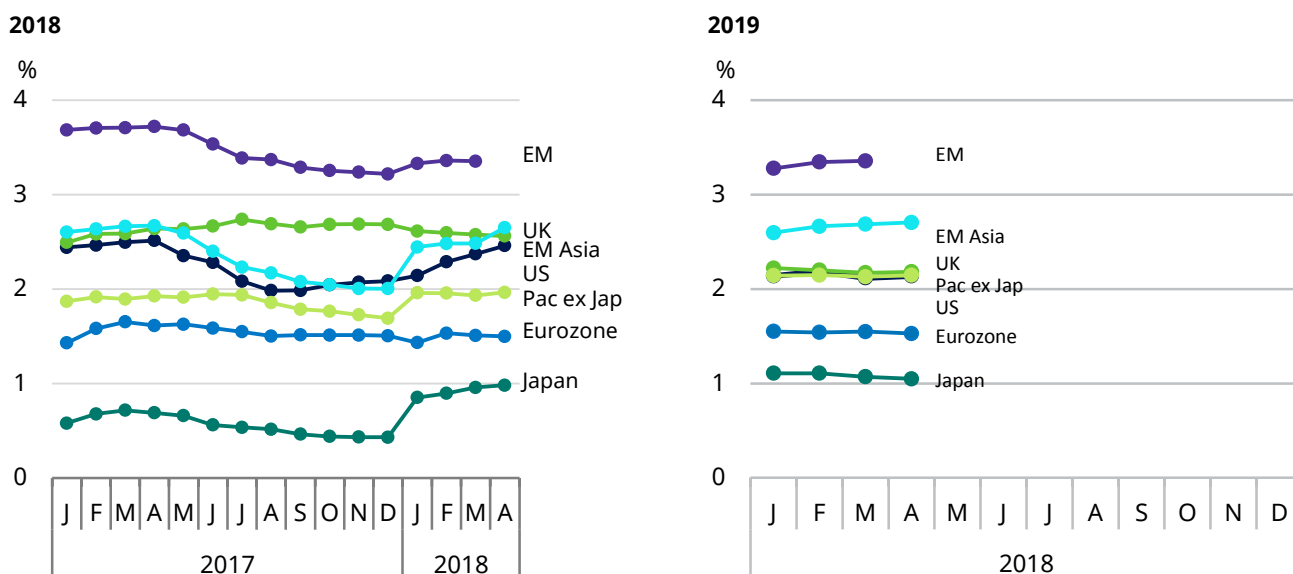
## Updated forecast charts – Consensus Economics

For the EM, EM Asia and Pacific ex Japan, growth and inflation forecasts are GDP weighted and calculated using Consensus Economics forecasts of individual countries.

**Chart A: GDP consensus forecasts**



**Chart B: Inflation consensus forecasts**



Source: Consensus Economics (March/ April 2018), Schroders.

Pacific ex. Japan: Australia, Hong Kong, New Zealand, Singapore.

Emerging Asia: China, India, Indonesia, Malaysia, Philippines, South Korea, Taiwan, Thailand.

Emerging markets: China, India, Indonesia, Malaysia, Philippines, South Korea, Taiwan, Thailand, Argentina, Brazil, Colombia, Chile, Mexico, Peru, South Africa, Czech Republic, Hungary, Poland, Romania, Russia, Turkey, Ukraine, Bulgaria, Croatia, Estonia, Latvia, Lithuania.

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