



# Financing the U.S. Trade Deficit: Role of Foreign Governments

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## Summary

The nation's trade deficit is equal to the imbalance between national investment and national saving. National saving is the sum of household saving, business saving, and public sector saving (a budget deficit equals public sector borrowing). Over the period 2001-2006, the gap between national saving and investment widened, largely because of a fall in private and public saving, causing the trade deficit to widen. (It declined somewhat in both 2007 and 2008 relative to GDP.) To finance the trade deficit, foreign capital must flow into the United States.

Net private capital inflows have not grown over this period, however, to match the widening gap between saving and investment. The growing trade deficit from 2002 through 2006 was increasingly financed by official capital inflows as central banks and treasuries in a few Asian and oil-producing countries accumulated U.S. assets, arguably as a precautionary reserve should another Asian-type financial crisis emerge, to make use of windfall earnings resulting from high commodity prices, and to moderate or prevent their currencies from appreciating against the dollar. Net official capital inflows were close to \$400 billion in both 2006 and 2007.

The financial turmoil and economic contraction during 2008 reduced the gap between national saving and investment. The result was a decline in the trade deficit and the net inflow of capital. It also appears to have had a significant effect on the composition of international capital flows both from and to the United States. Between 2007 and 2008, foreign private capital inflows declined by more than 97%, while foreign official inflows rose by some 1.3%. As a result, official inflows rose from about 30% of private inflows in 2007 to more than 10 times as large in 2008. U.S. private capital outflows shifted to an inflow in 2008 as U.S. investors withdrew assets from the rest of the world. U.S. official outflows, which had been miniscule in 2007, grew to some \$530 billion in 2008, largely reflecting currency swaps between the Federal Reserve and foreign central banks. Because the net official movement of capital was outward from the United States, the net inflow was dominated by private capital. This, in turn, came not from foreign investors but from the liquidation and repatriation of American-owned assets abroad.

While the net inflow of capital continued during the first quarter of 2009, it underwent yet another compositional change. Rather than an outflow of U.S. capital, there was an inflow. That inflow arose because the repayment of official loans dominated the outflow of private capital by more than 2-to-1. Foreign lending also changed. Private lending was negative in the sense that foreign holders of investments in the United States liquidated them. Official lending to the United States was still positive, but only about half the size of the private outflow. Thus, the net inflow of capital was dominated by the repayment of U.S. government loans and the continued lending by foreign official sources.

If total net capital inflows decline, mainstream economics suggests, all else held constant, that the dollar and trade deficit would decline, U.S. interest rates would rise, and U.S. spending on capital goods and consumer durables would fall, all else equal. This report will be updated as events warrant.

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## Introduction

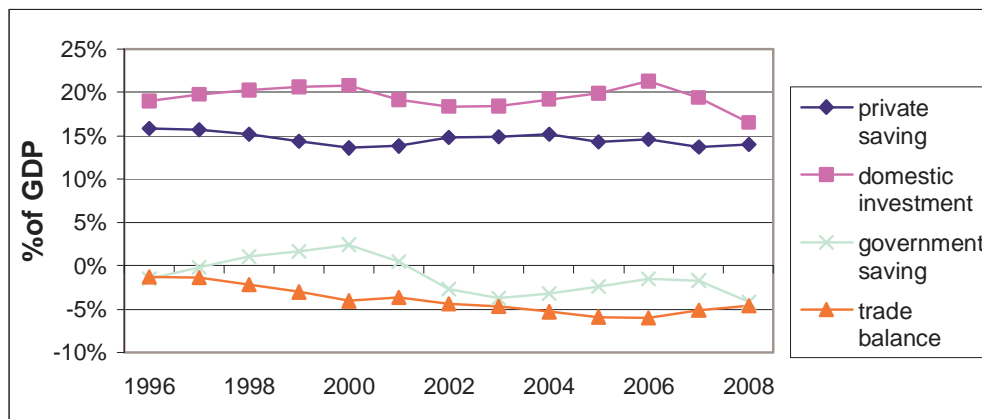
By accounting identity, the U.S. current account balance (which consists primarily of the trade balance) must equal the financial (formerly the capital) account balance or the net international flow of capital. That is because a country receives saving from abroad when it imports more goods and services than it exports. Capital outflows represent foreign assets purchased by Americans (both private and official), whereas capital inflows are U.S. assets (both private and official) purchased by foreigners. Official capital flows represent assets bought and sold by governments or other official organizations; all other capital flows are categorized as private. Also by identity, U.S. spending on capital goods (investment) must equal national saving plus net capital flows. National saving consists of private saving (household and business saving) and public sector saving (federal, state, and local government saving). When the public sector runs a budget deficit, it has a negative saving rate, which reduces national saving.

These identities are useful when attempting to provide a proximate explanation for why the U.S. trade deficit has stayed at very high levels from the late 1990s, a period of rapid economic expansion, through the recession of 2001, and to the present.

## The 1990s Experience

In the late 1990s, the United States experienced an investment boom and a decline in the private sector saving rate. As can be seen in **Figure 1**, there was a widening gap between the private saving and investment rates as the decade progressed. The result was a growing trade deficit that filled the gap—from 1.3% of GDP in 1997 to 4% of GDP in 2000. Although the public sector budget balance improved as the decade progressed, moving to surplus in 1998, this shift was not large enough to offset the growing private sector saving-investment imbalance, and the trade deficit continued to grow. So paradoxically for some, the budget deficit and trade deficit did not move in the same direction, as had occurred in the 1980s. The reason was that all else did not remain constant—spending on capital goods (investment) rose and private saving fell.

**Figure 1. U.S. Saving, Investment, Budget Balance, and Trade Balance**



**Note:** The data are obtained from the National Income and Product Accounts of the United States, U.S. Department of Commerce, Bureau of Economic Analysis (BEA). Private saving equals household and business saving. (Net) government saving equals the combined budget balance of the federal and state and local sector. Domestic investment includes private and public investment. The trade balance measure used in this chart is measured as the current account deficit in the BEA saving and investment tables. BEA measures government saving on a calendar year basis using a different definition than in budget documents.

Why did the 1990s investment boom lead to a growing trade deficit and an appreciating dollar? The substantial acceleration in productivity growth that began in the last half of the 1990s, it is argued, increased the real rate of return on U.S. capital. Because this rise in productivity was largely an American phenomenon, real rates of return in the U.S. rose relative to those abroad and this served to increase the attractiveness of U.S. assets. The response of foreigners (and Americans) was to substitute American assets for non-American assets in their portfolios.<sup>1</sup> To buy American assets, foreigners first had to buy dollars. This contributed to driving up the price of the dollar on the foreign exchange market (the dollar appreciated) and, as explained above, this resulted in a growing trade deficit.

## The 2000-2007 Experience

The American investment boom came to an abrupt halt with the 2001 economic recession. As seen in **Figure 1**, domestic investment spending fell to 18% of GDP in 2003 from 22% in 2000 (it subsequently recovered, but remained below 22%). Over that period, private saving first increased modestly from 13.6% of GDP in 2000 to 14.8% of GDP in 2003 (it declined to 13.7% of GDP in 2007). Since the trade deficit reflects the imbalance of national saving and investment, one might assume that the change in saving and investment would result initially in a smaller trade deficit and then a larger one, all else equal. However, other things were not equal during this period—the public sector initially went from being a net contributor to national saving, running a net budget surplus of 2.4% of GDP in calendar year 2000, to a net borrower, running a budget deficit that peaked at 3.6% of GDP in 2003 (a shift of 6% of GDP).<sup>2</sup> This change in fiscal position meant that the overall shortfall of national saving relative to investment in the early 2000s grew and was larger than in the 1990s. The improved fiscal position of the public sector between 2003 and 2006 (the deficit fell from 3.6% of GDP to 1.2%) was not enough to offset the growing gap between private investment and private saving. This meant that long-term interest rates, while historically low, did not fall as much as they otherwise would have.<sup>3</sup>

Investors choose where to buy assets based on the (risk-adjusted) rate of return. The Federal Reserve had an important influence on interest rates from 2000 to 2003, lowering short-term interest rates to 1% from 6.5%. It might be expected that the fall in interest rates that accompanied the investment slowdown and the steep stock market decline of mid-2000 to 2002 made the U.S. economy a less attractive destination for foreign capital. As can be seen in **Figure 2**, this was generally the case. Annual private capital inflows fell from about \$1 trillion in 2000 to \$600 billion in 2003. However, at the same time that the U.S. was experiencing an economic downturn, so was much of the rest of the world, and American purchases of foreign assets (private outflows) also fell sharply, from \$600 billion in 2000 to \$300 billion in 2003.

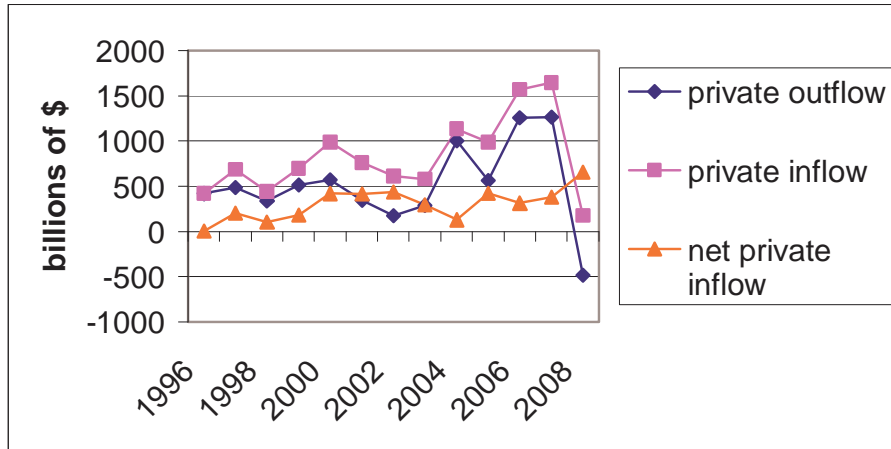
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<sup>1</sup> For more information on foreign lending to the United States, see CRS Report RL32462, *Foreign Investment in U.S. Securities*, by (name redacted).

<sup>2</sup> Most of the fiscal shift from 2000 to 2007 came at the federal level, since many state and local governments have balanced budget rules. The federal budget shifted from a surplus of 2.4% of GDP in FY2000 to a deficit of 3.6% of GDP in FY2003. In subsequent years the budget deficit declined reaching a low of 1.2% of GDP in 2007.

<sup>3</sup> This was the same logic behind the “twin deficits” argument made in the 1980s. See CRS Report RS21409, *The Budget Deficit and the Trade Deficit: What Is Their Relationship?*, by (name redacted) and (name redacted).

**Figure 2. Composition of U.S. Private Capital Flows, 1996-2008**



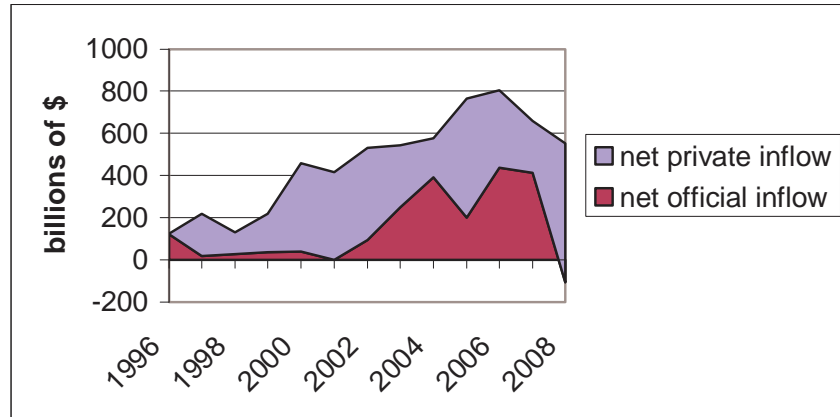
**Source:** Bureau of Economic Analysis.

With the acceleration in world economic growth, international capital flows began to rise. Private inflows increased sharply, topping \$1.5 trillion in 2006 and 2007. At the same time, private outflows rose relative to private inflows, causing net private inflows to fall to \$314 billion in 2006 and \$379 billion in 2007.

Based on the decline in net private capital flows from 2002 to 2007, the trade deficit would have been expected to have declined. This did not occur (except for a small decline in 2007) because of an increase in official capital inflows—primarily purchases of U.S. assets by foreign central banks and treasuries to increase their foreign exchange reserves and by so-called “sovereign wealth funds.” It is this net inflow that filled the growing gap between national saving and investment in the United States.

As seen in **Figure 3**, low net official inflows meant that net private inflows tracked net total inflows very closely from 1997 to 2001. But since 2002, net total inflows (the trade deficit) kept climbing while net private inflows both rose and fell. Net official capital inflows became a major source of financing for domestic investment over this period, equaling \$448 billion in 2006 and \$433 billion in 2007.

**Figure 3. U.S. Net Capital Inflows by Type, 1996-2008**



**Source:** Bureau of Economic Analysis.

Official capital inflows have not been spread evenly among U.S. trading partners. They have been concentrated in Asian economies, and more recently, in oil-producing economies. By contrast, the foreign reserve accumulation of many other trading partners, such as the euro area and the Anglo-Saxon countries, has been negligible.

The decline in net private capital flows through 2007 placed downward pressure on the U.S. dollar since foreigners needed to buy fewer dollars to buy U.S. assets. But the rise in net official capital inflows tempered that decline. The dollar fell 25% in real terms against major currencies from its peak in February 2002 to December 2007.<sup>4</sup> (As discussed below, the dollar declined in real terms during the first half of 2008 by about 1% and rose by about 9.2% during the last half of the year.) When one examines the depreciation of the dollar during 2002-2007, it was due mainly to a decline against the euro (40%), the Canadian dollar (37%), and the British pound (29%)—currencies from the same countries that have not been a source of official capital inflows. The dollar declined by 16% in nominal terms against the Japanese yen and by 11% against the Chinese yuan (the Chinese have only allowed the yuan to float on a limited basis since mid-2005).

Why did some countries decide to increase their foreign exchange reserves over the period 2002-2007? There are many reasons why a country might increase its reserves. It may wish to prevent its currency from appreciating against the dollar or against a major trading partner's (or competitor's) currency. If the price of a major export such as oil suddenly rises, the country may decide to invest some of its windfall in foreign assets instead of consuming it. Or a country may be attempting to stimulate its economy in a recession. Countries may accumulate reserves to guard their currency against a sudden withdrawal of investment from their country during a future downturn, or to rebuild their reserves after a prior defense of their currency drained them away. In any of these cases, regardless of the motivation, the effect on the dollar from the official accumulation of U.S. assets by a foreign country is the same—it prevents the dollar from depreciating against the country's currency as much as it otherwise would.

<sup>4</sup> As measured by the Major Currency Index of the Federal Reserve. If the alternative Board Based Index is used, the fall in real terms is 18.8%. If the nominal value of each index is used, the decline in the Major Currency Index is 32.3% while for the Broad Based Index, it is 28.9%.

The Chinese role during this episode was more complicated because the Chinese government does not allow the free flow of private capital out of China. Nevertheless, the data from China must still conform to the accounting identity mentioned above. Thus, for China to have a current account surplus, domestic investment in China must be less than China's national saving. However, it is the Chinese government rather than private individuals who are diverting China's saving abroad.<sup>5</sup> The result has been a large accumulation of dollar denominated assets by the Bank of China. Thus, lower U.S. interest rates were unlikely to have had much of an effect on the bilateral flow of capital from China to the United States. Since mid-2005, China has allowed the yuan to appreciate against the dollar, but intervenes in currency markets to prevent the yuan's value from changing by more than 0.3% daily, at most. Between mid-2005 and 2007, the yuan appreciated 11% in nominal terms against the dollar.

## **The 2008-2009 Experience**

The financial turmoil that gripped the United States beginning in mid-2007 and the economic downturn that began late in that year not only reduced the gap between domestic investment and national saving, but also had a substantial effect on the recorded international flow of capital during 2008. When private and official capital flows are consolidated, 2008 presented a very different picture from prior years. The United States still had a net inflow of capital because a shortfall between domestic investment and national saving persists. However, the net inflow was dominated by private capital flows, most of which came not from foreign purchases of U.S. assets but from the liquidation and repatriation of U.S. owned assets abroad. The data show that the movement of private capital from the United States shifted from an outflow of \$1.480 trillion in 2007 to an inflow of some \$534 billion—a net shift of some \$1.78 trillion in a single year. U.S. official outflow, which had been miniscule in 2007, grew to an outflow of nearly \$530 billion in 2008. This reflected, in large measure, Federal Reserve currency swaps with foreign central banks.<sup>6</sup> The inflow of private capital to the United States from abroad virtually dried up in 2008, declining by more than 97% from 2007 (from \$1.649 trillion to \$147.1 billion). The inflow of capital from official sources rose from \$481 billion in 2007 to \$487 billion in 2008. Thus, the net inflow of capital to the United States during 2008 was dominated by the liquidation and repatriation of U.S.-owned assets in foreign countries. This changed considerably during the first quarter of 2009. The net inflow of capital to the United States was dominated by the repayment of loans made by the U.S. government and the continued lending by foreign official sources. The former was \$244 billion while the latter was \$71.2 billion. The U.S. private sector resumed lending to foreigners while foreign private holders of U.S. assets liquidated them and repatriated the capital. The former amounted to some \$118 billion while the latter totaled some \$149 billion.

## **What Do These Trends Mean for the U.S. Economy?**

Did the shift in net capital inflow to the United States since 2002 from primarily private to a mix of private and official sources change the effect of the trade deficit on the U.S. economy? The shift meant that net inflows were based less on private lenders seeking profitable opportunities in

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<sup>5</sup> This may be the consequence of the degree of development of China's financial intermediaries. For a discussion of this point, see Prasad, Eswar S. "Next Steps for China," *Finance and Development*, vol. 42, no. 3, IMF, September 2005.

<sup>6</sup> For more information, see CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*, by (name redacted).



the United States and more on efforts by foreign central banks and treasuries to keep their currencies stable against the dollar, to build precautionary reserves against a possible replay of the Asian financial crisis of 1997-1998, to invest windfall earnings resulting from high commodity prices (including oil), and to the investment practices of sovereign wealth funds.

Although the reasons for the trade deficit may have changed since the 1990s, its effect on the U.S. economy remains the same. When private foreigners buy U.S. assets, they must first obtain dollars, and this pushes up the value of the dollar. This makes some U.S. exports and import-competing goods less competitive, reducing production and employment in those industries. On the other hand, the capital inflow increases the supply of saving available to U.S. borrowers, thereby pushing down domestic interest rates. This has an offsetting stimulative effect on the U.S. economy because it increases interest-sensitive spending on plant, equipment, homes, consumer durables (such as automobiles and appliances), and the like, thereby boosting employment in those industries. In the medium term, the trade deficit has no net effect on U.S. aggregate spending or employment, although there may be transitional effects. It does change the composition of spending and employment, however, away from the tradable sectors and toward the interest-sensitive nontradable sectors.

When the trade deficit results from official capital flows, the outcome is very much the same. When a country reduces its relative demand for U.S. goods and services, U.S. exports (and employment within export industries) fall. With a floating exchange rate, the dollar would depreciate. But if the foreign country has fixed its exchange rate to the dollar, its central bank must accumulate reserves, usually in dollars, to prevent its currency from appreciating. This pushes down U.S. interest rates and stimulates interest-sensitive U.S. spending just the same as if a private capital inflow motivated by relative rates of return had occurred.

Thus, if the purchase of U.S. assets by foreign central banks and treasuries (official capital inflows to the United States) ceased, the composition of output would be affected. All else equal, the U.S. dollar would depreciate, increasing the competitiveness of U.S. exports and import-competing industries. But at the same time, less saving would be available for Americans to finance their spending on capital goods and for the U.S. government to finance its budget deficit. As a result, interest rates would rise and depress interest sensitive spending, all else equal.

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