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ECON 101: CURRENCY MANIPULATION

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About the Series

The Studies in Applied Economics series is under the general direction of Prof. Steve H. Hanke, Co-Director of The Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise (hanke@jhu.edu).

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Following his graduation from the University of California, Berkeley (BA, 1965) and the University of Chicago (Ph.D. 1972) he was an Assistant Professor of Economics at the University of Virginia (1970-75). He was employed by the International Monetary Fund from 1976-2003, and was seconded to the Board of Governors of the Federal Reserve (1979) and to the World Bank's *World Development Report* team (1988-89) for one year each.

While at the IMF Dr. Coats led technical assistance teams advising on and assisting with the development of a number of monetary authorities—including the introduction of new currencies (Bosnia and Herzegovina, Croatia, Kazakhstan, Kyrgyzstan, Moldova, West Bank and Gaza Strip) and advising on emergency measures and the longer run rebuilding of money and banking systems in post crisis countries (Afghanistan, Bosnia, Iraq, Kosovo, Serbia). Dr. Coats also assisted the governments of Bulgaria, Croatia, Moldova, Serbia and Turkey in recent banking crises, provided assistance in developing inflation targeting monetary policy frameworks in the Czech Republic, Kazakhstan, Slovak Republic, and Turkey, and lead Financial Sector Assessment Program (FSAP) assessments of Bangladesh, Egypt, Israel, and the Slovak Republic.

Since retiring from the IMF Dr. Coats was a Director of the Cayman Islands Monetary Authority (2003-2010), Senior Monetary Policy Advisor to the Central Bank of Iraq (2003 to 2005), Senior Monetary Policy Advisor to Da Afghanistan Bank (2002 to 2007), Inflation Targeting Advisor to the National Bank of Kazakhstan (2006 – 2009 and 2014-2015), and Advisor to Central Bank of South Sudan (2007 – 2011). He was part of the IMF's program team to Afghanistan from Sept 2010 – Dec 2013. His most recent position was Overseas Development Institute Advisor to the UN OCHA on Yemen, Oct 2018 – May 2019. His most recent book, *One Currency for Bosnia: Creating of the Central Bank of Bosnia and Herzegovina*, was published in November 2007.

Dr. Coats' honors include Kyrgyzstan's Certificate of Honor, presented by President Askar Akaev in Bishkek in 1997. *Central Banking Journal's* 2019 Award for Outstanding Contribution for Capacity Building of central banks, especially in demanding circumstances:

<https://www.centralbanking.com/awards/3979781/outstanding-contribution-for-capacity-building-warren-coats>

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Abstract

Currency manipulation refers to a country's interfering with the market's determination of the exchange rate of its currency in order to influence its trade balance, usually to favor its exports over its imports. In a world in which people and firms trade and invest across borders, i.e. our world, anything a country does (monetary policy, fiscal policy, industrial policy, trade policy) will potentially affect the exchange rate of its currency for other currencies (real and/or nominal exchange rates). This makes it difficult to define what currency manipulation might mean, but it generally refers to a government's intervention in the foreign exchange market by buying dollars or other foreign currencies thus depreciating its own currency's exchange rate. This makes its exports cheaper to foreign buyers and its imports more expensive domestically resulting in a trade surplus (or smaller deficit).

In the following I compare policy reactions to shocks under three types of exchange rate/monetary policy regimes with an eye on the currency manipulation question. The broad categories of shocks are a) a globally shared recession and b) a single country shock to imports or exports such as from an oil price shock or tariffs, or from changes in capital inflows or outflows such as from a change in the political environment. The three policy regimes are: 1) freely floating exchange rates with no restrictions on capital flows, 2) an adjustable exchange rate peg, and 3) a gold standard with currency board rules. Regimes 1 and 3 are the opposite ends of the range of policy regime options. A strict gold standard (or other hard anchor) with currency board rules removes any question of currency manipulation as it is not possible in such a regime.

Introduction

Currency manipulation refers to a country's interfering with the market's determination of the exchange rate of its currency in order to influence its trade balance, usually to favor its exports over its imports. In a world in which people and firms trade and invest across borders, i.e. our world, anything a country does (monetary policy, fiscal policy, industrial policy, trade policy) will potentially affect the exchange rate of its currency for other currencies (real and/or nominal exchange rates). This makes it difficult to define what currency manipulation might mean, but it generally refers to a government's intervention in the foreign exchange market by buying dollars or other foreign currencies thus depreciating its own currency's exchange rate. This makes its exports cheaper to foreign buyers and its imports more expensive domestically resulting in a trade surplus (or smaller deficit). While a country's persistent intervention to buy foreign currencies is clear evidence of currency manipulation, many countries with floating exchange rates intervene temporarily in either direction to prevent excessive volatility of their exchange rates without longer-run interference in the market's determination of their

exchange rate and most central banks intervene to build up and maintain most reserves of foreign currency.¹ Any country whose currency is held abroad also must have a current account deficit sufficient to supply the amount of its currency demanded abroad. The US dollar is the world's primary reserve currency and has experienced current account and trade deficits for that reason. In the first six years of this century (2000-2006) many central banks acted to increase their foreign exchange reserves (largely USD) pushing the US current account deficit from \$400 billion per year to \$800 billion.²

When President Trump criticized Federal Reserve Board Chairman Powell for not cutting interest rates enough on July 31, was he trying to depreciate the dollar (currency manipulation) in order to boost American exports, or more generally trying to boost American economic output (to counteract the economic damage he is inflicting with his many trade wars) going into the 2020 Presidential elections?³ And can these two be separated?

In the following I compare policy reactions to shocks under three types of exchange rate/monetary policy regimes with an eye on the currency manipulation question. The broad categories of shocks are a) a globally shared recession and b) a single country shock to imports or exports such as from an oil price shock or tariffs, or from changes in capital inflows or outflows such as from a change in the political environment. The three policy regimes are: 1) freely floating exchange rates with no restrictions on capital flows, 2) an adjustable exchange rate peg, and 3) a gold standard with currency board rules. Regimes 1 and 3 are the opposite ends of the range of policy regime options.

If, for example, the US experiences an increase in its inflation rate above its 2 percent target (as could happen but for Trump's trade wars) and raises its policy interest rate in order to tighten money and constrain the inflation, the exchange rate and market reactions will depend on its policy regime, which for the US is floating exchange rates with an inflation target. Similarly, but in the opposite direction, an oil exporting country experiencing a loss of export revenue from a fall in oil prices might cut its policy interest rate in order to increase domestic investment and make up for the loss of domestic demand. Or in the example currently in our face of Trump's trade war with China, the imposition by the U.S. of tariffs on China's imports might lead China to cut its policy interest rates or otherwise make up for the loss of aggregate demand in China from a reduced trade surplus (or increased trade deficit as China's current account is currently more or less balanced).

¹ Joseph E. Gagnon. "Currency Manipulation and its toll on the US Economy" Peterson Institute for International Economics." July 13, 2017. Web.

https://www.youtube.com/watch?v=wE7UkXk_VCo

² Warren Coats. "Who Pays Uncle Sam's Deficits." *National Interest*. June 26, 2018.

<https://nationalinterest.org/feature/who-pays-uncle-sams-deficits-26417>

³ Warren Coats. "Is Trump Killing his own Re-election." Blog. July, 30, 2019.

<https://wcoats.blog/2019/07/30/is-trump-killing-his-own-re-election/>

Floating exchange rates

For a synchronized global recession (pretty much what we had in 2008)—all countries will want to lower their monetary policy interest rates in order to stimulate their domestic output. If one country gets out ahead of the others by lowering its interest rates more, its exchange rates will depreciate relative to the others (from capital outflows seeking higher yields abroad) and its stimulus to its output will come partly from an increased trade surplus, thus at the expense of other countries experiencing a trade deficit.

In the US example of tightening its monetary policy, the increase in US interest rates will attract foreign capital, which will appreciate the dollar's exchange rates producing or increasing a trade deficit. This would increase aggregate demand in the foreign trade surplus countries. To illustrate with the recent easing of monetary policy in the US, the one quarter percent cut in the Federal Reserve's policy rate on July 31, 2019 tends to precipitate a capital outflow as investors chase the relatively higher returns abroad (assuming that other central banks have not cut their rates as well). The increased sale of dollars for other currencies in order to shift investments abroad will depreciate the dollar. A depreciated dollar makes US exports cheaper and imports more expensive thus producing the trade surplus that makes the capital outflow possible, and which adds to domestic aggregate demand. If other countries respond by lowering their own interest rates more, or by direct intervention in the foreign exchange market, to prevent the loss of domestic demand in their own economies, they can set off a vicious cycle. Such situations have been referred to as competitive devaluations. To avoid the fruitless damage of competitive devaluations, countries need to synchronizing policy interest rate cuts in order to avoid exchange rate and trade balance effects.

Similarly, the oil exporter reacting to an oil price decrease induced trade deficit by cutting its monetary policy interest rate will depreciate its exchange rate even more than would result from the fall in the dollar price of oil alone. This will increase the prices and reduce the purchases of imports while restoring some of the domestic revenue from its reduced exports thus reducing its trade deficit and increasing (restoring) domestic aggregate demand. This would be appropriate exchange rate and aggregate demand management, and not generally considered currency manipulation.

What would be the impact on the Chinese exchange rate from the imposition of tariffs by the U.S. on China's exports to the U.S.? In the absence of any policy response by China, American imports from China would fall as American consumers faced the higher prices from the tariffs. China's exports and export revenue would fall increasing its trade deficit (or reducing its surplus). The supply of dollars relative to yuan in the foreign exchange market would fall, depreciating the yuan until the trade balance is restored.

This is what happened on August 5, 2019, though I do not know whether this was a purely market determined rate or whether China intervened in the FX market. Thus, it is not possible to conclude whether China was manipulating its exchange rate. It is more likely that China intervened in the opposite direction, i.e., to prevent the yuan from depreciating much beyond 7.1 yuan/USD. Sadly this did not keep the US Treasury from labeling as currency manipulation the modest depreciation of the yuan from 6.90 yuan per dollar on Aug 1 to 7.05 on Aug 5 thus discrediting the integrity of the Treasury's assessment.

Pegged exchange rates

With pegged or managed exchange rates the country that cuts its interest rates more than others must intervene in the foreign exchange market in order to maintain its exchange rate peg. There will be no trade balance effect if the monetary increase from the intervention is sterilized (an offsetting sale of domestic securities by the central bank to reabsorb the base money created by the initial FX intervention), but the ability of the rate cutting central bank to continue such intervention is limited by the size of its foreign exchange reserves. The US does not peg its exchange rates and maintains minimal FX reserves. Unsterilized intervention will increase the money supply and prices until the real exchange rate has depreciated enough to restore a balance of payments equilibrium (a trade surplus sufficient to enable the desired capital outflow).

China pegged its exchange rate at about 8.3 yuan per dollar for the decade from 1995-2005. In the last few years of that period China's negligible trade surplus began to grow. Rather than allow its exchange rate to appreciate in response to market forces, China began to intervene and by 2005, when it abandoned its peg, its modest foreign exchange reserves had risen to around half a trillion USD. The ability of surplus countries to intervene and accumulate reserves without limit reflects the asymmetry of adjustment pressures between deficit and surplus countries noted by Keynes. Over the next nine years China allowed its exchange rate to appreciate to almost 6 yuan per dollar but in order to resist more dramatic appreciation it intervened massively, accumulating almost 4 trillion USD in FX reserves by early 2014. Domestic inflation also contributed to the badly needed real appreciation during this period but as China sterilized much of its intervention, such inflation was insufficient. Since then China has reversed its interventions to prevent more rapid depreciation of the yuan from market forces, running its FX reserves from 4 trillion down to 3 trillion in 2017 thus keeping its depreciation under 7 yuan per dollar. This coincided with China's gradual liberalization of capital mobility and China experienced the limitations of the impossible **trinity** (the so-called trilemma). The trilemma is the fact that it is only possible to have two of the following at the same time: a fixed exchange rate; free capital movement; and an independent monetary policy.

More recently China's FX reserves have grown very modestly to about 3.12 trillion USD and while appreciating temporarily through mid 2018 its exchange rate remained just under 7 yuan per dollar through Aug 2, 2019. From a high of almost 10% of its GDP in 2007, China's current account surplus has fallen to 0.4% by the end of 2018. In fact, China had a current account deficit of -3.7% of its GDP in the first quarter of 2018, which rose during Trump's trade war with China to 0.4% by the second quarter of 2019.

Hard anchor with currency board rules

Regime (3)—gold standard with currency board rules—is the most interesting because it reflects the market reaction when no monetary policy and thus no currency manipulation is possible. Market interest rates fully reflect market conditions with no input from the central bank. A global recession will result in a fall in market interest rates everywhere as aggregate demand falls below supply. This fall cushions the fall in demand by encouraging investment and facilitates the adjustments in the economy needed for recovery. Interest rates will not necessarily fall by the same amount in all countries and thus the emergence of interest rate

differentials could precipitate capital flows. This contributes to global income because it encourages capital to flow to where its return is highest.

A capital outflow from the US to other countries under the classical gold standard would reduce the money supply in the US. For an American to invest abroad in this (gold standard like) regime, she must sell dollars for the foreign currency. Ultimately the Fed must transfer the ownership of gold (or whatever the reserve assets are) to the central bank issuing the currency being purchased (the Hume specie flow mechanism). The reduced money supply will lower prices in the US and thus depreciate the real exchange rate despite the fixed nominal rate. This will increase exports and decrease imports producing the trade surplus needed to finance the capital outflows. In the case of a currency outflow because of a trade deficit, the same specie flow mechanism would also lower prices in the US and thus depreciate the real exchange rate restoring trade balance (with underlying capital flows).

Regime (3) with currency board rules would operate a bit differently. If, for example, China and the U.S. have the same hard anchor (e.g., gold or a basket of commodities or the SDR) and abide by currency board rules, the exchange rate for their respective currencies is fixed. They are effectively in a single currency area and the supply of money will be determined by the public via currency board rules. Cross border financial relationships between individuals and firms (and countries) would be determined and evolve in the same ways they do within countries. The mobility of goods, labor, and capital enjoyed within the US (though not without frictions) and sought within the EU (though not without considerable political frictions) facilitate the distribution of a single currency and uniform prices. Capital flows would eventually equilibrate (risk adjusted) interest rates globally.

Taking again the example of a US tax (tariff) on its imports from China, the resulting trade deficit in China (or reduced surplus) precipitates a capital outflow (reduced inflow) from the US to finance it. This tends to shift ownership of Chinese assets to the US. Under a classical gold standard (or other hard anchor) the money supply in China would fall and increase in the US. The tendency for dollar prices to increase in the US and Yuan prices to fall in China would reverse the effects of the tariff on the balance of trade between the US and China.

However, with currency board rules the US and Chinese publics' will restore whatever level of money they demand at the fixed official price of its anchor (e.g. gold). Any tendency for the dollar price of the anchor in the US to increase would create an arbitrage opportunity that would tend to offset the increase in the money supply. With different market and central bank prices for the anchor (Gold), the anchor could be purchased at the lower official price at the central bank and resold in the market at the higher price thus tending to restoring the money supply to its original level. Currency board rules weaken the Hume specie flow mechanism. None-the-less, capital moves from the surplus (US) to the deficit country (China) moving interest rates in directions that reduce the desired capital flow (up in the US and down in China). And the fall in China's exports will reduce their relative prices within China reallocating Chinese resources to the production of other things. To this extent, China would be paying for part of Trump's tariffs.

Conclusion

In floating or managed exchange rate regimes, it is hard to say whether monetary policy induced changes in interest rates are motivated by domestic aggregate demand or price

stability objectives or exchange rate objectives--i.e., are currency manipulation. For globally firmly fixed exchange rates with currency board rules, currency manipulation for whatever reason is not possible, adding to the benefits of such a system. Direct central bank intervention in foreign exchange markets is a more obvious indication of currency manipulation. There is no evidence that China has been guilty of currency manipulation for the last four to five years through August 28, 2019. Over most of the period since 2015 it has been a net seller of its foreign exchange reserves (including USD), i.e., it has been intervening to prevent the depreciation of the yuan's exchange rate. The US Treasury's designation of China as a currency manipulator on August 5, 2019, only undermines the credibility of the US Treasury as an objective evaluator of currency manipulation.

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