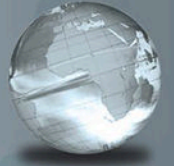


GLOBAL  
EDITION



# Macroeconomics

TENTH EDITION

Andrew B. Abel • Ben S. Bernanke • Dean Croushore





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Tenth Edition

Global Edition

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as bonds, stocks, and patents) that they own in other countries. For example, the interest that a U.S. saver receives from a French government bond he or she owns, or the profits that a U.S. company receives from a foreign subsidiary, qualify as income receipts from abroad.

The income payments flowing out of a country consist of compensation paid to foreign residents working in the country plus payments to foreign owners of assets in the country. For example, the wages paid by a U.S. company to a Swedish engineer who is temporarily residing in the United States, or the dividends paid by a U.S. automobile company to a Mexican owner of stock in the company, are both income payments to residents of other countries.

**Net Unilateral Transfers.** **Unilateral transfers** are payments from one country to another that do not correspond to the purchase of any good, service, or asset. Examples are official foreign aid (a payment from one government to another) or a remittance of money from a resident of one country to family members living in another country. A country's net unilateral transfers equal unilateral transfers received by the country minus unilateral transfers flowing out of the country. The negative value of net unilateral transfers in Table 5.1 shows that the United States is a net donor to other countries.

**Current Account Balance.** Adding net exports of goods and services, net income from abroad, and net unilateral transfers yields a number called the **current account balance**. If the current account balance is positive, the country has a current account surplus. If the current account balance is negative, the country has a current account deficit. As Table 5.1 shows, in 2017 the United States had a \$424.5 billion current account deficit, equal to the sum of net exports of goods and services ( $NX = -\$552.3$  billion), net income from abroad ( $NFP = \$221.7$  billion), and net unilateral transfers ( $-\$93.9$  billion).

## APPLICATION

### Current Account Balance and Trade Openness Around the World

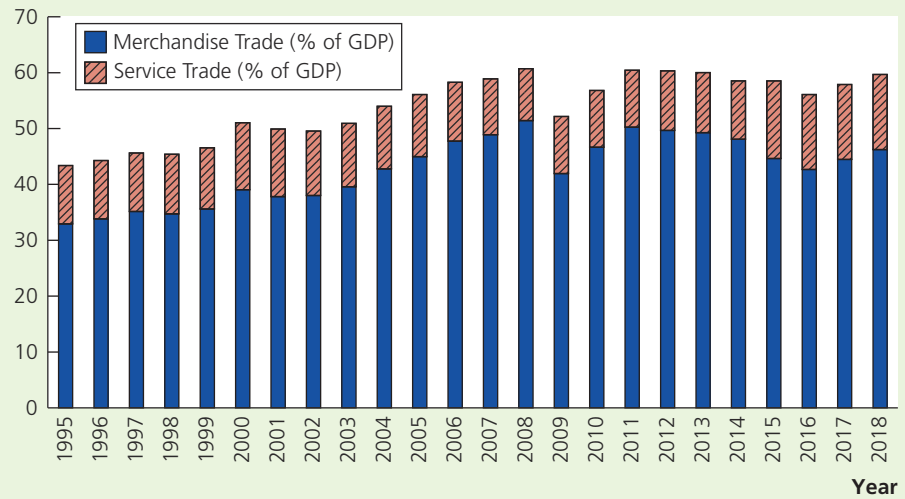
Over the past two decades, international trade has become an important component of economies around the world. With the specialization in goods and services, rise in global purchasing power, liberalization of financial markets, and free trade agreements, economies became increasingly globalized, or integrated. Trade openness, also referred to as trade integration, is a simple indicator of the significance of international trade in an economy and is measured as the ratio of all trade (exports plus imports) to GDP.

As you can see in Figure 5.1, the world's aggregate trade openness has dramatically increased since the nineties, from a little above 40% of world GDP to nearly 60% in 2018. While the benefits of globalization are well known, there are some caveats as well, primarily around trade imbalances. While some nations are running current account deficits, others enjoy current account surpluses and have accumulated claims on the rest of the world. These imbalances should be put into perspective to understand whether they are indicative of economic health of difficulties. For example, countries such as Germany and Japan run current account

FIGURE 5.1

The growth of merchandise and service trade across the world as a percentage of world GDP (1995–2018)

Source: World Bank Database, 2019. Trade Statistics. <https://data.worldbank.org/topic/trade?view=chart>.



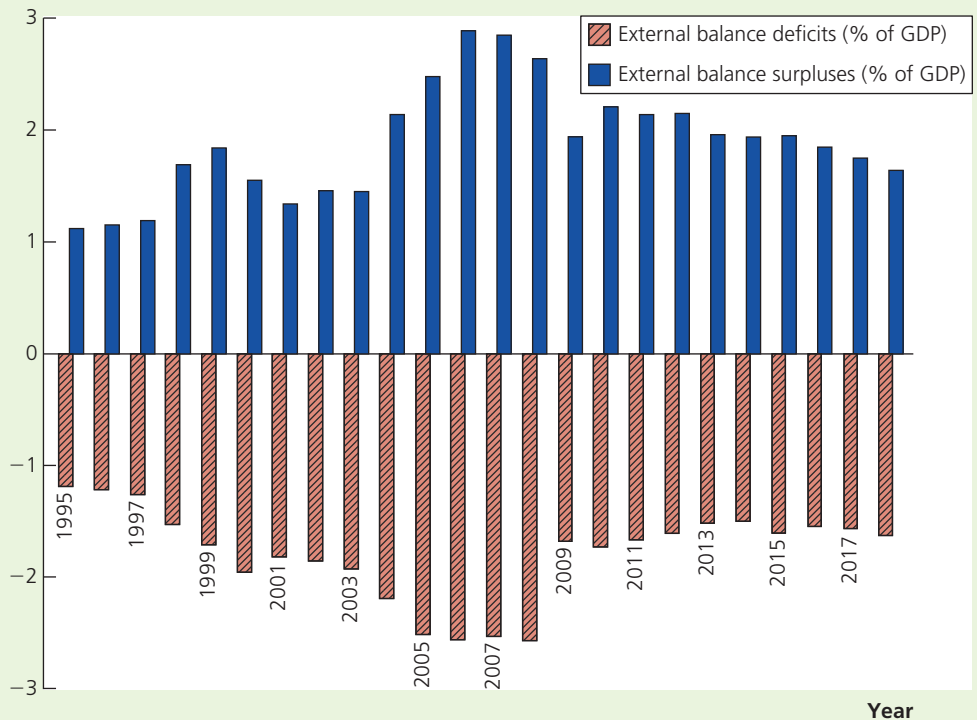
surpluses, which they invest abroad to generate the income they offer as pension to increasingly large ageing populations. However, if we consider Japan's prolonged recession and the reluctance of its consumers to buy imported goods as factors contributing to its trade surplus, it would suggest that the economy needs stimulus.<sup>2</sup>

FIGURE 5.2

World current account deficits and surpluses as a percentage of world GDP (1995–2017)

The chart shows that trade imbalances and global interdependence peaked just before the 2007–2009 recession hit and caused severe contagion effects. External balance deficits may not match surpluses due to statistical discrepancies.

Source: The International Monetary Fund, 2019. *World Economic Outlook, Growth Slowdown, Precarious Recovery*, IMF, April 2019.



<sup>2</sup>Debasish Kumar Das, 2016. "Determinants of Current Account Imbalance in the Global Economy: A Dynamic Panel Analysis," *Journal of Economic Structures*, 5:8, 2016. DOI: <https://doi.org/10.1186/s40008-016-0039-6>.

(continued)

On the other hand, emerging economies with predominantly young populations may run trade deficits in order to finance the imports needed to develop their human capital. However, if these deficits are financing other needs, such as consumption, they would only add to the debt burden and eventually become unsustainable.

Finally, excessive dependence on international trade exposes economies to external demand shocks and leads to contagion effects, such as the ones observed in the aftermath of the 2007–2009 recession. Thus, governments have to assess the sources of trade imbalances and correct them if they are apt to lead to a slowdown in the economy.

## The Financial Account

International transactions involving assets, either real or financial, are recorded in the **financial account**. (Before July 1999, this account was called the capital account, so beware: If you use data from a source published before 1999, the term “capital account” refers to a measure currently known as the financial account. Even many current discussions still use the term “capital account” to refer to the financial account.) When a U.S. firm or resident sells an asset to another country, for example, if a U.S. hotel is sold to Italian investors, the transaction is recorded as an increase in foreign-owned assets in the United States, which is a **financial inflow**, because funds flow into the United States to pay for the asset. Similarly, when the home country buys an asset from abroad—say a U.S. resident opens a Swiss bank account—the transaction involves a **financial outflow** from the United States and is recorded as an increase in U.S.-owned assets abroad.

The **financial account balance** equals the value of financial inflows minus the value of financial outflows plus the net increase in foreign-owned derivatives (which are financial assets whose value is based on, or “derived” from, the values of other assets) in the United States. When residents of a country sell more assets to foreigners than they buy from foreigners, the financial account balance is positive, creating a financial account surplus. When residents of the home country purchase more assets from foreigners than they sell, the financial account balance is negative, creating a financial account deficit. Table 5.1 shows that in 2017, U.S. residents increased their holdings of foreign assets (ignoring financial derivatives and unilaterally transferred assets) by \$1182.7 billion while foreigners increased their holdings of U.S. assets by \$1537.7 billion. Thus the United States had net financial flows of \$355.0 billion in 2017 (\$1537.7 billion minus \$1182.7 billion). Adding the net change in financial derivatives, the financial account balance in 2017 was \$331.9 billion.

**The Balance of Payments.** In Table 5.1 one set of financial flows—transactions in official reserve assets—has been broken out separately. These transactions differ from other financial account transactions in that they are conducted by central banks (such as the Federal Reserve in the United States), which are the official institutions that determine national money supplies. Held by central banks, **official reserve assets** are assets, other than domestic money or securities, that can be used in making international payments. Historically, gold was the primary official reserve asset, but now the official reserves of central banks also include government securities of major industrialized economies, foreign bank deposits, and special assets created by the International Monetary Fund.

Central banks can change the quantity of official reserve assets they hold by buying or selling reserve assets on open markets. For example, the Federal Reserve could increase its reserve assets by using dollars to buy gold. According to Table 5.1 (see the line “U.S. official reserve assets”), in 2017 the U.S. central bank sold \$1.7 billion of official reserve assets. In the same year foreign central banks increased their holdings of dollar-denominated reserve assets by \$185.7 billion (see the line “Foreign official assets”). The **balance of payments** is the net increase (domestic less foreign) in a country’s official reserve assets. A country that increases its net holdings of reserve assets during a year has a balance of payments surplus, and a country that reduces its net holdings of reserve assets has a balance of payments deficit. For the United States in 2017 the balance of payments was  $-\$187.4$  billion (equal to the  $-\$1.7$  billion increase in U.S. reserve assets minus the  $\$185.7$  billion increase in foreign dollar-denominated reserve assets). Thus the United States had a balance of payments deficit of  $\$187.4$  billion in 2017.

For the issues we discuss in this chapter, the balances on current account and on financial account play a much larger role than the balance of payments. We explain the macroeconomic significance of the balance of payments in Chapter 13 when we discuss the determination of exchange rates.

## The Relationship Between the Current Account and the Financial Account

The logic of balance of payments accounting implies a close relationship between the current account and the financial account. Except for errors arising from problems of measurement, *in each period the current account balance and the financial account balance must sum to zero.* That is, if

$$\begin{aligned} CA &= \text{current account balance and} \\ FA &= \text{financial account balance,} \end{aligned}$$

then

$$CA + FA = 0. \tag{5.1}$$

The reason that Eq. (5.1) holds is that every international transaction involves a swap of goods, services, or assets between countries. The two sides of the swap always have offsetting effects on the sum of the current account and the financial account balances,  $CA + FA$ . Thus the sum of the current account and the financial account balances must equal zero.

Table 5.2 helps clarify this point. Suppose that a U.S. consumer buys an imported British sweater, paying \$75 for it. This transaction is an import of goods to the United States and thus reduces the U.S. current account balance by \$75. However, the British exporter who sold the sweater now holds \$75. What will he do with it? There are several possibilities, any of which will offset the effect of the purchase of the sweater on the sum of the current account and the financial account balances.

The Briton may use the \$75 to buy a U.S. product—say, a computer game. This purchase is a \$75 export for the United States. This U.S. export, together with the original import of the sweater into the United States, results in no net change in the U.S. current account balance  $CA$ . The U.S. financial account balance  $FA$  hasn’t changed, as no assets have been traded. Thus the sum of  $CA$  and  $FA$  remains the same.

A second possibility is that the Briton will use the \$75 to buy a U.S. asset—say, a bond issued by a U.S. corporation. The purchase of this bond is a financial

**TABLE 5.2**

Why the Current Account Balance and the Financial Account Balance Sum to Zero: An Example  
(Balance of Payments Data Refer to the United States)

<b>Case I: United States Imports \$75 Sweater from Britain; Britain Imports \$75 Computer Game from United States</b>	
<b>Current Account</b>	
Exports	\$75
less Imports	\$75
Current account balance, <i>CA</i>	0
<b>Financial Account</b>	
No transaction	
Financial account balance, <i>FA</i>	0
Sum of current and financial account balances, <i>CA + FA</i>	0
<b>Case II: United States Imports \$75 Sweater from Britain; Britain Buys \$75 Bond from United States</b>	
<b>Current Account</b>	
less Imports	\$75
Current account balance, <i>CA</i>	-\$75
<b>Financial Account</b>	
Financial inflow	\$75
Financial account balance, <i>FA</i>	\$75
Sum of current and financial account balances, <i>CA + FA</i>	0
<b>Case III: United States Imports \$75 Sweater from Britain; Federal Reserve Sells \$75 of British Pounds to British Bank</b>	
<b>Current Account</b>	
less Imports	\$75
Current account balance, <i>CA</i>	-\$75
<b>Financial Account</b>	
Financial inflow (reduction in U.S. official reserve assets)	\$75
Financial account balance, <i>FA</i>	+\$75
Sum of current and financial account balances, <i>CA + FA</i>	0

inflow to the United States. This \$75 increase in the U.S. financial account offsets the \$75 reduction in the U.S. current account caused by the original import of the sweater. Again, the sum of the current account and the financial account balances,  $CA + FA$ , is unaffected by the combination of transactions.

Finally, the Briton may decide to go to his bank and trade his dollars for British pounds. If the bank sells these dollars to another Briton for the purpose of buying U.S. exports or assets, or if it buys U.S. assets itself, one of the previous two cases is repeated. Alternatively, the bank may sell the dollars to the Federal Reserve in exchange for pounds. But in giving up \$75 worth of British pounds, the Federal Reserve reduces its holdings of official reserve assets by \$75, which counts as a financial inflow. As in the previous case, the financial account balance rises by \$75, offsetting the decline in the current account balance caused by the import of the sweater.<sup>3</sup>

This example shows why, conceptually, the current account balance and the financial account balance must always sum to zero. In practice, problems in

<sup>3</sup>In this case, the balance of payments falls by \$75, reflecting the Fed's loss of official reserves. We didn't consider the possibility that the Briton would just hold \$75 in U.S. currency. As dollars are an obligation of the United States (in particular, of the Federal Reserve), the Briton's acquisition of dollars would appear in the financial account as an increase in foreign-owned assets in the United States, which is a financial inflow. This financial inflow would offset the reduction in the U.S. current account resulting from the import of the sweater.