The Global Financial Crisis: Analysis and Policy Implications

Dick K. Nanto, Coordinator
Specialist in Industry and Trade

July 10, 2009

Congressional Research Service
7-5700
www.crs.gov
RL34742

CRS Report for Congress
Prepared for Members and Committees of Congress

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
10 JUL 2009		**00-00-2009 to 00-00-2009**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
The Global Financial Crisis: Analysis and Policy Implications	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Congressional Research Service,Library of Congress,101 Independence Ave., SE,Washington,DC,20540-7500**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**131**	

Summary

The world has entered a global recession that is causing widespread business contraction, increases in unemployment, and shrinking government revenues. Some of the largest and most venerable banks, investment houses, and insurance companies have either declared bankruptcy or have had to be rescued financially. Nearly all industrialized countries and many emerging and developing nations have announced economic stimulus and/or financial sector rescue packages, such as the American Recovery and Reinvestment Act of 2009 (P.L. 111-5). Several countries have resorted to borrowing from the International Monetary Fund as a last resort. The crisis has exposed fundamental weaknesses in financial systems worldwide, demonstrated how interconnected and interdependent economies are today, and has posed vexing policy dilemmas.

The process for coping with the crisis by countries across the globe has been manifest in four basic phases. The first has been intervention to contain the contagion and restore confidence in the system. This has required extraordinary measures both in scope, cost, and extent of government reach. The second has been coping with the secondary effects of the crisis, particularly the global recession and flight of capital from countries in emerging markets and elsewhere that have been affected by the crisis. The third phase of this process is to make changes in the financial system to reduce risk and prevent future crises. In order to give these proposals political backing, world leaders have called for international meetings to address changes in policy, regulations, oversight, and enforcement. On April 2, 2009, heads of the G-20 nations met in the Leaders' London Summit and announced measures to bolster international financial institutions, stabilize the world economy, and reform and improve the financial regulatory system. The fourth phase of the process is dealing with political, social, and security effects of the financial turmoil. One such effect is the strengthened role of China in financial markets.

The role for Congress in this financial crisis is multifaceted. While the recent focus has been on combating the recession, the ultimate issue perhaps is how to ensure the smooth and efficient functioning of financial markets to promote the general well-being of the country while protecting taxpayer interests and facilitating business operations without creating a moral hazard. In addition to preventing future crises through legislative, oversight, and domestic regulatory functions, Congress plays a key role in generating policy options and informing the public. On the regulatory side, the largest questions seem to be how U.S. regulations should be changed and, if changed, how closely those changes are to be harmonized with international recommendations. Congress also plays a role in measures to reform and recapitalize the International Monetary Fund, the World Bank, and regional development banks.

On June 17, 2009, the Department of the Treasury presented the Obama Administration proposal for financial regulatory reform. The proposal focuses on five areas and includes establishing the Federal Reserve as a systemic risk regulator, creating a Council of Regulators, regulating all financial derivatives, creating a Consumer Financial Protection Agency, improving coordination and oversight of international financial markets, and other provisions. Legislation in Congress also addresses these issues.

Contents

Recent Developments and Analysis 1
The Global Financial Crisis and U.S. Interests 2
Policy 4
Four Phases of the Global Financial Crisis 8
Contain the Contagion and Strengthen Financial Sectors 8
Coping with Macroeconomic Effects 10
Regulatory and Financial Market Reform 12
Dealing with Political, Social, and Security Effects 15
New Challenges and Policy in Managing Financial Risk 21
The Challenges 21
Origins, Contagion, and Risk 28
Risk 32
The Downward Slide 33
Effects on Emerging Markets 38
Latin America 45
Mexico 47
Brazil 49
Argentina 50
Russia and the Financial Crisis 52
Effects on Europe and The European Response 53
The "European Framework for Action" 56
The British Rescue Plan 59
Collapse of Iceland's Banking Sector 60
Impact on Asia and the Asian Response 62
Asian Reserves and Their Impact 65
National Responses 66
Japan 66
China 67
South Korea 72
Pakistan 72
Other Countries' Moves 74
International Policy Issues 75
Bretton Woods II 76
G-20 Meetings 76
The International Monetary Fund 78
Changes in U.S. Regulations and Regulatory Structure 81
Legislation 82

Figures

Figure 1. Quarterly (Annualized) Economic Growth Rates for Selected Countries 11
Figure 2. Origins of the Financial Crisis: The Rise and Fall of Risky Mortgage and Other Debt 30

Figure 3. Selected Stock Market Indices for the United States, U.K., Japan, and Russia 34
Figure 4. Exchange Rate Values for Selected Currencies Relative to the U.S. Dollar 36
Figure 5. Current Account Balances (as a percentage of GDP) 40
Figure 6. Global Foreign Exchange Reserves 41
Figure 7. Capital Flows to Latin America (in percent of GDP) 43
Figure 8. Capital Flows to Developing Asia (in percent of GDP) 43
Figure 9. Capital Flows to Central and Eastern Europe (in percent of GDP) 44
Figure 10. Asian Current Account Balances are Mostly Healthy 63
Figure 11. Monthly Change in Chinese FDI and Trade: April 2008-May 2009 69

Tables

Table 1. Problems, Targets of Policy, and Actions Taken or Possibly to Take in Response to the Global Financial Crisis 25
Table 2. Stimulus Packages by Selected Countries 37
Table 3.China's Central Government November 2008 Domestic Stimulus Package 70

Appendixes

Appendix A. Major Recent Actions and Events of the International Financial Crisis 83
Appendix B. Stimulus Packages Announced by Governments 111
Appendix C. London Summit—Leaders' Statement 114
Appendix D. Comparison Selected Financial Regulatory Reform Proposals 121
Appendix E. British, U.S., and European Central Bank Operations, April to Mid-October 2008 125

Contacts

Author Contact Information 127

Recent Developments and Analysis[1]

July 8-10. The G8 Summit in Italy included a dialogue with five developing countries (Brazil, China, India, Mexico, and South Africa). The summit resulted in declarations or statements dealing with Responsible leadership for a sustainable future, Non Proliferation, Counter Terrorism, Promoting the global agenda, Energy and Climate, G8-Africa Partnership on Water and Sanitation, and Global Food Security,

July 10. A new General Motors emerged from bankruptcy protection (filed for bankruptcy on June 1) as a leaner automaker and with 60.8% government ownership.

June 30. The Obama Administration delivered to Capitol Hill a bill that would create the Consumer Financial Protection Agency whose mission would be to promote access and protect consumers from unscrupulous practices across the market. This new agency is to implement and enforce the new credit card bill and would have authority to combat the worst abuses in mortgage markets. See H.R. 3126.

June 24. H.R. 2346 (P.L. 111-32) increased the U.S. quota in the International Monetary Fund by 4.5 billion SDRs ($7.69 billion), provided loans to the IMF of up to an additional 75 billion SDRs ($116.01 billion), and authorized the United States Executive Director of the IMF to vote to approve the sale of up to 12,965,649 ounces of the Fund's gold. On June 18, Congress had cleared H.R. 2346, the $105.9 billion war supplemental spending bill, that mainly funds military operations in Iraq and Afghanistan through September but also included the IMF provisions. The President's signing statement rejected certain congressional conditions on the funding, but a provision in H.R. 3081 that passed the house on July 9, 2009, was designed to overrule the President on this issue.

June 22. The World Bank's analysis of the global economy painted an unprecedented picture: global output falling by 2.9% and world trade by nearly 10%; accompanied by plummeting private capital flows, likely to decline from $707 billion in 2008 to an anticipated $363 billion in 2009.

June 17. The U.S. Treasury released the Obama Administration proposals to reorganize the financial regulatory system. Key areas of reform include systemic risk, securitization, derivatives, and consumer protection.

****

The global economic slide appears to be nearing a bottom, although the outlook for Europe and Japan is worsening. Asia (except Japan) appears to be recovering first. China is expected to grow at about 7.7% in 2009. The outlook for the United States is for change in real GDP to be around minus 3% for 2009 with a recovery starting toward the end of the year. U.S. unemployment, however, is expected to continue to rise to more than 10% in 2010.

[1] For a more complete list of major developments and actions, see **Appendix A**.

The Global Financial Crisis and U.S. Interests[2]

The global financial crisis has now moved from containing the contagion to coping with the global recession and changing regulations to prevent a reoccurrence of the problem. Some security and foreign policy effects of the crisis also are beginning to appear. This report provides an overview of the global aspects of the financial crisis, how it developed, proposals for regulatory change, and a review of how the crisis is affecting other regions of the world.

The role for Congress in this financial crisis is multifaceted. The overall issue seems to be how to ensure the smooth and efficient functioning of financial markets to promote the general well-being of the country while protecting taxpayer interests and facilitating business operations without creating a moral hazard.[3] In addition to preventing future crises through legislative, oversight, and domestic regulatory functions, Congress has been providing funds and ground rules for economic stabilization and rescue packages and informing the public through hearings and other means. Congress also plays a role in measures to reform the international financial system, in recapitalizing international financial institutions, such as the International Monetary Fund, and in replenishing funds for poverty reduction arms of the World Bank (International Development Association) and regional development banks.

What began as a bursting of the U.S. housing market bubble and a rise in foreclosures has ballooned into a global financial and economic crisis. Some of the largest and most venerable banks, investment houses, and insurance companies have either declared bankruptcy or have had to be rescued financially. In October 2008, credit flows froze, lender confidence dropped, and one after another the economies of countries around the world dipped toward recession. The crisis exposed fundamental weaknesses in financial systems worldwide, and despite coordinated easing of monetary policy by governments, trillions of dollars in intervention by central banks and governments, and large fiscal stimulus packages, the crisis seems far from over.

This financial crisis which began in industrialized countries quickly spread to emerging market and developing economies. Investors pulled capital from countries, even those with small levels of perceived risk, and caused values of stocks and domestic currencies to plunge. Also, slumping exports and commodity prices have added to the woes and pushed economies world wide either into recession or into a period of slower economic growth. The global crisis now seems to be played out on two levels. The first is among the industrialized nations of the world where most of the losses from subprime mortgage debt, excessive leveraging of investments, and inadequate capital backing credit default swaps (insurance against defaults and bankruptcy) have occurred. The second level of the crisis is among emerging market and other economies who may be "innocent bystanders" to the crisis but who also may have less resilient economic systems that can often be whipsawed by actions in global markets. Most industrialized countries (except for Iceland) have been able to finance their own rescue packages by borrowing domestically and in international capital markets, but many emerging market and developing economies have insufficient sources of capital and have turned to help from the International Monetary Fund (IMF), World Bank, or from capital surplus nations, such as Japan, and the European Union.

[2] Prepared by Dick K. Nanto, Specialist in Industry and Trade, Foreign Affairs, Defense, and Trade Division.

[3] A moral hazard is created if a government rescue of private companies encourages those companies and others to engage in comparable risky behavior in the future, since the perception arises that they will again be rescued if necessary and not have to carry the full burden of their losses.

For the United States, the financial turmoil touches on the fundamental national interest of protecting the economic security of Americans. It also is affecting the United States in achieving national foreign policy goals, such as maintaining political stability and cooperative relations with other nations and supporting a financial infrastructure that allows for the smooth functioning of the international economy. Reverberations from the financial crisis, moreover, are not only being felt on Wall Street and Main Street but are being manifest in world flows of exports and imports, rates of growth and unemployment, government revenues and expenditures, and in political risk in some countries. The simultaneous slowdown in economic activity around the globe indicates that emerging market and developing economies have not decoupled from industrialized countries and governments cannot depend on exports to pull them out of these recessionary conditions.

This global financial and economic crisis has brought to the public consciousness several arcane financial terms usually confined to the domain of regulators and Wall Street investors. These terms lie at the heart of both understanding and resolving this financial crisis and include:

- Systemic risk: The risk that the failure of one or a set of market participants, such as core banks, will reverberate through a financial system and cause severe problems for participants in other sectors. Because of systemic risk, the scope of regulatory agencies may have to be expanded to cover a wider range of institutions and markets.[4]
- Deleveraging: The unwinding of debt. Companies borrow to buy assets that increase their growth potential or increase returns on investments. Deleveraging lowers the risk of default on debt and mitigates losses, but if it is done by selling assets at a discount, it may depress security and asset prices and lead to large losses. Hedge funds tend to be highly leveraged.
- Procyclicality: The tendency for market players to take actions over a business cycle that increase the boom-and-bust effects, e.g. borrowing extensively during upturns and deleveraging during downturns. Changing regulations to dampen procyclical effects would be extremely challenging.[5]
- Preferred equity: A cross between common stock and debt. It gives the holder a claim, prior to that of common stockholders, on earnings and on assets in the event of liquidation. Most preferred stock pays a fixed dividend. As a result of the stress tests in early 2009, some banks may increase their capital base by converting preferred equity to common stock.
- Collateralized debt obligations (CDOs): a type of structured asset-backed security whose value and payments are derived from a portfolio of fixed-income underlying assets. CDOs based on sub-prime mortgages have been at the heart of the global financial crisis. CDOs are assigned different risk classes or tranches, with "senior" tranches considered to be the safest. Since interest and principal payments are made in order of seniority, junior tranches offer higher coupon

[4] International Monetary Fund, *2009 Global Financial Stability Report: Responding to the Financial Crisis and Measuring systemic Risks*, Summary Version, Washington, DC, April 2009, p. 1ff.

[5] See Jochen Andritzky, John Kiff, Laura Kodres, Pamela Madrid, and Andrea Maechler, *Policies to Mitigate Procyclicality*, International Monetary Fund, IMF Staff Position Note SPN/09/09, Washington, DC, May 7, 2009.

payments (and interest rates) or lower prices to compensate for additional default risk. Investors, pension funds, and insurance companies buy CDOs.

- Credit default swap (CDS): a credit derivative contract between two counterparties in which the buyer makes periodic payments to the seller and in return receives a sum of money if a certain credit event occurs (such as a default in an underlying financial instrument). Payoffs and collateral calls on CDSs issued on sub-prime mortgage CDOs have been a primary cause of the problems of AIG and other companies.

The global financial crisis has brought home an important point: the United States is still a major center of the financial world. Regional financial crises (such as the Asian financial crisis, Japan's banking crisis, or the Latin American debt crisis) can occur without seriously infecting the rest of the global financial system. But when the U.S. financial system stumbles, it may bring major parts of the rest of the world down with it.[6] The reason is that the United States is the main guarantor of the international financial system, the provider of dollars widely used as currency reserves and as an international medium of exchange, and a contributor to much of the financial capital that sloshes around the world seeking higher yields. The rest of the world may not appreciate it, but a financial crisis in the United States often takes on a global hue.

Policy

Early U.S. policy was aimed at containing the contagion and in dealing with the ensuing recession. The two largest legislative actions were the Troubled Asset Relief Program aimed at providing support for financial institutions[7] and the American Recovery and Reinvestment Act of 2009 aimed at providing stimulus to the economy.[8]

Policy proposals to change specific regulations as well as the structure of regulation and supervision at both the domestic and international levels have been coming forth through the legislative process, from the Administration, and from recommendations by international organizations such as the IMF,[9] Bank for International Settlements,[10] and Financial Stability Board (Forum).[11] On June 17, 2009, the Obama administration announced its plan for regulatory reform of the U.S. financial system.[12] In Congress, numerous bills have been introduced that deal with issues such as establishing a commission/select committee to investigate causes of the

[6] See, for example, Friedman, George and Peter Zeihan. "The United States, Europe and Bretton Woods II." A Strafor Geopolitical Intelligence Report, October 20, 2008.

[7] CRS Report RL34730, *Troubled Asset Relief Program: Legislation and Treasury Implementation*, by Baird Webel and Edward V. Murphy.

[8] CRS Report R40537, *American Recovery and Reinvestment Act of 2009 (P.L. 111-5): Summary and Legislative History*, by Clinton T. Brass et al.

[9] For analysis and recommendations by the International Monetary Fund, see "Global Financial Stability Report, Financial Stress and Deleveraging, Macro-Financial Implications and Policy," October 2008. 246 p.

[10] For information on Basel II, see CRS Report RL34485, *Basel II in the United States: Progress Toward a Workable Framework*, by Walter W. Eubanks.

[11] Now called the Financial Stability Board. For recommendations by the Financial Stability Forum, see "Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience, Follow-up on Implementation," October 10, 2008. 39 p.

[12] U.S. Department of the Treasury, *Financial Regulatory Reform: A New Foundation: Rebuilding Financial Supervision and Regulation*, Washington, DC, June 2009, 85 p.

financial crisis, provide oversight and greater accountability of Federal Reserve and Treasury lending activity, deal with problems in the housing and mortgage markets, provide funding for the International Monetary Fund, address problems with consumer credit cards, provide for improved oversight for financial and commodities markets, deal with the U.S. national debt, and establish a systemic risk monitor.

The United States, however, cannot be a regulatory island among competing nations of the world. In an international marketplace of multinational corporations, instant transfers of wealth, lightning fast communications, and globalized trading systems for equities and securities, if U.S. regulations are anomalous or significantly more "burdensome" than those in other industrialized nations, business and transactions could migrate toward other markets. Hence, many have emphasized the need to coordinate regulatory changes among nations. The vehicle for forming an international consensus on measures to be taken by individual countries is the G-20 along with the International Monetary Fund and new Financial Stability Board[13] (based in Switzerland), although some developing nations prefer the more inclusive G-30. The April 2009 G-20 London Summit called for a greater role for the IMF and for it to collaborate with the new Financial Stability Board to provide early warning of macroeconomic and financial risks and actions needed to address them.[14] The leaders also agreed that national financial supervisors should establish Colleges of Supervisors consisting of national financial supervisory agencies that oversee globally active financial institutions. (See **Appendix C** and "G-20 Meetings" section of this report.) Still, work at the international level remains advisory.

At the April 2009 G-20 London Summit, a schism arose between the United States and the U.K., who were arguing for large and coordinated stimulus packages, and Germany and France, who considered their automatic stabilizers (increases in government expenditures for items such as unemployment insurance that are triggered any time the economy slows) plus existing stimulus programs as sufficient. In the communiqué, the G-20 leaders decided to add $1.1 trillion in resources to the international financial institutions, including $750 billion for the International Monetary Fund, $250 billion to boost global trade, and $100 billion for multilateral development banks. On June 24, 2009, President Obama signed H.R. 2346 into law (P.L. 111-32). This increased the U.S. quota in the International Monetary Fund by 4.5 billion SDRs ($7.69 billion), provided loans to the IMF of up to an additional 75 billion SDRs ($116.01 billion), and

[13] The following countries and territories are represented on the Financial Stability Board: Argentina, Australia, Brazil, China, Canada, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Switzerland, Turkey, the United Kingdom, and the United States. The following institutions, standard-setting bodies and other groupings are also members of the FSB: the Bank for International Settlements, European Central Bank, European Commission, International Monetary Fund, Organisation for Economic Co-operation and Development, World Bank, Basel Committee on Banking Supervision, International Accounting Standards Board, International Association of Insurance Supervisors, International Organization of Securities Commissions, Committee on the Global Financial System, and Committee on Payment and Settlement Systems.

[14] In addition to the mandate of the Financial Stability Forum (to assess vulnerabilities affecting the financial system, identify and oversee action needed to address them, and promote coordination and information exchange among authorities responsible for financial stability), the Financial Stability Board is to (1) monitor and advise on market developments and their implications for regulatory policy; (2) advise on and monitor best practice in meeting regulatory standards; (3) undertake joint strategic reviews of the policy development work of the international standard setting bodies to ensure their work is timely, coordinated, focused on priorities and addressing gaps; (4) set guidelines for and support the establishment of supervisory colleges; (5) manage contingency planning for cross-border crisis management, particularly with respect to systemically important firms; and (6) collaborate with the IMF to conduct Early Warning Exercises.

authorized the United States Executive Director of the IMF to vote to approve the sale of up to 12,965,649 ounces of the Fund's gold.[15]

On June 17, 2009, the Department of the Treasury presented the Obama Administration proposal for financial regulatory reform. The proposals focus on five areas as indicated below. In many cases, legislation in Congress also addresses these issues.

1. Promote robust supervision and regulation of financial firms.

a. A new **Financial Services Oversight Council** to identify emerging systemic risks and improve interagency cooperation (chaired by Treasury and including the heads of the principal federal financial regulators as members).

b. New authority for the **Federal Reserve to supervise all firms** that could pose a threat to financial stability, even those that do not own banks.

c. **Stronger capital and other prudential standards** for all financial firms, and even higher standards for large, interconnected firms.

d. A new **National Bank Supervisor** (a single agency with separate status in Treasury to supervise all federally chartered banks).

e. **Elimination of the federal thrift charter** and other loopholes that allowed some depository institutions to avoid bank holding company regulation by the Federal Reserve.

f. The **registration of advisers of hedge funds** and other private pools of capital with the SEC.

2. Establish comprehensive supervision of financial markets.

a. **Enhanced regulation of securitization markets**, including new requirements for market transparency, stronger regulation of credit rating agencies, and a requirement that issuers and originators retain a financial interest in securitized loans.

b. Comprehensive **regulation of all over-the-counter derivatives**.

c. New authority for the **Federal Reserve to oversee** payment, clearing, and settlement systems.

3. Protect consumers and investors from financial abuse.

a. A new **Consumer Financial Protection Agency** (an independent entity) to protect consumers across the financial sector from unfair, deceptive, and abusive practices.

b. **Stronger regulations** to improve the transparency, fairness, and appropriateness of consumer and investor products and services.

c. A level playing field and **higher standards for providers** of consumer financial products and services, whether or not they are part of a bank.

4. Provide the government with the tools it needs to manage financial crises.

a. A **new regime to resolve nonbank financial institutions** whose failure could have serious systemic effects.

[15] An SDR is a Special Drawing Right, a type of international currency created by the IMF that can be converted into a national currency for use. One SDR currently is worth about $1.55 dollars.

b. Revisions to the **Federal Reserve's emergency lending authority** to improve accountability.

5. Raise **international regulatory standards** and improve international cooperation. Treasury proposed international reforms to support U.S. efforts, including strengthening the capital framework; improving oversight of global financial markets; coordinating supervision of internationally active firms; and enhancing crisis management tools.

Treasury also proposed the creation of an **Office of National Insurance** within the Department of the Treasury.

With respect to macro-prudential supervision and systemic risk, the Treasury Plan proposed that the U.S. Federal Reserve serve as a systemic regulator. Also, in Congress, H.R. 1754/S. 664 would create a systemic risk monitor for the financial system of the United States, to oversee financial regulatory activities of the federal government, and for other purposes.[16] Among its provisions are to establish an independent Financial Stability Council, to require the Federal Reserve to promulgate rules to deal with systemic risk, and to transfer authorities and functions of the Office of Thrift Supervision to the Comptroller of the Currency. (The Treasury Plan would call this combined agency the National Bank Supervisor.)

Other countries have addressed their own versions of the systemic risk problem. The United Kingdom, for example, created a tripartite regulatory and oversight system consisting of the Bank of England, H.M. Treasury, and a Financial Services Agency (a national regulatory agency for all financial services). Australia and the Netherlands have created systems in which one financial regulatory agency is responsible for prudential regulation of relevant financial institutions and a separate and distinct regulatory agency is responsible for business conduct and consumer protection.[17] The European Union is considering the creation of a new European Systemic Risk Council and European System of Financial Supervisors composed of new European Supervisory Authorities.[18]

In Congress, several bills deal with concerns over the perceived failures of credit rating agencies[19] in assigning ratings to derivatives and other financial products. These include H.R. 74, H.R. 1181, H.R. 1445, S. 927, and S. 1073.

Other bills have been introduced that would provide for the establishment of commissions or special committees to study the causes of the financial crisis. S. 386 (P.L. 111-21, Section 5) establishes a 10-member Financial Crisis Inquiry Commission in the legislative branch to examine the causes of the current U.S. financial and economic crisis, taking into account fraud and abuse in the financial sector and other specified factors. It authorizes $5 million for the Commission and requires the Commission to submit a final report on its findings to the President and Congress on December 15, 2010, requires the Commission chairperson to appear before the House Committee on Financial Services and the Senate Committee on Banking, Housing, and

[16] For discussion, see CRS Report R40417, *Macroprudential Oversight: Monitoring the Financial System*, by Darryl E. Getter.

[17] U.S. Department of the Treasury. *The Department of the Treasury Blueprint for a Modernized Financial Regulatory Structure*. March 2008. 217 p.

[18] EUROPA, *Financial Services: Commissioni proposes stronger financial supervision in Europe*, Press release IP/90/836, Brussels, Belgium, May 27, 2009.

[19] See CRS Report R40613, *Credit Rating Agencies and Their Regulation*, by Gary Shorter and Michael V. Seitzinger

Urban Affairs within 120 days after the submission of such report, and terminates the Commission 60 days after the submission of such report. It also requires Republican approval before the commission could issue subpoenas. Other bills related to commissions or special committees include H.Res. 345, H.R. 74, H.R. 768, S. 298, and S. 400.

Numerous bills have been introduced related to the housing market, mortgages, and foreclosures. They address issues such as: the Troubled Assets Relief Program and its operation[20] and foreclosure prevention initiatives.[21] For details, see the CRS reports cited in the footnote below.

The protection of consumers from allegedly unscrupulous practices in mortgage, credit card, other financial markets also has risen as a priority issue with the Obama Administration. On June 30, the Administration delivered to Capitol Hill a bill that would create a new Consumer Financial Protection Agency whose mission would be to promote access and protect consumers from such unscrupulous practices across financial markets. This proposed agency would implement and enforce the Credit Card Act of 2009 (H.R. 627, P.L. 111-24) and would have powers to write and enforce consumer protection rules for banks, mortgage lenders, and other financial institutions, and could cover credit cards, mortgages, checking and savings accounts, and pay-day loans. The plan would move responsibility for consumer protection from the current bank regulators to the new agency.[22] On July 15, 2009, H.R. 3126 was introduced. It would create a new Financial Protection Agency.

Four Phases of the Global Financial Crisis

The global financial crisis as it has played out in countries across the globe has been manifest in four overlapping phases. Although each phase has a policy focus, each phase of the crisis affects the others, and, until the crisis has passed, no phase seems to have a clear end point.

Contain the Contagion and Strengthen Financial Sectors

The first phase has been intervention to contain the contagion and strengthen financial sectors in countries.[23] On a macroeconomic level, this has included policy actions such as lowering interest rates, expanding the money supply, quantitative (monetary) easing, and actions to restart and restore confidence in credit markets. On a microeconomic level, this has entailed actions to resolve immediate problems and effects of the crisis including financial rescue packages for ailing firms, guaranteeing deposits at banks, injections of capital, disposing of toxic assets, and restructuring debt. This has involved decisive (and, in cases, unprecedented) measures both in scope, cost, and extent of government reach. Actions taken include the rescue of financial institutions considered to be "too big to fail" and government takeovers of certain financial

[20] CRS Report RL34730, *Troubled Asset Relief Program: Legislation and Treasury Implementation*, by Baird Webel and Edward V. Murphy.

[21] CRS Report R40210, *Preserving Homeownership: Foreclosure Prevention Initiatives*, by Katie Jones. CRS Report R40498, *Overview of the Securities Act of 1933 as Applied to Private Label Mortgage-Backed Securities*, by Kathleen Ann Ruane.

[22] U.S. Department of the Treasury, *Administration's Regulatory Reform Agenda Moves Forward: Legislation for Strengthening Consumer Protection Delivered To Capitol Hill*, Press Release TG-189, Washington, DC, June 30, 2009. Karey Wutkowski, "Consumer agency to slim regulatory burden: U.S. watchdog," *Reuters*, June 30, 2009, http://www.Reuters.com.

[23] See CRS Report RL34412, *Containing Financial Crisis*, by Mark Jickling.

institutions, government facilitation of mergers and acquisitions, and government purchases of problem financial assets. Nearly every industrialized country and many developing and emerging market countries have pursued some or all of these actions. Although the "panic" phase of containing the contagion has passed, operations still are continuing, and the ultimate cost of the actions are yet to be determined. (See **Appendix E** for early containment actions.)

In the United States, traditional monetary policy almost has reached its limit as the Federal Reserve has lowered its discount rate to 0.5% and has a target rate for the federal funds rate of 0.0 to 0.25%. The Federal Reserve and Treasury, therefore, have turned toward quantitative monetary easing (buying government securities and injecting more money into the economy) and dealing directly with the toxic assets being held by banks.[24]

What has been learned from previous financial crises is that without a resolution of underlying problems with toxic assets and restoring health to the balance sheet of banks and other financial institutions, financial crises continue to drag on. This was particularly the case with Japan.[25] Even Sweden, often viewed as a successful model of how to cope with a financial crisis, had to take decisive action to deal with the nonperforming assets of its banking system.[26]

In the United States, the Treasury, Federal Reserve, Federal Deposit Insurance Corporation, Office of Thrift Supervision, and Comptroller of the Currency have worked together to contain the contagion. Under the $700 billion Troubled Asset Relief Program[27] (TARP, H.R. 1424/P.L. 110-343), the Treasury has invested in dozens of banks, General Motors, Chrysler and the insurer A.I.G. The investments are in the form of preferred stock that pays quarterly dividends. On March 23, 2009, The U.S. Treasury released the details of its $900 billion Public Private Partnership Investment Program to address the challenge of toxic (legacy) assets being carried by the financial system.[28]

The U.S. Federal Reserve also has conducted about $1.2 trillion in emergency commitments to stabilize the financial sector. Its interventions have included a safety net for commercial banks, the rescue of Bear Stearns, a lending facility for investment banks and brokerages, loans for money-market assets and commercial paper, and purchases of securitized loans and lending to businesses and consumers for purchases of asset-backed securities.[29]

---

[24] See Board of Governors of the Federal Reserve System, *Federal Reserve Press Release*, March 18, 2009. U.S. Department of the Treasury, *U.S. Treasury and Federal Reserve Board Announce Launch of Term Asset-Backed Securities Loan Facility (TALF)*, Press Release tg-45, March 3, 2009. CRS Report RL31416, *Monetary Aggregates: Their Use in the Conduct of Monetary Policy*, by Marc Labonte.

[25] Eric S. Rosengren, *Addressing the Credit Crisis and Restructuring the Financial Regulatory System: Lessons from Japan*, Federal Reserve Bank of Boston, Paper given at the Institute of International Bankers Annual Washington Conference, Boston, MA, March 2, 2009.

[26] Thomas F. Cooley, "Swedish Banking Lessons," *Forbes.com*, January 28, 209.

[27] For details, see CRS Report RL34730, *Troubled Asset Relief Program: Legislation and Treasury Implementation*, by Baird Webel and Edward V. Murphy

[28] U.S. Department of the Treasury, *Treasury Department Releases Details on the Public Private Partnership Investment Program*, Press Release tg-65, March 23, 2009.

[29] For details, see CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*, by Marc Labonte. "The Fed's Trillion," *The Washington Post*, May 5, 2009, p. A14.

Coping with Macroeconomic Effects

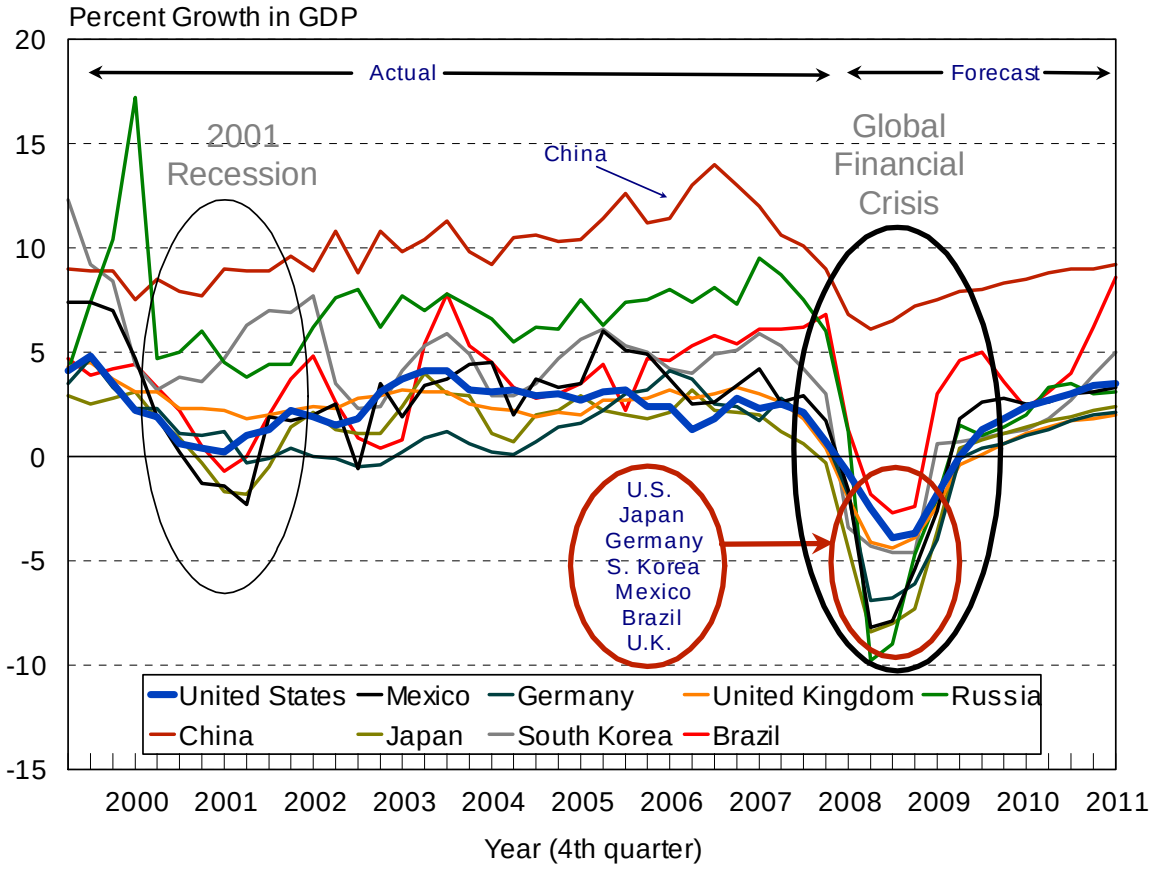
The second phase of this financial crisis is less uncommon except that the severity of the macroeconomic downturn confronting countries around the world is the worst since the Great Depression of the 1930s. The financial crisis soon spread to real sectors to negatively affect whole economies, production, firms, investors, and households. Many of these countries, particularly those with emerging and developing markets, have been pulled down by the ever widening flight of capital from their economies and by falling exports and commodity prices. In these cases, governments have turned to traditional monetary and fiscal policies to deal with recessionary economic conditions, declining tax revenues, and rising unemployment.

Figure 1 shows the effect of the financial crisis on economic growth rates (annualized changes in real GDP by quarter) in selected nations of the world. The figure shows the difference between the 2001 recession that was confined primarily to countries such as the United States, Mexico, and Japan and the current financial crisis that is pulling down growth rates in a variety of countries. The slowdown—recession for many countries—is global. The implication of this synchronous drop in growth rates is that the United States and other nations may not be able to export their way out of recession. Even China is experiencing a "growth recession." There is no major economy that can play the role of an economic engine to pull other countries out of their economic doldrums.

In June 2009, there has been a growing consensus among forecasters that the world has seen the worst of the global recession and that economies would hit bottom in 2009 and begin a weak recovery in 2010. On June 24, the Organization for Economic Cooperation and Development revised its world economic outlook upwards for the first time in two years. Most of this improved outlook, however, was in higher growth in China (7.7%) and other developing countries and less negative growth in the United States (-2.8%) for 2009. The outlook for the Eurozone (-4.8%) and Japan (-6.8%) for 2009 was slightly worse. The OECD reported that housing prices were falling in all OECD countries except for Switzerland. [30]

[30] Norma Cohen, "OECD Sees Strongest Outlook since 2007," *Financial Times*, June 24, 2009, FT.com.

Figure 1. Quarterly (Annualized) Economic Growth Rates for Selected Countries



Source: Congressional Research Service. Data and forecasts (March 15) by Global Insight.

In response to the recession or slowdown in economic growth, many countries have adopted fiscal stimulus packages designed to induce economic recovery or at least keep conditions from worsening. These are summarized in **Table 2** and **Appendix B** and include packages by China ($586 billion), the European Union ($256 billion), Japan ($250 billion), Mexico ($54 billion), and South Korea ($52.5 billion).The global total for stimulus packages now exceeds $2 trillion, but some of the packages include measures that extend into subsequent years, so the total does not imply that the entire amount will translate into immediate government spending. The stimulus packages by definition are to be fiscal measures (government spending or tax cuts) but some packages include measures aimed at stabilizing banks and other financial institutions that usually are categorized as bank rescue or financial assistance packages. The $2 trillion total in stimulus packages amounts to approximately 3% of world gross domestic product, an amount that exceeds the call by the International Monetary Fund for fiscal stimulus totaling 2% of global GDP to counter worsening economic conditions world wide.[31] If only new fiscal stimulus measures to be done in 2009 are counted, however, the total and the percent of global GDP figures would be considerably lower. An analysis of the stimulus measures by the European Community for 2009 found that such measures amount to an estimated 1.32% of European Community GDP.[32] The

[31] Camilla Anderson, *IMF Spells Out Need for Global Fiscal Stimulus*, International Monetary Fund, IMF Survey Magazine: Interview, Washington, DC, December 28, 2008.

[32] David Saha and Jakob von Weizsäcker, *Estimating the size of the European stimulus packages for 2009*, Brugel, (continued...)

IMF estimated that as of January 2009, the U.S. fiscal stimulus packages as a percent of GDP in 2009 would amount to 1.9%, for the euro area 0.9%, for Japan 1.4%, for Asia excluding Japan 1.5%, and for the rest of the G-20 countries 1.1%.[33]

At the G-20 London Summit, a schism arose between the United States and the U.K., who were arguing for large and coordinated stimulus packages, and Germany and France, who considered their automatic stabilizers (increases in government expenditures for items such as unemployment insurance that are triggered any time the economy slows) plus existing stimulus programs as sufficient. In their communiqué, the leaders noted that $5 trillion will have been devoted to fiscal expansion by the end of 2010 and committed themselves to "deliver the scale of sustained fiscal effort necessary to restore growth." In the communiqué, the G-20 leaders decided to add $1.1 trillion in resources to the international financial institutions, including $750 billion more for the International Monetary Fund, $250 billion to boost global trade, and $100 billion for multilateral development banks. (See **Appendix C** for the London Summit communiqué.)

The additional lending by the international financial institutions would be in addition to national fiscal stimulus efforts and could be targeted to those countries most in need. Several countries have borrowed heavily in international markets and carry debt denominated in euros or dollars. As their currencies have depreciated, the local currency cost of this debt has skyrocketed. Other countries have banks with debt exposure almost as large as national GDP. Some observers have raised the possibility of a sovereign debt crisis[34] (countries defaulting on government guaranteed debt) or as in the case of Iceland having to nationalize its banks and assume liabilities greater than the size of the national economy.

Since November 1, 2008, the IMF, under its Stand-By Arrangement facility, has provided or is in the process of providing financial support packages for Iceland ($2.1 billion), Ukraine ($16.4 billion), Hungary ($25.1 billion), Pakistan ($7.6 billion), Belarus ($2.46 billion), Serbia ($530.3 million), Armenia ($540 million), El Salvador ($800 million), Latvia ($2.4 billion), Seychelles ($26.6 million), Mongolia ($229.2 million), Costa Rica ($735 million), Guatemala ($935 million), and Romania ($17.1 billion). The IMF also created a Flexible Credit Line for countries with strong fundamentals, policies, and track records of policy implementation. Once approved, these loans can be disbursed when the need arises rather than being conditioned on compliance with policy targets as in traditional IMF-supported programs. Under this facility, the IMF board has approved Mexico ($47 billion), Poland ($20.5 billion), and Columbia ($10.5 billion).[35]

Regulatory and Financial Market Reform

The third phase of the global financial crisis—to decide what changes may be needed in the financial system—also is underway. In order to coordinate reforms in national regulatory systems and give such proposals political backing, world leaders began a series of international meetings

(...continued)

JVW/ DS, 12 December 2008.

[33] Charles Freedman, Michael Kumhof, Douglas Laxton, and Jaewoo Lee, *The Case for Global Fiscal Stimulus*, International Monetary Fund, IMF Staff Position Note SPN/09/03, March 6, 2009.

[34] Steven Pearlstein, "Asia, Europe Find Their Supply Chains Yanked. Beware the Backlash," *The Washington Post*, February 20, 2009, pp. D1, D3.

[35] International Monetary Fund, *IMF Financial Activities—Update June 18, 2009*, Washington, DC, June 18, 2009, http://www.imf.org/external/np/tre/activity/2009/061809.htm.

to address changes in policy, regulations, oversight, and enforcement. Some are characterizing these meetings as Bretton Woods II.[36] The G-20 leaders' Summit on Financial Markets and the World Economy that met on November 15, 2008, in Washington, DC, was the first of a series of summits to address these issues. The second was the G-20 Leader's Summit on April 2, 2009, in London (see **Appendix C**),[37] and the third is to be held in November 2009.

In this third phase, the immediate issues to be addressed by the United States and other nations center on "fixing the system" and preventing future crises from occurring. Much of this involves the technicalities of regulation and oversight of financial markets, derivatives, and hedging activity, as well as standards for capital adequacy and a schema for funding and conducting future financial interventions, if necessary. In the November 2008 G-20 Summit, the leaders approved an Action Plan that sets forth a comprehensive work plan.

The leaders instructed finance ministers to make specific recommendations in the following areas:

- Avoiding regulatory policies that exacerbate the ups and downs of the business cycle;
- Reviewing and aligning global accounting standards, particularly for complex securities in times of stress;
- Strengthening transparency of credit derivatives markets and reducing their systemic risks;
- Reviewing incentives for risk-taking and innovation reflected in compensation practices; and
- Reviewing the mandates, governance, and resource requirements of the International Financial Institutions.

Most of the technical details of this work plan have been referred to existing international standards setting organizations or the National Finance Ministers and Central Bank Governors. These organizations include the International Accounting Standards Board, the Financial Accounting Standards Board, Basel Committee on Banking Supervision, the International Organization of Securities Commissions, and the Financial Stability Forum (Board).

At the London Summit, the leaders addressed the issue of coordination and oversight of the international financial system by establishing a new Financial Stability Board (FSB) with a strengthened mandate as a successor to the Financial Stability Forum with membership to include all G-20 countries, Financial Stability Forum members, Spain, and the European Commission. The FSB is to collaborate with the IMF to provide early warning of macroeconomic and financial risks and the actions needed to address them. The Summit left it to individual countries to reshape regulatory systems to identify and take account of macro-prudential (systemic) risks, but agreed to regulate hedge funds and Credit Rating Agencies.[38]

[36] The Bretton Woods Agreements in 1944 established the basic rules for commercial and financial relations among the world's major industrial states and also established what has become the World Bank and International Monetary Fund.

[37] Information on the London G-20 Summit is available at http://www.londonsummit.gov.uk/en/.

[38]: Group of Twenty Nations. "London Summit – Leaders' Statement," 2 April 2009 http://www.londonsummit.gov.uk/resources/en/PDF/final-communique

For the United States, the fundamental issues may be the degree to which U.S. laws and regulations are to be altered to conform to recommendations from the new Financial Stability Board and what authority the Board and IMF will have relative to member nations. Although the London Summit strengthened regulations and the IMF, it did not result in a "new international financial architecture." The question still is out as to whether the Bretton Woods system should be changed from one in which the United States is the buttress of the international financial architecture to one in which the United States remains the buttress but its financial markets are more "Europeanized" (more in accord with Europe's practices) and more constrained by the broader international financial order? Should the international financial architecture be merely strengthened or include more control, and if more control, then by whom?[39] What is the time frame for a new architecture that may take years to materialize?

For the United States, some of these issues are being addressed by the President's Working Group on Financial Markets (consisting of the U.S. Treasury Secretary, Chairs of the Federal Reserve Board, the Securities and Exchange Commission, and the Commodity Futures Trading Commission) in cooperation with international financial organizations. **Appendix D** lists the major regulatory reform proposals and indicates whether they have been put forward by various U.S. and international organizations. Those that have been proposed by both the U.S. Treasury and the G-20 include the following:

- **Systemic Risk**: All systemically important financial institutions should be subject to an appropriate degree of regulation. Use of stress testing by financial institutions should be more rigorous.
- **Capital Standards**: Large complex systemically-important financial institutions should be subject to more stringent capital regulation than other firms. Capital decisions by regulators and firms should make greater provision against liquidity risk.
- **Hedge Funds**: Hedge funds should be required to register with a national securities regulator. Systemically-important hedge funds should be subject to prudential regulation. Hedge funds should provide information on a confidential basis to regulators about their strategies and positions.
- **Over-the-Counter Derivatives**: Credit default swaps should be processed through a regulated centralized counterparty (CCP) or clearing house.
- **Tax Havens:** Minimum international standards—a regulatory floor—should apply in all countries, including tax havens and offshore banking centers.

Among the proposals put forward by the Treasury but not mentioned by the G-20 included creating a single regulator with responsibility over all systemically important financial institutions with power for prompt corrective action, strengthening regulation of critical payment systems, processing all standardized over-the-counter derivatives through a regulated clearing house and subjecting them to a strong regulatory regime, and providing authority for a government agency to take over a failing, systemically important non-bank institution and place it in conservatorship or receivership outside the bankruptcy system. (For the June 17, 2009, Obama Administration proposal for financial market regulation, see the "Policy" section of this report.)

[39] Friedman, George and Peter Zeihan. "The United States, Europe and Bretton Woods II." A Strafor Geopolitical Intelligence Report, October 20, 2008.

Dealing with Political, Social, and Security Effects

The fourth phase of the financial crisis is in dealing with **political, social, and security effects of the financial turmoil**. These are secondary impacts that relate to the role of the United States on the world stage, its leadership position relative to other countries, and the political and social impact within countries affected by the crisis. For example, on February 12, 2009, the U.S. Director of National Intelligence, Dennis Blair, told Congress that instability in countries around the world caused by the global economic crisis and its geopolitical implications, rather than terrorism, is the primary near-term security threat to the United States.[40]

The political, social, and security effects of the global financial crisis can be divided roughly into the following categories:

- effects on political leadership and regimes inside countries;
- effects on ideologies, protectionism, and state capitalism;
- effects on international leadership and attitudes toward the United States;
- effects on supranational political and economic organizations; and
- effects on poverty and flows of aid resources.

Political Leadership and Regimes

The financial crisis works on political leadership and regimes within countries through two major mechanisms. The first is the discontent from citizens who are losing jobs, seeing businesses go bankrupt, losing wealth both in financial and real assets, and facing declining prices for their products. In democracies, this discontent often results in public opposition to the existing establishment or ruling regime. In some cases it can foment extremist movements, particularly in poorer countries where large numbers of unemployed young people may become susceptible to religious radicalism that demonizes Western industrialized society and encourages terrorist activity.

The precipitous drop in the price of oil holds important implications for countries, such as Russia, Mexico, Venezuela, Yemen, and other petroleum exporters, who were counting on oil revenues to continue to pour into their coffers to fund activities considered to be essential to their interests. While moderating oil prices may be a positive development for the U.S. consumer and for the U.S. balance of trade, it also may affect the political stability of certain petroleum exporting countries. The concomitant drop in prices of commodities such as rubber, copper ore, iron ore, beef, rice, coffee, and tea also carries dire consequences for exporter countries in Africa, Latin America, and Asia.[41]

In Pakistan, a particular security problem exacerbated by the financial crisis could be developing. The IMF has approved a $7.6 billion loan package for Pakistan, but the country faces serious

[40] Dennis C. Blair, *Annual Threat Assessment of the Intelligence Community for the Senate Select Committee on Intelligence*, Director of National Intelligence, Washington, DC, February 12, 2009. See also, U.S. Senate, Committee on Foreign Relations, "Foreign Policy Implications Of The Global Economic Crisis," Roundtable before the Committee On Foreign Relations, February 11, 2009.

[41] Johnston, Tim. "Asia Nations Join to Prop Up Prices," *Washington Post*, November 1, 2008, p. A10. "Record Fall in NZ Commodity Price Gauge," *The National Business Review*, November 5, 2008.

economic problems at a time when it is dealing with challenges from suspected al Qaeda and Taliban sympathizers, when citizen objections are rising to U.S. missile strikes on suspected terrorist targets in Pakistan, and the country faces a budget shortfall that may curtail the ability of the government to continue its counterterror operations.[42]

The second way that the crisis works on ruling regimes is through the actions of existing governments both to stay in power and to deal with the adverse effects of the crisis. Any crisis generates centrifugal forces that tend to strengthen central government power. Most nations view the current financial crisis as having been created by the financial elite in New York and London in cooperation with their increasingly laissez faire governments. By blaming the industrialized West, particularly the United States, for their economic woes, governments can stoke the fires of nationalism and seek support for themselves. As nationalist sentiments rise and economic conditions worsen, citizens look to governments as a rescuer of last resort. Political authorities can take actions, ostensibly to counter the effects of the crisis, but often with the result that it consolidates their power and preserves their own positions. Authoritarian regimes, in particular, can take even more dictatorial actions to deal with financial and economic challenges.

Economic Philosophy, Protectionism, and State Capitalism

In the basic economic philosophies that guide policy, expediency seems to be trumping free-market ideologies in many countries. The crisis may hasten the already declining economic neoliberalism that began with President Ronald Reagan and British Prime Minister Margaret Thatcher. Although the market-based structure of most of the world economies is likely to continue, the basic philosophy of deregulation, non-governmental intervention in the private sector, and free and open markets for goods, services, and capital, seems to be subsumed by the need to increase regulation of new financial products, increased government intervention, and some pull-back from further reductions in trade barriers. Emerging market countries, particularly those in Eastern Europe, moreover, may be questioning their shift toward the capitalist model away from the socialist model of their past.

State capitalism in which governments either nationalize or own shares of companies and intervene to direct parts of their operations is rising not only in countries such as Russia, where a history of command economics predisposes governments toward state ownership of the means of production, but in the United States, Europe, and Asia. Nationalization of banks, insurance companies, and other financial institutions, as well as government capital injections and loans to private corporations have become parts of rescue and stimulus packages and have brought politicians and bureaucrats directly into economic decision-making at the company level.

While state ownership of enterprises may affect the efficiency and profitability of the operation, it also raises questions of equity (government favoring one company over another) and the use of scarce government resources in oversight and management of companies. When taxpayer funds have been used to invest in a company, the public then has an interest in its operations, but protecting that interest takes time and resources. This has already been illustrated in the United States by the attention devoted to executive compensation and bonuses of companies receiving

[42] Joby Warrick, "Experts See Security Risks in Downturn, Global Financial Crisis May Fuel Instability and Weaken U.S. Defenses," *Washington Post*, November 15, 2008. P. A01. Bokhari, Farhan, "Pakistan's War On Terror Hits Roadblock, Global Economic Crisis Prompts Military To Consider Spending Cutbacks," CBS News (online version), October 28, 2008.

government loans or capital injections and by the threatened bankruptcy of Chrysler and General Motors.

In the G-20 and other meetings, world representatives have been vocal in calling for countries to avoid resorting to **protectionism** as they try to stimulate their own economies. Still, whether it be provisions to buy domestic products instead of imports, financial assistance to domestic producers, or export incentives, countries have been attempting to protect national companies often at the expense of those foreign. Overt attempts to restrict imports, promote exports, or impose restrictions on trade are limited by the rules of the World Trade Organization (WTO), but there is ample scope for increases in trade barriers that are consistent with the rules and obligations of the WTO. These include raising applied tariffs to higher bound levels as well as actions to impose countervailing duties or to take antidumping measures. Certain sectors also are excluded from trade agreements for national security or other reasons. Moreover, there are opportunities to favor domestic producers at the expense of foreign producers through industry-specific relief or subsidy programs, broad fiscal stimulus programs, buy-domestic provisions, or currency depreciation.

Several countries have imposed trade related measures that tend to protect or assist domestic industries. Although the WTO reported in January 2009 that most WTO members had successfully kept domestic protectionist pressures under control "with only limited evidence of increases in trade restricting or trade distorting measures," the WTO also compiled a list of new trade and trade-related policy measures that had been taken since September 2008. These included increases in steel tariffs by India, increases in tariffs on 940 imported products by Ecuador, restrictions on ports of entry for imports of certain consumer goods by Indonesia, imposition of non-automatic licensing requirements on products considered as sensitive by Argentina, increase in tariffs on imports of crude oil by South Korea, re-introduction of export subsidies for certain dairy products by the European Commission, and a rise in import duties on cars and trucks by Russia.[43]

China has announced a number of policy responses to deal with the crisis, including a pledge to spend $586 billion to boost domestic spending. However, China has also announced plans to provide subsidies to various industries (such as steel and motor vehicles) and to boost export tax rebates. Also, despite calls to allow its currency to appreciate, the Chinese government has depreciated its currency vis-à-vis the dollar in recent months arguably to help its export industries.

In the United States, the Buy America provision in the February 2009 stimulus package[44] has been widely criticized. Even though the provision applies only to steel, iron, and manufactured goods used in government funded construction projects and language was included that the provision "shall be applied in a manner consistent with United States obligations under international agreements," many nations have protested the Buy America language as

[43] Bureau of National Affairs, "WTO Report Finds 'Limited' Impact So Far of Financial Crisis on Higher Trade Barriers," *International Trade Reporter*, 26 ITR 143, January 29, 2009. Report by the World Trade Organization quoted in: Chris Nelson, *The Nelson Report*, Samuels International Associates, Inc., January 15, 2009.

[44] H.R. 1 (P.L. 111-5) Sec. 1605 provides that none of the funds appropriated or otherwise made available by the act may be used for a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project are produced in the United States provided that such action would not be inconsistent with the public interest, such products are not produced in the United States, and would not increase the cost of the overall project by more than 25%.

"protectionist"[45] and as possibly starting down a slippery slope that could lead to WTO-inconsistent protectionism by countries.

A concern also is rising among developing nations that a type of "financial protectionism" may arise. Governments may direct banks that have received capital injections to lend more domestically rather than overseas. Borrowing by the U.S. Treasury to finance the growing U.S. budget deficit also pulls in funds from around the world and could crowd out borrowers from countries also seeking to cover their deficits. Also of concern to countries such as Vietnam, China, and other exporters of foreign brand name exports is that private flows of investment capital may decline as producers face rising inventories and excess production capacity. Why build another factory when existing ones sit idle?

U.S. Leadership Position

Another issue raised by the global financial crisis has been the role of the United States on the world stage and the U.S. leadership position relative to other countries. How this will play out with the Obama Administration is yet to be seen, but the rest of the world seems to be expressing ambivalent feelings about the United States. On one hand, many blame the United States for the crisis and see it as yet another of the excesses of a country that had emerged as the sole superpower in a unipolar world following the end of the Cold War. Although not always explicit, their willingness to follow the U.S. lead appears to have diminished. On the other hand, countries recognize that the United States is still one of a scant few that can bring other nations along and induce them to take actions outside of their political comfort zone. The combination of U.S. military power, extensive economic and financial clout, its diplomatic clout, and its veto power in the IMF put the United States at the center of any resolution to the global financial turmoil.

During the early phase of the crisis, European leaders (particularly British Prime Minister Gordon Brown, French President Nicolas Sarkozy, and German Chancellor Angela Merkel) played a major role and have been influential in crafting international mechanisms and policies to deal with adverse effects of the crisis as well as proposing long-term solutions. Also, dealing with the financial crisis has enabled countries with rich currency reserves, such as China, Russia, and Japan, to assume higher political profiles in world financial circles. If China[46] helps to finance the various rescue measures in the United States, Washington may lose some leverage with Beijing in pursuing human and labor rights, product safety, and other pertinent issues. Also, the inclusion of China, India, and Brazil in the G-20 Summits rather than just the G-7 or G-8 countries as originally proposed, seems to indicate the growing influence of the non-industrialized nations in addressing global financial issues.[47]

The recession in the United States and elsewhere also may hamper efforts to reach agreement on international issues such as climate change. In addition, U.S. trade and foreign investments are key components of American soft power. At a time when U.S. policymakers are turning more toward the use of soft power (or what is sometimes termed "smart power"), if the United States is

[45] "Europe Warns against 'Buy American' Clause," *Spiegel Online International*, February 3, 2009, Internet edition.

[46] For details, see CRS Report RL34314, *China's Holdings of U.S. Securities: Implications for the U.S. Economy*, by Wayne M. Morrison and Marc Labonte.

[47] The G-7 includes Canada, France, Germany, Italy, Japan, United Kingdom, and the United States. The G-8 is the G-7 plus Russia. The G-20 adds Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Saudi Arabia, South Africa, South Korea, and Turkey.

blamed for what is becoming the worst global recession in decades and U.S. companies are perceived as reducing their overseas business activities because of the global financial crisis, the ability of the United States to induce other countries to coalesce around U.S. goals may be diminished.

International Financial Organizations

The financial crisis has brought international financial organizations and institutions into the spotlight. These include the International Monetary Fund, the Financial Stability Board (an enlarged Financial Stability Forum), the Group of Twenty (G-20), the Bank for International Settlements, the World Bank, the Group of 7 (G-7), and other organizations that play a role in coordinating policy among nations, provide early warning of impending crises, or assist countries as a lender of last resort. The precise architecture of any international financial structure and whether it is to have powers of oversight, regulatory, or supervisory authority is yet to be determined. However, the interconnectedness of global financial and economic markets has highlighted the need for stronger institutions to coordinate regulatory policy across nations, provide early warning of dangers caused by systemic, cyclical, or macroprudential risks[48] and induce corrective actions by national governments. A fundamental question in this process, however, rests on sovereignty: how much power and authority should an international organization wield relative to national authorities?

As a result of the global financial crisis, the IMF has expanded its activities along several dimensions. The first is its role as lender of last resort for countries less able to access international capital markets. It also is attempting to become a lender of "not-last" resort by offering flexible credit lines for countries with strong economic fundamentals and a sustained track record of implementing sound economic policies. The second area of expansion by the IMF has been in oversight of the international economy and in monitoring systemic risk across borders. The IMF also tracks world economic and financial developments more closely and provides countries with the forecasts and analysis of developments in financial markets. It additionally provides policy advice to countries and regions and is assisting the G-20 with recommendations to reshape the system of international regulation and governance. Although the London Summit provided for more funding for the IMF and international development banks, some larger issues, such as governance of and reform of the IMF are now being determined. (For further discussion of the IMF, see sections below on "The Challenges" and "International Policy Issues."

On June 24, 2009. President Obama signed H.R. 2346 into law (P.L. 111-32). This increased the U.S. quota in the International Monetary Fund by 4.5 billion SDRs ($7.69 billion), provided loans to the IMF of up to an additional 75 billion SDRs ($116.01 billion), and authorized the United States Executive Director of the IMF to vote to approve the sale of up to 12,965,649 ounces of the Fund's gold. H.R. 2346 was the $105.9 billion war supplemental spending bill that mainly funds military operations in Iraq and Afghanistan but also included the IMF provisions. On June 26, the President released a signing statement that included:

> However, provisions of this bill within sections 1110 to 1112 of title XI, and sections 1403 and 1404 of title XIV, would interfere with my constitutional authority to conduct foreign relations by directing the Executive to take certain positions in negotiations or discussions

[48] See CRS Report R40417, *Macroprudential Oversight: Monitoring the Financial System*, by Darryl E. Getter.

> with international organizations and foreign governments, or by requiring consultation with the Congress prior to such negotiations or discussions. I will not treat these provisions as limiting my ability to engage in foreign diplomacy or negotiations.[49]

This signing statement has been addressed in H.Amdt. 311 to H.R. 3081, the Fiscal 2010 State-Foreign Operations spending bill passed on July 7, 2009.

The Washington Action Plan from the G-20 Leader's Summit in November 2008 contained specific policy changes that were addressed in the April 2, 2009 Summit in London. The regulatory and other specific changes have been assigned to existing international organizations such as the Financial Stability Forum (now Financial Stability Board) and Bank for International Settlements, as well as international standard setting bodies such as the Basel Committee on Banking Supervision, International Accounting Standards Board, International Organization of Securities Commissions, and International Association of Insurance Supervisors.[50]

Effects on Poverty and Flows of Aid Resources

The global crisis is causing huge losses and dislocation in the industrialized countries of the world, but in many of the developing countries it is pushing people deep into poverty. The crisis is being transmitted to the poorer countries through declining exports, falling commodity prices, reverse migration, and shrinking remittances from citizens working overseas. This could have major effects in countries which provide large numbers of migrant workers, including Mexico, Guatemala, El Salvador, India, Bangladesh, and the Philippines.

The decline in tax revenues caused by the slowdown in economic activity also is increasing competition within countries for scarce budget funds and affecting decisions about the allocation of national resources. This budget constraint relates directly to the ability to finance official development assistance to poorer nations and other programs aimed at alleviating poverty.

In the United States, the economic downturn and the vast resources being committed to provide stimulus to the U.S. economy and rescue trouble financial institutions could clash with some foreign policy priorities of the new Administration. President Obama and top officials in his Administration—including Secretary of State Clinton and Secretary of Defense Gates—have pledged to increase the capacity of civilian foreign policy institutions and levels of U.S. foreign assistance. Financial constraints could impose difficult choices between foreign policy priorities—for example, between boosting levels of non-military aid to Afghanistan and increasing global health programs–or changes to planned levels of increases across the board. The global reach of the economic downturn further complicates the resource problem, as it both limits what other countries can do to address common international challenges and potentially exacerbates the scale of need in conflict areas and the developing world.

---

[49] White House, Office of the Secretary, *Below is a statement from the President upon signing H.R. 2346 on June 24, 2009:*, Washington, DC, June 26, 2009, http://www.whitehouse.gov/the_press_office/Statement-from-the-President-upon-signing-HR-2346/.

[50] Progress on these items as of mid-March 2009 is summarized in: U.K. Chair of the G20, *Progress Report on the Immediate Actions of the Washington Action Plan,* Annex to the G20 Finance Ministers' and Central Bank Governors' Communique - 14 March, London, March 14, 2009.

New Challenges and Policy in Managing Financial Risk[51]

The Challenges

The actions of the United States and other nations in coping with the global financial crisis first aimed to contain the contagion, minimize losses to society, restore confidence in financial institutions and instruments, and lubricate the economic system in order for it to return to full operation. Attention now is focused on stimulating the economy and stemming the downturn in macroeconomic conditions that is increasing unemployment and forcing many companies into bankruptcy. As of early 2009, as much as 40% of the world's wealth may have been destroyed since the crisis began,[52] although equity markets have recovered somewhat since then. There still is uncertainty, however, over whether the worst of the crisis actually has passed and whether monetary and fiscal policies taken so far will be sufficient to cope with the global recession. It also is unknown whether the current crisis is an aberration that can be fixed by tweaking the system, or whether it reflects systemic problems that require major surgery. The world now is working its way into the third phase of the crisis. The goal now is to change the regulatory structure and regulations, the global financial architecture, and some of the imbalances in trade and capital flows to ensure that future crises do not occur or, at least, to mitigate their effects.

Judging from policy proposals to cope with the financial crisis in both the United States and in Europe, it appears that solutions are taking a multipronged approach. They are being aimed at the different levels in which financial markets operate: globally, nationally, and by specific financial sector.

On the global side, there exists no international architecture capable of coping with and preventing global crises from erupting. The financial space above nations basically is anarchic with no supranational authority with firm oversight, regulatory, and enforcement powers. Since financial crises occur even in relatively tightly regulated economies, the likelihood that a supranational authority could prevent an international crisis from occurring is questionable. International norms and guidelines for financial institutions exist, but most are voluntary, and countries are slow to incorporate them into domestic law.[53] As such, the system operates largely on trust and confidence and by hedging financial bets. The financial crisis has been a "wake-up call" for investors who had confidence in, for example, credit ratings placed on securities by credit rating agencies operating under what some have referred to as "perverse incentives and conflicts of interest."

The financial crisis crossed national boundaries and spread from individual financial institutions to the wider economy. Not only did countries of the world not directly complicit in the original financial problems suffer "collateral damage," but the ensuing downturn in economic activity affected millions of "innocent bystanders" because of their being connected through trade,

[51] Prepared by Dick K. Nanto, Specialist in Industry and Trade, Foreign Affairs, Defense, and Trade Division.

[52] Edmund Conway, "WEF 2009: Global crisis 'has destroyed 40pc of world wealth'," *Telegraph.co.uk*, January 29, 2009, Internet edition.

[53] For example, see CRS Report RL34485, *Basel II in the United States: Progress Toward a Workable Framework*, by Walter W. Eubanks.

financial, and investment flows. To some extent, the International Monetary Fund, World Bank, or the Organization for Economic Cooperation and Development monitored the global economy, but they tended to focus on macroeconomic flows and not on macroprudential regulation.

The global financial crisis resulted from a confluence of factors and processes at both the macro-financial level (across financial sectors) and at the micro-financial level (the behavior of individual institutions and the functioning of specific market segments). This joint influence of both macro and micro factors resulted in market excesses and the emergence of systemic risks of unprecedented magnitude and complexity.[54] In the United States, regulation tends to be by function. There has been no macroprudential or systemic regulation and oversight.[55] Separate regulatory agencies oversee each line of financial service: banking, insurance, securities, and futures. This is microprudential regulation under which no single regulator possesses all of the information and authority necessary to monitor systemic and synergistic risk or the potential that seemingly isolated events could lead to broad dislocation and a financial crisis so widespread that it affects the real economy.[56] Also no single regulator can take coordinated action throughout the financial system.

In a report on systemic regulation, the Council on Foreign Relations explained the problem as follows:

> One regulatory organization in each country should be responsible for overseeing the health and stability of the overall financial system. The role of the systemic regulator should include gathering, analyzing, and reporting information about significant interactions between and risks among financial institutions; designing and implementing systemically sensitive regulations, including capital requirements; and coordinating with the fiscal authorities and other government agencies in managing systemic crises. We argue below that the central bank should be charged with this important new responsibility.[57]

Analysis by the European Central Bank suggests three main considerations on the way in which systemic risks should be monitored and analyzed. First, macroprudential analysis needs to capture all components of financial systems and how they interact. This would include all intermediaries, markets, and infrastructures underpinning them. Second, macroprudential risk assessment should cover the interactions between the financial system and the economy at large. Third, financial markets are not static and are continuously evolving as a result of innovation and international integration. Several financial crises in history have resulted from financial liberalizations or innovations that were neither sufficiently understood nor managed.[58]

A related consideration in policymaking is that centers of financial activity, such as New York, London, and Tokyo, compete with each other, and multinational firms can choose where to conduct particular financial transactions. Unless the regulatory framework and the supervisory

---

[54] Lucas Papademos, "*Strengthening macro-prudential supervision in Europe*," Speech by Lucas Papademos, Vice President of the ECB, Brussels, Belgium, March 24, 2009.

[55] See CRS Report R40417, *Macroprudential Oversight: Monitoring the Financial System*, by Darryl E. Getter.

[56] See CRS Report R40249, *Who Regulates Whom? An Overview of U.S. Financial Supervision*, by Mark Jickling and Edward V. Murphy

[57] Squam Lake Working Group on Financial Regulation, *A Systemic Regulator for Financial Markets*, Council on Foreign Relations, Center for Geoeconomic Studies, Working Paper, May 2009, p. 2.

[58] Lorenzo Bini Smaghi, "Lorenzo Bini Smaghi: Going forward – regulation and supervision after the financial turmoil," Bank for International Settlements, *BIS Review*, 77, 2009.

arrangements in the United States, Europe, and other large financial centers are broadly compatible with each other, business may flow from the United States to the area of minimal regulation and supervision. The interconnectedness of financial centers across the world also implies that systemic risk can be amplified because of actions occurring in different countries, often out of sight or reach of national regulators.

One challenge is that the world economy depends greatly on large financial (and other) institutions that may be deemed "too large to fail." If an institution is considered to be "too big to fail," its bankruptcy would pose a significant risk to the system as a whole. Yet, if there is an implicit promise of governmental support in case of failure, the government may create a moral hazard, which is the incentive for an entity to engage in risky behavior knowing that the government will rescue it if it fails. Another challenge is that innovative financial instruments may not be well understood or regulated. Some of the early proposals have been designed to bring hedge funds, off-balance sheet financial entities, and, perhaps, credit default swaps under regulatory authority.

A further challenge is that existing micro-prudential regulation, by and large, did not identify the nature and size of accumulating financial and systemic risks and impose appropriate remedial actions. Even though some analysts and institutions were sounding alarms before the crisis erupted, there were few regulatory tools available to cope with the accumulation of risk in the system as a whole or the risks being imposed by other firms either in the same or different sectors. There also seemed to be insufficient response to these risks either by market participants or by the authorities responsible for the oversight of individual financial institutions or specific market segments.

Under a free-enterprise system, a fundamental assumption is that markets will self-correct, and that individuals, in pursuing their own financial interests, like an "invisible hand," tend also to promote the good of the global community. If losses occur, investors and institutions naturally become more prudent in the future. A complex challenge remains to determine how much further regulation and oversight is necessary to moderate behavior by institutions that may be in their own financial interest but may pose excessive risk to the system as a whole. Also, how can supervisory authorities preclude a repeat of the same mistakes in the future as personnel and firms change and as memories of financial crises become distant? Also, how should the system be improved to fill gaps in information and technical expertise in order to compensate for faulty or incomplete methods of modeling risk or to provide more resilience in the system to offset human error?

For other nations of the world, what has become clear from the crisis is that U.S. financial ailments can be highly contagious. Foreign financial institutions are not immune to ill health in American banks, brokerage houses, and insurance companies. The financial services industry links together investors and financial institutions in disparate countries around the world. Investors seek higher risk-adjusted returns in any market. In financial markets, moreover, innovations in one market quickly spread to another, and sellers in one country often seek buyers in another. AIG insurance, for example, appears to have been brought down primarily by its Financial Products subsidiary based in London, an operation that engaged heavily in credit default swaps.[59] The revolution in communications, moreover, works both ways. It allows for

[59] Morgenson, Gretchen, "Behind Insurer's Crisis, Blind Eye to a Web of Risk," *The New York Times* (Internet edition), September 27, 2008.

instant access to information and remote access to market activity, but it also feeds the herd instinct and is susceptible to being used to spread biased or incomplete information.

The linking of economies also transcends financial networks.[60] Flows of international trade both in goods and services are affected directly by macroeconomic conditions in the countries involved. In the second phase of the financial crisis, markets all over the world have been experiencing historic declines. Precipitous drops in stock market values have been mirrored in currency and commodity markets.

Another issue is the mismatch between regulators and those being regulated. The policymakers can be divided between those of national governments and, to an extent, those of international institutions, but the resulting policy implementation, oversight, and regulation almost all rest in national governments (as well as sub-national governments such as states, e.g. New York, for insurance regulation). Yet many of the financial and other institutions that are the object of new oversight or regulatory activity may themselves be international in presence. They tend to operate in all major markets and congregate around world financial centers (i.e., London, New York, Zurich, Hong Kong, Singapore, Tokyo, and Shanghai) where client portfolios often are based and where institutions and qualified professionals exist to support their activities. The major market for derivatives, for example, is London, even though a sizable proportion of the derivatives, themselves, may be issued by U.S. companies based on U.S. assets.

A further issue is to what extent the U.S. government and Federal Reserve as "domestic lenders of last resort" should intervene in the day-to-day activities of corporations that have received federal support funds. Traditionally, financial regulations have been aimed at ensuring financial stability, transparency, and equity. Financial institutions have traded the promise of a governmental safety net for government rules that attempt to ensure that a safety net is not necessary. Issues such as executive compensation and bonuses, or, in the case of General Motors, whether executives travel by private jet, traditionally have not been subject to regulation. Yet once the government provides public support for companies, public pressure rises to intervene in such matters.

A fundamental issue deals with the nature of regulation and supervision. Banking regulation tends to be specific and detailed and places requirements and limits on bank behavior. Federal securities regulation, however, is based primarily on disclosure. Registration with the Securities and Exchange Commission is required, but that registration does not imply that an investment is safe, only that the risks have been fully disclosed. The SEC has no authority to prevent excessive risk taking. Likewise, derivatives trading is supervised by the Commodity Futures Trading Commission, but the futures exchanges and the over-the-counter markets on which they trade are largely unregulated.[61]

Table 1 lists the major problems raised by the crisis, the targets of policy, and the policies already being taken or possibly to take by various entities in response to the global financial crisis. The long-term policies listed in the table essentially center on issues of transparency, disclosure, risk management, creating buffers to make the system more resilient, dealing with the secondary effects of the crisis, and the interface between domestic and international financial institutions.

[60] For an analysis of global production networks, see CRS Report R40167, *Globalized Supply Chains and U.S. Policy*, by Dick K. Nanto.

[61] CRS Report R40249, *Who Regulates Whom? An Overview of U.S. Financial Supervision*, by Mark Jickling and Edward V. Murphy

The length and breadth of the list indicates the extent that the financial crisis has required diverse and draconian action. The number of policies or actions not yet taken and being considered (marked by a "?" in the table) indicate that policymakers may still have a long way to go to rebuild the financial system that has been at the heart of the economic strength of the world. Many of these items are discussed in later sections of this report and are addressed in separate CRS reports.[62]

Table 1. Problems, Targets of Policy, and Actions Taken or Possibly to Take in Response to the Global Financial Crisis

Problem	Targets of Policy	Actions Taken or Possibly To Take
Containing the Contagion and Restoring Market Operations		
Bankruptcy of financial institutions	Financial institution, Financial sector	—Capital injection through loans or stock purchases—Increase capital requirements —Takeover of company by government or other company —Allow to go bankrupt
Excess toxic debt	Capital base of debt holding institution	—Write-off of debt by holding institution —Purchase of toxic debt through Public Private Partnership Investment Program government at a discount (March 23, 2009, Treasury announcement) —Ease mark-to-market accounting requirements (April 2, 2009, Financial Accounting Standards Board) —Restructure mortgages —Nationalize debt holding institutions?
Credit market freeze	Lending institutions	—Coordinated lowering of interest rates by central banks/Federal Reserve —Guarantee short-term, uncollateralized business lending —Capital injection through loans or stock purchases
Consumer runs on deposits in banks and money market funds	Banks Brokerage houses	—Guarantee bank deposits —Guarantee money market accounts —Buy underlying money market

[62] See, for example, CRS Report RL34412, *Containing Financial Crisis*, by Mark Jickling; CRS Report RL33775, *Alternative Mortgages: Causes and Policy Implications of Troubled Mortgage Resets in the Subprime and Alt-A Markets*, by Edward V. Murphy; CRS Report RL34657, *Financial Institution Insolvency: Federal Authority over Fannie Mae, Freddie Mac, and Depository Institutions*, by David H. Carpenter and M. Maureen Murphy; CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*, by Marc Labonte; CRS Report RS22099, *Regulation of Naked Short Selling*, by Mark Jickling; and CRS Report RS22932, *Credit Default Swaps: Frequently Asked Questions*, by Edward V. Murphy.

Problem	Targets of Policy	Actions Taken or Possibly To Take
		securities to cover redemptions
Declining stock markets	Investors Short sellers	—Temporary ban on short sales of stock —Government purchases of stock?
Global recession, rising unemployment, decreasing tax revenues, declining exports	National governments	—Stimulative monetary and fiscal policies —Increased lending by International Financial Institutions (April 2009 G-20 declaration to increase IMF funding) —Trade policy? —Support for unemployed
Coping with Long-Term, Systemic Problems		
Poor underwriting standards Overly high ratings of collateralized debt obligations by rating companies Lack of transparency in ratings	Credit rating agencies Bundlers of collateralized debt obligations Corporate leveraged lenders	—More transparency in factors behind credit ratings and better models to assess risk? —Regulation of Credit Rating Agencies (April 2, 2009 London Summit) —Changes to the IOSCO Code of Conduct for Credit Rating Agencies? —Strengthen oversight of lenders? —Strengthen disclosure requirements to make information more easily accessible and usable?
Incentive distortions for originators of mortgages (no penalty for mortgage defaults due to faulty lending practices)	Mortgage originators Fannie Mae/Freddie Mac All participants in the originate-to-distribute chain	—Require loan originators and bundlers to provide initial and ongoing information on the quality and performance of securitized assets or to retain a 5% interest in the security (June 17 Treasury Plan) —Strengthened oversight of mortgage originators (June 17 Treasury Plan) —Penalties for malfeasance by originators?
Shortcomings in risk management practices Severe underestimation of risks in the tails of default distributions and insufficient regard for systemic risk Risk models that encourage pro-cyclical risk taking	Investors Banks, securities companies Regulatory agencies	—More prudent oversight of capital, liquidity, and risk management? —Raise capital requirements for complex structured credit products and to account for liquidity risk (June 17 Treasury Plan) —Strengthen authorities' responsiveness to risk? —Set stricter capital and liquidity buffers for financial institutions (June 17 Treasury Plan)
Banks had weak controls over off-balance sheet risks	Bank structured investment vehicles Bank sponsored conduits Regulatory agencies	—Strengthen accounting and regulatory practices? —Raise capital requirements for off-balance sheet investment vehicles?

Problem	Targets of Policy	Actions Taken or Possibly To Take
Regulators are "stove piped." Do not deal adequately with large complex financial institutions	Financial intermediaries engaged in a combination of banking, securities, futures, or insurance	—create an independent agency to monitor systemic risk (March 20 and June 17, 2009 Treasury Announcements and plans) —Create a Financial Services Oversight Council or other organization to improve interagency coordination and cooperation (June 17,2009 Treasury plan)
Hedge funds and private equity are largely unregulated Information on Credit Default Swaps not public	Regulatory agencies	—extend regulation and oversight to hedge funds and private equity (April 2, 2009, London Summit, June 17, 2009 Treasury Plan) —create clearing counterparty for credit default swaps (March 26, 2009 Treasury Announcement)
Consumers being "victimized" in credit card, mortgage, and other financial markets	Bank regulatory agencies	—create a Consumer Financial Protection Agency (June 17, 2009 Treasury Plan)
	Problems for International Policy	
Lack of consistency in regulations among nations and need for new regulations to cope with new risks and exposures	National regulatory and oversight authorities Bank for International Settlements International Monetary Fund Financial Stability Board (Financial Stability Forum)	—Implement G-20 Action Plan (November 15, 2008 G-20 Summit) —Implement Basel II (Bank for International Settlements' capital and other requirements for banks) (in process by countries) —Bretton Woods II agreement? —Greater role for the Financial Stability Board/Forum and International Monetary Fund (April 2, 2009 London Summit, June 17 Treasury Plan) —Establish colleges of national supervisors to oversee financial sectors across boundaries (November 15, 2008 G-20 Summit)
Countries unable to cope with financial crisis	IMF, Development Banks National monetary authorities and governments	—Increased resources for the IMF and World Bank (April 2, 2009 London Summit) (H.R. 2346, provided for increase in quota and loans to the IMF) —Loans and swaps by capital surplus countries —Creation of long-term international liquidity pools to purchase assets?
Countries slow to recognize emerging problems in financial systems	National monetary and banking authorities Governments IMF Regional organizations	—Increased IMF and Financial Stability Board/Forum macroprudential/systemic oversight, surveillance and consultations (April 2, 2009 London Summit, June 17 Treasury Plan) —Build more resilience into the

Problem	Targets of Policy	Actions Taken or Possibly To Take
		system? —Increase reporting requirements? —Establish colleges of national supervisors to oversee financial sectors across national borders (Nov. 15, 2008, G-20 Summit)
Lack of political support to implement changes in policy	National political leaders	—G-20 international summit meetings —Bilateral and plurilateral meetings and events

Source: Congressional Research Service

Notes: In the Actions to Take column, a "?" indicates that the action or policy has been proposed but is still in development or not yet taken.

Origins, Contagion, and Risk[63]

Financial crises of some kind occur sporadically virtually every decade and in various locations around the world. Financial meltdowns have occurred in countries ranging from Sweden to Argentina, from Russia to Korea, from the United Kingdom to Indonesia, and from Japan to the United States.[64] As one observer noted: as each crisis arrives, policy makers express ritual shock, then proceed to break every rule in the book. The alternative is unthinkable. When the worst is passed, participants renounce crisis apostasy and pledge to hold firm next time.[65]

Each financial crisis is unique, yet each bears some resemblance to others. In general, crises have been generated by factors such as an overshooting of markets, excessive leveraging of debt, credit booms, miscalculations of risk, rapid outflows of capital from a country, mismatches between asset types (e.g., short-term dollar debt used to fund long-term local currency loans), unsustainable macroeconomic policies, off-balance sheet operations by banks, inexperience with new financial instruments, and deregulation without sufficient market monitoring and oversight.

As shown in **Figure 2**, the current crisis harkens back to the 1997-98 Asian financial crisis in which Thailand, Indonesia, and South Korea had to borrow from the International Monetary Fund to service their short-term foreign debt and to cope with a dramatic drop in the values of their currency and deteriorating financial condition. Determined not to be caught with insufficient foreign exchange reserves, countries subsequently began to accumulate dollars, Euros, pounds, and yen in record amounts. This was facilitated by the U.S. trade (current account) deficit and by its low saving rate.[66] By mid-2008, world currency reserves by governments had reached $4.4 trillion with China's reserves alone approaching $2 trillion, Japan's nearly $1 trillion, Russia's

[63] Prepared by Dick K. Nanto. See also, CRS Report RL34730, *Troubled Asset Relief Program: Legislation and Treasury Implementation*, by Baird Webel and Edward V. Murphy.

[64] For a review of past financial crises, see Luc Laeven and Fabian Valencia. "Systemic Banking Crises: A New Database," International Monetary Fund Working Paper WP/08/224, October 2008. 80p.

[65] Gelpern, Anna. "Emergency Rules," *The Record* (Bergen-Hackensack, NJ), September 26, 2008.

[66] From 2005-2007, the U.S. current account deficit (balance of trade, services, and unilateral transfers) was a total of $2.2 trillion.

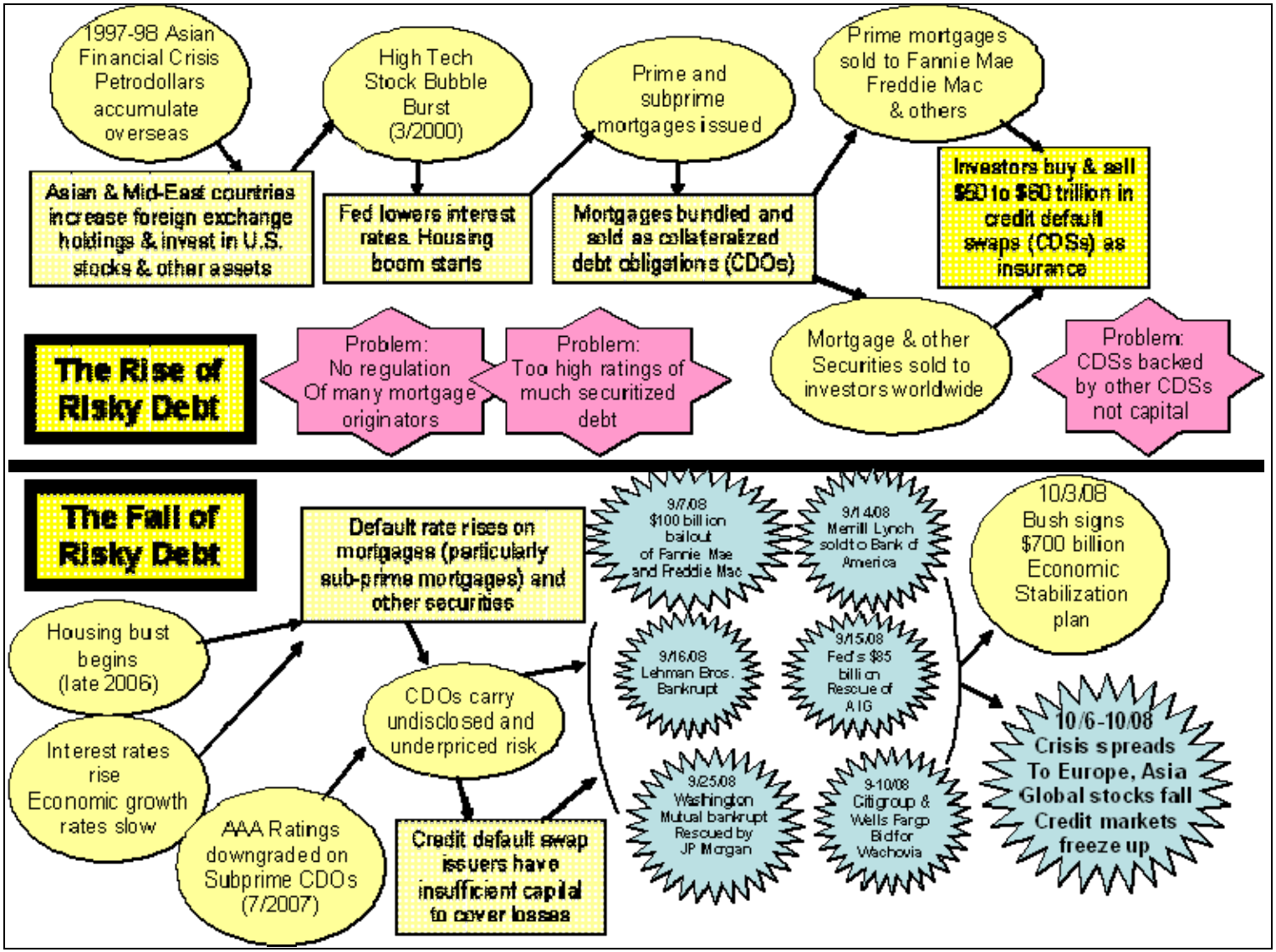
more than $500 billion, and India, South Korea, and Brazil each with more than $200 billion.[67] The accumulation of hard currency assets was so great in some countries that they diverted some of their reserves into sovereign wealth funds that were to invest in higher yielding assets than U.S. Treasury and other government securities.[68]

Following the Asian financial crisis, much of the world's "hot money" began to flow into high technology stocks. The so-called "dot-com boom" ended in the spring of 2000 as the value of equities in many high-technology companies collapsed.

[67] Reuters. Factbox—Global foreign exchange reserves. October 12, 2008.

[68] See CRS Report RL34336, *Sovereign Wealth Funds: Background and Policy Issues for Congress*, by Martin A. Weiss.

Figure 2. Origins of the Financial Crisis: The Rise and Fall of Risky Mortgage and Other Debt



After the dot-com bust, more "hot investment capital" began to flow into housing markets—not only in the United States but in other countries of the world. At the same time, China and other countries invested much of their accumulations of foreign exchange into U.S. Treasury and other securities. While this helped to keep U.S. interest rates low, it also tended to keep mortgage interest rates at lower and attractive levels for prospective home buyers.[69] This housing boom coincided with greater popularity of the securitization of assets, particularly mortgage debt (including subprime mortgages), into collateralized debt obligations (CDOs).[70] A problem was that the mortgage originators often were mortgage finance companies whose main purpose was to write mortgages using funds provided by banks and other financial institutions or borrowed. They were paid for each mortgage originated but had no responsibility for loans gone bad. Of course, the incentive for them was to maximize the number of loans concluded. This coincided with political pressures to enable more Americans to buy homes, although it appears that Fannie Mae and Freddie Mac were not directly complicit in the loosening of lending standards and the rise of subprime mortgages.[71]

In order to cover the risk of defaults on mortgages, particularly subprime mortgages, the holders of CDOs purchased credit default swaps[72] (CDSs). These are a type of insurance contract (a financial derivative) that lenders purchase against the possibility of credit event (a default on a debt obligation, bankruptcy, restructuring, or credit rating downgrade) associated with debt, a borrowing institution, or other referenced entity. The purchaser of the CDS does not have to have a financial interest in the referenced entity, so CDSs quickly became more of a speculative asset than an insurance policy. As long as the credit events never occurred, issuers of CDSs could earn huge amounts in fees relative to their capital base (since these were technically not insurance, they did not fall under insurance regulations requiring sufficient capital to pay claims, although credit derivatives requiring collateral became more and more common in recent years). The sellers of the CDSs that protected against defaults often covered their risk by turning around and buying CDSs that paid in case of default. As the risk of defaults rose, the cost of the CDS protection rose. Investors, therefore, could arbitrage between the lower and higher risk CDSs and generate large income streams with what was perceived to be minimal risk.

---

[69] See U.S. Joint Economic Committee, "Chinese FX Interventions Caused international Imbalances, Contributed to U.S. Housing Bubble," by Robert O'Quinn. March 2008.

[70] For further analysis, see CRS Report RL34412, *Containing Financial Crisis*, by Mark Jickling, U.S. Joint Economic Committee, "The U.S. Housing Bubble and the Global Financial Crisis: Vulnerabilities of the Alternative Financial System," by Robert O'Quinn. June 2008.

[71] Fannie Mae (Federal National Mortgage Association) is a government-sponsored enterprise (GSE) chartered by Congress in 1968 as a private shareholder-owned company with a mission to provide liquidity and stability to the U.S. housing and mortgage markets. It operates in the U.S. secondary mortgage market and funds its mortgage investments primarily by issuing debt securities in the domestic and international capital markets. Freddie Mac (Federal Home Loan Mortgage Corp) is a stockholder-owned GSE chartered by Congress in 1970 as a competitor to Fannie Mae. It also operates in the secondary mortgage market. It purchases, guarantees, and securitizes mortgages to form mortgage-backed securities. For an analysis of Fannie Mae and Freddie Mac's role in the subprime crisis, see David Goldstein and Kevin G. Hall, "Private sector loans, not Fannie or Freddie, triggered crisis," McClatchy Newspapers, October 12, 2008.

[72] A credit default swap is a credit derivative contract in which one party (protection buyer) pays a periodic fee to another party (protection seller) in return for compensation for default (or similar credit event) by a reference entity. The reference entity is not a party to the credit default swap. It is not necessary for the protection buyer to suffer an actual loss to be eligible for compensation if a credit event occurs. The protection buyer gives up the risk of default by the reference entity, and takes on the risk of simultaneous default by both the protection seller and the reference credit. The protection seller takes on the default risk of the reference entity, similar to the risk of a direct loan to the reference entity. See CRS Report RS22932, *Credit Default Swaps: Frequently Asked Questions*, by Edward V. Murphy.

In 2007, the notional value (face value of underlying assets) of credit default swaps had reached $62 trillion, more than the combined gross domestic product of the entire world ($54 trillion),[73] although the actual amount at risk was only a fraction of that amount (approximately 3.5%). By July 2008, the notional value of CDSs had declined to $54.6 trillion and by October 2008 to an estimated $46.95 trillion.[74] The system of CDSs generated large profits for the companies involved until the default rate, particularly on subprime mortgages, and the number of bankruptcies began to rise. Soon the leverage that generated outsized profits began to generate outsized losses, and in October 2008, the exposures became too great for companies such as AIG..

Risk

The origins of the financial crisis point toward three developments that increased risk in financial markets. The first was the originate-to-distribute model for mortgages. The originator of mortgages passed them on to the provider of funds or to a bundler who then securitized them and sold the collateralized debt obligation to investors. This recycled funds back to the mortgage market and made mortgages more available. However, the originator was not penalized, for example, for not ensuring that the borrower was actually qualified for the loan, and the buyer of the securitized debt had little detailed information about the underlying quality of the loans. Investors depended heavily on ratings by credit agencies.

The second development was a rise of perverse incentives and complexity for credit rating agencies. Credit rating firms received fees to rate securities based on information provided by the issuing firm using their models for determining risk. Credit raters, however, had little experience with credit default swaps at the "systemic failure" tail of the probability distribution. The models seemed to work under normal economic conditions but had not been tested in crisis conditions. Credit rating agencies also may have advised clients on how to structure securities in order to receive higher ratings. In addition, the large fees offered to credit rating firms for providing credit ratings were difficult for them to refuse in spite of doubts they might have had about the underlying quality of the securities. The perception existed that if one credit rating agency did not do it, another would.

The third development was the blurring of lines between issuers of credit default swaps and traditional insurers. In essence, financial entities were writing a type of insurance contract without regard for insurance regulations and requirements for capital adequacy (hence, the use of the term "credit default swaps" instead of "credit default insurance"). Much risk was hedged rather than backed by sufficient capital to pay claims in case of default. Under a systemic crisis, hedges also may fail. However, although the CDS market was largely unregulated by government, more than 850 institutions in 56 countries that deal in derivatives and swaps belong to the ISDA (International Swaps and Derivatives Association). The ISDA members subscribe to a master agreement and several protocols/amendments, some of which require that in certain circumstances companies purchasing CDSs require counterparties (sellers) to post collateral to back their exposures.[75] It was this requirement to post collateral that pushed some companies

[73] Notional value is the face value of bonds and loans on which participants have written protection. World GDP is from World Bank. Development Indicators.

[74] International Swaps and Derivatives Association, ISDA Applauds $25 Trn Reductions in CDS Notionals, Industry Efforts to Improve CDS Operations. News Release, October 27, 2008.

[75] For information on the International Swaps and Derivatives Association, see http://www.isda.org. In 2008, credit derivatives had collateralized exposure of 74%. See ISDA, *Margin Survey 2008*. Collateral calls have been a major (continued...)

toward bankruptcy. The blurring of boundaries among banks, brokerage houses, and insurance agencies also made regulation and information gathering difficult. Regulation in the United States tends to be functional with separate government agencies regulating and overseeing banks, securities, insurance, and futures. There was no suprafinancial authority.

The Downward Slide

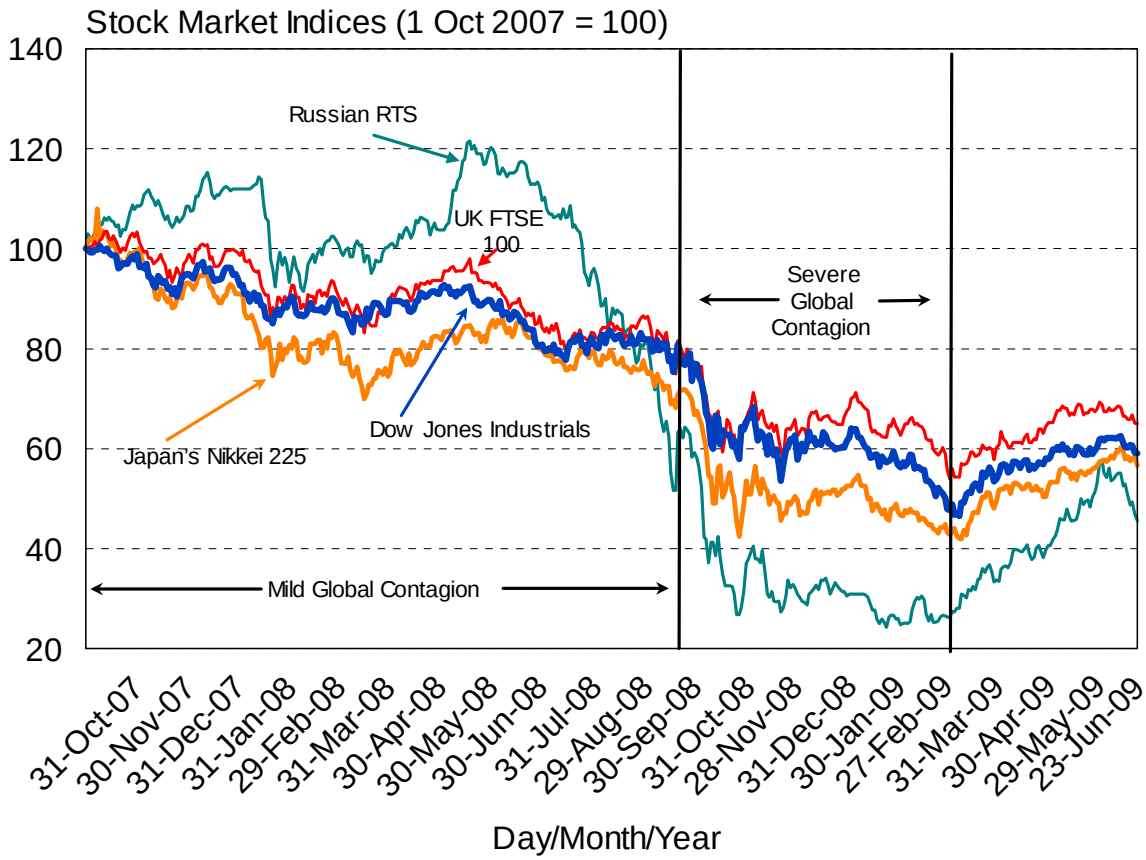
The plunge downward into the global financial crisis did not take long. It was triggered by the bursting of the housing bubble and the ensuing subprime mortgage crisis in the United States, but other conditions have contributed to the severity of the situation. Banks, investment houses, and consumers carried large amounts of leveraged debt. Certain countries incurred large deficits in international trade and current accounts (particularly the United States), while other countries accumulated large reserves of foreign exchange by running surpluses in those accounts. Investors deployed "hot money" in world markets seeking higher rates of return. These were joined by a huge run up in the price of commodities, rising interest rates to combat the threat of inflation, a general slowdown in world economic growth rates, and increased globalization that allowed for rapid communication, instant transfers of funds, and information networks that fed a herd instinct. This brought greater uncertainty and changed expectations in a world economy that for a half decade had been enjoying relative stability.

An immediate indicator of the rapidity and spread of the financial crisis has been in stock market values. As shown in **Figure 3**, as values on the U.S. market plunged, those in other countries were swept down in the undertow. By mid-October 2008, the stock indices for the United States, U.K., Japan, and Russia had fallen by nearly half or more relative to their levels on October 1, 2007. The downward slide reached a bottom in mid-March 2009, although there still is concern that the subsequent slow recovery in stock values has been a "bear market bounce" and that these stock markets may again go into sustained decline. the close tracking of the equities markets in the United States, Japan, and the U.K. provides further evidence of the global nature of capital markets and the rapidity of international capital flows.

(...continued)

factor in the financial difficulties of AIG insurance.

Figure 3. Selected Stock Market Indices for the United States, U.K., Japan, and Russia



Source: Factiva database.

Declines in stock market values reflected huge changes in expectations and the flight of capital from assets in countries deemed to have even small increases in risk. Many investors, who not too long ago had heeded financial advisors who were touting the long term returns from investing in the BRICs (Brazil, Russia, India, and China),[76] pulled their money out nearly as fast as they had put it in. Dramatic declines in stock values coincided with new accounting rules that required financial institutions holding stock as part of their capital base to value that stock according to market values (mark-to-market). Suddenly, the capital base of banks shrank and severely curtailed their ability to make more loans (counted as assets) and still remain within required capital-asset ratios. Insurance companies too found their capital reserves diminished right at the time they had to pay buyers of or post collateral for credit default swaps. The rescue (establishment of a conservatorship) for Fannie Mae and Freddie Mac in September 2008 potentially triggered credit default swap contracts with notional value exceeding $1.2 trillion.

In addition, the rising rate of defaults and bankruptcies created the prospect that equities would suddenly become valueless. The market price of stock in Freddie Mac plummeted from $63 on October 8, 2007 to $0.88 on October 28, 2008. Hedge funds, whose "rocket scientist" analysts claimed that they could make money whether markets rose or fell, lost vast sums of money. The

[76] Thomas M. Anderson, "Best Ways to Invest in BRICs," Kiplinger.com, October 18, 2007.

prospect that even the most seemingly secure company could be bankrupt the next morning caused credit markets to freeze. Lending is based on trust and confidence. Trust and confidence evaporated as lenders reassessed lending practices and borrower risk.

One indicator of the trust among financial institutions is the Libor, the London Inter-Bank Offered Rate. This is the interest rate banks charge for short-term loans to each other. Although it is a composite of primarily European interest rates, it forms the basis for many financial contracts world wide including U.S. home mortgages and student loans. During the worst of the financial crisis in October 2008, this rate had doubled from 2.5% to 5.1%, and for a few days much interbank lending actually had stopped. The rise in the Libor came at a time when the U.S. monetary authorities were lowering interest rates to stimulate lending. The difference between interest on Treasury bills (three month) and on the Libor (three month) is called the "Ted spread." This spread averaged 0.25 percentage points from 2002 to 2006, but in October 2008 exceeded 4.5 percentage points. By the end of December, it had fallen to about 1.5%. The greater the spread, the greater the anxiety in the marketplace.[77]

As the crisis has moved to a global economic slowdown, many countries have pursued expansionary monetary policy to stimulate economic activity. This has included lowering interest rates and expanding the money supply.

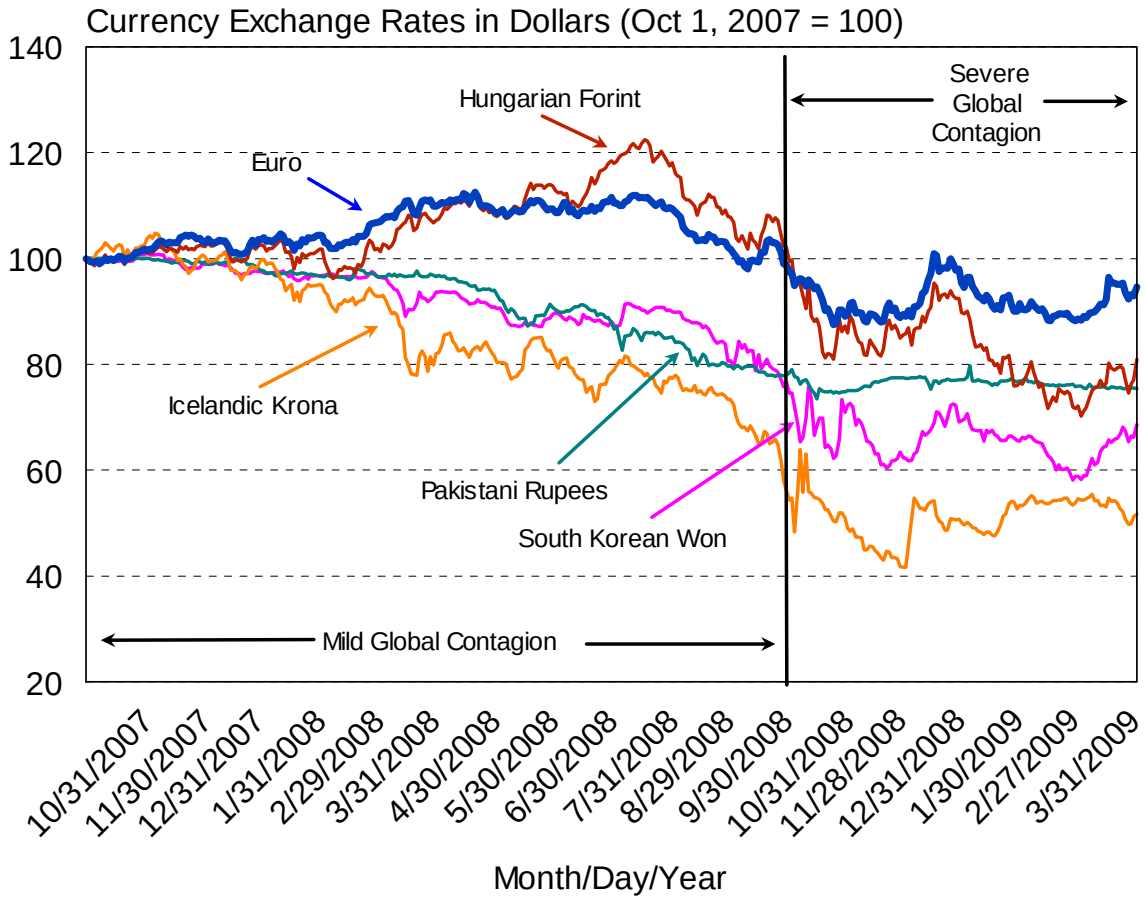
Currency exchange rates serve both as a conduit of crisis conditions and an indicator of the severity of the crisis. As the financial crisis hit, investors fled stocks and debt instruments for the relative safety of cash—often held in the form of U.S. Treasury or other government securities. That increased demand for dollars, decreased the U.S. interest rate needed to attract investors, and caused a jump in inflows of liquid capital into the United States. For those countries deemed to be vulnerable to the effects of the financial crisis, however, the effect was precisely the opposite. Demand for their currencies fell and their interest rates rose.

Figure 4 shows indexes of the value of selected currencies relative to the dollar for countries in which the effects of the financial crisis have been particularly severe. For much of 2007 and 2008, the Euro and other European currencies, including the Hungarian forint had been appreciating in value relative to the dollar. Then the crisis broke. Other currencies, such as the Korean won, Pakistani rupee, and Icelandic krona had been steadily weakening over the previous year and experienced sharp declines as the crisis evolved. Recently, however, they have recovered slightly.

For a country in crisis, a weak currency increases the local currency equivalents of any debt denominated in dollars and exacerbates the difficulty of servicing that debt. The greater burden of debt servicing usually has combined with a weakening capital base of banks because of declines in stock market values to further add to the financial woes of countries. National governments have had little choice but to take fairly draconian measures to cope with the threat of financial collapse. As a last resort, some have turned to the International Monetary Fund for assistance.

[77] For these and other indicators of the crisis in credit, see http://www.nytimes.com/interactive/2008/10/08/business/economy/20081008-credit-chart-graphic.html.

Figure 4. Exchange Rate Values for Selected Currencies Relative to the U.S. Dollar



Source: Data from PACIFIC Exchange Rate Service, University of British Columbia.

As economies weakened, governments moved from shoring up their financial institutions to coping with rapidly developing recessionary economic conditions. While actions to assist banks, insurance companies, and securities firms recover or stave off bankruptcy continued, stimulus packages became policy priorities. In the fourth quarter of 2008, economic growth rates dropped in some countries at rates not seen in decades.(See **Figure 1**) China alone has estimated that 20 million workers have become unemployed. **Table 2** shows stimulus packages by selected major countries of the world. While the $787 billion package by the United States is the largest, China's $586 billion, the European Union's $256 billion, and Japan's $250 billion packages also are quite large. **Appendix A** provides a more complete list of stimulus packages by country.

Table 2. Stimulus Packages by Selected Countries

Date Announced	Country	$Billion	Status, Package Contents
17-Feb-09	United States	787.00	Infrastructure technology, tax cuts, education, transfers to states, energy, nutrition, health, unemployment benefits. Budget in deficit.
4-Feb-09	Canada	32.00	Two-year program. Infrastructure, tax relief, aid for sectors in peril. Government to run an estimated $1.1 billion budget deficit in 2008 and $52 billion deficit in 2009.
7-Jan-09	Mexico	54.00	Infrastructure, a freeze on gasoline prices, reducing electricity rates, help for poor families to replace old appliances, construction of low-income housing and an oil refinery, rural development, increase government purchases from small- and medium-sized companies. Paid for by taxes, oil revenues, and borrowing.
12-Dec-08	European Union	39.00	Total package of $256 billion called for states to increase budgets by $217 billion and for the EU to provide $39 billion to fund cross-border projects including clean energy and upgraded telecommunications architecture.
13-Jan-09	Germany	65.00	Infrastructure, tax cuts, child bonus, increase in some social benefits, $3,250 incentive for trading in cars more than nine years old for a new or slightly used car.
24-Nov-08	United Kingdom	29.60	Proposed plan includes a 2.5% cut in the value added tax for 13 months, a postponement of corporate tax increases, government guarantees for loans to small and midsize businesses, spending on public works, including public housing and energy efficiency. Plan includes an increase in income taxes on those making more than $225,000 and increase National Insurance contribution for all but the lowest income workers.
5-Nov-08	France	33.00	Public sector investments (road and rail construction, refurbishment and improving ports and river infrastructure, building and renovating universities, research centers, prisons, courts, and monuments) and loans for carmakers. Does not include the previously planned $15 billion in credits and tax breaks on investments by companies in 2009.
16-Nov-08	Italy	52.00	Three year program. Measures to spur consumer credit, provide loans to companies, and rebuild infrastructure.
		(3.56)	Feb. 6, 2009, $2.56 billion stimulus package that is part of the three-year program. Included payments of up to $1,950 for trading in an old car for a new, less polluting one and 20% tax deductions for purchases of appliances and furniture. Additional $1 billion allocated in March 2009 for building a bridge and increasing welfare aid.
20-Nov-08	Russia	20.00	Cut in the corporate profit tax rate, a new depreciation mechanism for businesses, to be funded by Russia's foreign exchange reserves and rainy day fund.
10-Nov-08	China	586.00	Low-income housing, electricity, water, rural infrastructure, projects aimed at environmental protection and technological innovation, tax deduction for capital spending by companies, and spending for health care and social welfare.
13-Dec-08	Japan	250.00	Increase in government spending, funds to stabilize the financial system (prop up troubled banks and ease a credit crunch by purchasing commercial paper), tax cuts for homeowners and companies that build or purchase new factories and equipment, and grants to local government. The April 2009 package included increasing the safety net for non-regular workers, supporting small businesses, new car purchase subsidies, revitalizing regional economies, promoting solar power and nursing and medical services.
6-Apr-09	Japan	154.00	

Date Announced	Country	$Billion	Status, Package Contents
3-Nov-08	South Korea	14.64	$11 billion for infrastructure (including roads, universities, schools, and hospitals; funds for small- and medium-business, fishermen, and families with low income) and tax cuts. Includes an October 2008 stimulus package of $3.64 billion to provide support for the construction industry.
9-Feb-09	South Korea	37.87	The government announced its intention to invest $37.87 billion over the next four years in eco-friendly projects including the construction of dams; "green" transportation networks such as low-carbon emitting railways, bicycle roads, and other public transportation systems; and expand existing forest areas.
28-Nov-08	Taiwan	15.60	Shopping vouchers of $108 each for all citizens, construction projects to be carried out over four years include expanding metro systems, rebuilding bridges and classrooms, improving, railway and sewage systems, and renew urban areas.
26-Jan-09	Australia	35.2	$7 billion stimulus package in October 2008 was cash handouts to low income earners and pensioners. January's $28.2 billion package includes infrastructure, schools and housing, and cash payments to low- and middle-income earners. Budget is in deficit.
23-Dec-08	Brazil	5.00	Program established in 2007 to continue to 2010. Tax cuts (exempt capital goods producers from the industrial and welfare taxes, increase the value of personal computers exempted from taxes) and rebates. Funded by reducing the government's budget surplus.

Source: Congressional Research Service from various news articles and government press releases.

Notes: Currency conversions to U.S. dollars were either already done in the news articles or by CRS using current exchange rates.

Effects on Emerging Markets[78]

The global credit crunch that began in August 2007 has led to a financial crisis in emerging market countries (**see box**) that is being viewed as greater in both scope and effect than the East Asian financial crisis of 1997-98 or the Latin American debt crisis of 2001-2002, although the impact on individual countries may have been greater in previous crises. Of the emerging market countries, those in Central and Eastern Europe appear, to date, to be the most impacted by the financial crisis.

The ability of emerging market countries to borrow from global capital markets has allowed many countries to experience incredibly high growth rates. For example, the Baltic countries of Latvia, Estonia, and Lithuania experienced annual economic growth of nearly 10% in recent years. However, since this economic expansion was predicated on the continued availability of access to foreign credit, they were highly vulnerable to a financial crisis when credit lines dried up.

[78] Prepared by Martin A. Weiss, Specialist in International Trade and Finance, Foreign Affairs, Defense, and Trade Division.

What are Emerging Market Countries?

There is no uniform definition of the term "emerging markets." Originally conceived in the early 1980s, the term is used loosely to define a wide range of countries that have undergone rapid economic change over the past two decades. Broadly speaking, the term is used to distinguish these countries from the long-industrialized countries, on one hand, and less-developed countries (such as those in Sub-Saharan Africa), on the other. Emerging market countries are located primarily in Latin America, Central and Eastern Europe, and Asia.

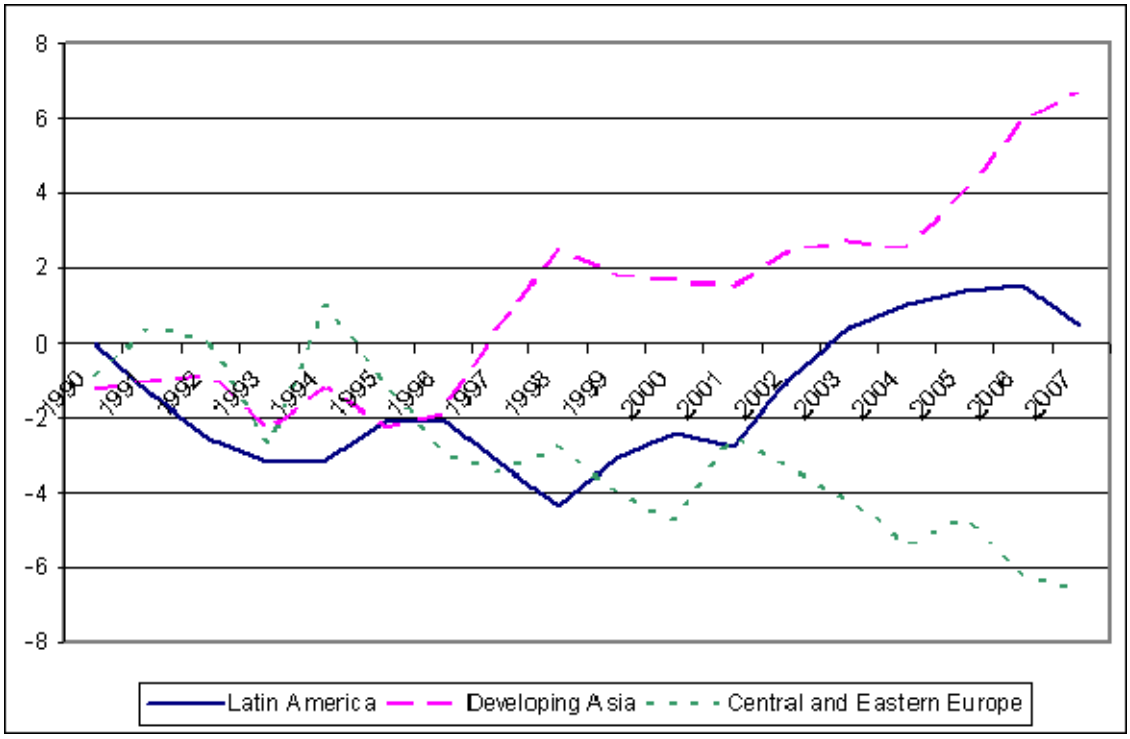
Since 1999, the finance ministers of many of these emerging market countries began meeting with their peers from the industrialized countries under the aegis of the G-20, an informal forum to discuss policy issues related to global macroeconomic stability. The members of the G-20 are the European Union and 19 countries: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom and the United States.

For more information, see "When are Emerging Markets no Longer Emerging?, Knowledge@Wharton, available at http://knowledge.wharton.upenn.edu/article.cfm?articleid=1911.

Of all emerging market countries, Central and Eastern Europe appear to be the most vulnerable. On a wide variety of economic indicators, such as the total amount of debt in the economy, the size of current account deficits, dependence on foreign investment, and the level of indebtedness in the domestic banking sector, countries such as Hungary, Ukraine, Bulgaria, Kazakhstan, Kyrgyzstan, Latvia, Estonia, and Lithuania, rank among the highest of all emerging markets. Throughout the region, the average current account deficit increased from 2% of GDP in 2000 to 9% in 2008. In some countries, however, the current account deficit is much higher. Latvia's estimated 2008 current account deficit is 22.9% of GDP and Bulgaria's is 21.4%.[79] The average deficit for the region was greater than 6% in 2008 (**Figure 5**).

[79] Mark Scott, "Economic Problems Threaten Central and Eastern Europe," *BusinessWeek*, October 17, 2008.

Figure 5. Current Account Balances (as a percentage of GDP)



Source: International Monetary Fund

Due to the impact of the financial crisis, several Central and Eastern European countries have already sought emergency lending from the IMF to help finance their balance of payments. On October 24, the IMF announced an initial agreement on a $2.1 billion two-year loan with Iceland (approved on November 19). On October 26, the IMF announced a $16.5 billion agreement with Ukraine. On October 28, the IMF announced a $15.7 billion package for Hungary. On November 3, a staff-level agreement on an IMF loan was reached with Kyrgyzstan,[80] and on November 24, the IMF approved a $7.6 billion stand-by arrangement for Pakistan to support the country's economic stabilization.[81]

The quickness with which the crisis has impacted emerging market economies has taken many analysts by surprise. Since the Asian financial crisis, many Asian emerging market economies enacted a policy of foreign reserve accumulation as a form of self-insurance in case they once again faced a "sudden stop" of capital flows and the subsequent financial and balance of payments crises that result from a rapid tightening of international credit flows.[82] Two additional factors motivated emerging market reserve accumulation. First, several countries have pursued an export-led growth strategy targeted at the U.S. and other markets with which they have generated

[80] Information on ongoing IMF negotiations is available at http://www.imf.org.

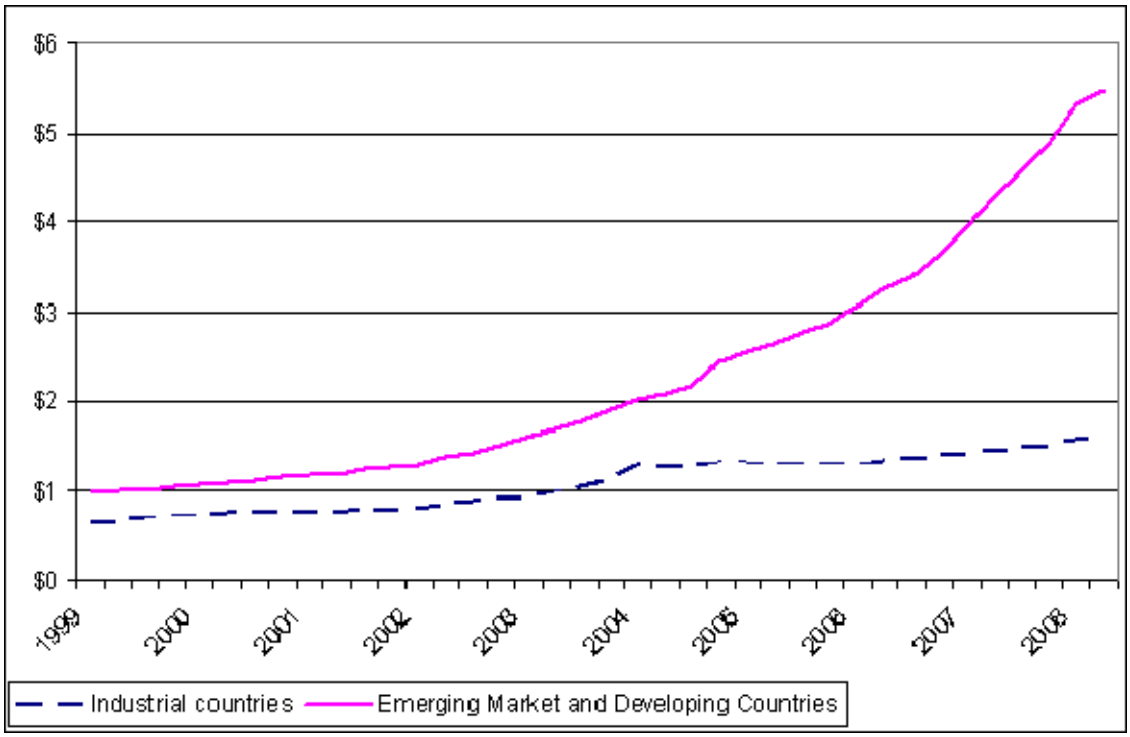
[81] International Monetary Fund, "IMF Executive Board Approves Stand-by Arrangement for Pakistan." Press Release No. 08/303, November 24, 2008.

[82] Reinhart, Carmen and Calvo, Guillermo (2000): When Capital Inflows Come to a Sudden Stop: Consequences and Policy Options. Published in: in Peter Kenen and Alexandre Swoboda, eds. Reforming the International Monetary and Financial System (Washington DC: International Monetary Fund, 2000) (2000): pp. 175-201.

trade surpluses.[83] Second, a sharp rise in the price of commodities from 2004 to the first quarter of 2008 led many oil-exporting economies, and other commodity-based exporters, to report very large current account surpluses. **Figure 6** shows the rapid increase in foreign reserve accumulation among these countries. These reserves provided a sense of financial security to EM countries. Some countries, particularly China and certain oil exporters, also established sovereign wealth funds that invested the foreign exchange reserves in assets that promised higher yields.[84]

Figure 6. Global Foreign Exchange Reserves

($ Trillion)



Source: IMF

While global trade and finance linkages between the emerging markets and the industrialized countries have continued to deepen over the past decade, many analysts believed that emerging markets had successfully "decoupled" their growth prospects from those of industrialized countries. Proponents of the theory of decoupling argued that emerging market countries, especially in Eastern Europe and Asia, have successfully developed their own economies and intra-emerging market trade and finance to such an extent that a slowdown in the United States or Europe would not have as dramatic an impact as it did a decade ago. A report by two economists at the IMF found some evidence of this theory. The authors divided 105 countries into three groups: developed countries, emerging countries, and developing countries and studied how economic growth was correlated among the groups between 1960 and 2005. The authors found that while economic growth was highly synchronized between developed and developing

[83] "New paradigm changes currency rules," *Oxford Analytica*, January 17, 2008.

[84] See CRS Report RL34336, *Sovereign Wealth Funds: Background and Policy Issues for Congress*, by Martin A. Weiss.

countries, the impact of developed countries on emerging countries has decreased over time, especially during the past twenty years. According to the authors:

> In particular, [emerging market] countries have diversified their economies, attained high growth rates and increasingly become important players in the global economy. As a result, the nature of economic interactions between [industrialized and emerging market] countries has evolved from one of dependence to multidimensional interdependence.[85]

Despite efforts at self-insurance through reserve accumulation and evidence of economic decoupling, the U.S. financial crisis, and the sharp contraction of credit and global capital flows in October 2008 affected all emerging markets to a degree due to their continued dependence on foreign capital flows. According to the *Wall Street Journal*, in the month of October, Brazil, India, Mexico, and Russia drew down their reserves by more than $75 billion, in attempt to protect their currencies from depreciating further against a newly resurgent U.S. dollar.[86]

A key to understanding why emerging market countries have been so affected by the crisis (especially Central and Eastern Europe) is their high dependence on foreign capital flows to finance their economic growth (**Figures 7-8**). Even though several emerging markets have been able to reduce net capital inflows by investing overseas (through sovereign wealth funds) or by tightening the conditions for foreign investment, the large amount of gross foreign capital flows into emerging markets remained a key vulnerability for them. For countries such as those in Central and Eastern Europe which have both high gross and net capital flows, vulnerability to financial crisis is even higher.

Once the crisis occurred, it became much more difficult for emerging market countries to continue to finance their foreign debt. According to Arvind Subramanian, an economist at the Peterson Institute for International Economics, and formerly an official at the IMF:

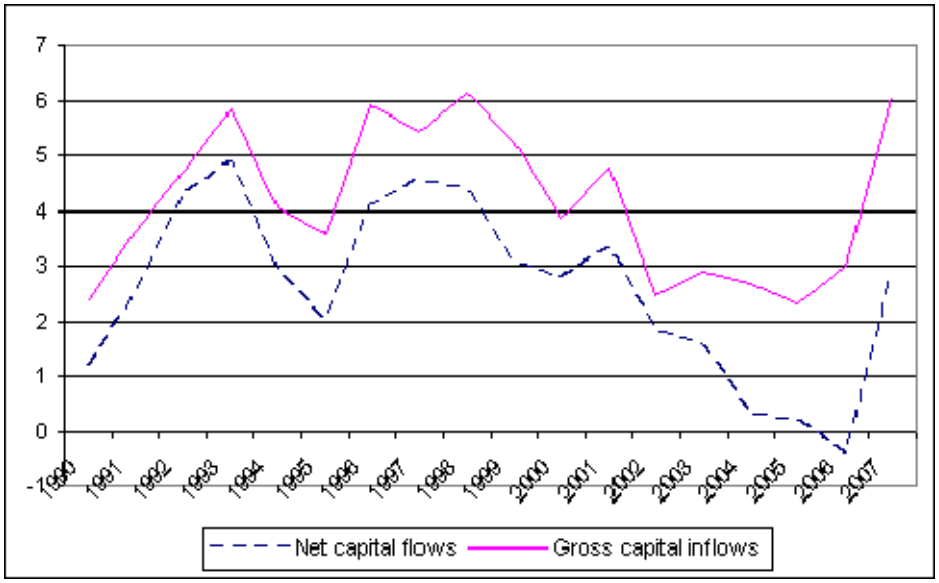
> If domestic banks or corporations fund themselves in foreign currency, they need to roll these over as the obligations related to gross flows fall due. In an environment of across-the-board deleveraging and flight to safety, rolling over is far from easy, and uncertainty about rolling over aggravates the loss in confidence.[87]

[85] Cigdem Akin and M. Ayhan Kose, "Changing Nature of North-South Linkages: Stylized Facts and Explanations." International Monetary Fund Working Paper 07/280. Available at http://www.imf.org/external/pubs/ft/wp/2007/wp07280.pdf.

[86] Joanna Slater and Jon Hilsenrath, "Currency-Price Swings Disrupt Global Markets ," *Wall Street Journal*, October 25, 2008.

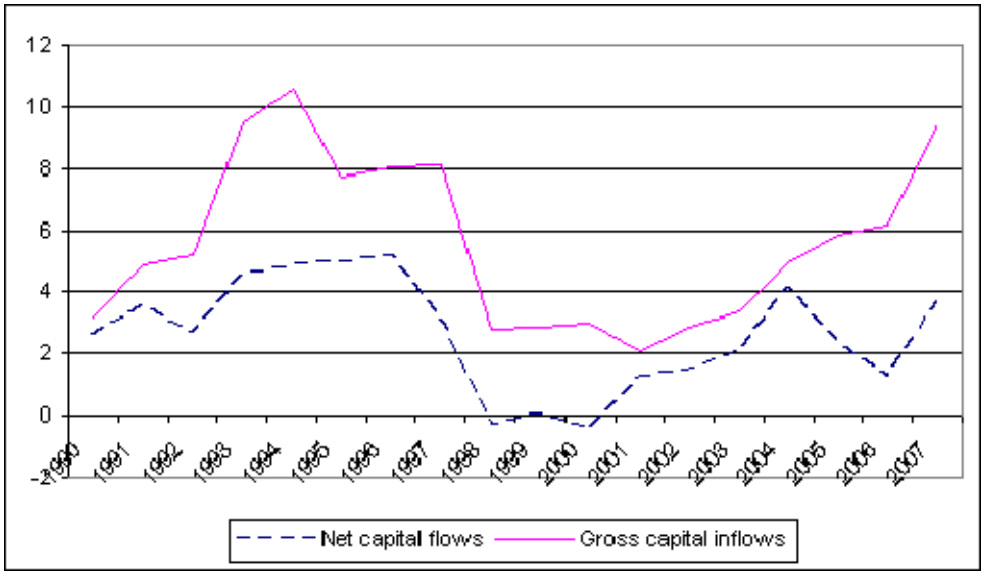
[87] Arvind Subramanian , "The Financial Crisis and Emerging Markets," Peterson Institute for International Economics, Realtime Economics Issue Watch, October 24, 2008.

Figure 7. Capital Flows to Latin America (in percent of GDP)



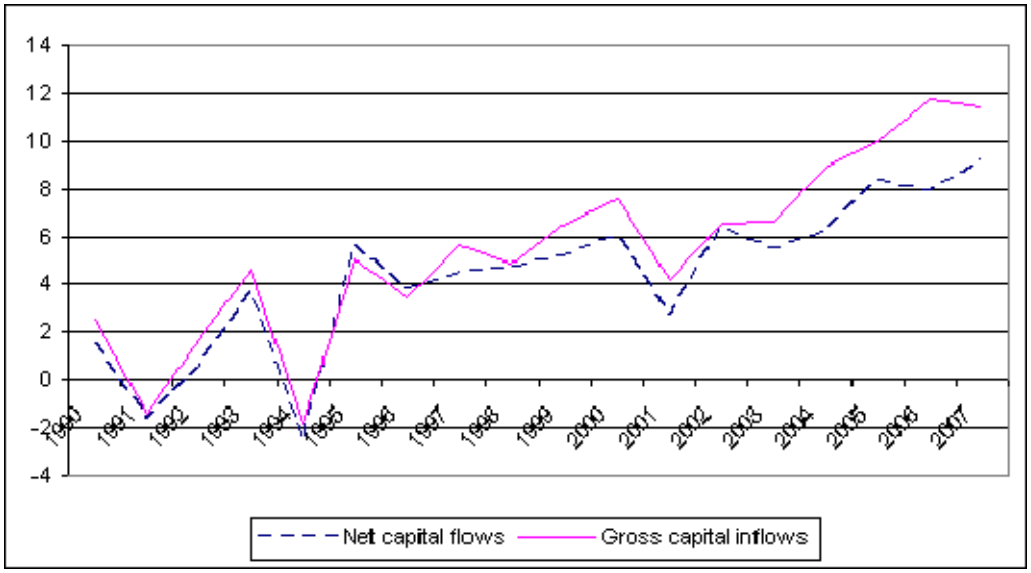
Source: IMF

Figure 8. Capital Flows to Developing Asia (in percent of GDP)



Source: IMF

Figure 9. Capital Flows to Central and Eastern Europe (in percent of GDP)



Source: IMF

As emerging markets have grown, Western financial institutions have increased their investments in emerging markets. G-10[88] financial institutions have a total of $4.7 trillion of exposure to emerging markets with $1.6 trillion to Central and Eastern Europe, $1.5 trillion to emerging Asia, and $1.0 trillion to Latin America. While industrialized nation bank debt to emerging markets represents a relatively small percentage (13%) of total cross-border bank lending ($36.9 trillion as of September 2008), this figure is disproportionately high for European financial institutions and their lending to Central and Eastern Europe. For European and U.K. banks, cross-border lending to emerging markets, primarily Central and Eastern Europe accounts for between 21% and 24% of total lending. For U.S. and Japanese institutions, the figures are closer to 4% and 5%.[89] The heavy debt to Western financial institutions greatly increased central and Eastern Europe's vulnerability to contagion from the financial crisis.

In addition to the immediate impact on growth from the cessation of available credit, a downturn in industrialized countries will likely affect emerging market countries through several other channels. As industrial economies contract, demand for emerging market exports will slow down. This will have an impact on a range of emerging and developing countries. For example, growth in larger economies such as China and India will likely slow as their exports decrease. At the same time, demand in China and India for raw natural resources (copper, oil, etc) from other developing countries will also decrease, thus depressing growth in commodity-exporting countries.[90]

[88] The Group of Ten is made up of eleven industrial countries (Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States).

[89] Stephen Jen and Spyros Andreopoulos, "Europe More Exposed to EM Bank Debt than the U.S. or Japan," Morgan Stanley Research Global, October 23, 2008.

[90] Dirk Willem te Velde, "The Global Financial Crisis and Developing Countries," *Overseas Development Institute*, October 2008.

Slower economic growth in the industrialized countries may also impact less developed countries through lower future levels of bilateral foreign assistance. According to analysis by the Center for Global Development's David Roodman, foreign aid may drop precipitously over the next several years. His research finds that after the Nordic crisis of 1991, Norway's aid fell 10%, Sweden's 17%, and Finland's 62%. In Japan, foreign aid fell 44% between 1990 and 1996, and has never returned to pre-crisis assistance levels.[91]

Latin America[92]

Financial crises are not new to Latin America, but the current one has two unusual dimensions. First, as substantiated earlier in this report, it originated in the United States, with Latin America suffering shocks created by collapses in the U.S. housing and credit markets, despite minimal direct exposure to the "toxic" assets in question. Second, it spread to Latin America in spite of recent strong economic growth and policy improvements that have generally increased economic stability and reduced risk factors, particularly in the financial sector.[93] Repercussions from the global financial crisis have varied by country based in part on policy differences, but also exposure to two major risks, the degree of reliance on the U.S. economy, and/or dependence on commodity exports. Nonetheless, investors have been especially hard on the region as a whole, perhaps leery of its capacity to weather short-term financial contagion let alone a protracted global recession.

The economies of Latin America and the Caribbean grew at an average annual rate of nearly 5.5% for the five years 2004-2008, lending credence to the once prominent idea that they were "decoupling" from slower growing developed economies, particularly the United States.[94] Domestic policy reforms have been credited with achieving macroeconomic stability, stronger fiscal positions, sounder banking systems, and lower sovereign debt risk levels. Others note, however, that Latin America's recent growth trend is easily explained by international economic fundamentals, questioning the importance of the decoupling theory. The sharp rise in commodity prices, supportive external financing conditions, and high levels of remittances contributed greatly to the region's improved economic welfare, reflecting gains from a strong global economy. In addition, all three trends reversed even before the financial crisis began, suggesting that Latin America remains very much tied to world markets and trends.[95]

Latin America is experiencing two levels of economic problems related to the crisis. First order effects from financial contagion are evident in the high volatility of financial market indicators. All major indicators fell sharply in the fourth quarter of 2008, as capital sought safe haven in less risky assets, many of them, ironically, dollar denominated. Regional stock indexes fell by half

[91] David Roodman, "History Says Financial Crisis Will Suppress Aid," *Center for Global Development*, October 13, 2008.

[92] Prepared by J. F. Hornbeck, Specialist in International Trade and Finance, Foreign Affairs, Defense, and Trade Division.

[93] United Nations. Economic Commission on Latin America and the Caribbean. *Latin America and the Caribbean in the World Economies, 2007. Trends 2008.* Santiago: October 2008. p. 28.

[94] Decoupling generally refers to economic growth trends in one part of the world, usually smaller emerging economies, becoming less dependent (correlated) with trends in other parts of the world, usually developed economies. See Rossi, Vanessa. *Decoupling Debate Will Return: Emergers Dominate in Long Run.* London: Chatham House, 2008. p. 5.

[95] Ocampo, Jose Antonio. The Latin American Boom is Over. *REG Monitor*. November 2, 2008.

from June to October 2008, although on average, equity markets have recovered half these loses. Currencies followed suit in many Latin American countries. They depreciated suddenly from investor flight to the U.S. dollar reflecting a lack of confidence in local currencies, the rush to portfolio rebalancing, and the fall in commodity import revenue related to sharply declining prices and diminished global demand. Many currencies remain highly depreciated and in Mexico and Brazil, where firms took large speculative off-balance sheet derivative positions in the currency markets, currency losses were compounded to a degree requiring central bank intervention to ensure dollar availability.[96]

Debt markets followed in kind, as credit tightened and international lending contracted, even for short-term needs such as inventory and trade finance. Borrowing has become more expensive, as seen in widening bond spreads. Over the past year, bond spreads in the Emerging Market Bond Index (EMBI) and corporate bond index for Latin America increased by over 600 basis points, half occurring in the fall of 2008. This trend suggests first, that Latin America was already beginning to experience a slowdown prior to the financial crisis, and second, that the crisis itself was a sudden subsequent shock to the region. Some countries, including Brazil, Mexico, and Colombia, have been able to access the international debt markets. Many others, however, have had to rely more on domestic debt placements. Overall, after spiking in the fall of 2008, sovereign bond spreads have retreated to under 500 basis points, lower than in earlier financial crises, when they remained above 1,000 basis points. This trend points to Latin America's relatively stronger economic fundamentals and regulatory regimes, which helped many countries avoid a more severe reaction to the crisis. The exceptions are in Argentina, Ecuador, and Venezuela, all of which share a heavy dependence on commodity exports and weak economic policy frameworks. In each of these countries, bond spreads rose to over 1,500 basis points and remain above 1,000 basis points in June 2009, reflecting a lack of confidence in their capacity to service debt.[97]

Second order effects all point to a deterioration of broader economic fundamentals. GDP growth for the region is expected to be a negative 1%-2% in 2009. The fall in global demand, particularly for Latin America's commodity exports, will be a big factor, as already seen in contracting export revenue. Tightening credit markets and the sharp rise in the cost of capital for Latin America is dampening investment. Consumption, trade surpluses, tourism, and remittances have also declined, which along with deteriorating public sector budgets, has caused a region-wide economic slowdown. Public sector borrowing is expected to rise and budget constraints may threaten spending on social programs, with a predictably disproportional effect on the poor. Social effects are also seen in the rising unemployment throughout the region.[98]

Policy responses have materialized from many quarters, including multilateral organizations, which have adopted programs to ameliorate the credit crisis and stimulate demand. The International Monetary Fund (IMF), World Bank, Inter-American Development Bank (IDB), Andean Development Corporation (CAF), and Latin American Reserve Fund (LARF) have all increased lending to the region, particularly on an expedited and short-term basis. The goal is to provide credit to the private sector and to support, in selective cases, bank recapitalization. Funds

[96] International Monetary Fund. Global Markets Monitor, June 15, 2009, and Fidler, Stephen. Going South. *Financial Times*. January 9, 2009. p. 7.

[97] Ibid, and International Monetary Fund. Regional Economic Outlook. *Western Hemisphere: Grappling with the Global Financial Crisis*. Washington, D.C. October 2008. pp. 7-10.

[98] International Monetary Fund. *Regional Economic Outlook – Western Hemisphere: Stronger Fundamentals Pay Off*. Washington, D.C. May 2009. p. 9-17 and United Nations Economic Commission on Latin America. *GDP in Latin America and the Caribbean May Fall -1.7% in 2009*. Press Release, June 10, 2009.

will also be made available for public sector spending (infrastructure and social programs) as a form of fiscal stimulus, primarily through the World Bank and IDB.

The United States has taken steps to provide dollar liquidity (reciprocal currency "swap" arrangement) on a temporary bilateral basis to many central banks of "systemically important" countries with sound banking systems. In Latin America, this group includes Mexico and Brazil, each of which had access to a $30 billion currency swap reserve with the U.S. Federal Reserve System initially through April 30, 2009, but which has been extended to February 1, 2010. The swap arrangement is intended to ensure dollar availability in support of the large trade and investment transactions conducted with the United States.[99]

National governments are also relying on monetary, fiscal, and exchange rate policies to stimulate their economies. The capacity to undertake any of these options varies tremendously among the Latin American countries. Fiscal capacity is constrained in many countries by high debt levels. Among the few countries adopting a fiscal stimulus, estimates of their size suggest they are small, ranging from 1.0% or less of GDP in Mexico, Brazil, and Argentina, up to 2.9% of GDP in Chile.[100] Countries are also increasing loans and guarantees as part of a stimulus plan.

Many countries are also limited in their use of monetary policy to expand liquidity. In particular, reducing interest rates is difficult for those experiencing significant currency depreciations, which can increase inflationary pressures. Nonetheless, those countries with flexible exchange rates have relied on currency depreciations to shoulder much of the adjustment process, without experiencing severe financial instability.[101] There has been some concern that countries may eventually resort to nationalistic policies that will reduce the flows of goods, services, and capital, which has been periodically observed. Capital controls, increased tariffs, and regulations that hinder trade and capital flows, however, can have debilitating effects on recovery strategies in the long run. The magnitude of the global economic downturn and adequacy of policy responses vary by country as illustrated by three examples discussed below.

Mexico

The Mexican economy has continued to contract sharply since the fourth quarter of 2008, and a survey of estimates forecasts that economic growth may fall by over 5% in 2009, the worst decline in six decades. Output is falling in both industry and service sectors, with the 13% decline in industrial production over the past year the worst since the 1995 "peso crisis." In January 2009, automobile production alone fell by 50% and car exports declined by 57% from the year earlier. Remittances, which amounted to $25 billion in 2008, may fall by 15% in 2009. Mexico faces a number of problems: heavy reliance on the U.S. economy, falling foreign investment, and low (until recently) oil prices. The United States accounts for half of Mexico's imports, 80% of its exports, and most of its foreign investment and remittances income.[102]

---

[99] Board of Governors of the Federal Reserve System. *Federal Reserve Press Release.* October 29, 2008 and *Minutes of the Federal Open Market Committee April 28-29, 2009.*

[100] Loser, Claudio. Stimulus Packages: How Much Can the Region Afford? *Latin American Advisor*. Inter-American Dialogue. January 29, 2009.

[101] International Monetary Fund. *Regional Economic Outlook – Western Hemisphere: Stronger Fundamentals Pay Off.* Washington, D.C. May 2009. p. 18-22.

[102] Global Outlook. *Mexico.* March 17, 2009 and International Monetary Fund, *Global Markets Monitor*, June 16, 2009.

At the outset of the financial crisis, Mexico experienced a run on the peso, which caused its value to fall at one point by 40% from its August 2008 high (currently down by 20% compared to 12% for the regional currency index). The decline was unrelated to investments in U.S. mortgage-backed securities. Investor portfolio re-balancing away from emerging markets, the dramatic fall in commodity prices, and decline in U.S. demand for Mexican exports were the main causes. The peso also suffered from large private positions taken in the belief that the peso's strength would not be eroded by the U.S. financial crisis. Many firms had gone beyond hedging to taking large derivative positions in the currency. As the peso began to depreciate, companies had to unwind these large off-balance-sheet positions quickly, accelerating its fall. One large firm had losses exceeding $1.4 billion and filed for bankruptcy, indicative of the severity of the problem. The Mexican government has responded by selling billions of dollars of reserves and using a temporary currency swap arrangement with the U.S. Federal Reserve to assure dollar liquidity, but the peso remains the hardest hit of all emerging market currencies.[103]

Mexico's long-term economic prospects hinge on recovery of U.S. aggregate demand. Because Mexico's trade is poorly diversified, the effects of the U.S. downturn are particularly noticeable, with Mexican exports to the United States on a monthly basis falling 37% from October 2008 to February 2009, reaching the lowest level since January 2005. The trade effect has been compounded by the fall in remittances from Mexican workers living in the United States. Employment figures for the formal economy are beginning to register large job losses. In the short-term, it will be important to evaluate Mexico's ability to counter the peso's decline and maintain liquidity to support both domestic financing and its trade with the United States. In the medium term, the depth of Mexico's economic slowdown in response to the U.S. recession will be the most telling benchmark of its vulnerability to the global crisis.[104]

To date, the Mexican government has adopted supportive monetary and fiscal policies. The central government has increased liquidity in the banking system, including multiple cuts in the prime policy lending rate. It has also increased its credit lines with the World Bank, International Monetary Fund, and Inter-American Development Bank. It has further agreed to $6.9 billion infrastructure stimulus package and an additional program weighted towards reducing energy costs to consumers. The price of cooking gas has been reduced by 10% and petroleum prices in the domestic market have been frozen. The Mexican government estimates that consumers will benefit by some $45 billion. Government programs to support small and medium-sized businesses, worker training, employment generation, and social safety nets have been maintained and expanded in some cases.[105]

The costs of these responses has placed additional strain on Mexico's finances. The overall fiscal deficit is expected to reach 3.5% of GDP for 2009 and 2010, estimated to be near the maximum that Mexico can afford. Recent downward revisions of Mexico's credit rating (still investor grade) reflect growing concern over Mexico's financial position in light of weak economic fundamentals and Mexico's recovery relying so heavily on a U.S. economic rebound.[106]

---

[103] Ibid., and The Wall Street Journal. *Mexico and Brazil Step In to Fight Currency Declines*, October 24, 2008 and *Latin America Monitor: Mexico.* December 2008.

[104] Latin American Newsletters. *Latin American Mexico and NAFTA Report*, March 2009, p. 10 and *Latin America Monitor: Mexico*, March 2009, p. 3.

[105] United Nations. Economic Commission on Latin America and the Caribbean. *The Reactions of the Governments of the Americas to the International Crisis: An Overview of Policy Measures up to 31 March 2009.* April 2009.

[106] Latin American Newsletters. *Latin American Mexico and NAFTA Report*, May 2009, p. 8-10.

Brazil

Brazil entered the financial crisis from a position of relative macroeconomic and fiscal strength, but nonetheless has not been immune to the global contraction. Although the economy grew by 5.1% in 2008, as of June 2009, it decelerated by 1.8% relative to a year earlier. Most economists predict a recession for 2009, but with the economy declining by less than 1%, followed by a relatively robust growth rate of 3.5% for 2010. Still, a number of indicators remain weak. Investment in both public and private projects appears to be on hold and at the close of 2008, industrial output has fallen by over 9% from a year earlier, led by a nearly 60% decline in automobile production.[107]

Financial repercussions sparked the crisis and affected Brazil in ways similar to Mexico. Brazil's stock market index tumbled by half in 2008 as investors fled both equities and the Brazilian currency (the *real*). The Brazilian government sold billions of dollars to fight a rapidly depreciating currency, which fell at one point by over 35% from its August 2008 high. Both indexes, however, have since recovered significantly and Brazil is widely expected to be at the forefront of a global recovery. Brazil, like Mexico, also has a large currency derivatives market, where speculative trades contributed to the *real's* decline, although to a lesser degree than in Mexico. Brazil's central bank agreed to the temporary currency swap arrangement with the U.S. Federal Reserve. It also has some $200 billion in international reserves, which have served as a cushion against financial retreat from the financial markets. It also has a sound and well-regulated banking system and an experienced central bank staff that has helped maintain confidence in the financial system.[108]

The real economy faces longer-term challenges. Industrial production remains weak and has led to Brazil shedding 654,000 jobs in December 2008. In addition to the fall in domestic demand, Brazil's exports have suffered in part because over half are commodities, which experienced dramatic price declines in late 2008, but this trend has been offset in part by strong export performance to China, which replaced the United States in the first quarter of 2009 as the largest recipient of Brazilian exports. Nonetheless, Brazil decided to raise tariffs on seven steel imports because of a surge in imports from China.[109] Capital inflows, which were strong in 2008, have also slowed, despite Brazil's recent solid macroeconomic performance and its investment grade rating. As with other countries, the extent to which global demand diminishes will ultimately affect all these variables. Brazil has a large internal market and is well-positioned on macroeconomic and fiscal fronts, which have helped soften the effects of the global financial crisis.[110]

Brazil has emphasized enhancing financial sector liquidity through monetary policy over adopting a large fiscal stimulus. The Central Bank has injected billions of dollars into the banking system, lowered reserve requirements, and reduced the key short-term interest rate many times, from 13.75% to 9.25%. The Brazilian government has authorized state-owned banks to purchase

[107] Business Monitor International. *Latin American Monitor: Brazil*. March 2009 and Brazil-U.S. Business Council, *Brazil Bulletin*, June 15, 2009.

[108] Canuto, Otaviano. Emerging Markets and the Systemic Sudden Stop. *RGE Monitor*. November 12, 2008 and Wheatley, Jonathan. Brazilian Economy Is the Real Lure for the Yield-Hungry. *Financial Times*. May 7, 2009.

[109] Bureau of National Affairs. International Trade Daily. *Brazil Raises Duties on Steel Products After Imports from China Soar in 2009*. June 9, 2009.

[110] *Latin American Brazil & Southern Cone Report*, January 2009, p. 12.

private banks, approved stricter accounting rules for derivatives, extended credit directly to firms through the National Development Bank (BNDES) and the Central Bank, and exempted foreign investment firms from the financial transactions tax.[111] Unibanco, one of Brazil's largest banks, has also procured a $60 million credit extension from the World Bank's International Finance Corporation to support trade financing.

On the fiscal side, the government has frozen spending of approximately 6% of the federal budget, preferring to reinforce a policy of fiscal balance, but has also announced a small $16 billion stimulus package (1% of GDP). Tax cuts on retail sales, particularly automobiles, have helped maintain consumer purchasing. Brazil has maintained fiscal support for its social programs, expanded unemployment insurance, and made provisions for low-income housing and other support. To accommodate its increased fiscal commitments, it has reduced its primary fiscal surplus target from 3.8% to 2.5% of GDP.[112]

Argentina

Argentina, because of its shaky economic and financial position at the outset of the crisis, is poorly positioned to deal with a protracted downturn compared to most other Latin American countries. Although until recently it has experienced dramatic economic growth since 2002, this trend reflects a rebound from the previous severe 2001-2002 financial crisis and rise in commodity prices that benefitted Argentina's large agricultural sector. The collapse of commodity prices in late 2008 has diminished export and fiscal revenues and Argentina is also experiencing declines in investment, domestic consumer demand, and industrial production. Installed capacity utilization fell from 79% in October 2008 to 67.4% in January 2009. Particularly hard hit has been motor vehicles, metallurgy, and textiles. Economists forecast the economy will contract by 1% to 2% in 2009.[113]

Argentina has been financially isolated from global markets since its 2001 crisis and is also hampered by a litany of questionable policy choices, which combined with the global recession and a prolonged draught, has further diminished confidence in its financial system. Although the banks remain liquid and solvent, the stock market fell at one point by 37% from last fall and the peso has depreciated by 18%. Among the highly questionable policies that have diminished confidence in the country is the 2002 historic sovereign debt default and failure to renegotiate with Paris Club countries and private creditor holdouts. Others include government interference in the supposedly independent government statistics office (particularly with respect to inflation reporting), price controls, high export taxes, and most recently, nationalization of private pension funds to bolster public finances.[114] These policies have isolated the economy from international capital markets despite the need to finance a growing debt burden and public and private sector investments. Price controls and export restrictions (quotas and taxes) have led to market distortions, protests over government policies, and declining consumer confidence.

[111] Brazil-U.S. Business Council. *Brazil Bulletin*. October 27, 2008 and December 8, 2008.

[112] Soliani, Andre and Iuri Dantas. Brazil Freezes 37.2 Billion Reais of 2009 Budget. *Bloomberg Press*. January 27, 2009, and Economic Commission on Latin America and the Caribbean, *The Reactions of the Governments of the Americas to the International Crisis,* April 2009.

[113] Latin American Newsletters. *Latin American Economy & Business,* January 2009, pp. 10-11 and Global Insight. *Argentina.* June 12, 2009.

[114] Benson, Drew and Bill Farles. Argentine Bonds, Stocks Tumble on Pension Fund Takeover Plan. *Bloomberg*. October 21, 2008 and International Monetary Fund. *Global Markets Monitor*. March 17, 2009.

After ten months of steady growth, Argentina's exports declined by 6% in November and an additional 24% in December 2008, which includes key agricultural and energy products.[115] In response to falling demand for Argentine exports and the government's questionable financial policies and position, Argentina's currency has depreciated slowly, but not in line with its neighbors' currencies because of heavy exchange rate intervention. In selling dollars to protect the peso's value, however, Argentina has so far used up over 15% of its one-time $54 billion in foreign reserves, forced interest rates skyward, and made exports less competitive. In recognition that industrial production and exports are falling rapidly, Argentina has also adopted administrative trade restrictions to limit imports. These affect Brazilian goods in particular, including textiles and various machinery exports, raising tensions between the two major trade partners of the regional customs union, Mercosur.[116]

Risk assessment has been swift and punishing. Bond ratings have fallen, yields on short-term public debt exceed 30%, and the interest rate spread on Argentina's bonds rose to over 1,700 basis points, but have since settled around 1,000 basis points, four times higher than Mexico's or Brazil's spreads. The interest rate spread on credit default swaps peaked at 4,500 basis points in December 2008 before falling to the current level of 3,500 basis points, indicating the high cost required to insure against bond defaults. All these indicators point to a global perception of Argentina as a high-risk country, likely reinforcing its ostracism from international capital markets.[117]

Argentina has adopted a number of policies to address the domestic effects of the global economic crisis. The first initiative is a massive $32 billion public works program, which will raise expenditures by 2 percentage points of GDP. It is complemented by a $3.8 billion (1.2% of GDP) fiscal stimulus package comprising reduced interest rate loans for the purchase of durable goods, a 5 percentage point reduction in export taxes on wheat and corn, and subsidized credit extension to industrial sectors, including small- and medium-sized firms.[118]

Given Argentina's large expected public spending outlays for the coming year, the high and growing cost of its debt, falling revenues from imports, and its inability to access international credit markets, it had to take dramatic action to finance these programs. It did so by nationalizing, with the approval of the Congress, the private-sector pension system, effective January 1, 2009. The pension system provided $29 billion in assets immediately and access to an estimated $4.6 billion in annual pension contributions. In addition, Argentina has conducted two bond swaps (with 15.4% yields) for guaranteed loans maturing in 2009 to 2011.[119] Although these two moves have provided Argentina with increased fiscal capacity to meet short- and perhaps medium-term financing needs, the costs entail increased fiscal outlays in the future and heightened investor skepticism, particularly in light of what has become a protracted global recession.

---

[115] Republica Argentina. Ministerio de Economia y Finanzas Publicas. Instituto Nacional de Estadistica y Censos. *Intercambio Comercial Argentino*. Buenos Aires, January 28, 2009 and Global Insight. *Argentina.* June 12, 2009.

[116] Global Insight. *Argentina: S&P Lowers Argentina's Rating to B-*. November 3, 2008 and Latin America Weekly Report. *Lula May Accept Argentine Protectionism.* March 12, 2009. p. 8.

[117] International Monetary Fund. Regional Economic Outlook. *Western Hemisphere: Grappling with the Global Financial Crisis*. Washington, DC. October 2008. p. 8.

[118] *Latin American Brazil & Southern Cone Report*, February 2009, p. 3.

[119] Ibid., *Latin American Brazil & Southern Cone Report*, January 2009, p. 10, and IMF. *Global Markets Monitor*. March 2, 2009.

Russia and the Financial Crisis[120]

Russia tends to be in a category by itself. Although by some measures, it is an emerging market, it also is highly industrialized. Until recently, Russia had been experiencing impressive economic success, an average of 7% annual growth in real gross domestic product (GDP). In 2008, however, Russia faced a triple threat with the financial crisis coinciding with a rapid decline in the price of oil and the aftermath of the country's military confrontation with Georgia over the break-away areas of South Ossetia and Abkhazia. These events have exposed three fundamental weaknesses in the Russian economy: substantial dependence on oil and gas sales for export revenues and government revenues; a rise in foreign and domestic investor concerns; and a weak banking system. The economic downturn is showing up in Russia's performance indicators. In January 2009, Russia's industrial production declined 20% from the previous month, the largest drop in at least seven years and indicates a likely drop in overall Russian GDP.[121] The government predicted that Russian GDP will contract 2.2% in 2009, which would be the first annual contraction since 1998.[122]

The decline in world oil prices has hit Russia hard. Oil, natural gas, and other fuels account for about 65% of Russia's export revenues (2007).[123] In addition, the Russian government is dependent on taxes on oil and gas sales for more than half of its revenues. An average price of oil below $60/barrel could put the government budget into deficit.[124] An average price in the $30-$35/barrel range could cause the Russian economy to stop growing, according to one estimate.[125] As of February 9, 2009, the price of Urals-32 was $42.80, a 69.0% drop from its July 4, 2008 peak of $137.61.[126]

Another sign of financial trouble for Russia has been the rapid decline in stock prices on Russian stock exchanges. At the close of business on February 13, 2009, the RTS index had lost 75.0% of its value from its peak reached on May 19, 2008.[127] (The decline was the largest since Russia experienced a financial crisis in August 1998.) On September 16, 2008, alone, the RTS index lost 11.5% of its value leading the government to close stock markets for two days. The overall drop in equity prices has been blamed on the loss of investor confidence in the wake of the August 2008 conflict between Russia and Georgia but also because of the decline in oil prices and as a result of the credit crisis that has affected markets throughout the world. In addition, the ruble has been declining in nominal terms because foreign investors have been pulling capital out of the market to shore up domestic reserves putting downward pressure on the ruble. The ruble had declined 34.8% in terms of the dollar from July 29, 2008, to February 17, 2009.[128] Russian official reserves have declined substantially in part because of Russian Central Bank intervention to defend the ruble although the government has allowed some gradual depreciation. Between

[120] Prepared by William H. Cooper, Specialist in International Trade and Finance, Foreign Affairs, Defense, and Trade Division.

[121] *Financial Times.* February 16, 2009.

[122] *Financial Times.* February 18, 2009.

[123] Economist Intelligence Unit.

[124] Open Source Center. *Government Bails Out Oil Companies Suffering From World Financial Crisis.* October 30, 2008.

[125] Economist Intelligence Unit. *Monthly Report—Russia.* October 2008. p. 7.

[126] U.S. Department of Energy. Energy Information Administration.

[127] RTS.

[128] http://www.quote.ru.

July 31 and January 23, 2009, the reserves declined from $596.6 billion to $386.5 billion, or 35.2%.[129]

Russia's banking system remains immature, and high interest rates prevail. Russian companies, therefore, have relied on foreign bank loans for financing rather than equity-based financing or domestic bank loans. However, these foreign loans were secured with company stocks as collateral. Because of the drop in stock values and because of the overall tightening of credit availability, foreign banks have declined to rollover loans. The Russian government, led by President Medvedev and Prime Minister Putin, has implemented several packages of measures valued at over $200 billion since September 2008 to prop up the stock market and the banks. The economic crisis is also forcing Russian leaders to confront restructuring of government budget priorities as Russia is expected to face its first budget deficit since 2000.[130]

Effects on Europe and The European Response[131]

Some European countries[132] initially viewed the financial crisis as a purely American phenomenon. That view has changed as economic activity Europe has declined at a fast pace over a short period of time. Making matters worse, global trade has declined sharply, eroding prospects for European exports providing a safety valve for domestic industries that are cutting output. In addition, public protests, sparked by rising rates of unemployment and concerns over the growing financial and economic turmoil, are increasing the political stakes for European governments and their leaders. The global economic crisis is straining the ties that bind together the members of the European Union and could present a significant challenge to the ideals of solidarity and common interests. In addition, the longer the economic downturn persists, the greater the prospects are that international pressure will mount against those governments that are perceived as not carrying their share of the responsibility for stimulating their economies to an extent that is commensurate with the size of their economy.

European countries are also concerned over the impact the financial crisis and the economic recession are having on the economies of East Europe and prospects for political instability[133] as well as future prospects for market reforms. Worsening economic conditions in East European countries could compound the current problems facing financial institutions in the EU. Although mutual necessity may eventually dictate a more unified position among EU members and increased efforts to aid East European economies, some observers are concerned these actions may come too late to forestall another blow to the European economies and to the United States. Governments elsewhere in Europe, such as Iceland and Latvia, have collapsed as a result of public protests over the way their governments have handled their economies during the crisis.

The crisis has underscored the growing interdependence between financial markets and between the U.S. and European economies. As such, the synchronized nature of the current economic

[129] Central Bank of Russia.

[130] *Financial Times.*

[131] Prepared by James K. Jackson, Specialist in International Trade and Finance, Foreign Affairs, Defense, and Trade Division.

[132] For additional information, see CRS Report R40415, *The Financial Crisis: Impact on and Response by The European Union*, by James K. Jackson.

[133] Pan, Phillip P., Economic Crisis Fuels Unrest in E. Europe, *The Washington Post*, January 26, 2009, p, A1.

downturn probably means that neither the United States nor Europe is likely to emerge from the financial crisis or the economic downturn alone. The United States and Europe share a mutual interest in developing a sound financial architecture to improve supervision and regulation of individual institutions and of international markets. This issue includes developing the organization and structures within national economies that can provide oversight of the different segments of the highly complex financial system. This oversight is viewed by many as critical to the future of the financial system because financial markets generally are considered to play an indispensible role in allocating capital and facilitating economic activity.

Within Europe, national governments and private firms have taken noticeably varied responses to the crisis, reflecting the unequal effects by country. While some have preferred to address the crisis on a case-by-case basis, others have looked for a systemic approach that could alter the drive within Europe toward greater economic integration. Great Britain has proposed a plan to rescue distressed banks by acquiring preferred stock temporarily. Iceland, on the other hand, has had to take over three of its largest banks in an effort to save its financial sector and its economy from collapse. The Icelandic experience raises important questions about how a nation can protect its depositors from financial crisis elsewhere and about the level of financial sector debt that is manageable without risking system-wide failure.

According to reports by the International Monetary Fund (IMF) and the European Central Bank (ECB), many of the factors that led to the financial crisis in the United States created a similar crisis in Europe.[134] Essentially low interest rates and an expansion of financial and investment opportunities that arose from aggressive credit expansion, growing complexity in mortgage securitization, and loosening in underwriting standards combined with expanded linkages among national financial centers to spur a broad expansion in credit and economic growth. This rapid rate of growth pushed up the values of equities, commodities, and real estate. Over time, the combination of higher commodity prices and rising housing costs pinched consumers' budgets, and they began reducing their expenditures. One consequence of this drop in consumer spending was a slowdown in economic activity and, eventually, a contraction in the prices of housing. In turn, the decline in the prices of housing led to a large-scale downgrade in the ratings of subprime mortgage-backed securities and the closing of a number of hedge funds with subprime exposure. Concerns over the pricing of risk in the market for subprime mortgage-backed securities spread to other financial markets, including to structured securities more generally and the interbank money market. Problems spread quickly throughout the financial sector to include financial guarantors as the markets turned increasingly dysfunctional over fears of under-valued assets.

As creditworthiness problems in the United States began surfacing in the subprime mortgage market in July 2007, the risk perception in European credit markets followed. The financial turmoil quickly spread to Europe, although European mortgages initially remained unaffected by the collapse in mortgage prices in the United States. Another factor in the spread of the financial turmoil to Europe has been the linkages that have been formed between national credit markets and the role played by international investors who react to economic or financial shocks by rebalancing their portfolios in assets and markets that otherwise would seem to be unrelated. The rise in uncertainty and the drop in confidence that arose from this rebalancing action undermined the confidence in major European banks and disrupted the interbank market, with money center banks becoming unable to finance large securities portfolios in wholesale markets. The increased

[134] *Regional Economic Outlook: Europe*, International Monetary Fund, April, 2008, p. 19-20; and *EU Banking Structures*, European Central Bank, October 2008, p. 26.

international linkages between financial institutions and the spread of complex financial instruments has meant that financial institutions in Europe and elsewhere have come to rely more on short-term liquidity lines, such as the interbank lending facility, for their day-to-day operations. This has made them especially vulnerable to any drawback in the interbank market.[135]

Estimates developed by the International Monetary Fund in January 2009 provide a rough indicator of the impact the financial crisis and an economic recession are having on the performance of major advanced countries. Economic growth in Europe is expected to slow by nearly 2% in 2009 to post a 0.2% drop in the rate of economic growth, while the threat of inflation is expected to lessen. Economic growth, as represented by gross domestic product (GDP), is expected to register a negative 1.6% rate for the United States in 2009, while the euro area countries could experience a combined negative rate of 2.0%, down from a projected rate of growth of 1.2% in 2008. The sharp drop in the prices of oil and other commodities in the later part of 2008 may have helped improve the rate of economic growth, but the length and depth of the economic downturn likely will mean that the IMF projections will prove to be too optimistic when the final data for 2009 are known. Indeed, in mid-February, the European Union announced that the rate of economic growth in the EU in the fourth quarter of 2008 had slowed to an annual rate of negative 6%.[136]

Central banks in the United States, the Euro zone, the United Kingdom, Canada, Sweden, and Switzerland staged a coordinated cut in interest rates on October 8, 2008, and announced they had agreed on a plan of action to address the ever-widening financial crisis.[137] The actions, however, did little to stem the wide-spread concerns that were driving financial markets. Many Europeans were surprised at the speed with which the financial crisis spread across national borders and the extent to which it threatened to weaken economic growth in Europe. This crisis did not just involve U.S. institutions. It has demonstrated the global economic and financial linkages that tie national economies together in a way that may not have been imagined even a decade ago. At the time, much of the substance of the European plan was provided by the British Prime Minister Gordon Brown,[138] who announced a plan to provide guarantees and capital to shore up banks. Eventually, the basic approach devised by the British arguably would influence actions taken by other governments, including that of the United States.

On October 10, 2008, the G-7 finance ministers and central bankers,[139] met in Washington, DC, to provide a more coordinated approach to the crisis. At the Euro area summit on October 12, 2008, Euro area countries along with the United Kingdom urged all European governments to adopt a common set of principles to address the financial crisis.[140] The measures the nations supported are largely in line with those adopted by the U.K. and include:

---

[135] Frank, Nathaniel, Brenda Gonzalez-Hermosillo, and Heiko Hesse, *Transmission of Liquidity Shocks: Evidence from the 2007 Subprime Crisis*, IMF Working Paper #WP/08/200, August 2008, the International Monetary Fund.

[136] Flash Estimates for the Fourth Quarter of 2008, Eurostat news release, STAT/09/19, February 13, 2009.

[137] Hilsenrath, Jon, Joellen Perry, and Sudeep Reddy, Central Banks Launch Coordinated Attack; Emergency Rate Cuts Fail to Halt stock Slide; U.S. Treasury Considers Buying Stakes in Banks as Direct Move to Shore Up Capital, the *Wall Street Journal*, October 8, 2008, p. A1.

[138] Castle, Stephen, British Leader Wants Overhaul of Financial System, *The New York Times*, October 16, 2008.

[139] The G-7 consists of Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

[140] *Summit of the Euro Area Countries: Declaration on a Concerted European Action Plan of the Euro Area Countries*, European union, October 12, 2008.

- Recapitalization: governments promised to provide funds to banks that might be struggling to raise capital and pledged to pursue wide-ranging restructuring of the leadership of those banks that are turning to the government for capital.
- State ownership: governments indicated that they will buy shares in the banks that are seeking recapitalization.
- Government debt guarantees: guarantees offered for any new debts, including inter-bank loans, issued by the banks in the Euro zone area.
- Improved regulations: the governments agreed to encourage regulations to permit assets to be valued on their risk of default instead of their current market price.

In addition to these measures, EU leaders agreed on October 16, 2008, to set up a crisis unit and they agreed to a monthly meeting to improve financial oversight.[141] Jose Manuel Barroso, President of the European Commission, urged EU members to develop a "fully integrated solution" to address the global financial crisis, consistent with France's support for a strong international organization to oversee the financial markets. The EU members expressed their support for the current approach within the EU, which makes each EU member responsible for developing and implementing its own national regulations regarding supervision over financial institutions. The European Council stressed the need to strengthen the supervision of the European financial sector. As a result, the EU statement urged the EU members to develop a "coordinated supervision system at the European level."[142] This approach likely will be tested as a result of failed talks with the credit derivatives industry in Europe. In early January 2009, an EU-sponsored working group reported that it had failed to get a commitment from the credit derivatives industry to use a central clearing house for credit default swaps. As an alternative, the European Commission reportedly is considering adopting a set of rules for EU members that would require banks and other users of the CDS markets to use a central clearing house within the EU as a way of reducing risk.[143]

The "European Framework for Action"

On October 29, 2008, the European Commission released a "European Framework for Action" as a way to coordinate the actions of the 27 member states of the European Union to address the financial crisis.[144] The EU also announced that on November 16, 2008, the Commission will propose a more detailed plan that will bring together short-term goals to address the current economic downturn with the longer-term goals on growth and jobs in the Lisbon Strategy.[145] The short-term plan revolves around a three-part approach to an overall EU recovery action plan/framework. The three parts to the EU framework are:

[141] *EU Sets up Crisis Unit to Boost Financial Oversight*, Thompson Financial News, October 16, 2008.

[142] *Ibid.*

[143] Bradbury, Adam, EU Eyes Next Step on Clearing, *The Wall Street Journal Europe*, January 7, 2009. p. 21.

[144] Communication From the Commission, From Financial Crisis to Recovery: A European Framework for Action, European Commission, October 29, 2008.

[145] The Lisbon Strategy was adopted by the EU member states at the Lisbon summit of the European Union in March 2001 and then recast in 2005 based on a consensus among EU member states to promote long-term economic growth and development in Europe.

A new financial market architecture at the EU level. The basis of this architecture involves implementing measures that member states have announced as well as providing for (1) continued support for the financial system from the European Central Bank and other central banks; (2) rapid and consistent implementation of the bank rescue plan that has been established by the member states; and (3) decisive measures that are designed to contain the crisis from spreading to all of the member states.

Dealing with the impact on the real economy. The policy instruments member states can use to address the expected rise in unemployment and decline in economic growth as a second-round effect of the financial crisis are in the hands of the individual member states. The EU can assist by adding short-term actions to its structural reform agenda, while investing in the future through: (1) increasing investment in R&D innovation and education; (2) promoting flexicurity[146] to protect and equip people rather than specific jobs; (3) freeing up businesses to build markets at home and internationally; and (4) enhancing competitiveness by promoting green technology, overcoming energy security constraints, and achieving environmental goals. In addition, the Commission will explore a wide range of ways in which EU members can increase their rate of economic growth.

A global response to the financial crisis. The financial crisis has demonstrated the growing interaction between the financial sector and the goods-and services-producing sectors of economies. As a result, the crisis has raised questions concerning global governance not only relative to the financial sector, but the need to maintain open trade markets. The EU would like to use the November 15, 2008 multi-nation G-20 economic summit in Washington, DC, to promote a series of measures to reform the global financial architecture. The Commission argues that the measures should include (1) strengthening international regulatory standards; (2) strengthen international coordination among financial supervisors; (3) strengthening measures to monitor and coordinate macroeconomic policies; and (4) developing the capacity to address financial crises at the national regional and multilateral levels. Also, a financial architecture plan should include three key principles: (1) efficiency; (2) transparency and accountability; and (3) the inclusion of representation of key emerging economies.

European leaders, meeting prior to the November 15, 2008 G-20 economic summit in Washington, DC, agreed that the task of preventing future financial crisis should fall to the International Monetary Fund, but they could not agree on precisely what that role should be.[147] The leaders set a 100-day deadline to draw up reforms for the international financial system. British Prime Minister Gordon Brown reportedly urged other European leaders to back fiscal stimulus measure to support the November 6, 2008 interest rate cuts by the European Central Bank, the Bank of England, and other central banks. Reportedly, French Prime Minister Nicolas Sarkozy argued that the role of the IMF and the World Bank needed to be rethought. French and German officials have argued that the IMF should assume a larger role in financial market regulation, acting as a global supervisor of regulators. Prime Minister Sarkozy also argued that the IMF should "assess" the work of such international bodies as the Bank of International Settlements. Other G-20 leaders, however, reportedly have disagreed with this proposal, agreeing instead to make the IMF "the pivot of a renewed international system," working alongside other bodies. Other Ministers also were apparently not enthusiastic toward a French proposal that Europe should agree to a more formalized coordination of economic policy.

[146] The combination of labor market flexibility and security for workers.

[147] Hall, Ben, George Parker, and Nikki Tait, European Leaders Decide on Deadline for Reform Blueprint, *Financial Times*, November 8, 2008, p. 7.

In an effort to confront worsening economic conditions, German Chancellor Angela Merkel proposed a package of stimulus measures, including spending for large-scale infrastructure projects, ranging from schools to communications. The stimulus package represents the second multi-billion euro fiscal stimulus package Germany has adopted in less than three months. The plan, announced on January13, 2009, reportedly was doubled from initial estimates to reach more than 60 billion Euros[148] (approximately $80 billion) over two years. The plan reportedly includes a pledge by Germany's largest companies to avoid mass job cuts in return for an increase in government subsidies for employees placed temporarily on short work weeks or on lower wages.[149] Other reports indicate that Germany is considering an emergency fund of up to 100 billion Euros in state-backed loans or guarantees to aid companies having problems getting credit.[150]

Overall, Germany's response to the economic downturn changed markedly between December 2008 and January 2009 as economic conditions continued to worsen. In a December 2008 article, German Finance Minister Peer Steinbruck defended Germany's approach at the time. According to Steinbruck, Germany disagreed with the EU plan to provide a broad economic stimulus plan, because it favored an approach that is more closely tailored to the German economy. He argued that Germany is providing a counter-cyclical stimulus program even though it is contrary to its long-term goal of reducing its government budget deficit. Important to this program, however, are such "automatic stabilizers" as unemployment benefits that automatically increase without government action since such benefits play a larger role in the German economy than in other economies. Steinbruck argued that, "our experience since the 1970s has shown that ... stimulus programs fail to achieve the desired effect.... It is more likely that such large-scale stimulus programs—and tax cuts as well—would not have any effects in real time. It is unclear whether general tax cuts can significantly encourage consumption during a recession, when many consumers are worried about losing their jobs. The history of the savings rate in Germany points to the opposite." [151]

France, which has been leading efforts to develop a coordinated European response to the financial crisis, has proposed a package of measures estimated to cost over $500 billion. The French government is creating two state agencies that will provide funds to sectors where they are needed. One entity will issue up to $480 billion in guarantees on inter-bank lending issued before December 31, 2009, and would be valid for five years. The other entity will use a $60 billion fund to recapitalize struggling companies by allowing the government to buy stakes in the firms. On January 16, 2009, President Sarkozy announced that the French government would take a tougher stance toward French banks that seek state aid. Up to that point, France had injected $15 billion in the French banking system. In order to get additional aid, banks would be required to suspend dividend payments to shareholders and bonuses to top management and to increase credit lines to such clients as exporters. France reportedly was preparing to inject more money into the banking system.[152]

---

[148] Benoit, Bernard, Germany Doubles Size of Stimulus, *Financial Times*, January 6, 2009, p. 10; Walker, Marcus, Germany's Big Spending Plans, *The Wall Street Journal Europe*, January 13, 2009, p. 3.

[149] Benoit, Bernard, German Stimulus Offers Job Promise, *Financial Times*, December 16, 2008. p. 1.

[150] Walker, Marcus, Germany Mulls $135 Billion in Rescue Loans, *The Wall Street Journal Europe*, January 8, 2009. p. 1.

[151] Steinbruck, Peer, Germany's Way Out of the Crisis, *The Wall Street Journal*, December 22, 2008.

[152] Parussini, Gabrielle, France to Give Banks Capital, With More Strings Attached, *The Wall Street Journal Europe*, January 16, 2009, p. A17.

On December 4, 2008, President Sarkozy announced a $33 billion (26 billion euros) package of stimulus measures to accelerate planned public investments.[153] The package is focused primarily on infrastructure projects and investments by state-controlled firms, including a canal north of Paris, renovation of university buildings, new metro cars, and construction of 70,000 new homes, in addition to 30,000 unfinished homes the government has committed to buy in 2009. The plan also includes a 200 Euro payment to low-income households. On December 15, 2008, France agreed to provide the finance division of Renault and Peugeot $1.2 billion in credit guarantees and an additional $250 million to support the car manufacturers' consumer finance division.[154] In an interview on French TV on January 14, 2009, French Prime Minister Francois Fillon indicated that the French government is considering an increase in aid to the French auto industry, including Renault and Peugeot.[155] The auto industry and its suppliers reportedly employ about 10% of France's labor force.

The British Rescue Plan

On October 8, 2008, the British Government announced a $850 billion multi-part plan to rescue its banking sector from the current financial crisis. Details of this plan are presented here to illustrate the varied nature of the plan. The Stability and Reconstruction Plan followed a day when British banks lost £17 billion on the London Stock Exchange. The biggest loser was the Royal Bank of Scotland, whose shares fell 39%, or £10 billion, of its value. In the downturn, other British banks lost substantial amounts of their value, including the Halifax Bank of Scotland which was in the process of being acquired by Lloyds TSB.

The British plan included four parts:

- A coordinated cut in key interest rates of 50 basis, or one-half of one percent (0.5) between the Bank of England, the Federal Reserve, and the European Central Bank.
- An announcement of an investment facility of $87 billion implemented in two stages to acquire the Tier 1 capital, or preferred stock, in "eligible" banks and building societies (financial institutions that specialize on mortgage financing) in order to recapitalize the firms. To qualify for the recapitalization plan, an institution must be incorporated in the UK (including UK subsidiaries of foreign institutions, which have a substantial business in the UK and building societies). Tier 1 capital often is used as measure of the asset strength of a financial institution.
- The British Government agreed to make available to those institutions participating in the recapitalization scheme up to $436 billion in guarantees on new short- and medium-term debt to assist in refinancing maturing funding obligations as they fall due for terms up to three years.

[153] Gauthier-Villars, David, Leading News: France Sets Stimulus Plan, *The Wall Street Journal Europe*, December 5, 2008, p. 3.

[154] Hall, Ben, France Gives Renault and Peugeot E.U.R 779m, *Financial Times*, December 16, 2008, p. 4.

[155] Abboud, Leila, France Considers New Measures to Aid Auto Companies, *The Wall Street Journal Europe*, January 15, 2009, p. 4.

- The British Government announced that it would make available $352 billion through the Special Liquidity Scheme to improve liquidity in the banking industry. The Special Liquidity Scheme was launched by the Bank of England on April 21, 2008 to allow banks to temporarily swap their high-quality mortgage-backed and other securities for UK Treasury bills.[156]

On November 24, 2008, Britain's majority Labor party presented a plan to Parliament to stimulate the nation's slowing economy by providing a range of tax cuts and government spending projects totaling 20 billion pounds (about $30 billion).[157] The stimulus package includes a 2.5% cut in the value added tax (VAT), or sales tax, for 13 months, a postponement of corporate tax increases, and government guarantees for loans to small and midsize businesses. The plan also includes government plans to spend 4.5 billion pounds on public works, such as public housing and energy efficiency. Some estimates indicate that the additional spending required by the plan will push Britain's government budget deficit in 2009 to an amount equivalent to 8% of GDP. To pay for the plan, the government would increase income taxes on those making more than 150,000 pounds (about $225,000) from 40% to 45% starting in April 2011. In addition, the British plan would increase the National Insurance contributions for all but the lowest income workers.[158]

On January 14, 2009, British Business Secretary Lord Mandelson unveiled an additional package of measures by the Labor government to provide credit to small and medium businesses that have been hard pressed for credit as foreign financial firms have reduced their level of activity in the UK. The three measures are: (1) a 10 billion pound (approximately $14 billion) Capital Working Scheme to provide banks with guarantees to cover 50% of the risk on existing and new working capital loans on condition that the banks must use money freed up by the guarantee to make new loans; (2) a one billion pound Enterprise Finance Guarantee Scheme to assist small, credit-worthy companies by providing guarantees to banks of up to 75% of loans to small businesses; and (3) a 75 million pound Capital for Enterprise Fund to convert debt to equity for small businesses.[159]

Collapse of Iceland's Banking Sector

The failure of Iceland's banks raises questions of bank supervision and crisis management for governments in Europe and the United States. As Icelandic banks began to default, Britain used an anti-terrorism law to seize the deposits of the banks to prevent the banks from shifting funds from Britain to Iceland.[160] This incident raises questions about how national governments should address the issue of supervising foreign financial firms operating within their borders and whether they can prevent foreign-owned firms from withdrawing deposits in one market to offset losses in another. In addition, the case of Iceland raises questions about the cost and benefits of branch

[156] The Bank of England, *Financial Stability Report*, April 2008, p. 10.

[157] Scott, Mark, Is Britain's Stimulus Plan a Wise Move? *BusinessWee*k, November 24, 2008; Werdigier, Julia, Britain Offers $30 Billion Stimulus Plan, *The New York Times*, November 25, 2008.

[158] Falloon, Matt, and Mike Peacock, UK Government to Borrow Record Sums to Revive Economy, *The Washington Post*, November 24, 2008.

[159] *Real Help for Business*, press release, Department for Business, Enterprise and Regulatory Reform, January 14, 2009; Mollenkamp, Carrick, Alistair MacDonald, and Sara Schaefer Munoz, Hurdles rise as U.K. Widens Stimulus Plan, *The Wall Street Journal Europe*, January 14, 2009, p. 1.

[160] Benoit, Bertrand, Tom Braithwaaite, Jimmy Burns, Jean Eaglesham, et. al., Iceland and UK clash on Crisis, *Financial Times*, October 10, 2008, p. 1.

banking across national borders where banks can grow to be so large that disruptions in the financial market can cause defaults that outstrip the resources of national central banks to address.

On November 19, 2008, Iceland and the International Monetary Fund (IMF) finalized an agreement on an economic stabilization program supported by a $2.1 billion two-year standby arrangement from the IMF.[161] Upon approval of the IMF's Executive board, the IMF released $827 million immediately to Iceland with the remainder to be paid in eight equal installments, subject to quarterly reviews. As part of the agreement, Iceland has proposed a plan to restore confidence in its banking system, to stabilize the exchange rate, and to improve the nation's fiscal position. Also as part of the plan, Iceland's central bank raised its key interest rate by six percentage points to 18% on October 29, 2008, to attract foreign investors and to shore up its sagging currency.[162] The IMF's Executive Board had postponed its decision on a loan to Iceland three times, reportedly to give IMF officials more time to confirm loans made by other nations. Other observers argued, however, that the delay reflected objections by British, Dutch, and German officials over the disposition of deposit accounts operated by Icelandic banks in their countries. Iceland reportedly smoothed the way by agreeing in principle to cover the deposits, although the details had not be finalized. In a joint statement, Germany, Britain, and the Netherlands said on November 20, 2008, that they would "work constructively in the continuing discussions" to reach an agreement.[163] Following the decision of IMF's Executive Board, Denmark, Finland, Norway, and Sweden agreed to provide an additional $2.5 billion in loans to Iceland.

Between October 7 and 9, 2008, Iceland's Financial Supervisory Authority (FSA), an independent state authority with responsibilities to regulate and supervise Iceland's credit, insurance, securities, and pension markets took control, without actually nationalizing them, of three of Iceland's largest banks: Landsbanki, Glitnir Banki, and Kaupthing Bank prior to a scheduled vote by shareholders to accept a government plan to purchase the shares of the banks in order to head off the collapse of the banks. At the same time, Iceland suspended trading on its stock exchange for two days.[164] In part, the takeover also attempted to quell a sharp depreciation in the exchange value of the Icelandic krona.

The demise of Iceland's three largest banks is attributed to an array of events, but primarily stems from decisions by the banks themselves. Some observers argued that the collapse of Lehman Brothers set in motion the events that finally led to the collapse of the banks,[165] but this conclusion is controversial. Some have argued that at the heart of Iceland's banking crisis is a flawed banking model that is based on an internationally active banking sector that is large relative to the size of the home country's GDP and to the fiscal capacity of the central bank.[166] As a result, a disruption in liquidity threatens the viability of the banks and overwhelms the ability of

[161] Anderson, Camilla, Iceland Gets Help to Recover From Historic Crisis, *IMF Survey Magazine*, November 19, 2008.

[162] Iceland Raises Key Rate by 6 Percentage Points, *The New York Times*, October 29, 2008.

[163] Jolly, David, Nordic Countries Add $2.5 Billion to Iceland's Bailout, *The New York Times*, November 20, 2008.

[164] Wardell, Jane, Iceland's Financial Crisis Escalates, BusinessWeek, October 9, 2008; Pfanner, Eric, Meltdown of Iceland's Financial system Quickens, *The New York Times*, October 9, 2008.

[165] Portes, Richard, The Shocking Errors Behind Iceland's Meltdown, *Financial Times*, October 13, 2008, p. 15.

[166] Buiter, Willem H., and Anne Sibert, *The Icelandic Banking Crisis and What to Do About it: The Lender of Last Resort Theory of Optimal Currency Areas*. Policy Insight No. 26, Centre for Economic Policy Research, October 2008. p. 2.

the central bank to act as the lender of last resort, which undermines the solvency of the banking system.

On October 15, 2008, the Central Bank of Iceland set up a temporary system of daily currency auctions to facilitate international trade. Attempts by Iceland's central bank to support the value of the krona are at the heart of Iceland's problems. Without a viable currency, there was no way to support the banks, which have done the bulk of their business in foreign markets. The financial crisis has also created problems with Great Britain because hundreds of thousands of Britons hold accounts in online branches of the Icelandic banks, and they fear those accounts will default. The government of British Prime minister Gordon Brown has used powers granted under anti-terrorism laws to freeze British assets of Landsbanki until the situation is resolved.

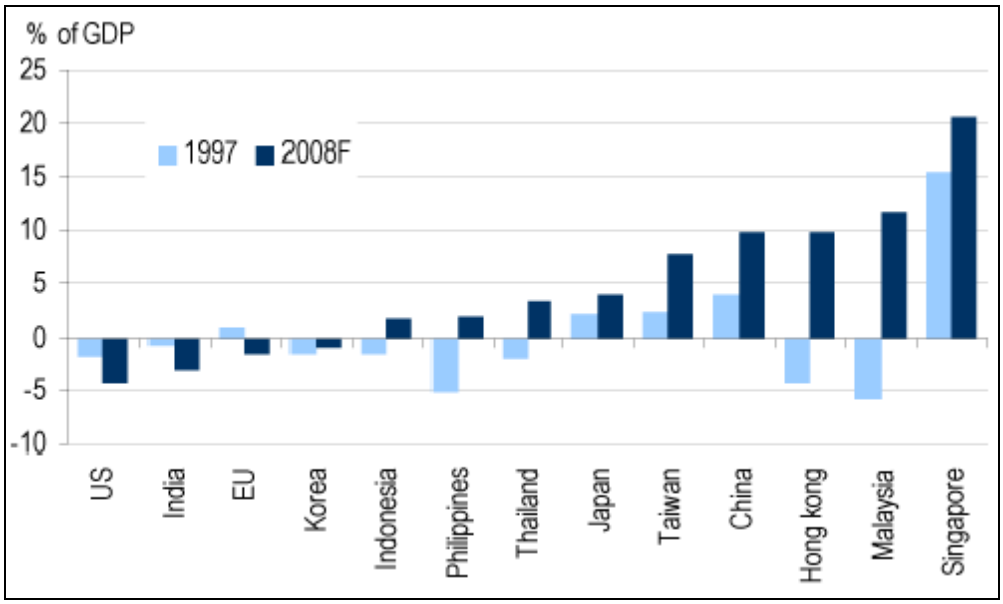
Impact on Asia and the Asian Response[167]

Many Asian economies have been through wrenching financial crises in the past 10-15 years. Although most observers say the region's economic fundamentals have improved greatly in the past decade, this crisis provides a worrying sense of *deja vu*, and an illustration that Asian policy changes in recent years—including Japan's slow but comprehensive banking reforms, Korea's opening of its financial markets, China's dramatic economic transformation, and the enormous buildup of sovereign reserves across the region—have not fully insulated (and, so far, *cannot* fully insulate) Asian economies from global contagion.

In the early months of the crisis, Asian nations did not have to deal with outright bankruptcies or rescues of major financial institutions, as Western governments did. With only a few exceptions—most notably in South Korea—leverage within Asian financial systems was comparatively low and bank balance sheets were comparatively healthy at the outset of the crisis. Nearly all East Asian nations run current account surpluses, a reversal from their state during the Asian financial crisis of the late 1990s. These surpluses have been one reason for the buildup of enormous government reserves in the region, including China's $1.9 trillion and Japan's $996 billion—the two largest reserve stockpiles in the world. Such reserves give Asian governments resources to provide fiscal stimulus, inject capital into their financial systems, and provide backstop guarantees for private financial transactions where needed. So overall, Asian economies are much healthier than they were before the Asian Financial Crisis of 1997-1998, when several Asian countries burned through their limited reserves quickly trying to defend currencies from speculative selling.

[167] Prepared by Ben Dolven, Asia Section Research Manager, Foreign Affairs, Defense, and Trade Division.

Figure 10. Asian Current Account Balances are Mostly Healthy



Source: Merrill Lynch

Still, Asia has not been insulated. The initial stage of the crisis, which centered around losses directly from subprime assets in the United States, has given way to a broader global crisis marked by slowing economies and dried-up liquidity. Asia and the United States are deeply linked in many ways, including trade (primarily Asian exports to the United States), U.S. investments in the region, and financial linkages that entwine Asian banks, companies and governments with U.S. markets and financial institutions. As a result, even though Asian banks disclosed relatively low direct exposures to failed institutions and toxic assets in the United States and Europe, Asian economies appear caught in a second phase of the crisis. With Western economies slowing and global investors short of cash and pulling back from any markets deemed risky, Asian economies appear extremely vulnerable—and that threatens deeper damage to Asian financial systems and then, in turn, to markets for U.S. exports and investments.

The signs of distress in Asia are legion. Japan's government officially forecasts zero growth for 2009. The Nikkei-225 Index has lost half its value over the course of 2008, exacerbated by a surge by the yen to its highest level against the dollar since 1982. The yen's strength makes Japanese exports more expensive and adds to the damage that slowing economies around the world are already expected to inflict on Japan's export-led economy. Japan entered a recession in the July-September 2008 quarter, contracting for the second straight quarter. And in November, Japanese exports fell by 26.7%, the largest year-on-year decline on record, leaving Japan with a trade deficit for the second straight month—the first time that has happened since 1980.[168]

Meanwhile, South Korea's stock market and currency have plunged precipitously, as South Korean companies have hoarded dollars because of substantial dollar debts. Chinese GDP growth, while still strong, slowed from 10.4% in the April-June quarter to 9.0% in the July-September period. Further slowing in China seems inevitable. In November, Chinese exports dropped 2.2%, the first monthly decline in seven years, while imports plunged by 18% in the

[168] Japan Logs Trade Deficit on Slumping World Demand, *Reuters*, November 22, 2008.

month, reflecting a substantial decline in domestic Chinese demand. This has raised concerns that further slowing could lead to unemployment and social unrest, key concerns of the Chinese government. Such concerns prompted the government to announce a $586 billion stimulus package in early November 2008, although the measures included many policies that had previously been announced. Smaller economies dependent on the financial and trading sectors, such as Hong Kong and Singapore, have been hammered—Singapore is already in a recession, and Hong Kong's government has announced it will guarantee all the $773 billion in Hong Kong bank deposits through 2010.

One of the most worrying developments in Asia is that Pakistan, already coping with severe political instability, has been forced to seek emergency loans from the IMF because of dwindling government reserves. This points to the limits of bilateral solutions to the crisis: For much of October and early November, Pakistan reportedly sought support from China, Saudi Arabia and other Middle Eastern states before being forced to the IMF.[169] On November 13, well into discussions with the IMF, Pakistan officials announced they had received a $500 million aid package from Beijing, far short of the $10 billion-$15 billion that Pakistani leaders say they need over the next two years.[170] Then on November 15, Pakistani and IMF officials confirmed that Pakistan would receive $7.6 billion in emergency loans, including $4 billion immediately to avoid sovereign default. But this remains short of what Pakistan says it needs.[171]

Since the outset of the crisis, governments in Japan, South Korea, Hong Kong, Singapore, Malaysia, Australia, New Zealand, Indonesia and elsewhere have been forced into a range of moves to support domestic financial systems, pumping money into financial markets, issuing guarantees for bank deposits, and providing fiscal stimulus to shore up economic growth and slow declines in local stock markets. In several instances, including in Japan and South Korea, initial interventions failed to staunch financial market declines, leading authorities to broaden their support moves as the crisis deepened.

So in Asia, a belief that held sway in recent years that Asian economies were starting to "decouple" from the United States and Europe, generating growth that didn't depend on the rest of the world, has given way to a realization that a crisis that originated in the West can sweep up the region as well. Declines in Asian stock markets are similar in scale to, or larger than, those in the U.S. and Europe, despite the lack of bankruptcies and failed institutions in Asia. Throughout the crisis thus far, Asian economies have experienced a so-called "flight to quality," in which lenders and investors have sought safe investments and moved out of those perceived as risky. This has so far included the majority of Asia's emerging economies. Some economists, however, believe that Asia's reserves and current account surpluses may recover more strongly than other emerging markets once the crisis stabilizes.[172]

[169] Despite Ambivalence, Pakistan May Wrap Deal by Next Week, *The Wall Street Journal*, October 28, 2008.

[170] IMF 'Has Six Days to Save Pakistan,' *Financial Times*, October 28, 2008.

[171] Pakistan Says it will Need Financing Beyond IMF Deal, *The Wall Street Journal*, November 17, 2008.

[172] See, for instance, Morgan Stanley report, "EM Currencies, No Differentiation in the Sell-Off," October 23, 2008.

Asian Reserves and Their Impact

Some analysts argue that substantial Asian reserves could be one source of relief for the global economy.[173] Japan has contributed funding for the IMF support package of Iceland, and on November 14, Prime Minister Taro Aso said Japan would lend the IMF $100 billion to support further packages that might be needed before the IMF increases its capital in 2009.[174] Many wonder if China and other reserve-rich developing nations will find ways to use those reserves to support financially-strapped governments. As noted previously, Pakistan reportedly has approached China and several Gulf states for such support.

One key question is whether Asian countries will seek to play a larger role in setting multilateral moves to shore up regulation, and international support for troubled countries. Five Asian countries—Japan, China, South Korea, India and Indonesia, were present at the G-20 summit. But Asian approaches to multilateral regulation are still unclear. At an October 25-26 meeting of the Asia Europe Forum (ASEM), Chinese Premier Wen Jiabao said China generally agrees with many European governments which seek an expansion of multilateral regulations. "We need financial innovation, but we need financial oversight even more," Wen reportedly told a press conference.[175] In late January, speaking at an annual gathering of economic and political leaders in Davos, Switzerland, Wen blamed the crisis on an "excessive expansion of financial institutions in blind pursuit of profit," a failure of government supervision in the financial sector, and an "unsustainable model of development, characterized by prolonged low savings and high consumption."[176] Many analysts saw this as a criticism of the United States, which has much lower savings and higher consumption rates than China.

Previous Asian attempts to play a leadership role have been unsuccessful. In 1998, in the midst of the Asian Financial Crisis, Japan and the Asian Development Bank proposed the creation of an "Asian Monetary Fund" through which wealthier Asian governments could support economies in financial distress. The proposal was successfully opposed by the U.S. Treasury Department, which argued that it could be a way for countries to bypass the conditions that the IMF demands of its borrowers and go straight to "easier" sources of credit.

Two years later, in 2000, Finance Ministers from the ASEAN+3 nations (the 10 members of the Association of Southeast Asian Nations[177], plus Japan, South Korea and China) announced the Chiang Mai Initiative (CMI), whose primary measure was to provide a swap mechanism that countries could tap to cover shortfalls of foreign reserves. This was a less aggressive proposal than the Asian Monetary Fund. Although a small portion of the swap lines could be tapped in an emergency, most would likely be subject to IMF conditions for recipients.[178]

---

[173] See, for instance, Jeffrey Sachs, The Best Recipe for Avoiding a Global Recession, *Financial Times*, October 27, 2008.

[174] The moved was announced in a November 14 opinion piece by Japanese Prime Minister Taro Aso, Restoring Financial Stability, printed in *The Wall Street Journal*.

[175] Leaders of Europe and Asia Call for Joint Economic Action, *New York Times*, October 25, 2008.

[176] Chinese Premier Blames Recession on U.S. Actions, *Wall Street Journal*, January 29, 2009.

[177] ASEAN's members are Indonesia, Singapore, Malaysia, Thailand, the Philippines, Brunei, Vietnam, Cambodia, Laos and Burma (Myanmar).

[178] For a fuller discussion of the Chiang Mai Initiative, see East Asian Cooperation, Institute of International Economics, http://www.iie.com/publications/chapters_preview/345/3iie3381.pdf.

On October 26, Japan, China, South Korea, and ASEAN members agreed to start an $80 billion multilateral swap arrangement in 2009, which would allow countries with substantial balance of payments problems to tap the reserves of larger economies. There remains, however, disagreement within the region about whether the IMF should play an active role in setting conditions for countries that use these swap lines.

Asian leaders have sought to start other regional discussions. On October 22, a Japanese government official floated the idea of a pan-Asian financial stability forum, modeled after the Financial Stability Forum at the BIS, which was discussed in May at a meeting of Finance Ministers from Japan, South Korea and China.[179] On December 13, the leaders of Japan, China, and South Korea held a trilateral summit in Fukuoka, Japan, agreeing on bilateral swap lines between South Korea and the two others – a new renminbi-won swap line worth the equivalent of $28 billion and an expansion of an existing yen-won swap line to the equivalent of $20 billion.[180] Beyond this measure of support for South Korea, however, the summit did not provide broader multilateral initiatives.

National Responses

So far, the national-level responses among Asian governments include the following:

Japan

Japan was part of the early moves among major economies to flood markets with liquidity, in the "crisis containment" part of the global response, and the Bank of Japan has continued its aggressive monetary stimulus in the months since. Alongside other major central banks, the Bank of Japan pumped tens of billions of dollars into financial markets in late September and early October. It followed these moves with an announcement on October 14 that it would offer an unlimited amount of dollars to institutions operating in Japan, to ensure that Japanese interbank credit markets continued to function. The BOJ did not lower interest rates in the crisis's early stages, but on October 31, it joined other global central banks, including the U.S. Federal Reserve, by cutting a key short-term interest rate to 0.3%, from 0.5%, and on December 19 it cut the rate to 0.1%.

For a time, Japan was considered relatively insulated, because of its well capitalized banks, substantial reserves and current account surplus. Japan spent nearly $440 billion between 1998 and 2003 to assist and recapitalize its banking system, and most observers say Japan's financial system emerged from the experience fairly sound. Healthy capital positions helped Mitsubishi UFG Group, Japan's largest bank, and Nomura, the country's largest brokerage, to buy pieces of distressed U.S. investment banks as the crisis was deepening in October. Mitsubishi UFG bought 21% of Morgan Stanley for $9 billion, and Nomura purchased the Asian, European and Middle Eastern operations of Lehman Brothers.

But as Western economies began to slow, Japan's financial insulation thinned. The Japanese economy is highly exposed to slowdowns in export markets, particularly in the U.S. and Europe. The U.S. accounted for 20.1% of Japan's exports in 2007. Japan has sought to provide fiscal

[179] Japan, China, S. Korea Eye Financial Stability Forum, *Reuters*, October 20, 2008.

[180] Asian Leaders See Growth Driver, *The Wall Street Journal*, December 15, 2008.

stimulus: The government unveiled a $107 billion stimulus package in August, and on January 27, the Japanese parliament passed a second package, valued at $54 billion. The package—and, more broadly, Prime Minister Taro Aso's response to the crisis—has been the subject of severe infighting within Aso's ruling Liberal Democratic Party. Aso's government currently faces extremely low support ratings of around 20%.[181]

There have been signs of stress in the Japanese financial system in the weeks following the Nomura and Mitsubishi UFG purchases. In October, Yamato Insurance, a mid-sized insurance company, filed for bankruptcy, with $2.7 billion in liabilities. Then, in late October, with share prices tumbling, the much larger Mitsubishi UFG Group—which just two weeks earlier was sufficiently capitalized that it had bought the Morgan Stanley stake—said it would raise as much as $10.7 billion to improve its capital base. Many analysts say smaller banks may need direct help from the government. Japan's two largest political parties, the ruling Liberal Democratic Party and the main opposition Democratic Party of Japan, have agreed on the need to re-authorize expired legislation that would allow the government to purchase equity to support private banks, and Japanese media reports say this is expected to be passed in December. This move would restart a program first authorized in 2002 as part of the bank recapitalization process.

China[182]

The extent of China's exposure to the current global financial crisis, in particular from the fallout of the U.S. sub-prime mortgage problem, is mixed but is believed to be relatively small. China's numerous restrictions on capital flows to and from China limit the ability of individual Chinese citizens and many firms to invest their savings overseas. Thus, the exposure of Chinese private sector firms and individual investors to sub-prime U.S. mortgages is likely to be rather small. On the other hand, the exposure of Chinese government entities, such as the State Administration of Foreign Exchange, the China Investment Corporation (a $200 billion sovereign wealth fund created in 2007),[183] state banks, and state owned enterprises), may be more exposed and may have suffered losses from troubled U.S. mortgage securities. The Chinese government generally does not release detailed information on the holdings of its financial entities, although some of its banks have reported on their supposed level of exposure to sub-prime U.S. mortgage securities. Such entities have generally reported that their exposure to troubled sub-prime U.S. mortgages has been minor relative to their total investments, that they have liquidated such assets or have written off losses, and that they continue to earn high profit margins.[184]

However, China's economy has not been immune to effects of the global financial crisis, given its heavy reliance on trade and foreign direct investment (FDI) for its economic growth. Numerous sectors have been hard hit.[185] To illustrate:

---

[181] Japan Passes Contentious Stimulus Budget, *Associated Press*, January 27, 2009.

[182] The section on China was prepared by Wayne M. Morrison, Specialist in Asian Trade and Finance, Foreign Affairs, Defense, and Trade Division.

[183] For an overview of the China Investment Corporation, see CRS Report RL34337, *China's Sovereign Wealth Fund*, by Michael F. Martin.

[184] China's holdings of Fannie Mae and Freddie Mac securities are likely to be more substantial, but less risky (compared to other sub-prime securities), especially after these two institutions were placed in conservatorship by the Federal Government in September 2008.

[185] China's economy was already slowing down before the global financial crisis hit. This was in large part the result of government efforts to slow the rate of inflation. China's real GDP growth fell from 13% in 2007 to 9% in 2008. The (continued...)

- The real estate market in several Chinese cities has exhibited signs of a bubble that is bursting, including a slowdown in construction, falling prices and growing levels of unoccupied buildings. This has increased pressure on the banks to lower interest rates further to stabilize the market.
- China's trade has plummeted seven straight months (December 2008-May 2009) recent months (see **Figure 11**). For example, exports in May 2009 were down 26.4% on a year-on-year basis, the biggest monthly decline ever recorded (since such data were collected).
- The level of FDI flows to China has fallen eight months in a row (November 2008-May 2009). For example, FDI flows to China dropped by nearly a third in January 2009 (year-on-year basis).
- Numerous press reports indicate sharp reductions of production and employment in China. The Chinese government in January 2009 estimated that 20 million migrant workers had lost their jobs in 2008 because of the global economic slowdown.
- *Global Insight*, an international forecasting firm, estimates that China's real GDP growth would slow to 6.9% in 2009.[186] Some analysts contend annual economic growth of less than 8% could lead to social unrest, given that every year there are 20 million new job seekers in China.[187]

(...continued)

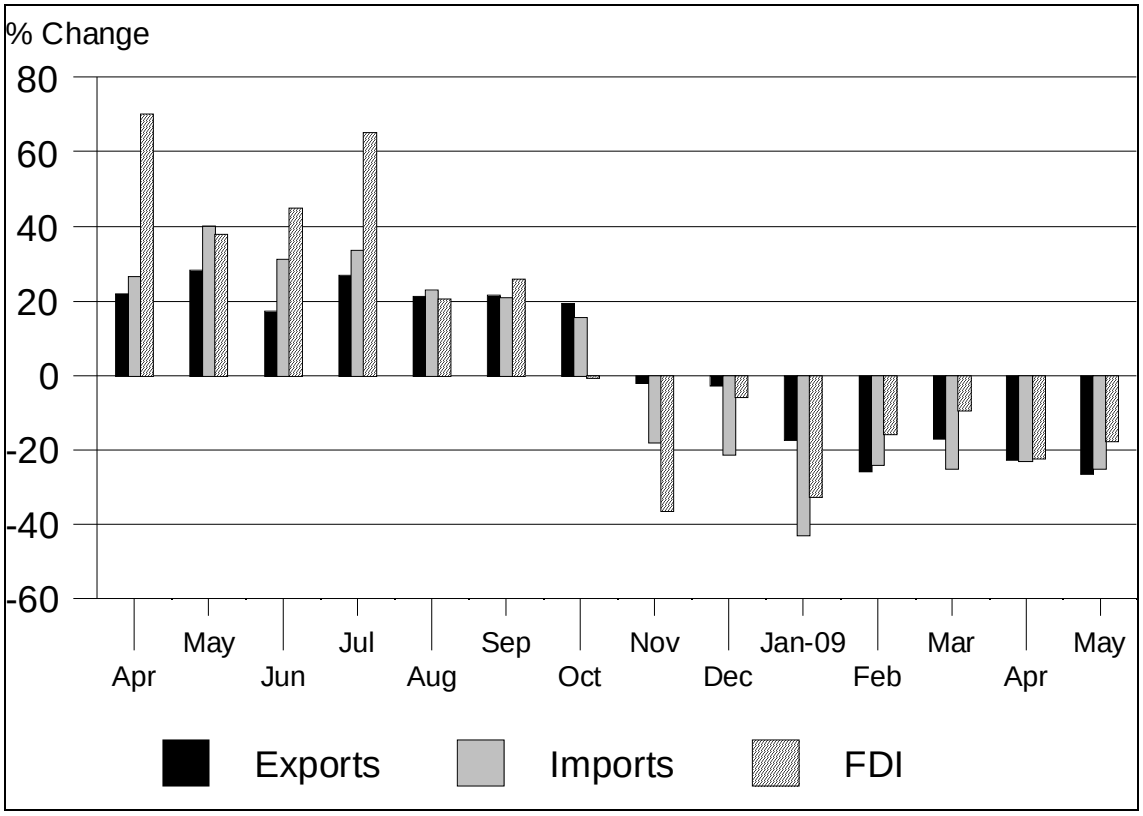
global financial crisis has sharply diminished economic growth. Thus, the Chinese government has abandoned its anti-inflation policies and instead has sought to stimulate the economy.

[186] Global Insight, *China*, May 29, 2009.

[187] According to *Xinhua Net* (March 9, 2008), China's Labor and Social Security Minister Tian Chengping warned that the employment situation in China in 2008 was expected to be "very severe," noting that towns and cities would be able to provide only 12 million new jobs.

Figure 11. Monthly Change in Chinese FDI and Trade: April 2008-May 2009

year-on-year basis



Source: Global Insight and China's Customs Administration.

China has responded to the crisis on a number of fronts. On September 27, 2008, Chinese Premier Wen Jiabao reportedly stated in a speech that "What we can do now is to maintain the steady and fast growth of the national economy and ensure that no major fluctuations will happen. That will be our greatest contribution to the world economy under the current circumstances." [188] On October 8, 2008, China's central bank announced plans to cut interest rates and the reserve-requirement ratio in order to help stimulate the economy. The announcement coincided with announcements by the U.S. Federal Reserve and other central banks of major economies around the world to lower their benchmark interest rates, although, neither China's central bank or the media stated that these measures were taken in conjunction with the other major central banks. On October 21, 2008, China's State Council announced it was considering implementing a new economic stimulus package, which would include an acceleration of construction projects, new export tax rebates, a reduction in the housing transaction tax, increased agriculture subsidies, and expanding lending to small and medium enterprises.[189] On November 9, 2008 the Chinese government announced it would implement a two-year $586 billion stimulus package, mainly dedicated to infrastructure projects. The package would finance programs in 10 major areas, including affordable housing, rural infrastructure, water, electricity, transport, the environment, technological innovation and rebuilding areas hit by disasters (especially, areas that were hit by

[188] *Chinaview*, September 27, 2008.

[189] Global Insight, *Country Intelligence Analysis, China*, October 20, 2008.

the May 12, 2998 earthquake).[190] **Table 3** provides a breakdown of China's stimulus program spending priorities.

Table 3.China's Central Government November 2008 Domestic Stimulus Package

	In Chinese Yuan (billions)	In U.S. Dollars (billions)	As a Percent of Total Stimulus Package	As a Percent of China's 2008 GDP
Transport infrastructure investment	1,500	220	37.5	5.0
Post-earthquake reconstruction	1,000	146	25.0	3.3
Public housing	400	59	10.0	1.3
Rural infrastructure	370	54	9.3	1.2
Research and development and structural change	370	54	9.3	1.2
Environmental development	210	31	5.3	0.7
Healthcare and education	150	22	3.8	0.5
Totals	4,000	586	100.0	13.3

Source: Global Insight.

Notes: Ranked according to planned spending levels.

Analysts debate what role China might play in responding to the global financial crisis, given its nearly $2 trillion in foreign exchange reserves. Some have speculated that China could use some of these reserves to shore up troubled financial institutions and companies around the world, such as in the United States. Others have contended that China could, in order to help stabilize its largest export market (the United States), use its reserves to purchase some of the large amount of U.S. debt securities that will need to be issued to help fund the hundreds of billions of dollars in new federal spending on government purchases of troubled assets and programs to stimulate the U.S. economy.[191]

China already plays a major role in funding U.S. debt. China's holdings of U.S. securities (which include short term and long term Treasury securities, government agency debt, corporate debt, and equities) are estimated to have totaled $1.4 trillion at the end of December 2008; this figure is equivalent to over $1,000 per Chinese citizen. Over the past few years, China has been the single largest foreign purchaser of U.S. Treasury securities, which are used to fund the federal budget deficit. In September 2008, China overtook Japan to become the largest foreign holder of U.S. Treasury securities, at $585 billion, and these holdings grew to $764 billion as of April 2009.[192]

[190] China *Xinhua News Agency*, November 12, 2008.

[191] Such a move would help keep U.S. interest rates relatively low. If China decided not to sharply increase its purchases of U.S. securities, U.S. interest rates could go up.

[192] See CRS Report RL34314, *China's Holdings of U.S. Securities: Implications for the U.S. Economy*, by Wayne M. Morrison and Marc Labonte.

At a press conference during her visit to China on February 21, 2009, Secretary of State Hillary Rodham Clinton stated that she appreciated "greatly the Chinese government's continuing confidence in the United States Treasuries."

There are a number of reasons why China might be reluctant to boost significantly its purchases of U.S. assets. One concern would be whether increased Chinese investments in the U.S. economy would produce long-term economic benefits for China. In March 2009, Chinese Premier Wen Jiabao at a news conference stated: "We lent such huge fund [*sic*] to the United States and of course we're concerned about the security of our assets and, to speak truthfully, I am a little bit worried." Many analysts (including some in China) have questioned the wisdom of China's policy of investing a large level of foreign exchange reserves in U.S. government securities, which offer a relatively low rate of return, when China has such huge development needs. China's holding of U.S. Treasury securities fell by $4.4 billion from March-April 2009, leading some analysts to speculate that China might move away from dollar assets. In addition, some Chinese investments in U.S. financial companies have fared poorly, and Chinese officials might be reluctant to put additional money into investments that were deemed to be too risky. A sharp economic slowdown in the Chinese economy could increase pressure to invest money at home rather than overseas. China may also be reluctant to boost investment in U.S. companies, due to concerns that doing so would be risky or could come under unfavorable scrutiny by Congress.

Some U.S. policymakers have expressed concern that increased Chinese purchases of U.S. debt could give it greater political leverage over the United States. They warn that this would undermine the ability of the United States to press China to reform various aspects of its economy, such as its currency policy.[193] Another major concern for U.S. officials is the extent China may attempt to subsidize industries impacted by the global economic slowdown and whether the pace of China's economic reforms will be slowed. Many U.S. officials have urged China not to try to export its way out of the crisis (especially through the use of subsidies, trade barriers, or a depreciation of its currency), but instead focus on promoting increased domestic consumption, further economic reforms, and continuing the appreciation of its currency (the renminbi) so that greater domestic demand in China will result in higher Chinese demand for imports. On February 19, 2008, the Chinese government stated that it would use its some of its foreign exchange reserves to boost imports, stimulate the domestic economy, and to help Chinese companies boost investment overseas.[194] However, the government has also stated that it intends to assist Chinese export industries as well. In June 2009, several media reports stated that the Chinese government had recently implemented "Buy China" provisions to ensure that only Chinese-made products are used for projects relating to the government's stimulus package, even though the government had pledged in February 2009 not to impose such restrictions.[195]

There are some indicators that show the economy may be improving or has bottomed out. For example, the value of China's main stock market index, the Shanghai Stock Exchange Composite Index, has risen by 48% in 2009 (through June 15). Industrial output in March, April, and May 2009 rose by 8.3%, 7.3%, and 8.9% respectively, on a year-on-year basis. Prices have also stabilized in recent months. Retail sales of consumer goods rose by 15.2% from January-May on

[193] For additional information, see CRS Report RS22984, *China and the Global Financial Crisis: Implications for the United States*, by Wayne M. Morrison.

[194] People's Daily Online, February 19, 2009.

[195] *Financial Times*, "Buy China Policy Set to Raise Tensions," June 16, 2009.

a year-on-year basis, and total investment in fixed assets shot up by 32.9%. On the negative side, China's trade and FDI flows have showed no signs of improvement and continue to plummet.

South Korea

South Korea, Asia's fourth largest economy, has been deeply affected by the crisis, with both the South Korean stock market and the won tumbling throughout recent months, sometimes precipitously. On October 28, the won reached its lowest point since 1998, when South Korea was in the middle of its IMF support package. Oxford Analytica estimates that foreign investors withdrew a net $25 billion from the Korean stock market between January and late September.[196] Experts say South Korean banks have large dollar-denominated debts, and therefore need to protect their holdings of dollars. This has contributed to the won's fall, and in early October, President Lee Myung-bak invoked patriotism to encourage Korean banks to stop hoarding dollars and buy won.[197]

South Korea has announced several packages to stimulate the economy and shore up the domestic banking industry. The government announced a broad economic rescue package on October 19, 2008, promising to guarantee $100 billion in South Korean banks' foreign-currency debt and provide another $30 billion to directly support South Korean banks. (The total amount was equivalent to 14% of the country's GDP.) Struggling with its plunging stock market and currency, President Lee's government has also announced policies to spend up to $9.2 billion to support real-estate developers struggling with unsold apartments, and to provide further financial support to small businesses. On October 27, Korea's central bank cut its prime interest rate by 0.75 percentage points to 4.25%, the largest cut it has made since it began setting base interest rates in 1999. The rate has since been cut two more times, to 3%. On December 17, the government said it would launch a $15 billion fund to boost the capital of Korean banks.

South Korea has been an enormous economic success, and has bounced back strongly from the Asian Financial Crisis that forced it to turn to the IMF for a $58 billion support package in December 2007. After contracting by 6.9% in 1998, South Korea's GDP bounced back by 9.5% and 8.5% in the ensuing two years. Since 2002, GDP growth has been in the 3%-6% range. However, President Lee has said the current situation is more severe than the 1997 crisis. Economically, South Korea is an outlier within Asia. It is one of the few Asian countries that is running a current account deficit ($12.6 billion in January-August 2008). Its banks are unusually leveraged, with loan-deposit ratios of more than 130%, higher than that in the United States and the EU, and the only East Asian country over 100%.[198]

Pakistan

Pakistan's economy went into a steady decline in 2008. After several years of strong and comparatively stable growth, Pakistan quickly slid into a severe economic crisis in 2008.[199] Growth in real GDP declined sharply from about 8% to 3-4%; inflation rose to nearly 24%; and

[196] SOUTH KOREA: Seoul Faces Growth and Liquidity Tests, *Oxford Analytica*, October 8, 2008.

[197] Lee Warns Against Dollar Hoarding, *Korea Times*, October 8, 2008.

[198] See Merrill Lynch, "Asia: Risks Rising", October 3, 2008.

[199] For more information about Pakistan's economic crisis, see CRS Report RS22983, *Pakistan's Capital Crisis: Implications for U.S. Policy*, by Michael F. Martin and K. Alan Kronstadt.

Pakistan's rupee depreciated by over 23% against the U.S. dollar. Pakistan's unemployment rate rose, and the United Nations reported that 10 million Pakistanis were undernourished. In the words of Pakistan President Asif Ali Zardari, "The greatest challenge this government faces is an economic one."[200]

Rising trade and current account deficits generated a "capital crisis" in the autumn of 2008. Pakistan's foreign reserves slid from $14.2 billion in October 2007 to $4.1 billion at the end of October 2008. According to President Zardari's chief economic advisor, Shaukat Tarin, Pakistan needed $4 to $5 billion by the end of November 2008 to avoid defaulting on maturing sovereign debt obligations. In addition, even if Pakistan does secure the money it needs by the end of November, Tarin stated that Pakistan requires $10 to $15 billion in assistance over the next two to three years to continue to service its account deficits and outstanding debt.[201]

Several factors, in addition to the current global financial crisis, are contributing to the recent downturn in Pakistan's economy. Pakistan's continuing struggle against Islamist militancy in its tribal areas along the border with Afghanistan has led to high federal deficits and uncertainty about the stability of the Pakistan government. A recent escalation of bombings and violence in Pakistan has raised the risk for and scared off many foreign investors and businesses. This has worsened the nation's capital shortage. In addition, the flight from risk that has followed the U.S. financial crisis has apparently contributed to some capital flight from Pakistan, especially among overseas Pakistanis and investors from the Middle East.

Pakistan has sought the required assistance from several countries (including China, Saudi Arabia, and the United States), international financial institutions (including the Asian Development Bank (ADB), the International Monetary Fund (IMF), the Islamic Development Bank (IDB), and the World Bank), and an informal group of nations called the "Friends of Pakistan." Although the ADB, the World Bank and others did offer some support, the total amount was insufficient to avoid the default risk. As a consequence, Pakistan reluctantly began negotiating a loan with the IMF. On November 15, Tarin announced that Pakistan had reached a tentative agreement with the IMF to borrow $7.6 billion over the next 23 months.[202] The first installment of the loan—up to $4 billion—was expected by the end of November; Pakistan is to repay the loan by 2016.[203]

Assuming Pakistan and the IMF formally conclude the agreement, the $7.6 billion loan is well short of the estimated $10 billion to $15 billion Pakistan says it needs over the next two years to avoid a financial crisis. Some observers speculate that the IMF agreement will spur help from other potential donors, such as China, Saudi Arabia, and the United States. However, given the continuing economic problems of the potential donor nations, Pakistan may not be able to secure the full amount of assistance it says it needs. As a result, the IMF loan may end up being only a short-term patch to a long-term economic problem.

In the meantime, Pakistan has announced some changes in economic policy designed to alleviate their capital crisis. On September 19, 2008, acting finance minister Naveed Qamar released new economic policies designed to bring about macroeconomic stability and avoid seeking IMF

[200] "Pakistan's Zardari to Give Up Powers," *AFP*, September 20, 2008.

[201] Simon Cameron-Moore, "Pakistan Needs $10-15 Bln Fast, Says PM's Adviser," *Reuters*, October 21, 2008.

[202] "IMF Okays $7.6 Bln Package for Pakistan: Tareen," *Associated Press of Pakistan*, November 15, 2008.

[203] Jamie Anderson, "Pakistan Turns to IMF for Financial Aid," *Money Times*, November 16, 2008.

assistance that included the elimination of fuel, electricity and food subsidies, and a reduction in the government deficit.[204] On November 3, 2008, Tarin announced reforms of Pakistan's tax system, including the politically sensitive taxation of large landowners, to reduce the incidence of tax evasion.[205] There has also been talk of cutting Pakistan's defense budget.

According to some analysts, the new economic policies may foster popular discontent and threaten political stability. The elimination of fuel, electricity and food subsidies may cause significant harm to Pakistan's poor, many of whom are already undernourished. The tax on large landowners may undermine support for Zardari's Pakistan People's Party among its party members and its coalition partners. A cut in Pakistan's defense budget also could harm its military efforts against Islamist militants and weaken the military's political support for the current coalition government.

Other Countries' Moves

Governments around the region have been affected by the crisis, and have issued a range of rescue measures to keep financial markets functioning and shore up economic growth. Other moves include:

Australia, which had seen one of the largest jumps in housing prices in the world in recent years, has seen property prices tumble, leading to a spike in bad loans among Australian banks. Australia's commodities-dependent economy has also been hurt by declining commodities prices, and the Australian dollar has declined substantially in recent weeks. In response, the government issued a full guarantee on all bank deposits in early October, and added a $7 billion fiscal stimulus plan on October 14.

On October 14, The Hong Kong Monetary Authority said it would provide government backing for all of the $773 billion in Hong Kong bank deposits through 2010 as government assistance for banks in Europe and the United States put pressure on Asian regulators to follow suit even though Asian banks tended to be better capitalized. The authority also said that it was prepared to provide capital to the 23 locally incorporated banks if they needed it, following the examples of the United States and Britain.

Many countries have seen trade volumes fall—both because of slowing global demand but also because domestic banks have been wary of issuing trade finance. India's central bank, the Reserve Bank of India, announced emergency measures on November 15 to support Indian banks who issue letters of credit for Indian exporters. The central bank more than doubled the level of funds it makes available for banks to refinance export credits at favorable rates.[206] The availability of trade finance has become a regional problem that further threatens export-led Asian economies, as evidenced by a call from the Asian Development Bank on November 16 for Asian banks to unfreeze credit to borrowers seeking to continue doing business.[207]

[204] "Pakistan Unveils Package for Economic Stability," *Reuters*, September 19, 2008.

[205] Farhan Bokhari, "Pakistan Vows to Target Rich Tax Evaders as IMF Concludes Talks on Vital Loan," *Financial Times*, November 3, 2008.

[206] India Acts to Avert Liquidity Crunch, *Financial Times*, November 16, 2008

[207] Ibid.

International Policy Issues

In making policy changes, Congress faces several fundamental issues. First is whether any long-term policies should be designed to restore confidence and induce return to the normal functioning of a self-correcting system or whether the policies should be directed at changing a system that may have become inherently unstable, a system that every decade or so creates bubbles and then lurches into crisis. [208] For example, in Congressional testimony on October 23, 2008, former Federal Reserve Chairman Alan Greenspan stated that a "once-in-a-century credit tsunami"' had engulfed financial markets, and he conceded that his free-market ideology shunning regulation was flawed.[209] In a recent book, the financier George Soros stated that the currently prevailing paradigm, that financial markets tend towards equilibrium, is both false and misleading. He asserted that the world's current financial troubles can be largely attributed to the fact that the international financial system has been developed on the basis of that flawed paradigm.[210] Could this crisis mark the beginning of the end of "free market capitalism?" On the other hand, the International Monetary Fund has observed that market discipline still works and that the focus of new regulations should not be on eliminating risk but on improving market discipline and addressing the tendency of market participants to underestimate the systemic effects of their collective actions.[211]

A second question deals with what level any new regulatory authority should reside. Should it primarily be at the state, national, or international level? If the authority is kept at the national level, how much power should an international authority have? Should the major role of the IMF, for example, be informational, advisory, and technical, or should it have enforcement authority? Should enforcement be done through a dispute resolution process similar to that in the World Trade Organization, or should the IMF or other international institution be ceded oversight and regulatory authority by national governments?

As of mid-2009, the primary role of the IMF in the financial crisis appears to be twofold. The first is of lender of last resort, and the second is to provide analysis and advice to member countries. The IMF has been tracking economic and financial developments worldwide in order to provide policymakers with forecasts and analysis of developments in financial markets. It also is providing policy advice to countries and regions and is assisting the Group of 20 and other international organizations with recommendations to reshape the system of international regulation and governance.

The June 17 Treasury proposal for financial regulation cedes no sovereignty to the IMF. It calls for international reforms to support U.S. efforts. Even the IMF recognizes that its authority over countries comes primarily through its advisory capacity and through the conditions it places on loans to borrowing countries.

---

[208] For an analysis of bubbles, see CRS Report RL33666, *Asset Bubbles: Economic Effects and Policy Options for the Federal Reserve*, by Marc Labonte.

[209] Lanman, Scott and Steve Matthews. "Greenspan Concedes to 'Flaw' in His Market Ideology," *Bloomberg News Service*, October 23, 2008.

[210] Soros, George. *The New Paradigm for Financial Markets: The Credit Crisis of 2008 and What it Means* (PublicAffairs, 2008) p. i. Soros proposes a new paradigm that deals with the relationship between thinking and reality and accounts for misconceptions and misinterpretations.

[211] International Monetary Fund. "The Recent Financial Turmoil—Initial Assessment, Policy Lessons, and Implications for Fund Surveillance," April 9, 2008.

Bretton Woods II

The second question above is central for those calling for a new Bretton Woods conference. U.K. Prime Minister Gordon Brown called for such a conference to have the specific objective of remaking the international financial architecture.[212] In the declaration of the G-20 Summit on Financial Markets and the World Economy, world leaders stated:

We underscored that the Bretton Woods Institutions must be comprehensively reformed so that they can more adequately reflect changing economic weights in the world economy and be more responsive to future challenges. Emerging and developing economies should have greater voice and representation in these institutions. (See **Appendix C**.)

G-20 Meetings

On November 15, 2008, the G-20 Summit on Financial Markets and the World Economy was held in Washington, DC. This was billed as the first in a series of meetings to deal with the financial crisis, discuss efforts to strengthen economic growth, and to lay the foundation to prevent future crises from occurring. This summit included emerging market economies rather than the usual G-7 or G-8 nations that periodically meet to discuss economic issues. It was not apparent that the agenda of the emerging market economies differed greatly from that of Europe, the United States, or Japan.

The G-20 is an informal forum that promotes open and constructive discussion between industrial and emerging-market countries on key issues related to global economic stability. The members include the finance ministers and central bankers from the member nations. A G-20 leaders' summit is a new development.

The G-20 Washington Declaration to address the current financial crisis was both a laundry list of objectives and steps to be taken and a convergence of attitudes by national leaders that concrete measures had to be implemented both to stabilize national economies and to reform financial markets. The declaration established an Action Plan that included high priority actions to be completed prior to March 31, 2009. Details are to be worked out by the G-20 finance ministers. The declaration also called for a second G-20 summit that was held in London on April 2, 2009. Since the attendees now include the Association for Southeast Asian Nations, the G-20 no longer refers to just 20 nations.

At the April 2009 **G-20 London Summit**, leaders agreed on establishing a new Financial Stability Board (incorporating the Financial Stability Forum) to work with the IMF to ensure cooperation across borders; closer regulation of banks, hedge funds, and credit rating agencies; and a crackdown on tax havens. The leaders could not agree on the need for additional stimulus packages by nations, but they considered the additional funding for the IMF and multilateral development banks as key stimulus directed at developing and emerging market economies. The leaders reiterated their commitment to resist protectionism and promote global trade and investment.[213]

---

[212] Gerstenzang, James. "Bush will Meet with G-20 After Election," *Los Angeles Times*, October 23, 2008.

[213] G-20, *Meeting of Finance Ministers and Central Bank Governors, United Kingdom, 14 March 2009*, Communiqué, March 14, 2009.

At the November G-20 summit, the leaders agreed on common principles to guide financial market reform:

- Strengthening transparency and accountability by enhancing required disclosure on complex financial products; ensuring complete and accurate disclosure by firms of their financial condition; and aligning incentives to avoid excessive risk-taking.
- Enhancing sound regulation by ensuring strong oversight of credit rating agencies; prudent risk management; and oversight or regulation of all financial markets, products, and participants as appropriate to their circumstances.
- Promoting integrity in financial markets by preventing market manipulation and fraud, helping avoid conflicts of interest, and protecting against use of the financial system to support terrorism, drug trafficking, or other illegal activities.
- Reinforcing international cooperation by making national laws and regulations more consistent and encouraging regulators to enhance their coordination and cooperation across all segments of financial markets.
- Reforming international financial institutions (IFIs) by modernizing their governance and membership so that emerging market economies and developing countries have greater voice and representation, by working together to better identify vulnerabilities and anticipate stresses, and by acting swiftly to play a key role in crisis response.

At the London Summit, the leaders reviewed progress on the November G-20 Action Plan that set forth a comprehensive work plan to implement the above principles. The Plan included immediate actions to:

- Address weaknesses in accounting and disclosure standards for off-balance sheet vehicles;
- Ensure that credit rating agencies meet the highest standards and avoid conflicts of interest, provide greater disclosure to investors, and differentiate ratings for complex products;
- Ensure that firms maintain adequate capital, and set out strengthened capital requirements for banks' structured credit and securitization activities;
- Develop enhanced guidance to strengthen banks' risk management practices, and ensure that firms develop processes that look at whether they are accumulating too much risk;
- Establish processes whereby national supervisors who oversee globally active financial institutions meet together and share information; and
- Expand the Financial Stability Forum to include a broader membership of emerging economies.

The leaders instructed finance ministers to make specific recommendations in the following areas:

- Avoiding regulatory policies that exacerbate the ups and downs of the business cycle;

- Reviewing and aligning global accounting standards, particularly for complex securities in times of stress;
- Strengthening transparency of credit derivatives markets and reducing their systemic risks;
- Reviewing incentives for risk-taking and innovation reflected in compensation practices; and
- Reviewing the mandates, governance, and resource requirements of the International Financial Institutions.

The leaders agreed that needed reforms will be successful only if they are grounded in a commitment to free market principles, including the rule of law, respect for private property, open trade and investment, competitive markets, and efficient, effectively-regulated financial systems. The leaders further agreed to:

- Reject protectionism, which exacerbates rather than mitigates financial and economic challenges;
- Strive to reach an agreement this year on modalities that leads to an ambitious outcome to the Doha Round of World Trade Organization negotiations;
- Refrain from imposing any new trade or investment barriers for the next 12 months; and
- Reaffirm development assistance commitments and urge both developed and emerging economies to undertake commitments consistent with their capacities and roles in the global economy.

The International Monetary Fund[214]

Policy proposals for changes in the international financial architecture have included a major role for the IMF. As a lender of last resort, coordinator of financial assistance packages for countries, monitor of macroeconomic conditions worldwide and within countries, and provider of technical assistance, the IMF has played an important role during financial crises whether international or confined to one member country.

The financial crisis has shown that the world could use a better early warning system that can detect and do something about stresses and systemic problems developing in world financial markets. It also may need some system of what is being called a macro-prudential framework for assessing risks and promoting sound policies. This would not only include the regulation and supervision of financial instruments and institutions but also would incorporate cyclical and other macroeconomic considerations as well as vulnerabilities from increased banking concentration and inter-linkages between different parts of the financial system.[215] In short, some institution

[214] Prepared by Dick K. Nanto and Martin A. Weiss. For further information see CRS Report RS22976, *The Global Financial Crisis: The Role of the International Monetary Fund (IMF)*, by Martin A. Weiss.

[215] Lipsky, John. "Global Prospects and Policies," Speech by John Lipsky, First Deputy Managing Director, International Monetary Fund, at the Securities Industries and Financial Markets Association, New York, October 28, 2008. World Bank. "The Unfolding Crisis, Implications for Financial Systems and Their Oversight," October 28, 2008. p. 8.

could be charged with monitoring synergistic conditions that arise because of interactions among individual financial institutions or their macroeconomic setting.

However, the IMF's current system of macroeconomic monitoring tends to focus on the risks to currency stability, employment, inflation, government budgets, and other macroeconomic variables. The IMF, jointly with the Financial Stability Board, has recently stepped up its work on financial markets, macro-financial linkages, and spillovers across countries with the aim of strengthening early warning systems. The IMF has not, however, traditionally pressed countries to counter specific risks such as how macroeconomic variables, potential synergisms and blurring of boundaries among regulated entities, and new investment vehicles affect prudential risk for insurance, banking, and brokerage houses. The Bank for International Settlements makes recommendations to countries on measures to be undertaken (such as Basel II) to ensure banking stability and capital adequacy, but the financial crisis has shown that the focus on capital adequacy has been insufficient to ensure stability when a financial crisis becomes systemic and involves brokerage houses and insurance companies as well as banks.

The International Monetary Fund

The IMF was conceived in July 1944, when representatives of 45 governments meeting in the town of Bretton Woods, New Hampshire, agreed on a framework for international economic cooperation. The IMF came into existence in December 1945 and now has membership of 185 countries.

The IMF performs three main activities:

- monitoring national, global, and regional economic and financial developments and advising member countries on their economic policies (surveillance);
- lending members hard currencies to support policy programs designed to correct balance of payments problems; and
- offering technical assistance in its areas of expertise, as well as training for government and central bank officials.

The financial crisis has created an opportunity for the IMF to reinvigorate itself and possibly play a constructive role in resolving, or at the least mitigating, the effects of the global downturn. It has been operating on two fronts: (1) through immediate crisis management, primarily balance of payments support to emerging-market and less-developed countries, and (2) contributing to long-term systemic reform of the international financial system.[216] The IMF also has a wealth of information and expertise available to help in resolving financial crises and has been providing policy advice to member countries around the world.

IMF rules stipulate that countries are allowed to borrow up to three times their quota[217] over a three-year period, although this requirement has been breached on several occasions in which the

[216] See CRS Report RS22976, *The Global Financial Crisis: The Role of the International Monetary Fund (IMF)*, by Martin A. Weiss.

[217] Each member country of the IMF is assigned a quota, based broadly on its relative size in the world economy. A member's quota determines its maximum financial commitment to the IMF and its voting power. The U.S. quota of about $58.2 billion is the largest.

IMF has lent at much higher multiples of quota. In response to the current financial crisis, the IMF has activated its Emergency Financing Mechanism to speed the normal process for loans to crisis-afflicted countries. The emergency mechanism enables rapid approval (usually within 48-72 hours) of IMF lending once an agreement has been reached between the IMF and the national government.

As of April 2009, the IMF, under its Stand-By Arrangement facility, has provided or is in the process of providing financial support packages for Iceland ($2.1 billion), Ukraine ($16.4 billion), Hungary ($25.1 billion), Pakistan ($7.6 billion), Belarus ($2.46 billion), Serbia ($530.3 million), Armenia ($540 million), El Salvador ($800 million), Latvia ($2.4 billion), and Seychelles ($26.6 million). The IMF also created a Flexible Credit Line for countries with strong fundamentals, policies, and track records of policy implementation. Once approved, these loans can be disbursed when the need arises rather than being conditioned on compliance with policy targets as in traditional IMF-supported programs. The IMF board has approved Mexico for $47 billion under this facility. Poland has requested a credit line of $20.5 billion.

The IMF also may use its Exogenous Shocks Facility (ESF) to provide assistance to certain member countries. The ESF provides policy support and financial assistance to low-income countries facing *exogenous shocks*, events that are completely out of the national government's control. These could include commodity price changes (including oil and food), natural disasters, and conflicts and crises in neighboring countries that disrupt trade. The ESF was modified in 2008 to further increase the speed and flexibility of the IMF's response. Through the ESF, a country can immediately access up to 25% of its quota for each exogenous shock and an additional 75% of quota in phased disbursements over one to two years.

The increasing severity of the crisis has led world leaders to conclude that the IMF needs additional resources. At the 2009 February G-7 finance ministers summit, the government of Japan lent the IMF $100 billion dollars.[218] At the April 2009 London G-20 summit leaders of the world's major economies agreed to increase resources of the IMF and international development banks by $1.1 trillion including $750 billion more for the International Monetary Fund, $250 billion to boost global trade, and $100 billion for multilateral development banks. For the additional IMF resources, $250 billion was to be made available immediately through bilateral arrangements between the IMF and individual countries, while an additional $250 billion would become available as additional countries pledged their participation. The increased resources include the $100 billion loan from Japan, and the members of the European Union had agreed to provide an additional $100 billion. Subsequently, Canada ($10 billion), South Korea ($10 billion), Norway ($4.5 billion), and Switzerland ($10 billion) agreed to subscribe additional funds. The Obama Administration has asked Congress to approve a U.S. subscription of $100 billion to the IMF's New Arrangements to Borrow. China reportedly has said it is willing to provide $40 billion through possible purchases of IMF bonds.[219] The sources for the remaining $145.5 billion of the planned increase in the NAB have not been announced.

The IMF reportedly is considering issuing bonds, something it has never done in its 60-year history.[220] These would be sold to central banks and government agencies and not to the general

[218] IMF Signs $100 Billion Borrowing Agreement with Japan, *IMF Survey Magazine: In the News*, February 13, 2009.

[219] "China Urges World Monetary Systems Diversification ," *Dow Jones Newswire* , April 2, 2009, http://www.djnewswires.com/eu.

[220] Timothy R. Homan, "IMF Plans to Issue Bonds to Raise Funds for Lending Programs ," *Bloomberg.com*, April 25, 2009.

public. According to economist and former IMF chief economist Michael Mussa, the United States and Europe previously blocked attempts by the IMF to issue bonds since it could potentially make the IMF less dependent on them for financial resources and thus less willing to take policy direction from them.[221] However, several other multilateral institutions such as the World Bank and the regional development banks routinely issue bonds to help finance their lending.

The IMF is not alone in making available financial assistance to crisis-afflicted countries. The International Finance Corporation (IFC), the private-sector lending arm of the World Bank, has announced that it will launch a $3 billion fund to capitalize small banks in poor countries that are battered by the financial crisis. The Inter-American Development Bank (IDB) announced on October 10, 2008 that it will offer a new $6 billion credit line to member governments as an increase to its traditional lending activities. In addition to the IDB, the Andean Development Corporation (CAF) announced a liquidity facility of $1.5 billion and the Latin American Fund of Reserves (FLAR) has offered to make available $4.5 billion in contingency lines. While these amounts may be insufficient should Brazil, Argentina, or any other large Latin American country need a rescue package, they could be very helpful for smaller countries such as those in the Caribbean and Central America that are heavily dependent on tourism and property investments.

Changes in U.S. Regulations and Regulatory Structure

Aside from the international financial architecture, a large question for Congress may be how U.S. regulations might be changed and how closely any changes are harmonized with international norms and standards. Related to that is whether U.S. oversight and regulatory agencies, government sponsored enterprises, credit rating firms, or other related institutions should be reformed, merged, their mandates changed, or rechartered. (Many of these questions are addressed in separate CRS reports.)[222]

As events have developed, policy proposals have been coming forth through the legislative process and from the Administration, but other proposals are emerging from recommendations by international organizations such as the IMF,[223] Bank for International Settlements,[224] and Financial Stability Forum.[225]

---

[221] Bob Davis, "IMF Considers Issuing Bonds to Raise Money," *Wall Street Journal*, February 1, 2009.

[222] See, for example, CRS Report RL34730, *Troubled Asset Relief Program: Legislation and Treasury Implementation*, by Baird Webel and Edward V. Murphy; CRS Report RL34412, *Containing Financial Crisis*, by Mark Jickling; CRS Report RL33775, *Alternative Mortgages: Causes and Policy Implications of Troubled Mortgage Resets in the Subprime and Alt-A Markets*, by Edward V. Murphy; CRS Report RL34657, *Financial Institution Insolvency: Federal Authority over Fannie Mae, Freddie Mac, and Depository Institutions*, by David H. Carpenter and M. Maureen Murphy; CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*, by Marc Labonte; CRS Report RS22099, *Regulation of Naked Short Selling*, by Mark Jickling; and CRS Report RS22932, *Credit Default Swaps: Frequently Asked Questions*, by Edward V. Murphy.

[223] For analysis and recommendations by the International Monetary Fund, see "Global Financial Stability Report, Financial Stress and Deleveraging, Macro-Financial Implications and Policy," October 2008. 246 p.

[224] For information on Basel II, see CRS Report RL34485, *Basel II in the United States: Progress Toward a Workable Framework*, by Walter W. Eubanks.

[225] For recommendations by the Financial Stability Forum, see "Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience, Follow-up on Implementation," October 10, 2008. 39 p.

The IMF has suggested various principles that could guide the scope and design of measures aimed at restoring confidence in the international financial system. They include:

- employ measures that are comprehensive, timely, clearly communicated, and operationally transparent;
- aim for a consistent and coherent set of policies to stabilize the global financial system across countries in order to maximize impact while avoiding adverse effects on other countries;
- ensure rapid response on the basis of early detection of strains;
- assure that emergency government interventions are temporary and taxpayer interests are protected; and
- pursue the medium-term objective of a more sound, competitive, and efficient financial system.[226]

Legislation

For legislation related to a fiscal stimulus and monetary policy, see CRS Report R40104, *Economic Stimulus: Issues and Policies*, by Jane G. Gravelle, Thomas L. Hungerford, and Marc Labonte and CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*, by Marc Labonte.

For a discussion of housing legislation, see CRS Report RL34623, *Housing and Economic Recovery Act of 2008*, coordinated by N. Eric Weiss and CRS Report RL33879, *Housing Issues in the 110th Congress*, coordinated by Libby Perl.

For policy related to the financial sector, see CRS Report R40224, *Troubled Asset Relief Program and Foreclosures*, by N. Eric Weiss et al., and CRS Report RL34730, *Troubled Asset Relief Program: Legislation and Treasury Implementation*, by Baird Webel and Edward V. Murphy.

For policy related to government sponsored enterprises, see CRS Report RS21663, *Government-Sponsored Enterprises (GSEs): An Institutional Overview*, by Kevin R. Kosar.

For policy related to the International Monetary Fund, see CRS Report RS22976, *The Global Financial Crisis: The Role of the International Monetary Fund (IMF)*, by Martin A. Weiss.

[226] International Monetary fund. "Global Financial Stability Report: Financial Stress and Deleveraging, Macrofinancial Implications and Policy" (Summary version), October 2008. pp. ix-x.

Appendix A. Major Recent Actions and Events of the International Financial Crisis[227]

2009

July 8-10. The G8 Summit in Italy included a dialogue with five developing countries (Brazil, China, India, Mexico, and South Africa). The summit resulted in declarations or statements dealing with Responsible leadership for a sustainable future, Non Proliferation, Counter Terrorism, Promoting the global agenda, Energy and Climate, G8-Africa Partnership on Water and Sanitation, and Global Food Security. During the summit, on **July 9,** China pressed for new international exchange rules. China criticized the dominant role of the U.S. dollar as a global reserve currency and urged diversification of the reserve currency system aiming at relatively stable exchange rates among leading currencies. Chinese state councilor Dai Bingguo's remarks caused concern among western leaders, some of whom fear that even discussion of long-term currency issues could unsettle markets and undercut economic recovery. (G-8 Chair's Summary and *Financial Times*)

July 10. A **new General Motors** emerged from bankruptcy protection (filed for bankruptcy on June 1) as a leaner automaker and with 60.8% government ownership. The new company will include the Chevrolet, Cadillac, Buick, and GMC Brands, with its overseas operations. About 4,100 of its 6,000 U.S. dealerships will remain with the new company, while other dealerships will be shed over the next 14 months. The company will have only a fraction of the $54 billion in unsecured debt it previously held. Other holdings, contracts and liabilities that GM needed to divest as part of the bankruptcy process will be held by the old company, to be known as Motors Liquidation Co. (GMGMQ). The process of disposing of those assets and liabilities could take two to three years. These holdings include about 16 U.S. plants and facilities that employ about 20,000 workers. Some of the plants will stay open through 2012. The federal government will initially hold 60.8% of the stock in the new company, with a union-controlled health care trust fund owning 17.5%, the Canadian and Ontario governments owning 11.7% and bondholders of the old GM eventually getting about 10%. (CNNMoney.com)

July 10. Treasury Secretary Timothy Geithner **urged Congress** to **rein in** the $592 trillion **derivatives market** with new U.S. laws that are "difficult to evade." The complexity of over-the-counter derivatives contracts and industry growth let corporations take on excessive risk and caused a "very damaging wave of deleveraging" that exacerbated the global credit crisis, Geithner said in prepared testimony at a joint hearing of the House Agriculture and Financial Services committees. Geithner repeated the President's call to force "standardized" contracts onto exchanges or regulated trading platforms, and regulate all dealers. Contracts would be subject to new disclosure rules, and "conservative" capital and margin requirements, as well as business-conduct standards, would be imposed on market participants. The market, which grew almost seven-fold since 2000, complicated government efforts throughout the credit crisis to assess potential losses at U.S. banks and corporations because regulators lacked adequate data to measure their risk, Geithner said. (Bloomberg)

[227] Prepared by J. Michael Donnelly, Information Research Specialist, Knowledge Services Group. Source: Various news reports and press releases. Beginning July 1, 2009, source information will be provided.

July 9. The **U.S. House of Representatives passed 111th Congress bill H.R. 3081** that contained H.Amdt. 311, a provision designed to overrule the President with respect to his signing statement of June 24, 2009. That Presidential statement rejected certain congressional conditions on the funding for the International Monetary Fund contained in 111th Congress bill H.R. 2346, The Supplemental Appropriations Act, 2009, P.L. 111-32. (CQ Today)

July 9. **A report from the McKinsey Global Institute (MGI)** found that big oil investors and Asia's central banks and sovereign wealth funds are poised to grow twice as fast as other institutional investors, underscoring how financial power is continuing to shift away from the West. According to MGI, petrodollar investors—including central banks, sovereign wealth funds, and individual magnates based mostly in the Middle East and Russia—will see the value of their foreign assets soar to at least $9 trillion by 2013, up from an estimated $5 trillion at the end of 2008. Similarly, foreign financial assets held by Asia's sovereign investors will collectively swell to $7.5 trillion by 2013, up from $4.8 trillion in 2008. The projected rate of growth between 2009 and 2013 will be the slowest since 2000, but, "impressive" nonetheless.

What explains these two group's ability to sail right through financial turmoil that wrecked some of the West's biggest and boldest investors? Mostly, it's the nature of the assets they hold. As the economy rebounds, oil prices will go up responding to growing demand for gasoline products tied to greater economic activity. Likewise, when global trade picks up again, Asian reserves will resume building up, reflecting those countries' ample trade surpluses. In other words, both petrodollar and Asian investors have a hedge over other institutional investors not so much because of the investment decisions they'll make but because their existing portfolios will benefit from "structural flows that will bring money in," as the world economy heads toward recovery.

At least some of these structural advantages may wind down in the long run –China, for example, is slowly steering its economy more towards satisfying domestic demand—but in the short-term, they'll help tick the financial power balance increasingly toward the economic power centers in the developing world. One risk connected to continued growth in petrodollars and Asian sovereign investment assets is that so much idle money will end up, again, feeding assets bubbles around the world as it did in the run-up to the current recession, warns the MGI report. (*Wall Street Journal—Real Time Economics*)

July 8. The **International Monetary Fund (IMF) and Canada** have signed an agreement to provide the Fund with up to the equivalent of US$10 billion/about SDR 6.5 billion. The Fund can now add these resources to those already available from borrowing agreements with Japan and Norway to provide balance of payments assistance to its members in the current crisis. (IMF)

July 6. The **world's top wealth management firms** were reported by Reuters from a survey of 14,000 private bankers and 7,000 wealthy individuals by Scorpio Partnership. Private wealth managed by banks and investment managers around the world dropped nearly 17% to $14.5 trillion in 2008 from 2007. (CNBC.com)

Top 10 Wealth Managers

Rank	Bank	Assets in Million $
1	Bank of America	1,501
2	UBS	1,393
3	Citi	1,320
4	Wells Fargo	1,000
5	Credit Suisse	612

6	JPMorgan	552
7	Morgan Stanley	522
8	HSBC	352
9	Deutsche Bank	231
10	Goldman Sachs	215

Source: Scorpio Partnership via Reuters via CNBC.com

July 6. U.S. manufacturing output from factories has **contracted** for four consecutive quarters and analysts now expect manufacturing output to fall as much as 12% this year, the worst contraction since 1946. Nearly 1.7 million manufacturing workers—or one in eight—have lost their jobs in the last 18 months alone. (Reuters)

July 5. A bankruptcy judge said late Sunday, July 5, that **General Motors Corporation (GM)** can sell the bulk of its assets to a new government-backed company, clearing the way for the automaker to quickly emerge from bankruptcy protection. GM and the government are reportedly preparing to complete the sale transaction within this week. Chrysler's assets were recently sold to a new company led by Italian automaker Fiat. If GM is able to execute its sale this week, both automakers would have completed their trips through bankruptcy in about 40 days—an unusually speedy process. The government and GM have argued that a quick sale was critical to preserve the automaker's value. (AP and *Washington Post*)

July 2. The **American economy lost 467,000 jobs** in June and the unemployment rate edged up to 9.5% in a sobering indication that the most painful downturn since the Great Depression continues. The number of unemployed persons, 14.7 million and the unemployment rate (9.5%) were little changed in June. Since the start of the recession in December 2007, the number of unemployed persons has increased by 7.2 million, and the unemployment rate has risen by 4.6 percentage points. "The numbers are indicative of a continued, very severe recession," said Stuart G. Hoffman, chief economist at PNC Financial Services Group in Pittsburgh. (U.S. Bureau of Labor Statistics and *New York Times*)

July 2. **Eurozone unemployment rose** above 15 million in May; unemployment rate at 10 year high of 9.5%, the highest level since February 1999. The number of jobless across the Eurozone spiked up by a further 273,000 in May. This followed increases of 398,000 in April and 423,000 in March. May witnessed the 14th successive monthly rise in unemployment. This took the number of Eurozone jobless up to 15.0 million, the highest level since the bloc's inception in January 1999. It was also up by 3.95 million from the five-and-a-half-year low of 11.063 million seen in March 2008. (IHS Global Insight)

July 2. The **Federal Deposit Insurance Corporation (FDIC)** plans to issue **new rules** that could make it slightly easier for private equity firms to buy failed banks. Under a new directive the agency is expected to demand that investment firms like the Carlyle Group or Kohlberg Kravis Roberts provide support to the banks they acquire if the banks get into more trouble and need additional capital. The new rules represent a balancing act for the F.D.I.C, which is responsible for protecting depositors from losses. Government officials have been eager to recruit private investors to stretch out Congressional bail-outs. Bank regulators remain concerned about permitting comparatively high-risk investor groups take control of banks with billions of dollars in government-guaranteed deposits. The agency has seized 45 failing banks this year, and more than 60 since last fall. (*New York Times*)

July 2. China's tax administration reports that the total value-added tax **(VAT) refund for exporting goods** rose 23.4% year on year during the first five months, hitting 290 billion yuan/U.S.$42.5 billion, as a result of progressive rebate rate increases since last year. China has introduced seven consecutive export tax rebate hikes since the second half of last year to rein in the freefall of the country's exports. (IHS Global Insight)

July 1. Planned job cuts announced by U.S. employers totaled 74,393 in June, down 33% from 111,182 in May, according to a report released on Wednesday by global outplacement firm Challenger, Gray & Christmas, Inc. June marked the fifth consecutive month of declining planned layoffs at U.S. firms, hitting the lowest level since March 2008 and providing another hopeful sign that the U.S. economy is attempting to end its worst recession in decades. (Reuters)

July 1. The **contraction in euro zone manufacturing** output moderated for the fourth consecutive month in June, a fresh sign that the severe economic downturn in the currency block is gradually bottoming out, final data from Markit Economics showed. However, there were marked differences in the pace of recovery in the region's largest economies, with Germany, Spain, and Italy still suffering sharp downturns in manufacturing, while France and the Netherlands moved closer to stabilization. (Wall Street Journal)

July 1. Asian economic data from Japan, China and South Korea indicate possible **stabilization**, or a hesitant steps with a considerable distance to full recovery. In Japan, the Tankan survey of big manufacturers, conducted quarterly by the Bank of Japan, bounced back from a record low it hit in March, recording minus 48 in its June survey. Below 50 indicates economic recession, while above 50 indicates growth. In China, an important official purchasing managers' index, rose for the fourth month in a row in June. And South Korea reported that exports in June were 11.3% lower than a year earlier, up from a 28.5% fall recorded in May. (New York Times)

July 1. Home prices in 20 major U.S. metropolitan areas **fell** in April at a slower pace than forecast, the S&P/Case-Shiller home- price index showed today. Today's Case-Shiller numbers are the latest sign that that the worst of the housing slump may be passing. Sales of existing homes posted gains in April and May, while housing starts jumped in May from a record low. Home prices saw a "striking improvement in the rate of decline" in April and trading in funds launched today indicates investors believe the U.S. housing slump is nearing a bottom, said Yale University economist Robert Shiller. "At this point, people are thinking the fall is over," Shiller, co-founder of the home price index that bears his name, said in a Bloomberg Radio interview today. "The market is predicting the declines are over." (Bloomberg)

July 1. California's lawmakers failed to agree on a **balanced budget** by the start of its new fiscal year, clearing the way to suspend payments owed to the state's vendors and local agencies, who instead will get "IOU" notes promising payment. The notes will mark the first time in 17 years the most populous U.S. state's government will have to resort to the unusual and dramatic measure. Democrats who control the legislature could not convince Republicans late Tuesday night to back their plans to tackle a $24.3 billion budget shortfall or a stopgap effort to ward off the IOUs. The two sides agree on the need for spending cuts but are split over whether to raise taxes. Democrats have pushed for new revenues while Republican lawmakers and Governor Arnold Schwarzenegger, also a Republican, have ruled out tax increases. (CNBC)

July 1. The **Turkish economy declined** by 13.8% year on year in the first quarter of 2009. The drop was the largest ever recorded for the country. This follows a 6.2% year on year fourth-

quarter decline, placing the Turkish economy officially in recession. This deep contraction is among the steepest in the region, surpassed by only Estonia and Latvia. (IHS Global Insight)

July 1. Ukraine's GDP dropped by 20.3% in the first quarter, following a decline by 7.9% in the final quarter 2008. The first quarter's decline was the steepest since 1994, when the economy slumped by 22.3% for the year as a whole. The key driving force for the downturn was gross fixed capital formation, which fell -48.7% year on year. (IHS Global Insight)

July 1. China granted a U.S. $950 million **credit line to Zimbabwe**. According to Agence France-Presse, the loan will be used primarily in assisting the Zimbabwean government to rebuild its shattered economy, which is expected to cost around US$10 billion in the near term. The Zimbabwean prime minister also received pledges of US$500 million from Europe and the United States. (IHS Global Insight)

June 30. The **United Kingdom's** first quarter **GDP contraction** was deeper than previously reported at 2.4% quarter on quarter and 4.9% year on year. These statistics represent the sharpest decline since the second quarter of 1958 and the deepest since quarterly records began in 1948. Consumer spending, investment, exports, and imports all fell substantially and inventories were slashed. The revised data show that the recession began in the second quarter of 2008 rather than the third, and has been deeper than previously thought. Problems unique to the United Kingdom included the sharp housing-market downturn, high levels of consumer debt, and the relative importance of the financial sector.

June 30. In the first quarter of 2009, **Croatian GDP shrank** by 6.7% year-on-year, its greatest economic contraction in over 16 years. This represents its most severe economic downturn since its post-Yugoslav violence in 1992. The Croatian economy was undermined by severe downturns in household consumption and fixed capital formation. Exports of goods and services dropped 14.2% year on year. Imports of goods and services fell an even sharper 20.9% year on year. The Croatian kuna depreciated by 1.8% over this period. Lack of export orders forced manufacturers to begin laying off thousands of workers.

June 30. The **International Monetary Fund (IMF)** approved an increase of 40% in financial assistance for **Belarus**, bringing total support to some US$3.5 billion. The increase in financial support of US$679 million will supply Belarus with vital liquidity relief. This increase signals the IMF's trust in Belarus's ability and willingness to pursue responsible macroeconomic policy and further structural reforms. In the longer term, challenges remain extensive and economic and financial risks high.

June 30. Iran was reported to plan to scrap **domestic gasoline subsidies** for private vehicles. No time frame for implementation was given. It was announced that the government would still provide gasoline subsidies for fishing vessels and domestic trucks. Iranians currently purchase up to 20 gallons per month at the subsidized price of US$0.40 per gallon, and unlimited quantities at $1.60 per gallon. Iran's gasoline imports of 130,000 barrels per day and profitable crude oil exports are considered to be potential sanctions targets over Iran's nuclear program.

June 29. Kosovo formally **joined the IMF and World Bank**. This gives Kosovo increased international legitimacy, which is important since support for its 2008 unilateral declaration of independence has been questioned by some. It is hoped that membership in the international financial institutions will bring new investment to the country, the poorest in Europe. It suffers

widespread corruption and massive infrastructure problems. Kosovo has an unemployment rate near 60%, and a massive trade deficit. Almost half its population lives in poverty.

June 26. United States real GDP declined a revised 5.5% in the first quarter. Profits from current production increased US$48.1 billion, or increased 3.8% quarter on quarter. It is the first quarterly increase since the second quarter of 2007. All profits came from the financial sector. Earnings in other industries declined.

June 26. The French gross domestic product contracted by 1.2% quarter on quarter during the first three months of 2009. This follows a revised contraction of 1.4% during the final quarter of 2008, and falls of 0.2% and 0.4% during the third and second quarters of last year. Investment and exports continued to perform particularly badly during the first quarter.

June 26. New Zealand's gross domestic product contracted 0.7% quarter-on-quarter in the three months through March and by 2.2% for the year, marking it as the deepest recession on record. In March growth contracted for the fifth consecutive quarter. A slump in domestic demand despite positive net exports has driven New Zealand's economic drop.

June 25. American International Group (AIG) announced that it has reached a deal to reduce its debt to the Federal Reserve Bank of New York by $25 billion. AIG said that it would give the New York Fed preferred stakes in Asian-based American International Assurance (AIA) and American Life Insurance Company (Alico), which operates in more than 50 countries. Under the agreement, AIG will split off AIA and Alico into separate company-owned entities called "special purpose vehicles," or SPVs. The New York Fed will receive preferred shares now valued at $25 billion—$16 billion in AIA and $9 billion in Alico—and in exchange will forgive an equal amount of AIG debt. The Fed is now in the insurance business.

June 24. H.R. 2346 was signed to become P.L. 111-32, increasing the U.S. quota in the International Monetary Fund by 4.5 billion SDRs ($7.69 billion), providing loans to the IMF of up to an additional 75 billion SDRs ($116.01 billion), and authorizing the United States Executive Director of the Fund to vote to approve the sale of up to 12,965,649 ounces of the Fund's gold. On June 18, Congress had cleared H.R. 2346, the $105.9 billion war supplemental spending bill, that mainly funds military operations in Iraq and Afghanistan through September but also included the IMF provisions. The President's signing statement rejected certain congressional conditions on the funding, but a provision in H.R. 3081 that passed the house on July 9, 2009, was designed to overrule the President on this issue.

June 24. The United States and the European Union lodged a complaint in the World Trade Organization (WTO) against China, accusing Beijing of unfairly helping their domestic steel, aluminum, and chemical industries by limiting overseas exports of raw materials. The United States and the EU allege that while Chinese companies get primary access low priced raw materials from domestic producers, non-Chinese companies must buy the products in the open market, where prices are higher due to the lack of Chinese output restricting supplies. EU Trade Commissioner Catherine Ashton said that the Chinese restrictions on raw materials "distort competition and increase global prices." China responded that the curbs were put in place to protect the environment, and retaliated with a request for the WTO to investigate U.S. restrictions on the import of Chinese poultry products. The case represents the first trade action taken by the United States against China, or any country, under President Barack Obama. The U.S. president is aware that China is the largest creditor to the United States. Washington frequently complains about China flooding the world market with cheap exports, rather than holding them back.

June 24. The International Monetary Fund (IMF) approved an increase in assistance to Armenia. Armenia may now immediately withdraw an additional U.S. $103 million under its stand-by program approved in March.

June 23. The Chinese Ministry of Commerce (MofCOM) reported new measures to promote domestic consumption. The government plans to subsidize consumer durable trade-ins, reduce electricity prices for commercial enterprises, and promote credit cards. The trade-in of home appliances and automobiles will be emphasized.

June 23. The IMF froze Bosnia and Herzegovina's 1.2 billion euro/U.S. $1.66 billion stand-by arrangement when the country failed to implement agreed fiscal tightening. The IMF suspended the loan following the Bosnian government agreement with protests by war veterans and invalids to reverse planned cuts in benefits and pensions. The situation may be reviewed by the IMF in September.

June 23. Airbus displayed the first A320 aircraft made outside Europe at a factory in Tianjin, China. It was delivered to Dragon Aviation Leasing and will be used by Sichuan Airlines, a regional Chinese airline. Airbus began assembling the A320 in Tianjin in September, shipping components from Europe to China. The company has invested nearly U.S. $1.47 billion in the plant, a joint venture that is 51% owned by Airbus and 49% owned by a Chinese aviation consortium. Another 10 aircraft will be assembled this year in China, with Airbus planning to assemble four planes per month by the end of 2011. Airbus decided to construct the China plant based on predictions the country will purchase up to 2,800 passenger and transport planes over the next twenty years. Passenger travel is expected to expand five-fold during the next 20 years. The company's target is to gain more than 50% market share from now until 2012, a significant increase from its 39% market share in 1995.

June 23. The World Bank approved an U.S. $8 million grant for Guinea-Bissau's poverty reduction and reform program. The grant will be provided under the country's Interim Strategy Note (ISN), for the 2009-2010 period. The grant aims to improve economic management, foster economic growth and strengthen the delivery of basic services. It also seeks to support the government's reform agenda, targeting greater efficiency, transparency, and accountability in the management of public finances. Guinea-Bissau continues to be one of the most fragile states in sub-Saharan Africa, trapped in a cycle of political instability, weak institutional capacity and poor economic growth since the 1998-1999 civil war. The World Bank's grant is part of a broader initiative to support the country's stabilization and recovery.

June 18. Congress cleared H.R. 2346, the U.S. $105.9 billion war supplemental spending bill, sending it to the President's desk. House leaders advanced the measure on June 16, on a 226-202 vote. The Senate voted, 91-5, on June 18 to adopt the report, clearing the bill. The legislation mainly funds military operations in Iraq and Afghanistan through September. It includes $5 billion in borrowing authority for the International Monetary Fund (IMF).

June 17. The U.S. Treasury released a white paper containing proposals to reorganize the financial regulatory system. Key areas of reform include systemic risk, securitization, derivatives, and consumer protection. Visit the full document at http://www.financialstability.gov/docs/regs/FinalReport_web.pdf.

June 1. General Motors Corp. declares bankruptcy, filing for chapter 11. By asset value, GM was the second largest industrial bankruptcy in history, after WorldCom in 2002. Costs to the U.S.

government to save GM Corp. and Chrysler LLC now exceed $62 billion. GM's bankruptcy filing declared assets of $82 billion and liabilities of $172 billion. On the same day Chrysler's sale of assets to Italian Fiat SpA was approved by bankruptcy court.

May 13. The U.S. Treasury in a two-page letter to Congress outlined plans to regulate the over-the-counter (OTC) derivatives market, in order to quantify and regulate risks that led to the global financial crisis. According to Treasury Secretary Tim Geithner, the CFTC and SEC are reviewing the participation limits in current law to recommend how the Commodity Exchange Act and the securities laws should be amended. Treasury is coordinating with foreign governments to promote the implementation of similar measures to ensure U.S. regulation is not undermined by weaker standards abroad.

May 12. Standard & Poor's (S&P) lowered Mexico's credit rating outlook to negative from stable. Economists are reducing forecasts for real GDP growth in 2009. The central bank now estimates a 3.8%-4.8% annual contraction in 2009. S&P forecasts a 5.5% drop for Mexican real GDP this year. The Mexican economy is hampered by oil and trade. Mexico has long relied on oil revenues which are now falling. International oil prices and domestic production are down. The Constitution keeps the oil industry a state monopoly and the financial weakness of the state oil company, Pemex, has prevented development of deep water reserves in the Gulf of Mexico. Mexico's total trade, imports plus exports, equaled 62% of total Mexican GDP in 2008. Over 85% of Mexico's total trade is with the United States. In the United States, trade accounts for less than 30% of GDP. In the first quarter of 2009, Mexico's exports to the United States fell at a 26% annual rate, less than Canada's exports decline to the United States of 37%.

April 30. Chrysler, the third-largest U.S. vehicle manufacturer, filed for bankruptcy. The firm announced that it would shut four of its U.S. plants, located at Sterling Heights, Michigan; St. Louis, Missouri; Twinsburg, Ohio; and Kenosha, Wisconsin, by the end of 2010. Production at these, and five other U.S. plants (Newark, Delaware, Conner Avenue Detroit, North St. Louis, and its axle plant in Detroit) will be shifted to Canada and Mexico. The U.S. auto industry has been losing jobs for years. In 2008, the industry employed 711,000 people in the United States, down from 1.3 million in 1999. In 2008 U.S. automakers closed 230,000 jobs. Standard & Poor's estimates that even including component manufacturers, the U.S. auto industry accounts for just over 1% of non-farm employment. Outside Mexico, all of Chrysler's North American plants are temporarily closed while Chrysler is reorganized. The new company to emerge is likely to be 20% owned by the Italian firm Fiat, with a majority stake held by the U.S. United Autoworkers Union (UAW). Chrysler is the first bankruptcy filing by a major U.S. auto company since Studebaker in 1933. In Mexico, Chrysler is the fourth largest vehicle maker after Volkswagen, General Motors and Nissan. Chrysler claims that Mexican production may be unaffected. In the first quarter of 2009, total output of 33,998 units was 51% less than the same period of 2008. Mexico's total automobile production fell 41% annually in the first quarter of 2009, to 291,800 units.

May 7. The government's "stress tests" indicated that ten of the largest U.S. banks would have to raise a combined $74.6 billion in capital to cushion themselves against economic under-performance.

May 5. The European Commission lowered its growth forecast for the European Union to -4% in 2009 and -0.1% in 2010.

May 4. The International Monetary Fund approved a 24-month $17.1 billion Stand-By Arrangement for Romania. The total international financial support package will amount to $26.4 billion, with the European Union providing $6.6 billion, the World Bank $1.3 billion, and the European Bank for Reconstruction and Development, the European Investment Bank, and the International Finance Corporation a combined $1.3 billion.

April 30. Chrysler announced merger with Fiat and filed for bankruptcy. Separately, the Financial Accounting Standards Board changed the mark-to-market accounting rule to give banks more discretion in reporting value of assets.

April 28. Swine flu epidemic hits Mexican economy.

April 22. The International Monetary Fund projected global economic activity to contract by 1.3% in 2009 with a slow recovery (1.9% growth) in 2010. Overall, the advanced economies are forecast to contract by 3.8% in 2009, with the U.S. economy shrinking by 2.8%.

April 21. The IMF estimated that banks and other financial institutions faced aggregate losses of $4.05 trillion in the value of their holdings as a result of the crisis. Of that amount, $2.7 trillion is from loans and assets originating in the United States, the fund said. That estimate is up from $2.2 trillion in the fund's interim report in January, and $1.4 trillion last October.

April 14. The IMF granted Poland a $20.5 billion credit line using a facility intended to backstop countries with sound economic policies that have been caught short by the global financial crisis. On April 1, Mexico said that it was tapping the new credit line for $47 billion.

April 2. At the **G-20 London Summit**, leaders of the world's largest economies agreed to tackle the global financial crisis with measures worth $1.1 trillion including $750 billion more for the International Monetary Fund, $250 billion to boost global trade, and $100 billion for multilateral development banks. They also agreed on establishing a new Financial Stability Board to work with the IMF to ensure cooperation across borders; closer regulation of banks, hedge funds, and credit rating agencies; and a crackdown on tax havens, but they could only agree on additional stimulus measures through IMF and multilateral development bank lending and not through country stimulus packages. The leaders reiterated their commitment to resist protectionism and promote global trade and investment.

April 1. The U.S. Conference Board's Consumer Confidence Index inched 0.7 of a point higher in March, virtually unchanged from the 42-year low reached in February. The present situation index has fallen from a cyclical peak of 138.3 in July 2007 to 21.5 this month. Its record low was 15.8 in December 1982, when the unemployment rate stood at a post-war high of 10.8%.

April 1. Japan's economy shrank 3.3%, or by 12.7% in annual terms. This marked the deepest contraction in the economy since the first quarter of 1974, when the global economy was reacting to the oil shock, and the second-biggest decline in growth in the post-war era. Japan has experienced a record decline in exports. Total exports fell 13.9% in quarterly comparisons and by a stunning 45.0% in annual terms. These declines were mirrored by the Bank of Japan's quarterly business confidence survey, or tankan. The tankan results for the first quarter of 2009's headline Diffusion Index (DI) of business conditions for large manufacturing companies dropped to a reading of -58 in the three months through March from the -24 results recorded in the December quarter. The DI surveys respondents' business conditions expectations over the next three to six months. The reading for the first quarter was the worst on record.

April 1. Mexico's President Felipe Calderón claimed yesterday that his country was willing to take up a new credit line from the International Monetary Fund (IMF). He confirmed that government finances were "in order", allowing the country to boost central bank reserves via a new IMF borrowing of some US$30–40 billion as soon as this week. The IMF has failed to attract any borrower for a US$100-million loan offering last year. Potential borrowers may be concerned over conditionality requirements for loans and the negative message sent out when any economy requires IMF financing. The new Flexible Credit Line (FCL), launched recently by the IMF to attract developing nations, offers eligible countries easy access to large loans. Countries will be able to either immediately draw funds from the FCL, or keep it as an easily accessibly pool of finance.

March 31. The **Organization for Economic Cooperation and Development** (OECD) in a new survey reports worsening economic prospects. It is now expected that the global recession will worsen by an average **GDP contraction** of 4.3% in the OECD area in 2009 before a policy-induced recovery gradually builds strength through 2010. **International trade** is forecast to fall by more than 13% in 2009 and world economic activity will shrink by 2.7%. Specific forecasts include: U.S.: -4% in 2009 and 0% in 2010; Japan: -6.6% in 2009 and -0.5% in 2010; Eurozone: -4.1% in 2009 and -0.3% in 2010. Brazil's GDP is expected to decline by 0.3% in 2009 while Russia's is projected to fall 5.6%. Growth in India will ease to 4.3% in 2009 and in China to 6.3%. By the end of 2010 **unemployment** rates across OECD nations may reach 10.1% from 7.5% in the first quarter of 2009. The unemployed in the 30 advanced OECD countries would increase by about 25 million, the largest and most rapid growth in OECD unemployment in the post-war period.

March 31. U.S. housing prices continue to fall. The Standard & Poor's S&P/Case-Shiller 20-City Composite Index fell 19.0% annually in January 2009, the fastest on record. High inventories and foreclosures continued to drive down prices. All 20 cities covered in the survey showed a decrease in prices, with 9 of the 20 areas showing rates of annual decline of over 20%.

As of January 2009, average home prices are at similar levels to what they were in the third quarter of 2003. From their peaks in mid-2006, the 10-City Composite is down 30.2% and the 20-City Composite is down 29.1%.

March 31. The **World Trade Organization** (WTO) predicted that the volume of global **merchandise trade** would **shrink by 9%** this year. This will be the first fall in trade flows since 1982. Between 1990 and 2006 trade volumes grew by more than 6% a year, easily outstripping the growth rate of world output, which was about 3%. Now the global economic machine has gone into reverse: output is declining and trade is shrinking faster.

March 30. The central banks of China and Argentina reached an agreement for a 70 billion yuan/U.S. $10 billion currency swap for three years, the sixth such swap China has concluded with emerging economies including South Korea, Hong Kong, Indonesia, Belarus and Malaysia. The move may provide capital to these emerging markets and may in the long-term promote the Chinese yuan's international role. For Argentina, these moves may help to offset challenges in securing foreign exchange financing.

March 24. The Executive Board of the International Monetary Fund (IMF) approved a major overhaul of the IMF's lending framework, including the creation of a new **Flexible Credit Line** (FCL). The changes to the IMF's lending framework include:

- modernizing IMF conditionality for all borrowers,

- introducing a new Flexible Credit Line,
- enhancing the flexibility of the Fund's traditional stand-by arrangement,
- doubling normal access limits for nonconcessional resources,
- simplifying cost and maturity structures, and
- eliminating certain seldom-used facilities.

"These reforms represent a significant change in the way the Fund can help its member countries—which is especially needed at this time of global crisis," said IMF Managing Director Dominique Strauss-Kahn. "More flexibility in our lending along with streamlined conditionality will help us respond effectively to the various needs of members. This, in turn, will help them to weather the crisis and return to sustainable growth."

March 23. The U.S. Treasury released the details of its **Public Private Partnership Investment** Program to address the challenge of legacy toxic assets (mortgages and securities backed by loans) being carried by the financial system. The Treasury and the Federal Deposit Insurance Corporation with funding from the TARP and private capital are to purchase eligible assets worth about $500 billion with the potential to expand the program to $1 trillion.

March 20. The European Union announced additional support for the IMF's lending capacity in the form of a loan to the IMF totaling €75 billion, about US$100 billion.. The EU's common strategy is released. It focuses on regulating hedge funds, private equity, credit derivatives and credit rating agencies, and vowed to crack down on tax havens.

March 19. The **U.S. Federal Reserve** announced a plan to purchase **longer-term Treasury securities**. The Fed is now trying not just to influence the spread between private interest rates and Treasuries (through its mortgage-backed securities purchases, for example), but also to pull down the entire spectrum of interest rates by driving down the rate on benchmark Treasuries. Key points of yesterday's Fed announcement include:

- The federal funds rate, with a current target range of 0.0%–0.25%, is likely to remain exceptionally low for "an extended period." Last month, the Fed said the low rate would apply "for some time."
- The Fed will purchase:
  - up to an additional US$750 billion of agency mortgage-backed securities, for a total of US$1.25 trillion, and
  - up to an additional US$100 billion of agency debt for a total of up to US$200 billion.
- It followed the central banks of the United Kingdom and Japan by announcing its intention to purchase longer-term Treasury securities (up to US$300 billion worth) over the next six months.
- It has launched its Term Asset-Backed Securities Loan Facility (TALF) program to support credit for households and small businesses, and may expand that program to other lending.

- The Fed anticipates that fiscal and monetary stimulus, plus policies aimed at stabilizing the financial sector, will contribute to a gradual resumption of growth—although it has not said when.

This announcement caused the 10-year Treasury yield to fall from just over 2.9% to under 2.6%. Mortgage rates should follow Treasury yields down and spark another refinancing wave. Economists question whether lower rates will revive home purchases as well as refinancing.

March 18. The Federal Reserve announced that it would buy approximately $1.2 trillion in government bonds and mortgage-related securities in order to lower borrowing costs for home mortgages and other types of loans.

March 11. Chinese total exports experienced their biggest fall on record in February declining 25.7% on the year in February, to US$64.9 billion. Imports also declined 24.1% on the year, And China's trade surplus shrank to a three-year low of US$4.84 billion from US$39.1 billion in January. For the first two months of the year combined, exports fell 21.1% from the same period of 2008. Trade contracted despite investment being supported by the recent rapid expansion of credit and by the release of funds under the government's four trillion yuan/US$580 billion fiscal stimulus package.

March 10. Finance Minister Najib Razak announced a large **Malaysian fiscal stimulus** package. The 60 billion ringgit/US$16.3 billion package is the government's second supplementary budget, after the initial 7 billion ringgit stimulus already implemented. The package equals 9.0% of gross domestic product (GDP).

March 10. Philippines' exports experienced a record contraction in January as global demand continued to decline. Official data showed that total exports fell 41% year-on-year to US$2.49 billion. In December, exports contracted by a revised 40.3% in annual terms. Shipments of electronics, which account for more than half of total exports, almost halved, shrinking 48.4% in annual terms to US$1.35 billion.

March 10. United Kingdom industrial production suffered the largest annual drop since January 1981 in January. Manufacturing output plunged by 2.9% month on month and 12.8% year on year in January 2009, according to the Office for National Statistics (ONS). This followed a drop of 1.9% monthly in December and marked the eleventh successive monthly decline in manufacturing output.

March 10. China's official registered **unemployment** rate hit a three-year high of 4.2% in 2008. Although during the post-Asian Financial Crisis slowdown, between 1979 and 1982, unemployment was mostly concentrated in the state sector, this time the private sector has experienced worse unemployment, with migrant labor being fired first, with no social programs for relief. The number of business failures is estimated to be 7.5% of the country's Small and Medium sized Enterprises (SMEs), or nearly 500,000 firms.

February 24. U.S. President Barack Obama used his first **address** to a joint session of Congress to outline how the economic recovery can work. He outlined the rationale behind the economic stimulus and the financial sector rescue plans, conceding costs and risks, but warning of the greater danger of inaction. President Obama promised to reduce the federal budget deficit by half by the end of his first term. On the same day, U.S. Federal Reserve Chairman Ben Bernanke testified to Congress that if the financial system is stabilized soon, the recession will end in 2009 and the economy will grow in 2010.

February 24. The **Latvian government fell** over fiscal adjustment measures that are required for Latvia to comply with the IMF-led rescue program terms. This caused Standard & Poor's (S&P) to reduce its sovereign rating for Latvia from BBB- to BB+. S&P has thus cut the Baltic State to junk bond status. Latvia's ratings among various rating institutions currently vary significantly, from BB+ to BBB+.

February 23. The **Dow Jones** Industrial Average lost 3.4% to close at 7113.78, its **lowest level in 12 years**, and just under half the high it reached 16 months ago. Banking stocks led the index down, and losses were experienced in most sectors. The U.S. market declines have influenced international declines as well. Japan's Nikkei 225 ended down 1.5%, Australia's S&P/ASX 200 was off by 0.6%, Taiwan's Taiex lost 1.1%, and China's Shanghai Composite fell 4.6%. Equities are wiping huge amounts off the market value of companies and investments including pensions worldwide.

February 23. The **Chilean** Finance Ministry announced that the Central Bank of Chile will conduct U.S. dollar auctions in March 2009, to finance a US$3 billion **stimulus plan** announced by President Michelle Bachelet in January. US$1 billion will be directed into fiscal spending transactions. These resources will be drawn from the country's sovereign wealth fund, which currently holds around US$20.11 billion.

February 20. Several **Netherlands local and provincial council**s have announced that they are planning to launch local **stimulus packages** to combat the country's economic crisis. The Dutch government is planning to invest €94 million in the local economy and infrastructure projects, including new street lighting and an upgrade of the sewage network. Rotterdam is planning to launch further measures to augment the €200 million package announced in January for the construction industry. Amsterdam plans to invest €200 million in its construction industry, while Utrecht is still exploring options.

February 18. The **German** government agreed on a **revised bank bailout** plan. The first version, from October 2008, cost 480 billion euro/U.S. $603.7 billion, has not delivered appropriate results. The new text must be ratified by parliament before taking effect. To ensure the stability of the German financial sector the new plan considers three factors. Expropriation would be a last resort only. Acceleration of state holdings of bank shares, changes to current stock corporation regulations are proposed. The stabilization fund for the financial markets would increase its debt guarantee time period.

February 17. President Obama signed a **US$787 billion economic stimulus bill**, 111th Congress bill H.R. 1, following House and Senate final votes on the conference report on February 13. As passed, the stimulus package includes some US$575 billion in government spending and US$212 billion in tax cuts.

February 17. U.S. automakers General Motors Corp. and Chrysler LLC submitted recovery plans to the U.S. government requesting U.S. $21.6 billion more in loans to enable their recovery.

February 17. Eastern Europe's deepening recession is putting pressure on those **West European bank**s with local **subsidiaries**, Moody's Investors Service reports. The countries with the deepest fiscal deficits—the Baltic states, Bulgaria, Croatia, Hungary and Romania—have the highest external vulnerability. Moody's says Kazakhstan, Russia and Ukraine are also under pressure despite low public external debt. The Austrian banking system is the most exposed; banks there and in Belgium, France, Germany, Italy and Sweden account for 84% of total West

European claims. Exposure is heavily concentrated among certain banking groups: Raiffeisen, Erste, Societe Generale, UniCredit and KBC. Modern banking has just emerged in Eastern Europe. Eastern subsidiaries are more vulnerable in times of stress, with deteriorating asset quality and vulnerable liquidity positions. EU member countries have failed to coordinate national stimulus programs, and there appears to be no willingness to finance large cross-border rescue packages.

February 16. Russian President Dmitry Medvedev **replaced** the **governors** of Pskov, Orel and Voronezh, as well as the Nenets Autonomous Region. The terminations suggest that the Kremlin is using the economic crisis as an excuse for getting rid of governors with whom the federal leadership was already unhappy. As local development levels and production profiles vary greatly, the crisis is having diverse effects on Russia's regions. Russian economic activity as a whole may suffer substantially in the crisis, but inequality across Russian regions may be reduced.

February 16. The **Japanese economy contracted** by 3.3% quarterly in December, the Cabinet Office reported on preliminary figures. At an annual rate, GDP fell by 12.7%, and is now performing at its worst since 1974.

February 16. In preparation for the **London Leaders' summit in April**, world leaders are drafting responses to the global financial crisis. The extent to which they agree on the causes of the crisis will be critical to policies proposed. Broad consensus on key features of the financial crisis now includes:

- Maturity. It emerged from a market-led process of change that spanned around 30 years, not two or three, and culminated in the long boom that began in the early 1990s.
- Regulatory failure. For many reasons, neither regulation nor regulators policed these processes.
- Opacity. A major contributory factor was the complexity and opacity of the activities and the balance sheets of major financial institutions.
- Credit boom. The boom resulted from countries' competitive deregulation of financial markets over some 30 years.

How these ingredients interacted to cause the crisis remains under debate. The G20 are likely to promote global measures that address both the underlying causes and more immediate responses.

February 14. Finance ministers and central bank governors of the Group of Seven (**G7**) industrialized nations **met** in Rome to discuss the financial crisis and economic slowdown. In order to prevent a resurgence of protectionism, the G7 communique pledged members to do all they could to combat recession without distorting free trade.

February 13. The **U.S. federal government's** monthly **budget** statement reported a deficit of US $83.8 billion in January 2009, compared with a US $17.8-billion surplus a year earlier. Both higher outlays and falling tax receipts led to the deficit. The deficit for the first four months of the 2009 fiscal year ballooned to a record US$569 billion. The Troubled Asset Relief Program (TARP) added about US$42 billion to the deficit in January, bringing TARP spending so far this fiscal year to US$284 billion.

February 13. Eurozone GDP declined by 1.5% quarterly and 1.2% annually in the fourth quarter of 2008, the sharpest contraction since the bloc came into being in January 1999.

February 12. Ukraine's Finance Minister Viktor Pynzenuk **resigned**; Fitch downgraded its long-term foreign and local currency issuer rating from "B+" to "B"; and an International Monetary Fund (IMF) mission left Ukraine last week. The IMF, which has not concluded its US $1.9 billion part of the Ukrainian aid package, called for immediate and serious crisis management. The IMF mission announced last week that a successful implementation of the financial rescue for the country is in jeopardy.

February 12. The **Irish** government reported a 7-billion-euro (US$9 billion) **bank rescue plan** for two of the country's largest banks, the Allied Irish Bank and the Bank of Ireland. Each bank will receive 3.5 billion euro in recapitalization funds. The government attached conditions including preference shares that the government will obtain, with a fixed annual dividend of 8%, partial control over the appointment of the banks' directors, and executive pay reductions with no bonuses.

February 12. China's State Council **approved a stimulus plan** yesterday for the shipbuilding industry, urging banks to expand trade finance for the export of vessels, and extending fiscal and financial support for domestic buyers of long-range ships until 2012. The government will also encourage industry restructuring, and force the replacement of outdated ships. The funds will facilitate shipping research and technology. Mergers and acquisitions will be encouraged for industry consolidation. This is the latest Chinese industry stimulus plan, following support for textiles, automotive, steel, and machinery industries over the past few weeks.

February 12. Chinalco, the Aluminum Corporation of China, announced an investment of US$19.5 billion in Australian mining group **Rio Tinto**. This investment is China's largest-ever overseas purchase. Chinalco will buy $7.2-billion worth of convertible bonds as well as Rio Tinto assets worth $12.3 billion. Rio Tinto assumed substantial debt in its purchase of Canadian aluminum maker Alcan in 2007.

February 12. The **Swiss** government presented a **second economic stimulus plan** worth 700 million Swiss francs (US$603 million). The funds are directed at infrastructure (390 million francs), regions (100 million francs), environment and energy (80 million francs), research (50 million francs), renovation of state buildings (40 million francs), and the tourism sector (12 million francs). The first rescue package worth some 900 million francs launched in November did not have its desired effectiveness.

February 12. Kuwait's Sovereign Wealth Fund lost 15% in 2008. The emirate's sovereign wealth fund lost nine billion dinars (US$30.9 billion) in 2008 as a result of the global economic downturn. One example of losses was the US$5-billion capital injection into Citibank and Merrill Lynch in 2008, which fell to US$2.2 billion before returning to its current value of US$2.8 billion. These figures come days after the government unveiled a US$5.14-billion stimulus package which will be funded by the country's foreign-exchange reserves, as well as the Kuwait Investment Authority.

February 12. Australian legislature **rejected fiscal stimulus package** as Australian unemployment climbed to two-year high. The US$28 billion package failed over environmentalists' objections.

February 5. The Bank of **England**'s Monetary Policy Committee **reduced** its key **interest rate** by 50 basis points from 1.50% to 1.00%. Interest rates are now at their lowest level since the Bank of England was founded in 1694.

February 3. British Prime Minister Gordon Brown and **Chinese** Premier Wen Jiabao said that **coordination** was necessary in order to avert the global financial crisis, at the end of Premier Wen's five-day tour of Europe. Prime Minister Brown said that the United Kingdom is planning to double annual exports within the coming 18 months, from £5 billion to £10 billion. He stressed that the United Kingdom will benefit from China's recent stimulus packages, particularly the aerospace, hi-tech manufacturing, education, pharmaceuticals, and low-carbon technologies industries. **China and the European Union** (EU) have agreed to hold summit talks soon to increase **economic cooperation.**

February 3. Chinese President Hu Jintao will travel to Mali, Senegal, Tanzania, Mauritius, and Saudi Arabia from February 10 to February 17, 2009. Despite the global economic downturn the Chinese government is **increasing investment in Africa** and the Middle East. Chinese-African trade has been increasing by an average of 30% per year, almost reaching US$107 billion in 2008.

February 3. China will give **Senegal** several **cooperation** projects, including a museum, a theater, a children's hospital, and repair of sports stadiums worth some 80 million yuan or U.S. $11.5 million. This brings the total of pledged Chinese investments to Senegal in 2009 to US$117.3 million, including projects for power services, transport equipment and information technology infrastructure.

February 2. The government of **Kazakhstan** announced **nationalization** of two **banks**, BTA Bank, the nation's largest bank, and Alliance Bank, the nations third-largest bank. The government reported it is considering a possible sale of half of its stake in BTA Bank to Russia's Sberbank. The Kazakh government now owns 78.1% of BTA Bank.

February 2. A survey conducted jointly by the **Afghan** government and the United Nations forecast that **opium production** in Afghanistan will **decline** for the second consecutive year in 2009. The report estimates that the total area of poppy fields under cultivation declined to 378,950 acres, a 19% decline from the previous year. The survey also indicated that poppy cultivation in the main producing regions of the south and the southwest fell for the first time in five years. The decline was largely attributable to recent sharp falls in global prices for opiates following saturation of the market and the negative impact of drought. Farmers had also shifted production to staple grains after global prices surged in the first half of 2008. The survey indicates that prices for dry opium tumbled 25% in 2008 while wheat and rice prices rose 49% and 26% respectively. Afghanistan accounts for 90% of the world's supply of opium with proceeds from trafficking providing a main source of income for insurgents in the border regions with Pakistan.

February 2. Ireland average **prices** for **housing** declined by 9.1% in 2008 compared with a fall of 7.3% in 2007. Also, Moody's Ratings Services revised its sovereign outlook for Ireland to negative from stable on the basis of mounting fiscal pressures, economic deterioration, and the government's potentially damaging exposure to the banking sector. This follows a similar revision from Standard & Poor's in January.

January 30. The **U.S.** Bureau of Economic Analysis (BEA) announced that preliminary real gross domestic product (**GDP**)—the output of goods and services produced by labor and property

located in the United States – for 2008 rose 1.3%, down from 2.0% in 2007. Real GDP decreased at an annual rate of 3.8 percent in the fourth quarter of 2008, the largest decline since the first quarter of 1982.

January 30. South Korea reported that **industrial output fell** 9.6% in December. Total output tumbled by 18.6% in annual terms compared with the 14.0% decline in November, which was the second-largest decrease in production since the series began in 1970.

January 30. Finland reported that **industrial output** declined by 15.6% year-on-year in December, after falling by a revised rate of more than 9.0% in November. Production decreased in all main industrial sectors. Also, the Finnish government announced an increase in government expenditure of 1.2 billion euro to support the flagging economy. Additional funds are to be allocated to construction, renovation and transport infrastructure projects.

January 29-February 1. The **World Economic Forum** (WEF) met in Davos, Switzerland. Chinese Premier Wen Jiabao and Russian Premier Vladimir Putin blamed the U.S.-led financial system for the global financial crisis. European Central Bank (ECB) President Jean-Claude Trichet noted the ECB is drafting guidelines for European governments' establishment of "bad banks" to consolidate toxic assets.

January 29. Thailand's parliament approved a $3.35 billion stimulus package aimed at boosting its economy battered by months of street protests. Final approval was expected in February.

January 28. The International Monetary Fund (IMF) revised its forecast for world economic growth down to 0.5% for 2009. This would be the lowest level of growth since World War II and down by 1.7 percentage points since the IMF forecast in November 2008. The IMF indicated that despite wide-ranging policy actions by governments and central banks, financial markets are still under stress and the global economy is taking a turn for the worse. The IMF urged governments to take decisive action to restore financial sector health (by providing liquidity and capital and helping to dispose of problem assets) and to provide macroeconomic stimulus (both monetary and fiscal) to support sagging demand.

January 28. Canada announced a $32 billion stimulus package that included infrastructure spending and tax cuts.

January 28. The U.S. House of Representatives passed the American Recovery and Reinvestment Act of 2009 (H.R. 1, Obey). The cost of the bill was estimated at $819 billion.

January 26. Australia announced a $2.6 billion stimulus package.

January 22. Malaysia announced it is preparing a second economic stimulus package to fend off the threat of recession. Singapore unveiled a $13.7 billion stimulus package.

January 21. The Philippines announced a $633 million increase to bring its stimulus program to $6.9 billion.

January 15. The U.S. **Senate** voted to **release** the second half of the Treasury's Troubled Assets Recovery Package (**TARP**) to stabilize the U.S. financial system, granting President-elect Barack Obama authority to spend $350 billion to revive credit markets and help homeowners avoid foreclosure. The Treasury Department announced it would fund a rescue of Bank of America which guarantees $118 billion in troubled assets.

January 6. Chile announced a $4 billion stimulus package.

January 1. Belarus devalued its national **currency**, the Belarusian ruble, by over 20%. The National Bank announced that it will tie its currency immediately to a basket of three currencies—the U.S. dollar, the euro and the Russian ruble.

2008

December 31. The International Monetary Fund (**IMF**) gave tentative approval to **Belarus** for a US$2.5 billion 15 month Stand By Arrangement. Final approval will be decided by the IMF executive board in January.

December 30. South Korea reported that the **industrial output** index declined by 14.1% annually and by 10.7% monthly. The monthly contraction was the largest in 21 years. The slump in production is closely tied with the sharp reverse in exports, which fell by 18.3%.

December 30. Monetary Union Pact approved by **Gulf Cooperation Council (GCC)**—Bahrain, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Representatives from five of the six members of the GCC approved a draft accord for a monetary union yesterday at a summit in Muscat. GCC finance ministers did not agree on the ultimate location of the future central bank. The draft accord prepares for the creation of a monetary council, and the framework for a future monetary union.

December 26. The **Japanese** Ministry of Economy, Trade and Industry released preliminary figures showing that **industrial production** shrank at a record rate and unemployment rose. Total industrial output contracted 8.1% from October to November 2008. This marked the largest decline in industrial production in 55 years.

December 23. Poland's Monetary Policy Council reduced its main **policy rate** by 75 basis points. The Polish main policy rate has been reduced by 1% in two months, and now stands at 5.00%.

December 23. Japanese Cabinet approves record **fiscal plan** for FY2009. The ¥88.5 trillion (US$980.6 billion) fiscal package for FY2009, which begins April 1, 2009, marks a 6.6% increase in spending from initial targets.

December 23. After the IMF submitted a positive review of Iraq's economic reconstruction, the **Paris Club** of sovereign lenders completed the third and final step of **debt forgiveness for Iraq**, reducing Iraq's public external debt with its members by 20% or US$7.8 billion. Most of Iraq's remaining debt consists of official loans from Gulf Arab states and former communist countries, which may be forgiven or discounted if Iraq's economy continues to improve. Under former President Saddam Hussein, Iraq's debt totaled $125 billion.

December 23. New Zealand Real GDP declined 0.4% in quarterly seasonally adjusted terms. This marks the third consecutive quarterly decline in Real GDP. The economy fell into its first recession in more than a decade in the March, 2008. The rate of contraction deepened from the first two quarters of the year during which growth shrank by 0.3% and 0.2% respectively. In annual terms, the economy grew 1.7% in the year through September 2008.

December 23. The central **People's Bank of China** lowered **interest rates** for the fifth time in four months. Benchmark one-year lending and deposit rates were both lowered by 27 basis points to 5.31% and 2.25% respectively. These rates were lowered by their biggest margin in 11 years a month ago, lowered by 108 basis points.

December 22. U.K. Real GDP contracted by 0.6% quarterly in the third quarter of 2008. The Office for National Statistics (ONS) revised the decline in real GDP from its previous estimate of 0.5% quarterly. This marks the first time that the British economy has contracted since the second quarter of 1992. It had stagnated in the second quarter of 2008 and is therefore on the brink of recession, defined as two successive quarters of contracting quarterly GDP. Prior to that, GDP growth had moderated to 0.4% in the first quarter of 2008 from 0.6% in the fourth quarter of 2007 and 0.8% in the third quarter. Annual GDP growth fell to a 16-year low of 0.3% in the third quarter of 2008 from 1.7% in the second quarter and a peak of 3.3% in the second quarter of 2007. Industrial production contracted by 1.4% quarterly, and 2.5% annually in the third quarter, with manufacturing output down by 1.6% quarterly and 2.3% annually. This marks the third successive quarterly decrease in industrial production, meaning that the sector is already in recession.

December 22. Russia reports that **industrial** output growth slowed to 0.6% annual growth in October, then contracted by 8.7% annually in November, the worst monthly report since the economic collapse which followed the ruble crisis of 1998. Critical to Russia's economic slowdown is the unwillingness of Russian banks, which are heavily exposed to foreign currency denominated external debt, to lend.

December 21. Eurostat reports that **Eurozone industrial orders** fell 5.4% monthly in September and 4.7% monthly and 15.1% annually in October.

December 21. Canada reports that its federal government and the province of Ontario will contribute some C$4 billion (US$3.3 billion) to the short-term **automotive rescue** announced by the U.S. administration. The United States will provide US$13.4 billion in emergency loans to General Motors and Chrysler. General Motors is to receive C$3 billion of the Canadian funds, while Chrysler is to receive C$1 billion. Ford declines injections. Limits on executive compensation are a requirement for funds.

December 21. Zimbabwe reports its domestic **debt** level increased from Z$1 trillion on August 8 to Z$179.6 trillion (US$194 million at the current official inter-bank exchange rate) on September 8. This represents a monthly increase of 17,800%. Interest payments now account for roughly 90% of total debt.

December 19. President Bush announced an **automotive rescue** plan for General Motors Corp. and Chrysler LLC that will make $13.4 billion in federal loans available almost immediately. The money will come from the $700 billion fund set aside to rescue banks and investment firms in October. The government attached several conditions to the three-year loans and set a deadline of March 31 for the automakers to prove they can restructure enough to ensure their survival or recall the loans. As part of the rescue, GM is required to reduce debt by two-thirds via debt-for-equity swaps, pay half of the contributions to a retiree health care trust using stock, make union workers' wages competitive with foreign automakers and eliminate the union jobs bank, which pays laid-off workers.

December 19. An international rescue package of 7.5 billion euro (US$10.6 billion) for **Latvia** was announced. The IMF reports a 27-month stand by arrangement between Latvia and the IMF, worth 1.7 billion euro (US$2.4 billion). The remainder of the rescue package includes 3.1 billion euro from the European Union (EU), 1.8 billion euro from Nordic countries, 400 million euro from the World Bank, 200 million euro from the Czech Republic, and 100 million euro each from the European Bank of Reconstruction and Development, Estonia and Poland. Latvia nationalized its second largest bank, Parex Bank. Latvia will implement measures to tighten fiscal policy and stabilize its economy.

December 19. The Bank of **Japan** lowered the benchmark **rate** by 20 basis points to 0.3%. This marks the second consecutive monthly cut.

December 18. Turkey reduces **rates** for the second consecutive month. The Central Bank of the Republic of Turkey (CBRT) announced a 125-basis-point cut to their overnight borrowing rate from 16.25% to 15.00%, and their overnight lending rate by 125 basis points, from 18.75% to 17.50%. Turkish interest rates are the highest in Europe, even after the rate cuts.

December 18. Mexican industrial output decreased an annual 2.7% in October, the sixth consecutive monthly decline. More than 80% of Mexico's exports go to the United States.

December 18. Norwegian Central Bank cut its main policy interest **rate** by 175 basis points to 3.0%, the third decrease since October.

December 17. U.S. housing starts plummeted 18.9% in November, to a seasonally adjusted annual rate of 625,000 units. This was a record monthly low.

December 16. The **U.S.** Federal Open Market Committee (FOMC) voted unanimously to lower its target for the **federal funds rate** more than 75 basis points, to a range of 0.0% to 0.25%. Long term bond yields dropped from 2.50% to 2.35%.

December 15. The Bank of **Japan's** tankan survey of **business confidence** fell from minus 3 in the third quarter to minus 24 points in the fourth quarter of the year. The 21 point contraction was the steepest in the index since the oil shocks of the 1970s, and marked the lowest level in the index since 2002.

December 12. Ecuador's President Rafael Correa announced that Ecuador will stop honoring its **external debt**; the country should expect lawsuits from bondholders in the short term. This is not the same as declaring the entire Ecuadorean economy in default.

December 11. 27 European Union (**EU**) governments' leaders approved a 200 billion euro (US$269 billion) **economic stimulus** package. The cost is approximately 1.5% of the EU's total GDP. Member states will pay major shares; supranational EU institutions, such as the European Investment Bank (EIB), will contribute the remaining 30 billion euro.

December 11. Taiwan's central bank cut its leading discount **rate** by three quarters of a percentage point to 2.0%, marking the biggest reduction since 1982. It was also the fifth rate cut in two-and-a-half months.

December 11. The central Bank of **Korea** reduced the seven-day repurchase **rate** by one percentage point to a record low of 3.00%. Interest rates have been reduced by 225 basis points in two months, 100 basis points in October and 125 basis points in November.

December 5. November **U.S. nonfarm employment** loss of 533,000 jobs was the largest in 34 years, compared with the 602,000 decline in December 1974. The U.S. Bureau of Labor Statistics also reported the unemployment rate rose from 6.5 to 6.7 percent. November's drop in payroll employment followed declines of 403,000 in September and 320,000 in October, as revised.

November 25. U.S. real GDP fell 0.5% in the third quarter of 2008. The announcement by the U.S. Bureau of Economic Analysis also reported U.S. second quarter GDP increased 2.8%. BEA attributed the third quarter decline to a contraction in consumer spending and deceleration in exports.

November 24. The U.K. announced a fiscal stimulus package valued at £20 billion (US$30.2 billion) aimed at limiting the length and depth of the apparent U.K. recession. The package included a temporary reduction of value-added tax from 17.5% to 15.0%.

November 24. The IMF Executive Board approved a 23-month Stand-By Arrangement for Pakistan in the amount of $7.6 billion to support the country's economic stabilization program.

November 24. The Central Bank of **Iceland's currency swap arrangement** with Sweden, Norway, and Denmark is extended through December 2009. On the same date, Standard & Poor's Ratings Services, **S&P, reduced** its long-term **Iceland sovereign credit rating** from BBB to BBB-, while maintaining its short-term Iceland sovereign currency rating at A-3.

November 24. The U.S. Treasury, Federal Reserve, and Federal Deposit Insurance Corp. said that they will protect **Citigroup** against certain potential losses and invest an additional $20 billion (on top of the previous $25 billion) in the company. The government is to receive $7 billion in preferred shares in the company.

November 19. The IMF Executive Board agreed to a $2.1 billion loan for Iceland. Following the decision of IMF's Executive Board, Denmark, Finland, Norway, and Sweden agreed to provide an additional $2.5 billion in loans to Iceland.

November 15. At a G-20 (including the G-8, 10 major emerging economies, Australia and the European Union) summit in Washington, the G-20 leaders agreed to continue to take steps to stabilize the global financial system and improve the international regulatory framework.

November 15. Japan announced that it would make $100 billion from its foreign exchange reserves available to the IMF for loans to emerging market economies. This was in addition to $2 billion that Japan is to invest in the World Bank to help recapitalize banks in smaller, emerging market economies. Also, the IMF and **Pakistan** agreed in principle on a $7.6 billion loan package aimed at preventing the nation from defaulting on foreign debt and restoring investor confidence.

November 14. The President's Working Group on Financial Markets (Treasury, Securities and Exchange Commission, Federal Reserve, and the Commodity Futures Trading Commission) announced a series of initiatives to strengthen oversight and the infrastructure of the over-the-counter derivatives market. This included the development of credit default swap central counterparties—clearinghouses between parties that own debt instruments and others willing to insure against defaults.

November 13. The African Development bank conference on the financial crisis ended with a pessimistic outlook for **Sub-Saharan Africa**, due to declines in foreign capital, export markets and commodity-based exports.

November 13. Eurostat declared that **Eurozone** GDP declined by 0.2% in the third quarter of 2008, as well as the second quarter. Since **recession** is defined as two successive quarters of contracting GDP, this means that the Eurozone is technically in recession.

November 12. United States Treasury Secretary Paulson announced a **change** in priorities for the US$700 billion **Troubled Asset Relief Program** (TARP) approved by Congress in early October. The first priority remains to provide direct equity infusions to the financial sector. Roughly US$250 billion has been allocated to this sector. This scope was broadened to include non-banks, particularly insurance companies such as AIG, which provide insurance for credit defaults. Paulson noted that TARP would be used to purchase bank stock, not toxic assets. Paulson's new plan also would provide support for the **asset-backed commercial paper** market, particularly **securitized** auto loans, credit card debt, and student loans. Between August and November 2007 asset-backed commercial paper outstanding contracted by nearly US$400 billion. Paulson rejected suggestions that TARP funds be made available to the U.S. auto industry.

November 12. The Central Bank of **Russia** raised key **interest** rates by 1%. **Swiss** Economics Minister announced the Swiss government would inject 341 million Swiss Francs/US$286.6 million for economic **stimulus**. The State Bank of **Pakistan** raised **interest** rates by 2%, to reduce inflation. It also **injected** 320 billion rupees/US$4 billion into the Pakistan banking system.

November 11. IMF deferred their decision to approve US$2.1 billion loan for **Iceland**. This was the third time the IMF board scheduled then failed to discuss the Iceland proposal. The tentative Iceland package required Iceland to implement economic stabilization. That economic stabilization was the required trigger for implementation of EU loans to Iceland from Norway, Poland and Sweden. Iceland is reportedly involved in disputes over deposit guarantees with British and Dutch depositors in Icelandic banks.

November 10. The **United States** government announced further aid to **American International Group**, AIG. AIG's September $85 billion loan was reduced to $60 billion; the government bought $40 billion of preferred AIG shares, and $52.5 billion of AIG mortgage securities. The U.S. support of AIG increased from September's $85 billion to $150 billion.

November 9. G-20 meeting of finance ministers and central bank governors in Sao Paulo, **Brazil**, concluded with a communiqué calling for increased role of emerging economies in reform of Bretton Woods financial institutions, including the World Bank and the International Monetary Fund.

November 9. China announced a 4 trillion Yuan/U.S. $587 billion **domestic stimulus package**. primarily aimed at infrastructure, housing, agriculture, health care, and social welfare spending. This program represents 16% of China's 2007 GDP, and roughly equals total Chinese central and local government outlays in 2006.

November 8. Latvian government took over **Parex Bank**, the second-largest bank in Latvia.

November 7. Iceland's President Grimsson reportedly offered the use of the former U.S. Air Force **base at Keflavik** to Russia. The United States departed Keflavik in 2006.

November 7. United States October **employment** report revealed a decline of 240,000 jobs in October, and September job losses revised from 159,000 to 284,000. The U.S. unemployment rate rose from 6.1% to 6.5%, a 14-year high.

November 7. Moody's sovereign rating for **Hungary** is reduced from A2 to A3. Despite IMF assistance, financial instability may require "severe macroeconomic and financial adjustment." **Moody's** reduced its ratings of **Latvia** from A3 to A2, before the Latvian statistical office announced Latvian **GDP fell** at a 4.2% annual rate in the third quarter of 2008. Moody's also announced an outlook reduction for **Estonia and Lithuania**.

November 6. IMF approved SDR 10.5 billion/U.S. $15.7 billion Stand-By Arrangement for **Hungary**. U.S. $6.3 billion is to be immediately available.

November 6. International Monetary Fund announced its updated *World Economic Outlook*. Main findings include that "global activity is slowing quickly", and "prospects for global growth have deteriorated over the past month." The IMF now projects **global GDP growth** for 2009 at 2.2% , 3/4 of a percentage point lower than projections announced in October, 2008. It projects **U.S. GDP growth** at 1.4% in 2008 and -0.7% in 2009.

November 6. The **European Central Bank**, ECB, reduced its key **interest rate** from 3.75% to 3.25%. In two months the ECB has reduced this rate from 4.25% to 3.25%. The **Danish Central Ban**k lowered its key lending rate from 5.5% to 5%. The **Czech National Bank** reduced its interest rate from 3.5% to 2.75%. In **South Korea**, the Bank of Korea reduced its key interest rate from 4.25% to 4%. During October the Bank of Korea reduced its rate from 5.25% to 4.25%.

November 4. United States Institute of Supply Management's **manufacturing index** fell 4.6 points in October to 38.9, after previously falling in September. The export orders component of the manufacturing index fell 11 points in October to 41, following a drop of 5 points in September. 41 is the lowest level in this **export index** in 20 years. Exports have been the strongest sector in U.S. manufacturing during the past year.

November 4. Australia. Reserve Bank of Australia lowered its overnight **cash rate** by 75 basis points to 5.25%, the lowest Australian rate since March 2005.

November 4. Indian Prime Minister Manmohan Singh established a **Cabinet-level committee** to evaluate the effect of the financial crisis on India's economy and industries. This follows the **November 2 Indian and Pakistani Central banks**' actions to boost liquidity. India cut its short-term lending rate by 50 basis points to 7.5% and reduced its cash reserve ratio by 100 basis points to 5.5%.

November 4. Chilean President Michelle Bachelet announced a U.S. $1.15 billion **stimulus** package to boost the housing market and channel credit into small and medium businesses.

November 3. IMF announced agreement with **Kyrgyzstan** on arrangement under the Exogenous Shocks Facility to provide at least U.S. $60 million. The agreement requires the approval of the IMF Executive Board to become final.

November 3. Russian Prime Minister Vladimir Putin reported measures to support the real economy. The measures will include temporary preferences for domestic producers for state procurement contracts, subsidizing interest rates for loans intended to modernize production; and tariff protection for a number of industries such as automobiles and agriculture. The new policy aims to support exporters.

October 31. Three of the six **Gulf Cooperation Council**, GCC, countries, **Bahrain, Kuwait and Saudi Arabian central banks** reduced **interest rates** to follow the actions of the U.S. Federal Reserve and other central banks.

October 31. Kazakhstan government will make **capital injection**s into its **top four banks**, Halyk Bank, Kazkommertsbank, Alliance Bank and BTA Bank.

October 31. The U.S. Commerce Department reported that **consumer spending** fell 0.3% in September after remaining flat in the previous month. On a year-to-year basis, spending was down 0.4%, the first such drop since the recession of 1991. Consumer spending has not grown since June.

October 30. The U.S. Bureau of Economic Analysis reported that **U.S. real gross domestic product** decreased 0.3 per cent in the third quarter of 2008 after increasing 2.8 per cent in the second quarter of 2008.

October 29. The **U.S. Federal Reserve** lowered its target for the federal funds rate 50 basis points to 1 per cent. It also approved a 50 basis point decrease in the discount rate to 1.25 per cent. The Federal Reserve also announced establishment of temporary reciprocal currency arrangements, or swap lines, with the Banco Central do Brasil, the Banco de Mexico, the Bank of Korea, the Monetary Authority of Singapore, and the Reserve Bank of New Zealand. Swap lines are designed to help improve liquidity conditions in global financial markets.

October 29. IMF approved the creation of a **Short-Term Liquidity Facility**, established to support countries with strong policies which face temporary liquidity problems.

October 28. The IMF, the European Union, and the World Bank announced a joint financing package for **Hungary** totaling $25.1 billion to bolster its economy. The IMF is to lend Hungary $15.7 billion, the EU $8.1 billion, and the World Bank $1.3 billion.

October 28. The U.S. Conference Board said that its **consumer confidence** index has dropped to an all-time low, from 61.4 in September to 38 in October.

October 27. Iceland's **Kaupthing Bank** became the first European borrower to default on yen-denominated bonds issued in Japan (samurai bonds).

October 26. The IMF announced it is set to lend **Ukraine** $16.5 Billion.

October 24. IMF announced an outline agreement with **Iceland** to lend the country $2.1 billion to support an economic recovery program to help it restore confidence in its banking system and stabilize its currency.

October 23. President Bush called for the **G-20** leaders to meet on November 15 in Washington, DC to deal with the global financial crisis.

October 22. Pakistan sought help from the IMF to meet balance of payments difficulties and to avoid a possible economic meltdown amid high fuel prices, dwindling foreign investment and soaring militant violence.

G-20. The Group of 20 Finance Ministers and Central Bank Governors from industrial and emerging-market countries is to meet in Sao Paulo, Brazil on November 8-9, 2008, to discuss key issues related to global economic stability.

October 20. The **Netherlands** agreed to inject €10 billion ($13.4 billion) into **ING Groep** NV, a global banking and insurance company. The investment is to take the form of nonvoting preferred shares with no maturity date (ING can repay the money on its own schedule and will have the right to buy the shares back at 150% of the issue price or convert them into ordinary shares in three years). The government is to take two seats on ING's supervisory board; ING's executive-board members are to forgo 2008 bonuses; and ING said it would not pay a dividend for the rest of 2008.

October 20. Sweden proposed a financial stability plan, which includes a 1.5 trillion Swedish kronor ($206 billion) bank guarantee, to combat the impact of the economic crisis.

October 20. The U.N.**'s International Labor Organization** projects that the global financial crisis could add at least 20 million people to the **world's unemployed**, bringing the total to 210 million by the end of 2009.

October 19. South Korea announced that it would guarantee up to $100 billion in foreign debt held by its banks and would pump $30 billion more into its banking sector.

October 18. President Bush, President Nicolas Sarkozy of France, and the president of the European Commission issued a joint statement saying they agreed to "reach out to other world leaders" to propose an **international summit meeting** to be held soon after the U.S. presidential election, with the possibility of more gatherings after that. The Europeans had been pressing for a meeting of the Group of 8 industrialized nations, but President Bush went one step further, calling for a broader global conference that would include "developed and developing nations"—among them China and India.

October 17. The **Swiss** government said it would take a 9% stake ($5.36 billion) in **UBS**, one of the country's leading banks, and set up a $60 billion fund to absorb the bank's troubled assets. UBS had already written off $40 billion of its $80 billion in "toxic American securities." The Swiss central bank was to take over $31 billion of the bank's American assets (much of it in the form of debt linked to subprime and Alt-A mortgages, and securities linked to commercial real estate and student loans).

October 15. The **G8** leaders (Canada, France, Germany, Italy, Japan, Russia, the United Kingdom and the United States, and the European Commission) stated that they were united in their commitment to resolve the current crisis, strengthen financial institutions, restore confidence in the financial system, and provide a sound economic footing for citizens and businesses. They stated that changes to the regulatory and institutional regimes for the world's financial sectors are needed and that they look forward to a leaders' meeting with key countries at an appropriate time in the near future to adopt an agenda for reforms to meet the challenges of the 21st century.

October 14. In coordination with European monetary authorities, the **U.S. Treasury, Federal Reserve, and Federal Deposit Insurance Corporation** announced a **plan to invest up to $250 billion** in preferred securities of **nine major U.S. banks** (including **Citigroup, Bank of America, Wells Fargo, Goldman Sachs and JPMorgan Chase**). The FDIC also became able to

temporarily guarantee the senior debt and deposits in non-interest bearing deposit transaction accounts (used mainly by businesses for daily operations).[228]

October 13. U.K. Government provided $60 billion and took a 60% stake in **Royal Bank of Scotland** and 40% in **Lloyds TSB** and **HBOS**.

October 12-13. Several European countries (**Germany, France, Italy, Austria, Netherlands, Portugal, Spain, and Norway**) announced **rescue plans** for their countries worth as much as $2.7 trillion. The plans were largely consistent with a U.K. model that includes concerted action, recapitalization, state ownership, government debt guarantees (the largest component of the plans), and improved regulations.

October 8. In a coordinated effort, the **U.S. Federal Reserve**, the **European Central Bank**, the **Bank of England** and the **central banks of Canada and Sweden** all reduced **primary lending rates** by a half percentage point. **Switzerland** also cut its benchmark rate, while the **Bank of Japan** endorsed the moves without changing its rates. The **Chinese central bank** also reduced its key interest rate and lowered bank reserve requirements. The Federal Reserve's benchmark short-term rate stood at 1.5% and the European Central Bank's at 3.75%.

October 5. The **German** government moved to guarantee all private savings accounts and arranged a bailout for **Hypo Real Estate**, a German lender. A week earlier, **Fortis**, a large banking and insurance company based in Belgium but active across much of Europe, had received €11.2 billion ($8.2 billion) from the governments of the Netherlands, Belgium and Luxembourg. On October 3, the Dutch government seized its Dutch operations and on October 5, the Belgian government helped to arrange for **BNP-Paribas**, the French bank, to take over what was left of the company.

October 3. U.S. House of Representatives passes 110th Congress bill H.R. 1424, Financial Institutions Rescue bill, clearing it for Presidential signing or veto. **President signs** bill into law, P.L. 110-343, the **Emergency Economic Stabilization Act of 2008**, sometimes referred to as the Troubled Assets Relief Program, TARP. The new bill's title includes its purpose:

"A bill to provide authority for the Federal Government to purchase and insure certain types of troubled assets for the purposes of providing stability to and preventing disruption in the economy and financial system and protecting taxpayers ... "

October 3. Britain's Financial Services Authority said it had raised the amount guaranteed in savings accounts to £50,000 ($88,390) from £35,000. **Greece** also stated that it would guarantee savings accounts regardless of the amount.

October 3. Wells Fargo Bank announced a takeover of **Wachovia Corp**, the fourth-largest U.S. bank. (Previously, Citibank had agreed to take over Wachovia.)

October 1. U.S. Senate passed H.R. 1424, amended, Financial Institutions Rescue bill.

September/October. On September 30, **Iceland**'s government took a 75% share of **Glitnir**, Iceland's third-largest bank, by injecting €600 million ($850 million) into the bank. The following

[228] U.S. Treasury. "Joint Statement by Treasury, Federal Reserve and FDIC." Press Release HP-1206, October 14, 2008.

week, it took control of **Landsbanki** and soon after placed Iceland's largest bank, **Kaupthing**, into receivership as well.

September 26. Washington Mutual became the largest thrift failure with $307 billion in assets. **JPMorgan Chase** agreed to pay $1.9 billion for the banking operations but did not take ownership of the holding company.

September 22. Ireland increased the statutory limit for the deposit guarantee scheme for banks and building societies from €20,000 ($26,000) to €100,000 ($130,000) per depositor per institution.

September 21. The **Federal Reserve** approved the transformation of **Goldman Sachs** and **Morgan Stanley** into bank holding companies from investment banks in order to increase oversight and allow them to access the Federal Reserve's discount (loan) window.

September 18. Treasury Secretary Paulson announced a **$700 billion economic stabilization proposal** that would allow the government to buy toxic assets from the nation's biggest banks, a move aimed at shoring up balance sheets and restoring confidence within the financial system. An amended bill to accomplish this was passed by Congress on October 3.

September 16. The **Federal Reserve** came to the assistance of **American International Group, AIG**, an insurance giant on the verge of failure because of its exposure to exotic securities known as credit default swaps, in an $85 billion deal (later increased to $123 billion).

September 15. Lehman Brothers bankruptcy at $639 billion is the largest in the history of the United States.

September 14. Bank of America said it will buy **Merrill Lynch** for $50 billion.

September 7. U.S. Treasury announced that it was taking over **Fannie Mae** and **Freddie Mac,** two government-sponsored enterprises that bought securitized mortgage debt.

August 12. According to Bloomberg, **losses** at the **top 100 banks** in the world from the U.S. subprime crisis and the ensuing credit crunch exceeded $500 billion as write downs spread to more asset types.

May 4. Finance ministers of **13 Asian nations** agreed to set up a foreign exchange pool of at least $80 billion to be used in the event of another regional financial crisis. **China, Japan** and **South Korea** are to provide 80% of the funds with the rest coming from the 10 members of ASEAN.

March. The **Federal Reserve** staved off a **Bear Stearns** bankruptcy by assuming $30 billion in liabilities and engineering a sale of Bear Sterns to **JPMorgan Chase** for a price that was less than the worth of Bear's Manhattan office building.

February 17. The **British** government decided to "temporarily" nationalize the struggling housing lender, **Northern Rock**. A previous government loan of $47 billion had proven ineffective in helping the company to recover.

January. Swiss banking giant **UBS** reported more than $18 billion in writedowns due to exposure to U.S. real estate market. **Bank of America** acquired **Countrywide Financial**, the largest mortgage lender in the United States.

2007

July/August. German banks with bad investments in U.S. real estate are caught up in the evolving crisis, These include **IKB Deutsche Industriebank, Sachsen LB** (Saxony State Bank) and **BayernLB** (Bavaria State Bank).

July 18. Two battered **hedge funds** worth an estimated $1.5 billion at the end of 2006 were almost entirely worthless. They had been managed by **Bear Stearns** and were invested heavily in subprime mortgages.

July 12. The **Federal Deposit Insurance Corp**. took control of the $32 billion **IndyMac Bank (Pasadena, CA)** in what regulators called the second-largest bank failure in U.S. history.

March/April. New Century Financial corporation stopped making new loans as the practice of giving high risk mortgage loans to people with bad credit histories becomes a problem. The **International Monetary Fund** warned of risks to global financial markets from weakened US home mortgage market.

Appendix B. Stimulus Packages Announced by Governments

Date Announced	Country	$Billion	Status, Package Contents
17-Feb-09	United States	787.00	Infrastructure technology, tax cuts, education, transfers to states, energy, nutrition, health, unemployment benefits. Budget in deficit.
4-Feb-09	Canada	32.00	Two-year program. Infrastructure, tax relief, aid for sectors in peril. Government to run an estimated $1.1 billion budget deficit in 2008 and $52 billion deficit in 2009.
7-Jan-09	Mexico	54.00	Infrastructure, a freeze on gasoline prices, reducing electricity rates, help for poor families to replace old appliances, construction of low-income housing and an oil refinery, rural development, increase government purchases from small- and medium-sized companies. Paid for by taxes, oil revenues, and borrowing.
12-Dec-08	European Union	39.00	Total package of $256 billion called for states to increase budgets by $217 billion and for the EU to provide $39 billion to fund cross-border projects including clean energy and upgraded telecommunications architecture.
13-Jan-09	Germany	65.00	Infrastructure, tax cuts, child bonus, increase in some social benefits, $3,250 incentive for trading in cars more than nine years old for a new or slightly used car.
24-Nov-08	United Kingdom	29.60	Proposed plan includes a 2.5% cut in the value added tax for 13 months, a postponement of corporate tax increases, government guarantees for loans to small and midsize businesses, spending on public works, including public housing and energy efficiency. Plan includes an increase in income taxes on those making more than $225,000 and increase National Insurance contribution for all but the lowest income workers.
5-Nov-08	France	33.00	Public sector investments (road and rail construction, refurbishment and improving ports and river infrastructure, building and renovating universities, research centers, prisons, courts, and monuments) and loans for carmakers. Does not include the previously planned $15 billion in credits and tax breaks on investments by companies in 2009.
16-Nov-08	Italy	52.00	Awaiting final parliamentary approval. Three year program. Measures to spur consumer credit, provide loans to companies, and rebuild infrastructure. February 6, announced a $2.56 billion stimulus package that was part of the three-year program that includes payments of up to $1,950 for trading in an old car for a new, less polluting one and 20% tax deductions for purchases of appliances and furniture.
22-Nov-08	Netherlands	7.50	Tax deduction to companies that make large investments, funds to companies that hire temporary workers, and creation of a program to find jobs for the unemployed.
11-Dec-08	Belgium	2.60	Increase in unemployment benefits, lowering of the value added tax on construction, abolishing taxes on energy, energy checks for families, faster payments of invoices by the government, faster government investment in railroads and buildings, and lowering of employer's fiscal contributions.
27-Nov-08	Spain	14.30	Public works, help for automobile industry, environmental projects, research and development, restoring residential and military housing, and funds to support the sick.
14-Jan-09	Portugal	2.89	Funds to be provided to medium and small-sized businesses, money for infrastructure, particularly schools, and investment in technological improvement.

Date Announced	Country	$Billion	Status, Package Contents
20-Nov-08	Israel	5.40	Public works to include desalination plants, doubling railway routes, adding R&D funding, increasing export credits, cutting assorted taxes, and aid packages for employers to hire new workers.
21-Dec-08	Switzerland	0.59	Public works spending on flood defense, natural disaster and energy-efficiency projects.
5-Dec-08	Sweden	2.70	Public infrastructure and investment in human capital, including job training, vocational workshops, and workplace restructuring.; extension of social benefits to part-time workers.
26-Jan-09	Norway	2.88	Investment in construction, infrastructure, and renovation of state-owned buildings, tax breaks for companies.
20-Nov-08	Russia	20.00	Cut in the corporate profit tax rate, a new depreciation mechanism for businesses, to be funded by Russia's foreign exchange reserves and rainy day fund.
3-Dec-08	Egypt	8.51	Infrastructure, Industrial Development Authority, Export Development Fund, investment funds for small- and medium-sized enterprises, funds for industrial modernization, training, technology transfer centers, export promotion, land development
10-Nov-08	China	586.00	Low-income housing, electricity, water, rural infrastructure, projects aimed at environmental protection and technological innovation, tax deduction for capital spending by companies, and spending for health care and social welfare.
13-Dec-08	Japan	250.00	Increase in government spending, funds to stabilize the financial system (prop up troubled banks and ease a credit crunch by purchasing commercial paper), tax cuts for homeowners and companies that build or purchase new factories and equipment, and grants to local government.
6-Apr-09	Japan	100.00	Increasing safety net for non-regular workers, support for small businesses, revitalizing regional economies, promoting solar power and nursing and medical services.
3-Nov-08	South Korea	14.64	$11 billion for infrastructure (including roads, universities, schools, and hospitals; funds for small- and medium-business, fishermen, and families with low income) and tax cuts. Includes an October 2008 stimulus package of $3.64 billion to provide support for the construction industry.
9-Feb-09	South Korea	37.87	The government announced its intention to invest $37.87 billion over the next four years in eco-friendly projects including the construction of dams; "green" transportation networks such as low-carbon emitting railways, bicycle roads, and other public transportation systems; and expand existing forest areas.
16-Dec-08	Vietnam	6.00	Tax cuts, spending on infrastructure, housing, schools, and hospitals.
28-Jan-09	Indonesia	6.32	(Proposed) Tax incentives for companies and individuals, cuts in fuel and electricity prices, spending on infrastructure.
21-Jan-09	Philippines	7.01	Stimulus package wrapped into the current budget. More spending on infrastructure, agriculture, education, and health, cash for poor households, and tax cuts. Partial funding by borrowing from government corporations and from the nation's social security system.
29-Jan-09	Thailand	3.35	Cash for low earners, tax cuts, expanded free education, subsidies for transport and utilities.

Date Announced	Country	$Billion	Status, Package Contents
22-Jan-09	Singapore	13.70	Personal income tax rebate; cut in maximum corporate tax rate; subsidies for employee wages; training; cash handouts to low-income workers; increase in public sector hiring; assuming 80% of the risk on private bank loans; boosting aid to welfare recipients, government pensioners, and students; invest in infrastructure.
30-Nov-08	Malaysia	1.93	High impact infrastructure projects including roads, schools, and housing. Government budget in deficit. Expect a second, larger stimulus package in February or March 2009.
8-Dec-08	India	4.00	Stimulus package includes $70 million to finance exports of textiles and handicrafts; value added tax rate cut at different levels and across products. Public works spending includes funding for various sectors, including: housing, automobile, infrastructure, power, and medium and small industries. In addition, import duties on naptha was revoked, export duty on iron ore was removed, levy on exports of iron were reduced.
28-Nov-08	Taiwan	15.60	Shopping vouchers of $108 each for all citizens, construction projects to be carried out over four years include expanding metro systems, rebuilding bridges and classrooms, improving, railway and sewage systems, and renew urban areas.
31-Dec-08	Sri Lanka	0.14	Cuts in prices for diesel, kerosene, and furnace oil; lifting of surcharge on electricity, incentive for exporters not to retrench workers, lifting of tax on rubber exports, and subsidies for tea farmers.
26-Jan-09	Australia	35.2	$7 billion stimulus package in October 2008 was cash handouts to low income earners and pensioners. January's $28.2 billion package includes infrastructure, schools and housing, and cash payments to low- and middle-income earners. Budget is in deficit.
7-Jan-09	Mexico	54.00	Infrastructure, a freeze on gasoline prices, reducing electricity rates, help for poor families to replace old appliances, construction of low-income housing and an oil refinery, rural development, increase government purchases from small- and medium-sized companies. Paid for by taxes, oil revenues, and borrowing.
23-Dec-08	Brazil	5.00	Program established in 2007 to continue to 2010. Tax cuts (exempt capital goods producers from the industrial and welfare taxes, increase the value of personal computers exempted from taxes) and rebates. Funded by reducing the government's budget surplus.
5-Dec-08	Argentina	3.80	Low-cost loans to farmers, automakers, or other exporters.
6-Jan-09	Chile	4.00	Infrastructure, subsidies for copper producer, lower employer contributions for small- and medium-sized companies, and income tax rebates. Funded from copper windfall earnings saved in sovereign wealth funds and by issuing bonds.

Source: Congressional Research from various news articles and government press releases.

Notes: Currency conversions to U.S. dollars were either already done in the news articles or by CRS using current exchange rates.

Appendix C. London Summit—Leaders' Statement

2 April 2009

1. We, the Leaders of the Group of Twenty, met in London on 2 April 2009.

2. We face the greatest challenge to the world economy in modern times; a crisis which has deepened since we last met, which affects the lives of women, men, and children in every country, and which all countries must join together to resolve. A global crisis requires a global solution.

3. We start from the belief that prosperity is indivisible; that growth, to be sustained, has to be shared; and that our global plan for recovery must have at its heart the needs and jobs of hard-working families, not just in developed countries but in emerging markets and the poorest countries of the world too; and must reflect the interests, not just of today's population, but of future generations too. We believe that the only sure foundation for sustainable globalisation and rising prosperity for all is an open world economy based on market principles, effective regulation, and strong global institutions.

4. We have today therefore pledged to do whatever is necessary to:

- restore confidence, growth, and jobs;
- repair the financial system to restore lending;
- strengthen financial regulation to rebuild trust; fund and reform our international financial institutions to overcome this crisis and prevent future ones;
- promote global trade and investment and reject protectionism, to underpin prosperity; and
- build an inclusive, green, and sustainable recovery.

By acting together to fulfil these pledges we will bring the world economy out of recession and prevent a crisis like this from recurring in the future.

5. The agreements we have reached today, to treble resources available to the IMF to $750 billion, to support a new SDR allocation of $250 billion, to support at least $100 billion of additional lending by the MDBs, to ensure $250 billion of support for trade finance, and to use the additional resources from agreed IMF gold sales for concessional finance for the poorest countries, constitute an additional $1.1 trillion programme of support to restore credit, growth and jobs in the world economy. Together with the measures we have each taken nationally, this constitutes a global plan for recovery on an unprecedented scale.

Restoring growth and jobs

6. We are undertaking an unprecedented and concerted fiscal expansion, which will save or create millions of jobs which would otherwise have been destroyed, and that will, by the end of next year, amount to $5 trillion, raise output by 4 per cent, and accelerate the transition to a green economy. We are committed to deliver the scale of sustained fiscal effort necessary to restore growth.

7. Our central banks have also taken exceptional action. Interest rates have been cut aggressively in most countries, and our central banks have pledged to maintain expansionary policies for as long as needed and to use the full range of monetary policy instruments, including unconventional instruments, consistent with price stability.

8. Our actions to restore growth cannot be effective until we restore domestic lending and international capital flows. We have provided significant and comprehensive support to our banking systems to provide liquidity, recapitalise financial institutions, and address decisively the problem of impaired assets. We are committed to take all necessary actions to restore the normal flow of credit through the financial system and ensure the soundness of systemically important institutions, implementing our policies in line with the agreed G20 framework for restoring lending and repairing the financial sector.

9. Taken together, these actions will constitute the largest fiscal and monetary stimulus and the most comprehensive support programme for the financial sector in modern times. Acting together strengthens the impact and the exceptional policy actions announced so far must be implemented without delay. Today, we have further agreed over $1 trillion of additional resources for the world economy through our international financial institutions and trade finance.

10. Last month the IMF estimated that world growth in real terms would resume and rise to over 2 percent by the end of 2010. We are confident that the actions we have agreed today, and our unshakeable commitment to work together to restore growth and jobs, while preserving long-term fiscal sustainability, will accelerate the return to trend growth. We commit today to taking whatever action is necessary to secure that outcome, and we call on the IMF to assess regularly the actions taken and the global actions required.

11. We are resolved to ensure long-term fiscal sustainability and price stability and will put in place credible exit strategies from the measures that need to be taken now to support the financial sector and restore global demand. We are convinced that by implementing our agreed policies we will limit the longer-term costs to our economies, thereby reducing the scale of the fiscal consolidation necessary over the longer term.

12. We will conduct all our economic policies cooperatively and responsibly with regard to the impact on other countries and will refrain from competitive devaluation of our currencies and promote a stable and well-functioning international monetary system. We will support, now and in the future, to candid, even-handed, and independent IMF surveillance of our economies and financial sectors, of the impact of our policies on others, and of risks facing the global economy.

Strengthening financial supervision and regulation

13. Major failures in the financial sector and in financial regulation and supervision were fundamental causes of the crisis. Confidence will not be restored until we rebuild trust in our financial system. We will take action to build a stronger, more globally consistent, supervisory and regulatory framework for the future financial sector, which will support sustainable global growth and serve the needs of business and citizens.

14. We each agree to ensure our domestic regulatory systems are strong. But we also agree to establish the much greater consistency and systematic cooperation between countries, and the framework of internationally agreed high standards, that a global financial system requires. Strengthened regulation and supervision must promote propriety, integrity and transparency;

guard against risk across the financial system; dampen rather than amplify the financial and economic cycle; reduce reliance on inappropriately risky sources of financing; and discourage excessive risk-taking. Regulators and supervisors must protect consumers and investors, support market discipline, avoid adverse impacts on other countries, reduce the scope for regulatory arbitrage, support competition and dynamism, and keep pace with innovation in the marketplace.

15. To this end we are implementing the Action Plan agreed at our last meeting, as set out in the attached progress report. We have today also issued a Declaration, *Strengthening the Financial System*. In particular we agree:

- to establish a new Financial Stability Board (FSB) with a strengthened mandate, as a successor to the Financial Stability Forum (FSF), including all G20 countries, FSF members, Spain, and the European Commission;
- that the FSB should collaborate with the IMF to provide early warning of macroeconomic and financial risks and the actions needed to address them;
- to reshape our regulatory systems so that our authorities are able to identify and take account of macro-prudential risks;
- to extend regulation and oversight to all systemically important financial institutions, instruments and markets. This will include, for the first time, systemically important hedge funds;
- to endorse and implement the FSF's tough new principles on pay and compensation and to support sustainable compensation schemes and the corporate social responsibility of all firms;
- to take action, once recovery is assured, to improve the quality, quantity, and international consistency of capital in the banking system. In future, regulation must prevent excessive leverage and require buffers of resources to be built up in good times;
- to take action against non-cooperative jurisdictions, including tax havens. We stand ready to deploy sanctions to protect our public finances and financial systems. The era of banking secrecy is over. We note that the OECD has today published a list of countries assessed by the Global Forum against the international standard for exchange of tax information;
- to call on the accounting standard setters to work urgently with supervisors and regulators to improve standards on valuation and provisioning and achieve a single set of high-quality global accounting standards; and
- to extend regulatory oversight and registration to Credit Rating Agencies to ensure they meet the international code of good practice, particularly to prevent unacceptable conflicts of interest.

16. We instruct our Finance Ministers to complete the implementation of these decisions in line with the timetable set out in the Action Plan. We have asked the FSB and the IMF to monitor progress, working with the Financial Action Taskforce and other relevant bodies, and to provide a report to the next meeting of our Finance Ministers in Scotland in November.

Strengthening our global financial institutions

17. Emerging markets and developing countries, which have been the engine of recent world growth, are also now facing challenges which are adding to the current downturn in the global economy. It is imperative for global confidence and economic recovery that capital continues to flow to them. This will require a substantial strengthening of the international financial institutions, particularly the IMF. We have therefore agreed today to make available an additional $850 billion of resources through the global financial institutions to support growth in emerging market and developing countries by helping to finance counter-cyclical spending, bank recapitalisation, infrastructure, trade finance, balance of payments support, debt rollover, and social support. To this end:

- we have agreed to increase the resources available to the IMF through immediate financing from members of $250 billion, subsequently incorporated into an expanded and more flexible New Arrangements to Borrow, increased by up to $500 billion, and to consider market borrowing if necessary; and
- we support a substantial increase in lending of at least $100 billion by the Multilateral Development Banks (MDBs), including to low income countries, and ensure that all MDBs, including have the appropriate capital.

18. It is essential that these resources can be used effectively and flexibly to support growth. We welcome in this respect the progress made by the IMF with its new Flexible Credit Line (FCL) and its reformed lending and conditionality framework which will enable the IMF to ensure that its facilities address effectively the underlying causes of countries' balance of payments financing needs, particularly the withdrawal of external capital flows to the banking and corporate sectors. We support Mexico's decision to seek an FCL arrangement.

19. We have agreed to support a general SDR allocation which will inject $250 billion into the world economy and increase global liquidity, and urgent ratification of the Fourth Amendment.

20. In order for our financial institutions to help manage the crisis and prevent future crises we must strengthen their longer term relevance, effectiveness and legitimacy. So alongside the significant increase in resources agreed today we are determined to reform and modernise the international financial institutions to ensure they can assist members and shareholders effectively in the new challenges they face. We will reform their mandates, scope and governance to reflect changes in the world economy and the new challenges of globalisation, and that emerging and developing economies, including the poorest, must have greater voice and representation. This must be accompanied by action to increase the credibility and accountability of the institutions through better strategic oversight and decision making. To this end:

- we commit to implementing the package of IMF quota and voice reforms agreed in April 2008 and call on the IMF to complete the next review of quotas by January 2011;
- we agree that, alongside this, consideration should be given to greater involvement of the Fund's Governors in providing strategic direction to the IMF and increasing its accountability;
- we commit to implementing the World Bank reforms agreed in October 2008. We look forward to further recommendations, at the next meetings, on voice and

representation reforms on an accelerated timescale, to be agreed by the 2010 Spring Meetings;

- we agree that the heads and senior leadership of the international financial institutions should be appointed through an open, transparent, and merit-based selection process; and
- building on the current reviews of the IMF and World Bank we asked the Chairman, working with the G20 Finance Ministers, to consult widely in an inclusive process and report back to the next meeting with proposals for further reforms to improve the responsiveness and adaptability of the IFIs.

21. In addition to reforming our international financial institutions for the new challenges of globalisation we agreed on the desirability of a new global consensus on the key values and principles that will promote sustainable economic activity. We support discussion on such a charter for sustainable economic activity with a view to further discussion at our next meeting. We take note of the work started in other fora in this regard and look forward to further discussion of this charter for sustainable economic activity.

Resisting protectionism and promoting global trade and investment

22. World trade growth has underpinned rising prosperity for half a century. But it is now falling for the first time in 25 years. Falling demand is exacerbated by growing protectionist pressures and a withdrawal of trade credit. Reinvigorating world trade and investment is essential for restoring global growth. We will not repeat the historic mistakes of protectionism of previous eras. To this end:

- we reaffirm the commitment made in Washington: to refrain from raising new barriers to investment or to trade in goods and services, imposing new export restrictions, or implementing World Trade Organisation (WTO) inconsistent measures to stimulate exports. In addition we will rectify promptly any such measures. We extend this pledge to the end of 2010;
- we will minimise any negative impact on trade and investment of our domestic policy actions including fiscal policy and action in support of the financial sector. We will not retreat into financial protectionism, particularly measures that constrain worldwide capital flows, especially to developing countries;
- we will notify promptly the WTO of any such measures and we call on the WTO, together with other international bodies, within their respective mandates, to monitor and report publicly on our adherence to these undertakings on a quarterly basis;
- we will take, at the same time, whatever steps we can to promote and facilitate trade and investment; and
- we will ensure availability of at least $250 billion over the next two years to support trade finance through our export credit and investment agencies and through the MDBs. We also ask our regulators to make use of available flexibility in capital requirements for trade finance.

23. We remain committed to reaching an ambitious and balanced conclusion to the Doha Development Round, which is urgently needed. This could boost the global economy by at least

$150 billion per annum. To achieve this we are committed to building on the progress already made, including with regard to modalities.

24. We will give renewed focus and political attention to this critical issue in the coming period and will use our continuing work and all international meetings that are relevant to drive progress.

Ensuring a fair and sustainable recovery for all

25. We are determined not only to restore growth but to lay the foundation for a fair and sustainable world economy. We recognise that the current crisis has a disproportionate impact on the vulnerable in the poorest countries and recognise our collective responsibility to mitigate the social impact of the crisis to minimise long-lasting damage to global potential. To this end:

- we reaffirm our historic commitment to meeting the Millennium Development Goals and to achieving our respective ODA pledges, including commitments on Aid for Trade, debt relief, and the Gleneagles commitments, especially to sub-Saharan Africa;
- the actions and decisions we have taken today will provide $50 billion to support social protection, boost trade and safeguard development in low income countries, as part of the significant increase in crisis support for these and other developing countries and emerging markets;
- we are making available resources for social protection for the poorest countries, including through investing in long-term food security and through voluntary bilateral contributions to the World Bank's Vulnerability Framework, including the Infrastructure Crisis Facility, and the Rapid Social Response Fund;
- we have committed, consistent with the new income model, that additional resources from agreed sales of IMF gold will be used, together with surplus income, to provide $6 billion additional concessional and flexible finance for the poorest countries over the next two to three years. We call on the IMF to come forward with concrete proposals at the Spring Meetings;
- we have agreed to review the flexibility of the Debt Sustainability Framework and call on the IMF and World Bank to report to the IMFC and Development Committee at the Annual Meetings; and
- we call on the UN, working with other global institutions, to establish an effective mechanism to monitor the impact of the crisis on the poorest and most vulnerable.

26. We recognise the human dimension to the crisis. We commit to support those affected by the crisis by creating employment opportunities and through income support measures. We will build a fair and family-friendly labour market for both women and men. We therefore welcome the reports of the London Jobs Conference and the Rome Social Summit and the key principles they proposed. We will support employment by stimulating growth, investing in education and training, and through active labour market policies, focusing on the most vulnerable. We call upon the ILO, working with other relevant organisations, to assess the actions taken and those required for the future.

27. We agreed to make the best possible use of investment funded by fiscal stimulus programmes towards the goal of building a resilient, sustainable, and green recovery. We will make the

transition towards clean, innovative, resource efficient, low carbon technologies and infrastructure. We encourage the MDBs to contribute fully to the achievement of this objective. We will identify and work together on further measures to build sustainable economies.

28. We reaffirm our commitment to address the threat of irreversible climate change, based on the principle of common but differentiated responsibilities, and to reach agreement at the UN Climate Change conference in Copenhagen in December 2009.

Delivering our commitments

29. We have committed ourselves to work together with urgency and determination to translate these words into action. We agreed to meet again before the end of this year to review progress on our commitments.

Source: http://www.londonsummit.gov.uk/resources/en/PDF/final-communique.

Appendix D. Comparison Selected Financial Regulatory Reform Proposals[229]

This appendix provides a comparison, in graphic form, of selected proposals for regulatory reform that have been put forward in the wake of the global financial crisis. Seven such proposals are covered in the table below. They are, in chronological order:

U.S. Department of the Treasury, *Blueprint for a Modernized Financial Regulatory Structure*, March 2008. (This study was completed under Secretary Henry Paulson, during the Bush Administration.)

Counterparty Risk Management Policy Group (CRMPG), *Containing Systemic Risk: The Road to Reform*, Aug. 6, 2008. (The CRMPG, a group of commercial and investment bankers, began this study at the suggestion of the President's Working Group on Financial Markets. Its focus is on market participants, rather than regulators.)

Congressional Oversight Panel (COP), *Special Report on Regulatory Reform: Modernizing the American Financial Regulatory System: Recommendations for Improving Oversight, Protecting Consumers, and Ensuring Stability*, January 2009. (The COP was created by the Emergency Economic Stabilization Act of 2008 (P.L. 110-343) to oversee the Troubled Asset Relief Program.)

Group of Thirty, *Financial Reform: A Framework for Financial Stability*, January 15, 2009. (The Group of Thirty is a private, nonprofit body composed of senior representatives of the private and public sectors and academia, which aims to deepen understanding of international economic and financial issues.)

Group of 20 (G-20), *G-20 Working Group on Enhancing Sound Regulation and Strengthening Transparency: Final Report (Draft)*, February 2009. (The G-20 is made up of the finance ministers and central bank governors of 19 countries: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the U.K., and the United States, and also the European Union.)

Financial Services Authority (FSA), *The Turner Review: A Regulatory Response to the Global Banking Crisis*, March 2009. (The FSA is the UK regulatory agency with jurisdiction over banking, securities, insurance, and derivatives. Adair Turner has been FSA chairman since September 2008.)

U.S. Department of the Treasury, *Framework for Regulatory Reform: New Rules of the Road*, March 26, 2009. (Only a four-page summary of these proposals is available.)

The table below lists a number of specific recommendations contained in the above reports and studies, and indicates by an "X" which ones contain each recommendation. The absence of an "X" does not necessarily mean that the authors of the report oppose the recommendation—each study has its own scope and focus. In some cases, studies identify issues as needing further study;

[229] Prepared by Mark Jickling, Specialist in Financial Economics.

in others, an issue may be identified as a problem contributing to the financial crisis without a specific recommendation for reform being made. (In neither of these cases would an "X" appear in the table.)

(An "**X**" indicates that a report includes the recommendation at the left)

Recommendation	Treasury (2009)	FSA	G-20	Group of 30	COP	CRMPG	Treasury (2008)
Systemic Risk							
Create (or designate) a single regulator with responsibility over all systemically-important financial institutions, regardless of their legal form.	X				X		X
All systemically-important financial institutions should be subject to an appropriate degree of regulation.	X	X	X	X	X		X
The systemic risk regulator should have prompt corrective action powers with regard to failing systemically-important firms.	X				X		X
Firms' internal risk controls should be made more robust and should take systemic risk into account. Corporate boards should assume more responsibility for their firms' risk management practices.		X		X		X	
Systemically-important banks should be restricted in certain risky activities, such as affiliation with non-financial firms, proprietary trading, etc.		X		X	X		
Financial institutions' use of stress testing should be more rigorous.	X		X	X		X	
Regulation of critical payment systems should be strengthened.	X						X
International monitoring for systemic risk should be enhanced, and a more formal mechanism should be created.		X	X	X	X		
Capital Standards							
Large complex systemically-important financial institutions should be subject to more stringent capital regulation than other firms.	X		X		X		X
Minimum capital standards should be raised throughout the banking system, or for all financial institutions.		X	X	X	X		
Capital standards should be adjusted to avoid procyclicality, that is, firms should be required to build up capital during good times, and be allowed to hold less capital during cyclical contractions.		X	X	X	X	X	

Recommendation	Treasury (2009)	FSA	G-20	Group of 30	COP	CRMPG	Treasury (2008)
Regulators' and firms' capital decisions should make greater provision against liquidity risk.	X	X	X	X	X	X	
Hedge Funds and Other Private Pools of Capital							
Hedge funds should be required to register with the Securities and Exchange Commission (SEC) or other national securities regulator.	X		X	X	X		X
Systemically-important hedge funds should be subject to prudential regulation.	X		X	X	X		X
Hedge funds should provide information on a confidential basis to regulators about their strategies and positions.	X	X	X		X		X
Over-the-Counter (OTC) Derivatives							
Credit default swaps should be processed through a regulated centralized counterparty (CCP) or clearing house.	X	X	X	X	X	X	
All standardized OTC derivatives should be processed through a regulated CCP or clearing house.	X				X		
OTC derivatives dealers should be subject to a strong regulatory regime.	X						
Non-standard (or customized) OTC derivatives should be reported to a central trade repository or to a regulator.	X				X		
Resolution Authority for Non-Bank Financial Institutions							
To avoid disorderly liquidations, a government agency should have authority to take over a failing, systemically-important non-bank institution, and place it in conservatorship or receivership, outside the bankruptcy system.	X			X			
Money Market Funds							
SEC (or other national regulator) should impose limits on risk-taking to make money market funds less vulnerable to runs.	X			X			
Funds that offer bank-like services should be chartered as special purpose banks, insured, and regulated.				X			
Compensation Structures in Financial Firms							
Pay practices should discourage excessive risk-taking, via incentives for fostering long-term stability rather than maximizing annual performance bonuses.		X	X		X	X	

Recommendation	Treasury (2009)	FSA	G-20	Group of 30	COP	CRMPG	Treasury (2008)
Regulators should consider compensation structures when assessing firms' risk management practices.			X				
Credit Rating Agencies							
Credit rating agencies (CRAs) should be registered and regulated with the appropriate government agency.		X	X		X		
CRAs should be held more accountable for the accuracy of their ratings, through after-the-fact audits or independent evaluations.				X	X		
The rating process for complex financial instruments, such as structured securitized products, should be made more transparent, or such instruments should be subject to additional mandatory risk disclosures.		X				X	
CRA revenues (especially when securities issuers pay for ratings) should be subject to oversight or limits.				X	X		
Accounting Standards							
Fair value, or mark-to-market, accounting standards should be modified to reduce their procyclical impact.			X	X			
Current rules for accounting consolidation (specifying when assets and liabilities may be held off the balance sheet) should be replaced by a principles-based standard reflecting the concepts of control and risk exposure.						X	
Other Regulatory Structure Issues							
There should be a single banking regulator for prudential supervision.				X			X
There should be a single regulator for consumer financial products.					X		X
Financial regulators should play a greater role in macroeconomic policy-making.		X	X				
Insurance companies should be chartered and regulated at the federal level.				X			X
Government-sponsored enterprises—a clear line should be drawn between public and private firms.				X			
Minimum international standards—a regulatory floor—should apply in all countries, including tax havens and offshore banking centers.	X	X		X	X		

Source: Prepared by CRS.

Appendix E. British, U.S., and European Central Bank Operations, April to Mid-October 2008

	Bank of England	Federal Reserve	European Central Bank	Coordinated Central Bank Announcements
May	Announced that expanded three-month long-term repos would be maintained in June and July.	Expanded size of Term Auction Facility (TAF). Extended collateral of Term Securities Lending Facility (TSLF).		Expansion of agreements between Federal Reserve and European Central Bank.
July		Introduced 84-day TAF. Primary Dealer Credit Facility (PDCF) and TSLF extended to January 2009. Authorized the auction of options for primary dealers to borrow Treasury securities from the TSLF.	Announced that it would conduct operations under the 84-day TAF to provide US dollars to European Central Bank counterparties. Announced that supplementary three-month longer-term refinancing operations (LTROs) would be renewed in August and September.	
September	Announced that expanded three-month long-term repos would be maintained in September and October. Announced long-term repo operations to be held monthly. Extended drawndown period for Special Liquidity Scheme 9SLS).	Expanded collateral of PDCF. Expanded size and collateral of TSLF. Announced provision of loans to banks to finance purchase of high quality asset-backed commercial paper from money market mutual funds.	Announced six-month LTROs would be renewed in October, and three-month LTROs would be renewed in November and December. Conducted Special Term Refinancing Operation.	Expansion of agreement between Federal Reserve and European Central Bank. Establishment of swap agreements between Federal Reserve and the Bank of England, subsequently expanded. Bank of England and European Central Bank, in conjunction with the Federal Reserve, announced operation to lend U.S. dollars for one week, subsequently extended to scheduled weekly operations.

	Bank of England	Federal Reserve	European Central Bank	Coordinated Central Bank Announcements
October	Extended collateral for one-week U.S. dollar repos and for three-month long-term repos. Extended collateral of all extended-collateral sterling long-term repos, U.S. dollar repo operations, and the SLS to include bank-guaranteed debt under the UK Government bank debt guarantee scheme. Announced Operations Standing Facilities and a Discount Window Facility, which together replace existing Standing Facilities.	Announced payment of interest on required and excess reserve balances. Increased size of TAFs. Announced creation of the Commercial paper Funding Facility.	Increased size of six-month supplementary LTROs. Announced a reduction in the spread of standing facilities from 200 basis points to 100 basis points around the interest rate on the main refinancing operation. Introduced swap agreements with the Swiss National Bank.	Announced schedules for TAFs and Forward TAFs for auctions of U.S. dollar liquidity during the fourth quarter. European Central and Bank of England announced tenders of U.S. dollar funding at 7-day, 28-day, 84-day maturities at fixed interest rates for full allotment. Swap agreements increased to accommodate required level of funding.

Source: *Financial Stability Report*, October 2008, the Bank of England. p. 18.

Author Contact Information

Dick K. Nanto, Coordinator
Specialist in Industry and Trade
dnanto@crs.loc.gov, 7-7754

Martin A. Weiss
Specialist in International Trade and Finance
mweiss@crs.loc.gov, 7-5407

James K. Jackson
Specialist in International Trade and Finance
jjackson@crs.loc.gov, 7-7751

Wayne M. Morrison
Specialist in Asian Trade and Finance
wmorrison@crs.loc.gov, 7-7767

J. Michael Donnelly
Information Research Specialist
mdonnelly@crs.loc.gov, 7-8722

Ben Dolven
Section Research Manager
bdolven@crs.loc.gov, 7-7626

William H. Cooper
Specialist in International Trade and Finance
wcooper@crs.loc.gov, 7-7749

J. F. Hornbeck
Specialist in International Trade and Finance
jhornbeck@crs.loc.gov, 7-7782

Mark Jickling
Specialist in Financial Economics
mjickling@crs.loc.gov, 7-7784