

The Link Between Trade and Capital Flows

Movements of goods and services across borders are often thought of as distinct from international capital flows. For example, an individual who allocates part of his or her retirement savings to a mutual fund that invests in an international portfolio might not think that this cross-border transaction has an impact on the price of imports, such as foreign cars or food at the supermarket. Yet, for important but subtle reasons, trade flows and capital flows are closely intertwined—indeed, they are two sides of the same coin.

This chapter explores the linkages between trade and capital flows. The key points in this chapter are:

- Changes in a country's net international trade in goods and services, captured by the current account, must be reflected in equal and opposite changes in its net capital flows with the rest of the world.
- The United States has experienced a large net inflow of foreign capital in recent years. Any such inflow must be accompanied by an equally large current account deficit.
- The size and movement of current and capital accounts reflect fundamental economic forces, including saving and investment rates, and relative rates of growth across countries.

The Basic Accounting Identity

The *balance of payments* is the accounting system by which countries report data on their international borrowing and lending, as well as on the flow of goods and services in and out of the country. The balance of payments includes a number of different accounts (Box 14-1). The central relationship of the balance of payments is that the *net* flow of capital into a country, as measured by the financial and capital accounts, must balance the *net* flow of goods, services, transfer payments, and income receipts out of the country, as measured by the current account.

When the current account balance is negative, this means that purchases of foreign goods and services (and other outflows) exceed sales of goods and services to foreigners (and other inflows). This situation is referred to as a *current account deficit*. The *trade balance* is generally the largest component of the current account and captures the net inflows of goods and services. A

positive net flow of capital into the United States means that foreigners are purchasing more U.S. assets than U.S. citizens are purchasing foreign assets. According to the balance of payments, a positive net flow of capital into the United States must be balanced by a current account deficit.

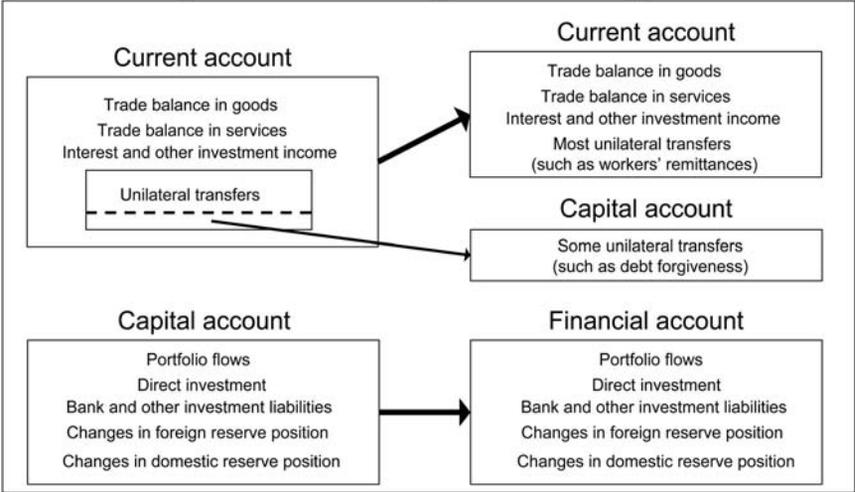
Box 14-1: A New Look for the Balance of Payments

Just as a country's national accounts keep track of macroeconomic variables such as GDP, saving, and investment, a country's balance of payments accounts serve as the bookkeeping for its international transactions, such as exports, imports, and international investment flows. In 1999, the Bureau of Economic Analysis announced that it would adopt new terminology to be consistent with international best practices for balance of payments accounting, as outlined by the International Monetary Fund.

The *old* balance of payments system used two accounts: the *capital account* and the *current account*. The *new* system uses three accounts (Chart 14-1). The new current account includes the trade balance in goods and services, net income receipts, and the balance of most unilateral transfers (one-way transfers of assets, such as pension payments to foreign residents). Some unilateral transfers, including debt forgiveness and the transfer of bank accounts by foreign citizens when immigrating to the United States, have been removed from the *old* current account and are now in a separate account, the *new* capital account. The new capital account represents a very small portion of overall capital flows. Private capital flows and changes in foreign and domestic reserves (formerly in the old capital account) are now in the *financial account*. This new treatment preserves the balance of payments identity that the sum of all the accounts is zero.

To simplify terminology, this *Economic Report of the President* refers to the new capital and financial accounts as *net capital flows*—that is, inflows of capital from foreign countries minus outflows from the United States. Positive net capital flows indicate that more capital is flowing into the United States than out.

Chart 14-1 Changes to the Balance of Payments Terminology in 1999



To understand how the balance of payments works in practice, consider a consumer in the United States who purchases a scarf from a foreign seller for one dollar. This transaction is recorded as an import and reduces the U.S. current account balance by one dollar. The foreign seller could spend the dollar on U.S. goods or on U.S. assets, such as stocks or bonds. If the foreigner purchases U.S. goods, this would be recorded in the balance of payments as a U.S. export in the current account. The U.S. purchase of the foreign scarf and the foreign purchase of U.S. goods would cancel each other out, so there would be no change in the current account and no change in net capital flows. Alternatively, if the foreigner decided to purchase U.S. assets, this would be recorded as a capital inflow into the United States. The increase in net capital flows would balance the decrease in the U.S. current account. In both examples, the resulting change in the current account, if any, exactly balances any change in net capital flows.

Trade in goods can lead to changes in financial balances (such as with the payment for the scarf in the example above), or financial transactions can lead to changes in trade balances. The latter case would occur if a foreigner purchased a U.S. asset, such as a bond, and the American seller of the bond used the proceeds to purchase foreign goods. In both cases, the balance between the current account and net capital flows still holds.

To understand how financial flows can affect trade balances, suppose that at the prevailing rate of return, investors in the United States seek to undertake \$200 billion worth of projects. If U.S. savers were willing to provide only \$150 billion in capital through saving, then the other \$50 billion could come from the rest of the world as \$50 billion in capital

inflows. If the U.S. investors choose to spend this capital inflow on foreign goods (perhaps imports of new computers), then net purchases of foreign goods would increase by \$50 billion. The resulting \$50 billion current account deficit would balance the \$50 billion capital inflow. If investors in the United States were not able to obtain the initial \$50 billion from abroad, both net capital flows and the current account would equal zero. There would be no current account deficit. Would this be good or bad? One immediate effect would be that the \$50 billion gap between desired investment and saving would need to be closed by scaling back investment projects or raising national saving. These changes should be evaluated on their own merits; there is nothing particularly beneficial about having a trade balance or net capital flows exactly equal to zero.

A country's saving and investment decisions are critical to evaluating the implication of any given level of its current account balance. In a world without capital flows, the only funds available for investment come from domestic saving. Capital flows allow a country to finance higher levels of investment by drawing on funds from abroad. This net inflow of funds corresponds to greater net purchases from the world and a decline in the current account balance.

The desirability of positive net capital flows and a current account deficit depend on what the capital inflows are used for. Household borrowing—an excess of household spending or investment over saving—provides a useful analogy. Household debt could reflect borrowing to finance an extravagant vacation, a mortgage to buy a home, or a loan to finance education. Without knowing its purpose, the appropriateness of the borrowing cannot be judged. Similarly for countries, borrowing from abroad can be productive or unproductive. Borrowing from abroad can be justified if it raises the potential output of the economy and this, in turn, generates the resources needed to repay the foreign lenders.

This entire discussion has focused on trade balances and net capital flows with the world as a whole, and not with any individual country. There is no economic basis for concern about trade deficits and the corresponding net capital flows with an individual trading partner when there are many countries in the world (Box 14-2).

Box 14-2: Bilateral Versus Multilateral Balances

A country's aggregate trade deficit matters only to the extent that it reveals information about underlying economic forces, such as relative international growth rates or national saving and investment patterns. In contrast, *bilateral deficits*, such as the U.S. trade deficit with China, reveal *nothing* about underlying economic forces in either country. While trade barriers are a cause for concern, there is no economic sense in which a bilateral deficit is either good or bad. It would be an extraordinary coincidence if all countries had balanced trade with each of their partners. One of the benefits of the international financial system is that it frees countries from these bilateral constraints.

For example, imagine a simplified world that consisted of only the United States, Australia, and China. Suppose the United States ships \$100 billion of machine tools to Australia and imports no goods in return. Australia ships \$100 billion of wheat to China with no reciprocal goods imports, and China ships \$100 billion of toys to the United States. Each country would have \$100 billion of exports and \$100 billion of imports, so that each would have balanced trade overall. Yet some Americans might complain about their bilateral deficit with China. Some Chinese might complain about their deficit with Australia, and some Australians about their deficit with the United States. All of these complaints would be unfounded; bilateral deficits and surpluses are a natural consequence of a trading world composed of many countries.

Domestic transactions provide a useful analogy. A plumber who spends no more than he earns can still run a bilateral deficit with the local grocer. The plumber can earn money from other sources to pay the grocer and is not constrained to buying only from grocers who have plumbing problems. The bilateral imbalance that exists between the plumber and the grocer is an entirely natural feature of a well-functioning economy with a strong payments system and specialization.

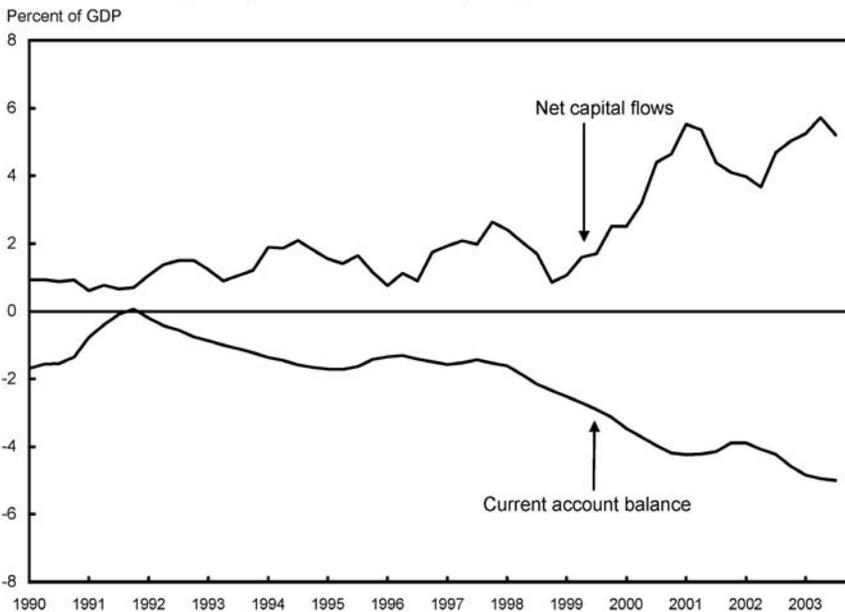
Trends in the U.S. Balance of Payments

The decrease in the U.S. current account balance, from nearly zero in the early 1990s to a deficit of about 5 percent of GDP in the first three quarters of 2003, has been mirrored by a similar increase in net capital flows (Chart 14-2). (The two series in Chart 14-2 are not exact mirror images due to imprecision in the measurement of trade and capital flows.)

Examining the components of the current and financial accounts provides information on the causes of these recent trends in the U.S. balance of payments (Table 14-1). Over the 1990s, a major contributor to the rise in the current account deficit was the increase in imports of foreign goods. The trade balance in goods moved from a deficit of 1.9 percent of GDP in 1990 to a deficit of 4.6 percent of GDP in 2000. Exports of goods increased from 6.7 percent of GDP in 1990 to 7.9 percent of GDP in 2000, but goods imports increased by much more, from 8.6 percent of GDP to 12.5 percent of GDP over the same period. The increase in the current account deficit since 2000 has resulted mainly from lower exports of goods (which fell from 7.9 percent to 6.4 percent of GDP between 2000 and the first three quarters of 2003), rather than increased imports. Imports as a share of GDP actually fell 1 percentage point over the same period (Chart 14-3 and Table 14-1). Most recently, the current account deficit has narrowed from 5.2 percent of GDP in the first quarter of 2003 to 4.9 percent of GDP in the third, reflecting stronger export growth.

Chart 14-2 Balance of Payments

The 1990s saw a surge in capital inflows and a corresponding deficit in the current account balance.



Note: Data are four-quarter moving totals.

Source: Department of Commerce (Bureau of Economic Analysis).

TABLE 14-1.— *Current and Financial Account*
[Percent of GDP]

Accounts	1990	2000	2002	2003: Q1-Q3
Current account balance.....	-1.4	-4.2	-4.6	-5.1
Trade balance in goods.....	-1.9	-4.6	-4.6	-5.0
Exports.....	6.7	7.9	6.5	6.4
Imports.....	-8.6	-12.5	-11.1	-11.5
Services (net).....	.5	.8	.6	.5
Other (net).....	.0	-.4	-.6	-.6
Net capital flows.....	.9	4.6	5.0	5.0
Financial account balance.....	1.0	4.6	5.0	5.1
Direct investment (net).....	.2	1.7	-.9	-.5
Portfolio (net).....	-.1	3.0	4.2	3.7
Equity securities (net).....	-.4	.9	.3	-.8
Debt securities (net).....	.3	2.2	3.8	4.5
Other.....	1.0	.0	1.8	1.8
Capital account balance.....	-.1	.0	.0	.0
Memo:				
Foreign purchases of U.S. Government securities.....	.5	-.5	1.6	2.6

Note: Detail may not add to totals because of rounding and seasonal adjustment.

Source: Department of Commerce (Bureau of Economic Analysis).

Chart 14-3 **Exports and Imports of Goods**

Both exports and imports of goods decreased substantially starting in the first quarter of 2001 and have yet to fully recover.

Percent of GDP



Source: Department of Commerce (Bureau of Economic Analysis).

U.S. net capital flows grew from about 1 percent of GDP in 1990 to over 4½ percent of GDP in 2000. This resulted from roughly equal increases in foreign purchases of debt securities, equity securities, and direct investment. This increase in net capital flows into the United States largely reflected the desire of foreigners to participate in higher-return investment opportunities in the United States. The global economic downturn and the collapse of high-tech stock prices and broader equity indices that began in 2000 contributed to a shift in the composition of capital flows in the United States. Foreign investors moved away from foreign direct investment and private equity assets and toward government and corporate bonds. In addition, foreign governments increased their share of these capital flows, although the foreign private sector still accounts for a far greater proportion.

Over the latter half of the 1990s and the early 2000s, the counterpart to the rising U.S. current account deficit has been a growing wedge between U.S. investment rates and U.S. national saving rates (Chart 14-4). The national saving rate in the United States began to decline in 1999, but increased capital inflows allowed U.S. investment rates to remain at a high level through 2000. As discussed in Chapter 1, *Lessons from the Recent Business Cycle*, investment fell substantially after the collapse of the stock market bubble of the late 1990s. In 2001, the decline in investment outpaced a contemporaneous decline in U.S. saving, so that the current account deficit narrowed. U.S. investment has since leveled off while saving remains low, causing a wider U.S. current account deficit. Over the entire period, the availability of foreign investment permitted the United States to maintain higher investment rates than it could have funded relying solely on domestic financing. These capital inflows have helped finance U.S. investments, expand U.S. productive capacity, and strengthen U.S. economic performance.

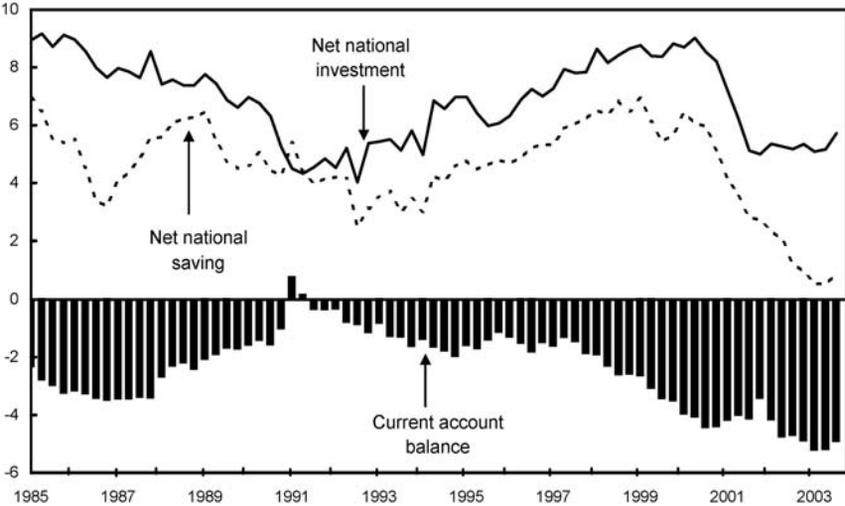
Factors that Influence the Balance of Payments

A number of underlying economic factors influence the level of and changes in the balance of payments. One of the most important factors is the differential rate of GDP growth across countries. During the late 1990s, the United States grew faster than many of its major trading partners, such as Japan and a number of major European countries. As a result, capital flowed into the United States, leading to a corresponding trade deficit. Even during the recent business-cycle downturn and recovery, U.S. growth rates have exceeded those of many of our major trading partners. This has contributed to the slow recovery in U.S. exports and has helped to maintain continued capital inflows into the United States.

Chart 14-4 Saving, Investment, and the Current Account Balance

In the late 1980s, a decline in the investment rate led to a reduction in the current account deficit, while a sharp decline in the national saving rate accounted for the most recent expansion of the deficit.

Percent of GDP



Source: Department of Commerce (Bureau of Economic Analysis).

A second determinant of trade and capital flows is the price of domestic goods relative to foreign goods. Relative prices are influenced by a number of factors, including labor and production costs, labor productivity, and exchange rates. For many manufactured products, for example, labor and production costs in developing countries are often below such costs in the United States. As a result, the prices of these goods produced in developing countries may be substantially lower than the price of similar goods produced in the United States. For other products and projects, such as airplanes and the development of new drugs, the availability of factors of production such as skilled engineers may be more important than the availability of low-skilled workers. Exchange rates can also influence relative prices. A depreciation of a country's currency can make its products cheaper and thus more competitive abroad, even if domestic prices do not change. When a country's currency appreciates, domestically produced goods become relatively more expensive in foreign markets.

A third determinant of the direction and size of capital flows is the relative return that investors expect to make in one country compared with another. This return differential can reflect factors discussed earlier, such as relative output growth, labor costs, or exchange rates. This differential can also

depend on a country's legal framework, accounting and tax systems, infrastructure, culture, and institutions. The flow of capital into the United States likely reflects a view that the expected risk-adjusted, after-tax return on U.S. assets is higher than the return on similar foreign investments.

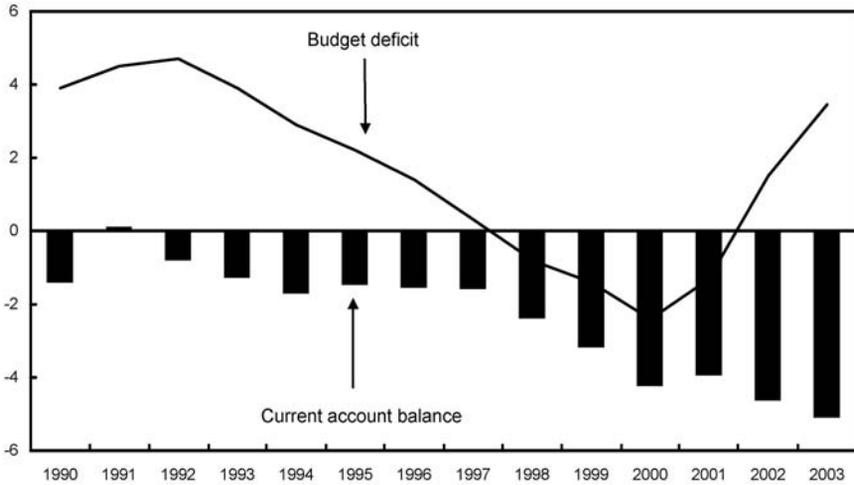
These factors—growth rates, relative prices, and rates of return—all drive national saving and investment decisions. Those decisions most directly determine the balance of payments. *National saving* is the sum of *private saving* (saving of households and corporations) and *public saving* (the total saving of Federal, State, and local governments, as reflected in their budget balances). When national saving is less than domestic investment, a country must be borrowing from abroad. This borrowing will be reflected in positive net capital flows and a current account deficit.

Although this suggests that the recent increase in the U.S. budget deficit may be related to the recent increase in the U.S. current account deficit, the historical evidence for a relationship between government deficits and trade deficits is mixed. A number of academic studies suggest that other domestic and international factors are more important influences on current account balances than government deficits. The recent U.S. experience supports this. In the 1990s, the large increase in the U.S. current account deficit occurred while the Federal budget surplus was growing (Chart 14-5). From 1997 to 2000, the U.S. current account deficit increased by almost 3 percentage points. Over the same period, the U.S. budget balance went from a slight deficit to a surplus of 2½ percent of GDP. Since 2000, the U.S. budget has moved into deficit by several percentage points of GDP, but the current account deficit has widened by only about 1 percentage point of GDP. These figures show that the current account and Federal budget do not move in lockstep, and that the government deficit is only one of several factors behind the widening of the current account deficit since the mid-1990s.

Chart 14-5 **Budget Deficit and the Current Account Balance**

The relatively steady decline in the current account balance contrasts with the initial reduction and subsequent expansion of the budget deficit.

Percent of GDP



Note: Budget deficit data are for fiscal years ending September 30; current account data are for calendar years. Current account balance for 2003 includes data through the third quarter.
Source: Department of Commerce (Bureau of Economic Analysis).

Possible Paths of Balance of Payments Adjustment

The U.S. current account deficit reached about 5 percent of GDP in the first three quarters of 2003. Historically, many countries with sizable current account deficits have experienced reductions in capital flows and corresponding reductions in their current account deficits. Because the U.S. current account deficit and U.S. capital inflows are balanced by trade and capital flows in other countries, any change in the U.S. balance of payments would involve corresponding changes in other countries' flows of trade and capital. The economic implications of any adjustments depend on how it occurs.

An adjustment in the U.S. trade balance could involve a number of domestic and global factors. For example, faster growth in other countries would be expected to increase demand for U.S. exports and narrow the U.S. current account deficit. Slower growth in the United States relative to its major trading partners would dampen U.S. demand for imports and reduce the U.S. trade deficit. Trade flows could also adjust through changes in the relative prices of U.S. goods and services compared to the prices of foreign goods and services. This relative-price adjustment could occur through changes in nominal exchange rates or through different inflation rates in different countries.

An adjustment in the U.S. balance of payments would also require a change in international capital flows. To reduce net capital flows, foreign investors could buy fewer U.S. assets and/or U.S. investors could buy more foreign assets. This might occur if U.S. national saving were to increase, thereby reducing the need for foreign funds to finance U.S. domestic investment. The U.S. investment rate could also fall, so that the United States required less capital inflow. Lower investment is the least desirable form of adjustment for the balance of payments, however, as it would reduce U.S. productive capacity and lead to slower growth.

It is impossible to predict the exact timing or magnitude of any adjustment in the U.S. current account balance. After a large increase in the U.S. current account deficit in the 1980s, the ensuing adjustments were gradual and benign. Public policies can facilitate changes in the U.S. current account and net capital flows by creating a stable macroeconomic and financial environment, encouraging foreign growth, and spurring increased saving in the United States.

Conclusion

Flows of goods and services across borders are linked to international capital flows through the balance of payments. Changes in the current account (which includes international trade in goods and services) must be balanced by equal and opposite changes in net capital flows with the rest of the world. Similarly, movements in net capital flows require offsetting movements in the current account.

In recent years, the United States has received large net inflows of foreign capital, which have been balanced by large U.S. current account deficits. The U.S. balance of payments is mirrored by trade and capital flows in other countries. Thus, over the same period, the rest of the world as a whole has experienced a current account surplus and capital outflows.

The United States' sizable positive net capital flows and the corresponding trade deficits are neither good nor bad in and of themselves. Instead, they represent underlying economic forces, such as relative GDP growth rates, relative prices of domestic and foreign goods, relative returns on investment, and national saving and investment decisions. Changes in these underlying factors would lead to changes in the U.S. balance of payments and corresponding changes in the international flows of trade and capital.