Report to Congress on International Economic and Exchange Rate Policies

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

April 15, 2009

This report reviews developments in international economic and exchange rate policies, focusing on the second half of 2008,[1] and is required under the Omnibus Trade and Competitiveness Act of 1988, 22 U.S.C. § 5305 (the "Act").[2] This report includes an appendix providing an overview of the international strategy to address the global economic and financial crisis agreed at the G-20 leaders meeting in London on April 2, 2009.

[1] More recent significant developments are also discussed if information is available.
[2] The Treasury Department has consulted with 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 exchange rate vis à vis the U.S. dollar to prevent effective balance of payments adjustments or to gain unfair competitive advantage in international trade. Between 1988 and 1994, Treasury cited three economies (China, Korea, and Taiwan) several times each for manipulating their exchange rates. Annex 2 provides further details regarding these determinations. Since July 1994, no economy has been found to have met the standards identified in Section 3004 of the Act.

This Report finds that the ongoing crisis is having substantial negative effects on the performance of every economy assessed. Economic growth rates have plummeted and for many economies, growth has turned negative. Exchange rates have come under sharp downward pressure, especially in emerging market economies, as the crisis has intensified. Net cross-border flows for many emerging markets have slowed or reversed as investor risk appetite has shrunk and "home bias" has ostensibly increased. Meanwhile, capital inflows in the United States, especially into Treasury bonds and bills, have been robust. In virtually all economies, credit spreads for private borrowers widened sharply and, although they have come down, spreads still remain elevated in many of the economies in this Report. Plunging exports, especially in highly export-oriented economies, and falling commodity prices have lessened the severity of global imbalances. Most economies in the Report are responding to the crisis with aggressive actions to restore economic growth and achieve financial stability.

Although international flows of capital have supported the growth of emerging markets, the current crisis makes clear that the risk of a sudden reversal of these flows remains, even for those following sound macroeconomic policies. One argument for the massive build up in foreign currency reserves by emerging markets in the post-1998 crisis period was to cushion the effect of a reversal in capital inflows. The development of new flexible credit lines by the IMF for economies with strong fundamentals should reduce the need for maintaining substantial foreign currency reserves, as should the expansion of swap arrangements by central banks. To support the new IMF facilities and maintain adequate resources for traditional lending programs, at the London Summit in early April, the G-20 Leaders pledged to substantially increase the IMF's lending capacity.

As highlighted by the London G-20 Leaders' Summit, the global economic and financial crisis has led to very close cooperation on the part of the world's major economies. All G-20 countries have undertaken fiscal stimulus packages as well as aggressively expansionary monetary policies and pledged to maintain expansionary policies for as long as needed to restore economic growth. G-20 Leaders also pledged to avoid competitive devaluations and promote the smooth functioning of the international monetary system.

To reduce the risk of another crisis, G-20 Leaders agreed to strengthen domestic financial regulation and to establish greater consistency and systematic cooperation between countries. Reducing the risk of another global crisis also requires a movement toward more balanced global growth through a sustained reduction in external imbalances. The foundations for such a change are underway. The U.S. current account deficit has fallen from 6.6 percent of GDP in the fourth quarter of 2005 to 3.7 percent at the end of 2008 and a renewed emphasis on saving will help limit the re-emergence of a deficit as the recovery progresses. A decline in imbalances on the part of surplus economies is also underway but to be sustained requires a shift toward much greater domestic demand led growth. In this regard, China's large fiscal stimulus package aims not just at boosting growth, but also at rebalancing China's growth through greater dependence on domestic consumption.

Treasury has concluded that no major trading partner of the United States met the standards identified in Section 3004 of the Act during the reporting period. Many economies still maintain fixed exchange rate regimes, either to a single currency or a basket of currencies. Nevertheless, there has been considerable movement toward greater exchange rate flexibility. Several economies discussed in this Report, for example, have either moved away from exchange rate pegs to the U.S. dollar or have allowed for greater flexibility within a managed exchange rate regime. Restrictions on the flow of capital into and out of economies have also been relaxed. Notwithstanding the current economic crisis, further movement along these lines is likely.

With respect to China, which has been highlighted in the Report in recent years, our conclusion is based on the following factors. First, China has taken steps to enhance exchange rate flexibility. Officials acknowledged in January the need for greater flexibility and the need to allow the exchange rate to adapt to an equilibrium level. Second, the Chinese currency appreciated by 16.6 percent in real terms between the end of June 2008 and the end of February 2009. As the crisis intensified, the currency appreciated slightly against the dollar when most other emerging market currencies fell sharply. Third, official statistics suggest the pace of China's foreign exchange reserve accumulation slowed in the second half of last year. Fourth, China has enacted a large fiscal stimulus package – second in size to that of the United States in the G-20 – which should help spur domestic demand growth and help rebalance the Chinese economy. Even so, Treasury remains of the view that the renminbi is undervalued.

Given China's large and rapid increase in its current account surplus, these steps should be just a beginning to a series of policy steps to rebalance the Chinese economy so that economic growth is more dependent on domestic demand, particularly private consumption. This view was echoed by G-7 Finance Ministers and Central Bank Governors at their February meeting. Accordingly, we will continue to use every opportunity, including the recently announced U.S.-China Strategic and Economic Dialogue, to engage the Chinese authorities to permit greater flexibility of the exchange rate and to encourage further policy measures to rebalance the Chinese economy in the direction of greater domestic demand led growth.

The International Monetary Fund (IMF) is responsible for surveillance of 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. In 2007, the IMF adopted the *Decision on Bilateral Surveillance over Members' Policies* which reaffirmed the central role of exchange rate analysis in surveillance. The U.S. Treasury supports more forceful and consistent application of the *2007 Decision*.

Introduction

This report focuses on international economic and foreign exchange developments in the second half of 2008. Where pertinent and when available, however, data and developments through early April 2009 are included.

Exports and imports of goods to and from the economies whose economies and currencies are discussed in this report accounted for about 85 percent of total U.S. merchandise trade in the second half of 2008.

U.S. Macroeconomic Trends

The U.S. economy faced enormous challenges in 2008. The housing market downturn entered its third year. Energy prices rose to record levels during the summer, pushing inflation to a level not seen since the early 1990s. The financial market turmoil that began in the summer of 2007 persisted and in September 2008 credit markets seized up, producing steep declines in equity prices and consumer and business confidence. Each of these factors contributed to a pronounced slowdown in economic activity in the second half of 2008. A number of monetary and fiscal policy measures were implemented in order to stabilize financial and credit markets. More recently, a $787 billion fiscal stimulus package was enacted to spur job growth and put the economy back on the path towards long-term sustainable growth.

U.S. Economy Contracted in the Second Half of 2008

Real GDP declined by 0.5 percent at an annual rate in the third quarter and by a steep 6.3 percent in the fourth quarter – the largest quarterly decline since early 1982. Economic activity weakened in nearly every sector. Consumer spending plunged for a second straight quarter in the final three months of 2008. Business investment declined as outlays for structures fell for the first time in 3 years and spending on equipment and software posted the largest quarterly drop since 1958. Residential investment continued to tumble, subtracting 0.8 percentage points from real GDP growth during the fourth quarter. Real exports and imports both plummeted, with net real exports subtracting 0.2 percentage points from real GDP growth, the first negative contribution from net exports since the first quarter of 2007. Between the second quarter of 2007 through the third quarter of 2008, net real exports boosted real GDP growth by roughly 1.5 percentage points on average each quarter. Inventory investment subtracted an additional 0.1 percentage point from fourth quarter growth. The economy received modest support from government spending, which boosted growth by about 0.3 percentage points. Over the four quarters of 2008, real GDP fell by 0.8 percent, the first four-quarter decline since 1991.

Labor Market Conditions Deteriorated

The labor market weakened throughout 2008 but conditions worsened notably in the third quarter as job losses accelerated and the unemployment rate jumped sharply higher. During the second half of 2008, 2.3 million jobs were cut on top of the 800,000 jobs lost in the first half. The unemployment rate rose by 1.6 percentage points between June and December to 7.2 percent. Job losses continued to mount in early 2009 and the unemployment rate climbed further. March 2009 marked the fifteenth straight month of job losses with 663,000 workers cut from nonfarm payrolls. That brought the total job loss since December 2007 to roughly

5.1 million. The unemployment rate rose 0.4 percentage points in March to 8.5 percent – the highest since November 1983.

The Housing Sector Weakened Further

Much of the weakness in the overall economy stemmed from the continued adjustment in the housing market. Combined sales of new and existing single-family homes fell to a 12-year low in the fourth quarter of 2008, and inventories of unsold homes rose to a historically high level relative to sales. New residential construction sank to an all-time low. Single-family housing starts and building permits both dropped to record lows in January 2009, with permits remaining below starts for the 24th straight month. Home prices continued to fall through January, with the Case-Shiller home price index down nearly 30 percent from its mid-2006 peak. Home builder optimism slid to an all-time low. Tentative signs of stabilization emerged in early 2009. Home sales, housing starts, and building permits all turned up in February, and the inventory of unsold homes continued to shrink. One measure of housing prices – the FHFA house price index – turned up in January. Even so, most housing indicators continue to hover near historically low levels and markets expect housing prices to continue to decline.

Inflation Retreated as Energy Prices Fell

Headline inflation, which had climbed sharply in the first half of 2008, began to moderate in the second half as energy prices retreated. Core inflation (excluding food and energy) remained contained. Consumer prices rose just 0.1 percent in the twelve months ending in December, the smallest annual increase since 1955 and substantially less than the 5.5 percent year-over-year inflation in the summer. Core consumer prices rose 1.8 percent during 2008, down from 2.4 percent over the twelve months of 2007. Inflation continued to moderate in early 2009. Headline inflation was just 0.2 percent over the year ending in February and core consumer inflation was a moderate 1.8 percent.

Financial Market Volatility Increased and Credit Markets Tightened

Equity markets posted steep losses in late 2008, triggered by growing weakness in the U.S. economy and concerns about the performance and viability of a wide range of financial assets, as well as the financial institutions holding or providing contingent guarantees for those assets. Over the entire year, the S&P 500 plunged by 38 percent – the largest annual loss since the early 1930s. The slide in equities extended into early 2009, with the S&P500 down an additional 12 percent through the end of March.

Financial market volatility reached unprecedented levels in the fall of 2008 when it became clear that several major U.S. financial institutions were on the brink of failure. The S&P stock market volatility index (VIX), often used as a measure of financial market uncertainty, shot up to an all-time high of 80 on October 27. The VIX had been hovering around 20 in August. The VIX has since retreated but, at around 44 percent, remains elevated.

Credit conditions for households and businesses were generally tight through most of 2008 but deteriorated rapidly at the end of the summer. The 3-month U.S. dollar LIBOR-OIS spread – a measure of stress in term interbank funding markets – shot up to a high of 365 basis points in early October. Prior to the beginning of the financial crisis in mid-2007, this spread was hovering around 9 basis points. The 10-year Treasury and Baa corporate yield spread also widened sharply, reaching 616 basis points in early December. Mortgage rates eased off their mid-year peaks, however, partly reflecting the Federal government's early-September move to place Fannie Mae and Freddie Mac into conservatorship and the Federal Reserve's purchase of mortgage-backed securities. The interest rate on a 30-year fixed rate mortgage slipped to about 5.1 percent in late December, down from about 6.6 percent in July.

Credit market conditions have since improved but remain generally tight. The LIBOR-OIS spread is currently just under 100 basis points. Spreads over Treasuries for corporate debt have narrowed but, at roughly 575 basis points at the end of March are still quite high by historical standards. Mortgage rates have fallen to new lows with the interest rate on a 30-year fixed rate mortgage falling below 4.8 percent in the first few days of April.

Monetary and Fiscal Policy Measures to Stimulate the Economy

Monetary and fiscal policy has focused on stabilizing financial and credit markets and putting the broader economy back on a path of long-term, sustainable growth.

The Federal Reserve has taken a number of actions to address the financial crisis and the economic downturn. Since September 2007, the Federal Reserve has cut the federal funds rate target by 525 basis points to a range of 0 to 0.25 percent. Other actions include implementing a number of programs designed to support the liquidity of financial institutions and foster improved conditions in financial markets. In addition to providing short-term liquidity to banks and other financial institutions, the Federal Reserve has also provided liquidity directly to borrowers and investors in key credit markets. For example, the Federal Reserve created a Commercial Paper Funding Facility (CPFF), providing a broad backstop for the commercial paper market by funding purchases of commercial paper of three-month maturity from high-quality issuers. It has also created a Money Market Investor Funding Facility to provide liquidity to U.S. money market mutual funds and certain other money market investors. The Federal Reserve has expanded its traditional tool of open market operations to support the functioning of credit markets through the purchase of longer-term securities. In late November, the Federal Reserve announced a program to purchase up to $100 billion in the direct obligations of government-sponsored enterprises (GSE) (Fannie Mae, Freddie Mac, and the Federal Home Loan Banks) and up to $500 billion in mortgage backed securities guaranteed by Fannie Mae, Freddie Mac, and Ginnie Mae. On March 18, the Federal Reserve announced plans to purchase up to $300 billion of longer-term Treasury securities in addition to increasing its total purchases of GSE debt and mortgage-backed securities to up to $200 billion and $1.25 trillion, respectively.

In early October, Treasury implemented a temporary $50 billion guaranty program for the U.S. money market mutual fund industry in order to address concerns about the safety and accessibility of these investments. In addition, the FDIC temporarily raised the deposit insurance limit from $100,000 to $250,000 per depositor per bank, and temporarily guaranteed the newly-issued senior unsecured debt of FDIC-insured institutions and their holding companies, as well as deposits in non-interest bearing deposit transaction accounts.

On October 3, the Emergency Economic Stabilization Act of 2008 (EESA) was signed into law. The EESA gives the Treasury Secretary broad and flexible authority to intervene in financial markets by injecting capital into financial institutions (by taking limited equity positions) and potentially by purchasing and insuring mortgage assets as needed to stabilize financial markets.

Over the last few months, Treasury has worked to implement the EESA. To date, the Capital Purchase Program – a key component of EESA – has allocated roughly $200 billion through March 27 in funds from the Troubled Asset Relief Program (TARP) to a broad array of financial institutions.

Several additional programs have been created using TARP funds to prevent disruptions in financial markets and the broader economy. The Systemically Significant Failing Institutions Program aims to provide stability and prevent disruption to financial markets in order to limit the impact on the economy and protect U.S. jobs, savings, and retirement security from the failure of a systemically significant institution. TARP funds were made available to assist the domestic auto industry in becoming financially viable under the Automotive Industry Financing Program. Treasury is also providing TARP resources to back the Federal Reserve's Term Asset Backed Securities Loan Facility (TALF). This facility provides liquidity to issuers of consumer asset-backed paper to lower the cost of consumer and small business loans.

In February 2009, Treasury introduced a Financial Stability Plan (FSP) providing a comprehensive set of measures to restore confidence in and strengthen financial institutions, restart the flow of credit to consumers and businesses, and address the housing crisis. The plan included four key measures: a Capital Assistance Program (CAP), a Consumer and Business Lending Initiative (CBLI), the Making Home Affordable Program, and a Public-Private Investment Program (PPIP). CAP aims to restore confidence in financial institutions and ensure that they have adequate capital to cushion losses and continue lending in more adverse environments. Banking supervisors will conduct stress tests to assess the capital needs of major U.S. financial institutions in challenging economic conditions. If additional capital is required, banks can raise capital through private markets or borrow from the Treasury under conditions imposed by the CAP.

The CBLI expands TALF to provide an initial $200 billion in financing to improve the functioning of secondary markets supporting consumer and business lending. The goal of the home affordability program is to reduce mortgage rates and help homeowners avoid foreclosure through loan modifications and refinancing. The PPIP is a joint Treasury, Federal Reserve, and FDIC program combining up to $100 billion in TARP capital with private capital to purchase legacy assets. The program has three key principles: maximize the impact of each taxpayer dollar, share the risk and profits with private sector investors, and use private sector competition to establish prices for the legacy assets, reducing the risk of government overpayment.

To stimulate domestic demand, Congress passed and President Obama signed the American Recovery and Reinvestment Act of 2009 (ARRA), a $787 billion stimulus package that will create or save between 3 million and 4 million jobs over the next two years in a range of industries from clean energy to health care. Over 90 percent of these jobs will be in the private sector. By the end of 2010, the ARRA is expected to raise GDP by more than 3 percent.

Federal Budget Outlook

Measures to support the economy coupled with lower revenues as a consequence of the recession raised the federal budget deficit in FY2008 and darkened the near-term outlook. The slowing economy and the economic stimulus package enacted in early 2008 contributed to a $297 billion increase in the federal budget deficit to $459 billion (3.2 percent of GDP) in FY 2008 (October through September). Outlays grew by 9.3 percent in FY2008 compared to FY2007, while receipts fell by 1.7 percent.

The budget deficit is projected to rise to $1.75 trillion (12.3 percent of GDP) in FY2009. Expenditures are expected to grow by 32 percent, partly reflecting TARP outlays and spending associated with the fiscal stimulus package enacted in mid-February. Receipts are projected to fall by 13 percent, due in part to falling employment and income and declining asset values. The deficit will narrow in subsequent years, averaging 3.1 percent of GDP from FY2012 to FY2019.

Global Economy

The global financial and economic crisis that began in August 2007 entered a new phase in the second half of 2008, characterized by periods of severe financial distress, falling commodity prices, and a pronounced weakening of economic conditions. Global trade contracted and output declined in many countries. By late 2008, it was clear that the global economy was in the midst of the most severe crisis of the post-World War II era.

By the fourth quarter of 2008, recessionary conditions prevailed in all G-7 countries and most of the rest of the advanced economies. Output in the G-7 fell by 1.0 percent in the third quarter of 2008 on an annualized basis and a further 7.4 percent in the fourth quarter. Many emerging market economies also contracted in the fourth quarter and in those economies where growth remained positive, it weakened considerably. Output fell in the fourth quarter in all of the emerging markets covered in this report with the possible exception of China and Venezuela.[3]

More troubling than the poor performance of the world economy in the fourth quarter is the near-term outlook. The IMF expects the global economy to contract by 0.5 to 1.0 percent this year even after taking into account the effects of fiscal and monetary stimulus. This will be the first time in over 60 years that global output has fallen. Output is expected to decline by 3.0 to 3.5 percent in the advanced economies and rise only 1.5 to 2.5 percent in the emerging and developing economies.[4]

Financial markets in the advanced economies have been most directly affected by the crisis and continue to remain under strain. Residential investment in the United States and in some European countries (notably Ireland, Spain, and the United Kingdom) remains a drag on growth. In addition, private consumption across the advanced economies has declined and consumer confidence has plummeted. Substantial increases in fiscal expenditures are needed across the advanced economies to restore jobs, boost economic growth, and improve consumer confidence.

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[3] China does not publish quarterly GDP data only year-over-year growth rates. Venezuela currently has only non-seasonally adjusted quarterly GDP data available for the second half of 2008. On a year-over-year basis, output growth slowed sharply in these two countries in the fourth quarter.

[4] Based on a G-20 surveillance not prepared in March 2009.

Emerging market economies have been most negatively affected by second round effects of the crisis. The decline in domestic demand in the advanced economies has lowered exports and resulted in a collapse in commodity prices. Although the latter has helped to lower inflation, it has negatively affected commodity-dependent economies, particularly those that recently invested in expanding production capacity. In addition, the downturn in the global economy combined with a sharp rise in risk aversion has resulted in a decline in capital flows to emerging and developing economies, as discussed in the next section.

Borrowing costs in emerging markets increased substantially in the second half of 2008. The spread between yields on emerging market debt and U.S. Treasury bonds increased by 471 basis points between the onset of the financial crisis and the end of 2008, with the spread rising by over 500 basis points in Emerging Europe. Spreads declined in early 2009, largely reflecting an ongoing adjustment from the October spike.

Emerging Market Bond Index Plus (EMBI+) Spreads
(basis points)

	Spread	Change from July 31, 2007		
	3/31/2009	6/30/2008	12/31/2008	3/31/2009
Global	636	76	471	417
Asia	482	100	356	257
Africa	640	-10	480	348
Europe	602	100	509	400
Latin America	692	60	480	441

Note: The spread is the difference between yields on emerging market foreign currency denominated bonds and US Treasury bonds.
Source: Bloomberg

Policy Developments

The initial response of policymakers to the crisis focused on stabilizing financial markets. As the crisis spread, policies expanded to address the decline in output. Nearly all advanced economies and many emerging market economies have taken steps to improve the health of the banking sector through the provision of additional liquidity. This has been done both through both traditional monetary policy measures as well as a variety of innovative measures. Central banks in all the major economies and several key emerging markets have established or expanded swap arrangements to enhance their ability to increase liquidity. These are discussed in the individual economy reports. Other measures are aimed at reducing concerns about bank safety and improving the ability of banks to borrow and lend. These include expansion of deposit insurance, guarantees on non-deposit liabilities of banks, capital injections, and asset purchases.

Policy Rates in G-20 Countries
(percent)

	Jun-2008	Dec-2008	Mar-2009
Argentina	9.44	11.1	10.9
Australia	7.3	4.3	3.3
Brazil	12.3	13.8	11.3
Canada	3.0	1.5	0.5
China	7.5	5.3	5.3
Euro Area	4.0	2.5	1.5
India	6.0	5.0	3.5
Indonesia	8.5	9.3	7.8
Japan	0.5	0.1	0.1
Korea	5.0	3.0	2.0
Mexico	7.8	8.3	7.5
Russia	10.8	13.0	13.0
Saudi Arabia	5.5	2.5	2.0
South Africa	12.0	11.5	9.5
Turkey	16.3	15.0	10.5
United Kingdom	5.0	2.0	0.5
United States	2.0	0.1	0.1

Real Policy Rates in G-20 Countries[1]
(percent)

	Jun-2008	Dec-2008	Mar-2009
Argentina	0.11	3.9	4.1
Australia	2.8	0.6	-0.5
Brazil	6.2	7.8	5.3
Canada	-0.1	0.3	-0.9
China	0.4	4.0	6.8
Euro Area	0.1	0.9	0.3
India	-1.7	-4.7	-6.1
Indonesia	-2.5	-1.9	-0.2
Japan	-1.5	-0.3	0.1
Korea	-0.5	-1.2	-1.9
Mexico	2.5	1.8	1.3
Russia	-4.4	-0.3	-1.5
Saudi Arabia	-5.2	-6.5	-4.9
South Africa	1.4	2.1	0.5
Turkey	5.6	4.8	2.6
United Kingdom	1.3	-1.1	-2.7
United States	-2.8	0.2	0.0

1. Policy rates adjusted by consumer price inflation.

Most central banks have reduced interest rates in the second half of 2008 and into 2009 both as a means to increase liquidity and spur domestic demand. Policy rates were cut in all of the G-20 economies during the second half of 2008 except in Argentina, Indonesia, Mexico, and Russia. Of these four, all except Russia lowered their policy rates in early 2009 as inflation risks moderated and output risks rose. Real rates, however, have risen in some economies as inflation has fallen by more than nominal interest rates. Some economies have room to reduce their policy rates further to bring down real rates, but others, notably the United States and Japan, already have nominal rates near zero. As economies approach zero nominal interest rate boundaries, non-interest rate measures are needed to achieve further monetary easing. Several advanced and emerging market economies have undertaken non-conventional measures to ease monetary policy.

All the G-20 economies have enacted fiscal stimulus programs in an effort to offset the projected decline in private demand over the next two years. In dollar terms, the $787 billion U.S. stimulus is the largest, followed by China's $590 stimulus package. At the G-20 summit in London, leaders pledged to maintain expansionary policies for as long as needed to restore economic growth.

Global Balance of Payments

The global economic and financial crisis is having a strong negative impact on global trade and investment flows. The WTO is projecting a 9 percent decline in the volume of external trade in 2009, the first decline since 1982 and the sharpest contraction in the post-war era. One consequence of the compression in global trade has been a decline in the magnitude and distribution of global imbalances. This reflects, in part, the circular flow of decreased wealth and income and diminished demand, rising unemployment, and further income compression. Weakened global demand also has sharply reduced many commodity prices and thus reduced the dollar value of exports from many commodity producers. Heightened risk aversion and deleveraging, meanwhile, has significantly reduced the volume of cross-border investment flows.

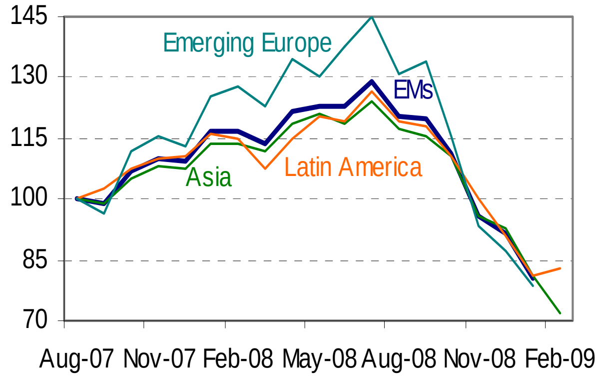
The Collapse in Trade

Exports from virtually every corner of the world have been under severe downward pressure during the second half of 2008 and continuing through early 2009. As shown below, exports from the euro area peaked in April 2008 and, as of December 2008, were off 13 percent year-over-year. Japan, meanwhile, has experienced a far sharper decline in exports, with export growth first turning negative in October. By February 2009, Japanese exports were down 49 percent year-over-year. In emerging markets, economies in Eastern Europe have been the hardest hit, with an over 40 percent decline in exports from their July 2008 peak. The decline in exports, however, has been broad-based and Latin America and Emerging Asia each have experienced export declines in excess of 30 percent from their peaks. As economic growth has plummeted, so too have the prices of globally-traded commodities and the export incomes of commodity exporters (e.g., Canada, the oil exporters, Australia, Brazil, etc.).

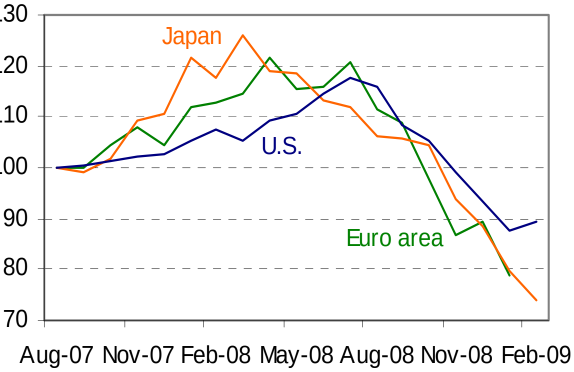
U.S. exports peaked in July 2008 and fell every month through January before rising in February. Trade data for February 2009 (the latest available) show a 23 percent decline in U.S. exports from the previous February. Merchandise exports to the euro area (our largest export market) fell 19 percent; exports to Canada (our 2nd largest export market) fell 26 percent; exports to

Mexico (our 3rd largest export market) fell by 24 percent; and exports to China (our 4th largest export market) fell by 19 percent.

Emerging market exports
(index, Aug-07 = 100)



U.S., Japan and Euro area exports
(index, Aug-07 = 100)



The counterpart to falling exports has been weak demand for imports. In the United States, as in many other oil importing countries, the dollar value of imports did not start falling until the price of oil began easing from its record high of $147 per barrel in early July. By February 2009, U.S. merchandise imports had fallen by 38 percent from their July 2008 peak. On a year-over-year basis, U.S. merchandise imports fell by 32 percent in February. Nonpetroleum imports were down over 25 percent from their February 2008 peak to a level not seen since September 2003. Similarly, euro area imports have fallen 19.3 percent year-over-year in January 2009 while Japanese imports fell by 39.9 percent in February 2009. Underlying these declines have been contractions in domestic demand during the second half of 2008. Additionally, a slowdown in demand in China has adversely affected exports from other emerging Asia economies which shipped 16.5 percent of their combined exports to China in 2008. Similarly, declining domestic demand in Europe has had a sharp negative impact on exports from central and eastern European economies, which were down over 25 percent year-over-year in February.[5]

Declining Current Account Imbalances

The net result of falling exports and falling commodity prices has been a sharp decline in the positive current account balances of major surplus economies while the similarly sharp decline in imports has narrowed the negative current account balances of major deficit economies, including the United States. The IMF envisions global imbalances declining from a high of 5.75 percent of world GDP in 2007 to around 4.0 percent of world GDP in 2009.

The U.S. current account deficit narrowed from $359.1 billion in the first half of 2008 to $314.1 billion in the second half of 2008. U.S. exports of goods decreased 2.6 percent (half-over-half) while service exports fell 0.1 percent. Imports declined a total of $56.6 billion in the second half, with non-oil imports falling $35.1 billion and oil imports declining $21.4 billion. The U.S.

[5] Emerging Asia is defined here as Indonesia, Korea, Malaysia, the Philippines, Taiwan and Thailand.

current account declined to 3.7 percent of GDP in the fourth quarter 2008 from a peak of 6.6 percent in the fourth quarter of 2005.

U.S. Balance of Payments and Trade

($ billions, seasonally adjusted unless otherwise indicated)

	2006	2007	2008	2008	2008	2008	2008
				Q1	Q2	Q3	Q4
Current Account:							
Balance on Goods	-838.3	-819.4	-820.8	-212.6	-217.9	-216.3	-174.1
Balance on Services	85.0	119.1	139.7	34.1	36.5	35.4	33.7
Balance on Income 1/	57.2	81.8	127.6	33.3	28.2	29.6	36.5
Net Unilateral Current Transfers	-92.0	-112.7	-119.7	-31.7	-29.0	-30.0	-28.9
Balance on Current Account	-788.1	-731.2	-673.3	-176.9	-182.2	-181.3	-132.8
Balance on Current Account as % of GDP	-6.0	-5.3	-4.7	-5.0	-5.1	-5.0	-3.7
Major Capital Flow Components (financial inflow +)							
Net Bank Flows	-27.3	-111.9	87.7	-142.2	-42.8	9.8	262.9
Net Direct Investment Flows	0.7	-95.7	7.4	-11.8	19.0	5.0	-4.7
Net Securities Sales	724.9	728.3	876.4	205.6	222.4	190.3	258.1
Net Liabilities to Unaffiliated Foreigners by Non-banking Concerns	78.1	155.6	254.4	165.9	-5.0	160.6	-67.0
Memoranda:							
Statistical Discrepancy	-47.1	-41.3	129.3	-9.7	62.3	34.7	56.6
Change in Foreign Official Assets in the United States	487.9	411.1	421.4	173.5	145.4	116.1	-13.6
Trade in Goods							
Balance	-817.3	-794.5	-799.6	-206.3	-212.7	-210.8	-169.8
Total Exports	1036.6	1162.5	1300.5	319.8	339.1	348.6	293.0
of Which:							
Agricultural Products	66.0	84.3	108.4	27.0	29.6	29.2	22.6
Capital Goods Ex Autos	415.0	447.4	469.5	116.6	120.2	122.0	110.6
Automotive Products	107.0	121.0	120.9	30.5	30.9	32.8	26.7
Consumer Goods Ex Autos and Food	129.1	146.1	161.2	39.2	41.0	42.3	38.7
Industrial Supplies and Materials 2/	276.0	316.3	387.3	93.2	103.8	108.8	81.6
Total Imports	1853.9	1957.0	2100.1	526.1	551.9	559.4	462.8
of Which							
Petroleum and Products	602.0	634.7	775.5	113.0	124.4	132.2	83.7
Capital Goods ex Autos	418.3	444.5	453.9	113.8	117.6	116.2	106.3
Automotive Products	256.6	258.9	233.6	64.2	62.4	58.1	48.8
Consumer Goods Ex Autos and Food	442.6	474.9	482.2	119.8	123.7	125.2	113.5

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

The euro area, meanwhile, saw its current account balance, which shifted from surplus into deficit in the first half of 2008, deteriorate further to a $70 billion deficit in the second half. Japan's trade balance shifted into a deficit in the second half but it continued to run a current account surplus ($60 billion), driven primarily by investment income from overseas assets. The current account surplus for fuel exporters is estimated to have increased to $592 billion in 2008 from $409 billion in 2007 as a result of rising energy prices through the first half of the year. The IMF expects the current account surplus for these economies to turn into a deficit in 2009.[6]

The crisis has brought into sharp focus the heavy dependency of many emerging market economies on exports to drive economic growth or dependency on foreign capital to fuel domestic development and finance their external deficits. A key lesson of the crisis is the need to ensure that future economic growth is better balanced. The foundations for such a change are underway. The U.S. current account deficit has declined and a renewed emphasis on saving will limit the re-emergence of large deficits as the recovery progresses. A decline in imbalances on the part of surplus economies is also underway but to be sustained requires a shift toward much greater domestic demand led growth. This is particularly important in China, given the large size and rapid growth of its current account surplus in past years.

[6] Quarterly data are not available for all of the fuel exporting countries.

Global Capital Flows and Foreign Exchange Reserves

There has been a sizable scaling back of cross-border investments by international investors. This is especially true of capital flows to emerging markets but a significant decline in capital market activity also is evident in some large advanced economies. Emerging asset and currency markets came increasingly under pressure after mid-summer 2008 as global investors reduced their allocations to these asset classes for a number of reasons. Slowing global growth undermined a view held earlier in the year by some market participants that emerging economies had de-coupled from the advanced economies. A downturn in commodity prices added to the mounting evidence of weakening global demand and pressured commodity-dependent economies and emerging asset markets and currencies. Cross-border capital flows into emerging markets declined sharply as growth prospects dimmed and liquidity needs prompted repatriation by investors in the United States and other advanced economies.

According the IMF, net private capital inflows to emerging markets totaled $122 billion in 2008, a sharp drop from the peak value of $610 billion in 2007. The IMF is projecting a net outflow of $175 billion in 2009. Portfolio flows and bank lending, which turned negative in 2008, are both expected to decline further as repayments are not met with new investment. Further, foreign direct investment is expected to slow considerably. Reduced access to foreign capital likely will mean significant internal adjustments and diminished growth prospects, or even contraction, by economies dependent on foreign capital to finance imports and domestic investment programs. Already, reduced availability of capital has led to reductions in foreign exchange reserves in some economies, and to increased demand on the resources of the IMF.

The global accumulation of foreign currency reserves surged in recent years. Reserves rose from $2.0 trillion at the end of 2001 to $6.4 trillion at the end of 2007, an average annual growth rate of 26 percent. This rapid pace of accumulation is typically seen as a result of the currency crises of 1997/98. A large stockpile of reserves was thought to reduce the risk of another currency crisis and to insulate the domestic economy from a sudden reversal of capital inflows. Others linked the reserve accumulation to an export-led growth strategy that required the maintenance of undervalued exchange rates.[7] Reserve accumulation in the emerging markets and developing countries was more than double the pace in the advanced economies, so that while the advanced economies held 60 percent of global reserves in 2001, by the end of 2007 their share had declined to 37 percent. Emerging Asia's share rose from 18 percent in 2001 to 33 percent at the end of 2008.[8]

Global Foreign Exchange Reserves Decline in the Second Half of 2008

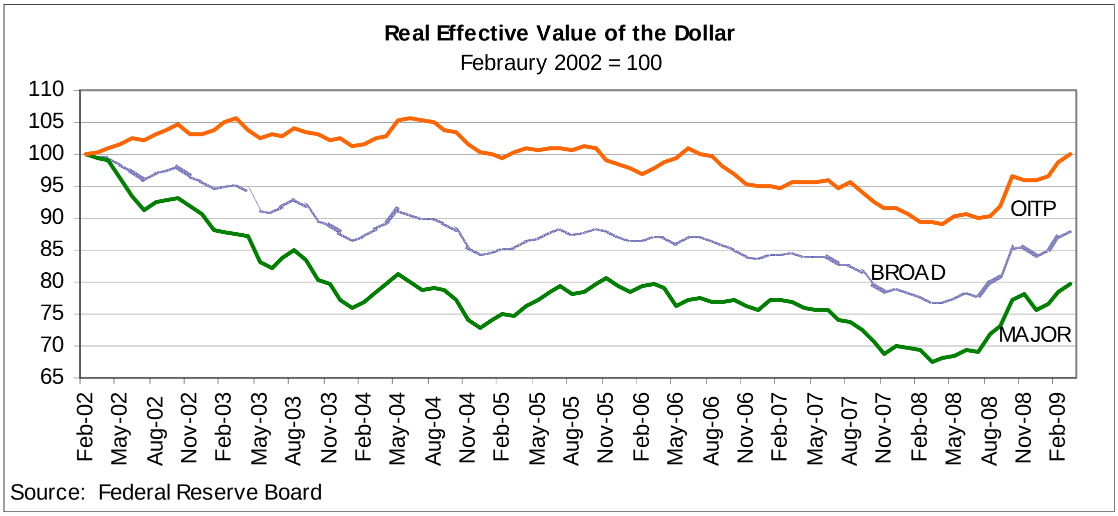
	Average Annual Growth (percent)		Quarterly Growth 2008 (percent)			
	2002-07	2008	qtr 1	qtr 2	qtr 3	qtr 4
World	25.6	4.9	7.6	1.8	-1.7	-2.6
Advanced Economies	14.2	2.9	4.6	-1.4	-2.7	2.5
Emerging and Developing Markets	37.4	6.1	9.4	3.7	-1.1	-5.4

[7] This view is most frequently associated with the Bretton Woods II concept developed by Dooley, Folkerts-Landau, and Garber. See for example, Michael P. Dooley, David Folkerts-Landau, and Peter Garber, "Interest Rates, Exchange Rates and International Adjustment: BW II Dynamics," International Economics and Economic Policy, December 2006, 3(3-4), pages 293-302.

[8] These data exclude reserves in Hong Kong, Korea, Singapore, and Taiwan, which are considered advanced economies by the IMF.

Reserve accumulation continued apace in the first quarter of 2008 but slowed markedly in the emerging markets and fell in the advanced economies in the second quarter.[9] Accumulation of reserves on a global scale peaked in July 2008, declining thereafter as several economies (notably India, Korea, Malaysia, and Russia) drew down reserves either to support their currency or to meet funding needs, including retiring some short-term debt obligations. Emerging Asia's reserves declined by an average of $14.7 billion a month between July and December, following an average monthly increase of $53 billion between January 2007 and July 2008. Global reserves fell by $286 billion in the second half of 2008 to end the year at $6.7 trillion.

The Dollar in Foreign Exchange Markets



In the second half of 2008, exchange rates reacted strongly as global financial market conditions rapidly worsened and evidence of a global economic downturn mounted. Volatility in exchange rates and asset markets rose sharply prompting a dramatic reduction of leveraged long positions in risky assets. Major and emerging currency and asset markets as well as major commodity markets were caught up in the surge of risk reduction.

On a real effective basis, the dollar rose by 7.4 percent during the second half of 2008, increasing 9.0 percent against the other "major currencies" and 5.9 percent against the currencies of "other important trading partners" (OITP).

The dollar's upward trend in the second half of the year initially reflected a moderation in downside growth risks and an accompanying sense in the market that the Federal Reserve's monetary easing cycle might be ending. In addition, Treasury and the Federal Reserve had announced in mid-July that they would provide Fannie Mae and Freddie Mac with backstop liquidity, and this was viewed favorably in the market as reducing financial system risk and supporting housing. The dollar uptrend became reinforced by increasing evidence that the economic downturn would not be confined largely to the United States. In particular, euro area economic growth was declining by more than initially expected.

[9] Some of this and subsequent declines may reflect the appreciation of the U.S. dollar against the euro. The dollar is the major reserve currency followed by the euro.

In the final weeks of 2008, the dollar retreated from its October-November highs. Both official and corporate accounts were reported to be re-balancing their positions by buying euros and Japanese institutional investors were scaling back their foreign holdings.

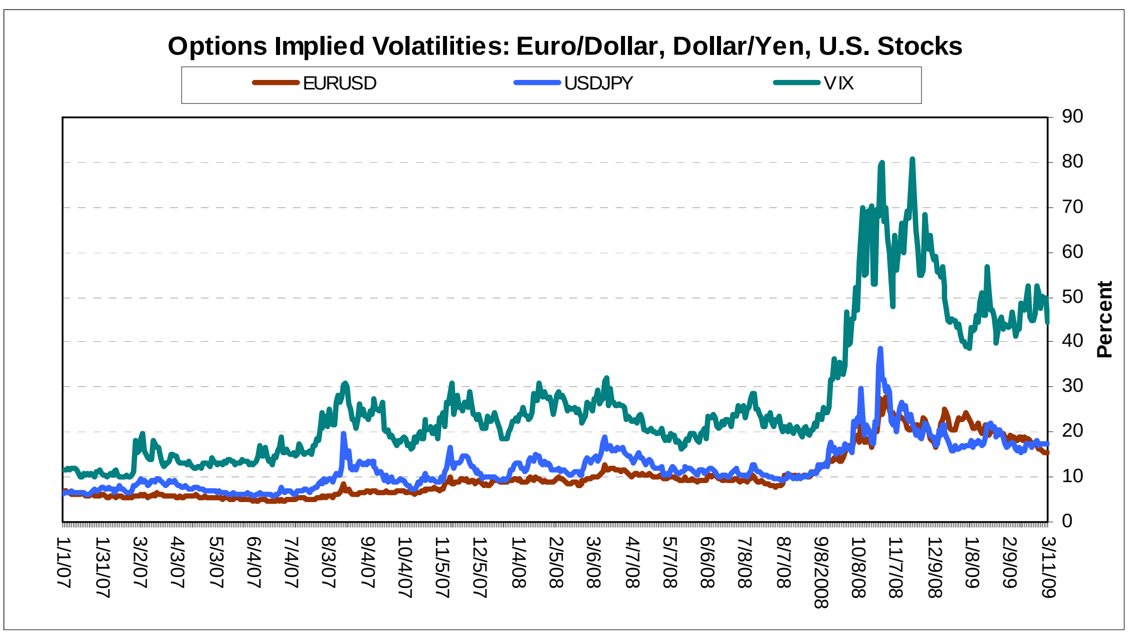
The dollar ended the second half of 2008 up against all the currencies discussed in this report except the Japanese yen and the Chinese renminbi. The Japanese yen appreciated even more steeply than the dollar against a broad set of currencies as market participants repaid borrowing in yen that had been used to buy risky assets. In early 2009, market concerns about western European exposure to eastern European credit risk intensified and weighed on the euro. The yen gave up some of its earlier appreciation as the outlook for the Japanese economy deteriorated. The dollar continued its upward trend through March against most of the other currencies, albeit at a slower pace.

Percent Change in Value of the U.S. Dollar

Against currency of	1st half 2008	2nd half 2008	1st quarter 2009
Argentina	-4.0	14.2	7.5
Australia	-8.6	34.8	2.3
Brazil	-10.0	44.4	0.3
Canada	2.6	19.3	3.6
China	-6.2	-0.5	0.2
Egypt	-3.4	2.9	2.4
Euro area	-7.3	12.7	5.1
India	9.0	13.2	4.0
Japan	-4.7	-14.6	9.1
Korea	11.8	20.7	8.8
Malaysia	-1.2	5.7	5.6
Mexico	-5.5	33.1	3.2
New Zealand	0.6	29.9	2.9
Norway	-6.2	36.5	-3.4
Russia	-4.6	30.2	11.1
Singapore	-5.6	5.3	6.2
South Africa	14.4	20.0	0.9
Switzerland	-9.8	4.5	6.7
Taiwan	-6.4	8.0	3.5
United Kingdom	-0.3	36.5	1.7

Note: The Saudi riyal and the Venezuelan peso are not included as these currencies are tightly pegged to the U.S. dollar

Market Volatility



In early September, the announcement that Fannie Mae and Freddie Mac would be placed in conservatorship and provided with other financial support reduced market uncertainties about their role in the financial system and their ability to support the housing market. At mid-month, however, Lehman Brothers' bankruptcy filing and the Federal Reserve's announcement of liquidity support for AIG raised major questions throughout the market about counterparty credit risk in the global financial system.

Liquidity conditions deteriorated sharply, volatility spiked, and market participants reduced their exposure to risky assets over the following weeks. In the view of market participants, impaired liquidity and reduced risk appetite were the key factors driving volatility higher. Although volatility in the euro/dollar and dollar/yen markets reached historical highs, volatility in these currency markets remained well below volatility in the S&P 500 market (VIX index). Subsequently, volatilities have retreated, but they remain elevated relative to levels seen before the financial crisis began in August 2007.

Economy Analyses

Asia & Pacific

China

During this period of economic turmoil, China has implemented aggressive fiscal and monetary policy measures to stimulate domestic growth and contribute to a global recovery. In November 2008, China announced a two-year $590 billion stimulus program, a headline amount of 13 percent of China's 2008 GDP. There is still debate over how much of this figure will be new spending but most analyst estimates of new spending range from $100 to $350 billion (over two years), or 1.0 to 3.6 percent of annual GDP each year, measures which the IMF has deemed "very significant." China expects to run a budget deficit of 3 percent of GDP in 2009, but its high trend growth and low debt stock provide China with the headroom to undertake further fiscal measures. Premier Wen Jiabao, in his opening remarks to China's National People's Congress on March 5, 2009, stressed the government's goal of achieving 8 percent real GDP growth this year, and pledged to pursue additional policy measures to strengthen domestic demand and boost consumption. Private sector forecasts expect growth to be somewhat lower. Consensus estimates of China's 2009 growth have weakened in recent months, falling from 9.1 percent in September 2008 to 7.0 percent in March. In January, the IMF forecast growth at 6.5 percent this year.

China also has responded to the economic slowdown by shifting quickly to relax monetary policy. Domestic inflation was a key concern for the Chinese government in the first half of 2008, in large part due to rising commodity and food prices, which have fallen sharply since then. As a result, consumer price inflation dropped from a peak of 8.7 percent year-over-year in February 2008 to a decline of 1.7 percent in February 2009. The easing of inflationary pressure, coupled with declining interest rates in other economies, provided the People's Bank of China (PBOC), China's central bank, space to pursue aggressive monetary easing to help restore growth. Since September, the PBOC has lowered the 1-year bank lending rate by 216 basis points to 5.3 percent and bank reserve requirements by 2 percentage points to 15.5 percent for large banks, scaled back its sales of central bank bonds, and reduced the interest rate paid on banks' excess reserves deposited at the central bank. The PBOC also lifted quantitative caps on bank lending towards the end of 2008. (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 finance.) After the easing of quotas, loan growth surged, with RMB 3.9 trillion ($567 billion) of new loans in the four month period from November 2008 to February 2009, more than triple the amount of new loans in the same period a year earlier.[10] A significant proportion of these loans are thought to have gone to the large, government-sponsored infrastructure projects promoted by China's stimulus plan.

In the reporting period, as the global economic outlook worsened, China returned to a policy of maintaining a largely-stable renminbi-dollar exchange rate. Nevertheless, the renminbi was the only emerging market currency discussed in this report that strengthened against the dollar during this time period. The renminbi remained basically stable against the dollar in the first quarter of 2009, appreciating by 0.1 percent.

While the renminbi has been stable against the U.S. dollar in recent months, the appreciation of the dollar against many other currencies has caused the renminbi to strengthen against these other currencies. As a result, the appreciation of the renminbi against a basket of currencies was faster in the second half of 2008 than in the first half. According to the BIS, the real effective exchange rate appreciated by 9.4 percent in the second half (compared to 2.5 percent in the first). The IMF and JP Morgan real effective exchange rate indexes showed smaller appreciations of 6.4 percent and 2.3 percent, respectively, in the second half. In the first two months of 2009 the real effective appreciation of the renminbi was 6.6 percent based on the BIS index and 4.0 percent based on the JP Morgan index.

Since the end of the dollar peg in July 2005, the renminbi has appreciated by 21 percent against the dollar. On a real effective basis, the renminbi appreciated between 18 and 30 percent during that time period depending on the measure used.[11]

Officially, China operates a "managed floating exchange rate regime based on market supply and demand with reference to a basket of currencies." In January, the PBOC issued a statement emphasizing the need to "improve the renminbi exchange rate formation mechanism in a preemptive, controllable, and gradual manner so as to strengthen the exchange rate flexibility and keep the renminbi exchange rate basically stable at an adaptive and equilibrium level." The statement also established as two long-term goals the development of the foreign exchange market and creation of new exchange rate risk management instruments. The PBOC also recently established a pilot project that allows corporations in the Yangtze River Delta and Guangdong (China's most important export regions) to settle their trade with Hong Kong and Macao in renminbi.

China currently holds $1.9 trillion worth of foreign reserves, equivalent to 45 percent of its 2008 GDP or 26 months of its imports. The pace of foreign reserve accumulation slowed to 7.6

[10] A variety of factors contributed to the surge in lending when quotas were lifted, including: the return to the formal banking sector of off-balance sheet bank activity or informal banking sector activity; pent-up demand for working capital loans from corporates; and government moral suasion to encourage banks to lend to stimulus projects. Short-term discounted bill financing comprised about 40 percent of new loans, some of which was for corporate working capital, but some of which is thought to have been channeled into the stock market or interest arbitrage plays.

[11] Since July 2005, the renminbi appreciated 18.3 percent on a real effective basis according to JP Morgan's index of real effective exchange rates, 29.6 percent according to a similar index maintained by the Bank for International Settlements (BIS), and 17.8 percent according to the IMF (JP Morgan and BIS numbers as of February 2009; IMF numbers as of January 2009).

percent in the second half of 2008, after posting a record pace of 18.4 percent in the first half of the year. Despite a record trade surplus of $114.3 billion in the fourth quarter of 2008, foreign reserves grew by only $40.4 billion, possibly suggesting a significant volume of capital outflows, which private analysts estimate could be between $100-200 billion. The outflow has been attributed mainly to an unwinding of speculative positions as expectations of renminbi appreciation cooled. Other factors besides capital outflows may have contributed to the slowdown in reserve accumulation, including valuation adjustments and lags in revenues from exports.

When the PBOC intervenes, it buys foreign currency with renminbi, adding to the domestic money supply. To counter the inflationary effects of money supply expansion, the PBOC absorbs domestic liquidity by issuing central bank bonds, by using repurchase agreements, and by increasing the required reserve ratio for banks. The PBOC issued a net RMB 410 billion ($60 billion) worth of central bank bonds in the second half of 2008, compared to RMB 750 billion ($106 billion) in the first half the year, indicating the reduced need for sterilization as inflows slowed. The PBOC also had RMB 362.2 billion ($53.2 billion) of repurchase agreements outstanding at the end of 2008.

Although China's financial markets largely have been insulated from the volatility in global financial markets, the associated sharp drop in external demand has led to a substantial decline in economic growth.[12] In combination with China's slowing property sector development, the dramatic slowdown in the export sector has led to rising unemployment and a significant drop in industrial production. Output expanded by 6.8 percent year-over-year in the fourth quarter of 2008, the lowest growth rate in seven years. China does not publish quarterly GDP figures, but many analysts believe that output growth came to a halt in the fourth quarter of 2008.

Real exports were up 13.4 percent year-over-year in the first three quarters of 2008. However, export growth declined dramatically in the fourth quarter, falling 1.6 percent year-over-year, as the industrialized world's fall into recession curtailed demand for Chinese goods. The contraction in exports has constrained industrial activity: growth in real industrial production was 5.9 percent year-over-year in December 2008, down from 17.4 percent a year earlier. Although official statistics are not available on a quarter-over-quarter basis, it is likely that real seasonally-adjusted industrial production declined by 2 to 4 percent between the third and fourth quarters. Despite a sharp slowdown in exports, the decline in imports has been more pronounced, as weakening domestic demand, declining component imports for export reprocessing, and the fall in prices for oil and other commodities have lowered China's import bill. As a result, China's global trade surplus grew in both the third and fourth quarters of 2008, and reached a record $198 billion in the second half of the year. China's current account surplus grew by $68.2 billion in 2008, to end the year at $440 billion. China's trade surplus continued to expand in 2009, reaching $43.9 billion in January and February combined, up 59 percent over 2008. On a bilateral basis, China's imports from the United States increased by 0.2 percent year-over-year to $34.7 billion in the second half of 2008, while China's exports to the United States increased by 5.8 percent to $183 billion. China's trade surplus with the United States grew to $149 billion in the second half of 2008, a 7.2 percent increase over the second half of 2007.

[12] Although China's stock market declined by 65 percent throughout 2008, this fall was part of an ongoing decline in stock prices since November 2007 when the bubble in China's equity market burst for largely domestic reasons. Equity prices are higher today than they were on September 15, 2008.

China's continued large current account surplus and accumulation of foreign exchange reserves suggest the renminbi remains undervalued. To limit the pace of renminbi appreciation, the PBOC buys foreign currency in the foreign exchange market, adding to China's stock of foreign reserves. Chinese authorities have stated that they recognize the need to address the imbalances in their domestic economy and have made "rebalancing" growth a key feature of China's 11th Five-Year Plan. Limited progress has been made and household consumption growth remains weak. The share of consumption in China's GDP growth declined from a recent peak of 62.3 percent in 2000 to 39.4 percent in 2007, well below average for a economy of China's income level. The low share of consumption in China reflects a weak social safety net, limited availability of financial services to Chinese households, and the failure of household income growth to keep pace with overall economic growth.

Shifting China's growth to a more sustainable, domestic-demand driven path will require policy measures of a scale sufficient to bring about marked changes in the pattern of saving and investment. In addition to efforts to raise household income, a key element is providing 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. Corporate saving represents the largest component of China's national saving. This reflects the growing profitability of Chinese enterprises in recent years, and the fact that dividend payout from Chinese enterprises is low. Requiring state-owned enterprises to pay larger dividends to the government would help reduce corporate saving while providing the government with additional resources for transfers to households or to invest in the social safety net.[13] Monetary policy tools could also play a key role in shifting the structure of the economy to new sources of growth. By liberalizing interest rates, improving the transmission of monetary policy, and most importantly, allowing prices, including the exchange rate, to respond to market forces, China's policymakers could take a sizeable step towards ensuring that resources within the Chinese economy flow to their most productive uses.

India

After averaging 8.8 percent over the past four years, growth is slowing largely due to lower investment (reflecting tighter financing conditions and uncertainty) as well as declining external demand, although India is less export dependent than many Asian economies. Year-over-year growth slowed to 5.3 percent during the fourth quarter of 2008, compared with 8.9 percent in the same quarter in 2007; but on a seasonally-adjusted annualized basis, the economy contracted 2.9 percent in the fourth quarter, the first contraction since early 2004. Some slowdown might have been inevitable since India had sharply tightened monetary policy through mid-2008, was growing near or above capacity, and faces infrastructure and other structural constraints, but global developments have hastened the downturn. Growth is expected to slow to around 5.5 percent in FY2009/10 (April-March) due to credit conditions and weaker external demand.

Recently-announced policy measures to stimulate the economy and ease credit conditions should help cushion the downturn. After tightening monetary policy through mid-2008 as inflationary

[13] China has also announced a plan to subsidize consumption of durable goods by rural households in 2009, which would boost their real income.

pressures increased, the Reserve Bank of India (RBI) began cutting interest rates in the fall to combat the impact of the global financial turmoil and slow the deceleration of growth. Since September 2008, the RBI has lowered the repurchase rate and cash reserve ratio by 400 basis points to 5 percent and cut its reverse repurchase rate by 250 basis points to 3.5 percent. These actions have injected approximately $82 billion in liquidity into the banking system. However, commercial credit conditions have not improved commensurately as risk aversion and sluggish bank deposit interest rates have disrupted monetary policy transmission.

In addition to the monetary easing, policymakers unveiled three fiscal packages in recent months. Most analysts estimate new spending and tax measures will range from 1.5 to 2 percent of GDP. Combined, the packages include additional spending of $4 billion, cuts in the central value added tax, excise duty, and service tax, as well as sector-specific measures focusing on exports, small- and medium-sized enterprises, and infrastructure. Both government and private forecasts expect the FY2008/09 consolidated fiscal deficit to rise above 11 percent of GDP (the deficit was 6.7 percent in FY2007/08). Public debt, currently at 80 percent of GDP, is expected to remain high.

High oil prices and strong import demand for much of the year contributed to a widening of the current account deficit to $23.4 billion over the first three quarters of 2008 compared to $6.4 billion over the same period in 2007. While the drop in oil prices and weaker domestic demand will lower imports, exports may fall by even more. The U.S. bilateral trade deficit with India rose to $3.1 billion in the second half of 2008 from $1.1 billion in the second half of 2007, as U.S. exports to India fell.

Net capital inflows shrunk significantly last year on declining portfolio flows and slowing overseas lending and short-term credit. Net portfolio outflows were $15.1 billion for January-December 2008, compared to $34.9 billion in inflows over the same period in 2007. In contrast, foreign direct investment inflows have risen from $9.4 billion in 2007 to $21.7 billion in 2008.

The rupee depreciated by 13.2 percent against the dollar in the second half of 2008 with significant volatility in the final quarter of the year, but fell by only 4.8 percent on a real effective basis.[14] The rupee has been more stable in the first two months of 2009, falling 1.9 percent against the dollar. Reserves fell by $63 billion between July 2008 and November, reflecting in roughly equal measures significant RBI intervention (estimated at $5 billion per week in October) to slow the rupee's decline and valuation effects. Reserves rose slightly in December to around $246 billion, as portfolio flows stabilized and the RBI appeared more comfortable letting the rupee depreciate.

India's official exchange rate arrangement is a managed float. The stated aim of foreign exchange intervention is to smooth volatility. The RBI seeks to achieve its monetary objectives of price stability and well-anchored inflation expectations by adjusting market liquidity through its policy interest rates, although it has at times used the exchange rate to help meet monetary objectives.

[14] All effective exchange rates in this report are based on JP Morgan's real effective exchange rate series, unless otherwise stated.

Japan

Japanese financial institutions are relatively less exposed to mortgage-backed securities and other problem assets, but, through their sizeable equity holdings, have been adversely impacted by the collapse in Japanese and global equity markets. Nevertheless, Japan has been particularly vulnerable to the global economic downturn due to the high share of manufactures in GDP and its high dependence on exports (notably autos and electronics). Japanese output began to decline in the second quarter of 2008 and many forecasters expect that real GDP will continue to contract into at least the second half of 2009, resulting in a deep and possibly prolonged recession. Japan's real GDP contracted significantly in the fourth quarter of 2008, falling 12.1 percent on a seasonally-adjusted annualized basis, the steepest decline in output since the first quarter of 1974. The Bank of Japan (BOJ) Policy Board's median forecast for FY2009 (April 2009-March 2010) is for output to contract by 2.0 percent, while the IMF and private sector consensus forecasts both expect output to contract by 5.8 percent in calendar year 2009.

Japan may also be slipping back into deflation. Headline consumer price inflation for the second half of 2008 was 1.6 percent year-over-year, due to higher fuel prices. However, in February 2009, headline consumer price inflation fell to -0.1 percent year-over-year, the first negative reading since September 2007. The BOJ Policy Board expects core consumer prices to decline in FY2009, with a median forecast of a 1.1 percent drop.

Deteriorating external demand and, to a lesser extent, a stronger yen on a real effective basis have diminished Japan's export prospects. Export volume fell 19.4 percent year-over-year in the fourth quarter of 2008, with a 29.9 percent drop in December. Import volume has also fallen, due to weak Japanese domestic demand, but at a less rapid rate, dropping 6.6 percent year-over-year in the fourth quarter of 2008. This has resulted in three consecutive monthly trade deficits since October 2008. However, Japan continued to maintain an overall current account surplus throughout 2008, as the positive contribution of net income on foreign investment exceeded the negative trade balance. Japan's current account surplus decreased substantially in 2008 from 4.0 percent of GDP in the first quarter to 1.8 percent in the fourth quarter. Japan's merchandise trade surplus with the United States fell by $13 billion to $59.8 billion in 2008. Exports to the United States declined by 29.7 percent year-over-year in the fourth quarter of 2008.

Japan's benchmark stock TOPIX index fell by 42 percent in 2008 (its sharpest one year percentage drop in history) and money market and corporate funding conditions remain relatively tight. Japanese banks still have substantial corporate equity holdings, and the drop in stock prices has put pressure on the banking system. Unrealized equity gains have now largely vanished, and banks must recognize unrealized market losses on their still substantial corporate equity holdings, subtracting from Tier 1 capital. Japan's financial firms have otherwise been relatively insulated from the external financial turmoil, but credit costs are expected to increase along with the deterioration in the overall economy.

The Japanese government has undertaken a variety of measures to alleviate the impact of the financial crisis on the economy and financial system. On the fiscal side, the government has introduced three separate stimulus packages estimated to add approximately 1.0 percent to GDP in 2009. The government estimates that the general fiscal deficit will rise to nearly 6 percent of GDP in FY2008 and 7 percent in FY2009, from 3.1 percent of GDP in FY2007.

The government has also taken measures to address weaknesses in the financial sector, increasing by six-fold the limit on public funds available for bank recapitalization to about $120 billion; setting aside up to $200 billion to purchase corporate equities from banks to remove a source of volatility to bank capital; adjusting the respective capital adequacy calculation methodologies for internationally active and strictly domestic banks; and easing mark-to-market accounting rules in measurement and classification. Meanwhile, the BOJ has eased monetary policy, cutting its policy rate (the uncollateralized overnight call rate) by a cumulative 40 basis points from a recent peak of 0.5 percent in October 2008 to 0.1 percent in December. In addition, the BOJ has expanded the range of collateral accepted in its discount operations, increased the amount of its outright purchases of Japanese government bonds, and has begun outright purchases of commercial paper, asset-backed commercial paper, corporate bonds, and stocks held by banks. The BOJ also maintains an unlimited swap line with the Federal Reserve to provide dollar liquidity. Originally set to expire in April 2009, the swap line was extended through October. At the end of January 2009, $84.6 billion was outstanding.

The economic and financial crisis appears to have boosted Japanese investors' risk aversion, which together with heightened foreign exchange volatility and an unwinding of the "yen carry trade" led to a 32 percent appreciation of the yen in the second half of 2008 on an effective basis. Net outflows of private capital dropped in the second half of 2008 to $75 billion from $109 billion in the first half of 2008. Against the dollar, the yen appreciated 15 percent in the second half of 2008. The appreciation of the yen during this period occurred against a backdrop of significantly higher volatility, which in turn appears to have led to a sharp unwinding of the "yen carry trade." The appreciation was also partially driven by the increasing perception of the yen as a "safe haven" currency. The yen peaked at ¥87.10 to the dollar on January 21, 2009. It subsequently depreciated by March 31, 2009 to ¥98.95 to the dollar, in part reflecting the rapid deterioration of the outlook for the Japanese economy.

Japan maintains a floating exchange rate regime. Japanese authorities have not intervened in the foreign exchange market since March 2004.[15] Japan's foreign exchange reserves rose in the second half of 2008 as a result of interest earnings and valuation changes on existing reserve holdings. Foreign exchange reserves totaled $1,004 billion at the end of December 2008, up from $974 billion at the end of June 2008, a 3.1 percent increase.

Korea

The international financial crisis and global downturn has affected South Korea through several channels. Output shrank 20.8 percent on a seasonally-adjusted annualized basis in the fourth quarter, the largest decline since 1998. Korea, like other East Asian economies, has seen very sharp declines in export demand as the global economy has slowed. Korea has also experienced substantial capital outflows, putting downward pressure on its currency. Finally, tightening global liquidity has had a particularly strong effect in Korea, due to the high dependence of its banking sector on short-term external loans, and a large amount of long-term foreign exchange hedging contracts that depended on foreign currency borrowing.

[15] The Ministry of Finance determines the timing and magnitude of foreign exchange interventions, and the operations are carried out by the Bank of Japan.

In the fourth quarter of 2008, Korea's real exports of goods and services fell 7.2 percent year-over-year, the largest decline since the bursting of the tech bubble in 2001, due to rapidly weakening trading partner growth. Real imports also fell in the fourth quarter, declining by 12.7 percent year-over-year, reflecting weakening domestic demand and lower demand for imports used for export re-processing (roughly 40 percent of total imports). Merchandise trade has continued to contract sharply in early 2009, with exports falling 25.6 percent through February on a year-over-year basis in dollar terms. The net effect of declining trade flows shifted Korea's trade balance from an average deficit of $1.5 billion per month in the first nine months of 2008 to an average $0.8 billion surplus from October 2008 through February 2009. As imports from the United States declined, Korea's bilateral trade surplus with the United States rose to $7.3 billion in the second half of 2008, an increase of $1.7 billion from the second half of 2007.

The Korean government has announced a series of expansionary fiscal measures to counteract the slowdown of its economy. Korea's 2009 fiscal stimulus totals 2.2 percent of GDP ($17 billion), including 1.2 percent in tax cuts and 1.0 percent in new expenditures. The Lee Administration has recently submitted a supplementary budget to the Congress for approval which includes 1.7 percent of GDP in additional proposed spending. The Bank of Korea (BOK) raised its benchmark policy interest rate by 25 basis points to 5.25 percent in early August 2008, as inflation rose, but shifted to an expansionary stance in the fall as weak domestic demand and lower global commodity prices moderated inflationary pressures. By the end of December, the BOK's base rate was 3 percent and following two additional cuts in early 2009, the base rate now stands at 2 percent, its lowest level in over a decade.

The BOK and the Korean government also have taken a number of steps to provide won and dollar liquidity to domestic financial institutions. On October 20, the BOK announced it would inject up to $30 billion in reserves to address foreign exchange liquidity tightness. In addition, the government provided a three-year guarantee of up to $100 billion (10 percent of GDP) on external debt issued by domestic banks between mid-October and end-June 2009. In October, the Federal Reserve and the BOK established a $30 billion swap facility, which was recently extended through October 2009. Through the end of January, the BOK has drawn $16.4 billion on this swap line. Korea also established additional swap lines with Japan and China. The Korean government recently announced plans to provide additional foreign currency liquidity by issuing $6 billion of Foreign Exchange Stabilization Bonds in both the first and second half of 2009. Finally, to boost foreign investment and encourage capital inflows, the government will exempt overseas investors from taxes on interest earned on their holdings of domestic bonds, and has introduced tax breaks for overseas purchasers of Korean real estate.

The current account deficit narrowed significantly over the second half of 2008, from $8.6 billion at the end of the third quarter to $1.1 billion at year end. This narrowing was largely due to a shift in the trade balance from a $9.1 billion deficit in the third quarter to $3.3 billion surplus in the fourth quarter, driven by a depreciating won and significantly lower import prices. Korea recorded four consecutive months of net capital outflows ending December 2008. Net outflows were $42.5 billion in the fourth quarter largely driven by outflows to service foreign currency-denominated loan liabilities, amounting to $45 billion. Net portfolio inflows were $1 billion in the fourth quarter, reflecting a greater amount of external assets divested by Korean investors ($18.4 billion) compared to Korean assets divested by external investors ($17.4 billion). In January, there was a net inflow of $4.7 billion as external loan repayment slowed, the

BOK drew on its swap line with the Federal Reserve, some foreign equity investment in Korea's stock market returned, and two local banks issued $4 billion in overseas bonds.

Movements in the won exchange rate in the second half of 2008 reflected the various stresses buffeting the Korean economy. The won depreciated by 21 percent against the U.S. dollar in the second half of the year and the real effective exchange rate depreciated by 24 percent. Exchange rate volatility increased and the Korean authorities intervened on several occasions to limit sharp won depreciation. In the first quarter of 2009, the currency depreciated an additional 9 percent against the dollar.

Korean authorities remain critical of speculation against the won, and have pledged to stem further depreciation of the won if necessary. Korea's foreign exchange reserves fell $61 billion (23 percent) in 2008 as a whole, with $57 billion of the decline occurring in the second half of the year. The decrease in reserves reflects: 1) active intervention in the spot foreign exchange markets to support the won; 2) dollar liquidity injection into banks; 3) and FX valuation effects. Korea also actively intervenes in the FX forward market to influence spot exchange rates. The BOK's net forward position shifted from a $20 billion net long dollar position at end-June 2008 to an $11 billion net short dollar position at end-February. At the end of March 2009, Korea's foreign exchange reserves stood at $206.3 billion.

Malaysia

Malaysia remains vulnerable to a slowing global economy despite having entered the global economic slowdown with its strongest GDP growth and largest stock of foreign exchange reserves since the Asian financial crisis. As demand for Malaysia's exports fell, the economy contracted by 11 percent in the fourth quarter of 2008 on a seasonally-adjusted annualized basis, the sharpest decline since early 2000. In the fourth quarter of 2008, goods exports fell year-over-year for the first time since 2002, while production in manufacturing and export-oriented industries declined over 10 percent. Merchandise trade plummeted in January and February 2009 combined, with exports falling by 22 percent and imports falling by 29 percent on a year-over-year basis.[16] The ringgit depreciated steadily in the second half of 2008, reflecting a weakened Malaysian economy and an increase in investors' risk aversion. Meanwhile, Malaysia continues to maintain significant reserves and a large current account surplus, driven by a continuing saving and investment imbalance.

Exports play a highly significant role in Malaysia's economy, totaling over 100 percent of GDP. In addition to manufactures, Malaysia is a large exporter of oil and other commodities. Due in large part to falling commodity prices and decreased global demand for electronics, Malaysia's goods and services exports in the fourth quarter of 2008 declined 16 percent on a seasonally adjusted basis from the previous quarter. Exports of electronics (40 percent of total exports), and main commodities including palm and crude oil all declined over ten percent year-over-year in the fourth quarter. Imports also fell sharply, down 12 percent on a seasonally adjusted basis from the previous quarter, as slowing export orders and investment activity led to a large decline

[16] January and February trade figures are combined to account for any seasonal Lunar New Year effects as businesses reduced their work days for the New Year celebration in January. Since the Lunar New Year occurred in January for 2009 and in February for 2008, export and import declines are likely overstated when comparing January or February trade figures independently.

in Malaysia's imports of capital and intermediate goods. Although net exports declined by $3.5 billion in the fourth quarter, for the year net exports were $51.6 billion, a record amount. Malaysia's bilateral trade surplus with the United States was $8.3 billion in the second half of 2008, falling $2.6 billion from the second half of 2007, as U.S. import demand slowed.

Malaysia's current account surplus was 15.7 percent of GDP in the fourth quarter of 2008, down from its record high of 21.5 percent in the second quarter. A large and persistent gap between saving and investment has continued to be the structural basis for Malaysia's current account surplus, which has been above ten percent of GDP since the fourth quarter of 2002. Saving in Malaysia is high, with public sector saving (including government-owned corporations) equal to 13 percent of GDP and private saving equal to 22 percent of GDP. At the same time, investment activity in Malaysia has declined with the onset of the global economic slowdown. Real gross fixed capital formation fell by 10.2 percent in the fourth quarter, and 3.4 percent year-over-year in the second half, compared to a 5.8 percent year-over-year gain in the first half of 2008. Investment as a share of GDP declined to 18.9 percent in the second half of 2008; by contrast, its share never fell below 22.1 percent in any year between 1980 and 1997.

Along with other economies in the region, Malaysia experienced substantial outflows of portfolio capital. The financial account of the balance of payments recorded a record high $21.3 billion outflow in the fourth quarter of 2008, a $3.9 billion increase from the previous quarter. Financial outflows were driven primarily by a significant retreat in portfolio investment and outflows of "other private investment." Net portfolio investment outflows were $9.3 billion in the fourth quarter as investors sold off Malaysian assets, and other net private capital outflows were $11.2 billion in large part due to the repayment of foreign loans by Malaysian banks. The Kuala Lumpur Composite Index (KLSE) has fallen over 40 percent from its January 2008 high, erasing all gains made since 2005. However, volatility in the KLSE has subsided since the end of 2008 and the index has fallen 0.5 percent in 2009 as of March 31.

Inflation has moderated from recent record highs in line with the global disinflationary trend, falling from 8.5 percent in July and August to 4.4 percent in December 2008. This has given Bank Negara Malaysia (BNM), the central bank, room to ease monetary policy. With the increasing downside risk to growth, the BNM cut its overnight policy rates by 25 basis points to 3.25 percent in the fourth quarter. In early 2009, the BNM made a series of moves to reduce its policy rate to 2.0 percent.

Malaysian officials have taken measures to enhance confidence and liquidity in the financial sector and to support economic growth. These include blanket guarantees for all ringgit and foreign currency deposits; an extension of the BNM's liquidity facility to insurance companies; and a small- and medium-sized enterprise credit guarantee program. BNM also established a roughly $11 billion bilateral currency swap with the People's Bank of China. In November, Malaysia announced a fiscal stimulus plan of 1 percent of GDP focused on infrastructure and social spending. On March 10, a second stimulus plan was announced equaling 8 percent of GDP, the largest in the nation's history, to be implemented in 2009 and 2010.

Malaysia ended the ringgit's fixed exchange rate to the dollar and revalued the currency in July 2005. Malaysia's central bank, BNM has since operated a managed float regime. Officially, BNM intervenes in both directions to smooth out excessive volatility in the ringgit exchange rate and has no explicit exchange rate target.

During the second half of 2008, the ringgit depreciated 5.7 percent against the U.S. dollar, reversing its trend of nominal appreciation since the end of the peg in 2005. From the end of 2008 to March 31, 2009, the ringgit depreciated by an additional 5.6 percent, reflecting increasing weakness in Malaysia's export sector and significant net capital outflows. The depreciation was significantly less in real effective terms; the ringgit depreciated 0.8 percent in the second half of 2008, following 2.7 percent depreciation in the first half. 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.

BNM intervened in the second half of 2008 to slow the decline in the ringgit, and Malaysia's foreign exchange reserves fell by 28 percent to $90.5 billion. During 2008, reserves declined by 10 percent, representing the first annual decline since 2000. Despite the recent decline, Malaysia's reserves continue to be well above common adequacy levels, equaling six months of imports or about four times the country's short-term external debt.

Singapore

Deepening industrial country recessions and slumping regional demand have severely curtailed Singapore's large export sector, dragging down real GDP growth. Exports began falling in the third quarter of 2008 and fell 14 percent year-over-year in the fourth quarter. Since Singapore's economy is highly trade dependent (imports and exports represent about 350 percent of GDP), declining external demand coupled with slowing domestic demand led to three consecutive quarters of real GDP contraction in 2008, including a 16.4 percent seasonally-adjusted annualized decline in the fourth quarter. Output grew by only 1.2 percent for the year (down from 7.8 percent in 2007). The Singapore government has recently revised its 2009 GDP growth projection to a contraction of between 2 and 5 percent (from the previous forecast of -1 to +2 percent GDP growth). Singapore's economy last contracted in 2001, when GDP declined by 1.9 percent. February year-over-year inflation slowed to 1.9 percent, from 4.4 percent in December, and authorities forecast inflation of -1 to 0 percent for 2009.

Singapore's equity market has not escaped the global financial and economic crisis; the Straits Times equity Index (STI) fell 40 percent in the second half of 2008. The banking sector has not been directly affected by the financial crisis; nonetheless, the economic slowdown will cut bank profits and impact bank asset quality as non-performing loans increase.

The government has implemented a number of measures to promote financial stability and cushion the economic downturn. In the second half of 2008, the authorities expanded the deposit guarantee program to cover all Singapore dollar and foreign currency deposits of individual and non-bank customers until 2010. The Monetary Authority of Singapore (MAS) also entered into a currency swap arrangement with the Federal Reserve, gaining access to a $30 billion swap line, recently extended through the end of October 2009. As of the end of January, Singapore had not drawn on the swap line.

In January, the government announced fiscal measures for FY09/10 (April-March), including a US$13.7 billion stimulus package (8.5 percent of GDP). The stimulus package includes corporate tax cuts, property tax rebates, and employment creation and maintenance measures. The government expects that the stimulus package will prevent a sharper economic downturn but will not avoid a further decline in output. For the first time, the government will draw from its extensive fiscal reserves, estimated to be in excess of several hundred billion U.S. dollars, to help finance the stimulus. Nevertheless, the government expects a $5.8 billion fiscal deficit in FY09/10 (3.5 percent of GDP), versus a projected surplus of 5.7 percent of GDP in FY08/09. This would be Singapore's largest fiscal deficit ever.

Singapore has a substantial gap between national saving and investment, resulting in a chronic, large current account surplus. The surplus dropped sharply, however, as exports fell during 2008, narrowing to 14.8 percent of GDP for the year, down from 24 percent in 2007. Meanwhile, in 2008, the capital account improved to a smaller deficit of 6 percent of GDP, from a deficit of 12 percent of GDP in 2007. Singapore is an international financial center, attracting large capital inflows, which it intermediates and invests internationally. Capital outflows are also augmented by substantial foreign investments by the country's sovereign wealth funds, typically resulting in a capital account deficit. Capital account outflows increased in the second half of 2008, reaching $9.8 billion from $1.6 billion in the first half of the year. The United States has a free trade agreement with Singapore, and Singapore typically runs a bilateral trade deficit with the United States. This deficit declined over the second half of 2008 to $5.6 billion (from $7.3 billion in the first half of 2008) on falling imports.

Singapore is highly open to international trade, trade barriers are very low, and domestic prices are largely determined by international prices. As a result, MAS maintains price stability by actively managing the exchange rate against an undisclosed basket of major trading partner currencies, allowing domestic prices to be largely determined by the pass-through of international prices. Until recently, MAS had pursued a policy of "modest and gradual" nominal appreciation of the Singapore dollar against the currency basket, intervening in the foreign exchange market to reduce pressure for faster appreciation and sterilizing these interventions through foreign exchange swaps, direct borrowing, and repos.[17] Citing the slowing economy and increased financial uncertainty, in October, MAS eased monetary policy by reducing the slope of the currency's policy band to neutral (limiting currency appreciation against the basket to zero). While some analysts predicted MAS would react to the deepening recession with an inter-meeting move ahead of April's next monetary policy committee meeting, in mid- January, the central bank reaffirmed its current monetary stance. Authorities confirmed that there would be no inter-meeting adjustments, signaling the government's comfort in letting fiscal policy do the heavy lifting for the time being.

In the second half of 2008, the Singapore dollar depreciated by 5.3 percent against the U.S. dollar and by 3 percent on a nominal effective basis. Foreign exchange reserves fell by 1.4 percent to $174 billion as the central bank intervened to smooth exchange rate volatility. Singapore's foreign exchange reserves equal roughly 100 percent of its GDP and 100 percent of its short term debt.

Sovereign wealth funds GIC and Temasek manage resources from Singapore's large surpluses. Temasek invests a significant portion of its portfolio in overseas markets and GIC invests almost exclusively overseas. Both funds have suffered significant losses over the course

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[17] The MAS manages the exchange rate within an undisclosed band and can choose to 1) change the midpoint of the band to allow for a one-off adjustment, 2) change the band's gradient to signal a possible turning point in the monetary policy cycle, or 3) widen the band.

of the financial crisis. By end-November, Temasek had lost 31 percent of its market value to $85 billion. While GIC discloses less information about its assets and returns, authorities have noted that the fund lost 25 percent of its value over the past several months. Singapore has played an important role in the IMF-facilitated International Working Group on Sovereign Wealth Funds (SWF), which aims to help maintain a stable global financial system and the free flow of capital and investment. Treasury has worked closely with Singapore to improve SWF practices globally.

Taiwan

Taiwan has been more adversely affected by slowing global demand than any other economy in Asia as trade flows fell sharply in the second half of 2008, particularly in the fourth quarter. Merchandise exports plunged by 25.5 percent in the fourth quarter of 2008 on a seasonally-adjusted, quarter-over-quarter basis (after a decline of 4.3 percent in the third quarter) and imports fell even more sharply, down 31.1 percent. Taiwan's trade surplus declined by $5.7 billion in the third quarter but rose by $3.2 billion in the fourth quarter on the sharper contraction of imports. For 2008 as a whole, Taiwan's trade surplus declined to $18.9 billion (4.5 percent of GDP) from $30.4 billion (7.3 percent of GDP) in 2007. Taiwan's current account surplus in 2008 was 6.3 percent of GDP ($25 billion), down from a surplus of 8.6 percent in 2007. Trade flows between Taiwan and the United States have declined amidst the current recession. Taiwan's exports to the United States contracted 18.6 percent in the second half of 2008, and Taiwan's imports from the United States fell 8.3 percent. For 2008 as a whole, the U.S. bilateral trade deficit with Taiwan was $11.0 billion, $1 billion smaller than in 2007.

Taiwan's domestic economy has historically been vulnerable to swings in global demand, as exports amount to 76 percent of its GDP. Real GDP contracted by 6.7 percent in the third quarter of 2008 on a seasonally-adjusted annualized basis, and an additional 25 percent in the fourth quarter. The drop in Taiwan's fourth quarter growth rate is the worst on record and signals a recession of unprecedented severity. For 2008 as a whole, Taiwan's real GDP growth was stagnant. Consensus estimates for 2009 range from a contraction of 4.0 to 7.2 percent, indicating that the recession will be much deeper than in the 2001, when GDP declined by 2.2 percent.

The Taiwan authorities have responded to weakening growth with significant monetary and fiscal policy easing. The Taiwan central bank has cut its key policy rate seven times since September for a total reduction of 237 basis points. The discount rate was lowered to 1.25 percent in February 2009, its lowest level on record. Taiwan's authorities have also introduced a series of fiscal stimulus packages. They plan to speed up infrastructure projects and to increase public fixed investment by 23 percent in 2009. The authorities already have distributed $2.5 billion (0.6 percent of GDP) in spending vouchers and have earmarked $18 billion in funds for loan guarantees for businesses. The focal point of the long-term fiscal plan is the "i-Taiwan 12 Projects," under which $121 billion will be invested over the next 8 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. Cumulative spending on vouchers, business loan guarantees, and i-Taiwan project investment in 2009 will be approximately $25.6 billion (6.5 percent of 2008 GDP). Taiwan also lowered corporate and personal income tax rates in early March.

Taiwan's weak domestic demand magnifies the impact of slowing external demand on economic growth and highlights the need for structural change aimed at boosting domestic consumption. Although initiatives like the spending voucher program may help boost consumption in the short-term, Taiwan remains overly reliant on net exports for economic growth. From 2005 to 2007, net exports contributed 60 percent of the average annual GDP growth. Domestic demand growth slowed sharply in the fourth quarter of 2008 as real investment declined by 22.8 percent year-over-year and consumption fell by 1.7 percent.

In the second half of 2008, the New Taiwan Dollar (NTD) depreciated by a total of 8.0 percent against the dollar and by 4.9 percent on a real effective basis, largely on concerns over the global slowdown and Taiwan's lagging export sector. In the first quarter of 2009, the NTD depreciated an additional 3.5 percent against the dollar and by 2.2 percent on a real effective basis. According to the Taiwan 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.

After posting a surplus in the financial account in the first half of 2008 for the first time since 2005, Taiwan experienced capital outflows in the third quarter as redemptions by U.S. mutual fund holders led to net capital outflows of $6.2 billion. The continued net outflow of foreign portfolio investment in the fourth quarter was more than offset by local investors repatriating an estimated $17.6 billion between November and January in response to Taiwan's growing interest rate differential with the United States.[18] As a result, the capital and financial account reached a surplus of $2.5 billion in the fourth quarter.

Taiwan's foreign currency reserves declined by $10.3 billion (3.7 percent) in the third quarter of 2008 due to large net capital outflows and a decline in Taiwan's current account surplus. This was offset by a $10.6 billion increase in the fourth quarter to end the year at $291.7 billion (a 0.1 percent increase during the second half of 2008). Taiwan's central bank attributed the increase in foreign reserves in November and December to "returns from foreign exchange management" and the appreciation of the "euro, yen, and other major currencies" against the U.S. dollar (which makes reserves denominated in those currencies worth more in U.S. dollar terms). In 2009, reserves grew by $8.4 billion through March, which was again attributed to the appreciation of the other currencies against the U.S. dollar and returns from foreign exchange management. Taiwan maintains $300 billion in foreign exchange reserves, well above common adequacy levels. Reserves represent the equivalent of 76.3 percent of 2008 GDP, 24.8 months of imports, and about three times the economy's short-term external debt. Taiwan does not disclose the currency composition of its foreign exchange reserves.

Australia

Australia's seventeen-year economic expansion may be at an end as tight credit conditions, falling commodity prices, and waning consumption have lowered growth. The economy expanded by only 0.3 percent on a seasonally-adjusted annualized basis in the fourth quarter of

[18] The different preferences of institutional vs. household investors explain the occurrence of simultaneous foreign portfolio outflows and repatriation by local investors. Institutional investors have extracted funds from Taiwan due to higher aversion to emerging market risk and the need to shore-up funds, while Taiwan households have shifted their investments back home to take advantage of the interest rate differential.

2008, after expanding by 1.8 percent in the third quarter. Excluding output in the farm sector, the economy contracted in both the third and fourth quarters of 2008. Although many market analysts consider Australia to be in recession, it is relatively well positioned to respond to the economic downturn with countercyclical fiscal and monetary policies. Australia has generated consistent budget surpluses in recent years and entered 2008 with a projected budget surplus of 1.8 percent of GDP.

Headline inflation peaked at 5.0 percent in the third quarter of 2008 before falling to 3.7 percent in the fourth quarter and is expected to decline to 2 percent in 2009.[19] The Australian Treasury expects real GDP to expand by one percent in FY2008-09 (July-June) and 0.75 percent in FY2009-10, due to current and anticipated aggressive government stimulus measures. The IMF and private sector consensus forecasts anticipate -0.7 percent and -0.3 percent growth in CY2009, respectively.

Australia has announced US$59 billion (9 percent of 2008 GDP) in cumulative government support measures to aid both the financial sector and real economy, including two fiscal stimulus packages. The first package, US$7 billion, was implemented in 2008. The second package, US$28 billion, will be implemented over four years, with most of the money to be spent on schools, roads, hospitals, and energy efficiency, and the remainder to be distributed to families and low-income earners.

Support measures for the financial system include guaranteeing retail deposits and wholesale funding; banning naked short selling of stocks; directly purchasing residential mortgage-backed securities to revive mortgage lending; and creating a commercial property lending facility. On the monetary side, the Reserve Bank of Australia (RBA) cut interest rates to 3.25 percent in February 2009 – marking a total of 400 basis points in cuts, including 300 basis points in the second half of 2008 – from the recent peak of 7.25 percent in March 2008. In addition, the RBA established a US$30 billion currency swap line with the U.S. Federal Reserve, which runs through October 2009, to provide additional liquidity support as needed. At the end of January 2009, US$10.2 billion of the swap line was outstanding.

Australia's sustained current account deficit started to reverse in 2008, reflecting the economy's reliance on foreign investment to supplement domestic saving. The current account deficit decreased from 3.2 percent of GDP in the third quarter of 2008 to 2.1 percent in the fourth quarter, due in part to negotiated price increases for iron ore and coal exports to China and a slowing of domestic growth and inward investment. Australia's bilateral merchandise trade deficit with the United States increased slightly, to US$5.6 billion, in the second half of 2008 from the same period the previous year as both imports and exports rose. Meanwhile, net capital inflows slowed in the second half of 2008 putting an additional damper on domestic investment.

The Australian dollar depreciated by 35 percent against the U.S. dollar in the second half of 2008 due to the unwinding of the carry trade, a sharp decline in commodity prices, narrowing international interest rate differentials, and risk retrenchment. The RBA intervened in the foreign exchange market in October and November 2008, halting the steep depreciation of the

[19] Australia does not produce monthly inflation data.

currency, which declined by as much as 23 percent against the U.S. dollar in October.[20] The real effective exchange rate depreciated by 27 percent in the second half of 2008. The Australian dollar fell a further 2.7 percent against the U.S. dollar in 2009 through end-March. Australia's foreign exchange reserves fell by 5.3 percent in the second half of 2008 to US$29.9 billion.

The Australian dollar was floated in 1983 and the RBA does not consider the exchange rate to be either a target or an instrument of monetary policy. However, the RBA does consider the exchange rate to be part of the transmission mechanism of monetary policy and intervenes when it believes the exchange rate has overshot or when market conditions threaten to become disorderly.

New Zealand

New Zealand's output began contracting in early 2008, ending a 10-year period of economic expansion. GDP continued to contract into the second half of the year, falling by 2.6 percent on a seasonally-adjusted annualized basis in the third quarter and by 2.3 percent in the fourth quarter. New Zealand's recession originated from domestic factors, but has been exacerbated by spillovers from the global financial crisis. A steep housing market correction, temporary drought conditions, slowing consumption, weak external demand, and tight international credit markets have all contributed to the contraction. The Reserve Bank of New Zealand (RBNZ) forecasts 0.5 percent GDP growth in 2009, while the IMF and private sector consensus forecasts anticipate -1.5 percent and -1.7 percent growth, respectively.

New Zealand has been adversely affected by higher costs of credit, tighter borrowing terms, and limited liquidity in international capital markets, as its low savings rate leaves corporations and the banking system reliant on external funding to finance domestic investment and credit expansion. This high reliance on external funding is reflected in New Zealand's large sustained current account deficit and sizeable negative net international investment position (over 90 percent of GDP at the end of 2008). The current account deficit was equivalent to 8.9 percent of GDP in the fourth quarter of 2008 and 8.6 percent in the third quarter, reflecting deficits in both the income and trade balances. The deficit is expected to decrease to around 7.5 percent of GDP in 2009 and 6.5 percent of GDP in 2010, as the trade balance improves and domestic savings rise. New Zealand's bilateral merchandise trade surplus with the United States widened by US$48 million to US$186 million in the second half of the year from the same period the previous year as imports from the United States were stagnant and exports rose slightly.

New Zealand has announced a series of policy measures to help stimulate domestic demand and support its financial system in response to the global economic downturn. A fiscal stimulus package (4 percent of GDP) includes income tax cuts and infrastructure spending to be implemented in 2009-10. In addition, the government has guaranteed retail bank deposits and overseas bank wholesale funding. The government expects its operational balance to decline from a 3.1 percent of GDP surplus in FY2007-08 (July-June) to deficits of 0.1 percent of GDP in FY2008-09 and 2.3 percent in FY2009-10.

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[20] The RBA reportedly purchased a net $3.2 billion of Australian dollars in October and $134 million in November 2008. The RBA last intervened in August 2007.

On the monetary side, in a series of steps beginning in June 2008, the RBNZ cut its policy rate by 525 basis points to 3.0 percent in March 2009. The cuts were made in response to weakening economic conditions and moderating inflationary pressures. In addition, the RBNZ expanded the range of collateral accepted in its discount operations and established a US$15 billion currency swap line with the U.S. Federal Reserve, which runs through October 2009, to provide additional liquidity support as needed. As of the end of January 2009, the RBNZ had not drawn on the swap line.

The NZD depreciated sharply against the U.S. dollar in the second half of 2008, falling 30 percent by end-December. The depreciation of the NZD has been driven primarily by a sharp decline in commodity prices, the unwinding of the carry trade, narrowing international interest rate differentials, and retrenchment from risk. The NZD has continued to depreciate by 2.9 percent in 2009, as of end-March 2009. The real effective exchange rate depreciated by 18.0 percent in the second half of 2008.

New Zealand has maintained a floating exchange rate since 1985. The RBNZ is empowered to intervene in the foreign exchange market to help achieve its inflation target or when the exchange rate is deemed unjustified by economic fundamentals. The RBNZ last intervened in the foreign exchange market in June 2007. Official foreign currency reserves fell by 43.5 percent in the second half of 2008 to US$11 billion. The change in reserves is not due to foreign exchange intervention, but rather recent technical changes to the RBNZ's domestic liquidity operations.

Europe

Euro Area

The financial sector and the real economy of the euro area have been severely buffeted by the global crisis. Euro area output declined by 6.5 percent on a seasonally-adjusted annualized basis in the fourth quarter of 2008, following declines of 1 percent in the second and third quarters. The OECD expects a 4.1 percent contraction in 2009 on very weak consumption and plummeting investment and stagnant growth in 2010. Declining foreign orders for manufactured goods, which fell 25 percent year-over-year in the fourth quarter of 2008, initiated the collapse in demand, and domestic orders soon followed, falling 19 percent in the fourth quarter. Industrial production began declining on a year-over-year basis in May 2008, and was down 9 percent in the fourth quarter. As demand retreated, inflation slowed rapidly. Headline inflation fell from a peak of 4.1 percent in July 2008 (on a year-over-year basis) to 0.6 percent in March 2009. Core inflation declined to 1.8 percent in February 2009 from a peak of 2.6 percent in August 2008. The euro area's current account balance worsened substantially during the second half of the year on collapsing global demand for European manufactured goods, especially demand for German capital equipment. The current account deficit widened from 0.3 percent of GDP in the first half of 2008 to 1.1 percent of GDP in the second half.

On the financial front, banks in Germany, Belgium, and the Netherlands have been hit hardest (as measured by total losses to date) by the global crisis, but real balance sheet effects are starting to burden banks throughout the region. Banks in the euro area have suffered approximately $160 billion in write-downs associated with the financial crisis or about 16 percent of the global total. Euro area banks are also highly exposed to Emerging Europe where a dozen of the largest banking groups in the region have an estimated $680 billion in assets. Due to rising financing costs and uncertainty, growth in bank lending to the private sector in the euro area peaked at 11.3 percent (year-over-year) in June 2008 before falling to 7.4 percent this past January. As the condition of the real economy worsened, asset quality also eroded. Net loan impairment charges increased through September 2008 to 0.18 percent of total assets from 0.11 percent at the end 2007. The region-wide average Tier 1 capital ratio, however, improved three tenths of a percent to 8.3 percent through September 2008 on declining risk weighted assets and capital increases, largely from the public sector. The banking sector is receiving government support in the form of enhanced deposit guarantees, bank debt rollover guarantees, and capital injections.

In response to the crisis, euro area member states have committed about $180 billion (1.5 percent of GDP) to fiscal stimulus packages. The combination of discretionary fiscal stimulus and automatic stabilizers is expected to raise the monetary union's aggregate fiscal deficit to 4 percent of GDP in 2009 and 4.4 percent in 2010 from 1.7 percent in 2008. While several member states are expected to exceed the 3 percent of GDP fiscal deficit ceiling, the Excessive Deficit Procedure is sufficiently flexible to allow short-term, cyclically-related lapses and additional fiscal stimulus is therefore possible without violating European Union (EU) rules. Commitments by euro area governments in the form of guarantees to the financial sector amount to about $3.1 trillion, capital injections to about $400 billion, and nearly $550 billion in ad hoc assistance.

The terms of European capital support, which is governed by EU state aid rules, may limit bank access to these resources. The EU defines minimum annual dividend levels of 7 percent for preferred shares and 9.3 percent for ordinary shares for government assistance to "fundamentally sound" institutions.

Turning to monetary policy, the European Central Bank (ECB), concerned about rising inflation, raised its minimum bid rate for repurchase transactions in July to 4.25 percent. The ECB reversed course in October as inflationary pressures abated. The ECB's key policy rate was lowered to 1.25 percent in April 2009. The ECB has also deployed a broad range of additional tools to mitigate liquidity constraints and financial instability. First, the ECB increased the volume and maturity of its refinancing operations and, in October 2008, initiated fixed rate, full allotment tenders for its main weekly refinancing operations. As a result, the ECB's balance sheet increased 37 percent between August and December 2008 as lending to euro area banks increased 70 percent. This influx of liquidity and market expectation for continued cuts has pushed the average over-night unsecured inter-bank borrowing rate (Eonia) to between 35-70 basis points below the policy rate since October. Second, expanded ECB collateral criteria also meant that it could accept a broader range of securities with a minimum rating of BBB-, including asset-backed securities, in effect becoming the purchaser of last resort for many securities. Third, through swap agreements with the Federal Reserve and Swiss National Bank, the ECB provides U.S. dollar and Swiss franc liquidity directly to European banks. The ECB also has euro repurchase facilities in place with the central banks of Hungary and Poland. The ECB swap line with the Federal Reserve is unlimited. At the end of January 2009, $206.4 billion was outstanding. The swap line, originally set to expire in April 2009, has been extended through October.

As the depth of the euro area's economic downturn became apparent to financial markets, especially after the collapse of Lehman Brothers, the euro weakened in foreign exchange markets. During the second half of 2008, the euro depreciated 11 percent against the U.S. dollar and 2.7 percent based on the ECB's real effective exchange rate index. The euro continued to depreciate in the first quarter of 2009, falling 5.1 percent against the U.S. dollar, and 2.7 percent on a real effective basis. Foreign currency reserves remained steady in the second half of 2008.

The value of the euro is market-determined, and 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 ECB sets monetary policy according to a strict anti-inflationary mandate of close to but less than 2.0 percent growth in headline prices.

Norway

Norway is a major oil and gas exporter, and its economic boom in 2007 and first half of 2008 slowed sharply as commodity prices collapsed during the second half of 2008. Concomitantly, GDP growth eased from 6.4 percent on an annualized basis in the first half of 2008 to 1.6 percent in the second half, but Norway's accumulated oil and gas wealth cushioned the fall. For 2009, the government forecasts a contraction of ½ percent of overall GDP and no growth for mainland (i.e., non-oil/gas & shipping) GDP.

To combat the downturn, Norway has deployed monetary, fiscal, and financial tools. On the monetary side, the central bank cut its policy rate sharply during the fourth quarter of 2008, from 5.75 percent to 3 percent; and a further 100 basis points in February and March 2009. It also arranged a $15 billion swap facility with the Federal Reserve, extended through October 2009, to provide dollar liquidity. Through February 2009, four swap auctions have occurred, the last on February 24 for $5.5 billion.

On the fiscal side, an expansionary 2009 budget presented in October – comprising cuts in inheritance and wealth tax and increases in health, education, daycare, and infrastructure expenditure totaling about $2.9 billion – was buttressed in January by another $2.9 billion stimulus package. The new package focuses on increased spending for infrastructure, schools, hospitals, and research, as well as reductions in business taxes. The government estimates that together, the two packages amount to 2.3 percent of mainland GDP. The government expects the 2009 non-oil central government deficit to rise to 5 percent of mainland GDP, up from 0.4 percent in 2008. The deficit will be financed by transfers from the Government Pension Fund-Global (GPF-G), Norway's sovereign wealth fund.

Through March 2009, the financial sector has remained generally healthy, albeit suffering from liquidity shortages. To address the liquidity crunch, the central bank introduced in October a $55 billion swap facility for banks to convert covered bonds to sovereign bonds for up to three years, along with a facility to offer two-year fixed rate loans to banks. Concurrently, collateral requirements were relaxed to include covered bonds, all money market units, and a range of corporate bonds. The swap and loan facilities were well utilized by banks and high grade corporates do not seem to be experiencing unusual difficulty. In February, the government announced two funds totaling $15 billion, one to boost bank capital and the other to improve the domestic bond markets. The first, the *Government Finance Fund*, is to boost core capital and increase lending capacity, with exact terms to be negotiated with banks on a case-by-case basis.

The second, the *Government Bond Fund*, will purchase fixed income instruments issued by domestic corporations in the primary and secondary markets over the next year or so and be wound down gradually. It is too early to assess the effectiveness of these two facilities.

The kroner depreciated sharply in the second half of 2008, falling by 37 percent vis-à-vis the dollar and 19 percent on a real effective basis. The depreciation largely reflected the decline in oil prices, financial market turmoil, and a flight to safety as peripheral currencies were abandoned in favor of the euro and dollar. In the first quarter of 2009, the kroner rose by 8 percent on a real effective basis as a general weakening of the euro coincided with some investment banks recommending holding the kroner – citing Norway's financial strength – leading large investors to increase their stocks. However, the dollar's safe haven status has prevented the kroner from appreciating substantially against it. The kroner rose by 3.3 percent against the dollar through end-March 2009.

Norway has a floating exchange rate, does not generally intervene, and has not done so since January 1999. The floating rate regime permits the central bank to pursue an inflation targeting policy. The central bank frequently undertakes foreign exchange transactions for its operational needs, including the management of GPF-G assets, which could influence the exchange rate. Norway's foreign currency reserves were roughly stable in the second half of 2008, rising by less than 1 percent.

Norway's current account surplus has been above 10 percent of GDP since early 2000. In the second half of 2008 the surplus was 18.6 percent of GDP, slightly above the 18.3 percent in the first half of the year despite falling energy prices. The United States' trade deficit with Norway narrowed in the second half of 2008 relative to the previous year as U.S. imports from Norway fell sharply.

Russia

Russia's economy experienced a rapid slowdown in the second half of 2008, as oil prices slid. GDP growth slowed to 1.3 percent on a seasonally-adjusted annualized basis in the third quarter, from 8.1 percent in 2007. Output fell by 4.9 percent in the fourth quarter. Following the brief conflict with Georgia in early August, and in the context of a rapidly decelerating global economy, capital flows reversed sharply from $41 billion in inflows in the second quarter to $19 billion in outflows in the third quarter and a further $131 billion outflow in the fourth quarter. As the ruble came under heavy pressure, reserves fell from a peak of nearly $600 billion at the beginning of August to $427 billion at end-December. After the Central Bank of Russia (CBR) in early November signaled that it would allow a gradual depreciation of the ruble by slowly widening the ruble's trading band, outflows accelerated significantly. The CBR spent $75 billion intervening to support the ruble in December. A subsequent January 21, 2009, decision to widen the ruble's exchange rate band by 10 percent and to tighten ruble liquidity has helped to staunch the loss of reserves and stabilize the currency. The ruble fell by 30 percent against the dollar in the second half of 2008 and by 18 percent against the dual (dollar/euro) currency basket. In the first quarter of 2009 the currency fell an additional 11 percent against the dollar.

The combination of falling commodity prices and slowing external demand cut Russia's trade surplus in half between the third and fourth quarters of 2008. The current account surplus fell sharply during 2008 from 10.3 percent of GDP in the first quarter to 1.8 percent in the fourth quarter. Trade with the United States increased and the U.S. trade deficit with Russia rose by $2.6 billion in the last half of 2008 relative to the previous year.

Russian companies have cut back production as exports have declined. Industrial production fell 10.3 percent year-over-year in December, and unemployment rose from 5.6 percent at end-June to 7.7 percent at end-December. Meanwhile, real disposable incomes fell 11.6 percent year-over-year in December and credit became increasingly costly as real interest rates moved from negative to modestly positive. Rising real interest rates are expected to pressure already strained bank balance sheets, as non-performing loans (NPLs) nearly tripled in 2008 to 3.8 percent of total loans by year-end. Leading local banks are expecting NPLs to comprise10 to 15 percent of total loans by the end of 2009.

Russian authorities and the CBR initiated a range of anti-crisis measures during this period, with Prime Minister Putin in September announcing a 55-point action plan. The plan seeks to bolster capital and ensure adequate liquidity in the financial sector, and to stimulate domestic demand through a range of tax cuts and subsidies. By the end of 2008, the government had injected $26 billion into several top banks and approved an additional $11 billion in early 2009. Further capital injections may be necessary if NPLs rise. The action plan also includes measures to grant preferences to Russian suppliers and to subsidize Russian exporters of industrial goods. The initial action plan and subsequent measures are estimated by the Russian government to cost 5.2 percent of 2008 GDP; roughly half can be categorized as aid to the financial sector, the other half as fiscal stimulus. Some measures are likely to have negative effects on Russia's key trading partners, and the overall impact on Russia's fiscal accounts is striking. The government expects the fiscal balance to switch from a 3.5 percent of GDP surplus in 2008 to an 8 percent of GDP deficit in 2009.

Russia's Reserve Fund, currently with $137 billion in assets (10 percent of GDP), was established to ensure Russia's ability to run a countercyclical fiscal policy in the event of an oil price shock. The size and potential duration of the current shock, however, could overwhelm these resources as early as 2010. Consequently, Russian officials have discussed plans to increase issuance of domestic debt in order to finance a portion of the deficit in 2009. If the Reserve Fund is depleted before oil prices recover, Russia would likely face ratings pressure and increased concern about the availability of financing, with potential implications for the value of the ruble.

Switzerland

Switzerland has been heavily impacted by the financial crisis due to its out-sized banking system, which has assets six times the GDP. Swiss banks are heavily exposed to the sub-prime and Alt-A mortgage market, and have announced almost $75 billion in write-downs since the crisis began. Economic growth in Switzerland began slowing in the first half of the year and output fell in the second half of the year. Output declined by 1.2 percent on a seasonally-adjusted annualized basis in the fourth quarter as exports fell sharply and bank losses mounted. The IMF expects Swiss real GDP to fall by more than of 2 percent this year, which would be the worst contraction in output since the mid-1970s.

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) has allowed it to follow countercyclical measures, including a $1.3 billion stimulus package and financial support for the banking system. Late in 2008, the Swiss government announced a recapitalization scheme worth $5.2 billion for UBS, the largest bank in Switzerland, and a $60 billion fund to remove illiquid assets from UBS's balance sheet.

The central bank has also responded to the global financial and economic turmoil by aggressively easing monetary policy to help stabilize the financial sector and real economy. After holding interest rates steady for a year, the Swiss National Bank (SNB) cut its central target for the Swiss three-month LIBOR by 225 basis points to 0.5 percent in the fourth quarter of 2008. Given that short-term interest rates are already close to zero and that inflation fell to 0.2 percent year-over-year in February, the SNB on March 12 announced more dramatic and 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. Through these measures, the central bank intends to prevent further appreciation of the Swiss franc vis-à-vis the euro. 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 set to expire in October 2009. At the end of January, $20.4 billion was outstanding.

The U.S. dollar rose 4.5 percent against the Swiss franc in the second half of 2008, and a further 6.7 percent in the first quarter of 2009. On a real effective basis the franc rose by 6.4 percent in the second half of 2008, remaining steady since then. The Swiss franc's overall strength is explained by its significant gains against the euro, appreciating by 7.7 percent in the second half of 2008. Switzerland has a freely floating exchange rate. Switzerland's foreign exchange reserves fell by 4.2 percent to $44.2 billion in the second half of 2008, largely due to valuation adjustments.

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 10 percent of GDP in 2007 to 7.8 percent in the first half of 2008, as the difficulties of Swiss banks amid the financial crisis reduced Switzerland's net investment and services income. The current account surplus, however, rose to 10.7 percent of GDP in the second half of the year, largely because investments in Switzerland fared worse than Swiss investments abroad, improving Switzerland's net investment income. The financial crisis also has affected Switzerland's financial account as Swiss firms sent additional capital to their subsidiaries abroad and inward direct investment decreased, resulting in a financial account deficit of $43 billion in the second half of 2008. The U.S. merchandise trade surplus with Switzerland increased slightly to $614 million in the second half of 2008. Both exports and imports grew strongly relative to the corresponding period in 2007.

United Kingdom

The financial and economic crisis continues to have a profound impact on the United Kingdom. Unsettled conditions in international capital markets, deteriorating domestic demand, and record levels of unemployment weighed heavily on growth. The economy contracted 2.8 percent on a seasonally-adjusted annualized basis in the third quarter and 6.1 percent in the fourth quarter. The housing market was a key a source of domestic weakness. Housing prices declined about 15 percent year-over-year in the final quarter of 2008 and mortgage approvals fell 63 percent. The financial system remains under considerable stress, prompting the government to take stakes in banks and to pursue policies to soften the impact on the real economy.

The Bank of England (BOE) held its bank rate at 5.0 percent through the third quarter due to persistently high inflation, but lowered the rate aggressively during the final quarter of 2008. Between October and December, the BOE reduced its bank rate by 300 basis points and further cut rates in the first three months of 2009 to 0.5 percent, the lowest in the institution's 400-year history. With inflationary pressures abating and its policy rate near zero the BOE announced in March 2009 that it is ready to engage in quantitative easing. Initially, the BOE would issue up to $106 billion in central bank reserves to purchase UK Treasury securities and triple AAA rated corporate debt. It was given the authority to issue up to $212 billion in reserves should conditions warrant further action.

The BOE also has implemented measures to directly aid troubled financial institutions. In April 2008, it introduced a Special Liquidity Scheme that allowed banks to confidentially swap illiquid assets for a prorated amount of U.K. Treasury bills, for up to 3 years. By the time access to the scheme closed in January 2009, nearly $270 billion in U.K. Treasury bills had been swapped for illiquid assets. The BOE also has an unlimited swap line with the Federal Reserve, originally set to expire in April 2009 but extended through October. At the end of January, $23.5 billion was outstanding.

In the second half of 2008, the U.K. government unveiled an array of measures to prop up the financial sector and stimulate the economy. The initial $700 billion rescue plan included $71 billion for the purchase of preferred shares in the country's most troubled financial institutions, $353 billion to guarantee inter-bank loans, and $282 billion to capitalize the Bank of England's Special Liquidity Scheme. In November, the government unveiled a 1.4 percent of GDP stimulus package. Tax breaks are central to the plan with a 2.5 percentage point cut in the VAT through December 2009, but the plan also includes increased capital spending on public infrastructure. Most recently (February 2009), the government created an Asset Protection Scheme that guarantees a portion of bank losses for a commercial fee. So far about $825 billion in assets have been placed under the scheme.

The pound came under significant pressure as capital inflows to the United Kingdom slowed in the second half of the year. The pound depreciated 36.5 percent against the dollar during the second half of 2008 and 15.5 percent on a real effective basis. Foreign exchange reserves fell by $5.2 billion in the second half of 2008 as the result of valuation adjustments. The U.K. has a freely floating market-determined exchange rate, and the Bank of England has not intervened since 1992.

By the end of 2008, the current account deficit narrowed by 44 percent compared to the previous year. U.S. imports from the U.K. fell in the second half of 2008 relative to same period in 2007. As a result, the U.S. bilateral trade deficit shrank to $4.9 billion from $5.7 billion in the second half of 2007.

Middle East

GCC

Six countries make up the Gulf Cooperation Council (GCC): Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. These countries entered the global economic crisis with substantial fiscal and reserve cushions after several years of high oil prices. Regional equity and credit markets have been hit by global pressures, falling oil prices, and Dubai's troubled real estate market. Large accumulated foreign assets suggest GCC members have the resources to mitigate the impact of the global slowdown and run countercyclical policies. Initial 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. The reduction in oil revenue and drawing down of foreign assets will likely reduce Gulf financing flows to the rest of the world.

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.

During the second half of 2008, oil prices receded from their peak and the dollar strengthened, easing inflationary pressures in the region. Forward markets are no longer pricing currency appreciation. Officials continue to publicly state their commitment to maintain the dollar peg and have reaffirmed their intention to form a monetary union (except for Oman, which announced in 2007 that it would not join). GCC members have extended the 2010 deadline for the monetary union and have announced the establishment of a regional Monetary Council by the end of 2009 as a precursor to a GCC Central Bank.

Saudi Arabia

Saudi Arabia entered the global economic crisis with substantial fiscal and reserve cushions after several years of high oil prices, high government revenues, and prudent increases in government spending. The IMF projects that government gross domestic debt fell to 15.8 percent of GDP at the end of 2008 from a high of 103 percent of GDP at the end of 1999. These cushions have facilitated government and central bank aid to the financial sector.

In the banking system, funding pressures have emerged and interbank lending has slowed. In response, the authorities have guaranteed deposits, injected liquidity directly into banks, and lowered the official lending rate and reserve requirements. In January, the Saudi Arabia Monetary Agency (SAMA) lowered its official lending rate to 2 percent, after lowering the rate by 350 basis points from October to January, in sync with U.S. Federal Reserve actions. In November, SAMA reduced reserve requirements to 7 percent after cutting them from 13 to 10 percent in October. These policy actions helped lower the spread between the three-month riyal interbank deposit rate and the official borrowing rate from 148 basis points in September to 40 basis points in February. SAMA also placed roughly $3 billion in deposits into the banking system on October 20 to further ease liquidity pressures.

With real GDP growth expected by the IMF to stagnate in 2009 from an estimated 4.2 percent in 2008, the government has also taken fiscal action to stimulate domestic demand and increase spending on productive infrastructure. The 2009 Saudi budget calls for a 16 percent increase in expenditures over 2008, and projects a fiscal deficit of 4.6 percent of GDP, compared with a fiscal surplus in 2008 projected by the IMF at 32.7 percent of GDP.

Saudi Arabia's current account balance may shift from a large surplus, 29 percent of GDP, in 2008 to a deficit in 2009, as the result of the collapse in oil prices. Its merchandise trade surplus with the U.S. rose by $6.4 billion to $20.8 billion in the last six months of 2008 from the same period the previous year, as U.S. imports rose sharply. Nevertheless, the trade surplus with the United States tumbled in the last two months of the year and continued to decline in early 2009.

Balance of payments pressure is already evident in international reserves, but the large net foreign asset position of SAMA is likely to provide significant support going forward. Official reserves fell by 21 percent from a peak of $38.9 billion in July 2008 to $29.9 billion in February 2009. SAMA's $422 billion in net foreign assets as of February 2009 dwarfs the official reserve position and could be used to help maintain external stability should conditions worsen.

The Saudi riyal is pegged to the U.S. dollar and fluctuations are limited. The riyal rose by 0.1 percent against the dollar in the second half of 2008 to February 2009 but appreciated by 21 percent on a real effective basis, in line with the strengthening U.S. dollar and persistently high domestic inflation.

Western Hemisphere

Argentina

The global economic crisis is impacting the Argentine economy on several fronts. As a significant agricultural exporter, lower commodity prices and falling external demand have reduced export receipts, while the government's response to the crisis has contributed to policy uncertainty, exacerbating pre-existing economic vulnerabilities and spurring capital flight. The economy expanded at a seasonally-adjusted annualized 6.3 percent in the third quarter of 2008, compared to an average quarterly annualized rate of 9.1 percent between 2003 and 2007, but falling consumption and investment growth pointed to a more pronounced slowdown. A mid-year farmers' strike depressed consumer and business confidence and contributed to growing uncertainty about the government's ability to sustain the six-year economic boom. By the fourth quarter of 2008, falling commodity prices and lower external demand further impacted growth, and with the government highly dependent on revenue raised from the commodities sector, increasing market worries over government finances and the balance of payments further eroded domestic confidence. In the fourth quarter, the economy contracted 1.2 percent on an annualized basis, with exports falling 51.5 percent and domestic demand contracting 7.3 percent.

The main Argentine equity market index fell 49 percent in the second half of 2008 and a further 4.3 percent in the first three months of 2009. EMBI spreads on Argentine government debt rose to 1695 basis points by the end of 2008, up 1085 basis points since end-June while sovereign five-year credit default swap spreads increased 3384 basis points to 4041 basis points during the same period. These movements reflected not just increased global risk aversion but also concerns about Argentina's ability to finance sovereign debt service obligations. The EMBI spread was 1891 basis points on March 31, 2009. Growth of credit to the private sector also fell from 35 percent year-over-year in June (roughly the 2006-2008 average) to 20 percent in December as banks became more cautious in their lending activities and investment demand slowed.

The Argentine government took a series of measures to limit the effect of the global crisis on its economy. In October, the government announced that it would nationalize the private pension system, which at the time had roughly $29 billion in assets, citing the need to protect savers from market volatility. Markets, however, viewed the move as an attempt to secure new financing for the government, since the pension funds could be prevailed upon to roll over government debt held and new contributions could be diverted to the fiscal accounts. In the two days following the October 21 announcement, the Argentine stock market fell 20 percent and Argentina's EMBI spreads increased 569 basis points. In December, the government unveiled a $3.9 billion (1.2 percent of GDP) fiscal stimulus package to be used for soft loans for consumers, trade financing, loans for automobile purchases, and support for small- and medium-sized enterprises. The package would be financed by the sale of foreign assets and cash that were held in the portfolio previously administered by the pension funds. Most analysts view the fiscal stimulus as unlikely to overcome the effects of falling investment and dampening consumer sentiment made worse by the pension fund nationalization.

The Argentine government has also sought to ease market concerns about its ability to meet 2009-2010 debt service obligations. In the first two months of 2009, the government completed a debt swap with domestic and foreign holders of peso-denominated debt to lengthen the maturity profile and reduce this year's debt service costs.

Before the crisis, Argentina intervened frequently in the foreign exchange market to promote exchange rate stability. With Argentina's quarterly current account balance registering an average surplus of 3.5 percent of GDP and net dollar inflows averaging 5.0 percent of GDP from 2003 through 2007, the central bank's currency interventions largely involved purchasing dollars, which led to reserve accumulation and relieved some pressure for nominal peso appreciation against the dollar. Argentina's foreign exchange reserves increased from $10.4 billion at the end of 2002 to $45.3 billion at the end of June 2008. In the second quarter of 2008, however, the farmers' strike coincided with large capital outflows and the Argentine central bank sold a net $2.7 billion in foreign exchange. For the full first half of 2008, the central bank sold a net $150 million in foreign exchange. Net capital outflows totaled $10 billion in the first half of 2008, compared to $3.9 billion for all of 2007. The peso gained 4 percent against the dollar in the first half of 2008.

As the impact of the financial crisis spread to emerging markets and markets reacted negatively to the Argentine government's policy direction, the peso again faced depreciation pressures in the fourth quarter of 2008. The central bank sold a net $2 billion in foreign exchange reserves to support the peso in the fourth quarter. During the second half of 2008, the peso depreciated by 14.2 percent against the dollar but rose by 9 percent on a real effective basis as a result of higher inflation and less nominal depreciation against the dollar than its major trading partners. In the first quarter of 2009, the peso depreciated 7.7 percent against the dollar and 6.5 percent on a real effective basis. Argentina's foreign exchange reserves fell by 2.1 percent in the second half of 2008 to $44.4 billion.

Argentina's current account returned to surplus in the third quarter following a small deficit in the second quarter (the first since 2001). The surplus fell from 4.4 percent of GDP in the third quarter of 2008 to 1.9 percent in the fourth quarter. Net capital outflows rose sharply in October but moderated in November and December. In the second half of 2008, net capital outflows totaled $11.3 billion. The U.S. bilateral trade surplus with Argentina fell by $180 million to $650 million in the second half of 2008 from the same period in 2007 as U.S. imports rose by more than U.S. exports.

Brazil

Brazil's real economy has been negatively affected by the global crisis. Weak foreign demand has reduced commodity prices and the value of Brazil's exports. As a result, capital has been flowing out of Brazil ($21 billion net financial and capital outflow in the fourth quarter of 2008) and domestic credit conditions have tightened amid rising non-performing loans. Capital outflows have put downward pressure on the Brazilian real; it has fallen 32 percent since July 1, 2008. Dollars were in significant demand, leading the central bank to intervene repeatedly in the foreign exchange market to support the real and promote orderly conditions.

After expanding by close to 7 percent at a seasonally-adjusted annualized rate in the first three quarters of 2008, output contracted by 13.6 percent in the fourth quarter. Private consumption declined by 7.6 percent and investment spending declined by nearly 34 percent. Output declined the most in the automobile, agriculture, and construction sectors. Exports contracted by 11 percent but imports fell by 29 percent. In the second half of 2008, the United States ran a $2.5 billion bilateral trade surplus with Brazil, up from $0.2 billion in the same period of 2007, as U.S. exports rose at a faster pace than imports. The current account slipped into negative territory in 2008 with a deficit of 1.8 percent of GDP, following several years of small surpluses. A weaker Brazilian growth outlook heightened risk-aversion among lenders, causing credit growth to slow and loan-deposit spreads to widen.

Adverse effects of the global crisis have been partly offset by Brazil's relatively low financial vulnerabilities. At the end of 2008, Brazil's net public sector debt ratio was 36 percent of GDP, foreign reserves ($201 billion) were about equal to Brazil's total external debt ($200 billion), and foreign direct investment (FDI) inflows in the second half of 2008 provided 140 percent coverage for Brazil's current account deficit. With outstanding domestic debt equivalent to only 41 percent of GDP, tighter external credit conditions had only modest deleveraging effects. Bank capital adequacy ratios are robust, though there are signs of increasing risk aversion, tightening domestic credit (from non-public financial institutions), and rising non-performing loan ratios. Accumulated annual consumer price inflation fell from 6.4 percent in July to 5.9 percent in December, within the central bank's 2.5 to 6.5 percent target band.

Between July 1, 2008, and March 31, 2009, the Brazilian real depreciated by 31 percent against the dollar and 22 percent on a real trade-weighted basis. Most of this depreciation stemmed from financial rather than trade-related outflows. In the fourth quarter alone, net capital and financial outflows totaled $21 billion while Brazil's trade balance recorded a $5 billion surplus. Financial outflows were concentrated in deposits and portfolio assets rather than direct investment flows. Despite market volatility, Brazil received $16 billion in net FDI inflows in the second half of 2008. The current account recorded an $11 billion deficit in the second half of 2008 owing in large part to dividend outflows from Brazilian bank subsidiaries. Foreign reserves were unchanged ($202 billion) between July and March as the reserves accrued in the third quarter were used in fourth quarter interventions to support the real.

Monetary expansion has been Brazil's main policy response to the crisis. Between September 2008 and January 2009, the central bank provided $40.4 billion in monetary stimulus through reductions in required reserve requirements on deposit accounts. After increasing its interest rate target by 150 basis points in the third quarter, the central bank has reduced the target rate by 2.5 percentage points (to 11.25 percent) in the first quarter of 2009 and signaled its readiness to continue reducing rates. The central bank also acted to increase dollar liquidity and trade finance through repurchase and swap market transactions and through the creation of a dollar facility for Brazilian importers and exporters whose market access to trade finance had been interrupted. In addition, a dollar facility was created for firms whose external debts mature in 2009. A $30 billion swap line was established between the Federal Reserve and Brazil's central bank. Originally scheduled to expire in April 2009, the swap line has been extended through October. Through the end of January, the central bank had not drawn on the swap line.

Since September, the central bank intervened repeatedly in the foreign exchange market to support the Brazilian real and promote orderly conditions. Foreign exchange intervention did not lead to any changes in Brazil's overall monetary policy framework. Brazil's central bank president reaffirmed Brazil's commitment to inflation targeting and a floating exchange rate.

A second policy response centered on increased public bank lending. Between July and January, public sector bank lending as a share of total outstanding credit increased while private bank lending decreased. From July to December, year-over-year growth in private bank lending decreased from 37 percent to 27 percent, while year-over-year growth in public bank lending increased from 30 percent to 40 percent. BNDES, Brazil's main public development bank, obtained a $42 billion credit line from the Finance Ministry to support investment lending and working capital for small- and medium-sized enterprises. Brazil's largest public banks reduced rates on consumer loans as market conditions tightened in January. Brazil's agricultural sector and automobile sector each received substantial assistance through allocated lending.

Fiscal policy has played a more limited role. In December, the government announced temporary reductions in the IPI (industrial production) tax on automobiles, the IOF (financial operations) tax on consumer loans, and adjusted income tax categories to reduce household tax rates. The combined stimulus effect of these measures was 10.5 billion reals (0.3 percent of GDP). The IPI tax reduction was renewed in March, and is now scheduled to expire in June.

Canada

The Canadian financial system has proved relatively resilient throughout the crisis due to lower leverage and more conservative lending practices. The key transmission mechanism of the financial crisis to Canada has been through the real sector, as a drop in external demand for Canada's products has led to a decrease in employment and output. GDP contracted by 3.4 percent on an annualized basis in the fourth quarter of 2008, after having remained virtually flat through the middle of the year. Since October 2008, employment in Canada has fallen by 356,600, or 1.9 percent of the labor force, and the unemployment rate rose to 8.0 percent in March 2009. As commodity prices dropped in the second half of 2008 due to weakened global demand, the value of the Canadian dollar and of Canadian equities, both of which had increased sharply due to commodity price increases from mid-2007 to mid-2008, fell precipitously. After peaking in June, the TSX composite index lost 41 percent of its value by the end of March 2009. In an effort to stimulate domestic consumption, the government's budget passed on March 12 includes a fiscal stimulus of 2.9 percent of GDP over two years. The stimulus focuses on infrastructure, with spending on roads, bridges, clean energy, broadband internet access, and electronic health records. Despite its strengths, the Canadian financial system has not been immune to spillover effects. In particular, strains in Canadian wholesale funding markets have been significant. 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 $US75 billion of insured mortgages. The Bank of Canada also has a $30 billion swap arrangement with the Federal Reserve. Originally set to expire in April 2009, the swap line has been extended through October. Through the end of January no drawings had been made.

Canada also has been aggressively stimulating its economy through monetary policy since early 2008. After having lowered its policy interest rate three times in the second half of 2008 and once in January 2009, the Bank of Canada again lowered its policy interest rate in March 2009, bringing it to 0.5 percent. The rate is down 250 basis points from mid-2008 and is at its lowest level ever. At the same time, inflation has fallen to 1.4 percent year-over-year in February from its peak of 3.5 percent in August 2008 as commodity prices dropped, allowing the Bank of Canada to continue cutting rates.

The Canadian dollar depreciated 19 percent against the U.S. dollar and 15 percent on a real effective basis in the second half of 2008, due largely to the sharp fall in the price of commodities, but also to the overall strength of the U.S. dollar as investors pursued a flight to quality in U.S. government bonds. In the first quarter of 2009, the Canadian dollar depreciated a further 3.6 percent against the U.S. dollar and 2.9 percent on a real effective basis. 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.

In the fourth quarter of 2008, Canada's current account surplus, which it had maintained for nearly a decade, turned into a deficit of 1.4 percent of GDP. This resulted from a lower goods surplus, as commodity prices decreased and exports of manufactured goods to the United States fell, as well as a higher investment income deficit, as Canadian earnings on foreign direct investment fell. Exports of automotive products were down 19 percent, accounting for nearly half of the quarterly decline in total exports. The U.S. bilateral trade deficit with Canada was $US35.4 billion in the second half of 2008, $US2.2 billion more than in the second half of 2007. U.S. exports to Canada fell by 1.5 percent from the previous year and imports were stagnant. Trade between the two countries fell sharply at the end of the year, with both exports and imports showing double digit declines from the previous year.

Mexico

The impact of the global economic and financial crises became increasingly evident in Mexico in the fourth quarter of 2008. Mexico is highly exposed to the U.S. economy; as domestic demand in the United States weakened, economic growth in Mexico likewise decelerated. Real GDP fell by 10.4 percent on a seasonally-adjusted annualized basis in the fourth quarter, the sharpest decline since 1995. Remittances fell by 5.3 percent year-over-year in the second half of 2008 reflecting exposure to U.S. housing markets, and exports to the United States shrank by 3.2 percent. Oil exports fell by over 40 percent in the fourth quarter due to the sharp decline in oil prices and manufacturing exports contracted by 15 percent.

To mitigate the length and depth of the downturn, the Mexican authorities passed an expansionary 2009 budget in November and introduced another stimulus package in January (two of the 25 measures require congressional approval and remain pending). The combined packages 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 stimulus packages together are estimated at 1.5 percent of 2009 GDP.

As the economy faltered last fall, 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 lost a third of its value against the U.S. dollar in the second half of the year and fell another 14 percent by early March; however, it has since reversed some of these losses, bringing peso depreciation down to 3.2 percent in the first quarter of 2009. On a real effective basis the peso depreciated by 20 percent in the second half of 2008 and 6.6 percent in the first quarter of 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 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 to reduce volatility and maintain market liquidity. Rather than managing foreign exchange reserves accumulation as before, however, the central bank now auctions dollars at a 2 percent depreciated peso rate everyday. These auctions were initially set at a maximum of $400 million a day, but the FX Commission recently lowered the maximum amount sold at below-market rates to $300 million a day and added a daily sale of $100 million at market rates to the interbank market, guaranteeing that a significant portion of the public sector's net foreign currency receipts is sold in the foreign exchange market.

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 and again in early February. On October 10 the central bank sold $6 billion dollars to alleviate pressure on the peso. In the fourth quarter central bank dollar sales were about $15 billion, with the bulk of the sales in October. These were largely offset by dollar sales from both the government and Pemex to the central bank. As a result, the stock of international reserves finished 2008 at $85.4 billion, down slightly from $85.7 billion in the first half of the year. The central bank has since sold another $6.2 billion to address significant volatility in the foreign exchange market.

To ensure sufficient liquidity for banks and corporations and relieve pressure in local debt markets, the central bank also announced 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. The central bank also has a $30 billion swap line with the Federal Reserve that has been extended through October 2009 it recently announced that it will draw for the first time on April 21. To help stabilize financial markets, public sector financial institutions have provided guarantees for commercial paper and mortgage backed securities.

Inflation remained well above the 3.0 percent target in the second half of the year, reaching a seven-year high of 6.5 percent year-over-year in December, but declined to 6.2 percent in February. As the economic contraction has intensified, the central bank reduced its policy rate by a cumulative 150 basis points in early 2009. Nonetheless, concerns persist regarding the impact of currency weakness on inflation going forward which may limit the central bank's scope to further ease monetary policy.

The current account deficit widened to 2.0 percent of GDP in the fourth quarter of 2008 from 1.0 percent of GDP in the first half of the year. Underlying this deterioration was a 7.3 percent decline in total exports, reflecting the generalized decline in external demand and lower oil prices amidst the global slowdown. Although this is a worrying trend, the government purchased put options to sell its 2009 oil exports at $70 per barrel, a transaction that is currently valued at $10 billion and at least will partially offset any current account deficit when it is recorded in the fourth quarter of 2009. The U.S. bilateral trade deficit with Mexico declined to $28.7 billion in the second half of 2008, down $12 billion from the same period in 2007, as U.S. imports declined.

Venezuela

Falling oil prices and the decline in external demand arising from the global financial crisis impacted Venezuela's economy primarily through its external accounts. Declining investment and exports as well as moderating consumption spending all contributed to a deceleration of real GDP growth in the fourth quarter to 3.2 percent year-over-year, versus 4.1 percent year-over-year during the third quarter of 2008. As a result of the run up of oil prices in the first half of 2008, Venezuela posted a current account surplus of $38.1 billion for 2008, up from $20 billion in 2007. However, the sharp drop in oil prices in the second half of the year pushed the current account into deficit in the fourth quarter. Exports declined during this period by 46 percent year-over-year, reflecting largely a 47 percent decline in oil exports. (Oil accounts for 12 percent of the economy and nearly 95 percent of exports.) Non-petroleum exports fell by 20 percent during the second half of the year as the real exchange rate continued to appreciate. Bilaterally, the U.S. trade deficit with Venezuela was $18.6 billion in the second half of 2008, an increase of $1 billion from the second half of 2007. The U.S. trade deficit with Venezuela, however, has fallen sharply in recent months from year ago levels as oil prices have dropped. Meanwhile, the Venezuelan stock market fell 5.8 percent between June 30 and December 31, 2008. During the fourth quarter of 2008, there was a $282 million outflow of foreign direct investment, reflecting the continued poor business environment in spite of developmental opportunities in the oil and gas sector.

Despite strong inflationary pressures stemming from persistent procyclical policies over recent years, the Venezuelan authorities remain focused on expansionary policies. In early 2009, the central bank underscored that high inflation – which topped 30 percent in 2008 – was not a main concern and that ongoing economic deceleration would be its top priority. Along these lines, in March 2009, the Venezuelan central bank cut reserve requirements from 27 percent above the required 2006 baseline to 25 percent and the overnight lending rate from 16 percent to 5.5 percent, a four-month low. Fiscal spending, which is highly exposed to oil price fluctuations, continued to advance at a brisk pace, with the government announcing in December 2008 a $100 billion, five-year spending plan to counteract the drop in oil prices. To help finance continued fiscal expenditures, the central bank in January 2009 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. Venezuela's foreign exchange reserves increased by 44 percent in the second half of 2008 to $32.6 billion. Around $5 billion of this increase consisted of oil revenues from Venezuela's state-controlled oil company, PDVSA, that were transferred in the last days of the year.

Venezuela pegged the 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 fixed nominal exchange rate, combined with high domestic inflation, resulted in a 35 percent appreciation of the real effective exchange rate in the second half of the year, versus a 4.5 percent appreciation during the first half of 2008. In the firs quarter of 2009 the real effective exchange rate appreciated by 7.5 percent. Meanwhile, the parallel exchange rate depreciated 67.7 percent in the second half of the year, falling from 3.4 strong bolivars per U.S. dollar to 5.7. Annual inflation rose to 30.8 percent for 2008, an increase from 22.3 percent in 2007 and reflecting continued high fiscal expenditures and loose monetary policy. Domestic real interest rates continue to be significantly negative.