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# International Capital Flows Following the September 11 Attacks

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## Summary

A major concern following the terrorist attacks on New York and Washington was that foreigners would curtail their purchases of U.S. financial assets and reduce the total inflow of capital into the U.S. economy, thereby weakening the value of the dollar. The Federal Reserve moved aggressively on its own and in tandem with other central banks at an unprecedented level to avert a potential crisis in the markets. These efforts were largely successful: by year-end U.S. equity markets slowly recovered their pre-attack values; and the exchange rate value of the dollar returned to its pre-attack rate after fluctuating within a fairly narrow range. Data also indicate that capital outflows were higher than normal for the month of September, but panic selling of U.S. assets did not occur. This report will be updated as warranted.

## Background

The September 11 attacks on New York and Washington struck at the heart of the U.S. financial center, disabling some stock and equity markets for a short time. These attacks raised concerns about the ability of the markets to absorb the shock and about the prospects that foreign investors would curtail their purchases of U.S. financial assets and reduce the inflow of capital into the U.S. economy, thereby weakening the value of the dollar. Although a decline in the value of the dollar would have benefitted export-sensitive and import-competing industries in the economy, it likely also would have pushed up interest rates and had a negative impact on such interest-sensitive industries as autos and housing. International flows of capital around the world have grown dramatically over the last decade. These flows exercise a primary influence on exchange rates and global flows of goods and services. They also allow the United States to finance its trade deficit because foreigners are willing to lend to the United States in the form of exchanging the sale of goods, represented by U.S. imports, for such U.S. assets as stocks, bonds, and U.S. Treasury securities.

The dollar is heavily traded in financial markets around the globe, at times playing the role of a global currency. Disruptions in this role have important implications for the

United States and for the smooth functioning of the international financial system. This prominent role means that the exchange value of the dollar often acts as a mechanism for transmitting economic and political news and events across national borders. While such a role helps facilitate a broad range of international economic and financial activities, it also means that the dollar's exchange value can vary greatly on a daily or weekly basis as it is buffeted by international events. Recent data indicate that the **daily** trading of foreign currencies totals more than $1.2 trillion, or more than the annual amount of U.S. exports of goods and services. The data also indicate that 90% of the global foreign exchange turnover is in U.S. dollars.[1]

In the U.S. foreign exchange market, the value of the dollar is followed closely by multinational firms, international banks, and investors who are attempting to offset some of the inherent risks involved with foreign exchange trading. On a daily basis, turnover in the U.S. foreign exchange market[2] averages $254 billion; similar transactions in the U.S. foreign exchange derivative markets[3] averages $135 billion.[4] Foreigners also buy and sell U.S. corporate bonds and stocks and U.S. Treasury securities. Foreigners now own 20% of the total amount of outstanding U.S. Treasury securities held by the public.[5] In 2000 (the latest year for which complete data are available), the foreign direct investment inflow into U.S. businesses reached nearly $300 million, or over 16 percent of total gross private investment of $1.7 billion. In addition, foreign investors acquired an additional $500 million in U.S. corporate bonds and stocks.

A comprehensive set of data on capital flows, represented by purchases and sales of U.S. government securities and U.S. and foreign corporate stocks, bonds, into and out of the United States is collected by the Treasury Department on a monthly basis.[6] These data indicate that in September 2001, capital flows out of U.S. capital markets were slightly higher than normal. These capital flows were in the form of a statistically significant[7] decline in foreigners' net purchases of U.S. government and corporate bonds and an increase in Americans' net purchases of foreign stocks and bonds. While the attacks on

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[1] *Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April 2001; Preliminary Global Data*. Bank for International Settlement, October 2001. p. 2-4. A copy of the report is available at: [http://www.bis.org/press/p011009.pdf]

[2] Defined as foreign exchange transactions in the spot and forward exchange markets and foreign exchange swaps.

[3] Defined as transactions in foreign reserve accounts, interest rate swaps, cross currency interest rate swaps, and foreign exchange and interest rate options.

[4] *The Foreign Exchange and Interest Rate Derivatives Markets Survey: Turnover in the United States*. The Federal Reserve Bank of New York, April, 2001. p. 1. A copy of the report is available at: [http://www.newyorkfed.org/pihome/triennial/fx_survey.pdf]

[5] *Treasury Bulletin*, December 2001. Table OFS-2. p. 56.

[6] These data are available through the World Wide Web at Treasury Department's Treasury International Capital (TIC) reporting site: [http://www.treas.gov/tic/]

[7] These results were derived at the 95% confidence level for monthly data from January 2000 to September 2001.

September 11 likely were a factor in the shift of some of these capital flows,[8] it is impossible from the data alone to separate out the effects of the attacks from other events that might have caused investors to pare back their accumulation of some dollar-denominated securities. The attacks of September 11 added to existing concerns about the course of the economy over the next year. Following the attacks:

- Currency traders quickly forged a voluntary "gentleman's agreement" not to profit from the event, which helped stabilize the value of the dollar, measured against a broad range of currencies. By September 14, however, the agreement had faltered as currency speculators began driving down the value of the dollar.[9]

- The Federal Reserve, concerned about the prospects of a panic in international financial markets, coordinated actions among central bankers and financial ministers around the globe to ensure the smooth operation of the international financial markets. These actions included an infusion of liquidity by the Federal Reserve of about $40 billion[10] and a roughly equivalent amount by the European Central Bank and coordinated intervention in the foreign exchange markets on at least two occasions by the Federal Reserve, the European Central Bank, and the Bank of Japan to support the value of the dollar.[11] Federal Reserve officials also signaled to U.S. banks that they would suspend temporarily some U.S. bank regulations in order to provide U.S. credit markets with needed liquidity, adding to other efforts to stem market uncertainty concerning liquidity and settlement problems associated with the Bank of New York.[12] Two weeks after the attacks, the dollar had declined 3% against the euro and 3.6% against the yen as foreigners' demands both for dollars and for some U.S. financial assets waned.

- The Bank of Japan intervened in foreign currency markets on five instances between September 11 and September 27 by buying dollars to stop the rise in the value of the yen. These efforts were undermined

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[8] Phillips, Michael M., Michael R. Sesit, and Silvia Ascarelli, Foreign Investors, Jittery Over Holdings, Begin Pulling Some Funds From the U.S. *The Wall Street Journal,* September 26, 2001. p. B 14.

[9] Downey, Jennifer, and Grainne McCarthy, Dollar Movement is Limited on Decision by Traders Not to Overact to Attacks. *The Wall Street Journal*, September 13, 2001. p. C 2.

[10] *U.S. Financial Data*, Federal Reserve Bank of St. Louis, October 4, 2001. p. 2-4.

[11] Ip, Gregg, G. Thomas Sims, and Paul Beckett, Fed Pumps Cash to Bank System to Help Meet Spiking Demand. *The Wall Street Journal*, September 13, 2001. p. C-1.; Ip, Gregg, and Paul Beckett, Fed Acts to Bolster Banks at Home and in Europe. *The Wall Street Journal,* September 14, 2001. p. A 2.; Hardy, John, Dollar Rises on More Central Bank Intervention. *The Wall Street Journal*, September 28, 2001. p. C 13; Ip, Greg, and Jim VandeHei, Economic Front: How Policy Makers Regrouped to Defend the Financial System. *The Wall Street Journal*, September 18, 2001. p. A 1; Cool Heads at the Central Banks. *Financial Times*, October 1, 2001. p. 2.

[12] Raghavan, Anita, Susan Pulliam, and Jeff Opdgke, Team Effort: Banaks and Regulators Dew Together to Calm Markets After Attack. *The Wall Street Journal*, October 18, 2001. p. A 1.

partially by Japanese firms that were repatriating some U.S. holdings to shore up their cash balances to meet financial reporting deadlines on September 30.[13]

- The Federal Reserve lowered key interest rates by one half a percentage point on September 17 and on October 2: the one-point drop in rates left the federal funds rate at 2.5 percent and the bank discount rate at 2.0%, the lowest those rates had been since 1962. The drop in rates on September 17 was followed by other central banks, including the European Central Bank, the Bank of Canada, and the Swedish central bank.[14] The Swiss central bank lowered its interest rates to stop the Swiss franc, which had been targeted by some investors fleeing from dollars, from appreciating further. The following day, the Bank of England cut interest rates by one-quarter of a percentage point. At the European Central Bank's bi-monthly meeting on September 27, the Bank decided to keep its interest rates unchanged at 3.75%. A similar action by the Bank on October 25 sparked a large sell-off of corporate stocks in Europe and strengthened foreign demand for dollar-denominated assets.[15]

Panic selling of dollar-denominated assets did not occur, as some had feared, following the September 11 attacks. In many respects currency and financial markets remained more steady than many had expected and regained their pre-attack levels within weeks. By mid-October, investors had discounted the effects of the attacks and had turned firmly toward the dollar, which recovered its pre-September 11 rates against the yen and the euro.[16] While some foreigners reduced their dollar asset holdings immediately following the attacks due to concerns about the safety and profitability of such investments,[17] other investors showed continued interest in dollar-denominated assets. Issues of high quality, investment grade corporate bonds and auctions for Treasury securities after September 11 went smoothly with strong sales pushing up prices of benchmark 10-year Treasury securities.[18] Initially, this demand stemmed from expectations that the Federal Reserve would lower key benchmark interest rates by another one-half percentage point on October 2. The price of a bond is inversely related to the interest rate, so lowering interest rates raises the price, making the bond more valuable. On October 4, the Treasury Department took the unprecedented move of holding an unscheduled

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[13] Zaun, Todd, Japan Steps in Again to Damp Yen, Ease Lot of its Exporters. *The Wall Street Journal*, September 26, 2001. p. A 10; Hardy, John, Dollar Rises on More Central Bank Intervention. *The Wall Street Journal*, September 28, 2001. p. C 13.

[14] Sesit, Michael, and Michael Williams, Europe, Canada Reduce Rates After Fed's Cut; Japan Sells Yen. *The Wall Street Journal*, September 18, 2001. p. A 14.

[15] Karmin, Craig, Frustrated Investors Trigger Massive Stock Sale As Europe's Central Bank Leaves Rates Unchanged. *The Wall Street Journal,* October 26, 2001. p. C 11.

[16] McCarthy, Grainne, Dollar Climbs Against Euro and the Yen. *The Wall Street Journal,* October 12, 2001. p. C 13.

[17] McGee, Suzanne, and Kara Scannell, Trying Hard, A Few Companies Raise Cash. *The Wall Street Journal,* September 28, 2001. p. C 1;

[18] Parry, John, New Signs of Economic Weakness and Abatement of Price Pressures Set Stage for Treasury Rally. *The Wall Street Journal,* September 28, 2001. p. C 15.

auction of 10-year Treasury bonds to avert a breakdown in one part of the financial markets that had been disrupted by the terrorist attacks from spilling over to other markets.[19]

The lack of action by the European Central Bank in lowering key interest rates and poor economic performance of other economies further strengthened foreign demand for dollar-denominated assets. In addition, the events of September 11th demonstrated that in times of crisis, investors still seem to prefer the U.S. dollar-denominated bond market to its euro counterpart. During the three weeks following the attacks, not a single corporation sold a bond in euros, while issues of corporate bonds in the U.S. market fell by only a third below its average. A recent report by the European Commission states that the shift toward dollar-denominated assets in times of crisis reflects "the relative strength and resilience of the U.S. dollar as a financing currency in volatile market conditions."[20]

## Policy Analysis

Foreign investors appear to have shaken off their concerns about the effects of the September 11th attacks on the U.S. economy and are focusing instead on other factors that will affect the course of the U.S. economy during the next year. Over the long run, the underlying economic prospects for the U.S. and other nations will continue to determine the overall international flow of capital. Foreigners are continuing to invest heavily in U.S. corporate bonds and a rally in U.S. stock markets could draw foreign investors back into buying these securities. Foreigners' direct investments to acquire U.S. businesses and real estate also held up well in the first half of 2001, although such investment activity is not expected to match the record-setting performance of the previous year. Of more immediate concern, however, is the impact a U.S. economic downturn, aggravated by the events of September 11, will have on the global economy. The United Nations released a forecast on October 10, 2001 for the world economy in the year ahead that was more pessimistic than previous reports. According to the report, this added pessimism stems from a slowdown in foreign investment in and capital flows to developing economies.

Investments in U.S. Treasury securities declined markedly over the past year due to the large federal government budget surpluses, which were used, in part, to retire Treasury securities. As the surpluses shrink and new Treasury securities are issued, they are expected to be desired. Such securities continue to be perceived by most investors as among the most secure in the world. Moreover, the overall monetary, fiscal, and regulatory framework of the U.S. economy is perceived by most investors as being the best combination for providing the most attractive overall investment climate in the world, despite the current weakness in the economy. Currency analysts expect the dollar to trade lower both in the near term and over the next year. One additional complication will be the effects of the introduction of the euro, which took place on January 1, 2002. Although the euro strengthened against the dollar over the summer, concerns are growing over the disruptions that could arise from the move to full implementation of the euro.

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[19] Ip, Greg, Treasury Sale Averts a Crisis in 'Repo' Market. *The Wall Street Journal*, October 5, 2001. p. C 1.

[20] Sims, G. Thomas, In Crisis, Bond Investors, Issuers Seem to Prefer to Deal in Dollars. *The Wall Street Journal*, October 23, 2001. p. C 16.

## Options and Implications for U.S. Policy

The September 11 attacks dealt a major challenge to the U.S. economy and to policymakers around the world. Financial and foreign exchange market activities were slightly out of the norm the first few weeks following the attacks, but actions by the Federal Reserve and by other central banks helped head off a financial panic and a loss of confidence by ensuring that the financial system was supplied with liquidity through coordinated actions. Central bank coordination in times of crises is not uncommon, but the speed with which the coordination was reached and the aggressiveness of the banks to stem any loss of confidence in the financial system are unusual. The high level of coordination among central banks likely demonstrates the lessons they learned and the techniques they developed by addressing other financial crises over the last two decades. It likely also demonstrates the recognition that national economies have become highly interconnected and that a shock to one creates spillover effects onto other economies and markets.

The highly developed and broad-based nature of the U.S. financial system proved that it could weather one of the worst blows in decades. Not even the aggressive actions by the Federal Reserve, however, could anticipate or forestall all of the potential repercussions. The Federal Reserve, for instance, performs a number of functions that, although transparent to most market participants, are essential to the smooth operating of the system by providing for the timely settlement of market transactions and for sufficient financial resources, or liquidity. Disruptions to this process can create additional, and potentially serious, problems in other financial markets that may not seem apparent at first glance. The crisis also demonstrates that the financial markets are highly efficient at processing information, a phenomenon which aids in spreading both good and bad news quickly. As a result, the markets absorbed the impact of the September 11 events quickly and likely moved on in a short time to assess the economic effects of other economic events and other economic news. This means that the overall course of the U.S. economy, rather than the events of September 11 likely determined the flows of capital into and out of the United States through the remainder of 2001.

The fiscal stimulus provided to the economy by additional federal government spending, combined with the measures taken by the Federal Reserve to lower interest rates, are the most important U.S. policy factors affecting the flows of capital into and out of the United States. The Federal Reserve moved aggressively following the terrorist attacks to reassure investors and to demonstrate the strength of the U.S. economic system. Congressional actions to reinforce that approach appear to have had a similar reassuring impact on foreign investors, currency traders, and the domestic economy. Such actions included the $40 billion Emergency Supplemental Appropriations for reconstruction and defense (P.L. 107-38, September 18, 2001), and $15 billion to aid the airline industry.