

POLICY BRIEF

Currency Manipulation: Reframing the Debate

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Currency manipulation has become an increasingly important flashpoint in negotiations involving international trade and finance. Unfortunately, the issue is not well understood; indeed, it is not even clear how the term "currency manipulation" should be defined. Nor is it at all obvious that currency manipulation is a problem that should concern economic policymakers.

In this policy brief, I will try to clarify this issue by reframing the debate. What is generally called "currency manipulation" would be better termed "saving manipulation," as it has little to do with market exchange rates and a lot to do with government policies that impact domestic saving rates. The actual concern is that countries will attempt to boost their current account balances by adopting policies that increase saving. And yet, not all prosaving policies are the subject of scrutiny; rather, policymakers tend to focus on the purchase of foreign exchange assets, even though it is possible to achieve the identical effects through other methods.

After explaining the economic concepts that underlie currency manipulation, I discuss some examples that have attracted the attention of policymakers. Japan, Germany, and China have all run large current account deficits at various times during the 2000s and 2010s, and thus, these countries deserve special scrutiny. We will see that currency manipulation can only be understood by looking past market exchange rates and reframing the debate in terms of saving manipulation. Moreover, there is very little evidence that currency or saving manipulation causes significant harm to a country's trading partners.

EXCHANGE RATES ARE NOT THE ISSUE

In order to better understand why the current debate over currency manipulation is misleading, consider the examples of Japan, Germany, and China:

- 1. During the first decade of the 21st century, Japan was heavily criticized for its exchange rate policy. In America, Treasury officials and various industry groups argued that the Japanese yen was undervalued. In contrast, macroeconomists noted the persistent deflation in Japan and suggested that the yen was too strong.¹
- 2. Germany currently has the world's largest current account surplus, which has led to accusations of currency manipulation. John Cochrane pointed out that this is ironic, given that Germany does not even have its own currency:

When, last week, the Treasury issued its currency manipulation report, I thought it was a joke. Treasury put *Germany* and *Italy* on its "monitoring list" of countries suspected of "currency manipulation." Germany and Italy, of course, use the Euro, the whole point of which is that they cannot, individually, "manipulate" their currencies, whatever that means.²

3. In the 1980s, the European Union moved toward a fixed exchange rate regime, with the prevention of currency manipulation being one important objective. In contrast, China has been accused of currency manipulation precisely because it adopted a fixed exchange rate regime. So which is it? Does currency manipulation involve fixed or flexible exchange rates?

The United States recently labeled China a currency manipulator, just as China was moving to a flexible exchange rate, and its current account balance has become roughly balanced. So why is China now being accused of currency manipulation?

To answer these questions, one needs to take a closer look at what currency manipulation actually involves.

WHAT IS CURRENCY MANIPULATION?

The term "currency manipulation" can be defined in many different ways. Article IV of the International Monetary Fund (IMF) *Articles of Agreement* says that IMF member countries shall "avoid manipulating exchange rates or the international monetary system in order to prevent effective balance of payments adjustment or to gain an unfair competitive advantage over other members."³

Phrases like "unfair competitive advantage" don't have any clear meaning in economics. Thus, I'll try to reframe the issue by reviewing some basic concepts in order to clarify the actual issues at stake. These concepts include the relationship between the current account and the savings–investment gap, the distinction between nominal and real exchange rates, and the distinction between short- and long-run effects.

Most people are familiar with the nominal exchange rate, the actual exchange rate that they would see quoted in an airport currency exchange or on a financial news network. But the *real* exchange

rate is the rate that is most relevant to current account balances, and this distinction helps to explain some of the confusion in the previously cited examples. When Cochrane observed that Germany had no ability to control its exchange rate, he was referring to the nominal exchange rate. But as we will see, German policymakers can influence Germany's real exchange rate.

It will be useful to examine the distinction between nominal and real exchange rates by reviewing the concept of purchasing power parity. When purchasing power parity holds, the nominal exchange rate (NER, expressed as foreign price of domestic currency) moves to offset changes in relative price levels:

percentage change in NER = foreign inflation – domestic inflation

Deviations from purchasing power parity reflect changes in the real exchange rate (RER), which is the nominal exchange rate times the ratio of domestic prices (Pd) and foreign prices (Pf):

RER = nominal exchange rate × (Pd/Pf)

This distinction is especially important in places that have experienced high inflation, such as Latin America. In those cases, the local currency often depreciated sharply over time, reflecting the effects of high inflation. Because the real exchange rate changed very little, rapid (nominal) currency depreciation did not give these countries a competitive advantage in international trade. These countries typically did not accumulate large current account surpluses, nor did American policymakers complain about their rapidly depreciating exchange rates.

Those who worry about currency manipulation focus on the real exchange rate, which can be affected by shifts in investment demand or the supply of saving, or both:

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current account = domestic saving - domestic investment
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Because the current account balance is the gap between domestic saving and domestic investment, policies that impact either variable tend to impact both the real exchange rate and the current account balance.

As a practical matter, countries almost never try to reduce domestic investment for the purpose of expanding the current account balance.⁴ Instead, the focus is generally on policies that encourage domestic saving. And yet, not all prosaving policies attract criticism. The most controversial prosaving policies involve the purchase of foreign exchange, which is seen as an "unfair" method of depreciating the exchange rate.

Less controversial are policies of fiscal austerity, despite the fact that budget surpluses have a similar impact on domestic saving, real exchange rates, and current account balances. Even less

controversial options are available, such as tax reform to encourage more private saving and government saving via a sovereign wealth fund.

What about monetary policy? An expansionary monetary policy will tend to depreciate the exchange rate, and this sort of action often leads to accusations of currency manipulation. During the Great Depression, countries that left the gold standard and devalued their currencies were accused of adopting "beggar-thy-neighbor" policies, which stole jobs from their trading partners.

However, monetary stimulus does not tend to increase domestic saving or boost the current account balance. This is because the substitution effect of a weaker currency is roughly offset by the income effect of faster domestic growth, which pulls in imports. Currency depreciation makes a country's imports more expensive, causing consumers to substitute toward domestically produced goods. But monetary stimulus also boosts national income, which causes consumers to buy more imported goods. During 1933, and again during 1971, the dollar was devalued against gold. In both cases the expansionary policies led to rapid growth in GDP, imports rose, and the US current account balance did not increase.⁵

While monetary stimulus does tend to reduce the nominal exchange rate, in the long run the price level will adjust to prevent any change in the real exchange rate. This is an implication of the longrun "neutrality of money," the tendency of changes in the money supply to impact only nominal variables such as wages and prices in the long run, while real variables such as the real exchange rate and real GDP are unaffected.

This is why those countries whose currencies have depreciated especially rapidly, such as Turkey, Venezuela, and Zimbabwe, do not see any permanent improvement in their current account. Domestic inflation offsets any benefit from a weaker currency. Indeed, countries with big trade surpluses (such as Germany, Japan, and Switzerland) often have currencies that have tended to appreciate in the long run.

NOMINAL AND REAL EXCHANGE RATES

The distinction between nominal and real exchange rates can help one to better understand the controversies over the current account surpluses in Japan, Germany, and China.

By the early 2000s, Japan had experienced nearly a decade of price deflation. A number of important Western macroeconomists suggested that Japan should depreciate its currency in order to boost the domestic price level. At roughly the same time, the US Department of the Treasury was complaining that the Japanese yen was too weak and that this led to an excessively large current account surplus in Japan. Surprisingly, it is possible that both views were correct, as these two groups were focused on radically different issues. The macroeconomists were essentially arguing that the *nominal* exchange rate for the Japanese yen was too strong and that a weaker yen would boost Japanese prices. Indeed, Lars Svensson called this a "foolproof" way for Japan to inflate, at a time when near-zero interest rates made some doubt whether monetary stimulus was still possible. There is no doubt that a sufficiently large depreciation of the exchange rate would push the price level higher, if only because imported goods would cost more.

The Treasury department was implicitly worried about the *real* exchange rate for the Japanese yen, which it regarded as too weak. It complained that the Japanese accumulation of foreign exchange assets held down the value of the yen and that this boosted the current account balance.⁶

Fred Bergsten and Joseph Gagnon argue that domestic saving tends to increase when a government purchases foreign assets because domestic savers favor domestic assets over foreign assets.⁷ Because of this "home bias" in investment, when the government purchases foreign assets it leads domestic savers to substitute toward domestic assets, which boosts their price and lowers their yield. This makes the domestic currency weaker.

But this debate isn't really about exchange rates; rather, it reflects the fact that the current account balance is saving minus investment, and thus a prosaving policy will result in exchange rates moving to the position necessary to generate a larger current account balance. Both sides might have accepted a more expansionary Japanese monetary policy if it had been achieved via the purchase of domestic assets (with no boost to domestic saving), rather than foreign exchange.

In recent years, the Japanese government has stopped purchasing large quantities of foreign assets, and yet Japan continues to run a current account surplus. Although during 2001–2004 the Bank of Japan purchased a net \$434 billion in foreign assets, during 2013–2016 the net purchases of foreign assets totaled only \$35 billion.⁸ After 2013, the Abe administration sharply reduced Japan's fiscal deficit. This had the effect of boosting Japan's rate of domestic saving, depreciating the country's exchange rate. While the purchase of foreign assets is often viewed as currency manipulation, a reduction in the budget deficit (or increase in the surplus) has the same effect on the current account balance, without attracting as much international criticism.

As noted earlier, the US government has also accused Germany of currency manipulation, despite the fact that Germany no longer uses the deutschmark and hence cannot control its nominal exchange rate.

Once again, the distinction between nominal and real exchange rates helps to explain the issue that puzzled John Cochrane. Even though Germany does not control the nominal exchange rate for the euro, it can reduce its real exchange rate with a high saving policy. In recent years, Germany has run budget surpluses, which tend to boost domestic saving. This lowers Germany's real

exchange rate by reducing Germany's inflation rate, and the lower inflation rate makes German firms relatively more competitive, increasing Germany's current account balance.

One motivation for the creation of the euro was to prevent beggar-thy-neighbor policies within the European Union. With all trade barriers removed, policymakers aimed to prevent one European Union member from attempting to gain a competitive advantage via currency depreciation. In fact, this policy has not been effective, and once again the distinction between real and nominal exchange rates helps to explain why.

While all nominal exchange rates within the Eurozone are fixed (at one, by definition), real exchange rates can vary owing to price level changes. Before the Great Recession, an investment boom in the Mediterranean countries led to an influx of savings from northern Europe into real estate projects in the south. This increase in domestic investment tended to raise these countries' price levels, appreciate the real exchange rates, and push current account balances into deficit. Greece experienced an especially large current account deficit, which later contributed to its subsequent financial crisis.

This episode shows that, when it comes to currency manipulation, nominal exchange rates are beside the point. What matters is how policymakers influence domestic investment, and especially domestic saving rates, and these policies thereby influence the current account even if the nominal exchange rate is fixed.

While the European Union adopted a fixed exchange rate regime to prevent currency manipulation, China was being accused of currency manipulation precisely because it fixed its currency to the dollar. Because China ran a large current account surplus during the early 2000s, the United States accused the Chinese government of fixing the exchange rate at too low a level.

Once again, the exchange rate wasn't really the issue. To see why, consider two alternative policies:

- Policy A: China fixes the yuan to the dollar. Maintaining that exchange rate requires the Chinese government to purchase \$250 billion a year in foreign assets.
- Policy B: China allows the yuan exchange rate to float. The Chinese government still purchases \$250 billion a year in foreign assets.

Both policies have essentially the same impact on both the real exchange rate and the current account, and yet policy A would look much more like currency manipulation to many observers. What actually matters is China's policy regarding domestic saving and investment, not its choice of exchange rate regime.

IS CURRENCY MANIPULATION HARMFUL?

We've seen that currency manipulation is a misleading term and that the actual concern is better described as "saving manipulation." The next question is whether any of this matters. Should one care if other countries adopt policies that boost their domestic saving rates?

Critics have identified three areas where currency manipulation might cause problems:

- 1. Aggregate demand: Prosaving policies tend to boost global saving rates, and this may depress global aggregate demand.
- 2. Structural unemployment: Even if there is no impact on aggregate demand, a current account surplus in one country may lead to current account deficits in other countries, and this may lead to structural unemployment as workers lose jobs in tradable goods industries. This is related to concern over the so-called China shock of 1990–2007.
- 3. Excessive borrowing and financial crisis: Countries with large current account deficits are often large borrowers from the rest of the world. In some cases, such as Greece and Iceland, large current account deficits were a contributing factor in subsequent financial crises.

While there are respectable arguments for each claim, these issues do not provide sufficient justification for pressuring countries to abandon prosaving public policies.

Currency Manipulation and Demand Management

At first glance, the first two concerns might seem like two sides of the same problem. In fact, the two concerns are very different. A paper by David Autor, David Dorn, and Gordon Hanson finds evidence that Chinese exports reduced US employment in various regional labor markets between 1990 and 2007.⁹ Paul Krugman points out that this should not have impacted the national unemployment rate:

OK, what about the effect on overall employment? In general, you can't answer that with a similar computation, because it all depends on offsetting policies. If monetary and fiscal policy are used to achieve a target level of employment – as they generally were prior to the 2008 crisis – then a first cut at the impact on overall employment is zero. That is, trade deficits meant 2 million fewer manufacturing jobs and 2 million more in the service sector....

Up through 2007 we basically had a Fed [Federal Reserve] which raised rates whenever it thought the economy was overheating; in the absence of the China shock it would have raised rates sooner and faster, so you just can't use the results of the cross-section regression – which doesn't reflect monetary policy, which was the same for everyone – to predict how things would have turned out.¹⁰

As long as interest rates are positive (as they were during 1990–2007) there is no reason to assume that a foreign current account surplus would have any impact on US aggregate demand. The Fed will adjust interest rates as needed to keep the expected growth in aggregate demand on target.

A recent paper by Trump administration officials Peter Navarro and Wilbur Ross cites the textbook aggregate expenditure equation (GDP = C + I + G + NX) as evidence that current account deficits reduce output:

The growth in any nation's gross domestic product (GDP) – and therefore its ability to create jobs and generate additional income and tax revenues – is driven by four factors: consumption growth, the growth in government spending, investment growth, and net exports. When net exports are negative, that is, when a country runs a trade deficit by importing more than it exports, this subtracts from growth....

In 2015, the US trade deficit in goods was a little under \$800 billion while the US ran a surplus of about \$300 billion in services. This left an overall deficit of around \$500 billion. Reducing this "trade deficit drag" would increase GDP growth.¹¹

In fact, as with any other identity, this equation does not, by itself, have any *causal* implications. While a \$300 billion current account deficit shows up as a negative factor in the national income identity, it also implies that domestic investment is \$300 billion greater than domestic saving. In an accounting sense, imports show up as a negative in the trade sector but an equal positive in consumption and investment accounts.¹² For this reason, the argument from Navarro and Ross is not accepted by most economists.¹³

A superior, but still flawed, argument revolves around the so-called paradox of thrift, the (Keynesian) idea that attempts by the public to increase saving can result in lower levels of aggregate demand, leaving total saving unchanged. This view was out of favor before the Great Recession but gained new adherents as global interest rates fell close to zero. Many pundits argued that monetary policy was ineffective at near-zero interest rates. In that case, it is not at all clear that monetary policy can effectively offset the negative impact on aggregate demand produced by foreign current account surpluses.

The case for a global paradox of thrift relies on some highly dubious assumptions. Even at nearzero interest rates, central banks have plenty of tools to boost aggregate demand, if they so choose. For instance, in 2013 the Fed faced a situation where fiscal policy became highly contractionary. The budget deficit fell from roughly \$1050 billion in calendar 2012 to \$550 billion in calendar 2013, a decline of \$500 billion in just 12 months. Many Keynesian economists claimed that this austerity risked pushing the economy into recession.¹⁴

In fact, the widely predicted economic slowdown did not occur after fiscal austerity was implemented.¹⁵ The Fed understood the impact of austerity and offset this policy with a more expansionary monetary policy. This included both a third round of quantitative easing (QE) and also a new policy of "forward guidance," which meant promising to maintain a more stimulative monetary policy until unemployment had declined close to the Fed's estimate of full employment. Numerous studies have confirmed that QE is very effective.¹⁶

Indeed, in 1999 Ben Bernanke pointed out that any sufficiently motivated central bank could boost aggregate demand, even at the zero bound, and suggested a number of policy options for doing so. To this day, neither the Bank of Japan nor the Fed has adopted Bernanke's most important suggestion—level targeting.¹⁷

Treasury department officials might not be happy that Japan's monetary stimulus during the early 2000–2010 period involved the purchase of foreign assets, and they might have preferred that Japan purchase domestic assets as a way of injecting new money into the economy. But the Japanese could quite reasonably respond that US monetary policymakers could neutralize the impact with any number of policies recommended by academics such as Ben Bernanke and thus should not blame foreign countries for any shortage in US aggregate demand.

Currency Manipulation and Deindustrialization

As stated previously, the Fed can offset the effects of increased foreign saving on total spending in the United States, even when interest rates are near zero.¹⁸ Even if total spending is on target, however, regional sectors may be adversely impacted by trade imbalances. By far the most famous example of this phenomenon occurred in the late 1990s and the first decade of the 21st century, when China became a major force in global manufacturing and trade.¹⁹ As noted earlier, a study by Autor, Dorn, and Hanson finds evidence that local labor markets that were especially hard hit by Chinese competition suffered long-term damage between 1990 and 2007. However, several factors call into question whether the China shock has important implications for the currency manipulation literature:

- 1. Much of the China shock was unrelated to currency issues. Once China began moving away from central planning and opened up to foreign trade and investment, it was inevitable that Chinese exports would rise rapidly. A country of 1.3 billion people with a comparative advantage in labor-intensive manufacturing is likely to be a highly disruptive force, even if its current account is roughly balanced.²⁰ Indeed, in 2019, China's current account balance had fallen close to zero, and yet the United States still complained about the large bilateral trade deficit. Thus, the disruptive impact of China's emergence would have been great even if China had not engaged in any currency manipulation.
- 2. Many observers, including Autor, Dorn, and Hanson, believe that the China shock is largely over. Going forward, there is no similar country on the horizon that is likely to have the same sort of disruptive impact. India is the only country with a similar population, but it lacks a comparative advantage in manufacturing. To the extent that Indian manufacturing

exports do increase, they are likely to replace exports from China and other East Asian countries that are transitioning to more sophisticated industries. China itself is gradually transitioning away from exports and investment, toward a more consumer-oriented economy. Thus, even if the China shock was poorly handled by US policymakers and Chinese imports should not have been allowed to surge so rapidly, it's not clear that this mistake has any implications for policy going forward.

- 3. Only a small portion of the recent deindustrialization in America's Rust Belt was caused by currency manipulation. Even when trade is balanced, many workers in specific industries lose jobs as the United States shifts toward higher-tech industries, as other countries gain a comparative advantage in various industries, and as automation allows the same number of goods to be produced with fewer workers. Thus, the larger share of job loss in the Rust Belt was caused by either the creative destruction of international trade or by technological innovation.²¹ The US coal industry saw employment plunge from 870,000 to 110,000, even as total output rose and as the United States became a major coal exporter. The "problem" was dramatically higher productivity. Yet few pundits argue that America should slow down technological progress to prevent the job loss from creative destruction, which involves similar tradeoffs. If another China shock were to occur, it would be more likely to come from a dramatic change in technology, such as artificial intelligence, rather than a country of a billion people transitioning away from communism.
- 4. After the East Asian crisis of 1997–1998, it was apparent than many Asian countries held inadequate levels of foreign exchange. Thus, it's not surprising that the world's second-largest economy would wish to accumulate a large stock of foreign assets for use during an exchange rate crisis. Consider that during the relatively mild exchange rate crisis that occurred between 2014 and 2016, China saw its stock of foreign exchange quickly plunge from \$4,059 billion to \$3,123 billion.
- 5. The recent surge in the US budget deficit is likely to have a bigger impact on the US current account than did the famous China shock. And yet there are few if any complaints about the trade implications of budget deficits. The relative silence on this issue, even from those who otherwise oppose the current administration's fiscal policy, suggests that currency manipulation is still poorly understood.

I do not wish to argue that complaints about currency manipulation have no merit. Rather, the problem needs to be put in perspective. Critics of currency manipulation worry that increases in the current account deficit can impact local economies. But most of the damage from current account deficits was done long ago. By 1987, the US manufacturing sector had already undergone a severe structural shock, and China had not yet become a major exporter. Today, the US current account deficit is actually smaller than in 1987, as a share of GDP. This means that over the past 32 years there has been *no net job loss owing to increases in the US current account deficit*.

Currency Manipulation and the Problem of Excess Indebtedness

Current account deficits are often assumed to represent net borrowing, although imports can also be paid for with the export of assets such as stocks and real estate. Some of the largest current account deficits have been associated with sizable increases in debt, often leading to an eventual debt crisis. Iceland and Greece are two examples of countries where large current account deficits before the Great Recession led to unsustainable accumulations of debt. This fact has led some in the media to incorrectly claim that countries with large current account surpluses are "forcing" deficits on the rest of the world.

It is true that the world's current account balances, properly measured, must net out to zero. But Greece's government was not forced to run up a public debt equal to 180 percent of GDP; rather, Greek policymakers made poor choices, running large fiscal deficits under the assumption that the boom would last forever. Nor was Iceland forced to allow banks with government-insured deposits to engage in highly risky lending practices.

Currency manipulation did not force the Trump administration to recently adopt a fiscal policy that dramatically boosted the US budget deficit during a period of extremely low unemployment. Indeed, that fiscal policy is likely one factor behind the recent increase in America's trade deficit, which is ironic, given that President Trump made the large US trade deficit a major issue in his campaign.

Of course, there is also private debt to consider. But excessive borrowing reflects domestic policy decisions, including the decision to adopt an income tax regime that favors debt over equity and a housing finance regime that subsidizes mortgage borrowing. If US regulators were encouraging excessive borrowing for home mortgages during the period leading up to 2007, then the solution is a better regulatory regime, not trying to prevent a housing boom by pressuring foreign countries to avoid current account surpluses.

HOW SHOULD THE UNITED STATES RESPOND TO CURRENCY MANIPULATION?

The preceding analysis casts some doubt on the claim that currency manipulation is a significant problem. For the moment, let's assume the alternative view is correct, and that currency manipulation has a deleterious effect on the US economy. What then?

Recall that currency manipulation is not actually about currencies; the actual issue is *saving manipulation*. Thus, policies such as nominal exchange rate adjustments or tariffs and quotas are likely to be ineffective. Those policies do not significantly impact the saving–investment gap, and hence they have little direct impact on the current account.

Bergsten and Gagnon suggest that the affected country could respond to currency manipulation by purchasing a quantity of foreign assets equal to the foreign exchange purchases of the country

that America is accusing of currency manipulation. Their empirical studies suggest, however, that reducing the budget deficit might be an even more effective way to boost domestic saving. Ultimately, any successful policy to increase the current account balance must either reduce domestic investment or increase domestic saving. Because most governments have no wish to reduce investment, prosaving policies seem like the more plausible response.

The deeper question is whether the discussion of currency manipulation does more harm than good. There are a number of reasons to be skeptical of the entire currency manipulation debate. Here are just a few:

- 1. The debate is ostensibly about exchange rates, but in practice it appears the actual concern is saving manipulation. If policymakers are unable to correctly diagnosis the issue, it is likely they will prescribe the wrong medicine, such as trade barriers.
- 2. Because policymakers aren't always aware of the sort of sophisticated critique of currency manipulation provided by Bergsten and Gagnon and others, they will wrongly assume that legitimate attempts to depreciate a currency for the purpose of boosting aggregate demand constitute currency manipulation. In fact, *any* successful central bank policy to end deflation is likely to depreciate the currency in foreign exchange markets. Thus, inappropriate pressure on the central banks of countries suffering from deflation will make it more difficult to battle deflation.
- 3. Because currency manipulation is actually saving manipulation, it is extremely difficult to define and identify currency manipulation. Even if it were possible to gain an international agreement to ban foreign exchange intervention—which seems unlikely—it would not prevent saving manipulation. Countries could increase saving in other ways, such as tax reform and fiscal austerity.

Take the case of Japan. One might argue that pressure from the United States caused Japan to sharply reduce its intervention in foreign exchange markets. But there are many ways to boost domestic saving rates. Thus, the Japanese national pension fund (GPIF) has gradually shifted its portfolio toward a larger share of foreign stocks and bonds, which would tend to boost overall saving rates if Japanese investors have home bias, which seems to be the case.²² In fact, Japan continues to run large current account surpluses, despite a lack of explicit foreign exchange intervention. There is more than one way to skin a cat.

4. Many policymakers wrongly believe that currency manipulation reduces aggregate demand in the rest of the world. That is certainly not true for countries not at the zero bound, and it is not even true at the zero bound if central banks adopt any of several policy options, such as price-level targeting, nominal GDP–level targeting, or a higher inflation target.

Of course, there are counterarguments to all of these points. There's no doubt that some foreign countries have occasionally adopted suboptimal saving policies, which have impacted both their own current accounts and the current accounts of their trading partners. In that case, one can always construct "game theory" arguments for pressure tactics to get them to reverse these policies. But I see little evidence that these policies will work. Governments would do better in focusing on getting their own house in order, rather than blaming foreign countries for poor economic outcomes.

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NOTES

- Ben Bernanke, "Japanese Monetary Policy: A Case of Self-Induced Paralysis?" (working paper, Allied Social Science Associations meetings, Boston, MA, January 9, 2000); Bennett T. McCallum, "Theoretical Analysis Regarding a Zero Lower Bound on Nominal Interest Rates," *Journal of Money, Credit and Banking* 32, no. 4 (2000): 870–904; Paul Krugman, "Reckonings; Purging the Rottenness," *New York Times*, April 25, 2001; Lars E. O. Svensson, "Escaping from a Liquidity Trap and Deflation: The Foolproof Way and Others," *Journal of Economic Perspectives* 17, no. 4 (2003): 145–66.
- 2. John Cochrane, "Institutionalized Nonsense," *Grumpy Economist*, June 6, 2019.
- 3. International Monetary Fund, Articles of Agreement of the International Monetary Fund, 2016, 6.
- 4. When they do discourage investment, the policy goals are generally unrelated to trade. Thus, the Chinese government has recently tried to shift its economy away from investment. The goal, however, was to generate more consumption, not higher net exports.
- 5. Scott Sumner, *The Midas Paradox: Financial Markets, Government Policy Shocks, and the Great Depression* (Oakland, CA: The Independent Institute, 2015).
- 6. John B. Taylor, "Not a Repeat of the Great Intervention," Economics One, September 18, 2010.
- 7. Fred C. Bergsten and Joseph E. Gagnon, *Currency Conflict and Trade Policy: A New Strategy for the United States* (Washington, DC: Peterson Institute for International Economics, 2016).
- 8. Data are from Bergsten and Gagnon, *Currency Conflict and Trade Policy*. Note that there are other ways to affect the exchange rate, such as diversifying the Japanese national pension system away from domestic bonds and toward greater holdings of foreign bonds.
- 9. David H. Autor, David Dorn, and Gordon H. Hanson, "The China Shock: Learning from Labor Market Adjustment to Large Changes in Trade" (NBER Working Paper No. 21906, National Bureau of Economic Research, Cambridge, MA, January 2016).
- 10. Paul Krugman, "Trade and Jobs: A Note," The Conscience of a Liberal, New York Times, July 3, 2016.
- 11. Peter Navarro and Wilbur Ross, *Scoring the Trump Economic Plan: Trade, Regulatory, & Energy Policy Impacts* (New York: Donald J. Trump for President, Inc., 2016).

- 12. For a good explanation of the difference between international accounting identities and causal relationships, see Daniel Griswold, "Plumbing America's Balance of Trade" (Mercatus Research, Mercatus Center at George Mason University, Arlington, VA, 2017).
- 13. "'The Navarro-Ross paper is well beyond voodoo economics,' the Harvard professor and Democrat [Larry Summers] said of the duo's September report on Trump's growth plans. 'The logic of it, the arguments made, are so far out of the mainstream of any kind of responsible economic thinking that they are the economic equivalent of creationism.'" Allan Smith, "Larry Summers Lambastes Policy Paper from Top Trump Advisers: 'Economic equivalent of creationism,'" *Business Insider*, January 3, 2017.
- 14. HoundDog for Keynesian Kossacks, "350 Economists Sign Letter Advocating Jobs and Growth Rather Than Austerity and Budget Cuts," *Daily Kos*, November 15, 2012.
- 15. No single test is decisive, as GDP growth data are noisy. Economic growth actually sped up in 2013, however, and that real GDP growth (year-over-year) had reached 2.6 percent by the fourth quarter of 2013, well above the 1.5 percent rate in the fourth quarter of 2012. Monetary offset passed this particular "test" with flying colors.
- 16. Joseph E. Gagnon, "Quantitative Easing: An Underappreciated Success" (Policy Brief No. PB16-4, Peterson Institute for International Economics, Washington, DC, April 2016). Other examples include Daniel J. Lewis, "Announcement-Specific Decompositions of Unconventional Monetary Policy Shocks and Their Macroeconomic Effects" (Staff Report No. 891, Federal Reserve Bank of New York, New York, October 2019); Eric T. Swanson, "The Federal Reserve Is Not Very Constrained by the Lower Bound on Nominal Interest Rates" (NBER Working Paper No. 25123, National Bureau of Economic Research, Cambridge, MA, October 2019); Davide Deborteli, Jordi Galí, and Luca Gambetti, "On the Empirical (Ir)Relevance of the Zero Lower Bound Constraint" (NBER Working Paper No. 25820, National Bureau of Economic Research, Cambridge, MA, May 2019).
- 17. Level targeting means setting a target trend line for the price level (or nominal GDP) and promising to return to that trend line after there is a temporary undershoot or overshoot.
- 18. Some have argued that the effective lower bound is actually closer to -0.75 percent.
- 19. Autor, Dorn, and Hanson, "The China Shock"; Bergsten and Gagnon, Currency Conflict and Trade Policy.
- 20. A country has a comparative advantage in producing a good when the structure of its economy makes it the lowest-cost producer.
- Michael Hicks and Srikant Devaraj estimate that 87 percent of job losses in manufacturing during 2000–2010 were the result of automation. Michael Hicks and Srikant Devaraj, *The Myth and Reality of Manufacturing in America* (Muncie, IN: Center for Business and Economic Research at Ball State University, 2017).
- 22. The data are available at Government Pension Investment Fund, "Past Performances," accessed November 25, 2019, https://www.gpif.go.jp/en/performance/past-performances.html.