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The U.S. Trade Deficit: Causes, Consequences, and Cures

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The U.S. Trade Deficit: Causes, Consequences, and Cures

Summary

The U.S. trade deficit has risen more or less steadily since 1992. In 2006, the trade imbalance reached $811.5 billion, an increase of $20 billion over the 2005 deficit, and a total increase of about $765 billion since 1992. The trade deficit's growth in 2006 was largely the consequence of increase of import purchases of nearly $210 billion, a slight deceleration from import growth in 2005. Exports in 2006 increased a smaller $162 billion, but this was an acceleration over the 2005 results. As a percentage of GNP, the trade deficit in 2006 was 6.1%, a record size, a decrease from 6.3% in 2005. The investment income component of the trade balance moved from a surplus of $10.3 billion in 2005 up to a surplus of $36.6 billion in 2006. The large and growing size of U.S. foreign indebtedness caused by successive trade deficits suggests that the investment income surplus is likely to soon be pushed toward deficit.

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 seeking to maximize returns and, in turn, the saving inflow makes a higher level of investment possible. For the United States, a net financial inflow also leads to a like-sized net inflow of foreign goods — a trade deficit. Absent a major shift in the underlying domestic and foreign macroeconomic determinants, most forecasts predict the continued widening of the U.S. trade deficit in 2007, but the rate of increase of the trade deficit is expected to slow.

The benefit of the trade deficit is that it allows the United States to spend now beyond current income. In recent years that spending has largely been for investment in productive capital. 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 its rising indebtedness. Borrowing from abroad allows the United States to live better today, but the payback must mean 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 they do impose burdens on 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 most likely correct itself, without crisis, under the pressures of normal market forces. But the risk of a more calamitous outcome can not be completely discounted. This report will be updated annually.

Contents

List of Tables

The U.S. Trade Deficit: Causes, Consequences, and Cures

Introduction

International trade continues to grow in importance for the world economy as well as 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 well-recognized by Congress, which in recent years has paid close attention to many dimensions of U.S. international trade performance. This report examines the trade deficit, paying special attention to why it continues to widen, why it may be a problem, and what can be done to correct it.

Trade Performance in 2006

The U.S. trade deficit as tallied in the *current account balance*[1] reached $811.5 billion in 2006, up from $791.5 billion in 2005.[2] As a percentage of GDP, the 2006 trade deficit stands at 6.1%, down slightly from a record share of 6.3 % in 2005. The small decrease in the trade deficits size as a percentage of GNP could indicate that a degree of stabilization of the imbalance may be occurring.

The trade deficit rose slowly and, more or less, steadily from a small surplus in 1991(a recession year) to about $135 billion in 1997. Then, as the pace of the economic expansion rapidly accelerated, the trade deficit posted particularly large increases over the next three years, reaching $413.4 billion in 2000. With recession in 2001, the trade deficit fell moderately to $389 billion. With the economic recovery in 2002, the trade deficit again began to expand along with the steady improvement in the pace of economic growth.[3] The cumulative increase in the trade deficit between 1997 and 2006 is $806 billion, with more than half of this increase occurring since 2001. **Table 1** shows the anatomy of recent trade trends.

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[1] The balance on current account is the nation's most comprehensive measure of international transactions, reflecting exports and imports of goods and services, investment income (earnings and payments), and unilateral transfers.

[2] Complete current account data on trade performance in 2006 will not be available until March 2007.

[3] Trade balance data for the full year 2006 are not yet available, but through three quarters the trade deficit on current account has been running at an annual rate of near $860 billion.

Goods Trade

Goods trade is the largest component of the current account balance, and what has happened in this form of trade has been the major source of change in the overall the current account in recent years, including 2006. The deficit in goods trade increased in 2006 to $838 billion from $783 billion in 2005. Since 1992, the goods trade deficit increased a total of $739 billion. Over this period, both exports and imports generally rose, but import growth out paced export growth. In 2001, in response to slack demand across the world economy, U.S. goods exports had fallen, but the U.S. recession in 2001 also led to an even larger curtailment in the U.S. demand for imports, causing the goods deficit (and the current account deficit) to fall. In 2002, weak world demand continued to push U.S. exports down, but even a tepid U.S. economic recovery in 2002 was enough to cause goods imports to increase, and the goods deficit (and the current account deficit) was once again on the rise. In 2006, goods exports increased about $129 billion in response to the stimulating effects of earlier dollar depreciation and faster economic growth in Japan and the euro area. But accelerating U.S. economic growth in 2006 also accelerates the inflow of goods imports by about $210 billion, causing the goods deficit to increase by about $56 billion. However, this is the smallest increase of the goods deficit since 2002.

Table 1. U.S. Current Account and Components

(BOP basis, billions of dollars, annual rate)

	2001	2002	2003	2004	2005	2006
Current account balance	-389.0	-472.4	-527.5	-665.3	-791.5	-811.5
Goods balance	-427.2	-482.3	-547.3	-665.4	-782.7	-838.3
Exports	718.7	682.4	713.4	807.5	894.6	1023.1
Imports	-1145.9	-1164.7	-1260.7	-1,473.0	-1677.2	-1861.4
Services balance	64.4	61.2	52.4	54.1	66.0	79.7
Exports	286.1	292.3	302.7	344.4	380.6	422.6
Imports	-221.8	-231.0	-250.3	-290.3	-314.6	-342.8
Investment income	25.1	12.2	36.6	27.6	11.3	36.6
Transfers (net)	-51.3	-63.5	-69.2	-81.5	-86.1	-89.6

Source: U.S. Department of Commerce (Bureau of Economic Analysis) and Global Insight

Services Trade

In 2006, the U.S. surplus in services trade increased to $79.7 billion from $66.0 billion in 2005. In contrast to goods, services trade had shown a slowly rising surplus through the mid-1990s. That trend ended in 1997, however, with the services surplus peaking at $91.9 billion. In 1998, the surplus fell to about $83 billion, but steadied near that level through 2000. Service exports grew more than $30 billion in this period, but with the dual effects of very rapid economic growth in the United States

and the continued strength of the dollar, services imports moved apace. From 2001 through 2003, the services surplus decreased. This decline reflected the continued increase of service imports despite (1) recession and slow growth in the United States and (2) the weak service export sales because of weakness in other economies and the continued negative impact of the strong dollar (the dollar had begun to depreciate in 2002, but given the typical lags, the positive effect of that depreciation was unlikely to have been significant in 2002). In response to continued weakening of the dollar in 2003 and 2004, as well as faster economic growth abroad, the surplus in services trade began to increase again in 2004 and continued to increase in 2005 and 2006.

Investment Income Balance

In 2006, the balance in the U.S. investment income account moved up from a surplus of $11.3 billion in 2005 to a surplus of $36.6 billion. The investment income balance is a tally of what U.S. foreign investments earn against what foreign investments in the U.S. earn. This pattern of surplus seems inconsistent with the rapid growth of foreign assets in the United States relative to the stock of U.S. assets in the rest of the world. Nevertheless, since 1998, the surplus in investment income has exhibited a rising trend, even as U.S. net indebtedness to the rest of the world increased sharply. The investment income surplus reached $46.3 billion in 2003 and fell to $30.4 billion in 2004. The persistence of the U.S. investment income surplus through 2006 is the result of the interplay of several forces. First, U.S. investments abroad on average earn a higher return than foreign investments do in the United States. This differential is thought to result from a higher incidence of mature, high yielding, assets in the U.S. investment portfolio, greater risk exposure, and the special status of the dollar as the worlds reserve currency of choice. Second, the sharp fall of interest rates between 2000 and 2004 translated into a fall in the rate of return as a large portion of U.S. foreign debt is repeatedly rolled over. Third, in the period 2002 to 2006, a falling dollar, particularly against the euro, caused the foreign currency value of U.S. foreign assets and the associated earnings to rise.

In the long run, however, it is likely that the United States' large and still growing stock of net foreign indebtedness will come to dominate movement of this balance and lead to steadily larger deficits in the investment income balance.[4]

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[4] The level and composition of the United States' accumulated net indebtedness to foreigners is found in the annual tally of the nation's *net international investment position* (NIIP) by the U.S. Department of Commerce and published in the June *Survey of Current Business*. In 2005, the NIIP was a deficit of $2.7 trillion. The capital inflow manifests in foreign holdings of several different types of assets including bank accounts, stocks, bonds, and real property. For more detail on cross-border capital flows, see CRS Report RL32462, *Foreign Investment in U.S. Securities*, by James Jackson.

Why the Trade Deficit Widens

A rising current account deficit (or a falling surplus) over the course of a brisk economic expansion is not a remarkable event for the U.S. economy. In the 1960s, brisk economic growth steadily eroded a small current account surplus. In the 1970s, modest deficits occurred with each economic expansion. However, from the 1980s through 2006, the average size of the trade deficits steadily increased. Cyclical factors certainly have at times played some role in this phenomenon, particularly in recent years with the United States growing rapidly relative to most major trading partners. Trend forces are also at work, however, inclining the U.S. economy toward generating large trade deficits in all but recession conditions. The next section examines in more depth the fundamental determinants of the trade balance.

The trade deficit widens as the economy expands, not because of trade barriers abroad, not because of foreign dumping of exports, and not because of any inherent inferiority of the U.S. goods on the world market, but because of underlying macroeconomic spending and saving behavior at home and abroad. In the U.S. economy, there is a strong tendency to spend beyond current output, with the excess of demand met by a net inflow of foreign goods and services that results in the U.S. trade deficit.[5] Of course, the U.S. trade deficit is only possible if there are foreign economies that produce more than is absorbed by their current spending and are able to export the surplus. Trade deficits and trade surpluses are jointly determined through international capital flows that lead to a mutually favorable reconciliation of these domestic spending-production imbalances. These imbalances will be sensitive to the short-run effects of the business cycle (at home and abroad) as well as long-term effects of trends in spending and production. But, these imbalances will not be significantly changed by trade policies that try to directly alter the levels of exports or imports such as tariffs, subsidies, or quotas.

A Saving-Investment Imbalance

National spending-production imbalances are analyzed by economists from the standpoint of national saving and investment behavior. Saving is just the flip side of spending (an excess of spending essentially translates into a deficiency of savings) but focusing on saving has the analytical advantage of rooting the phenomenon in the transactions on international asset markets that are the key to understanding aggregate trade imbalances.

International Capital Flows. A large and fluid trade in assets is one of the central attributes of the current world trading system, growing from flows totaling only a few billion dollars in 1970 to $7 trillion in 2005. The United States has been

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[5] It is useful to remember that "income"/"spending" are the flip side of "production"/ "output." Any given value of production generates an equal value of income. Thus the income the economy earns can support spending sufficient to purchase the economy's current output. With international trade, however, it is possible for there to be a divergence of spending and production through the borrowing and lending of current income and output between nations.

a major participant in international asset markets. In 2005, it received capital inflows of $1.3 trillion and send outflows to the rest of the world of $364 billion.[6]

With fluid world capital markets, domestic saving-investment imbalances will tend to cause two equivalent transfers: one, an initiating capital market transfer of real purchasing power (i.e., a loan) from the country with a surplus of saving to the country with a shortage of saving; and two, a corresponding transfer of real output (i.e., an import to the borrower and an export from the lender) through a goods market transactions.

It is an economic identity that the amount of investment undertaken by an economy will be equal to the amount of saving — that is, the portion of current income not used for consumption — that is available to finance investment. But for a nation this identity can be satisfied through the use of both domestic and *foreign saving*, or domestic and *foreign investment*. Therefore, a saving investment imbalance is a relationship between domestic saving and investment and one that can only occur if foreign saving or investment are available to satisfy the overall saving investment identity.[7] International capital flows from lender to borrower are the means by which the saving of one country can finance the investment of another. If international capital flows did not exist, domestic investment could be no larger or smaller than domestic saving.

In a relatively open world economy with reasonably fluid and well functioning international asset markets, it is possible for 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 *overall* saving-investment balance for both nations. These asset market transactions will change the demand for and supply of national currencies needed to purchase foreign assets, causing changes in exchange rates, which, in turn, induce an equivalent sized net flow of goods (i.e., trade deficits and trade surpluses) between economies.

Interest Rates and International Capital Flows. Differences in the level interest rates between economies are the basic equilabrating mechanism that works to induce saving (income) flows between countries as investors seek out higher rates of return. 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 also likely see some portion of domestic saving flow outward, attracted by more profitable investment opportunities abroad. This net outflow of purchasing power, which generally can only be used to purchase goods (or

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[6] See CRS Report RL32462, *Foreign Investment in U.S. Securities*, by James Jackson.

[7] Saving in a macroeconomic framework is the portion of current income that is left after households, businesses, and government pay for their current consumption. A household that diverts some amount of current income to a bank, mutual fund, or government bond is saving. Similarly the tax revenue that the government has left after paying for its spending is (public) saving.

assets) denominated in the country's currency, will, through changes in exchange rates, induce a like-sized net outflow of real goods and services — a trade surplus. Japan is an example of a nation that in recent decades has produced large net outflows of saving to the United States and other nations.

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 support domestic investment. Such a nation becomes a net importer of foreign saving (income), able to use the borrowed purchasing power to acquire foreign output, and leading to a like sized net inflow of foreign output — a trade deficit. That deficit augments the output available to the domestic economy, allowing the nation to invest beyond the level of domestic savings.

International asset market transactions and goods market transactions influence the demand and supply of dollars on foreign exchange markets. In most circumstances, however, there is a strong expectation 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, in most years, U.S. international asset transactions were two to three times as large as what would be needed to simply finance that year's trade deficit. The telling sign that asset transactions have been the determining force is that 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, as 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.

Other Factors That Influence International Capital Flows. Although relative levels of interest rates between countries are likely to be a strong and prevalent force directing capital flows among economies, other factors will also influence these flows. For instance, the size of the stock of assets in a particular currency held in the foreign investor's portfolio of assets can cause a change in investor preferences. Prudent investment practice counsels that one's portfolio should have an appropriate degree of *diversification*, across asset types, including the currency in which they are denominated. Diversification of holdings spreads risk across a wider spectrum of assets and reduces over exposure 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, will decide that their portfolio's share of dollar denominated assets is large enough. To improve the diversity of their portfolios, investors will slow or halt their purchase of such assets. Given that well over $8 trillion in U.S. assets are now in foreign investor portfolios, diversification may be an increasingly important factor governing the behavior of international investors towards dollar assets.

There is also likely to be a significant *safe-haven* effect behind some capital flows. 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, presents a continually safe investment climate. There is likely also an important *market size effect* influencing the attractiveness of dollar assets. Not only do U.S. asset markets offer a great variety of instruments, they are also very liquid markets with the ability to handle huge sums of money with only a small impact on price. 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 the magnitude of flows attributable to the special status of U.S. asset markets is probably substantial.

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 by the factors of return and risk that typically propel private investors. Government *official purchases* can serve two objectives. One, the accumulation of a reserve of foreign exchange denominated in readily exchangeable currencies, such as the dollar, to afford a store of international liquidity that can be used for coping with periodic currency crises arising out of often volatile private capital flows. This is most often a devise used by developing economies that periodically need to finance short-run balance of payments deficits and can not fully depend on borrowing on international capital markets to offer timely finance of these deficits. Also the Asian financial crisis in the late 1990s heightened the importance for many developing economies of having very large stocks of international reserves.

Two, official purchases are used to counter the impact of capital flows that would otherwise lead to unwanted changes in the countries exchange rate. 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 many east Asian economies that buy and sell foreign assets to influence their currencies' exchange rate relative to the dollar and other major currencies to maintain the price attractiveness of their exports. Globally, dollar assets in official foreign exchange reserves increased $1 trillion between 2001 and 2006. Among the large industrial economies in recent years, Japan has been a highly visible practitioner of accumulating international assets so as to slow the rise of the yen relative to the dollar, accumulating dollar-denominated foreign exchange reserves in 2003 of about $117 billion. Among emerging economies, China has undertaken large scale accumulation of dollar assets to fix the value of the renminbi relative to the dollar, accumulating $260 billion dollar-denominated assets between 2001 and 2005. In most cases, however government exchange rate intervention is unlikely to be substantial enough to change the direction in which private investors are pushing the dollar. It has likely slowed the fall of the dollar since early 2002, but not stopped it.

Recent Patterns of U.S. Saving and Investment Behavior

A domestic saving-investment imbalance can occur as a result of either investment rising relative to saving or saving falling relative to investment (see **Table 2**). In the 1980s, the saving rate and the investment rate both declined, but the saving rate fell substantially faster, inducing capital inflows and a rising trade deficit. The fall of the saving rate in this period was rooted in two occurrences. The first was a substantial fall in the public saving rate caused by the run up of large federal budget deficits (which amounts to negative saving or dissaving). The second occurrence was the decline of the household component of the private saving rate. In the late 1980s, this imbalance narrowed due to increased public saving (i.e., smaller deficits) and a sharp decline in the investment rate in response to a decelerating economy headed for recession.

After recovery from the 1991 recession, the U.S. saving-investment imbalance began to increase steadily, but the form of the imbalance changed. The rates of saving and investment both rose, but the investment rate climbed faster. The turnaround in the overall saving rate in the 1990s was the consequence of a sharp change in the public saving rate, where the steady move by the federal government from budget deficits to budget surpluses increased the public saving rate from -2.5% (i.e, dissaving) in 1992 to 5.2% in 2000. Dampening the rise of the overall saving rate, however, was the continued decline in the household saving rate, falling from about 6.5% in 1992 to 0.0% in 2000. The rise of the overall saving rate in the 1990s did not bring that rate up to the magnitude that prevailed in the 1950s, 1960s, or 1970s, and fell well short of the 1990s' briskly ascending rate of domestic investment. The predictable consequence of a widening savings-investment imbalance was a rising inflow of foreign savings to close that gap, and in turn, an ever larger trade deficit.

A substantial decrease in the rate of investment during the 2001 recession narrowed this gap and the trade deficit in that year. During the period from 2002 to 2005, the U.S. rate of investment increased and the rate of saving declined, causing the investment-saving gap to widen and the trade deficit to expand. The higher rate of investment was the result of the faster pace of economic activity in the ongoing economic expansion. The further fall of the saving rate was caused by reductions in both the household and government saving rates. The overall rate of saving in the economy in this period remained positive due to a generally steady rate of business saving. In 2006, however, with stabilization of both the saving and investment rates, the investment-saving gap stopped rising and the trade deficits advance slowed significantly.

Two questions may come to mind. One, why has the household saving rate collapsed over the past 20 years? Other factors unchanged, a higher rate of household savings would have likely meant the generation of smaller trade deficits. Two, why did U.S. investment spending boom in the 1990s? Other factors unchanged, a rate of investment at the lower level typical of other expansions would have also led to smaller trade deficits. The fall of the household saving rate has been the object of much economic research, but the reasons for the decline remain problematic. No single theory can fully account for the phenomenon, but three have considerable plausibility. First, capital gains on real estate, stocks, and other investments, particularly in the 1990s, have greatly increased household wealth. Economic theory

predicts that a rise in wealth reduces the need to save and increases the tendency to spend. 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. Third, more streamlined credit market vehicles, such as credit cards and home equity loans, have removed constraints on household liquidity and prompted increased spending (and reduced saving).[8]

Table 2. U.S. Saving-Investment Balance
(percentage of GDP)

	Ann. Avg. 1975 to 1982	Ann. Avg. 1983 to 1990	2000	2001	2002	2003	2004	2005	2006
Saving	19.7	17.1	18.2	16.5	14.7	13.5	13.4	13.5	14.1
Investment	20.3	19.5	21.8	19.1	18.4	18.2	19.2	19.7	20.0
Net[a] lending(+) or borrowing(-)	-0.6	-2.4	18.6	-2.6	-3.7	-4.7	-5.8	-6.2	-5.9

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

a. Net lending, in concept, should equal the size of the current account balance. Statistical discrepancies prevent a precise matching, however.

The reasons for the investment boom in the late 1990s also remain somewhat unclear, but three plausible forces have been suggested. First, the wealth induced spending mentioned just above also provides a stimulus to business investment, as new plant and equipment is needed to meet the rising demand for output. Second, it is argued that recent deregulation of industry, liberalization of trade, and massive integration of ever cheaper and more powerful computers into the production process have boosted productivity and raised the profitability of investment in the United States. Third, and perhaps most plausible, pervasive economic weakness abroad, most recently in Asia, has made the United States a singularly attractive destination for foreign investment. Even the relatively slow pace of the U.S. economic recovery in 2002 and early 2003, when juxtaposed with generally weaker growth in the rest of the world made it likely that the trade deficit would expand in 2002 and 2003. In 2004 and 2005, the U.S. economic growth was brisk and outpaced that of other major economies.

A change of significance in U.S. saving behavior over the past five years is the shift in the trajectory of public saving. In 2002, the federal budget moved back into deficit and in 2004 that budget deficit had risen to $413 billion, with the prospect of similar sized budget deficits persisting into the foreseeable future. This has resulted in the federal government moving from being a net saver in 2000 at a magnitude equal to about 2.8% of GDP to being a net dissaver at a magnitude of about 2.5% of GDP in 2005. This fall in government saving exacerbates the saving-investment imbalance

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[8] See CRS Report RS20224, *The Collapse of Household Saving: Why Has it Happened and What Are its Implications?*, by Brian Cashell and Gail Makinen.

and, other factors constant, widens the trade deficit. In 2005, the federal budget deficit was reduced and government dissaving improved to -1.8% of GDP. The budget deficit continued to fall in 2006, down to about -1.1% of GDP. This recent reduction of the budget deficit has not been the result of any policy change, but rather the result of an unexpectedly large inflow of tax revenue largely due to record levels of corporate profits. Despite this short-term reduction, most projections see large budget deficits extending for many years into the future.

For that widening of the trade deficit to happen, however, there will also need to be foreign lenders willing to invest in the United States. If, to take one extreme position, there are no such investors then any fall in the domestic saving rate will, through higher interest rates, lead to a like sized fall in the domestic investment rate. If, at the other extreme, there are legions of investors eager to invest in the United States, the savings shortfall will be overcome with little dampening of domestic investment. More realistically, there will likely be willing foreign investors, but that willingness might have to be gained through the prospect of a higher rate of return. The higher domestic interest rates must go to attract investors to bridge the domestic saving shortfall, the more downward pressure there will be on domestic investment.

The macroeconomic forces that generate trade deficits are entirely consistent with high rates of capacity utilization and employment. Trade deficits, however, can have negative effects on output and employment in particular sectors. (The output, employment, and sectoral effects of trade deficits are discussed at greater length in a latter section of the report.) The United States has regularly been the net recipient of foreign capital inflows and regularly had trade deficits for the past 25 years. It has also regularly achieved high rates of economic growth and low rates of unemployment over this time period.[9] This is more understandable in that although a deficit in goods and services trade caused by the rise of the exchange rate tends to have a negative effect on domestic economic activity that is sensitive to international trade, there is also a positive effect on domestic economic activity because of the lower interest rates caused by the like-sized net inflow of foreign capital (saving). Therefore, the trade deficit changes the composition of domestic output, but does not change the overall level of domestic output.

It is also true that an overall trade imbalance need not be reflected in the balance with individual trading partners. Bilateral balances will reflect additional forces such as geographic proximity, scale economies, and comparative advantage, and therefore some could be in deficit and others in surplus. Similarly, overall trade balance can be consistent with significant bilateral imbalances. For example, even if Unites States were to eliminate its trade deficit, it would likely have a sizeable trade deficit with China. Or seen the other way, a reduction of the U.S. trade deficit with China, not accompanied by a change in the U.S. economy's overall domestic saving-investment imbalance, will not lead to a reduction of the overall U.S. trade deficit. If, however, a decrease in the U.S. trade deficit with China is the result of a reduced inflow of capital (saving) from China, and there is no like-sized increase in another source of

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[9] 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, Mar. 2000.

foreign saving, then the overall U.S. trade deficit will also fall, but so must domestic investment in the United States to bring it into line with the smaller pool of saving that would be available to finance domestic investment.

This overall scenario leaves three strong impressions. One, U.S. trade deficits appear to be largely (but not completely) created and propelled by macroeconomic forces in the domestic economy that influence international flows of capital. Two, those deficits must be sustained by willing foreign lenders, and substantial reduction of that willingness, other factors constant, might lead to deficit reduction on less than the most favorable terms. And three, these forces may not be easily manipulated by policy.

Sustainability of the Trade Deficit

The U.S. trade deficit is very likely to grow larger in 2007.[10] Nevertheless, an ever larger trade deficit is not likely to be sustainable indefinitely. There are automatic adjustment processes that will dampen the willingness of borrowers to borrow and of lenders to lend, and which can cause a more or less orderly reduction of the saving-investment imbalance and, in turn, the trade deficit.

Borrower's Constraint

The central issue for a borrower country like the United States is the "ability to pay," that is, the capacity to meet the interest and principal payments on the accumulated stocks of foreign debt. Such payments must come at the expense of other forms of national expenditure and, therefore, will not increase without bound. For the United States, the Net International Investment Position (NIIP) is the measure of its stock of obligations and GDP is the measure of its ability to pay. Therefore the ratio NIIP/GDP is a possible proxy of the borrower's constraint. Because the United States do not have much experience with a rising foreign debt to GDP ratio, it is difficult to judge at what value this ratio would begin to sharply deter more borrowing. Between 1992 and 2003, this ratio (expressed as a percentage) has risen from 7.3% to 21.6%, a substantial gain, but that is still below the 25% to 35% common among other high income countries, well short of the debt burden of most households.

In 2006, the debt to GNP ratio fell to 19 %. Given a $811 billion current account deficit in 2005, it may seem odd that the debt to GNP ratio did not also increase. However, the change in the total dollar value of U.S. foreign debt reflects not only current borrowing but also changes in the market value of existing assets. These "valuation effects" were particularly beneficial for the United States in 2006, slowing the rate of advance of the negative NIIP. But such strongly favorable effects are unlikely to persist over the long run. Nevertheless, it is still problematic what level of the debt to GNP ratio would begin to significantly constrain the behavior of U.S. borrowers.

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[10] See forecasts by Global Insight, *The U.S. Economy*, June 2006.

An alternative measure of constraint is the ratio of the current account balance (CA) to GDP (CA/GDP). This measure lays more stress on the size of the annual flow of foreign obligations relative to GDP as an initiator of borrower behavior. The value of CA/GDP for the United States has risen from 0.8% in 1992 to 4.4% in 2000. Evidence from industrial economies indicates that, on average, when the CA/GDP ratio exceeds 4.2% the current account begins to narrow.[11] This suggests that the United States may be getting close to a point at which borrowers may begin to slow their rate of debt accumulation. However, there are special attributes of the American economy that would allow it to prudently push borrowing beyond this benchmark ratio (see below).

Lender's Constraint

The willingness to lend to a particular destination will be influenced by the risk-return profile of a borrower's assets *relative* to other available assets. A broad array of alternatives with comparable risk-return prospects would tend to reduce the willingness to lend to a single borrower. Similarly, a paucity of alternative investment opportunities would have the opposite effect. It can be expected that the array of alternatives faced would be influenced by the strength of economic conditions across the globe. In addition, the desire by investors for some degree of portfolio diversification will tend to limit their willingness to become overly saturated in assets denominated in a single currency. Beyond the willingness to invest is the issue of ability to invest. The ability to sustain a large or rising outflow of capital will be limited by the size of the lender economy and its wealth portfolio. Other economies are substantially smaller than the U.S. economy and may be unable to sustain the magnitude of outflow the United States can apparently readily absorb. Also limiting cross-border lending is the observed preference in most economies to hold a high percentage of wealth in home assets, although it is suspected that this preference is steadily being eroded by the improving efficiency of international asset markets. Finally, the holders of dollar assets, particularity shot-term portfolio investments, will be sensitive to the expected path of the dollar's exchange rate because a sizable depreciation can quickly decrease the rate of return of the dollar asset to the foreign holder. Therefore, the expectation of a depreciating dollar is likely reduce the foreign investors demand for dollar assets.

Two recent events, are likely to induce a substantial diversification of foreign investor portfolios *toward* dollar assets. One, the recent liberalization of the Japanese postal saving system, with a portfolio of $3 trillion, that had been held almost exclusively in very low yielding Japanese government bonds. And two, a large accumulation of foreign currency earnings by petroleum exporting countries looking for a preferred resting place in more liquid, hard currency assets. The sheer size and high liquidity of most U.S. markets, alone, will probably draw a large share of these funds. If U.S. assets also have a rate of return advantage then the inflow will be all the greater.

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[11] See Catherine L. Mann, *Is the Trade Deficit Sustainable* (Washington, DC: Institute for International Economics, 1999), p. 156.

The willingness of central banks to accumulate dollar assets will be governed by different considerations then the standard profit-loss calculation that motivates private investors and can be sustainable for long periods of time. Nevertheless, there will be pressures that will work to limit such official purchases. For unless the asset accumulation is *sterilized,* the growth of official reserves will be inflationary, and since the capacity for sterilization is not likely to be infinite, particularly if the financial markets of the lending country are not well developed and have small absorptive capacity, the inflationary impulse of official lending may not be avoidable forever. In general, sustained asset accumulation through official purchases ties the monetary policy of the lending country to that of the borrowing country and the lending countries need to avoid an acceleration of inflation will make it an unsustainable policy.[12] Also, like private investors, the prospect of incurring capital losses on holdings of dollar assets due to a likely depreciation of the dollar on the foreign exchange market could dampen foreign central bank's willingness to purchase more or continue to hold the dollar assets it has.

Special Considerations for the United States

There are factors unique to the United States that may reduce the constraints on international lending or borrowing. First, more than 90% of the U.S. international borrowing is denominated in dollars.[13] This means that the pressures that other borrowing countries might face because of fluctuations in the value of debt service burden caused by volatile exchange rates are largely not an issue for the United States. Second, a large portion of foreign capital inflows to the United States is in relatively stable long-term investments. Such investments tend to be less prone to volatility caused by sudden changes in investor confidence. Third, about 50% of the investment in the United States by foreigners is in the form of equity (stock) holdings. Equity holdings tend to carry less strict payment requirements than debt holdings, working to lower the potential service payments (for a given level of NIIP), and extend the period over which the nation can prudently run current account deficits. Finally, the size, stability, and liquidity of the U.S. asset markets puts the United States in a special position as a borrower. That importance is enhanced by the dollar also being the world economy's principal reserve currency and therefore a readily held asset as well as a readily exchanged asset. In recent years, foreign central banks have greatly increased there holdings of dollar reserves.

Prospects

Where is the trade deficit headed in the period just ahead? In the analytical 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. At present, the United States is an international borrower receiving a net inflow of foreign capital. If that net inflow decreases, the trade deficit will also decrease. If the net inflow increases, the trade deficit will also increase. If the capital inflow remains the same, so will the trade deficit. So, what direction are capital flows likely to take?

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[12] On the subject of sustainability of the trade deficit see CRS Report RL33186, *Is the U.S. Current Account Deficit Sustainable*? by Marc Labonte.

[13] See U.S. Treasury Department, *Treasury Bulletin,* Apr. 2002.

Whether the current capital inflow gets bigger, smaller, or remains the same will most likely be determined by the resolution of two contenting forces: risk and reward. If, on balance, foreign investors see further investment in the United States as a far more riskier 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.

The important risk factor currently is the adequacy of *diversification* in investor portfolios. Large dollar balances have been accumulated in recent years. A survey by *The Economist* magazine shows that American assets make up 53% of the typical foreign investors equity portfolio and 44% of the typical bond portfolio. As recently as the mid-1990s, these percentages where only about 30%. It has also been estimated that the average investor in recent years has allocated about 80% of his increased wealth to dollar assets and would have to continue at this rate or higher to sustain the U.S. trade deficit for the next few years.[14] This is possible, but it is fair to doubt that it is probable, as standard investment practice increasingly suggests that investors move away from dollar assets. Such a shift was likely part of the cause of the dollar's depreciation from early 2002 through 2004. In 2002, almost all foreign capital inflows were from private sources. But in 2004, only about 75% of that inflow was from private sources. The difference has been a sharp increase in official purchases by foreign central banks, rising from about $42 billion in 2000 to a peak of about $395 billion in 2004 and a still substantial $235 billion in 2005. For the period 2001-2006, holdings of dollar denominated foreign exchange reserves by foreign central banks grew from $28 billion to $440 billion.

The dollar changed course and appreciated in 2005, reflecting some re-shifting of private foreign investor preferences toward dollar assets. Two factors are probably the principal reasons for this rise. One, bourgeoning petroleum earnings looking for a safe and liquid resting place have moved toward dollar assets. And two, a significant nudging up of short-term interest rates by the Fed has made short-term dollar assets more attractive to all investors. The dollar was fairly steady through most of 2006, but began to weaken significantly at year-end. This may be the market's response to the Fed putting a halt to rate increases, and it also may reflect some softening of the demand for dollar assets by some oil exporting countries. In the period ahead, will the private foreign investor move away from or toward dollar assets? Will foreign central banks continue to increase there holdings of dollar assets?

For the private foreign investor, a relatively high *rate of return* is likely to continue to be a powerful incentive for holding an asset, and there are reasons to believe that for the immediate future, there will be some more attractive alternatives to dollar assets on the world market. In 2007, economic growth in the United States may be slowing and monetary policy has become more stimulative. This could cause some weakening of U.S. interest rates. In contrast, economic growth in the euro area seems to have finally taken hold and the economic expansion in Japan continues. Improved relative profitability in both these areas may attract investors who had previously channeled their investments toward dollar assets.

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[14] *The Economist*, Sept. 18, 2003.

There is likely to be some degree of uncertainty in forecasting the U.S. trade deficit's path. Nevertheless, a common scenario shows the current account deficit continuing to advance in 2007, perhaps exceeding $1 trillion. Also, in a common scenario, the trade deficit stabilizes near this level but begins to fall as a share of GDP. In this view, foreign investors are willing to continue their accumulation of dollar assets, but at a steadily slowing rate, as concerns about risk increase and opportunities for alternative investment destinations broaden. The affects of past and prospective dollar depreciation and faster economic growth abroad will likely have a stronger impact on the goods and services deficit, perhaps even causing it to decline in 2007.[15]

Is the Trade Deficit a Problem?

A trade deficit is not necessarily undesirable. It confers benefits and carries some costs, and the former may exceed the latter. Trade deficits are 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. Trade deficits do not necessarily cause slower economic growth or lead to any economy-wide loss of jobs.

As seen in the 1980s and as was evident in the 1990s, the U.S. unemployment has fallen to record lows and the economy's growth rate has accelerated to record highs even as the trade deficit has risen. That deficit, therefore, does not necessarily come at the expense of current domestic economic activity. Of course, borrowing carries a cost as the lender demands that interest be paid on the funds borrowed and the principal one day be repaid. This "debt service cost" is a burden the borrower must carry tomorrow for living beyond his means today. An evaluation of the desirability or undesirability of a trade deficit will hinge on the current benefits gained from that added spending relative to the future debt service burden that is incurred. Also, reliance on foreign sources of finance often raises concern that trade deficits carry an elevated risk of instability and disruption to the economy. Finally, trade deficits have differential effects on different sectors of the economy, often placing large burdens on exporting and import-competing sectors.

Intertemporal Trade

Gains from trade can arise from *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 than what current domestic saving alone could finance. The lending nation 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

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[15] See Global Insight, *U.S. Economic Outlook*, June 2007; and OECD, *Economic Outlook*, June 2007.

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, while 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.

Since the early 1980s, the United States has incurred trade deficits of moderate to large size, using international borrowing to push spending beyond current production, pursuing desired consumption and productive investment now rather than later. Similarly, nations like Japan have been able to run trade surpluses, using international lending opportunities to earn higher returns on their excess national savings and expanding the prospects for spending in the future. Such net flows have not grown as fast as gross flows of capital so that external sources of finance still claim only a small share of the total funding of domestic investment in most industrial countries. For the United States in 2005, for example, the trade deficit was equal to 6.4% of GDP and about 38% of domestic investment spending. The trend, nevertheless, has clearly been toward larger external imbalances (surpluses and deficits).

An aspect of the current pattern of international capital flows of some concern is that the inflows to the United States are largely outflows of capital from the developing economies. This is not a pattern that makes economic sense over the long-term. The United States has a large stock of high quality capital to equip its workers with and a slow growing but rapidly ageing population. The developing world, in contrast, tends to have a low ratio of capital to labor and have young, rapidly growing populations. Economic reasoning leads to the expectation that investment opportunities are likely to be greater in the capital poor developing economies and the need for saving to support future retirees greater in the United States, and that the United States should be running trade surpluses and be a net lender to the developing economies, not vice versa.[16]

Debt Service Burden

With each successive trade deficit the stock of foreign obligations grows. The current size of this stock is formally measured by the NIIP. In 1981, the United States was a *net creditor* with a net accumulation of assets in the rest of the world of $374 billion. But a steady and substantial stream of net foreign borrowing has swung the NIIP to a *net debtor* position of about $2.5 trillion in 2006, up from about $2.2 trillion in 2005. Again, favorable asset valuation effects cause the net creditor position to increase by less than the size of that years current account deficit. The cumulative increase in U.S. net foreign debt since 1981 is more than $3 trillion.[17]

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[16] See Ben S. Bernanke, "The Global Saving Glut and the U.S. Current Account Deficit," speech delivered Mar. 10, 2005, The Federal Reserve Board.

[17] See U.S. Department of Commerce, Bureau of Economic Analysis, *2005 Year-end Net International Investment Position*, June 30, 2006. The term "net debtor" is somewhat

(continued...)

The current annual debt service cost of America's net foreign debt can be roughly judged from the size of the investment income component of the current account balance (see **Table 1**). That series is a measure of the nation's net payments and receipts on past investment and debt. If positive, the United States earned more than it paid; if negative, the United States paid more than it earned. Over time trend movement in this measure will be reflective of changes in the stock of net indebtedness. As seen in **Table 1**, U.S. international investment income in 2006 was a surplus of $36.6 billion, up from a surplus of $11.3 billion in 2005, but below the recent high of $46.3 billion in 2003.

As discussed earlier, until 2006, the investment income balance has shown a surplus in the $20 billion — $30 billion range for the past 30 years. In recent years, the surplus of investment income has persisted despite the United States having a large *negative* international investment position (i.e., a large external debt). This continuing surplus meant that, so far, there has been no true debt service burden to the U.S. economy from its external debt. This has happened because there has been no net outflow of investment income, meanings there was no net diversion of U.S. real output to the rest of the world to service the external debt. In part, this lack of burden has been the result of the favorable effects of the recently strong dollar on the value of external assets and of recent low interest rates on the magnitude of external payments. However, the dollar is now on a downward path and interest rates have risen. Over the long run, if the trade deficit remains on its current upward trajectory, the volume of debt obligations will continue to grow, and as a result it is credible to expect U.S. international debt payments to also grow. It is possible that U.S. foreign debt service payments will reach or exceed $100 billion before the current account deficit is erased and net foreign borrowing stops.

A $100 billion transfer of real income to the rest of the world would be significant, but it would not be an overwhelming outflow for the world's largest economy. In 2006, the United States has a GDP valued at more than $12 trillion, and by decades end, it will likely exceed $13 trillion. For an economy of this size, a $100 billion foreign debt service burden amounts to 0.8% of GDP. Clearly, insolvency is not lurking just over the horizon, particularly since the economy in the future will be larger and more capable of meeting debt service payments.

Nevertheless, a debt service payment of this size would be significant, particularly if viewed in the context of the economy's average annual growth rate of real GDP. For a mature industrial economy like the United States, the long-term growth rate of real output can optimistically be expected to average as much as 3.0 % per annum. Thus, a yearly debt service burden of about 1.0% of GDP would mean that the rate of growth of output that is effectively available to the domestic economy is reduced to 2.0%. That would be a significant erosion of the rate of improvement in the U.S. living standard. At a 3.0% annual growth rate, national income doubles about every 24 years, whereas at a 2.0% annual rate, doubling occurs every 35 years.

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[17] (...continued)
inaccurate in that only a fraction is a true debt obligation, such as a bond, where there is a fixed term and contractual obligation to pay a fixed amount to the holder. Holdings of equities carry the expectation of earnings , but there is no obligation to pay if no earnings are made.

Put another way, if the per capita GDP in 2002 of $36,600 grows on average at 3.0% for 24 years, GDP per capita would equal about $75,000, whereas growing at 2.0% for that same period would bring per capita GDP to only $59,000 or about 21% less.

The degree of burden actually incurred, however, will depend in part on how the nation uses what it borrows. If foreign borrowing has financed an increase in domestic consumption (public or private), there will not be any boost to future productive capacity. Therefore, to meet debt service expense, future consumption must be reduced below what it otherwise would have been. Such a reduction represents the burden of foreign borrowing. This is not necessarily bad; it all depends on how current versus future consumption is valued. If, on the other hand, foreign saving is used to increase domestic investment the burden could be avoided or at least reduced. Investment spending increases the nation's capital stock and expands the economy's capacity to produce goods and services. The value of this added output may be sufficient to both pay foreign creditors and also augment domestic spending. In this case, because future consumption need not fall below what it otherwise would have been, there would be no true economic burden.

It is difficult to assess to what extent U.S. debt service cost will be attenuated by the shift in the 1990s to the pattern of supporting rising domestic investment using foreign borrowing from the pattern of the 1980s of support, more or less exclusively, added domestic consumption with foreign borrowing. (Keep in mind, however, that the accelerated rate of investment makes only a small net contribution to the size of the nation's huge capital stock. Thus its growth-accelerating effect is commensurately modest. In the calculations of debt burden done just above a relatively high rate of long-term growth was assumed. Therefore the possible boost from earlier elevated rates of investment has probably been accounted for.)

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, disrupting domestic capital markets and the wider economy? There are good reasons to doubt that a sharp turnaround in foreign capital flows is likely. Recent experience of other countries with the panic of foreign investors has shown that such behavior most often results from the growing likelihood that they would not be repaid, that debt service payments were doubtful. This occurred when a country's ability to pay debt service was imperiled by persistent weak economic growth or the rapid consumption of the nation's foreign exchange reserves in the defense of an overvalued currency. These are not risk factors that have much relevance to the circumstances of the United States, which has strong growth and does not fix its exchange rate.

In addition, a large proportion of investments made in the United States have been long-term in nature and not particularly prone to quick changes in commitment. It is very likely that many foreign investors generally see the U.S. economy as a bastion of long-run economic strength and will continue to invest for long-term gain. It is true that a sizeable share of the stock of U.S. foreign debt is in short term assets that can move quickly. That these types of assets will change direction as relative yields rise abroad is quite likely and does raise the risk of instability somewhat. But

given the absence of the risk factors noted just above, it is far more likely that such capital outflows will be part of an orderly adjustment process and not lead to undue economic instability. The impact of any exodus of foreign capital, absent any compensating increase in domestic saving, would tend to raise interest rates and dampen credit sensitive activities. It is very likely that a falling dollar and a shrinking U.S. trade deficit would be more disruptive to the more export dependent and exchange rate sensitive economies of Europe and Japan.

The United States underwent a very orderly correction from a large trade deficit in the 1985-1990 period. However, the current task is likely to be more difficult and carry a higher risk of a disorderly adjustment for four reasons. One, oil prices were falling sharply in the late 1980s, but now oil prices are rising sharply. This will add to the inflation impact of a falling exchange rate and hamper the Federal Reserve's ability to counter the interest rate spike. Two, in the 1986-1990 episode, other economies central banks, particularly Japan's, were willing to buy a large volume of dollar assets, providing a stabilizing counter force on the falling dollar and the rising yen. Given the already huge stocks of dollar assets being held abroad this action seems improbable today. Three, in the 1986-1990 period, Europe, the strongest market for U.S. exports, was booming. Today economic growth in Europe is slower. And four, the size of the imbalance is now twice as large.

For the United States, the pain of such an adjustment would be somewhat muted by the large size of the overall U.S. capital market relative to the scale of the foreign capital flows. In recent years, the total funds raised in U.S. credit markets have been around $2,200 billion. Therefore, net borrowing from the rest of the world at around $600 billion to $800 billion per year represents 25% to 30% of the nations annual flow of credit. This is a magnitude of significance, but if withdrawn gradually it is not necessarily overwhelming for the United States.

Effects on Total Output and Employment

Standard economic analysis indicates that a trade deficit does not cause a net loss of output or jobs in the overall economy. Trade deficits will, however, likely change the composition of output and employment. This compositional effect occurs because 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 positive effects of the trade deficits associated capital inflow on other parts of the economy. With a trade deficit some import sensitive industries (i.e., textiles) will have their output and employment decline, but some credit sensitive industries (i.e., housing) will have their output and employment increase. Recently, some domestic manufacturing industries have been harmed by the trade deficit, but there has also been a great surge in home building stimulated by lower interest rates afforded by the trade deficits attendant inflow of foreign capital.

Also, the Federal Reserve, using monetary policy, can set the overall level of spending in the economy to a level consistent with full employment.[18] Although deviations from full employment can occur, a well-run monetary policy will minimize the incidence and duration of such episodes and help keep the total level of employment high in most years with or without outsourcing, trade deficits, or trade in general.

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 more imports do not lead to a reduction of domestic output and employment is because a very large share of U.S. trade is *intraindustry* 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.[19] 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 the level of capacity utilization. Finally, there may simply be no domestic counterpart for some goods because product differentiation has led to specialization

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[18] Economies always have some amount of unemployment. Each economy will tend to have a natural rate of unemployment around which the actual unemployment rate fluctuates. This natural rate will also represent the rate at which the economy is effectively at full employment because a lower rate of unemployment would not be sustainable due to the inducement of higher a rate of inflation. The natural rate is not zero because at any point in time there will be some people who are changing jobs and other people who normal market forces have temporarily displaced. More fluid the economy's labor markets the lower its natural rate of unemployment is likely to be. For most of the last 30 years the United States economy's natural rate was judged to be in the 5.5% to 6.0% range. Since the mid-1990s, the natural rate has likely fallen to the 4.5% to 5.0% range. Most often an appropriate level of aggregate spending is that consistent with employment at the natural rate. There is no theory or evidence to indicate full employment is influenced by the trade deficit.

[19] The significance of intraindustry trade varies by industry. For industries that make sophisticated manufactured goods it tends to be very high with over 90% of trade of this form. In labor intensive industries, that manufacture less sophisticated products, very little trade is intraindustry. Intraindustry trade is to a great degree a manifestation of a wide spread move towards more fragmented production processes, or what is called *vertical specialization*. It is estimated that about one-third of the growth of world trade since 1970 is the result of this phenomenon and can be expected to be even higher for the trade of an advanced industrial economy such as the United States. For further examination of the nature and significance of intraindustry trade, see Paul Krugman and Maurice Obstfeld, *International Economics: Theory and Policy* (Reading, MA: Addison Wesely, 1997), pp. 139-142. For further examination of the *vertical specialization* phenomenon, see David Hummels, Dana Rapoport, and Kei-Mu Yi, "The Nature and Growth of Vertical Specialization," *Journal of International Economics*, vol. 54 (June 2001), pp. 75-96.

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).

For these reasons, to a substantial degree the size of the trade deficit during an economic expansion, as during the 1980s and 1990s, 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, the trade deficit has increased about $400 billion, whereas the unemployment rate fell from 6% in 2003 to 4.6% in 2006 and total civilian employment climbed from a low of 136 million workers in 2002 to 144 million workers in 2006.[20]

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. Evidence shows that over the past 20 years, persistent trade deficits may have caused a reduction in the size of the domestic manufacturing sector.[21] The trade deficit exerts some downward pressure on the size of the domestic manufacturing sector because the trade inflow cannot easily augment the full spectrum of goods and services that comprise the nation's increase in domestic demand. About 70% of domestic spending is on services, but because trade is a relatively poor vehicle for acquiring services, only about 15% of U.S. imports are services. Therefore the trade deficit, largely a net inflow of manufactured goods, may not meet the augmented domestic demand for goods and services. In this circumstance, relative prices can be expected to change so as to reallocate some resources out of the domestic manufacturing sector and into the production of services to help meet the added domestic demand for services. This, in turn, should induce a greater reliance on the net inflow of foreign manufactured goods to help meet the added domestic demand for manufactures. The outcome will be greater real output by the domestic service sector and smaller real output by the domestic manufacturing sector.[22]

Recent surges of the trade deficit have clearly had a sharp negative impact on particular sectors. On the export side, agriculture and commercial aircraft experienced dampened export sales, mainly due to general weakness in other economies, particularly in Asia. On the import side, the steel industry and the textile and apparel industries came under considerable pressure from low price competition from countries affected by economic crises. The trade deficit is certainly a factor in the fall of employment in the U.S. manufacturing sector from 17 million in 2000 to 14 million

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[20] See the *Economic Report of the President*, February 2006, Appendix B: Statistical Tables.

[21] See CRS Report RL32350, *Deindustrialization of the U.S. Economy: The Roles of Trade, Productivity, and Recession*, by Craig K. Elwell; CRS Report RL32179, *Manufacturing Output, Employment, and Productivity*, by Stephen Cooney; and Robert Rowthorn and Ramana Ramaswamy, "Deindustrialization: Causes and Implications," *Staff Studies for the World Economic Outlook*, IMF, 1997.

[22] This argument is not likely undermined by the development of U.S. trade surpluses in services in this period as *tradable* services are a small sub-set of the full spectrum of, largely non-tradable, services in domestic demand.

in 2006. (However, of greater importance in the reduction of jobs in manufacturing is the rapid increase in worker productivity.) 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,* but there are important questions about the adequacy of these programs.

Looking to the future, trade deficit induced erosion of the U.S. manufacturing sector may also undercut the country's ability to make future debt service payments to foreign creditors. Manufacturing is a major part of the exporting sector and it is that sector which will be the means for paying debt service. A healthy manufacturing sector is likely to make that task easier.

Policy Responses to Trade Deficits

So long as domestic saving in the United States falls short of domestic investment and 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 the use of trade policy tools to alter the flow of exports or imports, while imposing efficiency costs on the domestic economy, would not *over time* change the domestic investment-saving imbalance, and therefore would not change the overall size of the trade deficit.[23] On the other hand, macroeconomic policy tools have the potential to alter the saving-investment balance and the trade balance, but the realistic scope for their use is limited.

Trade Policy Responses

Trade policy involves actions to directly stimulate or retard the flows of imports and exports such as the erection or removal of tariffs and subsidies. Such actions will have significant impacts on the level of trade and economic efficiency (positive or negative) 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. 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 be unchanged. Alternatively, getting the 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

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[23] Similarly, the removal of U.S. trade barriers, while conferring efficiency gains, would not change the domestic investment-saving imbalance, and therefore would not widen the trade deficit.

be unchanged. Finally, an export subsidy would also stimulate export sales but an exchange rate induced rise of import sales would also leave the trade balance unchanged. (In the case of the subsidy, economic theory holds that a higher level of trade does not lead to an increase in economic welfare as the gains from trade are more than offset by the economic inefficiency of distorting the allocation of resources towards the export sector.)

Macroeconomic Policy Responses

The mechanics of the saving-investment relationship in an internationally open economy such as the United States suggests that there are essentially three ways the trade gap can be reduced. One, the rate of domestic investment falls. Two, the level of domestic saving rises. Or three, some combination of one and two occurs. Macroeconomic policy, the use of monetary and fiscal policy tools, can in theory effect changes in these variables. Monetary policy, by raising domestic interest rates and braking economic activity, can lower the rate of domestic investment and likely narrow the trade deficit. (At the extreme, a recession would likely dramatically reduce the trade deficit as it did in 2001.) Because of its negative effects on economic growth, decreasing the rate of domestic investment is not generally considered the most desirable economic course to follow, however.

The second course to a smaller trade deficit, raising the domestic saving rate, while having considerable economic merit, is a very problematic goal for macroeconomic policy. As explained above, fiscal decisions on taxing and spending influence the deficit or surplus position of the federal budget and the rate 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 2002, budget deficits have returned and the government saving rate has fallen accordingly. Given the political nature of budget deliberations, it seems problematic whether the federal budget can be an exploitable policy tool for reducing the trade deficit.

Also, keep in mind, that 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. This also means that a dollar of budget deficit reduction results in less than a dollar of trade deficit reduction, other factors constant. Therefore, if prospective budget deficits will be in the range of about $300 billion to $500 billion, an elimination of the trade deficit achieved through an increase of government saving would require running large budget surpluses.

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. Careful analysis reveals that such proposals most often have uncertain effects on the saving-investment

balance, as they tend to raise both saving and investment.[24] Other proposals, such as individual retirement accounts, may just redistribute saving, raising the household rate (a little), but lowering the public rate by an offsetting amount.

The Effect of Economic Policy Abroad. Foreign economic policy can help or hinder efforts by the United States to decrease the size of its trade deficit. As discussed above, the U.S. trade deficit is a two-way affair, reflecting the behavior of borrower and lender alike. The need to borrow must be met by a willingness to lend. 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 mutual policy actions— as the United States brings domestic spending *down* closer to domestic output and its major trading partners bring domestic spending *up* closer to their domestic output. In so doing, the U.S. efforts to become less dependent on imports is complemented by foreign efforts to become less dependent on exports to the United States. The less willing foreign economies are to change this current pattern of spending, the more protracted and difficult shrinking 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 were more supportive of the change in spending patterns.

Without such mutually supporting policies, the dollar might have to fall 40% to 50% to achieve any sizable reduction of the U.S. trade deficit. A depreciation of that magnitude is risky for two reasons. One, 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 that could possibly precipitate a world recession. Two, the dollar may not fall evenly against other currencies. From 2002 through 2004, the dollar fell by more than 30% against the euro but only about 15% against the Japanese yen. This has occurred because Japan has more actively tried to limit the strengthening of the yen relative to the dollar, accumulating a large stock of dollar assets. If such behavior becomes widespread, then the burden of adjustment of trade flows would fall heavily on the euro area and raise the risk of major economic collapse there.

Because of their size and degree of economic interaction with the United States, Japan and the euro zone (particularly Germany) would likely have to play a key role in assuring the world economy has an orderly adjustment to a weaker dollar and a much smaller American trade deficit. Yet neither has had a recent history of economic strength and there are reasons to doubt their willingness to undertake the actions that would better insure an orderly adjustment to a smaller U.S. trade deficit. Japan has struggled with poor economic performance for more than a decade and despite much better performance recently it is unclear that it is willing to overcome its fears of deflation and move strongly toward a stronger yen and reduced dependence on exports to support economic activity there. In Europe, structural rigidities continue

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[24] See CRS Report RL32119, *Can Public Policy Raise the Saving Rate?* by Brian Cashell.

to slow economic growth and a distinct bias towards tight macroeconomic polices further inhibits economic activity. In addition, there is an evident tendency of the euro zone to also use exports to support economic activity and therefore an inclination to avoid significant strengthening of the euro.

Of course, this adjustment process would also be assisted by the appreciation of other currencies, particularly in other Asian economies that have "pegged" their currency to the dollar. Much attention has been focused on China and its pegged currency, but the case for a stronger yuan is more tentative. Unlike Japan and the euro zone economies, China does not have a convertible currency or a well-developed and stable financial system. As a result, it probably has limited ability to successfully contend with currency instability. Nevertheless, many economists would argue that there is a need for China to allow its currency to appreciate and for that economy to channel more of its large saving pool into domestic investment. An appreciation of the yuan without changes in the saving-investment asymmetries between the United States and China would not lead to any significant changes in each trade imbalance. At present, it can be argued, China, by accumulating short-term reserves to maintain an undervalued exchange rate, is running a "neo-mercantilist" policy that allows it to run a large trade surplus to generate demand for its products and also have a large net inflow of long-term capital to help propel its economic development. For an economy of China's, this is not likely to be a sustainable process from the viewpoint of its trading partners. If it needs the inflow of long-term capital, then it should allow the real transfer of those resources by running a trade deficit or be prepared to use more of its own saving to support domestic investment rather than transfer those saving to the rest of the world.

In general, policies that improve the investment climate in many developing countries such as improved macroeconomic stability, increased financial transparency, and better bank regulation will tend to redirect international lending toward them and away from the United States. Nevertheless, it would seem quite problematic whether other countries will follow polices that would greatly increase the prospect for an orderly or quick shrinking of the U.S. current account deficit.

Conclusion

A trade deficit is not necessarily bad. It is most useful to see it as a vehicle to achieve an economic end, conferring some benefit at some cost. Whether the trade deficit is good or bad will hinge on how the benefit against the cost is weighed. The overriding benefit is the ability to borrow internationally so as to push current spending beyond current production. Trade deficits in the 1990s have been a means to help finance an elevated level of domestic investment. Investment augments the nation's future productive possibilities and is a boon to long-term economic welfare. In contrast, the large trade deficits of the 2000s have been used to finance greater public and private consumption.

The cost of the trade deficit is the debt service that must be paid on the associated borrowing from the rest of the world. The U.S. debt service has grown steadily and will soon reach a size that could impose a significant decrement to the rate of growth

of its living standard. It is a burden that is still well within the U.S. means to pay, but some might argue it is a burden that needs to be curtailed.

Reducing the trade deficit by policy actions is very problematic, however. It is clear that standard trade policy tools such as tariffs, quotas, and subsidies will not change saving or investment behavior and, therefore, will not reduce the trade deficit, but in many cases will create distortions that reduce national economic welfare. Macroeconomic policy can affect the saving-investment balance and can change the trade deficit, but how to do so by raising domestic saving rather than reducing domestic investment remains unclear. Recent policy changes have turned the federal budget from surplus to deficit for the next several years, reducing public saving and tending to increase the trade deficit. However, the prospect of more vigorous economic growth in the euro area and Japan could cause greater opportunities for investment in those economies, slowing their saving outflow to the United States, and working to shrink the U.S. trade deficit. Generating a sustained increase in the U.S. economy's rate of saving by reversing the steadily sagging rate of household saving would reduce the trade deficit, but how to raise that rate is uncertain.

It is very probable that the trade deficit could correct itself without any inducement by economic policy. There are good reasons to expect that economic forces will work to sate the demand for foreign borrowing as well as reduce the supply of foreign funds being offered. A significant acceleration of the rate of growth abroad relative to that of the United States (raising domestic investment relative to domestic saving abroad) would likely initiate such a process. A change in relative growth rates would most likely alter rates of return between the United States and the rest of the world, redirect a larger share of international investment flows towards destinations other than the United States, and shrink the U.S. trade deficit.

This correction does not necessarily have to lead to an elimination of the trade deficit. It might only fall enough to assure a more sustainable rate of accumulation of foreign debt. Nevertheless, a smaller trade deficit, lacking an increase in the rate of U.S. domestic saving, will mean that the reduced saving inflow from abroad will have shrunk without any offsetting increase in domestic saving. This will increase U.S. interest rates and force a reduction of domestic investment to the level of the smaller flow of saving available to finance it.