Report to Congress on International Economic and Exchange Rate Policies

U.S. Department of the Treasury
Office of International Affairs

October 15, 2009

This report reviews developments in international economic and exchange rate policies, focusing on the first half of 2009, and is required under the Omnibus Trade and Competitiveness Act of 1988, 22 U.S.C. § 5305 (the "Act").[1]

[1] The Treasury Department has consulted with the Board of Governors of the Federal Reserve System and IMF management and staff in preparing this report.

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Key Findings

The Omnibus Trade and Competitiveness Act of 1988 (the "Act") requires the Secretary of the Treasury to provide biannual reports on the international economic and exchange rate policies of the major trading partners of the United States. Under Section 3004 of the Act, the report must consider whether any foreign economy manipulates its rate of exchange against the U.S. dollar to prevent effective balance of payments adjustments or to gain unfair competitive advantage in international trade. For the period covered in this Report, January 1, 2009 to June 30, 2009, Treasury has concluded that no major trading partner of the United States met the standards identified in Section 3004 of the Act.

The Report further finds that the financial crisis that began in the summer of 2007, and intensified in the fall of 2008, was especially severe in the last quarter of 2008 and the first quarter of 2009. The International Monetary Fund (IMF) has estimated that global real GDP declined at an average annual rate of 6.5 percent during the first quarter of 2009 and international trade fell sharply, contracting at an annual rate of 54 percent. Industrial production is estimated to have declined by 18 percent. By early March 2009, global equity prices were down by 60 percent from their peak in October 2007. On a nominal effective basis, the dollar strengthened 5.9 percent in the fourth quarter of 2008 and a further 3.7 percent during the first quarter of 2009 as risk appetite fell sharply. There was widespread agreement that the crisis represented the greatest economic challenge in more than a generation, and there was growing concern that the world economy could be on the edge of a new depression

On April 2, 2009, Leaders of the G-20 met in London and pledged to do "whatever is necessary" to restore confidence, growth, and jobs; repair the financial system and restore lending; and maintain the global flow of capital. Pledges were made to deliver extraordinary fiscal and monetary stimulus and financial sector support – the largest and most comprehensive global stimulus program in modern times. In addition, G-20 Leaders pledged to make available an additional $850 billion to international financial institutions to support emerging markets and they committed to a substantial strengthening of financial market regulation and supervision. The U.S. Administration, together with the U.S. Congress, had already begun taking exceptional action to arrest the economic decline with emergency demand support measures under the February 2009 $787 billion American Recovery and Reinvestment Act (ARRA). This was buttressed by the Administration's Financial Stability Plan (FSP) to strengthen credit, housing, and financial markets, and by the joint Treasury/Federal Reserve bank stress tests conducted under the Supervisory Capital Assessment Program (SCAP). Virtually every G-20 member country and all the economies listed in this Report have put in place exceptional monetary and fiscal measures to bolster demand and support a rejuvenation of growth.

These forceful interventions on a coordinated global scale worked. In the few months following the April Leaders' meeting, global economic growth turned positive, industrial production bottomed and began increasing, international trade increased 10.2 percent, financial markets improved sharply as interest rate spreads declined and access to credit broadened, and consumer and business confidence improved. Globally, capital began flowing once again as risk aversion began to dissipate. As moderation in downside risks prompted global investors to once again shift their portfolios toward more risky assets, the dollar retraced some of its previous rise.

Despite the recent improvements in financial markets and economic growth, the global economic recovery remains incomplete. Private-sector demand remains weak and unemployment in many countries remains unacceptably high. To help guide the recovery and to reduce the risk and incidence of future crises, G-20 Leaders agreed at the Pittsburgh Summit on September 24-25 to launch a new Framework for Strong, Sustainable, and Balanced Growth. The goal of the Framework is to help to ensure a better balanced global economy that is less prone to crisis and to secure the ability to quickly mobilize early intervention in the event of prospective instability. As part of the Framework, G-20 members with sustained, significant external deficits pledged to undertake policies to support private savings and fiscal consolidation while maintaining open markets and strengthening export sectors. G-20 members with sustained, significant external surpluses pledged to strengthen domestic sources of growth. The G-20 will establish a process of mutual assessment to help evaluate the sustainability of policies and develop corrective actions where necessary.

As noted, no major trading partner of the United States met the standards identified in Section 3004 of the Act during the most recent reporting period. All of the countries described in this Report have put in place policies to boost their economies and expand domestic demand. Global imbalances have fallen sharply during the crisis from a peak of 5.9 percent of world GDP to an IMF-estimated 3.6 percent in 2009. The U.S. current account deficit has fallen from a peak of 6.5 percent of GDP in the fourth quarter of 2005 to 2.9 percent of GDP in the second quarter of 2009. Most U.S. bilateral trade deficits have fallen as well. Some of the correction in global imbalances is the result of cyclical factors and may be reversed as the global economy recovers. However, some is also structural – as with the rise in private sector saving in the United States.

Of the 17 currencies examined in this Report, two (the Saudi Arabia riyal and the Venezuelan bolivar) are fixed against the U.S. dollar. Among the remaining 15 currencies, all except the Norwegian kroner depreciated against the dollar in the first quarter of 2009, as capital flows to emerging markets declined and investors continued to shift their portfolios into dollar assets. During the second quarter of 2009, 14 of these currencies appreciated against the dollar, as improvements in financial market conditions and the global outlook led to a return to more diverse portfolios. Only the Chinese renminbi remained unchanged against the dollar in the second quarter. This lack of movement of the renminbi has contributed to upward pressure on more flexible currencies in the region. Several emerging markets in the region have intervened in the foreign exchange market to slow the pace of appreciation.

Although China's overall policies played an important role in anchoring the global economy in 2009 and promoting a reduction in its current account surplus, the recent lack of flexibility of the renminbi exchange rate and China's renewed accumulation of foreign exchange reserves risk unwinding some of the progress made in reducing imbalances as stimulus policies are eventually withdrawn and demand by China's trading partners recovers.

On an effective basis, the renminbi has depreciated 6.9 percent since February 2009. From the end of February through June, China's reserves increased both as a result of valuation changes and additional purchases associated with intervention. Both the rigidity of the renminbi and the reacceleration of reserve accumulation are serious concerns which should be corrected to help ensure a stronger, more balanced global economy consistent with the G-20 Framework. Treasury remains of the view that the renminbi is undervalued. The United States will continue to work with China both in the G-20 and the bilateral Strategic and Economic Dialogue to pursue policies that permit greater flexibility of the exchange rate and lead to more sustainable and balanced trade and growth.

Appendix 1 of the Report provides data on the currency composition of reserves over the past 30 years. Despite repeated predictions of the demise of the dollar as the major reserve currency, the data show no significant diversification of global currency reserves away from the dollar.

Appendix 2 of the Report, required by the Supplemental Appropriations Act, 2009, Public Law No. 111-32 (June 24, 2009) focuses on how to improve the effectiveness of IMF surveillance. Rigorous bilateral and multilateral surveillance by the IMF will help shed light on trends that could lead to the next unsustainable boom and allow preventative or corrective measures to be put in place. Under the G-20 Framework for Strong, Sustained, and Balanced Growth, the IMF will provide forward-looking analysis of whether the world's major countries are implementing economic policies, including exchange rate policies, which are collectively consistent with G-20 objectives.

Introduction

This report focuses on international economic and foreign exchange developments in the first half of 2009. Where pertinent and when available more recent data and developments are included.

Exports and imports of goods to and from the areas whose economies and currencies are discussed in this report accounted for more than 80 percent of U.S. merchandise trade in the first half of 2009.

U.S. Macroeconomic Trends

The U.S. economy remained deep in recession at the start of 2009 but, as the first half of the year drew to a close, signs of recovery began to emerge. The pace of economic contraction slowed sharply in the second quarter as some sectors appeared to be stabilizing. Conditions in financial and credit markets improved notably, and housing activity started to pickup during the spring after a 3-year slump. Labor markets remained very weak but job losses began to moderate midyear. Several new fiscal policy measures were put in place in early 2009 to stabilize financial markets and put the economy back on the path towards long-term sustainable growth. These initiatives, along with the injection of fiscal stimulus delivered by the American Recovery and Reinvestment Act (the Recovery Act), enacted in mid February, are having the desired impact. Financial market volatility decreased notably in the first half of the year, measures of financial risk declined substantially, with some returning to pre-crisis levels, and credit flows picked up considerably. Early indicators about the third quarter suggest that some sectors of the economy are starting to recover. Most private forecasters expect moderate economic growth to resume in the second half of 2009. The IMF projects US real GDP to decline by 2.7 percent in 2009 and rise by 1.5 percent in 2010.[2]

The U.S. Economy Continued to Contract in the First Half of 2009

U.S. real GDP fell at an annual rate of 6.4 percent in the first quarter and at a 1.0 percent pace in the second quarter. The second-quarter drop was the smallest in a year, partly due to a pickup in government spending which boosted real GDP by 1.3 percentage points. The rate of decline in private spending also slowed in the second quarter as the pullback in business investment moderated and the downturn in residential investment slowed. Private inventories continued to shrink but the drawdown was a smaller drag on growth in the second quarter, subtracting 1.4 percentage points from real GDP growth after reducing growth by 2.4 percentage points in the first quarter. Consumer outlays fell by 0.9 percent following a modest 0.6 percent increase in the first quarter. Exports and imports both declined but the drop in imports was larger. As a result, net exports rose, boosting real GDP by 1.6 percentage points in the second quarter. Since the previous business cycle peak in the fourth quarter of 2007, real GDP has fallen by an annual rate of 2.5 percent – the largest six-quarter decline on record in the post-war period.

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[2] The IMF annually reviews U.S. economic performance and policies through the IMF Article IV surveillance process. The last Article IV surveillance concluded in July 2009. The Article IV Staff Report and the results of the IMF Executive Board's discussion of the U.S. Article IV review can be found at http://www.imf.org/external/pubs/cat/longres.cfm?sk=23144.0 In addition, the IMF discusses U.S. economic policies and performance in the context of its twice yearly World Economic Outlook reports. These can be found at http://www.imf.org/external/pubs/ft/weo/2009/02/index.htm.

Labor Market Conditions Worsened

Labor market conditions continued to deteriorate in early 2009 as job losses accelerated and the unemployment rate surged. During the first half of the year, 3.4 million jobs were cut from nonfarm payrolls on top of the 3.1 million lost over the course of 2008. The unemployment rate jumped by 2.3 percentage points between December 2008 and June 2009 to 9.5 percent and in September stood at a 26-year high of 9.8 percent. Since the recession began in December 2007, the jobless rate has risen by 4.9 percentage points.

While the labor market remained very weak heading into the second half of 2009, there were signs that the rate of deterioration was slowing. The monthly pace of job losses moderated in the third quarter of 2009 to 256,000, on average, from about 430,000 in the second quarter and nearly 700,000 in the first quarter. Weekly initial claims data through September continued to signal further job losses, but they also pointed to a slower pace of decline.

The Housing Sector Showed Tentative Signs of Stabilization

The housing market downturn entered its fourth year in 2009, but by spring housing activity appeared to be stabilizing. Single-family housing starts appear to have hit bottom at the start of the year and by August had risen by one-third from early 2009 lows. Permit issuance for future construction also picked up in the first half of 2009 after falling steadily for more than three years. Sales of both new and existing single-family homes have also moved off of the low levels recorded in early 2009, and in August the combined total was near its highest level since late 2007. The inventory of unsold homes on the market retreated from a historically high level. In August, the stock of new homes for sale was at its lowest level since 1992 and, relative to sales, was approaching historical norms. Major house price measures started to stabilize at the end of the second quarter, though they remained sharply lower than a year earlier.

Inflation Slowed Sharply

Consumer prices fell by 1.4 percent during the twelve months ending in June and were down by 1.5 percent over the year ending in August. A year earlier, headline consumer inflation was around 5-1/2 percent. The dramatic reversal was due in large part to a steep drop in energy prices. Food price inflation also moderated notably. Core inflation (excluding food and energy) has also retreated, slowing from 2.5 percent in mid 2008 to 1.7 percent in June 2009, and 1.4 percent in August.

Conditions in Financial and Credit Markets Improved

Equity markets posted steep losses in 2008, triggered by weakness in the U.S. economy and concerns about the performance and viability of a wide range of assets and the financial institutions holding or guaranteeing those assets. Financial markets remained volatile at the start of 2009 and equity markets continued to post losses well into the first quarter. In early March, however, equities began to recover. From March 9 through the end of June, the S&P 500 jumped nearly 36 percent. This index has continued to post gains since mid year and through October 1 had risen an additional 12 percent, bringing the increase so far in 2009 to 14 percent.

Credit market conditions improved in the first six months of 2009. The 3-month U.S. dollar LIBOR-OIS spread – a measure of what banks perceive as the credit risk in lending to one another – fell to 39 basis points at the end of June from 126 basis points in late December and an all-time high of 365 basis points in early October 2008. This spread narrowed to around 14 basis points by early October, close to the pre-crisis historical average of 9 basis points. Corporate bond spreads also narrowed, pointing to a rising tolerance for risk. The spread between Baa-rated corporate bonds and the 10-year Treasury note fell to 364 basis points in late June and continued to ease through early October to 283 basis points. Though still elevated, this measure is far below its December 2008 peak of 616 basis points. Mortgage rates dipped to new lows early in the second quarter and, despite some upward movement, since then they remain at historically low levels.

Additional Policy Measures Were Implemented to Stimulate the Economy

A number of monetary and fiscal policy measures were put in place in the latter half of 2008 to stabilize financial and credit markets. With the economy weakening rapidly at the start of 2009 and markets still severely impaired, it became necessary to take additional action.

In February, Treasury introduced the Financial Stability Program, a set of initiatives to strengthen financial institutions and jumpstart the flow of credit to households and businesses. The first of these, the Supervisory Capital Assessment Program, subjected major banks to a rigorous evaluation of their medium-term prospects. Following this highly transparent exercise, major banks were able to raise a substantial amount of new capital. The Financial Stability Program also expanded the scale and the scope of the Term Asset-Backed Securities Lending Facility (TALF) in order to rehabilitate key channels of credit to households and businesses. The announcement of the TALF's launch in March helped narrow spreads, and the issuance of consumer-related asset-backed securities has recovered substantially. Finally, the Financial Stability Program created the Public-Private Investment Program to remove legacy assets from bank balance sheets and re-liquefy key markets for financial assets. While this initiative has not been implemented on the scale and scope originally anticipated, the government's willingness to commit resources to this effort likely contributed to the recovery of these markets.

Treasury also continued to play an active role in efforts to stabilize the housing market during the first half of 2009. Treasury purchases of mortgage-backed securities and support to the government-sponsored enterprises (GSEs), along with complementary policies implemented by the Federal Reserve, helped hold down mortgage rates. The Making Home Affordable Program, under which Treasury subsidizes mortgage modifications in order to reduce the incidence of foreclosures. In early October, nearly one month ahead of the November 1 benchmark established in July, more than 500,000 mortgages of distressed borrowers had entered a trial modification period

To more directly stimulate domestic demand, Congress passed and President Obama signed the American Recovery and Reinvestment Act (Recovery Act) in mid February. This $787 billion stimulus package was designed to support income, saving, and consumption through tax cuts and transfers to households, including the Making Work Pay tax credit, payments for unemployment insurance, and one-time payments to Social Security and other eligible beneficiaries. Treasury estimates indicate that nearly $63 billion in tax relief will have been made available by the end of August 2009. Economic stimulus will also support necessary state programs and provide funds for infrastructure investment. The spending from these programs will provide an important boost to economic activity throughout 2009 and in 2010—by the end of September nearly $95 billion in Recovery Act funds had been paid out by the government.

These measures are working. As noted above, financial markets have stabilized and conditions in credit markets have improved dramatically since late last year. Measures of systemic risk have declined substantially, with some returning to their pre-crisis levels, and there are clear signs that the economy is stabilizing.

Temporary Stimulus Measures Contributed to Rising Federal Budget Deficit

The temporary measures to shore up the financial system and spur economic growth and job creation along with lower revenues as a consequence of the recession have boosted the Federal budget deficit. In FY2009, the deficit is projected to reach $1.6 trillion (11.2 percent of GDP). Federal expenditures are expected to grow by 22 percent in FY2009, partly reflecting TARP outlays and spending associated with the Recovery Act. Receipts are projected to fall by 18 percent, due in part to falling employment and income and declining asset values. The deficit is expected to narrow once the temporary spending provisions of the Recovery Act expire and the economy begins to improve, with the deficit averaging slightly more than 4 percent of GDP from FY2012 to FY2019.

Global Economy

Global economic conditions continued to worsen in early 2009 and financial markets remained under severe stress. Global trade plummeted and capital flows to emerging markets declined, pushing down output, or sharply lowering growth rates in countries that had avoided the direct effects of the financial crisis.

Real GDP in the G-7 economies fell at an annual rate of 8.6 percent in the first quarter of 2009, the fourth consecutive quarterly decline, and the largest quarterly contraction in the post-World War II era. Real GDP fell in all of the economies discussed in this report in the first quarter, with the exception of China, India, and Korea.[3] China and India are the only two economies discussed in this report that have not experienced a contraction in output during the crisis. Nevertheless, growth has fallen sharply in both countries.

The severity of the crisis prompted an unprecedented coordinated response from monetary and fiscal policymakers, particularly among the G-20 economies. By the time of the April 2009 G-20 Leaders Summit, stimulus packages had been adopted by all G-20 fiscal authorities. In addition, central banks had slashed interest rates and many had adopted non-conventional measures to increase liquidity and support domestic demand. At the April Summit, Leaders pledged to take whatever actions necessary to restore economic growth, lending, and employment.

By late spring there were signs that these policy measures were stabilizing financial markets and attenuating the decline in real GDP. In the G-7 countries, real GDP contracted at an annual rate of 0.4 percent in the second quarter, the smallest decline in a year, and the economies of France,

[3] Real GDP data for Saudi Arabia are not available on a quarterly basis.

Germany, and Japan expanded slightly. Similarly, in the emerging markets, output either expanded or declines moderated. Declines in international trade also began to moderate in the second quarter, with some recovery by the end of the quarter.

The success of global policy efforts can be seen in the upward revisions in growth forecasts. The contraction in the global economy in 2009 is now expected to be less severe than the International Monetary Fund (IMF) forecast earlier in the year, and a stronger bounce back is expected in 2010, according to the latest IMF projections. Nevertheless, growth in both the advanced and emerging market economies is expected to remain below pre-crisis norms, with large output gaps. Given the continuing economic weakness and risks to a sustained recovery, G-20 leaders agreed at the Pittsburgh Summit in September 2009 that it was too early to remove the policy stimulus. At the same time, they agreed that developing a transparent and credible exit strategy was necessary, recognizing that the timing of the exits would differ across countries and policy measures.

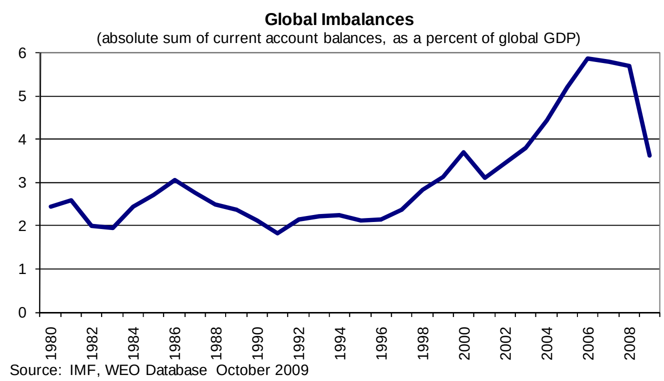
Global Output
(percent change)

	World	Advanced Economies	Emerging & Developing Economies
forecast 2009	-1.1	-3.4	1.7
forecast 2010	3.1	1.3	5.1
Average 2002-07	4.4	2.5	7.0

Source: IMF, World Economic Outlook, October 2009

Looking forward, Leaders of the G-20 established a new framework for more balanced and sustainable growth. Under this framework, G-20 countries will work together to ensure that their individual policies are collectively consistent with more sustainable and balanced trajectories of demand, debt, reserve, and credit growth. To reduce the likelihood of future crises, the G-20 will establish a process of mutual assessment to help evaluate the sustainability of policies and develop corrective actions where necessary.

Shifts in global demand are already underway. Global imbalances declined from 5.9 percent of world GDP in 2006 to an estimated 3.6 percent in 2009. The global crisis and associated drop in international trade is at least partly responsible for the decline in imbalances but some structural changes appear to be underway. For example, in some countries, notably the United States, the crisis may have resulted in a structural rise in private saving. As the economic recovery becomes established, fiscal stimulus will need to be unwound and public saving should be increased. As was acknowledged by Leaders at the Pittsburgh Summit, to sustain a strong recovery, this necessary rise in public saving will need to be accompanied by an offsetting rise in domestic demand in other countries. Otherwise, global growth will remain unacceptably low and the adjustment of current account imbalances could stall.



U.S. International Accounts

The U.S. current account deficit narrowed sharply to $203.3 billion in the first half of 2009 from $339.1 billion in the second half of 2008, a decrease of 40 percent. In the second quarter of 2009, the current account deficit narrowed to $98.8 billion (2.8 percent of GDP). This is the smallest deficit since the fourth quarter of 2001 in dollar terms and the smallest deficit as a share of GDP in a decade. U.S. merchandise exports decreased 21 percent in the first half of 2009 from the second half of 2008 and service exports fell 11 percent. However, imports fell more sharply—merchandise imports declined 26 percent, and service imports fell 12 percent.

U.S. Balance of Payments and Trade

($ billions, seasonally adjusted unless otherwise indicated)

	2006	2007	2008	2008 Q3	2008 Q4	2009 Q1	2009 Q2
Current Account:							
Balance on Goods	-847.3	-831.0	-840.3	-221.1	-178.8	-124.0	-115.5
Balance on Services	86.9	129.6	144.3	35.1	34.3	31.6	32.5
Balance on Income 1/	48.1	90.8	118.2	34.1	21.1	18.3	16.4
Net Unilateral Current Transfers	-91.3	-116.0	-128.4	-32.4	-31.5	-30.3	-32.2
Balance on Current Account	-803.5	-726.6	-706.1	-184.2	-154.9	-104.5	-98.8
Balance on Current Account as % of GDP	-6.1	-5.3	-4.9	-5.1	-4.3	-3.0	-2.8
Major Capital Flow Components (financial inflow +)							
Net Bank Flows	-40.1	-134.8	106.8	22.8	258.7	-253.2	-178.8
Net Direct Investment Flows	-1.8	-122.8	-12.3	8.6	12.3	-16.4	-18.7
Net Securities Sales	724.9	661.8	791.7	166.7	242.8	93.4	20.7
Net Liabilities to Unaffiliated Foreigners by Non-banking Concerns	63.5	161.2	327.1	163.8	-36.1	9.2	43.4
Memoranda:							
Statistical Discrepancy	-1.7	64.9	200.1	38.1	67.2	69.8	41.2
Change in Foreign Official Assets in the United States	487.9	480.9	487.0	115.6	-16.0	70.9	125.0
Trade in Goods							
Balance	-828.0	-808.8	-816.2	-214.9	-174.0	-120.2	-111.8
Total Exports	1026.0	1148.2	1287.4	340.7	293.3	252.0	248.9
of Which:							
Agricultural Products	66.0	84.3	108.3	28.9	23.3	21.6	23.7
Capital Goods Ex Autos	404.0	433.0	457.7	118.1	109.0	98.4	93.3
Automotive Products	107.3	121.3	121.5	31.9	27.3	17.5	16.7
Consumer Goods Ex Autos and Food	129.1	146.0	161.3	41.9	39.0	36.5	36.0
Industrial Supplies and Materials 2/	276.0	316.4	388.0	107.2	82.2	66.8	68.7
Total Imports	1853.9	1957.0	2103.6	555.5	467.3	372.2	360.7
of Which							
Petroleum and Products	602.0	634.7	779.5	130.8	85.4	52.2	56.9
Capital Goods ex Autos	418.3	444.5	453.7	115.2	106.7	91.6	86.4
Automotive Products	256.6	259.2	233.8	58.1	49.9	32.3	31.7
Consumer Goods Ex Autos and Food	442.6	474.6	481.6	123.0	114.1	105.9	104.8

1/ Including compensation of employees
2/ Including petroleum and petroleum products
Source: BEA, Bureau of Census

Net International Investment Position

U.S. net international indebtedness, as measured by the Net International Investment Position (NIIP), widened to $3.47 trillion at the end of 2008 from $2.14 trillion at the end of 2007, when valuing direct investment at the current cost of tangible assets. The value of U.S. assets held abroad rose to $19.9 trillion in 2008 while the value of foreign held assets in the U.S. increased to $23.4 trillion. As a share of GDP, net indebtedness rose to 24.3 percent in 2008, from 15.5 in 2007. If direct investment is valued at the market value of owner's equity, net indebtedness widened to $4.0 trillion (28.1 percent of GDP) from $1.5 trillion (10.9 percent of GDP).

U.S. Net International Investment Position
($ trillions)

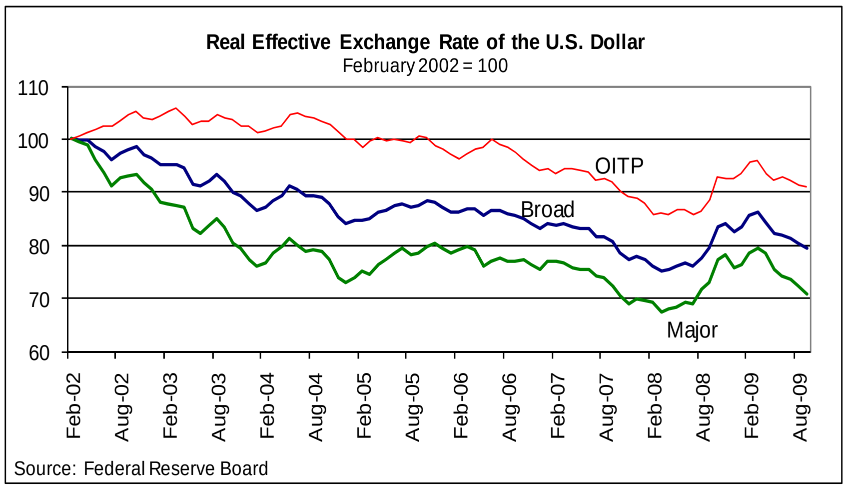
	2007	2008
U.S.-owned assets abroad	18.28	19.89
Official assets	0.37	0.92
Private assets	15.35	12.35
Direct Investment	3.45	3.70
Foreign Securities	6.84	4.24
Foreign-owned assets in the U.S.	20.42	23.36
Official assets	3.40	3.87
U.S. government securities	2.54	3.23
U.S. Treasury securities	1.74	2.33
Other assets	14.53	13.02
U.S. Treasury assets	0.64	0.88
Net international position	-2.14	-3.47
percent of GDP	-15.50	-24.30

Net financial flows and price and exchange rate adjustments each contributed to the widening of the NIIP.[4] Net financial flows increased net indebtedness by $0.5 trillion, as net foreign acquisitions of U.S. financial assets exceeded net U.S. acquisitions of overseas assets. Most of the increase in net indebtedness resulted from price and exchange rate adjustments. Price declines of U.S.-held foreign assets outpaced declines of foreign-held U.S. assets by $0.7 trillion, and the appreciation of the dollar in 2008 lowered the dollar value of U.S. assets abroad by $0.6 trillion.

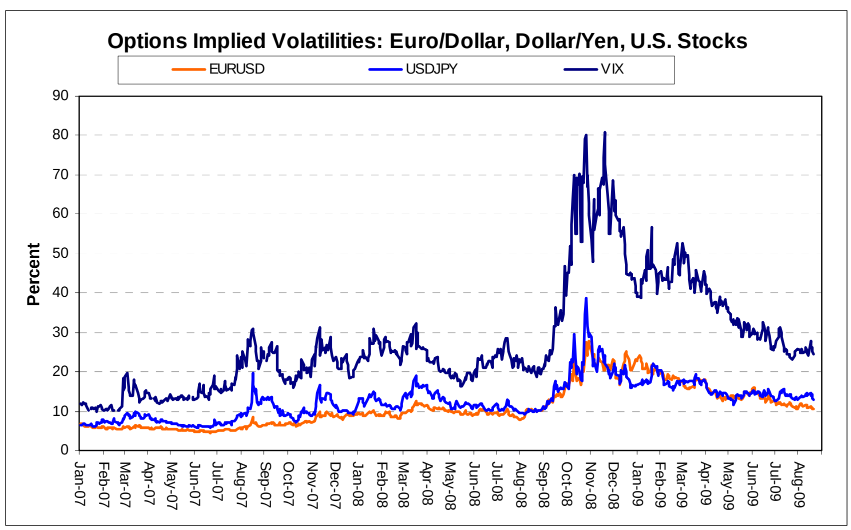
The Dollar in Foreign Exchange Markets

For much of the first half of 2009 and into the third quarter, the near-term direction of the dollar tended to be inversely correlated with market perceptions of financial and economic risk. The dollar appreciated when risk aversion increased and depreciated when risk appetite increased. Recently, however, this inverse correlation between the dollar and risk has become less clear, as market participants have focused more on relative returns on U.S. and foreign assets.

On a real effective basis, the dollar rose by 3.5 percent in the first two months of the year, against a broad group of currencies, but has since declined and at the end of September had depreciated by 4.0 percent since the end of 2008. Against the "major currencies" the dollar has depreciated by 6.3 percent in 2009 and by 1.7 percent against the currencies of "other important trading partners" (OITP).



Early in 2009, there was strong demand for dollars amid the extreme risk aversion resulting from the breakdown of money and credit markets and the spike in asset and currency market volatility in late 2008. This included "safe haven" buying of Treasuries by global investors and repatriation flows by U.S. investors. These flows have slowed as money and credit market conditions have settled and volatilities have moved closer to historically normal levels.



[4] The NIIP is a measure of the stock of U.S. holdings of foreign assets minus the stock of foreign holdings of U.S. assets (U.S. liabilities to foreigners). For this reason, changes in the valuation of these asset stocks can cause large year to year fluctuations, particularly when valued at current market prices.

In March, policy changes by major central banks and governments – including non-conventional monetary policy measures – alleviated market concerns about downside risks to the global financial system and world economy. The moderation in downside risks prompted global investors to re-allocate out of dollar assets amid a sustained recovery in asset markets. Major global asset market indicators have now returned to levels not seen since Lehman declared bankruptcy in September 2008.

Confidence was reinforced in the second quarter on a number of fronts. The April G-20 Leaders Summit alleviated concerns about emerging markets, especially in Eastern Europe, and global trade. Global investors increasingly sought exposure to growth, trade, and commodities as economic data in both the advanced and emerging markets showed improvement. China's fiscal stimulus initiatives were seen as critical to the outlook for global growth and commodities demand. U.S. financial sector earnings reports for the first quarter came in better than expected. U.S. bank "stress tests" were a key marker of progress in the financial market recovery process and were followed by increased capital raising by banks, issuance of non-guaranteed debt, and repayment of TARP loans by some recipients.

Analysis of Individual Economies

Asia

China

The fall in global demand brought China's growth to a halt in the fourth quarter of 2008, but a timely and aggressive fiscal and monetary policy stimulus has resulted in a strong domestic economic recovery and a decline in its current account surplus, and as a result contributed significantly to the recovery in global demand. Real GDP rose by 7.1 percent on a year-over-year basis in the first half of 2009, as fixed investment and consumption contributed 6.2 percentage points and 3.8 percentage points to growth, respectively. Reflecting the decline in China's trade surplus, net exports in the first half of 2009 subtracted 2.9 percentage points from growth. China does not publish quarterly output data, but private analysts estimate that output rose between an annual rate of 4 and 6 percent in the first quarter, and between 15 and 19 percent in the second quarter. In October, the IMF forecast that real GDP would increase by 8.5 percent in 2009, up from its April forecast of 6.5 percent growth. The IMF is forecasting that in 2010 China's economy will grow 9.0 percent and account for 28 percent of the anticipated 3.1 percent pace of total global growth.

As global demand dried up in the fourth quarter of 2008, China's exports plummeted. Exports fell by 31 percent between the third quarter of 2008 and the first quarter of 2009, while imports fell 30 percent. In the second quarter of 2009, imports recovered strongly on the back of China's economic stimulus; however, exports increased only slightly. As a result, China's trade surplus narrowed to a three-year low of $35 billion (3.2 percent of GDP) in the second quarter. China's current account surplus, though still large, narrowed to 6.7 percent of GDP in the first half of 2009, from an 11 percent high in 2007. China's trade surplus with the United States fell to $103 billion in the first half of 2009, down from 13 percent from the first half of 2008.

New details on China's fiscal stimulus program, originally announced in November 2008, were provided by Chinese authorities in the first half of 2009. The draft 2009 budget, issued at China's National People's Congress (NPC) annual meeting in March, indicates that new central government spending will be $172 billion (3.9 percent of annual GDP) spread over two years. This is less than one third of the two-year $590 billion fixed investment component of China’s stimulus, which means that most of the funding for public fixed investment is being provided by financial sector lending and local governments. Private analysts expect China’s budget deficit to rise to 4 percent of GDP in 2009 compared to a 0.5 percent deficit in 2008.

In response to the slowdown in growth and the decline in inflationary pressures, Chinese authorities loosened monetary policy significantly. At the end of 2008, the People's Bank of China (PBOC) lowered the 1-year bank lending rate by 216 basis points to 5.3 percent lowered reserve requirements for large banks by 200 basis points to 15.5 percent, reduced the amount of outstanding central bank bonds, and lowered the interest paid on excess reserves.. Interest rates and reserve requirements have remained at these levels through September 2009. Most importantly, in conjunction with these efforts to increase liquidity in the banking system, the PBOC lifted quantitative caps on bank lending towards the end of 2008, resulting in extraordinary growth in new bank loans.[5] In the first half of 2009, banks issued $1.1 trillion in new loans, equaling 35 percent of first half GDP, and more than triple the amount of new loans in the first half of 2008. A significant proportion of these loans are believed to have gone to the infrastructure projects promoted by China’s stimulus plan.

More recently, China’s banking regulators have become concerned that rapid loan growth was resulting in a deterioration of lending standards and have taken steps to increase banks’ provisions for bad loans. In July and August, new loans fell to $355 and $410 billion respectively, much lower than monthly average of $1.2 trillion in the first half of 2009. The PBOC has also taken steps to dampen liquidity growth in the inter-bank market by raising rates on its PBOC bills and repurchase agreements. Nevertheless, its stated goal remains to adhere to a “moderately loose monetary policy.”

Officially, China operates a “managed floating exchange rate regime based on market supply and demand with reference to a basket of currencies.” In the summer of 2008, however, China returned to a policy of maintaining a largely-stable renminbi-dollar exchange rate. Because the renminbi has remained stable against the U.S. dollar in 2009, it has followed the movement of the dollar against other currencies. According to the index of the Bank for International Settlements (BIS), China’s real effective exchange rate appreciated 13.3 percent between June 2008 and February 2009, but it has depreciated on a real effective basis by 6.9 percent between February and August 2009. Since the end of the dollar peg in July 2005, the renminbi has appreciated a cumulative 21.2 percent against the dollar and 15.7 percent on a real effective basis, based on the BIS measure.

In its 2008 annual report issued in August 2009, the PBOC reiterated its commitment to exchange rate reform, noting that it “will closely watch the movement in the exchange rates of the major currencies in the international market, and, following the principle of ‘self-initiated, controllable, and gradual’ to improve the formation mechanism of the RMB exchange rate, make the exchange rate more flexible, and keep it basically stable at an adaptive and equilibrium level.” In the report, the PBOC also reiterated its two long-term goals of developing the foreign exchange market and creating new exchange rate risk management instruments.

[5] Credit quotas remain one of China’s most effective tools for curbing lending growth and monetary expansion. Periods in which credit quotas are imposed usually result in a backlog of projects seeking financing.

China's leadership has also shown a greater commitment to interest rate liberalization and at the first U.S.-China Strategic and Economic Dialogue agreed to promote this in the future. The PBOC annual report notes it "will accelerate the establishment of the benchmark interest rate system in the money market, improve the central bank interest rate system, enhance the pricing capabilities and expertise of financial institutions, and give greater play to the market in determining interest rate levels." Interest rate liberalization will improve resource allocation, enhance the effectiveness of monetary policy as a market-oriented means of managing economic activity, and increase the growth of household incomes.

China has taken several steps in the reporting period towards greater capital account liberalization. First, the PBOC has implemented two pilot programs that allow corporations to settle their foreign trade in renminbi.[6] Second, the PBOC has signed six bilateral currency swap agreements with other central banks totaling RMB650 billion ($95 billion).[7] Third, since May 2009, several Hong Kong-funded banks within China have won approval to issue renminbi-denominated bonds in Hong Kong. China's Ministry of Finance also launched its first renminbi-denominated sovereign bond sale outside the mainland in late September, issuing $879 million in bonds in Hong Kong. Finally, the PBOC currently is exploring allowing domestic companies to lend funds to their foreign subsidiaries without seeking approval from Chinese authorities. At the first S&ED China agreed to further reduce capital controls by accelerating the allocation of quotas for Qualified Foreign Institutional Investors, which allow non-residents to invest in China's capital markets.

The stability of the renminbi against the dollar over the past year, the real effective depreciation that has taken place during the reporting period, continuing productivity growth in the Chinese economy, and the acceleration of foreign reserve accumulation this year all suggest that the renminbi remains undervalued. China currently holds $2.1 trillion worth of foreign reserves, equivalent to 49 percent of its 2008 GDP or over two years of imports. In the first half of 2009, China's reserve assets increased by $186 billion.

Renminbi adjustment alone, however, will not be sufficient to reduce materially China's current account surplus or achieve more balanced, sustained Chinese growth. For this, China must continue to reform its development strategy away from export and investment-led growth. Chinese authorities have stated that they recognize the need to address the imbalances in the domestic economy and have made "rebalancing" growth a key feature of China's 11th Five-Year Plan. In its second quarter report the PBOC noted, "while the protracted contraction of external demand will extend into the medium- and long-term period, the fundamental way to achieve sound and relatively rapid economic development is to accelerate reform and restructuring programs, with a priority on boosting consumption and domestic demand." While some progress has been made, household consumption growth remains near or below the growth rate of GDP. As a result, the share of household consumption in GDP declined from a recent peak of 46.4 percent in 2000 to

[6] The first program allows corporations in the Yangtze River Delta and Guangdong to settle their trade in renminbi with Hong Kong and Macao, while the second program allows corporations in Yunnan and Guangxi provinces to settle trade in renminbi with ASEAN countries.

[7] An official PBOC announcement on March 31 suggests that the new swap agreements allow firms in participating countries to use renminbi to directly purchase Chinese imports. Unlike U.S. dollar swaps, governments cannot use the renminbi swaps to engage in exchange rate intervention because the renminbi is not fully convertible. Nor can recipient central banks exchange the renminbi received for China's dollar holdings, according to the terms of the swap. There is no evidence that any central bank has drawn on the swap lines.

35.3 percent in 2008, well below average for an economy of China's income level. The low share of consumption reflects a weak social safety net, demographic trends, and the limited availability of financial services to households, including ceilings on bank deposit rates.

Shifting China's growth to a more sustainable, consumption driven path will require policy measures of a scale sufficient to bring about marked changes in the pattern of saving and investment. A key element of this effort is the provision of better social services and a stronger social safety net to reduce Chinese households' need for precautionary savings. China has recently taken important steps in this direction, including the announcement of a $124 billion plan to extend basic health care coverage to most of the population by 2011. China also revised the allocation of its fiscal stimulus in April, redirecting $63 billion (about 11 percent of the stimulus package) from transportation and infrastructure investment and environmental protection to low income housing, health, education, and technology innovation.

Corporate saving has risen rapidly over the last couple of years and now is the largest component of China's national saving. High corporate saving reflects a number of factors, including the growing profitability of Chinese enterprises in recent years, low inflation-adjusted interest rates and the cost of land and other inputs, and low dividend payouts from state-owned enterprises (SOEs). China has begun collecting dividends from a portion of SOEs under a trial program that started in late 2007, but at 5 to 10 percent of after-tax profits, the dividends remain low by international standards. There are reports that the government is considering broadening the dividend collection program to include more SOEs and increasing the level of dividends that SOEs are required to pay. This would help reduce corporate savings if these additional resources were transferred to households or invested in the social safety net, instead of being held or reinvested in the enterprise sector.

As China's recovery strengthens, moving to a more flexible exchange rate will give monetary authorities greater scope to maintain price stability, particularly as China reduces capital controls to promote greater international use of the RMB. In addition, greater exchange rate flexibility will complement other structural reforms in promoting consumption-led growth by inducing greater investment in services and other sectors more oriented towards China's domestic market.

In the first Strategic and Economic Dialogue (S&ED) between the United States and China, held in Washington DC in July 2009, both countries agreed to "pursue policies of adjusting domestic demand and relative prices to lead to more sustainable and balanced trade and growth." China also agreed that it will continue to "implement structural and macroeconomic policies to stimulate domestic demand and increase the contribution of consumption to GDP growth; further enhance access in its service market and expand areas and channels for non-government investment, with a view to expedite the development of its services industry and increase the share of services in GDP. China committed to deepening further reform of its social safety nets, including strengthening its basic old-age insurance system and enterprise annuities which should reduce excess saving. The next S&ED will be held in China in the summer of 2010.

India

India's economy is less exposed to the international economy than many other emerging markets, and this has reduced the effect of the crisis on the Indian economy. Exports are a smaller share of output than in most Asian economies and controls on capital flows are greater. Nevertheless, the crisis has lowered economic growth. After exceeding 9 percent growth for three years, growth slowed to 7.4 percent in 2008, reaching a low of 3.5 percent on an annualized basis in the fourth quarter. Growth rebounded to 6.6 and 7.2 percent in the first and second quarters of 2009, respectively, but the IMF expects the economy to grow by 5.4 percent this year as lower demand and weak credit conditions are compounded by a poor monsoon season. India has used both monetary and fiscal policy to stimulate the economy. The Reserve Bank of India (RBI) reduced its repurchase rate by 425 basis points to 4.75 percent between October 2008 and April 2009. The reverse repurchase rate was cut by 275 basis points to 3.25 percent and, the cash reserve ratio for banks was lowered by 400 basis points to 5.0 percent.

Fiscal stimulus measures, estimated by the IMF at around 0.6 percent of GDP, were announced in early 2009. The package includes measures to boost consumption and investment in infrastructure and to promote exports. India has limited room for additional fiscal stimulus. The FY 2008/09 (April to March) consolidated fiscal deficit was 11.4 percent of GDP and public debt is 80 percent of GDP.

Following an expansion of the current account deficit for much of 2008, the deficit narrowed to 1.5 percent of GDP in the first quarter of 2009, as imports fell by twice the rate of decline in exports. In the second quarter, a rebound in trade flows resulted in a rise in the merchandise trade deficit but a rising surplus in trade in services and increases in transfer payments resulted in a further reduction in the current account deficit to 0.9 percent of GDP. The U.S. bilateral trade deficit with India narrowed to $2.6 billion in the first half of 2009, from $4.7 billion in the first half of 2008, as U.S. imports from India fell sharply.

India's official exchange rate arrangement is a managed float, and the rupee moved in both directions during 2009. The rupee appreciated by 1.8 percent against the dollar in the first half of 2009 but the exchange rate was unchanged in the third quarter. On a real effective basis, the rupee depreciated by 0.3 percent in the first half of 2009, but was down 3.2 percent for the year through September. Foreign currency reserves, after falling by $56 billion in the second half of 2008 rose by $7.5 billion in the first half of 2009 to $254.1 billion.

The stated aim of foreign exchange intervention is to smooth volatility. While the RBI seeks to achieve its monetary objectives of price stability and well-anchored inflation expectations by adjusting market liquidity through its policy rates and the cash reserve ratio, at times, it has used the exchange rate to help meet monetary objectives.

Japan

Despite the relative insulation of Japan's financial system from the global financial turmoil, the crisis has resulted in the most severe recession in Japan's post-war history, lasting four consecutive quarters and amounting to a cumulative 8.7 percent decline in output. Japan has been particularly vulnerable to the global economic downturn due to the large share of manufacturing in GDP and its high dependence on exports (notably autos and electronics) for growth. Real exports fell by 64 percent in the first quarter of 2009, compared to the fourth quarter on an annualized basis. A 28 percent increase in exports in the second quarter, compared to the first quarter, and fiscal stimulus measures adopted by the Japanese government helped boost real GDP growth to a 2.3 percent annualized rate. The IMF expects real GDP to fall by 5.4 percent in 2009 followed by 1.7 percent growth in 2010.

Continued weak domestic demand resulted in a decline in imports in both the first and second quarters. Exports fell by more than imports in the first quarter resulting in a trade deficit but the second quarter increase in exports led to a trade surplus in the second quarter. Japan's substantial net income on foreign investment was enough to ensure that its current account balance remained in surplus, rising from 1.5 percent of GDP in the first quarter of 2009 to 3.1 percent in the second quarter. Japan's merchandise trade surplus with the United States decreased from $40 billion in the first half of 2008 to $18 billion in the first half of 2009. Exports to the United States declined by 42 percent year-over-year in the first half of 2009, compared to a 25 percent decline in imports from the United States.

Japanese financial markets have improved significantly in the first half of 2009, in parallel with global financial markets. Japan's benchmark TOPIX stock price index rose by 10 percent in the first half of the year, following a 42 percent drop in 2008 (its sharpest one-year percentage drop in history). Money market and corporate credit conditions also have improved substantially due to targeted efforts by Japanese authorities and the thawing of international credit markets. The precipitous drop in equity prices that continued into the first quarter of the year, however, put significant stress on Japanese banks, due to their sizeable corporate equity holdings, as internationally active Japanese banks are required to recognize unrealized market losses on their equity holdings, subtracting from Tier 1 capital. According to the IMF, major Japanese banks raised over $32 billion in private capital in the first half of 2009 in response to the decline in Tier 1 capital. The share of preferred stock and hybrid instruments in Tier 1 capital remains high, however, at between 20 and 60 percent, compared to core Tier 1 capital and tangible common equity. Major Japanese banks maintained a Tier 1 capital ratio near 7.7 percent during fiscal year 2008 (April 2008-March 2009).

Japanese authorities have responded to the financial crisis with a variety of fiscal, monetary, and financial policy measures. On the fiscal side, the government announced a fourth stimulus package in April 2009, following three separate stimulus packages in 2008. The IMF expects the April package to add approximately 2.0 percentage points to GDP over the next two years, and expects the cumulative impact of the fiscal packages on output in 2009 and 2010 to be equivalent to 1.8 percent and 1.0 percent of GDP, respectively. The consolidated fiscal deficit is projected to widen from 3.3 percent of GDP in fiscal year 2007 to about 12 percent in fiscal year 2009 as a result of increased spending measures and a fall in government revenue.

On the monetary side, the Bank of Japan (BOJ) has maintained an accommodative policy stance by keeping its policy rate (the uncollateralized overnight call rate) at 0.1 percent. Japan slipped back into deflation in early 2009. In August, headline consumer prices fell 2.4 percent year-over-year, the fastest pace of decline on record. Core prices (excluding perishable foods and energy) were down 0.9 percent in August.

The BOJ also has promoted financial market stability and improved corporate financing conditions by continuing to accept a broad range of collateral in its discount operations; increasing the amount of its Japanese government bond purchases; buying outright commercial paper, asset-backed commercial paper, corporate bonds, and stocks held by banks; and creating a facility to provide subordinated loans to banks as Tier 2 regulatory capital. In addition, the BOJ and the Federal Reserve have extended an unlimited dollar liquidity swap line until February 2010. The government and regulatory authorities have also continued to provide support to the financial sector by increasing public funds available for bank recapitalization (about $120 billion); allocating funds to purchase corporate equities from banks (up to $200 billion); adjusting the capital adequacy calculation methodologies for banks; and easing mark-to-market accounting rules in measurement and classification.

Japan maintains a floating exchange rate regime and Japanese authorities have not intervened in the foreign exchange market since March 2004. Japan's foreign exchange reserves fell by 1.5 percent in the first half of 2009 to $988 billion as a result of lower interest earnings and valuation changes on existing reserve holdings.

The Japanese yen appreciated against the dollar in the last half of 2008 continuing through January 2009. The yen depreciated by 14 percent between mid-January and mid-April, but has moved upward since then. In the first half of 2009, the yen depreciated by 6.2 percent against the dollar, but is up 1.1 percent for 2009 through September. On a real effective basis, the yen depreciated by 11 percent in the first half of 2009. The yen's depreciation early in the year reflected Japan's weak economic outlook and an increase in investors' risk appetite. Net outflows of private capital increased in the first half of 2009 to approximately $80 billion from $69 billion in the second half of 2008.

Malaysia

The Malaysian economy is heavily dependent on exports and was hard hit by the decline in global demand in the first quarter of 2009. Real GDP fell at an annual rate of 18.3 percent in the first quarter of 2009, with sharp declines in both exports and domestic demand. In the second quarter, real GDP rose at an annual rate of 14.1 percent as trade flows rose and policy measures boosted domestic demand.

Malaysia implemented aggressive fiscal and monetary measures in response to the global crisis. Last November, it announced a 1 percent of GDP fiscal stimulus plan and, in March 2009, it announced a second, much larger stimulus plan (8 percent of GDP) to be implemented over 2009 and 2010. On the monetary policy side, the central bank cut its overnight policy rate by 25 basis in November and a further 125 basis points in two moves in early 2009, bringing the overnight policy rate to 2.0 percent. Concurrently, reserve requirements were lowered to further improve liquidity conditions.

In addition, Malaysian officials have implemented proactive policies that have helped the financial system cope with the global economic slowdown. Among these measures, the government has implemented blanket guarantees for all ringgit and foreign currency deposits; an extension of the central bank's liquidity facility to insurance companies; and a small- and medium-sized enterprise credit guarantee program. The central bank has also established a roughly $11 billion bilateral currency swap with the People's Bank of China.

In April, the government announced plans to liberalize the services sector, including measures aimed at increasing the share of services in GDP. In addition to its newly promoted service sector reforms, the government aims to increase openness in the financial sector. This includes relaxing restrictions on foreign financial institutions allowed to operate in Malaysia, permitting a higher threshold for foreign equity investments in Malaysian banks and insurance companies, and granting increased operational flexibility to foreign banks. Many of these steps are aimed at attracting increased foreign direct investment.

Malaysia's current account surplus has remained above 10 percent of GDP since late 2002, the reflection of its persistent saving-investment imbalance. Saving in Malaysia remains high, while investment has yet to recover to its pre-Asian financial crisis peak in 1997. The current account surplus has not declined during the global economic downturn. In the second quarter of 2009, Malaysia's current account surplus was 18.5 percent of GDP. Malaysia's bilateral trade surplus with the United States, however, has fallen from $9.5 billion in the first half of 2008 to $5.8 billion in the first half of 2009, as exports to the United States have fallen sharply.

Malaysia ended the ringgit's fixed exchange rate pegged to the dollar and revalued the currency in July 2005. It has since maintained a managed floating exchange rate regime. Officially, the central bank intervenes in both directions to smooth out excessive volatility in the ringgit exchange rate and has no explicit exchange rate target. After falling by 28 percent during the second half of 2008, Malaysia's holding of foreign exchange reserves fell by $404 million, or 1 percent, during the first half of 2009 to $85.3 billion.

The ringgit depreciated by 7.9 percent against the dollar between the end of December 2008 and mid-March, but has appreciated since then. For 2009, through September the ringgit is roughly unchanged against the dollar. On a real effective exchange rate basis, based on the BIS index, the ringgit depreciated 2.4 percent in the first eight months of 2009.

Over the long term, a more flexible exchange rate policy would contribute to more balanced and stable economic growth in Malaysia by allowing domestic consumption and private investment to play a greater role in the economy and by enabling the economy to adjust more effectively to external shocks.

Singapore

Singapore's highly trade dependent economy (imports and exports represent 350 percent of GDP) was hit hard by the global crisis. Real GDP declined at an annual rate of 12.2 percent in the first quarter of 2009, the fourth consecutive quarterly decline, led by declining exports. There are signs, however, that a recovery is underway. Real GDP rose at an annual rate of 20.7 percent in the second quarter. Merchandise exports, which fell by 46 percent between July 2008 and January 2009, rose by 29 percent between January and August. The IMF is projecting a 3.3 percent decline in real GDP in 2009, but a 4.1 percent increase in real GDP in 2010.

Weak domestic demand and falling commodity prices resulted in a reversal in inflation over the past year. Prices declined by 0.5 percent in June on a year-over-year basis, down from a 7.6 percent inflation rate in April 2008. The decline in prices moderated to 0.3 percent in August, but the authorities continue to forecast deflation of between 0 and 1 percent over the near-term.

The government has deployed a range of monetary and fiscal instruments over the first half of the year to help lessen the impact of the global recession. Following approval of an expansionary budget in January, the government moved quickly to implement a fiscal stimulus package. Focused on saving jobs and helping viable businesses stay afloat and increase competitiveness, the stimulus measures are estimated to provide a fiscal impulse of about 3 percent of GDP in 2009-2010. The stimulus measures are expected to increase the fiscal deficit to 3.5 percent of GDP (the largest in Singapore's history) in FY2009 (April 2009-March 2010); because of ample fiscal reserves, however, the government will not need to borrow from the public.

To promote financial sector stability, in late 2008 the government expanded Singapore's deposit guarantee program to cover all Singapore dollar and foreign currency deposits of individual and non-bank customers until 2010. The central bank also entered into a $30 billion currency swap arrangement with the Federal Reserve, which was later extended through February 2010. Singapore has not drawn on the swap line.

Singapore's banking sector has remained stable throughout the financial crisis, although the economic slowdown has increased the number of non-performing loans and decreased bank profits. Nonetheless, overall loan growth has recovered more quickly than in past recessions, with sizeable increases in May and June.

The Monetary Authority of Singapore (MAS) manages the Singapore dollar exchange rate against an undisclosed basket of major trading partner currencies to maintain domestic price stability, allowing domestic prices to be largely determined by the pass-through of international prices. In October 2008, MAS shifted from a policy of "modest and gradual" nominal appreciation of the Singapore dollar against the currency basket to a zero appreciation policy. In the face of declining exports and a deepening recession, in April the central bank further eased monetary policy by re-centering the exchange rate band on the prevailing nominal effective exchange rate (NEER) level, while maintaining the band width and slope (currently at zero percent appreciation). The move resulted in a devaluation of the Singapore dollar by approximately 1.5 percent against the currency basket. To reduce pressure for faster appreciation, the authorities intervene in the foreign exchange market and sterilize the interventions through foreign exchange swaps, direct borrowing, and repos.

The Singapore dollar depreciated by 1.1 percent against the U.S. dollar in the first half of 2009, but appreciated by 2.7 percent in the third quarter. On a real effective basis, the Singapore dollar depreciated by 4.7 percent based on the JP Morgan Real Effective Exchange Rate Index in the first half of 2009, but depreciated by a lesser 2.8 percent based on the BIS index. Foreign exchange reserves fell by $2.8 billion in the first half of 2009, to $174.7 billion, but remain roughly equal to the country's GDP and short-term debt. These reserve numbers do not include the government's substantial stockpile of net fiscal reserves, which are estimated at more than $200 billion (about 100 percent of GDP).

Singapore's two sovereign wealth funds, GIC and Temasek, manage the country's large accumulation of foreign assets. As of end-August 2009, Temasek managed $134 billion, up considerably from the $85 billion under management by end-November 2008. GIC discloses less information about assets and returns, indicating only that the fund manages well in excess of $100 billion. GIC did disclose a 25 percent loss at the height of the crisis, but has not published any current statistics.

Singapore's large current account surplus – the product of a high national saving rate relative to domestic investment – fell to 9.2 percent of GDP in the first quarter of 2009, before rising to

10.5 percent in the second quarter. The current account surplus has fallen substantially from its 28 percent of GDP peak in early 2007. Net capital outflows increased significantly in the first half of 2009, to nearly 15 percent of GDP (from 6 percent of GDP in 2008).
The United States and Singapore have a free trade agreement, and Singapore typically runs a bilateral trade deficit with the U.S. Weak domestic demand resulted in declining trade between the two countries in the first half of 2009, but with U.S. exports to Singapore falling at twice the rate of U.S. imports from Singapore, Singapore's trade deficit declined from $6.3 billion in the first half of 2008 to $3.0 billion in the first half of 2009.

South Korea

After being hard-hit by the global crisis in late 2008, the South Korean economy has recovered strongly in 2009 as a result of significant domestic economic stimulus and improved terms of trade. Following an 18.8 percent annualized decline in real GDP in the fourth quarter of 2008, Korea's economy expanded by 0.5 percent in the first quarter of 2009, and 11.0 percent in the second quarter. Growth in the first quarter was driven by net exports and government spending, while growth in the second quarter was driven by net exports and private consumption. The IMF has pared its estimate for the 2009 decline in Korean GDP from 4.0 percent, projected in April, to 1.0 percent, projected in October.

In response to the external shock from the international financial crisis, the Korean government implemented significant fiscal and monetary stimulus. Korea's 2009 fiscal stimulus totals 3.8 percent of GDP ($30 billion), one of the largest among G-20 countries. The fiscal stimulus includes roughly 1.2 percent of GDP in tax cuts and 2.6 percent in new expenditures. On the monetary side, between September 2008 and February 2009, the Bank of Korea (BOK) reduced its benchmark interest rate by 325 basis points to 2 percent, the lowest level in over a decade. From the second quarter of 2008 through the first quarter of 2009, Korea's merchandise exports fell by 31 percent, as a result of the sharp drop in global demand. In the second quarter of 2009, exports expanded 10 percent as global trade flows improved. Korea's exports to China, which make up a quarter of its total exports, are recovering strongly, while exports to the United States and the European Union, which make up 20 percent of exports, continue to be weak. In the first half of 2009, Korean exports to the United States declined 23 percent from the first half of 2008, while imports from the United States fell 35 percent. As a result, Korea's bilateral trade surplus with the United States increased from $3.7 billion in the first half of 2008 to $5.1 billion in the first half of 2009.

Korea's overall nominal trade balance has shifted from a deficit of $1.2 billion in the first half of 2008 to a surplus of $22.1 billion in the first half of 2009. This shift has been driven by a 10 percent improvement in Korea's terms of trade from end-June 2008 to end-June 2009, and a 22 percent depreciation of the won against the U.S. dollar in the same period. Korea's current account, driven by the shift in the trade balance, shifted from a 3.8 percent of GDP deficit in the third quarter of 2008 to a 7.0 percent surplus in the second quarter of 2009.

The Bank of Korea (BOK) intervenes on both sides of the foreign exchange market to limit won volatility. Between end-June 2008 and end-February 2009, the period encompassing the worst of the crisis, the Korean won depreciated 31 percent against the U.S. dollar, and 25 percent in real effective terms. During this period of significant won weakness foreign exchange reserves fell from $258 billion at end-June 2008 to $201 billion in end-February 2009. In addition, the BOK drew down $18 billion on a $30 billion swap line with the U.S. Federal Reserve.

From the beginning of March through the end of September the won has appreciated 25 percent against the dollar, and 13 percent in real effective terms, as global financial conditions and liquidity began to improve and the Korean economy returned to growth. During this period, foreign exchange reserves have increased to $254 billion as of end-September 2009. In addition, the BOK has repaid $15 billion of the $18 billion it has drawn on its swap line with the Federal Reserve. Korea's foreign currency reserves equal 172 percent of total short-term external debt and 10.6 months of imports.

Taiwan

Taiwan experienced a sharper contraction in real GDP than any other economy in Asia due to slowing global demand in the second half of 2008 and the first quarter of 2009. Following a 27 percent decline in real GDP (at an annual rate) in the fourth quarter, output fell at an annual rate of 10.2 percent in the first quarter of 2009, the fourth consecutive quarterly decline. In the spring, the economy began to strengthen as export growth resumed. Second quarter real GDP increased at an annual rate of 20.7 percent. The government predicts that real GDP will decline by 4.0 percent in 2009, and then grow by 3.9 percent in 2010, driven by ongoing stimulus spending and a continued improvement in exports. The IMF forecast is similar, with real GDP falling by 4.1 in 2009 but growing by 3.7 percent in 2010.

Despite the fall in demand for Taiwan's exports, the drop in domestic activity and the associated decline in import demand led to an increase in Taiwan's current account surplus in the first half of 2009 to $23.3 billion (12.9 percent of GDP), from $16.0 billion in the first half of 2008. While both imports and exports registered year-over-year declines in the first half of 2009 – falling by 31.2 percent and 34.3 percent respectively – both increased in the second quarter, benefiting from the gradual stabilization of the world economy. Exports increased by 6.9 percent and imports increased by 10.7 percent on a quarterly basis in the second quarter. Trade flows between Taiwan and the United States also began to stabilize in the second quarter, after falling steadily throughout 2008 and the first quarter of 2009. For the first half of 2009, the U.S. bilateral trade deficit with Taiwan was $5.7 billion, up from $4.2 billion in the first half of 2008.

Taiwanese authorities have responded to the recession with significant monetary and fiscal easing. From September 2008 to February 2009, Taiwan's central bank cut its main policy rate by a total of 237 basis points, to a record low 1.25 percent. Taiwan also introduced a series of fiscal measures, earmarking US$4.5 billion for stimulus under a four-year US$15.2 plan. Most of the 2009 spending is scheduled to take effect in the second half of the year. The focal point of the long-term fiscal plan is the "i-Taiwan 12 projects," under which $US121 billion will be invested over the next eight years in infrastructure and industrial development projects. Taiwan plans to spend $5.1 billion (1.3 percent of GDP) on the i-Taiwan 12 projects in 2009, and the authorities also distributed $2.5 billion in shopping vouchers earlier in the year to encourage consumer spending. Following an August typhoon, Taiwan's government approved $3.6 billion in spending over three years for relief and reconstruction work. Typhoon Morakot caused the island's worst flooding in 50 years and over $426 million in agricultural losses.

The IMF expects Taiwan’s budget deficit to increase from 0.8 percent in 2008 to 4.7 percent in 2009. In September, Taiwan’s finance ministry announced a comprehensive budget-reform program aimed at keeping public debt below the 40 percent legal limit established by Taiwan's Public Debt Law.

After declining 8.0 percent against the dollar in the second half of 2008, the New Taiwan Dollar (NTD) depreciated a further 6.8 percent in the first two months of 2009, amid continued deterioration of Taiwan’s economy. The NTD ended the first half of 2009 unchanged against the dollar and by the end of September had appreciated 2.4 percent for the year. On a real effective basis, the NTD depreciated 0.9 percent in 2009 through September. According to Taiwan’s central bank, Taiwan’s exchange rate is market-determined except in instances when “the market is disrupted by seasonal or irregular factors” and the central bank intervenes.

Taiwan's foreign-exchange reserves, which are the world’s fourth largest, increased by 8.9 percent ($25.9 billion) in the first half of 2009, and reached US$321.1 billion at the end of July. Taiwan’s central bank attributed the increase in foreign reserves in 2009 to “returns from foreign exchange reserves management” and valuation changes reflecting the appreciation of the euro, pound sterling, yen, and “other major currencies.” Taiwan’s foreign reserves amount to 82 percent of its 2008 GDP, 21 months of imports, and about four times the economy’s short-term external debt. Taiwan’s central bank does not disclose the currency composition of its foreign exchange reserves, but states that “foreign exchange reserves in the U.S. dollar account for a major share of total reserves, followed by the euro and the Japanese yen.”

Europe

Euro Area

Real GDP in the 16 countries making up the euro area declined at an annual rate of 9.5 percent in the first quarter of 2009, the fourth consecutive quarterly decline. Real GDP continued to contract in the second quarter, but by a lesser 0.5 percent annual rate. Country-specific results, however, varied widely. In the second quarter, real GDP expanded in Germany and France, at annual rates of 1.3 and 1.1 percent, respectively, while Spain, Italy, and the Netherlands remained in recession.

In response to the crisis, euro area governments implemented fiscal support and financial repair measures. The region has committed roughly 1.5 percent of GDP in fiscal stimulus for the 2009-2010 period. Automatic stabilizers, such as unemployment benefits and other social welfare payments are estimated to add an additional 1.7 to 1.9 percent of GDP. On the financial front, government support commitments – in the form of recapitalization and new bank debt guarantees – have reached about 6.5 percent of GDP. Commitments by euro area governments in the form of guarantees amount to about $1.5 trillion and capital injections to about $260 billion. The European Central Bank (ECB) has provided substantial liquidity support to mitigate the effects of the crisis by: (1) cutting the minimum refinancing rate by 325 bps to 1 percent since September 2008; (2) providing full allotment, fixed rate (at the minimum refinancing rate) repo auctions for up to 12 months; (3) expanding the definition of acceptable collateral by lowering the minimum credit rating to BBB- and accepting a broad range of asset-backed securities; and, (4) adopting a $90 billion program in June 2009 to directly purchase covered bonds.

As a result of the financial crisis, euro area banks have made approximately $350 billion in write-downs. The IMF estimates that additional write-downs by euro area banks in between the third quarter of 2009 and the end of 2010 could total as much as $470 billion. Even without additional write-downs, the IMF estimates that euro area banks are less capitalized than banks in the United States (an average 8.5 percent Tier 1 Capital to Risk-Weighted Asset ratio compared to 11.5 percent in the United States at the end of the second quarter of 2009). Euro area banks have not attracted significant amounts of new private capital. As a result, there is continuing deleveraging by euro area banks which has led to a deceleration of credit growth to the private sector from 8.4 percent on a year-over-year basis in August 2008 to 0.3 percent in August 2009. The European Union stress test of 22 systemically relevant banks, however, does not reflect a capital shortage even in an aggravated scenario. However, Europe's stress test does not disaggregate results to reveal bank-specific results nor were assumptions related to probability of default, loss given default or projected bank profits.

Declining real GDP and the fiscal stimulus measures have weighed on public sector balance sheets. The region's weighted-average budget deficit is projected to deteriorate to 5.6 percent of aggregate GDP in 2009 and 7.0 percent in 2010, from 1.9 percent in 2008. Rapidly rising deficits are forecast to push public debt levels from 70 percent of GDP in 2008 to 86 percent by 2010.

The rapid decline in domestic demand, coupled with the fall in energy prices, resulted in a 0.2 percent decline in consumer prices in August, on a year-over-year basis. The ECB's current policy interest rate is 1 percent, but the over-night interbank has fallen to nearly 30 bps (nearly zero in real terms) in view of heavy ECB liquidity infections. The ECB has indicated that it hold the policy rate at this level until the economic rebound gains traction.

The value of the euro in foreign exchange markets is market-determined. The ECB has not intervened in the foreign exchange market since November 2000 when it defended the euro against depreciation in a concerted G-7 action. The euro fell by 12.7 percent against the dollar in the second half of 2008 and continued to decline against the dollar through early March. However, since early March, the euro has been on an upward trend, appreciating 4.6 percent against the dollar in the first nine months of 2009. On a real effective basis, the euro was unchanged in the first half of 2009 and rose by 0.2 percent through September.

Falling global demand in the wake of the crisis caused the euro area's current account deficit to increase to 2.0 percent of GDP in the first quarter of 2009 before moderating to 0.5 percent in the second quarter as exports steadied and imports continued to fall. Bilaterally, the euro area's trade surplus with the United States peaked in 2006 and has fallen as demand for euro area exports from the U.S. slackened and the euro appreciated vis-à-vis the dollar. The euro area trade surplus with the United States almost halved from to $41 billion in the first half of 2008 to $22 billion in the first half of 2009.

Norway

After several years of strong growth, Norway entered its first recession in decades in 2009. Tighter domestic credit and reduced external demand for Norwegian exports, notably commodities, led real GDP to decline at an annual rate of 3.1 percent in the first quarter of 2009 and at a 5.0 percent rate in the second quarter. Norway's accumulated oil savings in its

Government Pension Fund-Global (GPF-G) and the relatively strong stance of its banks meant that Norway entered the crisis in a strong position with cushions in place to mitigate the severity of the downturn.

Both fiscal and monetary policies have been used to mitigate the effects of the crisis. The authorities' revisions to the national budget in May increased the spending of oil revenues this year beyond what is normally allowed by Norway's fiscal guidelines, pushing the total fiscal stimulus for 2009 to 3 percent of GDP. The Bank of Norway cut its policy rate 450 bps to 1.25 percent between September 2008 and July 2009.

Norway has a floating exchange rate and has not intervened in exchange rate markets since January 1999. The central bank frequently undertakes foreign exchange transactions for operational purposes, including the management of GPF-G, which can indirectly affect the country's exchange rate. After falling by 37 percent against the U.S. dollar in the second half of 2008, the krone regained some ground in 2009, appreciating 7.5 percent against the dollar in the first half of 2009 and 17 percent through September. On a real effective basis, the currency rose 13.4 percent in the first half of 2009 and 19 percent through September.

Norway has run current account surpluses since 1999 due to its position as a major oil and gas exporter. With the drop in commodity prices from 2008 highs, Norway's current account surplus narrowed somewhat to 17.4 percent of GDP in the second quarter of 2009 from 20.7 percent in the fourth quarter of 2008. Norway's trade surplus with the United States was $1.4 billion in the first half of 2009, down from $2.4 billion in the first half of 2008. Norway's exports to the United States declined twice as much as imports from the U.S. over this period.

Norway's sustained large external surpluses have allowed it to build up nearly $50 billion in official foreign exchange reserves. An additional $374 billion in accumulated surpluses is held in the GPF-G which, at end-June, was the second-largest sovereign wealth fund after the Abu Dhabi Investment Authority. For the past decade, the government has had a fiscal rule which limits transfers from the GPF-G to the budget to no more than the expected long-run real rate of return of the fund, estimated at 4 percent. The government uses these transfers to finance the country's non-oil budget deficit, which has typically been in the range of 3-4 percent of GDP.

Russia

Russia's economy contracted sharply in the first half of 2009, as the impact of falling commodity prices and a sharp drop in external demand fed through to the domestic economy. Real GDP fell at an annual rate of 31 percent in the first quarter of 2009, and by 2.1 percent in the second quarter. The IMF expects Russia's economy to contract 7.5 percent in 2009 and to return slowly to 1.5 percent growth in 2010. Inflation, which had risen to over 15 percent on a year-over-year basis as of mid-2008 has slowed, but, at 12.3 percent in July 2009, remains high. Russia's fiscal deterioration has been striking: the combined impact of declining economic activity, a collapse in the value of trade, and a large stimulus package has pushed revenues down by one-third in the first seven months of this year from the same period in 2008, while expenditures have risen by one-third. The IMF projects a fiscal deficit of 5.5 percent of GDP for 2009, compared to a 4.1 percent of GDP surplus in 2008.

After extensive intervention between September 2008 and January 2009 (capped by $75 billion in net sales of foreign currency during December alone)[8] to slow depreciation of the ruble, the Central Bank of Russia (CBR) announced on January 21, 2009, that it would widen the ruble's exchange rate band by 10 percent. The CBR also tightened ruble liquidity to staunch the loss of reserves and stabilize the currency. After falling by 30 percent against the dollar in the last six months of 2008, the CBR's policies have broadly stabilized the ruble (which depreciated 3.7 percent against the dollar in the first half of 2009, and 1.7 percent in the first nine months). Foreign currency reserves fell from $406 billion to $346 billion in January 2009, but have since grown to $365 billion as of June 30. According to the JP Morgan Real Effective Exchange Rate Index, the ruble fell in real terms by 4.2 percent during the first half of 2009 and 4.4 percent through September. With CBR policy shifting away from a heavily managed exchange rate arrangement to inflation targeting, the CBR recently has taken action to reduce interest rates and facilitate a recovery.

The sharp decline in commodity prices and fall in external demand fueled a sharp adjustment in Russia's current account balance. The current account surplus declined from 6 percent of GDP in 2008 to 0.9 percent of GDP in the first quarter of 2009. The current account surplus rose to 3.1 percent in the second quarter as exports rebounded. The U.S. merchandise trade deficit with Russia fell from $8.7 billion in the first half of 2008 to $6.1 billion in the first half of 2009. Analysis by the IMF continues to suggest that Russia's real exchange rate is broadly in equilibrium, and that the scale of the ruble's real depreciation was appropriate given the change in Russia's long-term fundamentals.

The balance of Russia's oil Reserve Fund has declined to $88.5 billion as of July 2009, from $137 billion in December 2008. The Russian government projects that the Fund will be essentially depleted by end-2010, barring higher-than-expected oil prices. Russian officials plan to increase issuance of domestic debt and to issue as much as $20 billion in external debt in 2010 in order to limit recourse to the National Welfare Fund.

Switzerland

Switzerland has been heavily impacted by the financial crisis due to its large financial sector, which holds assets equaling six times the country's GDP. Swiss banks are heavily exposed to the sub-prime and Alt-A mortgage markets, and have announced almost $85 billion in write-downs since the crisis began. The Swiss economy has been contracting since the second half of 2008, with real GDP falling at an annual rate of 3.5 percent in the first quarter of 2009, and 1.0 percent in the second quarter, as exports of both goods and services fell sharply. The 2.0 percent contraction in growth expected by the IMF for 2009 would be the worst downturn in decades in Switzerland.

The Swiss government's strong fiscal position (net debt at 10 percent of GDP at the end of 2008 and a fiscal surplus of 0.9 percent of GDP in 2008) allowed it to implement countercyclical measures worth about 0.8 percent of GDP for 2009, as well as financial support for the banking system of almost 9 percent of GDP. Late in 2008, the Swiss government injected approximately $5.2 billion into UBS, the largest bank in Switzerland, but sold this stake to institutional

[8] Intervention figures reported by the CBR include repo-related transactions; the IMF's definition of foreign currency reserves excludes other reserve assets (such as reverse repos).

investors on August 20, 2009. Also in late 2008, the government created a $60 billion fund to remove illiquid assets from UBS's balance sheet, a fund which continues to be managed by the Swiss National Bank (SNB).

The central bank also responded to the global financial and economic turmoil by aggressively easing monetary policy to help stabilize the financial sector and real economy. Building on 225 basis points in rate cuts it announced late in 2008, the SNB further cut its central target for the Swiss three-month LIBOR by 25 basis points to "approximately" 0.25 percent in March 2009, but simultaneously announced more dramatic measures. Given that short-term interest rates were already close to zero and that deflationary pressures were building, on March 12, 2009, the SNB announced unconventional measures to ease monetary policy and combat the threat of deflation, including both foreign currency intervention as well as credit easing through the purchase of private bonds. Since the crisis began, the SNB has been actively supplying both Swiss franc and foreign currency liquidity to domestic banks (as well as Swiss franc liquidity abroad) through swap agreements with the Federal Reserve, the European Central Bank, and central banks in Central and Eastern Europe. The SNB has an unlimited swap arrangement with the Federal Reserve that, along with the Federal Reserve's other swap lines, recently was extended to February 2010. At the height of the crisis last October, the SNB auctioned off as much as $13 billion daily, but interest has since declined and there are currently no funds outstanding.

The U.S. dollar rose 4.5 percent against the Swiss franc in the second half of 2008, and a further 11.3 percent in 2009 through mid-March. Since then, through September, the dollar has depreciated against the Swiss franc by 12.7 percent. For 2009, through September, the dollar has depreciated 2.9 percent against the Swiss franc. On a real effective basis, the franc rose by 3.0 percent in the first half of 2009 and has appreciated by 3.4 percent in 2009 through September. While Switzerland continues to maintain a floating exchange rate, since March, the central bank has intervened in the foreign exchange market to prevent further appreciation of the Swiss franc vis-à-vis the euro. These interventions have caused the currency to depreciate 2.8 percent versus the euro in the first half of 2009, after strengthening 7.7 percent in the second half of 2008. While the SNB's actions in this regard are intended to address tight financial conditions in Switzerland, it also had the effect of reducing pressures in Central and Europe, where Swiss franc-denominated loans are common and where the franc's recent appreciation was beginning to threaten financial stability. Switzerland's foreign exchange reserves rose by 71 percent to $75.4 billion in the first half of 2009 due to the SNB's policy of currency intervention.

Switzerland has not faced significant balance of payments pressures due to its large net creditor position vis-à-vis the rest of the world, but the financial crisis has impacted both the current account and capital flows. Switzerland's current account surplus fell from 11 percent of GDP in the second half of 2008 to 8.1 percent in the first quarter of 2009, as the difficult external environment reduced Switzerland's net exports of goods and services. The financial crisis also contributed to swings in Switzerland's financial account. Switzerland recorded a financial account surplus of $9.8 billion in the first quarter of 2009, compared with a deficit of $41.2 billion in the second half of 2008, as foreign depositors rushed into Switzerland amid the financial crisis. The U.S. merchandise trade surplus with Switzerland was $1.7 billion in the first half of 2009, down from $3.7 billion in the corresponding period in 2008 as U.S. exports to Switzerland fell by 26 percent and imports fell by 14 percent.

United Kingdom

The United Kingdom continued to feel the impact of the financial and economic crisis through the first half of 2009, as the highly leveraged household sector cut back on consumption spending and housing investment, while financial sector strains contributed to declining business investment. The economy contracted at an annual rate of 9.3 percent in the first quarter and by 2.6 percent in the second quarter of 2009. The IMF projects a 4.4 percent decline in real GDP this year, with growth of 0.9 percent in 2010. Falling commodity prices and weak domestic demand have slowed overall consumer price inflation, from a peak of 5.3 percent year-over-year in September 2008 to 1.6 percent in August 2009.

The Bank of England (BOE) cut its base rate by 450 basis points between October 2008 and March 2009, to 0.5 percent, the lowest in the BOE's history. With the base rate approaching the zero lower bound, the BOE adopted "quantitative easing" measures targeted at increasing the level of bank reserves in an effort to affect longer-term asset prices and provide additional stimulus. In March 2009, the BOE established a roughly $120 million program to increase bank reserves through regular purchases of long-term government debt, as well as smaller amounts (less than 2 percent of the total combined) of commercial paper and corporate bonds. The size of the program was expanded to $240 billion in May and to $280 billion in August.

The BOE and the government have also implemented a range of measures to provide liquidity and capital support to banks hit by the global financial crisis and falling domestic asset prices. The BOE measures included facilities to swap private sector debt securities for Treasury bills, U.S. dollar repo operations arranged in coordination with the Federal Reserve, and discount window loans. The government's measures include about $79 billion spent to resolve troubled banks, plus $127 billion in capital injections into open banks. In addition, the government has assumed around $1.3 trillion in contingent liabilities through various asset and bank borrowing guarantee programs.

The government implemented a fiscal stimulus package in November 2008 that includes tax cuts and spending measures amounting to about 2 percent of GDP through next year, offset by tax increases and spending cuts amounting to about 1 percent of GDP in subsequent years. The fiscal deficit widened from 2.7 percent of GDP in 2007 to 7.0 percent in 2008 as a result of the recession's impact on tax revenues and mandatory social spending such as unemployment compensation. The government deficit is projected to widen to more than 13 percent of GDP in both 2009 and 2010, primarily due to the fiscal impact of the recession but also as a result of the stimulus measures.

After depreciating by 37 percent against the dollar in the second half of 2008, the pound recovered some ground, appreciating by 11.4 percent against the dollar in the first half of 2009. In the third quarter, the pound depreciated by 3.0 percent against the dollar. On a real effective basis, the pound appreciated by 9.8 percent in the first half of 2009 but depreciated by 3.4 percent in the third quarter. Foreign exchange reserves fell by $0.4 billion in the first half of 2009 as the result of valuation adjustments. The U.K. has a freely floating market-determined exchange rate, and the BOE has not intervened since 1992.

The U.K. current account deficit widened to 3.3 percent of GDP in the second quarter of 2009 as the goods and services deficit rose and the investment income surplus declined. U.S. imports from the U.K. fell more rapidly than U.S exports to the U.K. in the first half of 2009 relative to same period in 2008. As a result, the U.S. bilateral trade balance went from a deficit of $1 billion in the first half of 2008 to a $1.2 billion surplus in the first half of 2009.

Middle East

Gulf Cooperation Council

Six countries make up the Gulf Cooperation Council (GCC): Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE). These countries entered the global economic crisis with substantial fiscal and foreign currency reserve cushions after several years of rising oil prices. Strong foreign asset positions have provided GCC members the resources to mitigate the impact of the global slowdown and to run countercyclical policies. Policy responses have focused on liquidity management through lowering reserve requirements and interest rates, the provision of deposit guarantees, and capital injections into domestic banking sectors. Saudi Arabia and Bahrain have also increased government spending to stimulate domestic demand. Largely mirroring global market trends, GCC financial market indicators have improved since March 2009.

With the exception of Kuwait, GCC countries peg their exchange rates to the U.S. dollar. Kuwait dropped its peg in May 2007 in favor of a peg to a basket of currencies as revaluation pressures in the region increased. Forward markets imply continued stability in GCC exchange rates.

In May 2009, the UAE announced it would not participate in the planned GCC monetary union. The following month, the governments of Saudi Arabia, Bahrain, Qatar, and Kuwait signed a formal agreement, pledging to move forward with the monetary union. The agreement must still be approved by each Gulf state. Gulf leaders have chosen the Saudi capital Riyadh as the site for the future GCC Central Bank.

Saudi Arabia

Saudi Arabia entered the global economic crisis with substantial fiscal and foreign currency reserve cushions after several years of rising oil prices, high government revenues, and restrained increases in government spending. The IMF projects that government gross domestic debt fell to 13.4 percent of GDP at the end of 2008 from a high of 103 percent of GDP at the end of 1999. These cushions facilitated recent government support to the economy and financial sector while preserving creditworthiness.

The Saudi Arabian Monetary Agency (SAMA) continued to take actions in response to the global crisis to support the banking system and spur lending. SAMA lowered its official lending rate by 50 basis points to 2 percent in January 2009, following cuts totaling 300 basis points in the fourth quarter of 2008. It reduced the reserve repo rate (the interest rate on bank reserves held at SAMA) by 50 basis points in December 2008 and a further 125 basis points in the first half of 2009 to encourage bank lending. Nevertheless, commercial bank deposits at SAMA were up 50 percent in the first half of 2009.

Saudi Arabia is providing one of the largest official discretionary fiscal stimulus packages (per GDP) of all G-20 countries, at approximately 3.3 percent of GDP in 2009. The 2009 budget is its largest on record, with a heavy focus on capital spending to support physical and social infrastructure development. The government has budgeted for a 16 percent increase in expenditures in 2009, sending a clear signal that the fall in oil prices will not prevent it from implementing its long-term investment plans. The IMF expects growth to contract slightly this year, following 4.4 percent real GDP growth in 2008.

The IMF projects Saudi Arabia's current account surplus will narrow sharply from 29 percent of GDP in 2008 to 3.7 percent in 2009, largely as a result of lower oil prices. Saudi Arabia's merchandise trade surplus with the United States declined from $21.5 billion in the first six months of 2008 to $4.5 billion in the first six months of 2009. Saudi exports to the United States fell by about 64 percent during the same time period. Balance of payments pressure is evident in the fall in international reserves and decline in net foreign assets (NFA). Official reserves fell by 20 percent from a peak of $38.9 billion in July 2008 to $30.9 billion in July 2009. However, SAMA's $385 billion in net foreign assets as of July 2009 dwarfs the official reserve position. SAMA brought approximately $60 billion of its net foreign assets onshore since mid-2008 to help preserve financial stability and support the Saudi economy.

The Saudi riyal is pegged to the U.S. dollar. On a broad real effective basis, the riyal has risen 0.3 percent in 2009, through September. The real exchange value of the riyal rose in the first quarter but it has declined since then. These movements reflect both changes in Saudi inflation and movements in the U.S. dollar.

Western Hemisphere

Brazil

Brazil's economy is recovering from the crisis relatively quickly. Several years of adherence to a strong macroeconomic framework provided space for modest fiscal expansion and significant monetary policy expansion to cushion the economy from the financial crisis. As a result, Brazil suffered a sharp but short recession, and has shown signs of recovery beginning in the second quarter of 2009. Real GDP contracted at an annual rate of 3.8 percent in the first quarter of 2009, but rebounded by 7.9 percent in the second quarter, led by rising household consumption. The IMF expects growth to contract by 0.7 percent in 2009, but to grow by 3.5 percent in 2010.

Brazil was affected by the global crisis primarily through its external accounts. Weak foreign demand reduced commodity prices and export volume. Capital outflows caused a rapid depreciation (nearly 45 percent) of the Brazilian real against the dollar in late 2008, but increased investor confidence in future growth and recovering commodity prices since have led to a reversal. In the first half of 2009, the Brazilian real appreciated 15.4 percent against the dollar, and a further 9.6 percent in the third quarter. On a real effective basis, the real has increased by 22 percent in 2009 through September.

Exports declined 14.5 percent in the first quarter of 2009, before rebounding 22.5 percent in the second quarter. Imports have continued to decline, leaving Brazil with a growing trade surplus. In the first half of 2009, the United States ran a $2.4 billion bilateral trade surplus with Brazil, up from a deficit of $0.1 billion in the same period in 2008 as the U.S. recession continued to reduce demand for Brazilian exports.

Growth in outward profit remittances have offset Brazil's positive trade balance, leading to a current account deficit of 1 percent of GDP in the first quarter of 2009. A resumption of capital inflows has helped finance the current account deficit. In the first half of 2009, Brazil received portfolio inflows of $4.4 billion and $12.7 billion in foreign direct investment (FDI). The pace of fixed income investment and FDI growth has slowed in reaction to the international crisis and domestic recession, but the pace of equity market investment picked up markedly in the first half of 2009 following strong outflows at the end of 2008.

Brazil responded to the crisis through fiscal stimulus, direct support to public banks, and monetary policy easing. The government implemented a series of fiscal policy measures, including moving forward purchases and investments and implementing temporary reductions in various tax rates. In the first half of 2009, Brazil's net public sector debt ratio was 43 percent of GDP, up from 36 percent at the end of 2008, due largely to the government's fiscal stimulus programs.

Since the onset of the crisis, public sector bank lending has grown as a share of total outstanding credit. From December to June, public bank lending increased 11.8 percent, while domestic private bank lending grew only 1.4 percent and foreign private bank lending contracted 1.9 percent. BNDES, Brazil's main public development bank, has also increased lending by 8.0 percent in the first half of 2009. Petrobras, Brazil's state-controlled oil company, and BNDES, along with Brazil's agricultural, automobile, and mortgage sectors, each received substantial assistance through allocated lending and increased funding. Still, loan-to-deposit interest rate spreads remain high, due in part to the global retrenchment of credit. The average capital ratio for Brazilian banks is currently 18 percent (well above both the minimum requirement of 11 percent and international benchmark 8 percent), though there are signs of continued risk aversion by private banks.

The central bank reduced the target policy rate by 5.0 percentage points (to 8.75 percent) in the first half of 2009, and provided $40.4 billion in monetary stimulus through reductions in reserve requirements on deposit accounts. The central bank continued 2008 actions to increase dollar liquidity and trade finance through repurchase and swap market transactions and through the dollar facility for Brazilian importers and exporters whose market access to trade finance had been interrupted. In addition, a dollar facility exists for firms whose external debts mature in 2009. The $30 billion swap line established between the Federal Reserve and Brazil's central bank in October 2008 was extended through February 1, 2010. Through August 2009, the central bank had not drawn on the swap line.

Since September 2008, the central bank has intervened repeatedly in the foreign exchange market, initially to support the Brazilian real and promote orderly conditions. More recently intervention has aimed at smoothing appreciation of the real in response to capital inflows. The central bank purchased $18 billion in the first half of 2009, and now holds $201 billion in foreign currency reserves, which exceeds its total external debt ($195 billion).

Canada

The financial crisis affected Canada primarily through a drop in external demand leading to a decrease in employment and output. Real GDP contracted at an annual rate of 3.4 percent in the second quarter of 2009, following a 6.1 percent decline in the first quarter. Between October 2008 and July 2009, employment in Canada fell by 414,400, or 2.2 percent of the labor force. The values of the Canadian dollar and of Canadian equities, both of which are closely linked to commodities prices, hit troughs in March 2009, but have since recovered to late-2008 levels. The Canadian financial system has proved relatively resilient throughout the crisis due to lower leverage and more conservative lending practices, although strains in the Canadian wholesale funding markets have been significant.

In the fourth quarter of 2008, Canada’s current account surplus, which it had maintained for a decade, turned into a deficit, as both the quantity and price of exported commodities collapsed. Canada's overall current account deficit expanded to $9.8 billion, or 3 percent of GDP, during the second quarter of 2009, which also marked the first quarterly deficit for it merchandise trade balance in more than 30 years. Trade flows with the United States have been a significant factor in this development, as Canada’s goods surplus with the United States narrowed to $8.6 billion in the first half of 2009, from $41.3 billion in the first half of 2008. Canada’s imports from the United States were down 29 percent but its exports to the U.S. fell by 41 percent.

The government has taken several measures to counter the effects of the crisis. In an effort to stimulate domestic consumption, the government’s budget passed in March 2009 includes a fiscal stimulus of 2.9 percent of GDP over two years. Starting in October 2008, the Bank of Canada responded by expanding its provision of liquidity through an increase in term purchase and resale agreements, widening eligible collateral, extending the range of counterparties, creating a facility to provide insurance on wholesale term borrowing of deposit-taking institutions, and implementing a program to purchase up to $75 billion of insured mortgages. The Bank of Canada’s $30 billion swap arrangement with the Federal Reserve has been extended until February 2010. Through the end of September, no drawings had been made.

The Bank of Canada also cut its main policy rate by 50 basis points in March and a further 25 basis points in April to a record low of 0.25 percent, which it judges to be the effective lower bound. Prices fell by 0.8 percent year-over-year in August 2009, a turnaround from a 3.5 percent inflation rate in August 2008. Most of the decrease in prices is attributable to falling energy prices, but core inflation at 1.6 percent has fallen under the Bank of Canada’s 2 percent target.

There are signs that Canada’s economy is responding to the fiscal and monetary stimulus. The decline in quarterly real GDP moderated to an annual rate of 3.4 percent in the second quarter and final domestic demand rose by 0.4 percent. Monthly GDP increased at an annual rate of 1.2 percent in June 2009, the first increase since July 2008.

The Canadian dollar appreciated 4.4 percent against the U.S. dollar in the first half of 2009 and an additional 8.0 percent in the third quarter. On a real effective basis, the Canadian dollar has appreciated 9.1 percent in 2009 through September. Canada has a freely floating, market-determined exchange rate and relies on inflation targeting to guide monetary policy. Canada’s monetary authorities have not intervened in the foreign exchange market since September 2000, when they did so in coordination with other G-7 members to support the euro.

Mexico

The combination of the global crisis, the U.S. downturn, and the swine flu epidemic has propelled Mexico into its worst recession in decades. Real GDP has fallen for four consecutive quarters on a seasonally adjusted annualized basis, and, as of the second quarter of 2009, was down nearly 10 percent from its year-ago peak. The ailing industrial sector – critically dependent on U.S. demand – has been the biggest drag on the Mexican economy, pulled down by sharp declines in auto output and auto exports. The year-long slide in industrial production, however, shows signs of abating. Remittances fell by 11.9 percent year-over-year in the first half of 2009, reflecting exposure to U.S. housing markets, and exports to the United States shrank by nearly 30 percent. Although both oil and manufacturing exports contracted in the first half of 2009 – by 40 percent and 25 percent, respectively – oil exports expanded in the second quarter on rising oil prices, while the decline in manufacturing exports eased slightly.

To mitigate the length and depth of the downturn, the Mexican authorities passed an expansionary 2009 budget in November 2008 and introduced a second stimulus package in January 2009. The combined packages are estimated at 1.5 percent of 2009 GDP and aim to increase infrastructure spending, expand financing to federal housing agencies, increase support to small- and medium-sized enterprises and the agricultural sector, and protect employment and provide income support. The government announced an additional 0.16 percent of GDP stimulus following the swine flu outbreak in the spring. However, as a result of below-budget oil and tax revenue in the first half of the year, the government has been forced to make spending cuts totaling 0.7 percent of GDP.

The current account moved from a 2.8 percent of GDP deficit in the fourth quarter of 2008 to a 0.2 percent of GDP surplus in the second quarter of 2009 – the first quarterly surplus since 2005. Underlying this improvement was a 29.0 percent decline in imports, reflecting the decline in domestic demand in Mexico, which exceeded the 24.8 percent contraction in exports. The U.S. bilateral trade deficit with Mexico declined to $21.2 billion in the first half of 2009, down nearly $15 billion from the same period in 2008, as the fall in U.S. imports outpaced the fall in U.S. exports.

As Mexico's economy faltered in fall 2008, risk aversion in global financial markets and the unwinding of derivatives contracts triggered a sudden, massive peso depreciation and considerable stress in credit markets. The peso depreciated by 13 percent against the dollar in 2009 through mid-March, following 33 percent depreciation in the last half of 2008. As risk aversion abated in the spring, the peso strengthened and is up 1.7 percent against the dollar through the first nine months of 2009. On a real effective basis, the peso has appreciated 0.8 percent through September 2009.

Mexico has a flexible exchange rate and employs an inflation-targeting monetary policy regime. Pemex, the state-controlled Mexican oil company, is obligated by law – along with the rest of the non-financial public sector – to sell its foreign currency earnings to the Bank of Mexico to service the country's foreign debt. Reserves accumulate, therefore, when the foreign currency obtained by the Bank of Mexico is greater than foreign debt payments.

Following the 17 percent depreciation of the peso last October, the central bank reinstated the daily dollar sales mechanism (suspended in July 2008) to reduce volatility and maintain market liquidity.[9] Rather than managing foreign exchange reserves accumulation as before, however, the central bank now auctions dollars at a 2 percent depreciated peso rate every day. These auctions were initially set at a maximum of $400 million a day, but the Foreign Exchange Commission has twice lowered the maximum amount sold at below-market rates to its current level of $250 million a day. It also added a daily sale of $100 million – which it subsequently reduced to $50 million – at market rates to the interbank market, but announced the suspension of this auction effective October 1.

The central bank began to intervene in the foreign exchange market on a discretionary basis by supplying dollars directly to banks and brokers when the currency came under pressure in October 2008 and again in early February 2009. In the first half of 2009, the central bank sold $12 billion to reduce volatility in the foreign exchange market. As a result, the stock of international reserves stood at $74.2 billion at the end of June, down from $85.4 billion at end-2008. As of September, reserves rose to $77.2 billion after Mexico received $4 billion in SDRs from the IMF's general allocation.

To ensure sufficient liquidity for banks and corporations and relieve pressure in local debt markets, the central bank announced in late 2008 that it would pay interest on commercial bank deposits, and took measures to reduce the supply of long-term bonds for an increase in short-term tenors. In April the Mexican central bank tapped $4 billion of its $30 billion swap line with the Federal Reserve, to support corporate refinancing needs. In June, the swap line was extended until February 1, 2010. To help stabilize financial markets, public sector financial institutions have provided guarantees for commercial paper and mortgage-backed securities.

Inflation remained well above the central bank's 3.0 percent target in the first half of the year, but has declined since the start of 2009, falling to 5.1 percent in August, confirming expectations that the sharp contraction will drive disinflation. As the economic contraction intensified and inflation fell, the central bank reduced its policy rate by a cumulative 375 basis points in the first half of 2009 to 4.5 percent.

Venezuela

The global crisis continues to affect Venezuela primarily through the price of oil. As oil prices plunged in the first quarter of 2009, the economy contracted at an annual rate of 16.4 percent. With the moderate rebound in oil prices in the second quarter, the economy expanded 5.4 percent.

Markedly lower oil revenues have led the government to draw down international reserves and increase its reliance on local debt to finance its expansionary fiscal policy. On-budget expenditures expanded by 37 percent in 2008, but slowed to 2 percent year-over-year in the first quarter of 2009 as government revenues have declined. In January 2009, the central bank transferred $12.5 billion of its foreign currency reserves to the National Development Fund, an off-budget fund used by the government to finance domestic and international development projects. (This reserve transfer largely explains the 27 percent fall in Venezuela's reserves to $30.5 billion during the first eight months of the year.) In March 2009, the government tripled

[9] Under this mechanism, the central bank sells half of the reserves it has accumulated in the previous quarter at a constant daily amount.

the domestic debt issuance ceiling for 2009. Banks are expected to take on the bulk of the domestic debt, increasing the probability of crowding out lending to the private sector. PDVSA, the state-owned oil company, has also tapped local debt markets to compensate for lower oil export receipts. In June and July, it issued $3 billion in bonds to pay overdue debts to local currency suppliers.

Domestic inflation remains high, despite moderating during the first half of 2009, reflecting continued expansionary monetary and fiscal policy. Inflation in July was 26.2 percent on a year-over-year basis, down from 34.5 percent in September 2008. Domestic real interest rates continue to be significantly negative. The fixed nominal exchange rate, combined with high domestic inflation, resulted in a 6 percent appreciation of the real effective exchange rate in the first half of the year, on top of a 35 percent appreciation during the second half of 2008. Meanwhile, the parallel exchange rate depreciated approximately 18 percent in the first half of the year but has remained stable through August.

Venezuela pegged its currency to the U.S. dollar in 2003, following a period of rapid exchange rate depreciation, capital outflows, and falling international reserves. On January 1, 2008, the currency was redenominated when the authorities removed three zeroes and renamed it the "strong bolivar," although the exchange rate vis-à-vis the U.S. dollar was virtually unchanged. The official nominal exchange rate of 2.15 strong bolivars per U.S. dollar has been effectively constant since April 2005. The government maintains this peg through tight controls on capital movements and the supply of available foreign exchange. Purchases of foreign exchange in Venezuela are subject to approval by CADIVI, the government's foreign exchange authority.

The current account balance moved into deficit in the fourth quarter of 2008 for the first time in seven years, and the balance continued to decline in the first quarter of 2009 driven by the significant decline in oil prices. In the second quarter the current account balance returned to a slight surplus, as exports (notably oil) increased. Foreign direct investment recorded a $2.5 billion outflow (not seasonally adjusted) in the second quarter, reflecting the continued poor business environment in spite of developmental opportunities in the oil and gas sector, and the public sector repatriated $4.5 billion of deposits abroad to finance the fiscal deficit and settle the nationalization of several private assets. Bilaterally, the U.S. trade deficit with Venezuela narrowed to $7.1 billion in the first half of 2009, a decrease of $13 billion from the first half of 2008, largely the result of lower U.S. oil imports.

Appendix 1: An Historical Perspective on the Reserve Currency Status of the U.S. Dollar

The United States dollar has been the world's primary reserve currency for over 60 years. Under the Bretton Woods system, the dollar was pegged to gold and most other currencies were pegged to the dollar. As a result of this arrangement, dollars were used as the main intervention currency and, hence, reserve currency. Limits on convertibility of some currencies, particularly in the early years of the Bretton Woods system, also supported the use of the dollar as a reserve currency. With the collapse of the Bretton Woods system, fluctuations in the dollar's exchange rate and the rise of other global economic powers, there have been various predictions of the demise of the dollar as the primary reserve currency. Yet, data on currency composition of reserves indicate that the dollar's share of reserves today is roughly the same as 30 years ago, as is the euro's.[10] There have been variations in the dollar's share, but it has never fallen below 50 percent.

The rise of Germany and Japan as major economic powers led to the view that the deutschemark and the yen would rival the dollar, dividing the world into three currency blocs. The yen's share of global foreign currency reserves did rise in the 1980s, but peaked at close to 9 percent in 1991 and since has declined to less than 3 percent. The deutschemark was the main reserve currency among the euro legacy currencies and accounted for the largest share of reserves after the dollar. The share of reserves held in deutschemarks ranged from 10 to 18 percent between 1979 and 1998.

The decision to establish the European monetary union led to further predictions of the dollar's demise. The euro is currently the only other major reserve currency, accounting for one-fourth of foreign currency reserves. Throughout the 1980s, the combined share of the euro legacy currencies plus the European Currency Unit (ecu) hovered at around 30 percent.[11]

The dollar's role as the primary reserve currency (and, more generally, as the primary international currency) was not established by decree but, rather, because of the emergence of the U.S. as the world's major economy. Economists point to several key factors that determine the use of a currency for reserves. These are:

- the size of the domestic economy,
- the importance of the economy in international trade,
- the size, depth, and openness of financial markets,
- the convertibility of the currency,
- the use of the currency as a currency peg, and
- domestic macroeconomic policies.

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[10] Reserve composition data is reported on a voluntary basis and compiled by the IMF. Data prior to 1995 is only available in IMF annual reports. More recent data is available from the IMF's Currency Composition of Official Foreign Exchange Reserves (COFER) database. Currently there are 140 entities that report to COFER, including IMF member countries, non-members, and other foreign exchange reserves holding entities. Reporting is confidential, but the IMF has indicated that all advanced economies (as classified by the IMF) report to COFER. The results of the analysis in this appendix would not change unless non-reporters hold sharply different currency compositions of reserves and have changed those compositions over time.

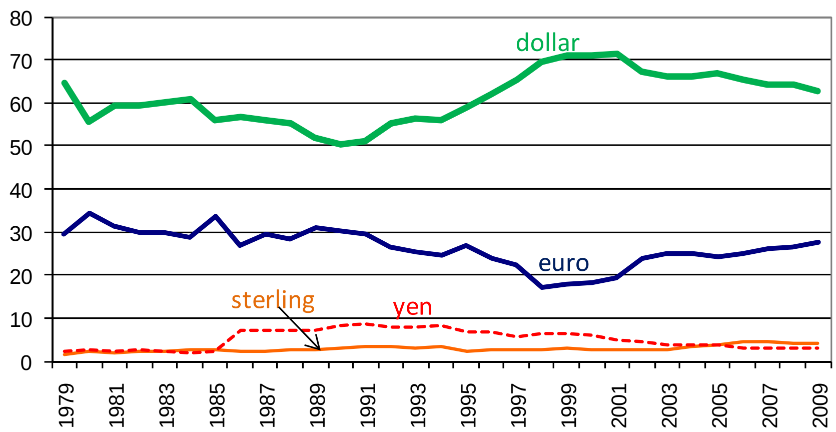
[11] The ecu was the unit of account for the European Monetary System (EMS) the precursor to European monetary union. It was computed as a weighted average of the currency participating in the EMS.

Most of these factors suggest that the dollar and the euro would account for equal shares of global reserves. The size of the euro area economy is only slightly smaller than the U.S. economy. The economy of the euro area is only slightly smaller than the U.S. economy. Both the euro area and the United States account for a large share of global trade. Both the euro and the dollar are freely convertible, and both economies have a history of sound macroeconomic policies. In addition, the dollar and the euro are the only currencies to which other currencies are regularly pegged.

The key factor that may explain the smaller share of the euro as a reserve currency is the size and depth of government bond markets. Although total sovereign debt outstanding in the euro area rivals that of the United States, there is no common euro area sovereign debt market. This reduces the ease with which holders of euro-denominated securities can buy and sell them, compared with U.S. Treasury securities.

These factors also explain why no emerging market currency accounts for a visible share of global foreign currency reserves. A few emerging markets have become large economies and global trading powers. Likewise, several of the emerging markets have established a history of sound macroeconomic policies resulting in low inflation and sustainable public debt levels. Emerging economies typically, however, do not have well developed and open domestic financial markets and, in some cases, limit convertibility. Over time, financial markets in many emerging markets are almost certain to become more developed and integrated with global capital markets. Financial market development combined with sound macroeconomic policies and open markets should lead to an increased international role for emerging market currencies and a greater diversification of foreign currency reserves. Nevertheless, as long as the United States maintains sound macroeconomic policies and deep, liquid, and open financial markets, the dollar will continue to be the major reserve currency.

Currency Composition of Foreign Reserves
(percent of allocated reserves)



Note: Prior to 1999 data for euro is the sum of reserves held in the legacy currencies and ecus.

Appendix 2: Report to Congress on IMF Bilateral and Multilateral Surveillance over Members' Policies

The Supplemental Appropriations Act, 2009 requires Treasury to (1) report on ways in which the IMF's surveillance function under Article IV could be enhanced and made more effective in terms of avoiding currency manipulation; (2) report on the feasibility and usefulness of publishing the IMF's internal calculations of indicative exchange rates; and (3) provide recommendations on the steps that the IMF can take to promote global financial stability and conduct effective multilateral surveillance.[12]

Background on IMF Surveillance

The IMF was founded in 1944 against the backdrop of the destructive mercantilist economic policies of the 1930s, including highly protectionist trade policies and beggar-thy-neighbor competitive exchange rate depreciations. From the start, exchange rate issues were at the core of the Fund's fundamental responsibilities in the international monetary system.

IMF member countries have the right to select an exchange rate regime of their choosing but also an obligation not to manipulate their exchange rate for the purposes of preventing effective balance of payments adjustment or gaining an unfair competitive advantage in international trade. The IMF is charged with overseeing the international monetary system to ensure its effective operation and monitoring each member's compliance with its policy obligations. This involves both bilateral and multilateral surveillance of exchange rates.

Obligations over **bilateral** surveillance were operationalized in the landmark 1977 Executive Board *Decision on Surveillance of Members' Exchange Rate Policies*. In fulfillment of its surveillance responsibilities, the IMF's Executive Board conducts Article IV consultations with each member country, typically once a year. IMF Management, or a country, may delay the Article IV consultation for a reasonable period. During the Article IV process, an IMF staff team meets a country's economic officials at the technical, senior policy, and typically the Ministerial/Central Bank Governor level. IMF staff views are then set forth in a staff report that summarizes economic developments and prospects, as well as discussions with the national authorities. The staff report is discussed by the IMF Executive Board. Publication of both the summary of the IMF Executive Board meeting and the staff paper are voluntary but presumed, though the country in question has the right to delete "market sensitive" information, and may decline to permit publication altogether.

The key instruments of the IMF's **multilateral** surveillance are two semi-annual publications produced by the Fund – the *World Economic Outlook* (WEO) and *Global Financial Stability Report (GFSR).* The WEO presents IMF staff analyses of global economic developments during the near and medium term. The GFSR focuses on current conditions in global financial markets, highlighting issues that could pose a risk to financial market stability. In addition, broad developments in the exchange rates of systemically important countries are reviewed periodically by the Executive Board, e.g., through discussions of the WEO, the GFSR, and cross-country analysis of key themes in bilateral surveillance.

[12] Title XIV, Section 1403(c) of the Supplemental Appropriations Act, 2009 (P.L.111-32).

Improving IMF Bilateral Exchange Rate Surveillance

In June 2007, the IMF Executive Board adopted a new *Decision on Bilateral Surveillance over Members' Policies*, replacing the 1977 *Decision on Surveillance over Exchange Rate Policies* as the guiding document on surveillance. The new decision was strongly backed by the U.S. Treasury Department in an effort to refocus the Fund on its core mandate.[13] In addition to formalizing the *de facto* coverage of fiscal, monetary, and financial sector policies in the conduct of bilateral surveillance, the new IMF surveillance framework reaffirmed the central role of exchange rate work in the Fund's daily life.

The 2007 Decision restored exchange rate surveillance's position at the core of the IMF's mandate. Since the Decision, IMF surveillance of exchange rates has improved in both breadth and quality. The IMF's Independent Evaluation Office found only 63 percent of Article IV reports from 1995-2005 included a clear assessment of the exchange rate's value in relation to economic fundamentals.[14] In contrast, the 2008 Triennial Surveillance Review found that that number had risen to 92 percent after the Decision.[15] Selected issues papers accompanying Article IV staff reports have been increasingly devoted to exchange rate issues and the sophistication of exchange rate assessments has improved, as econometric assessments of the exchange rate's equilibrium value have become more common.

Despite these improvements, the IMF's bilateral exchange rate surveillance still needs improvements in its candor, consistency, and transparency. In terms of candor, the 2008 Triennial Surveillance Review noted that a large portion of IMF exchange rate assessments completed since the 2007 Decision conclude that the exchange rate is broadly in line with fundamentals, even when large current account imbalances exist. IMF staff are too quick to explain current account imbalances as a result of temporary factors and 1 in 5 IMF Mission Chiefs cited the "need to preserve quality relationships with the authorities" as a challenge to full treatment of exchange rate issues. Taken together, this suggests IMF bilateral surveillance is biased towards accommodation of large external imbalances, as opposed to adjustment. With IMF staff facing strong pressure from country authorities to avoid conclusions of over or undervaluation of the exchange rate, improving the candor of IMF exchange rate surveillance requires providing IMF staff with counterbalancing institutional incentives for frank assessments. In particular, the IMF must explore methods to make both staff and management more accountable for their surveillance conclusions. Two possible methods are either ex-post assessments of bilateral surveillance conclusions or peer review of exchange rate assessment conclusions (i.e. the assessments would be 'refereed').

In terms of consistency, the IMF needs to deepen the integration between multilateral and bilateral surveillance and devote more consideration in Article IVs to the external implications of a member's policies. The IMF has increasingly incorporated some treatment of the external implications of members' policies (including exchange rate policies) into bilateral surveillance of systemically important countries. However, the IMF's bilateral surveillance of members at times continues to condone policies (such as excess reserve accumulation) that seem inconsistent with

[13] See, for example, remarks by Under Secretary for International Affairs Tim Adams at the American Enterprise Institute Seminar, "Working with the IMF to Strengthen Exchange Rate Surveillance," February 2, 2006.
[14] Independent Evaluation Office of the International Monetary Fund, "An IEO Evaluation of IMF Exchange Rate Policy Advice, 1999-2005," 2007.
[15] International Monetary Fund, "2008 Triennial Surveillance Report – Overview Paper," September 2, 2008.

the risks highlighted in the IMF's multilateral surveillance. Discussion of external and internal spillovers is rare in surveillance of less systemically important countries, even though these countries in aggregate can also influence the global system. Improving the consistency of surveillance requires better use of use multilateral surveillance analysis in the WEO and GFSR as inputs into bilateral surveillance. Strengthening cooperation between the country teams for interdependent economies (for example, by rotating staff) might also help increase the focus on cross-border spillovers.

Finally, the transparency of the IMF's exchange rate assessments must increase. The most important transparency measure is to continue to encourage IMF members, particularly systemically important countries to consent to timely Article IV reviews and the publication of their Article IV staff reports. Among the G-20 economies for example, two have not held an Article IV consultation with IMF staff in the past two years (Argentina and Turkey) and four more did not consent to publication of the staff reports from their most recent Article IVs (China, Brazil, Indonesia, and Saudi Arabia).

The transparency of the analysis behind the IMF's exchange rate assessment conclusions also is lacking in some cases. The 2008 Triennial Surveillance Review found that 22 percent of staff reports in the 50-country sample did not include clear presentations of the methodologies used in the exchange rate assessment. In some cases, the IMF simply states its conclusion that a currency is in line with its equilibrium, without providing supporting rationale. In other cases, the IMF presents the results of quantitative equilibrium exchange rate exercises without providing analysis and support for the conclusions. IMF staff could better document their exchange rate assessment analysis, in either the Article IV report itself or in accompanying documents.

Publication of IMF CGER Estimates

Since 1997, the IMF Consultative Group on Exchange Rate issues (CGER) has been conducting biannual exchange rate assessments to determine whether the exchange rate is broadly in line with fundamentals. Over time the methodologies used in the assessments have been revised and the number of currencies included in the assessments has been expanded. Currently CGER covers 27 advanced and emerging market economies with the assessments based on three distinct but complementary methodologies—the macroeconomic balance approach, a reduced form equilibrium real exchange rate approach, and an external sustainability approach. [16]

The results of this exercise are not publicly available, but CGER estimates for a particular currency may be published as part of the bilateral Article IV report. For example, CGER or CGER-type estimates were published for 11 of the G-20 economies in 2009. Three reports refer to the results of the CGER analysis but do not provide estimates. In the 4 cases where the Article IV report was not published, a "Public Information Notice" was released. Each of these provided a qualitative assessment of the real effective exchange rate relative to equilibrium but not data are given. Publication of the Article IV staff reports is at the discretion of the member country and each member retains the right to delete market sensitive information from a staff

[16] These methodologies are described in "Exchange Rate Assessments: CGER Methodologies," International Monetary Fund Occasional Paper #261, 2008.

report before publishing. Similarly, publication of the CGER analysis would require approval of the member countries whose exchange rates are included in the assessment.

Because the IMF publishes the methodologies used in the CGER assessments it is possible for researchers to develop similar estimates. An exact replication of the CGER assessments may not be possible as some of the data (notably import and export elasticities for individual economies) are not published and the IMF applies judgment to the results from the three methodologies to develop an overall exchange rate assessment. Nevertheless, researchers in academia, think tanks, and, financial markets use similar data and models to produce exchange rate assessments for a range of currencies.

Publication of CGER estimates would increase the transparency of the IMF's exchange rate surveillance, and expose the measures to outside scrutiny which could lead to refinements in methodologies. At this point, however, the CGER assessment does not cover most emerging market currencies. Technical challenges remain to expanding the analysis to commodity dependent economies and to economies undergoing rapid structural change but the IMF has developed methodologies to address some of these challenges. Even if the CGER assessments were published it is important to bear in mind that no precise methodology exists to identify real effective exchange rate misalignments. Nevertheless, models of equilibrium exchange rates can provide useful information especially when various models reach generally similar conclusions in direction and magnitude, (but even when they do not). Further, when model-based results are coupled with other available data composite judgments can be reached.

Improving IMF Multilateral Surveillance

In light of the global economic crisis, the IMF's multilateral surveillance mission has taken on increasing importance. Enhanced multilateral surveillance by the IMF is crucial for both recovery from this crisis and prevention of future economic instability. The IMF's participation in the G-20 mutual assessment mechanism, the new joint IMF and Financial Stability Board (FSB) early warning exercise, and the IMF's role in coordinating exit strategies are important inputs in this enhanced multilateral surveillance framework.

As part of the Framework for Strong, Sustainable, and Balanced Growth agreed to at the Pittsburgh G-20 Summit, the IMF will play a key advisory role in the G-20 mutual assessment mechanism. The IMF will develop a forward-looking analysis of whether policies pursued by individual G-20 countries are collectively consistent with more sustainable and balanced trajectories for the global economy, and report regularly to both the G-20 and the International Monetary and Financial Committee (IMFC).

The IMF/FSB Early Warning Exercise is intended to identify risks and vulnerabilities across financial institutions, markets, and countries, with particular emphasis on tail risks—defined as low probability, high impact events—that could lead to systemic crisis. The IMF and FSB conducted a dry-run of the EWE during the 2009 Spring Meetings and the first full EWE round was launched during the 2009 Annual Meetings.

Finally, the IMF will play an important role in coordinating exit strategies from extraordinary crisis-related measures. At the Pittsburgh, G-20 Summit leaders tasked the IMF and FSB with assisting Finance Ministers in developing a plan for coordinated exit strategies. The recent IMF

WEO highlights the difficulty of coordinating exits. Countries authorities must carefully time exit from accommodative policies so that it is neither premature nor delayed. The optimal timing of exit will vary with country circumstances, which could create cross-border spillovers that will affect the global recovery. Substantive contributions from the IMF to this difficult analytical problem are importantly needed.