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CRS Report for Congress

Weak Dollar, Strong Dollar: Causes and Consequences

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Weak Dollar, Strong Dollar: Causes and Consequences

Summary

After a long and large appreciation, in early 2002, the dollar peaked and steadily weakened in value relative to other major currencies through 2004. In 2005 and through most of 2006, the dollar was essentially steady. At the end of 2006, however, depreciation resumed and it has continued in 2007. A weaker dollar will be good news for exporters and those who compete with imports, while consumers of imports will be correspondingly unhappy. Yet it is important to recognize that a falling dollar is symptomatic of the ebb and flow of international capital in and out of the American economy. Those flows will have important implications for domestic interest rates and activities sensitive to credit conditions, such as housing and business investment.

The exchange rates movement will be strongly influenced by the effect of changes in interest rates on the flow of financial capital between countries. Also consider how the expected movement of future exchange rates influences investors now. Inflation, safe-haven and speculative effects, and the size of the trade balance can also be important. The central role of relative interest rates in generating international capital flows and exchange rate movements makes it important to understand the forces that move interest rates. This points toward an understanding of the demand for and supply of loanable funds. The economy's pattern of saving and investment will exert a strong force on interest rates. For the United States, a structural tendency for domestic savings to fall short of domestic investment leads to significantly higher interest rates when economic activity picks up speed. Government policy can also affect interest rates and the exchange rate. Large government budget deficits will tend to push up interest rates and the exchange rate. Budget surpluses have the opposite effect. Tight monetary policy tends to raise interest rates and the exchange rate. A stimulative monetary policy has the opposite effect.

As the significance of a weakening dollar is contemplated, it is important to consider the effect of the outflow of foreign capital that causes that weakening on domestic investment and overall economic welfare. In the 1980s, macroeconomic policy had a substantial effect on the level of interest rates and the path of the dollar. Tight monetary policy and large budget deficits pushed interest rates and the dollar upward through 1985 and a reversal of those policies pushed interest rates and the dollar down over the last half of the decade. In the 1990s, a steady rise of the dollar from mid-decade on was primarily the consequence of an investment boom in the United States that kept rates of return high and attracted large inflows of foreign capital. In both of these periods, upward pressure on the dollar was intensified by a persistently low U.S. saving rate and relatively weak economic performance abroad. The depreciation of the dollar between 2002 and 2004 was likely the consequence of slower U.S. growth and a move toward a more diversified portfolio by foreign investors. However, in 2005 the dollar strengthened again as foreign investor demand for dollars was rejuvenated. Since then, weakening demand for dollar assets by foreign investors has put the dollar on a downward path and important forces seem poised to continue to put downward pressure on the currency. This report will be updated as events warrant.

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Introduction

From 1994 to early 2002, the real (inflation adjusted) trade-weighted dollar exchange rate appreciated nearly 30%.[1] This appreciation occurred even as the U.S. trade deficit and foreign debt climbed steadily higher. From 2002 to the present, the dollar, for the most part, steadily depreciated, falling about 25%. From early 2002 through 2006, the dollar's fall was moderately paced at about 2.0% to 5.0% annually. Recently, however, the slide has accelerated, falling nearly 10% between January and December of 2007.

The dollar's fall from 2002 through early 2008 has not been uniform against individual currencies, however. For example, it fell 81% against the euro, 24% against the yen, and 16% against the yuan. These differing amounts of depreciation are largely a reflection of how willing these countries have been to let their currencies fluctuate against the dollar. The euro is free-floating, the yen has been moderately managed (mostly before 2005), and the yuan is actively managed (rigidly fixed before 2005 and less rigidly fixed since 2005).

The strong dollar in the 1994-2002 period was certainly a benefit to U.S. consumers because the rising exchange rate substantially lowered the price of foreign goods relative to the price of competing domestic products. However, the strengthening dollar was a growing impediment to the sales of U.S. exporting and import competing industries because the price of their products increased relative to those of foreign competitors. This also meant that as the dollar rose so did the U.S. trade deficit. Conversely, a weakening dollar would be celebrated by U.S. exporters

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[1] The trade-weighted exchange rate index used is the *price-adjusted broad dollar index* reported monthly by the Board of Governors of the Federal Reserve System. 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 dollar's 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 seven 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 seven 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.

and lamented by foreign exporters and domestic consumers. Further, a sustained dollar depreciation could be expected to slow and then reverse the steady rise of the U.S. trade deficit. Also, a depreciating dollar tends to improve the U.S. net debt position by raising the value U.S. foreign assets. But a falling dollar also tends to raise the dollar price of commodities such as oil, metals, and food.

The dollar, of course, is not just moving on its own. Appreciation and depreciation of the dollar are most often a reflection of the ebb and flow of international capital in and out of the United States as it is propelled by fundamental economic forces in the United States and abroad. Moreover, these asset market events will have strong effects on economic activity in the United States, activity seemingly unrelated to the dollars international exchange value. Because asset market transactions most often occur at a higher volume and at greater speed than do transactions in goods (i.e., imports and exports), most economists would argue that it is events in international asset markets that "call the tune the dollar dances to," and exports and imports of goods respond accordingly.

This means that the net size and direction of these asset flows dictate the state of a country's trade balance. A country receiving a net inflow of capital will have an appreciating exchange rate and run an equal sized trade deficit. In contrast, a country generating a net outflow of capital will have a depreciating currency and run an equal sized trade surplus. The exchange rate moves to equilibrate the inflow with the outflow of goods and assets. This also suggests that because the ups and downs of the dollar are driven by asset flows in and out of the economy, these dollar movements will be associated with impacts on domestic credit markets, affecting domestic interest rates and, in turn, interest sensitive spending such as housing, consumer durables, and business investment. Thus, while a rising dollar may be bad news for the tradeable goods sector, it is likely good news for interest rate sensitive sectors and vice versa for a falling dollar.

The importance of U.S. international economic transactions to a healthy economy is well recognized by Congress, which in recent years has closely monitored many dimensions of U.S. trade performance. The dollar exchange rate, cross border financial flows, and the trade deficit are known to be important to the functioning of the U.S. economy and for the implementation of sound economic policy. These factors are also germane to an understanding the recent issue of exchange rate manipulation by China and Japan. The determination of the dollar's exchange rate is, therefore, an ongoing area of congressional concern. This report provides background information on the forces that most likely determine the path of the dollar exchange rate. The report also considers recent events in international markets for goods and assets as well as suggest what implications these forces carry for the state of the U.S. economy and for economic policy.

What Determines the Dollar's Exchange Rate

The exchange value of the dollar is determined by the interplay of the demand for and supply of dollars in global foreign exchange markets. Prior to 1973, in the so-called fixed exchange rate era, the dollar's value was fixed at a rate established by

international agreement, and the U.S. and foreign governments were actively maintaining that fixed rate. This was accomplished by monetary policy changing the level of domestic interest rates relative to foreign interest rates so as to induce the buying or selling of dollar assets necessary to keep the exchange rate at the mandated fixed rate. The fixed rate exchange rate regime grew increasingly untenable in part because of the growing size and mobility of capital flows between countries. In the early 1970s, the United States and many other nations changed by default to a "flexible exchange rate" system. That system continues today.[2]

Demand, Supply, and the Dollar Exchange Rate

With flexible exchange rates and wide-spread abandonment of *capital controls* the dollar is largely free to move up or down as market forces dictate. In most circumstances the government plays little or no direct day to day role in determining the dollar's value relative to other currencies. The government can certainly use macroeconomic policy to affect the market forces that determine the exchange rate, but instances where the primary policy goal is the exchange rate are relatively rare. The exchange rate is almost always subordinate to the goal of domestic economic stabilization.[3] But the exchange rate will certainly move as a collateral consequence of pursuing other economic goals. On occasion, governments will intervene directly in the foreign exchange market, buying or selling particular currencies to induce some adjustment of the exchange rate, but such interventions are also infrequent and, when used, their impact on the exchange rate is often problematic unless the intervention is supported by changes in macroeconomic policy.

In this framework it is reasonable to infer that any observed weakening or depreciation of the dollar is most likely the result of a reduced demand for dollars in the foreign exchange market, an increased supply of dollars in that market, or some combination of both forces. Similarly, an appreciating, or strong dollar, is the consequence of an increase in the demand for dollars, or a decreased supply of dollars, or both in the foreign exchange markets. And most often these changing market forces are the result of actions by private market participants rather than government policy.

The demand for dollars for use in international exchange is a derived demand, driven by foreigner demand for U.S. goods and assets, which of course are denominated in dollars and can only be purchased with dollars. Therefore, to purchase U.S. goods or assets, a foreign buyer must first exchange their home

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[2] For a discussion of the collapse of the fixed exchange rate regime, often called the Bretton Woods System, see Barry Eichengreen, *Globalizing Capital* (Princeton, New Jersey: Princeton University Press, 1996), pp. 93-124. Currently about half of IMF member countries allow their currencies to float. That floating is sometimes not completely free because governments, attempting mitigate adverse effects on their currency from the foreign exchange markets, do from time to time buy or sell foreign exchange on the open market in an effort to influence the value of their currencies exchange rate.

[3] Many would argue that the great virtue of floating over fixed exchange rates is that in that regime the monetary authority, free from the need to use monetary policy to maintain the fixed rate, can make domestic stabilization its primary focus.

currency for dollars. Transactions in the foreign exchange market do not involve the transfer of large parcels of paper currency between countries. These exchanges are most often speedily achieved by the shifting of electronic balances between commercial banks or foreign exchange dealers. With the purchase of a U.S. good or asset there has also been an increase in the demand for dollars and an increase in the supply of foreign currency in the foreign exchange market. Other factors unchanged, these actions repeated on a larger scale would tend to increase the exchange value of the dollar relative to foreign currency. That is, the dollar will appreciate, meaning that each dollar can be exchanged for a greater amount of foreign currency, and as a result command a greater volume of foreign goods or assets.

Similarly, when Americans buy foreign goods or assets they initiate a similar process; however, it will have the opposite effect on the dollar's exchange value. Exchanging dollars for a foreign currency represents an increase in the demand for foreign currency and an increase in the supply of dollars on the foreign exchange market. This type of transaction repeated on a larger scale would tend to depreciate the exchange value of the dollar relative to foreign currencies, causing each dollar to exchange for less of the foreign currency, and as a result to command a smaller volume of foreign goods or assets.

The salient point is that the relative strength or weakness of the dollar will depend on the relative strength or weakness of the demand of foreigners for dollar denominated goods and assets in comparison to the strength of U.S. demand for foreign goods or assets.

The Importance of Trade in Assets

A closer look at the dynamics of world trade today shows that the volume and speed of international asset transactions far exceed that of goods transactions.[4] It is estimated that the *daily* global turnover on foreign exchange markets is near $2 trillion, with the dollar accounting for 90% of that. This compares with *annual* U.S. export sales of only $1.3 trillion. In addition, a very large share of asset transactions can be done electronically and therefore move far more rapidly than do transactions for goods, which will most often require a much slower physical transfer. This size and speed means that at any point in time it is most likely that the relative demand for assets here and abroad will be the dominant force in the foreign exchange market, transmitting the essential energy that drives movement in the exchange rate for the dollar and other widely traded currencies.

Expected Rate of Return and Asset Flows. What determines the size and direction of cross-border asset flows? One can expect that the demand for assets (e.g., bank accounts, stocks, bonds, and real property) by foreigners will be strongly influenced by the expected rate of return on those assets. The level of nominal interest rates can be used as a fairly reliable first approximation of the rate of return

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[4] For a discussion of the tremendous growth of cross-border asset transactions, see CRS Report RL30514, *Global Capital Market Integration: Implications for U.S. Economic Performance*, by Craig K. Elwell; and CRS Report RL32462, *Foreign Investment in U.S. Securities*, by James K. Jackson.

on assets that can be earned in a particular country. Therefore, differences in the level of interest rates between economies are likely to animate and direct international capital flows, as investors seek the highest rate of return. When interest rates in the United States are significantly higher than interest rates abroad, the demand for U.S. assets will, other factors unchanged, strengthen the demand for those assets, increase the demand for the dollars needed to buy U.S. assets, and appreciate the value of the dollar relative to foreign currencies. In contrast, if interest rates in the United States are on average lower than interest rates abroad, the demand for foreign assets will likely strengthen and the demand for U.S. assets will likely weaken. This will cause the demand for foreign currencies needed to purchase foreign assets to strengthen and the demand for the dollar will weaken, leading to a depreciation of the dollar relative to foreign currencies.

Yet differences in nominal interest rates may not be all an investor needs to know to guide his/her decision. Also consider that the return actually realized from an investment is paid out over some future period. This means that the realized value of that future payment can be altered by changes in other economic variables. Therefore, investor *expectations* of those future events will influence the investors "expected pay off" and, in turn, the relative attractiveness of an asset. Two economic variables of particular relevance to this decision are the expected change in the exchange rate itself over the term of the investment and the expected rate of inflation.

Expectations about the future path of the exchange rate itself will figure prominently in the investor's calculation of what she will actually earn from an investment denominated in another currency. Even a high nominal return would not be attractive if one expects the denominating currency to depreciate at a similar or greater rate and erase all economic gain. On the other hand, if the exchange rate is expected to appreciate the realized gain would be greater than what the nominal interest rate alone would indicate and the asset looks more attractive.

The influence of exchange rate expectations can significantly complicate the task of judging how exchange rates will move, as we can only imperfectly assess what informs those expectations and the strength of their effect. It is also possible for exchange rate expectations to introduce some degree of volatility into the exchange rate system, as "speculation" by some investors on the future path of the exchange rate can push the currency, up or down, as speculative actions feed on each other and generate "herd like" behavior. In these situations exchange rate expectations become a sort of self-fulfilling prophecy that works to exaggerate the path the currency is already set upon, pushing the currency well beyond what more basic fundamentals alone would dictate.

But this is going to be a bounded process. For at some point this speculative motive will also likely work to counter the ongoing trend, as the risk versus reward calculus causes a growing number of traders to doubt the likelihood of the dollar moving further on its current path and to come to believe that depreciation is the more probable event. As might be expected, such speculative behavior often makes it difficult to accurately predict the magnitude and duration of exchange rate movements, particularly in the short run.

The impact of *expected inflation* on investor decisions is more indirect. To a foreign investor, the U.S. rate of inflation would have little direct effect on the expected rate of return from a dollar-denominated asset. The critical uncertainty for the foreign investor is the path of the exchange rate, which will determine how any given dollar return will translate into his/her own currency. However, relative inflation rates among nations can be a predictor of where and how much the exchange rate will move in the future and, therefore, potentially relevant to the foreign investor's assessment of the expected return. If the United States has a lower inflation rate than that of a trading partner, the dollar can be expected to appreciate relative to that currency by an amount necessary to maintain parity in real purchasing power. If the United States has the higher rate of inflation, then the dollar would tend to depreciate so as to maintain real purchasing power. In other words, inflation differences will change the nominal exchange rate but not the real exchange rate.

Another reason inflation may influence the demand for assets is that trends in the level of prices can be a telling indicator of how well or poorly an economy is managed and whether the investment climate will change for better or worse. Economies with accelerating inflation are more likely to be ones that are poorly managed, with poor investment prospects; while economies with stable or decelerating inflation may be seen as better managed and likely a more attractive destination for investment. The aggressive and successful U.S. dis-inflation policy in the early 1980s may have contributed to the dollar's sharp appreciation in this period. In recent years, inflation in the United States has been consistently low and the current posture of the Fed gives no indication that this pattern will change, making this factor of diminished importance for judging recent and prospective movements of the dollar exchange rate. Changes in inflation trends in other countries will still be a factor, however.

Diversification, Safe-Havens, and Official Purchases. While relative levels of interest rates between countries and expected return are likely to be a strong and prevalent force directing capital flows among economies, other factors will also influence these flows at certain times. For instance, the size of the stock of assets in a particular currency in investor portfolios can cause a change in investor preferences. Prudent investment practice counsels that one's portfolio should have an appropriate degree of *diversification*, across asset types, including the currency in which they are denominated. Diversification spreads risk across a wider spectrum of assets and reduces over exposure to any one asset. Therefore, even though dollar assets may still offer a high relative return, if the accumulation has been large, at some point foreign investors, considering both risk and reward, will decide that their portfolio's share of dollar denominated assets is large enough. To improve the diversity of their portfolios, investors will slow or halt their purchase of such assets. Given that well over $8 trillion in U.S. assets are now in foreign investor portfolios, diversification may be an increasingly important factor governing the behavior of international investors toward dollar assets.

There is also likely to be a significant *safe-haven* effect behind some capital flows. This is really just another manifestation of the balancing of risk and reward by foreign investors. Some investors may be willing to give up a significant amount of return if an economy offers them a particularly low risk repository for their funds. In recent decades the United States, with a long history of stable government, steady

economic growth, and large and efficient financial markets can be expected to draw foreign capital for this reason. The size of the safe-haven effect is not easy to determine, but the disproportionate share of essentially no risk U.S. Treasury securities in the asset holdings of foreigners suggests the magnitude of safe-haven motivated flows is probably substantial and must exert a bias toward capital inflows and upward pressure on the dollar.

Governments through their central bank also often purchase international assets for reasons apart from rate of return. These so-called official purchases can serve two objectives. One, the accumulation of a reserve of foreign exchange denominated in readily exchangeable currencies such as the dollar to afford international liquidity for coping with periodic currency crises arising out of often volatile private capital flows. This is most often a device used by developing economies that periodically need to finance short-run balance of payments deficits and can not fully depend on international capital markets for such finance. In the wake of the Asian financial crisis of the mid-1990s, many emerging economies around the globe have over the last few years built up large stocks of foreign exchange reserves, much of it denominated in dollars. In 2006, emerging economies held about $3.7 trillion in foreign exchange reserves.

Two, official purchases are used to counter the impact of capital flows that would otherwise lead to unwanted changes in the countries exchange rate. This is a common practice for many east Asian economies who buy and sell foreign assets to influence their currencies exchange rate relative to the dollar and other major currencies to maintain the price attractiveness of their exports. In recent years, China and Japan have both been highly visible practitioners of international asset accumulation to stabilize their exchange rates relative to the dollar. In 2006, Japan held foreign exchange reserves valued at about $900 billion, an increase of $500 billion since 2002. Similarly, in 2006, China held foreign exchange reserves valued at more than $1 trillion, an increase of nearly $750 billion since 2002. India, Korea, Taiwan, and Russia also amassed sizable amounts of foreign exchange in this period. In contrast, the United States in this time period held foreign exchange reserves of less than $200 billion on average, with annual increments of only $1 billion to $10 billion. It is estimated that 30% to 40% of the worldwide increase in foreign exchange reserves since 2000 are of dollar assets.[5]

Given the importance of expectations in decision making and the speed with which many asset transactions can occur, exchange rates can be volatile and predicting the magnitude and duration of short-run exchange rate movement with precision is a very elusive goal. But broad, long-term trends can most often be explained by assessing the fundamental macroeconomic forces that affect the relative level of interest rates and the expected rate of return between the United States and the other major economies.[6]

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[5] See CRS Report RS21951, *Financing the U.S. Trade Deficit: Role of Foreign Governments*, by Marc Labonte and Gail Makinen.

[6] The issue of exchange rate volatility has been the focus of much discussion among economists. Contrary to expectation, exchange rates have been much more volatile since the

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Fundamental Factors Determining the Level of Interest Rates

Changes in the level of interest rates are usually central to understanding movement of the dollar's exchange rate. So what factors are likely to move interest rates up or down? Again, the level of interest rates is largely a market driven phenomenon governed by the demand for and supply of loanable funds.

The Demand for Loanable Funds. On the demand side of the loanable funds market we look for changes in the forces that commonly influence the use of credit. A strong, briskly growing economy with rapidly expanding investment expenditure can be expected to have a rising demand for loanable funds and exert upward pressure on interest rates. In contrast, economic weakness and attenuated investment opportunities would tend to exert downward pressure on interest rates. In addition to the vigor of the private economy, the demand for loanable funds and the level of interest rates can be influenced by the balance of the government budget. Government budget deficits mean that the public sector must borrow to fully fund its expenditures. Such borrowing is a demand for loanable funds and can certainly influence the level of interest rates in the market. Any movement toward larger budget deficits tends to exert upward pressure on interest rates and movement toward smaller deficits would have the opposite effect. Of course, these outcomes will be tempered by the economy's position in the business cycle. In or just after a recession when the demand for loanable funds is weak, these elevating effects on interest rates would be nil, but would become increasingly manifest as an economic expansion matures.

The Supply of Loanable Funds. Of primary importance on the supply side of the market for loanable funds is the nation's rate of saving. That flow represents the portion of current income that the economy has diverted from spending on current consumption and provides a supply of loanable funds, available to finance current investment expenditures. For any given level of demand for loanable funds, one can expect that a higher rate of saving would likely lead to a lower level of interest rates than would a lower rate of saving. Domestic saving can be augmented by an inflow of foreign saving, which is precisely what the capital inflows are. But that inflow

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[6] (...continued)
demise of the Bretton Woods system. There are two principal explanations. There is an inherent tendency for "overshooting" of equilibrium in these markets or exchange markets are subject to large scale "destabilizing speculation." For the creators of the Bretton Woods system the deleterious effects of destabilizing speculation were thought to be substantial and an important reason for *not* allowing exchange rates to float. In recent years, the locus of opinion has shifted more toward the destabilizing speculation explanation as evidence of investor irrationality has accumulated. The effect of volatility on the prices and volumes of goods in world trade seems to have been small, however. The enhanced ability to hedge exchange rate risk in modern markets may explain this small effect. It is expected that economies with large trade sectors, such as those in Europe, will find volatile exchange rates more disruptive than will economies with relatively small trade sectors, such as the United States. Yet, whatever costs exchange rate volatility does cause must be balanced against the considerable benefits of liberalized international capital flows.

will be primarily a response to pressures and incentives initially generated by the relative size of domestic saving and investment. And, of course that response will move the exchange rate.

One of the more significant macroeconomic characteristics of the U.S. economy to emerge over the past 25 years is the economy's low and declining domestic saving rate. That rate has fallen from about 20% of GDP in the 1970s to nearly 13% today.[7] For comparison with other advanced economies, the saving rate for Canada is 24%, for the euro area it is 21%, and for Japan it is 27%. A persistently low saving rate in the United States creates a significant structural bias toward relatively high interest rates during periods when economic activity and, in turn, the demand for loanable funds is on the rise. In these periods, it is expected that the dollar exchange rate will likely rise as an increased flow of foreign capital is attracted by those relatively high interest rates.

Government can also influence interest rates from the supply side of the loanable funds market. On the fiscal policy side, whereas budget deficits are an absorber of saving, budget surpluses are government saving that augments the economy's supply of loanable funds. Therefore, any move toward larger budget surpluses (or smaller deficits) will exert downward pressure on interest rates, while smaller surpluses (or larger deficits) tend to increase interest rates. Monetary policy can influence the level of interest rates through its governing of the financial intermediation activities of the banking system. A large share of the nation's saving is channeled to borrowers by banks. By altering the reserve position of banks, the monetary authority can alter the level of loanable funds they will have available for extending credit and thereby the level of short-term interest rates. A restrictive monetary policy tends to raise interest rates, while a expansionary monetary policy tends to lower interest rates. Also, monetary policy, less encumbered by administrative and political constraints, is in practice a more flexible tool than is fiscal policy and will be used more often to implement macroeconomic policy, particularly in the short run.

Government Currency Intervention. Government can try to influence exchange rates more directly. Economic theory suggests that if international assets are not seen by market participants as perfect substitutes and risk premiums vary between assets, it is possible for the central bank to affect the exchange rate by altering the asset composition of its and investor portfolios through the buying or selling of foreign exchange. When this action is executed in a way that does not induce a change in the money supply it is called "sterilized intervention." Such intervention has been used periodically by the United States and most other industrial economies to attempt to stabilize or change the value of the exchange rate. Over the years, there has been a controversy over whether sterilized intervention by itself is effective at inducing permanent changes in the exchange rate. The evidence, though not unanimous, suggests that such intervention can be effective some times and to some degree, but it remains far from a highly reliable tool. A recent trend that has very likely raised the potential potency currency intervention is the huge increase in

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[7] See CRS Report RL30873, *Saving in the United States: How Has It Changed and Why Is It Important?*, by Brian Cashell and Gail Makinen.

the scale of global official reserve holdings. Over the past five years, the worldwide amount of foreign exchange holdings, particularly among emerging Asian economies that fix their currencies value to the dollar, have tripled in size.

It is most likely to work when it is used visibly, infrequently, in coordination with complementary intervention by other nations, and when it is aimed at moving the exchange rate in the direction that macroeconomic policy will be pushing the exchange rate. As such, sterilized intervention is unlikely to be effective at moving the exchange rate counter to where enduring market fundamentals would take it. In other words, it is unlikely that intervention could have prevented the strong appreciation of the dollar between 1994 and 2001. Similarly, in the current period intervention is unlikely to be able to strengthen the dollar if macroeconomic policy and investor demand continue to push the dollar down.

The 1985 Plaza Accord among the G-5 countries is often touted as evidence of the possible effectiveness of coordinated currency intervention by governments. However, it was also backed up by policy changes consistent with the desired path for the dollar. By itself such intervention may be of little value, but as a device for sending a clear signal to international financial markets as to what the United States and its partners saw as the correct direction for the dollar, it is thought to be useful.

Capital Inflows, an Appreciating Dollar, and a Rising Trade Deficit

Also, as cross-border asset flows move the exchange rate, it has an impact on trade in goods. An appreciating dollar makes U.S. exports more expensive to foreign buyers and imports less expensive to domestic buyers. With net inflows of foreign capital and a rising exchange rate the trade balance will move toward deficit as export sales weaken and import sales strengthen. The size of the deficit in goods trade will generally be equal to the size of the net inflow of foreign capital, with the dollar's exchange rate working as the equilibration mechanism.

This sequence makes sense if you consider that a net inflow of foreign capital to the United States represents a net transfer of purchasing power from foreign economies to the United States. However, that purchasing power is denominated in a foreign currency and can be used only to purchase foreign goods. Of course, this process works in the opposite direction for countries that have a net capital outflow. They will experience a depreciating currency and a surplus in goods trade commensurate with the size of the capital inflow. A net capital inflow means a country has sold more assets to foreigners than it has purchased from foreigners or is running a surplus in its asset account. By the same reasoning, a net capital outflow will represent a deficit in its asset account. Thus, across both goods and assets transactions trade is always balanced, a surplus in asset trade must balance a deficit in goods trade, and vice versa.

As expected, those whose economic activities are sensitive to credit market conditions and the level of interest rates will find the forces causing the appreciating dollar to be favorable to their economic well-being. Similarly, those who export or

who must compete with imports will find these circumstances unfavorable to their economic well-being. It is often argued that the trade deficits that accompany a strong dollar also tend to increase the prospect of the nation implementing protectionist policies. Such policies do not change the forces causing the net inflow of capital and, therefore, will not change the trade deficit, but ultimately will impose costs on the economy that exceed any benefits gained.

As with most economic events, there are benefits gained from capital inflows, but at some cost. The strong dollar and its attendant capital inflows was a valuable support to domestic investment activity in the 1990s. Higher investment will boost economic growth and improve economic well-being. Without the capital inflow, U.S. investment would have been lower and the future benefits to our living standard reduced. Some of those benefits flow to foreigners who own U.S. assets, but the economy is better off than it would be without the capital inflow. The salient point is that the strength or weakness of the dollar is not necessarily a positive or a negative event, but rather a manifestation of an underlying economic process that helps some, hurts others, but on balance may often bring a net benefit to the overall economy.[8] As with many other things, economic virtue need not occur at the extremes of no capital inflows and no capital outflows, but at some intermediate point were the benefit and cost of international capital flows are equal. However, judging this "golden mean" is difficult.

The Ups and Downs of the Dollar: 1980 to 2007

It is revealing to examine the general path of the dollar since the 1980s in the framework outlined above. In both the 1980s and the 1990s, the dollar soared to record highs but for different reasons. It will also be revealing to see what caused the dollar to fall.[9]

The 1980s

During the 1980s, the dollar exchange rate followed a path of sustained and substantial appreciation followed by sustained and substantial depreciation. The dollar actually began its ascent in 1979 in response to a sharp tightening of monetary policy, which pushed up domestic interest rates. The Fed's goal at this time was not dollar appreciation, but to rein in the double digit inflation afflicting the economy. Nevertheless, as the markets came to appreciate the Fed's resolution in fighting inflation and the likely dual prospect of steadily rising interest rates and decelerating inflation, the United States became an attractive destination for foreign investment. The long recession from 1981 to 1983 did not do much to abate the dollar's rise. But the new Reagan Administration's fiscal policy would give a sharp upward push to the

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[8] For a fuller discussion of trade deficits, see CRS Report RL31032, *The U.S. Trade Deficit: Causes, Consequences, Cures*, by Craig K. Elwell.

[9] The discussion in this section follows that found in Paul Krugman and Maurice Obstfeld, *International Economics: Theory and Policy* (New York, NY: Harper-Collins, 1994), pp. 577-586.

dollar as the economic recovery commenced in 1983. Sizable tax cuts along with large increases in defense spending generated large federal budget deficits. That federal borrowing increased the demand for a shrinking pool of domestic saving and added to the upward push on interest rates. Capital inflows increased and the dollar climbed higher. It is also likely that once the dollar's rise appeared relatively steady, a strong round of speculative buying of dollar assets exacerbated the appreciation of the exchange rate. The dollar peaked in 1985, about 50% above its level in 1979.

The next half of the decade would see depreciation of the dollar that was nearly as large. What caused the change? One factor, difficult to isolate precisely, was a turn in the speculative belief that the dollar would continue to rise. At this point, a sufficient number of investors came to believe that the dollar was far above a sustainable level and was now more likely to depreciate than appreciate. Of far more importance to the process of depreciation, however, was a change in economic policy. Investor expectations were given reinforcement by sizable currency interventions by the U.S. and other major economies aimed at weakening the dollar. Whatever the actual effectiveness at changing the exchange rate, these interventions could be taken by international investors as a strong signal as to where the government wanted the dollar to go and that more fundamental changes in macroeconomic policy would support that desire. The Fed moved toward a more stimulative monetary policy that pushed interest rates down. Fiscal policy also slowly began to change toward a lower interest rate track, cutting the size of budget deficits over the last half of the decade.

The depreciation of the dollar during 1986, 1987, and 1988 was precipitous, falling to about 40% of its peak value in 1985 and below its 1979 level. In fact, the concern among policy makers here and abroad was that the dollar would fall too far and needed to be stabilized. Particularly, in 1986 and 1987, the United States and other governments made active use of intervention policies in an attempt to halt the dollar's slide. How effective these policies were is unclear, but for this or other reasons the dollar did enter a period of relative stability. This was interrupted in late 1987, when the Fed moved aggressively to counter the depressing effects of that year's stock market crash. Reserves were pumped into the financial system and interest rates fell and with them so did the dollar in 1988. For the remainder of the decade the dollar would not experience any sharp movements, remaining relatively weak.

On balance, the decade showed us that strong dollar trends were not haphazard, but were broadly predictable responses to changes in economic fundamentals that influence the expected rate of return on dollar denominated assets. Moreover, in this period those changes were largely induced by changes in macroeconomic policy. However, the structural fact of the low U.S. saving rate clearly influenced the economic events in this period.

The 1990s

The 1990s began in economic weakness. The pace of economic growth decelerated sharply in 1990 and the economy fell into recession in 1991. In response to the weakening economy, monetary policy turned to a more stimulative stance and the federal budget deficit grew as economic weakness automatically increased

government spending and dampened tax receipts. Interest rates in the United States fell. In contrast, economic activity abroad was moving relatively briskly. In this environment, the demand for dollar assets ebbed and the dollar exchange rate fell, depreciating about 15% between 1989 and 1992. In 1992, an economic recovery got underway in the United States, but abroad economic conditions weakened substantially. This change in relative economic performance was enough to induce a moderate appreciation of the dollar, but it remained well below the values of the 1980s.

By mid-decade, however, the pace of economic growth in the United States accelerated greatly. What lay behind this change to faster growth was a sharp increase in the pace of investment spending by business and a marked acceleration in productivity growth. The confluence of strong consumer demand, deregulation, trade liberalization, and a rush to more fully integrate computers and information technology into the production process propelled investment spending up at a record pace. Expenditures on new plant and equipment went from about 13% of GDP in 1993 to average over 20% of GDP for the remainder of the decade. But even with the move of the federal budget towards surplus, the flow of domestic saving could not keep pace with investment and interest rates edged up. Couple this bourgeoning saving-investment gap with a falling rate of inflation, and juxtapose the exuberant economic conditions in the United States with very weak economies abroad, and the United States became a very attractive destination for foreign investors. A quickly rising foreign demand for dollar denominated assets would push the dollar steadily higher, rising over 30% from 1995 through 2001. With the strongly appreciating dollar, the trade deficit increased to a record high.

This time the dollar's sharp ascent was driven by the private sector. Economic policy moved in conflicting directions, probably making its net impact on the dollar a minor one. The government's move toward budget surpluses certainly added to national saving and likely muted the dollar's rise, but this was unlikely the immediate goal of this policy change. In contrast, the Fed implemented a steadily more restrictive monetary policy that increased interest rates and this may have added to the dollars upward momentum. Again, the Fed's primary goal was to slow a very fast moving economy and head off any re-acceleration of inflation. A rising dollar's pushing down of import prices was supportive of this anti-inflation goal and made the Fed's task easier, but the Fed was not the principal force behind that appreciation.

The 2000s

A rising dollar and the growing net inflow of borrowing that pushes it is unlikely to be sustainable indefinitely. Borrower and lender alike may find good reasons to reduce the size of the capital inflow. For the lender, rising risk and the imperative of adequate portfolio diversification can prompt a diminished willingness to acquire dollar denominated assets. For the borrower, a rising burden of debt service (current and prospective) may curb the desire to borrow. And, of course, if the capital inflow is not checked by changes in private market decisions, it can be changed by macroeconomic policy.

Perhaps more fundamentally, it is important to consider that given the magnitude of dollar assets that have accumulated abroad, foreign investors would be

ready to seek a greater degree of diversity in their portfolios and are now moving out of dollar assets. Our knowledge of foreign investor portfolios is limited, but a recent survey by *The Economist* magazine shows that American assets make up 53% of the typical foreign investors equity portfolio and 44% of the typical bond portfolio. As recently as the mid-1990s, these percentages where only about 30%. It has also been estimated that the average investor in recent years has allocated about 80% of his increased wealth to dollar assets.[10] Considering that historically investors have shown a marked preference for home assets, rarely letting the foreign share in their portfolios rise above 30%, then one might reasonably conclude that the holdings of U.S. assets had so greatly reduced portfolio diversity that the saturation point had been reached. In any event, total net purchases of U.S. assets by private foreign investors fell from $460 billion in 2002 to $186 billion in 2004.

The effect of this swing in private foreign investor behavior on the dollar, however, has been muted but not offset by the counter effect of large foreign official purchases of dollar assets. In the same time period, net official purchases of dollar assets increased from $111 billion to $399 billion.

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 appreciated little or not at all against 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. This appreciation was rooted in a sharp bounce-back of the demand for dollar denominated assets by foreign purchasers. The net in flow of foreign funds jumped from $186 billion in 2004 to a record $585 billion in 2005. The motivating forces included continued strong U.S. economic growth relative to the rest of the world, further Fed induced increases in domestic interest rates, and rising profits of oil-exporting countries in need of a safe and liquid means of wealth storage. Also, the demand for dollar reserves by foreign central banks, although down from that of 2004, remained strong in 2005.

Through mid-2006, the dollar was steady, responding to the halt of short-term interest rate increases by the Fed and to a moderation of petro-dollar inflows. But, since then, the dollar has depreciated about 9% and is now down about 25% from its high in early 2002. This weakening appears to have been caused by some slackening in private investment flows, most likely responding not only to a desire for diversification but also to (1) slower economic growth in the United States, (2) interest rate reductions by the Fed, and (3) improved economic performance in the rest of the world. Additionally, the expectation by investors that the dollar will likely continue to depreciate tends to lower the expected yield on dollar assets and exerts downward pressure on the currency.

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[10] *The Economist*, September 18, 2003.

Instability and the Prospect of a Dollar Crash

When the dollar begins to fall, particularly after a sharp appreciation, concerns are raised about whether the process of depreciation could soon devolve into an outright crash, wreaking devastation on the wider economy. The critical issue is not the dollar per se but the underlying macroeconomic forces that are propelling it. Again the critical force in this regard is the flow of international capital into and out of the U.S. economy.

The dollar crash scenario is as follows: We are in a situation where there is widespread agreement that the dollar needs to depreciate substantially and there is a strong consensus in the financial markets that the dollar will fall rather than rise. This raises the prospect of a run on the dollar that leads to a rapid and large depreciation of the dollar that goes far beyond what is needed for the desired economic adjustment. The fear in some minds is that the move out of dollars could become a stampede if investors try to flee from dollar assets on a large scale. To shed dollar assets one needs to find a buyer, but this occurs only through a tremendous bidding down of the price of the now less desirable dollar assets. This leads not only to a sharply falling exchange rate, but also to sharply rising interest rates in U.S. financial markets as lower asset prices translates into higher effective interest rates. Thus, two sharp negative impulses are transmitted. One, a sharply falling dollar will likely mean a sharply rising euro and yen, and lead to severe decreases in the export sales these counties are very dependent on. Two, sharply rising interest rates in the United States will dampen spending in interest sensitive sectors as well as reveal any lurking weaknesses in financial markets.

There are, of course, positive impulses associated with a falling dollar: Increased export sales in the United States and stimulus to interest sensitive sectors abroad. In the *dollar crash scenario*, however, the negative impulses have a more immediate effect and are not sufficiently offset soon enough to prevent recession in the United States, Europe, and Japan.

A disorderly adjustment is possible, but not inevitable.[11] For one thing, the tendency for interest rates to rise in this circumstance works to brake the process, as higher yields assuage uneasy investors. But there is no guarantee that interest rates still would not rise to a dangerously disruptive level. There are, however, other reasons why a dollar crash is unlikely. First, why run from the dollar assets if there are no better alternatives? The U.S. economy is still the most productive and innovative economy in the world, producing more than a quarter of world output and an even greater share of quality marketable assets. U.S. assets typically offer higher returns on average then those of Europe or Japan and that return accrues more reliably then higher yielding assets of emerging economies. Therefore, a reasonable case can be made that it is unlikely that the rest of the world would easily absorb the net inflow of $700 billion to $800 billion of world saving into the U.S. market, suggesting that, despite some prudent investor reshuffling of their portfolios, the

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[11] See CRS Report RL33186, *Is the U.S. Current Account Deficit Sustainable?*, by Marc Labonte.

demand for dollar assets is likely to remain very strong, assuring that dollar depreciation will likely be orderly.

Second, a substantial portion of the foreign investment in the United States is typically long-term investment (e.g., direct investment in plant and equipment, long maturity bonds, and stocks), which tends to be far more stable than short-term portfolio investment flows because it is based on expectations of long-run return that are less sensitive to adverse short-run changes in economic conditions and, thereby, highly *panic resistant*.

Third, as discussed above, China and other emerging economies seem to be strongly tied to an economic development program propelled by export sales, particularity to the American market. To maintain the competitive position of their currencies in this market, they will continue to absorb large stocks of dollar assets, maintaining upward pressure on the dollar. Also, a growing share of Japanese household's saving has become more internationally mobile and likely to be looking for investment alternatives to typically low yielding domestic Japanese assets.

Fourth, the pool of world saving is likely growing, with substantial new inflows from China, India, and the oil-exporting countries. Dollar assets will likely be an attractive lure for a large share of this new saving. This new demand for dollar assets will, therefore, tend to offset some of the downward pressure on the dollar exchange rate caused by diversification out of dollar assets by other foreign investors.

Fifth, the dollar is the world economy's reserve currency of choice. The large size and stability of the dollar asset markets along with the ongoing needs of international investors for *liquidity* and a *store of value* undergirds the strong persistent international demand for dollar assets. However, a depreciating dollar over a substantial time period could undermine the dollars reserve currency status.

Where Will the Dollar Go

Predicting the path of the dollar is always a problematic endeavor. Economic fundamentals predict that the dollars near-term path will broadly reflect the resolution by international investors of an ongoing balancing of risk and return. Nevertheless, 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 and difficult to anticipate. Adding to the difficulty at this time are the large dollar asset holding by foreign central banks that are likely to respond to factors other than calculations of expected return. What this section of the report will lay out is 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.

Economic growth in the United States in 2007 shows signs of slowing and this may translate into a reduction of the expected return on dollar assets. In addition, the Fed in mid-2007 began to lower short-term interest rates. In contrast, both the euro

area and Japan have demonstrated that they have firmly established economic expansions underway, and they have currencies that are not expected to depreciate. These changes suggest that the expected yield advantage of dollar assets has been erased. If so, this presents foreign investors, with an already strong need to diversify away from dollar assets, with alternative sources of an attractive sustained rate of return. This change in incentives could be sufficient to induce a significant move toward yen and euro assets.

Most 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 50% beyond the depreciation that has already occurred to shrink the trade deficit from its current level of 6.5% of GDP to a sustainable level of about 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 increases. 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.) That there is investor sensitivity to this prospect is evidenced by the short-term weakening of the dollar that often follows release of official statistics showing that the U.S. trade deficit continues to grow.

Whether the central banks of countries that actively use 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 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 foreign holder with the second largest stock of dollar assets, would now undertake a large sell-off those assets. If Japan's central bank were to dump a large share of its dollar assets on the market, the yen would appreciate, eroding the competitiveness of Japanese products in the large

U.S. market. After nearly a decade of stagnation, Japan is unlikely to risk derailing its current economic expansion by inducing such a negative shock to its economy.

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 deprecation 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 the significant liquidity advantage offered by the broad and deep U.S. financial markets, but it may also indicate a significant degree of investor myopia and the risk of an all too abrupt clearing of vision down the road. Diversification of assets, however, can occur without a selling of dollar assets. Investors can merely shift the composition of additions to their portfolios toward nondollar assets. Also, foreign investors holding a high concentration of U.S. Treasury securities can manage risk by accumulating other types of dollar assets such as agency bonds or high-grade corporate bonds that pay a higher yield but offer only a small increase in risk.

Economic Policy and the Ups and Downs of the Dollar

The macroeconomic tools of monetary and fiscal policy have the potential to strongly influence the value of the dollar exchange rate. In practice, however, these strong policy instruments only rarely take the dollar as their primary concern. The goals of rapid and stable economic growth, high employment, and low inflation are usually the principal targets of macroeconomic policy. The dollar will likely be influenced by such policy actions, and its movement might well support achieving broader macroeconomic goals; but a particular level for the exchange rate is unlikely to be an explicit policy goal, and it would be misguided to describe such indirect exchange rate effects as evidence of an explicit "strong" or "weak" dollar policy. A major benefit of moving from fixed to floating exchange rates is that it frees the monetary authority from having to move interest rates to maintain the exchange rate at a fixed value, and allows it to focus monetary policy on domestic stabilization. Discretionary fiscal policy, to the extent that it can be used, will exert its effect on the exchange rate through the budget balance. Whether that balance is a surplus or deficit will be driven by forces largely unconcerned with the exchange rate.

If the dollar looked as if it were crashing and sharp increases of interest rates were threatened, a quick policy response would be called for, and would most likely be by the Fed. Such circumstances could place the Fed in a difficult spot. Stabilizing the exchange rate would dictate raising interest rates, but that would intensify the pressures faced by domestic interest-sensitive sectors. Insulating domestic economic activity would dictate lowering interest rates, but that would intensify the dollar's depreciation. Most often, domestic stabilization goals can be expected to take precedent. The policy task would be easier if fiscal policy could also be used and easier still if other countries pursued complementary adjustment policies. (Remember, if the dollar is falling, other currencies must be rising, and that may not

be desired, particularly if those other countries are more dependent on exports to sustain economic activity.) A crashing dollar could be a difficult policy problem. But, as discussed above, such a crash seems to be a remote possibility.

The dollar may not crash. Nevertheless, most economists argue that the dollar needs to make a further sizable, but orderly, downward correction. The correction is needed to give relief to domestic producers of tradable goods and to stem the growth of U.S. net external indebtedness. How much additional correction will be needed to achieve these goals is open to debate. Certainly, erasing the trade deficit would require a larger depreciation of the dollar than only reducing the deficit to a sustainable size. The dollar's path is highly dependent on decisions in international capital markets, made by lenders and borrowers alike. Capital markets are capable of carrying out an orderly adjustment, and such a market initiated adjustment may now be underway. But economic policy can also influence that adjustment.

The pertinent issue for economic policy is the character of the market forces that are propelling capital flows. The direction and magnitude of prospective movement of the dollar's exchange value will be substantially intertwined with the U.S. economy's use of sizable inflows of foreign financial capital to partially finance the economy's domestic investment spending.

Healthy levels of investment spending undergird long-term prosperity, and it is probably worth monitoring how well this important activity is proceeding. Because investment spending in the United States will likely rise with continued economic expansion, and because the level of domestic saving will likely continue to be smaller than what is needed to finance that investment, the demand for foreign capital will also grow. This will be a persistent force inclining the dollar toward appreciation. "Relatively strong" is an ambiguous term: what is being suggested is that the dollar in this environment may hover well above the level consistent with balanced trade. Whether this points to some further depreciation from recent highs or a renewal of appreciation is difficult to judge.

For economic policy to prudently counter United States reliance on foreign capital and push and hold the dollar at a far lower value, would most likely require an increase in the rate of national saving. How to achieve a larger flow of domestic saving is problematic. Because the government's most direct link to the level of national saving — the state of balance of the federal budget — is widely projected to be incurring deficits for the next several years, fiscal policy is assuming a posture that tends to appreciate the dollar. The path of monetary policy is certainly more flexible and the needs of a slowly recovering economy make it more likely that the Fed will follow a generally stimulative path in the near-term. This would perhaps be mildly supportive of depreciation of the dollar. But there is no strong reason to expect monetary policy to exert such strong downward pressure on the dollar that it would overcome even relatively moderate forces pushing to appreciate the dollar, such as rising investment spending, larger budget deficits, and economic weakness abroad.

Conclusion

A "weak" dollar is not necessarily bad and a "strong" dollar is not necessarily good. An accurate evaluation will depend on what has made the dollar weak or strong. The exchange rate is most often a symptom of movements of capital between countries. As such, it is these flows, and the forces behind them, that are likely to shape our final opinion about what is good or bad economic performance.

A strong dollar that is the result of large capital inflows used to support budget deficits and consumption, as in the 1980s, may be viewed differently than a strong dollar that is the result of capital inflows that finance a higher level of investment spending as in the 1990s. The latter, because it will likely lead to a smaller decrement to our future living standard, seems superior. Similarly, a dollar that weakens in response to a shift to a higher level of domestic saving may be viewed differently than a weakening that is the result of investors moving away from a poorly run economy with few good investment opportunities. The former, because it will mean that more of the benefit of future growth will accrue to U.S. citizens, seems superior.

The depreciation of the dollar from 2002 through 2004 was most likely due to a prudent response of investors to concurrent events in the U.S. economy, many of them likely transitory, however. The modest rise of the dollar in 2005 is most likely the consequence of increased demand for dollars due to the current and prospective strong performance of the U.S. economy, Fed interest rate increases, and rising petroleum prices. Yet, the path of the dollar exchange rate remains very problematic. The very large accumulation of dollar assets in foreign investment portfolios still indicates a growing need for diversification away from dollar assets. This may be the reason for the weakening of the dollar since late 2006. Also, it is difficult to predict if foreign central banks will continue their high volume *official purchases* of dollar assets. Under the most plausible scenario, the U.S. economy will continue to use a sizable inflow of foreign capital to help finance its domestic investment and a seeming *glut* of foreign saving shows no sign of ebbing. This suggests that the dollar may continue to depreciate in 2008. A crash of the dollar remains a significant risk, but an orderly adjustment seems more likely.