A record current account deficit: Causes and implications

Jack L. Hervey and Loula S. Merkel

Introduction and summary

The U.S. deficit in international trade soared to new heights in 1998, again in 1999, and in all likelihood, will increase even further this year. Mirroring these deficits have been huge foreign capital inflows. In 1999, the U.S. current account deficit—that is, the difference between exports and imports of goods, services, receipts and payments of income from and to foreigners, and unilateral transfers—totaled $331 billion or 3.6 percent of nominal gross domestic product (GDP). This record deficit compares with the previous record of $217 billion (2.5 percent of GDP) in 1998 and $141 billion (1.7 percent of GDP) in 1997. The magnitude of the recent year-to-year increases in this deficit, as well as its absolute dollar size, has raised considerable concern among many public and private observers of the U.S. economy. Not since 1987, when the current account deficit peaked at a then record $161 billion, has the condition of the U.S. international accounts so captured the attention of economists, policymakers, and the popular press.

Further compounding uneasiness about the current situation is the expectation by many economists that the magnitude of the trade deficit will show a further increase this year and that only a modest reduction, if any, is likely in 2001. Indeed, trade developments thus far in 2000 indicate that at least the first half of that expectation (that is, an increase in the year-to-year size of the deficit during 2000) will be borne out. There are also fears surrounding an eventual economic adjustment—"the current account gap … is the single biggest threat to the current expansion of the economy."[1]

There is nothing inherently "bad" (or "good") about a current account deficit—or for that matter, a current account surplus. However, the concern about the deficit that has drawn the attention of reasonable observers centers on a specific issue: Does the deficit in the U.S. international accounts represent a risk to our economic well-being in the near term or in the longer term? To answer this question, we need to identify the underlying cause of the deficit. What developments during the past two or three years—in the domestic economy and in the rest of the world—have led the U.S. to purchase dramatically more goods and services from abroad than it sold abroad? Furthermore, can the U.S. economy maintain a deficit of this magnitude? And, if not, what are the likely implications of an adjustment for the U.S. economy?

Three rationales are commonly used to explain the sudden and dramatic increase in the U.S. current account deficit. The first rationale contends that U.S. consumers have shifted their preferences from saving for the future—witness the near zero personal savings rate—toward purchasing more consumption goods in the present.[2] This surge in demand for domestic consumption goods translates into a corresponding increase in imported consumption goods. We call this the *consumption boom* hypothesis. Certainly, trade in consumer-type goods has increased in recent years. Indeed, more than 60 percent ($52 billion) of the year-to-year increase in the goods trade deficit between 1998 and 1999 was accounted for by the year-to-year increase in consumer goods, foods and beverages, and automotive

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imports (most of which are broadly classed as consumer goods). If the consumption boom story is true, it implies that there has been excessive borrowing from abroad to finance a domestic consumption binge. And according to this argument, since this borrowing has not gone toward enhancing productivity, the economy will be forced to suffer a decline in consumption in the future as resources are diverted away from production for domestic use toward production to service the foreign debt.

A second hypothesis suggests that the financial/exchange rate crises in Asia, Russia, and Brazil from mid-1997 through early 1999 contributed to a "safe haven" inflow of short-term foreign capital into U.S. markets.[3] Briefly, the idea here is that the flight of capital from the foreign economies takes away from the productive and consuming capacity of those economies; it not only detracts from the capacity of their domestic economies to perform, but it also reduces their capacity to import from foreign markets, namely, the U.S. From the U.S. perspective, this flight of foreign capital into the economy does two things—it makes it more difficult for the U.S. to export goods and services to these now poorer performing foreign markets and it facilitates (makes cheaper, in terms of dollars) the U.S. importation of goods and services from these countries. Thus, other things remaining the same, the U.S. current account deficit increases. We call this the *safe haven* hypothesis. The concern implicit within this explanation for the capital inflow is that economic recovery and increased stability abroad might result in an abrupt and substantial outflow of short-term capital, with resulting disruption in U.S. financial markets.

A third potential explanation for the recent rapid increase in the current account deficit is associated with the technological restructuring of the U.S. economy. This hypothesis implies that a technology shift in the economy (largely related to the assimilation of advances in computer and communication technology) has increased the level of productivity, and returns on investment, in the economy. Demand for investment has increased in response to this technology shift, which in turn has stimulated the inflow (supply) of foreign capital in support of this new type of investment. We call this the *technological change* hypothesis. There is less concern about an eventual adverse adjustment in the economy in this case, because this hypothesis implies that productivity-enhancing investment will result in increased output in the economy, thereby facilitating the servicing and eventual repayment of the increased level of borrowing from abroad (the larger trade/current account deficit).[4]

Before we can examine the relationship between the international accounts and the domestic economy, we need to understand how these international transactions work. In the next section, we set out a simple framework for understanding these relationships, based on national income accounting identities. We then review the three hypotheses outlined above, which seek to explain the recent rapid increase in the current account deficit/capital inflow, and analyze how well they match the available evidence. Finally, we consider whether the deficit is sustainable and, if not, what the implications of each hypothesis might be for an eventual adjustment in the U.S. economy.

We find little support for the consumption boom explanation in the data. While consumption has increased, its share of total expenditures has declined. We find some evidence to support the safe haven rationale for the increase in capital inflows. However, because much of the capital inflow appears to represent long-term investment rather than a short-term flight to safety, we do not find the implications of this story to be particularly worrisome for the health of the U.S. economy. In other words, our view is that an unwinding of such capital inflows is unlikely to be overly disruptive to domestic financial markets. Finally, we find the technological change argument to have some merit. Much of the recent increase in goods imports has been in the "investment" goods categories—capital equipment, intermediate capital equipment components, and industrial supplies used in the production of capital goods. Recent gains in productivity measures and continuing structural changes across the spectrum of U.S. industry suggest that the economy may be shifting to a new and higher level of potential output. An economy in the process of such a shift has an incentive to increase borrowing from abroad to fulfill the increased demand for investment. We believe that the available data on the current U.S. economic environment fit well with this scenario.

International trade—the current account and the capital account

One can think of trade in the context of individual decision-making. Trade is a result of conscious and voluntary decisions made by individuals, firms, and public institutions. Any individual faces a budget in which current expenditures are constrained by current income and the ability to borrow. More specifically, allowing subscript t to represent the current period, the individual's flow budget constraint is:

1) $y_t + r_t a_t = c_t + i_t + (a_{t+1} - a_t)$,

where y is income, c is expenditure on the consumption of goods and services, i is investment expenditure, r is the interest rate, and a is net assets, which could be positive or negative. If a_t is greater than zero, then the individual is a net creditor. If a_t is less than zero, then the individual is a net debtor. The term $r_t a_t$ represents income or debt payments, depending on the sign of a_t. What this accounting relationship says is that one's current income is distributed over one's current consumption and savings with any shortfall resulting in an increased net liability in the next period $(a_{t+1} - a_t)$.

At the national level, the individual budget equation we presented above still holds, but some changes in notation are useful to see how the collective individual decisions—the sum of which are the national private budget decision—are related to the international economy. Allowing uppercase letters to represent the sum of the individuals' variables, the national budget constraint, or equivalently, gross national product, is:

$$2) \quad Y_t + r_t A_t = C_t + I_t + (A_{t+1} - A_t).$$

In a closed economy, that is, a country not open to foreign trade, the national debt must be zero, that is, $A_t = 0$. This means that the sum of all borrowers' debt must exactly offset the sum of all lenders' funds. In other words, the current expenditures of a country as a whole are constrained by its current income—it cannot borrow. In contrast, an economy that is open to international trade has the option of financing its aggregate demand for consumption and investment by borrowing abroad, that is, $A_t < 0$. Similarly, an open economy can lend or invest abroad, taking advantage of a wider market and enhanced risk/return choices for its assets.

The nation's expenditures $(C_t + I_t)$ can either be spent on domestic goods consumed at home $(Y_t - X_t)$ or on imports (M_t):

$$3) \quad C_t + I_t = (Y_t - X_t) + M_t.$$

This is the familiar national accounting identity:

$$4) \quad Y_t = C_t + I_t + X_t - M_t.$$

Rearranging terms in equation 4, we can express the *trade balance* as:

$$5) \quad X_t - M_t = Y_t - C_t - I_t.$$

By substituting the trade balance equation 5 into the budget equation 2 and putting the $r_t A_t$ term on the left side, we get

$$6) \quad (X_t - M_t) + r_t A_t = (A_{t+1} - A_t).$$

This equation represents a country's balance of international payments. The sum of the trade balance $(X_t - M_t)$ and net income receipts on net foreign assets (or net payments on liabilities) $(r_t A_t)$ is the *current account balance*. The change in the stock of foreign assets held by domestic individuals or firms is a *capital outflow,* and the change in the stock of domestic assets held by foreigners is a *capital inflow*, the net of which $(A_{t+1} - A_t)$ is the *capital account balance*.

Equation 6 shows that movements in the current account are matched by identical movements in the capital account. It also implies that if a country runs a current account deficit, there will be an increase in the stock of foreign liabilities in the next period to finance the difference (that is, foreign borrowing or a capital inflow). The interest rate is positive, so as A becomes a larger negative, the income balance in subsequent periods must be a larger negative, which leads to a larger current account deficit, all else equal. From here we can see that the increase in the stock of foreign debt, also referred to as the net international investment position (NIIP), can lead to an ever-increasing income deficit.

The recent behavior of these components of the U.S. balance of payments is the cause of the current concern. Data presented in figure 1 identify recent trends that have rekindled the debate about the "deterioration" in the U.S. international trade position. From 1992 through 1997, U.S. trade grew impressively, with the nominal value of exports of goods and services up 8.7 percent per year, on average, and imports up an even more robust 9.7 percent per year. The associated net export deficits for 1992 and 1997 rose from $36 billion to $106 billion, respectively, or from 0.4

FIGURE 1

U.S. trade balance

Source: Bureau of Economic Analysis.

percent to 1.1 percent of GDP. During the most recent two and a half years, however, the differential in the growth rates between exports and imports increased markedly, resulting in a dramatic increase in the trade deficit. Export growth slowed to an average of 1.3 percent per year, in the face of weak economic conditions in foreign markets, while average import growth held at a relatively strong 8.6 percent rate—stimulated by the robust domestic expansion. The trade deficit for 1999 stood at $254 billion and its share of GDP rose sharply, to 2.7 percent—approaching the record 3.0 percent reached in 1987. In the first half of 2000, the deficit rose further to $348 billion—at an annual rate, a level equivalent to 3.5 percent of GDP.

Figure 2 shows the behavior of the current account balance. The trade balance is the largest component of the current account; however, it is not the only item causing concern. Since 1998, the income balance has been in deficit; in 1999 it showed a deficit of 0.2 percent of GDP. This figure means that the income paid to foreigners on their holdings of U.S. assets exceeded the income received on U.S. assets held abroad. It is interesting to note that the nation's net international investment position (A_t) has been negative since 1986; however, only since 1998 has the income account been in deficit. This is because the rate of return on U.S. assets held abroad has historically exceeded the rate of return paid to foreign investors holding U.S. assets.[5]

The final category of international transactions included in the current account, which we neglected in our previous description, is unilateral transfers—government and private. These transactions are mostly in the form of U.S. government grants and aid to foreign countries and international institutions. On net, they have almost always constituted an outflow of funds from the U.S. The U.S. has recorded a net unilateral transfers inflow only in one year since World War II; this was in 1991 as a result of foreign governments' contributions to the U.S. for the Persian Gulf War.

As shown above, the capital account reflects the net acquisition or sale of assets by U.S. and foreign parties. Asset changes include changes in official assets (international reserves), the net outflow of funds from U.S. financial institutions, and direct investment abroad from U.S. firms and individuals. They also include the net inflow of funds from foreign financial institutions and the inflow of direct investment funds into the U.S. from foreign firms and individuals. Apart from "statistical discrepancy," the current and capital/financial account balances are always equal. Figure 3 shows the components of the capital account. The sum of all historical capital/financial account transactions equals the nation's NIIP. As mentioned earlier, the U.S. is currently a net foreign debtor. In 1999, foreign debt represented 15.9 percent of GDP.

Savings and investment imbalance

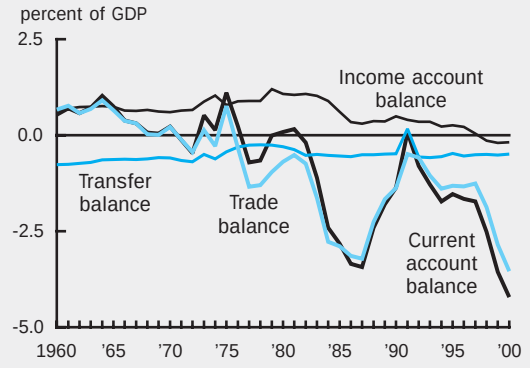
Looking again at the structural framework of the national accounting identities, we can examine how the equations presented above relate to the linkages between a country's domestic and international transactions. Equations 2 and 6 can be rearranged as:

$$7) \quad [Y_t + r_t(A_t) - C_t] - I_t = (A_{t+1} - A_t) = (X_t - M_t) + r_t A_t.$$

A country's inflow of foreign capital (debt) can be thought of as an import of foreign savings. A country's current income, less its current expenditures, equals its savings (S_t). It is easy to show that national savings less national investment is equivalent to the capital

FIGURE 2

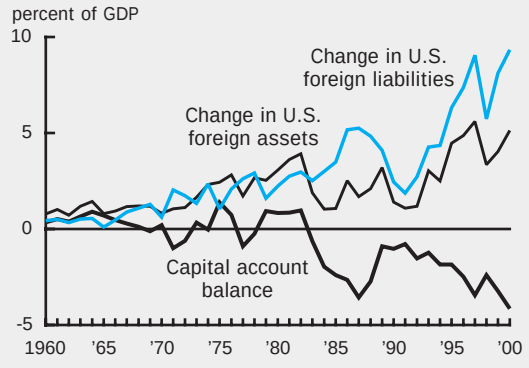
Components of current account



Source: Bureau of Economic Analysis.

FIGURE 3

Components of capital account



Source: Bureau of Economic Analysis.

account balance, which in turn equals the current account balance:

8) $S_t = [Y_t + r_t(A_t) - C_t]$.

9) $S_t - I_t = (A_{t+1} - A_t) = (X_t - M_t) + r_t(A_t)$.

This means that if a country's citizens in the aggregate decide to invest more than their available savings, then the country will run a current account deficit. This is matched by an increase in the stock of foreign debt. Thus, the current account deficit, representing the shortfall of domestic savings, will be financed by the net importation of foreign savings.[6]

To better understand this point, consider that when a country's aggregate demand for goods and services exceeds the aggregate domestic supply, it runs a trade deficit. Similarly, when aggregate supply outstrips aggregate demand, the country posts a trade surplus. This is what some economists term the "safety valve" quality of international trade. In the absence of the ability to trade with other countries, an excess aggregate demand situation would tend to bid up domestic prices. The trade balance, therefore, whether in deficit or surplus, is simply the residual of a country's aggregate demand and supply.

If a country has a trade deficit, it must finance it through foreign borrowing.[7] This description of market transactions, however, may give the misleading impression that debt is a sole consequence of trade flows. In reality, a country's net debt position is also a function of the relative risk and return preferences of investors. Foreign investors may want to invest in U.S. assets because they expect a higher risk-adjusted return than they might get at home or in a different country. As risk/return profiles around the world change, so do relative capital flows.

The relationship between a country's investment demand and the supply of domestic and foreign savings is shown in figure 4. In this graph of the market for loanable funds, the downward sloping demand curve for investment funds and the supply schedule of funds available for investment, or savings, are equilibrated by the interest rate. We see that the excess of domestic investment over savings is made up by foreign savings, or the current account deficit.

The size of an economy relative to the world economy is critical in determining the impact of changes in its investment demand and supply of funds. For example, a small economy in a world characterized by a high degree of capital mobility can have only a minuscule impact on the world interest rate. It essentially faces a perfectly elastic supply curve for funds; that is, any change in its domestic investment demand has little, if any, effect on the price it must pay for funds. By contrast, a large economy like the U.S., whose liabilities account for around one-third of the assets of the major OECD (Organization for Economic Cooperation and Development) countries,[8] has the power to influence the world interest rate. If, for example, there was an increase in demand for investment in the U.S., all else equal, the world interest rate would rise. Similarly, if for some exogenous reason, U.S. residents chose to save more (for example, due to a change in the demographic distribution over time), the world supply of loanable funds would increase and the world interest rate would fall.

Which hypothesis best fits the data?

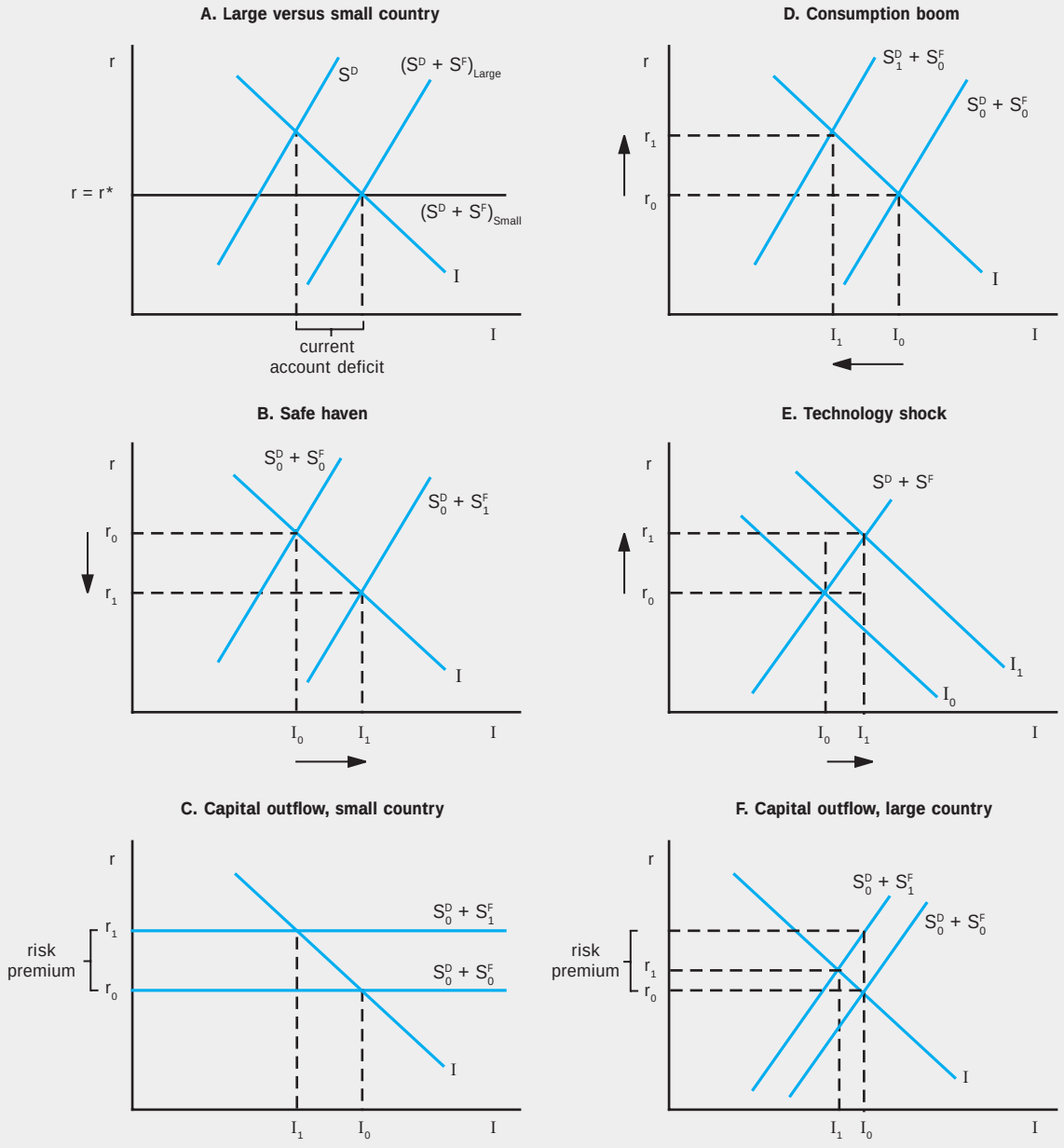
Using the framework we developed in the previous section, we briefly review our three hypotheses and examine to what extent they are supported by the data. While these hypotheses are not mutually exclusive, they do imply very different effects on interest rates and investment.

To many observers, the current boom in the U.S. economy is clearly manifested in a surge in personal consumption activity. U.S. consumers are purchasing more goods, including imports. At the same time, the personal saving rate has fallen to nearly zero (indeed, in July 2000 it was estimated at –0.2 percent).[9] These indicators lead to the view that increased consumption (and decreased saving) has led to the record trade deficit and capital inflows. This view translates into a shock to U.S. consumer tastes and preferences in favor of current over future consumption. This is very different from an increase in consumption associated with an increase in wealth. In the present situation, consumption is thought to be increasing at the expense of savings, regardless of income. In the context of the loanable funds market in a large economy, this would be reflected in an inward shift in the supply curve for funds, all else equal. From figure 4, we would expect this scenario to lead to a decline in investment and a rise in the interest rate.

The second potential explanation for the current account deficit and record capital inflows contends that the financial crises experienced by Asia, Russia, and Brazil from mid-1997 led to capital, domestic and foreign, fleeing these markets for the "safer" U.S market. This equates to the U.S. experiencing a beneficial shock to the perceived risk of its assets. Foreign capital (savings) flowed into the U.S. so more funds were available at any given interest rate. Again, all else equal, this would result in an outward shift in the supply curve for loanable funds, which would cause

FIGURE 4

Market for loanable funds



Notes: r* = world interest rate; S^D = domestic savings; S^F = foreign savings; I = investment.

interest rates to decline and investment to increase, as shown in figure 4. Note that this explanation is not inconsistent with an increase in the level of consumption, attributable to the increase in the quantity of investment leading to higher income.

The final explanation we consider argues that the U.S. is experiencing a positive technology shock, which has increased the economy's productivity and long-run level of potential output. The productivity of capital is higher and, hence, the incentives for investment are higher. As shown in figure 4, all else equal, this would correspond to an outward shift in the demand curve for investment and an increase in both interest rates and investment. Again, this explanation also justifies an increase in the level of consumption, since there is a wealth increase associated with the productivity shock.

Which of these explanations fits best with the recent behavior of the U.S. economy? Figure 5 shows that both gross domestic saving and investment as shares of GNP have been increasing since 1991. Investment however, has been increasing at a faster rate than national saving, resulting in the current account deficit.[10]

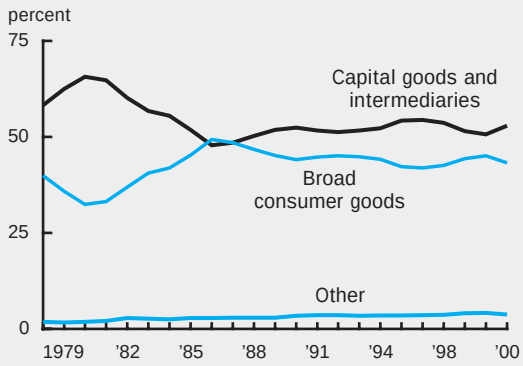
Immediately, we see that the behavior of investment does not support the consumption boom argument. We also find other evidence that refutes the consumption boom story. Imports of consumption goods, broadly defined to include automotive products and food, did represent more than half of the increase in the goods–trade deficit between 1998 and 1999.[11] However, looking at this figure alone may be misleading. Consumer goods historically have been the largest component of the goods–trade balance. Looking at the behavior and composition of imports, we see that capital goods, including non-oil industrial supplies and materials, actually comprise a larger share of our total imports than consumer goods (figure 6). Furthermore, there has been no apparent increase in consumer goods' share of imports. Note that we still run a trade surplus overall in capital goods, although it has been declining since 1970. Furthermore, to the degree that our capital goods imports constitute inputs into the production of intermediate and final goods, these figures may be reflecting re-exports. Figure 7 plots the components of our trade balance in capital goods, and indicates that since 1991 the U.S. has been a net importer of computers and related equipment. These capital goods are generally associated with productivity-enhancing investment.[12]

Perhaps a clearer view of whether the widening of the current account deficit is a result of a consumption boom can be seen from consumption and investment shares of gross domestic purchases (which include imports and exclude exports). This measure is equivalent to the resource constraint described in equation 3. Figure 8 plots these ratios (with government spending removed). An increase in investment since 1990 (above its historical trend) is evident, while total consumption expenditures have actually been declining in relative terms. The ratios are in real (price-adjusted) values, so they capture the volume effects of increased investment. Based on these statistics, one could argue that while the U.S. continues to have a growing trade deficit in consumption goods, these imports, as well as imports of capital goods, are allowing the economy to reallocate highly employed, scarce domestic resources toward productive investment.

While the investment behavior data refute the consumption boom theory, they support both the safe

FIGURE 6

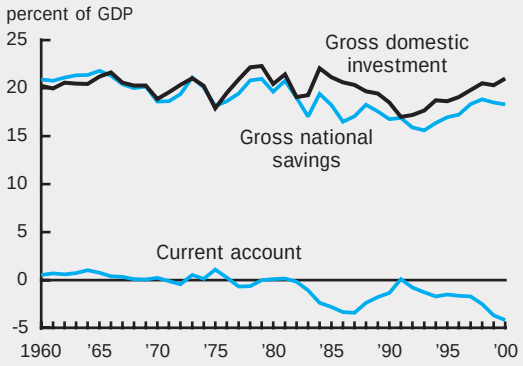
Share of total U.S. imports



Note: Broad consumer goods comprises consumer goods, foods, feeds and beverages, and automotive.
Source: Bureau of Economic Analysis.

FIGURE 5

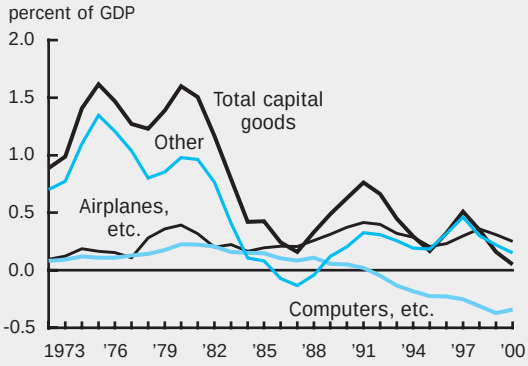
Savings and investment



Source: Bureau of Economic Analysis.

FIGURE 7

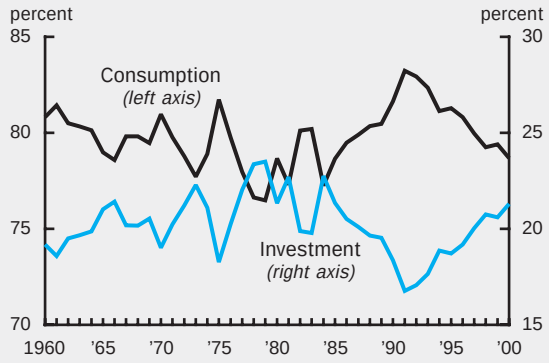
Capital goods trade balance



Source: Bureau of Economic Analysis.

FIGURE 8

Share of gross domestic purchases
(less government spending)



Source: Bureau of Economic Analysis.

FIGURE 9

Ten-year Treasury bond rate

Source: Federal Reserve Board of Governors.

haven and technology hypotheses. These two shocks would have opposite effects on interest rates, however. So how have U.S. interest rates behaved during the past two years? Figure 9 plots interest rates on the ten-year Treasury bond since 1990. From this figure we see that long-term interest rates declined from the middle of 1997 until late in 1998. From then until recently, U.S. long rates trended upwards. Obviously, these two effects did not operate in isolation—interest rates are affected by numerous developments. However, the "safe haven" story is supported by the decline in interest rates through 1998. During 1999, rates began to rise and capital flows and investment continued strong. This would indicate that increased domestic investment demand has been the dominating effect lately. So, while a combination of both the safe haven and technological change stories may have led to the record net capital inflows and current account deficit, it appears that technological change—increased U.S. demand for investment associated with the enhanced productivity of the economy—has dominated more recently.[13]

What would an adjustment mean?

With what we've learned about the likely sources of the current account and trade deficits (along with the corresponding capital flows), we now address whether these deficits are sustainable in the long term and, if not, what sort of adjustment the U.S. economy might ultimately undergo. If we consider the intertemporal qualities of the current account and capital account relationship, we can show that in the steady state, a trade deficit can be sustained as long as the growth rate of national income exceeds the rate of return paid on the nation's liabilities. Box 1 presents the details. How does the U.S. NIIP measure up against this sustainability requirement? Historically, the nominal growth rate of the U.S. economy has averaged around 7.4 percent per year.[14] The average nominal rate of return paid on U.S. foreign liabilities over the 1976 to 1999 period was around 5.5 percent. The 2 percentage-point difference between these rates implies that a trade deficit could be sustained.

The relationship also implies that for a given sustainable trade deficit, the U.S. can accumulate foreign liabilities up to some maximum level. Has this level been reached? If we consider that the average net exports share of GDP over the 1976 to 1999 period was –1.4 percent, and if we assume these averages to be the long-run values of these variables, then the corresponding long-run NIIP to GDP (or net foreign debt) position would be 70 percent. This level of indebtedness would likely not be desirable politically, given that the current NIIP to GDP ratio of 15.9 percent for 1999 is considered by some to be too large. Similarly, there is likely a foreign debt to GDP ratio above which foreign creditors would consider additional lending to the U.S. imprudent and, therefore, be less willing to purchase additional U.S. assets. Conversely, if one believes that there is some appropriate or desirable long-run level of foreign debt to income, say, for example, 20 percent, the corresponding long-run trade deficit to GDP ratio would be only around 0.4 percent.[15] If one were to subscribe to this second idea, then the current size of the deficit is "too large" and will adjust. What might an adjustment entail under our three different scenarios?

If the consumption boom argument held merit, then we would expect that, in the future, consumption would have to decline along with output as the

BOX 1

Sustainability of the current account deficit

The current account is the sum of the trade balance ($X_t - M_t$), income receipts on foreign assets held by U.S. citizens, income payments on U.S. assets held by foreigners, and unilateral transfers, which are typically foreign aid. The income receipts and payments net out to simply the rate of return (r) paid on the U.S.'s net international investment position (A), or stock of net foreign debt, multiplied by the current stock of NIIP. The capital account is equal to the change in the NIIP, and always equals the current account. Ignoring the foreign aid component, and allowing subscript t to represent the current period, we have

$$(X_t - M_t) + (1 + r_t)A_t = A_{t+1}.$$

As discussed in the text, the current account is equal to the capital account. Taking this relationship and dividing through by GDP (Y), we derive

$$((X_t - M_t)/Y_t) + (1 + r_t) \times (A_t/Y_t) = (Y_{t+1}/Y_t) \times (A_{t+1}/Y_{t+1}).$$

Now, allowing an S prefix to indicate share of GDP and g to be the growth rate of GDP, we can rewrite the equation as follows:

$$(SX_t - SM_t) + (1 + r_t)\, SA_t = (1 + g_t) \times SA_{t+1}.$$

In the long-run steady state, this equation can be represented as

$$(SX - SM) = (g - r) \times SA.$$

From this equation it can be seen that in the long-run steady state, the sustainability of a trade deficit depends on the relationship between the growth rate of the economy and the interest rate paid on U.S. liabilities. Specifically, a negative trade balance could be sustained as long as the rate of growth of income is greater than the interest rate ($g > r$).

U.S. begins running trade surpluses and repaying the foreign debt. However, as we noted earlier, we find this to be the least compelling hypothesis of the three we consider. So, in our view, this type of adjustment is unlikely.

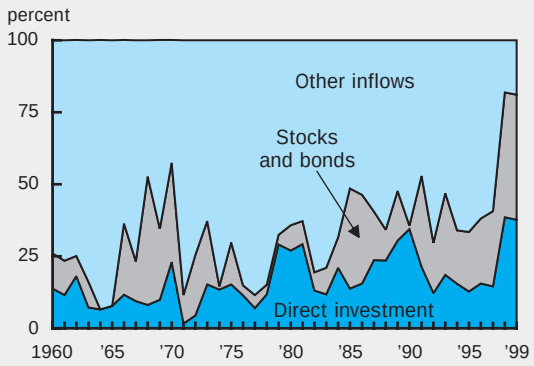
Under the safe haven scenario, for which we do find some support in the data, the adjustment would entail a reversal of the beneficial shock to the U.S. risk factor and a corresponding outflow of foreign capital from the U.S. It is not surprising that there is concern about the economic consequences of this type of adjustment in the U.S. current account deficit, given the financial crises we have seen in other parts of the world in recent years. The Mexican peso crisis in 1994–95 was followed by the Asian financial crisis beginning in mid-1997, the Russian bond default crisis in August 1998, and the Brazilian currency devaluation in early 1999. All of these developments displayed similar characteristics in that they involved a discord between countries' internal and external balances, capital flight, and sharp currency depreciations, followed by much slower or negative GDP growth during the adjustment phase.

However, as we noted above, the link between a country's internal and external balance is the interest rate, and a country's ability to influence the world interest rate is critical to the adjustment process. To see why this is important, let's examine the sequence of events if a country is confronted with an adverse shock to its perceived risk factor. This is the opposite of the shock described in the safe haven argument. In this case, foreigners demand a risk premium in excess of the world interest rate in order to supply the current level of funds. This is equivalent to a reversal or slowdown in capital inflows and would lead to a rise in national interest rates and a depreciation of the national exchange rate. Higher interest rates would lead to lower investment and consumption, while the exchange rate depreciation would lead to higher exports and lower imports. The fall in consumption and investment should outweigh the rise in exports, which means that output should fall. As shown in figure 4, however, these effects are less severe in a large country than in a small one.

Another important factor in determining the likely severity of an adjustment is the extent to which the capital inflows to the U.S. represent short-term, *hot money*. Some observers argue that speculative foreign capital has gone predominately into the U.S. stock market. However, a review of the structure of the U.S. capital account shows that this is not the case. Figure 10 shows that the largest shares of capital inflows since 1997 have been in the form of direct investment, defined as the purchase of a greater than 10 percent equity stake in a U.S. firm, and in long-term, non-Treasury securities, which include stocks and corporate

FIGURE 10

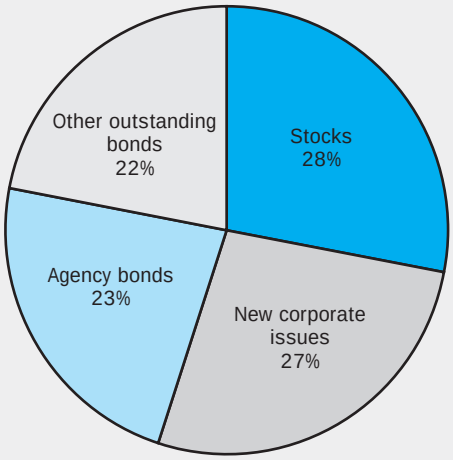
Share of capital inflows



Source: Bureau of Economic Analysis.

FIGURE 11

Foreign purchases of non-Treasury securities (1997–99 average)



Source: Bureau of Economic Analysis.

and municipal bonds with a maturity of at least one year. Such debt has contractual characteristics that make it harder to dissolve than short-term securities and bank loans. This is not to say that these assets are not liquid, but simply that they are not maturing and revolving at very short intervals.[16] Within the non-Treasury securities category, the share of equities was higher on average in the 1997 to 1999 period (28.6 percent) than in the entire 1991 to 1999 period (16.8 percent). However, figure 11 shows that the bulk of the inflows have been in the bonds, rather than the stocks subcategory.

Another important aspect of the capital account is that most of our existing debt, as well as the capital inflow, is dollar denominated. This means that in a capital outflow situation, the U.S. would not face the difficulty that some countries have of exchanging a depreciated domestic currency for the more expensive currencies in which payments need to be made.[17]

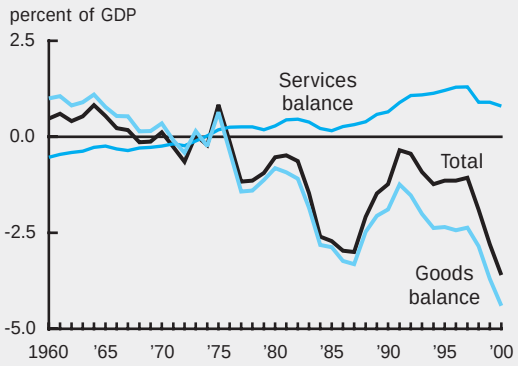
Finally, under the technological change scenario, for which we also find support in the data, the investment in productivity-enhancing capital stock leads to an increase in the output of the economy. As output increases over consumption, the country exports the excess and begins to run trade surpluses, thus beginning repayment of the foreign debt.[18]

An additional and related aspect of the technology shift argument derives from the composition of U.S. trade in goods versus services. Figure 12 shows that while the U.S. has run a persistent deficit in goods, the trade surplus in services is increasing. Trade in services represented 30 percent of U.S. goods and services exports in 1999. As the U.S. economy continues its transition toward a service economy, and as foreign countries continue to demand more services, we expect this trend will increasingly offset the goods deficit.

The scope of international trade in services, and the U.S.'s relative position in this market, is seldom given attention in policy discussions and the popular press. In fact, economists have traditionally regarded services as nontradable. Advances in technology, however, have allowed many services to transcend their historically local nature. While haircuts are still difficult to export, technological advances in communications are increasingly allowing U.S. companies to export business services, travel services, and financial services around the world. Deregulation of service industries within the U.S. and in other countries, international trade liberalization in services, and improvements in technology for service distribution

FIGURE 12

Trade balance and components



Source: Bureau of Economic Analysis.

channels will continue to expand the international market for services. With services already representing over half of real GDP, this is an area in which the U.S. will likely continue to be a competitive force in the expanding world market.[19]

If the increase in investment demand is truly due to an increase in productivity associated with new technology, and if this technological transformation continues to positively affect service industries, the U.S. can expect to reap substantial income gains in the future.[20] This would mean that the current U.S. international deficit position simply reflects the current and expected future prosperity of the U.S. and, importantly, that the adjustment process should be automatic and painless.

Conclusion

The U.S. deficit in international trade soared to new heights in 1998, again in 1999, and in all likelihood, will increase even further this year. Mirroring these deficits have been huge capital inflows from foreign investors. Is the condition of the U.S. international accounts placing the domestic economy in jeopardy? Can the U.S. continue to run such large trade deficits—continue to borrow abroad to finance the deficits—without facing an adjustment that will severely disrupt the domestic economy, along the lines of what some other countries have experienced in recent years?

In reviewing three commonly cited explanations for the source of the current account deficit—that it is a result of a boom in consumer spending at the expense of savings; that it is a result of short-term capital inflows fleeing disruptive economic conditions abroad; and/or that it is a result of a transition of the economy toward a higher level of productivity—we find that the evidence supports the notion that the current account deficit reflects a technological shift that has led to an increase in the relative prosperity of the U.S. economy. Furthermore, to the extent that an adjustment in the international sector may take place in the future, we would expect it to be relatively smooth and gradual—an adjustment that can be accomplished without serious adverse consequences to the U.S. economy. We also find some support for the safe haven story, but we do not believe that the U.S. economy faces the kind of sudden reversal in capital inflows that would be highly disruptive. This view is based on the large relative size of the U.S. economy, and its consequent ability to influence world interest rates, and the fact that much of the capital inflows of recent years have been in the form of longer-term investments.

NOTES

[1]Fred Bergsten, as quoted in Stevenson (2000).

[2]Note that this reason implies that the increase in consumption was a result of a shock to consumer tastes and preferences and is very different from an increase associated with an increase in wealth.

[3]This explanation was put forth in Hervey and Kouparitsas (2000).

[4]See, for example, Pakko (1999) and Hervey (1986).

[5]The March 2000 issue of *Survey of Current Business* reviews the behavior of returns to foreign direct investment in the U.S. The author finds that the return on assets (ROA) of U.S. owned companies in the U.S. exceeded the ROA of foreign owned companies in the U.S. by between 1 percent and 2 percent over the 1988–97 period.

[6]In this description of a national budget constraint we ignore the public sector. Government spending and saving would, of course, also affect a country's aggregate demand, and so its external balance. In particular, a government budget deficit lowers national savings and so lowers the current account balance. This is the basis of the twin deficits argument that was popular in explaining current account behavior during the 1980s.

[7]This is true if A_t is less than or equal to zero. If the country has a net stock of foreign assets, it need not borrow but can simply draw down its foreign asset stock.

[8]Humpage (1998).

[9]The personal savings rate may not be an appropriate measure, however. See Velde (1999).

[10]Another interesting aspect of figure 5 is that gross savings and gross investment in the U.S. are highly positively correlated, while investment and the current account deficit have a weaker, negative correlation. A number of studies have shown that investment booms are highly negatively correlated with increases in current account deficits, especially in smaller countries. See discussion in Baxter (1995). The difference between the excess investment and the current account deficit presented in figure 5 is termed the statistical discrepancy. Some argue that the increase in this component of the national accounts since 1997 has led to the current account deficit being overstated. See Koretz (2000).

[11]Cars and trucks account for about 85 percent of the automotive category. The food category here includes feed products.

[12]The U.S. is running a surplus in "advanced technology products," although it declined from $32.3 billion in 1997 to $19.1 billion in 1999.

[13]What the dominant force has been on the way to the current situation in the U.S. current account may not be as important as whether these shocks are permanent or temporary. Here, we assume that the shock is permanent or at least very persistent. See Baxter (1995).

[14]Over the 1955–99 period.

[15]Our choice of 20 percent in this example is arbitrary.

[16]The maturity structure of countries' foreign liabilities becomes very important in a capital outflow situation. In comparison, of Mexico's foreign liabilities in 1994, 55 percent were short term. When foreign sentiment towards Mexican assets changed, Mexico faced difficulty in rolling this debt over.

[17]Mann (1999), chapter 9.

[18]The technology shock would eventually be transmitted to the rest of the world, making investment in foreign countries relatively more attractive and encouraging a current account adjustment in the U.S.

[19]In 1999, services represented 52 percent of real GDP. See Mann (1999), chapter 6, for a further discussion of trade in services.

[20]The jury is still out on whether the U.S. is truly experiencing a "new economy" technology shock. See Kouparitsas (1999).

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