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## **Why the Dollar Rose in 2005 and the Prospect for 2006: Insights into the State of International Asset Markets and the Global Economy**

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# Why the Dollar Rose in 2005 and the Prospect for 2006: Insights into the State of International Asset Markets and the Global Economy

## Summary

The dollar exchange rate rose substantially in 2005, up 7% in the major currencies index and about 2.3% in the broad index, halting a three-year decline and moving counter to the expectations of many observers.

The path of the dollar is symptomatic of underlying economic forces that shape and propel U.S. international transactions. Of singular importance in this regard is the waxing and waning of the world's appetite for dollar denominated assets and the associated flow of funds on international capital markets. A closer look at the several forces that influence that appetite is revealing of, not only the ups and downs of the dollar, but also of the forces behind the large current account imbalances in the world economy (deficits in the United States and surpluses in other major economies).

The confluence of several forces likely explains the dollar's recent strength. Most importantly: the fast pace of U.S. economic growth, tax law changes, increases in short-term interest rates by the Fed, and a large pool of oil export earnings looking for a safe resting place.

The dollar weakened slightly in late 2005, but during the first four months of 2006, it has not shown any real trend, up or down. The major currencies index has been flat and the broad index has appreciated slightly. Forecasting the path of the exchange rate for the rest of the year is highly problematic, as the weight of economic fundamentals on the dollar can be easily countered in the short-run by sudden shifts in investor sentiment that are imperfectly understood. Consideration of the probable forces that have the potential to influence rate of return on dollar assets and the need to diversify out of dollar assets to minimize the risk of capital losses gives some overall sense of how the relative probabilities for appreciation versus depreciation stack up.

Whether the dollar rises or falls in 2006, there will still be reasons for concern about the underlying health of and impending risks to the United States and global economies, from the unhealthy combination of deficient domestic saving in the United States and deficient domestic spending in the rest of the world. The persistence of these large imbalances into 2006 is very likely only postponing an inevitable day of reckoning. The delay makes the job of adjustment not only more difficult but, perhaps, more risky.

For economic policy the task is how to assure an orderly correction of these imbalances that leaves all the involved economies on sounder macroeconomic footings. The most favorable economic outcome will result from coordinated policy actions to raise saving in the United States, boost domestic demand in the Euro area and Japan, and raise rates of domestic investment in the emerging economies of Asia and the oil exporting economies.

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# Why the Dollar Rose in 2005 and the Prospect for 2006: Insights into the State of International Asset Markets and the Global Economy

## Introduction

The dollar exchange rate rose substantially in 2005, halting a three-year decline and moving counter to the expectations of many observers. A steady depreciation of the dollar from early 2002 through 2004 had brought the dollar's value (on a real, trade-weighted basis) down about 30% against major currencies and about 15% against a broader group of currencies.<sup>1</sup> It can be argued that such depreciation was the inevitable consequence of America's large trade deficit and the associated accumulation of foreign indebtedness. But it was also a necessary aspect of the process of correcting those huge imbalances and, as some see it, of mitigating the looming risk of economic crisis that they carry with them. The growing concern at that time was not that the dollar would stop falling, but that it might begin to fall too fast to allow for an orderly correction of those imbalances. And, given the pivotal role of the dollar and the U.S. market in the global economy, a sharp fall of the dollar carries the risk of causing a global recession.<sup>2</sup>

In 2005, however, the dollar changed course and slowly but steadily appreciated in value, up 7% in the major currencies index and about 2.3% in the broad index. The appreciation was much more sizable against individual currencies, up about 14% against the yen and 11% against the euro, but it appreciated little or not at all against

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<sup>1</sup> The real or inflation-adjusted exchange rate is the relevant measure for gauging effects on exports and imports. A trade-weighted exchange rate index is a composite of a selected group of currencies, each's dollar value weighed by the share of the associated country's exports or imports in U.S. trade. The *major currencies* and the *broad* index cited here are constructed and maintained by the Federal Reserve. The major currencies index is comprised of 7 currencies traded actively outside of their home region. The currencies are the euro, Canadian dollar, Japanese yen, British pound, Swiss franc, Australian dollar, and Swedish krona. Because these currencies are traded in liquid financial markets this index is useful for gauging financial (asset) market pressures on the dollar. The *broad* index includes 26 currencies — the 7 in the major currencies index plus that of 19 more important trading partners. Among the 19 are the currencies of China, Mexico, Korea, Singapore, and India. The 26 countries account for about 90% of United States trade and, therefore, the broad index is a good measure of changes in the competitiveness of U. S. goods on world markets.

<sup>2</sup> J. Bradford DeLong, "Divergent Views on the Coming Dollar Crisis," *The Economist's Voice*, 2005, at [<http://www.bepress.com>].

the currencies of China and several other Asian economies that maintain their currencies at a fixed rate to the dollar. This appreciation occurred even as the U.S. trade deficit and foreign debt climbed to record levels.

The path of the dollar is symptomatic of underlying economic forces that shape and propel U.S. international transactions. Of singular importance in this regard is the waxing and waning of the world's appetite for dollar denominated assets and the associated flow of funds on international capital markets. A closer look at the several forces that influence that appetite is revealing of, not only the ups and downs of the dollar, but also the forces behind the large current account imbalances in the world economy (deficits in the United States and surpluses in other major economies), large asset market imbalances in the world economy (a large stock of liabilities in the United States and a large stock of dollar assets in the investment portfolios of foreigners), and the prospects for an orderly or disorderly correction of those imbalances.

## **Possible Reasons for the Dollar's Appreciation in 2005**

The dollar's exchange rate is not fixed by U.S. policy; rather, like most other major currencies, it moves flexibly with the forces of demand and supply in international foreign exchange markets. These forces are ultimately derived from the purchase and sale of dollar denominated goods or assets. Goods are, of course, things like wheat, oil, pharmaceuticals, or aircraft; while assets are things like stocks, bonds, and real property. An increase in foreign demand for dollar denominated goods or assets also increases the demand in foreign exchange markets for the dollars needed to buy those goods or assets, and that tends to bid up the dollar's foreign currency price. Conversely, a decrease in demand for dollar denominated goods or assets tends to push the dollar's foreign currency price down. For example, the fall of the dollar over the 2002-2004 period was, in part, the result of a weakening of the demand for dollar denominated assets by foreigners.<sup>3</sup>

The supply of dollars on foreign exchange markets is determined by the magnitude of the flow of dollars that Americans are exchanging for foreign currency needed to purchase foreign goods and assets. For example, in the same 2002-2004 period, substantial increases in demand for both foreign goods and assets by U.S. buyers also contributed to the weakening of the dollar at that time. This also shows that the pressures on the dollar in the foreign exchange markets can arise from the investment decisions of both foreign and domestic investors. It is also true that economic policy, while aimed at other economic goals, can affect the demand and

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<sup>3</sup> The current account balance responds slowly to a lower dollar. It takes time for the volume of U.S. exports to rise and the volume of U.S. imports to fall in response to the change in relative prices caused by the appreciation. Because a depreciating exchange rate's effect on the price of imports is more immediate, the actual value of imports will rise for a while. Therefore there will be a tendency for the trade deficit to get bigger before it gets smaller after a currency depreciation.

supply of U.S. and foreign goods and assets and, thereby, indirectly affect the exchange rate.

Asset markets, including the markets for foreign exchange, handle transactions at a far greater volume and at a much faster speed than the markets for goods and services. In 2004, just the *daily* trading on the world's foreign exchange markets was estimated to be in excess of \$1.9 trillion, with 90% of that trade in U.S. dollars.<sup>4</sup> Moreover, this buying and selling of dollars (and other assets) is largely a matter of near instantaneous electronic transfer with no need for physical handling or transport. Therefore, asset market events tend to play the dominant role in determining the path of the exchange rates of the dollar and other major currencies. With assets in the mix, it is possible to reconcile a rising dollar with a rising trade deficit, because the upward push of the demand for dollar assets on the demand for dollars is greater than the downward push of the trade deficit on the supply of dollars in the foreign exchange market.<sup>5</sup>

The strength of *net* capital inflows (the difference between inflows and outflows) from the rest of the world is a fairly consistent predictor of the general path of the dollar. For example, during the period from 1996 to 2002, net capital inflows grew from about \$150 billion to \$570 billion, and the dollar rose. For the period from 2002 to 2004 net capital inflows flattened out and the dollar depreciated. In 2005, net capital inflows grew strongly again, reaching over \$800 billion, and the dollar appreciated.

The direction and strength of international asset market flows are subject to a significant degree of uncertainty. Nevertheless, several factors in 2005 could have contributed to a change in domestic and foreign investors' calculation of the acceptable balance between *rate of return* and *risk* from holding dollar assets, triggering an increased capital inflow, and in conjunction bid up of the exchange value of the dollar. The net effect emerges as the resolution of upward impulses that happened and potential downward impulses that did not happen.

## Strong Economic Growth

The U.S. economy has grown faster than most other industrial economies, particularly those in the Euro area and Japan. For the 10 years ending in 2004, annual growth rate of real GDP in the U.S. economy averaged 3.3%. This compares to an average rate of 2.3% in the Euro area and 1.2% in Japan. For the 2003-2005 sub-period the U.S. economy's growth advantage was maintained, but there were some compositional changes as economic recovery in Japan narrowed its gap with the United States, while economic weakness in the Euro area economies increased the U.S. advantage over them. In 2005, the year the dollar began to appreciate, real GDP

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<sup>4</sup> *Triennial Central Bank Survey: Foreign Exchange and Derivatives Market Activity in 2004*, Bank for International Settlements, Mar. 2005.

<sup>5</sup> For a more extensive discussion of the determination of exchange rates see CRS Report RL31985, *Weak Dollar, Strong Dollar: Causes and Consequences*, by Craig K. Elwell.

growth in the United States was 3.6% compared to 1.4% and 2.4% in the Euro area and Japan respectively.<sup>6</sup>

Generally, a faster growing economy will generate more investment opportunities that offer higher rates of return than will slower growing economies. As will be discussed, higher rates of return can be the consequence of vigorous activity in the private marketplace, but also the result of the configuration of government policy. Further, rate of return advantages can be arrayed in various ways between long-term and short-term assets as well as between high risk and low risk assets.

The most ready measure of a rate of return advantage is the relative levels of interest rates. In 2005, there was a significant widening of the spread between short-term interest rates in the United States relative to short-term rates in the Euro area economies and the Japanese economy. From an average of 1.6% in 2004, U.S. short-term interest rates increased to around 3.5%, while in the Euro area economies short-term rates moved up slightly from 2.1% in 2004 to 2.2% in 2005. In Japan, there was no change with short-term rates staying at 0.0%. The spread on long-term interest rates in the United States relative to those in the Euro area and Japan also widened. This was due exclusively to a fall of long-term rates in both the Euro area and Japan in 2005. In the U.S. long-term rates averaging 4.3% were unchanged from 2004 but long-term rates in the Euro area economies fell from 4.1% to 3.4% and in Japan from 1.5% to 1.4%. Thus, while the attractiveness of both long-term and short-term U.S. assets improved in 2005, the change was more significant for short-term assets.

The rate of return advantage in the U.S. economy is likely greater than the spread between market interest rates would suggest, however. A study by the IMF of rates of return to capital in the large industrial economies and the developing economies for the decade 1994-2003 found the rate of return in the United States was about 8.6% as compared with a G-7 average of about 2.4% and an emerging market average of about *minus* 4.7%.<sup>7</sup> Given that the U.S. economy's rate of growth has accelerated since 2003 (and accelerated faster than other advanced economies), this large advantage likely still exists. But it is not possible to say that there was sufficient variation in this rate of return advantage to explain a weakening of foreign demand for dollar assets in the 2002-2004 period followed by a strengthening of that demand in 2005.

Data on private (non-government) foreign purchases of U.S. assets in 2005 show a substantial increase over 2004. Calculated on a net basis (outflows minus inflows) private capital inflows in 2005 were nearly \$570 billion, up from about \$186 billion in 2004. A major portion of the increase in private investment inflows was a \$253

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<sup>6</sup> Data on economic growth rates taken from the *OECD Economic Outlook*, no. 78, Jan. 2006.

<sup>7</sup> IMF, *World Economic Outlook*, "Global Imbalances: In a Saving and Investment Perspective," Sept. 2005, pp. 100-104.

billion swing in inflows for *direct investment*.<sup>8</sup> In 2004, this category had a \$145 billion net outflow (more out-bound direct investment than in-bound), a pattern that had been intensifying since 2002. In contrast, in 2005 net direct investment had an *inflow* (more in-bound than out-bound) of \$108 billion, representing a change of more than \$250 billion.

This shift in direct investment flows is outwardly consistent with the notion that faster relative growth attracts capital, but as discussed in the next section a special factor may explain a large part of 2005's direct investment shift. Other categories of capital inflows comprising what is usually called *portfolio investment* (unaffected by tax law changes, and more short-term in nature), also increased substantially to a net inflow of \$494 billion, up from \$374 billion in 2004. This acceleration of portfolio investment may certainly have been *pulled* into the United States by the lure of higher rates of return, but as discussed in latter sections of the report, there were also forces that likely pushed foreign investors' funds towards dollar assets, regardless of the growth performance and level of rate of return.<sup>9</sup>

## Tax Incentives

A large share of the \$250 billion shift in direct investment inflows discussed above was likely caused by U.S. companies moving reinvested earnings to the United States from abroad to take advantage of the significant tax incentives provided by the American Jobs Creation Act of 2004.<sup>10</sup> This explanation gains credence when we observe that nearly all of the net change in direct investment flows was caused by a reduction of U.S. investors' direct investment outflows from \$252 billion in 2004 down to only \$21 billion in 2005. Foreign direct invest inflows to the United States increased only \$27 billion in 2005. If it was only a matter of superior growth performance prompting the shift of net direct investment flows, the change would likely be more evenly split between domestic and foreign investor. This tax incentive was only available in 2005, so its effect on international investment flows will be limited to that year. Also, because this change is likely to be largely a matter of shifting accounting entries for most multinational corporations, it would not have much of an effect on the dollar's exchange rate.

## Further Tightening of Monetary Policy

The Federal Reserve continued to raise short-term interest rates in 2005. By May 2006, there had been 16 straight rate increases over 19 months, causing the federal funds rate to rise from 1.0% to 4.75%. As discussed earlier, the average level

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<sup>8</sup> Direct investment, in the United States and abroad, is defined as: the ownership or control, directly or indirectly, by one foreign person (individual, branch, partnership, association, government, etc.) of 10% or more of the voting securities of an incorporated U.S. business enterprise or an equivalent interest in an unincorporated U.S. business enterprise.

<sup>9</sup> Data on asset flows taken from the U.S. Department of Commerce, Bureau of Economic Analysis, *U.S. International Transactions in 2005*, Mar. 2006.

<sup>10</sup> CRS Report RL32652, *The 2004 Corporate Tax and FSC/ETI Bill: The American Jobs Creation Act of 2004*, by David L. Brumbaugh.



of U.S. short-term interest rates increased from 1.6% in 2004 to 3.5% in 2005 and this was also an increase relative to foreign short-term interest rates. The Federal Reserve's intention is to use monetary policy to slowly tighten the reins on aggregate spending through higher borrowing costs and thereby forestall an acceleration of the rate of inflation as the economic expansion proceeds.<sup>11</sup> However, higher interest rates will, other things equal, also tend to increase the attractiveness of dollar assets to foreign investors and bid up the dollar's exchange rate. This will have its strongest effect on the foreign purchases of short-term investments, particularly of highly liquid U.S. Treasury securities. In 2005, foreign purchases of Treasury securities increased to a record \$196 billion, up from \$107 billion in 2004.

## Decreased Personal and Public Saving

The personal saving rate in the United States has been very low in recent years, fluctuating narrowly between 1.3% and 1.8% of GDP from 1999 to 2004. The decline of the personal saving rate since 1999 has been an important reason for the United States having to attract large inflows of foreign capital (i.e. foreign saving) to help fund domestic investment, and therefore, a source of upward pressure on the dollar exchange rate. In 2005, however, the personal saving rate fell even lower, descending to negative rates through most of 2005. A particularly sharp reduction in personal saving occurred in the third quarter, with the saving rate falling to -1.3% of GDP.<sup>12</sup> That represented a decrement to national saving of nearly \$120 billion from the second to third quarter of 2005. A negative saving rate means that households were digging into past saving to pay for their current expenditures. Also in the second half of 2005, the government saving rate, or more accurately the government dissaving rate (i.e. a negative saving rate) caused by federal budget deficits, deteriorated (at a quarterly rate) from -0.4% to -0.8% of GDP. That translates to a decrement to national saving of about \$60 billion in the second half of 2005.

Other things equal, a substantial reduction in these two sources of national saving would decrease the pool of saving available to the economy for financing domestic investment, put upward pressure on domestic interest rates, raise the attractiveness of dollar assets, and exert upward pressure on the exchange rate. Other things were not equal, however. For at the same time that there was an intensification of personal and government dissaving, there was an offsetting increase in business saving. (Business saving is composed of undistributed business profits.) So, despite two significant negative impulses, the overall national saving rate did not decline in 2005. At 13.5% of GDP, the overall rate of national saving was slightly above the 13.4% rate recorded in 2004 and 2003. (For comparison, the overall national saving

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<sup>11</sup> The Federal Reserve Board, *Testimony of Chairman Ben S. Bernanke*, Before the Committee on Financial Services, U.S. House of Representatives, Feb. 15, 2006.

<sup>12</sup> U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, April 2006.

rate was 16% in 1995, rose to a high of 18% in 1999, and has steadily fallen since then.)<sup>13</sup>

Therefore, despite some significant negative impulses, it could not be concluded that a fall of the national saving, itself, contributed to the rise of the dollar in 2005. What can not be determined is if the fall in the personal and government saving rates might have changed investor expectations about the future path interest rates and the dollar itself, causing some speculative capital inflows and upward pressure on the dollar.

What is known, however, is that the rate of gross national investment increased to 19.7% of GDP, from 19% in 2004. Meaning that, with the saving rate essentially unchanged from 2004, bridging the bigger gap between the domestic saving available to fund investment and the level of investment undertaken required the inflow of foreign capital to increase to 6.3% of GDP in 2005 from 5.6% of GDP in 2004. A greater capital inflow puts greater upward pressure on the dollar exchange rate. This is really just another way of looking at the process discussed in the earlier section on economic growth.

## Reform of Japanese Postal Saving System

Since October 1, 2005, it has been possible for Japanese savers to buy shares of mutual funds at their post office. The postal saving system is the principal financial institution for most Japanese households and it has accumulated about \$3 trillion in assets, making it the world's largest bank. Prior to last year's reform, Japanese households were limited to accumulating relatively low-yielding Japanese government bonds.<sup>14</sup>

With more lucrative alternatives now available, a large diversification of perhaps as much as \$1 trillion out of the current holdings of largely low-yielding Japanese government bonds is expected. Even with a significant home-bias, it is unlikely that Japanese asset markets can offer enough sufficiently profitable investment options to absorb anything close to the amount of funds likely to flow from this diversification. Therefore a big share of these funds is expected to flow toward higher yielding foreign assets. Initial sales are reported to have favored foreign bond funds. Any such portfolio diversification of foreign investors out of non-dollar assets can be seen as a force tending to *push* foreign capital towards the large, well-functioning dollar asset markets.

Purchases of dollar assets are likely a substantial component of the ongoing diversification of Japanese households asset portfolio for two reasons. First, as already discussed above, dollar assets have historically offered a steady high-risk adjusted return that makes them more attractive than assets denominated in other easily convertible currencies such as the pound, yen, or euro. Second, the large size

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<sup>13</sup> CRS Report RS21489, *Saving Rates in the United States: Calculation and Comparison*, by Brian W. Cashell.

<sup>14</sup> Daniel Engber, "How Japan's Postal Service Got \$3 Trillion", *Slate* ([www.slate.com](http://www.slate.com)), August 5, 2005.

of the U.S. asset market allows it to easily accommodate large investment inflows as well as offer a ready market for any future sale of those investments. The precise magnitude of effect on the dollar exchange rate in 2005 of investment inflows from Japanese Postal Saving funds is not known, and the time period during which this flow of Japanese funds could have occurred in 2005 was only three months. Nevertheless, it seems likely that this was the source of some upward pressure on the dollar in late 2005.<sup>15</sup>

## Rising Petroleum Export Earning

Because the international oil market does business largely in dollars, rising prices translate into a rising demand for dollars. This boost in demand was large. The IMF estimates that the current-account surpluses of oil exporters may have increased nearly \$440 billion in 2005, an outflow of funds more than four times the size of that in 2002.<sup>16</sup> These funds are not being spent immediately on goods and services, but saved. Therefore, they are being placed in some type of asset, most likely one denominated in a readily convertible currency that also offers a good return, low risk, and easy access.<sup>17</sup> This is another instance of foreign portfolio diversification *out of* non-dollar assets that tends to *push* foreign capital towards the large, well functioning dollar asset markets.

As discussed in the previous section, only the large pound, yen, euro, and dollar asset markets can easily accommodate transactions on this scale and, at the same time, offer the investor the high degree of liquidity. If these oil exporters chose to swap their dollar earnings for other hard currencies, it would have exerted substantial downward pressure on the dollar. But the superior performance of the American economy means that the dollar market is also offering the investor higher return and lower risk than in the other hard currencies. Because these purchases are often made through third parties, the flow of earnings into dollar assets is difficult to measure, but most experts believe the bulk of these flows are into dollar assets. This is consistent with the increase of private foreign purchases of U.S. Treasury securities and non-Treasury securities assets in 2005 cited above. Given that high energy prices are most likely going to continue for some, upward pressure on the dollar exchange rate can be expected to continue as well.

## Foreign Central Banks Slow Accumulation of Dollar Assets

A telling aspect of international transactions for dollar assets in 2002, 2003, and 2004 was unusually large and accelerating purchases of dollar assets, primarily of liquid U.S. Treasury securities, by foreign central banks. Foreign central bank *official holdings* of U.S. securities increased by about \$673 billion over that three-year period. The total accumulation of official holdings in this period across the major hard currency assets (yen, dollar, euro, pound) was \$1.6 trillion. For the

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<sup>15</sup> John Makin, "Japan Moves toward Sustainable Recovery," *Economic Outlook: AEI Online*, Oct. 27, 2005, at [http://www.aei.org].

<sup>16</sup> IMF, *World Economic Outlook (chapter 2)*, Apr. 2006.

<sup>17</sup> "Recycling the Petrodollars," *The Economist*, Nov.10, 2005.

United States, the scale of the foreign central bank accumulation of dollar reserves, concurrent with greatly reduced private foreign purchases of U.S. assets, led to the unusual condition of official purchases exceeding private purchases by more than \$200 billion on a net basis. Such substantial official purchases certainly countered the forces pushing the dollar exchange rate down in this period — not stopping that process, but doubtless slowing it.<sup>18</sup>

For many observers in 2005, the unprecedented scale of the build up over the previous three years of official holdings by foreign central banks was unlikely to continue for much longer. Several factors suggested a sizeable and imminent sell-off of dollar assets by foreign central banks. One, the prospect of further dollar depreciation would mean a large loss of earnings on these holdings. Two, central banks would move to forestall the rising risk of inflation associated with such massive accumulations of official holdings.<sup>19</sup> Three, in response to mounting political pressure, many thought China would let its currency appreciate relative to the dollar. Therefore, there was concern that sizable movement out of dollars by central banks coming on top of the ongoing weakening of demand by private buyers could trigger a dollar collapse that could send recessionary ripples across the world economy.

During 2005, however, foreign central banks did not undertake a large scale sell-off of dollar assets. Japan's central bank, after several years of large scale purchases, stopped accumulating dollar reserves in 2005, but it did not selloff its existing holdings. Other Asian central banks, particularly China's, continued to amass dollar reserves in 2005, however, the pace of accumulation on a net basis by all sources slowed. The increase in 2005 totaled \$235 billion as compared with a \$399 billion gain in 2004. This brought the total worldwide official holdings of dollar assets to about \$900 billion. One would conclude, then, that earlier upward pressure on the dollar from these central bank activities abated in 2005, but there was not the overt downward pressure from a mass central bank selloff that many had anticipated.

As discussed in a later section, a sizable share of the accumulation of dollar assets by foreign central banks since 2002 has been the result of some countries trying to stabilize or fix the value of their currency relative to a falling dollar. This introduces a degree of interdependence between the dollar's path and the rate of accumulation of dollar reserves, for, with the dollar rising for other reasons in 2005, fewer reserves needed to be accumulated to achieve the currency stabilization goal.

Some diversification of foreign official holdings did occur, but it is interesting to observe that a significant portion of it was across classes of dollar assets rather

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<sup>18</sup> See CRS Report RL33274, *Financing the U.S. Trade Deficit*, by James K. Jackson.

<sup>19</sup> Any increase in the central banks holdings of assets increases the money supply, which in some circumstances might cause an acceleration of inflation. To nullify this potential inflationary effect of asset purchases, central banks sometimes carry out equal sized but offsetting transactions in domestic assets that leave the central banks total asset holding unchanged. This is called a *sterilized foreign exchange intervention*. The capacity for successful sterilization is limited by the stock of domestic assets and the tendency in less developed financial systems for reserve inflows to leak into the economy.

than across assets in other currencies. Federal Reserve data on changes in custodial holdings for other central banks at the New York Fed show a large shift in purchases from Treasury securities into government sponsored enterprises (GSEs) and agency bonds. Out of a recorded increase of foreign official holdings in 2005 of about \$184 billion, \$38 billion was of Treasury securities and \$146 billion was of GSEs and federal agency bonds. This is in sharp contrast to 2004, when foreign central banks purchased \$205 billion in Treasury securities and \$66 billion in federal agency bonds.<sup>20</sup> Presumably, the higher yield on federal agency bonds offsets some of the risk of holding dollar assets.

**Reasons for Having Large Official Holdings.** Official holdings are used for two purposes: one, to afford a country sufficient international liquidity to finance short-run trade deficits and weather periodic currency crises; and two, to stabilize a country's exchange rate. The liquidity function is usually only important to emerging economies that do not have a readily convertible currency or ready access to international capital markets on favorable terms. The Asian financial crisis of the late 1990s showed emerging economies that enormous liquidity balances are necessary to weather a currency crisis and since then they have accumulated enormous official holdings of foreign exchange reserves.<sup>21</sup>

The currency stabilization function has been a particularly important motive for the accumulation of foreign exchange reserves during the 2002-2004 period by the central banks of Japan, China, Taiwan, Korea, and India. The central banks of Japan and China undertook particularly enormous accumulations of foreign exchange reserves in this period (\$373 billion and \$323 billion respectively). The individual accumulations of Taiwan, Korea, and India were far smaller; nonetheless, their collective reserve growth was more than \$200 billion. For comparison, in 2004, the far larger U.S. economy's official reserves increased less than \$3 billion, bringing its total stock official reserves to only \$190 billion.<sup>22</sup>

There are no data to gauge what portion of these total reserve accumulations of the central banks are of dollar assets. However, since in each instance the focus was primarily to fix or control their currency's value relative to the dollar so as to maintain a competitive price of their exports in the American market, a very large share of these official holdings was likely of dollar assets, most often U.S. Treasury securities. Worldwide official holdings of dollar assets increased \$415 billion between 2002 and 2004.

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<sup>20</sup> Federal Reserve Board, H.4.1 statistical release, various issues ([www.federalreserve.gov](http://www.federalreserve.gov))

<sup>21</sup> International Monetary Fund, *Revised IMF Annual Report: Data on Official foreign Exchange Reserves*, November 2005.

<sup>22</sup> U.S. Department of Commerce, Bureau of Analysis, *International Transactions in 2004*, Survey of Current Business ([www.bea.gov](http://www.bea.gov)), April 2005.

## Prospects for the Dollar in 2006

The dollar weakened slightly in late 2005, but through April 2006, it did not show any true trend, up or down. The major currencies index has been flat and the broad index has appreciated slightly. Forecasting the path of the exchange rate for the rest of the year is highly problematic, as the weight of economic fundamentals on the dollar can be easily countered in the short-run by sudden shifts in investor sentiment that are imperfectly understood. What will be done here is to lay out the probable disposition of forces that will have the potential to influence the two key investor motives for holding dollar assets: the incentive to earn a high rate of return, and the need to diversify to minimize the risk of capital losses from holding too many assets in any particular currency. Considering this array of potential forces will at least give some overall sense of how the relative probabilities for appreciation versus depreciation stack up.

In 2006, the prospect of a high risk-adjusted return will likely continue to make dollar assets attractive to foreign investors. Economic growth in the United States accelerated to 5.3% in the first quarter of 2006 and is generally projected to outpace of other major economies this year. Faster growth usually translates into higher corporate earnings and higher investment returns, that attract foreign capital inflows and tends to push up the dollar exchange rate. Telling evidence in this regard is that long-term interest rates have risen in late 2005 and early 2006. The yield on inflation adjusted 10-year Treasury securities has risen nearly a half a percentage point during the six-month period ending in March 2006.

One important uncertainty about relative economic performance of other hard currency economies is whether Japan, after a long period of feeble growth, will continue the improvement in economic performance evident in 2005. Japan's growth is still likely to fall well short of that in the United States, but the ability to have strung together two years of reasonable growth and the common forecast of healthy growth in 2006 may persuade some Japanese investors that Japan's economic performance will continue to be good and persuade Japanese investors to move into domestic assets rather than into dollar assets. Also, the Euro area economies are expected to pick up the pace of growth in 2006, which is an improvement relative to a lackluster performance in 2005, and will likely still lag well behind the pace of growth in the United States.

The one-time tax incentives that put upward pressure on the dollar in 2005 will be absent in 2006. However, probable continuation of U.S. monetary and fiscal policies that combine large Federal budget deficits with a steady tightening of monetary policy would tend to push up U.S. interest rates and add to the attractiveness of dollar assets in 2006. In late April, however, comments by the Fed Chairman, Ben Bernake, suggested that the Fed's policy of monetary tightening might be ending. The importance of monetary policy for the near-term behavior of the dollar was made clear by some investors quickly selling dollar assets and causing a fall of the dollar in some markets, apparently in response to the mere suggestion of a policy change.

Outsized portfolio diversification from some sources *toward* dollar assets in 2006 seems probable. First, it is likely in 2006 that a goodly share of portfolio diversification out of yen assets held by the Japanese postal saving system will be toward dollar assets. This is apt to occur on a greater scale in 2006 than in 2005. Second, the prospect of further increases in petroleum prices will likely lead to further large portfolio diversification towards dollar assets by oil exporting nations. As discussed above, both the great size and efficiency of U.S. asset markets as well as advantages in rate of return will tend to draw in these funds.

Yet the incentive for private investors in general to diversify out of dollar assets seems also very big. Many experts argue that the U.S. current account deficit is too large to be sustainable and that the dollar's exchange rate would have to fall by at least 30% to shrink the trade deficit from its current level of 7% of GDP to a sustainable level near 3% of GDP. Dollar depreciation of that magnitude would easily swamp the interest rate differences that currently favor dollar assets, meaning that holders of those assets would see the potential earnings from those investments quickly wither away, while the attractiveness of assets denominated in appreciating currencies increase. This prospect would seem to be a compelling reason for profit sensitive investors to move out of dollar assets and into euro or yen assets. (This is all the more compelling if growth in these economies seems to be closing the gap with that in the United States.) The investor sensitivity to this prospect is evidenced by the short-term weakening of the dollar that often follows release of official statistics showing the U.S. trade deficit continuing to grow.

Whether the central banks of countries actively using foreign exchange reserves to fix or stabilize their currencies relative to the dollar will continue to amass dollar reserves probably hinges on the direction of the several market forces just discussed and on whether China remains committed to maintaining its fixed parity with the dollar. It may be that China sees the fixed parity as a critical anchor that contributes to the economic stability needed to attract long-term foreign investment, and sustain the rapid pace of economic growth needed to continue the still formidable task of absorbing China's huge labor force into the industrial sector. If it does, it will accumulate dollar assets as necessary to counter downward pressure on the dollar relative to the yuan. On the other hand, if the dollar is subject to upward pressure, maintaining the fixed parity would call for the sale of dollar assets. Other Asian economies, trying to maintain the dollar competitiveness of their exports relative to China's in the U.S. market, will likely buy or sell dollar assets in step with China.

What is difficult to assess is the extent to which liquidity needs, distinct from that of currency stabilization, will influence the holding of dollar reserves by the Central Bank of China. While China's current reserves are large, it is also true that China is under considerable international political pressure to open up its financial markets and make the yuan a flexible, convertible currency. A huge stock of foreign exchange reserves holdings may be seen as necessary to make the passage through this potentially very stormy transition.

It also seems unlikely that the Bank of Japan, the world's largest foreign holder of dollar assets, would undertake any large selling off of those assets at this time. Japan's tenuous current economic expansion is very likely tied to the growth of net exports, and therefore it seems unlikely that Japan's central bank would dump dollar

assets, causing the yen to appreciate, and, thereby, eroding competitiveness of Japanese products in the U.S. market.

In a world awash in dollar assets, many offering only a modest rate-of-return advantage over alternatives in other hard currencies, and with the looming prospect that at some point a large depreciation of the dollar will be necessary to correct the United State's huge current account imbalance, prudent foreign investors might try to get ahead of impending earnings and capital losses on their dollar investments that a large dollar depreciation would cause, and diversify out of dollar assets. That this has not occurred so far may speak to a significant degree of investor myopia and the risk of an all too abrupt clearing of vision down the road.

## **Conclusion**

Whether the dollar rises or falls in 2006, there will still be reasons for concern about the underlying health of and impending risks to the U.S. and global economies.

### **The Perils of Current Account and Asset Market Imbalances**

A rising dollar in 2006 would certainly speak to the seeming limitless capacity of the U.S. economy to attract a still larger inflow of foreign investment (i.e. foreign saving) despite an already large stock of indebtedness to foreigners. That attractiveness, however, is relative; contingent, not only on U.S. economic performance, but also that in the rest of the world.

Maintaining these imbalances at the current scale or larger can occur only through, what many economists see as, a continuation of the unhealthy combination of deficient domestic saving in the United States and deficient domestic spending in much of the rest of the world. The persistence of these large imbalances into 2006 is very likely only postponing the inevitable day of reckoning. This delay arguably makes the job of adjustment not only more difficult but more risky.

At some point it seems inevitable that international asset markets will force some correction of these international imbalances. Capital inflows to the United States will abate and the dollar will depreciate. This adjustment will most likely be orderly and without crisis. The U.S. experience with adjustment from current account and financial market imbalances in the 1986-1990 period shows that the process can be orderly. However, while occurring without crisis, such a correction happening without policy changes in the United States and abroad will not likely be on the best terms for deficit and surplus economies alike.

A falling dollar in 2006, that is propelled by an ebbing of foreign capital inflows to the United States, would act to reduce the nation's large trade deficit as a depreciating currency works to boost U.S. exports sales and dampen the purchase of imports. But, if this is occurring in an economy that has done nothing to boost its low saving rate, then interest rates will tend to rise, forcing a reduction in domestic investment spending to a rate consistent with the smaller flow of saving available to the economy. Less investment would ultimately lead to slower economic growth.



Conversely, if the diminished outflow of saving from foreign economies occurs without a commensurate increase in domestic demand in those economies, then the accompanying slowdown in their net exports would dampen near-term economic growth. Presumably falling interest rates and appreciating exchange rate would provide an off-setting stimulus to their domestic consumption and investment. But because the adjustment speeds of net-exports and domestic spending may differ there is a risk of economic contraction in the short-run. Given that these economies use increased net exports to the United States as a major engine for economic growth, this short-run economic shock could be substantial.<sup>23</sup>

**A Problem with Asset Markets.** Although asset market trade offers opportunities to raise overall economic efficiency and improve the economic welfare of borrower and lender alike, trade in assets is prone to occasional mistakes, the resolution of which can lead to crisis and collapse. The negative repercussions of such a collapse could extend beyond the asset market to the wider economy.

The essential weakness of asset markets is that assets are a claim on a stream of earnings over time — and the future is always uncertain. This can mean that relatively small changes in investors' beliefs about that future could have large effects on the value of the asset. This tends to make these markets much more volatile than goods markets, where value is far less contingent on the uncertainties of the future. Add to this the often observed tendency for “herd-like” behavior among investors, particularly those focused on the short-run, and the volatility in asset markets can grow larger. Then add in “leveraged purchases,” the inherent weakness of modern “fractional-reserve banking,” “exchange rate risk,” and the usual problems of distance (i.e., different language, law, and business practices) and the potential for volatility and crisis becomes even larger.

In the current context, a disorderly adjustment to the world's current account imbalances could be precipitated by a large decline in market preferences for dollar assets that pushes the dollar down sharply. In the United States, this would cause a spiking of long-term interest rates and rapidly falling asset prices that would combine to slow spending by households and business. The weaker dollar does provide a stimulus to U.S. export sales, but in the pessimistic scenario this is not large enough, or soon enough to prevent recession. In the surplus countries, most of whom rely heavily on export sales to propel their economies, sharp appreciation of their currencies would induce recession there as well.

In contrast to the orderly adjustment in the 1986-1990 period, four factors make a similar achievement more difficult now. One, oil prices were falling sharply in the late 1980s, but now oil prices are rising sharply. This would add to the inflation impact of a falling exchange rate and hamper the Federal Reserve's ability to counter the interest rate spike. Two, in the 1986-1990 episode other economies' central banks, particularly Japan's, were willing to buy a large volume of dollar assets, providing a stabilizing counter force to the falling dollar and the rising yen. Given

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<sup>23</sup> For discussion of the effects of adjusting to a smaller capital inflow and smaller trade deficit see CRS Report RL33186, *Is the U.S. Current Account Deficit Sustainable?*, by Marc Labonte.

the already huge stocks of dollar assets being held abroad this action seems improbable today. Three, in the 1986-1990 period Europe, the strongest market for U.S. exports, was booming. Today economic growth in Europe is weak. Four, the size of the imbalance is twice as large now. Disorderly adjustment and crisis are not the most probable outcome, but it is a risk that likely grows with the scale of the international imbalances.

There is no settled opinion about how to best manage asset markets, but it seems likely that removing any large scale imbalances in asset markets would also limit the potential for economic harm and, therefore, would be a reasonable policy goal.

## Policy Implications

As this report hopefully makes clear, the dollar's exchange rate is not an appropriate direct target for U.S. economic policy because it is only a symptom of more fundamental economic forces, particularly those that influence the demand for and supply of assets in the international market place. Currently, an examination of those forces highlights the large and potentially destabilizing imbalance in the global economy: in the United States persistent large trade deficits and the accumulation of foreign debt, and in the rest of the world large trade surpluses, weak domestic demand, and the accumulation of dollar denominated assets. Most economists would argue that this is a condition that carries more than a negligible risk of generating financial instability and global recession.

**A Program for an Orderly Correction of Global Imbalances.** For economic policy, the task is how to assure an orderly correction of these imbalances that leaves all the involved economies on sounder macroeconomic footing. A recent IMF study of current global economic imbalances reached conclusions that are generally consistent with mainstream economic thinking on this topic. That study suggested a coordinated international policy response, the essential elements of which are as follows:

- For the United States to raise its national saving rate. How to increase the personal saving rate remains problematic, so higher national saving would likely require an increase in public saving through a shift of the federal budget from deficit to surplus.
- For Japan and Europe to generate faster economic growth propelled primarily by domestic demand rather than net exports.
- For Asia (excluding Japan and China) and the oil-exporting economies a recovery of spending on domestic investment is called for.

Many would add to this agenda the need for China to allow its currency to appreciate and for that economy to channel more of its large saving pool into domestic investment. At present, it can be argued, China, by accumulating short-term reserves to maintain an undervalued exchange rate, is running a “neo-mercantilist” policy that allows it to run a large trade surplus to generate demand for its products and also have a large net inflow of long-term capital to help propel its

economic development. For an economy of China's size this not likely to be a sustainable process from the viewpoint of its trading partners. If it needs the inflow of long term capital it should allow the real transfer of those resources by running a trade deficit, or be prepared to use more of its own saving to support domestic investment rather than transfer that saving to the rest of the world.

From the standpoint of mainstream economics this program would, in the end, provide a better chance of establishing a more healthy macroeconomic foundation for the United States and the global economies, at once minimizing the prospect for global economic crisis and promoting sustainable and vigorous long-term growth.