

In Case You Missed it: Trumpian uncertainties

Is a yuan devaluation just noise in the market or have the risks of a trade war turning into a currency war just increased? And as we wait for Russia's response to sanctions, Aluminium has rocketed to a six-year high

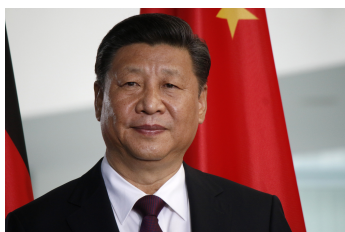
In this bundle



FX

Risks of trade war spilling into currency war increase

Risks of a trade war spilling over into a currency war have risen after reports that China is studying the use of CNY devaluation. The timing of this is...



China

Yuan devaluation 'threat' is tiny

Reports that China is looking at ways of devaluing CNY to offset export value losses due to US tariffs is not a 'threat' but merely more noise in...



Russia

Russia sanctions: Opening Pandora's box?

What US sanctions on Russian companies and oligarchs really mean for the Russian economy and financial markets



Aluminium: Over to China to fill the void

Aluminium prices are up 11% since news that Rusal will be included in the US sanctions list. It's now up to Chinese flows to fill a deepening...



Sustainability

Green bonds: Momentum supported by initiatives

An overview of the market and how the oil and gas majors' hesitant steps into renewables could turn into an offensive

By Nadège Tillier

Risks of trade war spilling into currency war increase

Risks of a trade war spilling over into a currency war have risen after reports that China is studying the use of CNY devaluation. The timing of this is somewhat interesting given that the US Treasury is due to release its semi-annual FX report



Source: Shutterstock

Thailand most at risk of being labelled an FX manipulator

We don't expect the US Treasury's April FX report, due mid-month to formally label any major country a currency manipulator based on the current '3 criteria' approach stipulated in [Section 701 of the 2015 Trade Facilitation Act](#).

If anything, Thailand is at borderline risk of meeting all three criteria should the US Treasury opt to include it in its analysis for the first time. Thailand has not featured in prior reports, though given that it just about now has a bilateral trade surplus of greater than US\$20bn (we use [US Census trade data](#)), the Treasury may deem Thailand to be a major trading partner - and therefore one that warrants inclusion in the report's analysis. If this were the case - and given that Thailand also meets the current account surplus and FX intervention criteria - the US Treasury may be required to label it a currency manipulator.

Indeed, this mercantilist US administration may see fit to make an example out of Thailand - especially as a show of force on its clampdown on what it deems as unfair trade and FX policies of its major trading partners. But alternatively, we note that it could give Thailand a 'hall pass' on the

FX intervention front - not least given that the Thai Bhat (THB) has appreciated by more than 13% against the US dollar since 2017.

No country has ever been formally labelled a 'currency manipulator' by the US Treasury - so the choice taken here would give investors a clear signal into how serious the Trump administration is in its 'America First' protectionist policy pursuit. Certainly, labelling any country a 'currency manipulator' would keep US trade policy uncertainty at its current elevated levels. As a side note, it's worth keeping in mind that the 2015 Trade Act gives any officially labelled 'currency manipulator' a 12-month grace period to address its undervalued exchange rate or large current account surplus.

As for China, we think two possible scenarios could stem from the US Treasury FX report that warrant consideration for global markets:

1. China remains on the 'monitoring list' despite not meeting two out of the three criteria any longer.

China does not warrant featuring on the 'monitoring list' based on the US Treasury's own guidelines as it won't have met two out of the three criteria for four consecutive reports now. However, the Treasury has stipulated that the significant bilateral US-China trade deficit in itself warrants keeping a watchful eye. As such, we would expect China to once again feature on the 'monitoring list' - and this is likely to keep US-China trade and geopolitical tensions on a knife-edge.

2. China is labelled a 'currency manipulator' by Trump despite no circumstantial evidence.

The tail risk - and one that we cannot fully rule out is if President Trump disregards Congress law and proceeds with labelling China or any other major country a 'currency manipulator'. If this happens, it won't be a huge surprise given that one only has to cast to cast their mind back to the early Trump administration this time last year - who labelled [China as the 'grand champions' of currency manipulation](#). And Germany was accused of using unconventional monetary policies to keep the euro 'grossly undervalued' ([see here](#)). Therefore, in our view, a tougher stance on Chinese FX policy will be a huge escalation of global trade and political tensions - and one that would serve as a risk-off catalyst for global markets.

[The US Treasury's October 2017 FX report can be found here](#)

Who's on the US Treasury's currency manipulation hit list?

China's Trade War Artillery: Two ploys, two contrasting market outcomes

While President Xi's speech on Monday evening took a more conciliatory tone in the US-China trade war saga, market headlines at the start of the week were dominated by unconfirmed reports that China is studying the use of CNY devaluation as a potential policy response to any trade war escalation.

While it may appear as if Beijing is simply considering the full extent of policies they could deploy to respond to President Trump's protectionist rampage, our Greater China Economist

Iris Pang does not believe that this approach will be a realistic outcome. Not least given that Chinese officials have spent considerable effort in recent years to erase any CNY devaluation sentiment within markets.

Nevertheless, the broader market implications of Chinese officials pursuing a policy of yuan devaluation in response to an actual US-China trade war would be almost the polar opposite to what one would see if Beijing adopted the widely-cited alternative artillery at its disposal which is the 'dumping' of US Treasury holdings or what we describe as a 'diversification out' of Treasuries into other non-USD assets.

Below we highlight how these two different approaches would have contrasting implications for the US dollar, Chinese yuan and broader EM Asia FX bloc.

1 Ploy 1: CNY devaluation to alleviate tariff pain for Chinese exporters

The implications of a CNY devaluation policy approach on broader emerging markets currencies are two-fold:

1. **Deterioration in global risk sentiment weighing on risky assets (including EM FX against the USD).**

Not only would it be seen as an escalation in any trade war and one that may ultimately spillover into a currency war but past CNY devaluation episodes have also been seen as 'exporting deflation' to the rest of the world. This bearish sentiment channel is likely to have a knee-jerk negative effect on risk-sensitive assets. Following the surprise 8/11 CNY devaluation, global equities fell by more than 10% between August-September 2015, while the broad EM FX index also tumbled by more than 6% during this initial period.

2. **Officials in other Asian countries may copy Beijing**

Indeed, the risk of broader competitive devaluations would pick-up significantly in response to a more protectionist White House- which would be a lose-lose for the global economy.

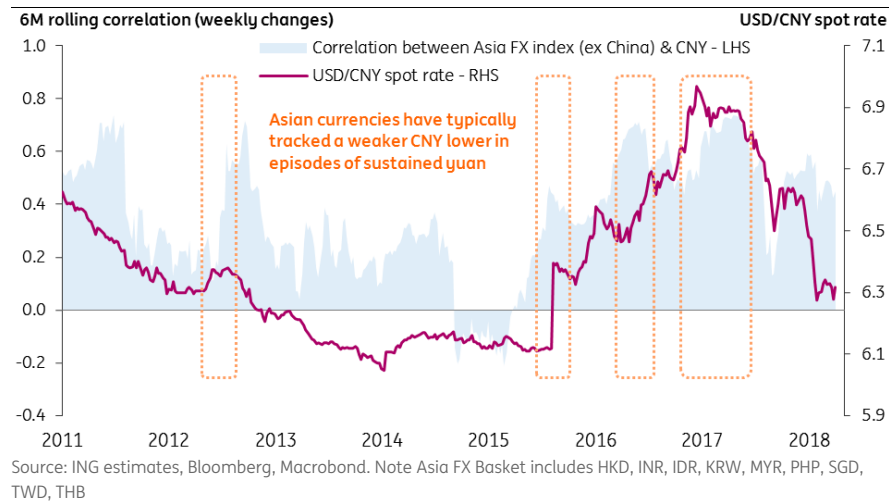
Therefore should China opt to take this trade war into the currency arena, we'd expect emerging markets Asia FX to move lower and in particular, Trump trade-sensitive currencies like the Korean won (KRW) and Taiwanese dollar (TWD). Our analysis shows that a basket of Asia FX (excluding CNY) has a correlation of 0.53 during weeks when CNY depreciates by more than 0.25% (see the first graphic below). As such, a sustained 5% depreciation in CNY would be consistent with a 2.5% move lower in the EM Asia FX ex-China index.

The second chart below shows how global assets reacted during the August 2015 CNY devaluation episode and we would expect a broadly similar reaction if Chinese officials adopted a similar policy approach. The safe-haven JPY would be an outperformer in FX markets, and we would expect USD/JPY to move lower towards the 100 level as it tracks any sharp decline in equity markets.

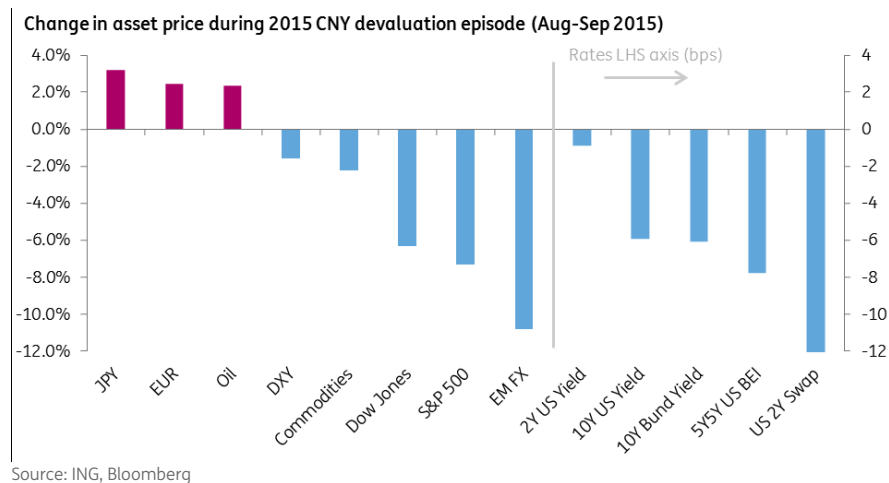
Equally, we note that a broader flight-to-safety would mean US yields moving lower, in particular, the 2-year US rates could move around 25bps lower as the Federal Reserve would likely pause any tightening efforts in the midst of increased volatility. This channel would see the USD modestly weaken against the EUR - though any EUR/USD upside may be limited as investors also push back

their nascent ECB tightening expectations.

Asian currencies tend to track CNY lower in devaluation episodes



2015 CNY devaluation episode provides historical precedence for global markets



2 Ploy 2: Threaten to rotate out of US Treasuries

While the flight-to-safety in the CNY devaluation approach would see bond yields moving lower, if Chinese officials choose to diversify out of US Treasury holdings and into other non-USD assets, then one would expect to see the market dynamics of higher US yields and a weaker US dollar transpire.

As we have explained in our [Trump Trilemma note](#), such dynamics may already be in play. however, the idea of Chinese officials 'dumping' US Treasuries may be slightly overexaggerated. In the absence of China's large trade surplus with the US diminishing any time soon, there is a

structural reason for Beijing to hold USD reserves in the form of safe, liquid USD assets. Indeed, the IMF's reserve adequacy metric estimates that China's overall reserve holdings should be around US\$2 trillion.

Under a 'Cold Trade War' scenario that doesn't take risky assets lower, one of the themes we may see emerge over the coming month is Asian central banks allowing the required tightening of monetary conditions to come through via the channel of a stronger FX – as opposed to higher policy rates.

Indeed, while the broad Asia FX index (ADXY) has failed to push on above its multi-year highs partly due to Trump tariffs on China having the counterproductive effect of weighing on Asia FX, we believe that Trump-sensitive currencies within the region (i.e., CNY, KRW, TWD & THB) will largely trade on a firmer footing against the USD – not least as a means to defuse trade and FX manipulation concerns of the White House.

Appendix: US Treasury's three criterias to identify currency manipulators

The US Treasury adopts a '3 criteria' approach to identifying which countries may be manipulating their currencies to gain an unfair trade or competitive advantage. These are:

1. **Significant** bilateral trade surplus (greater than US\$20bn)
2. **Material** current account surplus (greater than 3% of GDP)
3. **Persistent** one-sided FX intervention (12M net FX purchases greater than 2% of GDP)

While Congress has defined the broad definitions (words above in bold) for these three criteria as stipulated in Section 701 of the 2015 Trade Facilitation and Trade Enforcement Act of 2015, it is the US Treasury that determines the individual thresholds.

A wider definition of identifying currency manipulation has been produced [Bergsten and Gagnon \(2017\)](#) at the Peterson Institute for International Economics. [Their updated analysis](#) shows Switzerland, Taiwan, Israel and Thailand all meet the US's broader FX manipulation criteria.

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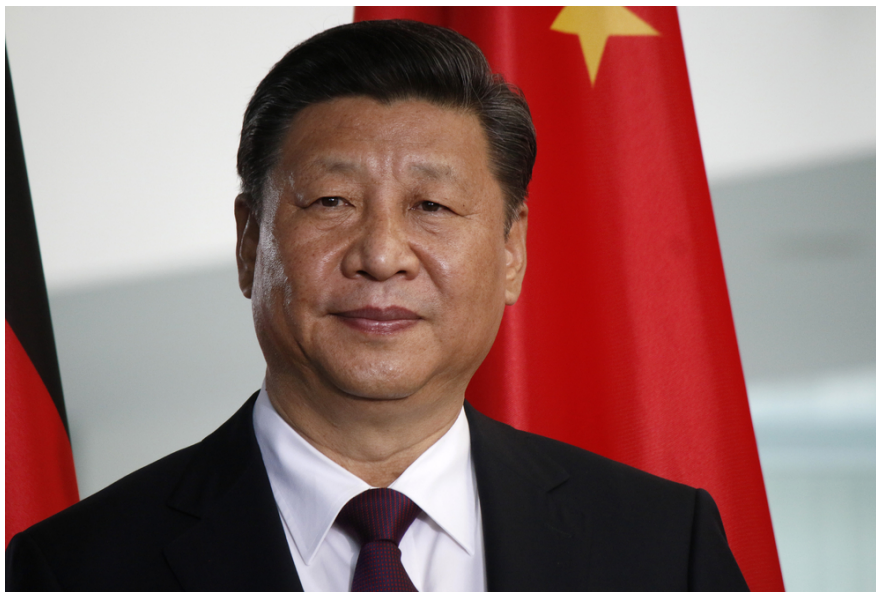
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Yuan devaluation 'threat' is tiny

Reports that China is looking at ways of devaluing CNY to offset export value losses due to US tariffs is not a 'threat' but merely more noise in the market



Source: Shutterstock

CNY devaluation - not even a threat

The chance of yuan devaluation because of a trade war is tiny. Export demand may well shrink when the US imposes 25% tariffs on some Chinese goods. But a devaluation of the yuan would not have the same impact on exports for three reasons:

- First, a devaluation of the currency applies to all goods, exports and imports.
- Second, it cannot solve the root cause of the problem, that the US thinks that China is the main cause of the US trade deficit.
- Third, it makes things even worse. A devaluation of the yuan would strengthen the US government's argument of China being unfair regarding trade, which is not what the Chinese government wants to see.

We do not think CNY devaluation is seriously being considered by China in reaction to any US trade war.

Yuan is acting like a safe haven currency

As we've seen, when trade tensions escalate the dollar softens against the major basket of

currencies. This is making the yuan look like a safe haven currency in the Asia time zone. This is positive for yuan's internationalisation. A stronger currency is more attractive to its holders. This is more obvious after the debut of yuan oil futures in China.

For the Chinese government, yuan internationalisation is a longer-term goal and is an important national and international policy for China. Keep in mind that this escalation in trade tension is somewhat shorter-term. We believe the Chinese government would follow the long-term goal on the future of the yuan, and apply other means to react to the US's trade issues.

Is the trade war a tit-for-tat after all?

A tit-for-tat could be the beginning of the trade war. But President Xi's speech in Boao Forum on 10th April shows that China is ready to open up the automobile sector to the rest of the world. At the same time, China is imposing 25% tariffs on US automobiles as a retaliation on American tariffs on Chinese goods.

It's obvious that China is sending a warning signal that these tit-for-tat actions are not in the US's interest. In fact, China is giving America a chance to go back to square one. For the moment, automobile manufacturers of other countries would be more than happy that the US continues its tariffs on China.

We maintain our forecast of USDCNY

Unless there is any change in the speed of yuan internationalisation, we believe we'll see just a mild appreciation of the yuan in 2018. Trade wars, of course, add more uncertainty and we think the central bank will be cautious not to speed up the internationalisation of the currency too fast.

Yes, there's plenty of noise in the market. But our forecast of USD/CNY for 6.10 by the end of the year is still on track.

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Russia sanctions: Opening Pandora's box?

What US sanctions on Russian companies and oligarchs really mean for the Russian economy and financial markets



The US extension of SDN (Specially Designated Nationals) sanctions against several oligarchs and their public companies last Friday saw the visible market reaction only this week. This is the first material impact seen since 2014 as the measures open the way to the uncharted territory of sanctioning any company in Russia. Retaliation measures on foreign business, which have so far been nearly non-existent (apart from the food imports ban) as well as potential losses of global investors/banks from Russian assets, are factors to watch. Non-US business reaction will determine the ultimate effects of the sanctions. Yet, the Russian economy overall is more protected than in 2014-15.

The sanctions...

Russian assets suffered heavy losses with stocks down nearly 10% on Monday and corporate bonds and sovereign eurobonds plunging too. OFZs decline of 0.7-1.5% in price terms and the RUB drop of around 5-7% look modest for now. The response came after the US government announced a new wave of sanctions against 24 Russian individuals and 15 companies last Friday.

The official rationale is an accusation of Russian meddling in the US elections and its behaviour in Ukraine and Syria. This comes in addition to the most recent escalation of accusations of Russia's

responsibility for the poisoning of the ex-Russian spy and its backing of the Assad regime, which is blamed for the use of chemical weapons. Effectively, the mix of accusations against Russia has soared, clearly aimed at raising the pressure on President Putin and his inner circle after his re-election and before the formation of the new government.

...and their surprise effect

The first negative effects of the US sanctions stem from the fact that such sanctions against public companies hadn't been expected. We think the market was mostly assuming that financing restrictions to raise new capital and buy technologies/equipment (which work against state-owned energy giants and banks) were the most probable options for sanctions against Kremlin oligarchs. Yet, the US has chosen the SDN approach (assets freeze, a ban on many transactions between sanctioned entities and US residents) which may create more pronounced and long-lasting primary and secondary effects on both sides (Russia and the West).

The indirect effects of sanctions are the primary focus

The direct impact on the Russian economy through the sanctioned entities doesn't look too biting. Yet, as was the case in 2014, the indirect effects are the primary focus. The financial market sell-off suggests investors may start looking at all of the Russian 'oligarchs/businessmen' on the US Kremlin list (released in January) through the prize of similar sanctions, which is the biggest threat.

The mix of accusations against Russia has soared

Moreover, as we have already learned, non-US entities may start behaving in a way that poses additional restrictions not stated in the official sanction wording (eg, Euroclear/Clearstream ban on settlement of sanctioned bonds before the stated deadline in early May, a ban on trading them, etc). Together with the defending strategies used by global banks' compliance/legal departments, this creates another layer of self-made sanctions from global banks and financial firms. These effects are impossible to quantify and properly analyse as they could have the potential to lead to a tail-risk scenario of uncharted waters of sanctions and likely retaliatory measures.

Russia previously largely reluctant to use 'economic' retaliation measures

It is worth mentioning that apart from the food import ban of 2014, Russia has been very reluctant to use 'economic' retaliation measures in response to various waves of sanctions. Foreign businesses working in Russia have seen no pressure (sometimes even the opposite) and the only example has been retaliation bans on Turkish businesses after Turkey shot down a Russian military jet in Syria. This time the authorities may be more responsive even though we still hope that the government will weigh all short-term political "gains" vs mid/long-term economic losses from higher economic isolation from the West.

Also, the threat of secondary sanctions against non-US entities working in Russia will be key for assessing the full effects of the sanctions, and their response is worth watching given the active presence of non-US businesses in Russia. These risks of foreign businesses losing the market share

in the country may be material for many companies from abroad as the Russian market is still a top priority for many, given corporate surveys and our contacts with clients.

This time the sanctions create a precedent

As for financial markets effects, when assessing restrictions on sovereign debt in January, the US government acknowledged risks to the global financial system which stopped them from being seriously considered. This time the sanctions create a precedent which could be used against (any) Russian company without clear and transparent arguments. So investors may try to limit exposure to Russian stocks/bonds, yet suffer direct losses. The same arguments work for foreign banks working in Russia (and mostly European, not the US banks) exposing them to potential losses via direct P/L effects and a loss of future business. Overall, we hope that the US is not planning to start the economic sanctions war against Russia given potential spillover effects, even though risks have increased.

The Russian economy itself is in a much better shape now than in 2014-15

On the macro side, the economy itself is in a much better shape now than in 2014-15 to withstand sanctions which may help limit the scale of the market panic:

- (1) it has adjusted to much lower oil price levels and returned back to growth (even still low);*
- (2) the fiscal policy is benchmarked to US\$40/bbl real oil price under the new fiscal rule;*
- (3) the monetary policy is still moderately tight;*
- (4) net external assets position of the private sector is negative (more fx assets than liabilities);*
- (5) FX reserves recovered visibly and RUB is fully flexible with very low risk of capital controls.*

Banking sector effects and the general financial stability are the most import sources of concerns, but we think the Central Bank is capable of managing these risks further.

RUB: The big washout of the consensus trade

On RUB, the drop so far looks rather contained. The YTD BoP data suggested it has been fairly valued and the recent drop puts it closer to the levels which we assessed in Dec-17 as fair given the current oil prices and the fiscal rule via the BoP-based methodology. With financial markets' concerns and signs of USD/RUB being used as a hedge vehicle by bond investors, the selling pressure may continue for some more time, especially given that long-RUB positions have been a consensus view among investors for quite a long time.

The rouble drop looks rather contained, so far

Indeed, the net speculative RUB-longs have been above 60% of total positions (CFTC data) and foreign holdings of OFZs are above 30% (and above 50% after adjusting for illiquid bonds). With the positive C/A seasonality coming to an end, the role of capital flows will be key now. However, RUB high carry status and likely capital repatriation by major Russian businessmen/oligarchs and wealthy individuals may offset or, at least, ease the negative pressure from financial investors selling RUB now.

With the USD/RUB 60 level easily passed, the market may keep the USD/RUB 65 level in mind. Yet, we still see RUB stabilising at better levels over the course of 2018 in our base case scenario of no significant widening of the sanctions list. We don't think the CBR will be concerned about the RUB weakness unless its moves start questioning the financial stability issues and/or puts the central bank's 4% inflation target at risk.

OFZs: Abundant RUB liquidity in the banking sector to provide a backstop

As for sovereign bonds, Russia's pure fiscal position doesn't flag any material risks. As authorities mentioned several times before, the primary supply of OFZs may be decreased if needed under a negative scenario, as the federal budget will likely have a breakeven oil price at around US\$55/bbl in 2018-20, so the only story is how to rebalance the sources of funding under the fiscal rule still requiring debt issuance by its construction.

The scale of the CBR policy easing may be revisited under the negative scenario of prolonged pressure on ruble assets, as these expectations have been supportive for OFZ. But this may allow for only a modest correction, not a major selloff. And abundant RUB liquidity in the banking sector will provide a backstop here. The low OFZs reaction so far backs the argument. Foreign bonds are even a much less important source of funding for the coffers, especially after the Finance Ministry already tapped a part of the annual gross issuance plan of US\$7bn. So, we might suggest using any decent price weakness as a buying opportunity unless one turns serious about the sanctions extension to sovereign debt and/or other corporates.

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Aluminium: Over to China to fill the void

Aluminium prices are up 11% since news that Rusal will be included in the US sanctions list. It's now up to Chinese flows to fill a deepening deficit beyond its borders and curb the LME rally. Keep an eye on the following to navigate the volatility



Source: Shutterstock

1 Rusal sanctions extend beyond the US

On 6 March, the US placed Rusal under sanctions. A temporary license allows existing agreements to be wound down until June 5th. While only explicitly forbidding US entities from dealing with sanctioned parties a non-US entity can be penalised too, and that can vary from denying visas to freezing USD credit lines.

We think this is much more than just a US issue, consumers are worried globally about taking Rusal material especially multinationals with exposure to the US. Rusal produced 13% of aluminium outside of China last year, so the repercussions are serious.

2 Aluminium was already poised to turn

The pace of the rally should be placed in context as LME prices were already looking heavily oversold and ready to jump.

With the LME price now breaching below \$2,000/mt, we [highlighted](#) before the sanctions were announced, that because prices had fallen less on Shanghai, a closed arbitrage for Chinese semi

exports would soon see ex-China markets tighten and prices were likely to recover. With Chinese margins averaging zero, a Shanghai and incremental LME uplift seemed inevitable.

3 Ex-China deficits get tighter, it will be up to China to fill the void

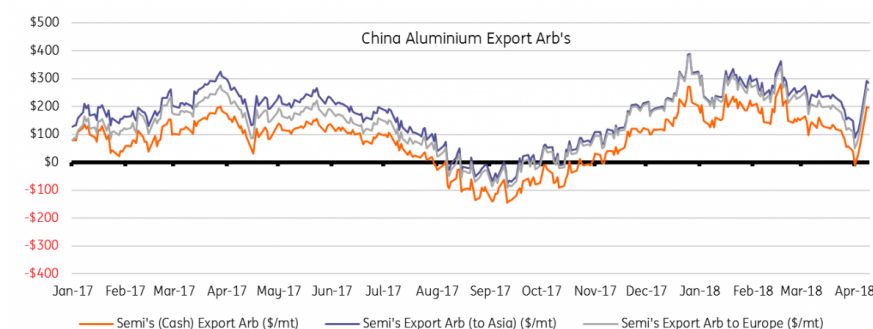
Even before Rusal sanctions, we were [bullish aluminium](#) expecting \$2,300 by second-half of 2019 because of deepening deficits outside of China which is the main domain of LME prices.

We already had a 1.75Mt 2018 shortage with generous assumptions for US smelters to restart. In a perfect storm, Hydro's recently announced 230kt loss at Albras increases shortage to 2Mt. The more Rusal supply exempt from consumption (3.7MT in total) then deficits both global and Ex-China get astronomical, but we suspect customers will yet appear (at a discount).

The last thing China needs is more aluminium units, but those companies have least to lose from US penalties, and if Rusal can stomach the discount we would expect units to flow here. China could, in turn, boost semi and even primary aluminium exports to ease the rest of world shortage as we explain further below. Chinese capacity utilisation was only 80% last year if higher prices can incentivise an additional 10%, which alone can add 3.6Mt of supply although doing so faces challenges from environmental controls.

Turning profitable for Chinese semi's exports

(\$/mt)



Source: SHFE, LME, Harbor, ING Research

4 The US looks tightest, but rest-of-world premiums should also rise

Russia provided almost 20% of US unwrought aluminium imports last year, so just as US premiums were starting to retreat on section 232 exemptions, the latest scramble by consumers has pushed the front month on CME above 20c/lb. Even the forwards think this has overrun with the curve in backwardation, but 2019 is still a hefty 19.75c/lb.

Since Russia was not 232-exempt, we were expecting Rusal imports to be increasingly displaced by those exempted including Canada, Australia and EU but it will now get even more competitive to source.

High premiums play to our original bullish stance of discouraging LME metal to appear

on warrant and escalating the trend of sharp backwardations as explained in our [2018 Aluminium outlook](#). Section 232 and 301, will keep the US looped out from any Chinese export relief supporting the high premiums. Europe and MJP premiums expected to play catch up with the US in near term.

5 LME suspending Rusal brands

After April 17th only material produced before the imposition of sanctions, which was 6 April can be delivered on to the exchange and only if it doesn't involve sanctioned parties. This is a U-turn from the announcement on Friday that the Bourse had no immediate plans to change its requirements.

We had previously cautioned that Rusal deliverability would render premiums more exposed than LME prices, but now its game on for all (ex-China) price benchmarks with Rusal supply excluded. Comex also suspended Rusal, but it remains deliverable on Shanghai.

6 Existing stocks

LME warehouses can still put pre-sanction produced metal on to warrant after April but to avoid challenges, the next few days could see a rush of material. Best estimates circulating suggest Rusal might represent 25% of off-warrant stocks which we believe are around 4MT ex-China. The LME published that already 36% of LME stock are of Eastern European origin, so mostly Rusal.

Meanwhile, just 18kt of LME stock cancelled at Port Klang shows a surprisingly mild run on the non-Rusal stockpiles. Should Rusal stocks continue to dominate, we could see a divergence between premiums and LME back on the cards.

7 Spreads flip

As aluminium surged on Monday, the ILME Cash-3M flipped from a contango of \$20.50c to a backwardation of \$16b. Anticipated tightness amid the loss of 13% of ex-China production resulted in a big shuffle of short positions with the resulting squeeze escalating the outright rally.

As Rusal (pre-sanction) stock is delivered, we still expect many consumers to shun those brands. Should this result in, those warrants being churned through clearing rather than financed this could indeed loosen spreads.

We have always emphasised that for Aluminium the curve matters more than it does in any market. If the spreads do indeed ease this will pose near-term resistance for the rally. On the other hand, as the deficits pull on off-warrant metal, the curve will need to tighten to incentivise the unwinding of stocks in financing.

8 Chinese exports: watch the arbs!

As we mentioned above, (point 2) the closed semi's export arb was a sign, markets had oversold, but now the export incentive has rebounded to previous January and February highs.

The growing shortage outside of China will incentivise LME to trade at a growing premium to Shanghai to incentivise exports. Should this differential surpass the 15% export tax, China could even begin to export primary metal.

Should Rusal metal indeed make its way into China then the local SHFE benchmark could depress enough to make this profitable. The flow of Chinese material to fill the rest of world shortage will provide the fundamental ceiling to this rally. We estimate that given average Chinese smelting costs the LME price must trade at above \$2,200 for a Chinese smelter to produce and export at a positive margin.

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Green bonds: Momentum supported by initiatives

An overview of the market and how the oil and gas majors' hesitant steps into renewables could turn into an offensive



The first three months of 2018 saw the issuance of c.€20bn self-labelled green bonds on the credit markets. In the last three months, the Kingdom of Belgium issued a €4.5bn green bond while the Republic of Poland and Indonesia issued €1bn respectively.

Aside from governments, oil and gas companies are trying to enter the renewable energy market too with Repsol being the only major green bond issuer. But still, we think the sector is a potential candidate.

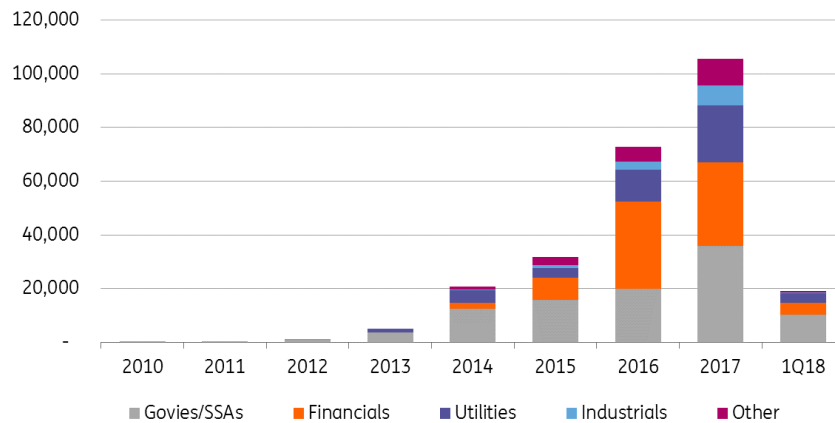
We believe issuance for 2018 and upcoming years will remain strong, and the reason behind that is the sheer number of initiatives across the globe to promote green finance.

In March 2018, the UK government published its “Accelerating Green Finance” report which described the need for investments in clean energy and infrastructure. The document also looked at incentives for sterling issuers to issue green bonds and advocated the issuance of a UK government green bond of the same order as the French sovereign green bond (c.€10bn).

Following the initiatives of the Chinese government and organisations, Japan is ready to catch-up

with its environment ministry willing to subsidise green bond costs, i.e., consultation and second opinion fees. The Japanese government would like to see Japanese green bond issuance doubling in 2018 compared with 2017. Last but not least, we want to mention the work at the European Union level with the recommendation of the establishment of an EU sustainability taxonomy, standards and labels among other things.

Green bond issuance per sector (€m)



Source: Bloomberg, ING

The state of the market

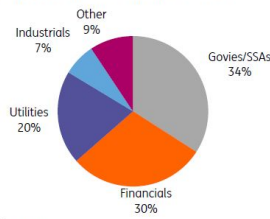
The first three months of 2018 saw the issuance of c.€20bn of self-labelled green bonds on the markets with governments and SSAs providing 55% of total issuance.

The Green Finance Taskforce behind UK's "Accelerating Green Finance" report recommends a UK government large-scale green/sustainable bond issue. Such a bond would further boost green bond issuance by governments and/or governmental agencies, and we think that we will see other governments showing additional interest.

On the corporate side, issuance was supported by Enel (€1.25bn), Engie (€1bn), Iberdrola (€700m) and MidAmerican Energy (US\$700m) on the Utilities side. The Norwegian SpareBank Boligkreditt issued the biggest bank green bond (€1bn) in the first quarter 2018. During this period, the EUR was by far the most used currency by issuers with 56% of total green bonds issued, followed by the US Dollar (14%).

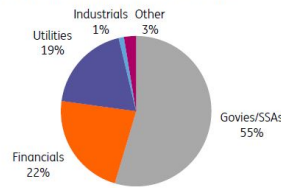
Green bond issuances by-sector and by-currency 2017/18

Fig 1 2017 green bond issuance per sector



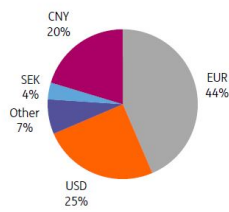
Source: Bloomberg, ING

Fig 2 1Q18 green bond issuance per sector



Source: Bloomberg, ING

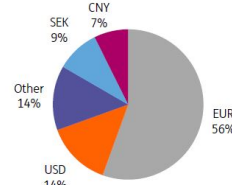
Fig 3 2017 green bond issuance per currency



Source: Bloomberg, ING

Source: Bloomberg, ING

Fig 4 1Q18 green bond issuance per currency



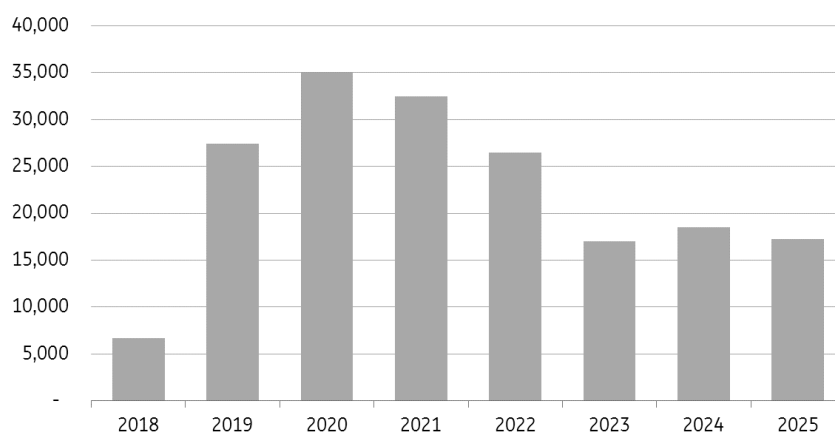
Source: Bloomberg, ING

The market is maturing

After having started slowly in the period 2008-14, the green bond market has grown stronger over the last two years. More than €255bn of green bonds are now outstanding as of March 2018. In 2018, the equivalent of €6.5bn will mature, and the redemptions are ramping up in the years after with €25.5bn in 2019 and €35bn in 2020.

However, we note that the next two years concerns a small number of green bonds issued in EUR as they represent only between 8% and 20% of the total. The redemptions of EUR green bonds will pick up in 2022-2025 with a redemption share of the total between 35% and 60%.

Green bond redemptions, all currencies included (€m)



Source: Bloomberg, ING

The Innogy case

As the market mature, we think investors will be more exposed to exceptional cases. We look at

the Innogy case.

On 10 March, the German utility E.ON announced the acquisition of its German peer Innogy. The agreement in principle is rather complex and consists mostly of asset swaps to RWE, Innogy's majority shareholder and a capital increase.

After the transaction, E.ON, which will have absorbed Innogy, will transfer its renewable power generation assets to RWE. We understand that debt should stay under E.ON. In October 2017, Innogy issued a €850m green bond maturing in 2027.

Initially, the proceeds are dedicated to:

- The construction and installation of onshore and offshore wind energy, solar energy, hydropower and other renewable energies.
- The distribution of renewables generation (network activities) and development of smart meters.
- The development of clean transportation: charging stations, heating systems, smart home devices.

Looking at Innogy's reporting on the use of its green bond proceeds, we can see that most of them are being used for renewable energy. The question that arises is what would become of Innogy's green bond if the new E.ON does not have any renewables assets any longer in its business portfolio. Could Innogy's green bond be transferred to RWE? In theory yes, but only if bondholders agree.

However, RWE has a different business profile and is rated one notch below Innogy at Baa3. We note as well that under the EMTN prospectus, investors have a put option to demand redemption concerning a change of control or a rating downgrade of Innogy SE. Management has not answered this question yet given that the acquisition process is only at its first steps. The case will certainly be answered one way or the other, but the company has at least two years before the full integration happens.

Oil and gas majors' hesitant steps into renewables

Last January, we wrote a note titled "Oil & gas firms hesitant steps into renewables". We are coming back to this subject as the last months saw rumours of acquisitions and additional details on investment programmes into renewables. Up to now, the investment plans may have looked considerable. For instance, the Saudi oil and gas major, Saudi Aramco has announced that it will spend US\$5bn in the next five years and BP, Royal Dutch Shell, Statoil and Total will each invest between €1.5bn and €4.5bn.

However, these plans are spread across some years which means that capex dedicated to renewables remain rather small in comparison with the companies' total capital expenditure.

Saudi Aramco's US\$5bn within the next five years to develop 10GW of renewable energy capacity only represents c.1% of the group's total investment. For the other European oil & gas majors, we estimate that they will dedicate between 1% and 5% of their global investments to green energy projects. However, groups such as Statoil and Royal Dutch Shell have already announced that their green energy plans will represent a much bigger share of their investments in the future.

The last few months have shown oil and gas majors have strong interest in entering the electricity

markets. For instance, Total SA and Royal Dutch Shell have shown interest in Eneco NV, the entity operating and supplying electricity to the Dutch and British markets, after the spin-off from the Dutch Stedin network assets. Eneco NV is in the hands of Dutch regions and municipalities that are now willing to sell the company. Eneco is valued to be worth up to €4bn.

Repsol, which issued a green bond in 2017, is said to weigh the sale of its 20% stake in Gas Natural and invest directly in green energy. In January 2018, Bloomberg reported that Repsol was in talks with KKR & Co's to acquire its renewable assets.

Fig 6 Major oil & gas green energy plans and existing projects

	Green capex plan	Solar	Wind	BioFuel	Electric
Statoil	US\$2.5bn representing 5% of capex. Plan to expand green capex to 15 – 20% of total investments by 2030	<ul style="list-style-type: none"> Agreement to acquire 40% of 162MW solar assets in Brazil Projects in energy storage 	<ul style="list-style-type: none"> More than 5GW of wind assets built or projected 	<ul style="list-style-type: none"> Experimentation on 5% bioethanol fuel for cars 	<ul style="list-style-type: none"> Operates charging stations in Norway and Sweden
Total	Intention to invest c. US\$500m per year representing less than 5% of capex	<ul style="list-style-type: none"> Entered the solar market in 2011 with SunPower Acquired solar battery maker Saft for US\$1.1bn Total SA energy Ventures (TEV) fund dedicated to innovative energy start-ups 	<ul style="list-style-type: none"> Acquired Windpower in 2016 which installs wind turbines in rural areas of the USA (market estimated at US\$25bn) 	<ul style="list-style-type: none"> Working on Biofuels with notably a demonstrator platform being built in Dunkirk, France 	<ul style="list-style-type: none"> Targeting its 300 French petrol stations to be equipped with electric charging stations
Shell	Will invest between US\$1bn and US\$2bn per year or 5 to 10% of capex	<ul style="list-style-type: none"> Re-entered the solar business in 2018 with a stake in Silicon Ranch Corp for US\$200m 	<ul style="list-style-type: none"> Operates some scale wind farms in NL 	<ul style="list-style-type: none"> Joint venture with Raizen to produce 2bn litres of ethanol 	<ul style="list-style-type: none"> Started the Ionity charging network in Europe
BP	US\$200m per year	<ul style="list-style-type: none"> Strategic partnership with Lightsource, biggest developer of large scale solar projects 	<ul style="list-style-type: none"> 5GW of wind in the US and 22.5MW wind farms in NL 	<ul style="list-style-type: none"> Produces biofuels in Brazil since 2008 (Ethanol) Joint venture with DuPont in bio butanol 	<ul style="list-style-type: none"> Investment in US based charging manufacturer and in FreeWire rapid charging systems for electric vehicles
Eni	Total investments of at least US\$550m between 2018 and 2020	<ul style="list-style-type: none"> Investments mostly for solar projects in Tunisia, Algeria, Ghana, Egypt, Pakistan and Italy 	<ul style="list-style-type: none"> Agreements with GE and Statoil for wind energy projects 	<ul style="list-style-type: none"> Biofuel projects in Sardinia and biodiesel 	<ul style="list-style-type: none"> Charging stations to be expended
Repsol	Non disclosed but received an EIB loan of €200m for green R&D	<ul style="list-style-type: none"> WindFloat Atlantic Project (offshore windfarm) 	<ul style="list-style-type: none"> Agreements with GE and Statoil for wind energy projects 	<ul style="list-style-type: none"> Vegetable oil In 2012 bought 50% of NFOL Biosolutions SA 	
Saudi Aramco	US\$5bn in 2018-2022	<ul style="list-style-type: none"> Has 10MW solar plant up to date Most of investments dedicated to solar 			
Exxon Mobil	US\$1bn in alternative energies			<ul style="list-style-type: none"> Algae into biofuel Cellulosic biofuel research 	
Chevron	Not disclosed	<ul style="list-style-type: none"> Invested in 5 joint venture solar facilities for projects in USA 	<ul style="list-style-type: none"> Wind farm (Casper) in the US commissioned in 2009 	<ul style="list-style-type: none"> Work on second generation biofuels Cellulosic biofuel Diesel fuel containing between 6% and 20% of biofuels 	

Source: Company information, Bloomberg, Reuters, The Guardian

Source: Company information, Bloomberg, Reuters, The Guardian

We believe that oil and gas majors' ongoing projects in charging stations, renewables and the electricity power markets could make the sector a candidate for green bonds. The sector is under pressure from governments, associations, organisations and investors to reduce CO2 emissions and offer new solutions. But it worth remembering that the oil and gas industry will not be able to change its business model in a short period.

The latest initiatives show that the sector is ready to enter the renewable power markets. Some oil and gas majors have understood they need to work on their image and show they

intend to gradually change their business model over time to comply with climate change mitigation objectives.

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