



The U.S. Trade Deficit: Causes, Consequences, and Policy Options

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Summary

The current account balance is the nation's most comprehensive measure of international transactions. It has three component balances: the goods and services balance, the investment income balance, and net unilateral transfers. These are all transactions thought to be closely related to current production, consumption, and income. For the United States, the size of the current account deficit is largely the reflection of a similarly sized goods and services deficit (i.e., trade deficit).

The U.S. current account (trade) deficit grew steadily from 1992 through 2006. In 2007, however, the trade imbalance decreased to \$726.6 billion from \$803.5 billion in 2006. In 2008 and 2009, the trade deficit continued to decrease, reaching \$706.1 billion and \$419.9 billion, respectively. These decreases reflected strong export sales and a steady weakening of import purchases. A sizable depreciation of the dollar from 2002 through 2007 made U.S. exports more attractive to foreign buyers and imports less attractive to American buyers. In addition, since 2006, economic growth in the United States slowed relative to that of its major trading partners. As a percentage of GDP, the trade deficit in 2009 decreased to 2.9%, down from a record 6.1% in 2006.

The size of the U.S. trade deficit is ultimately rooted in macroeconomic conditions at home and abroad. U.S. saving falls short of what is sought to finance U.S. investment. Many foreign economies are in the opposite circumstances, with domestic saving exceeding domestic opportunities for investment. This difference of wants will tend to be reconciled by international capital flows. The shortfall in domestic saving relative to investment tends to draw an inflow of relatively abundant foreign savings (capital), seeking to maximize returns and, in turn, the saving inflow makes a higher level of investment possible. For the United States, a net capital (savings) inflow also leads to a like-sized net inflow of foreign goods—a trade deficit. In 2007 and 2008, both saving and investment fell, but in a weakening economy investment fell more, causing the trade deficit to narrow.

The benefit of the trade deficit is that it allows the United States to spend now beyond current income. Since the 1980s, that added spending was largely for investment in real estate, durable goods, and capital equipment. In recent years, the added spending was for consumption. The cost of the trade deficit is a deterioration of the U.S. investment-income balance, as the payment on what the United States has borrowed from foreigners grows with rising indebtedness. Borrowing from abroad allows the United States to live better today, but the payback may cause some decrement to the rate of advance of U.S. living standards in the future. U.S. trade deficits do not now substantially raise the risk of economic instability, but trade deficits can impose adjustment burdens on some trade-sensitive sectors of the economy.

Policy action to reduce the overall trade deficit is problematic. Standard trade policy tools (e.g., tariffs, quotas, and subsidies) do not work. Macroeconomic policy tools can work, but recent and prospective government budget deficits will reduce domestic saving and most likely tend to *increase* the trade deficit. Most economists believe that, in time, the trade deficit will correct itself, without crisis, under the pressures of normal market forces. But the risk of a more disruptive adjustment cannot be completely discounted.

This report will be updated annually.

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Introduction

International trade continues to grow in importance for the world economy as well as for the U.S. economy, enhancing economic well-being generally, but also imposing costs on trade sensitive sectors of national economies. The importance of trade has been recognized by Congress, which in recent years has paid close attention to many dimensions of U.S. international trade performance as part of its oversight of economic policy.

Persistent large U.S. trade deficits raise a number of concerns among the public and in Congress. There are concerns that trade deficits slow economic growth, increase unemployment, generate deindustrialization, and raise the risk of economic and financial instability. To address those concerns, this report examines the trade deficit from the context of mainstream economic analysis. The first part of the report explains the fundamental macroeconomic forces that cause a trade imbalance (deficit or surplus). In light of those fundamental forces, the report then evaluates the most common economic concerns about trade deficits. Finally, the report examines the efficacy of alternative policy responses to trade imbalances and the economic forces that generate them.

The Current Account Balance

The current account balance is the nation's most comprehensive measure of international transactions. It has three component balances: the goods and services balance, the investment income balance, and net unilateral transfers. Goods are tangible items in the form of raw materials, intermediate products, and final products. Services are intangible output that cannot be stored and are usually produced and consumed at the same time. Income transactions are the payments and receipts on international investments such as dividends and interest. Unilateral transfers are the transfer of a good, service, or asset for which the receiving country does not provide anything of value in return, such as foreign aid, charitable contributions, or the payment of Social Security benefits to a U.S. citizen living abroad. The three types of transactions measured in the current account balance are thought by economists to be closely related to current production, consumption, and income.

For the United States, the size of the current account deficit is largely the reflection of a similarly sized goods and services deficit (i.e., trade deficit). In 2009, the United States had a current account deficit of \$378.4 billion, composed of a goods and services deficit of \$374.9 billion, an investment income surplus of \$121.4 billion, and a net unilateral transfers deficit of \$124.9 billion. Therefore, for the United States, the terms *current account deficit* and *trade deficit* can be used interchangeably with little inaccuracy. Such equivalence is not always the case, however. Australia, for example, has a relatively large current account deficit but a relatively small goods and services deficit (trade deficit) because it also has a relatively large investment income deficit (an outflow of retained earnings and interest payments).

In talking about trade balances, it is also important to distinguish between multilateral and bilateral balances. A bilateral balance is the balance between any pair of countries, whereas a multilateral balance is the balance between several or all of the country's trading partners. The current account balance is a multilateral balance across all trading partners. It is very likely that even if the United States' current account was in balance it would still have sizable bilateral imbalances (surpluses and deficits) with individual trading partners. Such bilateral imbalances

would typically be a reflection of differences between countries in comparative advantage and in the structure of production and trade between economies and not necessarily a matter of economic concern.

Table I. U.S. Current Account Deficit

billions of dollars

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Current Account Deficit	417.4	384.7	461.3	523.4	625.0	748.7	803.5	726.6	706.1	378.4
As % of GDP	4.2	3.8	4.4	4.8	5.3	5.9	6.1	5.3	4.9	2.7

Source: U.S. Department of Commerce, Bureau of Economic Analysis

In all but three years between the end of WWII and 1970, the United States had modest current account surpluses. During the 1970s, modest deficits occurred more frequently. However, in all but three years between 1981 and 2009, current account deficits have occurred and their typical size, both in dollar terms and as a share of GDP, has been rising as well. A necessary corollary of rising U.S. deficits over this period has been rising current account surpluses abroad.

The U.S. current account (trade) deficit, decreased to just above \$378 billion in 2009, down substantially from \$706 billion in 2008, and from a high of \$803 billion in 2006. As a percentage of GDP, the 2009 trade deficit stands at 2.7%, down from 4.9% in 2008, and a record high of 6.1% in 2006. The sharp fall of the trade deficit in 2009 is largely the short-term consequence of the recent recession. With economic recovery, more enduring economic forces are likely to determine the size of the trade deficit.¹

From the end of WWII to 1973, the Bretton Woods international monetary system of fixed exchange rates constrained the United States and other nations to maintain more or less balanced trade. With the collapse of the Bretton Woods system in 1973 that constraint was removed.²

But that by itself is not sufficient to account for why, from the 1980s to the present, the United States experienced a steady growth of current account deficits, while other nations experienced a steady growth of current account surpluses. Nor is the tendency toward persistent large current account deficits in recent decades the consequence of rising trade barriers abroad, increased foreign dumping of exports, or any inherent inferiority of U.S. goods on the world market.

¹ For more extensive look at U.S. trade statistics, see CRS Report RL33577, *U.S. International Trade: Trends and Forecasts*, by Dick K. Nanto and J. Michael Donnelly.

² In July 1944, representatives of 44 countries meeting at Bretton Woods, New Hampshire, drafted and signed the Articles of Agreement of the International Monetary Fund and the World Bank. The international monetary system established by the Bretton Woods agreement used fixed exchange rates against the dollar and a constant dollar price of gold of \$35 per ounce. The Bretton Woods system operated from 1945 to 1973.

To function efficiently, a fixed rate system such as the Bretton Woods system required effective control of the international flow of capital. As capital flows grew in scale with the post-war recovery of trade and finance, those controls grew increasingly ineffective, undermining the viability of the system. For a closer examination of the Bretton Woods System, see Robert Solomon, *The International Monetary System 1945-1981* (Harper&Row: New York, 1982).

Rather, trade imbalances occur because of underlying macroeconomic spending and saving behavior at home and abroad. Since the early 1980s, there is a strong tendency in the United States to spend beyond current output, with the excess of demand met by a net inflow of foreign goods and services that manifests itself as the U.S. current account deficit.

The Forces That Generate Current Account Imbalances

To understand the economic forces generating these persistent current account deficits (and surpluses abroad), it is helpful to have familiarity with basic balance of payments accounting conventions: specifically, two accounting identities (i.e., conditions that must always be true) that the current account must conform with. The first identity defines the necessary condition for the economy's *external balance*. The second accounting identity is the necessary condition for the economy's *internal balance*.

Conditions Necessary for External Balance

External balance requires that the balance in the *current account* (CA), whether deficit or surplus, be equal to the *negative* of the balance in the *financial account* (FA):

$$CA = -FA$$

The current account tallies trade in goods and services, whereas the financial account tallies international trade in assets—the inflows and outflows of various forms of financial capital such as bank accounts, stocks, bonds, and ownership of real property. A financial account surplus means that there has been a net inflow of capital (i.e., borrowing from abroad), and a financial account deficit means that there is a net outflow of capital (i.e., lending to other countries).

The external balance identity requires that a country with a current account deficit (i.e., it is buying more goods and services from the rest of the world than it is selling to the rest of the world) also have an equally sized financial account surplus (i.e., a capital inflow because it is selling more assets to the rest of the world than it is purchasing from the rest of the world). Similarly, a country with a current account surplus (i.e., it is selling more goods and services to the rest of the world than it is buying from the rest of the world) will also have an equally sized financial account deficit (i.e., a capital outflow because it is buying more assets from the rest of the world than it is selling to the rest of the world).

The necessary balance between the current account and the financial account is due to imports of goods and assets having to be paid for, and the export of either goods or assets being the only means of making that payment. It becomes then, just a matter of double-entry bookkeeping. If the earnings from goods and services exports are insufficient to pay for goods and services imports, then the earnings from asset exports must exceed the cost of asset imports (i.e., there must be borrowing) in the same amount in order that all imports are paid for.

The external balance identity is informative for two reasons. First, it establishes a necessary link between the current account balance (largely transactions in goods and services) and international capital flows (transactions in various types of assets). Second, although the current account

balance and the financial account balance are likely determined by different economic factors, in the end they must be reconciled and offset each other.

Conditions Necessary for Internal Balance

The internal balance identity requires that the current account balance always be equal to *the difference between a country's gross saving and investment*. Therefore, if a country has a current account deficit, its gross domestic saving is less than its gross domestic investment; or if a country has a current account surplus then its gross domestic saving is greater than gross domestic investment. The internal balance identity follows directly from the basic identity of the national income and product accounts. Namely, that total domestic output, known as gross domestic product (GDP) equals the sum of consumption (C), government spending (G), investment spending (I), and exports (X) minus imports (M) or:

$$\mathbf{GDP = C + I + G + (X - M)}$$

This identity can be rewritten as:

$$\mathbf{(X - M) = (GDP - C - G) - I}$$

Because exports minus imports (X-M) is equivalent to the current account balance (CA) and because GDP minus spending by consumers (C) and government (G) equals saving (S), the expression can be simplified to the internal balance identity:

$$\mathbf{CA = (S - I)}$$

That is to say, *a current account imbalance is always exactly matched by an imbalance between domestic saving and investment*. This is exactly equivalent to saying that deviations of domestic spending above or below domestic output are only possible if there is a balancing net inflow or outflow of output from or to the rest of the world. The internal balance identity is informative because it establishes a linkage between the current account and domestic spending and saving activity. It also suggests that different factors will likely determine the current account balance and the saving-investment balance, but in the end these factors must be reconciled by economic forces that leave the two balances equal.³ The need to satisfy both identities means that:

$$\mathbf{CA = -FA = (S - I)}$$

Establishing Causality

While the external and internal balance identities make it clear that the current account balance is linked to both the international trade in assets and to domestic spending and saving behavior, the identities do not establish causality between these elements. These identities are potentially consistent with changes in the current account (i.e., changes in the levels of exports and imports of goods and services), inducing changes in the financial account, that, in turn, cause changes in

³ Total saving is the sum of saving by households and businesses (typically called private saving) and saving by government. A government budget surplus adds to economy-wide saving and a government budget deficit reduces economy-wide saving (it is usually called dis-saving).

domestic saving and investment. On the other hand, they could also be consistent with changes in the balance of domestic saving and investment, inducing changes in the financial account, that, in turn, cause changes in the current account balance. The actual direction of causality at any particular time can only be established through an empirically grounded economic model that accounts for the behavior of saving, investment, and trade flows (in goods, services, and assets).

The standard model of international macroeconomics argues that the domestic saving-investment balance (S-I) is the *cause* and that the current account (CA) is the *effect*, with international financial flows (FA) *transmitting* the influence of the saving-investment balance to the current account balance. In other words, in today's global economy with large and fluid trade in goods and assets, countries with imbalances between domestic saving and investment will likely experience a compensating inflow or outflow of financial capital (i.e., saving), that will induce a current account deficit or surplus.⁴

The Adjustment Mechanisms

This section looks more closely at the economic forces that cause the two concurrent adjustments necessary for achieving internal and external economic balance. The first adjustment is investment-saving imbalances generating inflows and outflows of capital between economies linked by global asset markets; the second adjustment is cross-border flows of assets generating changes in the current account balance. The flow of capital represents a transfer of purchasing power between countries, while changes in the current account balance represent a reciprocal transfer of goods and services between countries.⁵

Domestic Saving-Investment Imbalances, Interest Rates, and International Capital Flows

The emergence over the post-WWII period of a relatively open world economy with large and fluid international asset markets makes it possible for national domestic saving-investment imbalances to be reconciled by international capital flows. With a willing lender and a willing borrower, flows of capital from a saving-surplus country to a saving-shortage country can achieve an overall saving-investment balance for both nations. A capital inflow allows a country with a shortfall of domestic saving, in effect, to use foreign savings to help finance domestic investment, and a capital outflow allows a country with an excess of domestic saving to put it to more profitable use financing foreign investment. Therefore, global saving will equal global investment.

⁴ For further discussion of the standard model of open economy macroeconomics, see N. Gregory Mankiw, *Principles of Economics* (The Dryden Press, 2008), chapters 29 and 30.

⁵ The nominal interest rate is the rate attached to a bank loan and other debt instruments. The real interest rate is the nominal exchange rate adjusted for the effects of inflation. The nominal exchange rate is the rate at which a person can trade the currency of one country for the currency of another. For example, if the dollar yen exchange rate is 100 yen per dollar, a person can exchange one dollar for 100 yen. The real exchange rate is the rate at which a person can trade goods and services of one country for the goods and services of another country and takes into consideration differences in the average level of prices between two countries. A change of the real exchange rate can occur because of a change in the nominal exchange rate or because of a change in the average level of prices (due to inflation or deflation).

Differences in the level of real interest rates between economies are the *basic* equilibrating mechanism that works to induce saving flows between countries as lenders seek out higher rates of return abroad and borrowers get access to foreign sources of finance. A nation with a “surplus” of domestic saving over domestic investment opportunities will tend to have relatively low domestic interest rates because the domestic supply of loanable funds (i.e., saving) exceeds the domestic demand for loanable funds (i.e., investment), pushing down interest rates (i.e., the price of loanable funds). As a result, this economy will likely see some portion of domestic saving flow outward, attracted by more profitable investment opportunities abroad.

Conversely, another nation that finds its domestic saving falling short of desired domestic investment will tend to have relatively high domestic interest rates because the domestic demand for loanable funds exceeds the domestic supply of loanable funds. As a result, this economy will likely attract an inflow of foreign saving, attracted by the higher rate of return, and that inflow will help finance domestic investment.

If international capital flows did *not* exist, domestic investment could be no larger or smaller than domestic saving, and the current account would have to be balanced. This was the reason that the U.S. current account was near balance during the 1950s and 1960s. At that time, the extensive controls on international capital flows that were part of the Bretton Woods system of fixed exchange rates effectively constrained the member economies to domestic saving-investment balance and, in turn, to current account balance. One of the reasons the Bretton Woods system collapsed in 1971 was the steady decline in the effectiveness of its control of cross-border capital flows and, in turn, a decline in the ability to maintain fixed exchange rates.

International Capital Flows, the Exchange Rate, and the Current Account Balance

As established above, the external balance identity dictates that a net capital inflow or outflow (i.e., a financial account surplus or deficit) must occur in conjunction with an equally sized current account deficit or surplus. This adjustment is accomplished by market-induced exchange rate movements. For the United States and other advanced economies, exchange rates are primarily determined on the global market for foreign exchange, where changes in the demand for and supply of national currencies, needed to purchase foreign assets, cause the relative value of currencies to rise or fall. For example, the purchase of a dollar-denominated asset by a foreign investor requires the investor to first exchange the home currency for the dollars needed to buy the asset. That action simultaneously increases the demand for dollars and increases the supply of the foreign currency on the global foreign exchange market, causing the dollar’s price in terms of the foreign currency (i.e., the exchange rate) to rise. With a net inflow of capital, the dollar’s exchange value rises; the higher exchange rate causes the international price of U.S. exports to increase, dampening foreign sales; and causes the dollar price of imports to decrease, stimulating purchases of foreign goods.

The exchange rate will rise by an amount sufficient to induce a net inflow of goods—a current account deficit—equal to the net inflow of capital from the rest of the world. Similarly, the country that has a net outflow of capital will have its exchange rate fall sufficiently to induce a current account surplus, equal to the net outflow of assets.

Therefore, the standard model of international macroeconomics predicts that a country like the United States, where domestic saving consistently falls short of domestic investment, will run a

current account (trade) deficit; whereas a country like Japan, where domestic saving exceeds domestic investment, will run a current account (trade) surplus. Deficits and surpluses are *co-determined*, because for a country with a shortfall of domestic saving relative to investment to run a current account deficit, there must be at least one other country with an excess of domestic saving relative to investment that runs a current account surplus, and vice versa.

Why Do Cross-Border Capital Flows Have a Stronger Effect on the Exchange Rate Than Do Goods and Services Flows?

International asset market transactions and goods and services market transactions both influence the demand and supply of dollars on foreign exchange markets. In most circumstances, however, economists argue that asset market transactions will tend to be dominant and ultimately dictate the exchange rate's actual direction of movement. This dominance is the result of asset market transactions occurring on a scale and at a speed that greatly exceeds what occurs with goods market transactions.

Electronic exchange makes most asset transfers nearly instantaneous and allows a very large volume of transactions to occur in a very short period of time. In most years since the 1970s, U.S. international asset transactions were two to three times as large as what would be needed simply to finance that year's trade deficit. For example, the balance of payments account for 2007 shows both a \$1.2 trillion purchase of foreign assets by U.S. residents (a capital outflow) and a \$1.9 trillion purchase of U.S. assets by foreign residents (a capital inflow). Therefore, while the United States could have financed that year's \$731 billion trade deficit simply by a \$731 billion sale of assets to foreigners, U.S. and foreign investors engaged in more than \$2 trillion of additional asset-for-asset transactions.⁶

A telling sign that asset transactions have been the determining force is that from 1994 to 2002, the dollar appreciated as the trade deficit grew. If goods market transactions were the determining force, the increase of the trade deficit would tend to depreciate the dollar: rising U.S. imports cause more dollars to be exchanged for foreign currency, increasing the supply of dollars on the foreign exchange market, and pushing the dollar down. In general, the exchange rate of countries that receive a net inflow of foreign capital will tend to appreciate, whereas the exchange rate of countries that have a net capital outflow will tend to depreciate.⁷

Other Factors That Can Influence the Size and Direction of International Capital Flows

Influences on Private Investors

Although relative levels of interest rates between countries are likely to be a strong and ever-present force directing capital flows among economies, other factors can periodically influence

⁶ Data on trade asset flows comes from U.S. Department of Commerce, Bureau of Economic Analysis, *U.S. International Accounts*, Table 1., 2007, <http://www.bea.gov/international/index.htm#bop>.

⁷ For a fuller discussion of this analytical framework, see N. Gregory Mankiw, *Principles of Economics* (Fort Worth, TX: The Dryden Press, 1997), p. 659; and also, Congressional Budget Office, *Causes and Consequences of the Trade Deficit: An Overview*, CBO Memorandum, March 2000.

these flows by causing an adjustment in the investors' perception of risk and *expected* return. For instance, the size of the stock of assets denominated in a particular currency held in the foreign investor's portfolio can cause a change in investor preferences. Prudent investment practice counsels that an investor's portfolio have an appropriate degree of diversification across asset types, including the currency in which assets are denominated.

Diversification of holdings spreads risk across a wider spectrum of assets and reduces overexposure to any one asset. Therefore, even though dollar assets may still offer a high relative return, if the accumulation of dollar assets already in the investor's portfolios is large, at some point foreign investors, considering both risk and reward, may decide that their portfolio's share of dollar-denominated assets is large enough. To improve the diversity of their portfolios, investors may slow or halt their purchase of such assets. Given that well over \$8 trillion in U.S. assets are now in foreign investor portfolios, achieving a sufficient degree of asset diversification may be an important factor governing the behavior of international investors toward dollar assets.

Another possible influence on international capital flows is a safe-haven effect. This is really just another manifestation of the balancing of risk and reward by foreign investors. Some investors may be willing to give up a significant amount of return if an economy offers them a particularly low-risk repository for their funds. The United States, with a long history of stable government and steady economic growth, as well as a huge market in low-risk Treasury securities, presents a continually safe investment climate. This motive for holding dollar assets was clearly evident during the recent financial crisis when the international demand for low-risk Treasury securities increased substantially, causing the dollar to appreciate from mid-2008 through early 2009. As global economic and financial conditions stabilized and evidence of recovery emerged in the last half of 2009, the safe-haven motive waned and so did the international demand for Treasury securities, causing the dollar to depreciate over this period.

Also affecting the flow of international capital is the size of the asset market. Many foreign investors have a preference for deep and liquid asset markets. Not only do U.S. asset markets offer a great variety of instruments, but their large size also creates very liquid markets, able to handle huge inflows and outflows of funds with only a small impact on the price of the dollar asset of interest. The precise size of these effects is not easy to determine, but the persistence of large capital inflows despite already large foreign holdings of dollar assets and the disproportionate share of essentially no-risk U.S. Treasury securities in foreign holdings suggests that the magnitude of flows attributable to the special status of U.S. asset markets is probably substantial.

Further, investors' exchange rate expectations will also influence the relative attractiveness of a foreign asset. A 6% yield on a dollar-denominated asset will have an expected yield of 0.0% if the dollar is expected to depreciate 6% per annum against an investor's home currency over the bond's holding period. Therefore, the prudent investor will include an adjustment for the dollar's expected future path into the calculation of the expected return, in their own currency, of holding dollar-denominated assets. This expected depreciation makes the relative return on dollar assets even lower than what is indicated by the nominal interest rate differential.

The Actions of Foreign Central Banks That Affect Capital Flows

In addition to private investors, governments will, with varying frequency, also buy or sell assets on the international capital market. Such official purchases are seldom motivated primarily by the factors of return and risk that typically influence private investors. Government official purchases

can serve two objectives. First, the accumulation of a reserve of foreign exchange denominated in readily exchangeable currencies, such as the dollar, serves as a store of international liquidity that can be used for coping with periodic currency crises arising out of often volatile private capital flows. Large stocks of foreign exchange reserves are often used by developing economies that periodically need to finance short-run balance-of-payments deficits and cannot fully depend on borrowing on international capital markets to offer timely finance of these deficits. The Asian financial crisis in the late 1990s heightened the importance for many developing economies of having very large stocks of international reserves to weather periodic financial crises.

Second, official purchases are used to counter the impact of capital flows that would otherwise lead to unwanted exchange rate changes. The United States and most other industrial nations, while most often allowing the value of their currencies to float on the foreign exchange market, have at times undertaken such intervention. This, however, is a common practice for China and other East Asian economies that buy and sell foreign assets to maintain stability of their currencies' exchange rates.⁸

The International Monetary Fund (IMF) estimates global foreign exchange reserves to be about \$8 trillion in 2009, up sharply from about \$1.8 trillion in 2000. Of the \$4.5 trillion of reserves for which the currency composition is known, 61% are some type of dollar-denominated asset.⁹ The U.S. Treasury reports that official holdings of Treasury securities have reached \$2.7 trillion.¹⁰

The large share of dollar assets reflects the dollar's role as the international reserve currency. There are significant advantages for the United States in having the dominant reserve currency. These advantages include reduced exchange rate risk and lower borrowing costs. However, these large accumulations of dollar assets in foreign official holdings also mean that foreign central banks have become important participants in and influences on U.S. financial markets and the wider U.S. economy.

The largest holder of foreign exchange reserves is China, with official holdings of about \$2.5 trillion. Many other emerging economies, such as Korea, India, Russia, and Brazil, each have sizable official holdings in the \$200 billion to \$400 billion range. Among the advanced industrial economies, only Japan is a large holder of foreign exchange reserves, with official holdings of about \$1 trillion, making it the second-largest holder after China. The United States' official holdings were comparatively small at about \$130 billion in 2009.¹¹

⁸ See CRS Report RS21625, *China's Currency: A Summary of the Economic Issues*, by Wayne M. Morrison and Marc Labonte.

⁹ IMF, *Currency Composition of Foreign Exchange Reserves (COFER)*, December 30, 2009, <http://www.imf.org/external/np/sta/cofer/eng/cofer.pdf>.

¹⁰ U.S. Treasury/Federal Reserve Board, "Major Foreign Holders of Treasury Securities," March 2010, <http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N>.

¹¹ Foreign exchange reserves by country can be found at U.S. Central Intelligence Agency, "World Fact Book," <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2188rank.html>.

Trends in Saving and Investment in the United States and Abroad

A domestic saving-investment imbalance can occur as a result of either investment rising relative to saving or saving falling relative to investment. The United States has always had a low rate of gross saving compared to Western Europe and Japan. In addition, since the 1970s, a pattern of generally falling saving rates has occurred in all three regions. However, investment rates in Western Europe and Japan also fell by a similar amount. So with saving and investment falling in tandem, there was no significant widening of their domestic savings-investment imbalance and, in turn, little change in their current account balances. In contrast, in the United States, as the saving rate decreased, the investment rate remained relatively stable or, as occurred in the late 1990s, increased with an acceleration of U.S. productivity. Therefore, the U.S. saving-investment imbalance increased, leading to steadily larger current account deficits.¹² Enabling larger U.S. current account deficits since the mid-1990s was a complementary increase in global saving outside of the advanced industrial economies that was not being absorbed by domestic investment in the home economies.¹³

A sizable slowing of economic growth in Europe and Japan since the 1970s is thought to be the primary reason for the tandem fall of saving and investment rates in these regions. In the United States, however, economic growth did not slow and therefore is not the cause of the steady fall of the U.S. saving rate. That fall was, in part, the result of a sharp decline of the household component of the private saving rate, decreasing from near 10% in the 1970s to near zero by 2005.¹⁴

Why the U.S. Saving Rate Fell

Why has the U.S. household saving rate collapsed over the past 25 years? Answering that question has been the object of much economic research, but the reasons for the decline remain to a significant degree problematic. No single theory can fully account for the phenomenon. Three theories have considerable plausibility as partial explanations. First, capital gains on real estate, stocks, and other investments, particularly in the 1990s, greatly increased household wealth. Economic theory predicts that a rise in wealth reduces the need to save and increases the tendency to spend.¹⁵ Second, increased government outlays for Medicare and Social Security transfer income from a relatively high-saving segment of the population to a relatively low-saving segment, tending to decrease the overall saving rate. Third, more streamlined credit market

¹² See IMF World Economic Outlook, Table A16, April 2010, <http://www.imf.org/external/pubs/ft/weo/2010/01/pdf/tables.pdf>.

¹³ See Federal Reserve Board Governor, Ben Bernanke, "The Global Savings Glut and the U.S. Current Account Deficit," remarks by Governor Ben S. Bernanke at the Sandridge Lecture, Virginia Association of Economics, Richmond VA, 2005.

¹⁴ See CRS Report R40647, *The Fall and Rise of Household Saving*, by Brian W. Cashell.

¹⁵ It would also be true that the large reduction in household wealth that occurred during the recent financial crisis and recession would induce an increase in the household saving rate. Also, in the aftermath of the recent financial market collapse, households are also likely to have less ready access to credit and more need to accumulate savings.

vehicles, such as credit cards and home equity loans, removed constraints on household liquidity and prompted increased spending and reduced saving.¹⁶

Also affecting the national saving rate have been sizable changes in government saving, as tax and expenditure policies over time have moved the federal budget from deficit, to surplus, and back to deficit. Large budget deficits from 1981 to 1986 contributed to a fall of the national saving rate in that period; a swing to sizable budget surpluses from 1997 to 2000 increased the national saving rate in that period; and a return to budget deficits from 2001 to 2007 helped push the national saving rate down in that period.¹⁷

Recent Saving-Investment Trends in the United States

Table 2 shows the pattern of U.S. gross saving, gross investment, and net capital inflows since 2000. As discussed earlier in the “Conditions Necessary for Internal Balance” section, the net capital inflow is the foreign funds attracted to help finance U.S. gross domestic investment. By the internal balance identity discussed earlier, it is the arithmetic difference between gross saving and gross investment. By the external balance identity, it is also equal to the current account (trade) deficit. (Because of statistical discrepancies, the equality is usually approximate.)

As the economy recovered from the recession of 2001, the rate of investment rose strongly, the rate of saving rose hardly at all, and the saving-investment imbalance grew larger along with the current account deficit, reaching a peak in 2006. In 2006, despite strong economic growth and an increased rate of domestic investment, the saving-investment gap stopped rising and the trade deficits also stopped growing. Household saving was still near zero, but in 2006 business saving and government saving increased sufficiently to stabilize the saving-investment imbalance.

From 2007 to 2009, the U.S. rates of saving and investment both decreased as the financial crisis and recession unfolded. But, particularly in 2009, the investment rate fell more than the saving rate, causing a sizable reduction in the saving-investment imbalance and the compensating inflow of foreign capital, and leading to a commensurately sized fall in the current account deficit.

Table 2. The U.S. Saving-Investment Imbalance
(all values are as a percentage of GDP)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Gross Domestic Saving	18.1	16.5	14.7	13.9	14.5	15.1	19.1	14.5	12.6	10.6
Gross Domestic Investment	22.2	20.3	18.9	18.6	19.8	20.9	26.1	19.6	17.5	13.6
Net Capital Inflow	4.1	3.8	4.2	4.6	5.3	5.9	7.0	5.1	4.9	3.0

Source: U.S. Department of Commerce, Bureau of Economic Analysis

¹⁶ For further discussion of using policy to raise the saving rate, see CRS Report RL33482, *Saving Incentives: What May Work, What May Not*, by Thomas L. Hungerford; and CRS Report RL32119, *Can Public Policy Raise the Saving Rate?*, by Brian W. Cashell.

¹⁷ U.S. Department of Commerce, Bureau of Economic Analysis, *National Income and Product Accounts, Table 5.1*, June 2010.

The Consequences of Trade Deficits

A Trade Deficit Can Be Beneficial

A trade deficit and the capital inflows that cause it can, on balance, be beneficial. It confers economic benefits and carries economic costs, and the former may exceed the latter. Standard economic theory suggests that trade deficits and capital inflows can be a vehicle for extending the gains from trade, where lending and borrowing among nations can lead to a more efficient allocation of saving and a preferred pattern of consumption over time.

Gains from trade can arise from what economists call intertemporal exchanges. These are exchanges of current goods and services for claims on future goods and services, that is, an exchange of goods and services for an asset (i.e., cash in a bank account, stock, or bond). When the United States (or any trading nation) borrows from abroad to import materials for a current investment project, it is undertaking intertemporal trade. In such a transaction, the borrowing nation gains because it can support a higher rate of investment in capital goods (e.g., equipment, factories, and infrastructure) than what current domestic saving alone could finance. The lending nation, in turn, gains an asset yielding a higher rate of return than is available in the home economy.

Because of the difference in their preferences for spending over time, the international asset market allows both parties to the transaction to raise their economic well-being. The borrower's economic well-being is raised by being able to spend more in the current period than current income allows. The lender's economic well-being is raised by being able to spend more in some future period. A country that is a net borrower will also run a trade deficit, whereas the country that is a net lender will run a trade surplus. This type of international asset transaction allows a more global utilization of the world's saving, a more efficient allocation of investment spending across nations, and a preferred distribution of spending over time.

So long as the external borrowing and the associated debt service costs do not outpace increases in the economy's productive potential, trade deficits could, in principle, be sustained for many years without ill effect.

The argument that trade deficits are on balance beneficial is most plausible when the associated inflow of foreign capital is used to finance an increase in domestic investment. A higher rate of investment increases the economy's stock of productive capital. With more capital, workers are more productive, leading to greater output and higher wages. The added output would most likely be large enough to make debt-service payments to foreigners and boost the domestic living standard. The U.S. trade deficits in the 1990s were the consequence of this pattern of saving and investment: during that economic expansion, a rising investment rate outpaced a rising saving rate. (The household saving rate continued to fall in this period, but a significant rise in government saving more than offset that fall.)

The Trade Deficit Could Be a Symptom of Excessive Consumption Spending

Some economists argue that the current account (trade) deficit and the associated capital inflow are not a problem in themselves but symptoms of a problem—a low national saving rate.¹⁸ The saving-investment imbalance that the U.S. economy has experienced for the last decade is not the result of domestic investment rising relative to the domestic saving rate as occurred in the 1990s; rather, it is the result of the domestic saving rate falling relative to the domestic investment rate. In this view, the inflow of foreign capital is financing increased consumption by households and government.

This pattern of expenditure, in light of the nation's impending need to fund the sizable retirement needs of an aging population, may suggest a significant problem of economic short-sightedness by households and government in meeting the country's future obligations. That funding, arguably, will require greater saving and less consumption. If the saving rate is raised, the trade deficit will decrease accordingly. However, if the trade deficit were to decline due to foreign investors becoming less willing to invest in the United States but without an increase in domestic saving, then domestic investment would have to fall. Less investment would tend to slow economic growth, making it more difficult to fund growing internal demands (i.e., from an aging population) and external obligations (i.e., debt service payments to foreign investors).

Can Trade Deficits and External Sources of Finance Cause Instability?

Trade deficits often raise concern about the potential instability of external sources of finance. What if foreign investors begin to pull their funds out of the United States, causing interest rates to rise sharply, disrupting domestic capital markets and the wider economy?¹⁹

The “dollar crash” scenario is as follows. Growing perceptions of an unsustainable accumulation of foreign debt in the U.S. economy result in a widespread expectation that the dollar will eventually depreciate substantially. It is argued that this expectation raises the prospect of a run on the dollar that leads to a rapid and disorderly depreciation of the dollar that goes far beyond what is needed for the desired economic adjustment. The fear in some minds is that the move out of dollars could become a stampede if investors try to simultaneously sell their dollar assets on a large scale. This leads not only to a sharply falling exchange rate, but also to sharply rising interest rates in U.S. financial markets as lower asset prices translate into higher effective interest rates. Sharply rising interest rates in the United States will dampen spending in interest-sensitive sectors and stress financial markets. There are, of course, positive impulses associated with a falling dollar, such as increased export sales in the United States and stimulus to interest sensitive sectors abroad. In the dollar crash scenario, however, the negative impulses have a more immediate effect.

¹⁸ See Edward M. Gramlich, *The Importance of Raising National Saving*, Board of Governors of the Federal Reserve System, March 2, 2005; and N. Gregory Mankiw, *Is the Trade Deficit a Problem?*, 2006, <http://gregmankiw.blogspot.com/2006/03/is-us-trade-deficit-problem.html>.

¹⁹ See, for example, Paul Krugman “Bad for the Country,” *The New York Times*, November 25, 2005, and “Will There Be a Dollar Crisis,” *Economic Policy*, July 2007.

A disorderly adjustment is possible, but not probable.²⁰ There are good reasons to doubt that a sharp destabilizing turnaround in foreign capital flows is likely.

First, why run from the dollar assets if there are no better alternatives? The U.S. economy is still, arguably, the most productive and innovative economy in the world, producing more than one-quarter of world output and an even greater share of quality marketable assets. U.S. assets typically offer higher returns at lower risk on average than those of Europe or Japan, and that return accrues more reliably than higher yielding assets of emerging economies. During the recent financial crisis and recession, foreign demand for dollar assets strengthened. Therefore, despite some prudent investor reshuffling of their portfolios, the demand for dollar assets is likely to remain sufficiently strong for any dollar depreciation to be orderly.

Second, a substantial portion of the foreign investment in the United States is typically long-term investment (e.g., direct investment in plant and equipment, long maturity bonds, and stocks). Such capital flows tend to be far more stable than short-term portfolio investment flows because they are based on expectations of long-run return that are less sensitive to adverse short-run changes in economic conditions and, thereby, more resistant to financial crisis.

Third, China and other emerging economies seem to be strongly tied to an economic development program propelled by export sales, particularly to the American market. To maintain the competitive position of their currencies in this market, they will continue to absorb large stocks of dollar assets, maintaining upward pressure on the dollar and downward pressure on U.S. interest rates. Also, a growing share of Japanese household saving has become more internationally mobile and likely to be looking for investment alternatives to typically low yielding domestic Japanese assets. There is a fear that a major diversification out of their large holdings of dollar assets by the Chinese would initiate a collapse of the dollar, induce a spike in U.S. interest rates, and dampen economic activity. However, China is unlikely to do this in part because any large sell-off of dollar assets would also cause the price of dollar assets on the global market to fall sharply, and erode the value of the dollar assets it continued to hold. The prospect of these sizable losses is a deterrent to undertaking such a diversification. Also, China is likely deterred because a sharp dollar depreciation would send sizable negative reverberations to the global economy that China is now highly interdependent with.

Fourth, the pool of world saving is likely growing, with substantial new inflows from China, India, and oil-exporting countries. Dollar assets will likely be an attractive lure for a large share of this new saving. This new demand for dollar assets will, therefore, tend to offset some of the downward pressure on the dollar exchange rate caused by diversification out of dollar assets by other foreign investors.

Fifth, the dollar is the world economy's reserve currency of choice. The large size and stability of the dollar-asset markets along with the ongoing needs of international investors for liquidity and a store of value undergirds the strong persistent international demand for dollar assets. However, a depreciating dollar over a substantial time period could undermine the dollar's reserve currency status.

²⁰ See CRS Report RL33186, *Is the U.S. Current Account Deficit Sustainable?*, by Marc Labonte.

Do Trade Deficits Cause Unemployment?

Trade deficits are most often a means of augmenting the level of goods and services available to domestic purchasers, in effect, allowing the nation to spend beyond current domestic output by means of importing foreign output. Both domestic and foreign output are used to meet current domestic demand. With strong demand in an economy operating near or at its productive capacity, and unable to generate a near-term expansion of that productive capacity sufficient to meet that demand, it is possible for domestic industries to be working at full capacity, even as there are also large inflows of similar or related foreign products.

Another reason why trade deficits do not lead to a net reduction of domestic output and employment is because a very large share of U.S. trade is intra-industry trade in intermediate products—trade within the same industry due to an internationally fragmented production process. A final product will often be composed of several components, some of domestic origin and some of foreign origin. With this structure of production, an increase in the demand for the final product will increase both domestic output and imported foreign output of necessary components, regardless of the level of capacity utilization.

Finally, there may simply be no domestic counterpart for some goods because product differentiation has led to specialization across countries in the production of particular goods. (The economic gain from such specialization arises from economies of scale, not comparative advantage, and is common among high-income economies with very similar resource endowments.)

Standard economic analysis indicates that, outside of periods of recession, a trade deficit does not cause a *net* loss of output or jobs in the overall economy.²¹ Trade and trade deficits will, however, likely change the composition of output and employment. The forces generating the trade deficit will tend to increase the dollar's exchange rate, raising the incentive to substitute some types of foreign output for similar types of domestic output. But this dampening effect on some domestic industries will tend to be offset by the stimulative effects of the trade deficit's associated capital inflow on other parts of the economy.

The Federal Reserve, using monetary policy, works to set the overall level of spending in the economy to a level consistent with full employment. Although deviations from full employment can occur during periods of recession, a well-run monetary policy will minimize the incidence and duration of such episodes and in an expanding economy keep the total level of employment high in most years with or without trade deficits.

For these reasons, to a substantial degree the size of the trade deficit during an economic expansion, as during the 1980s, 1990s, and 2000s, cannot be taken as a one-for-one measure of reduced domestic output and the loss of the associated jobs. Since the end of the recession in 2001 through 2007, the trade deficit increased about \$400 billion, whereas the unemployment rate fell from 6% in 2003 to 4.6% in 2007 and total civilian employment climbed from a low of 136 million workers in 2002 to 144 million workers in 2007.

²¹ See Dornbusch, Rudiger and Stanley Fischer, *Macroeconomics* (New York: McGraw-Hill, 1988), chapter 19.

Trade Deficits Can Have Adverse Effects on Particular Sectors

Although large trade deficits do not necessarily reduce the total level of economic activity, they can alter the composition of domestic output and employment. The rising exchange rate generated by the net inflow of foreign capital increases the incentive to allocate resources away from production of domestic tradable goods, and toward the import of foreign tradable goods. In most circumstances, the market churning associated with U.S. trade deficits can be expected to have a negative effect on the output and employment of the U.S. tradable goods sectors such as manufacturing.

This effect on the composition of U.S. output was evident during the period from 2000 to 2007. From 2000 to 2007, the real output for the overall economy increased at a 2.5% average annual rate; however, real output of the manufacturing sector increased at a significantly slower 0.5% average annual rate, indicating that the manufacturing sector was not advancing apace with the wider economy. Also during the 2000-2007 period, manufacturing employment fell from about 17.3 million employees to 13.8 million employees, a fall of about 3.5 million jobs. A sharp fall during the 2001 recession was not unusual, but a failure of manufacturing employment to increase during the subsequent economic expansion was unusual.

The slow growth of manufacturing output from 2000 to 2007 was, in part, a reflection of a moderate weakening of economy-wide demand, with GDP growth slowing to a 2.4% annual rate for the 2000-2007 period as compared with a 3.3% rate for the 1990-2000 period. Of greater importance, it appears that in the 2000-2007 period, increased foreign competition substantially dampened the demand for many goods manufactured in the United States. Although real exports of U.S. manufactured goods increased by \$216 billion, or at about a 3% average annual rate over the 2000-2007 period, real imports increased by \$440 billion, or at about a 5% average annual rate—causing the trade deficit in manufactures to increase by about \$230 billion.

If the rise in the trade deficit represents a substitution of foreign for domestic manufactured goods, then output and employment in the U.S. manufacturing sector would be lower than it otherwise would be.²² At the 2007 level of worker productivity in manufacturing, other things equal, an increase in the trade deficit in manufactures of \$230 billion would translate into the displacement of about 2 million jobs in U.S. manufacturing of the 3.5 million lost.

During the 1990-2000 time period, the trade deficit in manufactured goods also increased by a similar magnitude, about \$240 billion.²³ A critical difference between the two periods is that the 1990-2000 period began with a relatively weak dollar that rose about 21% over the course of the economic expansion but with most of that increase occurring after 1996.²⁴ This meant that for

²² A trade deficit in manufactures may not cause a like-sized reduction in the domestic output of manufactures. There are at least three reasons why domestic production and imports could rise together. First, both domestic and foreign output is needed to meet the current demand. Second, due to an internationally fragmented production process a final product will often be composed of both foreign and domestic components, so that an increase in demand for the final product raises the demand for domestic and foreign produced components. And third, there may be no domestic counterpart for some goods due to international specialization of a production process.

²³ U.S. Bureau of the Census, *International Trade Data*, <http://www.census.gov/foreign-trade/data/index.html>.

²⁴ The exchange rate measure used is the *price-adjusted broad index*. The broad index is a trade-weighted average of the dollar against the currencies of a large group of major U.S. trading partners. Data on the real trade weighted exchange rate are available at the Board of Governors of the Federal Reserve System, http://www.federalreserve.gov/releases/H10/Summary/indexbc_m.txt.

most of the time period not only was demand strong but the relative price of U.S. manufactured goods to foreign manufactured goods remained low. Given that exchange rate changes typically affect trade flows with a time lag of several years, the adverse effect of the late-in-the-decade rise of the dollar on the output of the U.S. manufacturing sector would not be clearly evident until after 2000.

The dollar continued to rise through early 2002, with a total appreciation in trade-weighted terms of about 28% since 1996.²⁵ This appreciation would mean that the recovery from the 2001 recession would begin with the dollar relatively strong, tending to dampen the demand for U.S. manufactured goods relative to foreign manufactured goods. The dollar fell about 22% through 2007, but given the normal lags the impact of the depreciation would not be evident on trade flows until about 2007. (A more substantial improvement in the trade deficit in manufactures occurred in 2008. But at this point the positive impacts on the sector from trade flows began to be overcome by the negative effects of the deepening recession.)

Adjustment to such trade effects can be economically painful for workers in these harmed sectors. Many economists argue that it is usually more beneficial to the overall economy to encourage adjustment than it is to protect sectors from the disruptive effects of trade. There are government programs that provide some amount of trade adjustment assistance.

Policy Responses to Trade Deficits

To the degree that a trade deficit's effects on the economy are on balance beneficial, there may be no reason for a policy response to reduce or eliminate it. In addition, if there is an orderly reduction in foreign investors' demand for dollar assets, the trade deficit could fall without any inducement by policy. However, in this circumstance the adjustment might not be achieved on the best terms for the United States since it would be accomplished by a reduction in domestic investment rather than an increase in domestic saving. If a reduction of the trade deficit is desired, macroeconomic policies are likely to be more effective than traditional trade-policy responses.

So long as domestic saving in the United States falls short of domestic investment and so long as an inflow of foreign saving is available to fill all or part of the gap, the United States will run a trade deficit. This suggests that for any policy to be effective in reducing the trade deficit, it must be able to affect the saving-investment imbalances at home and abroad that are its ultimate cause. Trade policy tools to alter the flow of exports or imports, while imposing economic costs on the domestic economy, would not over time significantly change the domestic saving-investment imbalance, and therefore would not change the overall size of the trade deficit. On the other hand, macroeconomic policy tools have the potential to alter the saving-investment balance and therefore alter the trade balance, but the realistic opportunity for their use is in practice often limited. Also, whether macroeconomic policy affects primarily saving or investment could be a matter of concern because of the potential differential effect on long-term growth.

²⁵ Ibid.

Problem with Trade Policy Responses

Trade policy involves actions to directly stimulate or retard the flows of imports and exports such as the introduction or removal of tariffs and subsidies. Such actions will affect the level of trade and economic efficiency, but will not change the balance of trade. In each instance, action aimed at altering one side of the trade equation tends to induce effects via the exchange rate that will cause the other side of the equation to change in the same direction and by an equal amount.²⁶

For example, using a tariff or quota as a barrier to stem the flow of imports into the United States would also reduce the demand for foreign exchange needed by the United States to purchase imports, appreciate the dollar's exchange rate, and induce an equivalent curtailment of export sales. With this policy, the level of trade has been reduced along with the economic gains from trade and general economic well-being, but the trade deficit would not necessarily change.²⁷

Similarly, an export subsidy imposed by a deficit country would stimulate export sales but an exchange-rate-induced rise of import sales would also leave the trade balance unchanged. It would also be true that an export subsidy removed by a surplus country would dampen its export sales but an exchange rate depreciation would also induce a fall in import purchases and most likely leave the size of the trade surplus unchanged.²⁸

Alternatively, getting trading partners to remove trade barriers would stimulate export sales, but would increase the demand for dollars by foreigners, appreciate the dollar exchange rate and induce an equivalent increase of imports. In this case, the level of trade is increased along with the gains from trade and economic well-being, but the trade deficit would not necessarily change.

Macroeconomic Policy Responses: Domestic and Foreign

To efficiently reduce or eliminate the U.S. trade deficit most economists would argue that there needs to be a rebalancing of global spending: the United States would need to reduce domestic spending, and the economies with trade surpluses would need to increase domestic spending.²⁹ In

²⁶ Standard economic analysis indicates that protection of import-competing industries with tariffs, subsidies, or other devices to shelter a domestic activity from international competition leads to an over-allocation of the nation's scarce resources in the protected sectors and an under-allocation of resources in the unprotected tradable goods industries. Standard economic theory indicates that reducing the flow of imports will also reduce the flow of exports because fewer exports are needed to pay for fewer imports. As a group, exporting sectors lose as the protected import-competing activities gain. But more important, the overall economy that consumed the imported goods would suffer because the more efficient production process—available through international trade—would not be used to the optimal degree. This would increase the price and reduce the array of goods available to the consumer from what they would otherwise be. Therefore, economic analysis indicates that the ultimate cost of the trade barrier is not a transfer of well-being between sectors, but a permanent net loss to the whole economy arising from the barrier's distortion toward the less efficient use of the economy's scarce resources. These costs would be magnified if the trading partners disadvantaged by these actions retaliated against U.S. exports.

²⁷ To the extent that revenues from the tariff raise government saving, the trade deficit would tend to decrease. The realistic scale of such an effect is probably small.

²⁸ To the extent that the export subsidy—a government outlay—reduces government saving, it would tend to increase the trade deficit. A value-added tax (VAT) with border adjustments is the simultaneous application of an export subsidy and an import tariff. This combination of instruments still does not change the saving-investment imbalance, so it will not reduce the trade deficit.

²⁹ See, for example, Oliver Blanchard, "Sustaining Global Recovery," International Monetary Fund, September 2009; "Rebalancing," *The Economist*, March 31, 2010, <http://www.imf.org/external/pubs/ft/fandd/2009/09/index.htm>; and (continued...)

the framework of the saving-investment relationship, this rebalancing means that the United States faces three alternatives: (1) the rate of domestic investment falls, (2) the level of domestic saving rises (due to reduced consumption spending), or (3) some combination of one and two. In all cases the dollar will have to depreciate (on a real trade-weighted basis) and foreign currencies appreciate to induce the changes in spending at home and abroad. The inducement is caused by the depreciating dollar increasing the relative price of foreign goods in the U.S. market and decreasing the relative price of U.S. goods in foreign markets.³⁰

U.S. Economic Policy: Increasing Domestic Saving

Macroeconomic policy can induce changes in saving and spending flows. For example, monetary policy, by raising domestic interest rates and slowing economic activity, can lower the rate of domestic investment, reduce the saving-investment gap, and decrease the trade deficit. (At the extreme, a recession could dramatically reduce the trade deficit as seen in 2008 and 2009.) As observed earlier, decreasing the rate of domestic investment will have a negative effect on economic growth and is not generally considered a desirable economic outcome.

Alternatively, federal government fiscal decisions that alter the levels of government revenue and spending will influence the size of the budget deficit or surplus and, in turn, the level of public saving. As seen in the late 1990s, a rise in the U.S. overall saving rate as a consequence of a rising public saving rate stemmed from the sharp swing of the federal budget from a deficit of \$290 billion in 1992 to a surplus of \$236 billion in 2000. Since 2000, budget surpluses were erased and budget deficits increased, rising to \$1.455 billion in 2009 and projected to remain near this level for some time forward. To eliminate the trade deficit by raising government saving would require the government to run a substantial and sustained budget surplus. However, given the large-scale federal borrowing likely to occur over the medium term, it seems unlikely that the federal budget can any time soon play a major role in raising national saving and reducing the trade deficit.³¹

Can macroeconomic policy lift the low private saving rate? Proposals have been made to use the tax code to raise incentives for saving by households. Most such proposals nevertheless have uncertain effects on the saving-investment balance, as they tend to raise both saving and investment. Other proposals, such as individual retirement accounts, may just redistribute saving, raising household saving (a little), but lowering public saving by an offsetting amount.³²

The adverse effects of the recent fall in housing prices and the recent recession on household wealth have prompted a higher rate of personal saving, but it remains uncertain how enduring this increase will be, and it is not clear that whatever increase in private saving is forthcoming will be

(...continued)

Board of Governors of the Federal Reserve System, Vice-chairman Donald L. Kohn, "Global Imbalances," speech, May 11, 2010, <http://www.federalreserve.gov/newsevents/speech/kohn20100511a.htm>.

³⁰ Large deficits in the near-term that are providing stimulus to sustain economic recovery are not the concern.

³¹ There is less than a one-for-one change in the total saving rate from a given reduction of the budget deficit. The lower interest rates that come from the smaller budget deficit will also tend to stimulate some amount of domestic spending and reduce national saving accordingly. The ultimate effect on the overall saving rate is likely to be \$0.50 to \$0.80 for each dollar reduction in the budget deficit. Therefore, if the saving-investment gap is about \$700 billion to \$800 billion, an elimination of the trade deficit achieved through an increase of government saving would seem to require running a budget surplus of over a trillion dollars.

³² For further discussion about using policy to raise the saving rate, see CRS Report RL33482, *Saving Incentives: What May Work, What May Not*, by Thomas L. Hungerford.

large enough to offset the fall in the public saving rate caused by increased deficit spending, let alone be sufficient to increase the overall saving rate.

At the moment, a low saving rate is unlikely to have an adverse effect on the size of the saving-investment imbalance because the rate of domestic investment is also low, not having recovered from the negative effects of the recent recession. As the economic recovery gains momentum, however, the rate of domestic investment is likely to rise, causing the shortfall of saving relative to investment to increase and, other things being equal, cause the trade deficit, generally and in manufactures in particular, to increase also.

Foreign Economic Policy: Increasing Domestic Spending

Foreign economic policy can help or hinder efforts by the United States to decrease the size of its trade deficit and remove the associated burden from the U.S. manufacturing sector. As discussed above, the U.S. trade deficit is a two-way affair, reflecting the behavior of borrower and lender alike. On the other side of the U.S. inclination to spend beyond current domestic output is a symmetrical inclination of foreign nations to spend well short of domestic output and export the difference. It seems that American spending is as important to these economies as foreign borrowing is to the United States.

The most orderly adjustment to a smaller U.S. trade deficit is likely to occur through mutually supporting policy actions by countries with large trade surpluses—as the United States brings domestic spending *down* closer to domestic output and foreign economies with large trade surpluses bring domestic spending *up* closer to their domestic output. In so doing, U.S. efforts to become less dependent on imports are complemented by foreign efforts to become less dependent on exports to the United States. As already noted above, this change would seem to require a substantial appreciation of foreign currencies relative to the dollar. By this theory, economies with trade surpluses that also fix their currencies to the dollar would need to allow their currencies to appreciate relative to the dollar.³³

The less willing foreign economies are to change this current pattern of spending, the more protracted and difficult the shrinking of the U.S. current account deficit could be. If foreign economic policies work to counter U.S. policies attempting to raise domestic saving by reducing their domestic saving, then the dollar depreciation needed to induce a sizable reduction of the U.S. trade deficit would be larger than if foreign policies induce a complementary change in their spending patterns.

Prospects in Major Trade Surplus Countries

It is likely that effective global rebalancing would involve sizable adjustments in the largest surplus economies—Germany, Japan, and China. However, there are significant potential constraints on how substantially each of these three economies can save less and spend more, perhaps limiting any appreciation of their currencies relative to the dollar. Even if the current account is in balance, the United States would very likely have sizable bilateral imbalances, deficits and surpluses, with individual trading partners. These bilateral imbalances would be a

³³ Adjustment of the real exchange rate would most likely occur through market driven changes of demand and supply in international asset markets. The real exchange rate can also adjust via differential rates of inflation. However, if most countries maintain a high degree of price stability, this channel arguably becomes largely hypothetical.

reflection of differences between countries in comparative advantage and of the structure of production and trade between economies and not necessarily a matter of economic concern.

In Germany, the inability to move its exchange rate independently from the other euro economies reduces its flexibility of adjustment. In addition, the effects of recession have left limited room for further fiscal expansion and small ability to lower the household saving rate.

Japan is much the same with little to no room for fiscal expansion and a poor prospect of boosting household spending. Moreover, both Germany and Japan, faced with substantial near-term economic weakness due to the global recession, are unlikely to risk a dampening of net exports that a sizable appreciation of their currencies would cause.

China has the largest trade surplus with the United States and therefore has the potential to have a large effect on U.S. export sales and a significant positive impulse on the pace of the U.S. economic recovery.³⁴ Also, economic growth has remained relatively strong in China through the recent global financial crisis and aggregate demand is expected to remain strong over the medium term. What is uncertain, however, is whether a greater share of this spending will be domestic demand, particularly consumption spending by Chinese households.³⁵

For more domestic spending to translate into a shift in China's trade balance, China's exchange rate would need to rise relative to the dollar, causing a decrease in the price of foreign goods relative to domestic goods, and exerting downward pressure on China's trade surplus. From July 2005 to February 2009 China relaxed its dollar peg, allowing the renminbi to appreciate by 28% (on a real trade-weighted basis).³⁶ However, faced with weakening export sales due to the global financial crisis, China re-pegged the renminbi to the dollar. In June of 2010, China indicated that it would again let the renminbi appreciate.³⁷

China's export-led growth model, relying on a high saving rate (to keep internal demand low) and a low exchange rate pegged to the dollar (to keep external demand high), has been very successful and, despite the possible advantages of reforms to boost domestic demand, it is uncertain whether China would move substantially away from this model.

³⁴ China's economy is only about one-third the size of the U.S. economy and only about 16% of its trade is with United States. Therefore any given percent reduction in China's trade surplus leads to a much smaller reduction in the U.S. trade deficit. Also, because of the structure of U.S.-China trade, even if the U.S. current account deficit was eliminated, a large bilateral deficit with China would likely remain.

³⁵ Some believe that the very high rate of saving by Chinese households is a precautionary measure to compensate for a lack of social insurance. It likely also reflects limited access to consumer credit. The difficulty for the near-term task of sustaining economic recovery is that even if policy actions are taken to remove these constraints on consumer spending, households are likely to only gradually change their pattern of consumption and not provide a sharp near-term boost to domestic spending. Also, a closer look at the sources of the increase in China's domestic saving over the last decade reveals that the principal contributor to that growth was Chinese companies, not households. Therefore, changing the saving practices of Chinese companies is arguably an important aspect of any large increase in China's saving rate. It is argued by some that Chinese companies retain too large a share of their earnings. Better access to credit and changes in the governance rules of Chinese business would likely reduce the business saving rate. But, as with households, even if such policy initiatives are forthcoming, the change in the business saving rate is likely to emerge only gradually.

³⁶ See CRS Report RS21625, *China's Currency: A Summary of the Economic Issues*, by Wayne M. Morrison and Marc Labonte.

³⁷ "China Issues Statement on Yuan Flexibility," *Wall Street Journal*, June 19, 2010, <http://blogs.wsj.com/chinarealtime/2010/06/19/china-issues-statement-on-yuan-flexibility/>.

All in all, it seems problematic whether economic policy abroad will be directed toward a rebalancing of domestic spending that would greatly increase the prospect for an orderly, quick, and substantial shrinking of the U.S. current account deficit. Without mutually supporting policies, the dollar might need a larger real depreciation to induce a sizable reduction of the U.S. trade deficit. A large depreciation could be risky for two reasons. First, some would argue that the greater the size of the currency's fall, the greater the chance that it will fall too far, too fast, sending a jolt to world financial markets. Second, the dollar may not fall evenly against other currencies. For example, from 2002 through 2007, the dollar fell by nearly 27% against the euro but only about 12% against the Chinese renminbi.³⁸ This unbalanced adjustment has occurred in part because China has limited the strengthening of the renminbi relative to the dollar, and in the process has accumulated a large stock of dollar assets. This very uneven depreciation across currencies places more of the burden of adjustment of trade flows on the euro area and other economies whose currencies are free to float relative to the dollar.

What if There is No Policy Response to the Trade Deficit?

The trade deficit could fall on its own without U.S. policy actions. As noted above, the trade deficit is sustained by a net inflow of foreign capital. If large numbers of foreign investors, with an abundance of dollar assets in their portfolios and seeking a better balance of risk-return, undertake to diversify their portfolios away from dollar assets, the capital inflow and, in turn, the trade deficit will decrease. Such a process began to occur in 2002 as a weakening demand by foreign investors for dollar assets caused the exchange rate to depreciate, which by 2007 caused the U.S. trade deficit (generally and in manufactured goods) to begin to decline. Whether this investor-led adjustment will continue during the ongoing economic expansion is uncertain.

The difficulty with this form of adjustment is that if the reduced inflow of capital is not offset by a similarly sized increase in domestic savings, the necessity of maintaining overall balance of saving and investment would force a decrease in domestic investment. As discussed above, it is uncertain that there would be a significant increase in domestic saving for some time forward. A decreased rate of investment would likely dampen domestic demand for manufactured goods and could ultimately cause the rate of long-term economic growth to slow.

Prospects for the U.S. Current Account Deficit

Where is the trade deficit headed in the period just ahead? In the economic framework presented in this report, the answer to that question will hinge on the net direction of capital flows into and out of the American economy. Whether the current capital inflow gets bigger, smaller, or remains the same will most likely be determined by the resolution of two opposing forces: risk and reward. If, on balance, foreign investors see further investment in the United States as a more risky undertaking, other factors equal, the capital inflow will ebb and bring the trade deficit down with it. On the other hand, if the relative rate of return from investment in U.S. assets grows more attractive, the net capital inflow could expand and bring the trade deficit up with it.

³⁸ See Board of Governors of the Federal Reserve System, *Statistical Release G.5, Foreign Exchange Rates*, <http://www.federalreserve.gov/releases/g5a/>.

A U.S. recovery will likely include a recovery of investment spending. If increased investment spending is not matched by increased domestic saving, the trade deficit is likely to rise. While the private saving rate is likely to be higher than its pre-recession level, the government saving rate is likely to be lower, making it difficult to judge whether the overall saving rate will be significantly above its pre-recession value.

Private investor behavior is sensitive to the investment alternatives available. The relative attractiveness of global investment alternatives will be influenced by the relative pace of the economic recoveries in the United States and the rest of the world. At this time, the expectation is that Europe and Japan will rebound more slowly than the United States. Also, the recent troubles in Greece and other euro area economies may diminish the attractiveness of the euro area as an investment destination. However, most emerging markets, especially in Asia, are expected to outpace the developed economies, including the United States.

A risk factor that could exert a medium-term influence on foreign suppliers of capital to the U.S. economy is the adequacy of diversification in their asset holdings, which already contain substantial dollar balances. Diversification would likely manifest itself as a slowing in the rate of accumulation of dollar assets, not as the “dumping” of dollar assets already held. Such diversification was a likely reason for a significant weakening of private capital inflows between 2002 and 2007.

Regarding the behavior of foreign central banks, it is uncertain whether they will continue to increase their already large holdings of dollar assets.

Forecasts

Given the sizable damage caused by the recent financial crisis and recession, the unprecedented scale of the policy responses to those negative shocks, and the weakened state of the global economy, projections of the U.S. trade deficit’s near-term path carry an above-normal degree of uncertainty. Most forecasts have the overall U.S. economy on a path of recovery in 2010 and for several years after that. However, there is some variance in the pace of that recovery among prominent forecasters. Outside of emerging Asia, most foreign economies are projected to recover more slowly than the United States.

The IMF is forecasting a modest increase in the U.S. current account deficit for 2010 to \$487 billion, from \$418 billion in 2009.³⁹ The critical factor generating this increase is the beginning of the recovery of investment spending in the aftermath of the recession. Saving rises but more slowly than investment. As the recovery gains momentum and investment spending rebounds more strongly than domestic saving, the trade deficit is projected to increase to \$638 billion by 2015. However, the increase is moderate, moving at a pace that keeps the trade deficit as a share of GDP stable and well below recent highs, remaining at around 3.5% of GDP. Relatively weaker recovery and more damped investment spending in much of the rest of the world makes the United States an attractive destination for foreign investors and helps to reinforce this pattern of net capital inflows. Although there is no dampening effect on economic activity, the foreign sector is not seen as a significant contributing force to the pace of economic activity.

³⁹ IMF, *World Economic Outlook*, April 2010, <http://www.imf.org/external/pubs/ft/weo/2010/01/pdf/c2.pdf>.

Global Insight, an economic forecasting company, projects a larger increase in the trade deficit than does the IMF.⁴⁰ The current account deficit in their view will rise to \$526 billion in 2010 and will continue to increase, reaching \$641 billion in 2012, pushing the trade deficit share of GDP to 3.9%. The sharper rise of the trade deficit in this projection as compared with the IMF projection is driven by a faster-paced recovery and stronger domestic investment spending in conjunction with relatively low domestic saving. Also, slower-paced recoveries in other major economies tend to encourage an inflow of foreign capital.

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⁴⁰ Global Insight, *U.S. Economic Outlook*, April 2010, <http://www.ihsglobalinsight.com/>.