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Merkel's terms?

US Special

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Summary

- Germany will be key in solving the looming trade dispute between the US and the EU.
- The transactional approach that Trump seems to apply in case of disputes seem to provide a lot of space to reach a deal but in practice doesn't.
- To predict the most likely scenario the key is to identify what concession the EU is able/willing to make.
- A game theoretic approach shows that a stable Nash equilibrium is reached via a bumpy ride
- A Nash equilibrium assumes that both players make rational choices and this does not necessarily have to be the case.

Background

For quite some years Europe and Germany could permit themselves to focus inward. However, several developments, most notably the Crimea crisis, Brexit and Trump's election victory have forced both the EU and Germany to look beyond their internal problems. One of the most recent challenges that especially Germany faces, is the accusation by the Trump administration that Germany exploits the low exchange rate in combination with unfair trade practices. Accordingly it is claimed that the US is flooded with German products. The resulting trade surplus for Germany in relation to the United States (US), is one of the focus areas of the trade agenda that Trump is currently implementing. Hence, Merkel is challenged on the current terms of trade. This special will provide a 'high level' and brief overview regarding the current trade dispute between the EU and the US. After 1 May at the latest, will we know whether the current exemption that the EU currently enjoys regarding the US steel- and aluminium tariffs will become permanent, extended or end.

Since Germany is often mentioned explicitly by the Trump administration, it is likely that the Trump administration will target German exports in case of an escalation. Therefore we also need to focus more specifically on the composition of German exports to the US. Looking at trade flows based on Eurostat data, which uses standard international trade classification (SITC), we highlight in the research note which German sectors are important and as such, which sectors could also be in the US' administration's crosshairs.

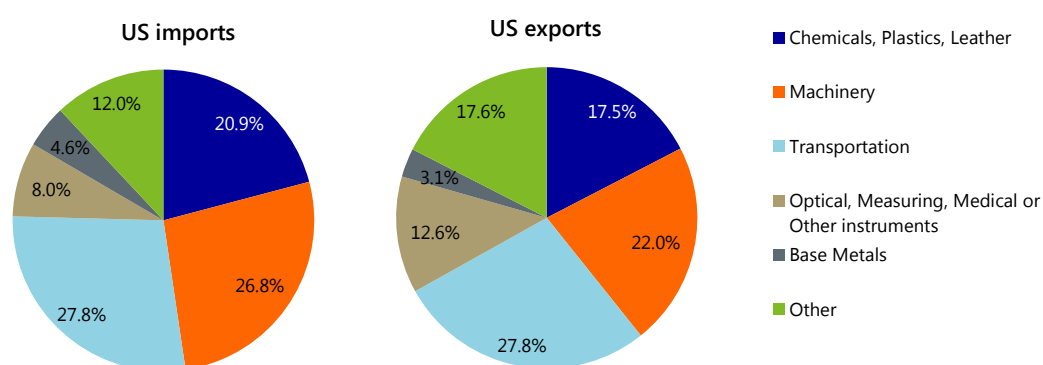
Merkel's views on foreign policy and her recent visit to the White House will also be taken into account with the purpose to enhance the analyses with factors beyond trade. The reason for including foreign policy, and more specifically, the security aspects is twofold. First of all, the steel- and aluminium tariffs that might affect the European Union after 1 May are formally justified by the Trump administration as a matter of national security. More importantly however (but related to the first reason) is the transactional approach that Trump applies in relation to foreign- and trade policy. Possible concessions by Germany on defence spending or the *Joint Comprehensive Plan of Action (JCPOA)*, more commonly known as the Iran nuclear deal, could therefore lead to a permanent exemption of steel- and aluminium tariffs. Via a game tree we show what the possible scenarios are and which factors should be included in the reaction functions of both players in the game, being the EU and the US.

Relations between the US and Germany

Germany's freedom and prosperity depends for a very important part on the liberal world order that the US had basically invented and guarded since WO-II. The global norms and values defining the liberal world order are founded in multilateralism. This order is currently challenged via many channels and since the Trump's presidency, the US seems to be taking a step back, although this step might not be as big as many fear. Still, President Trump is sceptical about commitments to multilateral institutions like the UN, WTO and also NATO. Often Trump has mentioned either the lack of efficiency and effectiveness of these institutions or, in the case of NATO, blamed countries for free riding (i.e. not contributing enough of their government budget to defence spending). Recently the idea of free trade benefitting the US has also been severely challenged by Trump, seeking to renegotiate existing trade deals in order to reduce the ever increasing trade deficit of the US. For Germany, all of the above-mentioned developments form a major threat, be it economically, security or global governance related. While seemingly separate topics, Mr. Trump seems to connect these topics, enforcing the idea that he seeks a transactional approach regarding foreign, security and economic relations.

Economic relations between Germany and the US are comprehensive. Whether it is about trade, investments or employment, both countries regard each other as crucial partners. For a long time the economic relationship intensified with increasing trade volumes and investment flows. With the Trump administration focussing on the aforementioned trade deficit, Germany stands out as one of the main countries of focus only after China. While the composition of the bilateral trade flows between the US and Germany show broad similarities (see figure 1) the trade balance is (heavily) tilted to the advantage of Germany which will be outlined in the next section.

Figure 1: US trade with Germany



Source: US Census Bureau February 9, 2017

Chancellor Merkel's recent visit to President Trump seems to indicate that relations have improved after the first visit. This first visit indicated a rather frosty relationship between both leaders. Nevertheless, despite warmer words from both sides at last Friday's press conference (27 April 2017), the core message from Trump remains that he aims for reciprocal trade relations and he has continues to emphasize that the small increase in planned German defence spending to 1.3% is not enough. Regarding trade, Merkel mentioned that the decision to either or not levy tariffs on steel and aluminium from the EU is totally up to president Trump. This seems to indicate that Trump has not changed his mind to (permanently) exempt the EU from tariffs.

German exports sectors that could be targeted

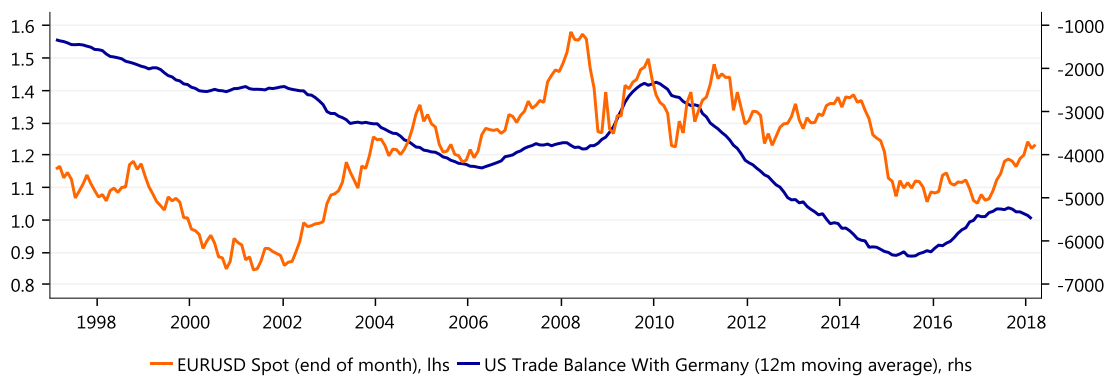
As mentioned, Trump seems to focus on Germany regarding the huge trade deficit with the EU. As such a detailed picture of German exports to the US is helpful in determining what actions Trump could undertake. Looking at Eurostat trade statistics a more detailed view can be obtained than the broad categories presented in the pie charts above. Eurostat trade statistics use SITC as a way of registering trade flows. The most broad product group classifications consist of a single

digit code whereas the most detailed product classes use a five digit code. Total merchandise exports from Germany to the US where € 112.3 billion in 2017 (up 16% from 2014) resulting in a €66 billion trade surplus for the former. This statistic

With great distance product class seven, being machinery and transport equipment, is the largest trade flow going from Germany to the US. This aggregated flow amounts to almost €68 billion, therefore more than 60% of total exports. Of this flow no less than (almost) one third (€21.7 billion) can be attributed to motor vehicles for transport of persons, i.e. cars in plain English. Another important product flow consists of medical and pharmaceutical products. Over €13 billion of these products were exported to the US in 2017. Within this relatively broad product category, the most important export products are insulin and other medicaments for retail sale. These two detailed product flows add up to € 9 billion. Professional, scientific and controlling instruments and apparatus make up for more than €6 billion. Finally, manufactured goods classified chiefly by material make up for almost € 10 billion. Adding up these trade flows covers € 97 billion of the total of € 112.3 billion of goods exports to the US.

Trump and Mnuchin also made comments on the exchange rate but as can be seen from the graph below, during the 2002-2007 the strong appreciation of EUR/USD only led to an increasing trade deficit for the US with the Eurozone. As such the correlation between the trade deficit and the exchange rate is weak to say the least.

Figure 2: A stronger EUR/USD exchange rate doesn't reduce the trade deficit of the US with the EZ.



Source: Macrobond

What does the US want from the EU and Germany?

Although Trump has shown that he can be unpredictable, he has been fairly consistent with his message to Europe. In short, Trump mainly wants the EU to do something about its significant trade surplus, honor the NATO agreement which requires members to spend 2% of GDP on defense and finally, he seeks support from Germany and France to renegotiate the JCPOA. Until now, Trump only has received minor concessions regarding defense spending but the administration continues to send out the message that more needs to be done.

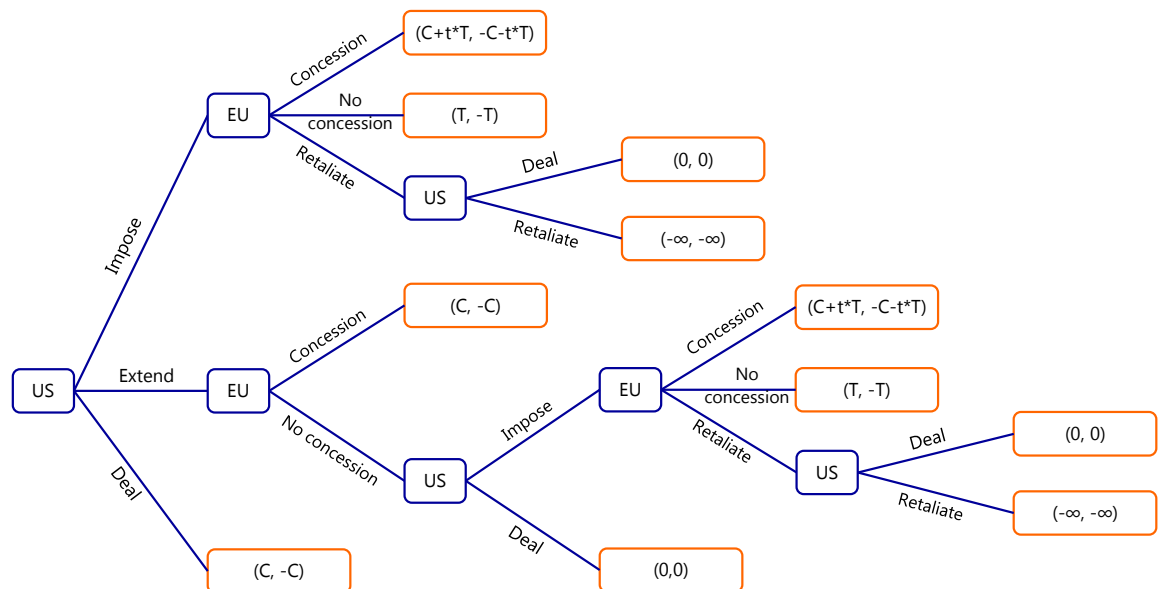
The game and the Nash equilibrium

Therefore it can be argued that we have game here, where the pay-off function of a deal can be presented as $D(T,J,N)$ where T represents a European concession regarding trade and J and N stand for JCPOA and NATO respectively. Each factor in the function could be assigned different weights and the chance of a deal increases when the EU offers a concession on the factor with the highest weight. Obviously the EU could also make concessions on multiple factors which would also increase the chance of reaching an agreement. It is further assumed that no concessions on either of the three factors will result in no deal.

The game tree presented below incorporates several assumptions in order to simplify an otherwise very complex model. For starters, it will be assumed that when the EU offers a concession, this concession will be meaningful and as such will be accepted by the US and therefore a concession will result in a deal. Of course, in reality this would not necessarily be the case. Furthermore, in a situation in which the US would impose tariffs and the EU retaliates, it is assumed that the monetary value of both measures is equal. Additionally, we assume that the imposition of tariffs doesn't go in effect immediately. This means that in case the US would impose tariffs, and the EU would choose to retaliate, the US could blow off the imposition of tariffs with the EU following suit and hence the payoff will be 0 for both players. A full escalation of the trade dispute would result in the most negative payoff possible for both players. The scenario of a full escalation is therefore symbolized by the minus infinity symbol. Finally, non-monetary aspects that in practice are also part of the payoff – like a deteriorating relationship between the EU and the US – are not included in the payoffs.

However the most important thing here is the overall rationale of the game. Via backward induction the game tree shows that if both players are rational non-monetary aspects are excluded, the most likely outcome will be that the EU and the US will eventually make a deal since it is the only stable Nash equilibrium.

Figure 3: game tree



Source: Rabobank

Legend:		
C = concession	T = Tariff	t = period that the tariff is active

Conclusion

Given the most recent developments, the chance that the EU could offer something meaningful regarding JCPOA is limited to say the least. In his visit to the US, French president Macron has gone far though and has even surpassed his European mandate in order to give Trump something. But that doesn't seem to have convinced Trump to stick to JCPOA. This means that a concession should be offered on trade and/or defence spending. The difficulty with increasing defence spending is that most countries within the EU are (still) coping with an increasingly strictly enforced budget deficit limit of 3%. On top of this, many countries are still recovering from the great recession so a potential godsend will most likely not end up on buying new military equipment. In short, it is difficult to make a meaningful concession in the short run. This means that the most likely concession will be made on trade.

Therefore, Germany will play a crucial role since any concessions relating to trade will almost certainly aim on lowering Germany's trade surplus with the US. A key aspect there is that import tariffs on cars with the destination EU are 10% compared to a tariff of 2.5% for European cars exported to the US. The difficulty here, however, is that an adjustment of the tariff for US cars entering the EU would imply that this same new tariff would automatically apply for all cars exported to the EU.

To tackle this problem a very comprehensive trade agreement should be agreed upon with the EU, but this will take a considerable amount of time. Therefore, whereas the eventual outcome might be simple to predict using the game tree, in the real world the outcome is much more uncertain. Still the Nash equilibrium provides a useful insight, being that the game shows that the **rational** choice for the EU seems to be to not offer any concessions and retaliate if necessary since this would lead to a deal. Indeed this is what the EU until now has signalled.

In real life things are much more complex of course. Until now the Trump administration hasn't made any decision yet although Commerce Secretary Wilbur Ross seems to have indicated that some countries get their tariff exemption period extended. We do however think that the EU will eventually come up with something which could very well be a symbolic concession in order to avoid a non-monetary negative payoff.

Finally, although from a purely technical perspective, where only trade would matter (as shown in the game tree) an escalation is the most likely scenario, taking the above mentioned non-monetary negative payoff into account would likely result in a different outcome. To be more specific, in the real world the EU is likely to eventually offer some kind of concession and will get another extension from Trump in order to provide the EU with additional time. This time will be offered to offer something meaningful in order to reduce the US trade deficit with the EU while with the new deadline the US continues to put pressure on the EU.

In the unlikely case that the dispute would escalate, it has been shown that cars are indeed the most likely product class to be targeted by the Trump administration. Targeting medical products likely hurts US consumers too much and many other product flows are too small to really make an impact. Let's see how the game is eventually played out in real life! It seems unlikely that the game will continue to be played on Merkel's terms.

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