

Perspectives on the U.S. Current Account Deficit and Sustainability

Catherine L. Mann

The U.S. current account balance has been deeply in deficit in recent years, including the record \$410 billion deficit in 2000, 4.2 percent of GDP, followed by \$393 billion in 2001. By definition, an economy running a current account deficit will experience an overall net capital inflow, as foreigners on net buy U.S. firms, stocks, bonds, Treasury obligations and currency—and also make bank loans in exchange for U.S. purchases of imported goods and services. A current account deficit can mean that a country is “living beyond its means,” because overall consumption and investment exceed the national savings of the economy. Alternatively, it can mean that a country is an “oasis of prosperity,” attracting investment from around the globe because the economy delivers higher investment returns at lower risk than other investment choices.

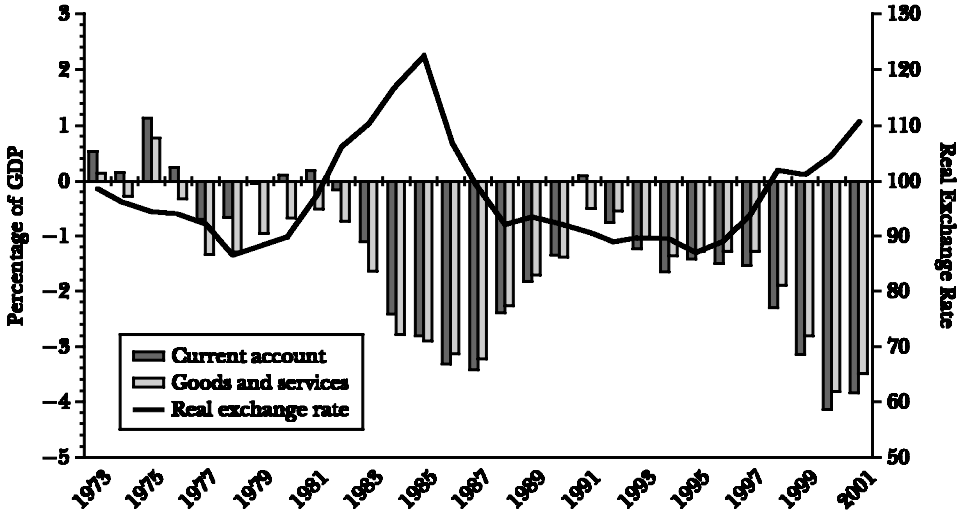
By the mid-1980s, the accumulation of the current account deficits and net foreign capital inflows had turned the net international investment position of the United States from positive to negative; that is, foreign investors now hold more U.S. assets than U.S. investors hold of foreign assets.¹ By the end of the year 2001, the net international investment position of the U.S. economy was about negative \$2 trillion, or 20 percent of GDP.

The negative net international investment position bears on the question of

¹ The exact year when the net international investment position turned negative depends on whether direct investment is calculated at current cost of plant, equipment and land or whether stock market prices are used to value the equity assets (Landefeld and Lawson, 1991). Calculated at current cost, the net international investment position turned negative in 1986, and the net international investment position in 2000 was \$1.4 trillion. Calculated at market value, the net international investment position turned negative in 1988, and the net international investment position in 2000 was \$1.6 trillion. See King (2001).

Figure 1

Overview of the External Deficits and the Dollar



Source: External Balances: Bureau of Economic Analysis, Department of Commerce; (<http://www.bea.doc.gov>). Real exchange rate: Federal Reserve Board; (<http://www.federalreserve.gov>).

Table 1

U.S. External Balance and Components, Selected Years (billions of dollars)

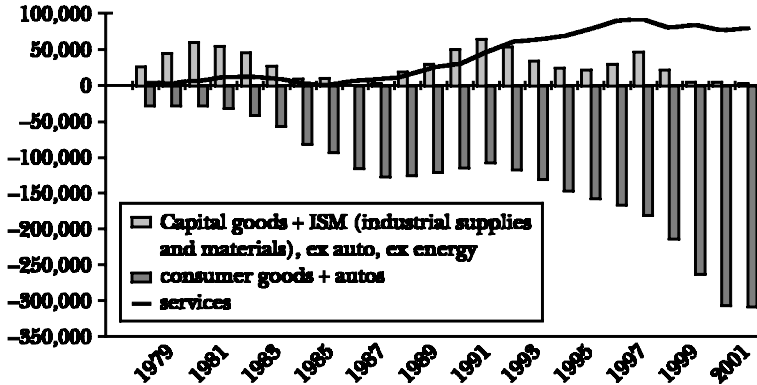
	1980	1985	1990	1995	2001
Current Account	2.3	-118.2	-79.0	-105.8	-393.4
Goods and Services	-19.4	-121.9	-80.9	-96.4	-358.3
Net Income	30.1	25.7	28.6	24.6	14.4
Net Unilateral Transfers	-8.3	-22.0	-26.7	-34.1	-49.5

Source: Bureau of Economic Analysis, Department of Commerce, (<http://www.bea.doc.gov>). Revised data 6/20/2002.

the sustainability of the current account deficit and the associated inflow of capital. The large stock of financial obligations implies flows of income payments and receipts—interest, dividends and the like—that must be paid out of the economy's current production and that could get large enough to reduce current consumption and investment. Moreover, even a large economy such as the United States must consider the implications of a change in foreign investor sentiment about the desirability of holding a large share of U.S. assets in their portfolios and of continuing to provide the net inflow of financial capital.

Figure 1 shows the current account deficit and its main component, the goods and services trade balance, as a share of U.S. GDP since 1973. Table 1 shows the magnitude in dollar terms for selected years of these two main balances, along with the remaining two components of the current account: net income payments on the net international investment position and unilateral transfers (such as U.S.

Figure 2
Trade Balance by Important Sector
 (millions of dollars)



Source: U.S. Census, (<http://www.census.gov/foreign-trade>).

grants to foreign countries and private remittances). Since the late 1970s, the U.S. trade balance has been in deficit. It widened dramatically when the U.S. economy was growing strongly relative to the world economy in the mid-1980s and the second half of the 1990s, and it narrowed in the early 1990s when the U.S. economy grew more slowly than the global economy. Also shown on Figure 1 is the real exchange value of the dollar, which is the international asset price companion to the current account. The real exchange value of the dollar also has exhibited large swings, most notably the appreciation-depreciation cycle of the mid-1980s. In the 1990s, the dollar has appreciated significantly, as well.

One consequence of the change in the net international investment position can be seen in the net income line in Table 1. When the net international investment position was positive in the 1970s and early 1980s, the U.S. economy received net income from its investments abroad. In 1980, for example, a goods and services trade deficit of \$19 billion was offset by net income of \$30 billion from foreign investments. As the net international investment position turned negative, the net income balance has gotten smaller, but was still a positive \$14 billion in 2001.

A more detailed look at the composition of trade in goods and services reveals that some sectors are characterized by cyclical fluctuations, whereas for others a trend is apparent. Figure 2 relies on “end-use” categories compiled by the Bureau of Economic Analysis of the U.S. Department of Commerce. It combines some of these categories into three sectors: capital goods and nonenergy industry supplies; consumer goods and autos; and services. Figure 2 shows that the trade surplus on capital goods and nonenergy industrial supplies, which are closely associated with changes in business demand for investment goods, fluctuates with the business cycle. In contrast, the trade balance for consumer goods and autos has been

persistently and increasingly negative, whereas that for services, persistently positive.

This essay considers the underpinnings of the large U.S. current account deficit. It then tackles the question of whether the U.S. current account deficit is sustainable. A current account deficit is “sustainable” at a point in time if neither it, nor the associated foreign capital inflows, nor the negative net international investment position are large enough to induce significant changes in economic variables, such as consumption or investment or interest rates or exchange rates. Even if the current account deficit is sustainable by this definition today, its trajectory could still be creating future risks for the U.S. and global economy.

Three Perspectives on the Current Account Balance

In some sense, focusing on the current account balance is misguided. After all, the current account is not a fundamental economic force in itself, but only one manifestation of the general equilibrium interaction between many factors: domestic rates of saving and investment; economic growth and trade; international investment and capital flows; prices and rates of return and the exchange rate; and fiscal and monetary policy. Although certain general equilibrium models encompass many features of the domestic and international economic interrelationships (like Knight and Scacciavillani, 1998), it is useful and common to take one of three perspectives on the current account deficit: 1) a domestic perspective based on national income and product accounts; 2) an international perspective based on trade flows in goods and services; and 3) an international perspective based on flows and holdings of financial assets. These three perspectives are different lenses through which to analyze the general equilibrium system. Each perspective involves a decision to focus on certain variables or economic relationships and to de-emphasize or even ignore other variables and relationships. Each perspective may be particularly useful in certain situations or time frames. All together, the three perspectives give views that are consistent and mutually reinforcing.

A Domestic Perspective Based on the National Income and Product Accounts

The first perspective on the current account deficit is based on the domestic national income and product accounts and shows how patterns of domestic savings and investment are reflected in the trade and current account balances. In the national accounts framework, it is an identity that domestic production in an economy must equal spending plus the trade balance. In the case of a trade deficit, a nation’s spending will exceed its domestic production, which yields the observation that, in a static sense, the United States has been “spending beyond its means.” A common arrangement of the national income and product account variables in the 1980s placed the two main sources of saving, private domestic saving and the foreign capital inflow due to the current account deficit, on one side of the identity,

with the two main sources of demand for financial capital, private sector investment and the government budget deficit, on the other side:²

$$\begin{array}{rcc} \text{domestic} & & \text{private} & \text{government} \\ \text{private} & + & \text{investment} & + & \text{budget} \\ \text{savings} & & \text{deficit} & & \text{deficit} \end{array} .$$

This form of the identity highlights that if domestic private savings and investment are roughly equal or at least move by about the same amount, then the fiscal and current account deficits are twins—about the same size and moving in the same way. Indeed, this pattern of events occurred in the 1980s. From 1983 to 1989, private savings and investment did move together and, by arithmetic, so did the fiscal budget and current account deficits. From 1980 to 1986, the federal budget deficit increased from 2.7 percent of GDP to 5 percent of GDP, and the current account deficit increased from 0 to 3.5 percent of GDP. The two were called the “twin deficits,” not only because they increased by about the same amount, but also because they derived from similar policy fundamentals. During the 1980s, expansionary fiscal policy through large budget deficits yielded robust domestic spending that supported both growth of U.S. GDP and increased imports. The government deficit increased demand in the capital markets, and monetary policy was tight, both of which kept interest rates high. High interest rates attracted foreign investment, appreciating the exchange value of the dollar. The appreciated dollar made U.S. exports more expensive for foreigners to buy and imports cheaper. Thus, the current account deficit widened in the 1980s as the fiscal stimulus yielded both robust U.S. economic growth and an appreciation of the dollar. The deficits were twinned through the mechanism linking the fiscal budget deficit to GDP growth and high interest rates, to high imports and appreciated dollar, to the current account deficit.

By the late 1990s, the federal budget deficit had moved into surplus, but the current account deficit widened. What changed to separate the former twins? The chain of causality starting with a large fiscal deficit and ending with a large current account deficit could have unwound in reverse: A reduced fiscal stimulus could have reduced demand throughout the economy, including demand for imports. The smaller fiscal deficit also could have taken the pressure off the costs of funds in financial markets and interest rates. With lower interest rates, the demand for U.S. and dollar-denominated assets could have fallen and the dollar depreciated,

² Recall that in the national income and product accounts identity, production equals spending also implies that savings equals investment ($S = I$). Savings has three components: private savings (S_p) comprised of household savings and corporate profits, public savings, or the fiscal budget position ($T - G$), and foreign savings, or the inverse of the trade deficit ($M - X$). Substituting and recombining yields the identity for sources and uses of funds: $S_p + (M - X) = I + (G - T)$. If government savings became a surplus, then it would shift sides of this equation and appear as $(T - G)$ on the other side as a source of funds. Similarly, if the trade balance became positive, it would shift sides of this equation and appear as $(X - M)$ on the other side as a use of funds.

all of which would help to narrow the current account deficit. Indeed, for a short period in the early 1990s, the variables seemed likely to follow this course.

But then the “new economy” arrived: the realization of efficiency gains, cost reductions and productivity enhancements from using information and communication technologies in an environment of heightened global competition and leading to the transformation of business activities.³ For present purposes, the key importance of the new economy phenomenon is that it drove a wedge between private investment and private savings.

On the one hand, business investment boomed in the 1990s—particularly in information technologies—rising from 5.5 percent of GDP in 1992 to 8.6 percent of GDP in 2000. The productivity gains associated with effective use of this investment contributed to an unprecedented rise in the U.S. stock market and to other valuations of the rates of return on business investments. The U.S. economy was in fact an “oasis of prosperity” at this time. Along with the economic environment of low unemployment, households became more confident of the future value of their wealth. So household savings, a key component of private savings, declined dramatically from 6.5 percent of GDP in 1992 to less than 1 percent of GDP in 2000.⁴ Despite greater public savings from the federal budget moving from a deficit of 4.8 percent of GDP in 1992 to a budget surplus of 2.5 percent of GDP in 2000, national savings was insufficient to finance the high rate of private investment.⁵

The productivity gains in the U.S. economy and the huge increases in U.S. stock market values also attracted foreign investors. Despite low interest rates on bonds, foreign capital inflows kept the value of the dollar high as foreigners sought out the high returns of the U.S. economy and invested their savings here, contributing at the same time to the financial sources for innovation and robust productivity growth. Because of the high investment in a hospitable market environment and the attraction of foreign capital, the chain of causality that had related the fiscal position to the current account position in the 1980s was broken in the 1990s.

³ For discussions of the “new economy” phenomenon in this journal, see Baily (2002) and the Symposium on Computers and Productivity in the Fall 2000 issue, along with the articles cited therein.

⁴ The official household savings rate is a residual calculation from the national income and product account definitions: personal disposable income minus personal consumption outlays. Its relationship to the economic concept of saving is questionable, and its trend behavior over time has become quite controversial (particularly as the measured rate fell below zero in 1999 as initially calculated, although it was subsequently revised). Gale and Sabelhaus (1999) show that if the definition based on the national income and product accounts is adjusted for other forms of retirement saving (such as federal and state retirement plans), the decline in the household savings rate is somewhat less dramatic. By including consumer durables in household savings as well as adjusting for inflation and certain taxes, the rate of decline levels out even more. Finally, including capital gains makes a huge difference; indeed, it reverses the measured decline. Whether to include the volatile capital gains component in savings is open to question.

⁵ There is a statistical discrepancy between gross domestic product—which is the value of expenditures—and gross domestic income—which is the income earned. These two values of the total economy should be the same, but they come from different source data, and in recent years, gross domestic income has been higher by some 0.5 percent of GDP. The gap seems to be widening: gross domestic income was 0.8 percent of GDP higher in 1999 and 1.3 percent higher in 2000. How the statistical discrepancy might be allocated to consumption and investment affects the macroeconomic identities, particularly the savings-investment balance. For more discussion, see Mann (1999, pp. 25–27).

A Perspective Based on International Trade in Goods and Services

The second viewpoint on the current account is an international perspective based on the factors that underpin the flows of exports and imports of goods and services. The previous perspective may have implied that foreigners respond passively to the demands reflected in our national accounts. For example, if a gap opens up between low private savings and high investment in the U.S. economy, the first perspective seems to imply that foreign investors will simply consume less and save and invest as much as the U.S. economy needs to finance its investment. The second perspective, focusing on the forces that drive export and import flows, provides an explicit role for foreign demand for goods and services. This alternative framework allows us to examine how global and national GDP growth, as well as the exchange rate, can affect the current account. It also allows us to consider the impact on trade and the current account of structural factors such as comparative advantage and globalization.

A useful starting point for this perspective is a model in which growth of national income and changes in relative prices drive trade flows (Marquez and Ericsson, 1993). In this model, exports grow faster when foreign income grows faster and when the relative price of exports to competing goods and services in the destination market falls. Imports grow faster when domestic income grows faster and when the relative price of imports to domestic goods and services falls.⁶ Figure 3 illustrates the U.S. experience. The top panel graphs annual changes in U.S. exports on the left-hand axis and changes in real world GDP (excluding the U.S. economy) on the right-hand axis. The bottom panel graphs annual changes in U.S. imports on the left-hand axis and changes in real U.S. GDP on the right-hand axis. The close relationship between GDP growth and real import and export growth is quite clear.

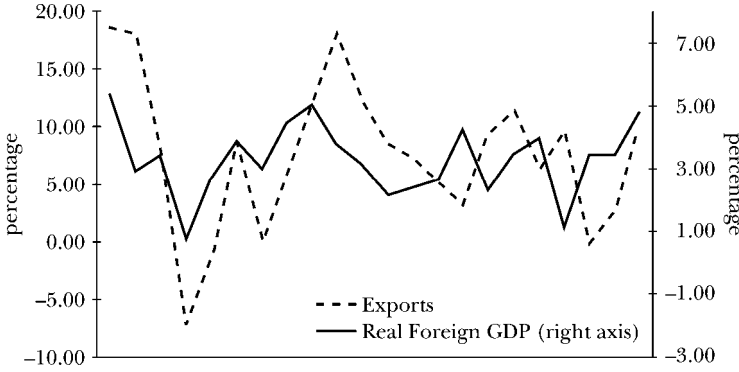
Examining the two panels also reveals the role of relative prices of exports for export growth and of imports for import growth. When the dollar depreciated sharply between 1986 and 1989, the relative price of U.S. imports tended to rise, making domestic products more attractively priced, and the relative price of U.S. exports tended to fall, making U.S. products more attractively priced in the destination markets. Thus, in the bottom panel, in the years around the dramatic depreciation of the dollar, imports grew more slowly than would have been expected based on the growth of U.S. GDP alone (that is, the dotted line is below the solid line). In the top panel, U.S. exports grew more quickly from 1986 to 1989 than would have been expected on the basis of foreign growth alone (thus, the dotted line above the solid line).

When equations are estimated for the effect of national income and relative prices on imports and exports, the estimated parameters generally produce

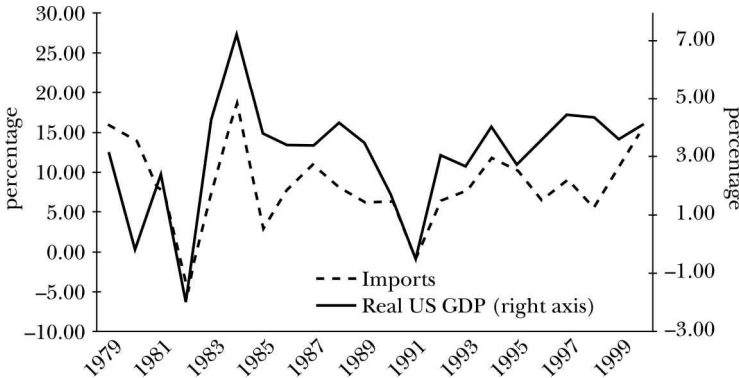
⁶ As discussed in Mann (1999, pp. 96–99, 117–119), the relative price of U.S.-traded goods and services has several components: the cost of production of the good or service by the home or foreign producer, the firm's markup over cost and the nominal exchange value of the dollar, which allows a buyer to compare prices in a common currency. The real exchange value of the dollar, appropriately trade weighted, summarizes these factors.

Figure 3

U.S. Exports and Foreign GDP



Imports and U.S. GDP



Source: GDP: World Development Indicators, 2001.
 Trade: Bureau of Economic Analysis, Department of Commerce.

excellent in-sample and predictive results. However, the empirical values in these studies present a puzzle. In every study where goods and services are aggregated, the U.S. income elasticity for imports of goods and services is significantly greater than the foreign income elasticity for U.S. exports of goods and services. For example, Hooper, Johnson and Marquez (1998) found that the long-run elasticity of U.S. exports of goods and services with respect to foreign national income was 0.80, while the long-run elasticity of U.S. imports of goods and services with respect to U.S. national income was 1.80. This asymmetry appears consistently in analyses over different estimation periods, data and econometric techniques (Houthakker and Magee, 1969; Cline, 1989; Wren-Lewis and Driver, 1998). (The pattern is also revealed in Figure 3 by the different left-axis scales in the two panels.) The asymmetry of how U.S. income affects imports and how world income affects U.S. exports means that if the U.S. economy and the rest of the world grow at the same rate, the current account deficit will continue to widen, unless the exchange value

of the dollar persistently depreciates (Krugman, 1985; Marris, 1985; Krugman and Baldwin, 1987; Obstfeld and Rogoff, 2000).

Much research investigates the puzzle of the income asymmetry. Some of the research considers additional international variables that may be important. For example, failing to include increases in international capacity to produce, ignoring the entry of new international competitors or poor accounting for new intermediate products in trade means that the import price measure probably is overstated—with the result that the estimated coefficient on U.S. income is biased up in estimation (Helkie and Hooper, 1988; Hooper and Mann, 1989; Mann, 1991; Feenstra and Shiells, 1997).

Other researchers have focused on variables important to the characteristics of the U.S. marketplace that might be missing. Demographic variables—such as immigrants and the age distribution of the U.S. population relative to that of our major trading partners—may be important to solving the econometric puzzle. For example, immigrants (who represent about 10 percent of the U.S. population, twice the share in the 1960s) maintain their tastes for their home products long after moving to the United States and also send home remittances (which as a capital outflow adds to the current account deficit). Moreover, a relatively young society like the United States will import more than relatively old societies of Europe and Japan, which tend to consume a higher fraction of domestic services such as health care (Gould, 1994; Marquez, 2002).

The income asymmetry—along with its manifestation in the current account deficit—might gradually attenuate as the world's economies mature and spend more on services (which are becoming increasingly tradable) and less on manufactured goods. Although the income asymmetry is quite pronounced for U.S. trade in goods, it is nearly absent or is reversed in certain categories of U.S. trade in services. For example, Wren-Lewis and Driver (1998) find that while the elasticity for U.S. exports of goods with respect to foreign income is 1.2, the elasticity of U.S. imports of goods with respect to U.S. income is 2.36. However, they also find that the elasticity of U.S. exports of services with respect to foreign income is 1.95, while the elasticity of U.S. imports of services with respect to U.S. income is 1.72 (see also the results in Deardorff et al., 2001; Dee and Hanslow, 2001). As foreign economies develop and mature, some of their growing demand for services will spill over into purchases of U.S. service exports, particularly if the services sector achieves greater liberalization through multilateral trade negotiations, which would tend to reduce the overall estimated asymmetry (Mann, 1999, pp. 37–41, 88–89, footnote 21 and p. 170).

What about the role of relative prices in affecting the trend current account deficit? As noted, a good proxy for relative prices is the real exchange value of the dollar, which has been appreciating since the mid-1990s, at about the same time as the relatively faster productivity growth of the new economy began to emerge in the U.S. data. Is there a relationship between productivity growth and the real exchange rate, and is there any implication for the current account deficit?

The trend appreciation of the U.S. dollar in part reflects the fact that the U.S. experience of the 1990s—technology uptake, rapid globalization, robust

competition and higher productivity growth—has not been matched by other major industrial economies (Marston, 1987; Tillé, Stoffels and Gorbachev, 2001; Alquist and Chinn, 2002). Indeed, since increasing global competition is a potent force transforming business activities and yielding increased productivity growth, the great increase in the exposure of the U.S. manufacturing industry to global competition during the last 15 years strongly complements the technological foundation for productivity growth in the United States (Baily and Gersback, 1995; Jensen and Musick, 1996; Helpmann, 1997; Mann, 1998; Rosen and Richardson, 2001). But although the trend appreciation of the U.S. dollar since 1995 grows from a fundamentally positive event—that is, robust productivity growth—it nonetheless serves to widen the current account deficit further.

A Global Perspective from International Capital Markets

The third viewpoint on the current account deficit focuses on international flows of financial assets. This perspective considers how differential rates of return affect financial flows and the exchange value of the dollar, as well as the desired portfolio allocation of wealth (Frenkel and Mussa, 1985).

The gross value of international financial transactions is enormous and increasing rapidly. As one example, gross foreign purchases of U.S. assets ranged between \$100 billion and \$250 billion each year from 1985 to 1994, but have exceeded \$400 billion every year since then, topping \$1 trillion in 2000. Trading in foreign currencies now totals about \$1.2 trillion each day (Bank for International Settlements, 2002). The sheer size of international financial markets raises hard questions: Is the current account simply determined by international capital flows, which have burgeoned beyond all relationship to real trade transactions? If so, have the perspectives on the current account that are based on domestic national accounting identities or on flows of trade in goods and services (the first two perspectives) become obsolete?

The relationship between international capital flows and international trade flows appears to have changed in two important ways in recent years, thanks to financial innovation and information and communication technology. First, transactions can be consummated much more speedily. Asset prices such as interest rates and exchange rates change nearly immediately, whereas real flows of trade in goods and services adjust more slowly. In addition, *expectations* about a country's profile of risk and return are particularly important in the quick response market of financial capital. When real or expected performance changes, a tension develops between the very rapid response of financial flows and the slower response of trade flows. This tension invariably will be reflected in the prices that can adjust most quickly and freely—that is, asset prices, particularly market driven exchange rates (Dornbusch, 1976). The second important change is that a greater diversity of financial assets and instruments is available. The expanding diversity of sophisticated techniques and instruments of financial intermediation, priced using complex analytical models, allow investors to target the types of risk they wish to undertake and to leverage their bets. In addition, because the returns on assets of different countries, in different currencies and at different maturities are imperfectly correlated with

each other and with the returns on financial assets of the home country and currency, an investor who holds a diversified portfolio can achieve a higher return for lower risk than would be possible with domestic financial assets alone (Grubel, 1968; Lewis, 1995; Tesar and Werner, 1998). In this view, the gains from trade should no longer be measured only in the real domain of goods and services, but should also be measured in how increased financial intermediation can improve on the risk and return frontier of the international wealth portfolio.

However, there is ample evidence that global investors do not diversify their portfolios, often holding a disproportionate share of “home” assets in their portfolio, and that global investors sometimes stampede in a financial herd when faced with new information or changed sentiment about the quality or price of the assets they hold (Tesar and Werner, 1998; Lewis, 1999; De Brower, 2001). In such a market, increased speed of transactions and a greater diversity of financial instruments can increase the volatility of financial flows. If the large U.S. current account deficit is viewed against this backdrop, even if foreign investors are currently enjoying “new economy” returns, will they continue to be satisfied? Is the U.S. economy vulnerable to an international financial market crisis along the lines of those suffered around the globe in the last decade?

If foreign investors became concerned about risks in the U.S. economy, events would unfold much differently than in east Asia, Russia, Argentina and others who have been hit by international financial crises. The characteristics of how the U.S. economy finances its current account deficit influences how a change in investor sentiment might be reflected in international financial flows, the exchange value of the dollar and the amount by which the U.S. current account deficit would need to adjust.

The U.S. marketplace has a very broad range of diverse financial instruments—stocks and bonds of all risk levels, with a wide array of derivative financial instruments for those concerned about specific risks or time horizons. U.S. markets for these financial instruments are deep and liquid. The market capitalization of the U.S. stock markets is half of the global total. As a result, foreign or domestic investors who are concerned about asset-type or maturity risk can adjust their portfolios simply by changing the composition of U.S. assets in their portfolios. For example, they can move from, say, U.S. stocks to Treasury securities, with no need to leave the U.S. credit market altogether.

But what if investors do want to limit their overall exposure to U.S. credit and currency risk? The specific characteristics of the financial inflows to the U.S. economy still provide some stability. Financial inflows can take a variety of forms: foreign direct investment, portfolio holdings of stocks and bonds, bank loans and holdings of government and agency securities. The bulk of net financing of the U.S. current account deficit is in the form of direct investment and private equity and bonds, as shown in Table 2.⁷ Should a large number of investors wish to reduce

⁷ The dividing line between a direct investment and a portfolio holding is that direct investment is defined as cross-border capital flows associated with a company where the nondomestic ownership stake is greater than 10 percent.

Table 2

Foreign Purchases of U.S. Assets, Net*(billions of dollars)*

	1980	1985	1990	1995	2000	2001
Official Assets	-15.5	1.1	-33.9	-109.9	-37.6	-5.2
Direct Investment	-16.9	-20.0	-47.9	-57.8	-307.7	-130.8
US Treasury Securities and Currency	-7.1	-25.6	-16.3	-103.8	75.8	-15.8
US Stocks and Bonds	-5.5	-51.0	-1.6	-77.2	-455.2	-407.7
Bank/nonbank assets	-17.6	-50.9	-41.3	-89.8	-291.3	-193.0
Total	-62.6	-146.4	-141.0	-438.5	-1016.0	-752.5

Source: Bureau of Economic Analysis, U.S. Department of Commerce; (<http://www.bea.doc.gov>).

their exposure to U.S. assets, the prices of these assets would decline. In particular, stock and bond prices would fall as foreign and domestic investors sold some from their portfolios. While a fall in the price of these assets would harm the economy by reducing national wealth, as well as by injuring consumer and business confidence and raising the cost of capital, the effects on real output are likely to be muted by the fact that lower prices of stocks and bonds would attract other investors, “bargain seekers,” thus tempering the price fall and providing an ongoing flow of capital. Because U.S. assets are such a large portion of the global investor’s portfolio, changes in sentiment are less likely to be monolithic and more likely to be self-righting than would be the case for countries whose assets represent the fringe of the portfolio.

Moreover, the dollar is the unit of account for about 80 percent of cross-border bank loans. For many of the countries that suffered international financial crises, not only was most of their foreign financing in the form of less marketable bank loans, rather than private equity and bonds, but most of these loans were not denominated in their home currency. When foreign capital started to exit and the local exchange rate plummeted, what banks earned in local currency was insufficient to repay their U.S. dollar loans (and the local currency cash flow of those companies also collapsed). Since the U.S. capital inflow is denominated in U.S. dollars, U.S. financial institutions are not exposed to this same exchange rate risk.

To be sure, the U.S. economy is not immune to a loss of confidence, whether it be instigated by foreign or domestic investors. A fall in the stock market and bond prices would hurt. Interest rates might rise to try to attract capital. Consumer confidence would be shaken and consumption could slow or decline. Investment in plant, equipment and software would stall as capital costs rose. Indeed, these changes are the channels through which trade flows (specifically imports) equilibrate to the smaller desired net foreign investment in the U.S. economy. This link between reduced inflows of international capital, higher domestic saving (less consumption) and lower investment and lower import growth leads us back to the domestic perspective on the current account balance based on the national accounting identities and the perspective of import and export flows, showing how these perspectives are mutually consistent and reinforcing.

Two Views of Current Account Sustainability

Analyzing whether the U.S. current account deficit is sustainable should consider two views: 1) the domestic view of U.S. consumption and investment spending; and 2) the international financial view of the global investor's portfolio of wealth. Current account sustainability is not only about how much the U.S. economy can afford to borrow from the rest of the world. It is also about how much investors in other countries are willing to buy and hold U.S. assets in their portfolios of wealth. These two sides to sustainability allow us to integrate the three perspectives on the current account.

What does it mean for the current account to be "sustainable"? Sustainable means that the external imbalance generates no economic forces that change its trajectory. From the domestic point of view, a sustainable current account trajectory is one where the feedback effects from the current account or net international investment position to consumption or business investment spending are relatively weak in comparison to other macroeconomic forces that affect these spending categories. From the international finance point of view, a sustainable current account is one where the feedback effects from international portfolio rebalancing to U.S. interest rates or the exchange rate are relatively weak in comparison to other macroeconomic forces that affect asset prices and portfolio choices.

Sustainability and the Domestic Economy: Interest Service, Spending and Domestic Output

A large and persistent current account deficit portends a negative net international investment position that grows ever larger. Eventually, the financial payments arising from this negative net investment position—such as interest and dividends—might become large enough to cut into current consumption and business investment. In this case, the current account deficit itself would generate changes in GDP growth and thus in import spending, which would make its present level unsustainable.

Even a large current account deficit need not engender these feedback relationships, however (Milesi-Ferretti and Razin, 1996). The higher the trend growth rate of the economy, the easier it is to service interest and principal on the accumulated stock of net international investment obligations without significantly affecting the behavior of domestic spending. Hence, higher long-run growth allows a country to continue running a current account deficit for longer than a country with slower long-run growth. If foreign capital inflows have helped to increase the productivity growth of the U.S. economy, then the resulting increase in long-term GDP growth enhances the capacity of the economy to pay the financial service.

Certain international financial obligations, like equity investments and foreign direct investment, do not require payments to investors, whereas bonds and other loans do require payments at specific times. The lower the stream of payments that is required to foreign investors, the longer a country can run current account deficits, because the interest service component does not build up so quickly. In addition, the higher the share of obligations in the country's own currency, the less

vulnerable the country is to exchange rate volatility. Hence, a country that issues assets mostly in its own currency, at low interest rates, and with a high share of equity can continue along its trajectory of spending and saving for longer than could a country that borrows in currencies other than its own, at high interest rates and using fixed maturity bank debt. This, of course, closely matches the characteristics of U.S. net financing.

There is a point at which borrowing is too much, but how to pin down that point? One gauge is to consider the intertemporal budget constraint (Obstfeld and Rogoff, 1985). If an economy running current account deficits today has to repay, in the future, principal (the net international investment position) plus interest to foreign investors, then this economy must start running trade surpluses at some point. If the accumulation of expected *future* trade surpluses is too small, the principal plus interest cannot be fully repaid, which means that the current account deficit *now* is too large. In this case, the ratio of the current account deficit to GDP may be the measure to consider. If we do not require the economy to repay the principal, then a current account deficit can continue so long as the accumulating negative net international investment position is growing less rapidly than the capacity of the economy to service the debt; that is, the net international investment position/GDP ratio may not need to turn positive, but at some point it needs to stop becoming ever more negative. But at what ratio?

In a world of certainty, everyone can “do the math.” When a country runs a series of current account deficits that are so large that the risk of nonrepayment becomes nonnegligible, global investors refuse to buy assets from that country at the going interest rate and exchange rate. As a result, either interest rates rise (to try to attract foreign investors) and/or the exchange rate depreciates (because demand falls), both of which also serve to ratify the decision by the home consumer and business to save more, consume and invest less, and buy fewer imports. Thus, this is a scenario where the current account deficit has gotten large enough to change the current trajectory of consumption and investment and the terms of finance (interest rates or exchange values), which means it was unsustainable by the definition.

For industrial countries, a ratio of current account deficit to GDP of somewhere between 4 and 5 percent appears to be associated with the onset of economic forces (including a monetary policy response, a reduction in income and, in some cases, a real depreciation) that reduce consumption and particularly investment and change the trajectory of the current account and return it to sustainable territory (Mann, 1999; Freund, 2000; Chinn and Prasad, 2000). For example, in Australia in 1989, the current account deficit to GDP ratio was more than 6 percent, and a real depreciation of some 21 percent, among other policy and structural changes, yielded a current account deficit to GDP ratio of less than 4 percent some three years later (Freund, 2000). Similarly, econometric analysis using panel data finds statistical support that a large negative net international investment position is associated with a depreciation of the relevant exchange rate, but the magnitude of net international investment that is associated with the exchange rate movement is not clear (Gagnon, 1996). In any case, the applicability of the average experience

of industrial countries to the U.S. economy may be inappropriate, given the composition of foreign purchases of U.S. assets.

For the U.S. economy, the ratio of the current account deficit to GDP was 4.2 percent in 2000, and the net international investment position/GDP was about 20 percent. Was the fall in stock market prices and the decline in domestic investment in 2000 and 2001 indicative of the early stages of an unsustainable current account trajectory, that the service on the net international investment position was getting too great and affecting consumption and investment or that foreign investors were concerned about the net financing requirements of the current account deficit? This connection seems unlikely, given that financial service on the net international investment position in fact was a small positive value, productivity growth remained robust, and the dollar continued to appreciate even as interest rates fell dramatically throughout 2001.⁸ Rather than being a sustainability episode driven by the current account deficit, a more reasonable interpretation is that changes in U.S. stock markets and investment levels from 2000 to 2001 were a response to earlier monetary policy decisions and greater realism on the part of investors regarding the near-term value of dot-com investments.

Sustainability and International Finance: Allocating the Global Wealth Portfolio

If a large U.S. current account deficit is to be sustained, global investors must be willing to purchase U.S. assets at current prices, including the going interest rate and exchange rate. If the global demand for U.S. assets at current prices is lower than what the U.S. economy is offering into the global marketplace by running a current account deficit, then foreign investors may demand a higher return or interest rate, or they may sell (or not purchase) U.S. investments, causing the dollar to depreciate. When these economic forces are set in motion, a current account deficit is revealed to be unsustainable from the point of view of the global investor.

How much the global investor is willing to invest in the U.S. economy is a function of several factors, including the risk-return profile of the U.S. obligations relative to financial assets of other countries; the growth of the investor's portfolio of wealth; transactions costs, information and regulation (Branson and Henderson, 1985; Levich, 1998). Estimating a sustainability benchmark based on the share of U.S. assets in the global investor's portfolio is difficult (Isard and Steckler, 1985; Meade and Thomas, 1993; Ventura, 2001). The empirical record is thin, and given significant innovations in international financial markets in recent years, analysis based on historical data may not extrapolate well to the present and future. The U.S. offering of financial assets into the international marketplace is very big, but how big relative to global wealth?

One approach is to consider U.S. net capital inflows relative to global savings. By this measure, the U.S. current account absorbs only about 6 percent of world savings, which seems to leave plenty of room in the global investor's portfolio for

⁸ Researchers for some time have wondered how the balance of net income can still be positive given the relatively rapid change from being a net creditor (net international investment position positive) to net debtor (net international investment position negative). See Mataloni (2000).

more U.S. assets (Cooper, 2001). But despite globalization of finance and financial institutions, market participants put the majority of their wealth into assets from their own country. Much of this “home bias” might be due to regulatory constraints, as well as information and transactions costs, but some is better regarded as a matter of taste (Tesar and Werner, 1998; Lewis, 1999). Consequently, the relevant global wealth available to make international investments is much smaller than global savings might imply.

Another benchmark might be that the U.S. current account absorbs about 60 percent of the global aggregated trade surplus, measured as the sum of all countries running trade surpluses (International Monetary Fund, 2000). This figure gives the impression of a global investor flush with U.S. assets. However, just as the previous comparison to global savings was too broad, this comparison is undoubtedly too narrow, since it does not account for the investment possibilities opened up by financial leverage or derivative instruments.

It is not just the stock of global savings or the global trade account that matters, but how much these grow over time in comparison to how quickly the “supply” increases of U.S. assets offered into the international marketplace (as measured by the current account deficit). The change in global wealth as well as the supply of U.S. assets offered depend on economic activity and productivity growth, in the U.S. economy and abroad, as well as on financial innovation and deregulation.

With these cautions duly noted, Figure 4 presents a different view of the importance of U.S. investments in the global bond and equity markets. Consider equities first. If the global investor simply “held the market,” by allocating her portfolio to mirror the size of the stock markets around the world, her portfolio would be the so-called “neutral” portfolio, measured by the Morgan Stanley Capital International index (the thick black line). By this measure, the neutral investor’s holdings of U.S. equities should have increased from about 35 percent of the portfolio of equities in 1995 to about 57 percent of the equity component of the portfolio at the end of 2001. The actual investment strategies of four international equity portfolio managers shown on the figure generally follow this upward trend of the share of U.S. equities in the portfolio, although the specific strategies vary somewhat. For international debt securities (bonds), the actual share of U.S. issued assets in total bonds issued in the international marketplace increased from about 10 percent to about 30 percent, as shown by the lower line on Figure 4.

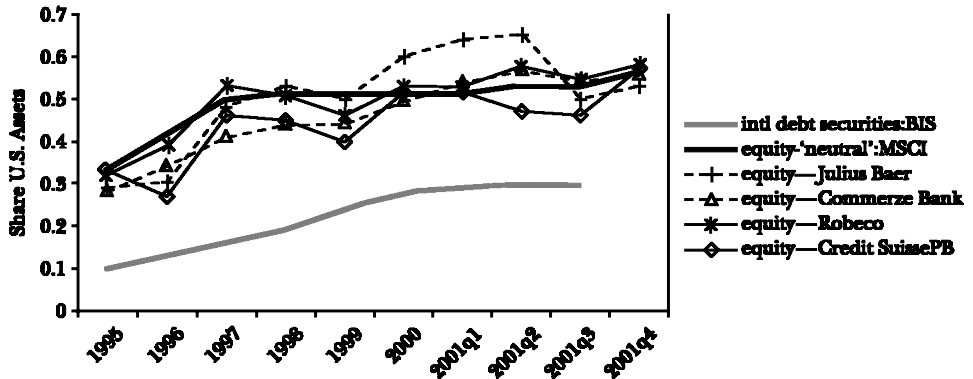
Given the relative performance of the U.S. economy through the 1990s, it made sense to hold an increasing share of U.S. assets in the portfolio. Yet, even as stock markets tumbled and the U.S. economy stumbled from 1999 to 2001, the U.S. share of the global portfolio increased and the dollar appreciated further, suggesting that global investors are not yet holding more U.S. exposure than they prefer. What about the future?

Future Sustainability of the U.S. Current Account Deficit

When the U.S. economy slowed dramatically and entered a technical recession in 2001, the current account deficit narrowed. From the perspective of the national

Figure 4

U.S. Share of Holdings of Assets in International Bond and Equity Markets



Source: Equity portfolio: *Economist* portfolio poll.
 International debt securities: Bank for International Settlements.

income and product accounts, the current account deficit and the savings-investment gap narrowed as domestic investment collapsed. From the goods and services perspective, the slowdown and decline in U.S. GDP growth slowed import growth dramatically. In contrast, from the perspective of international capital markets, portfolio managers continued to augment their portfolios with U.S. assets, even as the financing need of the current account deficit contracted, so the dollar appreciated. However, the current account deficit appears set to resume its recent trajectory of widening in the near future. Relatively more robust U.S. growth continues in large part because of the “new economy” base of improved productivity and enhanced flexibility. The income asymmetry, operating on imports that are now 1½ times exports, means that the U.S. current account deficit will widen again. Moreover, the savings-investment gap has opened up as the fiscal surplus of the government narrowed, first as automatic stabilizers worked during the slowdown and then as policy changes in 2001 (tax cuts and increased spending) took hold.

Looking forward, the negative net international investment position will increase. U.S. exposure in the portfolio of the global investor probably also will rise further. At some point, the trajectory for the current account will be unsustainable, probably because the share of U.S. investments in the global investor’s portfolio will be too high for diversification tastes (Mann, 2002). With certain structural changes, discussed in the next section, the U.S. demands on the global capital markets might avoid reaching the threshold of unsustainability. Otherwise, the likely outcome is a dollar depreciation—but at what pace?

Prospects for Structural Change: National Saving, Globalization of Services, the Euro

A first place to look for structural changes that might affect the trajectory of the current account is in national savings. Perhaps the government will increase its

budget surplus position in the next few years, as the economy strengthens. But there appears little prospect for structural change in the household saving rate. The trend decline in household savings is long-standing, and even as the stock market ceased its stratospheric rise, household savings did not rebound much. The policy avenues to raise household savings are not well understood. Consequently, the domestic savings-investment imbalance is likely to reemerge and remain so long as U.S. domestic investment stays strong.

A second place to look for a structural change to affect the trajectory of the current account is the income asymmetry. Global trade in services appears likely to rise for several reasons: as economies develop, the services share in their GDP rises; new technology has made it easier to trade services; and markets for services, such as transportation, telecommunications, financial and business services have been liberalized. This rise in global trade in services might reduce or even reverse the income asymmetry in trade that the U.S. economy now experiences. After all, U.S. exporters of services are highly competitive (McKinsey Global Institute, 1992). In addition, globalization of services might also enable foreign investors to hold still-higher shares of U.S. assets, because liberalization of financial markets abroad probably would reduce the “home bias” that leads investors to invest such a high proportion of their portfolios in their home markets.

Finally, the introduction of the euro constitutes a major structural change in the international currency landscape. Ultimately, this pan-European financial asset is likely to share the spotlight with U.S. dollar-denominated assets. Indeed, the introduction of the euro in 1999 led to a brief increase in the share of euro-denominated instruments in international bond markets and a fall in U.S. exposure in the equity portfolios of global investors. But in 2000 and 2001, the risk-return profile seemed again to favor U.S. investments, and global investors dialed back their euro investments.

No doubt some of the lack of sustained enthusiasm for the euro was due to relatively slower growth in the euro area. But a related issue is the incomplete integration of the euro financial markets. Euro area equity markets remain fragmented, which raises the transactions costs of obtaining European exposure. As a result, capital inflows to Europe (which would cause the euro to appreciate) are lower than they otherwise might be (Bank for International Settlements, 2000; International Monetary Fund, 2001; Mann and Meade, 2002). The higher cost of capital associated with these incomplete markets could reduce the euro area growth rate by 0.5 percent (Heinemann and Jopp, 2002). Conversely, a more integrated financial market in Europe, as well as structural change to promote higher productivity growth in Europe would contribute to net capital inflows, faster economic growth and an appreciating euro, all of which will tend to narrow the U.S. current account deficit.

A Sentiment-Driven Depreciation of the Dollar?

The three structural factors just discussed will take time to affect the trajectory of the U.S. current account deficit, if indeed the changes ever take place as outlined. In contrast, global investors are assessing the return on U.S. investments

on a daily basis, including both credit risk and exchange rate risk, against their desire to hold an internationally diversified portfolio. The global investor may continue for a time to increase holdings of U.S. assets, particularly if the relative risk-reward profile holds up. At some point, however, global investors will reach, or even go beyond, the desired proportion of U.S. assets in their portfolios. If the current account deficit continues to be large at a time when global investors no longer wish to add more U.S. assets to their portfolio, the current account deficit will not be sustainable, and an economic adjustment must occur.

Several scenarios for such an adjustment are possible. In one scenario, the dollar exchange rate depreciates significantly, perhaps as investors collectively reassess how valuable their U.S. holdings have been or perhaps because of a change in the assessment of currency or earnings volatility. In another, possibly complementary scenario, U.S. interest rates rise as corporations try to attract foreign and domestic capital. Both forces would narrow the trade deficit through changes in U.S. economic activity and changes in the dollar, with the consequence of reduced flow of U.S. assets into the international marketplace.

Abrupt changes in currency values can be disruptive, as the various international financial crises have shown. However, the U.S. economy is more insulated than most economies through its size, the fact that most of its obligations are marketable and are denominated in its own currency and because the international role of the dollar underpins global demand for it. Therefore, in terms of damage, it is likely that the brunt of the change in the dollar and the associated change in U.S. interest rates and demand would be borne as much by other countries as by the United States.

Moreover, a dramatic one-time adjustment in the exchange or interest rates will not address permanently the trajectory for the current account. As long as the productivity differential (with its impact on the dollar) and the income asymmetry (with its impact on trade flows) continue, the dollar will appreciate again and the current account deficit will resume expanding, sowing the seeds of another sustainability episode, as indeed the roller coaster ride of the U.S. dollar in foreign exchange rates since 1973 suggests.

Conclusion

Continuing U.S. current account deficits mean that the net international investment position of the U.S. economy is increasingly negative. The global investment community seems willing and able to hold sufficient U.S. assets in its portfolios to finance these deficits for now. But global investors will not expand the share of their portfolios that is in U.S. assets forever.

The inevitable long-term adjustment to a smaller U.S. current account deficit can come either by a set of quick response events, or by structural change and policy design. The most likely quick response event is that global investors reach a point where they are no longer willing to increase the share of U.S. assets that they

hold in their portfolios, and a declining exchange value of the dollar will be the principal equilibrating force reducing the current account deficit.

The structural and policy changes that could combine to change the widening trajectory of the current account deficit include fiscal discipline and more robust household saving in the U.S. economy, more rapid economic growth abroad underpinned by higher productivity growth, more liberalized domestic and global markets for services and more deeply integrated euro financial markets. The adjustment process toward a lower U.S. current account balance is likely to be far smoother if it is carried out through these kinds of reforms in a relatively benign environment, rather than through a series of disruptive sentiment-driven depreciations in the exchange value of the U.S. dollar.

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