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Research

Asia
North America

Economics
# China Macro

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# How will China handle the trade war

The US is set to impose a 25% tariff on US$200bn of Chinese exports as early as this month. China has loosened monetary and fiscal policies, which led to a pickup of the housing cycle recently. We think the trade war will hurt China's exports, but not be damaging enough for China to agree with all the terms that the US demands.

China may wait to observe how the new round of tariffs will affect the US. The trade war so far has had little impact on US consumers, but our analysis shows this may change soon. We built a quantitative model to explore how the US government picked Chinese export products in three rounds of tariffs announced this year. So far the US government avoided to impose tariffs on (1) consumer goods (2) goods with high China import share. Hence the damage on the US is less visible.

The coming round of tariffs on 200bn Chinese exports will affect products that the US government tried to avoid before. There are 78bn of consumer goods in the 200bn list, compared to only 3.7bn in the 50bn list announced before. They include consumer goods such as furniture, vacuum cleaners, air conditioners, etc.

Can the US impose a tariff on the 240bn Chinese exports not yet targeted for tariff? We think the scope may be limited. They include 200bn of consumer goods and products such as mobile phones (43bn), personal computers (37bn), and toys(12bn). The domestic value added for these exports is lower than those already under tariff. As the scope of tariffs extends to more Chinese exports, the marginal side effects will likely rise for the US, and the marginal damage to China will likely decline.

At this stage it is not clear how much of this tariff shock will be passed to US retail prices, and how the US consumers will react to price hikes. China may wait to observe this, hoping that US consumers will put pressure on the US government to make compromise. This suggests the trade war will likely get worse in the next few months without much progress on negotiation. The next window of negotiation is likely to be November when the two Presidents meet.

If a trade deal cannot be reached (our baseline case), China will likely keep monetary policy loose, raise the fiscal deficit to boost infrastructure investment, and let the RMB depreciate to 7.4 in 2019. If a trade deal is reached, China will likely bring USDCNY back to around 6.5, buy more US agricultural and energy goods, open the service sector to foreign firms, and normalize monetary and fiscal policies to a neutral stance.

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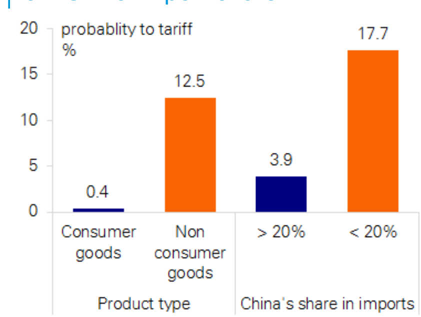
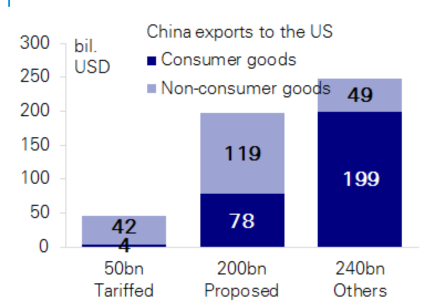
Figure 1: US prefers to tax non-consumer goods, and goods with low China import share




*Source: Deutsche Bank*
*Note: Please refer to page 6-7 for detailed discussion on the model and how to interpret the results.*

Figure 2: Tariffs will start to hit US consumers




*Source: Deutsche Bank*

## China: bracing for the trade shock

The US is set to impose a 25% tariff on US$200bn of Chinese exports as early as this month ( Figure 5 ). This is equivalent to 40% of China's exports to the US, and 9% of China's total exports in 2017. It is a significant escalation of the trade war for both countries. So far the US already imposed a 25% tariff on 50bn of Chinese exports, but it had no visible effect on China's exports, which continued to grow at 12% 3mma yoy by July. The new round of tariffs will likely be more damaging for China's exports.

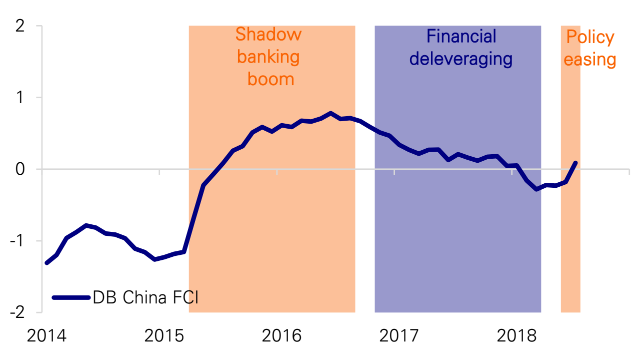
In response to this looming risk, China has loosened monetary and fiscal policies. On the monetary side, our Financial Condition Index rebounded since April as the PBoC cut RRR and pushed three month SHIBOR down to 2.9% by now from 4.9% in the end of 2017 ( Figure 3 ). On the fiscal side, the government sped up local government bond issuances in recent months and approved some infrastructure projects.

The policy easing has led to a pickup of the housing cycle recently. New housing starts are running at 21% 3mma yoy in July, up from 10% in Q1 ( Figure 4 ). Property sales also maintained strong momentum, running at 19% 3mma yoy. The loosening of monetary policy will likely keep the momentum strong in H2.

We think these policy measures are effective in countering the trade shock. China's labor market is tight. The housing cycle plays a more important role in the economy than exports. Moreover, exports to the US only accounted for 12% of Chinese total exports in 2017. We estimate the impact of 25% tariffs on 250bn of exports will affect the economy by about half a percentage point. The policy easing measures so far should be able to largely offset such effect.

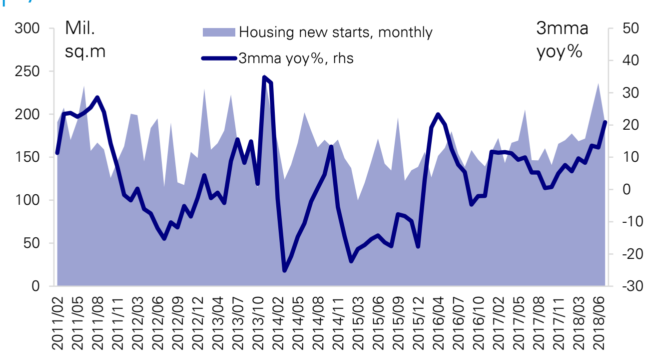
The Chinese authorities likely feel no urgency to give in and agree with all the terms the US side requested. China may follow a "wait and see" strategy in the next few months before the US midterm election is over in November. There is a good reason to follow such a strategy in our view: the trade war will likely become painful for the US soon as well.

Figure 3: Financial conditions loosened since April



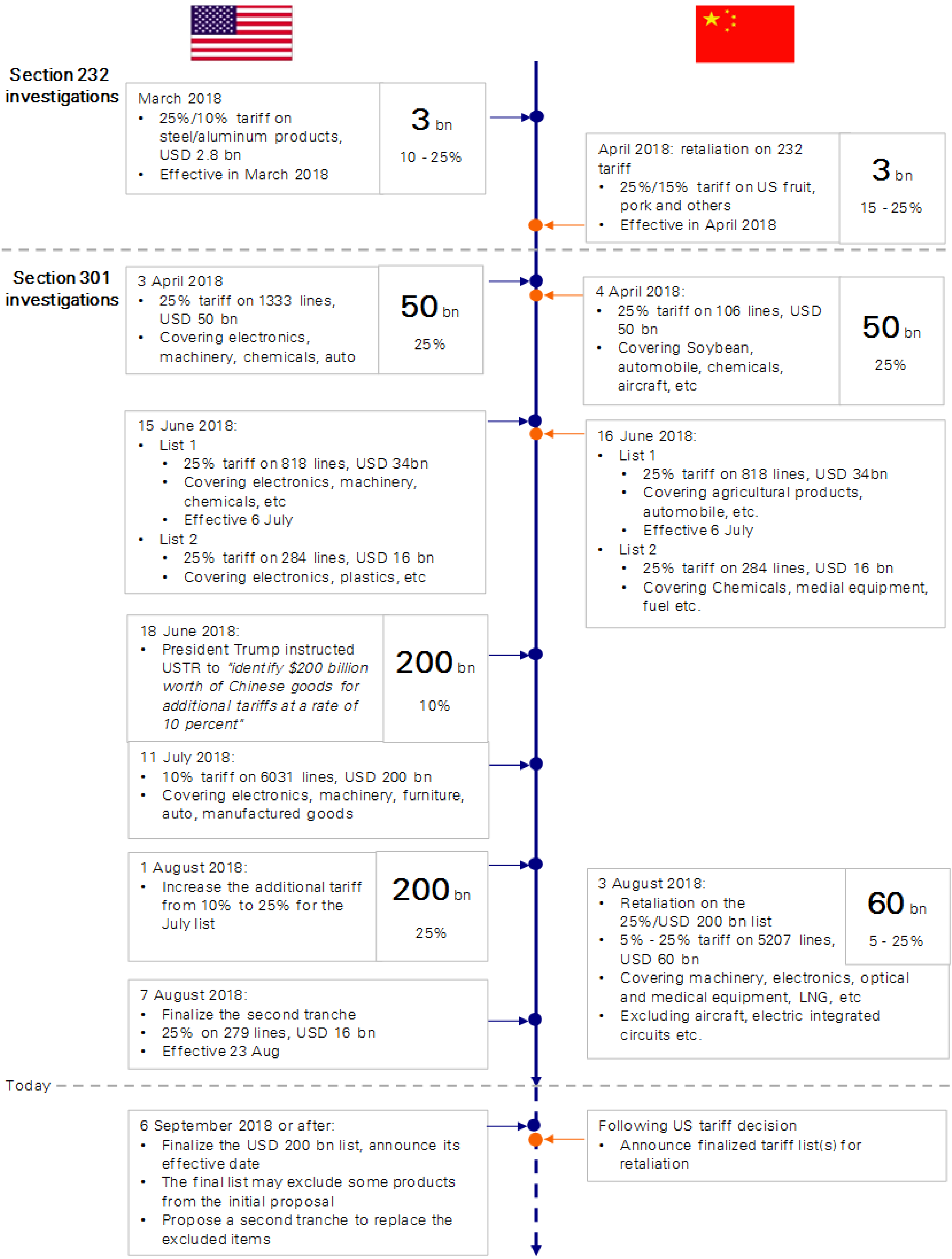

*Source: Deutsche Bank*
*Note: Please refer to China Macro: Launching a Financial Conditions Index for China (31 May 2018) for background discussion.*

Figure 4: Policy easing has led to a pickup of housing cycle




*Source: Deutsche Bank, WIND*

Figure 5: A timeline for the trade war




*Source: Deutsche Bank, China MoF, USTR, USITC, Whitehouse.gov*

## US: the pains from trade war will likely rise soon

The coming round of tariff targets 200bn Chinese exports. This is obviously four times larger than the tariffs already charged on the 50bn Chinese exports. But the actual "damage" to the US economy and consumers is likely to be a lot more than four times bigger. We reached this conclusion by analyzing the US government's decisions on tariffs announced so far ( Figure 5 ).

It turns out there are a lot of interesting details from the US announcements that can help to gauge the coming "pains" from the trade war. The first $50bn list contains 1,333 tariff lines of products. It was based on "extensive interagency economic analysis", and would "target products that benefit from China's industrial plans", such as *Made in China 2025,* while "minimizing the impact on the U.S. economy" [1]. The second $200bn list share the same considerations on US economy and consumers, though China's industrial policy was no longer a focus. All finalized lists also took into account public comments received ( Figure 6 ).

Figure 6: Official claims on tariff lists compilation

| | Apri List 1 | June List 1 | June List 2 | July List |
|---|---|---|---|---|
| Benefit from Chinese industrial policies, including *Made in China 2025* | √ | √ | √ | |
| Less likely to cause disruptions to the U.S. economy | √ | √ | √ | √ |
| Less impact on the U.S. consumers, based on alternative country sources for each product | √ | √ | √ | √ |
| Thorough examination of comments and testimony from interested parties | | √ | | |
| Legal and administrative constraints | √ | √ | √ | √ |

*Source: Deutsche Bank, USTR*

What do these criteria mean in practice? We build a quantitative model to explore what Chinese exports the US government has preferred to target for tariff, and what they have preferred to avoid. The US government has so far made four rounds of decisions related to tariffs on China's exports, as we illustrated in Figures 5 and 6. Thousands of tariff lines were considered and 1097 lines (50bn) were eventually picked in the first three rounds of decisions, and the 6031 lines (200bn) now under review for the fourth round of announcement.

We explore a number of explanatory variables that seem to fit the official claims to see if they could actually explain these tariff choices. Two factors appear critical to their choices:

1. **Current tariffs largely avoided consumer products**. This is in line with the US government's goal to limit the impact on US consumers. Among the 50bn of goods currently being tariffed, only 3.7bn are consumer products.
2. **Reliance on China exports** is important too. This is measured by China's share in total US imports of the same product. If China's share is low, it shouldn't be too difficult for the US to switch to suppliers in other

1 See USTR Press Release, " Under Section 301 Action, USTR Releases Proposed Tariff List on Chinese Products ", April 3 2018

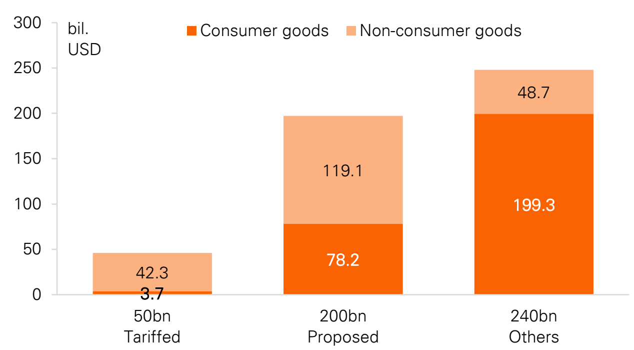
countries. The higher China's share is, the more difficult it would be to find substitutes, and the more disruptive the tariff would be on the US economy. Average China import share was only about 20% in the 50bn list.

So far the US have carefully avoided consumer and China dependent products. As a result, the trade war so far has had little impact on US economy and consumers. But this is becoming harder as the tariff list expands to the next 200bn.

Within the currently proposed 200bn list, about 78bn are consumer products ( Figure 7 ). These include different types furniture (24bn), travel bags(2.2bn), vacuum cleaners (1.8bn), vinyl flooring(1.7bn), window/wall air conditioners (1.3bn), etc. Similarly, reliance on China increases sharply for the 200bn products in tariff pipeline. China import shares are above 20% for most of the products, and for about half of them, China's share are more than 50% ( Figure 8 ; for more details see Appendix I: Top products in the 200bn list ).

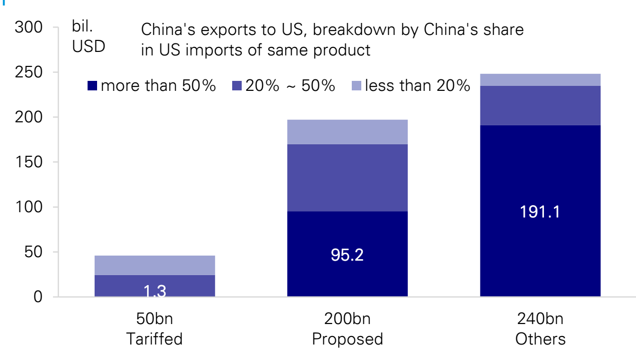
Furthermore, many of the consumer products subject to tariff also happen to have very high China import share. China's import share is about 93% for air conditioners, 78% for vacuum cleaners, and 60-90% for various types of furniture. Therefore, we believe each dollar of tariff imposed on this 200bn list is a lot more painful for the US than one dollar of tariff imposed on the first 50bn list.

Figure 7: New US tariffs will increasingly hit consumer goods...




Source: Deutsche Bank

Figure 8: ...whose substitutes from other countries will be harder to find




Source: Deutsche Bank

Not surprisingly, US domestic resistance on the latest $200bn list appeared stronger than before. The majority of the industry representatives were against it during the six-day public hearing. Will the US be able to accommodate their complaints by exempting these products and finding other products to tariff instead?

We think the scope for finding more product to tariff is very limited. This is because the rest of the products---240bn or so that have not yet been included in any tariff lists---generally appear more prone to tariff increases. To be specific, (1) they are mostly consumer goods. among the 240bn, 200bn are consumer goods. These include big items such as cell phones (43bn), personal computers (37bn), and toys (12bn); and (2) they are also difficult to substitute from other countries. China import accounts for, on average, 70% of total imports from the world.

## What will happen to the 200bn list?

Despite the domestic resistance, we still expect the $200bn tariff list to be finalized soon. The public consultation period will conclude on Thursday, September 6. The US government does not have a fixed date to finalize the list and implement the tariffs, though recent news suggest Trump wants it to be ready as soon as possible. Our baseline is that the list will be finalized before mid-September.

The $200bn will likely also come in tranches. The first tranche will contain most but not all of the $200bn products, addressing public concerns on some products. The US government will announce a second tranche list at the same time, which will likely be finalized later this year.

Our numeric model not only tells us the important factors for US tariff decisions, it can also be used to predict what will happen next. This so-called Probit regression model is a commonly used tool to predict binary decisions.

Aside from the two important factors above (**product type** and **China import share**), explanatory variables in the model also include:

- **Share in imports of similar products** [2], which suggests how easy it is for US companies to switch to importing similar products instead.
- **Import demand elasticity**. High elasticity suggests that import demand is more sensitive to prices, and therefore increasing tax may cause bigger disruption to imports.
- **processing trade share.** China's value added is usually very small for processing trade exports. Putting tariff on these may cause bigger damage to other countries such as Korea, Japan or even the US itself, then on China.
- **current tariff rate**.

These explanatory variables not only fit the official claims, but also makes good economic and political sense. The US administration should seek to maximize the damage of tariffs to China, while at the same time minimizing the impact on the US economy. In this regard, these variables either measure domestic costs, or costs to China, or both.

The model is implemented as follows: we first estimate a probit regression with US's choice on the 50bn products whose tariffs have been finalized and imposed as the dependent variable, with all explanatory variables above on the right hand side (see Appendix II: estimation of the probit model ). Then we apply the model to estimate the likelihood for the US to impose a tariff on each of the product lines.

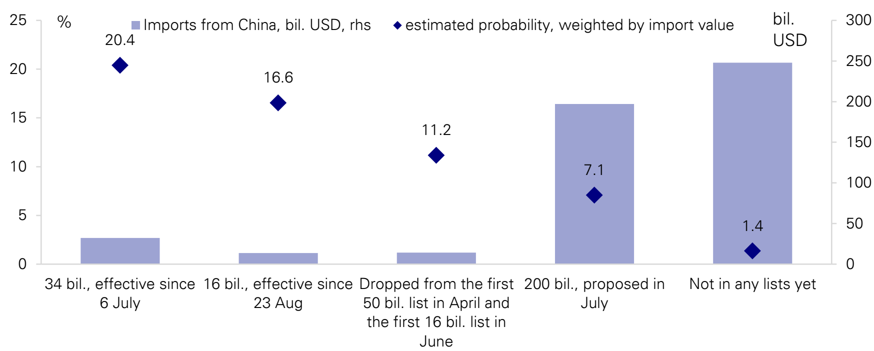
Results suggest that our model worked well in predicting the US tariff list choices ( Figure 9 ). The first tranche of $34bn are the most likely to be tariffed; the model predicts an average "likelihood" of 20%. Average "likelihood" drops slightly to 17% The second tranche of $16bn. It further drops to 7% for the proposed $200bn

2 This is measured by the share of the product in total imports under the same HS 4-digit category.

list. Yet it is still much higher than the rest, whose average "likelihood" of being tariffed was only 1.4% according to model predictions.

Note that these "likelihoods" should be interpreted in relative terms. In other words, the model tells us the US government is much more reluctant to impose tariffs on the products in the 200bn list than the first round of 34bn products already under tariff on July 6. The model also shows an overwhelmingly strong preference to avoid tariffs on the 240bn Chinese exports not yet targeted for tariff.

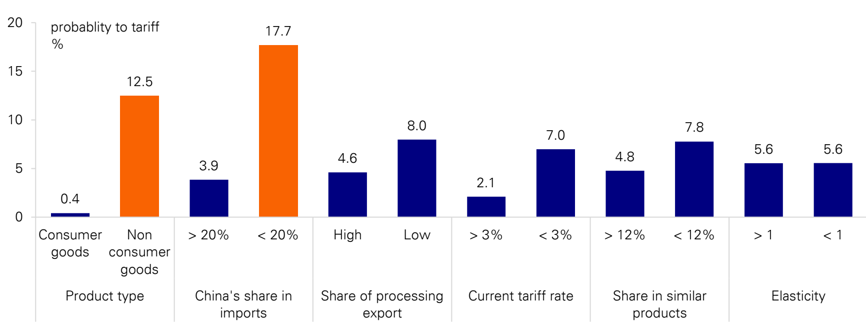
Figure 9:Model-predicted likelihood to be targeted for tariffs




*Source:Deutsche Bank*
*Note: please refer to Appendx II for the probit model.*

As discussed earlier, our model finds that non-consumer products and products with low shares of imports from China are most likely to be imposed tariff ( Figure 10 ). Other factors, including processing trade, current tariff rate, substitution with similar products and elasticity, also matters to some extent.

Figure 10: Non-consumer, low China import share goods most likely to get tariffs




*Source:Deutsche Bank*

## What to exclude and include from the 200bn list?

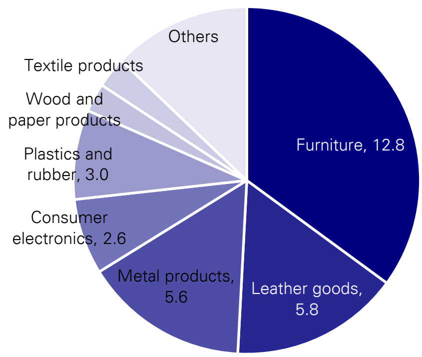
We use our model to predict what will likely be dropped from the 200bn list, and what will be included from outside the list.

- We identified $44bn of products that are least likely to be tariffed according to our model ("likelihood"<0.5%), and therefore will more likely be exempted from tariff. These products are largely in the categories of furniture, metal products, leather, and consumer electronics( Figure 11 ). Top products by value include upholstered seats

(2.3bn) and chairs (1.4bn), lamps (2bn), vacuum cleaners (1.7bn), vinyl flooring (1.6bn), and steel cooking appliances (1bn).

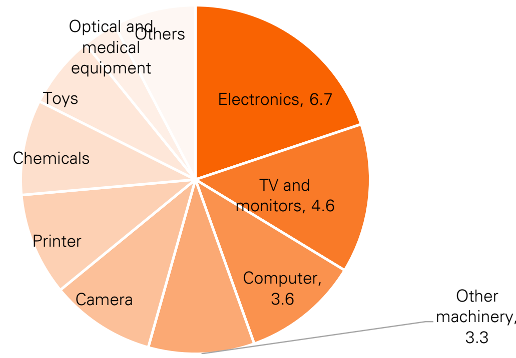
- Meanwhile we also tried to identify products that are most likely ("likelihood">3%) to be included. The amount is about 34bn in total, including electronics, printer and computer, clothes and chemicals ( Figure 12 ). Top product by tariff lines are telephone parts (2.1 bn), digital cameras (1.6bn), and lithium-ion batteries (1bn).

Figure 11: Model-predicted dropouts from the 200bn list




Source: Deutsche Bank

Figure 12: Model-predicted products to include




Source: Deutsche Bank

## Two scenarios for 2019

The outlook of the trade war depends more on the US than China. On the US side, the impact is perhaps no so much about overall growth but more about consumer sentiment. A recent consumer survey suggests that US consumers are increasingly worried about the negative impact of tariffs. Such worries are shared not only by Democrats and Independents, but also increasingly by Republicans ( Figure 13 ).

At this stage it is not clear how much of this tariff shock will be passed to US retail prices, and how the US consumers will react to price hikes. China may wait to observe this, hoping that US consumers will put pressure on the US government to make compromise. This suggests the trade war will likely get worse in the next few months without much progress on negotiation. The next window of negotiation may be November 30 when the two Presidents meet at the G20 meeting in Argentina.

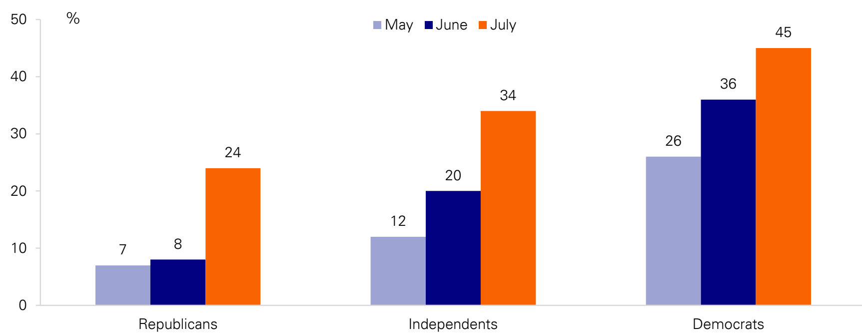
If the two sides reach a deal, it probably would include (1) China buys more US products, agriculture and energy in particular; (2) China opens its service market more to foreign firms; (3) China brings USDCNY exchange rate back to pre-war level, around 6.5; and (4) some promises to protect intellectual property and cutting subsidies to SOEs.

In such a scenario, we would expect RMB to strengthen, China's current account and trade surplus to shrink at a faster pace, the end of loosening from both monetary and fiscal policies, potentially a resumption of the deleveraging process, and further strengthening of capital controls. This is a scenario positive for equities and RMB. It is negative for commodities as China does not need to boost infrastructure investment as much.

If a trade deal cannot be reached, which is our baseline case, China will likely loosen policies further and let RMB depreciate. Monetary easing will continue to encourage banks to lend to SMEs and consumers. Fiscal deficit could be raised in 2019 to support government on-budget spending on its priorities, such as poverty reduction and environmental protection. There is also scope for gradually cutting VAT and other taxes. This scenario is positive for commodities and negative for RMB.

We continue to expect GDP growth to be 6.5% in H2 2018 and 6.3% in 2019. This is under the assumption that the two countries will not reach a trade deal. If a trade agreement is reached in November, we see moderate upside risk to our baseline forecast.

Figure 13: Negative references to potential impact of tariffs from consumer survey




*Source: Deutsche Bank, University of Michigan Surveys of Consumers*

# Appendix I: Top products in the 200bn list

## Figure 14: Top products in the 200bn list

| HS 4 digit | Product | Import value, 200 bn list (bn) | China's share in similar products (%) | Mostly consumer goods ? |
|---|---|---|---|---|
| 8517 | electrical apparatus for line telephony or line telegraphy, including such apparatus for carrier-current or digital line systems; parts thereof | 23.9 | 48.2 | |
| 8473 | parts and accessories nesoi for typewriters and other office machines of headings 8469 to 8472 | 15.1 | 68.6 | |
| 9403 | furniture, nesoi (other than seats, medical, surgical, dental or veterinary furniture) and parts thereof | 11.3 | 48.4 | √ |
| 9401 | seats (other than barber, dental and similar chairs), whether or not convertible into beds, and parts thereof | 9.8 | 66.3 | √ |
| 8708 | parts and accessories for tractors, public-transport passenger vehicles, motor cars, goods transport motor vehicles and special purpose motor vehicles | 9.4 | 14.5 | |
| 8471 | automatic data processing machines and units thereof; magnetic or optical readers, machines for transcribing and processing coded data, nesoi | 7.9 | 25.6 | |
| 9405 | lamps and lighting fittings and parts thereof nesoi; illuminated signs etc. with a fixed light source and parts thereof nesoi | 7.2 | 63.1 | √ |
| 4202 | travel goods, vanity cases, binocular and camera cases, handbags, wallets, cutlery cases and similar containers, of various specified materials | 6.3 | 58.2 | √ |
| 8504 | electrical transformers, static converters or inductors; power supplies for adp machines or units; parts thereof | 5.1 | 50.4 | |
| 8544 | insulated wire, cable and other insulated electrical conductors; optical fiber cables, of individually sheathed fibers, with conductors etc. or not | 3.0 | 54.3 | √ |
| 8481 | taps, cocks, valves and similar appliances for pipes, boiler shells, tanks, vats or the like; parts thereof | 2.9 | 30.9 | |
| 8302 | mountings and other hardware for furniture, doors, windows etc.; hatracks, castors etc.; door closures; the foregoing and parts thereof, of base metal | 2.5 | 45.9 | √ |
| 3923 | articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics | 2.5 | 34.6 | √ |
| 8508 | vacuum cleaners; parts thereof | 1.9 | 74.4 | √ |
| 8525 | transmission apparatus for radiotelephony, radiotelegraphy, radiobroadcasting or tv; tv cameras; still image video cameras and recrdrs;digital cameras | 1.9 | 44.8 | |
| 4011 | new pneumatic tires, of rubber | 1.9 | 14.0 | √ |
| 3918 | floor coverings, in rolls or tiles, of plastics; wall or ceiling coverings, in rolls not under 45 cm (18 in.) in width, of plastics | 1.9 | 80.6 | √ |
| 8415 | air conditioning machines, comprising a motor-driven fan and elements for changing the temperature and humidity; parts thereof | 1.8 | 49.7 | |
| 7326 | articles of iron or steel, nesoi | 1.7 | 36.7 | √ |
| 8537 | boards, panels etc. with two or more appar for switching etc. elec circuits (heading 8535, 8536) or optical etc. instrument of chapter 90; n/c appar | 1.6 | 15.5 | |
| 8418 | refrigerators, freezers and other refrigerating or freezing equipment, electric or other; heat pumps nesoi, parts thereof | 1.6 | 21.5 | |
| 7321 | stoves, ranges, grates, cookers, barbecues, braziers and similar nonelectric domestic appliances, and parts thereof, of iron or steel | 1.4 | 59.3 | √ |
| 8414 | air or vacuum pumps, air or other gas compressors and fans; ventilating or recycling hoods incorporating a fan, with or without filters; parts thereof | 1.3 | 32.0 | |
| 0304 | fish fillets and other fish meat (whether or not minced), fresh, chilled or frozen | 1.3 | 24.0 | |
| 8716 | trailers and semi-trailers; other vehicles, not mechanically propelled; and parts thereof | 1.3 | 38.7 | |
| 8531 | electric sound or visual signaling apparatus (bells, sirens, burglar or fire alarms etc.), nesoi; and parts thereof | 1.2 | 41.7 | |
| 3926 | articles of plastics and articles of polymers and resins of headings 3901 to 3914, nesoi | 1.2 | 58.3 | √ |
| 8512 | electrical lighting or signaling equipment nesoi, windshield wipers, defrosters and demisters used for cycles or motor vehicles; parts thereof | 1.2 | 20.9 | |
| 8516 | electric water heaters etc., space and soil heating apparatus; electrothermic hair apparatus (curlers etc.), hand-dryers, flatirons etc.; parts | 1.2 | 42.8 | √ |
| 8483 | transmission shafts and cranks; bearing housings, housed bearings etc.; gears and gearing; ball & roller screws; clutches, etc.; and parts | 1.1 | 21.0 | |
| 4412 | plywood, veneered panels and similar laminated wood | 1.1 | 41.6 | |
| 6505 | hats and other headgear, knitted or crocheted, or made up from lace, felt or other textile fabric, in the piece (no strips); hair nets of any material | 1.1 | 64.7 | |
| 4819 | cartons, bags and other packing containers of paper, paperboard, cellulose wadding etc.; office box files, letter trays, etc. of paper or paperboard | 1.1 | 43.5 | √ |
| 8543 | electrical machines and apparatus, having individual functions, nesoi; parts thereof | 1.0 | 69.7 | |
| 6810 | articles of cement, concrete or artificial stone, whether or not reinforced | 1.0 | 50.8 | √ |
| 3304 | beauty or make-up and skin-care preparations (other than medicaments), including sunscreens etc.; manicure or pedicure preparations | 1.0 | 21.1 | √ |

*Source:Deutsche Bank, USITC, USTR, UNCTAD, WITS*

# Appendix II: estimation of the probit model

## Figure 15: Independent variable definitions and source

| Variable | Definition | Source | Observation | Mean |
|---|---|---|---|---|
| Consumer goods | 1 for consumer goods, 0 for others, UNCTAD SoP classification, HS 6 digit | UNCTAD, WITS | 8789 | 0.340 |
| Higher share of processing exports | 1 for HS 4 digit products, the share of processing exports of which is higher than the median of the corresponding HS 2 digit category | China Customs | 8742 | 0.536 |
| China's share in US imports | Share of China in US imports, HTS 8 digit product, 2017 | USITC | 8789 | 29.943 |
| Share in similar products | Share of US imports of the HTS 8 digit products in the correponding HS 4 digit product, 2017 | USITC | 8789 | 12.386 |
| Import elasticity | Import price elasticity, HS 6 digit, capped at 5 | SMART, WITS | 8607 | 1.743 |
| Current tariff rate | Current MFN rate applied to Chinese exports, *ad valorem* and *ad valorem* equivalent, with additional 232 tariff on steel and aluminum | TRAINS, WITS, USITC, US Department of Commerce | 8610 | 4.895 |
| *Made in China 2025* sector | 1 for the target sector in the *Made in China 2025* strategy, HS 2 digit (28 - 38, 84 - 90) | | 8789 | 0.335 |

*Source: Deutsche Bank*

## Figure 16: Probit regression results

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Consumer goods | -1.215*** | -1.224*** | -1.118*** | -1.156*** | -1.131*** | -0.705*** |
| | (0.0618) | (0.0619) | (0.0653) | (0.0655) | (0.0680) | (0.0767) |
| Higher share of processing exports | | -0.105*** | -0.121*** | -0.144*** | -0.194*** | -0.115*** |
| | | (0.0371) | (0.0384) | (0.0389) | (0.0402) | (0.0431) |
| China's share in US imports | | | -0.0144*** | -0.0148*** | -0.0153*** | -0.0188*** |
| | | | (0.000950) | (0.000970) | (0.00101) | (0.00112) |
| Share in similar products | | | -0.00381*** | -0.00368*** | -0.00498*** | -0.00186* |
| | | | (0.000923) | (0.000935) | (0.000950) | (0.00104) |
| Import elasticity | | | | -0.0859*** | -0.0756*** | -0.0156 |
| | | | | (0.0126) | (0.0131) | (0.0145) |
| Current tariff rate | | | | | -0.0709*** | -0.0407*** |
| | | | | | (0.00556) | (0.00620) |
| *Made in China 2025* sector | | | | | | 1.195*** |
| | | | | | | (0.0494) |
| Constant | -0.953*** | -0.892*** | -0.545*** | -0.360*** | -0.0929* | -1.041*** |
| | (0.0195) | (0.0276) | (0.0361) | (0.0436) | (0.0477) | (0.0653) |
| Observations | 8,789 | 8,742 | 8,742 | 8,597 | 8,428 | 8,428 |
| Import value | 505.5 | 501.7 | 501.7 | 496.6 | 494.7 | 494.7 |
| Pseudo R2 | 0.094 | 0.096 | 0.143 | 0.154 | 0.192 | 0.298 |
| Log likelihood | -2881.5 | -2869.2 | -2721.8 | -2672.1 | -2530.2 | -2196.9 |

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

*Source:Deutsche Bank*
*Note: Dependent variable is 1 for the 1097 tariff lines (totaling 50bn) that were implemented 25% tariff, and 0 for all other tariff lines. Regression (5) was used for all model predictions in this report.*

# Appendix 1

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