



Policy Memorandum

ECONOMIC POLICY INSTITUTE • MAY 12, 2015 • POLICY MEMO #206

STOP CURRENCY MANIPULATION IN THE TRANS-PACIFIC PARTNERSHIP

Millions of Jobs at Stake

BY **ROBERT E. SCOTT**

Currency manipulation distorts trade flows by artificially lowering the cost of U.S. imports and raising the cost of U.S. exports, and is the leading cause of stubbornly high U.S. trade deficits over the past 15 years. More than 20 countries, led by China, have, together, been spending about \$1 trillion per year buying foreign assets to artificially suppress the value of their currencies. Several members of the proposed Trans-Pacific Partnership (TPP)—including Japan, Malaysia, and Singapore—are well known currency manipulators, and others—including South Korea, Taiwan, and China—have expressed interest in joining the agreement.

A growing number of economists, and a bipartisan majority of members of Congress, have called for the inclusion of “strong and enforceable foreign currency

manipulation disciplines” in the TPP. This policy memorandum describes currency manipulation, outlines standards that should be used to define currency manipulation for enforcement purposes, and reviews enforcement tools that can be used to counter currency manipulation in the future. It also estimates jobs that would be gained by eliminating currency manipulation. As this research shows, ending currency manipulation could significantly reduce U.S. trade deficits and create millions of jobs, with job gains in every state and most or all U.S. congressional districts.

This policy memorandum, which draws heavily from research findings in a 2014 EPI report (Scott 2014), makes the following key points about currency manipulation:

- Government purchases of foreign exchange reserves and other financial assets denominated in foreign currencies are the principal tool of currency manipulation. Large-scale purchases of such assets keep the currencies of interveners undervalued, artificially subsidizing the cost of their exports and taxing their imports, and increasing their trade surpluses.
- Official (government) holdings of foreign exchange reserves and other foreign assets increased by roughly \$1 trillion per year between 2008 and 2014. Although official holdings of foreign exchange reserves by currency manipulators fell slightly in 2014, largely due to the Russian financial crisis, total government holdings of other foreign assets increased by more than \$600 billion. Currency manipulation kept the currencies of most interveners substantially undervalued in 2014.
- There is a strong correlation between the trade (current account) surpluses of interveners and their purchases of foreign assets. Both averaged approximately \$1 trillion per year between 2008 and 2014.
- Quantitative easing (QE) is easily distinguishable from currency manipulation; thus action to end currency manipulation won't infringe on a nation's right to engage in quantitative easing.
- Although currency manipulation is prohibited by both the International Monetary Fund (IMF) and the World Trade Organization (WTO), neither has been able to stop it. The IMF, in particular, has no enforcement tools to compel countries to abide by their obligations to avoid manipulating exchange rates for commercial gain.
- Eliminating currency manipulation would reduce the annual U.S. trade deficit by \$200 billion under a low-impact scenario and \$500 billion under a high-impact scenario. This would increase U.S. GDP by between \$288 billion and \$720 billion per year (between 2.0 percent and 4.9 percent) and create between 2.3 and 5.8 million jobs.
- Each of the 50 states and the District of Columbia would gain jobs under both the low- and high-impact scenarios. Job gains under the low-impact scenario would range from 1.06 percent of employment in Washington, D.C., to 2.29 percent of state employment in Wisconsin. Job gains under the high-impact scenario would range from 2.64 percent of employment in Washington, D.C., to 5.55 percent of employment in Wisconsin.
- Nine of the top 10 states gaining the most jobs (as a share of total employment) in both scenarios are in the Midwest. They are Wisconsin (64,700 to 156,600 jobs), Indiana (61,000 to 152,600 jobs), Iowa (34,000 to 79,600 jobs), Minnesota (55,900 to 135,300 jobs), Michigan (82,800 to 207,200 jobs), Ohio (103,200 to 254,600 jobs), South Dakota (9,200 to 21,100 jobs), Kansas (28,900 to 67,000 jobs), and Nebraska (19,000 to 44,200 jobs). In the West, Idaho (13,900 to 32,700 jobs) rounds out the top 10 states gaining the most jobs.
- Jobs are gained in all but two congressional districts under the low-impact scenario, and in all congressional districts under the high-impact scenario. Under the high-impact scenario, each of the top 20 districts by jobs created as a share of district employment would gain at least 14,700 jobs and as many as 24,400 jobs (gains representing between 5.79 percent and 8.65 percent of total district employment). Of the top 20 congressional districts, five are in California; three are in Wisconsin; two each in Indiana, Ohio, and Michigan; and one each in Kansas, Nebraska, Illinois, Minnesota, Washington, and Iowa. Under the high-impact scenario, among *all* districts, net job gains range from a low of 6,300 jobs in the 34th Congressional District in California to a high of 24,400 jobs in the 17th Congressional District in California.

Currency manipulation is a growing problem that has vexed policymakers for more than two decades. Currency manipulation has shifted production and jobs from

deficit countries (principally the United States, and to a lesser extent, the European Union) to the surplus countries (China and other currency manipulators). In the current economic environment, this has contributed to critical trends bedeviling the U.S. economy: the slow recovery from the recent recession, the persistence of high levels of un- and under-employment, and the suppression of wage growth. In this context, it would be unconscionable for the administration to negotiate, or for Congress to approve, a trade agreement that does not include strong and enforceable tools to end currency manipulation.

Describing currency manipulation

The United States has run chronic trade deficits for well over a decade. For at least 15 years, these deficits have been largely driven by the decision made by several of our major trading partners to manage the value of their currency for competitive advantage in U.S. and global markets (Bergsten and Gagnon 2012; Bayoumi, Gagnon, and Saborowski 2014). They buy dollar-denominated financial assets to boost the value of the dollar and depress the value of their own currencies. This results in cheaper imports for the United States and makes U.S. exports more expensive in global markets. More than 20 countries, led by China, have been spending about \$1 trillion per year buying foreign assets to artificially suppress the value of their currencies (Bergsten and Gagnon 2012). Ending this currency manipulation by our trading partners is thus crucially important for reducing U.S. trade deficits and stabilizing the global economy in coming years.

Given this, a trade agreement that includes several countries that are obvious currency manipulators would seem like a good place to start addressing the problem. Several members of the proposed TPP—including Japan, Malaysia, and Singapore—are well known currency manipulators, and others—including South Korea, Taiwan, and China—have expressed interest in joining the

agreement. Yet U.S. Trade Representative Michael Froman has testified that currency manipulation has not been discussed in the TPP negotiations (McCormack 2014). The arguments against such provisions are weak. Particularly unconvincing is the argument that any such currency provision would somehow bar the Federal Reserve from undertaking expansionary monetary policy that included purchasing bonds to help the U.S. economy through a recession, also known as quantitative easing (Bergsten 2014).

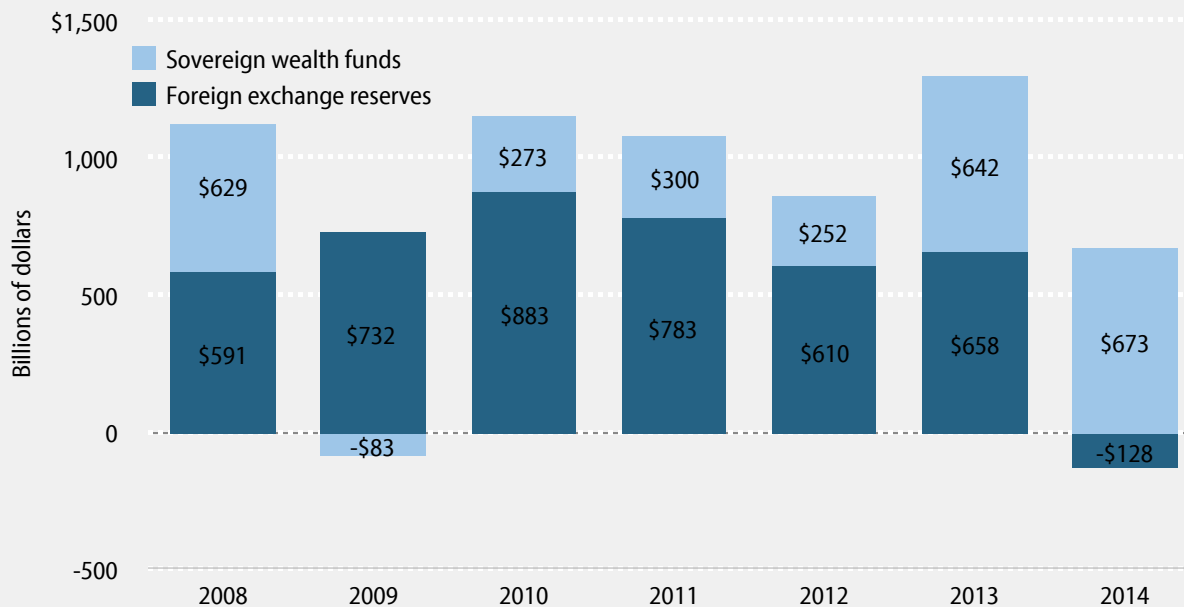
All monetary policy tools, including quantitative easing, affect exchange rates. However, direct intervention in currency markets *directly* affects exchange rates through the purchase and sale of *foreign* currency assets. Quantitative easing, on the other hand, consists of Fed purchases of *domestic* assets (such as U.S. Treasuries and mortgage-backed securities), without affecting foreign currency assets (Bivens 2015). All relevant international rules and standards, including those of the International Monetary Fund and the G-7, acknowledge this distinction and clearly exempt QE policies from responsibility for currency manipulation (Bergsten 2014, 5). Other countries may complain about QE policies, but those objections have no merit and should be ignored (Bivens 2015).

Conversely, when people describe mercantilist currency management, they universally mean the purchase by a nation's monetary and financial authorities of *foreign* assets. For example, the Chinese central bank buys not Chinese bonds, but U.S. Treasury bonds and mortgage-backed securities. This has a direct effect on the relative demand for Chinese versus U.S. assets, which moves the U.S.–China exchange rate.

Many commentators narrowly define currency manipulation to include only official holdings of foreign exchange reserves by central banks. However, a growing number of countries have created sovereign wealth funds (SWFs) to invest in private companies, land and commodities, and other foreign financial assets. SWF investments also directly affect the demand for foreign curren-

FIGURE A

Change in net holdings of foreign assets of currency manipulators, by type, 2008–2014



Source: Author’s analysis of International Monetary Fund 2015b, Sovereign Wealth Fund Institute 2015, and Central Bank of the Republic of China 2015

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cies. Bergsten and Gagnon (2012, note 1) define “intervention to include all net purchases of foreign assets by the public sector, including in sovereign wealth funds.” The same definition is used here.

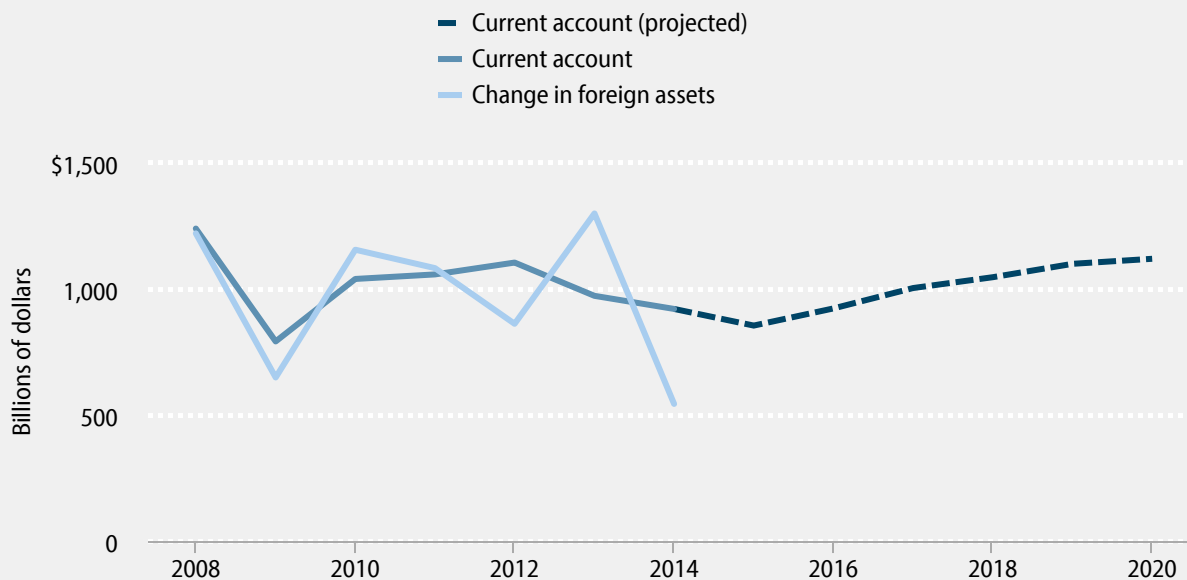
Figure A reports the change in foreign exchange reserves by the 22 currency manipulators identified by Bergsten and Gagnon and the change in sovereign wealth fund assets held by a subset of nine of those countries.¹ Since 2008, holdings of foreign exchange reserves (principally U.S. Treasury bonds, mortgage-backed securities, and other government financial assets) have increased by \$590 billion per year, on average, but this includes a decline of \$128 billion in 2014 (largely due to the Russian financial crisis). Over the same period, holdings of SWF investments in nine countries identified by Bergsten and Gagnon increased by an average of \$384 billion

per year, but this average includes a \$642 billion increase in 2013 and a \$673 billion increase in 2014. Thus, as official holdings of foreign exchange reserves by central banks leveled off or declined in 2014, holdings of SWFs skyrocketed. Foreign governments have shifted the composition of their acquisitions, but the levels of net official purchases remained high, in excess of \$500 billion in 2014, as shown in Figure A. Overall, holdings of foreign exchange reserves and SWFs increased \$974 billion per year, as the figure shows.² Currency manipulation remains a serious problem today.

There is a near one-to-one correlation between the net increase in foreign asset holdings of currency manipulators between 1980 and 2010, and their total current account surplus (the broadest measure of trade in goods, services, and income), as shown by Bergsten and Gagnon

FIGURE B

Change in foreign asset holdings, and current account surplus, of currency manipulators, 2008–2020



Source: Author's analysis of International Monetary Fund 2015a, 2015b; Sovereign Wealth Fund Institute 2015; and Central Bank of the Republic of China 2015

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(2012, Figure A). This strong correlation continued between 2008 and 2014, as shown in **Figure B**.³ Figure B also includes the latest (April 2015) IMF projections of the total current account surplus of the 22 currency manipulators for 2015–2020; the surplus is conservatively projected to increase from \$855 billion in 2015 to \$1.1 trillion in 2020, an increase of 31 percent. The United States will likely absorb the largest share of this increase, because it is the largest trading country, and because the dollar still makes up the majority of the foreign exchange reserves held by most countries.⁴

Gagnon (2013) estimates that a country's current account increases by between 60 and 100 cents for each dollar spent on intervention, confirming the strong correlation shown in Figure B. In more recent research, Bayoumi, Gagnon, and Saborowski (2014) find a some-

what smaller direct effect of intervention on the current account (42 cents on the dollar). However, they also find “that there is an important positive effect of lagged net official flows on current accounts,” which implies that for countries with open capital markets, both stocks and flows of net foreign official assets have positive effects on the current account. This research confirms that currency manipulation is a direct cause of current account imbalances.

Why hasn't more been done to end currency manipulation?

Currency manipulation “to gain unfair comparative advantage” is prohibited in the charters of both the International Monetary Fund and the World Trade Organization (IMF 2015c, Bergsten 2014). The United States,

which has suffered from large and growing trade deficits for 30 years, also has substantial incentives for ending currency manipulation. Yet neither the United States nor the IMF nor the WTO has been able to thwart currency manipulation. A variety of explanations have been advanced to explain why persistent currency manipulation and sustained current account imbalances have been tolerated, globally and by the United States.

Currency policies and trade policies are generally managed by different branches of government. Finance ministries and central banks are typically responsible for currency issues, while trade and commerce officials are responsible for trade policy. Likewise, at the international level, the WTO handles trade while the IMF is responsible for exchange rates. Coordination problems between different agencies at the national and international levels have made it difficult to reconcile trade and exchange rate imbalances (Bergsten 2014).

In the United States, the Omnibus Foreign Trade and Competitiveness Act of 1988 requires the Treasury secretary to make semiannual reports on economic and exchange rate policies (Scott 2010). Since 1988, Treasury has identified three countries as currency manipulators: Taiwan, South Korea, and China, with Taiwan cited in 1988 and again in 1992. Each citation lasted for at least two six-month reporting periods, while China's lasted for five periods, ending in 1994 (GAO 2005, 13). In each case, Treasury entered into negotiations with the offending country. Each ultimately made "substantial reforms to their foreign exchange regimes" (GAO 2005, 14).

The Treasury has not identified any countries as currency manipulators since 1994. Prior to the formation of the World Trade Organization, the United States had the authority to impose unilateral trade sanctions under Section 301 of the Trade Act of 1974 (as amended), to address unfair trade practices. When the United States joined the WTO in 1994, it gave up Section 301 enforcement actions and agreed to resolve trade disputes through the WTO dispute settlement mechanism (Dunn

and Fennell 2004). This eliminated effective tools for enforcement actions against currency manipulation under the 1988 trade act.

Since 1994, Treasury has consistently expressed a preference for quiet diplomacy over open confrontation, and conducting negotiations about exchange rate policies, for example, through the annual Strategic and Economic Dialogues with Chinese officials. Yet despite these efforts, China and other countries continue to manipulate their exchange rates, as shown above. Treasury's position appears to reflect the mixed effects of exchange rate policy on U.S. interest groups. While large trade deficits and currency manipulation are bad for export- and import-competing industries, implicit currency subsidies are good for U.S. industries that get access to artificially cheap components. Chinese capital inflows (the counterpart of China's large trade surpluses) helped finance the U.S. federal deficit and the housing boom of the early 2000s. But these same capital flows also contributed to the housing bubble, which caused the financial collapse and Great Recession (Bernanke 2010).

In the WTO, the General Agreement on Tariffs and Trade (GATT) agreement (Article XV.4) states that "contracting parties shall not, by exchange action, frustrate the intent ... of this agreement" (GATT 2015). However, Article XV also directs parties to consult with the IMF in the event of problems regarding "exchange arrangements." Hence, the WTO relies on the IMF for resolution and enforcement of currency manipulation problems.

Article IV (Section 1.iii) of the IMF articles of incorporation clearly states that "each member shall ... avoid manipulating exchange rates ... to gain an unfair competitive advantage over other members." However, the IMF has failed to resolve outstanding currency issues (Bergsten 2014). One reason for this is that the IMF has no national enforcement instruments to rely on to enforce its rules (Henning 2008).

Thus, both the United States and the IMF suffer from a common problem when it comes to dealing with currency manipulation. Both lack adequate enforcement mechanisms to compel countries to abandon sustained purchases of foreign exchange reserves which are causing substantial, sustained imbalances in global current account flows.

There is now widespread agreement among economists and elected officials that new tools and institutions are needed to address currency manipulation. A bipartisan majority of members of Congress have called for the inclusion of “strong and enforceable foreign currency manipulation disciplines” in the TPP. Experts such as Peterson Institute for International Economics director emeritus C. Fred Bergsten (2014) and former Treasury secretary Larry Summers (Summers and Balls 2015, 22) have recommended that new trade agreements address currency manipulation. Currency manipulation can and should be addressed through trade agreements such as the TPP (Bivens 2015).

How should currency manipulation be defined and regulated?

The objectives for new policies to end currency manipulation should be based on Article IV of the IMF articles of incorporation. Recent experience suggests that some clarification is needed on the criteria to be used to define currency manipulation. Also, a variety of enforcement tools should be developed, both within the proposed TPP agreement and in related trade legislation.

Bergsten and Gagnon (2012) have identified a clear set of criteria that can be used to define currency manipulation. There are three key elements⁵:

1. Sustained net official (government-owned or controlled) purchases of foreign assets. This category must be clearly defined to include both traditional foreign exchange reserves as well as sovereign wealth

funds and other government-controlled investments, including foreign investment by state-owned enterprises.

2. Sustained current account surpluses in excess of some minimum threshold. The 22 countries identified by Bergsten and Gagnon had, on average, a surplus between 2001 and 2011.
3. Foreign exchange reserves with a value in excess of three months of goods and services imports, or one year of short-term financial liabilities (whichever is larger).

The goal of enforcement actions should be to encourage currency manipulators to move toward current account balance (having neither a surplus nor deficit) within two to three years. For some countries with large stocks of foreign assets, divestiture may be necessary to achieve trade balance within a reasonable time period, due to the hangover impact of large stocks of reserves on current account balances.

Within the TPP, enforcement of currency manipulation standards could be achieved through the dispute settlement process used to enforce other trade, labor, and environmental disciplines in the agreement. Bergsten (2014) recommends that a currency manipulation chapter be included within the TPP. He identifies five different types of penalties which could be included as enforcement tools in the dispute settlement process. These include: a) a “snapback” provision which would withdraw the benefits of the agreement; b) imposition of countervailing duties; c) tariffs; d) other monetary penalties (fines); and e) countervailing currency intervention. The fifth penalty is in the form of a proposal for governments of deficit countries to purchase assets denominated in the currency of interveners to offset their purchases of foreign assets.

Inclusion of a currency manipulation clause in the TPP is an important first step—a way to get the “camel’s nose under the tent”—to begin to create a regime of

TABLE 1

Impact of ending currency manipulation on U.S. economy

Change	Scenario*	
	Low impact	High impact
<i>Trade deficit (billions of dollars)</i>	-\$200	-\$500
Gross domestic product		
<i>in annual billions of dollars</i>	+\$288	+\$720
<i>as a share of GDP**</i>	+2.0%	+4.9%
Number of jobs	+2,300,000	+5,800,000

*The low-impact scenario assumes ending currency manipulation would reduce the trade deficit by \$200 billion; the high-impact scenario assumes a \$500 billion reduction in the trade deficit. The table shows the hypothetical change in 2015 three years after implementation.

**Percentages shown are relative to baseline forecasts for 2015.

Note: Dollar calculations are in 2005 dollars.

Source: Scott 2014

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enforceable currency manipulation disciplines. However, the long-run goal must be to end currency manipulation by all countries, not just those few who join the TPP (Japan, Singapore, and Malaysia), or others that could join in the near future (Korea, Taiwan, and ultimately China). The United States needs other tools to end currency manipulation, and new enforcement tools are the key.

Trade Promotion Authority, which the Obama administration has asked for to help it complete negotiations on the TPP, is being packaged with a number of related measures, such as trade adjustment assistance. Separate legislation to authorize the United States to impose countervailing duties on imports from *any* country engaging in currency manipulation should be included in that package. Currency manipulation is a direct subsidy to exports, and businesses in the United States should be able to obtain relief from it in the form of countervailing duties. A mechanism for countervailing duties might affect only a small share of total U.S. imports but would

be an important signal that currency manipulation will no longer be tolerated.

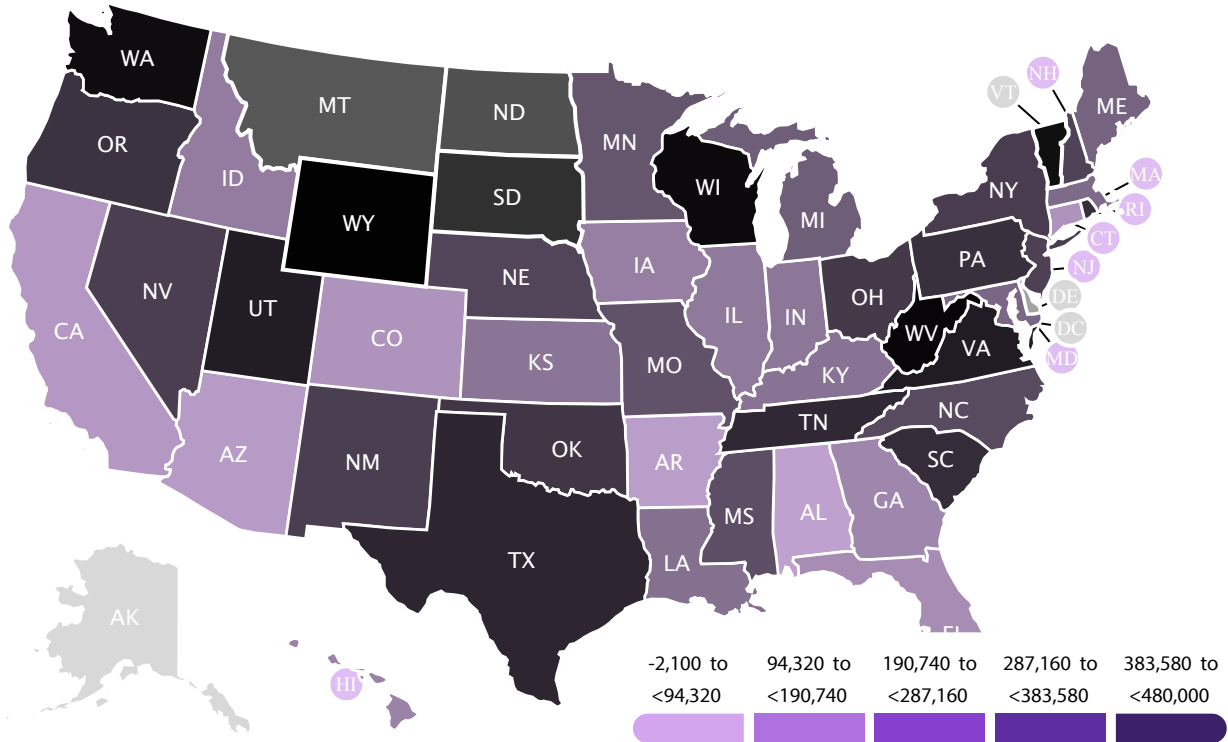
The employment impacts of ending currency manipulation

Ending currency manipulation could significantly reduce U.S. trade deficits and create millions of U.S. jobs, with job gains in every state and most or all U.S. congressional districts. This section summarizes jobs that could be created by eliminating currency manipulation, as estimated in Scott 2014. (The findings estimate effects at the end of a three-year timeline for implementation; see Scott 2014 for methodology.)

Eliminating currency manipulation would reduce the U.S. trade deficit by \$200 billion under a low-impact scenario and \$500 billion under a high-impact scenario. This would increase annual U.S. GDP by between \$288 billion and \$720 billion (between 2.0 percent and 4.9 percent), as shown in **Table 1**.

FIGURE C

Jobs created as a share of state employment from ending currency manipulation in high-impact scenario



Source: Scott 2014

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Each of the 50 states and the District of Columbia would gain jobs under both the low- and high-impact scenarios. As shown in **Table 2 at the end of this memorandum**, job gains under the low-impact scenario, expressed as a share of total jobs in the state, would range from 1.06 percent in Washington, D.C., to 2.29 percent in Wisconsin. Job gains under the high-impact scenario would range from 2.64 percent in Washington, D.C., to 5.55 percent in Wisconsin.

Nine of the top 10 states gaining the most jobs (as a share of total employment) in both scenarios are in the Midwest. They are Wisconsin (64,700 to 156,600 jobs),

Indiana (61,000 to 152,600 jobs), Iowa (34,000 to 79,600 jobs), Minnesota (55,900 to 135,300 jobs), Michigan (82,800 to 207,200 jobs), Ohio (103,200 to 254,600 jobs), South Dakota (9,200 to 21,100 jobs), Kansas, (28,900 to 67,000 jobs), and Nebraska (19,000 to 44,200 jobs). In the West, Idaho (13,900 to 32,700 jobs) rounds out the top 10 states gaining the most jobs.

Jobs are gained in all but two congressional districts under the low-impact scenario, and in all congressional districts under the high-impact scenario, as shown in **Figure C**.

Under the high-impact scenario, each of the top 20 districts by jobs created as a share of district employment would gain at least 14,700 jobs and as many as 24,400 jobs (gains representing between 5.79 percent and 8.65 percent of total district employment), as shown in **Table 3 at the end of this memorandum**. Of the top 20 congressional districts, five are in California; three are in Wisconsin; two each in Indiana, Ohio, and Michigan; and one each in Kansas, Nebraska, Illinois, Minnesota,

Washington, and Iowa. Under the high-impact scenario, among *all* districts, net job gains range from a low of 6,300 jobs in the 34th Congressional District in California to a high of 24,400 jobs in the 17th Congressional District in California.

—The author thanks Josh Bivens and Ross Eisenbrey for comments, and Will Kimball for research assistance.

TABLE 2

Net U.S. jobs created by eliminating currency manipulation, by state (ranked by jobs gained as a share of total state employment under high-impact scenario)

Rank	State	State employment (2011 average)	Scenario*			
			Low impact		High impact	
			Net jobs created	Jobs created as a share of state employment	Net jobs created	Jobs created as a share of state employment
1	Wisconsin	2,819,475	64,700	2.29%	156,600	5.55%
2	Indiana	2,934,500	61,000	2.08%	152,600	5.20%
3	Iowa	1,538,755	34,000	2.21%	79,600	5.17%
4	South Dakota	415,625	9,200	2.21%	21,100	5.08%
5	Minnesota	2,728,880	55,900	2.05%	135,300	4.96%
6	Michigan	4,191,880	82,800	1.98%	207,200	4.94%
7	Ohio	5,213,455	103,200	1.98%	254,600	4.88%
8	Kansas	1,389,040	28,900	2.08%	67,000	4.82%
9	Idaho	684,915	13,900	2.03%	32,700	4.77%
10	Nebraska	943,645	19,000	2.01%	44,200	4.68%
11	Oregon	1,710,335	31,300	1.83%	78,600	4.60%
12	North Dakota	370,830	7,400	2.00%	17,000	4.58%
13	New Hampshire	684,805	12,700	1.85%	31,300	4.57%
14	Arkansas	1,235,755	22,500	1.82%	56,300	4.56%
15	South Carolina	1,968,925	35,600	1.81%	89,300	4.54%
16	Washington	3,118,000	61,300	1.97%	140,300	4.50%
17	Illinois	5,926,850	107,500	1.81%	266,400	4.49%
18	Kentucky	1,838,400	31,800	1.73%	82,500	4.49%
19	Connecticut	1,742,495	32,400	1.86%	77,000	4.42%
20	Pennsylvania	5,853,320	101,400	1.73%	253,000	4.32%
21	Alabama	1,981,095	33,000	1.67%	85,000	4.29%
22	Missouri	2,742,055	47,200	1.72%	116,800	4.26%
23	Tennessee	2,784,460	45,800	1.64%	118,100	4.24%
24	Oklahoma	1,681,760	27,900	1.66%	71,100	4.23%
25	California	16,426,695	258,400	1.57%	687,100	4.18%
26	Vermont	327,300	5,600	1.71%	13,600	4.16%
27	Utah	1,260,805	20,800	1.65%	51,600	4.09%

TABLE 2 (CONTINUED)

			Scenario*			
			Low impact		High impact	
28	Mississippi	1,181,295	18,900	1.60%	47,900	4.05%
29	North Carolina	4,195,810	63,400	1.51%	170,000	4.05%
30	Rhode Island	511,235	8,300	1.62%	20,700	4.05%
31	Texas	11,455,070	179,100	1.56%	460,400	4.02%
32	Montana	479,990	8,200	1.71%	19,200	4.00%
33	Georgia	4,193,775	65,900	1.57%	167,600	4.00%
34	Arizona	2,687,990	43,500	1.62%	105,100	3.91%
35	Massachusetts	3,284,720	50,600	1.54%	128,400	3.91%
36	Delaware	420,365	6,700	1.59%	16,200	3.85%
37	West Virginia	748,560	11,800	1.58%	28,800	3.85%
38	Colorado	2,492,420	38,300	1.54%	95,700	3.84%
39	Wyoming	289,975	4,200	1.45%	10,900	3.76%
40	Maine	643,105	9,300	1.45%	24,000	3.73%
41	New Jersey	4,152,515	57,200	1.38%	150,900	3.63%
42	New Mexico	869,775	12,500	1.44%	30,800	3.54%
43	Louisiana	1,973,940	27,800	1.41%	69,700	3.53%
44	Virginia	3,860,130	52,500	1.36%	131,300	3.40%
45	Florida	8,101,900	110,200	1.36%	274,000	3.38%
46	New York	8,959,015	109,900	1.23%	296,400	3.31%
47	Nevada	1,204,880	16,000	1.33%	39,800	3.30%
48	Maryland	2,894,565	35,800	1.24%	89,400	3.09%
49	Alaska	344,345	3,900	1.13%	10,300	2.99%
50	Hawaii	629,525	7,200	1.14%	18,200	2.89%
51	District of Columbia	310,605	3,300	1.06%	8,200	2.64%
Total**		140,399,600	2,300,000	1.64%	5,800,000	4.13%

*The low-impact scenario assumes ending currency manipulation would reduce the trade deficit by \$200 billion; the high-impact scenario assumes a \$500 billion reduction in the trade deficit. The table shows the hypothetical change in 2015 three years after implementation.

**Total may vary slightly due to rounding.

Source: Scott 2014

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TABLE 3

Net U.S. jobs created by eliminating currency manipulation, by congressional district (ranked by jobs gained as a share of total district employment under high-impact scenario)

Rank	State	District	District employment (2011 average)	Scenario*			
				Low impact		High impact	
				Net jobs created	Jobs created as a share of state employment	Net jobs created	Jobs created as a share of state employment
1	California	21	243,800	10,100	4.1%	21,100	8.7%
2	California	17	346,100	9,300	2.7%	24,400	7.0%
3	Wisconsin	6	353,600	9,900	2.8%	23,800	6.7%
4	Indiana	3	327,000	8,000	2.4%	20,800	6.4%
5	Kansas	4	332,900	9,800	2.9%	21,000	6.3%
6	Indiana	2	317,800	7,900	2.5%	20,000	6.3%
7	Ohio	4	317,900	8,000	2.5%	19,700	6.2%
8	Nebraska	3	305,600	8,500	2.8%	18,800	6.2%
9	Wisconsin	5	370,600	9,300	2.5%	22,500	6.1%
10	California	16	244,900	6,700	2.7%	14,700	6.0%
11	California	19	324,000	7,500	2.3%	19,300	6.0%
12	Michigan	6	310,400	7,700	2.5%	18,400	5.9%
13	Illinois	17	311,700	7,800	2.5%	18,300	5.9%
14	Michigan	10	308,700	7,400	2.4%	18,100	5.9%
15	California	20	302,500	8,000	2.6%	17,700	5.9%
16	Wisconsin	8	362,800	9,000	2.5%	21,200	5.8%
17	Minnesota	7	328,700	8,400	2.6%	19,100	5.8%
18	Ohio	8	328,800	8,000	2.4%	19,100	5.8%
19	Washington	4	284,500	7,600	2.7%	16,500	5.8%
20	Iowa	1	392,300	9,700	2.5%	22,700	5.8%
21	Wisconsin	1	342,500	8,200	2.4%	19,800	5.8%
22	California	18	344,500	7,700	2.2%	19,900	5.8%
23	Indiana	6	311,900	7,400	2.4%	18,000	5.8%
24	Ohio	7	326,800	7,500	2.3%	18,800	5.8%
25	Michigan	2	315,900	7,200	2.3%	17,900	5.7%
26	Ohio	14	349,700	8,300	2.4%	19,800	5.7%
27	Wisconsin	7	338,400	7,900	2.3%	19,100	5.6%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
28	South Carolina	3	264,500	5,900	2.2%	14,900	5.6%
29	Ohio	5	334,200	7,600	2.3%	18,700	5.6%
30	Oregon	1	377,200	7,800	2.1%	20,800	5.5%
31	California	26	325,900	7,700	2.4%	17,900	5.5%
32	Illinois	16	330,800	7,700	2.3%	18,100	5.5%
33	Minnesota	3	353,800	7,800	2.2%	19,300	5.5%
34	Iowa	4	382,300	9,100	2.4%	20,800	5.4%
35	Iowa	2	373,400	8,500	2.3%	20,300	5.4%
36	Indiana	4	328,500	7,200	2.2%	17,600	5.4%
37	Arkansas	1	277,400	6,100	2.2%	14,800	5.3%
38	Minnesota	1	348,200	7,800	2.2%	18,500	5.3%
39	Indiana	1	310,600	6,800	2.2%	16,500	5.3%
40	Pennsylvania	3	317,700	6,800	2.1%	16,700	5.3%
41	Alabama	4	262,900	5,200	2.0%	13,700	5.2%
42	Michigan	7	299,100	6,200	2.1%	15,500	5.2%
43	Kansas	1	345,900	7,800	2.3%	17,900	5.2%
44	Michigan	3	315,300	6,500	2.1%	16,300	5.2%
45	Massachusetts	3	355,400	7,100	2.0%	18,200	5.1%
46	Ohio	16	355,600	7,400	2.1%	18,200	5.1%
47	Ohio	6	292,300	6,100	2.1%	14,900	5.1%
48	Washington	8	318,000	7,400	2.3%	16,200	5.1%
49	Georgia	14	290,700	5,400	1.9%	14,800	5.1%
50	Arkansas	4	295,100	6,000	2.0%	15,000	5.1%
51	South Dakota	Statewide	415,600	9,200	2.2%	21,100	5.1%
52	Minnesota	6	348,700	7,400	2.1%	17,700	5.1%
53	Illinois	14	351,000	7,300	2.1%	17,700	5.0%
54	Idaho	2	355,000	7,800	2.2%	17,900	5.0%
55	Illinois	18	337,500	7,400	2.2%	17,000	5.0%
56	Wisconsin	3	353,500	7,300	2.1%	17,800	5.0%
57	Illinois	10	324,800	6,500	2.0%	16,300	5.0%
58	Texas	12	337,500	6,800	2.0%	16,900	5.0%
59	Illinois	6	355,600	6,900	1.9%	17,800	5.0%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
60	Alabama	5	311,900	6,400	2.1%	15,600	5.0%
61	Michigan	11	342,100	6,600	1.9%	17,100	5.0%
62	Washington	1	332,300	7,300	2.2%	16,600	5.0%
63	Ohio	13	320,400	6,200	1.9%	16,000	5.0%
64	Washington	2	318,900	7,300	2.3%	15,900	5.0%
65	Michigan	9	326,100	6,300	1.9%	16,200	5.0%
66	Michigan	4	286,300	5,700	2.0%	14,200	5.0%
67	Indiana	8	329,300	6,300	1.9%	16,300	4.9%
68	California	24	323,500	7,000	2.2%	16,000	4.9%
69	Oregon	2	314,200	6,500	2.1%	15,500	4.9%
70	Pennsylvania	5	316,800	6,200	2.0%	15,500	4.9%
71	Illinois	8	366,300	7,200	2.0%	17,900	4.9%
72	Minnesota	2	358,300	6,800	1.9%	17,500	4.9%
73	South Carolina	4	301,000	5,600	1.9%	14,700	4.9%
74	Tennessee	8	299,200	6,100	2.0%	14,600	4.9%
75	South Carolina	5	275,200	5,300	1.9%	13,400	4.9%
76	California	22	289,600	6,300	2.2%	14,100	4.9%
77	Ohio	9	315,000	6,200	2.0%	15,200	4.8%
78	Kentucky	2	317,100	5,700	1.8%	15,300	4.8%
79	Missouri	8	298,500	5,700	1.9%	14,400	4.8%
80	Connecticut	5	348,300	7,100	2.0%	16,800	4.8%
81	Pennsylvania	16	327,700	6,400	2.0%	15,800	4.8%
82	Kentucky	1	284,800	5,100	1.8%	13,700	4.8%
83	Wisconsin	4	308,000	5,800	1.9%	14,800	4.8%
84	Texas	36	291,900	5,900	2.0%	14,000	4.8%
85	Oklahoma	1	361,900	6,700	1.9%	17,200	4.8%
86	Indiana	9	339,400	6,500	1.9%	16,100	4.7%
87	Tennessee	1	297,600	5,700	1.9%	14,100	4.7%
88	California	50	296,200	5,900	2.0%	14,000	4.7%
89	New Hampshire	2	332,200	6,400	1.9%	15,700	4.7%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
90	Illinois	15	316,500	6,100	1.9%	14,900	4.7%
91	Oklahoma	2	290,300	5,500	1.9%	13,600	4.7%
92	California	15	336,400	5,900	1.8%	15,700	4.7%
93	Illinois	4	326,600	6,000	1.8%	15,200	4.7%
94	Pennsylvania	15	343,800	6,500	1.9%	16,000	4.7%
95	New York	23	324,600	6,100	1.9%	15,100	4.7%
96	Colorado	4	344,100	6,500	1.9%	16,000	4.6%
97	Arkansas	3	327,000	6,000	1.8%	15,200	4.6%
98	California	46	314,400	5,100	1.6%	14,600	4.6%
99	Washington	9	341,400	6,900	2.0%	15,800	4.6%
100	Oklahoma	3	329,900	6,300	1.9%	15,200	4.6%
101	Washington	3	284,500	5,300	1.9%	13,100	4.6%
102	New York	27	337,800	6,400	1.9%	15,500	4.6%
103	North Dakota	Statewide	370,800	7,400	2.0%	17,000	4.6%
104	Pennsylvania	18	345,000	6,400	1.9%	15,800	4.6%
105	North Carolina	10	324,000	5,400	1.7%	14,800	4.6%
106	Pennsylvania	7	339,700	6,400	1.9%	15,500	4.6%
107	Kentucky	6	335,400	6,100	1.8%	15,300	4.6%
108	Connecticut	2	348,600	6,900	2.0%	15,900	4.6%
109	Pennsylvania	6	362,300	6,700	1.8%	16,500	4.6%
110	California	45	354,400	6,400	1.8%	16,100	4.5%
111	California	48	352,600	5,900	1.7%	16,000	4.5%
112	Michigan	8	330,800	5,800	1.8%	15,000	4.5%
113	California	25	302,700	5,700	1.9%	13,700	4.5%
114	Texas	3	371,200	6,300	1.7%	16,800	4.5%
115	Missouri	2	378,600	7,000	1.8%	17,100	4.5%
116	Tennessee	7	285,800	4,900	1.7%	12,900	4.5%
117	Ohio	2	323,600	6,000	1.9%	14,600	4.5%
118	Virginia	9	298,400	5,200	1.7%	13,400	4.5%
119	Pennsylvania	12	331,900	6,000	1.8%	14,900	4.5%
120	Wisconsin	2	390,000	7,300	1.9%	17,500	4.5%
121	Idaho	1	329,900	6,200	1.9%	14,800	4.5%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
122	Nebraska	1	321,700	6,100	1.9%	14,400	4.5%
123	Kentucky	3	333,300	5,800	1.7%	14,900	4.5%
124	Arizona	5	317,900	5,700	1.8%	14,200	4.5%
125	Michigan	13	230,700	4,000	1.7%	10,300	4.5%
126	Minnesota	5	352,000	6,400	1.8%	15,700	4.5%
127	Texas	26	368,300	6,500	1.8%	16,400	4.5%
128	Connecticut	3	352,700	6,600	1.9%	15,700	4.5%
129	Utah	1	312,400	5,700	1.8%	13,900	4.4%
130	Alabama	3	274,600	4,500	1.6%	12,200	4.4%
131	Texas	29	292,900	5,200	1.8%	13,000	4.4%
132	Texas	13	309,000	5,700	1.8%	13,700	4.4%
133	Pennsylvania	4	342,900	6,200	1.8%	15,200	4.4%
134	Missouri	3	370,000	6,800	1.8%	16,400	4.4%
135	Pennsylvania	9	304,800	5,200	1.7%	13,500	4.4%
136	California	52	350,100	6,200	1.8%	15,500	4.4%
137	Georgia	9	284,600	5,000	1.8%	12,600	4.4%
138	New Hampshire	1	352,600	6,300	1.8%	15,600	4.4%
139	Ohio	1	332,300	6,000	1.8%	14,700	4.4%
140	North Carolina	1	291,800	5,300	1.8%	12,900	4.4%
141	Tennessee	4	314,500	5,100	1.6%	13,900	4.4%
142	Missouri	7	337,400	5,900	1.7%	14,900	4.4%
143	Pennsylvania	10	312,500	5,500	1.8%	13,800	4.4%
144	Texas	2	364,600	5,600	1.5%	16,100	4.4%
145	Missouri	6	355,900	6,500	1.8%	15,700	4.4%
146	Kentucky	4	333,500	5,800	1.7%	14,700	4.4%
147	California	10	277,200	5,300	1.9%	12,200	4.4%
148	Tennessee	6	304,500	5,200	1.7%	13,400	4.4%
149	Texas	8	309,200	5,300	1.7%	13,600	4.4%
150	North Carolina	9	371,400	6,300	1.7%	16,300	4.4%
151	Illinois	11	347,300	5,800	1.7%	15,200	4.4%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
152	Mississippi	1	305,600	4,900	1.6%	13,300	4.4%
153	Texas	32	360,900	5,900	1.6%	15,700	4.4%
154	Minnesota	4	336,000	5,900	1.8%	14,600	4.3%
155	Tennessee	3	297,000	4,700	1.6%	12,900	4.3%
156	Florida	17	248,700	4,800	1.9%	10,800	4.3%
157	Michigan	1	290,200	5,200	1.8%	12,600	4.3%
158	New York	22	320,200	5,800	1.8%	13,900	4.3%
159	Ohio	11	275,200	4,800	1.7%	11,900	4.3%
160	Ohio	10	312,800	5,400	1.7%	13,500	4.3%
161	New York	24	327,300	5,800	1.8%	14,100	4.3%
162	Michigan	5	264,800	4,600	1.7%	11,400	4.3%
163	Texas	7	376,300	5,800	1.5%	16,200	4.3%
164	Rhode Island	1	250,900	4,300	1.7%	10,800	4.3%
165	Oregon	4	309,000	5,600	1.8%	13,300	4.3%
166	Michigan	12	313,800	5,300	1.7%	13,500	4.3%
167	Texas	24	388,600	6,600	1.7%	16,700	4.3%
168	Texas	33	283,900	4,500	1.6%	12,200	4.3%
169	Connecticut	1	349,800	6,300	1.8%	15,000	4.3%
170	North Carolina	5	324,500	4,900	1.5%	13,900	4.3%
171	Mississippi	2	266,900	4,800	1.8%	11,400	4.3%
172	Georgia	3	285,800	4,600	1.6%	12,200	4.3%
173	California	23	274,100	4,700	1.7%	11,700	4.3%
174	South Carolina	6	253,500	4,500	1.8%	10,800	4.3%
175	North Carolina	13	349,900	5,900	1.7%	14,900	4.3%
176	Oregon	5	326,700	5,900	1.8%	13,900	4.3%
177	Texas	14	303,300	5,600	1.8%	12,900	4.3%
178	Minnesota	8	303,400	5,300	1.7%	12,900	4.3%
179	Pennsylvania	8	357,800	6,200	1.7%	15,200	4.2%
180	Texas	6	348,800	5,600	1.6%	14,800	4.2%
181	New York	25	335,400	5,700	1.7%	14,200	4.2%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
182	Utah	4	331,500	5,600	1.7%	14,000	4.2%
183	California	39	332,000	5,300	1.6%	14,000	4.2%
184	New Jersey	7	377,100	6,300	1.7%	15,900	4.2%
185	Texas	4	299,300	5,100	1.7%	12,600	4.2%
186	Texas	10	342,600	5,700	1.7%	14,400	4.2%
187	Texas	1	297,700	5,100	1.7%	12,500	4.2%
188	North Carolina	11	295,400	4,700	1.6%	12,400	4.2%
189	Texas	18	306,400	4,900	1.6%	12,800	4.2%
190	California	49	299,700	4,700	1.6%	12,500	4.2%
191	California	42	307,000	5,100	1.7%	12,800	4.2%
192	Pennsylvania	11	329,300	5,600	1.7%	13,700	4.2%
193	South Carolina	7	269,400	4,400	1.6%	11,200	4.2%
194	Texas	27	305,600	5,200	1.7%	12,700	4.2%
195	Vermont	Statewide	327,300	5,600	1.7%	13,600	4.2%
196	Michigan	14	257,700	4,200	1.6%	10,700	4.2%
197	Massachusetts	2	356,500	6,000	1.7%	14,800	4.2%
198	North Carolina	2	303,800	4,200	1.4%	12,600	4.1%
199	Texas	11	308,800	4,700	1.5%	12,800	4.1%
200	Georgia	2	251,200	4,300	1.7%	10,400	4.1%
201	California	44	270,600	3,300	1.2%	11,200	4.1%
202	Colorado	2	384,600	6,500	1.7%	15,900	4.1%
203	Kansas	2	339,900	5,700	1.7%	14,000	4.1%
204	North Carolina	8	301,700	4,100	1.4%	12,400	4.1%
205	California	35	284,800	3,900	1.4%	11,700	4.1%
206	New Jersey	5	356,100	5,600	1.6%	14,600	4.1%
207	Florida	8	283,400	4,900	1.7%	11,600	4.1%
208	Indiana	5	357,700	5,800	1.6%	14,600	4.1%
209	Arizona	9	360,300	6,100	1.7%	14,700	4.1%
210	California	5	326,800	5,500	1.7%	13,300	4.1%
211	Iowa	3	390,800	6,700	1.7%	15,900	4.1%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
212	California	43	302,800	4,400	1.5%	12,300	4.1%
213	Ohio	12	359,500	6,000	1.7%	14,600	4.1%
214	West Virginia	1	258,700	4,300	1.7%	10,500	4.1%
215	Washington	7	380,000	6,500	1.7%	15,400	4.1%
216	California	32	293,800	4,000	1.4%	11,900	4.1%
217	California	29	303,700	4,400	1.4%	12,300	4.1%
218	Georgia	11	340,900	5,500	1.6%	13,800	4.0%
219	Ohio	15	336,400	5,400	1.6%	13,600	4.0%
220	Illinois	3	319,500	5,100	1.6%	12,900	4.0%
221	Texas	25	302,200	4,800	1.6%	12,200	4.0%
222	Indiana	7	312,200	5,000	1.6%	12,600	4.0%
223	Georgia	7	312,500	4,900	1.6%	12,600	4.0%
224	Pennsylvania	17	312,600	4,800	1.5%	12,600	4.0%
225	Massachusetts	4	374,800	5,900	1.6%	15,100	4.0%
226	South Carolina	2	305,600	5,000	1.6%	12,300	4.0%
227	Missouri	4	324,900	5,300	1.6%	13,000	4.0%
228	Montana	Statewide	480,000	8,200	1.7%	19,200	4.0%
229	Illinois	5	397,600	6,300	1.6%	15,900	4.0%
230	California	9	275,300	4,600	1.7%	11,000	4.0%
231	Connecticut	4	343,000	5,500	1.6%	13,700	4.0%
232	Louisiana	3	328,100	5,300	1.6%	13,100	4.0%
233	Utah	2	305,700	4,800	1.6%	12,200	4.0%
234	Georgia	12	278,200	4,300	1.5%	11,100	4.0%
235	Illinois	2	278,200	4,500	1.6%	11,100	4.0%
236	Texas	5	300,800	4,800	1.6%	12,000	4.0%
237	Massachusetts	1	341,000	5,600	1.6%	13,600	4.0%
238	Washington	5	291,500	4,900	1.7%	11,600	4.0%
239	Nevada	2	309,400	5,100	1.6%	12,300	4.0%
240	Texas	22	352,500	5,400	1.5%	14,000	4.0%
241	South Carolina	1	299,800	4,900	1.6%	11,900	4.0%
242	Oregon	3	383,300	5,600	1.5%	15,200	4.0%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
243	Massachusetts	6	372,000	5,900	1.6%	14,700	4.0%
244	West Virginia	3	223,000	3,800	1.7%	8,800	3.9%
245	Alabama	2	276,900	4,200	1.5%	10,900	3.9%
246	Arizona	7	282,300	4,400	1.6%	11,100	3.9%
247	Arizona	3	262,200	4,300	1.6%	10,300	3.9%
248	Pennsylvania	13	339,000	5,100	1.5%	13,300	3.9%
249	Illinois	12	301,000	4,800	1.6%	11,800	3.9%
250	Illinois	13	326,600	5,400	1.7%	12,800	3.9%
251	Texas	31	323,000	4,700	1.5%	12,600	3.9%
252	North Carolina	7	315,400	5,000	1.6%	12,300	3.9%
253	California	33	364,200	5,200	1.4%	14,200	3.9%
254	California	41	271,900	4,100	1.5%	10,600	3.9%
255	Georgia	10	287,400	4,400	1.5%	11,200	3.9%
256	Texas	19	310,700	4,900	1.6%	12,100	3.9%
257	Arizona	1	264,900	4,500	1.7%	10,300	3.9%
258	Georgia	8	272,700	4,300	1.6%	10,600	3.9%
259	Missouri	5	345,300	5,400	1.6%	13,400	3.9%
260	Maine	1	340,400	5,400	1.6%	13,200	3.9%
261	Georgia	6	361,200	5,500	1.5%	14,000	3.9%
262	New Jersey	11	358,800	5,400	1.5%	13,900	3.9%
263	California	51	258,600	4,000	1.5%	10,000	3.9%
264	California	38	313,300	4,000	1.3%	12,100	3.9%
265	Delaware	Statewide	420,400	6,700	1.6%	16,200	3.9%
266	California	36	251,900	4,100	1.6%	9,700	3.9%
267	Mississippi	3	303,900	4,600	1.5%	11,700	3.8%
268	Georgia	1	286,100	4,800	1.7%	11,000	3.8%
269	New Mexico	2	273,100	4,400	1.6%	10,500	3.8%
270	New Jersey	12	352,400	5,500	1.6%	13,500	3.8%
271	Virginia	6	339,900	5,200	1.5%	13,000	3.8%
272	Massachusetts	5	387,400	5,700	1.5%	14,800	3.8%
273	Florida	13	309,200	4,600	1.5%	11,800	3.8%
274	Arizona	2	299,200	4,900	1.6%	11,400	3.8%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
275	Kansas	3	370,300	5,600	1.5%	14,100	3.8%
276	Rhode Island	2	260,300	4,000	1.5%	9,900	3.8%
277	Colorado	3	331,400	5,100	1.5%	12,600	3.8%
278	Alabama	6	318,400	4,600	1.4%	12,100	3.8%
279	Virginia	5	316,100	4,600	1.5%	12,000	3.8%
280	California	14	364,000	5,100	1.4%	13,800	3.8%
281	Alabama	7	253,500	3,700	1.5%	9,600	3.8%
282	California	47	327,600	4,500	1.4%	12,400	3.8%
283	Alabama	1	283,000	4,500	1.6%	10,700	3.8%
284	North Carolina	6	341,800	3,900	1.1%	12,900	3.8%
285	Mississippi	4	304,900	4,700	1.5%	11,500	3.8%
286	Arizona	4	233,500	3,700	1.6%	8,800	3.8%
287	Maryland	1	342,300	5,300	1.5%	12,900	3.8%
288	Texas	17	329,300	4,700	1.4%	12,400	3.8%
289	Tennessee	2	327,200	4,800	1.5%	12,300	3.8%
290	Wyoming	Statewide	290,000	4,200	1.4%	10,900	3.8%
291	Tennessee	9	305,300	4,400	1.4%	11,400	3.7%
292	Louisiana	5	283,900	4,400	1.5%	10,600	3.7%
293	California	3	286,600	4,500	1.6%	10,700	3.7%
294	Oklahoma	4	350,900	5,000	1.4%	13,100	3.7%
295	New York	19	327,300	4,900	1.5%	12,200	3.7%
296	Utah	3	311,200	4,600	1.5%	11,500	3.7%
297	Virginia	4	327,900	5,000	1.5%	12,100	3.7%
298	North Carolina	12	319,800	4,400	1.4%	11,800	3.7%
299	Illinois	9	347,200	4,700	1.4%	12,800	3.7%
300	California	2	323,100	4,700	1.5%	11,900	3.7%
301	New Jersey	6	353,600	4,700	1.3%	13,000	3.7%
302	Colorado	5	315,900	4,800	1.5%	11,600	3.7%
303	Kentucky	5	234,300	3,200	1.4%	8,600	3.7%
304	New Jersey	9	338,500	4,500	1.3%	12,400	3.7%
305	Georgia	4	311,700	4,500	1.4%	11,400	3.7%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
306	Florida	15	304,200	4,600	1.5%	11,100	3.6%
307	Florida	6	283,200	4,300	1.5%	10,300	3.6%
308	Arizona	6	366,000	5,400	1.5%	13,300	3.6%
309	North Carolina	3	305,600	4,700	1.5%	11,100	3.6%
310	New York	26	327,700	4,700	1.4%	11,900	3.6%
311	Massachusetts	8	375,600	5,300	1.4%	13,600	3.6%
312	California	53	342,700	5,000	1.5%	12,400	3.6%
313	Illinois	7	298,500	4,300	1.4%	10,800	3.6%
314	Arizona	8	301,700	4,500	1.5%	10,900	3.6%
315	California	1	260,300	3,900	1.5%	9,400	3.6%
316	Louisiana	4	311,100	4,200	1.4%	11,200	3.6%
317	New York	21	309,200	4,100	1.3%	11,100	3.6%
318	Missouri	1	331,500	4,600	1.4%	11,900	3.6%
319	Texas	9	326,400	4,400	1.3%	11,700	3.6%
320	California	11	324,200	4,600	1.4%	11,600	3.6%
321	Maine	2	302,700	3,900	1.3%	10,800	3.6%
322	Colorado	1	384,400	5,400	1.4%	13,700	3.6%
323	West Virginia	2	266,900	3,700	1.4%	9,500	3.6%
324	Colorado	7	362,500	5,000	1.4%	12,900	3.6%
325	Pennsylvania	14	323,200	4,500	1.4%	11,500	3.6%
326	Tennessee	5	353,400	4,900	1.4%	12,500	3.5%
327	California	4	294,200	4,200	1.4%	10,400	3.5%
328	Florida	25	326,000	4,400	1.3%	11,500	3.5%
329	California	13	340,200	4,300	1.3%	12,000	3.5%
330	California	31	292,200	3,900	1.3%	10,300	3.5%
331	Texas	30	292,300	4,000	1.4%	10,300	3.5%
332	New York	2	357,800	4,800	1.3%	12,600	3.5%
333	Florida	4	329,900	4,700	1.4%	11,600	3.5%
334	New Jersey	1	339,200	4,600	1.4%	11,900	3.5%
335	Florida	10	331,500	4,700	1.4%	11,600	3.5%
336	Texas	28	266,300	3,900	1.5%	9,300	3.5%
337	Colorado	6	369,600	5,100	1.4%	12,900	3.5%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
338	New Jersey	3	344,200	4,900	1.4%	12,000	3.5%
339	Georgia	13	312,800	4,200	1.3%	10,900	3.5%
340	Washington	6	275,500	4,000	1.5%	9,600	3.5%
341	Nebraska	2	316,300	4,300	1.4%	11,000	3.5%
342	Oklahoma	5	348,800	4,400	1.3%	12,100	3.5%
343	Texas	34	242,200	3,400	1.4%	8,400	3.5%
344	Massachusetts	9	352,300	4,600	1.3%	12,200	3.5%
345	New York	18	332,100	4,500	1.4%	11,500	3.5%
346	Florida	5	284,000	4,000	1.4%	9,800	3.5%
347	Florida	7	322,500	4,500	1.4%	11,100	3.4%
348	California	30	358,200	4,200	1.2%	12,300	3.4%
349	Florida	19	265,200	3,700	1.4%	9,100	3.4%
350	Georgia	5	318,100	4,300	1.4%	10,900	3.4%
351	Ohio	3	333,000	4,300	1.3%	11,400	3.4%
352	New Jersey	8	371,000	3,900	1.1%	12,700	3.4%
353	New Jersey	2	324,400	4,500	1.4%	11,100	3.4%
354	Illinois	1	290,200	3,700	1.3%	9,900	3.4%
355	New Mexico	3	284,800	3,700	1.3%	9,700	3.4%
356	Virginia	10	376,400	5,000	1.3%	12,800	3.4%
357	New Mexico	1	311,900	4,400	1.4%	10,600	3.4%
358	Louisiana	1	354,000	4,800	1.4%	12,000	3.4%
359	Texas	23	289,700	3,500	1.2%	9,800	3.4%
360	Louisiana	6	367,800	4,900	1.3%	12,400	3.4%
361	Florida	16	276,100	3,700	1.3%	9,300	3.4%
362	Pennsylvania	1	273,300	3,500	1.3%	9,200	3.4%
363	North Carolina	4	350,900	4,600	1.3%	11,800	3.4%
364	Arkansas	2	336,300	4,400	1.3%	11,300	3.4%
365	Florida	12	283,200	3,800	1.3%	9,500	3.4%
366	Florida	26	335,600	4,600	1.4%	11,200	3.3%
367	Florida	14	320,700	4,200	1.3%	10,700	3.3%
368	New York	1	343,300	4,500	1.3%	11,400	3.3%
369	Florida	22	332,000	4,300	1.3%	11,000	3.3%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
370	California	12	399,400	4,700	1.2%	13,200	3.3%
371	Washington	10	291,300	4,000	1.4%	9,600	3.3%
372	Virginia	7	364,600	4,900	1.3%	12,000	3.3%
373	Florida	20	302,100	3,900	1.3%	9,900	3.3%
374	Texas	15	280,900	3,700	1.3%	9,200	3.3%
375	Florida	18	284,000	3,700	1.3%	9,200	3.2%
376	Texas	21	361,200	4,600	1.3%	11,700	3.2%
377	California	8	235,500	3,000	1.3%	7,600	3.2%
378	Maryland	6	363,200	4,700	1.3%	11,700	3.2%
379	Florida	11	217,400	2,800	1.3%	7,000	3.2%
380	Florida	3	277,000	3,700	1.3%	8,900	3.2%
381	Nevada	1	284,700	3,500	1.2%	9,100	3.2%
382	Florida	27	313,600	3,800	1.2%	10,000	3.2%
383	Virginia	3	320,100	4,200	1.3%	10,200	3.2%
384	Virginia	2	339,800	4,400	1.3%	10,800	3.2%
385	Florida	23	339,900	4,200	1.2%	10,800	3.2%
386	Texas	35	318,200	3,900	1.2%	10,100	3.2%
387	Hawaii	2	299,400	4,000	1.3%	9,500	3.2%
388	Louisiana	2	329,000	4,200	1.3%	10,400	3.2%
389	California	7	313,200	3,900	1.2%	9,900	3.2%
390	California	37	335,600	2,900	0.9%	10,600	3.2%
391	New Jersey	4	326,400	3,900	1.2%	10,300	3.2%
392	New York	20	357,600	4,500	1.3%	11,200	3.1%
393	Florida	1	303,900	3,900	1.3%	9,500	3.1%
394	Pennsylvania	2	273,100	3,400	1.2%	8,500	3.1%
395	Massachusetts	7	369,800	4,500	1.2%	11,500	3.1%
396	Maryland	7	315,700	3,900	1.2%	9,800	3.1%
397	New York	12	418,800	4,400	1.1%	13,000	3.1%
398	California	27	332,200	3,100	0.9%	10,300	3.1%
399	Florida	21	316,800	3,900	1.2%	9,800	3.1%
400	New Jersey	10	310,700	3,500	1.1%	9,600	3.1%
401	California	6	288,300	3,500	1.2%	8,900	3.1%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
402	Texas	20	311,400	3,700	1.2%	9,600	3.1%
403	Virginia	1	352,400	4,500	1.3%	10,800	3.1%
404	Nevada	4	274,300	3,400	1.2%	8,400	3.1%
405	Florida	9	317,200	3,800	1.2%	9,700	3.1%
406	Maryland	8	400,100	4,900	1.2%	12,200	3.0%
407	Maryland	3	369,500	4,600	1.2%	11,200	3.0%
408	California	28	359,900	3,400	0.9%	10,900	3.0%
409	New York	16	323,600	3,600	1.1%	9,800	3.0%
410	Maryland	2	351,700	4,100	1.2%	10,600	3.0%
411	New York	3	336,700	3,700	1.1%	10,100	3.0%
412	Alaska	Statewide	344,300	3,900	1.1%	10,300	3.0%
413	Nevada	3	336,500	3,900	1.2%	10,000	3.0%
414	Virginia	11	400,900	4,800	1.2%	11,900	3.0%
415	New York	13	317,200	3,300	1.0%	9,400	3.0%
416	New York	17	341,400	3,600	1.1%	10,100	3.0%
417	New York	15	255,900	2,600	1.0%	7,500	2.9%
418	Texas	16	281,300	2,600	0.9%	8,200	2.9%
419	Florida	24	293,400	3,200	1.1%	8,500	2.9%
420	Maryland	4	384,100	4,400	1.1%	11,100	2.9%
421	New York	10	360,300	3,600	1.0%	10,300	2.9%
422	Virginia	8	423,700	4,800	1.1%	12,100	2.9%
423	Florida	2	301,500	3,400	1.1%	8,600	2.9%
424	California	40	280,500	-800	-0.3%	7,900	2.8%
425	New York	14	341,800	3,200	0.9%	9,600	2.8%
426	New York	4	342,500	3,600	1.1%	9,600	2.8%
427	New York	6	327,000	3,000	0.9%	9,100	2.8%
428	New York	5	336,200	3,200	1.0%	9,300	2.8%
429	Maryland	5	368,200	4,000	1.1%	10,100	2.7%
430	New York	9	324,900	3,100	1.0%	8,900	2.7%
431	New York	8	292,700	2,700	0.9%	8,000	2.7%
432	New York	7	322,200	1,900	0.6%	8,600	2.7%
433	New York	11	317,500	2,700	0.9%	8,400	2.6%

TABLE 3 (CONTINUED)

				Scenario*			
				Low impact		High impact	
434	District of Columbia	District-wide	310,600	3,300	1.1%	8,200	2.6%
435	Hawaii	1	330,100	3,200	1.0%	8,700	2.6%
436	California	34	309,400	-2,100	-0.7%	6,300	2.0%
Total**			140,399,600	2,300,000	1.6%	5,800,000	4.1%

* The low-impact scenario assumes ending currency manipulation would reduce the trade deficit by \$200 billion; the high-impact scenario assumes a \$500 billion reduction in the trade deficit. The table shows the hypothetical change in 2015 three years after implementation.

** Totals may vary slightly due to rounding.

Source: Scott 2014

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Endnotes

1. The 22 countries identified as currency manipulators are China, Hong Kong, Japan, Korea, Malaysia, Singapore, Taiwan, Thailand, Algeria, Angola, Azerbaijan, Kazakhstan, Kuwait, Libya, Norway, Qatar, Russia, Saudi Arabia, United Arab Emirates, Denmark, Israel, and Switzerland (Bergsten and Gagnon 2012, Table 1). The nine countries with SWFs included by Bergsten and Gagnon were China, Korea, Singapore, Azerbaijan, Kazakhstan, Kuwait, Norway, Qatar, and the United Arab Emirates. These countries accounted for 70.7 percent of total SWF holdings listed by the Sovereign Wealth Fund Institute (SWFI 2015). Other currency manipulators also included in the SWFI list were Malaysia, Algeria, Angola, Libya, Russia, and Saudi Arabia. Together, all currency manipulators were responsible for 92.4 percent of total SWF holdings on the SWFI list (data through March 2015). In addition, Japan's \$1.2 trillion Government Pension Investment Fund (which is not included on the SWFI list, or by Bergsten and Gagnon) has announced plans to increase holdings of foreign stocks and bonds from 23 percent to 40 percent of total holdings in the near future (Warnock and Narioka 2014). This will increase actual foreign holdings from \$244.2 billion in 2012 to \$480 billion in 2015, an increase of \$235.8 billion (Scott 2015)
2. The increase in net holdings never fell below \$500 billion per year, despite the global financial crisis in 2009, when net holdings increased by \$649 billion, and the Russian financial crisis in 2014, when net holdings increased by \$544 billion, as shown in Figure B.
3. SWFI (2015) provides data on total holdings for each SWF for March 2015 (or latest available), by fund and country. It also provides total holdings of all SWFs between September 2007 and March 2015. Currency manipulators were responsible for virtually all of the holdings recorded by the SWFI in March 2015 (endnote 1, above). Thus, Figure A assumes that total SWF holdings of currency manipulators are a constant share of the total stock of all SWFs, as estimated by the SWFI (there are no publicly available historical data on the holdings of individual SWFs).
4. The IMF (2015a) reports that in the 4th quarter of 2014, U.S. dollar claims made up \$3.826 trillion out of a total of \$6.085 trillion of allocated reserves, or 62.9 percent of the

total. Note that unallocated reserves comprised \$5.5 trillion out of the total of \$11.6 trillion in total foreign exchange reserves, or nearly half of the total.

5. Bergsten and Gagnon (2012) recommend six months of goods and services imports, and two additional criteria not mentioned here. The first is that foreign exchange reserves grew faster than the GDP between 2001 and 2011, but this criterion is less relevant for enforcement actions. The second excludes countries with a GDP per capita of less than \$3,000. That criterion may not be desirable in the context of a TPP that includes low-income countries such as Vietnam.

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