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Special Commentary

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The Structure of U.S. Capital Flows and the Dollar

Executive Summary

The transactions that the United States undertakes with the rest of world, both real and financial, which are recorded in the country's balance of payments accounts, significantly influence the value of the U.S. dollar vis-à-vis foreign currencies. Although the U.S. current account deficit widened in the second half of the 1990s, it was the autonomous inflows of direct and portfolio investment during that period that led to significant dollar appreciation. In contrast, the current account deficits of the past decade were financed largely by accommodating inflows of foreign capital (e.g., foreign central bank purchases of U.S. Treasury securities) that prevented the dollar from depreciating even more than it did. The trade-weighted value of the dollar has been essentially trendless over the past three years.

We look for only modest appreciation of the U.S. dollar—largely against the currencies of other advanced economies—in the next few quarters. Although the U.S. current account deficit should not widen significantly, sharp acceleration in autonomous capital inflows does not seem likely either, at least not as long as the Federal Reserve remains in an accommodative mode. In that regard, we forecast that the Fed will not increase its target for the Fed Funds rate for the foreseeable future as U.S. economic growth remains modest and inflation remains benign. More significant dollar appreciation than what we forecast would most likely require stronger U.S. growth and higher rates of return on U.S. assets.

The Dollar and the Balance of Payments

Over the past two decades or so, the value of the U.S. dollar has gone through three broad phases.

Over the past two decades or so, the value of the U.S. dollar has gone through three broad phases. Between mid-1995 and early 2002 the trade-weighted value of the dollar rose nearly 40 percent (Figure 1). Not only did the greenback strengthen against the currencies of most developing economies (measured as "Other Important Trading Partners" in Figure 1), but it appreciated during this period vis-à-vis major currencies as well. The second phase began in early 2002 when the U.S. dollar began a downward slide that lasted until mid-2008. Finally, the greenback has been more or less trendless since mid-2009 (after gyrating wildly during the global financial crisis and its immediate aftermath). What explains these broad swings in the value of the dollar over the past two decades? Can we use any insights that we glean from this analysis to divine the future direction of the dollar?

Any analysis of the dollar's value versus other currencies should really start with the country's balance of payments accounts. After all, the transactions that the United States undertakes with the rest of world, both real and financial, influence the value of the U.S. dollar vis-à-vis foreign currencies, and these transactions are recorded in the country's balance of payments accounts. Transactions such as American exports of goods and services and foreign capital inflows into the United States, which show up as credits in the balance of payments, generate foreign demand for U.S. dollars that cause the greenback to appreciate. On the other hand, debits in the balance of payments (e.g., U.S. imports of goods and services and outflows of capital to other countries) generate American demand for foreign currencies that lead to dollar depreciation.

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We must distinguish between autonomous and accommodating transactions.

If credits equal debits, as they must in any double-entry accounting system, then how can the value of the dollar change? Here we must distinguish between autonomous transactions, which consumers and businesses undertake as they pursue their economic self-interest, and accommodating transactions, which are the accounting offset to the autonomous transactions.[1] Perhaps an example or two will help illustrate the point. Suppose an American manufacturer sells $1 million worth of machinery to a British company. The sale of the machinery is considered to be an American export and shows up in the U.S. balance of payments as a $1 million credit. To pay for the machinery, the British company buys U.S. dollars with pounds sterling in the foreign exchange market and then deposits the proceeds in the American manufacturer's bank in London. This accommodating transaction enters the balance of payments as a $1 million debit (increase in U.S. assets held abroad). However, it was the autonomous purchase of U.S. exports that generated a demand for U.S. dollars that would cause the greenback to rise in value vis-à-vis the British pound.

As another example, consider an American hedge fund that buys €10 million worth of newly issued stock from a German investment bank (an autonomous transaction), and assume that it currently takes 1.30 U.S. dollars to buy one euro in the foreign exchange market. The hedge fund would use $13 million to purchase €10 million in the foreign exchange market, and it would then deposit the euro proceeds in the German investment bank's account at an American commercial bank in New York (the accommodating offset to the autonomous purchase of stock). The purchase of stock would enter the U.S. balance of payments as a $13 million debit (increase in American assets held abroad) and the deposit of euros in the New York based-bank would generate a $13 million credit (increase in foreign assets held in the United States). However, it was the autonomous purchase of stock by the U.S. hedge fund that generated a demand for euros that would cause the U.S. dollar to decline in value against the euro.

Figure 1

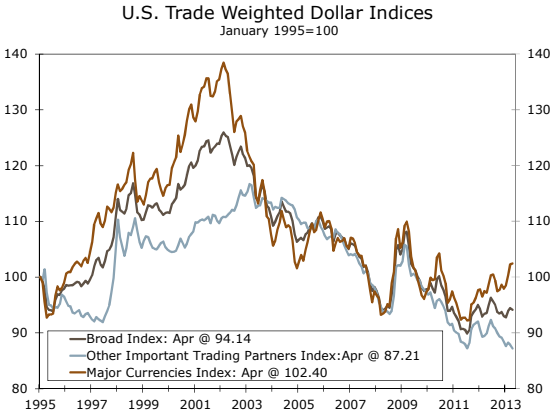
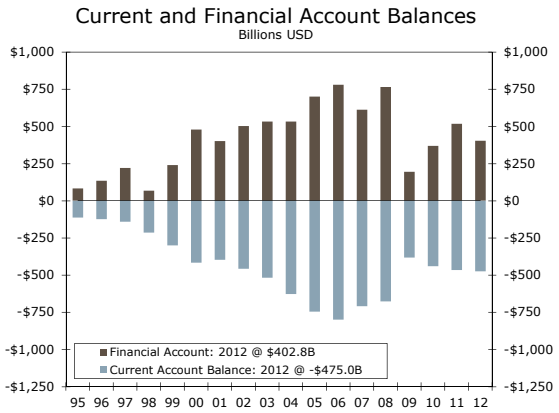


Figure 2



Source: Federal Reserve Board, Department of Commerce and Wells Fargo Securities, LLC

Phase 1: Strong Capital Inflows in 1995—2001

Net capital inflows rose significantly between 1995 and 2001.

With this primer in balance-of-payments accounting in hand, let's now turn to the trend appreciation of the U.S. dollar that occurred between mid-1995 and early 2002. From $114 billion in 1995, the U.S. current account deficit widened to nearly $400 billion in 2001. However, as balance-of-payments accounting requires, the widening in the current account deficit during those years was offset by an increase in the financial account surplus (Figure 2). That is, net capital inflows rose significantly between 1995 and 2001, and this increase in net capital inflows occurred because gross capital inflows rose more than gross capital outflows (Figure 3).

Moreover, it was the structure of those inflows that led to the appreciation of the dollar. Recall the distinction between autonomous transactions and accommodating transactions. Foreign direct

[1] **See Dennis Appleyard and Alfred Field, International Economics, Third Edition, Irwin/McGraw-Hill, 1998.**

investment (FDI) in the United States and foreign purchases of U.S. securities are autonomous transactions, because they are undertaken when the foreign private sector acts in its own economic self-interest. In contrast, purchases of U.S. assets by the foreign "official" sector—largely purchases of U.S. Treasury securities by foreign central banks—are accommodating transactions for reasons we will discuss subsequently in further detail.

Figure 3

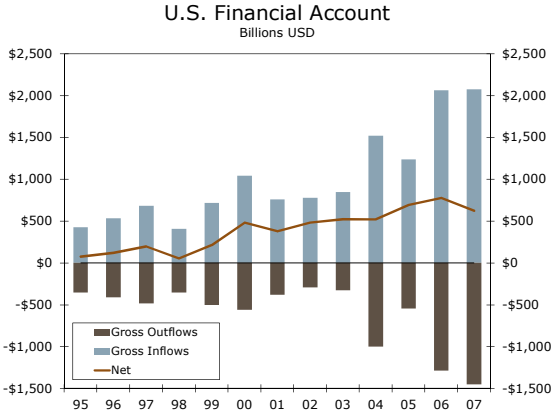
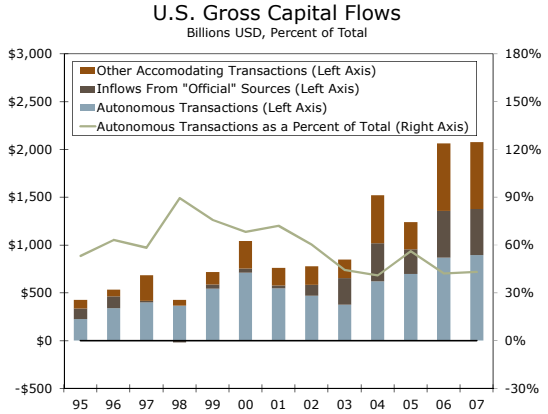


Figure 4



Source: Department of Commerce and Wells Fargo Securities, LLC

Figure 4 shows that autonomous foreign purchases of U.S. assets (FDI and portfolio investment) shot up from $227 billion in 1995 to more than $700 billion in 2000, the peak year for gross capital inflows during the 1995—2001 period of dollar appreciation. As a percentage of total capital inflows, autonomous transactions rose from about 50 percent in 1995 to nearly 70 percent in 2000. Foreign direct investment mushroomed to $321 billion in 2000 from $58 billion in 1995, and foreign portfolio investment more than doubled from $169 billion in 1995 to $390 billion in 2000.

These strong inflows of FDI and portfolio investment went hand in hand with robust U.S. economic growth during this period that raised rates of return on U.S. assets, making them attractive to foreign investors. As foreigners bought U.S. dollars to purchase U.S. securities and real assets, the greenback strengthened, which contributed to the widening in the U.S. current account deficit. In sum, the strength of the U.S. economy attracted capital inflows from abroad that led to dollar appreciation. This rise in the financial account surplus (i.e., gross capital inflows in excess of gross capital outflows) was offset in the balance of payments by the widening in the current account deficit that was a byproduct of the stronger dollar.

Phase 2: Current Account Deficits and Dollar Weakness in 2002—2008

The U.S. current account deficit narrowed a bit during the shallow recession of 2001, but it soon resumed its upward trend.

The U.S. current account deficit narrowed a bit during the shallow recession of 2001, but it soon resumed its upward trend, rising from about $450 billion in 2002 to $800 billion (a staggering 6 percent of GDP) in 2006. The widening in the current account deficit reflected strong growth in U.S. domestic demand, which sucked in imports, in conjunction with weak economic growth in some of America's traditional trading partners, such as western Europe and Japan, that constrained growth in exports. But unlike the previous decade, when the dollar strengthened despite the widening in the current account deficit, the greenback trended lower with the increased red ink in the current account. Moreover, the dollar's depreciation was broad based during this period.[2]

As balance-of-payments accounting requires, the increase in the current account deficit was matched by rising financial account surpluses (Figure 2). However, the structure of the capital

[2] From its peak in early 2003 until its nadir in mid-2008, the Fed's Other Important Trading Partners index dropped 18 percent. The greenback's weakness was even more extreme versus major currencies as the Major Currency index plunged nearly 40 percent between early 2002 and mid-2008.

inflows changed from one that was heavily weighted toward autonomous financial transactions (i.e., FDI and portfolio investment by foreign investors) to one in which accommodative transactions (i.e., foreign central bank purchases of U.S. Treasury securities and short-term financing flows of banks and businesses) were more prevalent. Indeed, by 2004, autonomous transactions accounted for only 40 percent of gross capital inflows (Figure 4).

Foreign official purchases of U.S. assets shot up from about $100 billion in 2002 to nearly $500 billion in 2007. However, these financial account transactions were largely accommodating rather than autonomous like the surge in private capital flows that occurred between 1995 and 2000. For example, purchases of Treasury securities by the Chinese central bank simply reflect a policy decision by the Chinese government to maintain a current account surplus, while keeping the value for the Chinese renminbi essentially fixed versus the U.S. dollar.[3] Without the intervention of the Chinese central bank in the foreign exchange market and its subsequent purchase of U.S. Treasury securities, the renminbi would have appreciated sharply against the dollar.[4] Moreover, China was not alone. Other central banks intervened heavily in the foreign exchange market during these years to limit the extent of dollar depreciation vis-à-vis their currencies.

The trend increase in the current account deficit between 2002 and 2008 put downward pressure on the value of the U.S. dollar.

In sum, the trend increase in the current account deficit between 2002 and 2008 put downward pressure on the value of the U.S. dollar. As required by balance-of-payments accounting, the increase in the current account deficit during these years was matched by the rise in the financial account surplus. Unlike the late 1990s, when strong inflows of FDI and portfolio investment by foreign investors caused the greenback to strengthen, accommodating financial transactions played an important role in financing the current account deficits of 2002 through 2008. The dollar would have depreciated even more during these years had foreign central banks not ramped up their purchases of U.S. government securities.

Phase 3: Depressed Capital Inflows and Trendless Dollar Since 2009

As noted earlier, the trade-weighted value of the dollar has been essentially trendless since mid-2009. The good news for the greenback is that the current account deficit is much smaller today than it was a few years ago, which exerts less downward pressure on the dollar. The red ink in the current account totaled $475 billion in 2012, which was roughly equivalent to its level in 2002 before the dollar's slide began.

The bad news, however, is that autonomous inflows of capital, which could lead to dollar strength if they were to surge *à la* the late 1990s, remain weak. There was only $200 billion worth of private portfolio inflows from foreign investors in 2012, and FDI totaled only $175 billion, a 25 percent decline from 2011 (Figure 5). Accommodating transactions have continued to play a relatively large role in the financing of the current account deficit as purchases of U.S. Treasury securities by the foreign "official" sector totaled roughly $350 billion in 2012. In addition, foreign deposits in American banks plunged by nearly $400 billion in 2012, which may reflect the continued low interest-rate environment in the United States that would diminish the appeal to foreign investors of parking money in American banks. It is difficult to realize sustained currency appreciation if foreigners are liquidating their deposits *en masse* in American banks and taking the proceeds home.

[3] It is impossible to determine exactly the value of Treasury securities the People's Bank of China (PBoC) purchased during this period. However, Treasury Department data show that Chinese holdings of U.S. Treasury securities rose from roughly $80 billion in early 2002 to more than $700 billion at the end of 2008. The vast majority of this increase likely reflects purchases by the PBoC.

[4] The Chinese currency was effectively fixed at 8.28 yuan per dollar between early 1998 and July 2005. The dollar has depreciated 25 percent on balance (an average annualized average rate of only 4 percent) since the Chinese government allowed some flexibility in the exchange rate starting in July 2005.

Figure 5

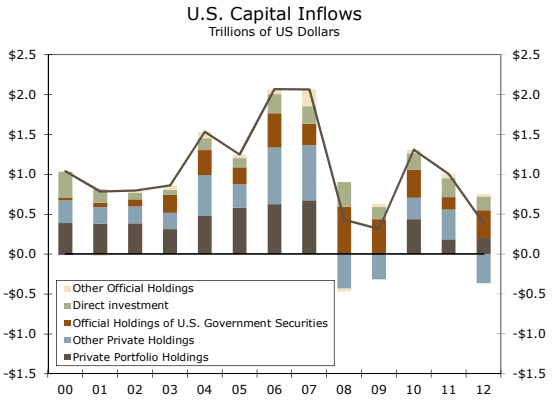
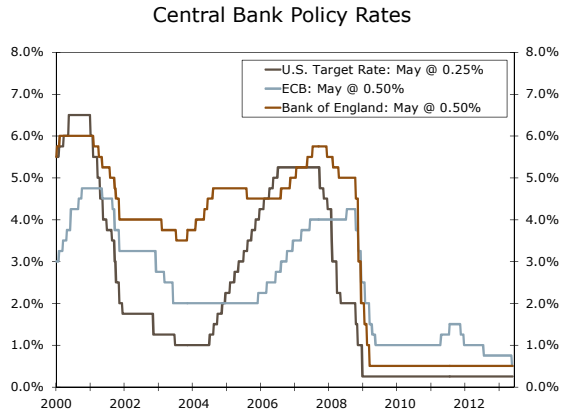


Figure 6



Source: Department of Commerce, Bloomberg LP and Wells Fargo Securities, LLC

Which Way for the Dollar in Coming Quarters?

This report has discussed the evolution of the U.S. balance of payments over the past two decades and the implications of that evolution for the value of the U.S. dollar. We now turn to our views on the U.S. balance of payments and the dollar's value going forward.

Let's start with the current account deficit, which we project will widen from $475 billion in 2012 to $495 billion in 2013.[5] Slow economic growth in many of the country's major trading partners should constrain growth in American exports for the second consecutive year in 2013. On the other hand, moderate growth in U.S. domestic demand should keep import growth constrained as well. In addition, we forecast that petroleum prices will remain little changed this year due to slow global growth. Consequently, the value of American oil imports should not increase significantly.[6] We project that the current account deficit will widen to $570 billion in 2014 as stronger growth in U.S. domestic demand leads to acceleration in imports and as petroleum prices rise further. This modest increase in the U.S. current account deficit over the next two years should exert some downward pressure on the dollar, everything else equal.

We project that the current account deficit will widen to $570 billion in 2014.

Of course, everything else is not equal. We also need to consider developments in the U.S. financial account. The choices of U.S. assets by foreigner investors are many and varied, including bonds, equities and real estate among many others, while the factors underlying the demand for U.S. assets are complex and varied as well. However, to the extent that the U.S. economy grows at only a moderate pace, foreign demand for U.S. assets will likely remain constrained as well. That moderate economic outlook is broadly consistent with our base scenario, with our U.S. economic forecast seeing only a gradual upswing in growth, from an expected 1.8 percent in 2013 to 2.1 percent in 2014.

That is not to say that the greenback will not perform well against some currencies, and in particular against the major currencies. As moderate as our 2013 GDP growth forecast is, it is still better than for the Eurozone, where we forecast that real GDP will contract 0.6 percent. Indeed, the gloomy state of the Eurozone economy poses a particularly interesting example, given the significant divergence that currently exists between the Eurozone and the United States. Whereas U.S confidence surveys—specifically the Institute of Supply (ISM) indices—indicate slow but steady growth, Eurozone confidence surveys—the Purchasing Manager Indices (PMIs)—are consistent with contraction. As shown in Figure 7, the large negative economic gap between the Eurozone and the United States—as proxied by the difference between these PMI and ISM

[5] Our forecast details can be found in our *Monthly Economic Outlook*, which is posted on our website.
[6] Petroleum currently accounts for 17 percent of the value of total American imports. Moreover, increased U.S. production of crude oil and conservation efforts have led to decreased American demand for oil. The volume of petroleum imports fell 1.5 percent in 2011 from the previous year, and nearly another 8 percent last year.

surveys—has typically been consistent with a weakening euro. As a result we expect the greenback to gain against the euro over the medium term. Rates of real GDP growth in the United Kingdom and Japan should be positive, albeit weaker than in the United States, and we expect moderate gains for the U.S. dollar against the yen and the British pound as well.

The going will probably be much tougher for the U.S. dollar against the commodity and especially some emerging currencies, where economic growth rates are generally stronger, and interest rates are generally higher, than in the United States. As an indication, we expect developing countries' GDP to grow by an average of 5 percent in 2013, easily exceeding the pace of growth in the United States. Indeed, we see a weakening trend for the greenback against many of these emerging currencies. Overall however, considering the performance of the greenback against both the major and emerging currencies, we expect a modest trade-weighted appreciation in the value of the U.S. dollar over the medium term.

We expect developing countries' GDP to grow by an average of 5 percent in 2013.

More significant dollar appreciation than what we forecast would most likely require stronger U.S. growth and higher rates of return on U.S. assets. Again as an illustrative example, one specific rate of return that often influences currencies are relative short-term interest rates, which can be captured to some extent by two-year government yields. Figure 8 shows U.S. two-year yields compared to the GDP-weighted average of two-year yields for the Eurozone, Japan, the United Kingdom, Canada, Australia, Sweden and Switzerland. Although relative yields have moved in favor of the United States (or in other words, the negative gap between the U.S. and global yields has shrunk), this has been due to falling international yields rather than rising U.S. yields. It likely would require much stronger U.S. economic growth and Fed tightening, which would raise returns on U.S. assets thereby attracting autonomous inflows of foreign portfolio capital, for the greenback to experience significant appreciation. However, robust economic growth and Fed tightening do not form part of our base scenario in our economic outlook. Therefore, we believe that dollar appreciation will remain limited over the next few quarters.

Figure 7

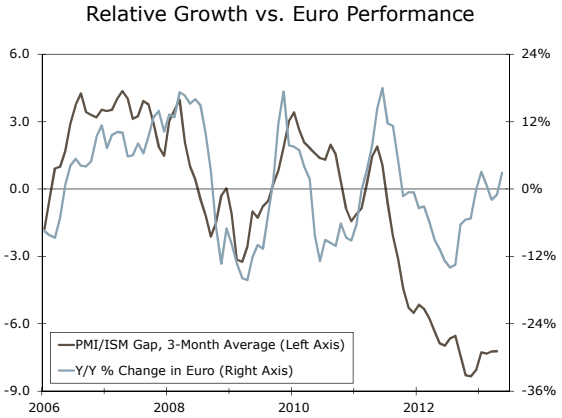
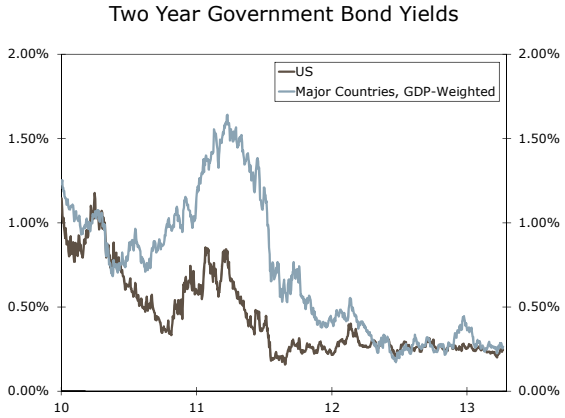


Figure 8



Source: Ecowin and Wells Fargo Securities, LLC

Conclusion

Financial transactions that Americans undertake with the rest of the world, which are recorded in the U.S. balance of payments, significantly influence the value of the U.S. dollar vis-à-vis foreign currencies. Robust U.S. economic growth in the second half of the 1990s caused returns on U.S. assets to rise, thereby leading to strong autonomous capital inflows that caused the dollar to appreciate, while the appreciation of the U.S. dollar contributed to the widening in the U.S. current account deficit during that period. It was the horse of autonomous inflows of foreign capital that drove the cart of the widening current account deficit in the late 1990s.

The horse and the cart were reversed during the past decade. The current account deficit, which widened even further, needed to be financed by capital inflows. However, autonomous capital inflows were insufficient to finance the entire current account deficit. Rather than seeing their

currencies strengthen sharply against the greenback, foreign central banks stepped into the breach and purchased U.S. dollars in the foreign exchange market that were subsequently used to buy U.S. Treasury securities. Over the past three years, the value of the dollar has been essentially trendless. Although the size of the U.S. current account deficit is modest today, rates of return on U.S. assets are not high enough to attract strong autonomous capital inflows into the country.

We look for only modest appreciation of the U.S. dollar—largely against the currencies of other advanced economies—in the next few quarters. Although the U.S. current account deficit should not widen significantly, sharp acceleration in autonomous capital inflows does not seem likely either, at least not as long as the Federal Reserve remains in an accommodative mode. In that regard, we forecast that the Fed will not increase its target for the Fed Funds rate for the foreseeable future as U.S. economic growth remains modest and inflation remains benign.

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