# An Economic Analysis of China's Currency Devaluation and its Impact on Trade with the United States 

Article: China must resist US pressure to keep yuan stable

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# China must resist US pressure to keep yuan stable 

## Beijing should defend monetary policy sovereignty and stick to exchange rate liberalization

Yu Yongding-March 6, 2019 14:01 JST
The United States is reportedly pushing China to agree to keep the value of the yuan stable, as part of a deal to end the trade war between the world's two largest economies. It is a demand that China, as its leaders discuss economic policy at the National People's Congress, must think twice about before accepting.

The yuan was undoubtedly undervalued for many years, including through a peg to the U.S. dollar that was established in 1998. An undervalued yuan was an important contributing factor to the trade surplus that China has run consistently since 1993, when its annual per capita income stood at just $\$ 400$. In other words, even when China was still a very poor country, it was exporting capital to the rest of the world, especially the U.S.

Though running a trade surplus benefits some sectors of the economy for a time, it is unclear that it benefits the economy as a whole in the long run. Still, two decades of maintaining a current account surplus, which includes trade, together with a capital account surplus, fueled by large inflows of foreign direct investment, enabled China to accumulate huge foreign-exchange reserves and a large stock of FDI. As a result, though China is one of the world's largest creditors, it has run an investment-income deficit for more than a decade.

But, over the last 15 years or so, China has been working to correct its trade imbalances. Since 2005, when the yuan's dollar peg was eliminated, it has appreciated steadily. By the end of 2013, its exchange against the dollar had strengthened by $35 \%$. In the same year, China's current-account surplus fell to just $2 \%$ of GDP, from its 2007 peak of $10.1 \%$.

Moreover, since 2014, when looser capital controls left China's capital account more responsive to broader changes in the global economy, the country has started to run significant capital-account deficits from time to time. Sometimes, those deficits are large enough to put the entire balance of payments in deficit, despite the trade surplus.

On Aug. 11, 2015, China took a major step to boost exchange-rate flexibility: instead of setting a daily midpoint for the yuan independently, the People's Bank of China began basing the midpoint on the previous day's closing prices. Initially, there was only slight downward pressure on the yuan in the foreign exchange market. But the poorly timed move ended up fueling expectations of currency devaluation, spurring a surge in capital outflows that drove down the yuan's value further.

Some -- including former U.S. Federal Reserve Chair Janet Yellen, in a recent interview -- have suggested that China devalued its currency that summer, in order to offset the effects of an appreciating dollar on the economy's international competitiveness. The truth is that China, precisely because it feared that a depreciation would trigger even stronger expectations of further devaluation ultimately endangering China's financial stability, abruptly canceled the reform just days after it was initiated and began to intervene heavily in the foreign exchange market to arrest the currency's decline.

When those interventions slowed in 2016, the yuan began to depreciate again, spurring the PBOC to resume intervention. The PBOC spent some $\$ 1$ trillion of China's foreign exchange reserves in less than two years to stem downward pressure on the exchange rate. In 2017, thanks to the tightening of capital controls and a fall in the dollar index, the yuan exchange rate finally stabilized.


There is no evidence that China has intervened to weaken the yuan since, not even to offset the impact of higher U.S. tariffs on Chinese exports, even as the exchange rate has fluctuated in response to fears about the trade war. The Chinese government knows that it is not in its best interests to manipulate its exchange rate. And, given China's financial vulnerabilities, devaluation is particularly unappealing.

So, while U.S. President Donald Trump's administration's fear that China is manipulating its exchange rate to gain a trade advantage is not irrational, it is unfounded.

Still, China cannot commit to keep the yuan stable against the U.S. dollar. China's economic cycles are not synchronized with those of the U.S. The Federal Reserve may raise the federal funds rate at a time when the PBOC needs to cut its interest rate, which would spur capital outflows and drive down the yuan's value. It is a country's sovereign right to decide its exchange rate policy, and the U.S. cannot expect to dictate China's. So, even as it listens humbly to America's complaints, China must retain full authority over its approach to the yuan and be able to loosen monetary policy when economic conditions dictate, regardless of whether that causes the yuan to depreciate.

The U.S. would disapprove, but what other choice would China have? It cannot forfeit its monetary independence, and it is not in China's interest to block capital outflows to offset depreciation pressure. Nor can it continue to use its hardearned, and limited, foreign exchange reserves to prop up the yuan's value. How can China be sure the balance is enough to maintain exchange rate stability indefinitely?

Complicating matters further, the relationship between the yuan's value and the U.S. dollar is not just bilateral. China has already committed to cut its trade surplus with the U.S., which comprises the majority of China's overall trade surplus. If the U.S. dollar rises in this context, China's current account is likely to swing into deficit. Again, is China supposed to cut its imports from the rest of the world by whatever means necessary, or sacrifice its foreign exchange reserves? This is not a purely bilateral issue -- exchange rate misalignments often require international coordination to resolve.

China's authorities are committed to advancing the shift toward a marketdriven economy, with a fully flexible exchange rate regime. So, in the current trade negotiations with the U.S., it can credibly commit not to keep the value of the yuan artificially low. But under no circumstances should it promise to keep the exchange rate stable against the dollar.

Recent tensions between U.S. and China is focused on ongoing trade protections-economic policies protecting domestic suppliers-, in the context of U.S.'s nationalist stance and China's slowing growth. This commentary will analyze the effect of China's exchange rate policies and their impact on the Balance of Payments (BoP) - a list of transactions by a country with the rest of the world.

During its rapid growth, China has maintained a policy of devaluation-an artificial reduction of its currency's value by its government-"through a peg to the U.S. dollar," contributing to their "[consistent] trade surplus" They have, however, recently reversed this decision with "the yuan's dollar peg [being] eliminated,"


Diagram 1-A: Foreign Exchange Market of Yuan


Diagram 1-B: The Chinese Macroeconomy

The fixed exchange rate $P_{f}$ in Diagram 1-A has been maintained by the People's Bank of China's (PBOC) purchase of yuan with foreign currency reserves. A hypothetical increase in demand of yuan from $D_{1}$ to $D_{2}$ will be mitigated by the POBC's selling of its reserves, causing an increase in supply of yuan in the exchange from $S_{1}$ to $S_{2}$, maintaining yuan's price at $P_{f}$.

As the article suggests, this pegging is likely aimed at growing China's export industries; with the devalued currency exports will be cheaper and imports expensive, increasing the trade surplus. Such devaluation will also attract foreign investors, resulting in "[accumulation] of foreign-exchange reserves and [...] FDI," crucial to a growing economy.

However, as seen in Diagram 1-B, the change in components of Aggregate Demand (AD): increase in Exports (X) and Investment (I), and a decrease in Imports (M), will stimulate an increase from $A D_{1}$ to $A D_{2}$, causing price levels to rise from $P_{1}$ to $P_{2}$ resulting in inflation. While its Real Gross Domestic Product (rGDP) has also increased-indicating economic growth-without effective purchase of capital goods and policies handling rapid growth, the expansionary gap is likely only to
be temporary, and with $A S_{1}$ shifting back to $A S_{2}$ in accordance to the new classical self-correcting model, will further stimulate inflation.

Such phenomena will likely cause an overheated economy, as its productive capacity struggles to follow the expansionary gap. More significantly, however, the cheap exports due to the devalued currency will likely overwhelm U.S. domestic producers, and stimulate trade wars. Therefore, it is at China's best incentive to lift such policies-as they have in recent years-after desired economic growth has been achieved.

Note, however, that the above model fails to consider numerous other China's trade partners with which the stakes are different. Also important to note is that China's economy is large and planned, and therefore likely less prone to market pressures such as inflation, indicating the possibility that the negative impact of devaluation may be less than assumed.

More recent trade wars between China and the U.S. has caused suspicions of China devaluing its currency to gain a trade advantage against US's tariffs. As the article makes clear that there is "no evidence that China has intervened to weaken the yuan since," this commentary will simply analyze whether U.S.'s "fear that China is manipulating its exchange rate to gain a trade advantage," is economically reasonable.


Diagram 2-A: Microeconomic Market
for Cotton in U.S.
U.S.'s domestic market for cotton-which we will assume imports only from China-is modeled in Diagram 2-A. China's producers's supply, $S_{c}$-shown to be elastic as China is a single economy-due to their efficiency and thus low price, is being imported at quantity $Q$ of Imports $B$ (China's exports). However, an imposed tariff will cause $S_{c}$ to shift to $S_{c t}$, resulting in loss of surplus by Chinese producers and U.S. consumers, and a gain by domestic producers, as exports decrease to $Q$ of Imports $A$. However, as China reduces its exchange rates, $S_{c t}$ shifts downwards to $S_{c t d}$, increasing China's exports back to $Q$ of Imports $B$, benefiting Chinese exporters.

While this policy benefits China's exporters, the devaluation also negates protection by U.S. on domestic producers, and is considered unethical-thus somewhat justifying U.S.'s suspicions. However, as a country's exchange rate influences other aspects of the economy also, China's devaluation decision may be motivated by other factors irrelevant to trade; note also that the model has still only incorporated two nations-in reality, both country's trade is multilateral, and thus "is not a purely bilateral issue-exchange rate misalignments often require international coordination to resolve."

In this commentary, China's devaluation of its currency and its impacts on its economy and international trade have been analyzed. Facing a time of political and economic tension, the Chinese government must act cautiously to balance its citizen's welfare and ethical trade.

